

GIMPO, KS

Latitude = 37.56 N

Longitude = 126.79 E

Period of Record = 1988 To 2017

Station ID = ICAO_RKSS

Elevation = 58 Feet

Average Pressure = 29.95 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	93	78	120	7.5	NNW
0.4% Occurrence	90	77	118	7.6	WNW
1.0% Occurrence	88	76	116	7.6	WNW
2.0% Occurrence	86	74	110	7.7	WNW
Mean Daily Range	17	-	-	-	NNW
97.5% Occurrence	16	14	8	4.9	NNW
99.0% Occurrence	12	10	6	4.4	NW
99.6% Occurrence	9	8	6	4.5	NNW
Median of Extreme Lows	5	4	4	4.8	NNW

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	82	87	153	7.9	WNW
0.4% Occurrence	80	85	144	8	SSW
1.0% Occurrence	78	83	136	7.1	SSW
2.0% Occurrence	77	82	132	6.9	SSW

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	151	82	0.99	8.2	SSW
0.4% Occurrence	151	82	0.99	7.8	SSW
1.0% Occurrence	141	81	0.94	6.5	SSW
2.0% Occurrence	134	81	0.88	7.1	S

Air Conditioning/ Humid Area Criteria	Threshold	T ≥ 93 °F	T ≥ 80 °F	Twb ≥ 73 °F	Twb ≥ 67 °F
	# of Hours	12	629	804	1749

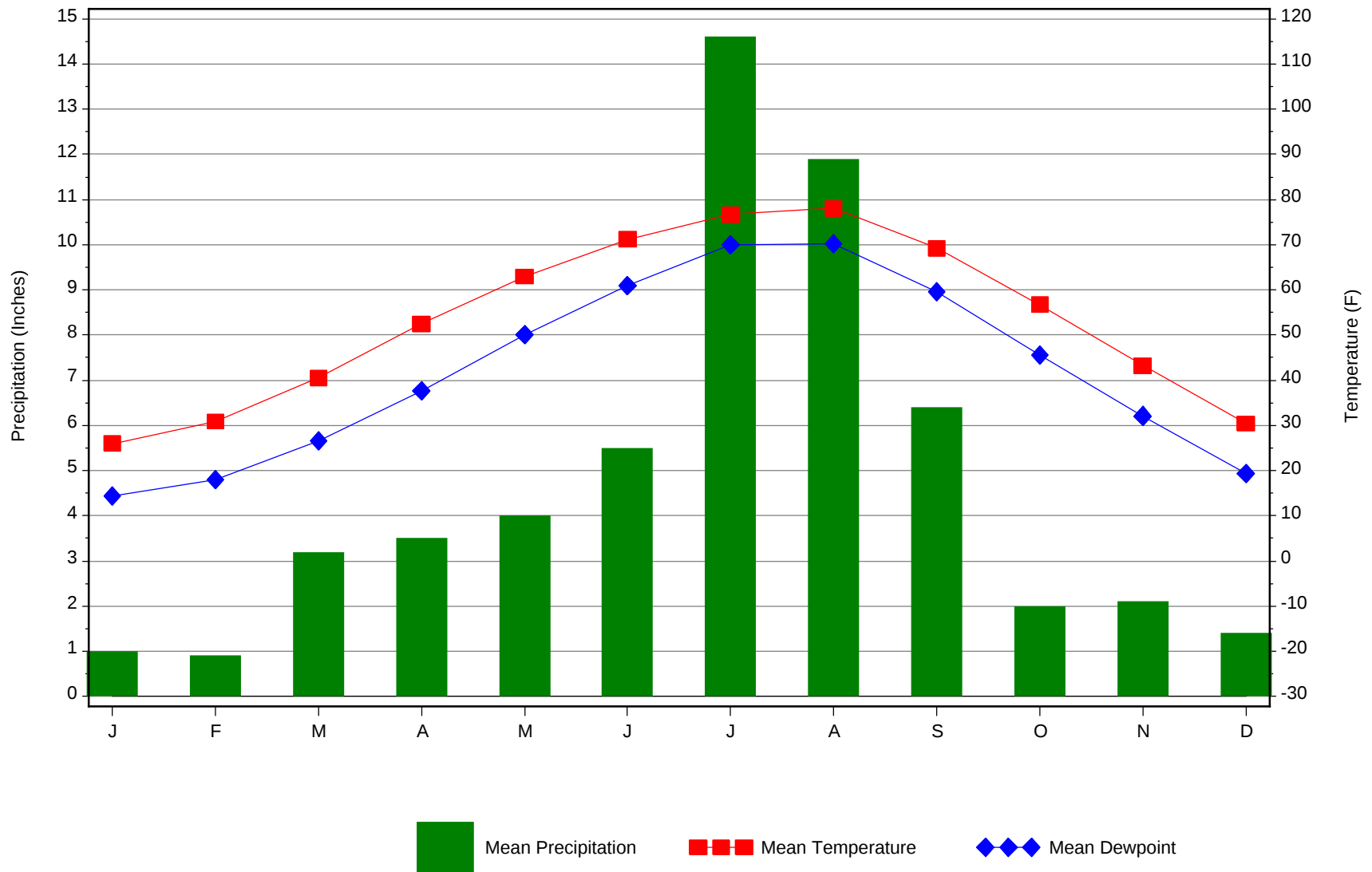
Other Site Data

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
6	N/A	105	3.7 + 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 (#)
55.8	48	20	76

