

powered by

Q.ANTUM DUO Z

PRELIMINARY

# Q.PEAK DUO BLK-G10+ 350-370

ENDURING HIGH  
PERFORMANCE



Quality  
Controlled PV

www.tuv.com  
ID 1111232615



## BREAKING THE 20% EFFICIENCY BARRIER

Q.ANTUM DUO Z Technology with zero gap cell layout boosts module efficiency up to 20.9%.



## THE MOST THOROUGH TESTING PROGRAMME IN THE INDUSTRY

Q CELLS is the first solar module manufacturer to pass the most comprehensive quality programme in the industry: The new "Quality Controlled PV" of the independent certification institute TÜV Rheinland.



## INNOVATIVE ALL-WEATHER TECHNOLOGY

Optimal yields, whatever the weather with excellent low-light and temperature behaviour.



## ENDURING HIGH PERFORMANCE

Long-term yield security with Anti LID Technology, Anti PID Technology<sup>1</sup>, Hot-Spot Protect and Traceable Quality Tra.Q™.



## EXTREME WEATHER RATING

High-tech aluminium alloy frame, certified for high snow (5400Pa) and wind loads (4000Pa).



## A RELIABLE INVESTMENT

Inclusive 25-year product warranty and 25-year linear performance warranty<sup>2</sup>.

<sup>1</sup> APT test conditions according to IEC / TS 62804-1:2015, method A (~1500 V, 96h)

<sup>2</sup> See data sheet on rear for further information.

## THE IDEAL SOLUTION FOR:



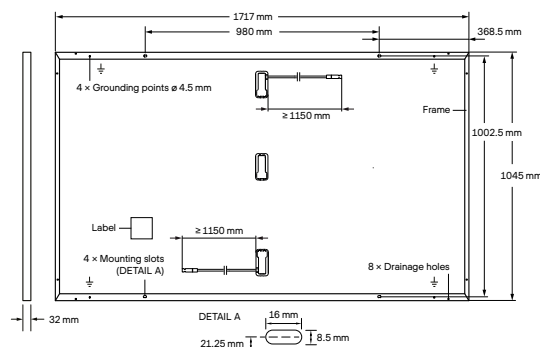
Rooftop arrays on  
residential buildings

Engineered in Germany

Q CELLS

## MECHANICAL SPECIFICATION

|              |                                                                              |
|--------------|------------------------------------------------------------------------------|
| Format       | 1717 mm × 1045 mm × 32 mm (including frame)                                  |
| Weight       | 19.9 kg                                                                      |
| Front Cover  | 3.2 mm thermally pre-stressed glass with anti-reflection technology          |
| Back Cover   | Composite film                                                               |
| Frame        | Black anodised aluminium                                                     |
| Cell         | 6 × 20 monocrystalline Q.ANTUM solar half cells                              |
| Junction box | 53-101 mm × 32-60 mm × 15-18 mm<br>Protection class IP67, with bypass diodes |
| Cable        | 4 mm <sup>2</sup> Solar cable; (+) ≥ 1150 mm, (-) ≥ 1150 mm                  |
| Connector    | Stäubli MC4; IP68                                                            |

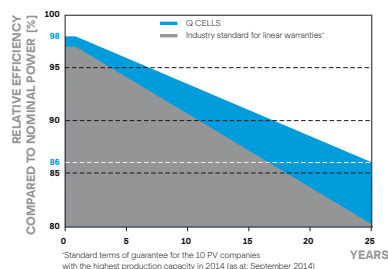


## ELECTRICAL CHARACTERISTICS

| POWER CLASS                                                                                     |                                    |                      | 350    | 355    | 360    | 365    | 370    |
|-------------------------------------------------------------------------------------------------|------------------------------------|----------------------|--------|--------|--------|--------|--------|
| MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC <sup>1</sup> (POWER TOLERANCE +5 W / -0 W) |                                    |                      |        |        |        |        |        |
| Minimum                                                                                         | Power at MPP <sup>1</sup>          | P <sub>MPP</sub> [W] | 350    | 355    | 360    | 365    | 370    |
|                                                                                                 | Short Circuit Current <sup>1</sup> | I <sub>SC</sub> [A]  | 10.97  | 11.00  | 11.04  | 11.07  | 11.10  |
|                                                                                                 | Open Circuit Voltage <sup>1</sup>  | V <sub>OC</sub> [V]  | 41.11  | 41.14  | 41.18  | 41.21  | 41.24  |
|                                                                                                 | Current at MPP                     | I <sub>MPP</sub> [A] | 10.37  | 10.43  | 10.49  | 10.56  | 10.62  |
|                                                                                                 | Voltage at MPP                     | V <sub>MPP</sub> [V] | 33.76  | 34.03  | 34.31  | 34.58  | 34.84  |
|                                                                                                 | Efficiency <sup>1</sup>            | η [%]                | ≥ 19.5 | ≥ 19.8 | ≥ 20.1 | ≥ 20.3 | ≥ 20.6 |
| MINIMUM PERFORMANCE AT NORMAL OPERATING CONDITIONS, NMOT <sup>2</sup>                           |                                    |                      |        |        |        |        |        |
| Minimum                                                                                         | Power at MPP                       | P <sub>MPP</sub> [W] | 262.6  | 266.3  | 270.1  | 273.8  | 277.6  |
|                                                                                                 | Short Circuit Current              | I <sub>SC</sub> [A]  | 8.84   | 8.87   | 8.89   | 8.92   | 8.95   |
|                                                                                                 | Open Circuit Voltage               | V <sub>OC</sub> [V]  | 38.77  | 38.80  | 38.83  | 38.86  | 38.90  |
|                                                                                                 | Current at MPP                     | I <sub>MPP</sub> [A] | 8.14   | 8.20   | 8.26   | 8.31   | 8.37   |
|                                                                                                 | Voltage at MPP                     | V <sub>MPP</sub> [V] | 32.24  | 32.48  | 32.71  | 32.94  | 33.17  |

<sup>1</sup>Measurement tolerances P<sub>MPP</sub> ± 3%; I<sub>SC</sub>; V<sub>OC</sub> ± 5% at STC: 1000 W/m<sup>2</sup>, 25 ± 2°C, AM 1.5 according to IEC 60904-3 • 2800 W/m<sup>2</sup>, NMOT, spectrum AM 1.5

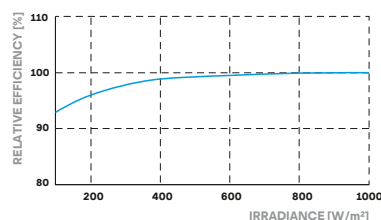
### Q CELLS PERFORMANCE WARRANTY



At least 98% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 93.5% of nominal power up to 10 years. At least 86% of nominal power up to 25 years.

All data within measurement tolerances. Full warranties in accordance with the warranty terms of the Q CELLS sales organisation of your respective country.

### PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000 W/m<sup>2</sup>).

### TEMPERATURE COEFFICIENTS

|                                             |   |       |       |                                            |      |       |        |
|---------------------------------------------|---|-------|-------|--------------------------------------------|------|-------|--------|
| Temperature Coefficient of I <sub>SC</sub>  | α | [%/K] | +0.04 | Temperature Coefficient of V <sub>OC</sub> | β    | [%/K] | -0.27  |
| Temperature Coefficient of P <sub>MPP</sub> | γ | [%/K] | -0.34 | Nominal Module Operating Temperature       | NMOT | [°C]  | 43 ± 3 |

## PROPERTIES FOR SYSTEM DESIGN

|                               |                  |      |             |                                                 |               |
|-------------------------------|------------------|------|-------------|-------------------------------------------------|---------------|
| Maximum System Voltage        | V <sub>SYS</sub> | [V]  | 1000        | PV module classification                        | Class II      |
| Maximum Reverse Current       | I <sub>R</sub>   | [A]  | 20          | Fire Rating based on ANSI / UL 61730            | C / TYPE 2    |
| Max. Design Load, Push / Pull |                  | [Pa] | 3600 / 2660 | Permitted Module Temperature on Continuous Duty | -40°C - +85°C |
| Max. Test Load, Push / Pull   |                  | [Pa] | 5400 / 4000 |                                                 |               |

## QUALIFICATIONS AND CERTIFICATES

Quality Controlled PV - TÜV Rheinland;  
IEC 61215:2016; IEC 61730:2016.  
This data sheet complies  
with DIN EN 50380.  
QCPV Certification ongoing.



**Note:** Installation instructions must be followed. See the installation and operating manual or contact our technical service department for further information on approved installation and use of this product.

### Hanwha Q CELLS GmbH

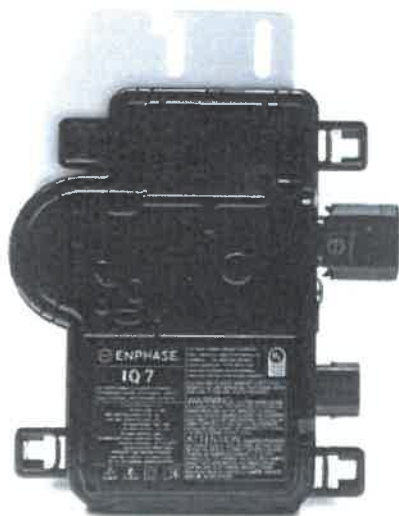
Sonnenallee 17-21, 06766 Bitterfeld-Wolfen, Germany | **TEL** +49 (0)3494 66 99-23444 | **FAX** +49 (0)3494 66 99-23000 | **EMAIL** sales@q-cells.com | **WEB** www.q-cells.com

## Enphase IQ 7 and IQ 7+ Microinverters

The high-powered smart grid-ready **Enphase IQ 7 Micro™** and **Enphase IQ 7+ Micro™** dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7 and IQ 7+ Microinverters integrate with the Enphase IQ Envoy™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analysis software.

IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.



### Easy to Install

- Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014 & 2017)

### Productive and Reliable

- Optimized for high powered 60-cell and 72-cell\* modules
- More than a million hours of testing
- Class II double-insulated enclosure
- UL listed

### Smart Grid Ready

- Complies with advanced grid support, voltage and frequency ride-through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (UL 1741-SA)

\* The IQ 7+ Micro is required to support 72-cell modules.



To learn more about Enphase offerings, visit [enphase.com](https://enphase.com)



## Enphase IQ 7 and IQ 7+ Microinverters

| INPUT DATA (DC)                                | IQ7-60-2-US / IQ7-60-B-US                                                                                                                                                                                                                                                                                                                                                               |                      | IQ7PLUS-72-2-US / IQ7PLUS-72-B-US |                      |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------|----------------------|
| Commonly used module pairings¹                 | 235 W - 350 W +                                                                                                                                                                                                                                                                                                                                                                         |                      | 235 W - 440 W +                   |                      |
| Module compatibility                           | 60-cell PV modules only                                                                                                                                                                                                                                                                                                                                                                 |                      | 60-cell and 72-cell PV modules    |                      |
| Maximum input DC voltage                       | 48 V                                                                                                                                                                                                                                                                                                                                                                                    |                      | 60 V                              |                      |
| Peak power tracking voltage                    | 27 V - 37 V                                                                                                                                                                                                                                                                                                                                                                             |                      | 27 V - 45 V                       |                      |
| Operating range                                | 16 V - 48 V                                                                                                                                                                                                                                                                                                                                                                             |                      | 16 V - 60 V                       |                      |
| Min/Max start voltage                          | 22 V / 48 V                                                                                                                                                                                                                                                                                                                                                                             |                      | 22 V / 60 V                       |                      |
| Max DC short circuit current (module Isc)      | 15 A                                                                                                                                                                                                                                                                                                                                                                                    |                      | 15 A                              |                      |
| Overvoltage class DC port                      | II                                                                                                                                                                                                                                                                                                                                                                                      |                      | II                                |                      |
| DC port backfeed current                       | 0 A                                                                                                                                                                                                                                                                                                                                                                                     |                      | 0 A                               |                      |
| PV array configuration                         | 1 x 1 ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit                                                                                                                                                                                                                                                               |                      |                                   |                      |
| OUTPUT DATA (AC)                               | IQ 7 Microinverter                                                                                                                                                                                                                                                                                                                                                                      |                      | IQ 7+ Microinverter               |                      |
| Peak output power                              | 250 VA                                                                                                                                                                                                                                                                                                                                                                                  |                      | 295 VA                            |                      |
| Maximum continuous output power                | 240 VA                                                                                                                                                                                                                                                                                                                                                                                  |                      | 290 VA                            |                      |
| Nominal (L-L) voltage/range²                   | 240 V /<br>211-264 V                                                                                                                                                                                                                                                                                                                                                                    | 208 V /<br>183-229 V | 240 V /<br>211-264 V              | 208 V /<br>183-229 V |
| Maximum continuous output current              | 1.0 A (240 V)                                                                                                                                                                                                                                                                                                                                                                           | 1.15 A (208 V)       | 1.21 A (240 V)                    | 1.39 A (208 V)       |
| Nominal frequency                              | 60 Hz                                                                                                                                                                                                                                                                                                                                                                                   |                      | 60 Hz                             |                      |
| Extended frequency range                       | 47 - 68 Hz                                                                                                                                                                                                                                                                                                                                                                              |                      | 47 - 68 Hz                        |                      |
| AC short circuit fault current over 3 cycles   | 5.8 Arms                                                                                                                                                                                                                                                                                                                                                                                |                      | 5.8 Arms                          |                      |
| Maximum units per 20 A (L-L) branch circuit³   | 16 (240 VAC)                                                                                                                                                                                                                                                                                                                                                                            | 13 (208 VAC)         | 13 (240 VAC)                      | 11 (208 VAC)         |
| Overvoltage class AC port                      | III                                                                                                                                                                                                                                                                                                                                                                                     |                      | III                               |                      |
| AC port backfeed current                       | 0 A                                                                                                                                                                                                                                                                                                                                                                                     |                      | 0 A                               |                      |
| Power factor setting                           | 1.0                                                                                                                                                                                                                                                                                                                                                                                     |                      | 1.0                               |                      |
| Power factor (adjustable)                      | 0.7 leading ... 0.7 lagging                                                                                                                                                                                                                                                                                                                                                             |                      | 0.7 leading ... 0.7 lagging       |                      |
| EFFICIENCY                                     | @240 V                                                                                                                                                                                                                                                                                                                                                                                  | @208 V               | @240 V                            | @208 V               |
| Peak CEC efficiency                            | 97.6 %                                                                                                                                                                                                                                                                                                                                                                                  | 97.6 %               | 97.5 %                            | 97.3 %               |
| CEC weighted efficiency                        | 97.0 %                                                                                                                                                                                                                                                                                                                                                                                  | 97.0 %               | 97.0 %                            | 97.0 %               |
| MECHANICAL DATA                                |                                                                                                                                                                                                                                                                                                                                                                                         |                      |                                   |                      |
| Ambient temperature range                      | -40°C to +65°C                                                                                                                                                                                                                                                                                                                                                                          |                      |                                   |                      |
| Relative humidity range                        | 4% to 100% (condensing)                                                                                                                                                                                                                                                                                                                                                                 |                      |                                   |                      |
| Connector type (IQ7-60-2-US & IQ7PLUS-72-2-US) | MC4 (or Amphenol H4 UTX with additional Q-DCC-5 adapter)                                                                                                                                                                                                                                                                                                                                |                      |                                   |                      |
| Connector type (IQ7-60-B-US & IQ7PLUS-72-B-US) | Friends PV2 (MC4 intermateable).<br>Adaptors for modules with MC4 or UTX connectors:<br>- PV2 to MC4: order ECA-S20-S22<br>- PV2 to UTX: order ECA-S20-S25                                                                                                                                                                                                                              |                      |                                   |                      |
| Dimensions (WxHxD)                             | 212 mm x 175 mm x 30.2 mm (without bracket)                                                                                                                                                                                                                                                                                                                                             |                      |                                   |                      |
| Weight                                         | 1.08 kg (2.38 lbs)                                                                                                                                                                                                                                                                                                                                                                      |                      |                                   |                      |
| Cooling                                        | Natural convection - No fans                                                                                                                                                                                                                                                                                                                                                            |                      |                                   |                      |
| Approved for wet locations                     | Yes                                                                                                                                                                                                                                                                                                                                                                                     |                      |                                   |                      |
| Pollution degree                               | PD3                                                                                                                                                                                                                                                                                                                                                                                     |                      |                                   |                      |
| Enclosure                                      | Class II double-insulated, corrosion resistant polymeric enclosure                                                                                                                                                                                                                                                                                                                      |                      |                                   |                      |
| Environmental category / UV exposure rating    | NEMA Type 5 / outdoor                                                                                                                                                                                                                                                                                                                                                                   |                      |                                   |                      |
| FEATURES                                       |                                                                                                                                                                                                                                                                                                                                                                                         |                      |                                   |                      |
| Communication                                  | Power Line Communication (PLC)                                                                                                                                                                                                                                                                                                                                                          |                      |                                   |                      |
| Monitoring                                     | Enlighten Manager and MyEnlighten monitoring options.<br>Both options require installation of an Enphase IQ Envoy.                                                                                                                                                                                                                                                                      |                      |                                   |                      |
| Disconnecting means                            | The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690.                                                                                                                                                                                                                                                               |                      |                                   |                      |
| Compliance                                     | CA Rule 21 (UL 1741-SA)<br>UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01<br>This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC-2014 and NEC-2017 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer's instructions. |                      |                                   |                      |

1. No enforced DC/AC ratio. See the compatibility calculator at <https://enphase.com/en-us/support/module-compatibility>

2. Nominal voltage range can be extended beyond nominal if required by the utility.

3. Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

To learn more about Enphase offerings, visit [enphase.com](https://enphase.com)

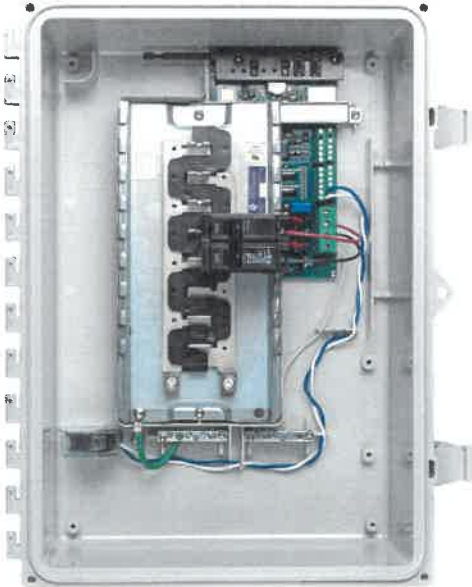
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2018-05-24



## Enphase IQ Combiner 3

(X-IQ-AM1-240-3)

The **Enphase IQ Combiner 3™** with Enphase IQ Envoy™ consolidates interconnection equipment into a single enclosure and streamlines PV and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and Eaton BR series busbar assembly.



### Smart

- Includes IQ Envoy for communication and control
- Flexible networking supports Wi-Fi, Ethernet, or cellular
- Optional AC receptacle available for PLC bridge
- Provides production metering and optional consumption monitoring

### Simple

- Reduced size from previous combiner
- Centered mounting brackets support single stud mounting
- Supports back and side conduit entry
- Up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80 A total PV or storage branch circuits

### Reliable

- Durable NRTL-certified NEMA type 3R enclosure
- Five-year warranty
- UL listed



**LISTED**

To learn more about Enphase offerings, visit [enphase.com](https://enphase.com)



# Enphase IQ Combiner 3

## MODEL NUMBER

IQ Combiner 3 X-IQ-AM1-240-3

IQ Combiner 3 with Enphase IQ Envoy™ printed circuit board for integrated revenue grade PV production metering (ANSI C12.20 +/- 0.5%) and optional\* consumption monitoring (+/- 2.5%).

## ACCESSORIES and REPLACEMENT PARTS (not included, order separately)

Enphase Mobile Connect™

CELLMODEM-03 (4G / 12-year data plan)

CELLMODEM-01 (3G / 5-year data plan)

CELLMODEM-M1 (4G based LTE-M / 5-year data plan)

Plug and play industrial grade cellular modem with data plan for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands, where there is adequate cellular service in the installation area.)

Consumption Monitoring\* CT

CT-200-SPLIT

Split core current transformers enable whole home consumption metering (+/- 2.5%).

Circuit Breakers

BRK-10A-2-240

BRK-15A-2-240

BRK-20A-2P-240

Supports Eaton BR210, BR215, BR220, BR230, BR240, BR250, and BR260 circuit breakers.

Circuit breaker, 2 pole, 10A, Eaton BR210

Circuit breaker, 2 pole, 15A, Eaton BR215

Circuit breaker, 2 pole, 20A, Eaton BR220

EPLC-01

Power line carrier (communication bridge pair), quantity 2

XA-PLUG-120-3

Accessory receptacle for Power Line Carrier in IQ Combiner 3 (required for EPLC-01)

XA-ENV-PCBA-3

Replacement IQ Envoy printed circuit board (PCB) for Combiner 3

## ELECTRICAL SPECIFICATIONS

Rating

Continuous duty

System voltage

120/240 VAC, 60 Hz

Eaton BR series busbar rating

125 A

Max. continuous current rating (output to grid)

65 A

Max. fuse/circuit rating (output)

90 A

Branch circuits (solar and/or storage)

Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included)

Max. continuous current rating (input from PV)

64 A

Max. total branch circuit breaker rating (input)

80A of distributed generation / 90A with IQ Envoy breaker included

Production Metering CT

200 A solid core pre-installed and wired to IQ Envoy

## MECHANICAL DATA

Dimensions (WxHxD)

49.5 x 37.5 x 16.8 cm (19.5" x 14.75" x 6.63"). Height is 21.06" (53.5 cm with mounting brackets).

Weight

7.5 kg (16.5 lbs)

Ambient temperature range

-40° C to +46° C (-40° to 115° F)

Cooling

Natural convection, plus heat shield

Enclosure environmental rating

Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction

Wire sizes

- 20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors
  - 60 A breaker branch input: 4 to 1/0 AWG copper conductors
  - Main lug combined output: 10 to 2/0 AWG copper conductors
  - Neutral and ground: 14 to 1/0 copper conductors
- Always follow local code requirements for conductor sizing.

Altitude

To 2000 meters (6,560 feet)

## INTERNET CONNECTION OPTIONS

Integrated Wi-Fi

802.11b/g/n

Ethernet

Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included)

Cellular

Optional, CELLMODEM-01 (3G) or CELLMODEM-03 (4G) or CELLMODEM-M1 (4G based LTE-M) (not included)

## COMPLIANCE

Compliance, Combiner

UL 1741  
CAN/CSA C22.2 No. 107.1  
47 CFR, Part 15, Class B, ICES 003  
Production metering: ANSI C12.20 accuracy class 0.5 (PV production)

Compliance, IQ Envoy

UL 60601-1/CANCSA 22.2 No. 61010-1

\* Consumption monitoring is required for Enphase Storage Systems.

To learn more about Enphase offerings, visit [enphase.com](http://enphase.com)

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2018-09-13



# RT-MINI

Self-flashing base for asphalt & metal roof-top PV mounting systems

RT-MINI is suitable for mounting any rail system with a conventional L-Foot.

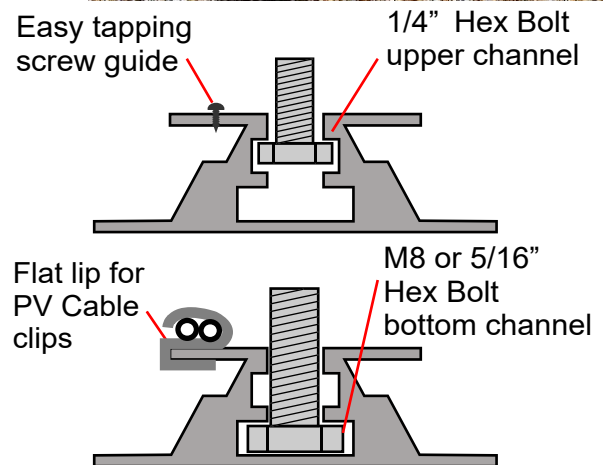


Dual bolt design: M8 or 5/16" for L-Foot & 1/4" for EMC



ICC ESR 3575

Call Now for more details  
858-935-6064



**Roof Tech**

Smarter PV mounting solutions from top of roof to bottom line®  
www.roof-tech.us info@roof-tech.us

# RT-MINI

Flexible Flashing certified by the International Code Council (ICC)

Engineered to ASTM D 1761 (Standard Test Methods for Mechanical Fasteners in Wood)

## Components

RT2-00-MINIBK

PAT : PENDING



MINI base : 20 ea.

Screw : 40 ea.

Extra RT-Butyl : 10 ea.

## Optional item

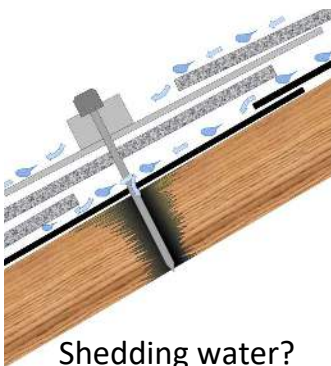
5 x 60mm Mounting screw (RT2-04-SD5-60) : 100 ea./Bag

5/16" Hex bolt, washer & nut set (RT-04-BN30SL-US) : 100 ea./Bag

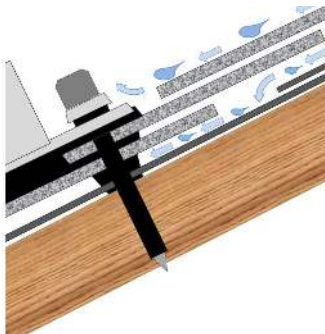
RT-Butyl (RT2-04-BUTYLT) : 10 ea./Box

RT-Butyl is Roof Tech's flexible flashing used in 700,000 residential PV systems for the last 24 years. It is the first PV mounting system with Flexible Flashing certified by the ICC.

Metal Flashing Retrofit



Flexible Flashing



Shedding water?

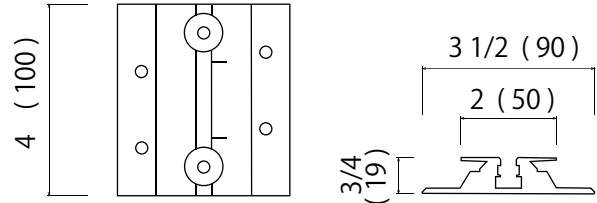
**100% Waterproof**

ICC ESR-3575

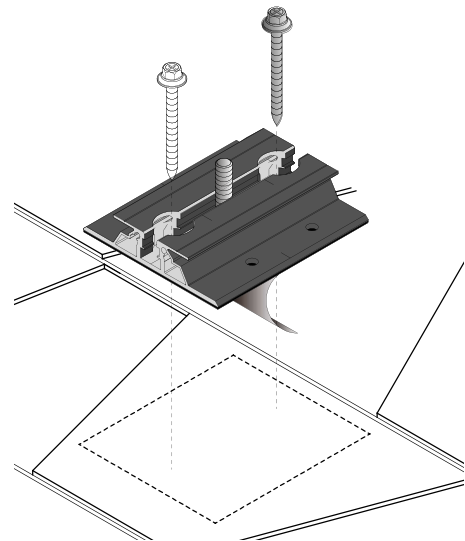
ASTM2140 testing UV testing (7500 hrs.)



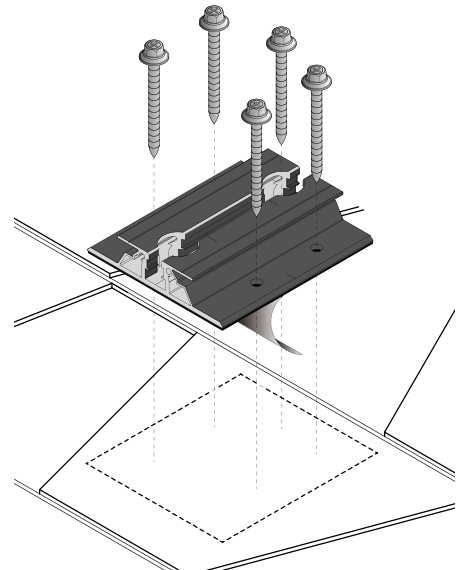
## Dimensions in (mm)



## Rafter installation



## Deck installation



P.E. Stamped Letters available at [www.roof-tech.us/support](http://www.roof-tech.us/support)

Roof Tech Inc.

[www.roof-tech.us](http://www.roof-tech.us)

[info@roof-tech.us](mailto:info@roof-tech.us)

10620 Trenea Street, Suite 230, San Diego, CA 92131

858.935.6064



Rev. 03-2020



# FLORIDA BUILDING CODE COMPLIANCE

## FLORIDA BUILDING CODE 2020 REQUIREMENTS

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Questions often arise in the solar industry as to the requirements for installing solar mounting systems in Dade and Broward counties and throughout the rest of the Florida. Outlined below are the four requirements to comply with the 2020 Florida Building Code. The first three requirements are necessary for solar racking systems, while the fourth is specific to solar roof attachments. The fifth item, Florida-specific testing, is optional for installation.

### 1 - UL CERTIFICATIONS

- ▶ Racking UL 2703 (Supplied by EcoFasten)
- ▶ Modules UL 1703 or UL 61730 (See module manufacturer website)
- ▶ Inverters UL 1741 (See inverter manufacturer website)

### 2 - MODULE LOAD RATING

- ▶ UL 1703 / UL 61730 load rating to meet site conditions pressure for project (see module manufacturer installation manual or data sheet)
- ▶ Or alternately, Module Mechanical Load Test Report to show that the module meets or exceed the site conditions load rating

### 3 - RACKING STRUCTURAL CAPACITY

- ▶ Florida PE stamped system capacity and span tables that meet site conditions and roof zones for the project (Supplied by EcoFasten)

### 4 - ROOF ATTACHMENTS

- ▶ Structural Capacity certification letters that meets or exceeds site conditions (Supplied by EcoFasten)
- ▶ Waterproofing/Flashing per NRCA & FRSA/TRI (Florida) guidelines (Supplied by EcoFasten, when applicable)

### 5 - OPTIONAL FLORIDA SPECIFIC TESTING OR CERTIFICATIONS

- ▶ Florida Product Approval
- ▶ Miami Dade NOA
- ▶ Water Seal Testing: TAS100(A) (required for HVHZ Florida Product Approval or Miami Dade NOA)

## ECOFASTEN ROOF ATTACHMENTS – FLORIDA COMPLIANT

---

EcoFasten offers two roof attachments that meet the specifications for installation in the State of Florida, which are GF-1® and QB-1 as shown below.

### GF-1®

GF-1® is a versatile solution for use on composition shingle roofs. The 8" x 12" flashing installs with a single fastener and when combined with an EcoFasten compression bracket, a watertight seal is created, maintaining the integrity of the roof.

Available GF-1® SKUs:

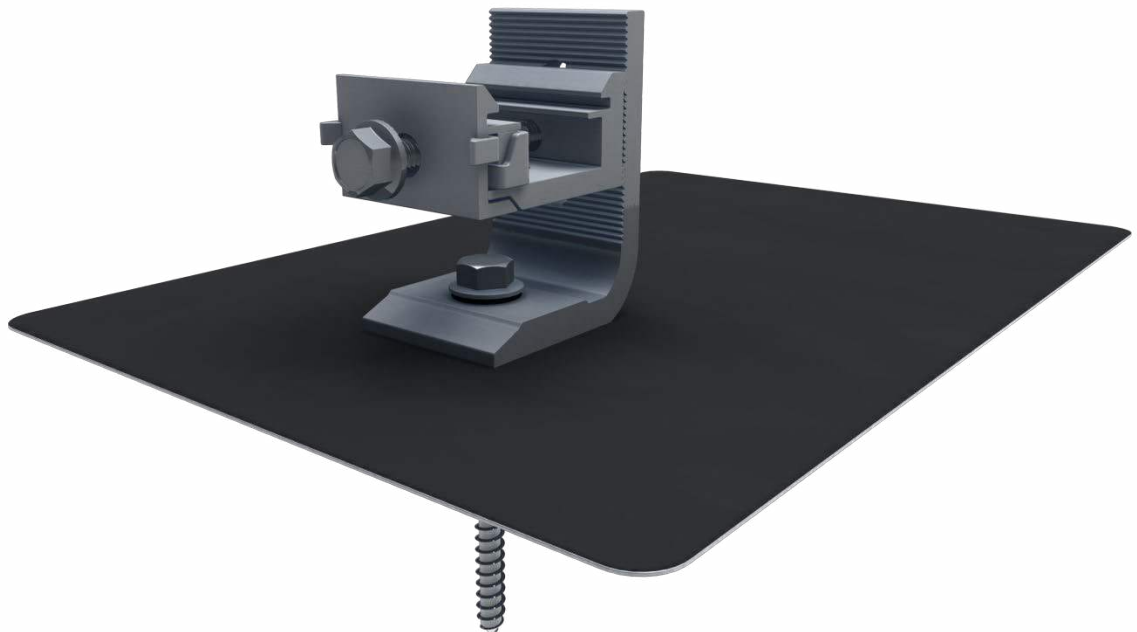
- 3012010 - GF-1 FLASHING GLV BLK 8x12"
- 3012011 - GF-1 FLASHING GLV MLL 8X12"

Available Compression Brackets:

- 2012022 - CF UNIV L-FOOT MLL 3"

GF-1® Structural Capacity Documentation for Permit Packets

- ▶ [ClickFit L-Foot Capacity Report 07.29.2021](#)
- ▶ [GF-1 Installation Manual Florida 08.11.2021 v2.0](#)



### QB-1

QB-1 uses a super strong base that can be used on composition shingle, tile, shake, slate, metal shingle, and low slope rooftops. This is a rail-based solution is ideal for new residential construction projects. The base can be installed prior to the roofing material, allowing for the roof to be shingled or tiled around the posts.

