

CAPE DYER, CA

Latitude = 66.65 N

Longitude = 61.38 W

Period of Record = 1988 To 2017

Station ID = ICAO_CWFD

Elevation = 2379 Feet

Average Pressure = 27.96 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	59	52	44	7.4	SSW
0.4% Occurrence	55	48	42	7.3	SW
1.0% Occurrence	52	46	38	7.7	SW
2.0% Occurrence	50	45	39	8.1	SW
Mean Daily Range	8	-	-	-	N
97.5% Occurrence	-24	-24	1	7.8	N
99.0% Occurrence	-28	-28	1	4.5	N
99.6% Occurrence	-32	-32	1	3.5	E
Median of Extreme Lows	-31	-31	1	3.7	E

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	56	56	68	9.3	N
0.4% Occurrence	51	54	52	5.5	SSW
1.0% Occurrence	48	51	46	6.5	S
2.0% Occurrence	46	49	42	6.1	***

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	69	56	0.45	-	-
0.4% Occurrence	55	49	0.35	15	NW
1.0% Occurrence	48	48	0.31	5.3	***
2.0% Occurrence	43	47	0.28	5	SW

Air Conditioning/ Humid Area Criteria	Threshold	T ≥ 93 °F	T ≥ 80 °F	Twb ≥ 73 °F	Twb ≥ 67 °F
	# of Hours	0	0	0	5

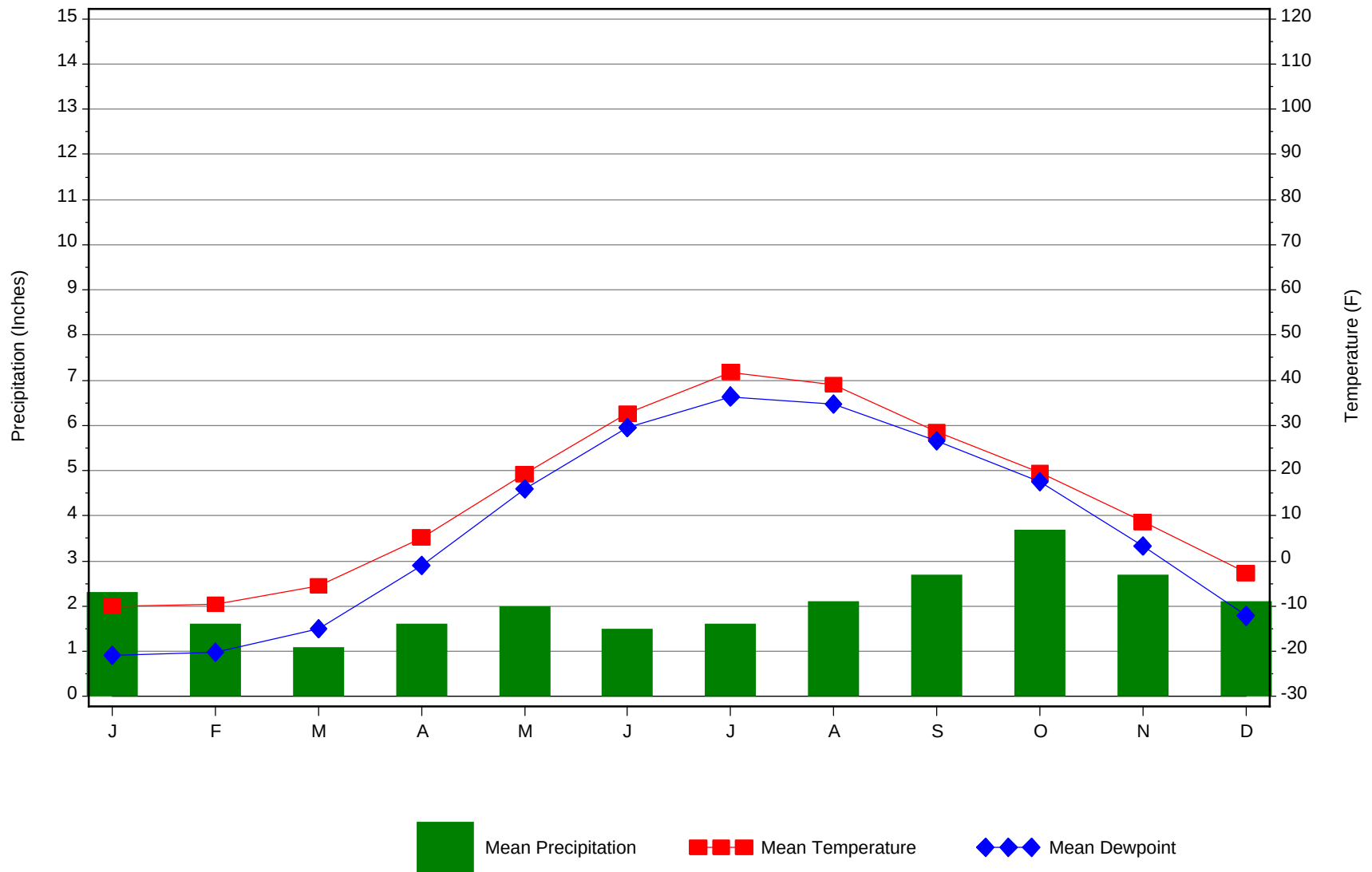
Other Site Data

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
1	N/A	N/A	0.1 + 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 (#)
16.7	N/A	N/A	23