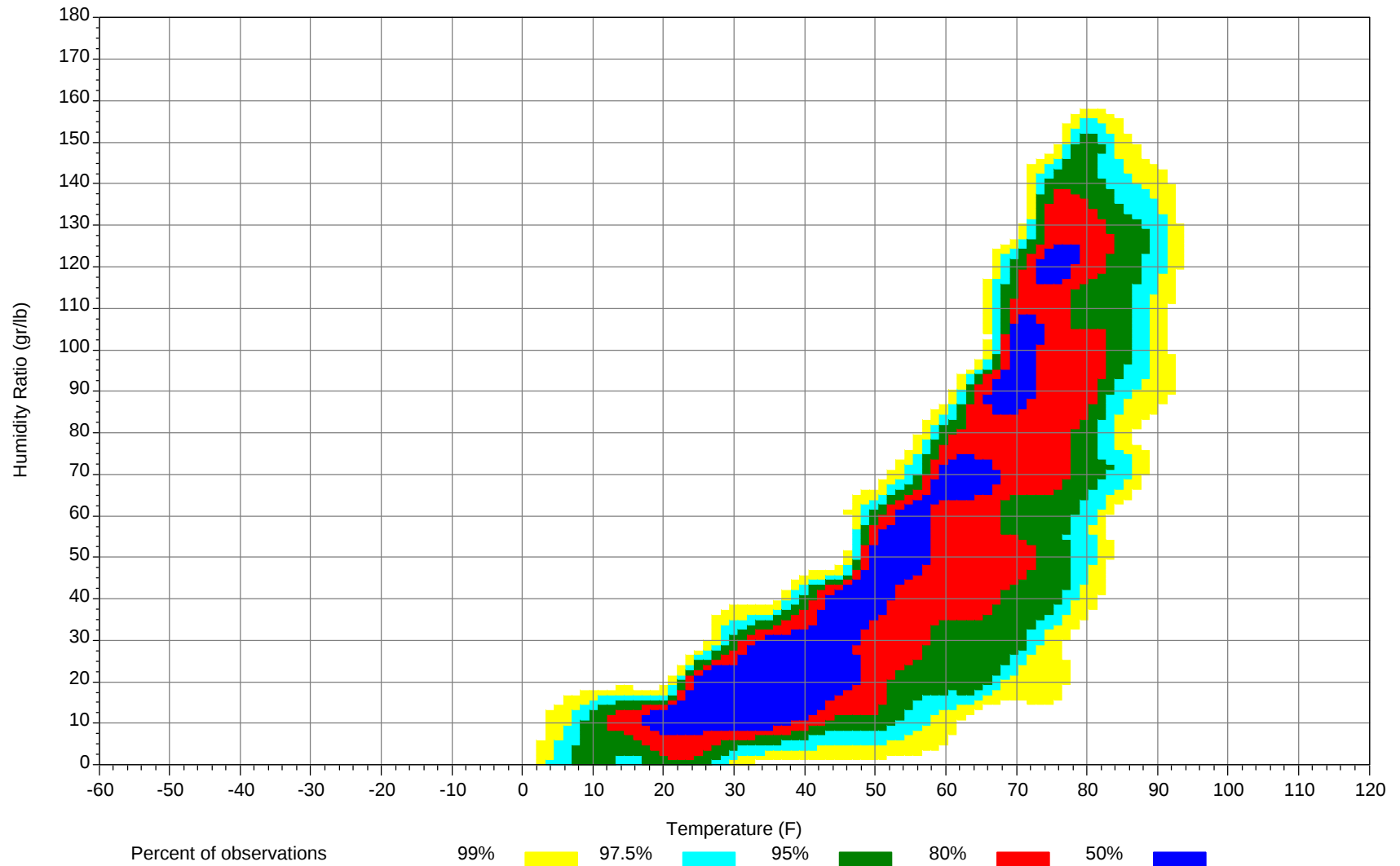
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.



