

EL SALVADOR INTL, ES	Station ID = ICAO_MSLP
Latitude = 13.44 N	Elevation = 101 Feet
Longitude = 89.06 W	Average Pressure = 29.74 inches Hg
Period of Record = 1988 To 2017	

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	100	72	73	11.3	VRB
0.4% Occurrence	96	74	89	10	VRB
1.0% Occurrence	95	74	93	9.8	VRB
2.0% Occurrence	93	75	101	9	VRB
Mean Daily Range	17	-	-	-	NE
97.5% Occurrence	71	68	97	3.1	NE
99.0% Occurrence	69	66	91	2.8	NE
99.6% Occurrence	68	65	87	2.6	NE
Median of Extreme Lows	64	62	78	2.2	ENE

	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	84	90	162	8.5	VRB
0.4% Occurrence	82	89	149	6.8	VRB
1.0% Occurrence	81	88	145	6.4	VRB
2.0% Occurrence	80	87	140	6	VRB

	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	160	85	1.05	5.1	VRB
0.4% Occurrence	151	85	0.99	5.1	VRB
1.0% Occurrence	151	85	0.99	4.9	VRB
2.0% Occurrence	151	85	0.99	4.9	VRB

Air Conditioning/ Humid Area Criteria	Threshold	T ≥ 93 °F	T ≥ 80 °F	Twb ≥ 73 °F	Twb ≥ 67 °F
	# of Hours	233	3575	4561	6121

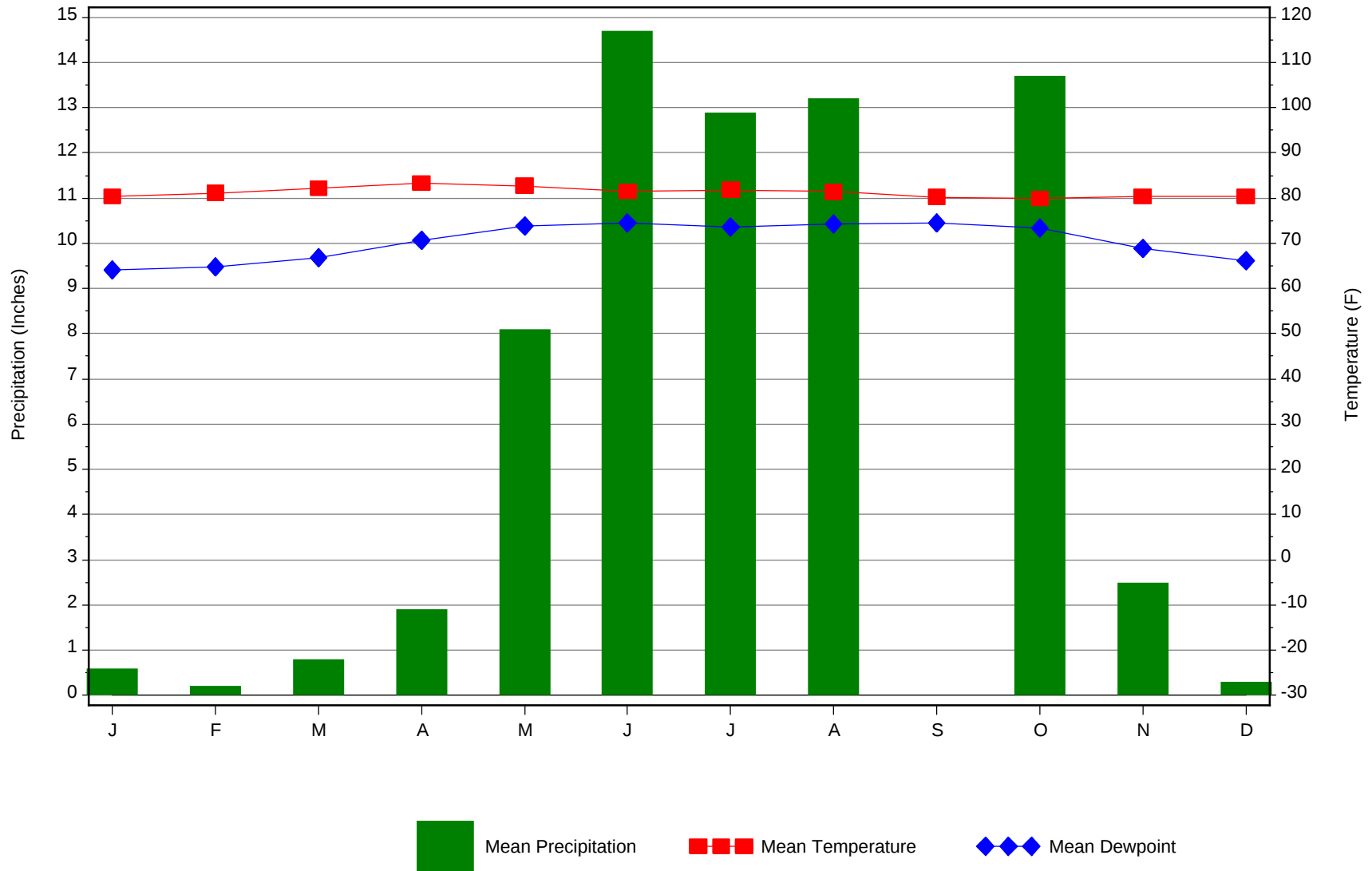
Other Site Data

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
10	N/A	N/A	17.9 + 5.3
Ground Water Temperature (°F) 50 Foot Depth*	Frost Depth 50 Year Recurrence (in)	Ground Snow Load 50 Year Recurrence (lb/ft²)	Average Annual Freeze-Thaw Cycles (#)
83.8	N/A	N/A	0