Available QB-1 SKUs:

- 3017010 - QB-1 BASE AL
- 3017011 - QB-1 POST AL MLL 4.5"
- 3017012 - QB-1 POST AL MLL 6.5"
- 3017013 - QB-1 FLASHING AL MLL 12X12"
- 3017014 - QB-1 FLASHING AL MLL 18X18"
- 3017015 - QB-1 EPDM COLLAR BLK 1.25"

QB-1 Structural Capacity Documentation for Permit Packets

- ▶ [QB-1 State of Florida Certification Letter 07.29.2021](#)
- ▶ [QB-1 Installation Manual 04.09.2021 v1.0](#)



### CLICKFIT®

ClickFit® is one of the fastest installing rail-based systems in the industry. With its click-in rail assembly, the rails can be connected to any of EcoFasten's composition shingle, tile, and metal roof mounts in seconds without the need for fasteners or tools. The ClickFit system is made of robust, anti-corrosive materials, such as aluminum and cold formed coated steel, to ensure the strength, corrosion resistance, and longevity.

Available ClickFit Rail SKUs:

- 2012021 - CF STD RAIL MLL AL 14FT
- 2012025 - CF STD RAIL AL MLL 171.5"

ClickFit UL 2703 Certification for Permit Packets

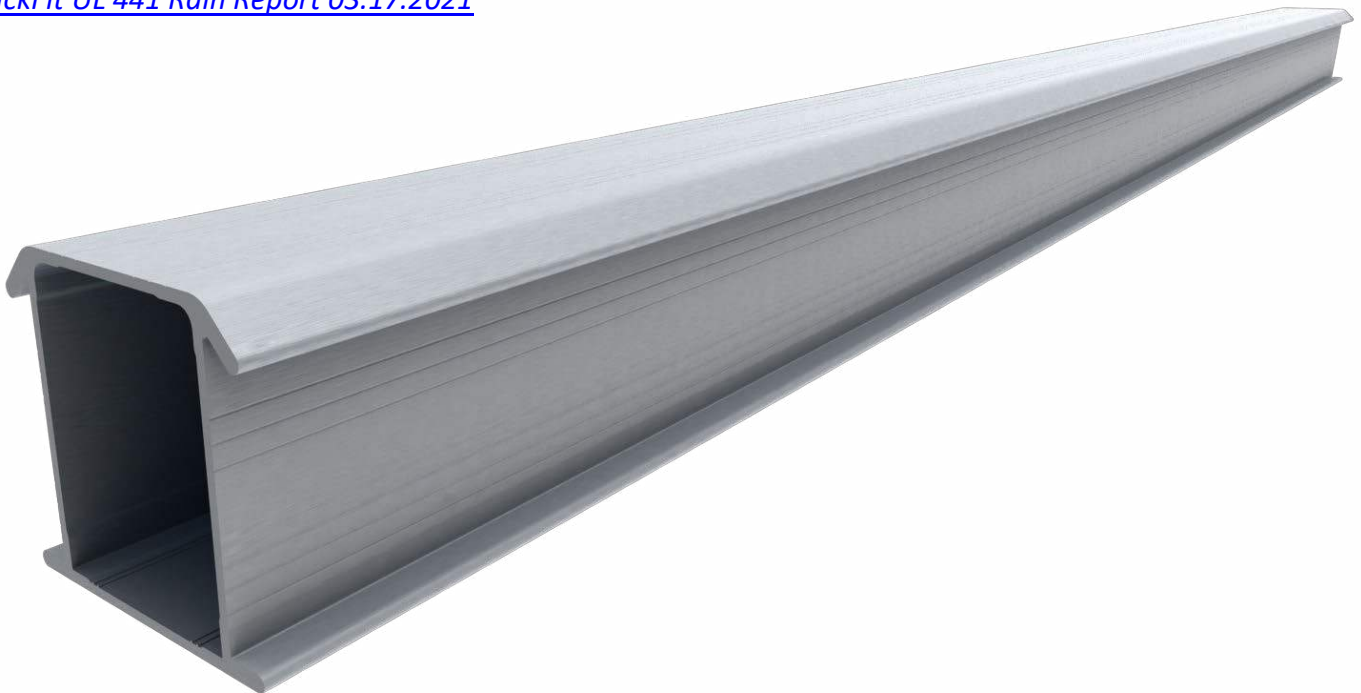
- ▶ [\*ClickFit UL 2703 Approved Installation Manual Version 07.06.2021 v2.5\*](#)
- ▶ [\*ClickFit UL 2703 Approved Addendum 06.07.2021 v1.1\*](#)

ClickFit Module Load Rating/Span Tables for Permit Packets

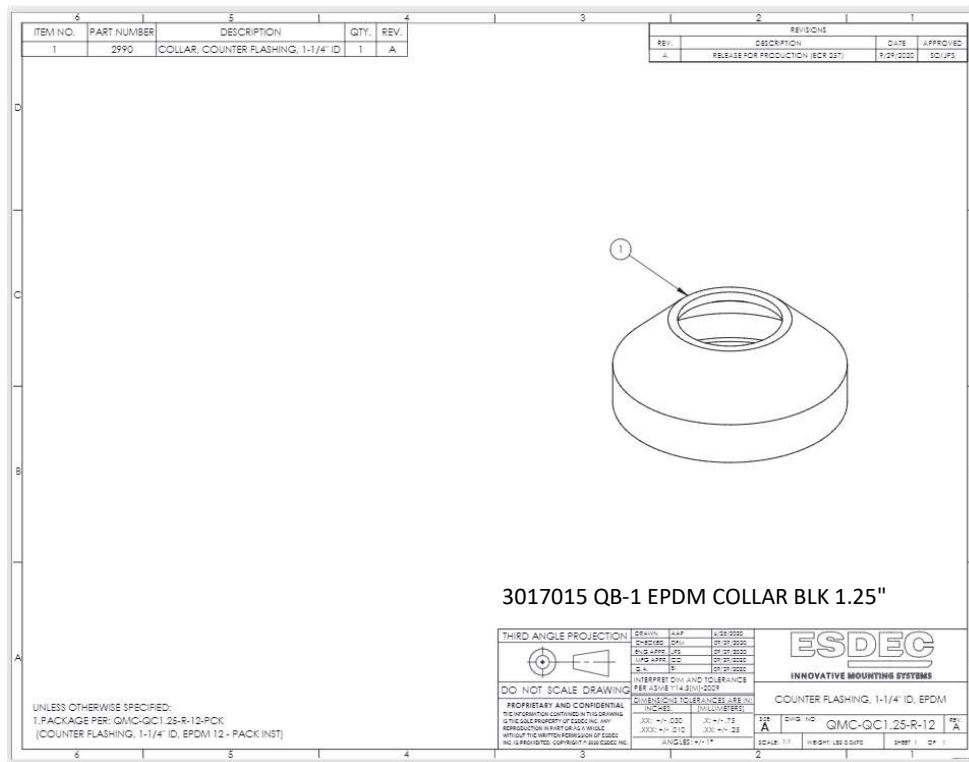
- ▶ [\*ClickFit Master Letter Certification 04.15.2021\*](#)

ClickFit Waterproofing for Permit Packets

- ▶ [\*ClickFit UL 441 Rain Report 03.17.2021\*](#)

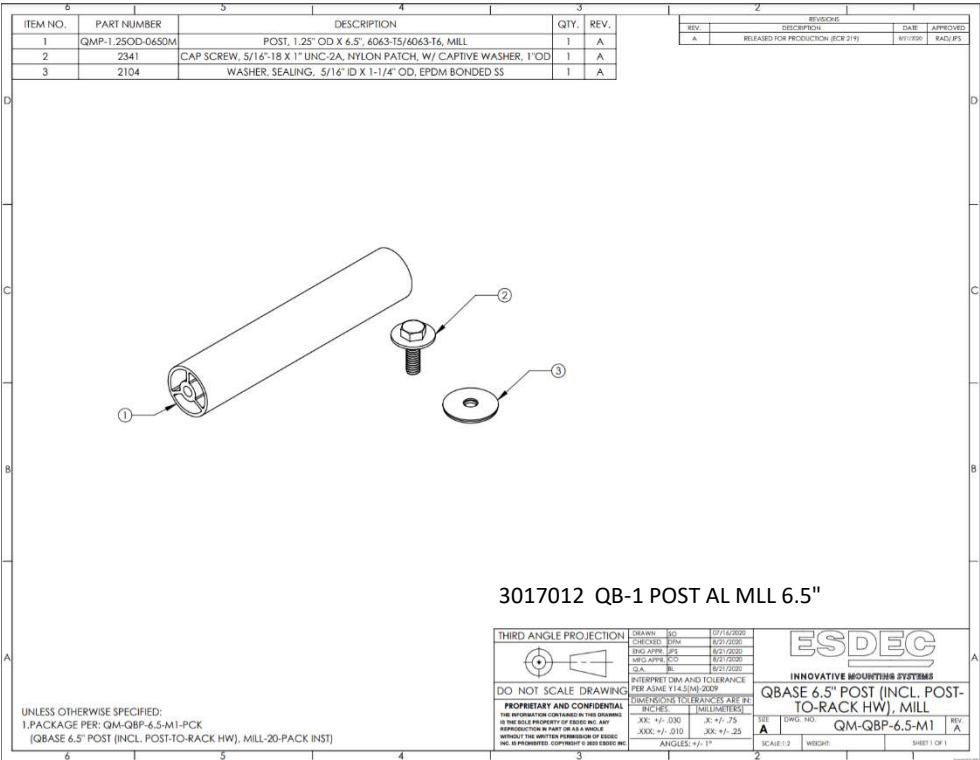
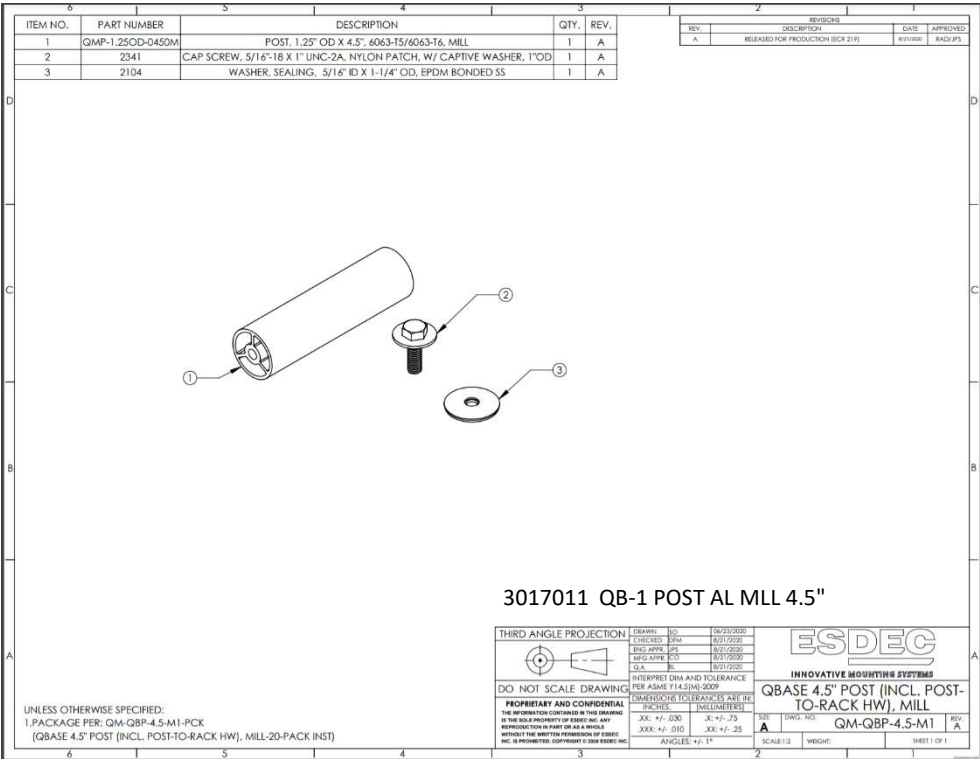


Designed and Certified for Compliance with the Florida Building Code & ASCE/SEI-7



Designed and Certified for Compliance with the Florida Building Code & ASCE/SEI-7

QB-1 CUT SHEETS



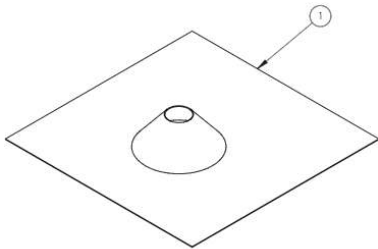
STRUCTURAL CERTIFICATION

Designed and Certified for Compliance with the Florida Building Code & ASCE/SEI-7

## QB-1 CUT SHEETS

| ITEM NO. | PART NUMBER | DESCRIPTION                                     | QTY. | REV. |
|----------|-------------|-------------------------------------------------|------|------|
| 1        | 1810        | FLASHING, CONE 12" X 12" X 1.8", ALUMINUM, MILL | 1    | A    |

| REVISIONS |                                  |           |          |
|-----------|----------------------------------|-----------|----------|
| REV.      | DESCRIPTION                      | DATE      | APPROVED |
| A         | RELEASE FOR PRODUCTION (PCR 338) | 9/14/2020 | SD/JPS   |

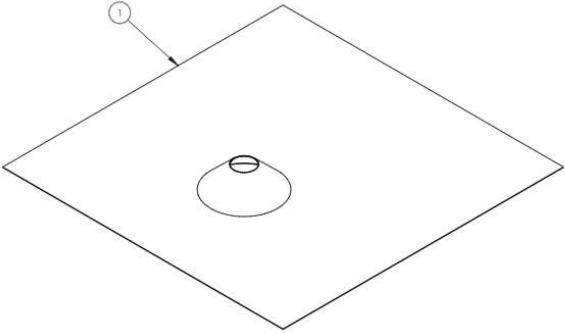


**3017013 QB-1 FLASHING AL MLL 12X12"**

|                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                      |                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>THIRD ANGLE PROJECTION</b><br>                                                                                                                                                       |  | DRAWN: GMP 9/13/2020<br>CHECKED: GMP 09/16/2020<br>DESIGNED: JPL 09/16/2020<br>DATE APPR: GMP 09/16/2020<br>DATE APPR: GMP 09/16/2020<br>DATE APPR: GMP 09/16/2020                   | <br><b>INNOVATIVE MOUNTING SYSTEMS</b>                                                            |
| <b>DO NOT SCALE DRAWING</b><br>PROPRIETARY AND CONFIDENTIAL<br>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ESDEC INC. ANY REPRODUCTION IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF ESDEC INC. IS PROHIBITED. COPYRIGHT © 2020 ESDEC INC. |  | DIMENSIONS TO SURFACE ARE UNLESS OTHERWISE SPECIFIED.<br>UNLESS OTHERWISE SPECIFIED:<br>1. PACKAGE PER: QMC-F12X12-A 1-PCK (SEAMLESS FLASHING, 12" x 12", 3003, MILL 12 - PACK INST) |                                                                                                                                                                                      |
| DIMENSIONS TO SURFACE ARE UNLESS OTHERWISE SPECIFIED.<br>UNLESS OTHERWISE SPECIFIED:<br>1. PACKAGE PER: QMC-F12X12-A 1-PCK (SEAMLESS FLASHING, 12" x 12", 3003, MILL 12 - PACK INST)                                                                                     |  | DIMENSIONS TO SURFACE ARE UNLESS OTHERWISE SPECIFIED.<br>UNLESS OTHERWISE SPECIFIED:<br>1. PACKAGE PER: QMC-F12X12-A 1-PCK (SEAMLESS FLASHING, 12" x 12", 3003, MILL 12 - PACK INST) | DIMENSIONS TO SURFACE ARE UNLESS OTHERWISE SPECIFIED.<br>UNLESS OTHERWISE SPECIFIED:<br>1. PACKAGE PER: QMC-F12X12-A 1-PCK (SEAMLESS FLASHING, 12" x 12", 3003, MILL 12 - PACK INST) |

| ITEM NO. | PART NUMBER | DESCRIPTION                                 | QTY. | REV. |
|----------|-------------|---------------------------------------------|------|------|
| 1        | 1310        | FLASHING, CONE 18"X18"X.032", 3003 AL. MILL | 1    | A    |

| REVISIONS |                                  | DATE      | APPROVED |
|-----------|----------------------------------|-----------|----------|
| REV.      | DESCRIPTION                      |           |          |
| A.        | RELEASE FOR PRODUCTION (RCK ZSB) | 9/14/2020 | SC/JP    |



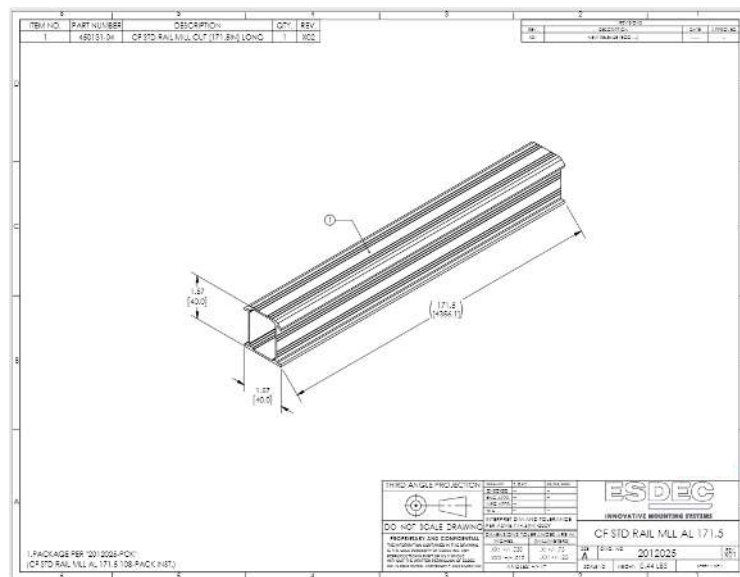
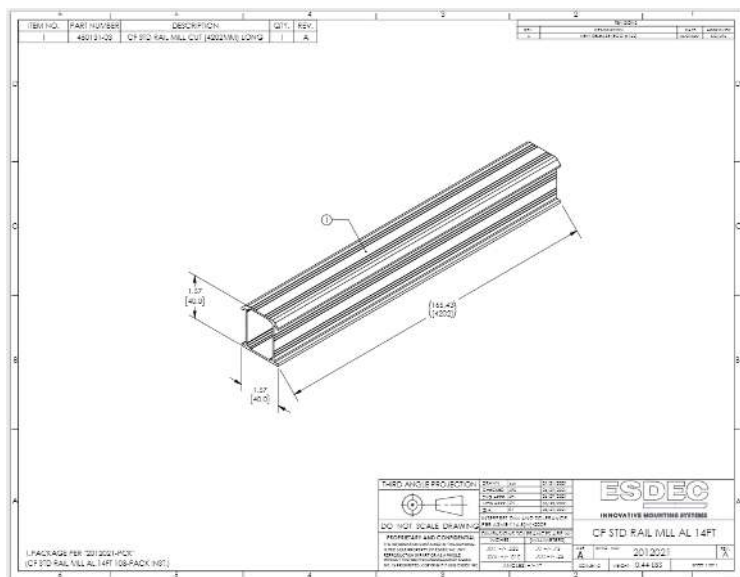
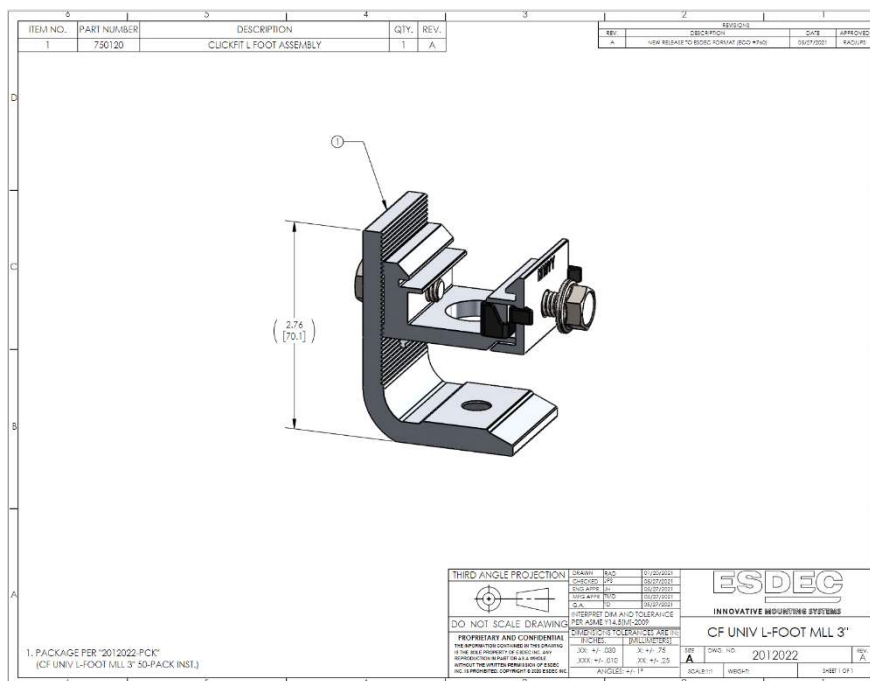
**3017014 QB-1 FLASHING AL MLL 18X18"**

|                                                                                                                                                                                                                                                                                                             |  |                                                                                                                            |                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>THIRD ANGLE PROJECTION</b><br>                                                                                                                                                                                        |  | DRAWN: JAP 1/24/2020<br>CHECKED: DMH 02/11/2020<br>DESIGNED: JFL 02/11/2020<br>CADD: JFL 02/11/2020<br>S.A.: GS 02/11/2020 | <br><b>INNOVATIVE MOUNTING SYSTEMS</b> |
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| UNLESS OTHERWISE SPECIFIED:<br>1. PACKAGE PER: QMC-F18X18-A-1-PCK<br>(SEAMLESS FLASHING, 18" x 18", 3003, MILL 12 - PACK INST)                                                                                                                                                                              |  | SIZE: 1/8" DIA<br>QMC-F18X18-A-1<br>SCALE: 1/8" = 1"                                                                       | SHEET: 1 OF 1                                                                                                               |

## WATERPROOFING PER NRCA GUIDELINES

Designed and Certified for Compliance with the Florida Building Code & ASCE/SEI-7

## CLICKFIT CUT SHEETS



### STRUCTURAL CERTIFICATION

Designed and Certified for Compliance with the Florida Building Code & ASCE/SEI-7

UL 2703

Conforms to UL 2703 Mechanical & Bonding requirements. See EcoFasten ClickFit Installation Manual for full ratings.

## PERMITTING PACKETS

---

Listed below is the documentation you will need to provide to your AHJ for permitting approval. Click on the link to download file.

### UL 2703 CERTIFICATIONS:

- ▶ [ClickFit UL 2703 Approved Installation Manual Version 07.06.2021 v2.5](#)
- ▶ [ClickFit UL 2703 Approved Addendum 06.07.2021 v1.1](#)

### STRUCTURAL CERTIFICATIONS:

- ▶ [ClickFit L-Foot Capacity Report 07.29.2021](#)
- ▶ [ClickFit Master Letter Certification 04.15.2021](#)
- ▶ [GF-1 Installation Manual Florida 08.11.2021 v2.0](#)
- ▶ [QB-1 State of Florida Certification Letter 07.29.2021](#)

### WATERPROOFING:

- ▶ [ClickFit UL 441 Rain Report 03.17.2021](#)

### INSTALLATION MANUALS:

- ▶ [GF-1 Installation Manual Florida 08.11.2021 v2.0](#)
- ▶ [QB-1 Installation Manual 04.09.2021 v1.0](#)

### OPTIONAL CUT SHEETS:

- ▶ [2012021 - CF STD RAIL MLL AL 14FT Cut Sheet](#)
- ▶ [2012022 - CF UNIV L-FOOT MLL 3" Cut Sheet](#)
- ▶ [2012025 - CF STD RAIL AL MLL 171.5" Cut Sheet](#)
- ▶ [3012010 - GF-1 FLASHING GLV BLK 8x12" Cut Sheet](#)
- ▶ [3012011 - GF-1 FLASHING GLV MLL 8X12" Cut Sheet](#)
- ▶ [3017010 - QB-1 BASE AL Cut Sheet](#)
- ▶ [3017011 - QB-1 POST AL MLL 4.5" Cut Sheet](#)
- ▶ [3017012 - QB-1 POST AL MLL 6.5" Cut Sheet](#)
- ▶ [3017013 - QB-1 FLASHING AL MLL 12X12" Cut Sheet](#)
- ▶ [3017014 - QB-1 FLASHING AL MLL 18X18" Cut Sheet](#)
- ▶ [3017015 - QB-1 EPDM COLLAR BLK 1.25" Cut Sheet](#)

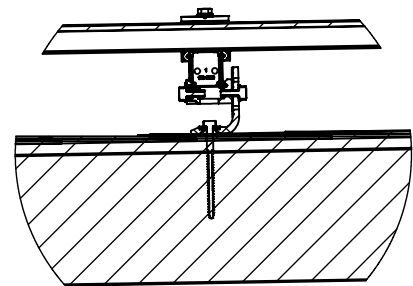
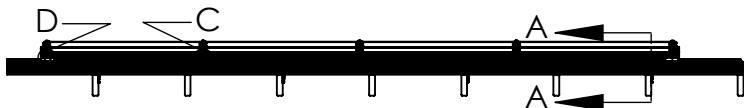
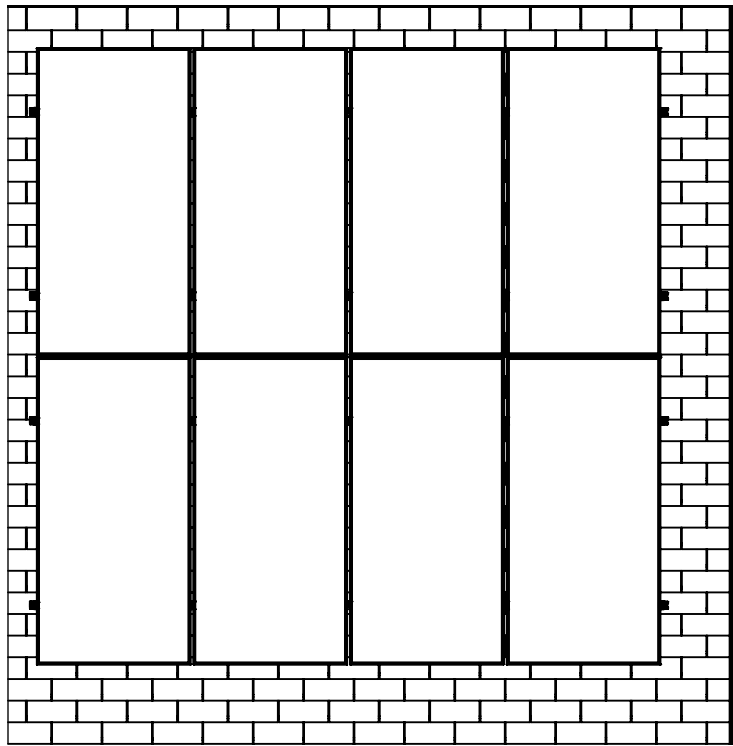
## CONTACT ECOFASTEN

---

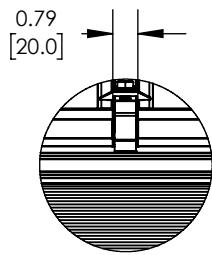
4141 W Van Buren Street, Suite 2, Phoenix, AZ 85009

877.859.3947 | [ecofastensolar.com](http://ecofastensolar.com)

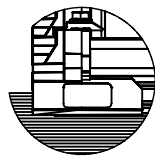




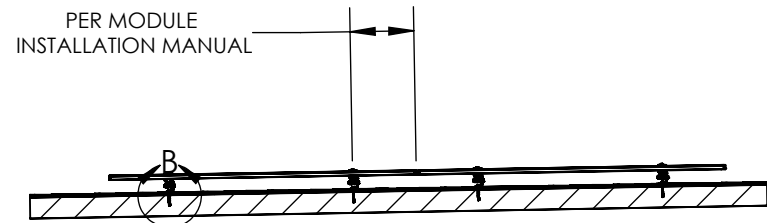
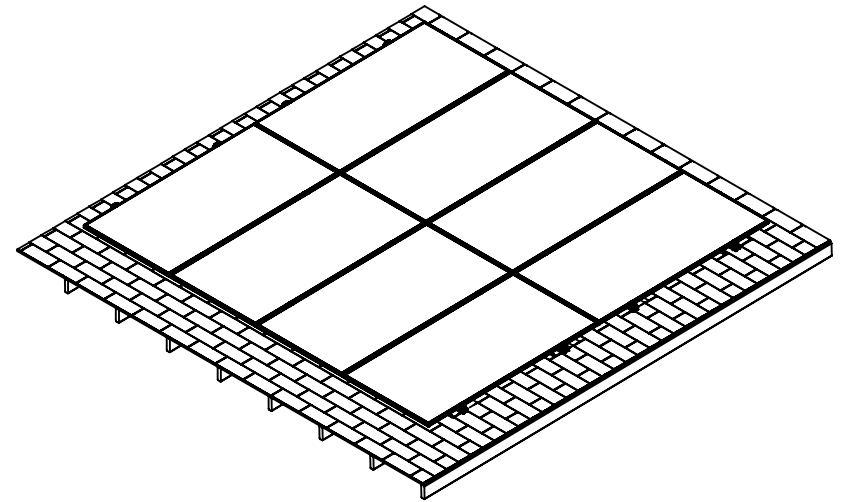
DETAIL B  
SCALE 1 : 8



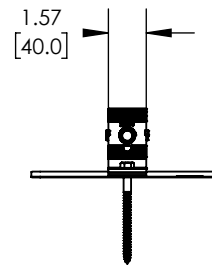
DETAIL C  
SCALE 1 : 6



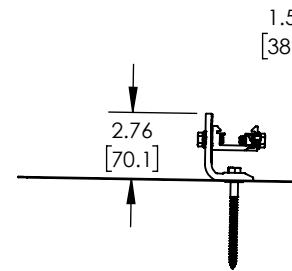
DETAIL D  
SCALE 1 : 6



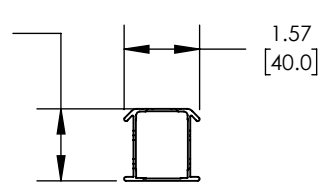
SECTION A-A



FRONT VIEW  
L-FOOT

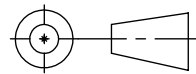


SIDE VIEW  
L-FOOT



FRONT VIEW RAIL

THIRD ANGLE PROJECTION



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|           |        |            |
|-----------|--------|------------|
| DRAWN     | T. RAY | 06/23/2021 |
| CHECKED   | -      | -          |
| ENG APPR. | -      | -          |
| MFG APPR. | -      | -          |
| Q.A.      | -      | -          |

INTERPRET DIM AND TOLERANCE  
PER ASME Y14.5[M]-2009

DIMENSIONS TOLERANCES ARE IN:

| INCHES.        | [MILLIMETERS] |
|----------------|---------------|
| .XX: +/- .030  | .X: +/- .75   |
| .XXX: +/- .010 | .XX: +/- .25  |

ANGLES: +/- 1°

**ESDEC**

INNOVATIVE MOUNTING SYSTEMS

**CLICKFIT COMP SHINGLE**

|                  |                                |                    |
|------------------|--------------------------------|--------------------|
| SIZE<br><b>A</b> | DWG. NO.<br><b>XX-XXXX-XXX</b> | REV.<br><b>X01</b> |
|------------------|--------------------------------|--------------------|

SCALE: 1:50

WEIGHT:

SHEET 1 OF 2



April 22, 2021

EcoFasten Solar LLC  
4141 W Van Buren St, Ste 2  
Phoenix, AZ 85009  
TEL: (877) 859-3947

Attn.: Eco Fasten Solar - Engineering Department

Re: Report # 2019-11325HG.05.01 – EcoFasten - ClickFit System for Gable and Hip Roofs  
Subject: Engineering Certification for the State of Florida

PZSE, Inc. – Structural Engineers has provided engineering and span tables for the EcoFasten - ClickFit System, as presented in PZSE Report # 2019-11325HG.05.01, "Engineering Certification for the EcoFasten - ClickFit System for Gable and Hip Roofs". All information, data, and analysis therein are based on, and comply with, the following building codes and typical specifications:

- Building Codes:
1. 2020 Florida Building Code, by Florida Building Commission
  2. ASCE/SEI 7-16, Minimum Design Loads for Buildings and Other Structures, by American Society of Civil Engineers
  3. 2018 International Building Code, by International Code Council, Inc.
  4. 2018 International Residential Code, by International Code Council, Inc.
  5. AC428, Acceptance Criteria for Modular Framing Systems Used to Support Photovoltaic (PV) Panels, November 1, 2012 by ICC-ES
  6. Aluminum Design Manual 2015, by The Aluminum Association, Inc.
  7. ANSI/AWC NDS-2018, National Design Specification for Wood Construction, by the American Wood Council

Design Criteria:

Risk Category II  
Seismic Design Category = A - E  
Exposure Category = B, C & D  
Basic Wind Speed (ultimate) per ASCE 7-16 = 90 mph to 180 mph  
Ground Snow Load = 0 to 60 (psf)

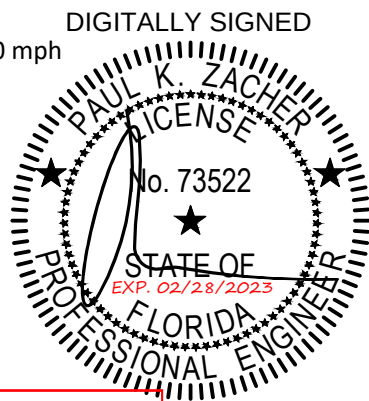
This letter certifies that the loading criteria and design basis for the EcoFasten - ClickFit System Span Tables are in compliance with the above codes.

