

GOODLAND/RENNER FIELD/GO, KS

Latitude = 39.37 N

Longitude = 101.68 W

Period of Record = 1988 To 2017

Station ID = ICAO_KGLD

Elevation = 3688 Feet

Average Pressure = 26.23 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	101	66	56	13.1	S
0.4% Occurrence	98	67	61	13.3	S
1.0% Occurrence	95	67	67	13.8	S
2.0% Occurrence	91	66	70	13	S
Mean Daily Range	26	-	-	-	W
97.5% Occurrence	12	11	9	11.2	W
99.0% Occurrence	5	4	6	11.4	N
99.6% Occurrence	0	0	5	11.2	N
Median of Extreme Lows	-8	-9	3	10.9	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	74	88	117	12.4	S
0.4% Occurrence	71	87	102	12.2	S
1.0% Occurrence	70	86	98	12.4	S
2.0% Occurrence	69	85	94	12.6	S

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	127	77	0.74	10.1	E
0.4% Occurrence	113	75	0.67	11.8	S
1.0% Occurrence	109	75	0.64	10.5	SSE
2.0% Occurrence	102	74	0.6	10.8	S

Air Conditioning/ Humid Area Criteria	Threshold	T ≥ 93 °F	T ≥ 80 °F	Twb ≥ 73 °F	Twb ≥ 67 °F
	# of Hours	151	867	14	513

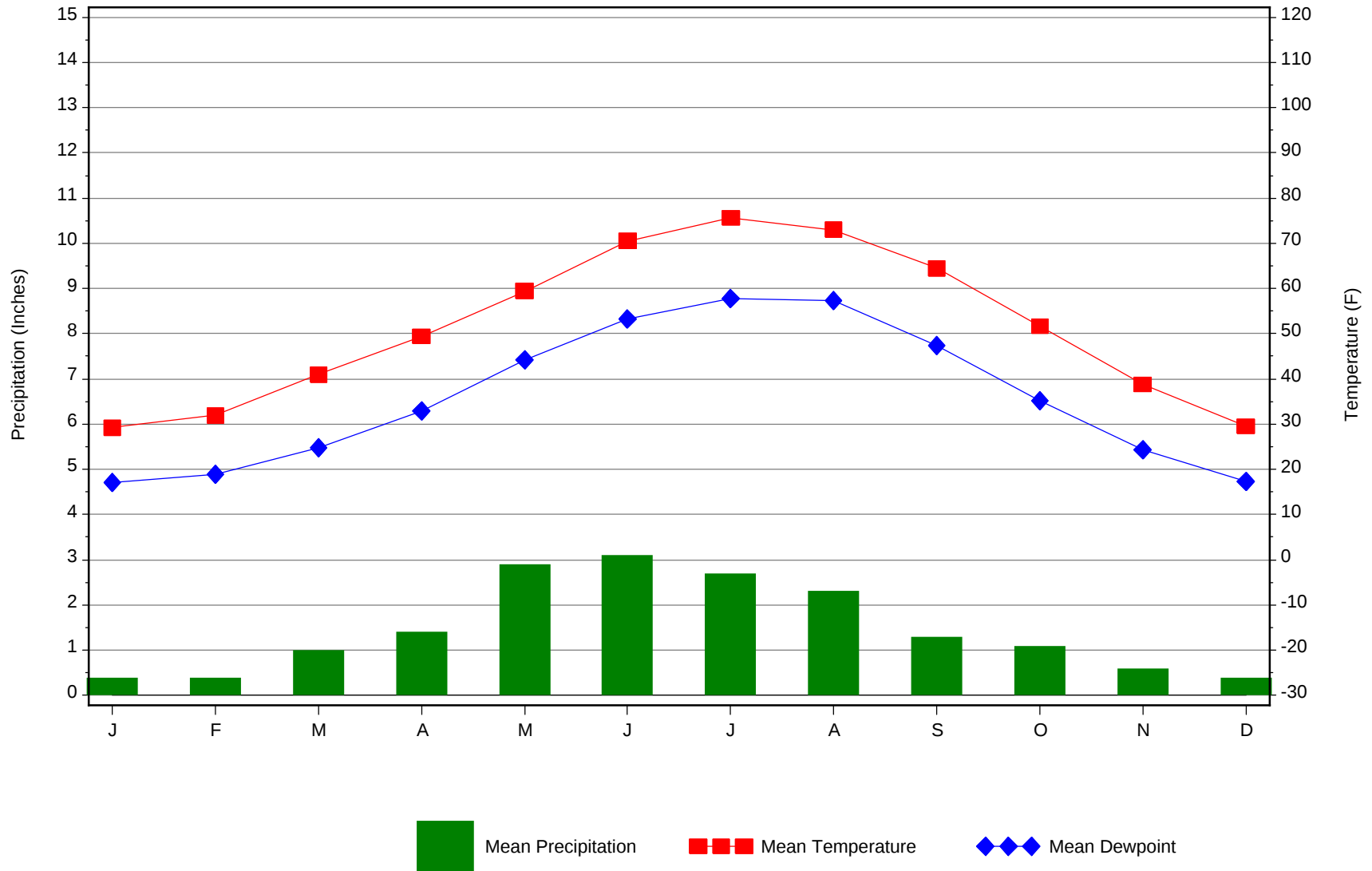
Other Site Data

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	3.3	90	0.4 + 1.0
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 (#)
53.8	N/A	15	114