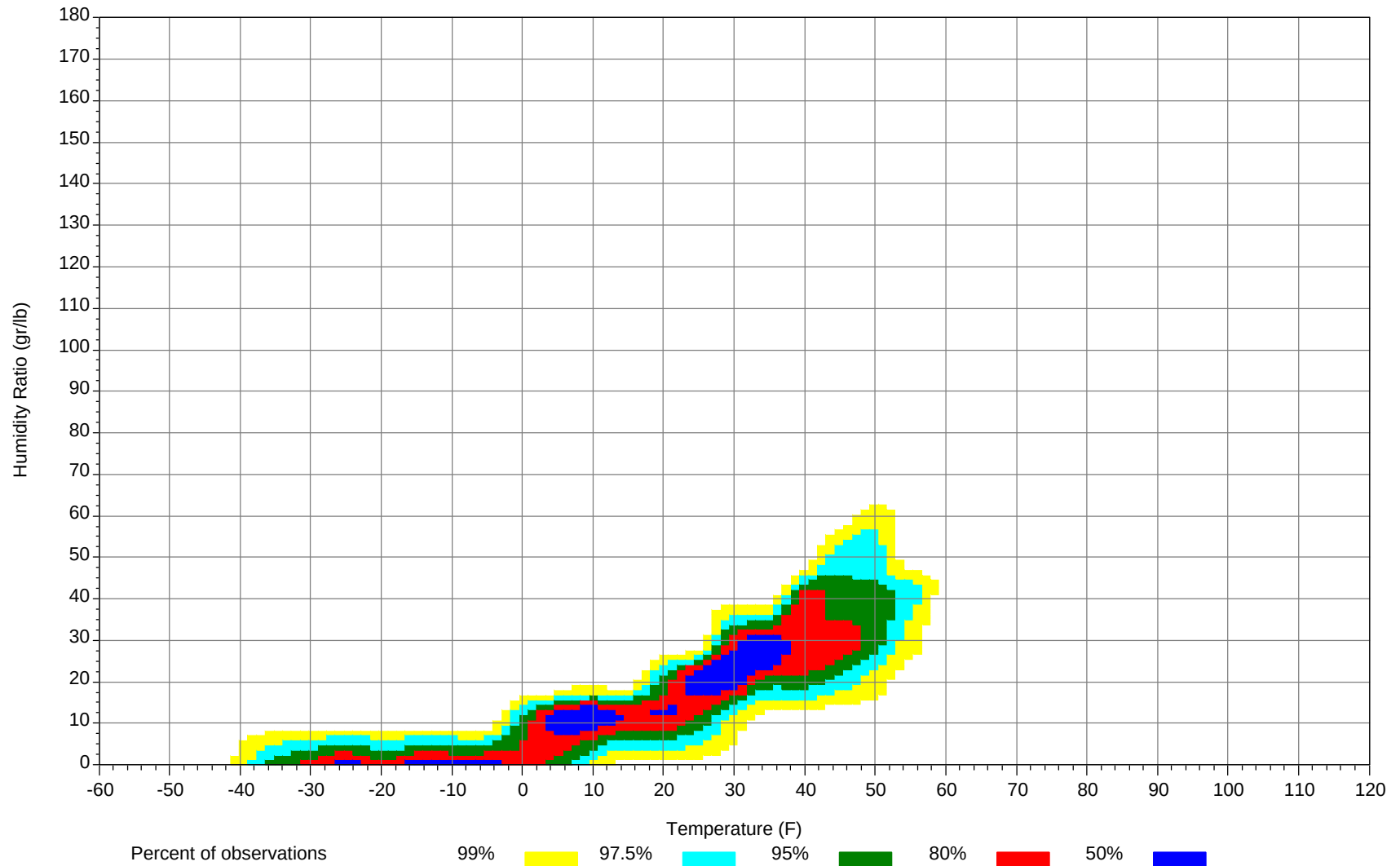
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.



