

YECHEON, KS	Station ID = ICAO_RKTY
Latitude = 36.63 N	Elevation = 354 Feet
Longitude = 128.35 E	Average Pressure = 29.62 inches Hg
Period of Record = 1988 To 2017	

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	93	78	125	4.6	W
0.4% Occurrence	91	77	119	4.6	W
1.0% Occurrence	90	77	119	4.6	W
2.0% Occurrence	87	74	111	4.5	W
Mean Daily Range	20	-	-	-	W
97.5% Occurrence	21	19	11	3.6	W
99.0% Occurrence	17	15	9	3.3	W
99.6% Occurrence	14	13	8	3.1	W
Median of Extreme Lows	8	7	6	2.5	WNW

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	81	90	146	3.6	WSW
0.4% Occurrence	80	88	141	3.6	W
1.0% Occurrence	79	87	137	3.5	W
2.0% Occurrence	77	83	131	3.1	W

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	157	85	1.02	-	-
0.4% Occurrence	147	84	0.96	-	-
1.0% Occurrence	143	83	0.93	2.3	W
2.0% Occurrence	134	83	0.88	2.8	W

Air Conditioning/ Humid Area Criteria	Threshold	T ≥ 93 °F	T ≥ 80 °F	Twb ≥ 73 °F	Twb ≥ 67 °F
	# of Hours	31	477	577	1270

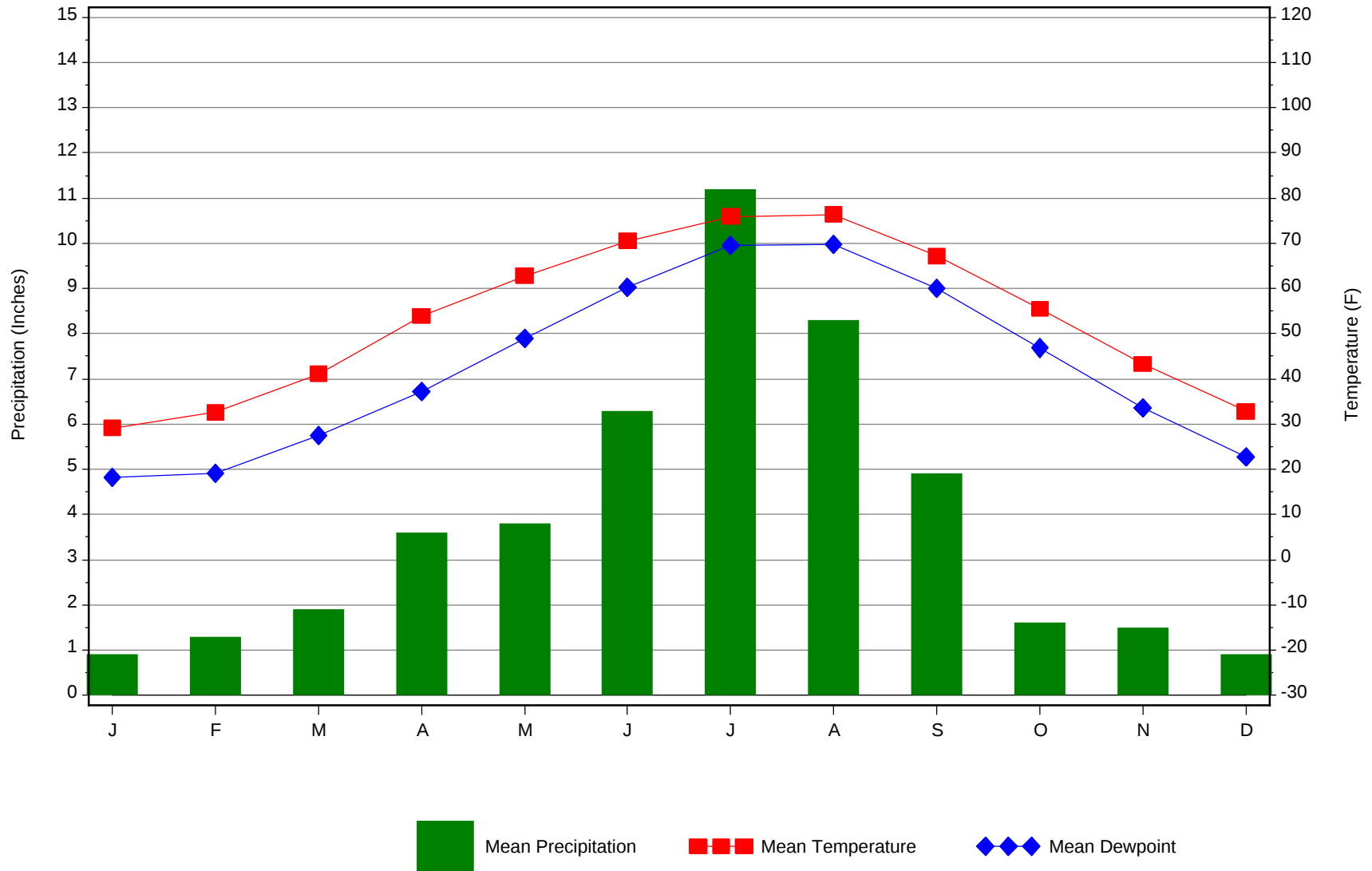
Other Site Data

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
8	N/A	N/A	3.4 + 0.7
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 (#)
57.3	N/A	N/A	61