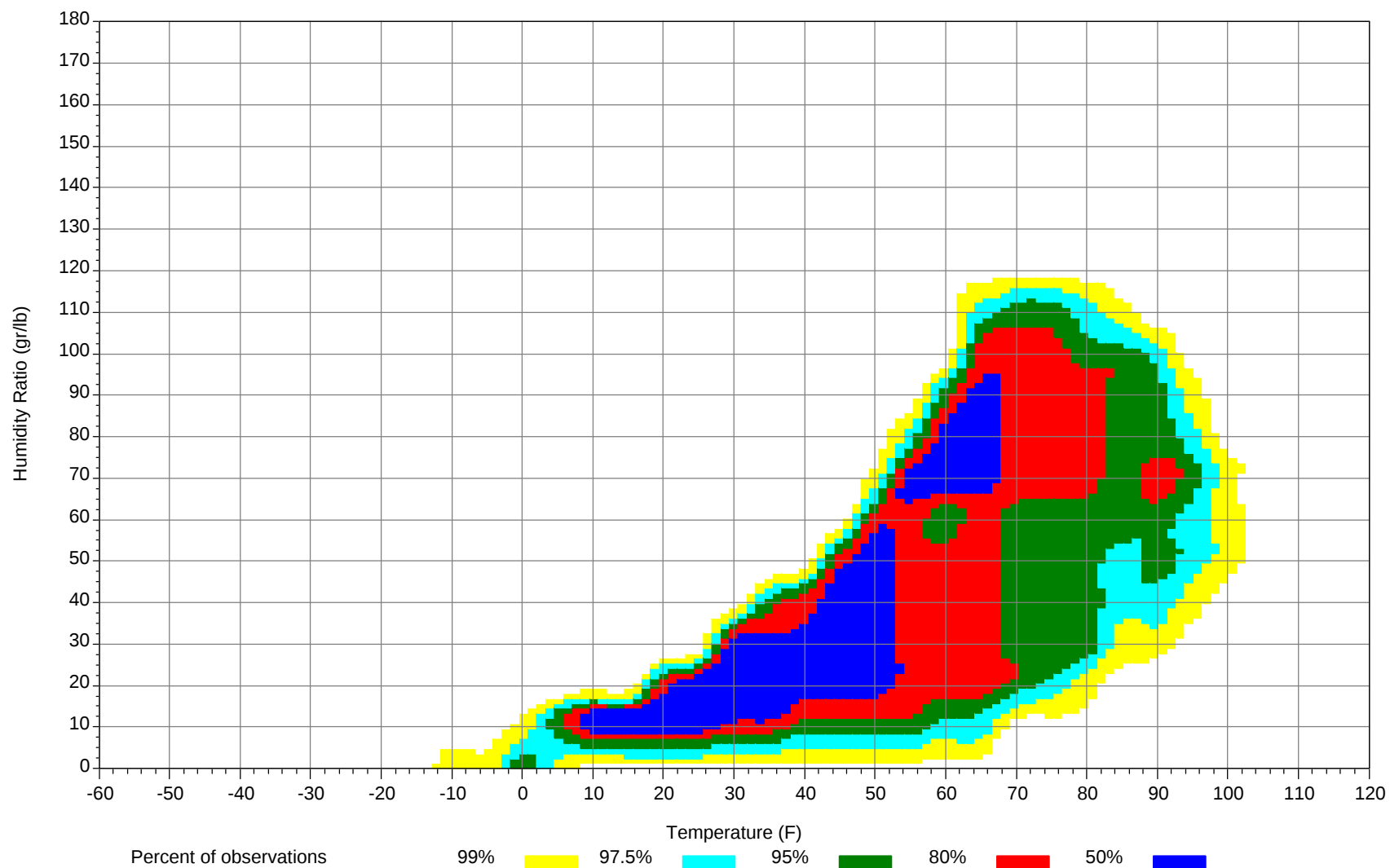
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.



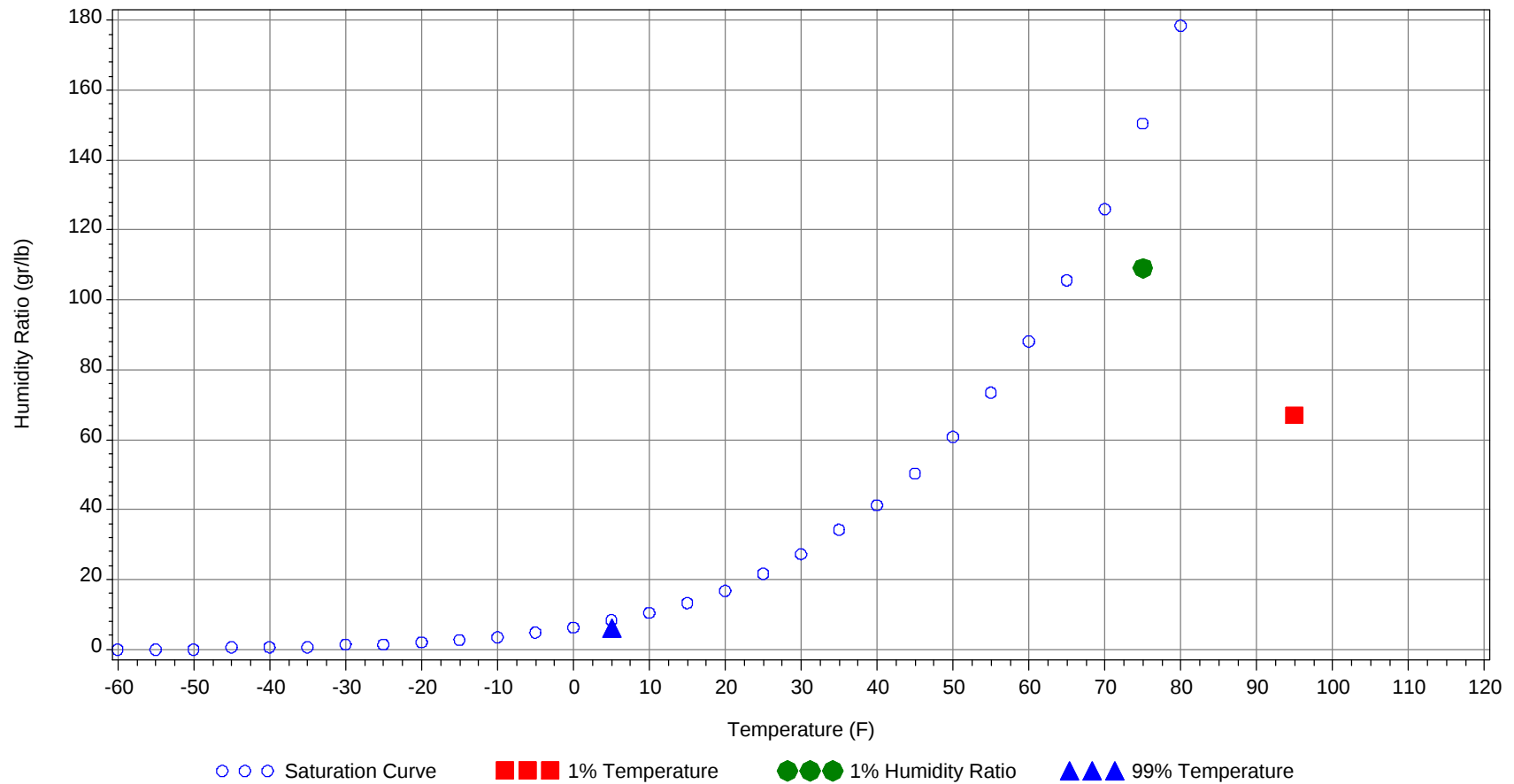
Average Annual Climate



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		67		67.0	33.2
99.0% Dry Bulb	5.0				6.0	2.1
1.0% Humidity Ratio	109.0	75.0	68.8	66.0		35.1