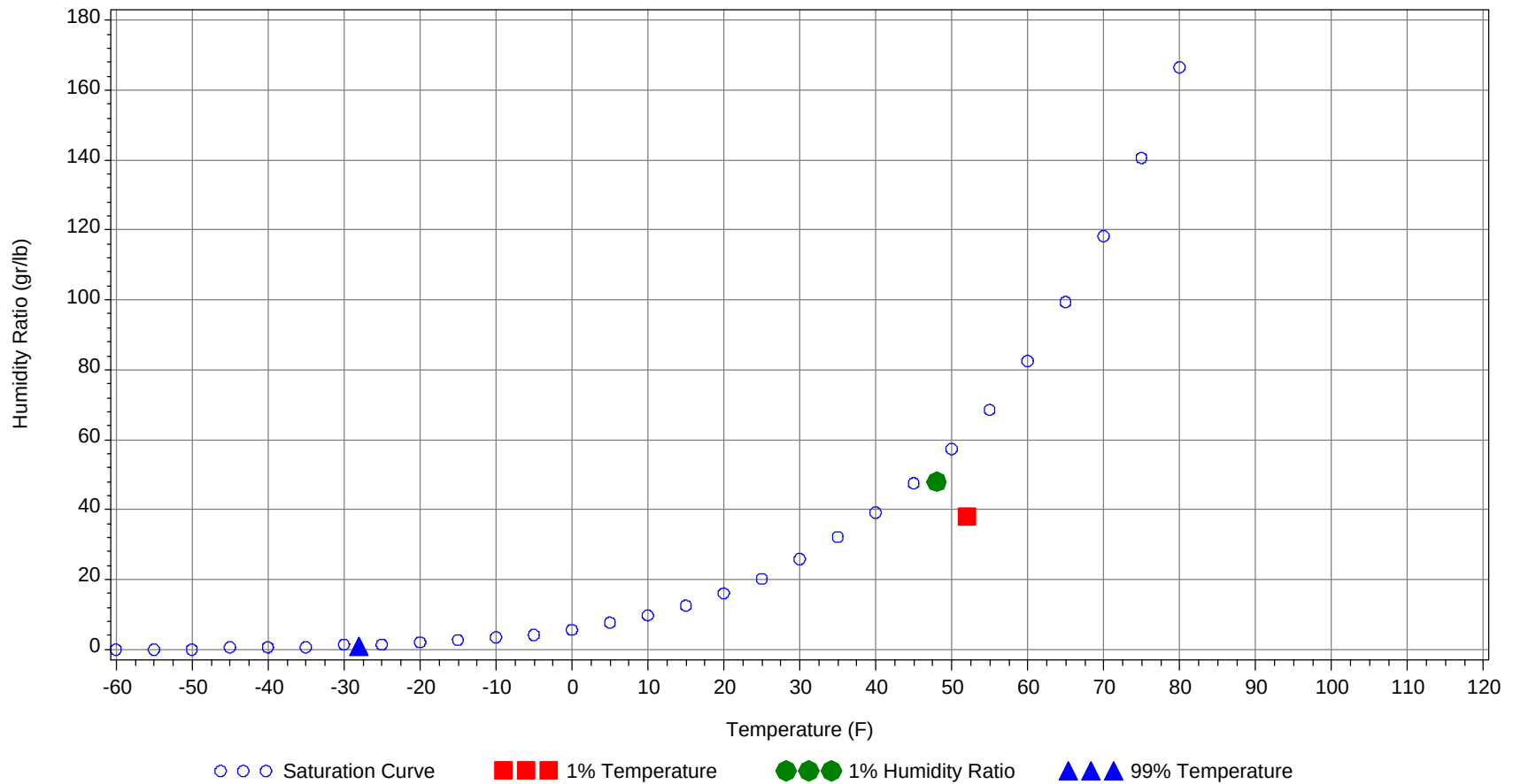
Average Annual Climate



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	52.0		46		38.0	18.1
99.0% Dry Bulb	-28.0				1.0	-6.6
1.0% Humidity Ratio	48.0	48.0	46.8	45.9		19.0

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															
40/ 44															
35/ 39															
30/ 34						0	0		0		0	0	0	0	
25/ 29	1	1	1	3		1	1	1	3	24.9	3	3	3	9	
20/ 24	2	2	2	6		2	3	3	8	21.3	3	4	2	9	19.5
15/ 19	3	5	5	13	11.7	5	5	5	15	17.2	5	7	6	18	16.2
10/ 14	7	7	7	21	10.2	6	5	6	17	11	12	14	14	40	10.8
5/ 9	13	15	11	39	5.6	15	16	14	45	5.8	20	30	24	74	5.4
0/ 4	22	23	24	69	0.6	20	21	20	61	0.5	34	37	37	108	0.7
-5/ -1	27	25	26	78	-3.6	21	20	21	62	-3.9	33	29	29	91	-3.7
-10/ -6	43	42	46	131	-8.2	36	42	39	117	-8	40	44	43	127	-8
-15/-11	34	34	32	100	-12.6	33	30	30	93	-12.8	28	28	29	85	-12.7
-20/-16	45	47	46	138	-17.3	37	41	39	117	-17.2	32	30	30	92	-17
-25/-21	30	27	27	84	-22.3	26	25	26	77	-22.2	22	15	20	57	-22.2
-30/-26	13	14	14	41	-27.4	14	11	13	38	-27.2	10	5	9	24	-27.3
-35/-31	6	4	6	16	-31.8	5	3	5	13	-31.9	4	1	3	8	-31.6
-40/-36	2	2	2	6	-36.1	3	1	3	7	-35.9	1	0	1	2	-35.8
-45/-41	0	0	0	0	-40.5	0	0		0	-40	0		0	0	-40
-50/-46	0			0											

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)	April					May					June				
	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											0	0		0	60
55/ 59											0	1	1	2	55.2
50/ 54						0	0	0	0	45	2	5	4	11	42.1
45/ 49						1	1	1	3	41.1	10	15	10	35	41.1
40/ 44		0	0	0	42.4	2	4	2	8	37.4	19	23	18	60	38.5
35/ 39	0	1	0	1	30.3	8	10	8	26	34.7	46	52	47	145	34.8
30/ 34	1	1	1	3	28.5	18	22	17	57	30.4	69	75	76	220	30.6
25/ 29	5	9	4	18	24.2	36	47	42	125	26	68	55	64	187	26.8
20/ 24	9	13	11	33	20.5	39	41	39	119	21.5	19	10	15	44	22.1
15/ 19	24	29	25	78	15.2	53	56	55	164	16.7	6	3	5	14	18.6
10/ 14	34	36	36	106	11.2	46	42	46	134	11.5	1	1	1	3	
5/ 9	46	53	48	147	5.8	31	23	28	82	6.7	0	0	0	0	
0/ 4	45	48	42	135	1	11	1	9	21	1.8					
-5/ -1	28	23	28	79	-3.4	2	0	1	3	-2.7					
-10/ -6	26	20	24	70	-7.6	1		0	1	-6.7					
-15/-11	13	5	11	29	-12.4										
-20/-16	8	2	6	16	-16.4										
-25/-21	1	0	1	2	-21.8										
-30/-26	0		0	0	-27.6										
-35/-31															
-40/-36															
-45/-41															
-50/-46															