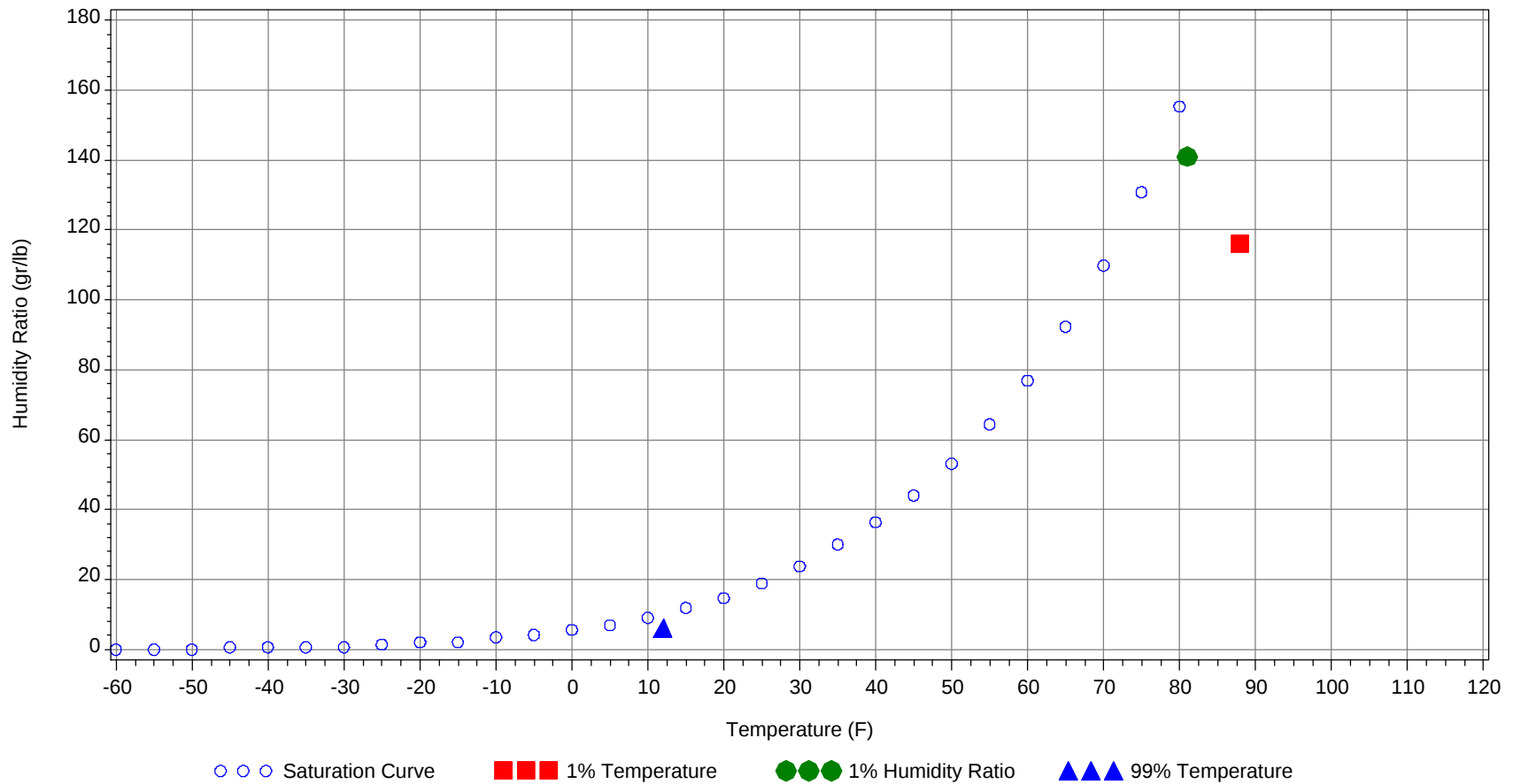
Average Annual Climate



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	88.0		76		116.0	39.1
99.0% Dry Bulb	12.0				6.0	3.8
1.0% Humidity Ratio	141.0	81.0	78.1	77.0		41.6

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)
95/ 99															
90/ 94															
85/ 89															
80/ 84															
75/ 79													0	0	55
70/ 74												0	0	0	52.4
65/ 69							0		0	47		2	0	2	50.1
60/ 64						0	0	0	0	49.2	0	10	3	13	48.8
55/ 59		0	0	0	50	0	2	1	3	48.3	1	26	9	36	45.5
50/ 54	0	2	1	3	44	0	10	4	14	42.9	5	49	24	78	42.8
45/ 49	1	10	3	14	39.7	3	26	12	41	39.1	17	63	53	133	40
40/ 44	2	20	9	31	36.2	5	32	18	55	35.9	26	39	48	113	37
35/ 39	13	49	29	91	32.7	17	53	48	118	32.6	61	38	62	161	33.6
30/ 34	34	60	58	152	28.6	41	50	60	151	28.4	74	16	35	125	29.3
25/ 29	41	50	60	151	23.5	54	30	46	130	23.7	48	4	11	63	24.4
20/ 24	36	25	36	97	19.5	39	11	20	70	19.5	12	0	2	14	19.8
15/ 19	56	20	33	109	15.5	41	7	12	60	15.5	4		0	4	16.7
10/ 14	41	9	13	63	10.6	20	2	3	25	10.7					
5/ 9	17	3	5	25	5.8	4	0	1	5	5.7					
0/ 4	5	1	1	7	0.5	1	0	0	1	0.5					
-5/ -1	2	0	0	2	-3.8			0	0	-4					
-10/ -6	1	0		1	-7.1										

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															
90/ 94							0		0	63.3		2	1	3	67.9
85/ 89							2	0	2	61.8		13	2	15	68.9
80/ 84		1	0	1	61		12	3	15	62.2	0	60	16	76	68
75/ 79		6	1	7	57.4	0	46	13	59	60.9	5	81	50	136	66.9
70/ 74		20	6	26	54.8	2	65	34	101	59.3	55	57	85	197	66.1
65/ 69	1	27	10	38	52.9	12	52	39	103	58.2	76	19	52	147	64
60/ 64	6	54	27	87	51.1	56	49	78	183	56.9	79	8	30	117	60.9
55/ 59	17	60	49	126	48.8	93	19	58	170	53.8	22	1	3	26	56.4
50/ 54	50	44	67	161	46.4	64	3	21	88	50	2		0	2	52.4
45/ 49	69	21	53	143	42.7	19	0	2	21	45.2					
40/ 44	45	5	18	68	38.9	2	0	0	2	41.1					
35/ 39	39	1	9	49	35.1	0	0		0	37.6					
30/ 34	13	0	1	14	30.4										
25/ 29	1			1	27										
20/ 24															
15/ 19															
10/ 14															
5/ 9															
0/ 4															
-5/ -1															
-10/ -6															

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)
95/ 99		1	0	1	79.2	0	2	0	2	77					
90/ 94		10	2	12	77.3	0	29	8	37	77.3		0		0	70.3
85/ 89	0	35	12	47	75.9	0	50	18	68	76		8	1	9	72.1
80/ 84	9	86	54	149	74.4	20	86	66	172	74.6	0	44	12	56	69
75/ 79	90	81	106	277	73.2	97	57	96	250	73.2	6	81	41	128	66.9
70/ 74	106	31	65	202	69.9	92	22	52	166	69.7	42	63	76	181	65.8
65/ 69	36	4	8	48	66.3	29	2	7	38	65.8	50	24	51	125	63.3
60/ 64	6	0	0	6	62.4	9	1	2	12	61.3	78	15	42	135	60
55/ 59	0			0	57.9	1		0	1	55.5	44	3	13	60	55.5
50/ 54						0			0	52	17	0	4	21	51
45/ 49											4		0	4	46.5
40/ 44											0			0	41
35/ 39															
30/ 34															
25/ 29															
20/ 24															
15/ 19															
10/ 14															
5/ 9															
0/ 4															
-5/ -1															
-10/ -6															

