TRIPOLI INTL, LY	
Latitude = 32.66 N	Station ID = ICAO_HLLT
Longitude = 13.16 E	Elevation = 263 Feet
Period of Record = 1988 To 2017	Average Pressure = 29.73 inches Hg

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	113	75	73	12.8	WSW
0.4% Occurrence	108	73	68	11.7	N
1.0% Occurrence	104	73	72	11.6	ENE
2.0% Occurrence	100	71	71	11.1	ENE
Mean Daily Range	22	-	-	-	WSW
97.5% Occurrence	45	43	38	4.7	WSW
99.0% Occurrence	42	40	33	4.4	SSW
99.6% Occurrence	40	38	31	4.6	SSW
Median of Extreme Lows	37	35	27	4.7	SSW

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	84	102	147	12.6	ENE
0.4% Occurrence	80	95	129	12	ENE
1.0% Occurrence	78	92	122	11.7	ENE
2.0% Occurrence	76	89	114	11.1	ENE

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	163	96	1.07	12.1	ENE
0.4% Occurrence	137	87	0.9	9.4	ENE
1.0% Occurrence	128	84	0.85	9.5	ENE
2.0% Occurrence	123	81	0.82	7.7	E

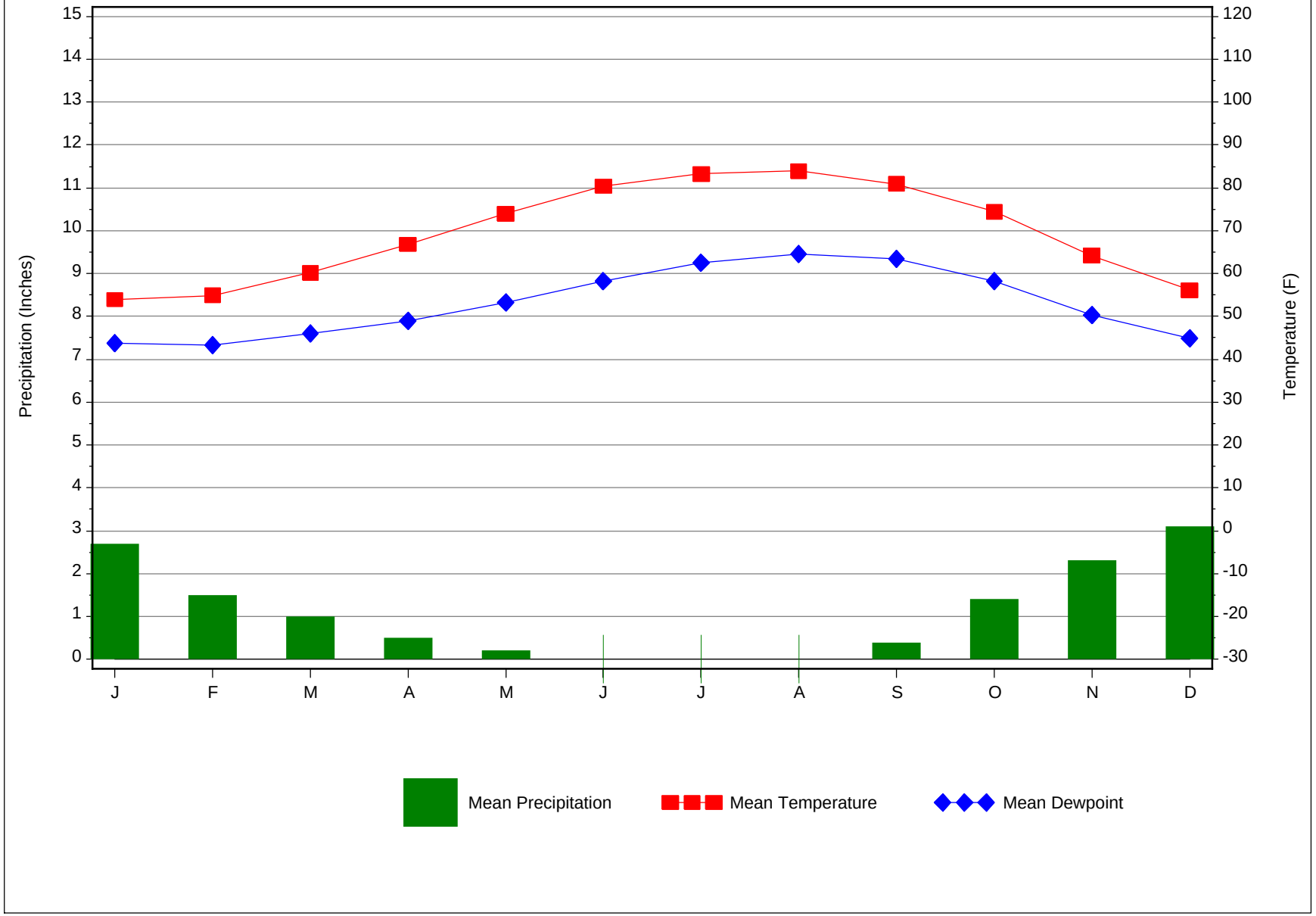
Air Conditioning/ Humid Area Criteria	**Threshold**	**T ≥ 93°F**	**T ≥ 80°F**	**Twb ≥ 73°F**	**Twb ≥ 67°F**
	# of Hours	565	1946	618	2241