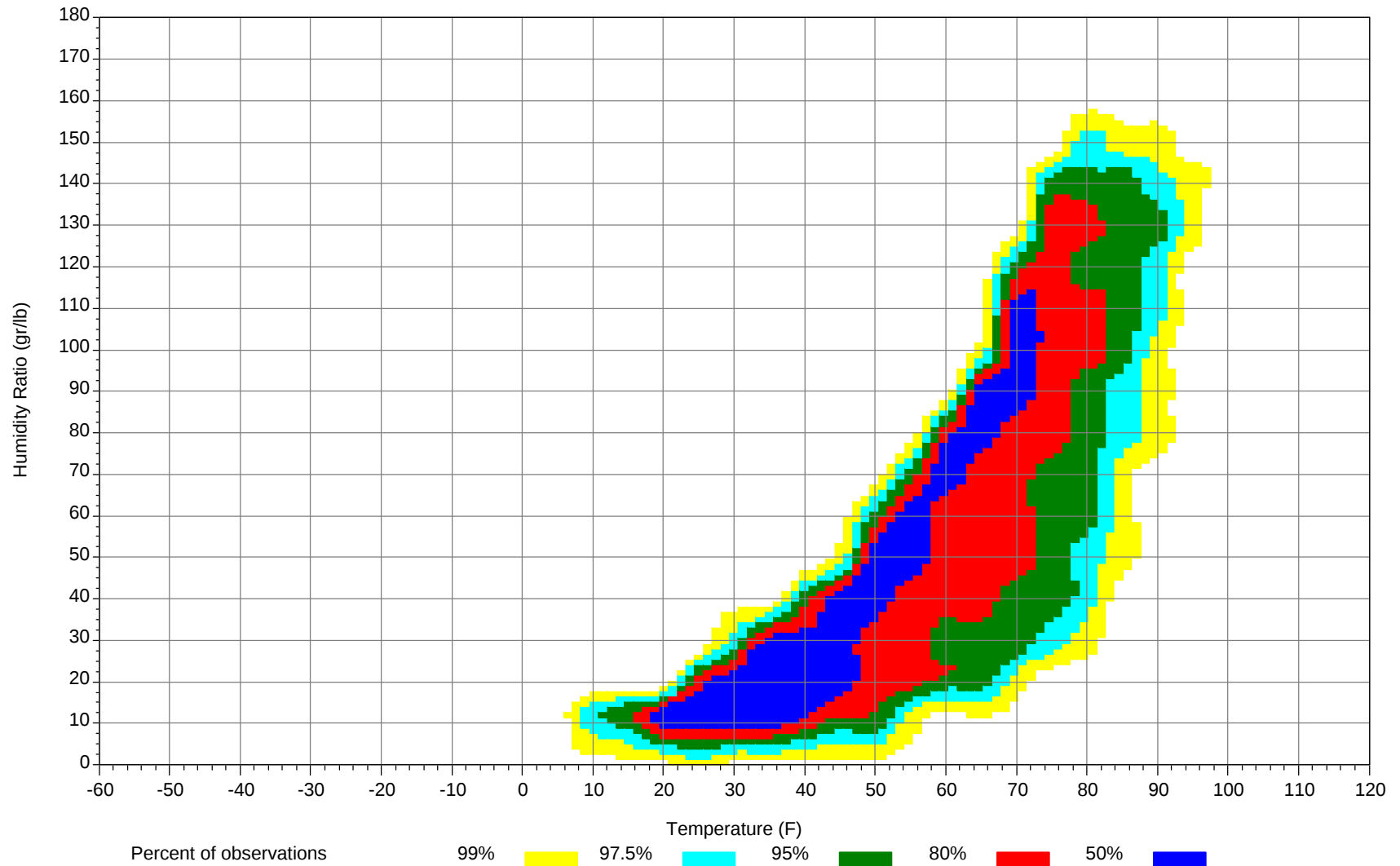
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.