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)
105/109															
100/104															
95/ 99															
90/ 94															
85/ 89							0		0	54		1	0	1	53.3
80/ 84							0		0	52.4		3	0	3	52.9
75/ 79		0		0	50	0	1	0	1	49.2		7	1	8	50.8
70/ 74		2		2	47.6	0	3	0	3	47.6		17	3	20	49.3
65/ 69		3	0	3	45.1	0	6	1	7	46.4	0	16	4	20	47.6
60/ 64		10	0	10	43.5	0	14	2	16	44	1	29	9	39	46.2
55/ 59		15	1	16	41.3	0	17	4	21	41.9	3	29	16	48	43.5
50/ 54	0	21	3	24	39.2	1	23	7	31	39.5	8	30	22	60	41.5
45/ 49	2	34	9	45	36.4	4	28	16	48	36.8	21	31	36	88	38.8
40/ 44	5	23	15	43	34.2	9	22	17	48	34.6	26	17	28	71	36.2
35/ 39	22	34	36	92	31.4	23	31	36	90	31.8	48	25	41	114	33
30/ 34	40	31	45	116	28.2	43	26	40	109	28.7	54	20	38	112	29.3
25/ 29	54	27	50	131	24.2	51	20	41	112	24.5	43	10	26	79	24.9
20/ 24	34	16	28	78	20.1	31	10	22	63	20.3	19	5	9	33	20.4
15/ 19	42	16	29	87	16	30	10	17	57	16.2	13	2	7	22	16.2
10/ 14	21	7	16	44	10.9	14	5	9	28	10.8	7	2	3	12	11.1
5/ 9	13	5	10	28	6.2	8	3	5	16	6.3	2	1	1	4	6.3
0/ 4	9	2	5	16	1.1	6	3	4	13	1.2	3	0	2	5	1.2
-5/ -1	3	0	1	4	-3.2	2	1	2	5	-3.5	1		0	1	-3
-10/ -6	1		1	2	-7.5	1	1	1	3	-8.2					
-15/-11	0		0	0	-11.1	1	0	0	1	-12.1					
-20/-16	0			0	-15	0		0	0	-15.7					
-25/-21															
-30/-26															

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)
105/109												1	0	1	62.3
100/104							0	0	0	67.7		3	1	4	65.2
95/ 99		0		0	58.7		1	0	1	60.9	0	12	2	14	65.8
90/ 94		1	0	1	58.2	0	7	1	8	61	0	29	8	37	65.5
85/ 89		3	0	3	55.4	0	11	2	13	60.5	1	32	11	44	65.4
80/ 84		10	1	11	54.8	0	28	7	35	59.9	3	50	23	76	64.1
75/ 79	0	18	3	21	53.7	1	33	12	46	58.8	10	41	32	83	62.6
70/ 74	1	24	8	33	52.4	5	39	21	65	57.1	27	35	43	105	61.2
65/ 69	1	23	9	33	50.7	9	32	24	65	55.5	37	15	35	87	60.1
60/ 64	5	38	21	64	48.7	29	37	41	107	53.9	72	13	45	130	57.8
55/ 59	12	31	28	71	46.4	45	26	46	117	51.3	53	5	26	84	54.1
50/ 54	29	28	37	94	44.6	59	17	44	120	48.3	25	2	10	37	49.8
45/ 49	44	24	41	109	41.5	53	11	31	95	43.8	10	1	4	15	45.2
40/ 44	36	15	29	80	38.3	21	3	10	34	39.8	2	0	1	3	41.1
35/ 39	53	13	32	98	34.4	16	2	7	25	35.3	0		0	0	37.1
30/ 34	36	7	19	62	30.2	7	1	2	10	30.7					
25/ 29	16	3	8	27	25.1	2		0	2	26.4					
20/ 24	4	1	2	7	20.8	0			0	22					
15/ 19	2	1	1	4	16.3										
10/ 14	1		0	1	11.9										
5/ 9	0		0	0	7										
0/ 4															
-5/ -1															
-10/ -6															
-15/-11															
-20/-16															
-25/-21															
-30/-26															

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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)
105/109		0		0	65.9										
100/104		8	1	9	67.1		3	0	3	65.8		0		0	64
95/ 99		32	6	38	67.5		15	2	17	66.7		5	0	5	63.6
90/ 94	0	54	16	70	67.8	0	46	9	55	67.2		20	2	22	63.4
85/ 89	1	38	16	55	67.4	0	39	11	50	67		24	4	28	62.9
80/ 84	7	52	36	95	66.5	3	56	26	85	66.2	0	43	12	55	61.7
75/ 79	20	31	44	95	65	11	40	39	90	64.8	3	36	18	57	60
70/ 74	56	19	57	132	63.8	38	28	60	126	63.3	10	39	31	80	58.5
65/ 69	66	7	38	111	62.5	60	12	48	120	62.1	22	22	31	75	57.5
60/ 64	69	5	27	101	59.6	91	7	40	138	59.4	52	23	48	123	55.6
55/ 59	23	1	7	31	55.1	34	2	11	47	54.8	50	13	40	103	52.1
50/ 54	4	0	1	5	51.1	8	0	2	10	50.3	50	9	29	88	48.3
45/ 49	1		0	1	45.8	1		0	1	46.2	34	4	17	55	43.6
40/ 44	0			0	42	0			0	42.4	11	2	4	17	39.4
35/ 39											7	1	3	11	36.3
30/ 34											2	0	1	3	31.4
25/ 29															
20/ 24															
15/ 19															
10/ 14															
5/ 9															
0/ 4															
-5/ -1															
-10/ -6															
-15/-11															
-20/-16															
-25/-21															
-30/-26															

