Design Indoor Cooling Temp. : 75 °F
Design Outdoor Cooling Temp. : 88 ° F
Temp. Difference Cooling :13°F
Indoor Humidity: 50 Grains difference: 24

Plymouth House

950
Area: Minneapolis St. Paul, MN
Front Door Orientation West

Design Indoor Heating Temp. : 70 ° F
Design Outdoor Heating Temp. : -11 ° F
Temp. Difference Heating :81° F
Room by room load - Number of rooms: 9

Room 1: Bedroom 1 (Master)

TD:Cool:13°F Heat:81°F	Sq. ft. -types 1 and 2	shading	Sq. ft.- types 1 and 2	shading	Sq. ft.- types 1 and 2		Sq. ft.
Outside Wall: North	1: 144 2:	Windows →	1: 2:	Glass Doors x	1: 40 2:	Doors	
Outside Wall: South	1: 2:	Windows L	1: 2:	Glass Doors L	1: 2:	Doors	
Outside Wall: E & W	1: 100 2:	Windows L	1: 2:	Glass Doors L	1: 2:	Doors	
Outside Wall: NE & NW	1: 2:	Windows →	1: 2:	Glass Doors x	1: 2:	Doors	
Outside Wall: SE & SW	1: 2:	Windows L	1: 2:	Glass Doors L	1: 2:	Doors	
Floor - (linear ft. if slab)	1: 2:	Ceiling	1: 245.7 2:	Appliances	Fireplaces 0		
Sky Lights	N: S:	E-W:	NE-NW:	SE-SW:			
Number of People	2	Conditioned Sq. ft.	245.7	Cubic Ft.	1965		

Rm 1: Bedroom 1 (Master)	Btu's Cooling	Sensible Load	Latent Load	Btu's Heating	CFM heating	CFM cooling
	1437	957	480	1998	0	

Room 2: Bedroom 2 (Lydia)

Outside Wall: North	1: 2:	Windows x	1: 2:	Glass Doors x	1: 2:	Doors	
Outside Wall: South	1: 80 2:	Windows L	1: 12 2:	Glass Doors L	1: 2:	Doors	
Outside Wall: E & W	1: 106 2:	Windows L	1: 2:	Glass Doors L	1: 2:	Doors	
Outside Wall: NE & NW	1: 2:	Windows x	1: 2:	Glass Doors x	1: 2:	Doors	
Outside Wall: SE & SW	1: 2:	Windows L	1: 2:	Glass Doors L	1: 2:	Doors	
Floor - (linear ft. if slab)	1: 2:	Ceiling	1: 132.5 2:	Appliances	Fireplaces 0		
Sky Lights	N: S:	E-W:	NE-NW:	SE-SW:			
Number of People	1	Conditioned Sq. ft.	132.5	Cubic. Ft.	1060		

Rm 2: Bedroom 2 (Lydia)	Btu's Cooling	Sensible Load	Latent Load	Btu's Heating	CFM heating	CFM cooling
	1179	932	247	2022	0	0

Room 3: Bedroom 3 (Jules)

Outside Wall: North	1: 62.667 2:	Windows x	1: 2:	Glass Doors x	1: 2:	Doors	
Outside Wall: South	1: 112 2:	Windows L	1: 2:	Glass Doors L	1: 2:	Doors	
Outside Wall: E & W	1: 96 2:	Windows L	1: 12 2:	Glass Doors L	1: 2:	Doors	
Outside Wall: NE & NW	1: 2:	Windows x	1: 2:	Glass Doors x	1: 2:	Doors	
Outside Wall: SE & SW	1: 2:	Windows L	1: 2:	Glass Doors L	1: 2:	Doors	
Floor - (linear ft. if slab)	1: 2:	Ceiling	1: 145.5 2:	Appliances	Fireplaces 0		
Sky Lights	N: S:	E-W:	NE-NW:	SE-SW:			
Number of People	1	Conditioned Sq. ft.	145.5	Cubic. Ft.	1164		

Rm 3: Bedroom 3 (Jules)	Btu's Cooling	Sensible Load	Latent Load	Btu's Heating	CFM heating	CFM cooling
	1759	1502	257	2584	0	0

Room 4: Bedroom 4 (Basement)

