

GOOSE BAY, CA

Latitude = 53.32 N

Longitude = 60.42 W

Period of Record = 1988 To 2017

Station ID = ICAO_CYYR

Elevation = 160 Feet

Average Pressure = 29.68 inches Hg

Design Criteria Data

Dry Bulb Temperature (T)	Mean Coincident (Average) Values				
	Design Value (°F)	Wet Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	91	67	63	13.5	WSW
0.4% Occurrence	82	63	59	12.1	WSW
1.0% Occurrence	79	62	58	11.6	W
2.0% Occurrence	73	60	57	10.4	W
Mean Daily Range	16	-	-	-	W
97.5% Occurrence	-13	-14	1	9.7	W
99.0% Occurrence	-18	-18	1	10.1	W
99.6% Occurrence	-22	-23	1	10.7	W
Median of Extreme Lows	-27	-27	1	8.4	W

Wet Bulb Temperature (T _{wb})	Design Value (°F)	Dry Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	70	84	85	11.9	SW
0.4% Occurrence	66	77	77	10.3	WSW
1.0% Occurrence	64	74	73	9.8	S
2.0% Occurrence	62	71	68	9.1	S

Humidity Ratio (HR)	Design Value (gr/lb)	Dry Bulb Temperature (°F)	Vapor Pressure (in. Hg)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	97	75	0.65	8.1	S
0.4% Occurrence	85	70	0.57	7.5	S
1.0% Occurrence	78	69	0.52	8.1	S
2.0% Occurrence	72	66	0.48	9.4	S

Air Conditioning/ Humid Area Criteria	Threshold	T ≥ 93 °F	T ≥ 80 °F	Twb ≥ 73 °F	Twb ≥ 67 °F
	# of Hours	5	65	5	31

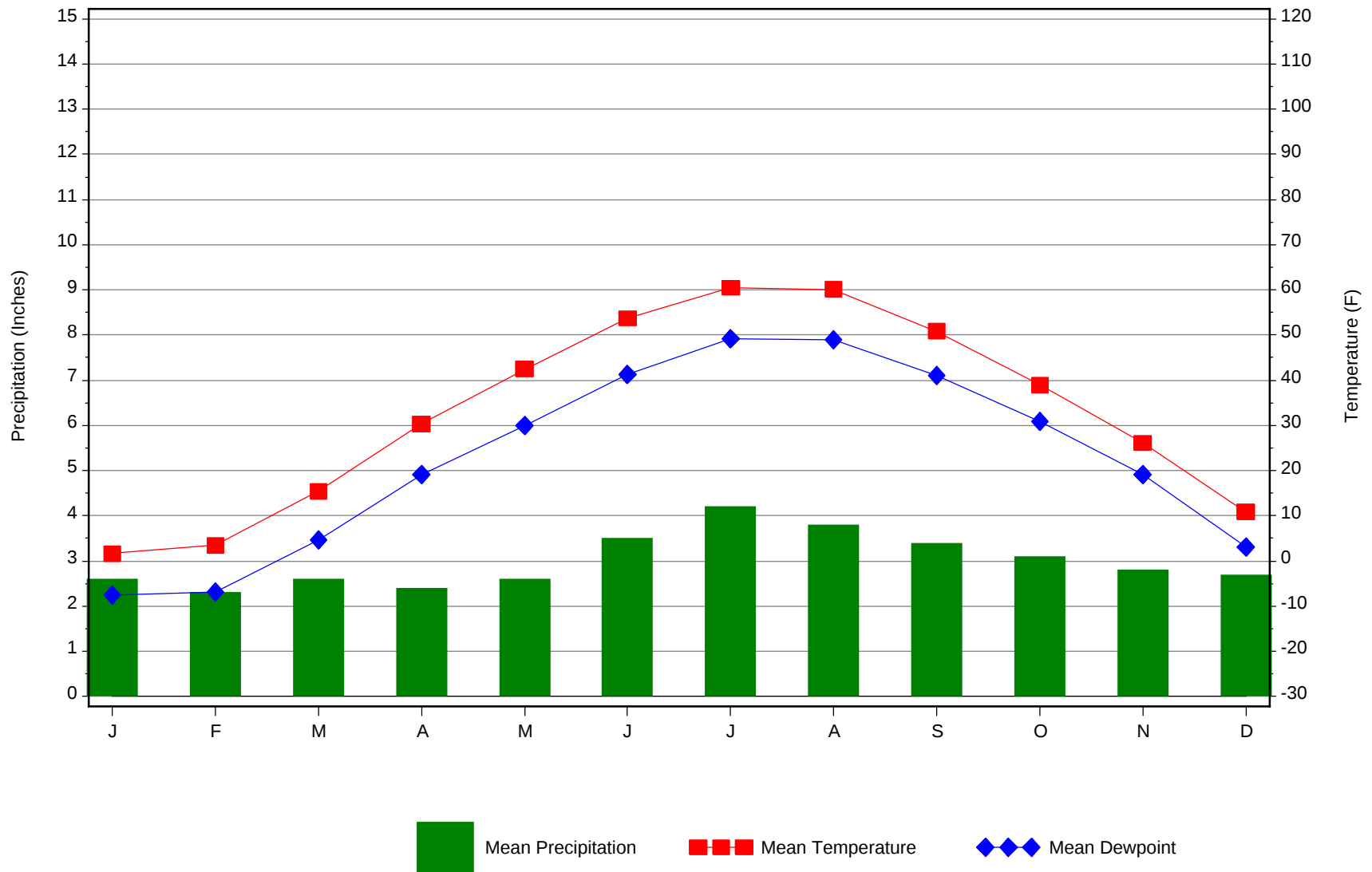
Other Site Data

Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
3	N/A	85	0.0 + 0.1
Ground Water Temperature (°F) 50 Foot Depth*	Frost Depth 50 Year Recurrence (in)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
35.5	60	100	50