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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)
105/109															
100/104															
95/ 99															
90/ 94		2		2	59.1										
85/ 89		6	0	6	57.3										
80/ 84		17	1	18	56.5		0		0	53.2					
75/ 79		22	3	25	55.2		6		6	51.1					
70/ 74	1	32	7	40	53.5		13	0	13	49.6		1		1	47.8
65/ 69	1	27	10	38	51.7		13	0	13	48.2		3		3	46.3
60/ 64	8	39	23	70	50.4		24	3	27	46.3		10		10	44.3
55/ 59	20	31	33	84	48	1	27	6	34	43.6	0	15	1	16	41.5
50/ 54	39	25	45	109	45.5	5	30	18	53	41.2	0	22	3	25	39.3
45/ 49	56	20	48	124	41.7	18	34	30	82	38.6	3	33	8	44	36.7
40/ 44	37	10	27	74	38	23	21	29	73	35.9	5	25	13	43	34
35/ 39	47	9	29	85	34.4	50	28	47	125	32.7	20	38	35	93	31.2
30/ 34	25	4	14	43	30.1	55	23	47	125	29.1	41	34	50	125	28.1
25/ 29	10	2	5	17	25.2	45	12	31	88	24.7	61	25	56	142	24.3
20/ 24	3	1	2	6	20.6	20	5	13	38	20	36	16	27	79	20
15/ 19	1	1	1	3	17.4	15	3	10	28	15.8	41	10	27	78	15.9
10/ 14	1	0	0	1	11.9	5	1	5	11	10.8	19	6	12	37	10.8
5/ 9	0			0	7.2	3	0	1	4	6.4	9	4	8	21	6.1
0/ 4						1		1	2	1.2	5	3	4	12	1
-5/ -1						0		0	0	-3.2	2	1	2	5	-3.4
-10/ -6						0			0	-7	3	1	2	6	-7.8
-15/-11											0	0	1	1	-11.9
-20/-16											0	0	0	0	-16.2
-25/-21											0			0	-22.7
-30/-26											0			0	-25.5

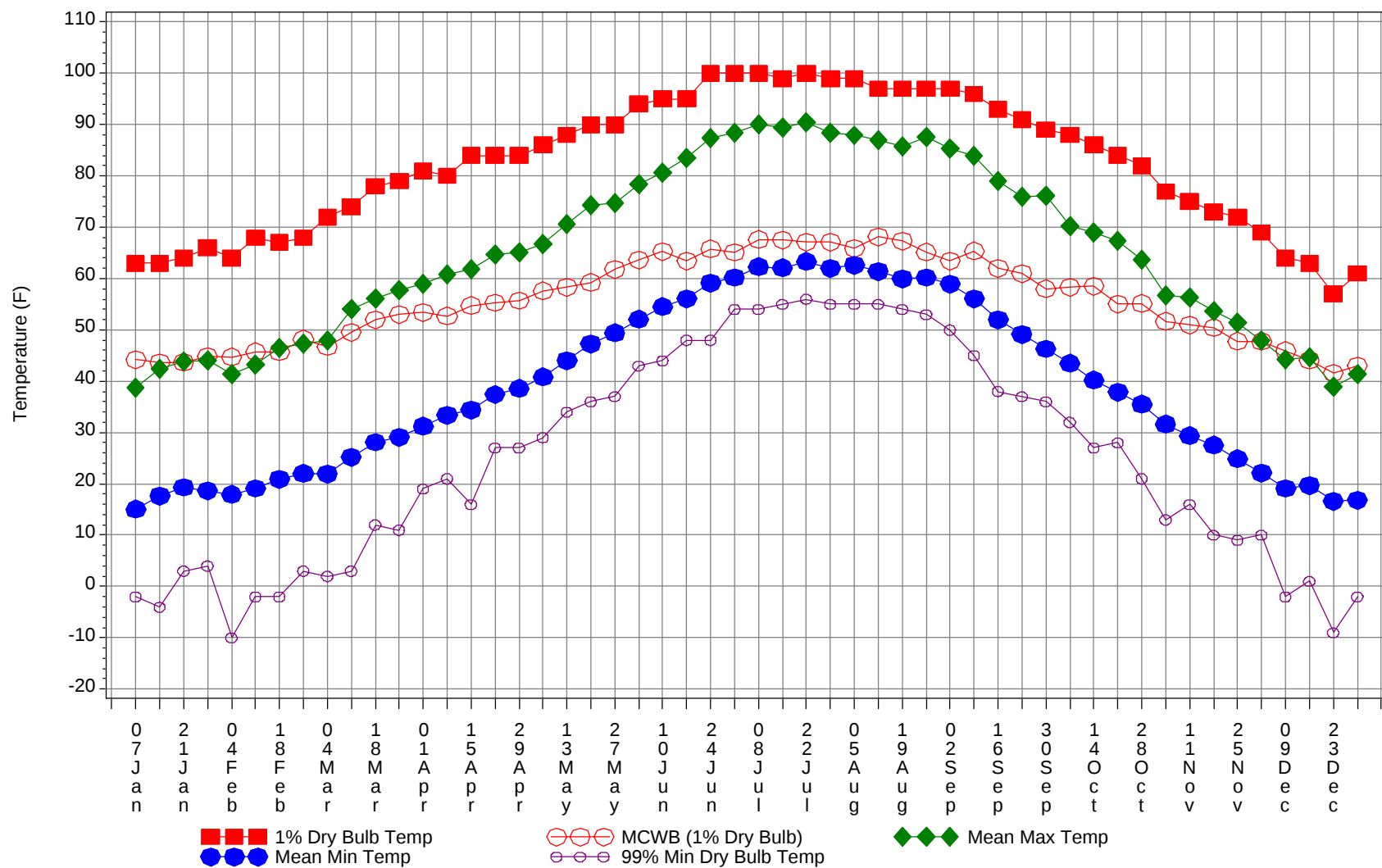
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Dry-Bulb Temperature Hours For An Average Year