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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)
95/ 99															
90/ 94															
85/ 89															
80/ 84		1	0	1	64										
75/ 79	0	13	2	15	62		0		0	63.3					
70/ 74	1	48	10	59	59.3		1	0	1	58.1					
65/ 69	5	50	21	76	57.4	0	4	1	5	57.7					
60/ 64	19	60	60	139	55.6	2	23	7	32	53.9		0		0	50.8
55/ 59	46	42	64	152	52.5	9	39	21	69	50.2		2	0	2	48.3
50/ 54	63	21	51	135	48.7	21	49	37	107	46.6	1	10	3	14	45.4
45/ 49	61	9	26	96	44	32	47	49	128	41.9	4	27	13	44	41
40/ 44	27	2	9	38	39.7	30	30	35	95	38	9	30	20	59	37.3
35/ 39	19	1	5	25	35.2	50	28	43	121	34	25	54	46	125	33.4
30/ 34	7		1	8	31	49	15	33	97	29.1	47	54	57	158	28.8
25/ 29	1		0	1	26.2	35	4	12	51	24.4	56	39	54	149	23.9
20/ 24						10	0	2	12	20.3	38	16	26	80	19.6
15/ 19						2	0	0	2	16.8	41	12	21	74	15.5
10/ 14						0			0	14	22	2	7	31	10.8
5/ 9											5	0	1	6	6.2
0/ 4											0			0	1.1
-5/ -1															
-10/ -6															

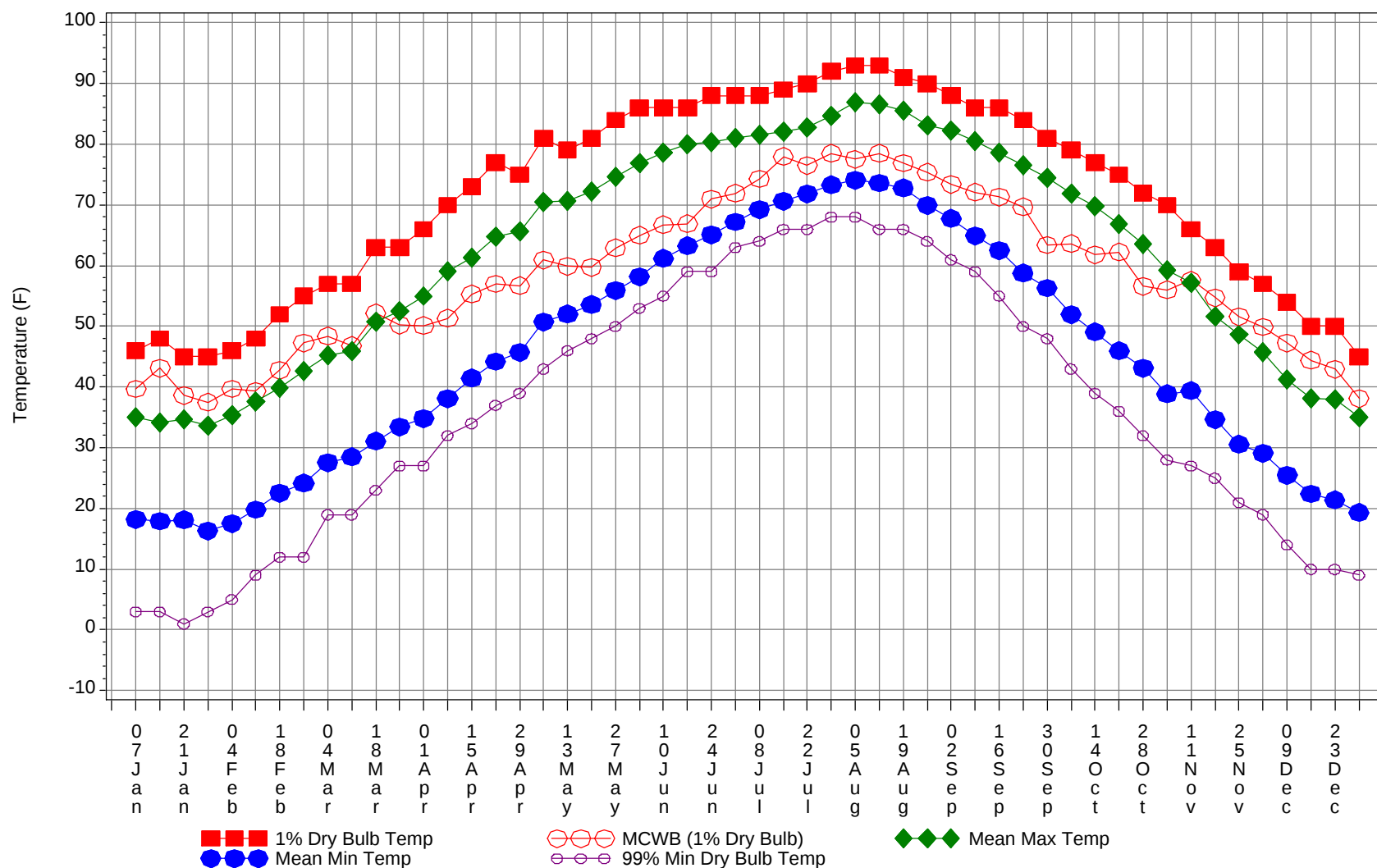
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Dry-Bulb Temperature Hours For An Average Year