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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)
65/ 69		0		0	53	0		0	0	67					
60/ 64	1	3	1	5	53.4	0	1	0	1	55.4					
55/ 59	6	16	7	29	49.2	1	6	1	8	50	0		0	0	54.1
50/ 54	20	33	24	77	45.1	9	18	11	38	46.4	0	1	0	1	47
45/ 49	49	61	55	165	42.7	34	50	35	119	42.3	2	2	1	5	43.4
40/ 44	55	49	55	159	39.8	46	52	50	148	39.2	3	7	4	14	37.9
35/ 39	72	55	69	196	36.2	80	72	80	232	35.9	20	30	21	71	34.3
30/ 34	35	26	32	93	31.8	61	41	58	160	31.9	68	79	70	217	30.5
25/ 29	8	5	5	18	27.4	15	9	13	37	27.8	87	82	86	255	26.2
20/ 24	1	1	1	3	22.3	1	0	0	1		45	32	43	120	21.5
15/ 19											14	7	14	35	16.8
10/ 14											1		1	2	12.1
5/ 9											0		0	0	8
0/ 4											0		0	0	
-5/ -1											0			0	
-10/ -6															
-15/-11															
-20/-16															
-25/-21															
-30/-26															
-35/-31															
-40/-36															
-45/-41															
-50/-46															

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)
65/ 69															
60/ 64															
55/ 59															
50/ 54															
45/ 49	0		0	0											
40/ 44	0	0	0	0			0		0			0		0	41.8
35/ 39	2	2	1	5	34.8	0	0		0			0		0	
30/ 34	13	16	15	44	30.5	2	2	1	5	31.5	0	0	0	0	24
25/ 29	42	48	40	130	25.6	6	4	5	15	25.7	4	5	5	14	23.5
20/ 24	56	59	54	169	21.3	12	13	12	37	21.4	4	4	4	12	20.4
15/ 19	77	75	80	232	16.6	33	31	32	96	16.3	6	6	6	18	16.2
10/ 14	45	38	43	126	11.6	60	65	61	186	11.1	17	13	12	42	10.3
5/ 9	10	9	12	31	6.8	62	61	61	184	6.3	35	33	32	100	5.7
0/ 4	3	1	3	7	1.6	33	34	35	102	1	50	52	55	157	0.9
-5/ -1	1	0	1	2	-3.7	16	16	16	48	-3.5	33	35	32	100	-3.7
-10/ -6	0	0	0	0	-8.9	10	9	11	30	-7.6	41	41	43	125	-7.9
-15/-11			0	0		4	2	4	10	-12.4	20	19	20	59	-12.6
-20/-16						1	1	1	3	-16.4	18	16	18	52	-17.2
-25/-21						0	1	0	1	-22.3	11	13	11	35	-22.2
-30/-26						0	0	0	0	-26	6	7	6	19	-27.2
-35/-31											2	2	3	7	-31.7
-40/-36											1	0	1	2	-36
-45/-41											0		0	0	-40
-50/-46															

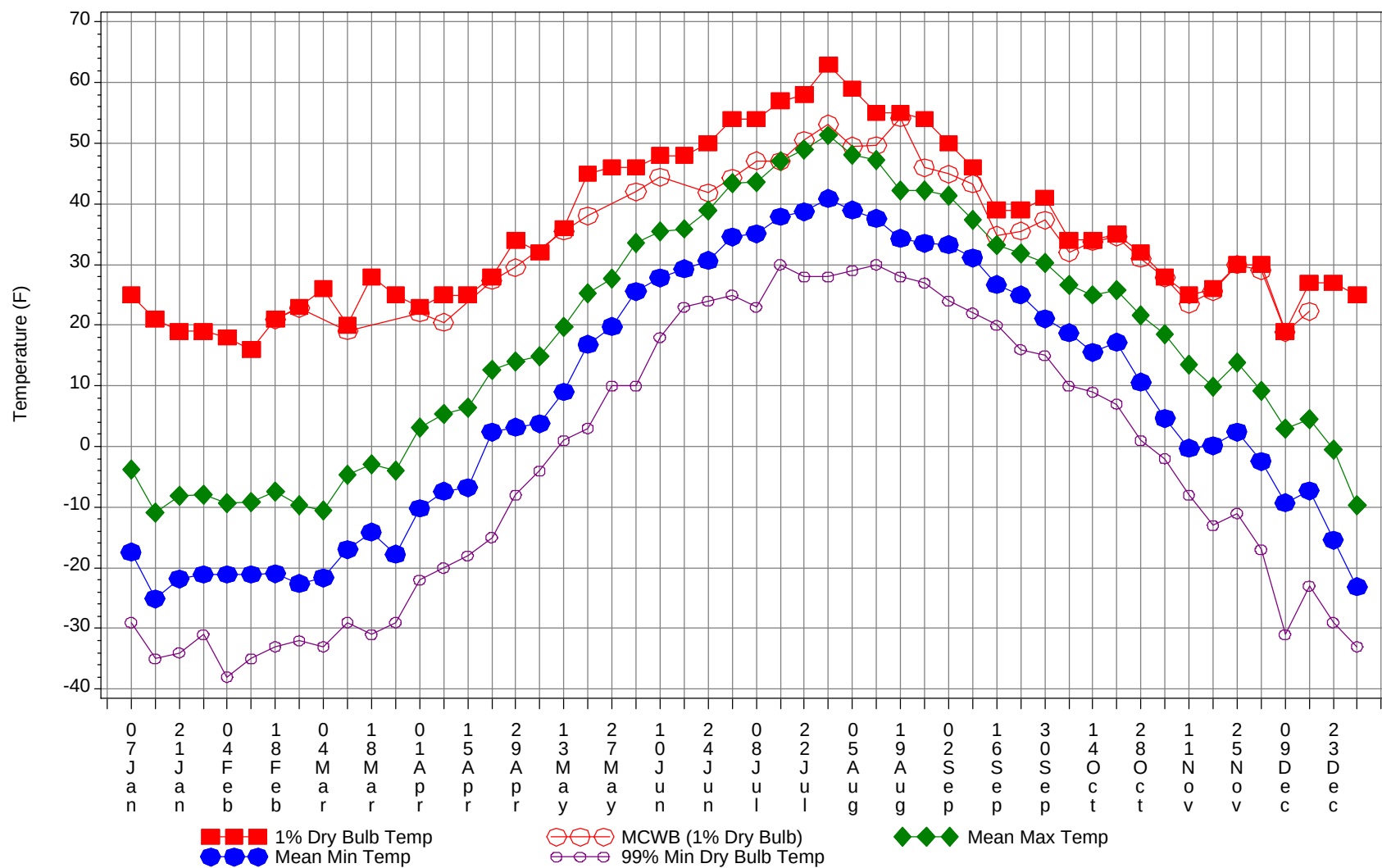
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

