

Residential System Sizing Calculation

Summary

Project Title:
Dillon Residence

, FL

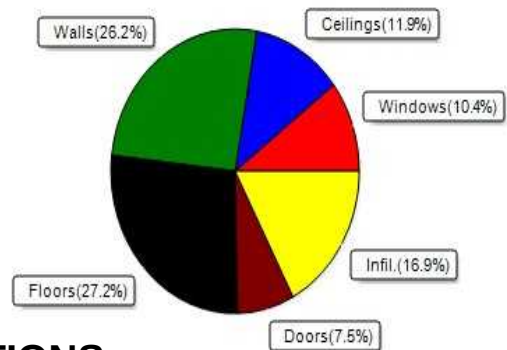
5/22/2026

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(100 ft.) Temp Range(M)					
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(51gr.)					
Winter design temperature(TMY3 99%)	30	F	Summer design temperature(TMY3 99%)	94	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	40	F	Summer temperature difference	19	F
Total heating load calculation	70446	Btuh	Total cooling load calculation	64170	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	170.3	120000	Sensible (SHR = 0.85)	194.8	102000
Heat Pump + Auxiliary(0.0kW)	170.3	120000	Latent	152.3	18000
			Total (Electric Heat Pump)	187.0	120000

WINTER CALCULATIONS

Winter Heating Load (for 6164 sqft)

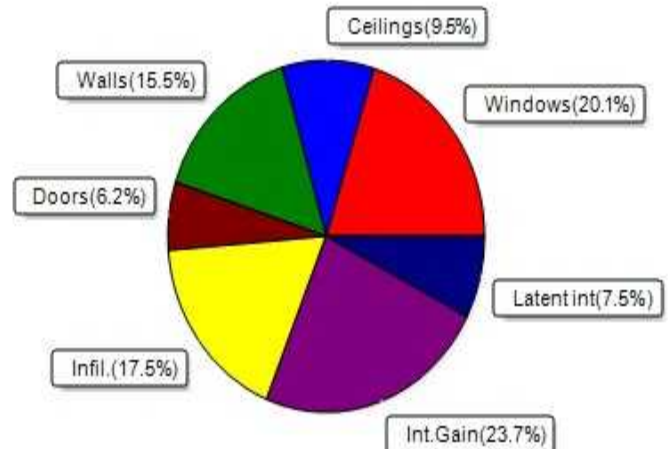
Load component	Load		
Window total	829	sqft	7295 Btuh
Wall total	5819	sqft	18427 Btuh
Door total	288	sqft	5299 Btuh
Ceiling total	6164	sqft	8384 Btuh
Floor total	See detail report		19163 Btuh
Infiltration	271	cfm	11878 Btuh
Duct loss			0 Btuh
Subtotal			70446 Btuh
Ventilation	Ex:0 cfm; Sup:0 cfm		0 Btuh
TOTAL HEAT LOSS			70446 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 6164 sqft)

Load component	Load		
Window total	829	sqft	12879 Btuh
Wall total	5819	sqft	9965 Btuh
Door total	288	sqft	3974 Btuh
Ceiling total	6164	sqft	6078 Btuh
Floor total			0 Btuh
Infiltration	203	cfm	4232 Btuh
Internal gain			15220 Btuh
Duct gain			0 Btuh
Sens.Ventilation	Ex:0 cfm; Sup:0 cfm		0 Btuh
Blower Load			0 Btuh
Total sensible gain			52348 Btuh
Latent gain(ducts)			0 Btuh
Latent gain(infiltration)			7022 Btuh
Latent gain(ventilation)			0 Btuh
Latent gain(internal/occupants/other)			4800 Btuh
Total latent gain			11822 Btuh
TOTAL HEAT GAIN			64170 Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: 5-22-26

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Project Title:
Dillon Residence

, FL

5/22/2026

Reference City: Gainesville, FL (Defaults)
Humidity difference: 51gr.