Other Site Data

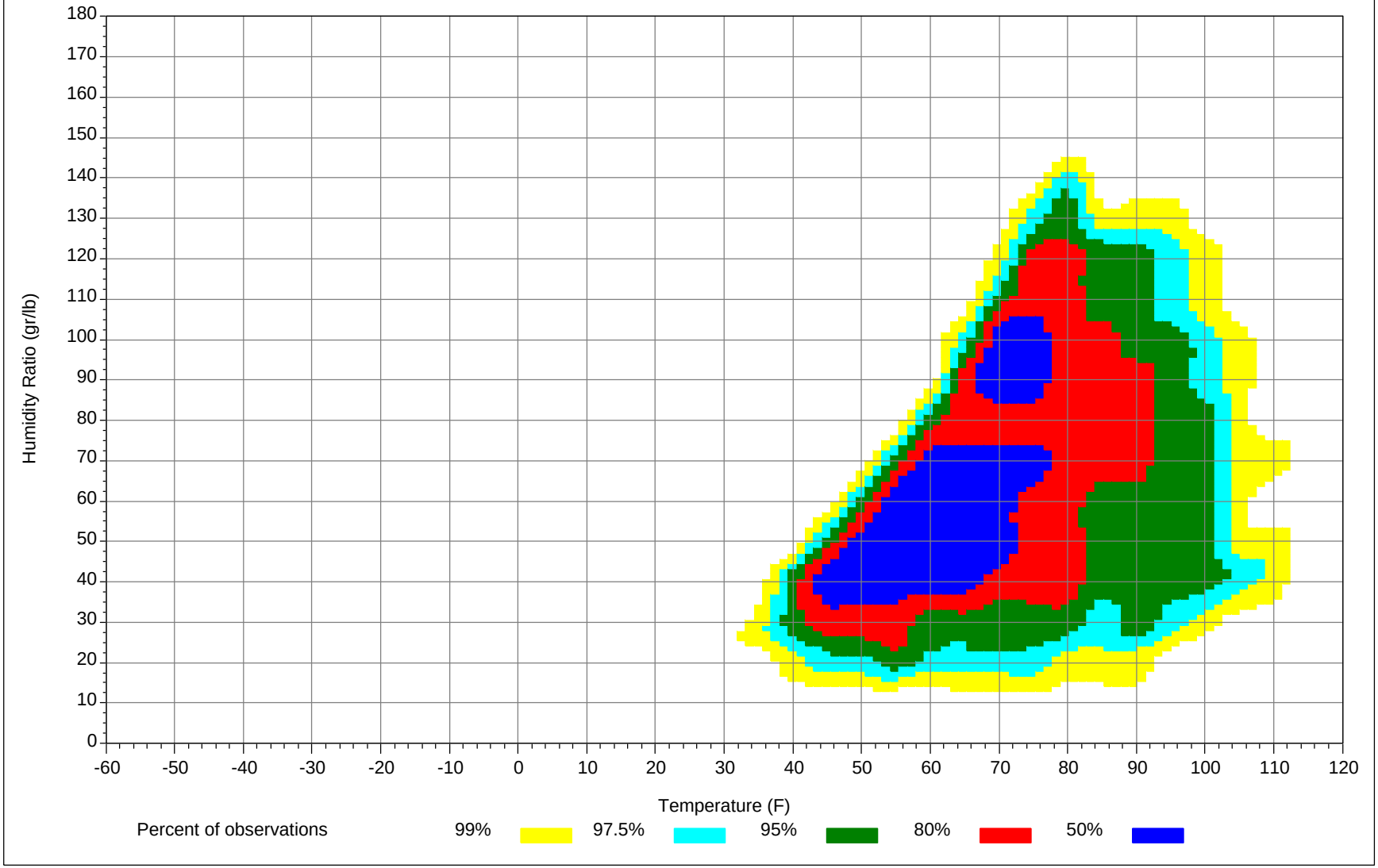
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
10	N/A	N/A	2.4 + 3.0
Ground Water Temperature (°F) 50 Foot Depth*	Frost Depth 50 Year Recurrence (in)	Ground Snow Load 50 Year Recurrence (lb/ft^2)	Average Annual Freeze-Thaw Cycles (#)
71.8	N/A	N/A	0