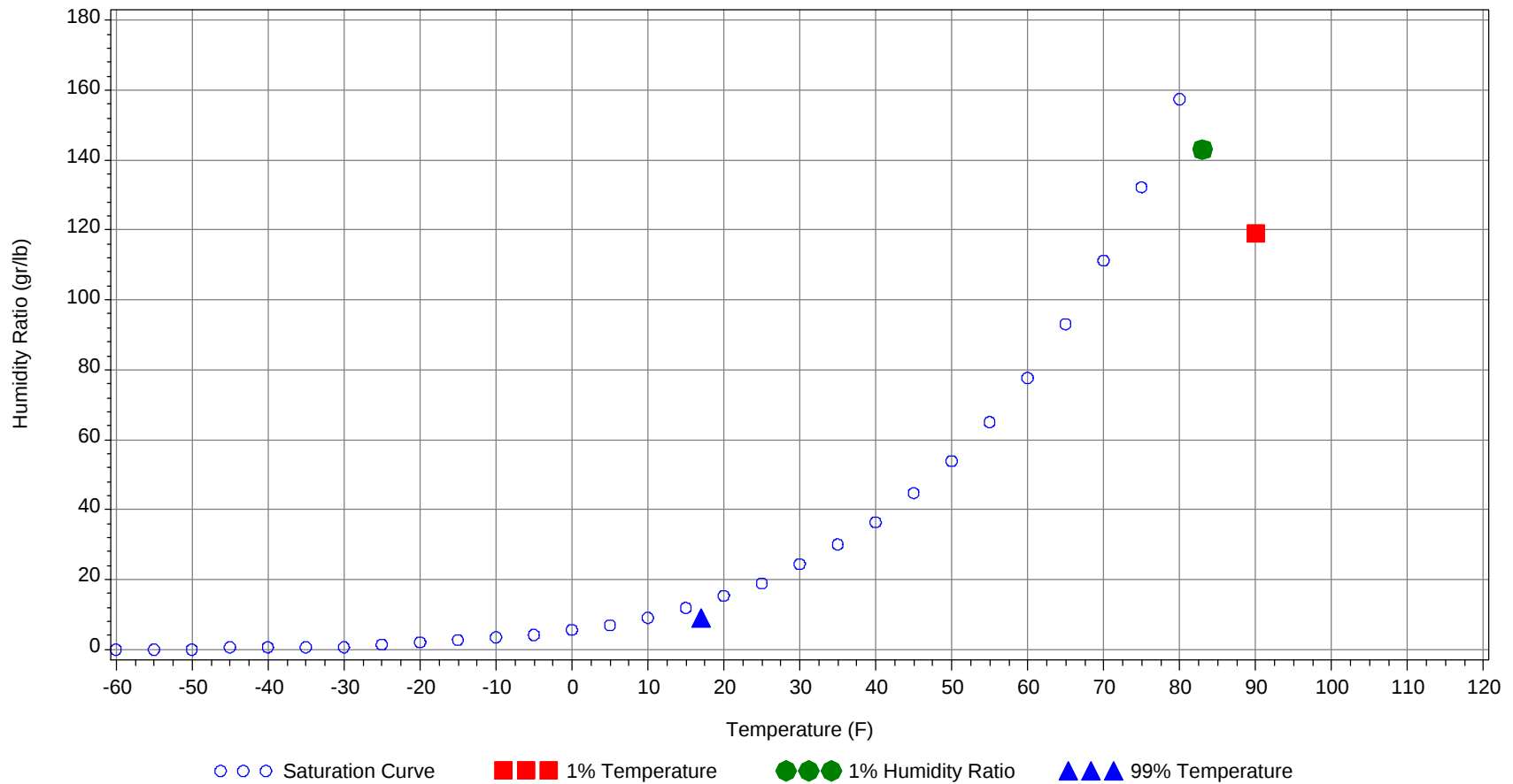
Average Annual Climate



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	90.0		77		119.0	40.1
99.0% Dry Bulb	17.0				9.0	5.5
1.0% Humidity Ratio	143.0	83.0	78.7	77.0		42.4

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															
95/ 99															
90/ 94															
85/ 89															
80/ 84															
75/ 79															
70/ 74												1	0	1	50.6
65/ 69							0	0	0	52.7		3	1	4	50.7
60/ 64	0			0	42		0	0	0	50.6	0	12	6	18	48
55/ 59	0			0		0	3	1	4	45.3	0	27	17	44	45.4
50/ 54	0	4	0	4	42.6	0	13	5	18	41.6	2	47	31	80	42.5
45/ 49	2	14	5	21	39.4	2	35	18	55	38.7	12	59	51	122	40
40/ 44	4	30	13	47	35.8	6	41	28	75	35.9	29	42	51	122	37.2
35/ 39	11	65	41	117	32.1	25	54	50	129	32.3	61	36	53	150	33.5
30/ 34	42	62	72	176	28.4	36	39	58	133	28	84	16	28	128	29.2
25/ 29	60	40	66	166	23.8	60	24	44	128	23.6	46	3	9	58	24.8
20/ 24	53	20	31	104	19.7	43	9	14	66	19.7	12	1	1	14	20.2
15/ 19	47	10	16	73	15.8	37	5	6	48	15.8	3			3	16.8
10/ 14	22	2	4	28	11.4	10	1	0	11	11.1					
5/ 9	5	1	0	6	6.5	3	0		3	6.2					
0/ 4	1			1	2.2	0			0	3					

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															
95/ 99															
90/ 94							0	0	0	64.3		4	2	6	68.9
85/ 89		0		0	64		3	1	4	64.9		20	9	29	68.9
80/ 84		4	2	6	60.2		22	11	33	62.6		52	29	81	68.2
75/ 79		14	7	21	58.2		44	24	68	60.6	1	61	46	108	67.3
70/ 74		30	15	45	55.3	1	57	38	96	58.9	34	57	70	161	66.1
65/ 69	1	29	20	50	53	5	40	38	83	58.1	60	27	44	131	63.5
60/ 64	3	47	39	89	50.8	34	49	60	143	56.3	94	16	32	142	60.3
55/ 59	16	49	51	116	48.9	81	25	50	156	53.2	41	3	7	51	55.8
50/ 54	46	38	52	136	46.1	80	7	21	108	49.5	8		1	9	51.8
45/ 49	59	20	35	114	42.3	37	1	4	42	44.8	1			1	47
40/ 44	44	6	12	62	38.3	8	0	0	8	40.3					
35/ 39	49	2	6	57	34.5	2			2	37.5					
30/ 34	19	0	1	20	29.9										
25/ 29	3	0		3	26										
20/ 24	0			0	22.5										
15/ 19															
10/ 14															
5/ 9															
0/ 4															

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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	79.8										
95/ 99		6	2	8	79.5		4	1	5	79.4					
90/ 94		23	10	33	78.4		31	12	43	77.3		1	0	1	74.5
85/ 89		36	18	54	76.5	0	41	17	58	76.4		7	2	9	73.3
80/ 84	4	58	44	106	74.7	2	72	44	118	74.6	1	35	12	48	70.7
75/ 79	52	72	83	207	73	51	59	84	194	73.3	4	68	30	102	68
70/ 74	107	42	63	212	69.8	115	32	67	214	70.1	21	65	57	143	66
65/ 69	59	10	21	90	65.9	50	8	21	79	65.8	35	31	51	117	63.9
60/ 64	21	2	6	29	62	27	1	3	31	62.5	79	25	56	160	60.7
55/ 59	6		0	6	57.3	2		0	2	58.2	55	7	23	85	55.8
50/ 54											28	2	9	39	51
45/ 49											16	0	1	17	46.6
40/ 44											1			1	42.2
35/ 39															
30/ 34															
25/ 29															
20/ 24															
15/ 19															
10/ 14															
5/ 9															
0/ 4															