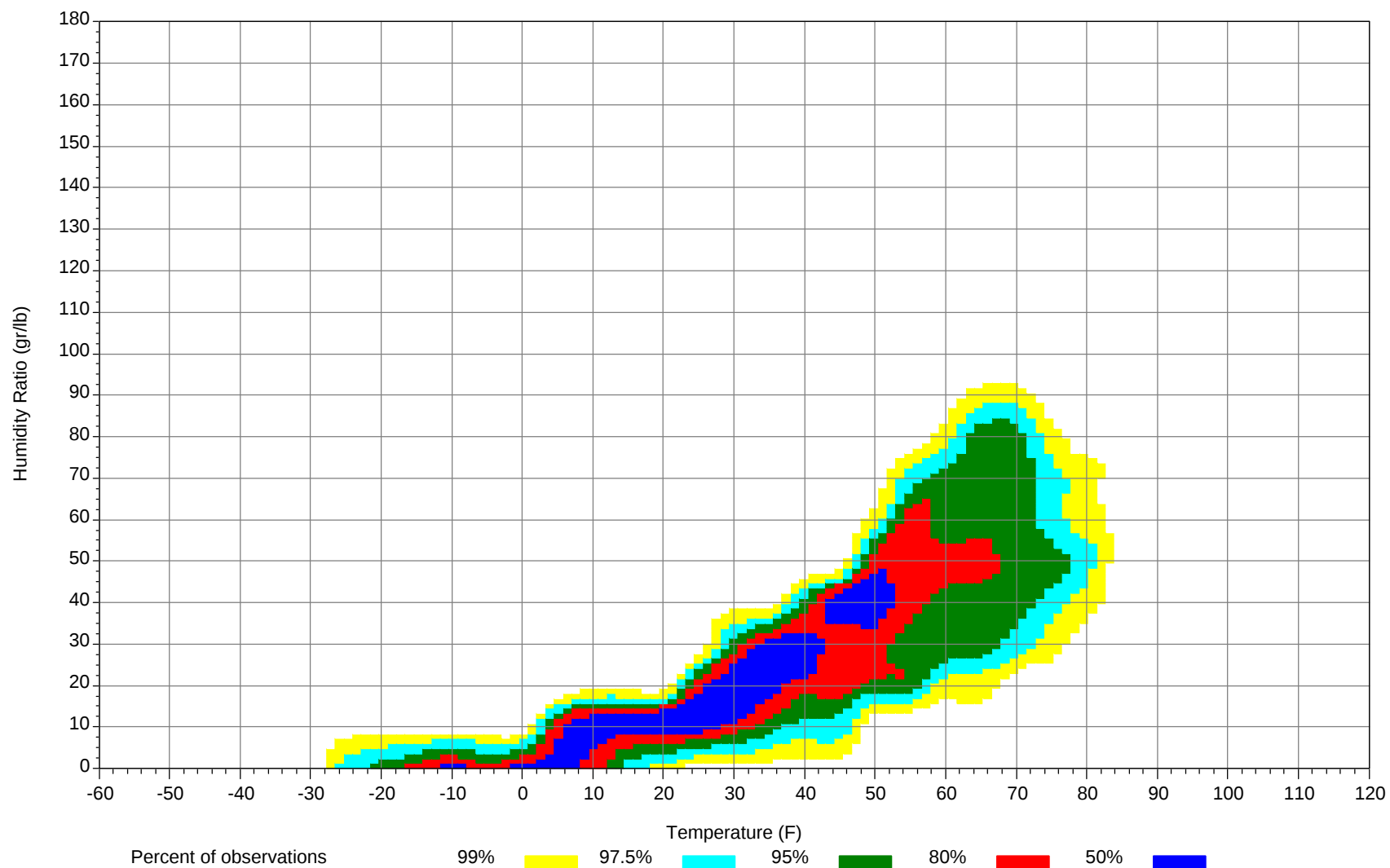
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.