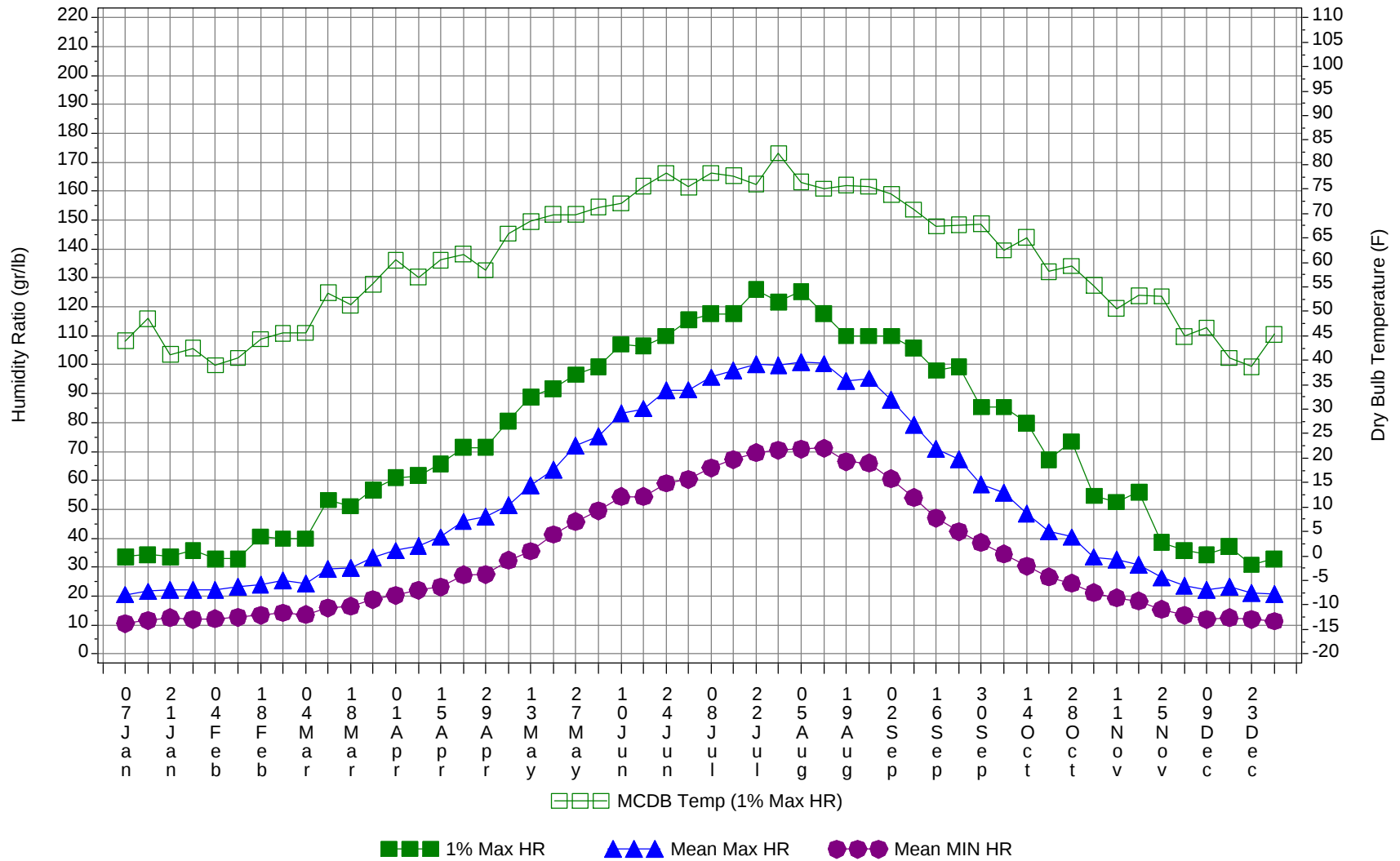
Temperature Range (° F)	Annual				
	01 To 08 LST	09 To 16 LST	17 to 00 LST	Total Obs	M C W B (° F)
105/109		1	0	1	63
100/104		14	2	16	66.4
95/ 99	0	66	9	75	66.7
90/ 94	1	160	36	197	66.3
85/ 89	2	154	45	201	65.2
80/ 84	14	259	106	379	63.7
75/ 79	45	236	152	433	61.5
70/ 74	138	253	230	621	59.7
65/ 69	197	179	199	575	58
60/ 64	327	248	260	835	54.6
55/ 59	242	213	218	673	49.5
50/ 54	228	210	222	660	45.1
45/ 49	247	219	240	706	40.5
40/ 44	175	138	173	486	36.6
35/ 39	286	181	266	733	32.9
30/ 34	303	146	256	705	28.9
25/ 29	282	100	216	598	24.5
20/ 24	146	54	103	303	20.2
15/ 19	145	43	91	279	16
10/ 14	68	21	46	135	10.9
5/ 9	35	14	25	74	6.2
0/ 4	24	8	14	46	1.1
-5/ -1	8	2	5	15	-3.3
-10/ -6	6	1	5	12	-7.9
-15/-11	2	0	1	3	-12
-20/-16	1	0	0	1	-15.9
-25/-21	0			0	-22.7
-30/-26	0			0	-25.5

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Annual Summary of Temperatures



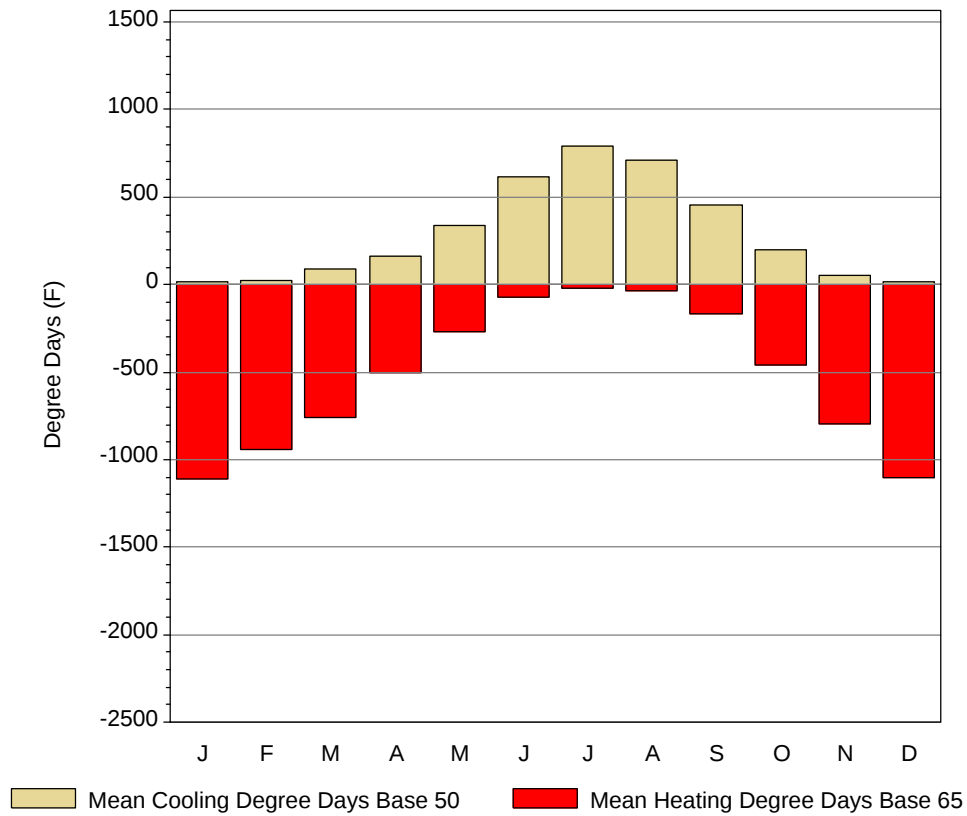
Long Term Humidity and Dry Bulb Temperature Summary



