

EARECKSON AS, AK	
Latitude = 52.71 N	Station ID = ICAO_PASY
Longitude = 174.11 E	Elevation = 98 Feet
Period of Record = 1988 To 2017	Average Pressure = 29.62 inches Hg

Design Criteria Data

	Mean Coincident (Average) Values				
Dry Bulb Temperature (T)	Design Value (°F)	Wet Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	59	53	52	12.8	W
0.4% Occurrence	56	52	53	14.9	NW
1.0% Occurrence	54	51	51	14.9	W
2.0% Occurrence	54	51	51	14.9	W
Mean Daily Range	5	-	-	-	N
97.5% Occurrence	26	24	14	16.9	N
99.0% Occurrence	24	22	13	15.8	N
99.6% Occurrence	22	20	11	15.2	NW
Median of Extreme Lows	19	17	10	15.8	NW

	Design Value (°F)	Dry Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Wet Bulb Temperature (T _{wb})					
Median of Extreme Highs	54	55	58	14.9	W
0.4% Occurrence	53	54	56	14.8	W
1.0% Occurrence	52	53	54	14.9	S
2.0% Occurrence	52	53	54	14.9	S

	Design Value (gr/lb)	Dry Bulb Temperature (°F)	Vapor Pressure (in. Hg)	Wind Speed (mph)	Prevailing Direction (NSEW)
Humidity Ratio (HR)					
Median of Extreme Highs	62	55	0.42	16.2	W
0.4% Occurrence	58	53	0.39	15.2	W
1.0% Occurrence	57	53	0.39	14.8	W
2.0% Occurrence	55	52	0.36	15.7	S

Air Conditioning/ Humid Area Criteria	Threshold	T ≥ 93 °F	T ≥ 80 °F	Twb ≥ 73 °F	Twb ≥ 67 °F
	# of Hours	0	0	0	0

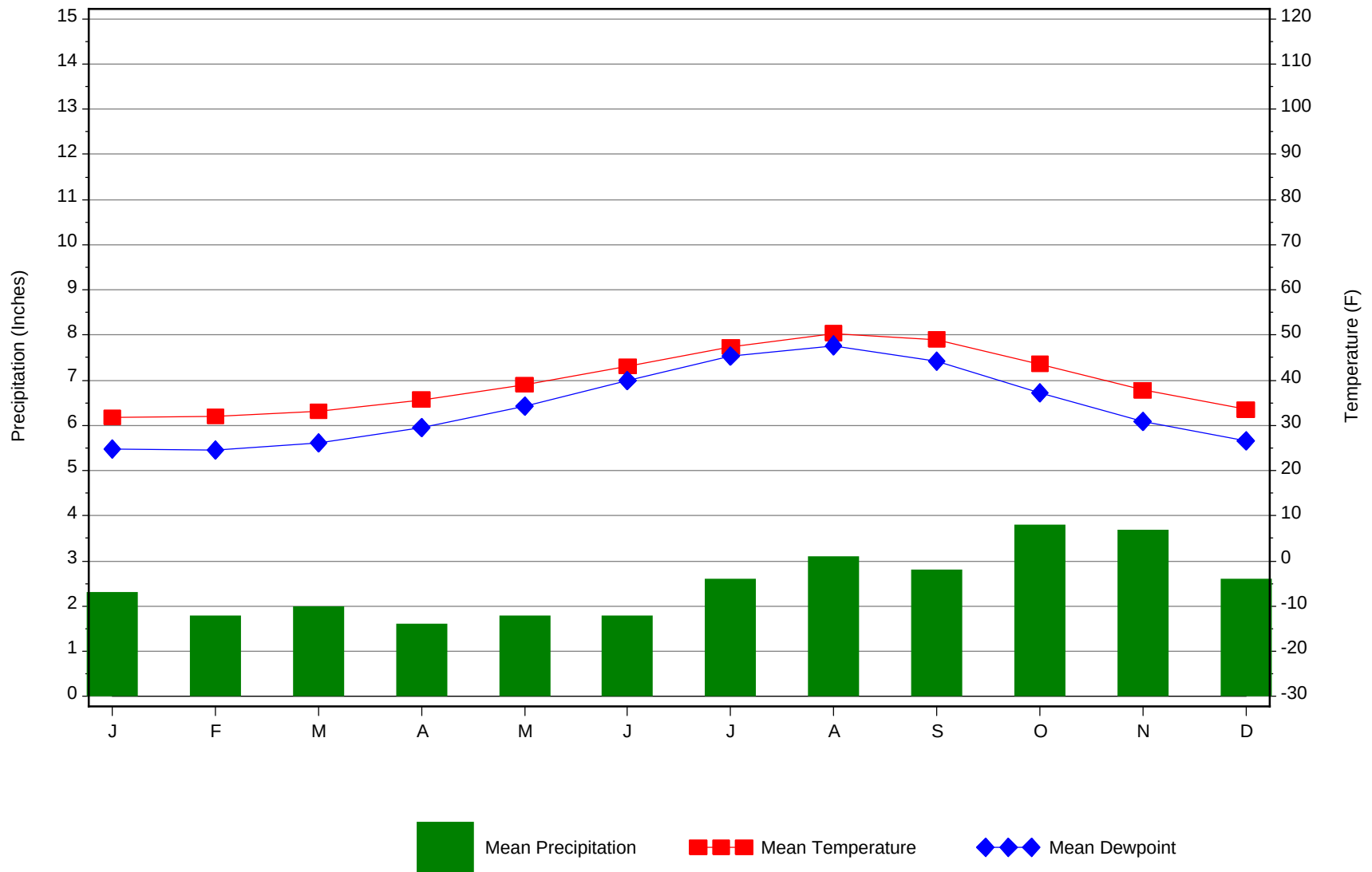
Other Site Data

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
4	0.8	130	0.0 + 0.0
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 (#)
42.3	52	25	42