Dry-Bulb Temperature Hours For An Average Year

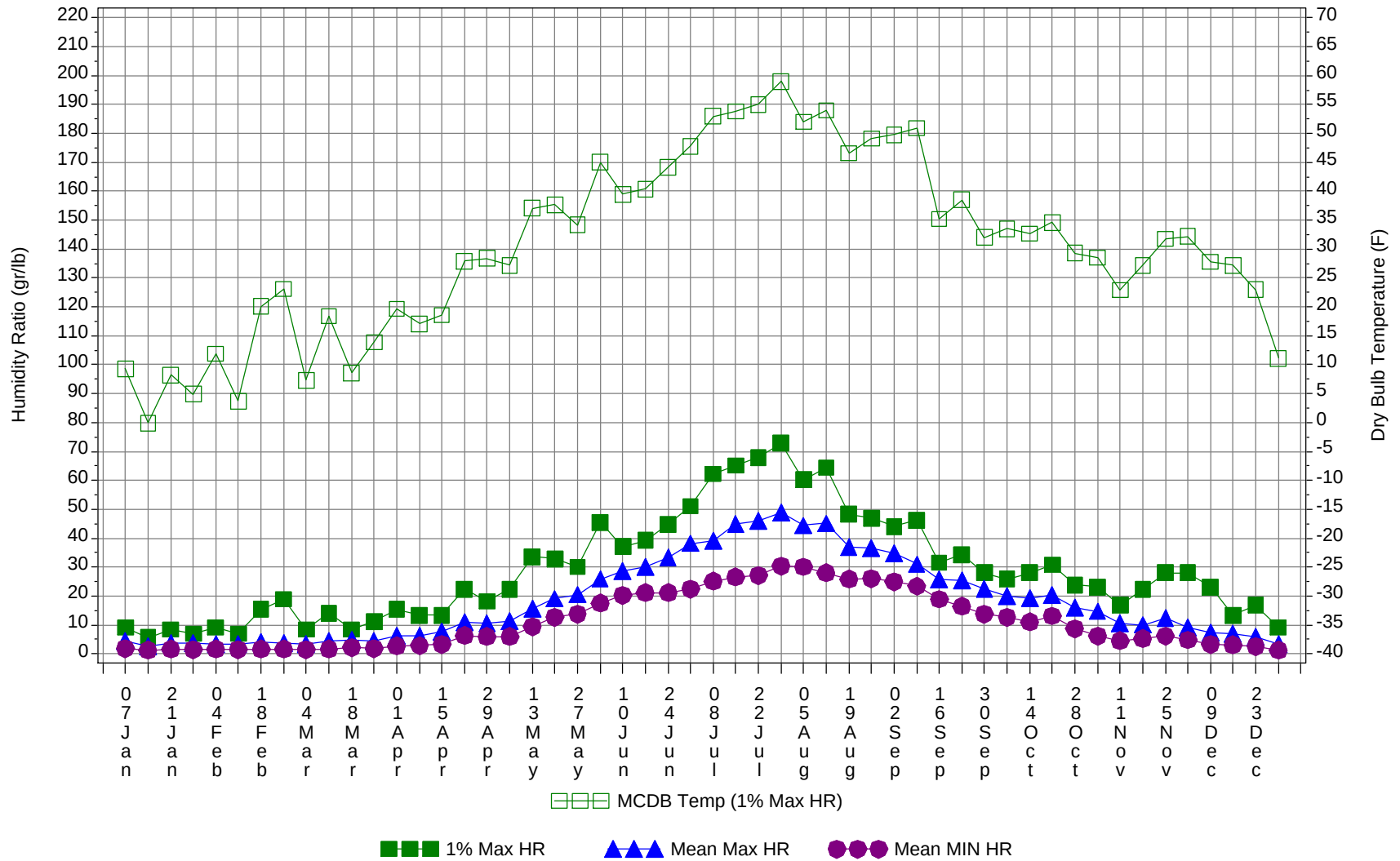
	Annual				
Temperature Range (° F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (° F)
65/ 69	0	0	0	0	60
60/ 64	1	4	1	6	54.4
55/ 59	9	23	9	41	49.6
50/ 54	31	59	40	130	45.3
45/ 49	99	132	104	335	42.4
40/ 44	128	139	131	398	39.2
35/ 39	233	227	230	690	35.4
30/ 34	272	265	275	812	30.9
25/ 29	277	270	270	817	26.1
20/ 24	190	179	182	551	21.3
15/ 19	223	218	228	669	16.4
10/ 14	224	216	223	663	11.2
5/ 9	229	236	226	691	6.1
0/ 4	214	215	221	650	0.9
-5/ -1	160	147	153	460	-3.6
-10/ -6	197	198	206	601	-7.9
-15/-11	133	120	127	380	-12.7
-20/-16	141	139	141	421	-17.1
-25/-21	91	81	86	258	-22.2
-30/-26	43	37	43	123	-27.3
-35/-31	17	10	16	43	-31.8
-40/-36	6	4	6	16	-36
-45/-41	1	0	0	1	-40.4
-50/-46	0			0	