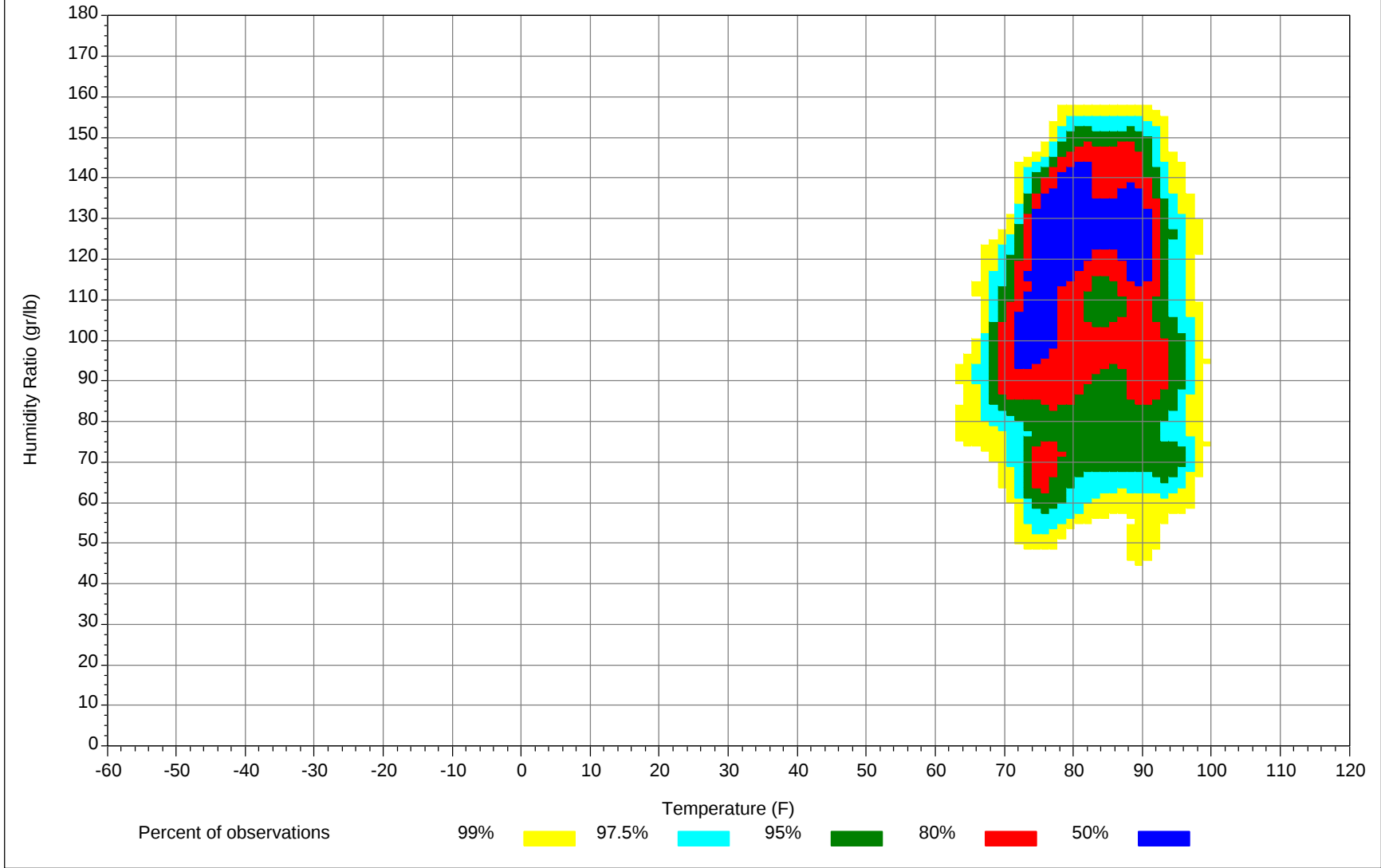
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.