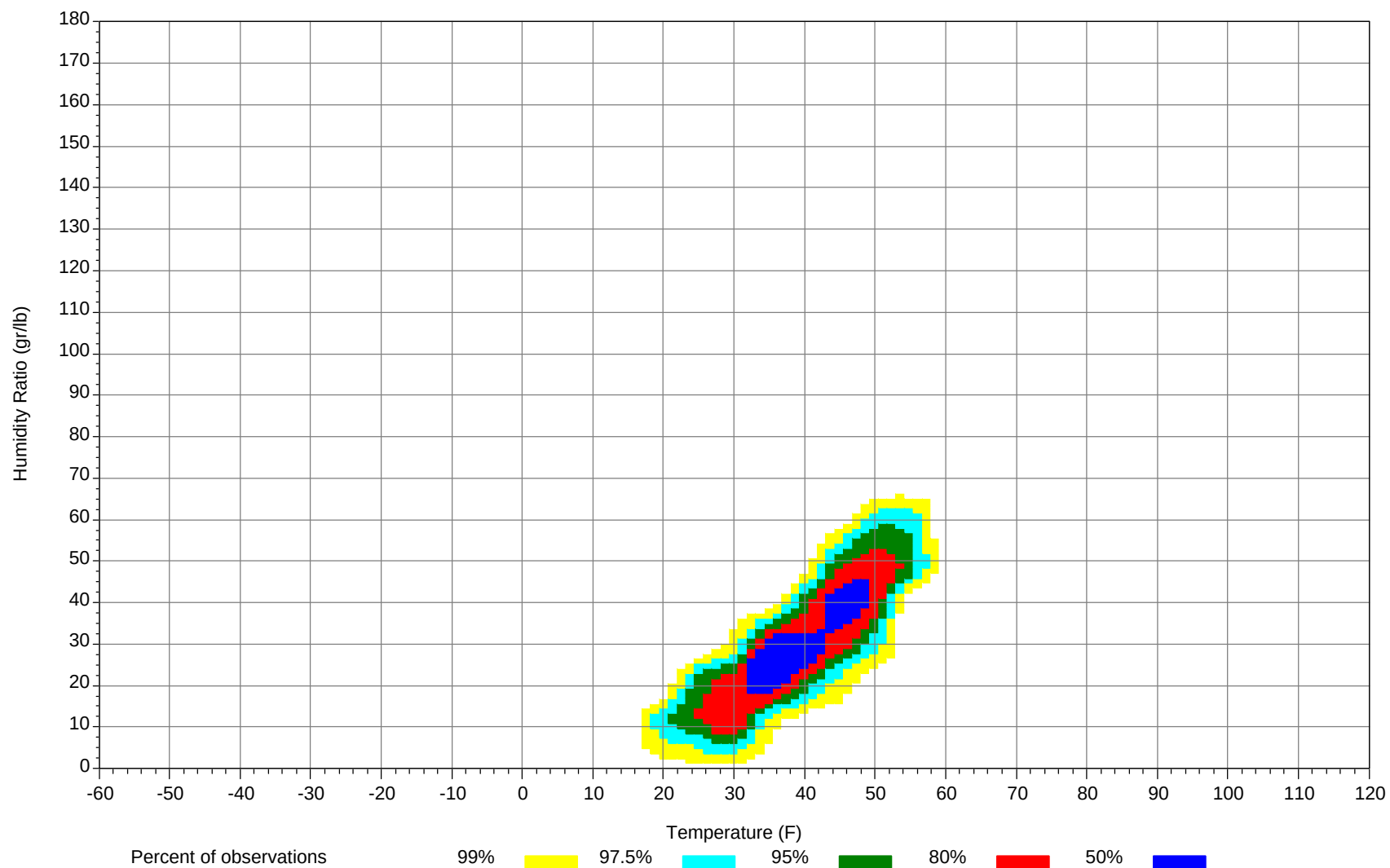
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.