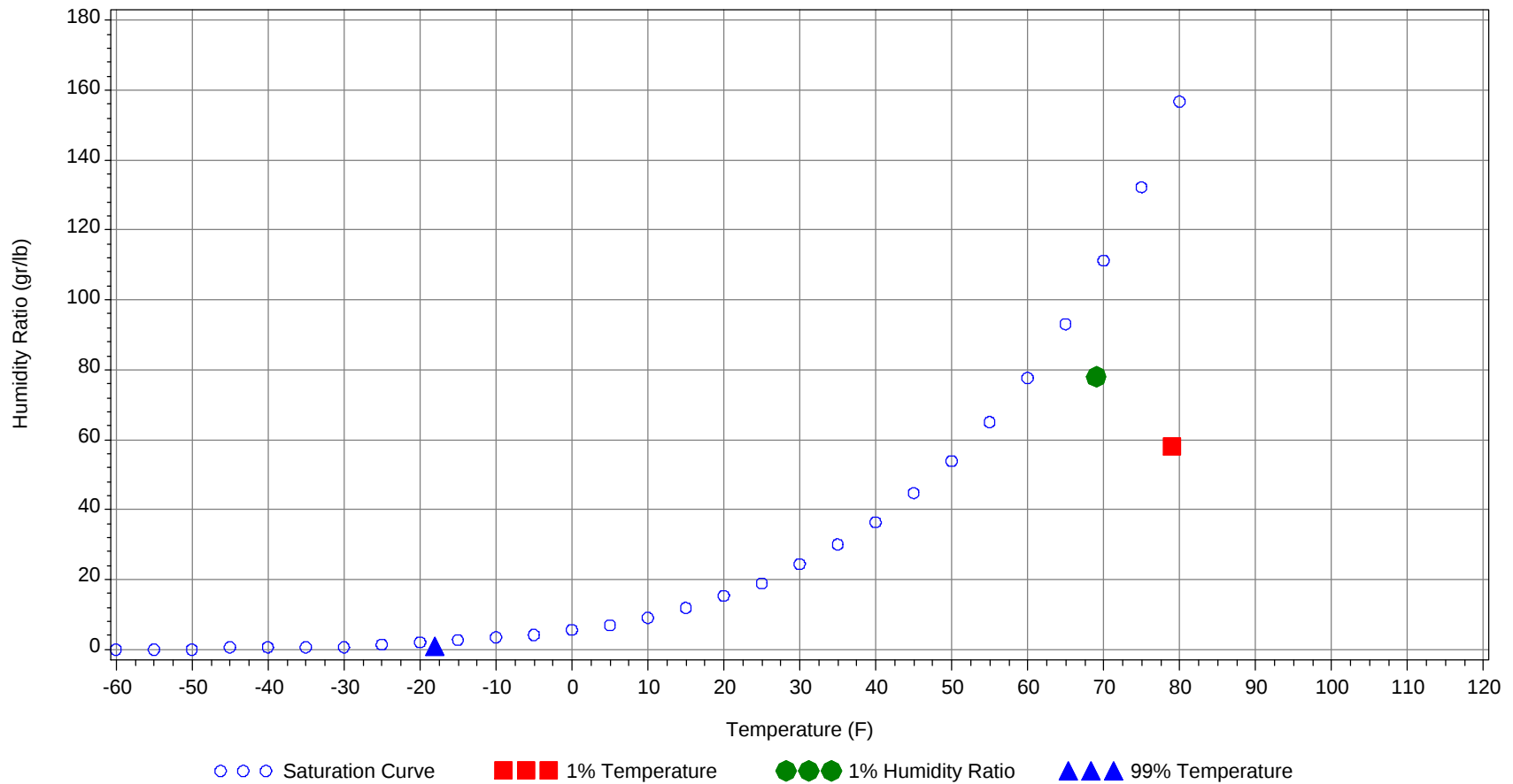
Average Annual Climate



Long Term Psychrometric Summary



Psychrometric Summary of Peak Design Values



	(° F) / (gr/lb)	MCDB (° F)	MCWB (° F)	MCDP (° F)	MCHR (gr/lb)	Enthalpy (btu/lb)
1.0% Dry Bulb	79.0		62		58.0	27.9
99.0% Dry Bulb	-18.0				1.0	-4.2
1.0% Humidity Ratio	78.0	69.0	63.3	60.1		28.8

Dry-Bulb Temperature Hours For An Average Year

Temperature Range (°F)	January					February					March				
	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)
95/ 99															
90/ 94															
85/ 89															
80/ 84															
75/ 79															
70/ 74															
65/ 69															
60/ 64															
55/ 59												0	0	0	44.7
50/ 54	0	0	0	0	46.5							1	0	1	41.8
45/ 49	0	0	0	0	43.9	0	1		1	41.8	0	4	1	5	39
40/ 44	0	0	0	0	38.7	1	0	1	2	38.8	2	6	4	12	36
35/ 39	2	4	3	9	34.4	1	3	2	6	34.7	7	18	14	39	32.9
30/ 34	7	10	9	26	30.5	7	9	7	23	30.2	19	31	27	77	29
25/ 29	9	10	9	28	25	7	11	11	29	24.5	23	37	35	95	23.9
20/ 24	8	9	10	27	20.4	8	11	10	29	20.1	19	30	26	75	19.5
15/ 19	16	18	16	50	16	11	21	17	49	15.5	28	32	33	93	15.3
10/ 14	17	25	21	63	10.7	17	28	24	69	10.3	28	30	31	89	10.1
5/ 9	26	30	28	84	5.5	25	35	30	90	5.3	28	26	28	82	5.1
0/ 4	28	35	34	97	0.2	25	35	34	94	0.1	31	19	24	74	0.2
-5/ -1	22	25	26	73	-4.1	20	23	26	69	-4.2	17	7	11	35	-4.2
-10/ -6	34	36	39	109	-8.5	37	25	33	95	-8.5	25	5	9	39	-8.3
-15/-11	27	20	24	71	-12.9	26	11	16	53	-12.8	13	1	3	17	-12.7
-20/-16	31	18	20	69	-17.1	25	8	9	42	-17.1	7	1	1	9	-16.9
-25/-21	15	5	7	27	-22.1	11	2	3	16	-22	2	0	0	2	-21.7
-30/-26	5	1	1	7	-26.7	3	0	0	3	-27.3	0			0	-25.3
-35/-31	0	0		0	-30.5	0			0	-32					

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

Dry-Bulb Temperature Hours For An Average Year

	April					May					June				
Temperature Range (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)
95/ 99												0	0	0	67.3
90/ 94							0	0	0	66		2	1	3	67
85/ 89							0	0	0	61.2		2	1	3	65
80/ 84							2	1	3	58.5	0	6	3	9	62.6
75/ 79							2	1	3	57.1	1	11	7	19	60.3
70/ 74		0	0	0	50	0	6	2	8	53.6	3	23	14	40	57.7
65/ 69		0	0	0	48.7	0	6	3	9	51.9	5	22	16	43	56
60/ 64		1	0	1	45.9	1	13	8	22	49.4	18	37	31	86	53.5
55/ 59		3	1	4	44.1	4	23	15	42	46.7	28	39	39	106	50.4
50/ 54	0	10	5	15	41.8	10	38	26	74	43.6	41	42	49	132	46.9
45/ 49	3	19	14	36	39	24	51	45	120	40.5	55	34	42	131	43.2
40/ 44	8	22	17	47	36.1	34	41	43	118	37.6	43	16	22	81	39.4
35/ 39	30	59	49	138	33.1	78	47	63	188	34.3	37	7	14	58	35.7
30/ 34	54	55	62	171	29	65	15	33	113	29.9	9	0	1	10	31.2
25/ 29	43	38	43	124	23.9	25	3	7	35	24.5	0			0	26.5
20/ 24	31	16	23	70	19.6	6	0	0	6	20.1					
15/ 19	32	10	16	58	15.5	1	0	0	1	15.6					
10/ 14	21	4	6	31	10.5	0			0	11.8					
5/ 9	10	1	3	14	5.5										
0/ 4	5	0	1	6	0.5										
-5/ -1	1	0	0	1	-4.3										
-10/ -6	1			1	-7.4										
-15/-11															
-20/-16															
-25/-21															
-30/-26															
-35/-31															

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Dry-Bulb Temperature Hours For An Average Year