If you have any questions on the above, do not hesitate to call.

Prepared by:  
PZSE, Inc. – Structural Engineers  
Roseville, CA

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY PAUL K. ZACHER, PE ON 04/22/2021 USING A SHA-1 AUTHENTICATION CODE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SHA-1 AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.





April 15, 2021

EcoFasten Solar LLC  
4141 W Van Buren St, Ste 2  
Phoenix, AZ 85009  
TEL: (877) 859-3947

Attn.: EcoFasten Solar LLC - Engineering Department

Re: Report # 2019-11325HG5.01 Engineering Certification for the EcoFasten Solar LLC ClickFit - Rail System for Gable and Hip Roof.

PZSE, Inc. - Structural Engineers have reviewed EcoFasten Solar LLC ClickFit System. All information, data, and analysis contained within the EcoFasten Solar LLC ClickFit System Rail span tables are based on and comply with the following codes:

1. Minimum Design Loads for Buildings and Other Structures, ASCE/SEI 7-16
2. 2018 International Building Code, by the International Code Council, Inc.
3. 2018 International Residential Code, by the International Code Council, Inc.
4. AC428, Acceptance Criteria for Modular Framing Systems Used to Support Photovoltaic (PV) Panels, November 1, 2012, by ICC-ES
5. Aluminum Design Manual 2015, by The Aluminum Association, Inc.

Following are typical specifications to meet the above code requirements:

|                            |                                                                                                                                                                                                                         |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Design Criteria:</b>    | Ground Snow Load = 0 - 60 (psf)<br>Basic Wind Speed = 90 - 180 (mph)<br>Roof Mean Height = 0 - 30 (ft)<br>Enclosed and Partially Enclosed Gable and Hip Roof Pitch = 0° - 60° (degrees)<br>Exposure Category = B, C & D |
| <b>Attachment Devices:</b> | The evaluation of the ClickFit System considers the ClickFit L-Foot.                                                                                                                                                    |
| <b>Rail:</b>               | The evaluation of the ClickFit System Rail p/n 2012021 (450124, REV X03), made with an aluminum alloy, 6000 series, with a minimum yield strength of 35 ksi.                                                            |
| <b>Cantilever:</b>         | Maximum cantilever length is L/3, where "L" is the span noted in the Span Tables, provided at least 1 module length between maximum cantilevers.                                                                        |

- Clearance:** 2" to 10" clear from the top of the roof to the top of the PV panel.
- Tolerance(s):** 1.0" tolerance for any specified dimension in this report is allowed for installation.
- PV Module Size:** 60-Cell PV Panel max dimension is 68.5".  
72-Cell PV Panel max dimension is 80.4".
- Installation Orientation:** Landscape (L) - PV Panel long dimension is parallel to the ridge/eave line of the roof, and the PV panel is mounted on the short side.  
Portrait (P) - PV Panel short dimension is parallel to the ridge/eave line of the roof, and the PV panel is mounted on the long side.

### Components and Cladding Roof Zones:

#### Roof Zones – Enclosed and Partially Enclosed Gable Roofs, $\theta \leq 7^\circ$ :

The zones shall be determined using figure 30.3-2A of ASCE 7-16. See Figure 1.

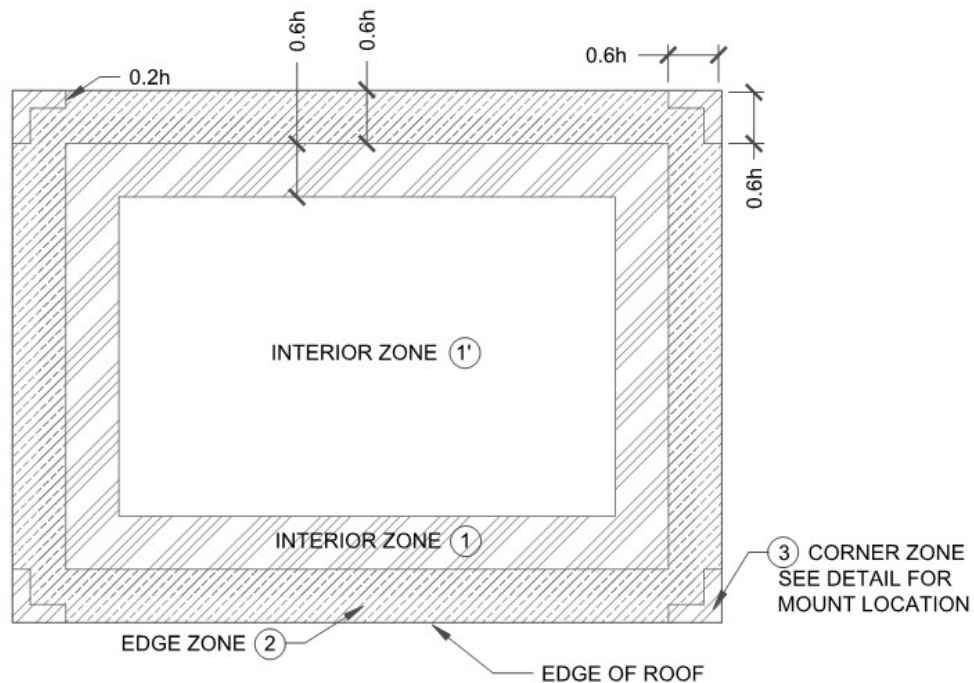


Figure 1: Roof Edge and Corner Zones, Gable Roofs,  $\theta \leq 7^\circ$

### Roof Zones – Enclosed and Partially Enclosed Gable and Hip Roofs, $7^\circ < \theta \leq 60^\circ$ :

The Edge Zone, “a,” shall be determined using figure 30.3-2B to figure 30.3-2D of ASCE 7-16, for Gable roofs. The Edge Zone, “a,” shall be determined using figure 30.3-2E to figure 30.3-2I of ASCE 7-16, for Hip roofs. Interior Zone 1 span shall be the minimum of 1 and 1’ (See ClickFit System Rail Span Chart). Corner Zone 3 spans shall be the shortest of 3e and 3r (See ClickFit System Rail Span Chart). See Figure 2.

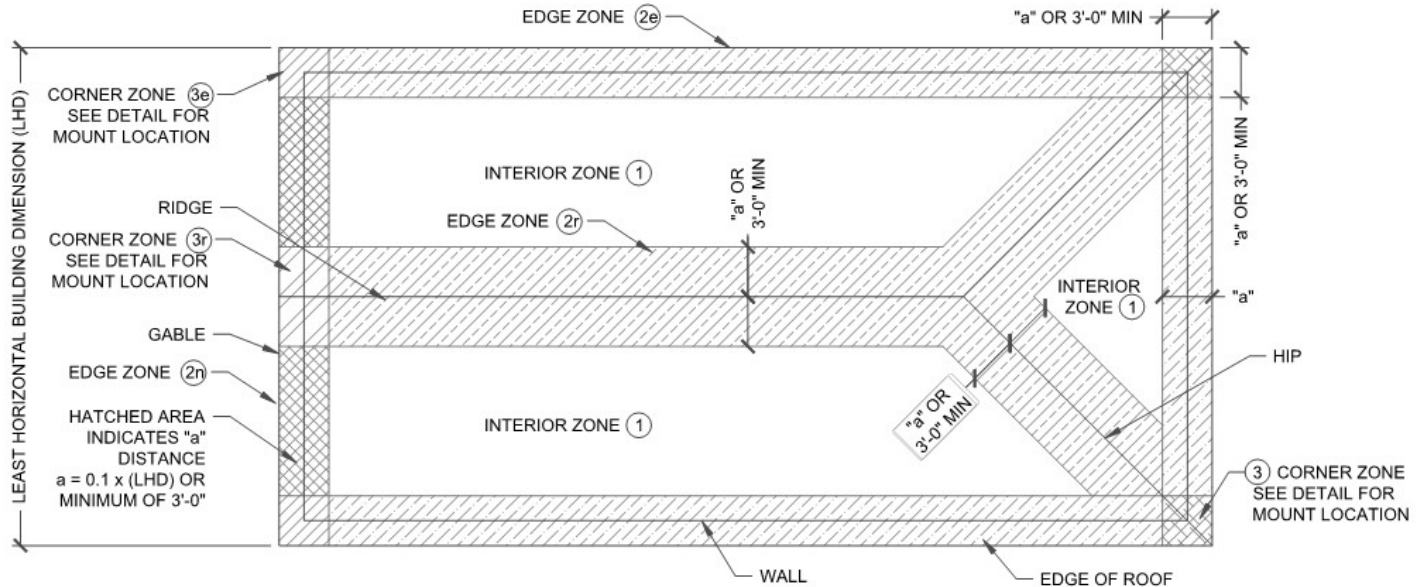


Figure 2: Roof Zones, Gable and Hip Roofs,  $7^\circ < \theta \leq 45^\circ$

### Panel with Support Mounts in Multiple Roof Zones:

Edge and Corner Zone spacings (Zone 2 & 3, respectively) apply only to mounts located in those Zones, not to all the mounts supporting the module.

- Notes:
- 1) Tables are determined for Rail and L-foot only and does not include roof capacity check.
  - 2) Risk Category II per ASCE 7-16.
  - 3) Topographic factor,  $k_{zt}$  is 1.0.
  - 4) Average parapet height is 0.0 ft.
  - 5) Wind speeds are LRFD values.
  - 6) Attachment spacing(s) apply to a seismic design category E or less.

### Panel Array Edge:

Panels exposed at array edge shall use figure 29.4-7 of ASCE 7-16 to determine “ $d_1$ ” and “ $d_2$ ” to apply “Array Edge” spans that apply to an array layout. See figure 3.

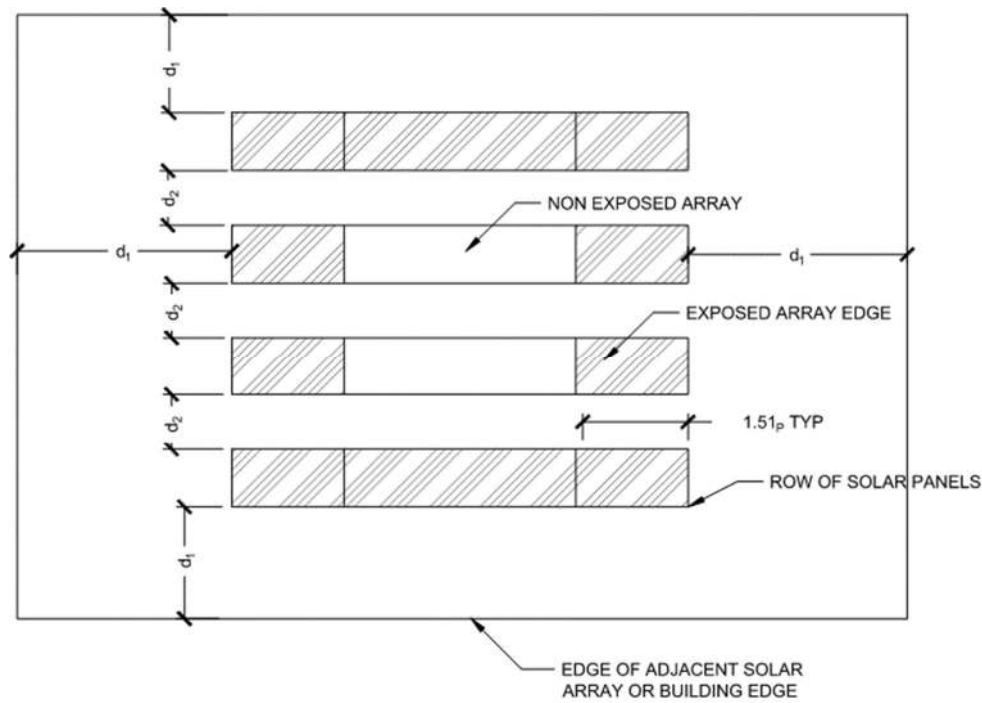


Figure 3: Array Edge

#### Design Responsibility:

These tables are intended to be used under the responsible charge of a registered design professional where required by the authority having jurisdiction. In all cases, these tables should be used under the direction of a design professional with sufficient structural engineering knowledge and experience to be able to:

- Evaluate whether these tables apply to the project, and
- Understand and determine the appropriate values for all input parameters of these tables.

This letter certifies that the EcoFasten Solar LLC ClickFit Railed System, when installed according to the limitations of this letter and the attached span tables, complies with the above codes and loading criteria. This certification excludes evaluation of the building structure to support the loads imposed on the building by the array; including, but not limited to strength and deflection of structural framing members, fastening and/or strength of roofing materials, and/or the effects of snow accumulation on the roof. Structures will require additional knowledge of the building and are outside the scope of the certification of this racking system.

If you have any questions on the above, do not hesitate to call.

Prepared by:

PZSE, Inc. – Structural Engineers  
Roseville



## Table of Contents

---

| Item .....                                                                                                     | Page # |
|----------------------------------------------------------------------------------------------------------------|--------|
| Part 1: EcoFasten Flush-Mount ClickFit System with L-foot - Enclosed Hip and Gable .....                       |        |
| Span Tables for Flush-Mount ClickFit System on 0-30 Foot Roof, 60-Cell Modules - Portrait .....                | 6      |
| Span Tables for Flush-Mount ClickFit System on 0-30 Foot Roof with 72-Cell Modules - Portrait .....            | 14     |
| Span Tables for Flush-Mount ClickFit System on 0-30 Foot Roof with 60-Cell & 72-Cell Modules - Landscape ..... | 22     |
| Appendix A: Ecofasten ClickFit Cut Sheets .....                                                                | 30     |

| Maximum Rail Spans (Inches) |                   |             |                | ClickFit Rail 450124 (REVX03) Flush-Mount on 0 to 30 Foot Roof -- L-Foot -- 60-Cell |    |    |    |    |    |        |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------|-------------------|-------------|----------------|-------------------------------------------------------------------------------------|----|----|----|----|----|--------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Ground Snow Load            | Exposure Category | Panel Angle | Wind Speed-->  | 90 mph                                                                              |    |    |    |    |    | 95 mph |    |    |    |    |    | 100 mph |    |    |    |    |    | 105 mph |    |    |    |    |    | 110 mph |    |    |    |    |    | 115 mph |    |    |    |    |    | 120 mph |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Roof Zone-->   | 1'                                                                                  | 1  | 2e | 2r | 2n | 3e | 3r     | 1' | 1  | 2e | 2r | 2n | 3e      | 3r | 1' | 1  | 2e | 2r | 2n      | 3e | 3r | 1' | 1  | 2e | 2r      | 2n | 3e | 3r | 1' | 1  | 2e      | 2r | 2n | 3e | 3r | 1' | 1       | 2e | 2r | 2n | 3e | 3r | 1' | 1  | 2e | 2r | 2n | 3e | 3r |    |    |    |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 psf                       | B                 | 0 to 7      | Array Interior | 86                                                                                  | 86 | 86 | 86 | 86 | 82 | 82     |    | 86 | 86 | 86 | 86 | 86      | 78 | 78 |    | 86 | 86 | 85      | 85 | 85 | 76 | 76 |    | 86      | 86 | 82 | 82 | 82 | 73 | 73      |    | 86 | 86 | 80 | 80 | 80      | 70 | 70 |    | 86 | 86 | 77 | 77 | 77 | 68 | 68 |    | 86 | 83 | 75 | 75 | 75 | 66 | 66 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 86                                                                                  | 86 | 79 | 79 | 79 | 70 | 70     |    | 86 | 85 | 76 | 76 | 76      | 68 | 68 |    | 86 | 82 | 73      | 73 | 73 | 65 | 65 |    | 86      | 79 | 71 | 71 | 71 | 63 | 63      |    | 86 | 77 | 69 | 69 | 69      | 61 | 61 |    | 86 | 74 | 66 | 66 | 66 | 59 | 59 |    | 86 | 72 | 64 | 64 | 64 | 56 | 56 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 7 to 20     | Array Interior | 87                                                                                  | 87 | 87 | 83 | 83 | 83 | 78     |    | 87 | 87 | 87 | 80 | 80      | 80 | 75 |    | 87 | 87 | 87      | 77 | 77 | 77 | 72 |    | 87      | 87 | 87 | 74 | 74 | 74 | 70      |    | 84 | 84 | 84 | 72 | 72      | 72 | 67 |    | 81 | 81 | 81 | 70 | 70 | 70 | 65 |    | 78 | 78 | 78 | 68 | 68 | 68 | 63 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 83                                                                                  | 83 | 83 | 72 | 72 | 72 | 67     |    | 80 | 80 | 80 | 69 | 69      | 69 | 65 |    | 77 | 77 | 77      | 67 | 67 | 67 | 62 |    | 74      | 74 | 74 | 64 | 64 | 64 | 60      |    | 72 | 72 | 72 | 62 | 62      | 62 | 58 |    | 70 | 70 | 70 | 60 | 60 | 60 | 55 |    | 68 | 68 | 68 | 58 | 58 | 58 | 53 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 20 to 27    | Array Interior | 87                                                                                  | 87 | 87 | 87 | 87 | 87 | 87     |    | 87 | 87 | 87 | 86 | 86      | 86 | 83 |    | 87 | 87 | 87      | 82 | 82 | 82 | 80 |    | 87      | 87 | 87 | 80 | 80 | 80 | 77      |    | 87 | 87 | 87 | 77 | 77      | 77 | 75 |    | 87 | 87 | 87 | 74 | 74 | 74 | 72 |    | 87 | 87 | 87 | 72 | 72 | 72 | 70 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 87                                                                                  | 87 | 87 | 77 | 77 | 77 | 75     |    | 87 | 87 | 87 | 74 | 74      | 74 | 72 |    | 86 | 86 | 86      | 71 | 71 | 71 | 63 |    | 83      | 83 | 83 | 69 | 69 | 69 | 67      |    | 80 | 80 | 80 | 66 | 66      | 66 | 65 |    | 77 | 77 | 77 | 64 | 64 | 64 | 63 |    | 75 | 75 | 75 | 62 | 62 | 62 | 61 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 27 to 45    | Array Interior | 88                                                                                  | 88 | 88 | 88 | 88 | 88 | 88     |    | 88 | 88 | 88 | 88 | 88      | 85 | 88 |    | 88 | 88 | 88      | 88 | 88 | 82 | 88 |    | 88      | 88 | 88 | 88 | 86 | 79 | 86      |    | 86 | 86 | 86 | 86 | 76      | 83 |    | 83 | 83 | 83 | 83 | 80 | 74 | 80 |    | 81 | 81 | 81 | 81 | 78 | 72 | 78 |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 86                                                                                  | 86 | 86 | 86 | 83 | 76 | 83     |    | 83 | 83 | 83 | 83 | 79      | 73 | 79 |    |    |    |         |    |    |    |    |    |         | 77 | 77 | 77 | 74 | 68 | 74      |    | 72 | 72 | 72 | 72 | 62      | 62 | 62 | 69 |    | 70 | 70 | 70 | 60 | 60 | 60 | 67 |    | 67 | 67 | 67 | 67 | 62 | 67 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 45 to 60    | Array Interior | 90                                                                                  | 90 | 90 | 90 | 90 | 90 | 90     |    | 90 | 90 | 90 | 90 | 90      | 90 | 90 |    | 90 | 90 | 90      | 90 | 90 | 90 | 90 |    | 90      | 90 | 90 | 90 | 90 | 90 | 90      |    | 90 | 90 | 90 | 90 | 90      | 90 | 90 |    | 90 | 90 | 90 | 90 | 90 | 90 | 90 |    | 90 | 90 | 90 | 90 | 90 | 90 | 90 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 90                                                                                  | 90 | 90 | 90 | 90 | 90 | 90     |    | 90 | 90 | 90 | 90 | 90      | 90 | 90 |    | 90 | 90 | 86      | 86 | 86 | 86 | 86 |    | 87      | 87 | 83 | 83 | 83 | 83 | 83      |    | 85 | 85 | 81 | 81 | 81      | 81 | 81 |    | 83 | 83 | 78 | 78 | 78 | 78 | 78 |    | 81 | 81 | 76 | 76 | 76 | 76 | 76 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             | C                 | 0 to 7      | Array Interior | 86                                                                                  | 86 | 81 | 81 | 81 | 72 | 72     |    | 86 | 86 | 78 | 78 | 78      | 69 | 69 |    | 86 | 84 | 75      | 75 | 75 | 67 |    | 86 | 81      | 73 | 73 | 73 | 65 | 65 |         | 86 | 79 | 70 | 70 | 70 | 62      | 62 |    | 86 | 76 | 68 | 68 | 68 | 61 | 61 |    | 86 | 74 | 66 | 66 | 66 | 58 | 58 |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 86                                                                                  | 78 | 70 | 70 | 70 | 62 | 62     |    | 86 | 75 | 68 | 68 | 68      | 60 | 60 |    | 86 | 73 | 65      | 65 | 65 | 57 |    | 86 | 70      | 63 | 63 | 63 | 54 | 54 |         | 86 | 68 | 61 | 61 | 61 | 52      | 52 |    | 83 | 66 | 59 | 59 | 59 | 49 | 49 |    | 80 | 64 | 56 | 56 | 56 | 47 | 47 |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 7 to 20     | Array Interior | 86                                                                                  | 86 | 86 | 74 | 74 | 74 | 69     |    | 82 | 82 | 82 | 71 | 71      | 71 | 66 |    | 79 | 79 | 79      | 68 | 68 | 64 |    | 76 | 76      | 76 | 66 | 66 | 66 | 62 |         | 74 | 74 | 74 | 64 | 64 | 64      | 60 |    | 71 | 71 | 71 | 62 | 62 | 62 | 57 |    | 69 | 69 | 69 | 60 | 60 | 60 | 60 |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Interior | 74                                                                                  | 74 | 74 | 64 | 64 | 64 | 60     |    | 71 | 71 | 71 | 61 | 61      | 61 | 56 |    | 68 | 68 | 68      | 59 | 59 | 59 | 54 |    | 66      | 66 | 66 | 56 | 56 | 56 | 51      |    | 64 | 64 | 64 | 53 | 53      | 53 | 48 |    | 62 | 62 | 62 | 51 | 51 | 51 | 46 |    | 60 | 60 | 60 | 49 | 49 | 49 | 44 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 20 to 27    | Array Interior | 87                                                                                  | 87 | 87 | 79 | 79 | 79 | 76     |    | 87 | 87 | 87 | 76 | 76      | 76 | 74 |    | 87 | 87 | 87      | 73 | 73 | 73 | 61 |    | 85      | 85 | 85 | 70 | 70 | 70 | 68      |    | 82 | 82 | 82 | 68 | 68      | 68 | 66 |    | 79 | 79 | 79 | 66 | 66 | 66 | 64 |    | 77 | 77 | 77 | 64 | 64 | 64 | 62 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 82                                                                                  | 82 | 82 | 68 | 68 | 68 | 66     |    | 79 | 79 | 79 | 65 | 65      | 65 | 64 |    | 76 | 76 | 76      | 63 | 63 | 63 | 61 |    | 73      | 73 | 73 | 61 | 61 | 61 | 59      |    | 71 | 71 | 71 | 59 | 59      | 59 | 56 |    | 68 | 68 | 68 | 56 | 56 | 56 | 54 |    | 66 | 66 | 66 | 53 | 53 | 53 | 51 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 27 to 45    | Array Interior | 88                                                                                  | 88 | 88 | 88 | 88 | 88 | 88     |    | 88 | 88 | 88 | 88 | 88      | 85 | 88 |    | 88 | 88 | 88      | 88 | 88 | 82 | 88 |    | 88      | 88 | 88 | 88 | 86 | 79 | 86      |    | 86 | 86 | 86 | 86 | 76      | 83 |    | 83 | 83 | 83 | 83 | 80 | 74 | 80 |    | 81 | 81 | 81 | 81 | 78 | 72 | 78 |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 76                                                                                  | 76 | 76 | 73 | 68 | 73 | 68     |    | 73 | 73 | 73 | 73 | 70      | 65 | 70 |    | 71 | 71 | 71      | 68 | 63 | 68 |    | 68 | 68      | 68 | 68 | 66 | 61 | 66 |         | 66 | 66 | 66 | 64 | 58 | 64      |    | 64 | 64 | 64 | 64 | 62 | 56 | 62 |    | 62 | 62 | 62 | 60 | 53 | 60 |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 45 to 60    | Array Interior | 90                                                                                  | 90 | 90 | 90 | 90 | 90 | 90     |    | 90 | 90 | 90 | 90 | 90      | 90 | 90 |    | 90 | 90 | 90      | 90 | 90 | 90 | 90 |    | 90      | 90 | 90 | 90 | 90 | 90 | 90      |    | 90 | 90 | 90 | 90 | 90      | 90 | 90 |    | 90 | 90 | 90 | 90 | 90 | 90 | 90 |    | 90 | 90 | 90 | 90 | 90 | 90 | 90 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 90                                                                                  | 90 | 90 | 90 | 90 | 90 | 90     |    | 90 | 90 | 90 | 90 | 90      | 90 | 90 |    | 90 | 90 | 86      | 86 | 86 | 86 | 86 |    | 87      | 87 | 83 | 83 | 83 | 83 | 83      |    | 85 | 85 | 80 | 80 | 80      | 80 | 80 |    | 83 | 83 | 78 | 78 | 78 | 78 | 78 |    | 81 | 81 | 76 | 76 | 76 | 76 | 76 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             | D                 | 0 to 7      | Array Interior | 83                                                                                  | 83 | 83 | 83 | 82 | 82 |        | 83 | 83 | 83 | 83 | 83 | 78      | 78 |    | 83 | 83 | 83 | 83      | 83 | 76 |    | 83 | 83 | 82      | 82 | 82 | 73 | 73 |    | 83      | 83 | 80 | 80 | 80 | 70 |         | 83 | 83 | 77 | 77 | 77 | 68 | 68 |    | 83 | 83 | 75 | 75 | 75 | 66 | 66 |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 83                                                                                  | 83 | 79 | 79 | 79 | 70 | 70     |    | 83 | 83 | 76 | 76 | 76      | 68 | 68 |    | 83 | 82 | 73      | 73 | 73 | 65 | 65 |    | 83      | 79 | 71 | 71 | 71 | 63 | 63      |    | 83 | 77 | 69 | 69 | 69      | 61 | 61 |    | 83 | 74 | 66 | 66 | 66 | 59 | 59 |    | 83 | 72 | 64 | 64 | 64 | 56 | 56 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 7 to 20     | Array Interior | 87                                                                                  | 87 | 87 | 83 | 83 | 83 | 78     |    | 87 | 87 | 87 | 80 | 80      | 80 | 75 |    | 87 | 87 | 87      | 77 | 77 | 77 | 72 |    | 87      | 87 | 87 | 74 | 74 | 74 | 70      |    | 84 | 84 | 84 | 72 | 72      | 72 | 67 |    | 81 | 81 | 81 | 70 | 70 | 70 | 65 |    | 78 | 78 | 78 | 68 | 68 | 68 | 63 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 80                                                                                  | 80 | 83 | 73 | 73 | 73 | 67     |    | 80 | 80 | 80 | 77 | 77      | 77 | 72 |    | 80 | 80 | 80      | 77 | 77 | 77 | 72 |    | 80      | 80 | 80 | 80 | 80 | 80 | 77      |    | 80 | 80 | 80 | 77 | 77      | 77 | 75 |    | 80 | 80 | 80 | 70 | 70 | 70 | 65 |    | 78 | 78 | 78 | 68 | 68 | 68 | 63 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 20 to 27    | Array Interior | 87                                                                                  | 87 | 87 | 74 | 74 | 74 | 72     |    | 86 | 86 | 86 | 71 | 71      | 71 | 69 |    | 83 | 83 | 83      | 69 | 69 | 69 | 67 |    | 80      | 80 | 80 | 66 | 66 | 66 | 64      |    | 77 | 77 | 77 | 64 | 64      | 64 | 62 |    | 75 | 75 | 75 | 62 | 62 | 62 | 60 |    | 72 | 72 | 72 | 60 | 60 | 60 | 58 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   |             | Array Edge     | 77                                                                                  | 77 | 77 | 64 | 64 | 64 | 62     |    | 74 | 74 | 74 | 62 | 62      | 62 | 60 |    | 71 | 71 | 71      | 59 | 59 | 59 | 57 |    | 69      | 69 | 69 | 56 | 56 | 56 | 54      |    | 67 | 67 | 67 | 54 | 54      | 54 | 52 |    | 64 | 64 | 64 | 51 | 51 | 51 | 49 |    | 63 | 63 | 63 | 49 | 49 | 49 | 47 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                             |                   | 27 to 45    | Array Interior | 83                                                                                  | 83 | 83 | 83 | 80 | 74 | 80     |    | 80 | 80 | 80 | 80 | 77      | 71 | 77 |    | 77 | 77 | 77      | 77 | 74 | 68 | 74 |    | 74      | 74 | 74 | 74 | 71 | 66 | 71      |    | 72 | 72 | 72 | 72 | 69      | 64 | 69 |    | 70 | 70 | 70 | 60 | 60 | 60 | 57 |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Array Edge                  | 72                |             | 72             | 72                                                                                  | 69 | 64 |    |    |    |        |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