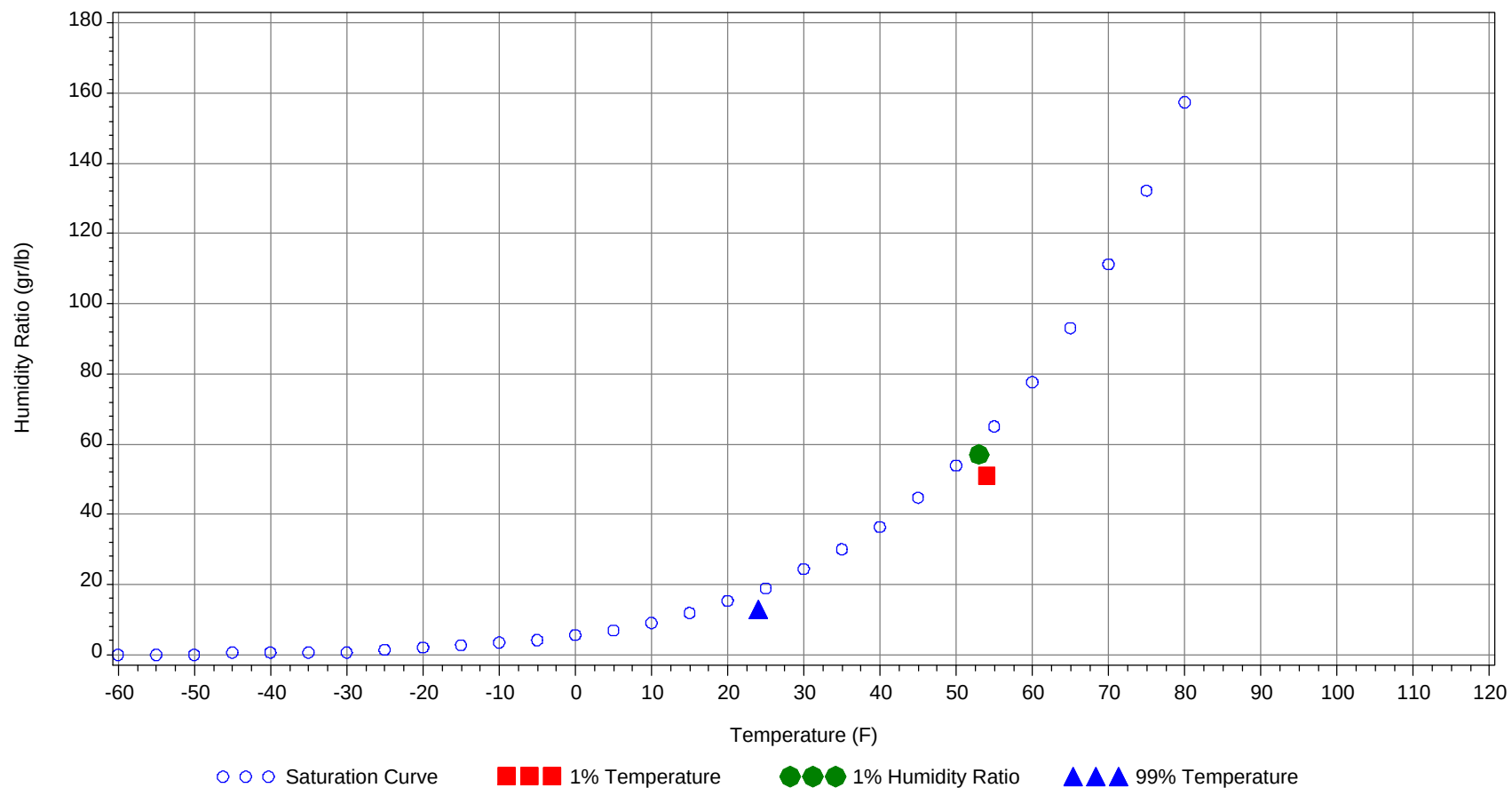
Average Annual Climate



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	54.0		51		51.0	21.0
99.0% Dry Bulb	24.0				13.0	7.7
1.0% Humidity Ratio	57.0	53.0	52.4	51.8		21.6

Dry-Bulb Temperature Hours For An Average Year

	January					February					March				
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)
65/ 69															
60/ 64															
55/ 59															
50/ 54															
45/ 49		0		0	41		0		0	42		1	0	1	39.8
40/ 44	3	5	5	13	38.8	1	4	4	9	38.1	2	9	6	17	37.7
35/ 39	56	71	74	201	34.5	54	68	62	184	34.2	68	97	93	258	34.2
30/ 34	104	100	99	303	29.6	108	96	100	304	29.7	117	105	105	327	29.8
25/ 29	68	61	60	189	24.6	50	47	49	146	24.5	54	33	39	126	25.1
20/ 24	16	9	10	35	20.6	11	8	8	27	20	6	3	4	13	20.3
15/ 19	2	1	1	4	16.4	1	1	0	2	17.3	1	0	1	2	17.5
10/ 14		0		0	12										

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)
65/ 69															
60/ 64															
55/ 59												0	0	0	48.6
50/ 54							1	0	1	44.9	1	7	7	15	46.7
45/ 49	0	1	0	1	40.4	1	13	6	20	41.8	21	94	71	186	44.1
40/ 44	2	29	22	53	37.6	36	107	96	239	39.1	169	118	141	428	41.1
35/ 39	120	149	145	414	34.7	193	124	140	457	36.2	50	21	20	91	37.8
30/ 34	102	56	67	225	30.3	19	4	6	29	31.4		0		0	34
25/ 29	16	5	6	27	25.7	0	0		0	26.7					
20/ 24	0			0	21.8										
15/ 19															
10/ 14															

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

	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)
65/ 69		0	0	0	57.8										
60/ 64	0	0	1	1	54.9	0	1	1	2	55		0	0	0	53.1
55/ 59	0	7	7	14	52.3	3	22	15	40	52.7	1	10	5	16	51.4
50/ 54	12	62	56	130	49.4	103	152	145	400	50.1	67	132	108	307	48.8
45/ 49	182	162	159	503	46	140	73	86	299	46.9	143	92	114	349	45.3
40/ 44	52	16	24	92	42.9	3	0	1	4	42.5	26	6	13	45	40.2
35/ 39	1	0	0	1	38.7	0			0	39	3	0	0	3	36.4
30/ 34											0			0	34
25/ 29															
20/ 24															
15/ 19															
10/ 14															