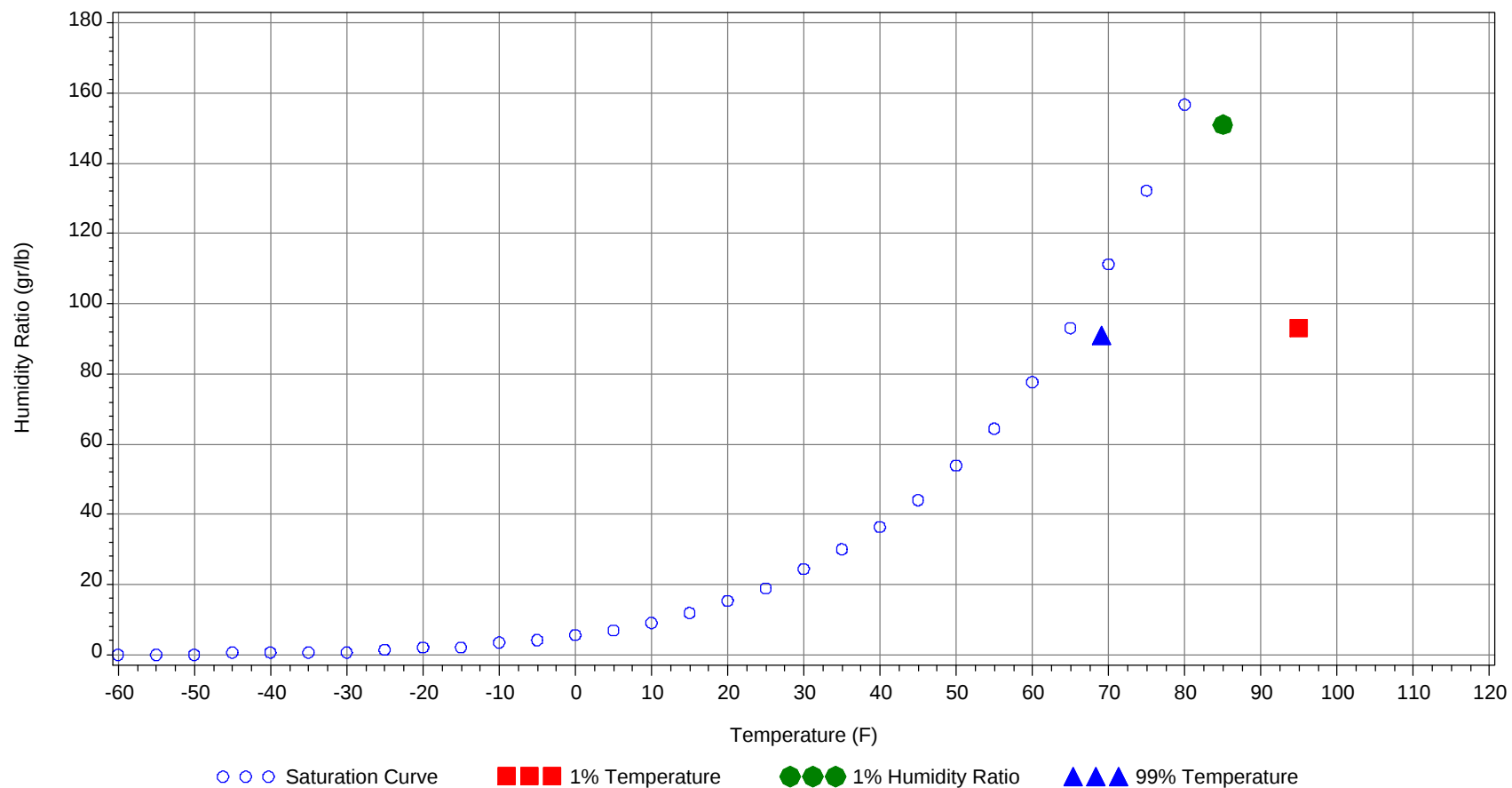
Average Annual Climate



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	95.0		74		93.0	37.3
99.0% Dry Bulb	69.0				91.0	30.3
1.0% Humidity Ratio	151.0	85.0	80.3	78.8		43.9

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)
100/104		0		0	75.3		0		0	70		1		1	70.3
95/ 99	0	12	0	12	71.9		16	0	16	70.5		19	1	20	71
90/ 94	0	103	3	106	71.9	0	108	5	113	72.3	0	139	7	146	73.7
85/ 89	0	99	18	117	72.2	1	83	24	108	72.6	4	76	34	114	73.6
80/ 84	22	31	73	126	70.5	27	16	68	111	70.8	48	12	95	155	72.4
75/ 79	95	1	100	196	68.4	85	1	90	176	69.4	106	1	90	197	70.8
70/ 74	105	0	51	156	67.2	92	0	35	127	67.5	79	0	21	100	67.9
65/ 69	22	0	4	26	64.7	17		1	18	64.4	11	0	1	12	63.7
60/ 64	3		0	3	61.1	2			2	61.7	1		0	1	60.4
55/ 59	0			0	59										

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)
100/104		1		1	72.8		0	0	0	72.9					
95/ 99		14	0	14	74.1	0	11	0	11	75.9		5	0	5	77.7
90/ 94	1	152	7	160	76	1	108	5	114	77.8	0	75	3	78	78.9
85/ 89	10	63	39	112	76.1	7	86	34	127	77.9	3	105	21	129	78.5
80/ 84	58	9	119	186	75.2	56	34	128	218	76.8	33	44	92	169	77.4
75/ 79	132	1	69	202	72.9	158	8	74	240	74.9	161	11	113	285	75.1
70/ 74	38		6	44	69.2	26	0	6	32	72.1	43	1	11	55	72.2
65/ 69	2		0	2	64.9	0		0	0	67					
60/ 64	0			0	62.5										
55/ 59															

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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)
100/104		0		0	73		0		0	78					
95/ 99		6		6	77.2		3	0	3	78.4		0		0	80
90/ 94	0	111	6	117	78.4	0	91	3	94	78.9	0	50	0	50	79.2
85/ 89	3	96	29	128	78	2	107	24	133	78.4	1	109	11	121	78.6
80/ 84	36	29	88	153	76.8	28	41	93	162	77.3	19	64	72	155	77.5
75/ 79	151	6	102	259	74.4	160	6	108	274	74.7	147	16	140	303	75
70/ 74	57	1	23	81	71.8	57	0	20	77	71.9	74	1	17	92	72.3
65/ 69	0		0	0	68.6	0		0	0	65.4	0		0	0	68.7
60/ 64						0		0	0	63					
55/ 59															