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



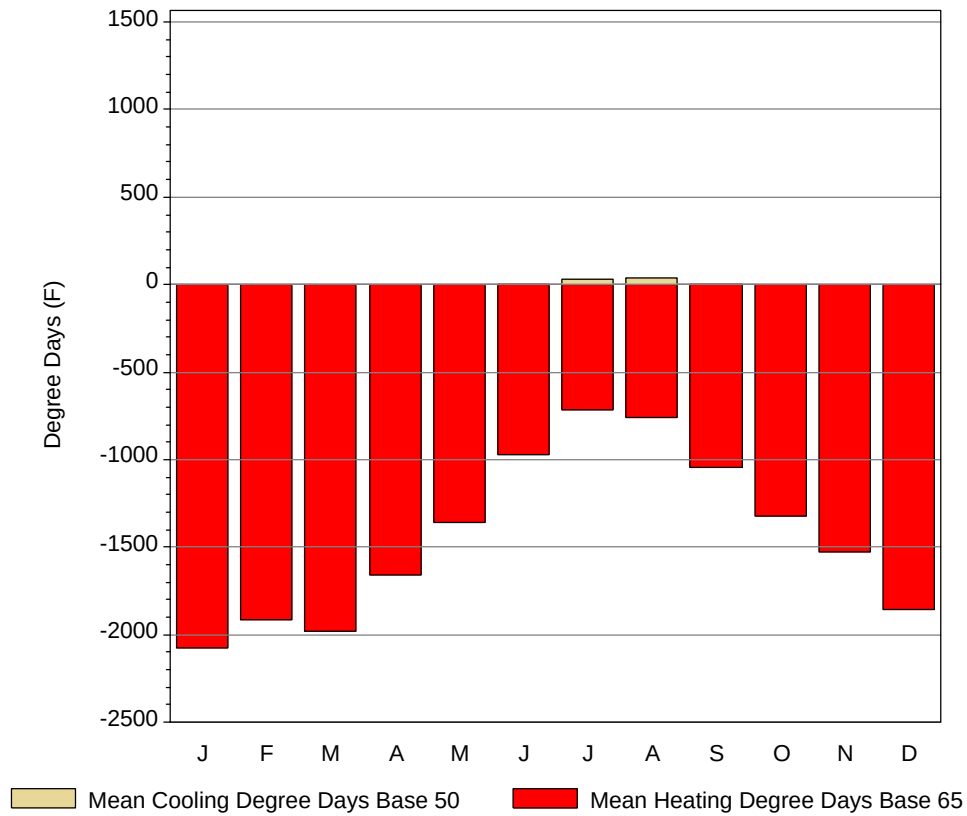
Long Term Humidity and Dry Bulb Temperature Summary