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

	October					November					December				
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)
65/ 69															
60/ 64															
55/ 59		0		0	48.7										
50/ 54	3	15	8	26	47.8		0	0	0	44.2					
45/ 49	90	126	102	318	43.6	8	12	8	28	43.3	1	1	0	2	42.2
40/ 44	106	75	101	282	39.4	63	66	65	194	39.2	15	17	13	45	39.2
35/ 39	45	30	34	109	35	112	118	119	349	34.4	92	95	98	285	34.3
30/ 34	4	2	3	9	31.4	49	38	41	128	29.8	92	96	94	282	29.5
25/ 29	0	0		0	27	8	5	6	19	25.5	41	35	38	114	24.9
20/ 24						0	0	0	0	21.5	6	4	4	14	20.3
15/ 19											1	1	1	3	17
10/ 14															

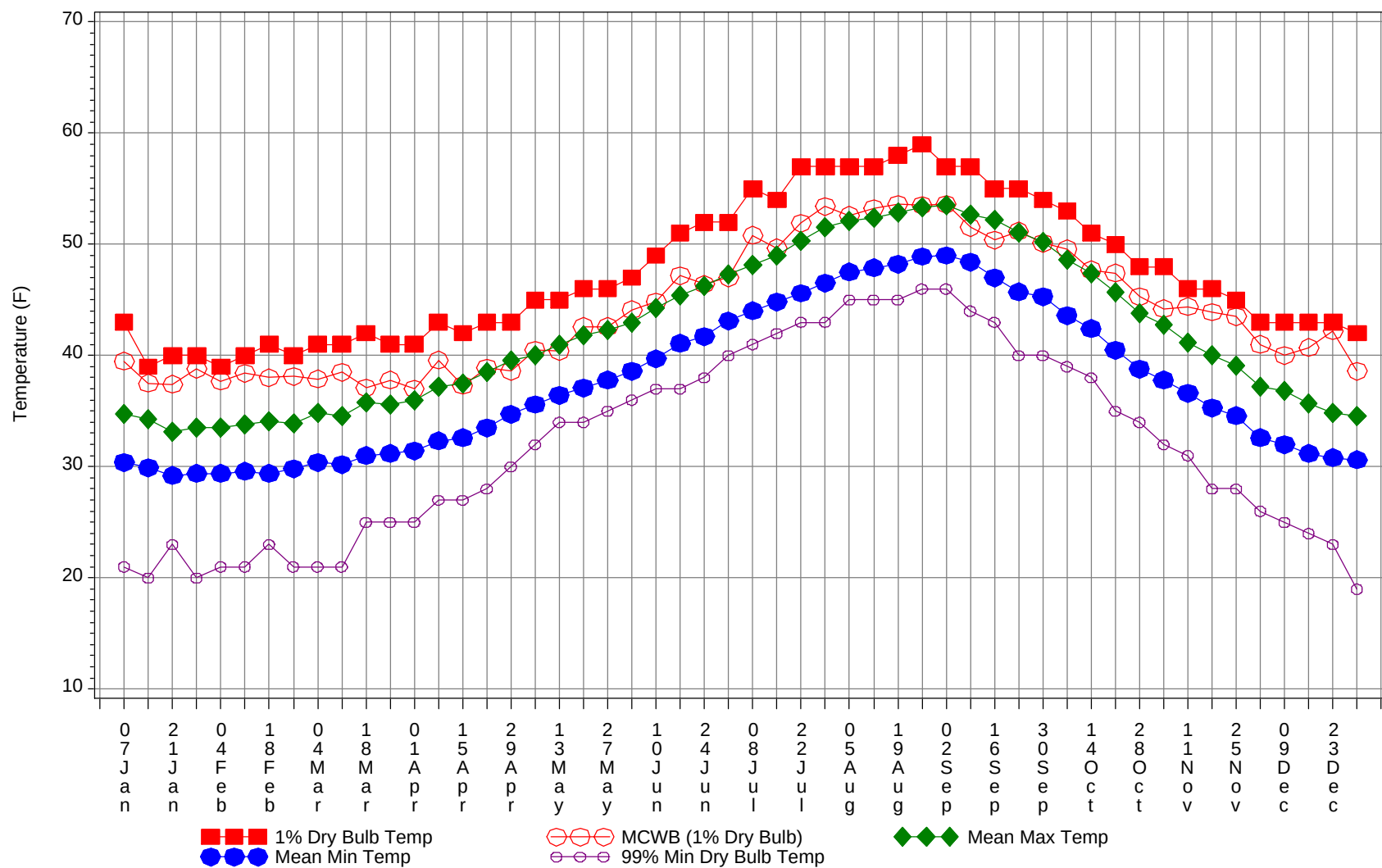
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