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)
100/104							0		0	79					
95/ 99		1		1	78.6		2		2	75.2		7		7	73.5
90/ 94	0	49	0	49	77.7		81	0	81	74.7	0	104	1	105	73.3
85/ 89	1	112	7	120	77.7	1	116	9	126	75.2	1	105	12	118	73.3
80/ 84	22	67	63	152	76.7	26	37	61	124	73.6	23	30	63	116	71.6
75/ 79	139	18	157	314	74.5	114	3	138	255	71.9	98	2	122	222	70.2
70/ 74	85	1	21	107	71.5	92	0	31	123	69.3	108	0	48	156	68.1
65/ 69	2		0	2	65.7	7	0	1	8	64.6	16	0	2	18	65.2
60/ 64	0			0	64	1		0	1	61.7	2		0	2	61.7
55/ 59															

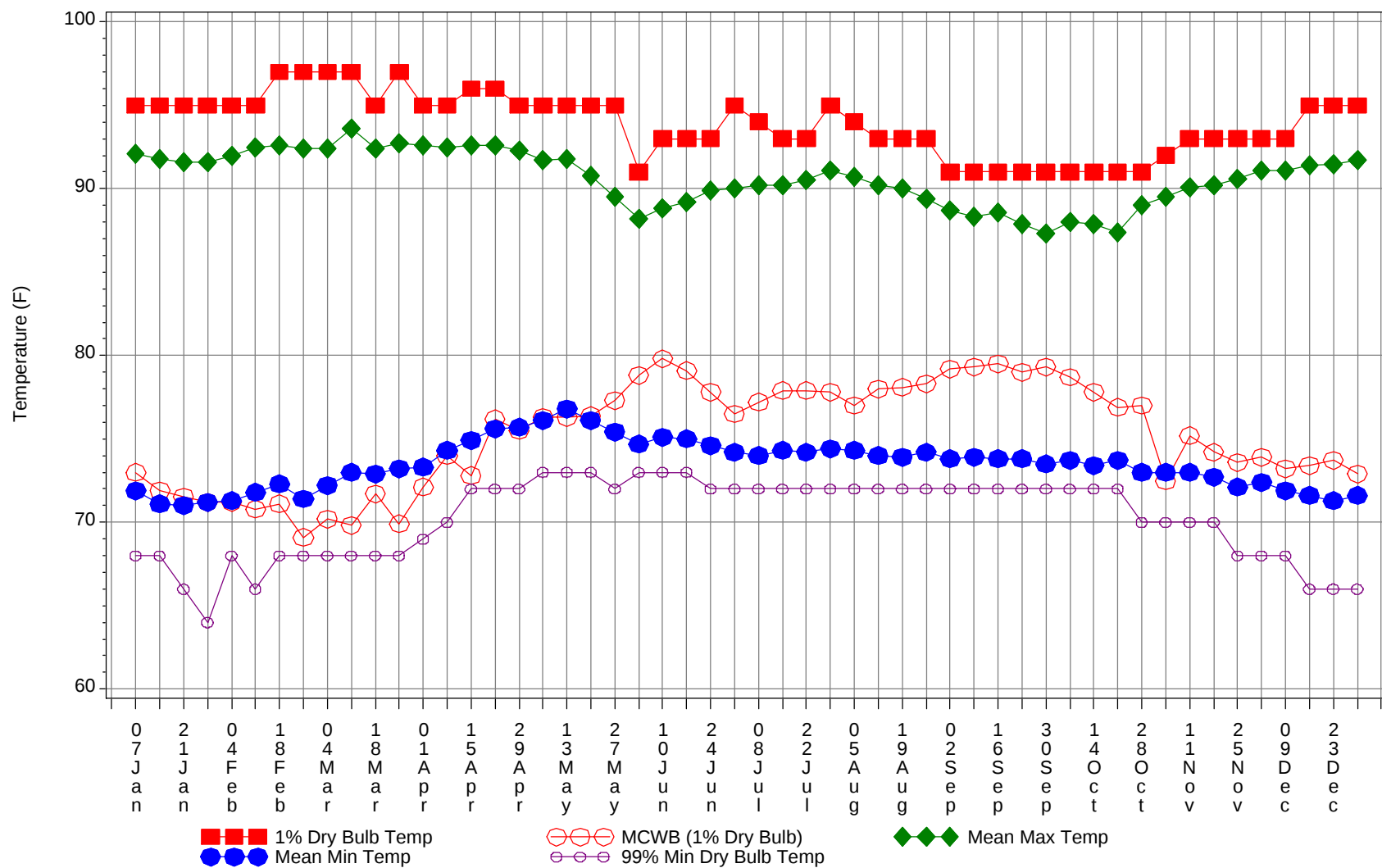
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