| Maximum Rail Spans (Inches) |                   |                |                | ClickFit Rail 450124 (REVX03) Flush-Mount on 0 to 30 Foot Roof -- L-Foot -- 60-Cell |         |    |    |    |    |    |    |    |         |    |    |    |    |    |    |    |         |    |    |    |    |    |    |    |         |    |    |    |    |    |    |    |         |    |    |    |    |    |    |    |         |    |    |    |  |  |  |  |
|-----------------------------|-------------------|----------------|----------------|-------------------------------------------------------------------------------------|---------|----|----|----|----|----|----|----|---------|----|----|----|----|----|----|----|---------|----|----|----|----|----|----|----|---------|----|----|----|----|----|----|----|---------|----|----|----|----|----|----|----|---------|----|----|----|--|--|--|--|
| Ground Snow Load            | Exposure Category | Panel Angle    | Wind Speed >>  |                                                                                     | 130 mph |    |    |    |    |    |    |    | 140 mph |    |    |    |    |    |    |    | 150 mph |    |    |    |    |    |    |    | 160 mph |    |    |    |    |    |    |    | 170 mph |    |    |    |    |    |    |    | 180 mph |    |    |    |  |  |  |  |
|                             |                   |                | Roof Zone >>   |                                                                                     | 1'      | 2' | 2e | 2r | 2n | 3e | 3r | 1' | 2'      | 2e | 2r | 2n | 3e | 3r | 1' | 2' | 2e      | 2r | 2n | 3e | 3r | 1' | 2' | 2e | 2r      | 2n | 3e | 3r | 1' | 2' | 2e | 2r | 2n      | 3e | 3r | 1' | 2' | 2e | 2r | 2n | 3e      | 3r |    |    |  |  |  |  |
| 0 psf                       | B                 | 0 to 7         | Array Interior | 86                                                                                  | 79      | 70 | 70 | 70 | 70 | 63 | 63 | 86 | 74      | 67 | 67 | 67 | 59 | 59 | 86 | 71 | 63      | 63 | 63 | 55 | 55 | 85 | 68 | 61 | 61      | 61 | 51 | 51 | 82 | 65 | 57 | 57 | 57      | 48 | 48 | 78 | 62 | 54 | 54 | 54 | 45      | 45 | 45 |    |  |  |  |  |
|                             |                   |                | Array Edge     | 86                                                                                  | 68      | 61 | 61 | 61 | 62 | 52 | 81 | 64 | 57      | 57 | 57 | 48 | 48 | 77 | 61 | 53 | 53      | 53 | 44 | 44 | 73 | 58 | 49 | 49 | 49      | 42 | 42 | 70 | 54 | 46 | 46 | 46 | 39      | 39 | 67 | 51 | 44 | 44 | 44 | 37 | 37      |    |    |    |  |  |  |  |
|                             |                   | 7 to 20        | Array Interior | 74                                                                                  | 74      | 74 | 64 | 64 | 64 | 64 | 64 | 70 | 70      | 70 | 61 | 61 | 61 | 56 | 56 | 67 | 67      | 67 | 57 | 57 | 57 | 52 | 64 | 64 | 53      | 53 | 53 | 48 | 48 | 61 | 61 | 61 | 50      | 50 | 50 | 45 | 45 | 58 | 58 | 58 | 47      | 47 | 47 | 43 |  |  |  |  |
|                             |                   |                | Array Edge     | 64                                                                                  | 64      | 64 | 53 | 53 | 53 | 49 | 61 | 61 | 61      | 49 | 49 | 49 | 45 | 45 | 57 | 57 | 57      | 46 | 46 | 46 | 42 | 53 | 53 | 53 | 43      | 43 | 43 | 39 | 50 | 50 | 50 | 40 | 40      | 40 | 37 | 47 | 47 | 47 | 38 | 38 | 38      | 34 |    |    |  |  |  |  |
|                             |                   | 20 to 27       | Array Interior | 82                                                                                  | 82      | 82 | 68 | 68 | 68 | 66 | 78 | 78 | 78      | 65 | 65 | 65 | 63 | 74 | 74 | 74 | 62      | 62 | 62 | 62 | 60 | 70 | 70 | 58 | 58      | 58 | 56 | 67 | 67 | 67 | 55 | 55 | 55      | 53 | 65 | 65 | 65 | 52 | 52 | 52 | 50      |    |    |    |  |  |  |  |
|                             |                   |                | Array Edge     | 71                                                                                  | 71      | 71 | 59 | 59 | 59 | 56 | 67 | 67 | 67      | 54 | 54 | 54 | 52 | 64 | 64 | 64 | 51      | 51 | 51 | 49 | 61 | 61 | 61 | 47 | 47      | 47 | 47 | 58 | 58 | 58 | 44 | 44 | 44      | 40 | 53 | 55 | 55 | 42 | 42 | 42 | 40      |    |    |    |  |  |  |  |
|                             |                   | 27 to 45       | Array Interior | 76                                                                                  | 76      | 76 | 76 | 76 | 73 | 68 | 73 | 72 | 72      | 72 | 70 | 64 | 70 | 69 | 69 | 69 | 66      | 61 | 66 | 66 | 66 | 61 | 66 | 66 | 66      | 66 | 63 | 58 | 63 | 63 | 63 | 61 | 55      | 61 | 61 | 61 | 61 | 58 | 51 | 58 | 51      | 58 |    |    |  |  |  |  |
|                             |                   |                | Array Edge     | 66                                                                                  | 66      | 66 | 66 | 64 | 58 | 64 | 63 | 63 | 63      | 63 | 60 | 54 | 60 | 60 | 60 | 60 | 57      | 50 | 57 | 56 | 53 | 47 | 53 | 52 | 52      | 52 | 50 | 44 | 50 | 52 | 52 | 52 | 50      | 44 | 50 | 49 | 49 | 49 | 47 | 42 | 42      | 40 |    |    |  |  |  |  |
|                             |                   | 45 to 60       | Array Interior | 87                                                                                  | 87      | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83      | 78 | 78 | 78 | 78 | 78 | 80 | 80 | 75      | 75 | 75 | 75 | 75 | 75 | 77 | 77 | 71      | 71 | 71 | 71 | 74 | 74 | 69 | 69 | 69      | 69 | 69 | 71 | 71 | 66 | 66 | 66 | 66      |    |    |    |  |  |  |  |
|                             |                   |                | Array Edge     | 77                                                                                  | 77      | 72 | 72 | 72 | 72 | 72 | 73 | 73 | 68      | 68 | 68 | 68 | 68 | 70 | 70 | 70 | 65      | 65 | 65 | 65 | 65 | 65 | 67 | 67 | 62      | 62 | 62 | 62 | 62 | 65 | 65 | 59 | 59      | 59 | 59 | 59 | 62 | 62 | 56 | 56 | 56      | 56 |    |    |  |  |  |  |
|                             |                   | C              | 0 to 7         | Array Interior                                                                      | 86      | 69 | 62 | 62 | 62 | 62 | 54 | 83 | 66      | 59 | 59 | 59 | 50 | 50 | 79 | 63 | 55      | 55 | 55 | 55 | 46 | 46 | 75 | 60 | 51      | 51 | 51 | 43 | 43 | 62 | 56 | 48 | 48      | 48 | 41 | 41 | 69 | 53 | 45 | 45 | 45      | 38 | 38 |    |  |  |  |  |
|                             |                   |                |                | Array Edge                                                                          | 76      | 60 | 51 | 51 | 51 | 43 | 43 | 72 | 56      | 48 | 48 | 48 | 40 | 40 | 58 | 52 | 44      | 44 | 44 | 44 | 37 | 43 | 65 | 49 | 41      | 41 | 41 | 34 | 34 | 62 | 46 | 39 | 39      | 39 | 30 | 60 | 43 | 37 | 37 | 37 | 27      | 27 |    |    |  |  |  |  |
|                             | 7 to 20           |                | Array Interior | 65                                                                                  | 65      | 65 | 55 | 55 | 55 | 50 | 62 | 62 | 62      | 51 | 51 | 51 | 47 | 59 | 59 | 59 | 48      | 48 | 48 | 48 | 48 | 43 | 55 | 55 | 55      | 45 | 45 | 45 | 41 | 52 | 52 | 52 | 42      | 42 | 38 | 49 | 49 | 49 | 39 | 39 | 39      | 36 |    |    |  |  |  |  |
|                             |                   |                | Array Edge     | 55                                                                                  | 55      | 55 | 45 | 45 | 45 | 41 | 51 | 51 | 51      | 41 | 41 | 41 | 38 | 48 | 48 | 48 | 39      | 39 | 39 | 39 | 35 | 45 | 45 | 45 | 36      | 36 | 36 | 30 | 42 | 42 | 42 | 32 | 32      | 27 | 39 | 39 | 39 | 29 | 29 | 29 | 24      |    |    |    |  |  |  |  |
|                             | 20 to 27          |                | Array Interior | 72                                                                                  | 72      | 72 | 60 | 60 | 60 | 58 | 69 | 69 | 69      | 56 | 56 | 56 | 54 | 65 | 65 | 65 | 52      | 52 | 52 | 50 | 63 | 63 | 63 | 49 | 49      | 49 | 47 | 60 | 60 | 60 | 46 | 46 | 46      | 44 | 57 | 57 | 57 | 43 | 43 | 43 | 42      |    |    |    |  |  |  |  |
|                             |                   |                | Array Edge     | 63                                                                                  | 63      | 63 | 49 | 49 | 49 | 47 | 59 | 59 | 59      | 46 | 46 | 46 | 44 | 55 | 55 | 55 | 42      | 42 | 42 | 42 | 41 | 52 | 52 | 52 | 40      | 40 | 40 | 38 | 49 | 49 | 49 | 37 | 37      | 37 | 36 | 46 | 46 | 46 | 35 | 35 | 35      | 32 |    |    |  |  |  |  |
|                             | 27 to 45          |                | Array Interior | 68                                                                                  | 68      | 68 | 65 | 65 | 60 | 65 | 64 | 64 | 64      | 64 | 62 | 56 | 62 | 61 | 61 | 61 | 61      | 59 | 52 | 52 | 50 | 60 | 60 | 58 | 58      | 58 | 55 | 49 | 55 | 54 | 54 | 54 | 46      | 51 | 51 | 51 | 48 | 48 | 48 | 43 |         |    |    |    |  |  |  |  |
|                             |                   |                | Array Edge     | 58                                                                                  | 58      | 58 | 58 | 55 | 49 | 55 | 54 | 54 | 54      | 54 | 51 | 45 | 51 | 50 | 50 | 50 | 50      | 47 | 42 | 42 | 47 | 47 | 47 | 47 | 47      | 44 | 40 | 44 | 44 | 44 | 40 | 44 | 44      | 44 | 42 | 37 | 42 | 42 | 39 | 34 | 39      | 34 |    |    |  |  |  |  |
|                             | 45 to 60          |                | Array Interior | 79                                                                                  | 79      | 73 | 73 | 73 | 73 | 73 | 73 | 75 | 75      | 70 | 70 | 70 | 70 | 70 | 72 | 72 | 66      | 66 | 66 | 66 | 66 | 66 | 69 | 69 | 64      | 64 | 64 | 64 | 66 | 66 | 61 | 61 | 61      | 61 | 61 | 64 | 64 | 58 | 58 | 58 | 58      |    |    |    |  |  |  |  |
|                             |                   |                | Array Edge     | 69                                                                                  | 69      | 64 | 64 | 64 | 64 | 64 | 66 | 66 | 61      | 61 | 61 | 61 | 61 | 61 | 63 | 63 | 57      | 57 | 57 | 57 | 57 | 60 | 60 | 53 | 53      | 53 | 53 | 57 | 57 | 50 | 50 | 50 | 50      | 53 | 53 | 47 | 47 | 47 | 47 | 47 | 47      |    |    |    |  |  |  |  |
|                             | D                 |                | 0 to 7         | Array Interior                                                                      | 83      | 65 | 58 | 58 | 58 | 49 | 49 | 78 | 62      | 54 | 54 | 54 | 45 | 45 | 74 | 59 | 50      | 50 | 50 | 42 | 42 | 71 | 55 | 47 | 47      | 47 | 40 | 40 | 58 | 52 | 44 | 44 | 44      | 37 | 37 | 65 | 49 | 42 | 42 | 42 | 34      | 34 |    |    |  |  |  |  |
|                             |                   |                |                | Array Edge                                                                          | 71      | 55 | 47 | 47 | 47 | 40 | 40 | 67 | 51      | 44 | 44 | 44 | 37 | 37 | 64 | 48 | 41      | 41 | 41 | 33 | 33 | 61 | 44 | 38 | 38      | 38 | 29 | 29 | 58 | 42 | 36 | 36 | 36      | 25 | 25 | 55 | 39 | 32 | 32 | 32 | 23      |    |    |    |  |  |  |  |
|                             |                   | 7 to 20        | Array Interior | 62                                                                                  | 62      | 62 | 51 | 51 | 51 | 46 | 58 | 58 | 58      | 47 | 47 | 47 | 43 | 54 | 54 | 54 | 44      | 44 | 44 | 44 | 40 | 50 | 50 | 50 | 41      | 41 | 41 | 37 | 47 | 47 | 47 | 38 | 38      | 38 | 34 | 45 | 45 | 45 | 36 | 36 | 36      | 30 |    |    |  |  |  |  |
|                             |                   |                | Array Edge     | 51                                                                                  | 51      | 51 | 41 | 41 | 41 | 37 | 47 | 47 | 47      | 38 | 38 | 38 | 34 | 44 | 44 | 44 | 35      | 35 | 35 | 29 | 41 | 41 | 41 | 31 | 31      | 31 | 25 | 38 | 38 | 38 | 27 | 27 | 22      | 36 | 36 | 36 | 24 | 24 | 24 | 20 |         |    |    |    |  |  |  |  |
| 20 to 27                    |                   | Array Interior | 68             | 68                                                                                  | 68      | 56 | 56 | 56 | 53 | 65 | 65 | 65 | 52      | 52 | 52 | 50 | 62 | 62 | 62 | 48 | 48      | 48 | 48 | 46 | 59 | 59 | 59 | 45 | 45      | 45 | 43 | 55 | 55 | 55 | 42 | 42 | 42      | 40 | 52 | 52 | 52 | 40 | 40 | 40 | 38      |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 59             | 59                                                                                  | 59      | 45 | 45 | 45 | 43 | 54 | 54 | 54 | 42      | 42 | 42 | 40 | 51 | 51 | 51 | 39 | 39      | 39 | 39 | 37 | 47 | 47 | 47 | 36 | 36      | 36 | 34 | 44 | 44 | 44 | 33 | 33 | 33      | 30 | 42 | 42 | 42 | 29 | 29 | 29 | 27      |    |    |    |  |  |  |  |
| 27 to 45                    |                   | Array Interior | 64             | 64                                                                                  | 64      | 64 | 61 | 55 | 61 | 61 | 61 | 61 | 58      | 51 | 58 | 57 | 57 | 57 | 57 | 54 | 48      | 54 | 53 | 53 | 53 | 50 | 45 | 50 | 50      | 42 | 47 | 47 | 47 | 47 | 47 | 47 | 47      | 47 | 47 | 47 | 47 | 47 | 47 |    |         |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 53             | 53                                                                                  | 53      | 53 | 50 | 45 | 50 | 49 | 49 | 49 | 49      | 47 | 42 | 47 | 46 | 46 | 46 | 46 | 44      | 39 | 44 | 43 | 43 | 43 | 41 | 36 | 41      | 40 | 40 | 40 | 40 | 38 | 38 | 38 | 38      | 36 | 36 | 36 | 29 | 29 | 29 | 26 |         |    |    |    |  |  |  |  |
| 45 to 60                    |                   | Array Interior | 75             | 75                                                                                  | 69      | 69 | 69 | 69 | 69 | 71 | 71 | 66 | 66      | 66 | 66 | 66 | 68 | 68 | 63 | 63 | 63      | 63 | 63 | 65 | 65 | 60 | 60 | 60 | 60      | 60 | 63 | 63 | 56 | 56 | 56 | 56 | 56      | 60 | 60 | 53 | 53 | 53 | 53 |    |         |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 65             | 65                                                                                  | 60      | 60 | 60 | 60 | 60 | 62 | 62 | 56 | 56      | 56 | 56 | 56 | 59 | 59 | 52 | 52 | 52      | 52 | 52 | 55 | 55 | 49 | 49 | 49 | 49      | 49 | 52 | 52 | 46 | 46 | 46 | 46 | 46      | 49 | 49 | 43 | 43 | 43 | 43 |    |         |    |    |    |  |  |  |  |
| B                           |                   | 0 to 7         | Array Interior | 77                                                                                  | 77      | 70 | 70 | 70 | 63 | 63 | 77 | 74 | 67      | 67 | 67 | 59 | 59 | 77 | 71 | 63 | 63      | 63 | 55 | 55 | 77 | 68 | 61 | 61 | 61      | 51 | 51 | 77 | 65 | 57 | 57 | 57 | 48      | 48 | 77 | 62 | 54 | 54 | 54 | 45 | 45      | 45 |    |    |  |  |  |  |
|                             |                   |                | Array Edge     | 77                                                                                  | 68      | 61 | 61 | 61 | 62 | 52 | 77 | 64 | 57      | 57 | 57 | 48 | 48 | 77 | 61 | 53 | 53      | 53 | 44 | 44 | 73 | 58 | 49 | 49 | 49      | 42 | 42 | 70 | 54 | 46 | 46 | 46 | 39      | 39 | 67 | 51 | 44 | 44 | 44 | 37 | 37      |    |    |    |  |  |  |  |
|                             | 7 to 20           | Array Interior | 74             | 74                                                                                  | 74      | 64 | 64 | 64 | 64 | 70 | 70 | 70 | 61      | 61 | 61 | 56 | 56 | 67 | 67 | 67 | 57      | 57 | 57 | 52 | 64 | 64 | 53 | 53 | 53      | 48 | 48 | 61 | 61 | 61 | 50 | 50 | 50      | 45 | 45 | 58 | 58 | 58 | 47 | 47 | 47      | 43 |    |    |  |  |  |  |
|                             |                   | Array Edge     | 64             | 64                                                                                  | 64      | 53 | 53 | 53 | 49 | 61 | 61 | 61 | 49      | 49 | 49 | 45 | 45 | 57 | 57 | 57 | 46      | 46 | 46 | 42 | 53 | 53 | 53 | 43 | 43      | 43 | 39 | 50 | 50 | 50 | 40 | 40 | 40      | 37 | 47 | 47 | 47 | 38 | 38 | 38 | 34      |    |    |    |  |  |  |  |
|                             | 20 to 27          | Array Interior | 82             | 82                                                                                  | 82      | 68 | 68 | 68 | 66 | 78 | 78 | 78 | 65      | 65 | 65 | 63 | 74 | 74 | 74 | 62 | 62      | 62 | 62 | 60 | 70 | 70 | 58 | 58 | 58      | 56 | 67 | 67 | 67 | 55 | 55 | 55 | 53      | 65 | 65 | 65 | 52 | 52 | 52 | 50 |         |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 71             | 71                                                                                  | 71      | 59 | 59 | 59 | 56 | 67 | 67 | 67 | 54      | 54 | 54 | 52 | 64 | 64 | 64 | 51 | 51      | 51 | 49 | 61 | 61 | 61 | 47 | 47 | 47      | 47 | 58 | 58 | 58 | 44 | 44 | 44 | 40      | 53 | 55 | 55 | 42 | 42 | 42 | 40 |         |    |    |    |  |  |  |  |
|                             | 27 to 45          | Array Interior | 76             | 76                                                                                  | 76      | 76 | 76 | 73 | 68 | 73 | 72 | 72 | 72      | 70 | 64 | 70 | 69 | 69 | 69 | 66 | 61      | 66 | 66 | 66 | 61 | 66 | 66 | 66 | 66      | 63 | 58 | 63 | 63 | 63 | 61 | 55 | 61      | 61 | 61 | 61 | 58 | 51 | 58 | 51 | 58      |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 66             | 66                                                                                  | 66      | 66 | 64 | 58 | 64 | 63 | 63 | 63 | 63      | 60 | 54 | 60 | 60 | 60 | 60 | 57 | 50      | 57 | 56 | 53 | 47 | 53 | 52 | 52 | 52      |    |    |    |    |    |    |    |         |    |    |    |    |    |    |    |         |    |    |    |  |  |  |  |

[illegible]

| Maximum Rail Spans (Inches) |                   |                |                               | ClickFit Rail 450124 (REVX03) Flush-Mount on 0 to 30 Foot Roof -- L-Foot -- 60-Cell |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
|-----------------------------|-------------------|----------------|-------------------------------|-------------------------------------------------------------------------------------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|
| Ground Snow Load            | Exposure Category | Panel Angle    | Wind Speed >><br>Roof Zone >> | 130 mph                                                                             |    |    |    |    |    | 140 mph |    |    |    |    |    | 150 mph |    |    |    |    |    | 160 mph |    |    |    |    |    | 170 mph |    |    |    |    |    | 180 mph |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
|                             |                   |                |                               | 1'                                                                                  | 2' | 2e | 2r | 2n | 3e | 3r      | 1' | 2' | 2e | 2r | 2n | 3e      | 3r | 1' | 2' | 2e | 2r | 2n      | 3e | 3r | 1' | 2' | 2e | 2r      | 2n | 3e | 3r | 1' | 2' | 2e      | 2r | 2n | 3e | 3r | 1' | 2' | 2e | 2r | 2n | 3e | 3r |    |    |    |    |  |  |
| 15 psf                      | B                 | 0 to 7         | Array Interior                | 72                                                                                  | 72 | 70 | 70 | 70 | 63 | 63      | 72 | 72 | 67 | 67 | 67 | 59      | 59 | 72 | 71 | 63 | 63 | 63      | 55 | 55 | 72 | 68 | 61 | 61      | 61 | 51 | 51 | 72 | 65 | 57      | 57 | 57 | 48 | 48 | 72 | 62 | 54 | 54 | 54 | 45 | 45 |    |    |    |    |  |  |
|                             |                   |                | Array Edge                    | 72                                                                                  | 68 | 61 | 61 | 61 | 52 | 52      | 72 | 64 | 57 | 57 | 57 | 48      | 48 | 72 | 61 | 53 | 53 | 53      | 44 | 44 | 72 | 58 | 49 | 49      | 49 | 42 | 42 | 70 | 54 | 46      | 46 | 46 | 39 | 39 | 67 | 51 | 44 | 44 | 44 | 37 | 37 |    |    |    |    |  |  |
|                             |                   | 7 to 20        | Array Interior                | 74                                                                                  | 74 | 74 | 64 | 64 | 64 | 60      | 60 | 70 | 70 | 70 | 61 | 61      | 61 | 56 | 67 | 67 | 67 | 57      | 57 | 57 | 52 | 64 | 64 | 53      | 53 | 53 | 48 | 48 | 61 | 61      | 61 | 50 | 50 | 50 | 50 | 50 | 58 | 58 | 47 | 47 | 47 | 47 | 47 | 47 |    |  |  |
|                             |                   |                | Array Edge                    | 64                                                                                  | 64 | 64 | 53 | 53 | 53 | 49      | 49 | 61 | 61 | 61 | 49 | 49      | 49 | 45 | 57 | 57 | 57 | 46      | 46 | 46 | 42 | 53 | 53 | 53      | 43 | 43 | 43 | 39 | 50 | 50      | 50 | 40 | 40 | 40 | 40 | 40 | 37 | 47 | 47 | 47 | 38 | 38 | 38 | 34 |    |  |  |
|                             |                   | 20 to 27       | Array Interior                | 79                                                                                  | 79 | 79 | 68 | 68 | 68 | 66      | 66 | 78 | 78 | 78 | 65 | 65      | 65 | 63 | 74 | 74 | 74 | 62      | 62 | 62 | 60 | 70 | 70 | 58      | 58 | 58 | 56 | 67 | 67 | 67      | 55 | 55 | 55 | 53 | 65 | 65 | 65 | 52 | 52 | 52 | 50 | 50 |    |    |    |  |  |
|                             |                   |                | Array Edge                    | 71                                                                                  | 71 | 71 | 59 | 59 | 59 | 56      | 56 | 67 | 67 | 67 | 54 | 54      | 54 | 52 | 64 | 64 | 64 | 51      | 51 | 51 | 49 | 66 | 66 | 61      | 61 | 61 | 47 | 58 | 58 | 44      | 44 | 44 | 44 | 44 | 55 | 55 | 55 | 42 | 42 | 42 | 40 | 40 |    |    |    |  |  |
|                             |                   | 27 to 45       | Array Interior                | 76                                                                                  | 76 | 76 | 76 | 73 | 68 | 73      | 72 | 72 | 72 | 72 | 70 | 64      | 70 | 69 | 69 | 69 | 69 | 66      | 61 | 66 | 66 | 66 | 66 | 66      | 66 | 66 | 63 | 58 | 63 | 63      | 63 | 61 | 55 | 61 | 61 | 61 | 61 | 61 | 61 | 58 | 51 | 58 | 51 | 58 |    |  |  |
|                             |                   |                | Array Edge                    | 66                                                                                  | 66 | 66 | 66 | 64 | 58 | 64      | 63 | 63 | 63 | 63 | 60 | 54      | 60 | 60 | 60 | 60 | 60 | 57      | 50 | 57 | 57 | 56 | 56 | 56      | 56 | 53 | 47 | 52 | 52 | 52      | 50 | 44 | 50 | 49 | 49 | 49 | 47 | 47 | 47 | 42 | 42 | 42 | 40 |    |    |  |  |
|                             | 45 to 60          | Array Interior | 87                            | 87                                                                                  | 83 | 83 | 83 | 83 | 83 | 83      | 83 | 83 | 83 | 78 | 78 | 78      | 78 | 80 | 80 | 80 | 75 | 75      | 75 | 75 | 75 | 75 | 75 | 75      | 75 | 75 | 75 | 75 | 75 | 75      | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |  |  |
|                             |                   | Array Edge     | 77                            | 77                                                                                  | 72 | 72 | 72 | 72 | 72 | 73      | 73 | 68 | 68 | 68 | 68 | 68      | 68 | 70 | 70 | 65 | 65 | 65      | 65 | 65 | 65 | 65 | 65 | 65      | 65 | 65 | 65 | 65 | 65 | 65      | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 |    |  |  |
|                             | C                 | 0 to 7         | Array Interior                | 72                                                                                  | 69 | 62 | 62 | 62 | 54 | 54      | 72 | 66 | 59 | 59 | 59 | 50      | 50 | 72 | 63 | 55 | 55 | 55      | 46 | 46 | 72 | 60 | 51 | 51      | 51 | 43 | 43 | 72 | 56 | 48      | 48 | 48 | 41 | 41 | 69 | 53 | 45 | 45 | 45 | 38 | 38 |    |    |    |    |  |  |
|                             |                   |                | Array Edge                    | 72                                                                                  | 60 | 51 | 51 | 51 | 43 | 43      | 72 | 56 | 48 | 48 | 48 | 40      | 40 | 68 | 52 | 44 | 44 | 44      | 37 | 37 | 65 | 49 | 41 | 41      | 41 | 34 | 34 | 62 | 46 | 39      | 39 | 39 | 30 | 60 | 43 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |    |  |  |
|                             |                   | 7 to 20        | Array Interior                | 65                                                                                  | 65 | 65 | 55 | 55 | 55 | 50      | 50 | 62 | 62 | 62 | 51 | 51      | 51 | 47 | 59 | 59 | 59 | 48      | 48 | 48 | 48 | 48 | 48 | 48      | 48 | 48 | 48 | 48 | 48 | 48      | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |  |  |
|                             |                   |                | Array Edge                    | 55                                                                                  | 55 | 55 | 45 | 45 | 45 | 41      | 41 | 51 | 51 | 51 | 41 | 41      | 41 | 38 | 48 | 48 | 48 | 39      | 39 | 39 | 39 | 39 | 39 | 39      | 39 | 39 | 39 | 39 | 39 | 39      | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |    |  |  |
|                             |                   | 20 to 27       | Array Interior                | 72                                                                                  | 72 | 72 | 60 | 60 | 60 | 58      | 58 | 69 | 69 | 69 | 56 | 56      | 56 | 54 | 65 | 65 | 65 | 52      | 52 | 52 | 50 | 63 | 63 | 63      | 49 | 49 | 49 | 47 | 60 | 60      | 60 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |  |  |
|                             |                   |                | Array Edge                    | 63                                                                                  | 63 | 63 | 49 | 49 | 49 | 47      | 47 | 59 | 59 | 59 | 46 | 46      | 46 | 44 | 55 | 55 | 55 | 42      | 42 | 42 | 40 | 52 | 52 | 52      | 40 | 40 | 40 | 38 | 49 | 49      | 49 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |    |  |  |
| 27 to 45                    |                   | Array Interior | 68                            | 68                                                                                  | 68 | 65 | 60 | 65 | 64 | 64      | 64 | 64 | 62 | 56 | 62 | 61      | 61 | 61 | 61 | 59 | 52 | 59      | 52 | 52 | 59 | 58 | 58 | 58      | 55 | 49 | 55 | 54 | 54 | 54      | 51 | 46 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 48 | 43 | 48 |    |    |    |  |  |
|                             |                   | Array Edge     | 58                            | 58                                                                                  | 58 | 55 | 49 | 55 | 54 | 54      | 54 | 54 | 54 | 51 | 45 | 51      | 50 | 50 | 50 | 30 | 47 | 47      | 47 | 42 | 47 | 47 | 47 | 44      | 40 | 44 | 44 | 44 | 42 | 34      | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 |    |    |  |  |
| 45 to 60                    | Array Interior    | 79             | 79                            | 73                                                                                  | 73 | 73 | 73 | 73 | 73 | 75      | 75 | 70 | 70 | 70 | 70 | 72      | 72 | 72 | 66 | 66 | 66 | 66      | 66 | 66 | 66 | 66 | 66 | 66      | 66 | 66 | 66 | 66 | 66 | 66      | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |    |    |  |  |
|                             | Array Edge        | 69             | 69                            | 64                                                                                  | 64 | 64 | 64 | 64 | 66 | 66      | 61 | 61 | 61 | 61 | 61 | 63      | 63 | 63 | 57 | 57 | 57 | 57      | 57 | 57 | 57 | 57 | 57 | 57      | 57 | 57 | 57 | 57 | 57 | 57      | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |    |    |  |  |
| D                           | 0 to 7            | Array Interior | 72                            | 65                                                                                  | 58 | 58 | 58 | 49 | 49 | 72      | 62 | 54 | 54 | 54 | 45 | 45      | 72 | 59 | 50 | 50 | 50 | 42      | 42 | 71 | 55 | 47 | 47 | 47      | 40 | 40 | 68 | 52 | 44 | 44      | 44 | 37 | 37 | 65 | 49 | 42 | 42 | 42 | 34 | 34 |    |    |    |    |    |  |  |
|                             |                   | Array Edge     | 71                            | 55                                                                                  | 47 | 47 | 47 | 40 | 40 | 67      | 51 | 44 | 44 | 44 | 37 | 37      | 64 | 48 | 41 | 41 | 41 | 33      | 33 | 61 | 44 | 38 | 38 | 38      | 29 | 29 | 58 | 42 | 36 | 36      | 36 | 25 | 55 | 39 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 | 32 |    |    |  |  |
|                             | 7 to 20           | Array Interior | 62                            | 62                                                                                  | 62 | 51 | 51 | 51 | 46 | 46      | 58 | 58 | 47 | 47 | 47 | 43      | 54 | 54 | 54 | 44 | 44 | 44      | 44 | 44 | 44 | 44 | 44 | 44      | 44 | 44 | 44 | 44 | 44 | 44      | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |    |  |  |
|                             |                   | Array Edge     | 51                            | 51                                                                                  | 51 | 41 | 41 | 41 | 37 | 37      | 47 | 47 | 47 | 38 | 38 | 38      | 34 | 44 | 44 | 44 | 35 | 35      | 35 | 29 | 41 | 41 | 41 | 31      | 31 | 31 | 25 | 38 | 38 | 38      | 27 | 27 | 27 | 22 | 36 | 36 | 36 | 24 | 24 | 24 | 24 | 24 |    |    |    |  |  |
|                             | 20 to 27          | Array Interior | 68                            | 68                                                                                  | 68 | 56 | 56 | 56 | 53 | 53      | 65 | 65 | 65 | 52 | 52 | 52      | 50 | 62 | 62 | 62 | 48 | 48      | 48 | 46 | 59 | 59 | 59 | 45      | 45 | 45 | 42 | 52 | 52 | 52      | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |    |  |  |
|                             |                   | Array Edge     | 59                            | 59                                                                                  | 59 | 45 | 45 | 45 | 43 | 43      | 54 | 54 | 54 | 42 | 42 | 42      | 40 | 51 | 51 | 51 | 39 | 39      | 39 | 37 | 47 | 47 | 47 | 36      | 36 | 36 | 34 | 44 | 44 | 44      | 33 | 33 | 33 | 30 | 42 | 42 | 42 | 29 | 29 | 29 | 29 | 29 |    |    |    |  |  |
|                             | 27 to 45          | Array Interior | 64                            | 64                                                                                  | 64 | 61 | 55 | 61 | 61 | 61      | 61 | 61 | 58 | 51 | 58 | 57      | 57 | 57 | 57 | 54 | 48 | 54      | 43 | 43 | 53 | 53 | 53 | 50      | 45 | 50 | 50 | 50 | 47 | 42      | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 |    |    |  |  |
|                             |                   | Array Edge     | 53                            | 53                                                                                  | 53 | 50 | 45 | 50 | 49 | 49      | 49 | 49 | 49 | 47 | 42 | 47      | 46 | 46 | 46 | 46 | 44 | 39      | 44 | 43 | 43 | 43 | 43 | 43      | 43 | 43 | 43 | 43 | 43 | 43      | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 |    |    |  |  |
| B                           | 0 to 7            | Array Interior | 69                            | 69                                                                                  | 69 | 69 | 63 | 63 | 69 | 69      | 67 | 67 | 67 | 59 | 59 | 69      | 69 | 63 | 63 | 63 | 55 | 55      | 69 | 68 | 61 | 61 | 61 | 51      | 51 | 69 | 65 | 57 | 57 | 57      | 48 | 48 | 69 | 62 | 54 | 54 | 54 | 45 | 45 |    |    |    |    |    |    |  |  |
|                             |                   | Array Edge     | 69                            | 68                                                                                  | 61 | 61 | 61 | 52 | 52 | 69      | 64 | 57 | 57 | 57 | 48 | 48      | 69 | 61 | 53 | 53 | 53 | 44      | 44 | 69 | 58 | 49 | 49 | 49      | 42 | 42 | 69 | 54 | 46 | 46      | 46 | 39 | 39 | 67 | 51 | 44 | 44 | 44 | 37 | 37 |    |    |    |    |    |  |  |
|                             | 7 to 20           | Array Interior | 74                            | 74                                                                                  | 74 | 64 | 64 | 64 | 60 | 60      | 70 | 70 | 70 | 61 | 61 | 61      | 56 | 67 | 67 | 67 | 57 | 57      | 57 | 52 | 64 | 64 | 53 | 53      | 53 | 48 | 48 | 61 | 61 | 61      | 50 | 50 | 50 | 50 | 50 | 58 | 58 | 47 | 47 | 47 | 47 | 47 | 47 |    |    |  |  |
|                             |                   | Array Edge     | 64                            | 64                                                                                  | 64 | 53 | 53 | 53 | 49 | 49      | 61 | 61 | 61 | 49 | 49 | 49      | 45 | 57 | 57 | 57 | 46 | 46      | 46 | 42 | 53 | 53 | 53 | 43      | 43 | 43 | 39 | 50 | 50 | 50      | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |    |    |  |  |
|                             | 20 to 27          | Array Interior | 76                            | 76                                                                                  | 76 | 68 | 68 | 68 | 66 | 66      | 76 | 76 | 76 | 65 | 65 | 65      | 63 | 74 | 74 | 74 | 62 | 62      | 62 | 60 | 70 | 70 | 58 | 58      | 58 | 56 | 67 | 67 | 67 | 55      | 55 | 55 | 53 | 65 | 65 | 65 | 52 | 52 | 52 | 50 | 50 |    |    |    |    |  |  |
|                             |                   | Array Edge     | 71                            | 71                                                                                  | 71 | 59 | 59 | 59 | 56 | 56      | 67 | 67 | 67 | 54 | 54 | 54      | 52 | 64 | 64 | 64 | 51 | 51      | 51 | 49 | 66 | 66 | 61 | 61      | 61 | 47 | 58 | 58 | 44 | 44      | 44 | 44 | 44 | 55 | 55 | 55 | 42 | 42 | 42 | 40 | 40 |    |    |    |    |  |  |
|                             | 27 to 45          | Array Interior | 76                            | 76                                                                                  | 76 | 76 | 73 | 68 | 73 | 72      | 72 | 72 | 72 | 70 | 64 | 70      | 69 | 69 | 69 | 69 | 66 | 61      | 66 | 66 | 66 | 66 | 66 | 66      | 66 | 66 | 66 | 66 | 66 | 66      | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |    |  |  |
|                             |                   | Array Edge     | 66                            | 66                                                                                  | 66 | 66 | 64 | 58 | 64 | 63      | 63 | 63 | 63 | 60 | 54 | 60      | 60 | 60 | 60 | 57 | 50 | 57      | 57 | 56 | 56 | 56 | 56 | 53      | 47 | 52 | 52 | 52 | 50 | 44      | 50 | 49 | 49 | 49 | 47 | 47 | 47 | 42 | 42 | 42 | 40 |    |    |    |    |  |  |
| 45 to 60                    | Array Interior    | 87             | 87                            |                                                                                     |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |

[illegible]

| Maximum Rail Spans (Inches) |                   |                |                            | ClickFit Rail 450124 (REVX03) Flush-Mount on 0 to 30 Foot Roof -- L-Foot -- 60-Cell |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----------------------------|-------------------|----------------|----------------------------|-------------------------------------------------------------------------------------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Ground Snow Load            | Exposure Category | Panel Angle    | Wind Speed -> Roof Zone -> | 130 mph                                                                             |    |    |    |    |    | 140 mph |    |    |    |    |    | 150 mph |    |    |    |    |    | 160 mph |    |    |    |    |    | 170 mph |    |    |    |    |    | 180 mph |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|                             |                   |                |                            | 1'                                                                                  | 1  | 2e | 2r | 2n | 3e | 3r      | 1' | 1  | 2e | 2r | 2n | 3e      | 3r | 1' | 1  | 2e | 2r | 2n      | 3e | 3r | 1' | 1  | 2e | 2r      | 2n | 3e | 3r | 1' | 1  | 2e      | 2r | 2n | 3e | 3r | 1' | 1  | 2e | 2r | 2n | 3e | 3r |    |    |    |    |    |    |    |    |    |    |
| 30 psf                      | B                 | 0 to 7         | Array Interior             | 68                                                                                  | 68 | 68 | 68 | 68 | 63 | 63      | 68 | 67 | 67 | 67 | 59 | 59      | 68 | 68 | 63 | 63 | 63 | 55      | 55 | 68 | 68 | 61 | 61 | 61      | 51 | 51 | 68 | 65 | 57 | 57      | 57 | 48 | 48 | 68 | 62 | 54 | 54 | 54 | 45 | 45 | 68 | 62 | 54 | 54 | 54 | 45 | 45 |    |    |    |    |
|                             |                   |                | Array Edge                 | 68                                                                                  | 68 | 61 | 61 | 61 | 52 | 52      | 68 | 64 | 57 | 57 | 57 | 48      | 48 | 68 | 61 | 53 | 53 | 53      | 44 | 44 | 68 | 58 | 49 | 49      | 49 | 42 | 42 | 68 | 54 | 46      | 46 | 46 | 39 | 39 | 67 | 51 | 44 | 44 | 44 | 37 | 37 | 67 | 51 | 44 | 44 | 44 | 37 | 37 |    |    |    |
|                             |                   | 7 to 20        | Array Interior             | 70                                                                                  | 70 | 70 | 64 | 64 | 64 | 60      | 70 | 70 | 70 | 61 | 61 | 61      | 56 | 67 | 67 | 67 | 57 | 57      | 57 | 52 | 52 | 64 | 64 | 53      | 53 | 53 | 49 | 61 | 61 | 61      | 50 | 50 | 50 | 45 | 58 | 58 | 58 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 |    |    |
|                             |                   |                | Array Edge                 | 64                                                                                  | 64 | 64 | 53 | 53 | 53 | 49      | 61 | 61 | 61 | 49 | 49 | 49      | 45 | 57 | 57 | 57 | 46 | 46      | 46 | 42 | 42 | 53 | 53 | 53      | 43 | 43 | 43 | 39 | 50 | 50      | 50 | 40 | 40 | 37 | 47 | 47 | 47 | 38 | 38 | 38 | 34 | 34 | 38 | 34 | 38 | 34 | 38 | 34 | 38 | 34 |    |
|                             |                   | 20 to 27       | Array Interior             | 71                                                                                  | 71 | 71 | 68 | 68 | 68 | 66      | 71 | 71 | 71 | 65 | 65 | 65      | 63 | 71 | 71 | 71 | 62 | 62      | 62 | 60 | 70 | 70 | 70 | 58      | 58 | 58 | 56 | 67 | 67 | 55      | 55 | 55 | 53 | 65 | 65 | 65 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |    |    |    |
|                             |                   |                | Array Edge                 | 71                                                                                  | 71 | 71 | 59 | 59 | 59 | 56      | 67 | 67 | 67 | 54 | 54 | 54      | 52 | 64 | 64 | 64 | 51 | 51      | 51 | 49 | 49 | 61 | 61 | 61      | 47 | 47 | 47 | 45 | 58 | 58      | 58 | 44 | 44 | 44 | 43 | 55 | 55 | 55 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 | 42 |    |    |    |
|                             |                   | 27 to 45       | Array Interior             | 76                                                                                  | 76 | 76 | 76 | 73 | 68 | 73      | 72 | 72 | 72 | 70 | 70 | 70      | 64 | 70 | 69 | 69 | 69 | 66      | 66 | 66 | 66 | 66 | 69 | 69      | 69 | 66 | 66 | 63 | 58 | 63      | 63 | 61 | 55 | 61 | 61 | 61 | 61 | 61 | 61 | 58 | 51 | 58 | 51 | 58 | 51 | 58 |    |    |    |    |    |
|                             |                   |                | Array Edge                 | 66                                                                                  | 66 | 66 | 66 | 64 | 58 | 64      | 63 | 63 | 63 | 63 | 60 | 54      | 60 | 69 | 69 | 60 | 60 | 57      | 50 | 57 | 56 | 56 | 56 | 56      | 56 | 53 | 47 | 53 | 52 | 52      | 52 | 50 | 44 | 50 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |    |    |    |    |
|                             |                   | 45 to 60       | Array Interior             | 87                                                                                  | 87 | 83 | 83 | 83 | 83 | 83      | 83 | 83 | 78 | 78 | 78 | 78      | 78 | 80 | 80 | 75 | 75 | 75      | 75 | 75 | 77 | 77 | 71 | 71      | 71 | 71 | 71 | 74 | 74 | 69      | 69 | 69 | 69 | 69 | 71 | 71 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 | 66 |    |    |    |    |    |
|                             |                   |                | Array Edge                 | 77                                                                                  | 77 | 72 | 72 | 72 | 72 | 72      | 73 | 73 | 68 | 68 | 68 | 68      | 68 | 70 | 70 | 65 | 65 | 65      | 65 | 65 | 67 | 67 | 62 | 62      | 62 | 62 | 62 | 65 | 65 | 59      | 59 | 59 | 59 | 62 | 62 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |    |    |    |
|                             | C                 | 0 to 7         | Array Interior             | 68                                                                                  | 68 | 62 | 62 | 62 | 54 | 54      | 68 | 66 | 59 | 59 | 59 | 50      | 50 | 68 | 63 | 55 | 55 | 55      | 46 | 46 | 68 | 60 | 51 | 51      | 51 | 43 | 43 | 68 | 56 | 48      | 48 | 48 | 41 | 68 | 53 | 45 | 45 | 45 | 38 | 38 | 60 | 43 | 45 | 45 | 38 | 38 | 60 | 43 | 45 | 38 | 38 |
|                             |                   |                | Array Edge                 | 68                                                                                  | 60 | 51 | 51 | 51 | 43 | 43      | 68 | 56 | 48 | 48 | 48 | 40      | 40 | 68 | 52 | 44 | 44 | 44      | 37 | 37 | 65 | 49 | 41 | 41      | 41 | 34 | 34 | 62 | 46 | 39      | 39 | 39 | 30 | 60 | 43 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |    |    |    |    |
|                             |                   | 7 to 20        | Array Interior             | 65                                                                                  | 65 | 65 | 55 | 55 | 55 | 50      | 62 | 62 | 62 | 51 | 51 | 51      | 47 | 59 | 59 | 59 | 48 | 48      | 48 | 43 | 43 | 55 | 55 | 55      | 45 | 45 | 41 | 52 | 52 | 52      | 42 | 42 | 38 | 49 | 49 | 49 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |    |    |    |
|                             |                   |                | Array Edge                 | 55                                                                                  | 55 | 55 | 45 | 45 | 45 | 41      | 51 | 51 | 51 | 41 | 41 | 41      | 38 | 48 | 48 | 48 | 39 | 39      | 39 | 35 | 35 | 45 | 45 | 45      | 36 | 36 | 30 | 42 | 42 | 42      | 32 | 32 | 27 | 39 | 39 | 39 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 |    |    |    |    |
|                             |                   | 20 to 27       | Array Interior             | 71                                                                                  | 71 | 71 | 60 | 60 | 60 | 58      | 69 | 69 | 69 | 56 | 56 | 56      | 54 | 65 | 65 | 65 | 52 | 52      | 52 | 50 | 63 | 63 | 63 | 49      | 49 | 49 | 60 | 60 | 60 | 46      | 46 | 46 | 44 | 57 | 57 | 57 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 |    |    |    |    |
|                             |                   |                | Array Edge                 | 63                                                                                  | 63 | 63 | 49 | 49 | 49 | 47      | 59 | 59 | 59 | 46 | 46 | 46      | 44 | 55 | 55 | 55 | 42 | 42      | 42 | 41 | 52 | 52 | 52 | 40      | 40 | 40 | 38 | 49 | 49 | 49      | 37 | 37 | 37 | 36 | 46 | 46 | 46 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |    |    |    |    |    |
|                             |                   | 27 to 45       | Array Interior             | 68                                                                                  | 68 | 68 | 65 | 60 | 65 | 64      | 64 | 64 | 64 | 62 | 56 | 62      | 61 | 61 | 61 | 61 | 59 | 52      | 59 | 58 | 58 | 58 | 55 | 49      | 49 | 55 | 54 | 54 | 54 | 51      | 46 | 51 | 51 | 51 | 51 | 51 | 51 | 48 | 43 | 48 | 43 | 48 | 43 | 48 | 43 | 48 | 43 | 48 |    |    |    |
|                             |                   |                | Array Edge                 | 58                                                                                  | 58 | 58 | 58 | 55 | 49 | 55      | 54 | 54 | 54 | 54 | 51 | 45      | 51 | 50 | 50 | 50 | 47 | 42      | 47 | 47 | 47 | 47 | 47 | 47      | 44 | 40 | 44 | 44 | 44 | 44      | 40 | 44 | 44 | 44 | 42 | 37 | 42 | 42 | 42 | 39 | 34 | 39 | 34 | 39 | 34 | 39 | 34 | 39 |    |    |    |
|                             |                   | 45 to 60       | Array Interior             | 79                                                                                  | 79 | 73 | 73 | 73 | 73 | 73      | 75 | 75 | 70 | 70 | 70 | 70      | 70 | 72 | 72 | 66 | 66 | 66      | 66 | 66 | 69 | 69 | 64 | 64      | 64 | 64 | 66 | 66 | 66 | 61      | 61 | 61 | 61 | 61 | 64 | 64 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 | 58 |    |    |    |
|                             |                   |                | Array Edge                 | 69                                                                                  | 69 | 64 | 64 | 64 | 64 | 64      | 66 | 66 | 61 | 61 | 61 | 61      | 61 | 63 | 63 | 57 | 57 | 57      | 57 | 57 | 60 | 60 | 53 | 53      | 53 | 53 | 57 | 57 | 50 | 50      | 50 | 50 | 50 | 53 | 53 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 |    |    |    |
|                             | D                 | 0 to 7         | Array Interior             | 69                                                                                  | 65 | 58 | 58 | 58 | 49 | 49      | 69 | 62 | 54 | 54 | 54 | 45      | 45 | 69 | 59 | 50 | 50 | 50      | 42 | 42 | 69 | 55 | 47 | 47      | 47 | 40 | 68 | 52 | 44 | 44      | 44 | 37 | 37 | 65 | 49 | 42 | 42 | 42 | 34 | 34 | 42 | 34 | 34 | 42 | 34 | 34 | 42 | 34 | 34 |    |    |
|                             |                   |                | Array Edge                 | 69                                                                                  | 55 | 47 | 47 | 47 | 40 | 40      | 67 | 51 | 44 | 44 | 44 | 44      | 37 | 64 | 48 | 41 | 41 | 41      | 33 | 33 | 61 | 44 | 38 | 38      | 38 | 29 | 58 | 42 | 36 | 36      | 36 | 25 | 55 | 39 | 32 | 32 | 32 | 23 | 23 | 32 | 23 | 23 | 32 | 23 | 23 | 32 | 23 | 23 |    |    |    |
|                             |                   | 7 to 20        | Array Interior             | 62                                                                                  | 62 | 62 | 51 | 51 | 51 | 46      | 58 | 58 | 58 | 47 | 47 | 47      | 43 | 54 | 54 | 54 | 44 | 44      | 44 | 40 | 50 | 50 | 50 | 41      | 41 | 41 | 37 | 47 | 47 | 47      | 38 | 38 | 38 | 34 | 45 | 45 | 45 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 |    |    |    |    |
|                             |                   |                | Array Edge                 | 51                                                                                  | 51 | 51 | 41 | 41 | 41 | 37      | 47 | 47 | 47 | 38 | 38 | 38      | 34 | 44 | 44 | 44 | 35 | 35      | 35 | 29 | 41 | 41 | 41 | 31      | 31 | 31 | 25 | 38 | 38 | 38      | 27 | 27 | 27 | 22 | 36 | 36 | 36 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 24 |    |    |    |    |    |
|                             |                   | 20 to 27       | Array Interior             | 68                                                                                  | 68 | 68 | 56 | 56 | 56 | 53      | 65 | 65 | 65 | 52 | 52 | 52      | 50 | 62 | 62 | 62 | 48 | 48      | 48 | 46 | 49 | 59 | 59 | 45      | 45 | 43 | 55 | 55 | 55 | 42      | 42 | 40 | 52 | 52 | 52 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |    |    |    |    |
|                             |                   |                | Array Edge                 | 59                                                                                  | 59 | 59 | 45 | 45 | 45 | 43      | 54 | 54 | 54 | 42 | 42 | 42      | 40 | 51 | 51 | 51 | 39 | 39      | 39 | 37 | 47 | 47 | 47 | 36      | 36 | 36 | 34 | 44 | 44 | 44      | 33 | 33 | 33 | 30 | 42 | 42 | 42 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 |    |    |    |    |
|                             |                   | 27 to 45       | Array Interior             | 64                                                                                  | 64 | 64 | 61 | 55 | 61 | 61      | 61 | 61 | 61 | 58 | 51 | 58      | 57 | 57 | 57 | 57 | 54 | 48      | 54 | 53 | 53 | 53 | 50 | 45      | 45 | 40 | 50 | 50 | 50 | 40      | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 |    |    |    |    |    |    |
|                             |                   |                | Array Edge                 | 53                                                                                  | 53 | 53 | 50 | 45 | 50 | 49      | 49 | 49 | 49 | 47 | 42 | 47      | 46 | 46 | 46 | 46 | 44 | 39      | 44 | 43 | 43 | 43 | 41 | 36      | 41 | 40 | 40 | 40 | 40 | 38      | 38 | 38 | 33 | 38 | 38 | 38 | 33 | 38 | 38 | 33 | 38 | 38 | 33 | 38 | 38 |    |    |    |    |    |    |
|                             | B                 | 45 to 60       | Array Interior             | 75                                                                                  | 75 | 69 | 69 | 69 | 69 | 69      | 71 | 71 | 66 | 66 | 66 | 66      | 66 | 68 | 68 | 63 | 63 | 63      | 63 | 63 | 65 | 65 | 60 | 60      | 60 | 60 | 60 | 64 | 61 | 61      | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 |    |    |    |    |    |    |
| C                           | 0 to 7            | Array Interior | 64                         | 64                                                                                  | 61 | 61 | 61 | 52 | 52 | 64      | 64 | 57 | 57 | 57 | 48 | 48      | 64 | 61 | 53 | 53 | 53 | 44      | 44 | 64 | 58 | 49 | 49 | 49      | 42 | 42 | 64 | 54 | 46 | 46      | 46 | 39 | 39 | 64 | 51 | 44 | 44 | 44 | 37 | 37 | 64 | 51 | 44 | 44 | 44 | 37 | 37 |    |    |    |    |
|                             |                   | Array Edge     | 64                         | 64                                                                                  | 53 | 53 |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

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| Maximum Rail Spans (Inches) |                   |                |                                 | ClickFit Rail 450124 (REVX03) Flush-Mount on 0 to 30 Foot Roof -- L-Foot -- 72-Cell (P) |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----------------------------|-------------------|----------------|---------------------------------|-----------------------------------------------------------------------------------------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Ground Snow Load            | Exposure Category | Panel Angle    | Wind Speed --><br>Roof Zone --> | 130 mph                                                                                 |    |    |    |    |    | 140 mph |    |    |    |    |    | 150 mph |    |    |    |    |    | 160 mph |    |    |    |    |    | 170 mph |    |    |    |    |    | 180 mph |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|                             |                   |                |                                 | 1'                                                                                      | 1' | 2e | 2r | 2n | 3e | 3r      | 1' | 1' | 2e | 2r | 2n | 3e      | 3r | 1' | 1' | 2e | 2r | 2n      | 3e | 3r | 1' | 1' | 2e | 2r      | 2n | 3e | 3r | 1' | 1' | 2e      | 2r | 2n | 3e | 3r | 1' | 1' | 2e | 2r | 2n | 3e | 3r |    |    |    |    |    |    |    |
| 0 psf                       | B                 | 0 to 7         | Array Interior                  | 82                                                                                      | 74 | 67 | 67 | 67 | 59 | 59      | 82 | 71 | 63 | 63 | 63 | 55      | 55 | 82 | 67 | 60 | 60 | 60      | 51 | 51 | 81 | 64 | 56 | 56      | 56 | 47 | 47 | 77 | 61 | 53      | 53 | 53 | 44 | 44 | 74 | 58 | 50 | 50 | 50 | 42 | 42 | 74 | 58 | 50 | 50 | 42 | 42 |    |
|                             |                   |                | Array Edge                      | 81                                                                                      | 64 | 57 | 57 | 57 | 48 | 48      | 77 | 61 | 52 | 52 | 52 | 44      | 44 | 73 | 57 | 49 | 49 | 49      | 41 | 41 | 70 | 53 | 46 | 46      | 46 | 38 | 38 | 67 | 50 | 43      | 43 | 43 | 36 | 36 | 64 | 47 | 40 | 40 | 40 | 32 | 32 | 64 | 47 | 40 | 40 | 32 | 32 |    |
|                             |                   | 7 to 20        | Array Interior                  | 70                                                                                      | 70 | 70 | 61 | 61 | 61 | 55      | 66 | 66 | 66 | 56 | 56 | 56      | 51 | 51 | 63 | 63 | 52 | 52      | 52 | 48 | 48 | 60 | 60 | 49      | 49 | 49 | 45 | 57 | 57 | 57      | 46 | 46 | 46 | 42 | 42 | 54 | 54 | 54 | 43 | 43 | 43 | 35 | 35 | 43 | 39 |    |    |    |
|                             |                   |                | Array Edge                      | 61                                                                                      | 61 | 61 | 49 | 49 | 49 | 45      | 56 | 56 | 56 | 46 | 46 | 46      | 41 | 41 | 52 | 52 | 52 | 42      | 42 | 39 | 49 | 49 | 49 | 40      | 40 | 40 | 36 | 46 | 46 | 46      | 37 | 37 | 37 | 32 | 43 | 43 | 43 | 35 | 35 | 35 | 29 | 29 | 43 | 35 | 29 | 29 |    |    |
|                             |                   | 20 to 27       | Array Interior                  | 78                                                                                      | 78 | 78 | 65 | 65 | 65 | 63      | 74 | 74 | 74 | 61 | 61 | 61      | 59 | 70 | 70 | 58 | 58 | 58      | 55 | 45 | 67 | 67 | 57 | 57      | 54 | 54 | 54 | 52 | 64 | 64      | 51 | 51 | 51 | 49 | 61 | 61 | 61 | 48 | 48 | 48 | 46 | 46 | 46 | 39 | 39 | 37 | 37 |    |
|                             |                   |                | Array Edge                      | 67                                                                                      | 67 | 67 | 54 | 54 | 54 | 52      | 64 | 64 | 64 | 50 | 50 | 50      | 48 | 61 | 61 | 61 | 47 | 47      | 47 | 45 | 57 | 57 | 57 | 44      | 44 | 44 | 42 | 53 | 53 | 53      | 41 | 41 | 41 | 39 | 50 | 50 | 50 | 39 | 39 | 39 | 37 | 37 | 37 | 37 | 37 |    |    |    |
|                             |                   | 27 to 45       | Array Interior                  | 72                                                                                      | 72 | 72 | 72 | 72 | 70 | 64      | 68 | 68 | 68 | 66 | 66 | 66      | 65 | 65 | 65 | 65 | 63 | 63      | 63 | 57 | 57 | 62 | 62 | 62      | 60 | 60 | 54 | 60 | 60 | 60      | 57 | 50 | 57 | 56 | 56 | 56 | 53 | 47 | 53 | 56 | 56 | 56 | 53 | 47 | 53 |    |    |    |
|                             |                   |                | Array Edge                      | 63                                                                                      | 63 | 63 | 63 | 60 | 54 | 60      | 59 | 59 | 59 | 56 | 50 | 56      | 55 | 55 | 55 | 55 | 52 | 52      | 56 | 52 | 51 | 51 | 51 | 51      | 49 | 43 | 39 | 48 | 48 | 48      | 48 | 46 | 41 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |    |    |
|                             |                   | 45 to 60       | Array Interior                  | 82                                                                                      | 82 | 78 | 78 | 78 | 78 | 78      | 79 | 79 | 74 | 74 | 74 | 74      | 76 | 76 | 73 | 71 | 71 | 71      | 71 | 73 | 73 | 68 | 68 | 68      | 68 | 68 | 70 | 70 | 65 | 65      | 65 | 65 | 65 | 68 | 68 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 |    |
|                             |                   |                | Array Edge                      | 73                                                                                      | 73 | 68 | 68 | 68 | 68 | 68      | 70 | 70 | 65 | 65 | 65 | 65      | 65 | 67 | 67 | 62 | 62 | 62      | 62 | 62 | 64 | 64 | 58 | 58      | 58 | 58 | 58 | 61 | 61 | 55      | 55 | 55 | 55 | 55 | 59 | 59 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 | 52 |    |
|                             | C                 | 0 to 7         | Array Interior                  | 82                                                                                      | 66 | 59 | 59 | 59 | 49 | 49      | 79 | 62 | 54 | 54 | 54 | 46      | 46 | 75 | 59 | 51 | 51 | 51      | 43 | 43 | 71 | 55 | 47 | 47      | 47 | 40 | 68 | 52 | 44 | 44      | 44 | 37 | 37 | 65 | 49 | 42 | 42 | 42 | 42 | 35 | 35 | 49 | 42 | 42 | 35 | 35 |    |    |
|                             |                   |                | Array Edge                      | 72                                                                                      | 56 | 47 | 47 | 47 | 40 | 40      | 68 | 51 | 44 | 44 | 44 | 37      | 37 | 65 | 48 | 41 | 41 | 41      | 33 | 33 | 62 | 45 | 38 | 38      | 38 | 29 | 59 | 42 | 36 | 36      | 36 | 26 | 26 | 55 | 40 | 32 | 32 | 32 | 32 | 23 | 23 | 40 | 32 | 32 | 23 | 23 |    |    |
|                             |                   | 7 to 20        | Array Interior                  | 62                                                                                      | 62 | 62 | 51 | 51 | 51 | 46      | 58 | 58 | 58 | 47 | 47 | 47      | 43 | 54 | 54 | 54 | 44 | 44      | 44 | 40 | 51 | 51 | 51 | 41      | 41 | 41 | 37 | 48 | 48 | 48      | 39 | 39 | 39 | 35 | 45 | 45 | 45 | 36 | 36 | 36 | 36 | 31 | 31 | 45 | 36 | 36 | 31 | 31 |
|                             |                   |                | Array Edge                      | 51                                                                                      | 51 | 51 | 41 | 41 | 41 | 38      | 47 | 47 | 47 | 38 | 38 | 38      | 34 | 44 | 44 | 44 | 36 | 36      | 36 | 29 | 41 | 41 | 41 | 31      | 31 | 31 | 26 | 39 | 39 | 39      | 27 | 27 | 27 | 23 | 36 | 36 | 36 | 24 | 24 | 24 | 24 | 20 | 20 | 36 | 24 | 20 | 20 |    |
|                             |                   | 20 to 27       | Array Interior                  | 69                                                                                      | 69 | 69 | 56 | 56 | 56 | 54      | 65 | 65 | 65 | 52 | 52 | 52      | 50 | 62 | 62 | 62 | 48 | 48      | 48 | 46 | 59 | 59 | 59 | 45      | 45 | 45 | 43 | 55 | 55 | 55      | 42 | 42 | 42 | 41 | 52 | 52 | 52 | 40 | 40 | 40 | 40 | 40 | 38 | 38 | 40 | 38 |    |    |
|                             |                   |                | Array Edge                      | 59                                                                                      | 59 | 59 | 45 | 45 | 45 | 44      | 55 | 55 | 55 | 42 | 42 | 42      | 42 | 60 | 51 | 51 | 51 | 39      | 39 | 39 | 38 | 48 | 48 | 48      | 37 | 37 | 37 | 35 | 45 | 45      | 45 | 33 | 33 | 33 | 31 | 42 | 42 | 42 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29 |    |    |
|                             |                   | 27 to 45       | Array Interior                  | 64                                                                                      | 64 | 64 | 64 | 62 | 56 | 62      | 61 | 61 | 61 | 61 | 58 | 52      | 58 | 57 | 57 | 57 | 57 | 54      | 48 | 54 | 53 | 53 | 53 | 51      | 45 | 51 | 50 | 50 | 50 | 47      | 42 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 45 | 40 | 45 | 45 | 40 | 45 |    |    |    |    |
|                             |                   |                | Array Edge                      | 54                                                                                      | 54 | 54 | 54 | 51 | 45 | 51      | 50 | 50 | 50 | 47 | 42 | 47      | 46 | 46 | 46 | 46 | 46 | 44      | 39 | 44 | 43 | 43 | 43 | 41      | 37 | 41 | 41 | 41 | 41 | 41      | 38 | 33 | 38 | 38 | 38 | 38 | 38 | 38 | 36 | 36 | 36 | 29 | 36 | 29 | 36 |    |    |    |
|                             |                   | 45 to 60       | Array Interior                  | 74                                                                                      | 74 | 70 | 70 | 70 | 70 | 70      | 71 | 71 | 66 | 66 | 66 | 66      | 66 | 68 | 68 | 63 | 63 | 63      | 63 | 65 | 65 | 60 | 60 | 60      | 60 | 60 | 63 | 63 | 57 | 57      | 57 | 57 | 57 | 60 | 60 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 |    |
|                             |                   |                | Array Edge                      | 66                                                                                      | 66 | 60 | 60 | 60 | 60 | 60      | 62 | 62 | 56 | 56 | 56 | 56      | 56 | 59 | 59 | 52 | 52 | 52      | 52 | 56 | 56 | 49 | 49 | 49      | 49 | 49 | 52 | 52 | 46 | 46      | 46 | 46 | 46 | 46 | 49 | 49 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 |    |    |
|                             | D                 | 0 to 7         | Array Interior                  | 78                                                                                      | 62 | 54 | 54 | 54 | 45 | 45      | 74 | 58 | 50 | 50 | 50 | 42      | 42 | 70 | 54 | 46 | 46 | 46      | 39 | 39 | 67 | 51 | 43 | 43      | 43 | 36 | 64 | 48 | 41 | 41      | 41 | 33 | 62 | 45 | 38 | 38 | 38 | 29 | 29 | 48 | 48 | 38 | 29 | 29 | 48 | 38 |    |    |
|                             |                   |                | Array Edge                      | 67                                                                                      | 51 | 43 | 43 | 43 | 37 | 37      | 64 | 47 | 40 | 40 | 40 | 32      | 32 | 61 | 44 | 37 | 37 | 37      | 28 | 28 | 57 | 41 | 34 | 34      | 34 | 24 | 54 | 38 | 30 | 30      | 30 | 22 | 51 | 36 | 27 | 27 | 27 | 27 | 19 | 19 | 36 | 27 | 19 | 19 | 36 | 27 |    |    |
|                             |                   | 7 to 20        | Array Interior                  | 58                                                                                      | 58 | 58 | 47 | 47 | 47 | 42      | 53 | 53 | 53 | 43 | 43 | 43      | 39 | 50 | 50 | 50 | 40 | 40      | 40 | 37 | 46 | 46 | 46 | 38      | 38 | 33 | 44 | 44 | 44 | 35      | 35 | 29 | 41 | 41 | 41 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 |    |
|                             |                   |                | Array Edge                      | 47                                                                                      | 47 | 47 | 38 | 38 | 38 | 33      | 43 | 43 | 43 | 34 | 34 | 34      | 29 | 40 | 40 | 40 | 30 | 30      | 30 | 25 | 38 | 38 | 38 | 26      | 26 | 22 | 35 | 35 | 23 | 23      | 23 | 19 | 31 | 31 | 31 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |    |    |    |
|                             |                   | 20 to 27       | Array Interior                  | 65                                                                                      | 65 | 65 | 51 | 51 | 51 | 49      | 61 | 61 | 61 | 48 | 48 | 48      | 46 | 58 | 58 | 58 | 44 | 44      | 44 | 42 | 54 | 54 | 54 | 41      | 41 | 41 | 40 | 51 | 51 | 51      | 39 | 39 | 39 | 37 | 48 | 48 | 48 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |    |
|                             |                   |                | Array Edge                      | 54                                                                                      | 54 | 54 | 42 | 42 | 42 | 40      | 50 | 50 | 50 | 39 | 39 | 39      | 37 | 47 | 47 | 47 | 36 | 36      | 36 | 33 | 44 | 44 | 44 | 32      | 32 | 29 | 41 | 41 | 41 | 28      | 28 | 28 | 26 | 39 | 39 | 39 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |    |    |
|                             |                   | 27 to 45       | Array Interior                  | 60                                                                                      | 60 | 60 | 57 | 57 | 57 | 51      | 56 | 56 | 56 | 53 | 47 | 53      | 52 | 57 | 57 | 57 | 57 | 54      | 48 | 54 | 53 | 53 | 53 | 51      | 45 | 51 | 50 | 50 | 50 | 47      | 42 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 45 | 40 | 45 | 45 | 40 | 45 |    |    |    |
|                             |                   |                | Array Edge                      | 49                                                                                      | 49 | 49 | 47 | 47 | 47 | 41      | 47 | 46 | 46 | 46 | 46 | 46      | 46 | 48 | 48 | 48 | 48 | 48      | 46 | 49 | 49 | 49 | 40 | 40      | 40 | 38 | 49 | 49 | 49 | 37      | 37 | 37 | 35 | 46 | 46 | 46 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |    |    |
|                             |                   | 45 to 60       | Array Interior                  | 71                                                                                      | 71 | 66 | 66 | 66 | 66 | 66      | 67 | 67 | 62 | 62 | 62 | 62      | 62 | 65 | 65 | 59 | 59 | 59      | 59 | 62 | 62 | 55 | 55 | 55      | 55 | 59 | 59 | 52 | 52 | 52      | 52 | 52 | 56 | 56 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |    |    |
|                             |                   |                | Array Edge                      | 62                                                                                      | 62 | 56 | 56 | 56 | 56 | 56      | 58 | 58 | 52 | 52 | 52 | 52      | 52 | 54 | 54 | 48 | 48 | 48      | 48 | 48 | 51 | 51 | 45 | 45      | 45 | 45 | 48 | 48 | 42 | 42      | 42 | 42 | 42 | 45 | 45 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |    |    |    |    |
| B                           | 0 to 7            | Array Interior | 73                              | 73                                                                                      | 67 | 67 | 67 | 59 | 59 | 73      | 71 | 63 | 63 | 63 | 55 | 55      | 73 | 67 | 60 | 60 | 60 | 51      | 51 | 73 | 64 | 56 | 56 | 56      | 47 | 47 | 73 | 61 | 53 | 53      | 53 | 44 | 44 | 73 | 58 | 50 | 50 | 50 | 42 | 42 | 73 |    |    |    |    |    |    |    |