Temperature Difference: 19.0F(TMY3 99%)
Summer Setpoint: 75 °F (Required Manual J default)

Component Loads for Whole House

Window	Type*						Overhang		Window Area(sqft)			HTM		Load	
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded		
1	2 NFRC	0.33	0.22	No	No	N	1.3ft.	19.5f	36.0	0.0	36.0	11	11	400	Btuh
2	2 NFRC	0.33	0.22	No	No	N	1.3ft.	23.5f	54.0	0.0	54.0	11	11	601	Btuh
3	2 NFRC	0.33	0.22	No	No	N	1.3ft.	19.5f	36.0	0.0	36.0	11	11	400	Btuh
4	2 NFRC	0.33	0.22	No	No	E	1.3ft.	1.5ft.	36.0	0.0	36.0	11	36	1296	Btuh
5	2 NFRC	0.33	0.22	No	No	N	1.3ft.	23.5f	54.0	0.0	54.0	11	11	601	Btuh
6	2 NFRC	0.33	0.22	No	No	N	1.3ft.	19.5f	72.0	0.0	72.0	11	11	801	Btuh
7	2 NFRC	0.33	0.22	No	No	E	1.3ft.	1.5ft.	36.0	0.0	36.0	11	36	1296	Btuh
8	2 NFRC	0.33	0.22	No	No	N	1.3ft.	1.5ft.	18.0	0.0	18.0	11	11	200	Btuh
9	2 NFRC	0.33	0.22	No	No	E	1.3ft.	1.5ft.	72.0	0.0	72.0	11	36	2592	Btuh
10	2 NFRC	0.33	0.22	No	No	S	1.3ft.	1.5ft.	54.0	54.0	0.0	11	14	601	Btuh
11	2 NFRC	0.33	0.22	No	No	S	1.3ft.	1.5ft.	15.0	15.0	0.0	11	14	167	Btuh
12	2 NFRC	0.33	0.22	No	No	S	1.3ft.	10.5f	30.0	0.0	30.0	11	14	411	Btuh
13	2 NFRC	0.33	0.22	No	No	S	1.3ft.	1.5ft.	25.0	25.0	0.0	11	14	278	Btuh
14	2 NFRC	0.33	0.22	No	No	S	1.3ft.	1.5ft.	108.0	108.0	0.0	11	14	1201	Btuh
15	2 NFRC	0.33	0.22	No	No	N	1.3ft.	33.8f	36.0	0.0	36.0	11	11	400	Btuh
16	2 NFRC	0.33	0.22	No	No	N	1.3ft.	7.5ft.	18.0	0.0	18.0	11	11	200	Btuh
17	2 NFRC	0.33	0.22	No	No	S	1.3ft.	1.5ft.	54.0	54.0	0.0	11	14	601	Btuh
18	2 NFRC	0.33	0.22	No	No	S	1.3ft.	1.5ft.	15.0	15.0	0.0	11	14	167	Btuh
19	2 NFRC	0.33	0.22	No	No	S	1.3ft.	1.5ft.	20.0	20.0	0.0	11	14	222	Btuh
20	2 NFRC	0.33	0.22	No	No	S	1.3ft.	1.5ft.	20.0	20.0	0.0	11	14	222	Btuh
21	2 NFRC	0.33	0.22	No	No	S	1.3ft.	1.5ft.	20.0	20.0	0.0	11	14	222	Btuh
Window Total									829 (sqft)					12879 Btuh	