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

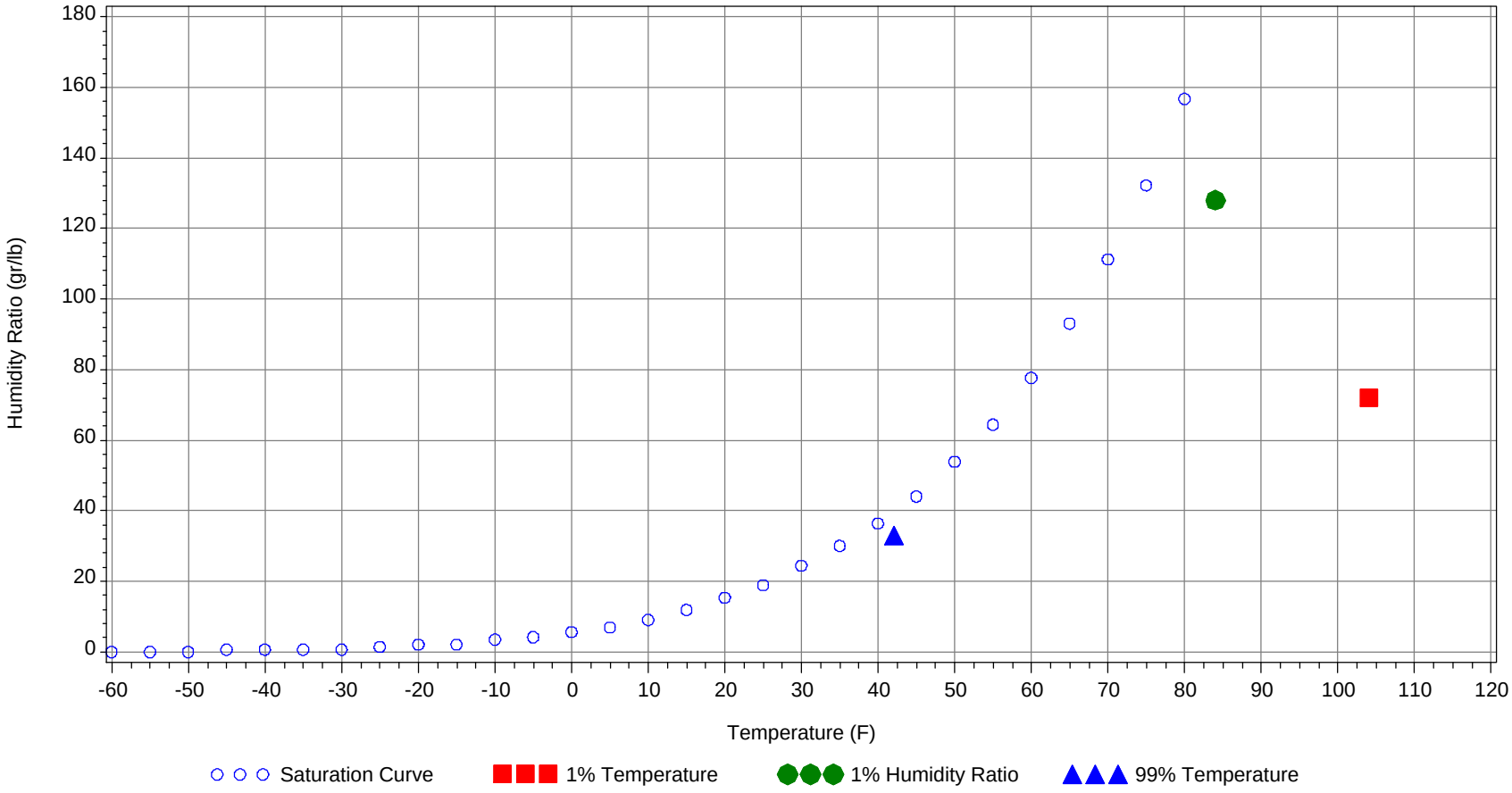
Average Annual Climate



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	104.0		73		72.0	35.6
99.0% Dry Bulb	42.0				33.0	15.3
1.0% Humidity Ratio	128.0	84.0	76.6	74.0		40.3

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**	**MCWB (°F)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°F)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°F)**
115/119															
110/114															
105/109															
100/104												0	0	0	61.6
95/ 99							0	0	0	61.5		1	0	1	65.4
90/ 94							0	0	0	60.8		3	1	4	63.6
85/ 89		0		0	61.5		1	0	1	62.5		5	3	8	62.1
80/ 84		1	0	1	57.7	0	4	2	6	58.8	0	12	6	18	60.8
75/ 79		3	1	4	56.8	0	7	4	11	57.9	1	25	12	38	58.7
70/ 74	0	11	5	16	55.4	1	18	10	29	55.9	4	37	21	62	57.5
65/ 69	0	25	12	37	54.7	2	23	13	38	54.7	9	44	30	83	56
60/ 64	3	65	36	104	53	5	55	35	95	53	23	61	57	141	54.5
55/ 59	22	69	75	166	51.1	20	56	64	140	50.9	53	40	68	161	52.1
50/ 54	70	45	79	194	48.5	62	37	64	163	48	75	16	41	132	48.9
45/ 49	100	23	34	157	44.5	83	17	27	127	44.6	63	4	9	76	45.1
40/ 44	46	5	5	56	40.5	43	4	5	52	40.6	19	0	1	20	40.8
35/ 39	8	1	0	9	36.4	10	1	1	12	35.9	2		0	2	36.5
30/ 34	0	0		0	31	1	0	0	1	31.4			0	0	34

Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure 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**	**MCWB (°F)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°F)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°F)**
115/119							0		0	83		1	0	1	80
110/114							0	0	0	75.1		3	1	4	75.2
105/109		0		0	65.5		4	1	5	71.8		10	4	14	72.8
100/104		2	1	3	69.4	0	10	5	15	70.1	0	17	8	25	72.2
95/ 99		5	2	7	65.9	0	17	8	25	68.1	1	31	14	46	70.3
90/ 94	0	11	5	16	64.4	2	25	14	41	66.6	3	41	23	67	68.6
85/ 89	1	17	8	26	63.9	3	29	16	48	65.4	9	38	28	75	67.9
80/ 84	2	26	15	43	62	11	44	29	84	64	20	50	43	113	66.8
75/ 79	6	39	24	69	60.1	21	49	39	109	62.6	38	35	54	127	65.9
70/ 74	14	54	36	104	58.9	35	42	49	126	61.4	69	13	45	127	65.1
65/ 69	22	42	42	106	57.5	47	19	47	113	60.4	64	1	16	81	63.1
60/ 64	54	31	61	146	55.9	71	7	33	111	58.1	31	0	3	34	59.8
55/ 59	65	11	36	112	53.2	45	1	6	52	54.6	5	0	0	5	55.3
50/ 54	56	2	9	67	49.4	12	0	0	12	50.3	0			0	51.8
45/ 49	20	0	0	20	46.1	1			1	46.5					
40/ 44	1			1	41.9										
35/ 39															
30/ 34															

Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure 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**	**MCWB (°F)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°F)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°F)**
115/119		1	0	1	74.6		0		0	76					
110/114		4	1	5	73.5		2	0	2	73.8		1	0	1	76.2
105/109		12	5	17	72.6		11	2	13	73.8		5	1	6	73.9
100/104		22	9	31	72.3		25	9	34	72.6		15	4	19	71.9
95/ 99	1	39	17	57	71.2	0	44	18	62	72.1		28	10	38	71.5
90/ 94	4	59	31	94	70.9	2	68	37	107	72.2	1	47	22	70	71.4
85/ 89	9	53	43	105	70.6	9	50	47	106	71.9	6	50	33	89	71.1
80/ 84	24	41	59	124	69.9	32	35	71	138	71.5	26	57	63	146	70.5
75/ 79	63	16	62	141	69.5	85	12	58	155	70.6	63	28	74	165	69.5
70/ 74	101	2	20	123	67.6	97	2	5	104	68.3	90	9	29	128	67.1
65/ 69	43	0	1	44	65	21	0		21	65.2	44	1	4	49	64.3
60/ 64	5			5	61.6	0			0	62.5	10	0	0	10	60.8
55/ 59															
50/ 54															
45/ 49															
40/ 44															
35/ 39															
30/ 34															

Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure 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**	**MCWB (°F)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°F)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°F)**
115/119															
110/114		0		0	77										
105/109		0	0	0	74.3										
100/104		5	1	6	71.4			0	0	69					
95/ 99	0	12	3	15	68.7		0	0	0	66.3					
90/ 94	0	28	8	36	67.8		2	0	2	66		0		0	60.5
85/ 89	1	31	13	45	67.9	0	6	1	7	64		1	0	1	58.7
80/ 84	5	55	33	93	67.1	0	20	6	26	62.8	0	2	1	3	58.1
75/ 79	24	58	61	143	65.9	2	39	17	58	61.7	0	7	3	10	58.5
70/ 74	60	38	72	170	64.6	7	57	38	102	60	1	20	8	29	56.7
65/ 69	69	15	38	122	62.4	20	47	53	120	58.8	2	40	17	59	55.9
60/ 64	64	6	16	86	59.4	54	38	68	160	56.6	9	66	49	124	54
55/ 59	22	1	2	25	54.6	82	22	42	146	53.4	38	56	79	173	51.6
50/ 54	3		0	3	49.7	58	7	12	77	48.9	89	39	67	195	48.5
45/ 49						16	1	2	19	44.2	84	15	22	121	44.4
40/ 44						2	0		2	38.6	21	2	2	25	40.2
35/ 39						0	0		0	34.5	3	0	0	3	35.8
30/ 34											0			0	32.5

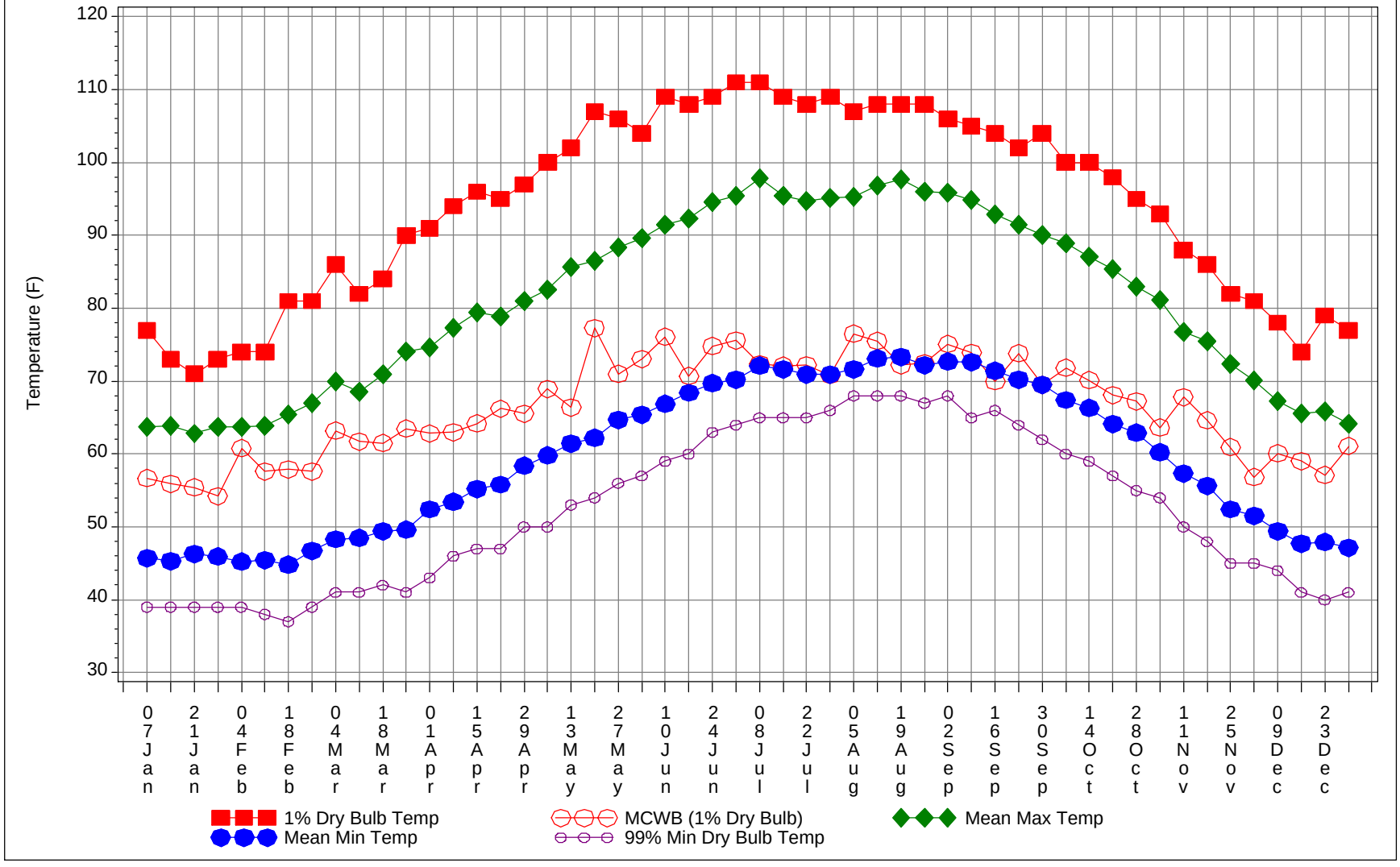
Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