	July					August					September				
Temperature Range (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)
95/ 99		0		0	72.3		0		0	73.3					
90/ 94		1	0	1	68		1	0	1	68.1		0	0	0	68.8
85/ 89		4	2	6	65.4		3	1	4	67.1		0	0	0	68.3
80/ 84		12	6	18	63.7	0	9	4	13	64.7		2	1	3	65.7
75/ 79	1	27	14	42	61.7	1	21	12	34	62.3		4	2	6	62.1
70/ 74	7	42	29	78	59.9	5	40	25	70	60.3	1	11	5	17	59.7
65/ 69	15	37	33	85	58.4	14	38	29	81	58.5	3	14	8	25	57.5
60/ 64	42	47	55	144	56.4	39	55	58	152	56.1	11	33	20	64	54.1
55/ 59	63	40	53	156	52.9	67	46	60	173	52.7	21	50	41	112	50.7
50/ 54	69	28	38	135	49.2	71	26	40	137	48.9	43	58	55	156	47.2
45/ 49	40	10	17	67	45	38	9	16	63	44.8	64	47	61	172	43.3
40/ 44	10	1	2	13	40.7	11	1	2	14	40.2	48	16	27	91	39.2
35/ 39	2		0	2	36.8	3		0	3	36.9	37	5	17	59	35.4
30/ 34	0			0	33.7	0			0	32.5	10	0	3	13	30.5
25/ 29											1			1	27.1
20/ 24															
15/ 19															
10/ 14															
5/ 9															
0/ 4															
-5/ -1															
-10/ -6															
-15/-11															
-20/-16															
-25/-21															
-30/-26															
-35/-31															

Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

Dry-Bulb Temperature Hours For An Average Year

Temperature Range (°F)	October					November					December				
	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)
95/ 99															
90/ 94															
85/ 89															
80/ 84															
75/ 79															
70/ 74		0		0	57.7										
65/ 69		2	0	2	56										
60/ 64	1	5	1	7	54.3		0	0	0	56.9					
55/ 59	3	11	7	21	50.7	1	1	0	2	53.3					
50/ 54	9	24	14	47	46.4	2	3	2	7	47.7	0	0		0	40.5
45/ 49	22	48	31	101	42.2	4	5	5	14	42.9	0	1	0	1	41.4
40/ 44	35	52	48	135	38.6	5	10	6	21	39	1	1	1	3	38.8
35/ 39	72	66	76	214	34.5	24	36	29	89	34.7	7	9	7	23	34.7
30/ 34	68	31	51	150	29.9	48	56	57	161	30.1	16	19	18	53	30.4
25/ 29	27	9	17	53	24.8	45	51	48	144	24.6	20	22	23	65	24.8
20/ 24	9	1	3	13	20.4	31	29	31	91	20	18	22	18	58	20.5
15/ 19	3	0	1	4	16.8	36	25	32	93	15.9	28	36	32	96	16
10/ 14	1	0	0	1	11.3	21	13	18	52	10.9	30	35	36	101	10.7
5/ 9	0			0	8.5	14	7	9	30	6	30	29	31	90	5.7
0/ 4						7	3	4	14	0.7	30	27	27	84	0.3
-5/ -1						2	0	1	3	-3.6	20	17	20	57	-4
-10/ -6						0	0		0	-6.8	22	18	20	60	-8.3
-15/-11											13	7	8	28	-12.7
-20/-16											9	4	6	19	-16.8
-25/-21											3	1	1	5	-22.1
-30/-26											1	0	0	1	-26.5
-35/-31															

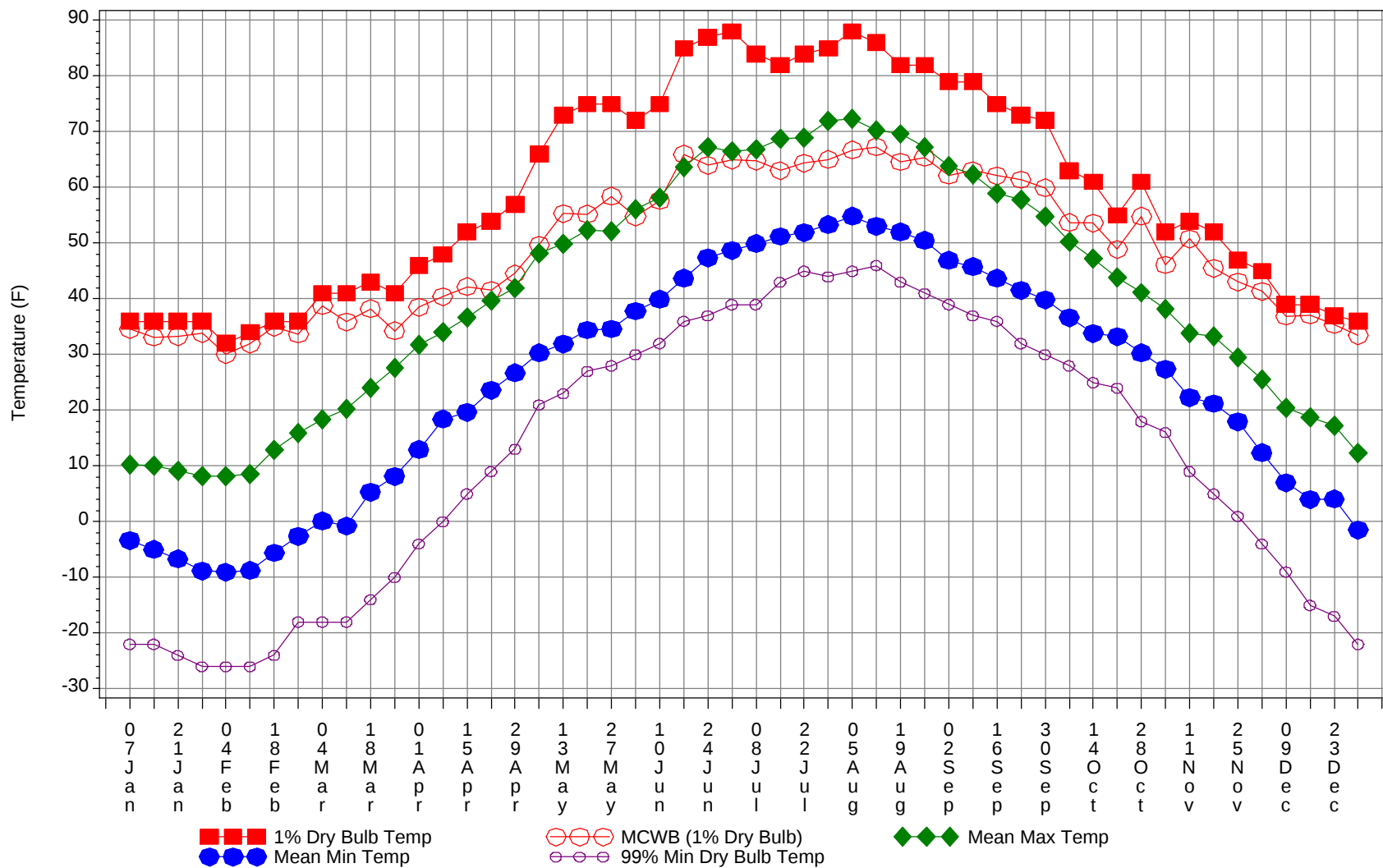
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Dry-Bulb Temperature Hours For An Average Year