Dry-Bulb Temperature Hours For An Average Year

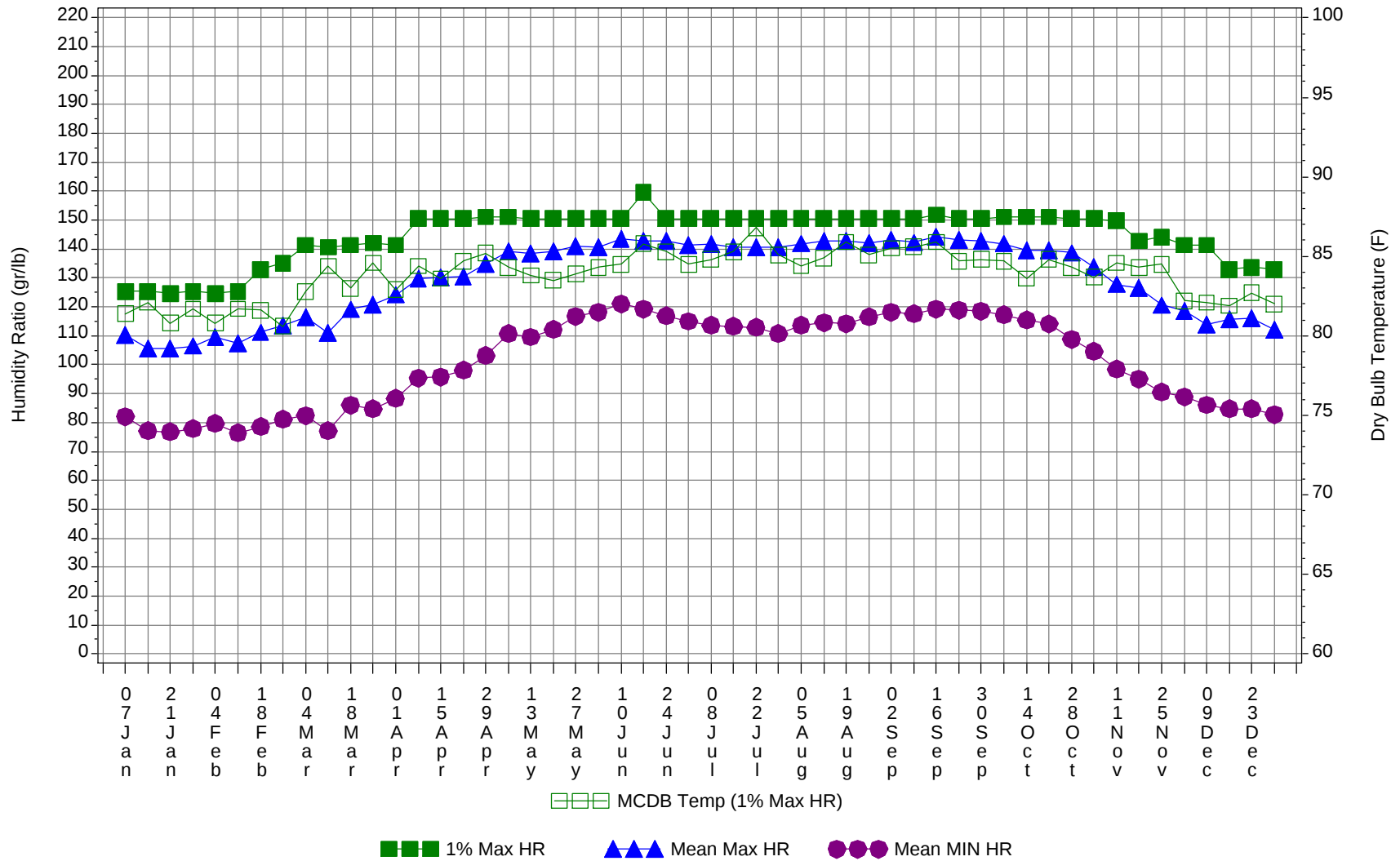
	Annual				
Temperature Range (° F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (° F)
100/104		3	0	3	72.4
95/ 99	0	97	1	98	73.4
90/ 94	2	1168	41	1211	75.7
85/ 89	32	1159	259	1450	76.1
80/ 84	395	414	1012	1821	75
75/ 79	1541	74	1306	2921	73
70/ 74	860	5	291	1156	69.5
65/ 69	79	0	10	89	64.7
60/ 64	9		1	10	61.4
55/ 59	0			0	59

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



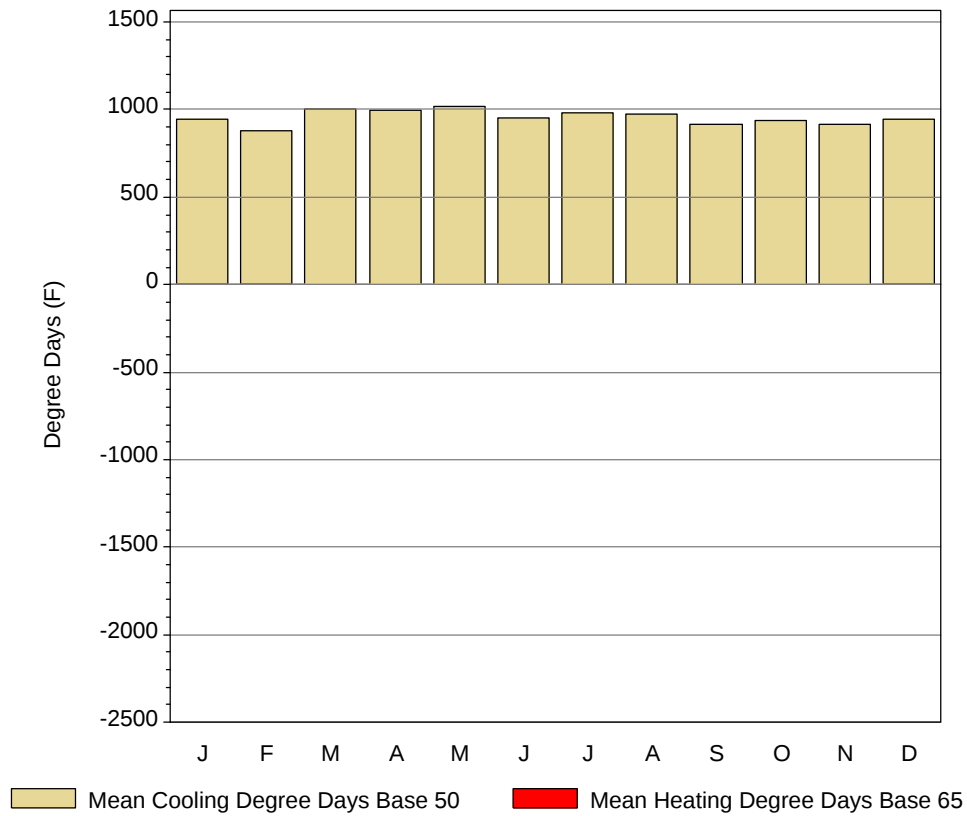
Long Term Humidity and Dry Bulb Temperature Summary