Dry-Bulb Temperature Hours For An Average Year

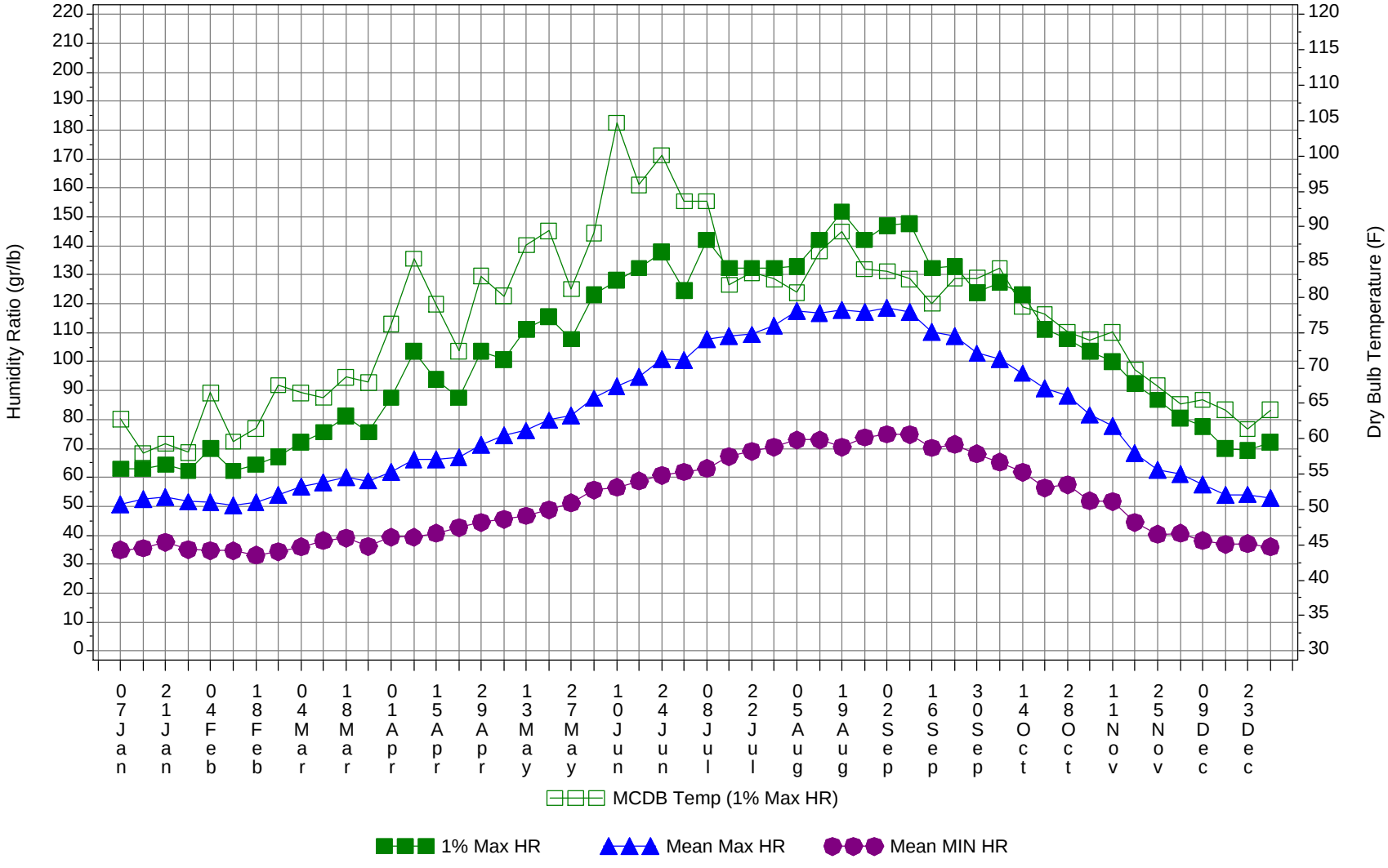
	Annual				
Temperature Range (°F)	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°F)**
115/119		2	0	2	77.2
110/114		11	3	14	74.4
105/109		42	13	55	73
100/104	0	94	37	131	72
95/ 99	2	175	72	249	70.6
90/ 94	12	281	142	435	69.9
85/ 89	37	278	191	506	69.2
80/ 84	118	343	324	785	67.8
75/ 79	297	317	404	1018	66.2
70/ 74	469	304	339	1112	63.3
65/ 69	340	260	274	874	59.7
60/ 64	329	333	362	1024	55.8
55/ 59	354	258	375	987	52.2
50/ 54	430	149	275	854	48.6
45/ 49	374	60	95	529	44.7
40/ 44	134	12	12	158	40.5
35/ 39	23	2	1	26	36.1
30/ 34	1	0	0	1	31.5

Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure 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