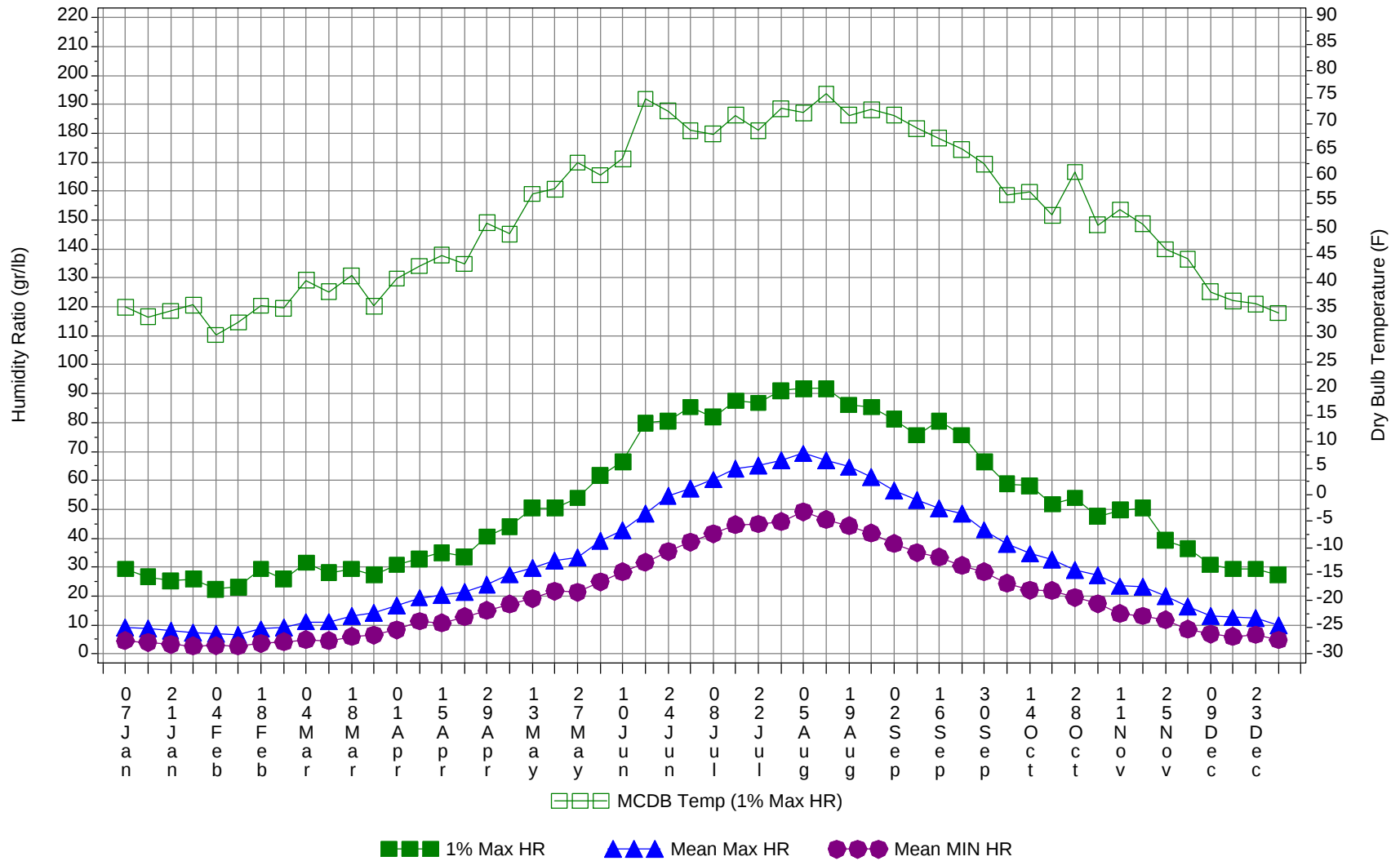
	Annual				
Temperature Range (° F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (° F)
95/ 99		0	0	0	70
90/ 94		4	2	6	67.5
85/ 89		10	4	14	65.8
80/ 84	0	31	14	45	63.6
75/ 79	2	65	36	103	61.6
70/ 74	15	121	75	211	59.3
65/ 69	38	118	89	245	57.6
60/ 64	111	191	174	476	55.1
55/ 59	187	212	217	616	51.5
50/ 54	245	229	227	701	47.3
45/ 49	250	229	233	712	42.7
40/ 44	196	167	173	536	38.4
35/ 39	301	253	274	828	34.3
30/ 34	303	227	268	798	29.8
25/ 29	200	182	193	575	24.4
20/ 24	130	119	121	370	19.9
15/ 19	156	141	147	444	15.7
10/ 14	136	136	136	408	10.5
5/ 9	132	129	129	390	5.4
0/ 4	126	119	124	369	0.2
-5/ -1	83	73	83	239	-4.1
-10/ -6	119	85	101	305	-8.4
-15/-11	80	40	51	171	-12.8
-20/-16	72	30	37	139	-17
-25/-21	31	8	12	51	-22.1
-30/-26	9	2	1	12	-26.9
-35/-31	0	0		0	-30.9

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Annual Summary of Temperatures