[illegible]

| Maximum Rail Spans (Inches) |                   |                |                               | ClickFit Rail 450124 (REVX03) Flush-Mount on 0 to 30 Foot Roof -- L-Foot -- 72-Cell (P) |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |
|-----------------------------|-------------------|----------------|-------------------------------|-----------------------------------------------------------------------------------------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|--|--|
| Ground Snow Load            | Exposure Category | Panel Angle    | Wind Speed >><br>Roof Zone >> | 130 mph                                                                                 |    |    |    |    |    | 140 mph |    |    |    |    |    | 150 mph |    |    |    |    |    | 160 mph |    |    |    |    |    | 170 mph |    |    |    |    |    | 180 mph |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |
|                             |                   |                |                               | 1'                                                                                      | 2' | 2n | 3e | 3r | 1' | 2'      | 2n | 3e | 3r | 1' | 2' | 2n      | 3e | 3r | 1' | 2' | 2n | 3e      | 3r | 1' | 1' | 2' | 2n | 3e      | 3r | 1' | 1' | 2' | 2n | 3e      | 3r | 1' | 1' | 2' | 2n | 3e | 3r |    |    |    |    |    |    |  |  |  |  |
| 15 psf                      | B                 | 0 to 7         | Array Interior                | 69                                                                                      | 69 | 67 | 67 | 67 | 59 | 59      | 69 | 69 | 63 | 63 | 63 | 55      | 55 | 69 | 67 | 60 | 60 | 60      | 51 | 51 | 69 | 64 | 56 | 56      | 56 | 47 | 47 | 69 | 61 | 53      | 53 | 53 | 44 | 44 | 69 | 58 | 50 | 50 | 50 | 42 | 42 |    |    |  |  |  |  |
|                             |                   |                | Array Edge                    | 69                                                                                      | 64 | 57 | 57 | 57 | 48 | 48      | 69 | 61 | 52 | 52 | 52 | 44      | 44 | 69 | 57 | 49 | 49 | 49      | 41 | 41 | 69 | 60 | 56 | 46      | 46 | 48 | 38 | 38 | 67 | 50      | 43 | 43 | 43 | 36 | 36 | 64 | 47 | 40 | 40 | 40 | 32 | 32 |    |  |  |  |  |
|                             |                   | 7 to 20        | Array Interior                | 70                                                                                      | 70 | 70 | 61 | 61 | 61 | 55      | 56 | 66 | 66 | 56 | 56 | 56      | 51 | 51 | 63 | 63 | 63 | 52      | 52 | 52 | 48 | 48 | 60 | 60      | 49 | 49 | 49 | 49 | 49 | 57      | 57 | 57 | 46 | 46 | 46 | 46 | 46 | 54 | 54 | 54 | 43 | 43 | 39 |  |  |  |  |
|                             |                   |                | Array Edge                    | 61                                                                                      | 61 | 61 | 49 | 49 | 49 | 45      | 45 | 56 | 56 | 56 | 46 | 46      | 46 | 41 | 41 | 52 | 52 | 52      | 42 | 42 | 42 | 39 | 49 | 49      | 49 | 40 | 40 | 40 | 36 | 46      | 46 | 46 | 37 | 37 | 37 | 32 | 43 | 43 | 43 | 35 | 35 | 35 |    |  |  |  |  |
|                             |                   | 20 to 27       | Array Interior                | 75                                                                                      | 75 | 75 | 65 | 65 | 65 | 63      | 74 | 74 | 74 | 61 | 61 | 61      | 59 | 70 | 70 | 70 | 58 | 58      | 58 | 55 | 55 | 67 | 67 | 57      | 54 | 54 | 54 | 52 | 64 | 64      | 64 | 51 | 51 | 51 | 49 | 61 | 61 | 61 | 48 | 48 | 48 | 29 |    |  |  |  |  |
|                             |                   |                | Array Edge                    | 67                                                                                      | 67 | 67 | 54 | 54 | 54 | 52      | 64 | 64 | 64 | 50 | 50 | 50      | 48 | 61 | 61 | 61 | 47 | 47      | 47 | 45 | 57 | 57 | 57 | 44      | 44 | 44 | 44 | 52 | 53 | 53      | 53 | 41 | 41 | 41 | 39 | 50 | 50 | 50 | 39 | 39 | 39 |    |    |  |  |  |  |
|                             |                   | 27 to 45       | Array Interior                | 72                                                                                      | 72 | 72 | 72 | 72 | 72 | 64      | 70 | 70 | 70 | 68 | 68 | 68      | 66 | 61 | 66 | 65 | 65 | 65      | 63 | 57 | 57 | 63 | 63 | 62      | 62 | 62 | 60 | 54 | 60 | 60      | 57 | 57 | 56 | 56 | 56 | 56 | 53 | 47 | 53 | 43 | 43 | 43 |    |  |  |  |  |
|                             |                   |                | Array Edge                    | 63                                                                                      | 63 | 63 | 63 | 60 | 54 | 60      | 59 | 59 | 59 | 59 | 56 | 50      | 56 | 55 | 55 | 55 | 55 | 52      | 46 | 52 | 52 | 48 | 61 | 51      | 51 | 49 | 43 | 49 | 48 | 48      | 48 | 46 | 41 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 43 | 38 | 43 |  |  |  |  |
|                             | 45 to 60          | Array Interior | 82                            | 82                                                                                      | 78 | 78 | 78 | 78 | 78 | 79      | 79 | 74 | 74 | 74 | 74 | 74      | 76 | 76 | 71 | 71 | 71 | 71      | 71 | 71 | 73 | 73 | 68 | 68      | 68 | 68 | 70 | 70 | 70 | 65      | 65 | 65 | 65 | 65 | 68 | 68 | 62 | 62 | 62 | 62 |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 73                            | 73                                                                                      | 68 | 68 | 68 | 68 | 68 | 70      | 70 | 65 | 65 | 65 | 65 | 65      | 67 | 67 | 62 | 62 | 62 | 62      | 62 | 62 | 64 | 64 | 58 | 58      | 58 | 58 | 61 | 61 | 55 | 55      | 55 | 55 | 55 | 59 | 59 | 52 | 52 | 52 | 52 |    |    |    |    |  |  |  |  |
|                             | C                 | 0 to 7         | Array Interior                | 69                                                                                      | 66 | 59 | 59 | 59 | 49 | 49      | 69 | 62 | 54 | 54 | 54 | 46      | 46 | 69 | 59 | 51 | 51 | 51      | 43 | 43 | 69 | 64 | 57 | 47      | 47 | 40 | 40 | 68 | 52 | 44      | 44 | 44 | 37 | 37 | 65 | 49 | 42 | 42 | 42 | 35 | 35 |    |    |  |  |  |  |
|                             |                   |                | Array Edge                    | 69                                                                                      | 56 | 47 | 47 | 47 | 40 | 40      | 58 | 51 | 44 | 44 | 44 | 37      | 37 | 65 | 48 | 41 | 41 | 41      | 33 | 33 | 62 | 45 | 38 | 38      | 38 | 29 | 29 | 59 | 42 | 36      | 36 | 36 | 26 | 26 | 55 | 40 | 32 | 32 | 32 | 23 |    |    |    |  |  |  |  |
|                             |                   | 7 to 20        | Array Interior                | 62                                                                                      | 62 | 62 | 51 | 51 | 51 | 46      | 58 | 58 | 58 | 47 | 47 | 47      | 43 | 54 | 54 | 54 | 44 | 44      | 44 | 40 | 40 | 51 | 51 | 51      | 41 | 41 | 41 | 37 | 48 | 48      | 48 | 39 | 39 | 39 | 35 | 45 | 45 | 45 | 36 | 36 | 31 |    |    |  |  |  |  |
|                             |                   |                | Array Edge                    | 51                                                                                      | 51 | 51 | 41 | 41 | 41 | 38      | 47 | 47 | 47 | 38 | 38 | 38      | 34 | 44 | 44 | 44 | 36 | 36      | 36 | 29 | 41 | 41 | 41 | 31      | 31 | 31 | 26 | 39 | 39 | 39      | 27 | 27 | 27 | 23 | 36 | 36 | 36 | 24 | 24 | 20 |    |    |    |  |  |  |  |
|                             |                   | 20 to 27       | Array Interior                | 69                                                                                      | 69 | 69 | 56 | 56 | 56 | 54      | 65 | 65 | 65 | 52 | 52 | 52      | 50 | 62 | 62 | 62 | 48 | 48      | 48 | 46 | 46 | 59 | 59 | 59      | 45 | 45 | 45 | 43 | 55 | 55      | 55 | 42 | 42 | 42 | 41 | 52 | 52 | 52 | 40 | 40 | 38 |    |    |  |  |  |  |
|                             |                   |                | Array Edge                    | 59                                                                                      | 59 | 59 | 45 | 45 | 45 | 44      | 55 | 55 | 55 | 42 | 42 | 42      | 40 | 51 | 51 | 51 | 39 | 39      | 39 | 38 | 48 | 48 | 48 | 37      | 37 | 37 | 35 | 45 | 45 | 45      | 33 | 33 | 33 | 31 | 42 | 42 | 42 | 29 | 29 | 27 |    |    |    |  |  |  |  |
| 27 to 45                    |                   | Array Interior | 64                            | 64                                                                                      | 64 | 64 | 62 | 56 | 62 | 61      | 61 | 61 | 61 | 58 | 52 | 58      | 57 | 57 | 57 | 57 | 54 | 48      | 54 | 53 | 53 | 53 | 53 | 51      | 45 | 51 | 50 | 50 | 50 | 50      | 47 | 42 | 47 | 47 | 47 | 47 | 45 | 40 | 45 |    |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 54                            | 54                                                                                      | 54 | 54 | 51 | 45 | 51 | 50      | 50 | 50 | 50 | 47 | 42 | 47      | 46 | 46 | 46 | 46 | 44 | 39      | 44 | 43 | 43 | 43 | 43 | 41      | 37 | 41 | 41 | 41 | 41 | 38      | 33 | 38 | 38 | 38 | 36 | 29 | 36 |    |    |    |    |    |    |  |  |  |  |
| 45 to 60                    | Array Interior    | 74             | 74                            | 70                                                                                      | 70 | 70 | 70 | 70 | 71 | 71      | 66 | 66 | 66 | 66 | 66 | 68      | 68 | 63 | 63 | 63 | 63 | 63      | 65 | 65 | 60 | 60 | 60 | 60      | 60 | 63 | 63 | 57 | 57 | 57      | 57 | 57 | 60 | 60 | 54 | 54 | 54 | 54 |    |    |    |    |    |  |  |  |  |
|                             | Array Edge        | 66             | 66                            | 60                                                                                      | 60 | 60 | 60 | 60 | 62 | 62      | 56 | 56 | 56 | 56 | 56 | 59      | 59 | 52 | 52 | 52 | 52 | 52      | 56 | 56 | 49 | 49 | 49 | 49      | 49 | 52 | 52 | 46 | 46 | 46      | 46 | 46 | 49 | 49 | 43 | 43 | 43 |    |    |    |    |    |    |  |  |  |  |
| D                           | 0 to 7            | Array Interior | 69                            | 62                                                                                      | 54 | 54 | 54 | 45 | 65 | 58      | 50 | 50 | 50 | 42 | 42 | 69      | 58 | 54 | 46 | 46 | 39 | 39      | 69 | 57 | 43 | 43 | 43 | 36      | 36 | 64 | 48 | 41 | 41 | 41      | 33 | 33 | 62 | 45 | 38 | 38 | 38 | 29 | 29 |    |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 67                            | 61                                                                                      | 51 | 41 | 41 | 38 | 47 | 47      | 47 | 38 | 38 | 38 | 34 | 44      | 44 | 44 | 36 | 36 | 36 | 29      | 41 | 41 | 41 | 31 | 31 | 31      | 26 | 39 | 39 | 39 | 27 | 27      | 27 | 23 | 36 | 36 | 36 | 24 | 24 | 20 |    |    |    |    |    |  |  |  |  |
|                             | 7 to 20           | Array Interior | 58                            | 58                                                                                      | 58 | 47 | 47 | 47 | 42 | 53      | 53 | 53 | 43 | 43 | 43 | 39      | 50 | 50 | 50 | 40 | 40 | 40      | 30 | 30 | 46 | 46 | 46 | 38      | 38 | 38 | 38 | 33 | 44 | 44      | 44 | 35 | 35 | 35 | 29 | 41 | 41 | 41 | 31 | 31 | 26 |    |    |  |  |  |  |
|                             |                   | Array Edge     | 47                            | 47                                                                                      | 47 | 38 | 38 | 38 | 33 | 43      | 43 | 43 | 34 | 34 | 34 | 29      | 40 | 40 | 40 | 30 | 30 | 30      | 25 | 38 | 38 | 38 | 26 | 26      | 26 | 22 | 35 | 35 | 35 | 23      | 23 | 23 | 19 | 31 | 31 | 31 | 20 | 20 | 17 |    |    |    |    |  |  |  |  |
|                             | 20 to 27          | Array Interior | 65                            | 65                                                                                      | 65 | 51 | 51 | 51 | 49 | 61      | 61 | 61 | 48 | 48 | 48 | 46      | 58 | 58 | 58 | 44 | 44 | 44      | 42 | 42 | 54 | 54 | 54 | 41      | 41 | 41 | 40 | 51 | 51 | 51      | 39 | 39 | 39 | 37 | 48 | 48 | 48 | 37 | 37 | 35 |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 54                            | 54                                                                                      | 54 | 42 | 42 | 42 | 40 | 50      | 50 | 50 | 39 | 39 | 39 | 37      | 47 | 47 | 47 | 36 | 36 | 36      | 33 | 44 | 44 | 44 | 32 | 32      | 32 | 29 | 41 | 41 | 41 | 28      | 28 | 28 | 26 | 39 | 39 | 39 | 25 | 25 | 23 |    |    |    |    |  |  |  |  |
|                             | 27 to 45          | Array Interior | 60                            | 60                                                                                      | 60 | 57 | 51 | 57 | 56 | 56      | 56 | 56 | 53 | 47 | 53 | 52      | 52 | 52 | 50 | 44 | 50 | 49      | 49 | 49 | 49 | 49 | 49 | 46      | 41 | 46 | 46 | 46 | 46 | 43      | 39 | 43 | 43 | 43 | 43 | 43 | 43 | 37 | 37 | 31 |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 49                            | 49                                                                                      | 49 | 49 | 47 | 41 | 47 | 46      | 46 | 46 | 46 | 43 | 38 | 43      | 42 | 42 | 42 | 40 | 36 | 40      | 40 | 40 | 40 | 40 | 40 | 38      | 31 | 38 | 37 | 37 | 37 | 35      | 35 | 35 | 35 | 35 | 35 | 31 | 25 | 31 |    |    |    |    |    |  |  |  |  |
| 45 to 60                    | Array Interior    | 71             | 71                            | 66                                                                                      | 66 | 66 | 66 | 66 | 67 | 67      | 62 | 62 | 62 | 62 | 62 | 65      | 65 | 59 | 59 | 59 | 59 | 59      | 62 | 62 | 55 | 55 | 55 | 55      | 55 | 59 | 59 | 52 | 52 | 52      | 52 | 52 | 56 | 56 | 49 | 49 | 49 | 49 |    |    |    |    |    |  |  |  |  |
|                             | Array Edge        | 62             | 62                            | 56                                                                                      | 56 | 56 | 56 | 56 | 58 | 58      | 52 | 52 | 52 | 52 | 52 | 54      | 54 | 48 | 48 | 48 | 48 | 48      | 51 | 51 | 45 | 45 | 45 | 45      | 45 | 48 | 48 | 42 | 42 | 42      | 42 | 42 | 45 | 45 | 40 | 40 | 40 |    |    |    |    |    |    |  |  |  |  |
| B                           | 0 to 7            | Array Interior | 65                            | 65                                                                                      | 65 | 65 | 59 | 59 | 65 | 65      | 63 | 63 | 63 | 55 | 55 | 65      | 65 | 60 | 60 | 60 | 51 | 51      | 65 | 64 | 56 | 56 | 56 | 47      | 47 | 65 | 61 | 53 | 53 | 53      | 44 | 44 | 65 | 58 | 50 | 50 | 50 | 42 | 42 |    |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 65                            | 64                                                                                      | 57 | 57 | 57 | 48 | 48 | 65      | 61 | 52 | 52 | 52 | 44 | 44      | 65 | 57 | 49 | 49 | 49 | 41      | 41 | 65 | 60 | 56 | 46 | 46      | 48 | 38 | 38 | 67 | 50 | 43      | 43 | 43 | 36 | 36 | 64 | 47 | 40 | 40 | 40 | 32 | 32 |    |    |  |  |  |  |
|                             | 7 to 20           | Array Interior | 70                            | 70                                                                                      | 70 | 61 | 61 | 61 | 55 | 56      | 66 | 66 | 56 | 56 | 56 | 51      | 51 | 63 | 63 | 63 | 52 | 52      | 52 | 48 | 48 | 60 | 60 | 49      | 49 | 49 | 49 | 49 | 57 | 57      | 57 | 46 | 46 | 46 | 46 | 46 | 54 | 54 | 54 | 43 | 43 | 39 |    |  |  |  |  |
|                             |                   | Array Edge     | 61                            | 61                                                                                      | 61 | 49 | 49 | 49 | 45 | 45      | 56 | 56 | 56 | 46 | 46 | 46      | 41 | 41 | 52 | 52 | 52 | 42      | 42 | 42 | 39 | 49 | 49 | 49      | 40 | 40 | 40 | 36 | 46 | 46      | 46 | 37 | 37 | 37 | 32 | 43 | 43 | 43 | 35 | 35 | 29 |    |    |  |  |  |  |
|                             | 20 to 27          | Array Interior | 72                            | 72                                                                                      | 72 | 65 | 65 | 65 | 63 | 72      | 72 | 72 | 61 | 61 | 61 | 59      | 70 | 70 | 70 | 58 | 58 | 58      | 55 | 55 | 67 | 67 | 57 | 54      | 54 | 54 | 52 | 64 | 64 | 64      | 51 | 51 | 51 | 49 | 61 | 61 | 61 | 48 | 48 | 48 |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 67                            | 67                                                                                      | 67 | 54 | 54 | 54 | 52 | 64      | 64 | 64 | 50 | 50 | 50 | 48      | 61 | 61 | 61 | 47 | 47 | 47      | 45 | 57 | 57 | 57 | 44 | 44      | 44 | 44 | 52 | 53 | 53 | 53      | 41 | 41 | 41 | 39 | 50 | 50 | 50 | 39 | 39 | 37 |    |    |    |  |  |  |  |
|                             | 27 to 45          | Array Interior | 72                            | 72                                                                                      | 72 | 72 | 70 | 64 | 70 | 68      | 68 | 68 | 66 | 61 | 66 | 65      | 65 | 65 | 65 | 63 | 57 | 57      | 63 | 63 | 62 | 62 | 62 | 60      | 54 | 60 | 60 | 57 | 57 | 56      | 56 | 56 | 56 | 53 | 47 | 53 | 43 | 43 | 43 |    |    |    |    |  |  |  |  |
|                             |                   | Array Edge     | 63                            | 63                                                                                      | 63 | 63 | 60 | 54 | 60 | 59      | 59 | 59 | 59 | 56 | 50 | 56      | 55 | 55 | 55 | 52 | 46 | 52      | 52 | 48 | 61 | 51 | 51 | 49      | 43 | 49 | 48 | 48 | 48 | 46      | 41 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 43 | 38 | 43 |    |    |  |  |  |  |
| 45 to 60                    | Array Interior    | 82             | 82                            | 78                                                                                      | 78 | 78 | 78 | 78 | 79 | 79      | 74 | 74 |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |

[illegible]

| Maximum Rail Spans (Inches) |                   |             |               | ClickFit Rail 450124 (REVX03) Flush-Mount on 0 to 30 Foot Roof -- L-Foot -- 72-Cell (P) |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----------------------------|-------------------|-------------|---------------|-----------------------------------------------------------------------------------------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|----|--|--|--|--|--|--|--|--|----------|--|----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Ground Snow Load            | Exposure Category | Panel Angle | Wind Speed--> | 130 mph                                                                                 |    |    |    |    |    | 140 mph |    |    |    |    |    | 150 mph |    |    |    |    |    | 160 mph |    |    |    |    |    | 170 mph |    |    |    |    |    | 180 mph |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|                             |                   |             |               | 1'                                                                                      | 2' | 2e | 2r | 2n | 3e | 3r      | 1' | 2' | 2e | 2r | 2n | 3e      | 3r | 1' | 2' | 2e | 2r | 2n      | 3e | 3r | 1' | 2' | 2e | 2r      | 2n | 3e | 3r | 1' | 2' | 2e      | 2r | 2n | 3e | 3r | 1' | 2' | 2e | 2r | 2n | 3e | 3r |  |  |  |  |  |  |  |  |          |  |                |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| B                           |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 0 to 7   |  | Array Interior | 64 | 64 | 64 | 64 | 64 | 59 | 59 | 64 | 64 | 63 | 63 | 63 | 63 | 55 | 55 | 64 | 64 | 60 | 60 | 60 | 51 | 51 | 64 | 64 | 56 | 56 | 56 | 47 | 47 | 64 | 61 | 53 | 53 | 53 | 44 | 44 | 64 | 58 | 50 | 50 | 50 | 42 | 42 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 64 | 64 | 57 | 57 | 57 | 48 | 48 | 64 | 61 | 52 | 52 | 52 | 44 | 44 | 64 | 57 | 49 | 49 | 49 | 41 | 41 | 64 | 53 | 46 | 46 | 46 | 38 | 38 | 64 | 50 | 43 | 43 | 43 | 36 | 36 | 64 | 47 | 40 | 40 | 40 | 32 | 32 |    |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 7 to 20  |  | Array Interior | 66 | 66 | 66 | 61 | 61 | 61 | 55 | 55 | 66 | 66 | 56 | 56 | 56 | 56 | 51 | 51 | 63 | 63 | 52 | 52 | 52 | 48 | 48 | 60 | 60 | 49 | 49 | 49 | 45 | 45 | 57 | 57 | 46 | 46 | 46 | 46 | 42 | 42 | 54 | 54 | 43 | 43 | 43 | 35 | 35 |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 61 | 61 | 61 | 49 | 49 | 49 | 45 | 45 | 56 | 56 | 46 | 46 | 46 | 46 | 41 | 41 | 52 | 52 | 42 | 42 | 42 | 39 | 39 | 49 | 49 | 40 | 40 | 40 | 36 | 36 | 46 | 46 | 37 | 37 | 37 | 32 | 43 | 43 | 35 | 35 | 29 | 29 |    |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 20 to 27 |  | Array Interior | 67 | 67 | 67 | 65 | 65 | 65 | 63 | 63 | 67 | 67 | 66 | 61 | 61 | 61 | 59 | 59 | 67 | 67 | 58 | 58 | 58 | 55 | 55 | 67 | 67 | 57 | 54 | 54 | 52 | 52 | 64 | 64 | 51 | 51 | 51 | 49 | 49 | 61 | 61 | 48 | 48 | 48 | 46 | 46 |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 67 | 67 | 67 | 54 | 54 | 54 | 52 | 52 | 64 | 64 | 64 | 50 | 50 | 50 | 48 | 48 | 61 | 61 | 47 | 47 | 47 | 45 | 45 | 57 | 57 | 44 | 44 | 44 | 42 | 42 | 53 | 53 | 53 | 41 | 41 | 41 | 39 | 50 | 50 | 39 | 39 | 39 | 37 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 27 to 45 |  | Array Interior | 72 | 72 | 72 | 72 | 70 | 70 | 64 | 70 | 68 | 68 | 68 | 66 | 61 | 66 | 65 | 65 | 65 | 65 | 63 | 57 | 63 | 62 | 62 | 62 | 60 | 54 | 60 | 60 | 60 | 57 | 50 | 60 | 60 | 60 | 57 | 50 | 57 | 56 | 56 | 56 | 53 | 47 | 53 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 63 | 63 | 63 | 63 | 60 | 54 | 60 | 59 | 59 | 59 | 59 | 56 | 50 | 56 | 55 | 55 | 55 | 55 | 52 | 46 | 52 | 51 | 51 | 51 | 49 | 43 | 49 | 48 | 48 | 46 | 41 | 46 | 48 | 48 | 48 | 46 | 41 | 46 | 46 | 46 | 43 | 38 | 43 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 45 to 60 |  | Array Interior | 82 | 82 | 78 | 78 | 78 | 78 | 78 | 79 | 79 | 74 | 74 | 74 | 74 | 74 | 74 | 75 | 76 | 71 | 71 | 71 | 71 | 71 | 71 | 73 | 73 | 68 | 68 | 68 | 68 | 68 | 70 | 70 | 65 | 65 | 65 | 65 | 65 | 68 | 68 | 62 | 62 | 62 | 62 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 73 | 73 | 68 | 68 | 68 | 68 | 68 | 70 | 70 | 65 | 65 | 65 | 65 | 65 | 65 | 67 | 67 | 62 | 62 | 62 | 62 | 62 | 62 | 64 | 64 | 58 | 58 | 58 | 58 | 58 | 61 | 61 | 55 | 55 | 55 | 55 | 55 | 59 | 59 | 52 | 52 | 52 | 52 |    |    |
| 30 psf                      |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 0 to 7   |  | Array Interior | 64 | 64 | 59 | 59 | 59 | 49 | 49 | 64 | 62 | 54 | 54 | 54 | 46 | 46 | 64 | 59 | 51 | 51 | 51 | 43 | 43 | 64 | 64 | 55 | 47 | 47 | 40 | 40 | 61 | 62 | 54 | 44 | 44 | 44 | 37 | 37 | 64 | 49 | 42 | 42 | 42 | 35 | 35 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 64 | 56 | 47 | 47 | 40 | 40 | 64 | 51 | 44 | 44 | 44 | 37 | 37 | 64 | 48 | 41 | 41 | 41 | 33 | 33 | 62 | 45 | 38 | 38 | 38 | 29 | 29 | 59 | 42 | 36 | 36 | 36 | 26 | 26 | 55 | 40 | 32 | 32 | 23 | 23 |    |    |    |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 7 to 20  |  | Array Interior | 62 | 62 | 62 | 51 | 51 | 51 | 46 | 58 | 58 | 47 | 47 | 47 | 43 | 54 | 54 | 44 | 44 | 44 | 40 | 40 | 51 | 51 | 51 | 41 | 41 | 41 | 37 | 37 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 51 | 51 | 51 | 41 | 41 | 41 | 38 | 47 | 47 | 47 | 38 | 38 | 34 | 44 | 44 | 44 | 36 | 36 | 36 | 29 | 41 | 41 | 41 | 31 | 31 | 31 | 26 | 26 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |    |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 20 to 27 |  | Array Interior | 67 | 67 | 67 | 56 | 56 | 56 | 54 | 65 | 65 | 65 | 52 | 52 | 52 | 50 | 62 | 62 | 62 | 62 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 59 | 59 | 59 | 45 | 45 | 45 | 44 | 55 | 55 | 55 | 42 | 42 | 42 | 40 | 51 | 51 | 51 | 39 | 39 | 39 | 38 | 38 | 48 | 48 | 48 | 37 | 37 | 37 | 35 | 45 | 45 | 45 | 33 | 33 | 31 | 42 | 42 | 42 | 29 | 29 | 29 | 29 |    |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 27 to 45 |  | Array Interior | 64 | 64 | 64 | 64 | 62 | 56 | 62 | 61 | 61 | 61 | 58 | 52 | 58 | 57 | 57 | 57 | 57 | 54 | 48 | 54 | 53 | 53 | 53 | 51 | 45 | 51 | 50 | 50 | 50 | 47 | 42 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 54 | 54 | 54 | 54 | 51 | 45 | 51 | 50 | 50 | 50 | 30 | 47 | 42 | 47 | 46 | 46 | 46 | 46 | 39 | 44 | 43 | 43 | 43 | 41 | 37 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 41 |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 45 to 60 |  | Array Interior | 74 | 74 | 70 | 70 | 70 | 70 | 70 | 71 | 71 | 66 | 66 | 66 | 66 | 66 | 68 | 68 | 63 | 63 | 63 | 63 | 63 | 65 | 65 | 60 | 60 | 60 | 60 | 60 | 60 | 63 | 63 | 57 | 57 | 57 | 57 | 57 | 60 | 60 | 54 | 54 | 54 | 54 | 54 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 66 | 66 | 62 | 60 | 60 | 60 | 60 | 62 | 62 | 56 | 56 | 56 | 56 | 56 | 59 | 59 | 52 | 52 | 52 | 52 | 52 | 56 | 56 | 49 | 49 | 49 | 49 | 49 | 52 | 52 | 46 | 46 | 46 | 46 | 46 | 49 | 49 | 43 | 43 | 43 | 43 | 43 |    |    |    |
| 35 psf                      |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 0 to 7   |  | Array Interior | 66 | 66 | 64 | 61 | 61 | 61 | 55 | 55 | 66 | 66 | 56 | 56 | 56 | 51 | 51 | 63 | 63 | 52 | 52 | 52 | 48 | 48 | 60 | 60 | 49 | 49 | 49 | 45 | 45 | 57 | 57 | 46 | 46 | 46 | 46 | 42 | 42 | 54 | 54 | 43 | 43 | 43 | 35 | 35 |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 61 | 61 | 61 | 49 | 49 | 49 | 45 | 45 | 56 | 56 | 46 | 46 | 46 | 46 | 41 | 41 | 52 | 52 | 42 | 42 | 42 | 39 | 39 | 49 | 49 | 40 | 40 | 40 | 36 | 36 | 46 | 46 | 37 | 37 | 37 | 32 | 43 | 43 | 35 | 35 | 29 | 29 |    |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 7 to 20  |  | Array Interior | 64 | 64 | 64 | 61 | 61 | 61 | 55 | 55 | 64 | 64 | 56 | 56 | 56 | 51 | 51 | 63 | 63 | 52 | 52 | 52 | 48 | 48 | 60 | 60 | 49 | 49 | 49 | 45 | 45 | 57 | 57 | 46 | 46 | 46 | 46 | 42 | 42 | 54 | 54 | 43 | 43 | 43 | 35 | 35 |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 61 | 61 | 61 | 49 | 49 | 49 | 45 | 45 | 56 | 56 | 46 | 46 | 46 | 46 | 41 | 41 | 52 | 52 | 42 | 42 | 42 | 39 | 39 | 49 | 49 | 40 | 40 | 40 | 36 | 36 | 46 | 46 | 37 | 37 | 37 | 32 | 43 | 43 | 35 | 35 | 29 | 29 |    |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 20 to 27 |  | Array Interior | 66 | 66 | 66 | 65 | 65 | 65 | 63 | 63 | 66 | 66 | 66 | 61 | 61 | 61 | 59 | 59 | 66 | 66 | 58 | 58 | 58 | 55 | 55 | 66 | 66 | 56 | 54 | 54 | 52 | 52 | 64 | 64 | 51 | 51 | 51 | 49 | 49 | 61 | 61 | 48 | 48 | 48 | 46 | 46 |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 66 | 66 | 66 | 54 | 54 | 54 | 52 | 52 | 64 | 64 | 64 | 50 | 50 | 50 | 48 | 48 | 61 | 61 | 47 | 47 | 47 | 45 | 45 | 57 | 57 | 44 | 44 | 44 | 42 | 42 | 53 | 53 | 53 | 41 | 41 | 41 | 39 | 50 | 50 | 39 | 39 | 39 | 37 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 27 to 45 |  | Array Interior | 72 | 72 | 72 | 72 | 70 | 70 | 64 | 70 | 68 | 68 | 68 | 66 | 61 | 66 | 65 | 65 | 65 | 65 | 63 | 57 | 63 | 62 | 62 | 62 | 60 | 54 | 60 | 60 | 60 | 57 | 50 | 60 | 60 | 60 | 57 | 50 | 57 | 56 | 56 | 56 | 53 | 47 | 53 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 63 | 63 | 63 | 63 | 60 | 54 | 60 | 59 | 59 | 59 | 59 | 56 | 50 | 56 | 55 | 55 | 55 | 55 | 52 | 46 | 52 | 51 | 51 | 51 | 49 | 43 | 49 | 48 | 48 | 46 | 41 | 46 | 48 | 48 | 48 | 46 | 41 | 46 | 46 | 46 | 43 | 38 | 43 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 45 to 60 |  | Array Interior | 82 | 82 | 78 | 78 | 78 | 78 | 78 | 79 | 79 | 74 | 74 | 74 | 74 | 74 | 75 | 76 | 71 | 71 | 71 | 71 | 71 | 71 | 73 | 73 | 68 | 68 | 68 | 68 | 68 | 70 | 70 | 65 | 65 | 65 | 65 | 65 | 68 | 68 | 62 | 62 | 62 | 62 |    |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 73 | 73 | 68 | 68 | 68 | 68 | 68 | 70 | 70 | 65 | 65 | 65 | 65 | 65 | 67 | 67 | 62 | 62 | 62 | 62 | 62 | 62 | 64 | 64 | 58 | 58 | 58 | 58 | 58 | 61 | 61 | 55 | 55 | 55 | 55 | 55 | 59 | 59 | 52 | 52 | 52 | 52 |    |    |    |
| 40 psf                      |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 0 to 7   |  | Array Interior | 62 | 62 | 59 | 59 | 59 | 49 | 49 | 62 | 62 | 54 | 54 | 54 | 46 | 46 | 62 | 59 | 51 | 51 | 51 | 43 | 43 | 62 | 62 | 55 | 47 | 47 | 40 | 40 | 62 | 62 | 54 | 44 | 44 | 44 | 37 | 37 | 62 | 49 | 42 | 42 | 42 | 35 | 35 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 62 | 56 | 47 | 47 | 40 | 40 | 62 | 51 | 44 | 44 | 44 | 37 | 37 | 62 | 48 | 41 | 41 | 41 | 33 | 33 | 62 | 45 | 38 | 38 | 38 | 29 | 29 | 59 | 42 | 36 | 36 | 36 | 26 | 26 | 55 | 40 | 32 | 32 | 23 | 23 |    |    |    |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 7 to 20  |  | Array Interior | 62 | 62 | 62 | 51 | 51 | 51 | 46 | 58 | 58 | 47 | 47 | 47 | 43 | 54 | 54 | 44 | 44 | 44 | 40 | 40 | 51 | 51 | 51 | 41 | 41 | 41 | 37 | 37 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 51 | 51 | 51 | 41 | 41 | 41 | 38 | 47 | 47 | 47 | 38 | 38 | 34 | 44 | 44 | 44 | 36 | 36 | 36 | 29 | 41 | 41 | 41 | 31 | 31 | 31 | 26 | 26 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 20 to 27 |  | Array Interior | 66 | 66 | 66 | 56 | 56 | 56 | 54 | 65 | 65 | 65 | 52 | 52 | 52 | 50 | 62 | 62 | 62 | 62 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  |          |  | Array Edge     | 59 | 59 | 59 | 45 | 45 | 45 | 44 | 55 | 55 | 55 | 42 | 42 | 42 | 40 | 51 | 51 | 51 | 39 | 39 | 39 | 38 | 38 | 48 | 48 | 48 | 37 | 37 | 37 | 35 | 45 | 45 | 45 | 33 | 33 | 31 | 42 | 42 | 42 | 29 | 29 | 29 | 29 |    |    |    |
|                             |                   |             |               |                                                                                         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |  |  |  |  |  |  |  |  | 27 to 45 |  | Array Interior | 64 | 64 | 64 | 64 | 62 | 56 | 62 | 61 | 61 | 61 | 58 | 52 | 58 | 57 | 57 | 57 | 57 | 54 | 48 | 54 | 53 | 53 | 53 | 51 | 45 | 51 | 50 | 50 | 50 | 47 | 42 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 |    |    |    |