Outside Wall: North	1: 69 2:	Windows x	1: 2:	Glass Doors x	1: 2:	Doors	
Outside Wall: South	1: 2:	Windows L	1: 2:	Glass Doors L	1: 2:	Doors	
Outside Wall: E & W	1: 106 2:	Windows L	1: 6 2:	Glass Doors L	1: 2:	Doors	
Outside Wall: NE & NW	1: 2:	Windows x	1: 2:	Glass Doors x	1: 2:	Doors	
Outside Wall: SE & SW	1: 2:	Windows L	1: 2:	Glass Doors L	1: 2:	Doors	
Floor - (linear ft. if slab)	1: 22 2:	Ceiling	1: 2:	Appliances	Fireplaces 0		
Sky Lights	N: S:	E-W:	NE-NW:	SE-SW:			
Number of People		Conditioned Sq. ft.	107.5	Cubic. Ft.	860		

Rm 4: Bedroom 4 (Basement)	Btu's Cooling	Sensible Load	Latent Load	Btu's Heating	CFM heating	CFM cooling
	665	625	40	3902	0	0

Room 5: Bathroom 2 (master)

Outside Wall: North	1: 52 2:	Windows x	1: 2:	Glass Doors x	1: 2:	Doors	
Outside Wall: South	1: 2:	Windows L	1: 2:	Glass Doors L	1: 2:	Doors	
Outside Wall: E & W	1: 78 2:	Windows L	1: 12 2:	Glass Doors L	1: 2:	Doors	

Outside Wall: NE & NW	1:	2:	Windows x	1:	2:	Glass Doors x	1:	2:	Doors		
Outside Wall: SE & SW	1:	2:	Windows L	1:	2:	Glass Doors L	1:	2:	Doors		
Floor - (linear ft. if slab)	1:	2:	Ceiling	1:	2:	Appliances		Fireplaces 0			
Sky Lights	N:	S:	E-W:		NE-NW:	SE-SW:					
Number of People			Conditioned Sq. ft.	63.38		Cubic. Ft.	507.04				

Rm 5: Bathroom 2 (master)	Btu's Cooling	Sensible Load	Latent Load	Btu's Heating	CFM heating	CFM cooling
	997	972	25	1383	0	0

Room 6: Living room 1 (1st floor)

Outside Wall: North	1: 260	2:	Windows x	1: 66	2:	Glass Doors x	1:	2:	Doors		
Outside Wall: South	1: 260	2:	Windows L	1: 6	2:	Glass Doors L	1:	2:	Doors		
Outside Wall: E & W	1: 453	2:	Windows L	1: 12	2:	Glass Doors L	1:	2:	Doors	2	
Outside Wall: NE & NW	1:	2:	Windows x	1:	2:	Glass Doors x	1:	2:	Doors		
Outside Wall: SE & SW	1:	2:	Windows L	1:	2:	Glass Doors L	1:	2:	Doors		
Floor - (linear ft. if slab)	1:	2:	Ceiling	1:	2:	Appliances		Fireplaces 0			
Sky Lights	N:	S:	E-W:		NE-NW:	SE-SW:					
Number of People	4		Conditioned Sq. ft.	787.81		Cubic. Ft.	1025.32				

Rm 6: Living room 1 (1st floor)	Btu's Cooling	Sensible Load	Latent Load	Btu's Heating	CFM heating	CFM cooling
	5178	4277	901	9684	0	0

Room 7: Bathroom 1 (2nd floor)

Outside Wall: North	1:	2:	Windows x	1:	2:	Glass Doors x	1:	2:	Doors		
Outside Wall: South	1: 68	2:	Windows L	1: 6	2:	Glass Doors L	1:	2:	Doors		
Outside Wall: E & W	1:	2:	Windows L	1:	2:	Glass Doors L	1:	2:	Doors		
Outside Wall: NE & NW	1:	2:	Windows x	1:	2:	Glass Doors x	1:	2:	Doors		
Outside Wall: SE & SW	1:	2:	Windows L	1:	2:	Glass Doors L	1:	2:	Doors		
Floor - (linear ft. if slab)	1:	2:	Ceiling	1: 100	2:	Appliances		Fireplaces 0			
Sky Lights	N:	S:	E-W:		NE-NW:	SE-SW:					
Number of People			Conditioned Sq. ft.	100		Cubic. Ft.	800				