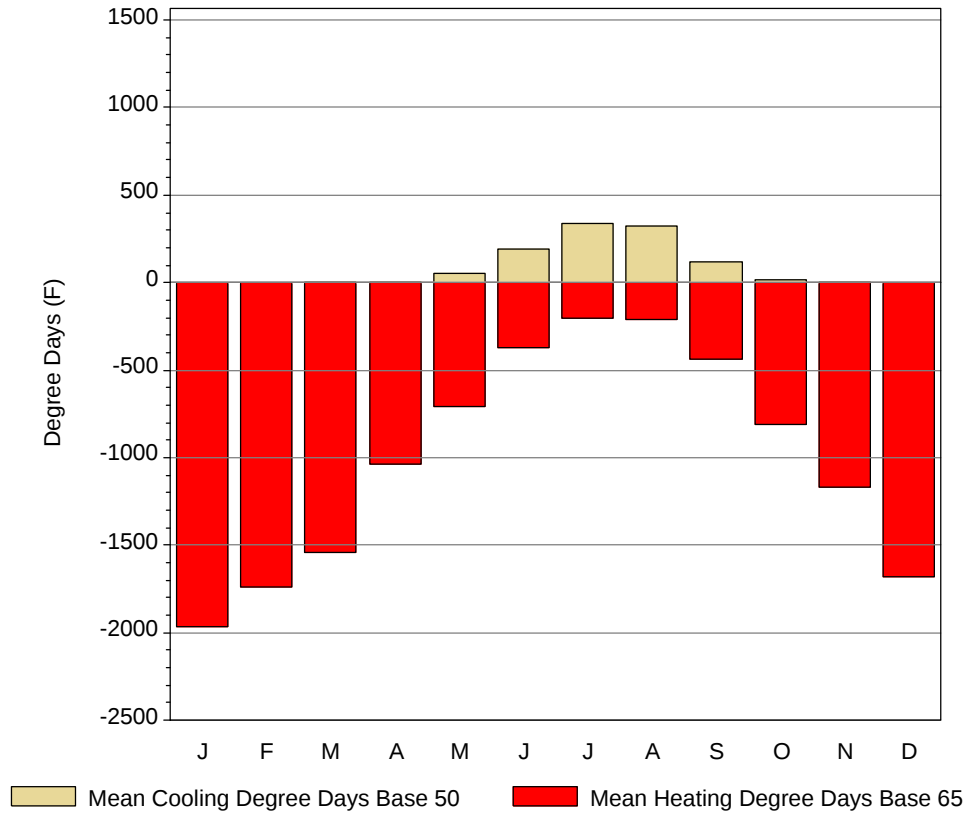
Long Term Humidity and Dry Bulb Temperature Summary



Long Term Humidity and Dry Bulb Temperature Summary

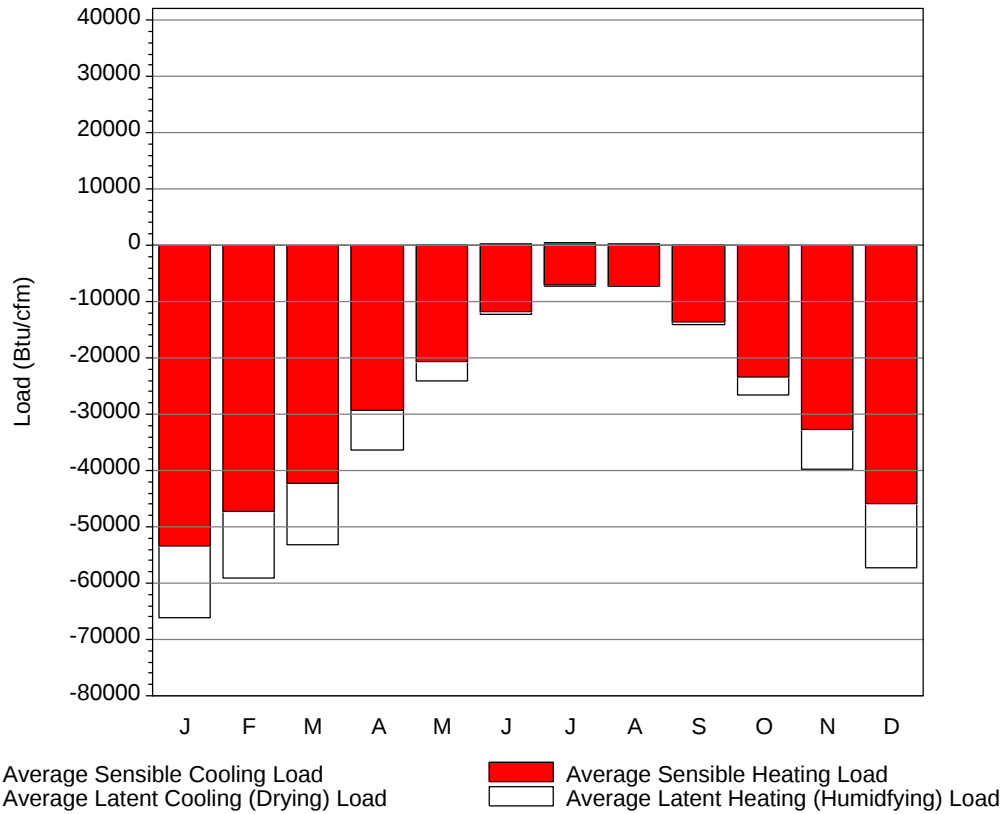
Week Ending	1.0% Temp (° F)	MCWB@ 1% Temp (° F)	Mean Max Temp (° F)	Mean Min Temp (° F)	99% Temp (° F)	1.0% HR (gr/lb)	MCDB@ 1% HR (° F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	36	34.5	10.3	-3.4	-22	29.4	35.4	9.1	4.6
14-Jan	36	33.1	10	-5	-22	26.6	33.6	8.7	3.9
21-Jan	36	33.2	9.1	-6.7	-24	25.2	34.7	8	3.2
28-Jan	36	33.8	8.2	-8.9	-26	25.9	35.8	7.4	2.7
4-Feb	32	30	8.1	-9.1	-26	22.4	30.2	6.9	2.8
11-Feb	34	31.9	8.5	-8.8	-26	23.1	32.5	6.7	2.7
18-Feb	36	34.9	12.8	-5.6	-24	29.4	35.7	8.6	3.6
25-Feb	36	33.7	15.9	-2.6	-18	25.9	35.2	9.2	4.1
4-Mar	41	38.8	18.3	0.1	-18	31.5	40.5	11.1	4.9
11-Mar	41	35.9	20.3	-0.8	-18	28	38.3	11.1	4.5
18-Mar	43	38.2	24.1	5.3	-14	29.4	41.3	13.1	6
25-Mar	41	34.3	27.6	8.1	-10	27.3	35.6	14.3	6.5
1-Apr	46	38.5	31.7	12.9	-4	30.8	40.8	16.7	8.3
8-Apr	48	40.4	34	18.4	0	32.9	43.2	19.4	11.3
15-Apr	52	42.2	36.6	19.6	5	35	45.2	20.3	10.7
22-Apr	54	41.5	39.6	23.6	9	33.6	43.6	21.5	12.8
29-Apr	57	44.5	41.9	26.7	13	40.6	51.3	24	15
6-May	66	49.7	48.2	30.3	21	44.1	49.2	27.4	17.1
13-May	73	55.3	49.9	31.9	23	50.4	56.8	29.8	19.2
20-May	75	55.2	52.4	34.4	27	50.4	57.7	32.3	21.7
27-May	75	58.4	52.1	34.6	28	53.9	62.7	33.4	21.4
4-Jun	72	54.7	56.1	37.8	30	61.6	60.3	39.1	24.9
10-Jun	75	57.7	58.1	39.9	32	66.5	63.4	42.7	28.4
17-Jun	85	66	63.7	43.7	36	79.8	74.7	48.4	31.7
24-Jun	87	64	67.3	47.4	37	80.5	72.4	54.6	35.4
1-Jul	88	64.9	66.4	48.7	39	85.4	68.7	57.2	38.6
8-Jul	84	64.7	66.8	49.9	39	81.9	68.1	60.3	41.5
15-Jul	82	63	68.8	51.2	43	87.5	71.6	64	44.6
22-Jul	84	64.4	68.9	51.9	45	86.8	68.7	65	44.9
29-Jul	85	65	72	53.3	44	91	72.9	67	45.7
5-Aug	88	66.7	72.3	54.8	45	91.7	72.1	69.3	49.1
12-Aug	86	67.3	70.3	53	46	91.7	75.6	66.9	46.5
19-Aug	82	64.6	69.6	52	43	86.1	71.6	64.6	44.3
26-Aug	82	65.4	67.2	50.5	41	85.4	72.7	61.2	41.7
2-Sep	79	62.2	63.8	46.9	39	81.2	71.6	56.4	38.1
9-Sep	79	63	62.3	45.8	37	75.6	69.1	53.1	35.1
16-Sep	75	62.1	58.9	43.7	36	80.5	67.3	50.2	33.4
23-Sep	73	61.4	57.8	41.5	32	75.6	65.2	48.4	30.5
30-Sep	72	59.9	54.7	39.8	30	66.5	62.4	42.9	28.4
7-Oct	63	53.7	50.2	36.6	28	58.8	56.6	38.1	24.4
14-Oct	61	53.6	47.2	33.8	25	58.1	57.2	34.6	22.1
21-Oct	55	48.9	43.9	33.2	24	51.8	52.8	32.7	21.9
28-Oct	61	54.8	41.1	30.3	18	53.9	60.9	28.9	19.5
4-Nov	52	46.1	38.1	27.4	16	47.6	50.9	27.1	17.4
11-Nov	54	50.8	33.9	22.3	9	49.7	53.8	23.4	13.9
18-Nov	52	45.5	33.3	21.2	5	50.4	51.1	23.1	13.1
25-Nov	47	43	29.4	17.9	1	39.2	46.3	20.1	11.7
2-Dec	45	41.3	25.5	12.4	-4	36.4	44.5	16.3	8.5
9-Dec	39	36.9	20.5	7	-9	30.8	38.3	13.1	6.8
16-Dec	39	37.1	18.7	4	-15	29.4	36.6	12.6	5.9
23-Dec	37	35.4	17.3	4.1	-17	29.4	36	12.5	6.6
31-Dec	36	33.4	12.4	-1.5	-22	27.3	34.3	9.9	4.8