Dry-Bulb Temperature Hours For An Average Year

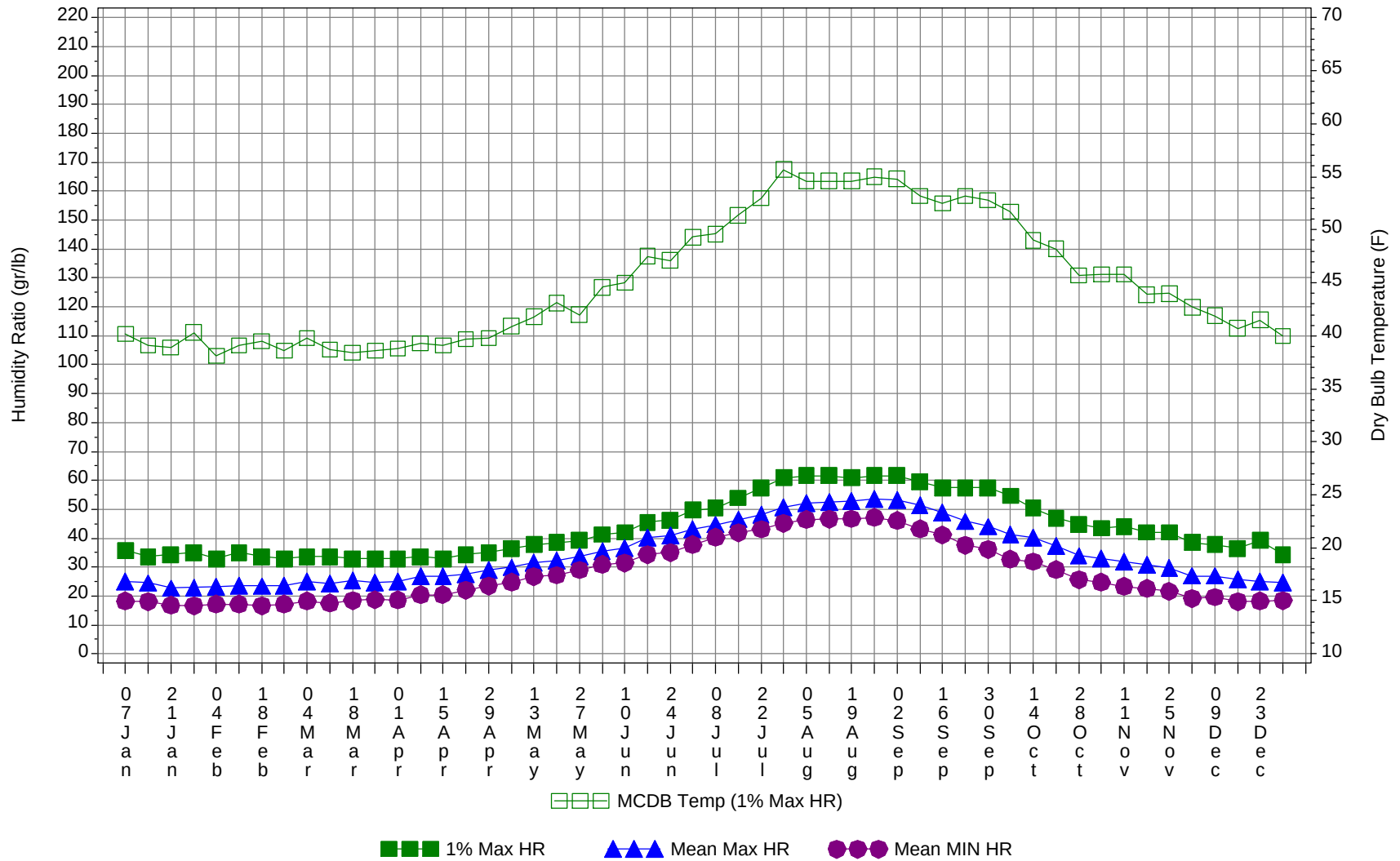
	Annual				
Temperature Range (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)
65/ 69		0	0	0	57.8
60/ 64	0	2	2	4	54.7
55/ 59	4	39	28	71	52.3
50/ 54	185	373	326	884	49.4
45/ 49	580	579	548	1707	45.2
40/ 44	488	455	496	1439	39.9
35/ 39	804	771	785	2360	34.9
30/ 34	585	490	511	1586	29.8
25/ 29	232	184	197	613	24.8
20/ 24	39	23	26	88	20.3
15/ 19	4	4	2	10	16.9
10/ 14		0		0	12

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.