Long Term Humidity and Dry Bulb Temperature Summary

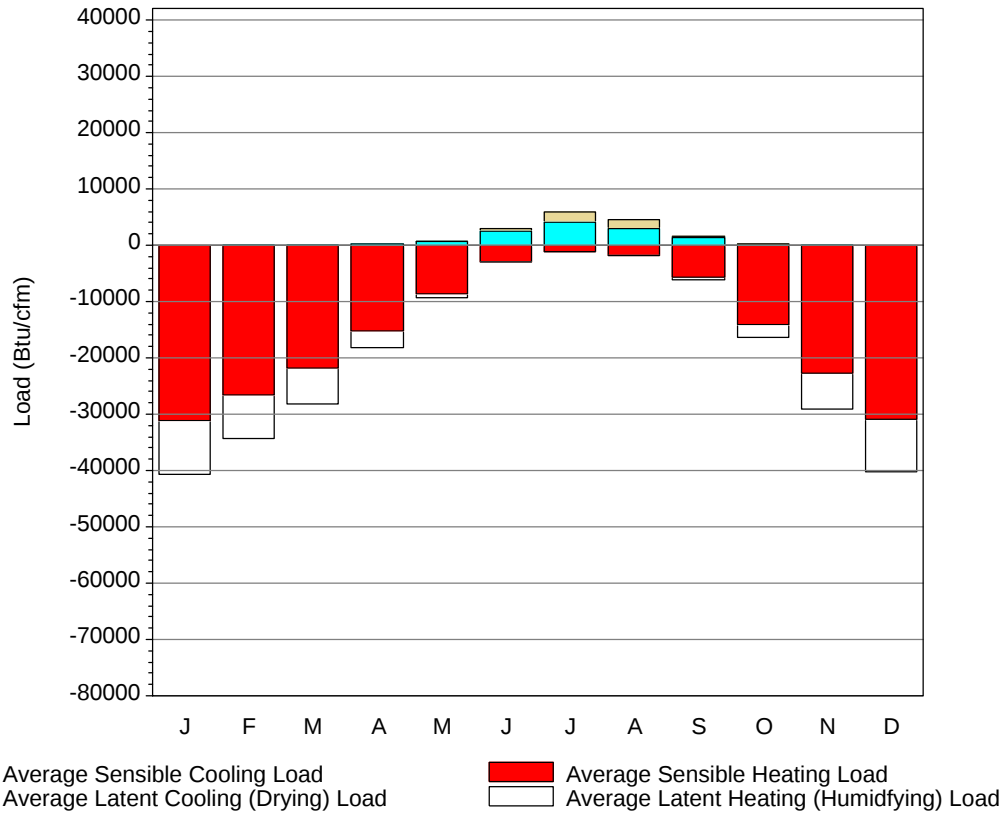
Week Ending	1.0% Temp (°F)	MCWB@ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB@ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	63	44.2	38.7	15.1	-2	33.6	44	20.5	10.5
14-Jan	63	43.6	42.5	17.6	-4	34.3	48.5	21.6	11.6
21-Jan	64	43.7	43.9	19.3	3	33.6	41.2	22.2	12.4
28-Jan	66	44.8	44.1	18.6	4	35.7	42.5	22	12
4-Feb	64	44.7	41.4	17.9	-10	32.9	39	22.1	12.1
11-Feb	68	45.7	43.3	19.1	-2	32.9	40.5	23.1	12.7
18-Feb	67	45.7	46.5	20.9	-2	40.6	44.3	23.9	13.4
25-Feb	68	48.2	47.4	22	3	39.9	45.5	25.4	14.2
4-Mar	72	46.7	48	21.9	2	39.9	45.6	24.4	13.6
11-Mar	74	49.5	54	25.2	3	53.2	53.8	29.4	15.9
18-Mar	78	52	56.2	28.1	12	51.1	51.3	29.8	16.4
25-Mar	79	53	57.7	29.1	11	56.7	55.6	33.4	18.8
1-Apr	81	53.4	59	31.2	19	60.9	60.5	35.7	20.3
8-Apr	80	52.7	60.9	33.4	21	61.6	57	37.3	22.1
15-Apr	84	54.7	61.8	34.4	16	65.8	60.5	40.4	23.1
22-Apr	84	55.3	64.6	37.4	27	71.4	61.7	45.8	27.3
29-Apr	84	55.7	65.1	38.6	27	71.4	58.4	47.3	27.5
6-May	86	57.6	66.7	40.8	29	80.5	65.9	51.3	32.3
13-May	88	58.3	70.7	44	34	88.9	68.4	58.3	35.5
20-May	90	59.2	74.3	47.3	36	91.7	69.8	63.8	41.3
27-May	90	61.8	74.7	49.4	37	96.6	69.8	72.1	45.7
4-Jun	94	63.6	78.3	52.1	43	99.4	71.3	75.2	49.5
10-Jun	95	65.3	80.6	54.5	44	107.1	72.1	83.1	54.4
17-Jun	95	63.4	83.6	56.1	48	106.4	75.6	84.8	54.4
24-Jun	100	65.8	87.4	59.1	48	109.9	78.3	91.1	59
1-Jul	100	65.1	88.4	60.2	54	115.5	75.4	91.3	60.4
8-Jul	100	67.6	90.1	62.3	54	117.6	78.3	95.7	64.3
15-Jul	99	67.5	89.4	62.1	55	117.6	77.7	98	67.2
22-Jul	100	67.1	90.4	63.3	56	126	76	100.3	69.5
29-Jul	99	67.1	88.5	62	55	121.8	82.3	99.8	70.4
5-Aug	99	65.9	87.9	62.6	55	125.3	76.4	101	70.8
12-Aug	97	68.1	86.9	61.4	55	117.6	75.1	100.4	71.1
19-Aug	97	67.3	85.8	59.9	54	109.9	75.8	94.5	66.5
26-Aug	97	65.2	87.5	60.2	53	109.9	75.5	95.3	65.9
2-Sep	97	63.4	85.4	58.9	50	109.9	73.9	87.9	60.5
9-Sep	96	65.4	83.9	56.1	45	105.7	70.8	79.3	54
16-Sep	93	62	79	52	38	98	67.4	71	46.9
23-Sep	91	61	75.9	49.1	37	99.4	67.7	67.3	42.2
30-Sep	89	58	76.1	46.3	36	85.4	67.9	58.5	38.5
7-Oct	88	58.3	70.3	43.5	32	85.4	62.5	55.7	34.5
14-Oct	86	58.5	68.9	40.2	27	79.8	65.1	48.6	30.3
21-Oct	84	55	67.3	37.9	28	67.2	58.1	42.2	26.6
28-Oct	82	55.1	63.6	35.5	21	73.5	59.3	40.4	24.4
4-Nov	77	51.7	56.8	31.6	13	54.6	55.3	33.5	21.2
11-Nov	75	50.9	56.3	29.4	16	52.5	50.6	32.5	19.3
18-Nov	73	50.4	53.6	27.5	10	56	53.2	30.8	18.3
25-Nov	72	47.8	51.4	24.9	9	38.5	53.1	26.3	15.4
2-Dec	69	47.8	48	22.1	10	35.7	44.9	23.6	13.4
9-Dec	64	45.9	44.3	19.1	-2	34.3	46.7	22.2	12
16-Dec	63	44.1	44.6	19.7	1	37.1	40.5	23.2	12.4
23-Dec	57	41.6	39	16.6	-9	30.8	38.7	21.1	11.9
31-Dec	61	43	41.3	16.8	-2	32.9	45.3	20.8	11.3