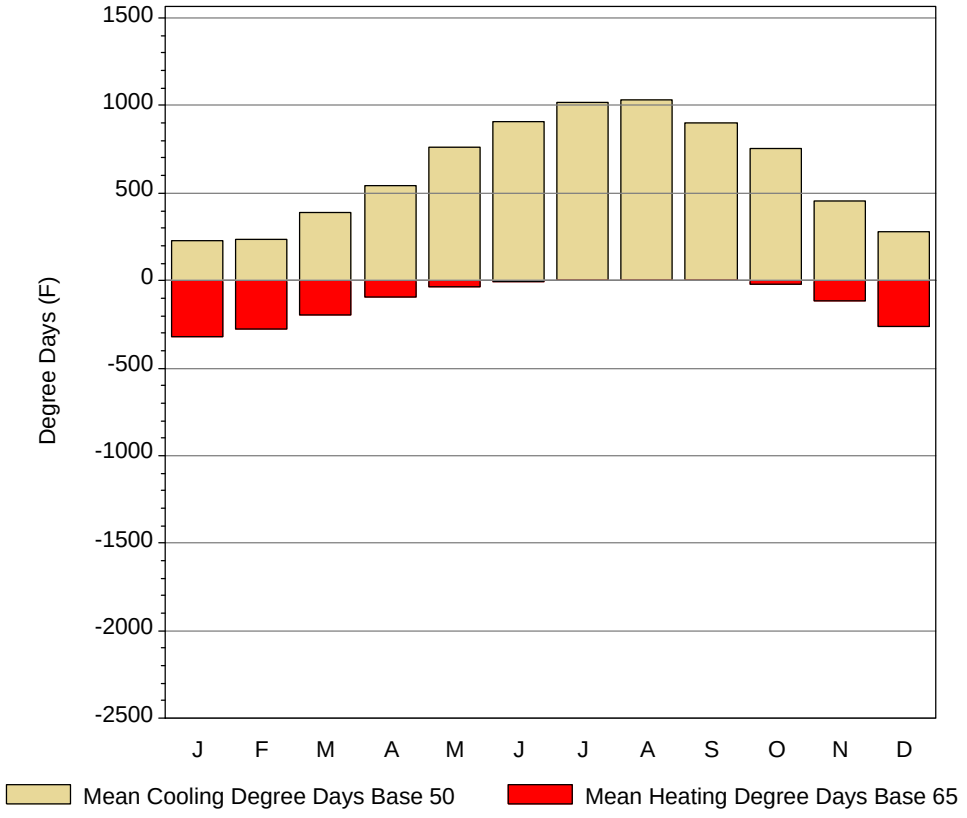
Long Term Humidity and Dry Bulb Temperature Summary