Annual Summary of Temperatures



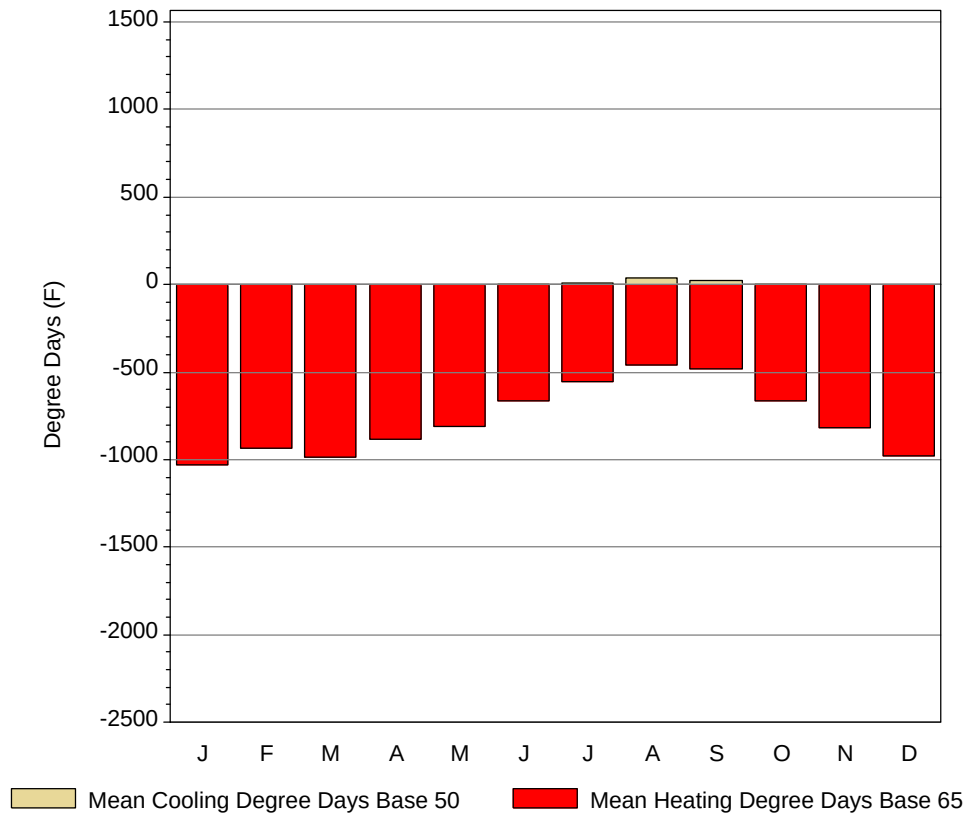
Long Term Humidity and Dry Bulb Temperature Summary