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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															
95/ 99															
90/ 94															
85/ 89															
80/ 84		0		0	61.3										
75/ 79		15	3	18	62.6										
70/ 74	0	49	11	60	59.8		0	0	0	57.4					
65/ 69	3	43	20	66	58		7	0	7	54.8					
60/ 64	10	56	48	114	56.1	1	25	6	32	52.3		0		0	50.5
55/ 59	32	42	65	139	53.1	3	42	20	65	49.9		5	0	5	47
50/ 54	54	24	55	133	49.3	15	50	42	107	46.2	1	17	4	22	43.5
45/ 49	69	13	32	114	45	24	45	48	117	42.1	3	39	15	57	39.4
40/ 44	38	4	11	53	40.6	27	27	42	96	38.6	8	40	23	71	36.3
35/ 39	30	2	4	36	36.5	60	26	45	131	34.6	25	60	53	138	32.7
30/ 34	9	0	1	10	31.9	68	13	29	110	30.1	54	47	76	177	28.9
25/ 29	1			1	27.9	34	3	6	43	25.6	70	24	54	148	24.5
20/ 24						5	0	1	6	20.7	47	11	17	75	20.4
15/ 19						1	0	0	1	16.4	31	4	5	40	16.3
10/ 14						0			0	11.8	8	1	0	9	11.6
5/ 9											1	0		1	7.1
0/ 4															

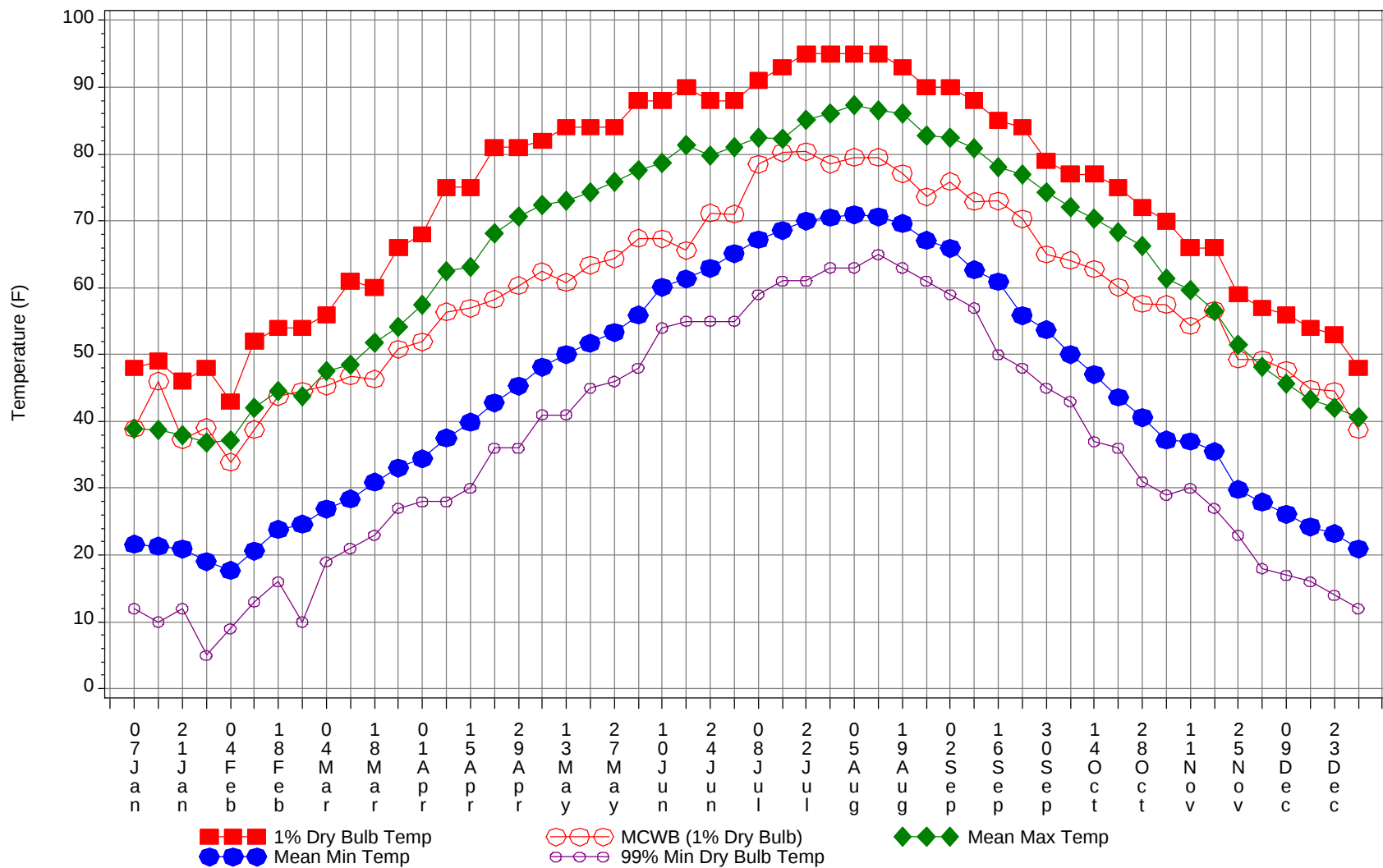
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