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	15.7	0.8	1111.1
FEB	25.8	2.2	939.1
MAR	86	14.2	756.4
APR	159	34.4	504.2
MAY	337	93	266.6
JUN	616.5	238.8	75.1
JUL	793.4	351.5	23.2
AUG	713.5	283.1	34.8
SEP	454.1	152	167.3
OCT	196.8	47	460
NOV	55.4	7.6	792.3
DEC	14.8	0.5	1100.9
ANN	3468	1225.1	6231

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	-31199	0	-9459
FEB	4	-26514	0	-7882
MAR	49	-21871	0	-6279
APR	189	-15113	0	-2984
MAY	694	-8652	37	-636
JUN	2459	-2936	591	-63
JUL	4026	-1202	1980	-3
AUG	2954	-1708	1657	-7
SEP	1414	-5735	184	-279
OCT	300	-13967	2	-2412
NOV	11	-22782	0	-6279
DEC	0	-30938	0	-9375
ANN	12100	-182617	4451	-45658

Station Information		Shading Geometry in Dimensionless Units	
City, State, WBAN	GOODLAND, KS 23065	Window:	1.000
Lat, Lon, Elev	39.37N 101.70W 3688ft	Overhang:	0.515
Press, Stn_Type	12.9psia Secondary	Vert Gap:	0.318

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	790	1050	1420	1800	2000	2270	2250	1990	1610	1240	850	690	1500
	Std.Dev.	47	64	92	101	116	143	111	100	121	115	58	34	35
	Minimum	690	920	1190	1630	1790	1980	2020	1840	1280	980	740	640	1430
	Maximum	870	1140	1570	2010	2300	2570	2470	2240	1800	1400	970	750	1570
	Diffuse	290	390	550	630	710	660	630	570	490	360	310	260	490
Clear Day	Global	960	1320	1820	2310	2610	2720	2640	2360	1930	1440	1030	860	1840
NORTH	Global	210	270	360	450	560	640	600	480	370	290	220	190	390
	Diffuse	210	270	360	430	490	510	490	440	370	290	220	190	350
Clear Day	Global	190	240	320	420	590	710	650	470	340	260	200	170	380
EAST	Global	560	710	900	1090	1130	1260	1250	1140	960	810	580	500	910
	Diffuse	260	340	450	530	570	600	580	530	450	350	270	230	430
Clear Day	Global	750	950	1220	1420	1520	1540	1510	1420	1240	1000	760	670	1170
SOUTH	Global	1400	1400	1300	1110	890	830	880	1050	1270	1490	1360	1340	1190
	Diffuse	380	440	520	540	540	530	530	520	480	430	380	340	470
Clear Day	Global	2030	2060	1870	1430	1060	900	950	1240	1640	1950	1990	1970	1590
WEST	Global	570	710	900	1070	1130	1240	1250	1170	1020	830	590	510	920
	Diffuse	270	340	460	540	590	610	590	540	460	360	280	230	440
Clear Day	Global	750	950	1220	1420	1520	1540	1510	1420	1240	1000	760	670	1170

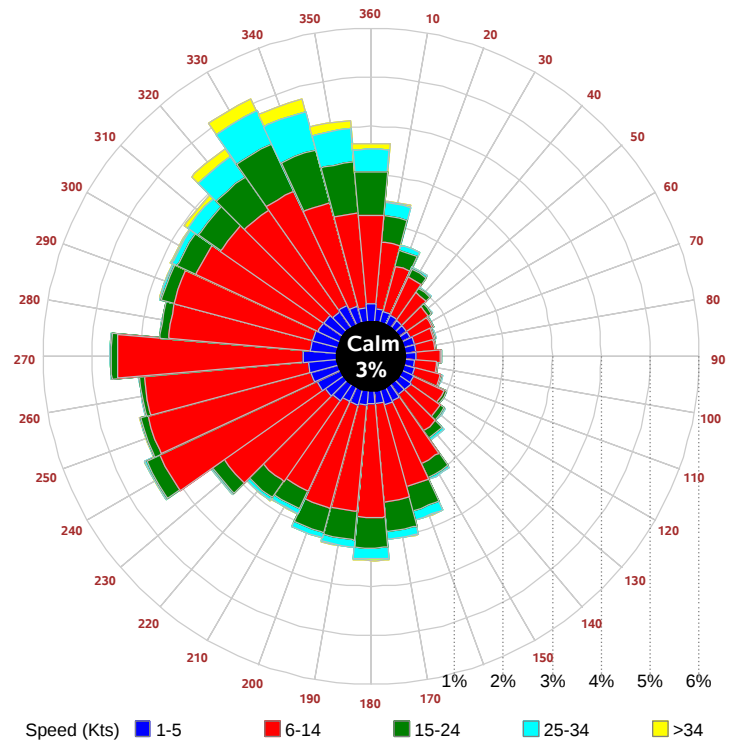
Average Annual Solar Radiation - Nearest Available Site Source: National Renewable Energy Laboratory, Golden CO, 1995