Long Term Humidity and Dry Bulb Temperature Summary

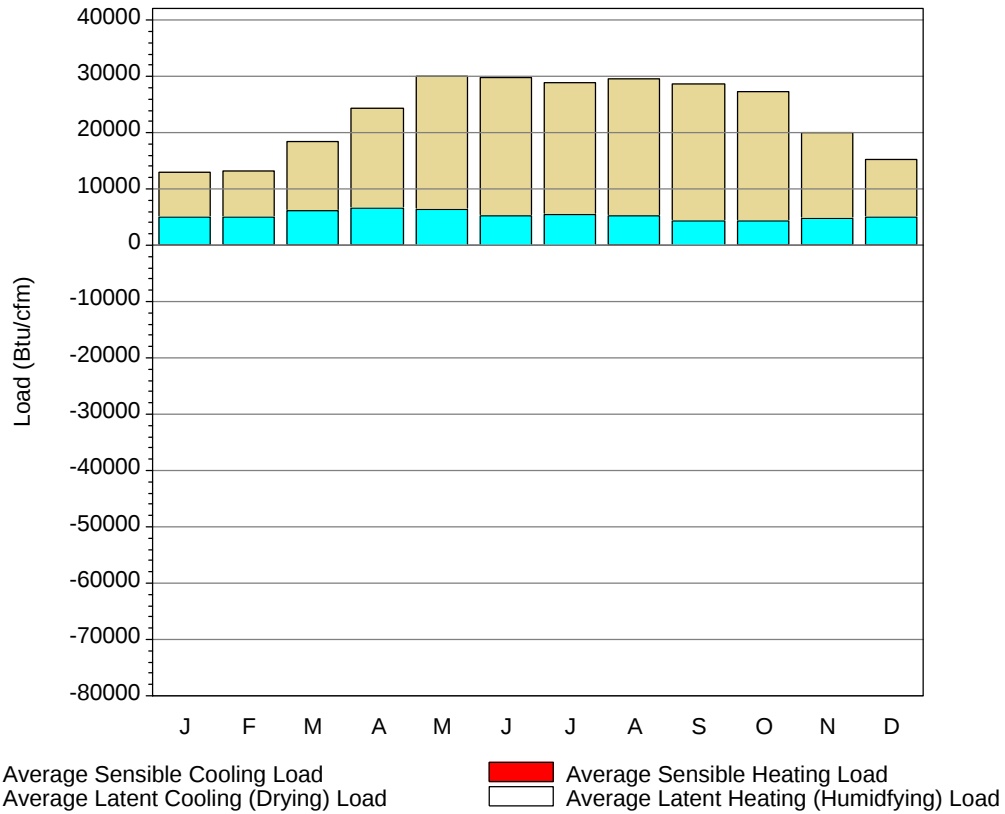
Week Ending	1.0% Temp (° F)	MCWB@ 1% Temp (° F)	Mean Max Temp (° F)	Mean Min Temp (° F)	99% Temp (° F)	1.0% HR (gr/lb)	MCDB@ 1% HR (° F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	95	73	92.1	71.9	68	125.3	81.4	110.4	82
14-Jan	95	71.9	91.8	71.1	68	125.3	82.1	105.7	77.2
21-Jan	95	71.5	91.6	71	66	124.6	80.8	105.6	76.8
28-Jan	95	71.2	91.6	71.2	64	125.3	81.7	106.5	77.9
4-Feb	95	71.2	92	71.3	68	124.6	80.8	109.7	79.7
11-Feb	95	70.8	92.5	71.8	66	125.3	81.7	107.5	76.4
18-Feb	97	71.1	92.6	72.3	68	133	81.6	111.2	78.6
25-Feb	97	69.1	92.4	71.4	68	135.1	80.6	113.6	81.2
4-Mar	97	70.2	92.4	72.2	68	141.4	82.8	116.4	82.4
11-Mar	97	69.8	93.6	73	68	140.7	84.4	110.9	77.1
18-Mar	95	71.7	92.4	72.9	68	141.4	83	119.2	86
25-Mar	97	69.9	92.7	73.2	68	142.1	84.6	120.7	84.7
1-Apr	95	72.1	92.6	73.3	69	141.4	82.9	124.2	88.4
8-Apr	95	74	92.5	74.3	70	150.5	84.4	129.9	95.4
15-Apr	96	72.8	92.6	74.9	72	150.5	83.6	130.3	95.8
22-Apr	96	76.2	92.6	75.6	72	150.5	84.7	130.6	98.1
29-Apr	95	75.5	92.3	75.7	72	151.2	85.2	134.9	103.1
6-May	95	76.3	91.7	76.1	73	151.2	84.3	139.1	110.8
13-May	95	76.3	91.8	76.8	73	150.5	83.8	138.5	109.6
20-May	95	76.4	90.8	76.1	73	150.5	83.5	139.3	112.2
27-May	95	77.3	89.5	75.4	72	150.5	83.9	140.9	116.7
4-Jun	91	78.8	88.2	74.7	73	150.5	84.3	140.8	118.1
10-Jun	93	79.8	88.8	75.1	73	150.5	84.5	143.5	121.1