Long Term Humidity and Dry Bulb Temperature Summary

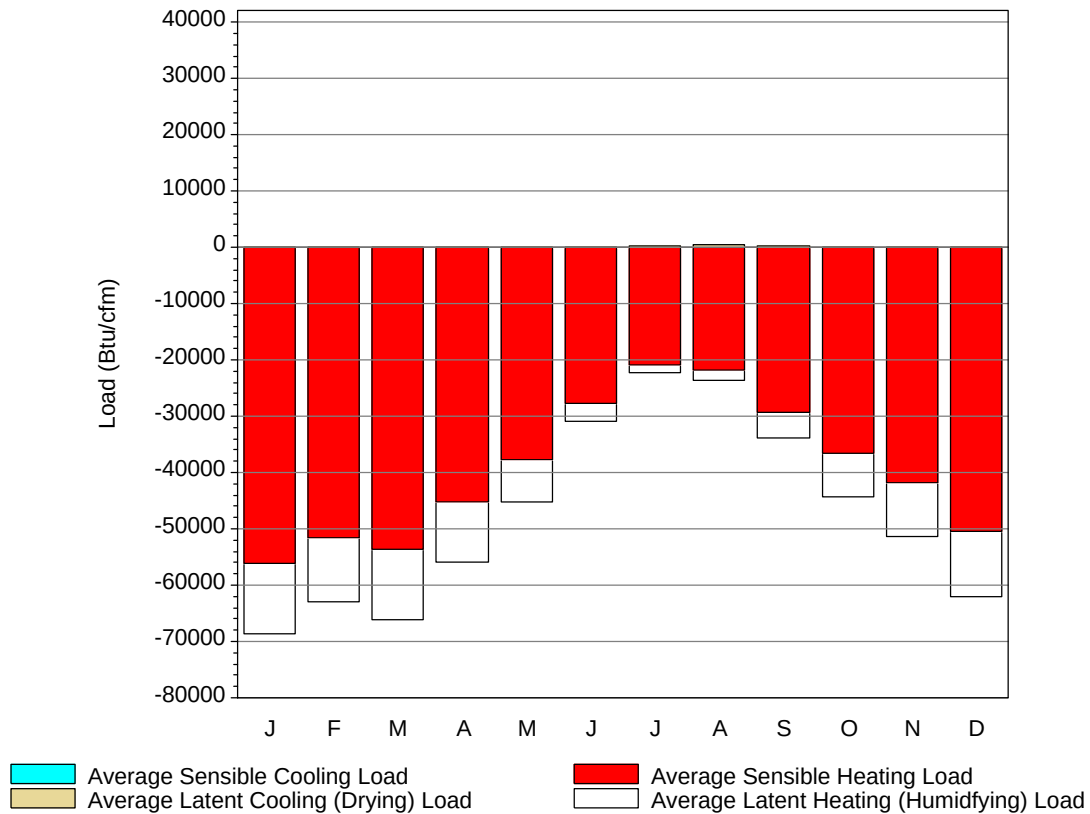
Week Ending	1.0% Temp (°F)	MCWB@ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB@ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	25		-3.8	-17.4	-29	9.1	9.3	4.3	1.8
14-Jan	21		-10.9	-25.1	-35	5.6	-0.1	2.7	1.2
21-Jan	19		-8.1	-21.8	-34	8.4	8.2	3.7	1.6
28-Jan	19		-7.9	-21.1	-31	7	4.9	3.6	1.5
4-Feb	18		-9.4	-21.1	-38	9.1	11.9	3.4	1.6
11-Feb	16		-9.2	-21.1	-35	7	3.7	3.3	1.5
18-Feb	21	20.9	-7.5	-21	-33	15.4	20.1	4.2	1.6
25-Feb	23	22.8	-9.7	-22.6	-32	18.9	23.1	3.6	1.6
4-Mar	26		-10.6	-21.7	-33	8.4	7.3	3.4	1.5
11-Mar	20	19.1	-4.7	-17	-29	14	18.4	4.5	1.7
18-Mar	28		-2.9	-14.1	-31	8.4	8.6	4.8	2.1
25-Mar	25		-4	-17.8	-29	11.2	13.9	4.5	1.8
1-Apr	23	22	3.1	-10.2	-22	15.4	19.7	6.3	2.7
8-Apr	25	20.5	5.3	-7.4	-20	13.3	17.1	6.1	2.8
15-Apr	25		6.4	-6.8	-18	13.3	18.6	7.7	3.2
22-Apr	28	27.4	12.7	2.4	-15	22.4	27.9	11	6.3
29-Apr	34	29.5	14	3.2	-8	18.2	28.4	10.6	5.9
6-May	32		14.8	3.8	-4	22.4	27.2	11.2	5.9
13-May	36	35.5	19.7	9	1	33.6	37.1	15.6	9.4
20-May	45	38	25.3	16.8	3	32.9	37.7	19.1	12.7
27-May	46		27.6	19.8	10	30.1	34.2	20.5	13.7
4-Jun	46	42	33.5	25.6	10	45.5	45	25.9	17.5
10-Jun	48	44.4	35.4	27.8	18	37.1	39.5	28.7	20.3
17-Jun	48		35.9	29.3	23	39.2	40.4	30.1	21.2
24-Jun	50	41.8	39	30.7	24	44.8	44.1	33.3	21.1
1-Jul	54	44.3	43.5	34.6	25	51.1	47.8	38.2	22.4
8-Jul	54	47.1	43.6	35.1	23	62.3	53	39	25.1
15-Jul	57	47	47.1	37.9	30	65.1	53.8	44.8	26.6
22-Jul	58	50.5	49	38.7	28	67.9	55	45.9	27.1
29-Jul	63	53.2	51.3	40.9	28	72.8	59	48.9	30.4
5-Aug	59	49.5	48.1	39	29	60.2	52	44.4	30.1
12-Aug	55	49.6	47.2	37.6	30	64.4	54	45.1	28
19-Aug	55	54.2	42.2	34.3	28	48.3	46.6	36.9	25.8
26-Aug	54	46	42.3	33.5	27	46.9	49.1	36.6	26
2-Sep	50	44.9	41.3	33.3	24	44.1	49.8	34.8	25
9-Sep	46	43.3	37.3	31.1	22	46.2	50.9	31	23.4
16-Sep	39	34.8	33.2	26.7	20	31.5	35.2	25.7	18.9
23-Sep	39	35.5	31.9	25	16	34.3	38.5	25.4	16.4
30-Sep	41	37.3	30.2	21.1	15	28	32	22.4	13.7
7-Oct	34	32	26.6	18.7	10	25.9	33.5	20.1	12.7
14-Oct	34	33.8	25	15.5	9	28	32.7	19.3	11
21-Oct	35	34.6	25.7	17.2	7	30.8	34.6	20.4	13.1
28-Oct	32	31	21.6	10.6	1	23.8	29.3	16.1	8.7
4-Nov	28	27.8	18.5	4.6	-2	23.1	28.5	14.7	6.2
11-Nov	25	23.5	13.5	-0.3	-8	16.8	22.9	10.5	4.5
18-Nov	26	25.6	9.9	0.1	-13	22.4	27.2	10	5.3
25-Nov	30	30	13.9	2.4	-11	28	31.8	12.4	6.1
2-Dec	30	29	9.1	-2.5	-17	28	32.2	9.2	4.8
9-Dec	19	18.8	3	-9.3	-31	23.1	27.8	7.2	3.3
16-Dec	27	22.3	4.5	-7.3	-23	13.3	27.2	6.9	3.1
23-Dec	27		-0.6	-15.4	-29	16.8	23	6	2.6
31-Dec	25		-9.7	-23.1	-33	9.1	11.1	3.3	1.3

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	2077.2
FEB	0	0	1913.3
MAR	0	0	1980.2
APR	0	0	1658.5
MAY	0	0	1358.1
JUN	4.2	0	974.6
JUL	31.2	0	714.1
AUG	37.2	2.6	756.2
SEP	2.9	0	1042.2
OCT	0	0	1321.8
NOV	0	0	1526.8
DEC	0	0	1853.5
ANN	75.5	2.6	17176.5

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	-56137	13	-12532
FEB	0	-51685	11	-11204
MAR	0	-53653	53	-12364
APR	0	-45309	4	-10645
MAY	0	-37611	3	-7691
JUN	0	-27596	4	-3394
JUL	0	-20920	170	-1392
AUG	0	-21881	577	-1717
SEP	0	-29266	182	-4508
OCT	0	-36613	47	-7607
NOV	0	-41797	12	-9463
DEC	0	-50543	23	-11427
ANN	0	-473011	1099	-93944