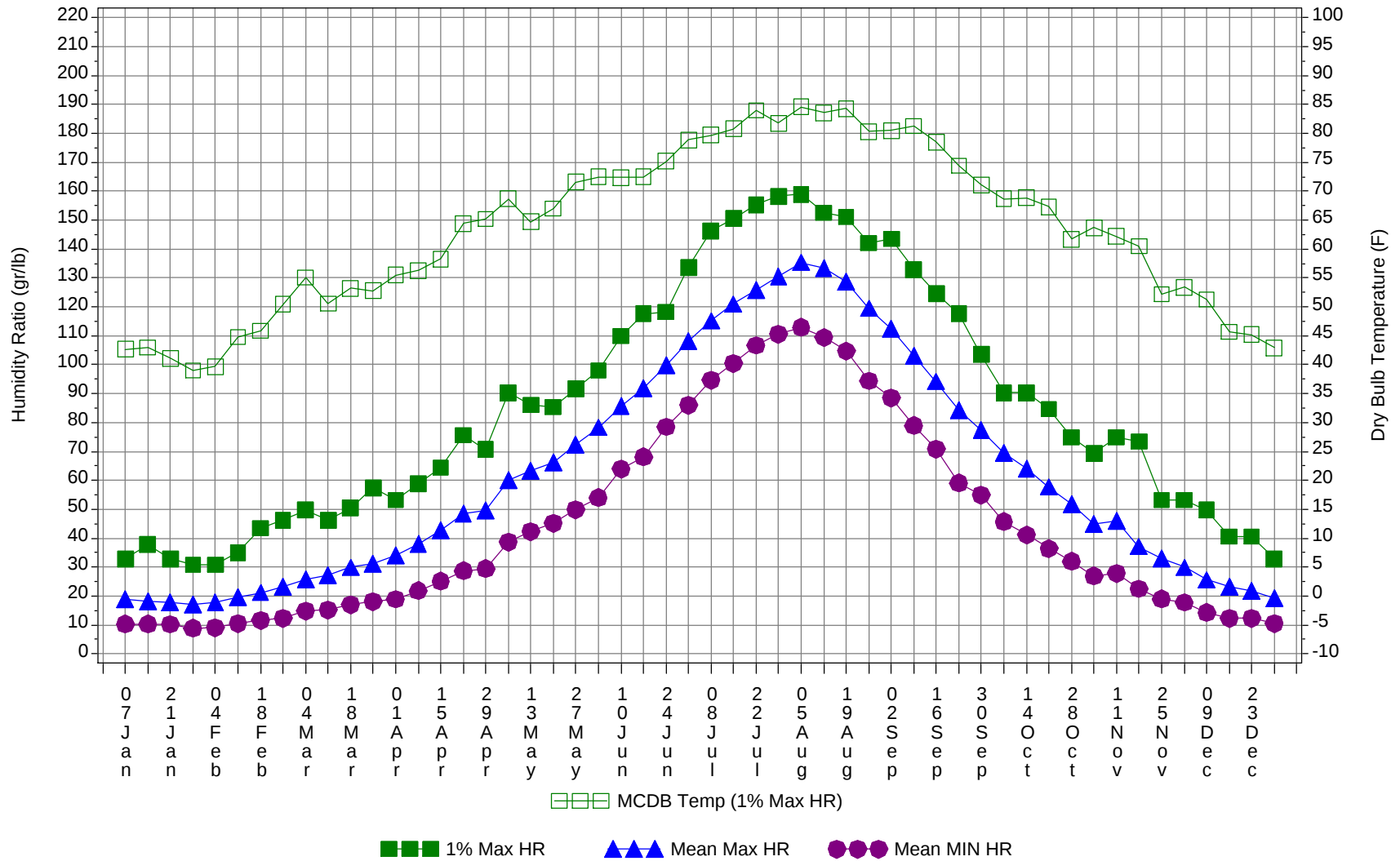
	Annual				
Temperature Range (°F)	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (°F)
95/ 99	0	2	0	2	77.6
90/ 94	0	41	10	51	76.8
85/ 89	1	106	33	140	74.8
80/ 84	29	289	151	469	72.3
75/ 79	195	364	308	867	70.1
70/ 74	294	307	328	929	66
65/ 69	208	184	189	581	61.4
60/ 64	254	221	248	723	57
55/ 59	233	197	219	649	51.9
50/ 54	225	189	210	624	47
45/ 49	210	205	212	627	41.9
40/ 44	148	158	158	464	37.6
35/ 39	225	224	242	691	33.5
30/ 34	266	195	245	706	28.8
25/ 29	236	127	183	546	23.9
20/ 24	135	52	86	273	19.6
15/ 19	144	40	66	250	15.6
10/ 14	84	13	23	120	10.7
5/ 9	26	3	6	35	5.9
0/ 4	6	1	1	8	0.6
-5/ -1	2	0	0	2	-3.8
-10/ -6	1	0		1	-7.1