Long Term Humidity and Dry Bulb Temperature Summary

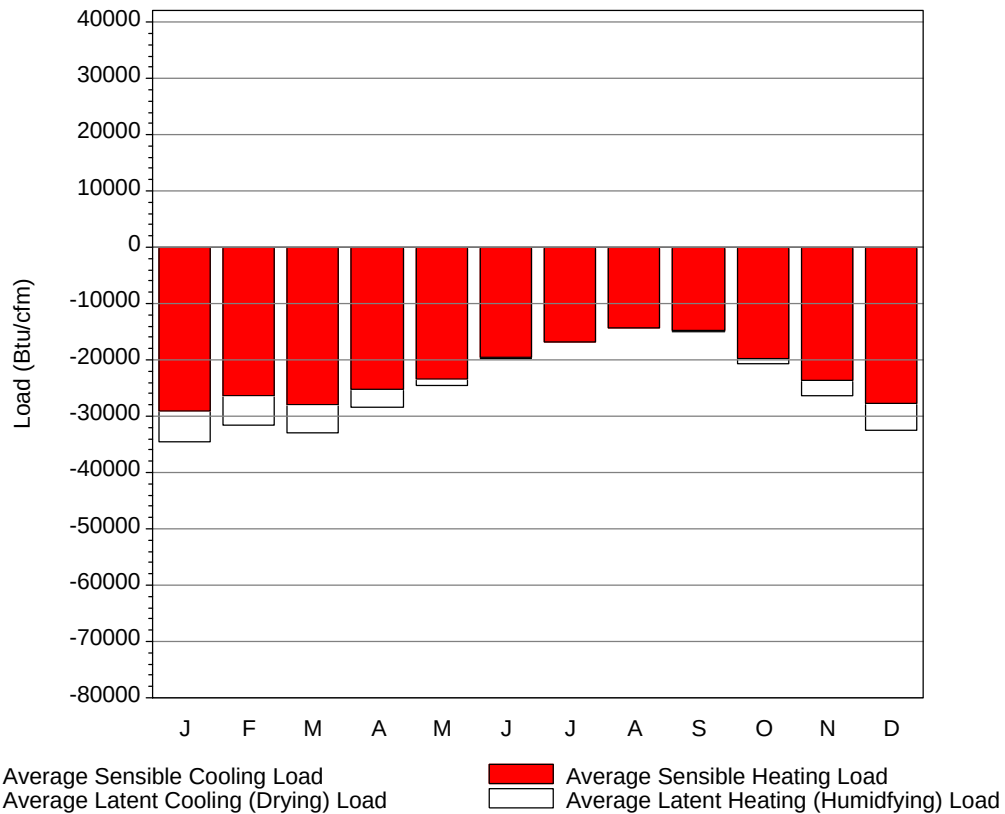
Week Ending	1.0% Temp (° F)	MCWB@ 1% Temp (° F)	Mean Max Temp (° F)	Mean Min Temp (° F)	99% Temp (° F)	1.0% HR (gr/lb)	MCDB@ 1% HR (° F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	43	39.5	34.7	30.4	21	35.7	40.2	25.1	18.3
14-Jan	39	37.5	34.3	29.9	20	33.6	39.1	24.5	18
21-Jan	40	37.4	33.1	29.2	23	34.3	38.9	22.7	16.8
28-Jan	40	38.8	33.5	29.4	20	35	40.3	23	16.7
4-Feb	39	37.7	33.5	29.4	21	32.9	38.1	23.3	17.1
11-Feb	40	38.4	33.8	29.6	21	35	39.1	23.5	17.1
18-Feb	41	38	34.1	29.4	23	33.6	39.5	23.4	16.6
25-Feb	40	38.1	33.9	29.8	21	32.9	38.6	23.7	17.1
4-Mar	41	37.9	34.8	30.4	21	33.6	39.8	24.9	18.3
11-Mar	41	38.5	34.6	30.2	21	33.6	38.7	24.2	17.5
18-Mar	42	37.1	35.8	31	25	32.9	38.4	25.3	18.4
25-Mar	41	37.8	35.6	31.2	25	32.9	38.6	24.8	18.7
1-Apr	41	37	36	31.4	25	32.9	38.8	25	18.6
8-Apr	43	39.6	37.2	32.3	27	33.6	39.3	26.7	20.4
15-Apr	42	37.3	37.5	32.6	27	32.9	39.1	26.8	20.5
22-Apr	43	38.9	38.5	33.5	28	34.3	39.7	27.7	22
29-Apr	43	38.6	39.6	34.7	30	35	39.8	29	23.5
6-May	45	40.5	40	35.6	32	36.4	40.9	29.9	24.7
13-May	45	40.4	41	36.4	34	37.8	41.8	31.4	26.7
20-May	46	42.6	41.8	37.1	34	38.5	43.1	32.2	27.2
27-May	46	42.6	42.3	37.8	35	39.2	42	33.7	29
4-Jun	47	44.1	43	38.6	36	41.3	44.6	35.5	30.9
10-Jun	49	44.8	44.3	39.7	37	42	45	36.6	31.5
17-Jun	51	47.2	45.4	41.1	37	45.5	47.5	40.1	34.4
24-Jun	52	46.4	46.3	41.7	38	46.2	47.1	40.9	35
1-Jul	52	47	47.3	43.1	40	49.7	49.3	43.1	37.7
8-Jul	55	50.8	48.1	44	41	50.4	49.6	44.7	40.3
15-Jul	54	49.7	49	44.8	42	53.9	51.4	46.5	41.9
22-Jul	57	51.9	50.3	45.6	43	57.4	53	48.2	43.1
29-Jul	57	53.4	51.5	46.5	43	60.9	55.7	50.6	45.1
5-Aug	57	52.6	52.1	47.5	45	61.6	54.6	52.1	46.4
12-Aug	57	53.2	52.4	47.9	45	61.6	54.6	52.4	46.6
19-Aug	58	53.6	52.9	48.2	45	60.9	54.6	52.9	46.7
26-Aug	59	53.5	53.3	48.9	46	61.6	55	53.7	47.1
2-Sep	57	53.6	53.5	49	46	61.6	54.8	53.2	46.1
9-Sep	57	51.5	52.7	48.4	44	59.5	53.2	51.4	43.2
16-Sep	55	50.4	52.2	47	43	57.4	52.5	49	41.1
23-Sep	55	51.2	51.1	45.7	40	57.4	53.2	45.8	37.5
30-Sep	54	50.1	50.2	45.3	40	57.4	52.8	44	36.2
7-Oct	53	49.6	48.6	43.6	39	54.6	51.7	41.3	32.7
14-Oct	51	47.7	47.4	42.4	38	50.4	49	40.3	31.9
21-Oct	50	47.4	45.7	40.5	35	46.9	48.2	37.3	29.1
28-Oct	48	45.3	43.8	38.8	34	44.8	45.7	33.9	25.6
4-Nov	48	44.2	42.8	37.8	32	43.4	45.8	33.1	24.8
11-Nov	46	44.4	41.2	36.6	31	44.1	45.8	31.8	23.3
18-Nov	46	43.9	40	35.3	28	42	43.9	30.9	22.6
25-Nov	45	43.5	39.1	34.6	28	42	44	29.8	21.6
2-Dec	43	41	37.2	32.6	26	38.5	42.7	27	19.2
9-Dec	43	40	36.8	32	25	37.8	41.9	27	19.6
16-Dec	43	40.7	35.7	31.2	24	36.4	40.7	25.7	18.1
23-Dec	43	42.2	34.8	30.8	23	39.2	41.5	25.1	18.3
31-Dec	42	38.6	34.6	30.6	19	34.3	40	24.8	18.4

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	1026
FEB	0	0	935.3
MAR	0	0	988.3
APR	0	0	882
MAY	0	0	807.7
JUN	0.7	0	664.4
JUL	10.5	0	551.9
AUG	36.4	0	457.9
SEP	20.4	0	481.1
OCT	1	0	667.2
NOV	0	0	820.6
DEC	0	0	977.1
ANN	69	0	9259.5

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	-29004	0	-5498
FEB	0	-26442	0	-5110
MAR	0	-28028	0	-4867
APR	0	-25194	0	-3237
MAY	0	-23346	0	-1170
JUN	0	-19553	0	-96
JUL	0	-16716	0	0
AUG	0	-14280	0	0
SEP	0	-14804	0	-89
OCT	0	-19703	0	-942
NOV	0	-23602	0	-2838
DEC	0	-27737	0	-4790
ANN	0	-268409	0	-28637