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													

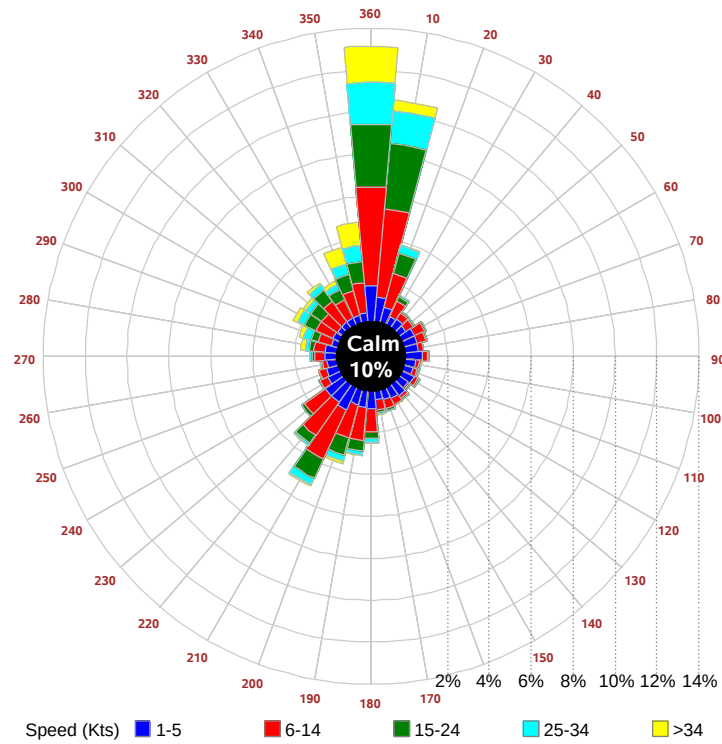
Average Annual Solar Radiation - Nearest Available Site Source: National Renewable Energy Laboratory, Golden CO, 1995

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													

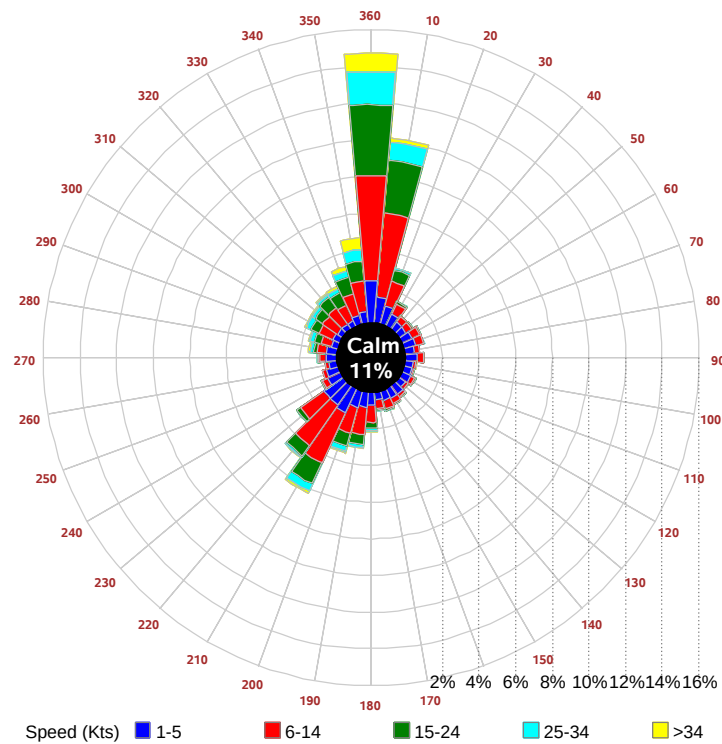
AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9												
		March						June				
		9am	11am	1pm	3pm	5pm		9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear											
	M.Cloudy											
NORTH	M.Clear											
	M.Cloudy											
EAST	M.Clear			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

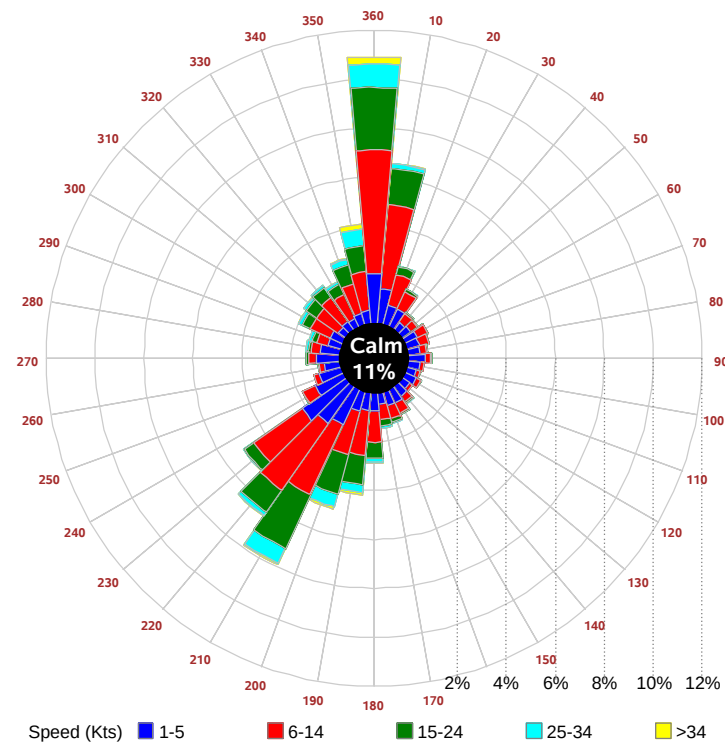
Wind Summary - December, January, and February



Wind Summary - March, April, and May



Wind Summary - June, July, and August



Wind Summary - September, October, and November