17-Jun	93	79.1	89.2	75	73	159.6	85.8	142.8	119.3
24-Jun	93	77.8	89.9	74.6	72	150.5	85.3	142.8	116.9
1-Jul	95	76.5	90	74.2	72	150.5	84.5	141.5	115
8-Jul	94	77.2	90.2	74	72	150.5	84.8	141.8	113.7
15-Jul	93	77.9	90.2	74.3	72	150.5	85.3	140.6	113.3
22-Jul	93	77.9	90.5	74.2	72	150.5	86.8	140.7	113
29-Jul	95	77.8	91.1	74.4	72	150.5	85.1	140.6	110.8
5-Aug	94	77	90.7	74.3	72	150.5	84.4	141.9	113.6
12-Aug	93	78	90.2	74	72	150.5	84.9	142.7	114.5
19-Aug	93	78.1	90	73.9	72	150.5	85.9	142.7	114.2
26-Aug	93	78.3	89.4	74.2	72	150.5	85.1	142.2	116.5
2-Sep	91	79.2	88.7	73.8	72	150.5	85.5	143.1	118.1
9-Sep	91	79.3	88.3	73.9	72	150.5	85.6	142.3	117.6
16-Sep	91	79.5	88.6	73.8	72	151.9	85.9	144.3	119.2
23-Sep	91	79	87.9	73.8	72	150.5	84.7	143.2	118.9
30-Sep	91	79.3	87.3	73.5	72	150.5	84.8	142.8	118.6
7-Oct	91	78.7	88	73.7	72	151.2	84.7	141.9	117.2
14-Oct	91	77.8	87.9	73.4	72	151.2	83.6	139.7	115.4
21-Oct	91	76.9	87.4	73.7	72	151.2	84.8	139.5	114.1
28-Oct	91	77	89	73	70	150.5	84.3	138.7	108.7
4-Nov	92	72.5	89.5	73	70	150.5	83.7	133.7	104.6
11-Nov	93	75.2	90.1	73	70	149.8	84.6	127.8	98.5
18-Nov	93	74.2	90.2	72.7	70	142.8	84.3	126.6	95.1
25-Nov	93	73.6	90.6	72.1	68	144.2	84.5	120.6	90.5
2-Dec	93	73.9	91.1	72.4	68	141.4	82.2	118.6	88.9
9-Dec	93	73.2	91.1	71.9	68	141.4	82.1	114	86.1
16-Dec	95	73.4	91.4	71.6	66	133	81.9	115.8	84.8
23-Dec	95	73.7	91.5	71.3	66	133.7	82.7	116.2	84.7
31-Dec	95	72.9	91.7	71.6	66	133	82	112.1	82.7