Dry-Bulb Temperature Hours For An Average Year

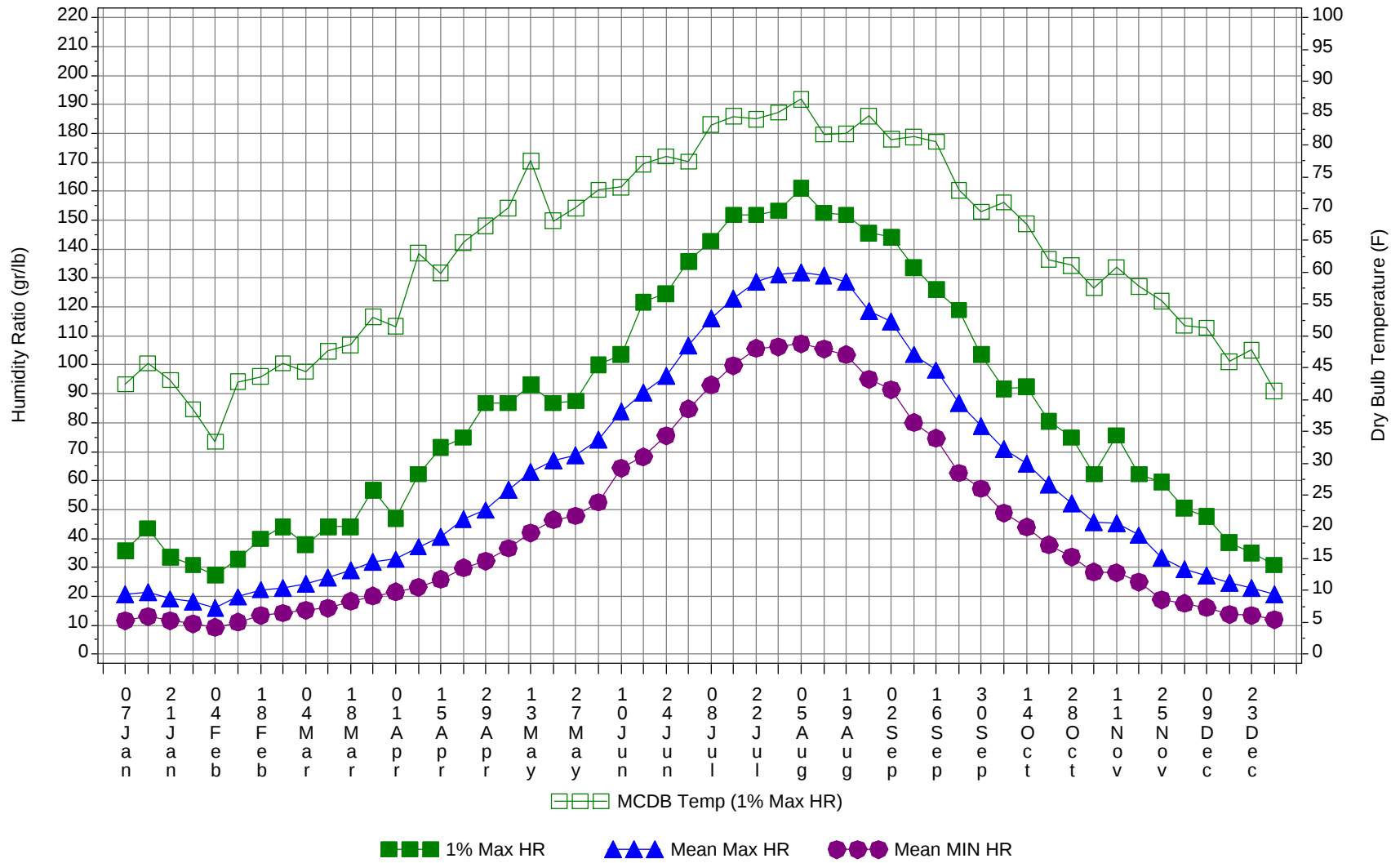
	Annual				
Temperature Range (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)
100/104		0		0	79.8
95/ 99		11	4	15	79.5
90/ 94		63	26	89	77
85/ 89	0	117	51	168	74.4
80/ 84	7	261	152	420	71.5
75/ 79	117	356	298	771	69.6
70/ 74	302	354	343	999	66.1
65/ 69	232	209	229	670	61.9
60/ 64	289	240	269	798	57.4
55/ 59	256	202	240	698	52.1
50/ 54	247	196	218	661	47.1
45/ 49	229	214	201	644	42
40/ 44	163	176	170	509	37.6
35/ 39	253	222	233	708	33.4
30/ 34	290	159	241	690	28.9
25/ 29	248	83	161	492	24.2
20/ 24	141	36	57	234	20
15/ 19	103	17	24	144	15.9
10/ 14	35	4	4	43	11.4
5/ 9	7	1	0	8	6.4
0/ 4	1			1	2.3