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



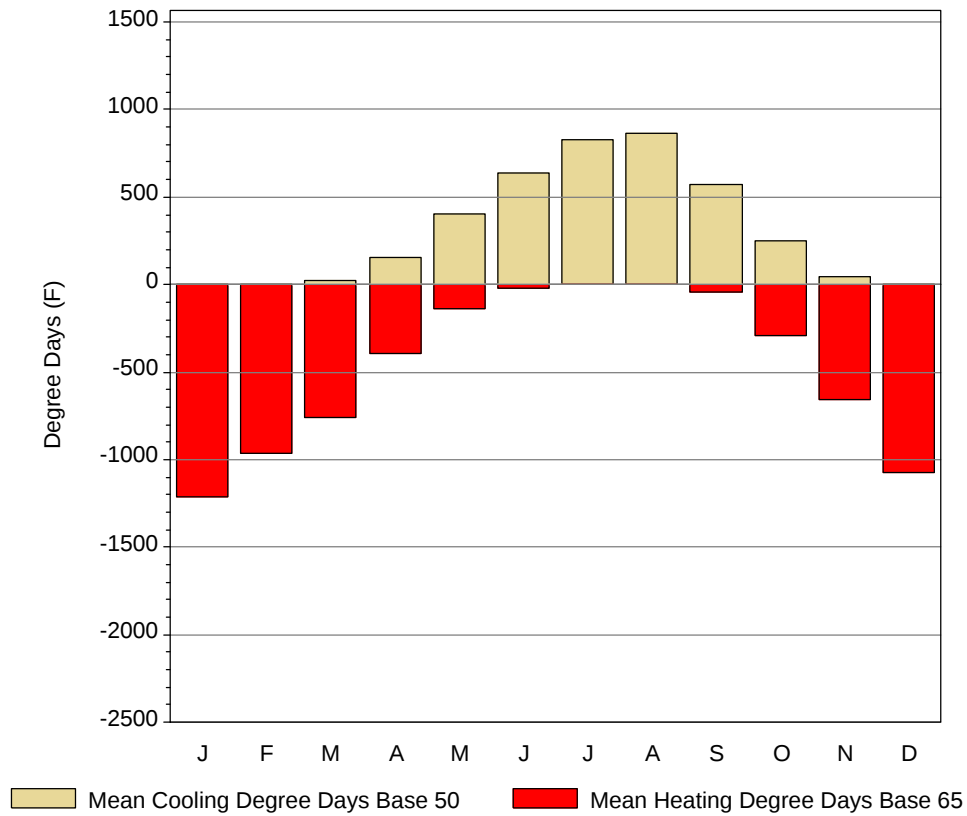
Long Term Humidity and Dry Bulb Temperature Summary