Degree Days, Heating and Cooling (Base 65 F) & Cooling (Base 50F)



Month	Mean Cooling Degree Days (°F) Base 50	Mean Cooling Degree Days (°F) Base 65	Mean Heating Degree Days (°F) Base 65
JAN	0	0	1966.4
FEB	0	0	1742.3
MAR	0.1	0	1538.3
APR	3.4	0.1	1040.4
MAY	49.8	6.4	705.2
JUN	194.2	36.5	374.9
JUL	338.8	65.7	206.2
AUG	325.9	57.2	210.3
SEP	120.2	11.8	437.3
OCT	13.3	0.2	808.5
NOV	1.2	0	1167.7
DEC	0	0	1681.7
ANN	1046.9	177.9	11879.2

Average Ventilation and Infiltration Loads (Outside Air vs 75F, 60% RH summer; 68F, 30% RH winter)



Month	Average Sensible Cooling Load (Btu/cfm)	Average Sensible Heating Load (Btu/cfm)	Average Latent Cooling Load (Btu/cfm)	Average Latent Heating Load (Btu/cfm)
JAN	0	-53380	0	-12825
FEB	0	-47359	0	-11697
MAR	0	-42284	0	-10890
APR	0	-29299	0	-7073
MAY	29	-20623	0	-3422
JUN	207	-11720	25	-572
JUL	293	-7122	124	-18
AUG	248	-7293	104	-36
SEP	38	-13534	14	-628
OCT	0	-23364	0	-3211
NOV	0	-32601	0	-7094
DEC	0	-46001	0	-11159
ANN	815	-334580	267	-68625

Station Information		Shading Geometry in Dimensionless Units	
City, State, WBAN	N/A	N/A	N/A
Lat, Lon, Elev	N/A	N/A	N/A
Press Stn Type	N/A	N/A	N/A

AVERAGE INCIDENT SOLAR RADIATION (Btu/sq.ft./day), Percentage Uncertainty = 9														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ.	Global													
	Std.Dev.													
	Minimum													
	Maximum													
	Diffuse													
Clear Day	Global													
NORTH	Global													
	Diffuse													
Clear Day	Global													
EAST	Global													
	Diffuse													
Clear Day	Global													
SOUTH	Global													
	Diffuse													
Clear Day	Global													
WEST	Global													
	Diffuse													
Clear Day	Global													