Long Term Humidity and Dry Bulb Temperature Summary

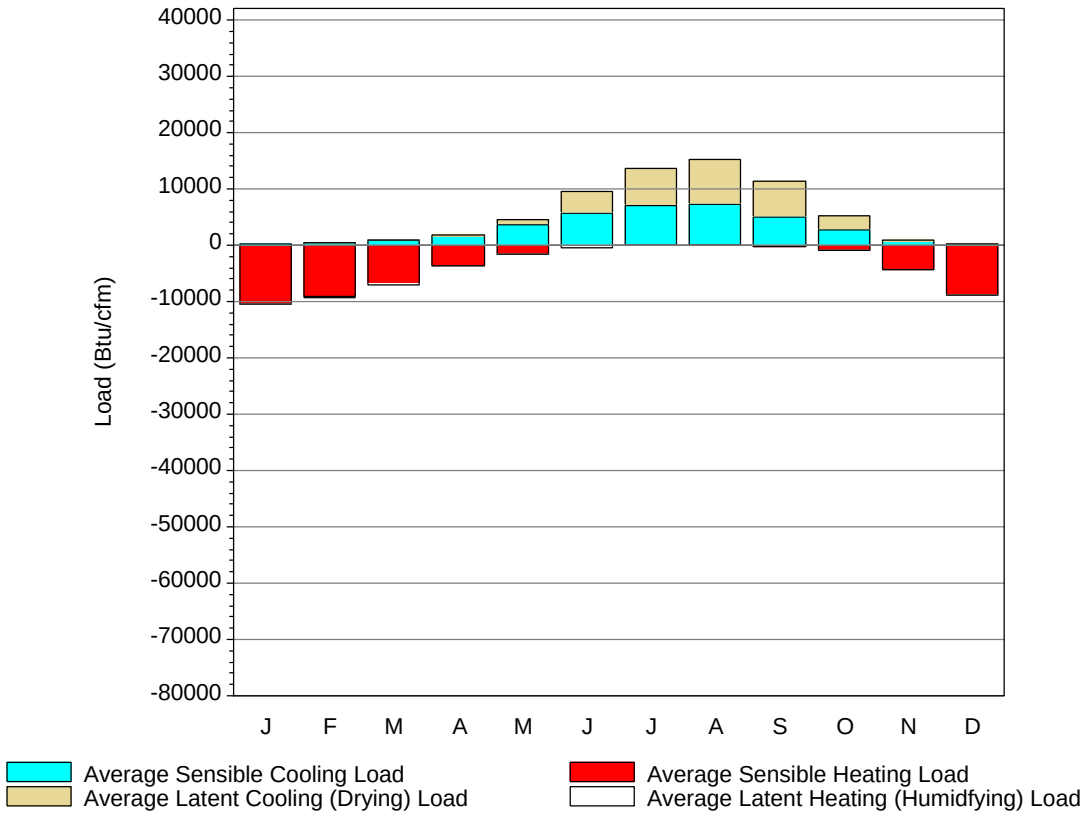
Week Ending	1.0% Temp (°F)	MCWB@ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB@ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	77	56.7	63.7	45.7	39	63	62.8	50.6	34.9
14-Jan	73	55.9	63.9	45.3	39	63	58	52.5	35.5
21-Jan	71	55.4	62.8	46.3	39	64.4	59.3	53.2	37.6
28-Jan	73	54.2	63.7	45.9	39	62.3	58.1	51.6	35
4-Feb	74	60.8	63.7	45.2	39	70	66.5	51.4	34.7
11-Feb	74	57.6	63.8	45.4	38	62.3	59.6	50.4	34.6
18-Feb	81	57.9	65.4	44.8	37	64.4	61.5	51.5	33.1
25-Feb	81	57.6	67	46.7	39	67.2	67.6	53.8	34.4
4-Mar	86	63.2	70	48.3	41	72.1	66.5	56.8	35.9
11-Mar	82	61.7	68.6	48.5	41	75.6	65.8	58.3	38.2
18-Mar	84	61.5	71	49.4	42	81.2	68.7	60	39.1
25-Mar	90	63.5	74	49.6	41	75.6	68	58.8	36.2
1-Apr	91	62.8	74.6	52.4	43	87.5	76.2	62	39.3
8-Apr	94	63	77.3	53.4	46	103.6	85.5	66.3	39.3
15-Apr	96	64.2	79.5	55.2	47	93.8	79	66.2	40.7
22-Apr	95	66.2	78.8	55.8	47	87.5	72.4	66.9	42.7
29-Apr	97	65.5	81	58.4	50	103.6	83	71.2	44.4
6-May	100	68.9	82.5	59.8	50	100.8	80.2	74.6	45.6
13-May	102	66.4	85.6	61.4	53	111.3	87.4	76.2	46.7
20-May	107	77.3	86.5	62.2	54	115.5	89.4	79.8	48.8
27-May	106	71	88.4	64.7	56	107.8	81.2	81.4	51.2
4-Jun	104	73	89.6	65.4	57	123.2	89.1	87.4	55.6
10-Jun	109	76.1	91.4	66.9	59	128.1	104.7	91.4	56.6
17-Jun	108	70.7	92.3	68.4	60	132.3	95.9	94.7	58.8
24-Jun	109	74.8	94.6	69.7	63	137.9	100.1	100.8	60.7
1-Jul	111	75.6	95.4	70.2	64	124.6	93.6	100.6	61.9
8-Jul	111	72.3	97.8	72.1	65	142.1	93.6	107.7	63
15-Jul	109	72.1	95.4	71.6	65	132.3	81.8	108.9	67.2
22-Jul	108	72.2	94.7	70.9	65	132.3	83.5	109.4	69
29-Jul	109	70.8	95.2	70.9	66	132.3	82.6	112.4	70.5
5-Aug	107	76.5	95.3	71.6	68	133	80.7	117.4	72.9
12-Aug	108	75.5	96.9	73.1	68	142.1	86.5	116.8	72.9
19-Aug	108	72.2	97.7	73.3	68	151.9	89.3	117.9	70.5
26-Aug	108	72.5	96	72.2	67	142.1	84	117.2	73.8
2-Sep	106	75.1	95.8	72.7	68	147	83.7	118.6	74.9
9-Sep	105	73.9	94.8	72.6	65	147.7	82.6	117.3	74.8
16-Sep	104	70	92.9	71.4	66	132.3	79.1	110.4	70.2
23-Sep	102	73.8	91.4	70.2	64	133	82.7	109	71.3
30-Sep	104	69.5	90.1	69.5	62	123.9	82.7	102.9	68.1
7-Oct	100	71.8	88.9	67.4	60	127.4	84.1	100.8	65.2
14-Oct	100	70.1	87.1	66.3	59	123.2	78.7	96	61.8
21-Oct	98	68.1	85.4	64.1	57	111.3	77.6	90.9	56.3
28-Oct	95	67.2	83	62.9	55	107.8	75.1	88.2	57.4
4-Nov	93	63.6	81.1	60.2	54	103.6	74	81.6	51.9
11-Nov	88	67.8	76.8	57.3	50	100.1	75.1	77.7	51.6
18-Nov	86	64.6	75.4	55.6	48	92.4	69.8	68.3	44.5
25-Nov	82	60.9	72.3	52.4	45	86.8	67.5	62.6	40.3
2-Dec	81	56.8	70.1	51.5	45	80.5	64.9	61.3	40.7
9-Dec	78	60.1	67.3	49.4	44	77.7	65.5	57.6	38.2
16-Dec	74	59	65.5	47.7	41	70	64.1	54	36.9
23-Dec	79	57.1	65.8	47.9	40	69.3	61.4	54.1	37.1
31-Dec	77	61.1	64.2	47.1	41	72.1	64.1	52.9	35.9

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	226.1	43.5	320.1
FEB	238.6	56.2	277
MAR	389.5	106.6	196.8
APR	543.7	185.7	94.1
MAY	761.6	328.6	32.1
JUN	909.4	463.9	4.5
JUL	1020.6	555.9	0.3
AUG	1029.3	564.4	0.1
SEP	902.4	453.3	1
OCT	753	305.9	17.9
NOV	452.9	119.4	111.9
DEC	276.6	54.5	263.7
ANN	7503.7	3237.9	1319.5

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	264	-10356	0	-189
FEB	413	-8959	2	-238
MAR	853	-6752	41	-212
APR	1674	-3572	219	-121
MAY	3593	-1479	874	-37
JUN	5744	-311	3831	-14
JUL	7179	-55	6584	-1
AUG	7207	-26	8127	0
SEP	5058	-117	6386	-1
OCT	2717	-961	2495	-6
NOV	724	-4205	264	-119
DEC	325	-8781	7	-170
ANN	35751	-45574	28830	-1108