Rm 7: Bathroom 1 (2nd floor)	Btu's Cooling	Sensible Load	Latent Load	Btu's Heating	CFM heating	CFM cooling
	398	367	31	952	0	0

Room 8: Living room 2 (basement)

Outside Wall: North	1: 82	2:	Windows x	1:	2:	Glass Doors x	1:	2:	Doors		
Outside Wall: South	1: 136	2:	Windows L	1:	2:	Glass Doors L	1:	2:	Doors		
Outside Wall: E & W	1: 222.667	2:	Windows L	1:	2:	Glass Doors L	1:	2:	Doors		
Outside Wall: NE & NW	1:	2:	Windows x	1:	2:	Glass Doors x	1:	2:	Doors		
Outside Wall: SE & SW	1:	2:	Windows L	1:	2:	Glass Doors L	1:	2:	Doors		
Floor - (linear ft. if slab)	1: 90.5	2:	Ceiling	1:	2:	Appliances		Fireplaces 0			
Sky Lights	N:	S:	E-W:		NE-NW:	SE-SW:					
Number of People			Conditioned Sq. ft.	415		Cubic. Ft.	3320				

Rm 8: Living room 2 (basement)	Btu's Cooling	Sensible Load	Latent Load	Btu's Heating	CFM heating	CFM cooling
	719	582	138	13273	0	0

Room 9: Bathroom 3 (basement)

Outside Wall: North	1:	2:	Windows x	1:	2:	Glass Doors x	1:	2:	Doors		
Outside Wall: South	1:	2:	Windows L	1:	2:	Glass Doors L	1:	2:	Doors		
Outside Wall: E & W	1: 83	2:	Windows L	1:	2:	Glass Doors L	1:	2:	Doors		
Outside Wall: NE & NW	1:	2:	Windows x	1:	2:	Glass Doors x	1:	2:	Doors		
Outside Wall: SE & SW	1:	2:	Windows L	1:	2:	Glass Doors L	1:	2:	Doors		
Floor - (linear ft. if slab)	1: 10.33	2:	Ceiling	1:	2:	Appliances		Fireplaces 0			
Sky Lights	N:	S:	E-W:		NE-NW:	SE-SW:					
Number of People			Conditioned Sq. ft.	72		Cubic. Ft.	576				

Rm 9: Bathroom 3 (basement)	Btu's Cooling	Sensible Load	Latent Load	Btu's Heating	CFM heating	CFM cooling
	133	108	25	1753	0	0

Basement	**Above grade:** Walls 1	Cubic Ft.	**Below grade:** walls 7	Floor	sq. ft. width 23ft. or	below: 2 ft.

Basement - Btu's Cooling: 0	Btu's Heating: 40	CFM Heating: 0	CFM Cooling: 0

Fresh air recommended: 55cfm → 23 CFM | Construction: very tight | Duct system: conditior | R-4 | very tight

Calculate Load	Total Btu's Cooling	Total Sensible Load	Total Latent Load	Total Btu's Heating	Total CFM Heatimg	Total CFM Cooling
	12465	10322	2143	37591		

Btu breakdown

	Sensible	Latent	Heating
walls	2510		13199
windows	4939		6094
ceilings	538		909
doors	19		63
floors	0		13511
appliances	0		
people	1840	1600	
glass doors	0		0
skylights	0		0
basement walls	0		39
basement floor	0		0
infiltration	156	179	1787
fresh air	319	364	1988
duct load	0	0	0
Totals	10322	2143	37591

Structure types

Outside Walls 1: Siding or Stucco R19 insulation
Outside Walls 2:
Windows 1: double pane no internal shade
Windows 2:
Glass Doors 1:
Glass Doors 2:
Floors 1: Concrete slab no edge insulation
Floor 2:
Ceiling 1: Ceiling under attic space R-56
Ceiling 2:
Doors: Wood solid core
Skylights:
Basement Walls: block brick or concrete - R19 insulation
Basement Floor: no insulation underneath
Win ht.: 5' 0" Overhang: 1.5' Top to overhang: 2'