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| Maximum Rail Spans (Inches) |                   |                |                             | ClickFit Rail 450124 (REVX03) Flush-Mount on 0 to 30 Foot Roof -- L-Foot -- Landscape |     |    |    |    |    |         |     |    |    |    |    |         |    |     |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----------------------------|-------------------|----------------|-----------------------------|---------------------------------------------------------------------------------------|-----|----|----|----|----|---------|-----|----|----|----|----|---------|----|-----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Ground Snow Load            | Exposure Category | Panel Angle    | Wind Speed-><br>Roof Zone-> | 130 mph                                                                               |     |    |    |    |    | 140 mph |     |    |    |    |    | 150 mph |    |     |    |    |    | 160 mph |    |    |    |    |    | 170 mph |    |    |    |    |    | 180 mph |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|                             |                   |                |                             | 1'                                                                                    | 1   | 2e | 2r | 2n | 3e | 3r      | 1'  | 1  | 2e | 2r | 2n | 3e      | 3r | 1'  | 1  | 2e | 2r | 2n      | 3e | 3r | 1' | 1  | 2e | 2r      | 2n | 3e | 3r | 1' | 1  | 2e      | 2r | 2n | 3e | 3r | 1' | 1  | 2e | 2r | 2n | 3e | 3r |    |    |    |    |    |    |
| 0 psf                       | B                 | 0 to 7         | Array Interior              | 103                                                                                   | 89  | 80 | 80 | 80 | 71 | 71      | 103 | 85 | 76 | 76 | 76 | 68      | 68 | 102 | 80 | 72 | 72 | 72      | 64 | 64 | 97 | 77 | 69 | 69      | 69 | 62 | 62 | 93 | 74 | 66      | 66 | 66 | 59 | 59 | 89 | 71 | 64 | 64 | 64 | 55 | 55 |    |    |    |    |    |    |
|                             |                   |                | Array Edge                  | 97                                                                                    | 77  | 69 | 69 | 69 | 62 | 62      | 92  | 73 | 66 | 66 | 66 | 58      | 58 | 87  | 70 | 63 | 63 | 63      | 54 | 54 | 83 | 67 | 60 | 60      | 60 | 51 | 51 | 80 | 64 | 56      | 56 | 56 | 48 | 48 | 77 | 61 | 53 | 53 | 53 | 45 | 45 |    |    |    |    |    |    |
|                             |                   | 7 to 20        | Array Interior              | 84                                                                                    | 84  | 84 | 73 | 73 | 73 | 68      | 80  | 80 | 80 | 69 | 69 | 69      | 65 | 76  | 76 | 76 | 66 | 66      | 66 | 62 | 72 | 72 | 72 | 63      | 63 | 63 | 59 | 69 | 69 | 69      | 60 | 60 | 55 | 67 | 67 | 67 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |    |
|                             |                   |                | Array Edge                  | 73                                                                                    | 73  | 73 | 63 | 63 | 63 | 59      | 69  | 69 | 69 | 60 | 60 | 60      | 55 | 66  | 66 | 66 | 56 | 56      | 56 | 51 | 63 | 63 | 63 | 52      | 52 | 52 | 48 | 60 | 60 | 60      | 49 | 49 | 49 | 57 | 57 | 57 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |    |    |
|                             |                   | 20 to 27       | Array Interior              | 93                                                                                    | 93  | 93 | 77 | 77 | 77 | 75      | 88  | 88 | 88 | 74 | 74 | 74      | 72 | 84  | 84 | 84 | 70 | 70      | 70 | 68 | 80 | 80 | 80 | 67      | 67 | 67 | 65 | 77 | 77 | 77      | 64 | 64 | 64 | 74 | 74 | 74 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 |    |
|                             |                   |                | Array Edge                  | 80                                                                                    | 80  | 80 | 67 | 67 | 67 | 65      | 76  | 76 | 76 | 64 | 64 | 64      | 62 | 73  | 73 | 73 | 61 | 61      | 61 | 59 | 69 | 69 | 69 | 57      | 57 | 57 | 55 | 67 | 67 | 67      | 54 | 54 | 54 | 64 | 64 | 64 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 |    |
|                             |                   | 27 to 45       | Array Interior              | 87                                                                                    | 87  | 87 | 83 | 77 | 83 | 77      | 82  | 82 | 82 | 82 | 73 | 73      | 79 | 78  | 78 | 78 | 75 | 70      | 75 | 75 | 75 | 75 | 75 | 75      | 72 | 67 | 72 | 72 | 72 | 72      | 69 | 64 | 69 | 69 | 69 | 67 | 62 | 67 | 62 | 67 | 62 | 67 | 62 | 67 | 62 |    |    |
|                             |                   |                | Array Edge                  | 75                                                                                    | 75  | 75 | 75 | 72 | 67 | 72      | 71  | 71 | 71 | 71 | 69 | 64      | 69 | 68  | 68 | 68 | 66 | 61      | 66 | 65 | 65 | 65 | 65 | 65      | 63 | 57 | 63 | 62 | 62 | 62      | 60 | 54 | 60 | 60 | 60 | 60 | 57 | 51 | 57 | 51 | 57 | 51 | 57 | 51 | 57 | 51 |    |
|                             |                   | 45 to 60       | Array Interior              | 100                                                                                   | 100 | 94 | 94 | 94 | 94 | 84      | 95  | 95 | 89 | 89 | 89 | 89      | 89 | 91  | 91 | 85 | 85 | 85      | 85 | 85 | 88 | 88 | 81 | 81      | 81 | 81 | 84 | 84 | 84 | 78      | 78 | 78 | 78 | 78 | 81 | 81 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 |    |
|                             |                   |                | Array Edge                  | 88                                                                                    | 88  | 82 | 82 | 82 | 82 | 82      | 84  | 84 | 78 | 78 | 78 | 78      | 78 | 80  | 80 | 74 | 74 | 74      | 74 | 74 | 77 | 77 | 71 | 71      | 71 | 71 | 71 | 74 | 74 | 68      | 68 | 68 | 68 | 68 | 71 | 71 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 | 65 |    |
|                             | C                 | 0 to 7         | Array Interior              | 100                                                                                   | 79  | 71 | 71 | 71 | 63 | 63      | 94  | 75 | 67 | 67 | 67 | 60      | 60 | 90  | 71 | 64 | 64 | 64      | 56 | 56 | 86 | 68 | 61 | 61      | 61 | 52 | 82 | 65 | 58 | 58      | 58 | 49 | 79 | 63 | 55 | 55 | 55 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 |
|                             |                   |                | Array Edge                  | 86                                                                                    | 68  | 62 | 62 | 62 | 53 | 53      | 81  | 65 | 58 | 58 | 58 | 49      | 49 | 77  | 62 | 54 | 54 | 46      | 46 | 74 | 59 | 50 | 50 | 50      | 43 | 71 | 55 | 47 | 47 | 47      | 40 | 68 | 52 | 45 | 45 | 45 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 |    |
|                             |                   | 7 to 20        | Array Interior              | 74                                                                                    | 74  | 74 | 65 | 65 | 65 | 61      | 71  | 71 | 71 | 61 | 61 | 61      | 57 | 67  | 67 | 67 | 58 | 58      | 58 | 53 | 64 | 64 | 64 | 54      | 54 | 49 | 62 | 62 | 62 | 51      | 51 | 46 | 59 | 59 | 59 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |    |
|                             |                   |                | Array Edge                  | 65                                                                                    | 65  | 65 | 55 | 55 | 55 | 50      | 61  | 61 | 61 | 51 | 51 | 51      | 46 | 58  | 58 | 58 | 47 | 47      | 47 | 43 | 54 | 54 | 54 | 44      | 44 | 40 | 51 | 51 | 51 | 41      | 41 | 38 | 48 | 48 | 48 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |    |
|                             |                   | 20 to 27       | Array Interior              | 82                                                                                    | 82  | 82 | 69 | 69 | 69 | 67      | 78  | 78 | 78 | 65 | 65 | 65      | 64 | 74  | 74 | 74 | 62 | 62      | 62 | 61 | 71 | 71 | 71 | 60      | 60 | 57 | 68 | 68 | 68 | 56      | 56 | 56 | 66 | 66 | 66 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 |    |
|                             |                   |                | Array Edge                  | 71                                                                                    | 71  | 71 | 60 | 60 | 60 | 58      | 68  | 68 | 68 | 55 | 55 | 55      | 53 | 65  | 65 | 65 | 52 | 52      | 52 | 50 | 62 | 62 | 62 | 48      | 48 | 46 | 59 | 59 | 59 | 45      | 45 | 45 | 54 | 54 | 54 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 |    |    |
|                             |                   | 27 to 45       | Array Interior              | 77                                                                                    | 77  | 77 | 77 | 74 | 69 | 74      | 73  | 73 | 73 | 70 | 65 | 70      | 73 | 70  | 70 | 70 | 67 | 62      | 67 | 67 | 67 | 67 | 67 | 67      | 64 | 59 | 64 | 64 | 64 | 62      | 56 | 62 | 61 | 61 | 61 | 59 | 53 | 59 | 53 | 59 | 53 | 59 | 53 | 59 | 53 | 59 |    |
|                             |                   |                | Array Edge                  | 67                                                                                    | 67  | 67 | 67 | 64 | 60 | 64      | 64  | 64 | 64 | 61 | 55 | 61      | 61 | 61  | 61 | 61 | 58 | 52      | 58 | 52 | 58 | 57 | 57 | 57      | 54 | 48 | 54 | 54 | 54 | 51      | 45 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 | 51 |    |    |
|                             |                   | 45 to 60       | Array Interior              | 90                                                                                    | 90  | 84 | 84 | 84 | 84 | 84      | 86  | 86 | 79 | 79 | 79 | 79      | 79 | 82  | 82 | 76 | 76 | 76      | 76 | 76 | 79 | 79 | 72 | 72      | 72 | 72 | 75 | 75 | 69 | 69      | 69 | 69 | 69 | 73 | 73 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 | 67 |    |    |
|                             |                   |                | Array Edge                  | 79                                                                                    | 79  | 73 | 73 | 73 | 73 | 73      | 75  | 75 | 69 | 69 | 69 | 69      | 69 | 72  | 72 | 66 | 66 | 66      | 66 | 66 | 68 | 68 | 63 | 63      | 63 | 63 | 66 | 66 | 60 | 60      | 60 | 60 | 60 | 63 | 63 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 | 57 |    |
|                             | D                 | 0 to 7         | Array Interior              | 94                                                                                    | 74  | 67 | 67 | 67 | 60 | 89      | 71  | 64 | 64 | 64 | 55 | 55      | 84 | 67  | 61 | 61 | 61 | 51      | 51 | 80 | 64 | 57 | 57 | 57      | 48 | 77 | 62 | 54 | 54 | 45      | 45 | 74 | 59 | 51 | 51 | 51 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 | 43 |    |
|                             |                   |                | Array Edge                  | 81                                                                                    | 65  | 57 | 57 | 57 | 48 | 48      | 77  | 61 | 53 | 53 | 53 | 45      | 45 | 73  | 58 | 49 | 49 | 42      | 42 | 70 | 54 | 46 | 46 | 46      | 39 | 67 | 51 | 44 | 44 | 44      | 37 | 64 | 48 | 41 | 41 | 41 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 | 34 |    |    |
|                             |                   | 7 to 20        | Array Interior              | 70                                                                                    | 70  | 70 | 61 | 61 | 61 | 56      | 67  | 67 | 67 | 57 | 57 | 57      | 52 | 64  | 64 | 64 | 53 | 53      | 53 | 48 | 61 | 61 | 61 | 50      | 50 | 45 | 58 | 58 | 58 | 47      | 47 | 47 | 54 | 54 | 54 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 | 44 |    |
|                             |                   |                | Array Edge                  | 61                                                                                    | 61  | 61 | 50 | 50 | 50 | 46      | 57  | 57 | 57 | 46 | 46 | 46      | 42 | 53  | 53 | 53 | 43 | 43      | 43 | 39 | 50 | 50 | 50 | 40      | 40 | 37 | 47 | 47 | 47 | 38      | 38 | 38 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 |    |    |    |
|                             |                   | 20 to 27       | Array Interior              | 78                                                                                    | 78  | 78 | 65 | 65 | 65 | 63      | 74  | 74 | 74 | 62 | 62 | 62      | 60 | 70  | 70 | 70 | 58 | 58      | 58 | 56 | 67 | 67 | 67 | 55      | 55 | 52 | 64 | 64 | 64 | 51      | 51 | 49 | 62 | 62 | 62 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |    |    |
|                             |                   |                | Array Edge                  | 67                                                                                    | 67  | 67 | 55 | 55 | 55 | 53      | 64  | 64 | 64 | 51 | 51 | 51      | 49 | 61  | 61 | 61 | 47 | 47      | 47 | 46 | 58 | 58 | 58 | 44      | 44 | 43 | 54 | 54 | 54 | 42      | 42 | 40 | 51 | 51 | 51 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 39 |    |    |    |
|                             |                   | 27 to 45       | Array Interior              | 73                                                                                    | 73  | 73 | 73 | 70 | 65 | 70      | 69  | 69 | 69 | 66 | 62 | 66      | 66 | 66  | 66 | 66 | 63 | 58      | 63 | 58 | 63 | 63 | 63 | 63      | 61 | 54 | 61 | 60 | 60 | 60      | 57 | 51 | 57 | 57 | 57 | 54 | 54 | 54 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |    |    |
|                             |                   |                | Array Edge                  | 63                                                                                    | 63  | 63 | 63 | 61 | 55 | 61      | 60  | 60 | 60 | 60 | 57 | 51      | 57 | 56  | 56 | 56 | 56 | 53      | 47 | 53 | 52 | 52 | 52 | 50      | 44 | 50 | 49 | 49 | 49 | 47      | 42 | 47 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 | 46 |    |    |
|                             |                   | 45 to 60       | Array Interior              | 85                                                                                    | 85  | 79 | 79 | 79 | 79 | 79      | 81  | 81 | 75 | 75 | 75 | 75      | 75 | 78  | 78 | 71 | 71 | 71      | 71 | 71 | 74 | 74 | 68 | 68      | 68 | 68 | 71 | 71 | 66 | 66      | 66 | 66 | 66 | 68 | 68 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 | 63 |    |    |
|                             |                   |                | Array Edge                  | 75                                                                                    | 75  | 69 | 69 | 69 | 69 | 69      | 71  | 71 | 65 | 65 | 65 | 65      | 65 | 68  | 68 | 62 | 62 | 62      | 62 | 62 | 65 | 65 | 59 | 59      | 59 | 59 | 62 | 62 | 56 | 56      | 56 | 56 | 56 | 60 | 60 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 |    |
| B                           | 0 to 7            | Array Interior | 92                          | 89                                                                                    | 80  | 80 | 80 | 71 | 71 | 92      | 85  | 76 | 76 | 76 | 68 | 68      | 92 | 80  | 72 | 72 | 72 | 64      | 64 | 92 | 77 | 69 | 69 | 69      | 62 | 62 | 92 | 74 | 66 | 66      | 66 | 59 | 59 | 89 | 71 | 64 | 64 | 64 | 55 | 55 |    |    |    |    |    |    |    |
|                             |                   | Array Edge     | 82                          | 78                                                                                    | 69  | 69 | 69 | 62 | 62 | 92      | 73  | 66 | 66 | 66 | 58 | 58      | 87 | 70  | 63 | 63 | 63 | 54      | 54 | 83 | 67 | 60 | 60 |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

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25 of 31

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| Maximum Rail Spans (Inches) |                   |                |                | ClickFit Rail 450124 (REVX03) Flush-Mount on 0 to 30 Foot Roof -- L-Foot -- Landscape |     |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
|-----------------------------|-------------------|----------------|----------------|---------------------------------------------------------------------------------------|-----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|
| Ground Snow Load            | Exposure Category | Panel Angle    | Wind Speed-->  | 130 mph                                                                               |     |    |    |    |    | 140 mph |    |    |    |    |    | 150 mph |    |    |    |    |    | 160 mph |    |    |    |    |    | 170 mph |    |    |    |    |    | 180 mph |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |
|                             |                   |                |                | 1'                                                                                    | 2'  | 2e | 2r | 3e | 3r | 1'      | 2' | 2e | 2r | 3e | 3r | 1'      | 2' | 2e | 2r | 3e | 3r | 1'      | 2' | 2e | 2r | 3e | 3r | 1'      | 2' | 2e | 2r | 3e | 3r | 1'      | 2' | 2e | 2r | 3e | 3r |    |    |    |    |    |    |    |    |    |    |  |  |
| 30 psf                      | B                 | 0 to 7         | Array Interior | 81                                                                                    | 81  | 80 | 80 | 80 | 71 | 71      | 81 | 81 | 76 | 76 | 76 | 68      | 68 | 81 | 80 | 72 | 72 | 72      | 64 | 64 | 81 | 77 | 69 | 69      | 69 | 62 | 62 | 81 | 74 | 66      | 66 | 66 | 59 | 59 | 81 | 71 | 64 | 64 | 64 | 55 | 55 |    |    |    |    |  |  |
|                             |                   |                | Array Edge     | 81                                                                                    | 77  | 69 | 69 | 69 | 62 | 62      | 81 | 73 | 66 | 66 | 66 | 58      | 58 | 81 | 70 | 63 | 63 | 63      | 54 | 54 | 81 | 70 | 63 | 63      | 63 | 51 | 51 | 80 | 64 | 56      | 56 | 56 | 48 | 48 | 77 | 61 | 53 | 53 | 53 | 45 | 45 |    |    |    |    |  |  |
|                             |                   | 7 to 20        | Array Interior | 83                                                                                    | 83  | 83 | 73 | 73 | 73 | 68      | 80 | 80 | 80 | 69 | 69 | 69      | 65 | 65 | 76 | 76 | 76 | 66      | 66 | 66 | 62 | 62 | 71 | 72      | 72 | 63 | 63 | 63 | 59 | 69      | 69 | 60 | 60 | 60 | 55 | 67 | 67 | 57 | 57 | 57 | 52 | 52 |    |    |    |  |  |
|                             |                   |                | Array Edge     | 73                                                                                    | 73  | 73 | 63 | 63 | 63 | 59      | 69 | 69 | 69 | 60 | 60 | 60      | 55 | 55 | 66 | 66 | 66 | 56      | 56 | 56 | 51 | 51 | 63 | 63      | 63 | 52 | 52 | 52 | 48 | 60      | 60 | 60 | 49 | 49 | 49 | 45 | 57 | 57 | 46 | 46 | 46 | 42 | 42 |    |    |  |  |
|                             |                   | 20 to 27       | Array Interior | 85                                                                                    | 85  | 85 | 77 | 77 | 77 | 77      | 77 | 85 | 85 | 85 | 74 | 74      | 74 | 74 | 74 | 84 | 84 | 84      | 70 | 70 | 70 | 68 | 80 | 80      | 80 | 67 | 67 | 67 | 65 | 77      | 77 | 77 | 64 | 64 | 64 | 63 | 74 | 74 | 74 | 62 | 62 | 62 | 60 | 60 |    |  |  |
|                             |                   |                | Array Edge     | 80                                                                                    | 80  | 80 | 67 | 67 | 67 | 65      | 65 | 76 | 76 | 76 | 64 | 64      | 64 | 62 | 62 | 73 | 73 | 73      | 61 | 61 | 61 | 59 | 69 | 69      | 69 | 57 | 57 | 57 | 55 | 67      | 67 | 67 | 54 | 54 | 54 | 52 | 64 | 64 | 64 | 51 | 51 | 49 | 49 |    |    |  |  |
|                             |                   | 27 to 45       | Array Interior | 87                                                                                    | 87  | 87 | 87 | 83 | 77 | 73      | 68 | 82 | 82 | 82 | 79 | 73      | 69 | 65 | 65 | 78 | 78 | 78      | 75 | 75 | 75 | 70 | 75 | 75      | 75 | 72 | 67 | 72 | 72 | 72      | 69 | 64 | 69 | 69 | 69 | 69 | 69 | 69 | 67 | 62 | 67 | 62 | 67 |    |    |  |  |
|                             |                   |                | Array Edge     | 75                                                                                    | 75  | 75 | 75 | 72 | 67 | 62      | 57 | 71 | 71 | 71 | 69 | 64      | 69 | 68 | 68 | 68 | 68 | 66      | 61 | 66 | 65 | 65 | 65 | 63      | 63 | 63 | 57 | 62 | 62 | 62      | 60 | 54 | 60 | 60 | 60 | 57 | 51 | 57 | 51 | 51 | 49 | 49 |    |    |    |  |  |
|                             |                   | 45 to 60       | Array Interior | 100                                                                                   | 100 | 94 | 94 | 94 | 94 | 94      | 94 | 95 | 95 | 89 | 89 | 89      | 89 | 89 | 91 | 91 | 85 | 85      | 85 | 85 | 85 | 88 | 88 | 81      | 81 | 81 | 81 | 81 | 84 | 84      | 78 | 78 | 78 | 78 | 78 | 81 | 81 | 75 | 75 | 75 | 75 | 75 |    |    |    |  |  |
|                             |                   |                | Array Edge     | 88                                                                                    | 88  | 82 | 82 | 82 | 82 | 82      | 84 | 84 | 78 | 78 | 78 | 78      | 78 | 80 | 80 | 74 | 74 | 74      | 74 | 74 | 74 | 77 | 77 | 71      | 71 | 71 | 71 | 71 | 74 | 74      | 68 | 68 | 68 | 68 | 68 | 71 | 71 | 65 | 65 | 65 | 65 | 65 |    |    |    |  |  |
|                             | C                 | 0 to 7         | Array Interior | 81                                                                                    | 79  | 71 | 71 | 71 | 63 | 63      | 81 | 75 | 67 | 67 | 67 | 60      | 60 | 81 | 71 | 64 | 64 | 64      | 56 | 56 | 81 | 68 | 61 | 61      | 61 | 61 | 61 | 81 | 65 | 58      | 58 | 58 | 49 | 49 | 79 | 63 | 55 | 55 | 55 | 47 | 47 |    |    |    |    |  |  |
|                             |                   |                | Array Edge     | 81                                                                                    | 68  | 62 | 62 | 62 | 53 | 53      | 81 | 65 | 58 | 58 | 58 | 49      | 49 | 77 | 62 | 54 | 54 | 54      | 46 | 46 | 74 | 59 | 50 | 50      | 50 | 43 | 43 | 74 | 59 | 50      | 50 | 43 | 43 | 74 | 55 | 47 | 47 | 47 | 40 | 40 |    |    |    |    |    |  |  |
|                             |                   | 7 to 20        | Array Interior | 74                                                                                    | 74  | 74 | 65 | 65 | 65 | 61      | 61 | 71 | 71 | 61 | 61 | 61      | 57 | 57 | 67 | 67 | 67 | 58      | 58 | 58 | 53 | 64 | 64 | 64      | 54 | 54 | 54 | 49 | 62 | 62      | 62 | 51 | 51 | 51 | 46 | 59 | 59 | 59 | 48 | 48 | 44 | 44 |    |    |    |  |  |
|                             |                   |                | Array Edge     | 65                                                                                    | 65  | 65 | 55 | 55 | 55 | 50      | 50 | 61 | 61 | 61 | 51 | 51      | 51 | 46 | 46 | 58 | 58 | 58      | 47 | 47 | 47 | 43 | 54 | 54      | 54 | 44 | 44 | 44 | 40 | 51      | 51 | 51 | 41 | 41 | 41 | 38 | 48 | 48 | 39 | 39 | 35 |    |    |    |    |  |  |
|                             |                   | 20 to 27       | Array Interior | 82                                                                                    | 82  | 82 | 69 | 69 | 69 | 67      | 67 | 78 | 78 | 78 | 65 | 65      | 65 | 64 | 64 | 74 | 74 | 74      | 62 | 62 | 62 | 61 | 71 | 71      | 71 | 60 | 60 | 60 | 57 | 68      | 68 | 56 | 56 | 56 | 54 | 66 | 66 | 53 | 53 | 53 | 51 | 51 |    |    |    |  |  |
|                             |                   |                | Array Edge     | 71                                                                                    | 71  | 71 | 60 | 60 | 60 | 58      | 58 | 68 | 68 | 68 | 55 | 55      | 55 | 53 | 53 | 65 | 65 | 65      | 52 | 52 | 52 | 50 | 62 | 62      | 62 | 48 | 48 | 48 | 46 | 59      | 59 | 59 | 45 | 45 | 45 | 44 | 56 | 56 | 43 | 43 | 43 | 41 | 41 |    |    |  |  |
|                             |                   | 27 to 45       | Array Interior | 77                                                                                    | 77  | 77 | 77 | 74 | 69 | 74      | 73 | 73 | 73 | 70 | 65 | 70      | 65 | 61 | 61 | 61 | 61 | 61      | 58 | 58 | 58 | 52 | 67 | 67      | 67 | 67 | 64 | 64 | 64 | 59      | 64 | 64 | 64 | 54 | 64 | 64 | 64 | 54 | 54 | 51 | 51 | 48 | 48 | 43 | 43 |  |  |
|                             |                   |                | Array Edge     | 67                                                                                    | 67  | 67 | 67 | 64 | 60 | 64      | 64 | 64 | 64 | 64 | 61 | 55      | 61 | 55 | 61 | 55 | 61 | 55      | 61 | 55 | 61 | 55 | 61 | 55      | 61 | 55 | 61 | 55 | 61 | 55      | 61 | 55 | 61 | 55 | 61 | 55 | 61 | 55 | 61 | 55 | 61 | 55 | 61 | 55 |    |  |  |
|                             |                   | 45 to 60       | Array Interior | 90                                                                                    | 90  | 84 | 84 | 84 | 84 | 84      | 84 | 86 | 86 | 79 | 79 | 79      | 79 | 79 | 82 | 82 | 76 | 76      | 76 | 76 | 76 | 79 | 79 | 72      | 72 | 72 | 72 | 72 | 75 | 75      | 69 | 69 | 69 | 69 | 69 | 73 | 73 | 67 | 67 | 67 | 67 | 67 |    |    |    |  |  |
|                             |                   |                | Array Edge     | 79                                                                                    | 79  | 73 | 73 | 73 | 73 | 73      | 75 | 75 | 69 | 69 | 69 | 69      | 69 | 72 | 72 | 66 | 66 | 66      | 66 | 66 | 66 | 68 | 68 | 63      | 63 | 63 | 63 | 63 | 66 | 66      | 60 | 60 | 60 | 60 | 60 | 63 | 63 | 57 | 57 | 57 | 57 | 57 |    |    |    |  |  |
| D                           | 0 to 7            | Array Interior | 81             | 81                                                                                    | 80  | 80 | 80 | 71 | 71 | 81      | 81 | 76 | 76 | 76 | 68 | 68      | 81 | 80 | 72 | 72 | 72 | 64      | 64 | 81 | 77 | 69 | 69 | 69      | 62 | 62 | 81 | 74 | 66 | 66      | 66 | 59 | 59 | 81 | 71 | 64 | 64 | 64 | 55 | 55 |    |    |    |    |    |  |  |
|                             |                   | Array Edge     | 81             | 77                                                                                    | 69  | 69 | 69 | 62 | 62 | 81      | 73 | 66 | 66 | 66 | 58 | 58      | 81 | 70 | 63 | 63 | 63 | 54      | 54 | 81 | 70 | 63 | 63 | 63      | 51 | 51 | 80 | 64 | 56 | 56      | 56 | 48 | 48 | 77 | 61 | 53 | 53 | 53 | 45 | 45 |    |    |    |    |    |  |  |
|                             | 7 to 20           | Array Interior | 83             | 83                                                                                    | 83  | 73 | 73 | 73 | 68 | 80      | 80 | 80 | 69 | 69 | 69 | 65      | 65 | 76 | 76 | 76 | 66 | 66      | 66 | 62 | 62 | 71 | 72 | 72      | 63 | 63 | 63 | 59 | 69 | 69      | 60 | 60 | 60 | 55 | 67 | 67 | 57 | 57 | 57 | 52 | 52 |    |    |    |    |  |  |
|                             |                   | Array Edge     | 73             | 73                                                                                    | 73  | 63 | 63 | 63 | 59 | 69      | 69 | 69 | 60 | 60 | 60 | 55      | 55 | 66 | 66 | 66 | 56 | 56      | 56 | 51 | 51 | 63 | 63 | 63      | 52 | 52 | 52 | 48 | 60 | 60      | 60 | 49 | 49 | 49 | 45 | 57 | 57 | 46 | 46 | 46 | 42 | 42 |    |    |    |  |  |
|                             | 20 to 27          | Array Interior | 85             | 85                                                                                    | 85  | 77 | 77 | 77 | 77 | 77      | 85 | 85 | 85 | 74 | 74 | 74      | 74 | 74 | 84 | 84 | 84 | 70      | 70 | 70 | 68 | 80 | 80 | 80      | 67 | 67 | 67 | 65 | 77 | 77      | 77 | 64 | 64 | 64 | 63 | 74 | 74 | 74 | 62 | 62 | 62 | 60 | 60 |    |    |  |  |
|                             |                   | Array Edge     | 80             | 80                                                                                    | 80  | 67 | 67 | 67 | 65 | 65      | 76 | 76 | 76 | 64 | 64 | 64      | 62 | 62 | 73 | 73 | 73 | 61      | 61 | 61 | 59 | 69 | 69 | 69      | 57 | 57 | 57 | 55 | 67 | 67      | 67 | 54 | 54 | 54 | 52 | 64 | 64 | 64 | 51 | 51 | 49 | 49 |    |    |    |  |  |
|                             | 27 to 45          | Array Interior | 87             | 87                                                                                    | 87  | 87 | 83 | 77 | 73 | 68      | 82 | 82 | 82 | 79 | 73 | 69      | 65 | 65 | 78 | 78 | 78 | 75      | 75 | 75 | 70 | 75 | 75 | 75      | 72 | 67 | 72 | 72 | 72 | 69      | 64 | 69 | 69 | 69 | 69 | 69 | 69 | 67 | 62 | 67 | 62 | 67 |    |    |    |  |  |
|                             |                   | Array Edge     | 75             | 75                                                                                    | 75  | 75 | 72 | 67 | 62 | 57      | 71 | 71 | 71 | 69 | 64 | 69      | 68 | 68 | 68 | 68 | 66 | 61      | 66 | 65 | 65 | 65 | 63 | 63      | 63 | 57 | 62 | 62 | 62 | 60      | 54 | 60 | 60 | 60 | 57 | 51 | 57 | 51 | 51 | 49 | 49 |    |    |    |    |  |  |
|                             | 45 to 60          | Array Interior | 100            | 100                                                                                   | 94  | 94 | 94 | 94 | 94 | 94      | 95 | 95 | 89 | 89 | 89 | 89      | 89 | 91 | 91 | 85 | 85 | 85      | 85 | 85 | 88 | 88 | 81 | 81      | 81 | 81 | 81 | 84 | 84 | 78      | 78 | 78 | 78 | 78 | 81 | 81 | 75 | 75 | 75 | 75 | 75 |    |    |    |    |  |  |
|                             |                   | Array Edge     | 88             | 88                                                                                    | 82  | 82 | 82 | 82 | 82 | 84      | 84 | 78 | 78 | 78 | 78 | 78      | 80 | 80 | 74 | 74 | 74 | 74      | 74 | 74 | 77 | 77 | 71 | 71      | 71 | 71 | 71 | 74 | 74 | 68      | 68 | 68 | 68 | 68 | 71 | 71 | 65 | 65 | 65 | 65 | 65 |    |    |    |    |  |  |
| 35 psf                      | C                 | 0 to 7         | Array Interior | 79                                                                                    | 79  | 79 | 79 | 79 | 71 | 71      | 79 | 79 | 76 | 76 | 76 | 68      | 68 | 79 | 79 | 72 | 72 | 72      | 64 | 64 | 79 | 77 | 69 | 69      | 69 | 62 | 62 | 79 | 74 | 66      | 66 | 66 | 59 | 59 | 79 | 71 | 64 | 64 | 64 | 55 | 55 |    |    |    |    |  |  |
|                             |                   |                | Array Edge     | 79                                                                                    | 77  | 69 | 69 | 69 | 62 | 62      | 79 | 73 | 66 | 66 | 66 | 58      | 58 | 79 | 70 | 63 | 63 | 63      | 54 | 54 | 79 | 67 | 60 | 60      | 60 | 51 | 51 | 79 | 64 | 56      | 56 | 56 | 48 | 48 | 77 | 61 | 53 | 53 | 53 | 45 | 45 |    |    |    |    |  |  |
|                             |                   | 7 to 20        | Array Interior | 81                                                                                    | 81  | 81 | 73 | 73 | 73 | 68      | 80 | 80 | 80 | 69 | 69 | 69      | 65 | 65 | 76 | 76 | 76 | 66      | 66 | 66 | 62 | 62 | 72 | 72      | 72 | 63 | 63 | 63 | 59 | 69      | 69 | 60 | 60 | 60 | 55 | 67 | 67 | 57 | 57 | 57 | 52 | 52 |    |    |    |  |  |
|                             |                   |                | Array Edge     | 73                                                                                    | 73  | 73 | 63 | 63 | 63 | 59      | 69 | 69 | 69 | 60 | 60 | 60      | 55 | 55 | 66 | 66 | 66 | 56      | 56 | 56 | 51 | 51 | 63 | 63      | 63 | 52 | 52 | 52 | 48 | 60      | 60 | 60 | 49 | 49 | 49 | 45 | 57 | 57 | 46 | 46 | 46 | 42 | 42 |    |    |  |  |
|                             |                   | 20 to 27       | Array Interior | 82                                                                                    | 82  | 82 | 77 | 77 | 77 | 77      | 77 | 82 | 82 | 82 | 74 | 74      | 74 | 72 | 72 | 82 | 82 | 82      | 70 | 70 | 70 | 68 | 80 | 80      | 80 | 67 | 67 | 67 | 65 | 77      | 77 | 77 | 64 | 64 | 64 | 63 | 74 | 74 | 74 | 62 | 62 | 62 | 60 | 60 |    |  |  |
|                             |                   |                | Array Edge     | 80                                                                                    | 80  | 80 | 67 | 67 | 67 | 65      | 65 | 76 | 76 | 76 | 64 | 64      | 64 | 62 | 62 | 73 | 73 | 73      | 61 | 61 | 61 | 59 | 69 | 69      | 69 | 57 | 57 | 57 | 55 | 67      | 67 | 67 | 54 | 54 | 54 | 52 | 64 | 64 | 64 | 51 | 51 | 49 | 49 |    |    |  |  |
|                             |                   | 27 to 45       | Array Interior | 87                                                                                    | 87  | 87 | 87 | 83 | 77 | 73      | 68 | 82 | 82 | 82 | 79 | 73      | 69 | 65 | 65 | 78 | 78 | 78      | 75 | 75 | 75 | 70 | 75 | 75      | 75 | 72 | 67 | 72 | 72 | 72      | 69 | 64 | 69 | 69 | 69 | 69 | 69 | 69 | 67 | 62 | 67 | 62 | 67 |    |    |  |  |
|                             |                   |                | Array Edge     |                                                                                       |     |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |  |  |