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

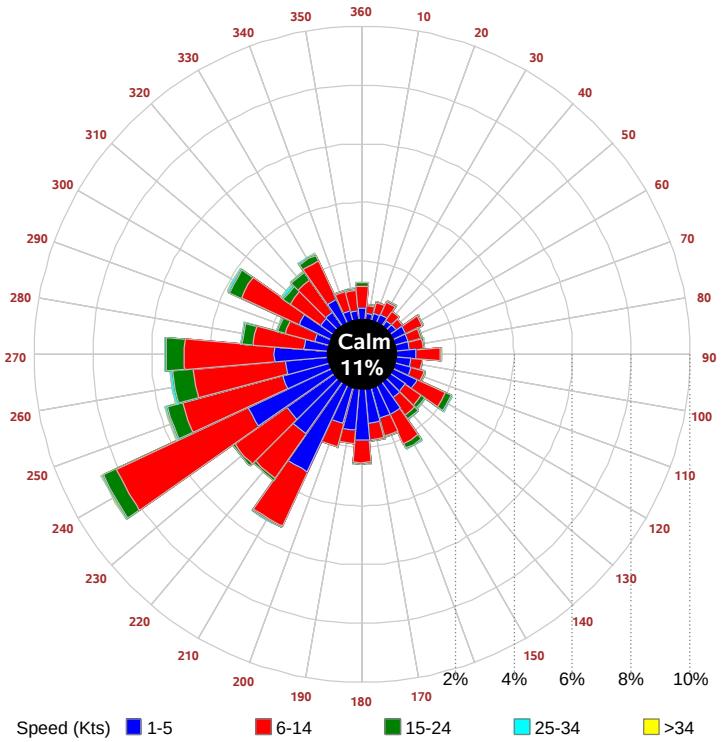
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ.	Global													
	Std.Dev.													
	Minimum													
	Maximum													
	Diffuse													
Clear Day	Global													
NORTH	Global													
	Diffuse													
Clear Day	Global													
EAST	Global													
	Diffuse													
Clear Day	Global													
SOUTH	Global													
	Diffuse													
Clear Day	Global													
WEST	Global													
	Diffuse													
Clear Day	Global													

AVERAGE 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													

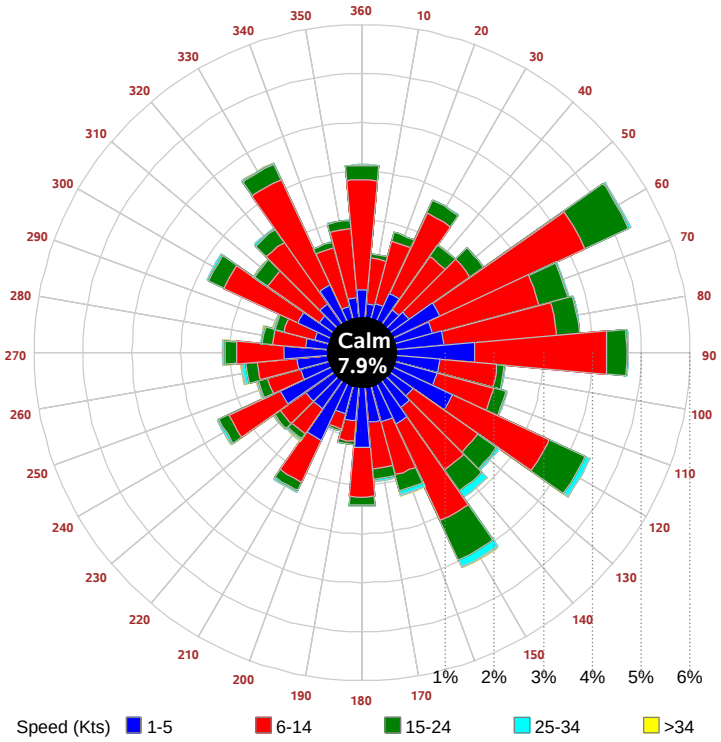
AVERAGE INCIDENT ILLUMINENCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9											
				March					June		
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear										
	M.Cloudy										
NORTH	M.Clear										
	M.Cloudy										
EAST	M.Clear										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

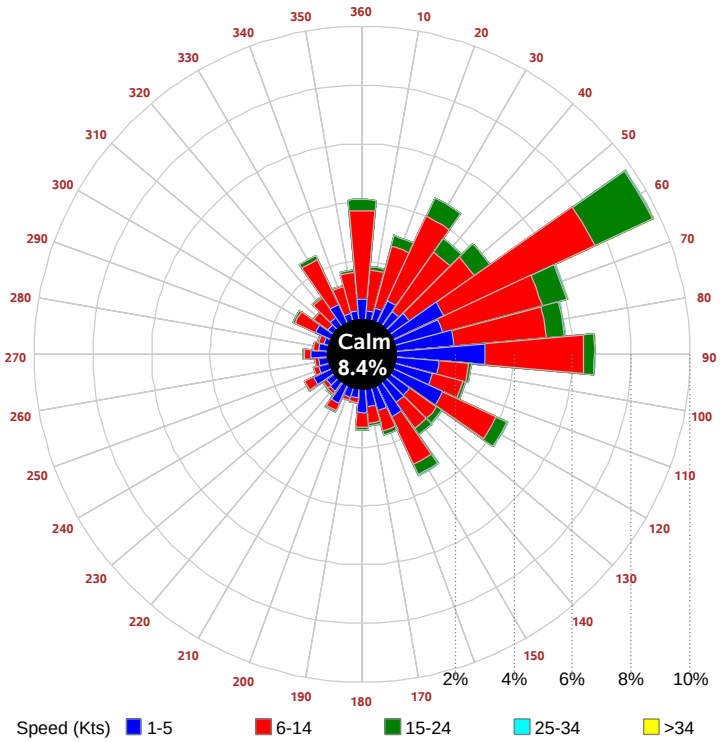
Wind Summary - December, January, and February



Wind Summary - March, April, and May



Wind Summary - June, July, and August



Wind Summary - September, October, and November