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Dillon Residence

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Walls	Type	U-Value	R-Value	Area(sqft)	HTM	Load
			Cav/Sheath			
1	Frame - Wood - Ext	0.077	19.0/0.0	134.3	1.65	222 Btuh
2	Frame - Wood - Ext	0.089	13.0/0.0	40.0	2.26	91 Btuh
3	Frame - Wood - Ext	0.077	19.0/0.0	130.0	1.65	215 Btuh
4	Frame - Wood - Ext	0.089	13.0/0.0	84.0	2.26	190 Btuh
5	Frame - Wood - Ext	0.077	19.0/0.0	295.5	1.65	489 Btuh
6	Frame - Wood - Ext	0.077	19.0/0.0	411.0	1.65	680 Btuh
7	Frame - Wood - Ext	0.077	19.0/0.0	128.3	1.65	212 Btuh
8	Frame - Wood - Ext	0.077	19.0/0.0	209.0	1.65	346 Btuh
9	Frame - Wood - Ext	0.077	19.0/0.0	188.0	1.65	311 Btuh
10	Frame - Wood - Ext	0.077	19.0/0.0	139.3	1.65	230 Btuh
11	Frame - Wood - Ext	0.077	19.0/0.0	200.0	1.65	331 Btuh
12	Frame - Wood - Ext	0.077	19.0/0.0	66.7	1.65	110 Btuh
13	Frame - Wood - Ext	0.077	19.0/0.0	241.5	1.65	399 Btuh
14	Frame - Wood - Ext	0.077	19.0/0.0	322.0	1.65	532 Btuh
15	Frame - Wood - Ext	0.077	19.0/0.0	42.0	1.65	69 Btuh
16	Frame - Wood - Ext	0.077	19.0/0.0	103.3	1.65	171 Btuh
17	Frame - Wood - Ext	0.077	19.0/0.0	105.0	1.65	174 Btuh
18	Frame - Wood - Ext	0.089	13.0/0.0	415.3	2.26	940 Btuh
19	Frame - Wood - Ext	0.077	19.0/0.0	130.0	1.65	215 Btuh
20	Frame - Wood - Ext	0.077	19.0/0.0	240.0	1.65	397 Btuh
21	Frame - Wood - Ext	0.077	19.0/0.0	113.3	1.65	187 Btuh
22	Frame - Wood - Adj	0.089	13.0/0.0	419.3	1.69	707 Btuh
23	Frame - Wood - Ext	0.077	19.0/0.0	108.0	1.65	179 Btuh
24	Frame - Wood - Ext	0.077	19.0/0.0	93.0	1.65	154 Btuh
25	Frame - Wood - Ext	0.077	19.0/0.0	115.5	1.65	191 Btuh
26	Frame - Wood - Ext	0.077	19.0/0.0	147.0	1.65	243 Btuh
27	Frame - Wood - Ext	0.077	19.0/0.0	234.0	1.65	387 Btuh
28	Frame - Wood - Ext	0.077	19.0/0.0	120.0	1.65	198 Btuh
29	Frame - Wood - Ext	0.077	19.0/0.0	180.0	1.65	298 Btuh
30	Frame - Wood - Ext	0.077	19.0/0.0	58.5	1.65	97 Btuh
31	Frame - Wood - Ext	0.077	19.0/0.0	100.0	1.65	165 Btuh
32	Frame - Wood - Ext	0.077	19.0/0.0	66.0	1.65	109 Btuh
33	Frame - Wood - Ext	0.077	19.0/0.0	172.0	1.65	284 Btuh
34	Frame - Wood - Ext	0.077	19.0/0.0	267.0	1.65	442 Btuh
	Wall Total			5819 (sqft)		9965 Btuh
Doors	Type			Area (sqft)	HTM	Load
1	Insulated - Exterior			48.0	13.8	662 Btuh
2	Insulated - Exterior			48.0	13.8	662 Btuh
3	Insulated - Exterior			48.0	13.8	662 Btuh
4	Insulated - Exterior			48.0	13.8	662 Btuh
5	Insulated - Garage			24.0	13.8	331 Btuh
6	Insulated - Exterior			48.0	13.8	662 Btuh
7	Insulated - Exterior			24.0	13.8	331 Btuh
	Door Total			288 (sqft)		3974 Btuh
Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	SnglAsmb no airsp/DarkShingle	0.034	30.0/0.0	2289.0	0.99	2257 Btuh
2	SnglAsmb no airsp/DarkShingle	0.034	30.0/0.0	917.0	0.99	904 Btuh
3	SnglAsmb no airsp/DarkShingle	0.034	30.0/0.0	861.0	0.99	849 Btuh
4	SnglAsmb no airsp/DarkShingle	0.034	30.0/0.0	2097.0	0.99	2068 Btuh
	Ceiling Total			6164 (sqft)		6078 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Dillon Residence

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Floors	Type	R-Value	Size	HTM	Load	
1	Slab On Grade	0.0	2289 (ft-perimeter)	0.0	0 Btuh	
2	Slab On Grade	0.0	917 (ft-perimeter)	0.0	0 Btuh	
3	Slab On Grade	0.0	861 (ft-perimeter)	0.0	0 Btuh	
4	Interior	0.0	2097 (sqft)	0.0	0 Btuh	
	Floor Total		6164.0 (sqft)		0 Btuh	
	Envelope Subtotal:				32896 Btuh	
Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load
	Natural	0.18	68769	1	203.1	4232 Btuh
Internal gain		Occupants	Btuh/occupant		Appliance	Load
		24	X 230	+	9700	15220 Btuh
	Sensible Envelope Load:					52348 Btuh
Duct load	Extremelysealed, Supply(R6.0-Condi),Return(R6.0-Condi)			(DGM of 0.000)		0 Btuh
	Sensible Load All Zones					52348 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Dillon Residence

, FL

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WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	52348 Btuh
	Sensible Duct Load	0 Btuh
	Total Sensible Zone Loads	52348 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	52348 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	7022 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent occupant gain (24.0 people @ 200 Btuh per person)	4800 Btuh
	Latent other gain	0 Btuh
	Latent total gain	11822 Btuh
	TOTAL GAIN	64170 Btuh