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



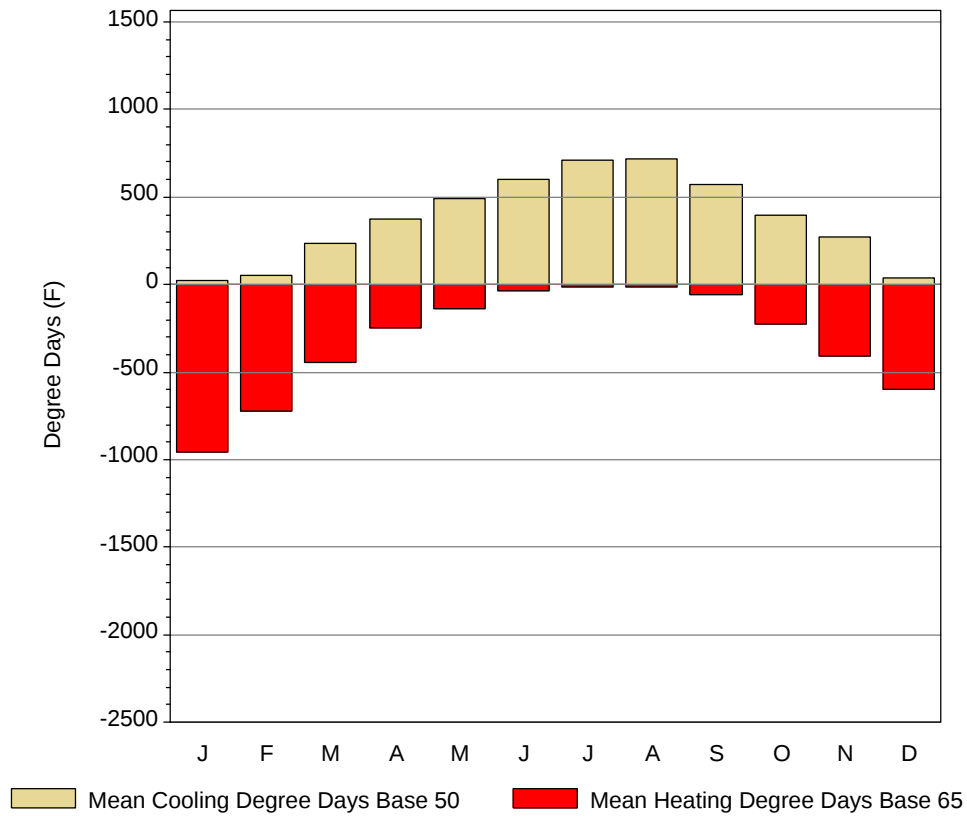
Long Term Humidity and Dry Bulb Temperature Summary