[illegible]

| Maximum Rail Spans (Inches) |                   |                |                | ClickFit Rail 450124 (REVX03) Flush-Mount on 0 to 30 Foot Roof -- L-Foot -- Landscape |                |    |    |    |         |    |    |    |    |         |    |    |    |    |         |    |    |    |    |         |    |    |    |    |         |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----------------------------|-------------------|----------------|----------------|---------------------------------------------------------------------------------------|----------------|----|----|----|---------|----|----|----|----|---------|----|----|----|----|---------|----|----|----|----|---------|----|----|----|----|---------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Ground Snow Load            | Exposure Category | Panel Angle    | Wind Speed->   | 130 mph                                                                               |                |    |    |    | 140 mph |    |    |    |    | 150 mph |    |    |    |    | 160 mph |    |    |    |    | 170 mph |    |    |    |    | 180 mph |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|                             |                   |                |                | Roof Zone->                                                                           | 1'             | 1' | 2e | 2r | 3e      | 3r | 1' | 1' | 2e | 2r      | 3e | 3r | 1' | 1' | 2e      | 2r | 3e | 3r | 1' | 1'      | 2e | 2r | 3e | 3r | 1'      | 1' | 2e | 2r | 3e | 3r |    |    |    |    |    |    |    |    |    |    |
| 45 psf                      | B                 | 0 to 7         | Array Interior | 74                                                                                    | 74             | 74 | 74 | 74 | 71      | 71 | 74 | 74 | 74 | 74      | 74 | 68 | 58 | 74 | 74      | 72 | 72 | 72 | 64 | 64      | 74 | 74 | 69 | 69 | 69      | 62 | 62 | 74 | 74 | 66 | 66 | 66 | 55 | 55 |    |    |    |    |    |    |
|                             |                   |                | Array Edge     | 74                                                                                    | 74             | 69 | 69 | 69 | 62      | 62 | 62 | 74 | 73 | 66      | 66 | 66 | 58 | 58 | 74      | 70 | 63 | 63 | 63 | 54      | 54 | 74 | 67 | 60 | 60      | 63 | 51 | 51 | 74 | 64 | 56 | 56 | 48 | 45 | 45 |    |    |    |    |    |
|                             |                   | 7 to 20        | Array Interior | 76                                                                                    | 76             | 76 | 76 | 73 | 68      | 76 | 76 | 76 | 69 | 69      | 69 | 65 | 65 | 76 | 76      | 76 | 66 | 66 | 66 | 62      | 62 | 72 | 72 | 72 | 63      | 63 | 63 | 59 | 69 | 69 | 60 | 60 | 55 | 67 | 67 | 57 | 57 | 52 |    |    |
|                             |                   |                | Array Edge     | 73                                                                                    | 73             | 73 | 63 | 63 | 63      | 59 | 69 | 69 | 69 | 60      | 60 | 60 | 55 | 55 | 66      | 66 | 66 | 56 | 56 | 56      | 51 | 51 | 63 | 63 | 63      | 52 | 52 | 52 | 60 | 60 | 49 | 49 | 45 | 57 | 57 | 46 | 46 | 42 |    |    |
|                             |                   | 20 to 27       | Array Interior | 78                                                                                    | 78             | 78 | 77 | 77 | 77      | 75 | 78 | 78 | 78 | 74      | 74 | 74 | 72 | 72 | 78      | 78 | 78 | 67 | 67 | 67      | 65 | 65 | 77 | 77 | 77      | 64 | 64 | 64 | 63 | 74 | 74 | 62 | 62 | 62 | 60 | 60 | 51 | 51 | 49 |    |
|                             |                   |                | Array Edge     | 78                                                                                    | 78             | 78 | 67 | 67 | 67      | 65 | 76 | 76 | 76 | 64      | 64 | 64 | 62 | 62 | 73      | 73 | 73 | 61 | 61 | 61      | 59 | 59 | 69 | 69 | 69      | 57 | 57 | 57 | 54 | 54 | 52 | 64 | 64 | 64 | 51 | 51 | 49 |    |    |    |
|                             |                   | 27 to 45       | Array Interior | 87                                                                                    | 87             | 87 | 87 | 83 | 77      | 83 | 82 | 82 | 82 | 79      | 73 | 73 | 78 | 78 | 78      | 78 | 75 | 75 | 75 | 70      | 70 | 75 | 75 | 75 | 75      | 72 | 67 | 72 | 72 | 69 | 64 | 69 | 69 | 69 | 67 | 62 | 67 |    |    |    |
|                             |                   |                | Array Edge     | 75                                                                                    | 75             | 75 | 75 | 72 | 67      | 72 | 71 | 71 | 71 | 71      | 69 | 64 | 69 | 68 | 68      | 68 | 66 | 66 | 66 | 61      | 61 | 65 | 65 | 65 | 65      | 63 | 57 | 63 | 62 | 62 | 60 | 54 | 60 | 60 | 60 | 57 | 51 | 57 |    |    |
|                             |                   | 45 to 60       | Array Interior | 100                                                                                   | 100            | 94 | 94 | 94 | 94      | 94 | 95 | 95 | 89 | 89      | 89 | 89 | 89 | 91 | 91      | 85 | 85 | 85 | 85 | 85      | 88 | 88 | 81 | 81 | 81      | 81 | 81 | 84 | 84 | 78 | 78 | 78 | 78 | 81 | 81 | 75 | 75 | 75 |    |    |
|                             |                   |                | Array Edge     | 88                                                                                    | 88             | 82 | 82 | 82 | 82      | 82 | 84 | 84 | 78 | 78      | 78 | 78 | 78 | 80 | 80      | 74 | 74 | 74 | 74 | 74      | 77 | 77 | 71 | 71 | 71      | 71 | 71 | 74 | 74 | 68 | 68 | 68 | 68 | 71 | 71 | 65 | 65 | 65 |    |    |
|                             |                   | C              | 0 to 7         | Array Interior                                                                        | 74             | 74 | 71 | 71 | 71      | 63 | 63 | 74 | 74 | 67      | 67 | 60 | 60 | 74 | 71      | 64 | 64 | 64 | 56 | 56      | 74 | 77 | 68 | 61 | 61      | 61 | 61 | 52 | 74 | 65 | 58 | 58 | 49 | 49 | 74 | 63 | 55 | 55 | 47 |    |
|                             |                   |                |                | Array Edge                                                                            | 74             | 68 | 62 | 62 | 62      | 53 | 53 | 74 | 65 | 58      | 58 | 49 | 49 | 74 | 62      | 54 | 54 | 54 | 46 | 46      | 73 | 59 | 50 | 50 | 50      | 43 | 43 | 71 | 55 | 47 | 47 | 40 | 40 | 68 | 52 | 45 | 45 | 38 |    |    |
|                             | 7 to 20           |                | Array Interior | 74                                                                                    | 74             | 74 | 65 | 65 | 65      | 61 | 71 | 71 | 71 | 61      | 61 | 57 | 57 | 67 | 67      | 58 | 58 | 58 | 53 | 53      | 64 | 64 | 54 | 54 | 54      | 49 | 62 | 62 | 62 | 51 | 51 | 51 | 68 | 59 | 59 | 48 | 48 | 44 |    |    |
|                             |                   |                | Array Edge     | 65                                                                                    | 65             | 65 | 55 | 55 | 55      | 50 | 61 | 61 | 61 | 51      | 51 | 51 | 46 | 46 | 58      | 58 | 58 | 47 | 47 | 47      | 43 | 43 | 54 | 54 | 54      | 44 | 44 | 44 | 40 | 40 | 37 | 37 | 37 | 34 | 34 | 30 |    |    |    |    |
|                             | 20 to 27          |                | Array Interior | 78                                                                                    | 78             | 78 | 69 | 69 | 69      | 67 | 78 | 78 | 78 | 65      | 65 | 65 | 64 | 74 | 74      | 74 | 62 | 62 | 62 | 60      | 70 | 70 | 58 | 58 | 58      | 56 | 67 | 67 | 67 | 55 | 55 | 52 | 64 | 64 | 64 | 51 | 51 | 49 |    |    |
|                             |                   |                | Array Edge     | 67                                                                                    | 67             | 67 | 55 | 55 | 55      | 50 | 61 | 61 | 61 | 51      | 51 | 51 | 46 | 46 | 58      | 58 | 58 | 44 | 44 | 44      | 40 | 40 | 54 | 54 | 54      | 44 | 44 | 44 | 40 | 40 | 37 | 37 | 37 | 34 | 34 | 30 |    |    |    |    |
|                             | 27 to 45          |                | Array Interior | 77                                                                                    | 77             | 77 | 77 | 74 | 69      | 74 | 73 | 73 | 73 | 70      | 65 | 70 | 70 | 70 | 70      | 70 | 67 | 62 | 67 | 67      | 67 | 67 | 67 | 67 | 67      | 64 | 64 | 64 | 59 | 64 | 64 | 54 | 54 | 54 | 61 | 61 | 61 | 59 | 53 |    |
|                             |                   |                | Array Edge     | 67                                                                                    | 67             | 67 | 67 | 64 | 60      | 64 | 64 | 64 | 64 | 64      | 61 | 55 | 61 | 61 | 61      | 61 | 58 | 52 | 58 | 52      | 58 | 57 | 57 | 57 | 57      | 54 | 54 | 54 | 48 | 54 | 54 | 44 | 44 | 44 | 51 | 51 | 48 |    |    |    |
|                             | 45 to 60          |                | Array Interior | 90                                                                                    | 90             | 84 | 84 | 84 | 84      | 84 | 86 | 86 | 79 | 79      | 79 | 79 | 79 | 82 | 82      | 76 | 76 | 76 | 76 | 76      | 79 | 79 | 72 | 72 | 72      | 72 | 72 | 75 | 75 | 69 | 69 | 69 | 69 | 73 | 73 | 67 | 67 | 67 |    |    |
|                             |                   |                | Array Edge     | 79                                                                                    | 79             | 73 | 73 | 73 | 73      | 73 | 75 | 75 | 69 | 69      | 69 | 69 | 69 | 72 | 72      | 66 | 66 | 66 | 66 | 66      | 68 | 68 | 63 | 63 | 63      | 63 | 63 | 66 | 66 | 60 | 60 | 60 | 60 | 63 | 63 | 57 | 57 | 57 |    |    |
|                             | D                 |                | 0 to 7         | Array Interior                                                                        | 76             | 76 | 67 | 67 | 67      | 60 | 60 | 76 | 71 | 64      | 64 | 64 | 55 | 55 | 76      | 71 | 64 | 64 | 55 | 55      | 76 | 74 | 67 | 67 | 67      | 67 | 67 | 76 | 65 | 57 | 57 | 48 | 48 | 76 | 64 | 55 | 55 | 47 |    |    |
|                             |                   |                |                | Array Edge                                                                            | 76             | 65 | 57 | 57 | 57      | 48 | 48 | 76 | 61 | 53      | 53 | 53 | 45 | 45 | 73      | 58 | 49 | 49 | 42 | 42      | 70 | 54 | 45 | 45 | 45      | 45 | 45 | 58 | 58 | 47 | 47 | 47 | 43 | 43 | 37 | 37 | 34 |    |    |    |
|                             |                   | 7 to 20        | Array Interior | 70                                                                                    | 70             | 70 | 61 | 61 | 61      | 56 | 67 | 67 | 67 | 57      | 57 | 52 | 52 | 64 | 64      | 64 | 53 | 53 | 53 | 48      | 61 | 61 | 61 | 61 | 50      | 50 | 50 | 45 | 58 | 58 | 47 | 47 | 47 | 43 | 43 | 37 | 34 | 34 |    |    |
|                             |                   |                | Array Edge     | 61                                                                                    | 61             | 61 | 50 | 50 | 50      | 46 | 57 | 57 | 57 | 46      | 46 | 46 | 42 | 42 | 53      | 53 | 53 | 43 | 43 | 43      | 39 | 50 | 50 | 50 | 40      | 40 | 40 | 37 | 47 | 47 | 47 | 38 | 38 | 33 | 33 | 30 |    |    |    |    |
| 20 to 27                    |                   | Array Interior | 78             | 78                                                                                    | 78             | 65 | 65 | 65 | 63      | 74 | 74 | 74 | 62 | 62      | 62 | 60 | 70 | 70 | 70      | 58 | 58 | 58 | 56 | 67      | 67 | 67 | 67 | 67 | 72      | 72 | 72 | 69 | 64 | 69 | 69 | 69 | 67 | 62 | 67 |    |    |    |    |    |
|                             |                   | Array Edge     | 67             | 67                                                                                    | 67             | 55 | 55 | 55 | 53      | 64 | 64 | 64 | 51 | 51      | 51 | 49 | 61 | 61 | 61      | 47 | 47 | 47 | 47 | 46      | 58 | 58 | 58 | 44 | 44      | 44 | 43 | 54 | 54 | 54 | 42 | 42 | 40 | 51 | 51 | 49 |    |    |    |    |
| 27 to 45                    |                   | Array Interior | 73             | 73                                                                                    | 73             | 73 | 73 | 70 | 65      | 70 | 69 | 69 | 69 | 66      | 62 | 66 | 66 | 66 | 66      | 66 | 63 | 58 | 63 | 63      | 63 | 61 | 54 | 61 | 60      | 60 | 60 | 57 | 51 | 57 | 57 | 57 | 54 | 48 | 54 | 54 |    |    |    |    |
|                             |                   | Array Edge     | 63             | 63                                                                                    | 63             | 63 | 61 | 55 | 61      | 60 | 60 | 60 | 60 | 57      | 51 | 57 | 56 | 56 | 56      | 56 | 53 | 47 | 53 | 52      | 52 | 52 | 50 | 44 | 50      | 49 | 49 | 49 | 49 | 47 | 42 | 47 | 46 | 46 | 44 |    |    |    |    |    |
| 45 to 60                    |                   | Array Interior | 85             | 85                                                                                    | 79             | 79 | 79 | 79 | 79      | 81 | 81 | 75 | 75 | 75      | 75 | 75 | 78 | 78 | 71      | 71 | 71 | 71 | 71 | 74      | 74 | 68 | 68 | 68 | 68      | 68 | 71 | 71 | 66 | 66 | 66 | 66 | 68 | 68 | 63 | 63 | 63 |    |    |    |
|                             |                   | Array Edge     | 75             | 75                                                                                    | 69             | 69 | 69 | 69 | 69      | 71 | 71 | 65 | 65 | 65      | 65 | 65 | 68 | 68 | 62      | 62 | 62 | 62 | 62 | 65      | 65 | 59 | 59 | 59 | 59      | 62 | 62 | 56 | 56 | 56 | 56 | 60 | 60 | 53 | 53 | 53 |    |    |    |    |
| 50 psf                      |                   | C              | 0 to 7         | Array Interior                                                                        | 72             | 72 | 71 | 71 | 71      | 63 | 63 | 72 | 72 | 67      | 67 | 60 | 60 | 72 | 71      | 64 | 64 | 64 | 56 | 56      | 72 | 68 | 61 | 61 | 61      | 61 | 52 | 72 | 65 | 58 | 58 | 49 | 49 | 72 | 63 | 55 | 55 | 47 |    |    |
|                             |                   |                |                | Array Edge                                                                            | 72             | 68 | 62 | 62 | 62      | 53 | 53 | 72 | 65 | 58      | 58 | 49 | 49 | 72 | 62      | 54 | 54 | 54 | 46 | 46      | 71 | 59 | 50 | 50 | 50      | 43 | 43 | 71 | 55 | 47 | 47 | 40 | 40 | 68 | 52 | 45 | 45 | 38 |    |    |
|                             | 7 to 20           |                | Array Interior | 74                                                                                    | 74             | 74 | 65 | 65 | 65      | 61 | 71 | 71 | 71 | 61      | 61 | 57 | 57 | 67 | 67      | 58 | 58 | 58 | 53 | 53      | 64 | 64 | 54 | 54 | 54      | 49 | 62 | 62 | 62 | 51 | 51 | 51 | 68 | 59 | 59 | 48 | 48 | 44 |    |    |
|                             |                   |                | Array Edge     | 65                                                                                    | 65             | 65 | 55 | 55 | 55      | 50 | 61 | 61 | 61 | 51      | 51 | 51 | 46 | 46 | 58      | 58 | 58 | 47 | 47 | 47      | 43 | 43 | 54 | 54 | 54      | 44 | 44 | 44 | 40 | 40 | 37 | 37 | 37 | 34 | 34 | 30 |    |    |    |    |
|                             | 20 to 27          |                | Array Interior | 76                                                                                    | 76             | 76 | 69 | 69 | 69      | 67 | 76 | 76 | 76 | 65      | 65 | 65 | 64 | 74 | 74      | 74 | 62 | 62 | 62 | 60      | 71 | 71 | 71 | 71 | 60      | 60 | 60 | 57 | 68 | 68 | 56 | 56 | 56 | 66 | 66 | 53 | 53 | 51 |    |    |
|                             |                   |                | Array Edge     | 71                                                                                    | 71             | 71 | 60 | 60 | 60      | 58 | 68 | 68 | 68 | 55      | 55 | 55 | 53 | 65 | 65      | 65 | 52 | 52 | 52 | 50      | 62 | 62 | 62 | 62 | 48      | 48 | 48 | 46 | 59 | 59 | 59 | 45 | 45 | 44 | 56 | 56 | 43 |    |    |    |
|                             | 27 to 45          |                | Array Interior | 77                                                                                    | 77             | 77 | 77 | 74 | 69      | 74 | 73 | 73 | 73 | 70      | 65 | 70 | 70 | 70 | 70      | 70 | 67 | 62 | 67 | 67      | 67 | 67 | 67 | 67 | 67      | 64 | 64 | 64 | 59 | 64 | 64 | 54 | 54 | 54 | 61 | 61 | 61 | 59 | 53 |    |
|                             |                   |                | Array Edge     | 67                                                                                    | 67             | 67 | 67 | 64 | 60      | 64 | 64 | 64 | 64 | 64      | 61 | 55 | 61 | 61 | 61      | 61 | 58 | 52 | 58 | 52      | 58 | 57 | 57 | 57 | 57      | 54 | 54 | 54 | 48 | 54 | 54 | 44 | 44 | 44 | 51 | 51 | 48 |    |    |    |
|                             | 45 to 60          |                | Array Interior | 90                                                                                    | 90             | 84 | 84 | 84 | 84      | 84 | 86 | 86 | 79 | 79      | 79 | 79 | 79 | 82 | 82      | 76 | 76 | 76 | 76 | 76      | 79 | 79 | 72 | 72 | 72      | 72 | 72 | 75 | 75 | 69 | 69 | 69 | 69 | 73 | 73 | 67 | 67 | 67 |    |    |
|                             |                   |                | Array Edge     | 79                                                                                    | 79             | 73 | 73 | 73 | 73      | 73 | 75 | 75 | 69 | 69      | 69 | 69 | 69 | 72 | 72      | 66 | 66 | 66 | 66 | 66      | 68 | 68 | 63 | 63 | 63      | 63 | 63 | 66 | 66 | 60 | 60 | 60 | 60 | 63 | 63 | 57 | 57 | 57 |    |    |
|                             | 60 psf            |                | D              | 0 to 7                                                                                | Array Interior | 74 | 74 | 67 | 67      | 67 | 60 | 60 | 74 | 61      | 64 | 64 | 64 | 55 | 55      | 74 | 61 | 64 | 64 | 55      | 55 | 74 | 61 | 61 | 61      | 61 | 50 | 50 | 50 | 45 | 58 | 58 | 47 | 47 | 47 | 43 | 43 | 37 | 34 | 34 |
|                             |                   |                |                |                                                                                       | Array Edge     | 74 | 65 | 57 | 57      | 57 | 48 | 48 | 74 | 61      | 53 | 53 | 53 | 45 | 45      | 73 | 58 | 49 | 49 | 42      | 42 | 70 | 54 | 45 | 45      | 45 |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

## Section Properties: Section1\_450124 (REV X03).DXF

### Section Information:

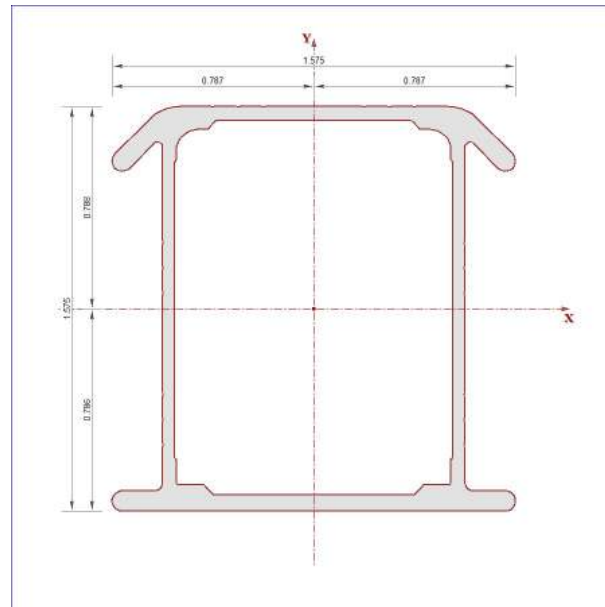
|                  |   |           |
|------------------|---|-----------|
| Material Type    | = | General   |
| Shape Type       | = | Arbitrary |
| Number of Shapes | = | 1         |

### Basic Properties:

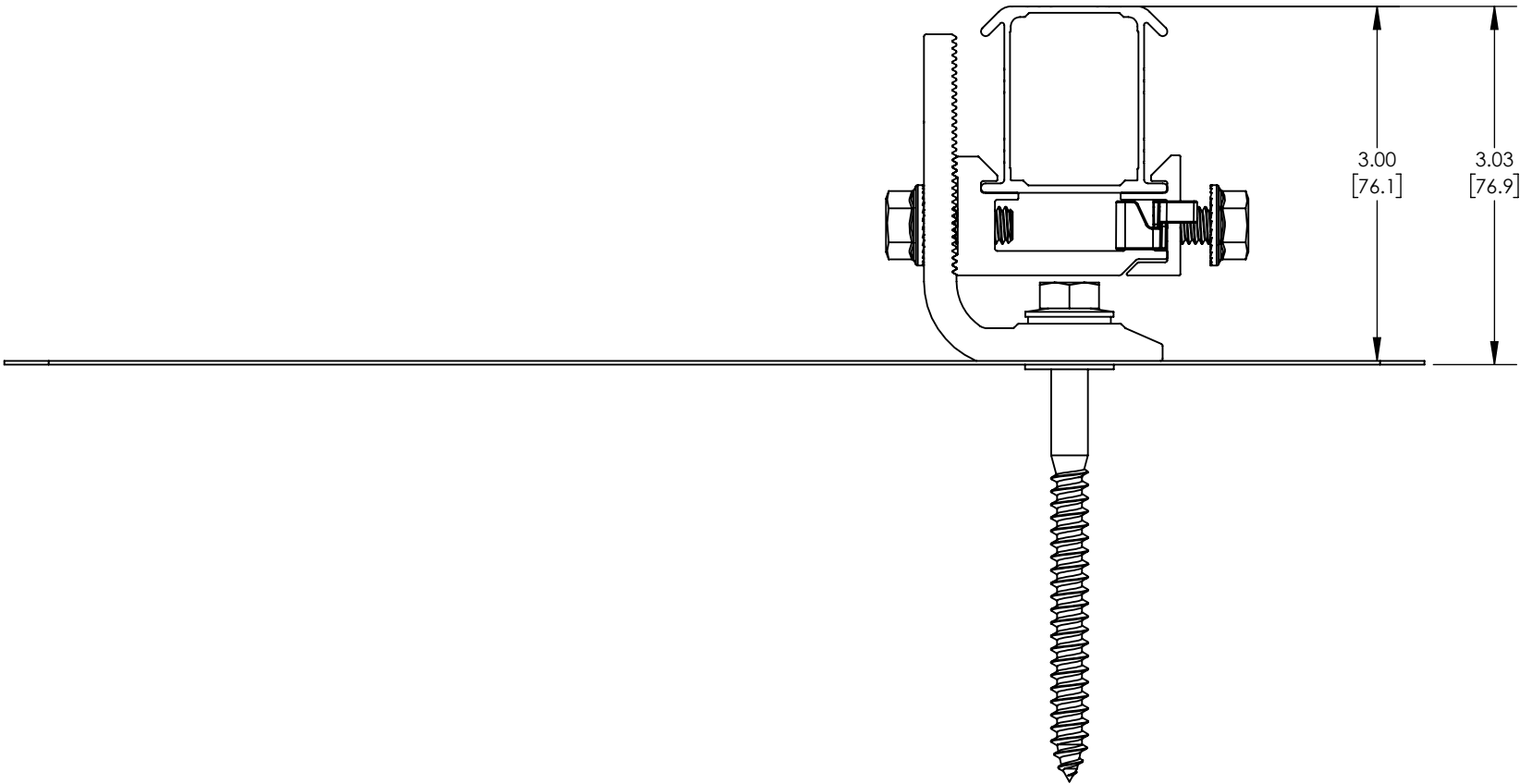
|                          |   |       |    |
|--------------------------|---|-------|----|
| Total Width              | = | 1.575 | in |
| Total Height             | = | 1.575 | in |
| Centroid, X <sub>o</sub> | = | 0.000 | in |
| Centroid, Y <sub>o</sub> | = | 0.786 | in |
| X-Bar (Right)            | = | 0.787 | in |
| X-Bar (Left)             | = | 0.787 | in |
| Y-Bar (Top)              | = | 0.788 | in |
| Y-Bar (Bot)              | = | 0.786 | in |
| Max Thick                | = | 1.575 | in |

### Equivalent Properties:

|                          |   |            |                 |
|--------------------------|---|------------|-----------------|
| Area, A <sub>x</sub>     | = | 0.373      | in <sup>2</sup> |
| Inertia, I <sub>xx</sub> | = | 0.151      | in <sup>4</sup> |
| Inertia, I <sub>yy</sub> | = | 0.100      | in <sup>4</sup> |
| Inertia, I <sub>xy</sub> | = | -0.000     | in <sup>4</sup> |
| S <sub>x</sub> (Top)     | = | 0.191      | in <sup>3</sup> |
| S <sub>x</sub> (Bot)     | = | 0.191      | in <sup>3</sup> |
| S <sub>y</sub> (Left)    | = | 0.126      | in <sup>3</sup> |
| S <sub>y</sub> (Right)   | = | 0.126      | in <sup>3</sup> |
| r <sub>x</sub>           | = | 0.635      | in              |
| r <sub>y</sub>           | = | 0.516      | in              |
| Plastic Z <sub>x</sub>   | = | 0.222      | in <sup>3</sup> |
| Plastic Z <sub>y</sub>   | = | 0.180      | in <sup>3</sup> |
| Torsional J              | = | <No Calc.> |                 |
| As-xx Def                | = | 1.000      |                 |
| As-yy Def                | = | 1.000      |                 |
| As-xx Stress             | = | 1.000      |                 |
| As-yy Stress             | = | 1.000      |                 |



Section Diagram



|                                                                                                                                                                                                                                                       |  |                                                    |  |                  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------|--|------------------|--|
| THIRD ANGLE PROJECTION                                                                                                                                                                                                                                |  | DRAWN                                              |  | -                |  |
|                                                                                                                                                                                                                                                       |  | CHECKED                                            |  | -                |  |
|                                                                                                                                                                                                                                                       |  | ENG APPR.                                          |  | -                |  |
|                                                                                                                                                                                                                                                       |  | MFG APPR.                                          |  | -                |  |
|                                                                                                                                                                                                                                                       |  | Q.A.                                               |  | -                |  |
| DO NOT SCALE DRAWING                                                                                                                                                                                                                                  |  | INTERPRET DIM AND TOLERANCE PER ASME Y14.5[M]-2009 |  |                  |  |
| <b>PROPRIETARY AND CONFIDENTIAL</b><br>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ESEDEC INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ESEDEC INC. IS PROHIBITED. COPYRIGHT © 2020 ESEDEC INC. |  | DIMENSIONS TOLERANCES ARE IN:                      |  |                  |  |
|                                                                                                                                                                                                                                                       |  | INCHES.                                            |  | [MILLIMETERS]    |  |
|                                                                                                                                                                                                                                                       |  | .XX: +/- .030                                      |  | .X: +/- .75      |  |
|                                                                                                                                                                                                                                                       |  | .XXX: +/- .010                                     |  | .XX: +/- .25     |  |
| ANGLES: +/- 1°                                                                                                                                                                                                                                        |  | SIZE <b>A</b>                                      |  |                  |  |
|                                                                                                                                                                                                                                                       |  | DWG. NO.                                           |  | XX-XXXX-XXX      |  |
|                                                                                                                                                                                                                                                       |  | SCALE: 1:1.5                                       |  | WEIGHT: 31 of 31 |  |
|                                                                                                                                                                                                                                                       |  |                                                    |  | REV. X01         |  |
|                                                                                                                                                                                                                                                       |  |                                                    |  | SHEET 1 OF 1     |  |

**INNOVATIVE MOUNTING SYSTEMS**

**MINIMUM MODULE HEIGHT EXAMPLE**