EQUIPMENT

1. Central Unit	Multiple #Multiple	120000 Btuh
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*Key: Window types (Panels - Number and type of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value)
(U - Window U-Factor)
(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))
- For Blinds: Assume medium color, half closed
For Draperies: Assume medium weave, half closed
For Roller shades: Assume translucent, half closed
(IS - Insect screen: none(N), Full(F) or Half(½))
(Ornt - compass orientation)



Version 8

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Project Title:
Dillon Residence
Building Type: User

, FL

5/22/2026

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 °F (TMY3 99%)
Winter Setpoint: 70 °F (Required Manual J default)

Component Loads for Whole House

Window	Panes/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.33	Vinyl	0.22	N	36.0		8.8	317 Btuh
2	2, NFRC 0.33	Vinyl	0.22	N	54.0		8.8	475 Btuh
3	2, NFRC 0.33	Vinyl	0.22	N	36.0		8.8	317 Btuh
4	2, NFRC 0.33	Vinyl	0.22	E	36.0		8.8	317 Btuh
5	2, NFRC 0.33	Vinyl	0.22	N	54.0		8.8	475 Btuh
6	2, NFRC 0.33	Vinyl	0.22	N	72.0		8.8	634 Btuh
7	2, NFRC 0.33	Vinyl	0.22	E	36.0		8.8	317 Btuh
8	2, NFRC 0.33	Vinyl	0.22	N	18.0		8.8	158 Btuh
9	2, NFRC 0.33	Vinyl	0.22	E	72.0		8.8	634 Btuh
10	2, NFRC 0.33	Vinyl	0.22	S	54.0		8.8	475 Btuh
11	2, NFRC 0.33	Vinyl	0.22	S	15.0		8.8	132 Btuh
12	2, NFRC 0.33	Vinyl	0.22	S	30.0		8.8	264 Btuh
13	2, NFRC 0.33	Vinyl	0.22	S	25.0		8.8	220 Btuh
14	2, NFRC 0.33	Vinyl	0.22	S	108.0		8.8	950 Btuh
15	2, NFRC 0.33	Vinyl	0.22	N	36.0		8.8	317 Btuh
16	2, NFRC 0.33	Vinyl	0.22	N	18.0		8.8	158 Btuh
17	2, NFRC 0.33	Vinyl	0.22	S	54.0		8.8	475 Btuh
18	2, NFRC 0.33	Vinyl	0.22	S	15.0		8.8	132 Btuh
19	2, NFRC 0.33	Vinyl	0.22	S	20.0		8.8	176 Btuh
20	2, NFRC 0.33	Vinyl	0.22	S	20.0		8.8	176 Btuh
21	2, NFRC 0.33	Vinyl	0.22	S	20.0		8.8	176 Btuh
Window Total					829.0(sqft)			7295 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