Long Term Humidity and Dry Bulb Temperature Summary

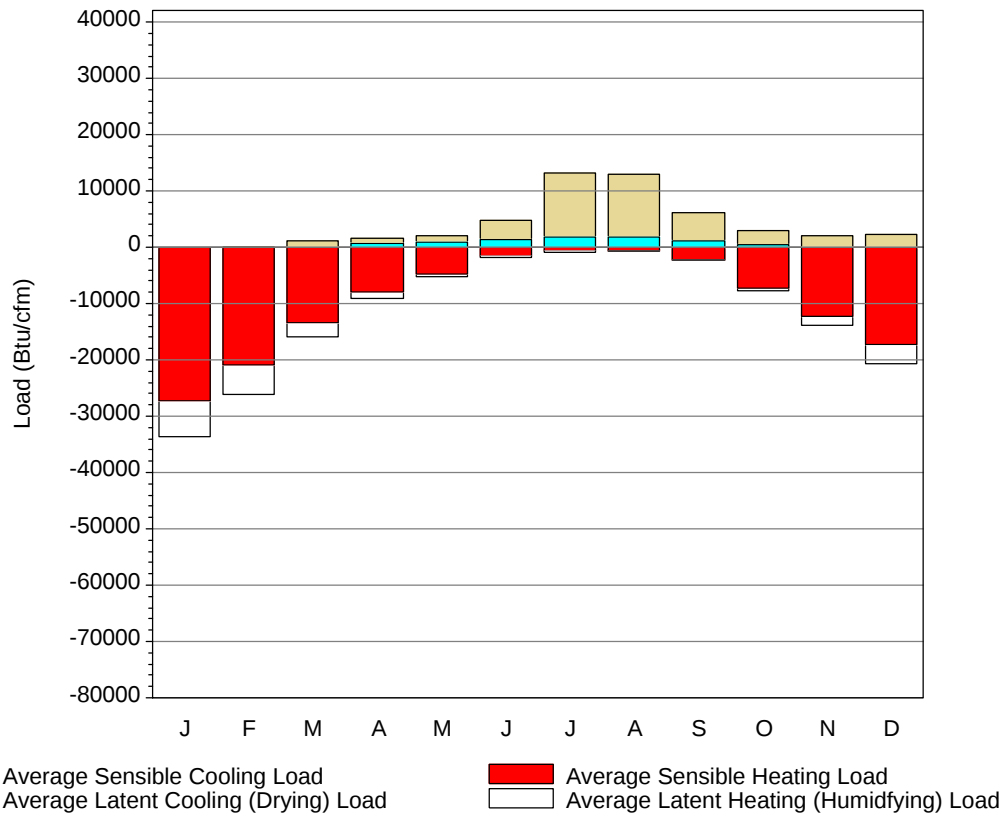
Week Ending	1.0% Temp (° F)	MCWB@ 1% Temp (° F)	Mean Max Temp (° F)	Mean Min Temp (° F)	99% Temp (° F)	1.0% HR (gr/lb)	MCDB@ 1% HR (° F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	48	38.9	38.9	21.6	12	35.7	42.4	20.8	11.5
14-Jan	49	46	38.7	21.3	10	43.4	45.7	21.4	13
21-Jan	46	37.3	38	20.9	12	33.6	43.1	19.1	11.6
28-Jan	48	39.1	36.8	19	5	30.8	38.5	18.2	10.5
4-Feb	43	33.9	37.1	17.7	9	27.3	33.4	15.9	9.2
11-Feb	52	38.8	42	20.6	13	32.9	42.8	19.8	11.1
18-Feb	54	43.7	44.5	23.8	16	39.9	43.6	22.3	13.3
25-Feb	54	44.5	43.7	24.6	10	44.1	45.7	22.9	14.2
4-Mar	56	45.3	47.5	26.9	19	37.8	44.4	24.2	15.2
11-Mar	61	46.8	48.4	28.4	21	44.1	47.6	26.4	15.9
18-Mar	60	46.3	51.8	30.9	23	44.1	48.6	28.9	18.3
25-Mar	66	50.8	54.2	33	27	56.7	53	31.9	20.1
1-Apr	68	51.9	57.4	34.4	28	46.9	51.5	32.8	21.5
8-Apr	75	56.4	62.5	37.5	28	62.3	63	37.1	23.1
15-Apr	75	56.9	63.1	39.9	30	71.4	59.9	40.7	25.9
22-Apr	81	58.3	68.1	42.8	36	74.9	64.7	46.6	29.8
29-Apr	81	60.3	70.7	45.3	36	86.8	67.3	49.8	32.1
6-May	82	62.4	72.4	48.1	41	86.8	70.1	56.7	36.6
13-May	84	60.8	73	50	41	93.1	77.5	63	41.9
20-May	84	63.4	74.3	51.7	45	86.8	68.1	66.9	46.4
27-May	84	64.3	75.8	53.3	46	87.5	70.1	68.7	47.8
4-Jun	88	67.4	77.6	55.9	48	100.1	73	74.2	52.5
10-Jun	88	67.3	78.7	60.1	54	103.6	73.4	83.8	64.4
17-Jun	90	65.6	81.4	61.3	55	121.8	77	90.3	68.2
24-Jun	88	71.2	79.8	62.9	55	124.6	78.2	96.2	75.6
1-Jul	88	71	81.1	65.1	55	135.8	77.4	106.8	84.7
8-Jul	91	78.5	82.4	67.2	59	142.8	83.2	116.2	93.1
15-Jul	93	80.2	82.3	68.6	61	151.9	84.5	123	99.7
22-Jul	95	80.4	85.1	70	61	151.9	84.1	128.6	105.7
29-Jul	95	78.5	86	70.5	63	153.3	85.1	131.1	106.2
5-Aug	95	79.5	87.4	70.9	63	161	87.2	131.9	107.4
12-Aug	95	79.5	86.6	70.6	65	152.6	81.7	130.9	105.5
19-Aug	93	77.1	86	69.6	63	151.9	81.8	128.8	103.6
26-Aug	90	73.6	82.7	67.1	61	145.6	84.6	118.7	95.1
2-Sep	90	75.9	82.4	65.9	59	144.2	80.9	115.1	91.4
9-Sep	88	72.9	80.8	62.7	57	133.7	81.3	103.6	80.1
16-Sep	85	73	78.1	60.9	50	126	80.5	98.2	74.6
23-Sep	84	70.3	77	55.8	48	119	72.9	86.8	62.6
30-Sep	79	65	74.3	53.7	45	103.6	69.5	78.8	57.2
7-Oct	77	64.1	72	50	43	91.7	71	70.8	48.8
14-Oct	77	62.8	70.4	47	37	92.4	67.6	65.9	43.9
21-Oct	75	60.1	68.3	43.6	36	80.5	62	58.7	37.7
28-Oct	72	57.6	66.2	40.6	31	74.9	61.1	52.1	33.6
4-Nov	70	57.5	61.4	37.2	29	62.3	57.6	45.6	28.4
11-Nov	66	54.3	59.7	37	30	75.6	60.8	45.4	28.1
18-Nov	66	56.6	56.5	35.5	27	62.3	57.8	41.1	25
25-Nov	59	49.3	51.4	29.8	23	59.5	55.5	33.3	18.8
2-Dec	57	49.2	48.2	27.9	18	50.4	51.6	29.5	17.6
9-Dec	56	47.7	45.6	26.1	17	47.6	51.3	27.1	16.1
16-Dec	54	44.8	43.3	24.2	16	38.5	46	24.7	13.8
23-Dec	53	44.5	42.1	23.2	14	35	47.8	22.8	13.3
31-Dec	48	38.8	40.6	20.9	12	30.8	41.4	20.8	12

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	26.4	0	957.7
FEB	50.5	1.2	723.6
MAR	238.1	53.2	447.3
APR	373	117.7	248.8
MAY	490.8	151.3	138.1
JUN	604	202.7	35.4
JUL	713.5	276.4	12.8
AUG	716.9	277.5	10.5
SEP	571	188.6	55.6
OCT	399.8	118.6	226.5
NOV	271.9	70.1	410.1
DEC	39.5	1.9	597.7
ANN	4495.4	1459.2	3864.1

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	-27254	0	-6366
FEB	0	-20918	123	-5199
MAR	0	-13278	1117	-2649
APR	800	-7896	812	-1213
MAY	1004	-4846	1009	-390
JUN	1274	-1588	3423	-213
JUL	1886	-657	11414	-164
AUG	1935	-616	11022	-120
SEP	1232	-2250	4846	-60
OCT	549	-7259	2523	-500
NOV	0	-12179	2170	-1724
DEC	0	-17160	2290	-3514
ANN	8680	-115901	40749	-22112