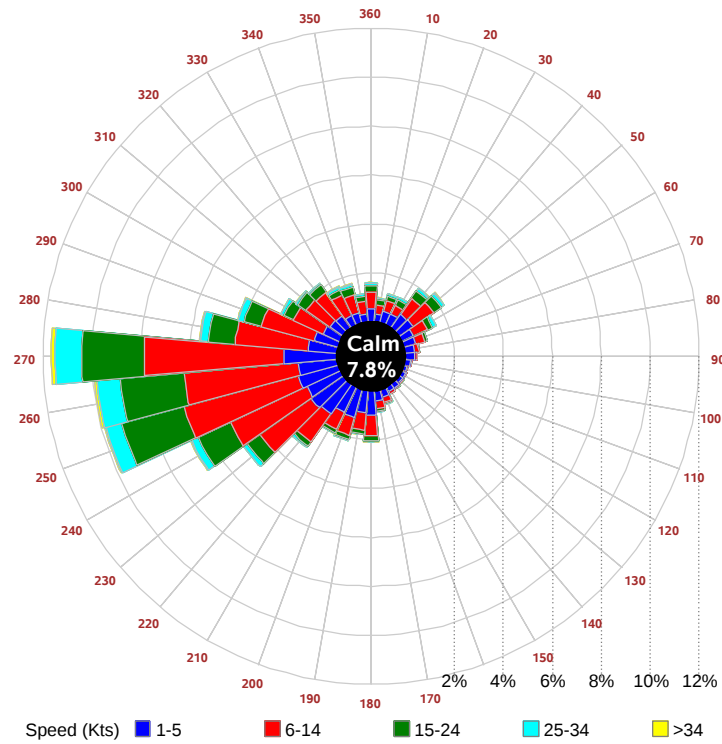
Average Annual Solar Radiation - Nearest Available Site Source: National Renewable Energy Laboratory, Golden CO, 1995

AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9														
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ.	Unshaded													
NORTH	Unshaded													
	Shaded													
EAST	Unshaded													
	Shaded													
SOUTH	Unshaded													
	Shaded													
WEST	Unshaded													
	Shaded													

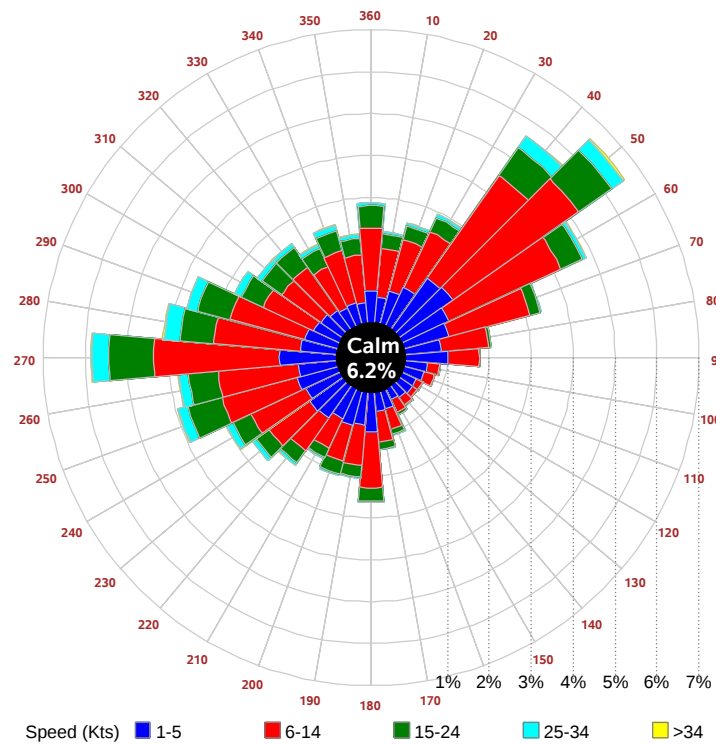
AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9												
				March						June		
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm	
HORIZ.	M.Clear											
	M.Cloudy											
NORTH	M.Clear											
	M.Cloudy											
EAST	M.Clear											
	M.Cloudy											
SOUTH	M.Clear											
	M.Cloudy											
WEST	M.Clear											
	M.Cloudy											
M.Clear	(% hrs)											

				Sept						Dec		
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm	
HORIZ.	M.Clear											
	M.Cloudy											
NORTH	M.Clear											
	M.Cloudy											
EAST	M.Clear											
	M.Cloudy											
SOUTH	M.Clear											
	M.Cloudy											
WEST	M.Clear											
	M.Cloudy											
M.Clear	(% hrs)											

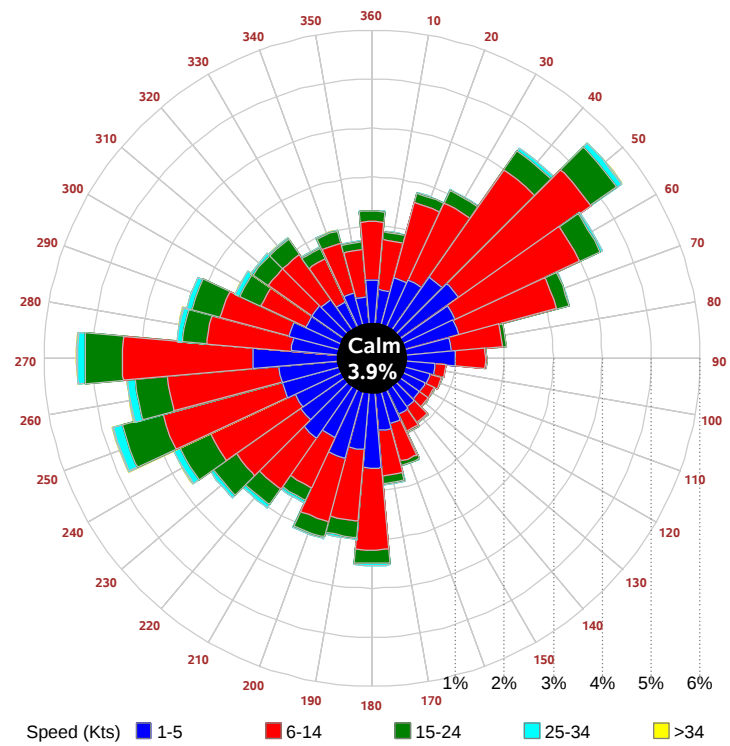
Wind Summary - December, January, and February



Wind Summary - March, April, and May



Wind Summary - June, July, and August



Wind Summary - September, October, and November