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



	Mean Cooling Degree Days (°F) Base 50	Mean Cooling Degree Days (°F) Base 65	Mean Heating Degree Days (°F) Base 65
Month			
JAN	942.7	477.8	0.2
FEB	878.9	455	0.1
MAR	999.9	534.9	0
APR	998.7	548.7	0
MAY	1016.9	551.9	0
JUN	952.5	502.5	0
JUL	983.7	518.7	0
AUG	973.7	508.7	0
SEP	914.7	464.7	0
OCT	938.3	473.3	0
NOV	917.1	467.2	0
DEC	944	479.1	0.1
ANN	11461.1	5982.5	0.4

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	5013	-21	8032	0
FEB	4988	-14	8283	0
MAR	6153	-8	12367	0
APR	6558	-1	17890	0
MAY	6334	0	23677	0
JUN	5335	0	24464	0
JUL	5572	0	23243	0
AUG	5301	-1	24267	0
SEP	4423	0	24228	0
OCT	4448	-1	22823	0
NOV	4690	-9	15247	0
DEC	4957	-15	10347	0
ANN	63772	-70	214868	0

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													

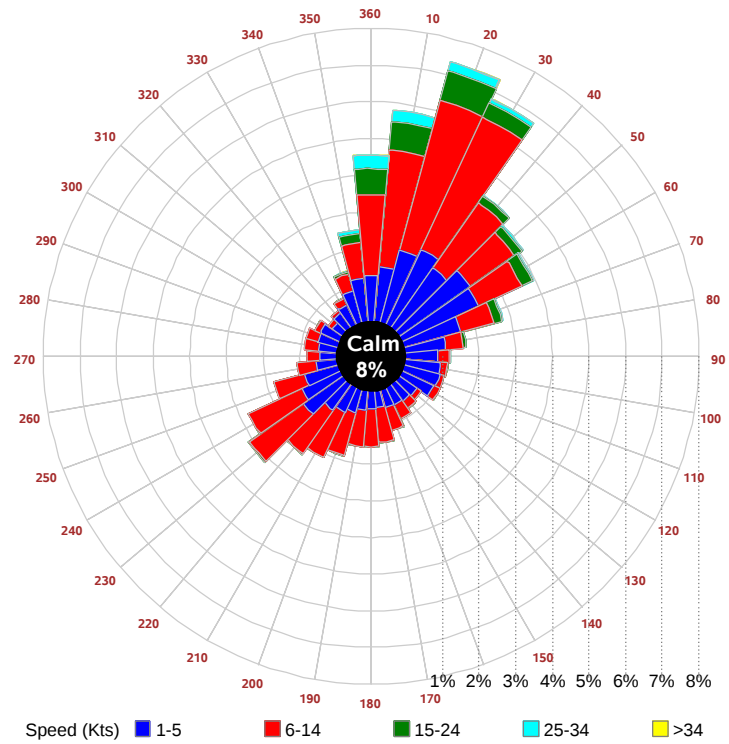
Average Annual Solar Radiation - Nearest Available Site Source: National Renewable Energy Laboratory, Golden CO, 1995

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													

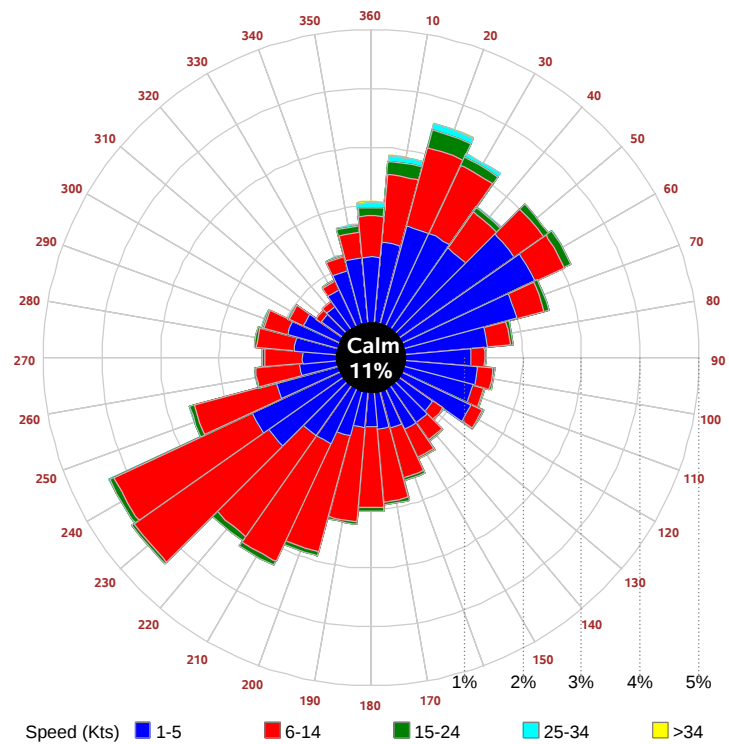
AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9												
				March						June		
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm	
HORIZ.	M.Clear											
	M.Cloudy											
NORTH	M.Clear											
	M.Cloudy											
EAST	M.Clear			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

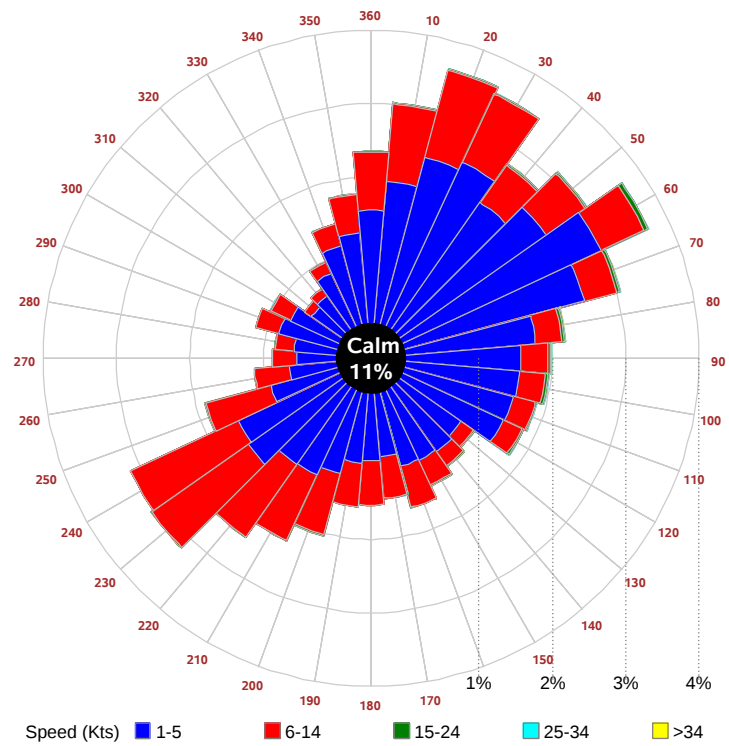
Wind Summary - December, January, and February



Wind Summary - March, April, and May



Wind Summary - June, July, and August



Wind Summary - September, October, and November