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	500	710	1000	1300	1460	1670	1650	1450	1160	860	550	430	1060
NORTH	Unshaded	150	190	250	300	360	410	380	310	250	200	150	130	260
	Shaded	130	170	230	270	330	370	350	290	230	180	140	120	230
EAST	Unshaded	380	490	640	780	810	900	890	810	680	570	410	340	640
	Shaded	350	440	570	680	700	770	760	700	600	510	370	310	560
SOUTH	Unshaded	1060	1030	900	710	530	480	510	650	850	1070	1020	1020	820
	Shaded	1040	960	710	460	340	340	330	380	610	950	990	1000	670
WEST	Unshaded	390	500	640	760	810	890	890	840	730	590	410	350	650
	Shaded	360	450	570	670	700	760	760	730	650	530	370	320	570

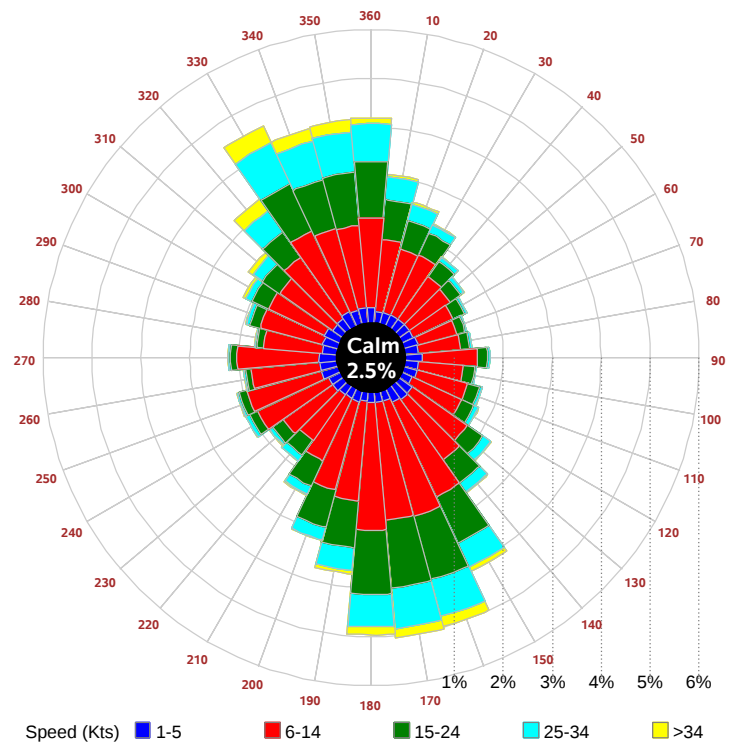
AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS Percentage Uncertainty = 9												
		March					June					
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm	
HORIZ.	M.Clear	47	78	83	62	22	55	90	104	95	65	
	M.Cloudy	30	52	58	43	16	37	64	77	72	48	
NORTH	M.Clear	10	14	15	12	7	16	15	16	16	13	
	M.Cloudy	11	16	17	14	7	15	17	18	18	14	
EAST	M.Clear	81	52	15	12	7	85	69	24	16	13	
	M.Cloudy	35	33	17	14	7	46	48	23	18	14	
SOUTH	M.Clear	48	79	84	64	23	12	34	46	39	16	
	M.Cloudy	24	44	51	36	12	13	28	38	33	16	
WEST	M.Clear	10	14	30	73	66	12	15	16	57	83	
	M.Cloudy	11	16	25	41	27	13	17	18	45	55	
M.Clear	(% hrs)	42	39	36	37	38	54	56	56	52	48	

		Sept					Dec					
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm	
HORIZ.	M.Clear	36	73	88	77	44	20	46	48	27	0	
	M.Cloudy	20	46	58	55	30	13	31	33	18	0	
NORTH	M.Clear	9	14	15	14	10	6	10	10	7	0	
	M.Cloudy	8	15	18	16	11	6	11	11	7	0	
EAST	M.Clear	78	68	20	14	10	52	37	10	7	0	
	M.Cloudy	25	37	20	16	11	20	22	11	7	0	
SOUTH	M.Clear	28	63	77	67	35	52	90	92	63	0	
	M.Cloudy	13	34	45	43	21	20	43	46	28	0	
WEST	M.Clear	9	14	15	60	80	6	10	28	54	0	
	M.Cloudy	8	15	18	40	40	6	11	19	25	0	
M.Clear	(% hrs)	53	55	58	56	57	44	44	45	45	51	

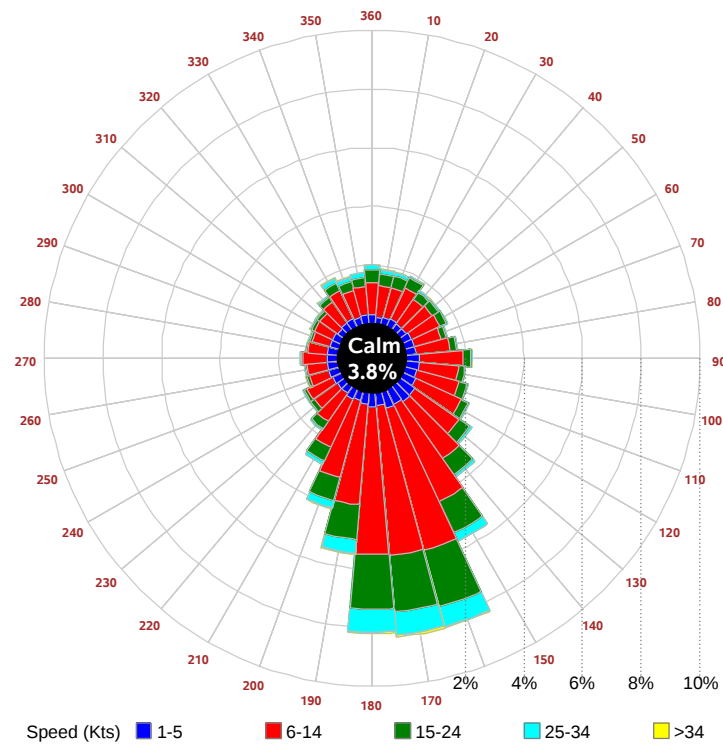
Wind Summary - December, January, and February



Wind Summary - March, April, and May



Wind Summary - June, July, and August



Wind Summary - September, October, and November