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													

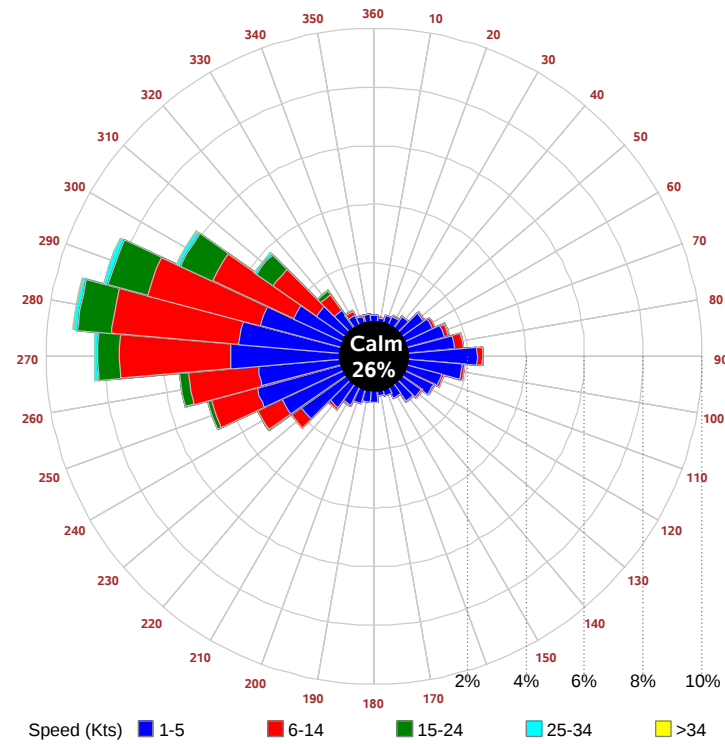
Average Annual Solar Radiation - Nearest Available Site Source: National Renewable Energy Laboratory, Golden CO, 1995

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													

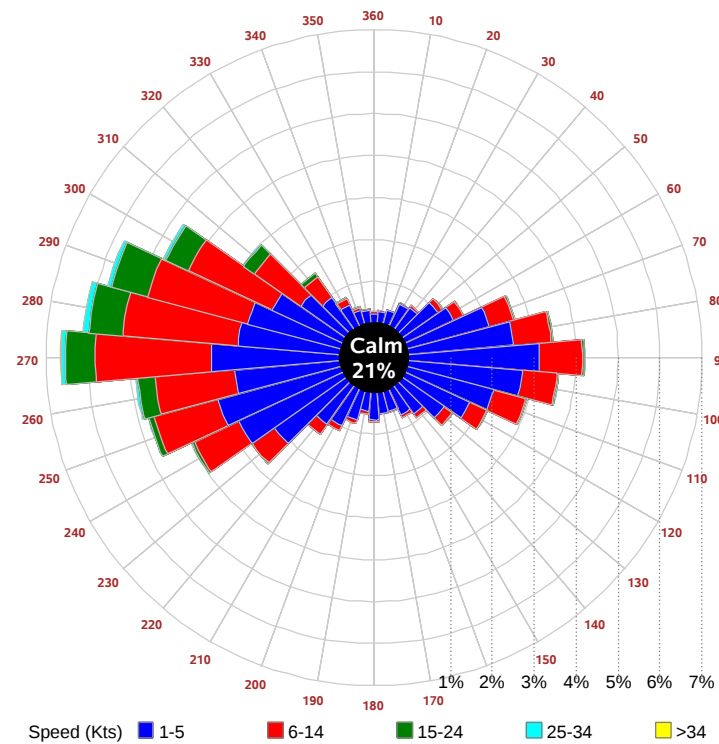
AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9												
		March						June				
		9am	11am	1pm	3pm	5pm		9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear											
	M.Cloudy											
NORTH	M.Clear											
	M.Cloudy											
EAST	M.Clear			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

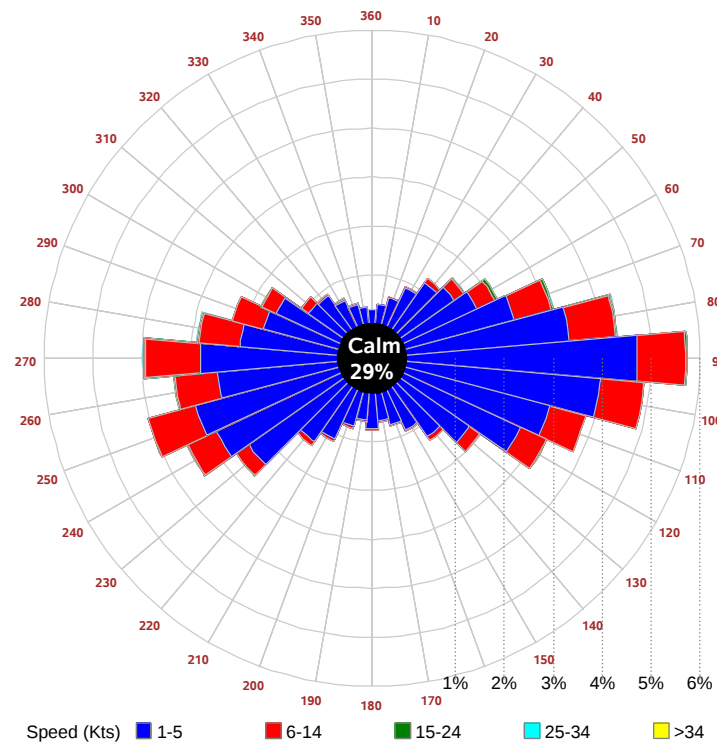
Wind Summary - December, January, and February



Wind Summary - March, April, and May



Wind Summary - June, July, and August



Wind Summary - September, October, and November