, FL

Project Title:
Dillon Residence
Building Type: User

5/22/2026

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.077)	19.0/0.0	134	3.09	415 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	40	3.55	142 Btuh
3	Frame - Wood	- Ext	(0.077)	19.0/0.0	130	3.09	402 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	84	3.55	298 Btuh
5	Frame - Wood	- Ext	(0.077)	19.0/0.0	296	3.09	913 Btuh
6	Frame - Wood	- Ext	(0.077)	19.0/0.0	411	3.09	1270 Btuh
7	Frame - Wood	- Ext	(0.077)	19.0/0.0	128	3.09	397 Btuh
8	Frame - Wood	- Ext	(0.077)	19.0/0.0	209	3.09	646 Btuh
9	Frame - Wood	- Ext	(0.077)	19.0/0.0	188	3.09	581 Btuh
10	Frame - Wood	- Ext	(0.077)	19.0/0.0	139	3.09	431 Btuh
11	Frame - Wood	- Ext	(0.077)	19.0/0.0	200	3.09	618 Btuh
12	Frame - Wood	- Ext	(0.077)	19.0/0.0	67	3.09	206 Btuh
13	Frame - Wood	- Ext	(0.077)	19.0/0.0	242	3.09	746 Btuh
14	Frame - Wood	- Ext	(0.077)	19.0/0.0	322	3.09	995 Btuh
15	Frame - Wood	- Ext	(0.077)	19.0/0.0	42	3.09	130 Btuh
16	Frame - Wood	- Ext	(0.077)	19.0/0.0	103	3.09	319 Btuh
17	Frame - Wood	- Ext	(0.077)	19.0/0.0	105	3.09	325 Btuh
18	Frame - Wood	- Ext	(0.089)	13.0/0.0	415	3.55	1475 Btuh
19	Frame - Wood	- Ext	(0.077)	19.0/0.0	130	3.09	402 Btuh
20	Frame - Wood	- Ext	(0.077)	19.0/0.0	240	3.09	742 Btuh
21	Frame - Wood	- Ext	(0.077)	19.0/0.0	113	3.09	350 Btuh
22	Frame - Wood	- Adj	(0.089)	13.0/0.0	419	3.55	1489 Btuh
23	Frame - Wood	- Ext	(0.077)	19.0/0.0	108	3.09	334 Btuh
24	Frame - Wood	- Ext	(0.077)	19.0/0.0	93	3.09	287 Btuh
25	Frame - Wood	- Ext	(0.077)	19.0/0.0	116	3.09	357 Btuh
26	Frame - Wood	- Ext	(0.077)	19.0/0.0	147	3.09	454 Btuh
27	Frame - Wood	- Ext	(0.077)	19.0/0.0	234	3.09	723 Btuh
28	Frame - Wood	- Ext	(0.077)	19.0/0.0	120	3.09	371 Btuh
29	Frame - Wood	- Ext	(0.077)	19.0/0.0	180	3.09	556 Btuh
30	Frame - Wood	- Ext	(0.077)	19.0/0.0	59	3.09	181 Btuh
31	Frame - Wood	- Ext	(0.077)	19.0/0.0	100	3.09	309 Btuh
32	Frame - Wood	- Ext	(0.077)	19.0/0.0	66	3.09	204 Btuh
33	Frame - Wood	- Ext	(0.077)	19.0/0.0	172	3.09	532 Btuh
34	Frame - Wood	- Ext	(0.077)	19.0/0.0	267	3.09	825 Btuh
Wall Total					5819(sqft)		18427 Btuh
Doors	Type	Storm	Ueff.		Area X	HTM=	Load
1	Insulated - Exterior, n		(0.460)		48	18.4	883 Btuh
2	Insulated - Exterior, n		(0.460)		48	18.4	883 Btuh
3	Insulated - Exterior, n		(0.460)		48	18.4	883 Btuh
4	Insulated - Exterior, n		(0.460)		48	18.4	883 Btuh
5	Insulated - Garage, n		(0.460)		24	18.4	442 Btuh
6	Insulated - Exterior, n		(0.460)		48	18.4	883 Btuh
7	Insulated - Exterior, n		(0.460)		24	18.4	442 Btuh
Door Total					288(sqft)		5299Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

, FL

Project Title:
Dillon Residence
Building Type: User

5/22/2026

Ceilings	Type/Color/Surface	Ueff.	R-Value	Area X	HTM=	Load
1	Single as/D/Shing	(0.034)	30.0/0.0	2289	1.4	3113 Btuh
2	Single as/D/Shing	(0.034)	30.0/0.0	917	1.4	1247 Btuh
3	Single as/D/Shing	(0.034)	30.0/0.0	861	1.4	1171 Btuh
4	Single as/D/Shing	(0.034)	30.0/0.0	2097	1.4	2852 Btuh
	Ceiling Total			6164(sqft)		8384Btuh
Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(1.180)	0.0	202.0 ft(perim.)	47.2	9534 Btuh
2	Slab On Grade	(1.180)	0.0	93.0 ft(perim.)	47.2	4390 Btuh
3	Slab On Grade	(1.180)	0.0	111.0 ft(perim.)	47.2	5239 Btuh
4	Interior	(1.180)	0.0	2097.0 sqft	0.0	0 Btuh
	Floor Total			6164 sqft		19163 Btuh
	Envelope Subtotal:					58568 Btuh
Infiltration	Type	Wholehouse ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural	0.24	68769	1.00	270.8	11878 Btuh
Duct load	Extremely sealed, R6.0, Supply(Con), Return(Con) (DLM of 0.000)					0 Btuh
All Zones	Sensible Subtotal All Zones					70446 Btuh

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	70446 Btuh
	Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss	70446 Btuh

EQUIPMENT

1. Electric Heat Pump	Multiple #Multiple	120000 Btuh
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Manual J Winter Calculations

Residential Load - Component Details (continued)

Project Title:
Dillon Residence
Building Type: User

, FL

5/22/2026

Key: Window types - NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)
U - (Window U-Factor)
HTM - (ManualJ Heat Transfer Multiplier)



Version 8