Long Term Humidity and Dry Bulb Temperature Summary

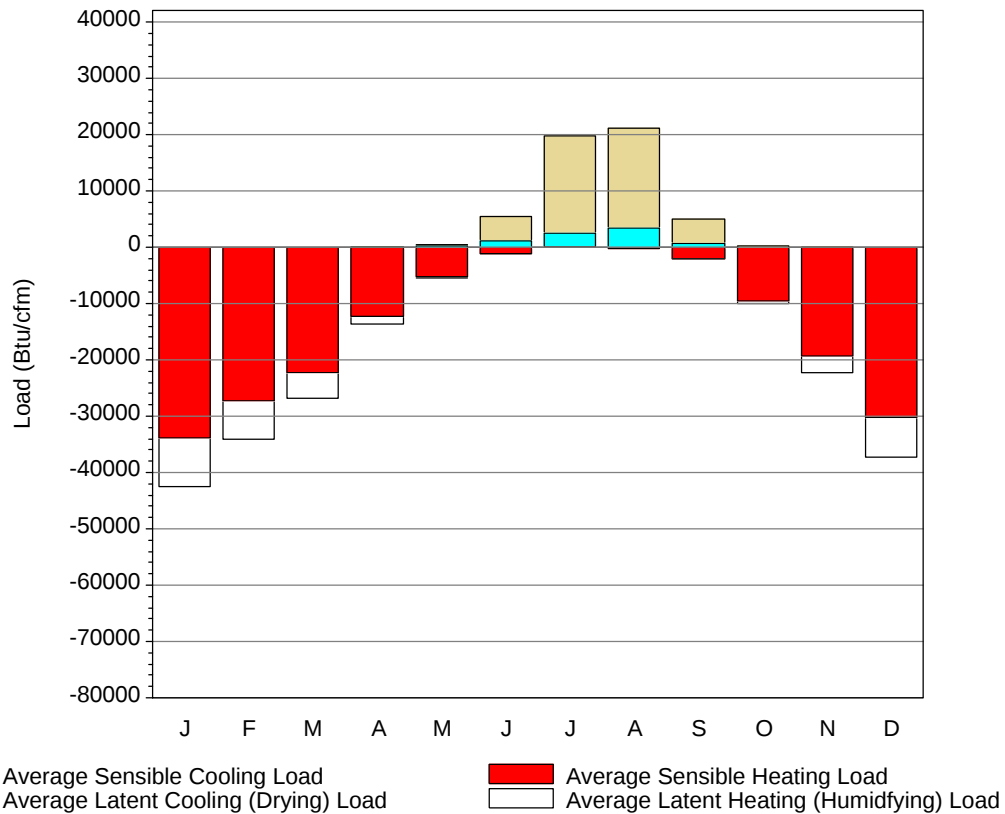
Week Ending	1.0% Temp (° F)	MCWB@ 1% Temp (° F)	Mean Max Temp (° F)	Mean Min Temp (° F)	99% Temp (° F)	1.0% HR (gr/lb)	MCDB@ 1% HR (° F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	46	39.7	35	18.2	3	32.9	42.7	18.9	10.3
14-Jan	48	43.1	34.2	17.9	3	37.8	43	18.1	10.3
21-Jan	45	38.6	34.7	18.1	1	32.9	41.1	17.9	10.2
28-Jan	45	37.5	33.6	16.3	3	30.8	39	17.2	8.9
4-Feb	46	39.7	35.4	17.5	5	30.8	39.7	17.8	9
11-Feb	48	39.3	37.6	19.8	9	35	44.8	19.6	10.5
18-Feb	52	42.8	39.9	22.5	12	43.4	45.9	21.2	11.6
25-Feb	55	47.3	42.7	24.2	12	46.2	50.5	23.3	12.3
4-Mar	57	48.4	45.2	27.5	19	49.7	55.1	25.7	14.8
11-Mar	57	46.8	46	28.5	19	46.2	50.6	27.1	15.1
18-Mar	63	52.2	50.7	31.1	23	50.4	53.2	29.9	17
25-Mar	63	50.2	52.5	33.4	27	57.4	52.8	31.2	18
1-Apr	66	50.1	55	34.8	27	53.2	55.5	34	18.9
8-Apr	70	51.3	59	38.1	32	58.8	56.3	37.9	21.9
15-Apr	73	55.3	61.4	41.5	34	64.4	58.3	42.6	25.1
22-Apr	77	57	64.7	44.2	37	75.6	64.4	48.4	28.8
29-Apr	75	56.7	65.7	45.7	39	70.7	65.2	49.6	29.5
6-May	81	60.9	70.5	50.7	43	90.3	68.7	60.2	38.6
13-May	79	59.9	70.6	52	46	86.1	64.7	63.3	42.3
20-May	81	59.7	72.3	53.6	48	85.4	67	66.3	45.1
27-May	84	62.9	74.7	55.9	50	91.7	71.6	72.4	49.9
4-Jun	86	65	76.9	58.2	53	98	72.5	78.3	54
10-Jun	86	66.7	78.6	61.2	55	109.9	72.4	85.8	64
17-Jun	86	66.9	80	63.3	59	117.6	72.5	92	68.1
24-Jun	88	71	80.4	65.1	59	118.3	75.2	99.8	78.5
1-Jul	88	71.9	81.1	67.2	63	133.7	78.9	108.2	86
8-Jul	88	74.3	81.6	69.2	64	146.3	79.7	115.2	94.6
15-Jul	89	78	82.1	70.6	66	150.5	80.8	121	100.4
22-Jul	90	76.5	82.8	71.8	66	155.4	84	125.9	106.7
29-Jul	92	78.5	84.7	73.3	68	158.2	81.8	130.6	110.6
5-Aug	93	77.5	86.9	74.1	68	158.9	84.6	135.4	112.9
12-Aug	93	78.5	86.6	73.6	66	152.6	83.6	133.3	109.4
19-Aug	91	76.9	85.5	72.8	66	151.2	84.3	128.6	104.7
26-Aug	90	75.4	83.2	69.9	64	142.1	80.3	119.5	94.4
2-Sep	88	73.4	82.3	67.8	61	143.5	80.5	112.5	88.6
9-Sep	86	72.1	80.6	64.9	59	133	81.3	103	79
16-Sep	86	71.3	78.6	62.5	55	124.6	78.5	94.2	70.9
23-Sep	84	69.7	76.6	58.8	50	117.6	74.4	84.4	59.1
30-Sep	81	63.4	74.4	56.3	48	103.6	71.1	77.4	55
7-Oct	79	63.6	71.9	51.9	43	90.3	68.7	69.4	45.7
14-Oct	77	61.8	69.8	49.1	39	90.3	68.9	64.1	41.1
21-Oct	75	62.2	66.9	46	36	84.7	67.3	57.7	36.4
28-Oct	72	56.6	63.5	43.1	32	74.9	61.7	51.8	32
4-Nov	70	56	59.3	38.9	28	69.3	63.7	44.9	26.9
11-Nov	66	57.6	57.2	39.4	27	74.9	62.2	45.9	27.8
18-Nov	63	54.7	51.7	34.6	25	73.5	60.5	37.1	22.5
25-Nov	59	51.6	48.6	30.6	21	53.2	52.2	33.1	19
2-Dec	57	49.9	45.7	29.1	19	53.2	53.4	29.9	17.8
9-Dec	54	47.3	41.3	25.5	14	49.7	51.3	25.6	14.3
16-Dec	50	44.4	38.2	22.4	10	40.6	45.7	23.2	12.3
23-Dec	50	42.9	37.9	21.4	10	40.6	45.2	21.9	12.3
31-Dec	45	38.1	35	19.3	9	32.9	42.9	19.2	10.5

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	0.1	0	1210.8
FEB	2.1	0	967.3
MAR	23.1	0.3	762
APR	152.8	14.3	390.4
MAY	405	76	139.2
JUN	634.8	203.6	18.8
JUL	828.4	363.8	0.4
AUG	865.7	401.9	1.1
SEP	574	169.3	45.8
OCT	249.9	29.5	290.6
NOV	48.5	0.7	653.8
DEC	1.3	0	1073.2
ANN	3785.7	1259.4	5553.4

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	0	-33793	0	-8611
FEB	0	-27271	0	-6889
MAR	0	-22156	0	-4565
APR	22	-12263	22	-1432
MAY	232	-5228	257	-136
JUN	1073	-1104	4324	-4
JUL	2530	-67	17336	0
AUG	3376	-99	17794	0
SEP	764	-2041	4278	-9
OCT	34	-9546	154	-546
NOV	0	-19266	3	-2969
DEC	0	-30228	0	-6975
ANN	8031	-163062	44168	-32136