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													

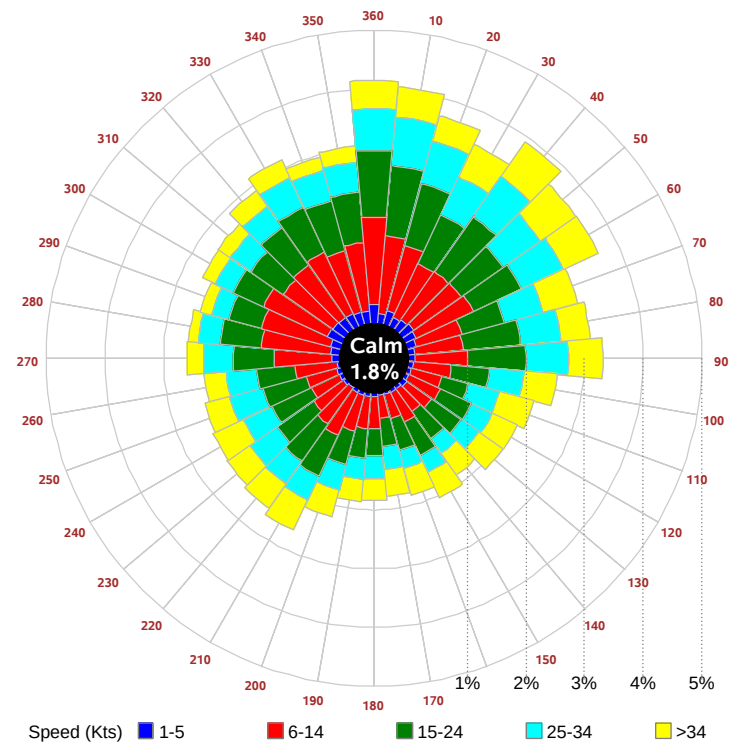
Average Annual Solar Radiation - Nearest Available Site Source: National Renewable Energy Laboratory, Golden CO, 1995

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													

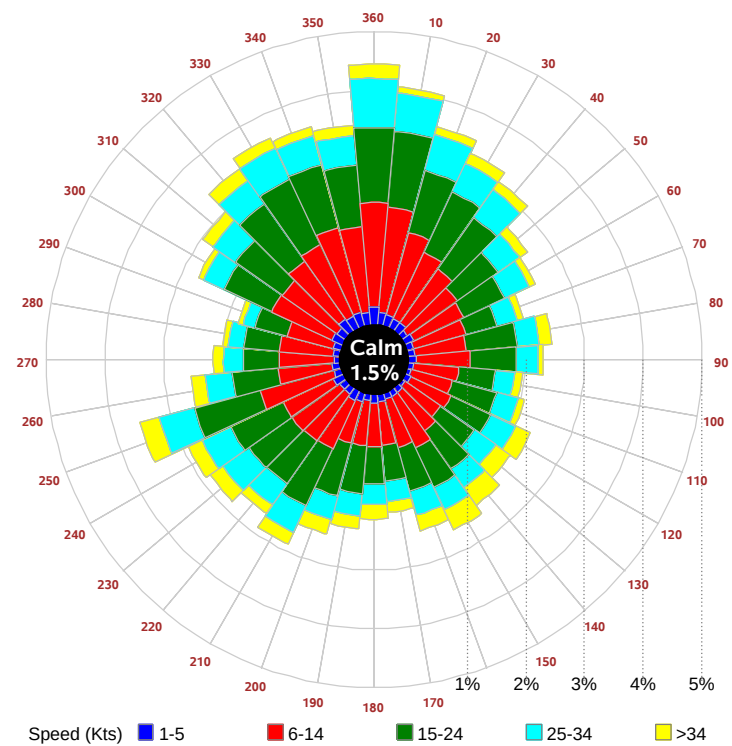
AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9												
				March						June		
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm	
HORIZ.	M.Clear											
	M.Cloudy											
NORTH	M.Clear											
	M.Cloudy											
EAST	M.Clear			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

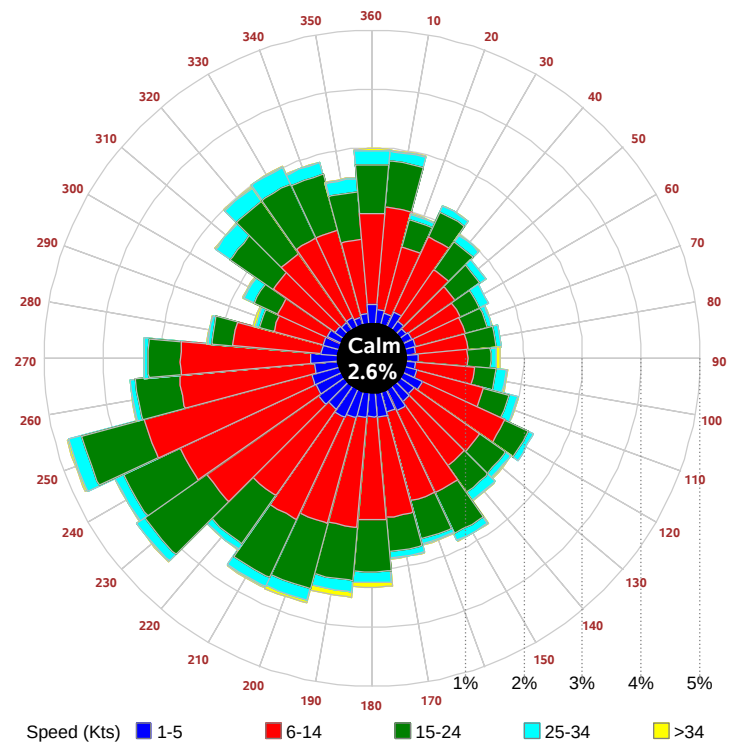
Wind Summary - December, January, and February



Wind Summary - March, April, and May



Wind Summary - June, July, and August



Wind Summary - September, October, and November