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													

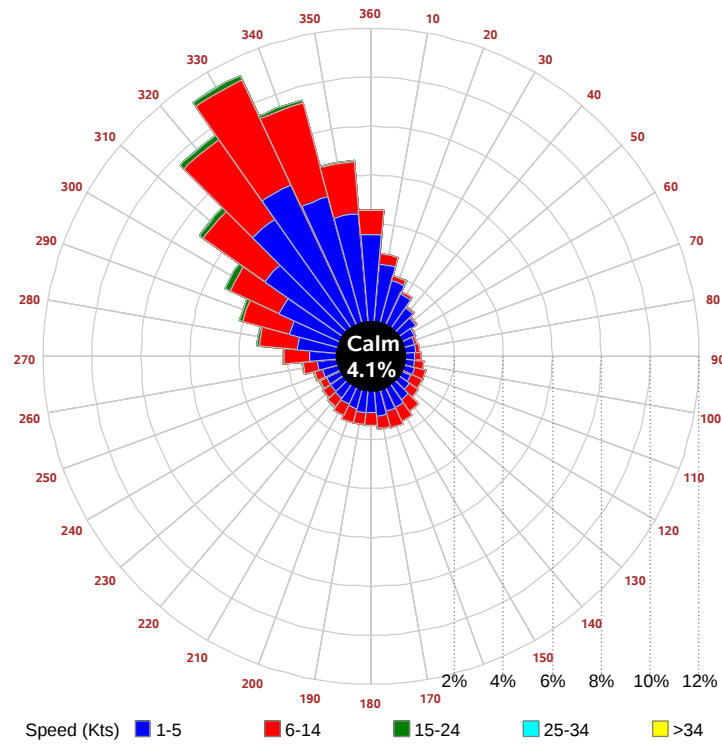
Average Annual Solar Radiation - Nearest Available Site Source: National Renewable Energy Laboratory, Golden CO, 1995

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													

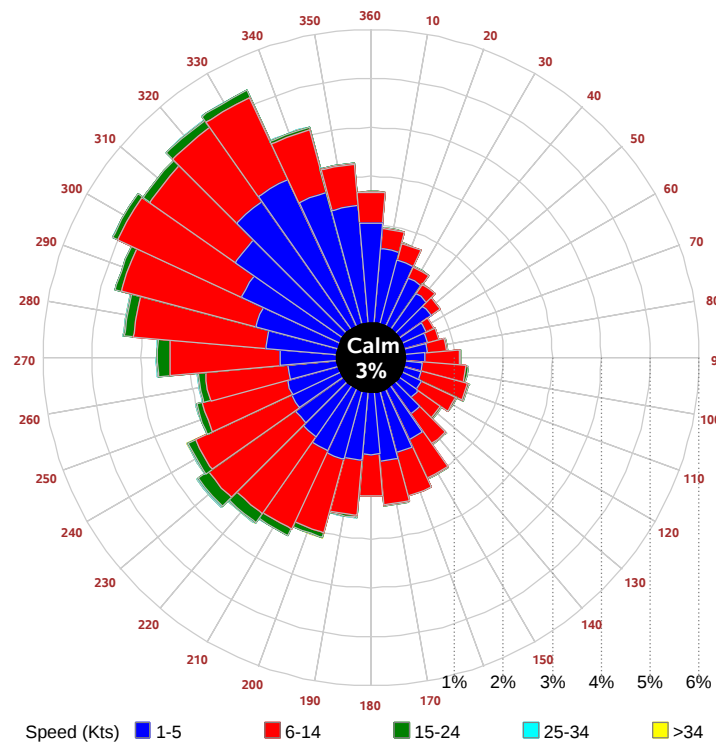
AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9												
				March						June		
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm	
HORIZ.	M.Clear											
	M.Cloudy											
NORTH	M.Clear											
	M.Cloudy											
EAST	M.Clear			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

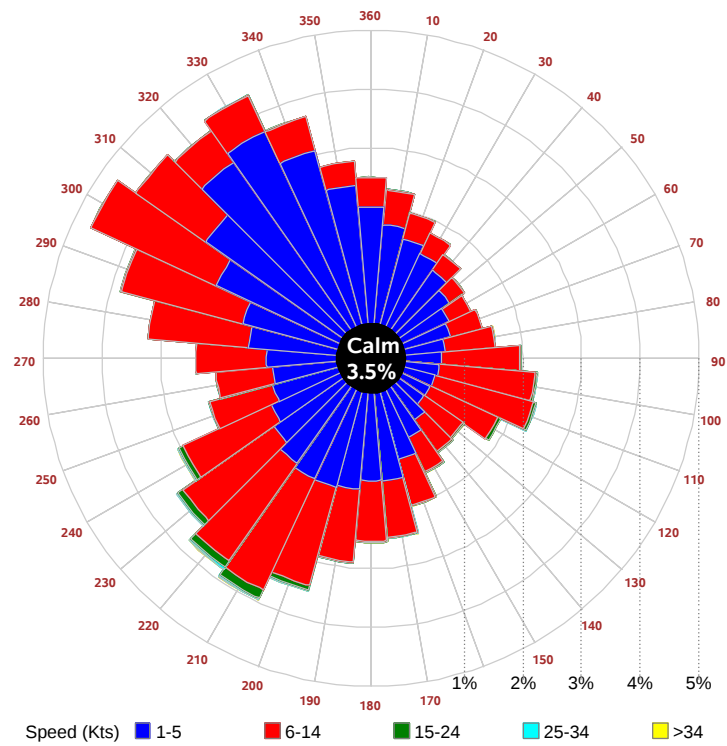
Wind Summary - December, January, and February



Wind Summary - March, April, and May



Wind Summary - June, July, and August



Wind Summary - September, October, and November

