RIMINI, IT	
Latitude = 44.02 N	Station ID = ICAO_LIPR
Longitude = 12.61 E	Elevation = 41 Feet
Period of Record = 1988 To 2017	Average Pressure = 29.95 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	95	72	84	10.6	S
0.4% Occurrence	90	76	112	8.8	NE
1.0% Occurrence	88	76	119	8.3	E
2.0% Occurrence	86	76	118	8.1	E
Mean Daily Range	15	-	-	-	W
97.5% Occurrence	32	31	24	4.8	W
99.0% Occurrence	28	27	19	3.9	SSW
99.6% Occurrence	27	27	18	3.9	SSW
Median of Extreme Lows	23	23	16	4.9	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	87	170	8.6	E
0.4% Occurrence	82	85	157	7.7	E
1.0% Occurrence	79	84	140	7.5	E
2.0% Occurrence	77	83	130	7.2	E

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	169	86	1.12	8.5	E
0.4% Occurrence	159	84	1.05	7.4	E
1.0% Occurrence	143	84	0.94	8.3	E
2.0% Occurrence	133	82	0.88	7.2	E

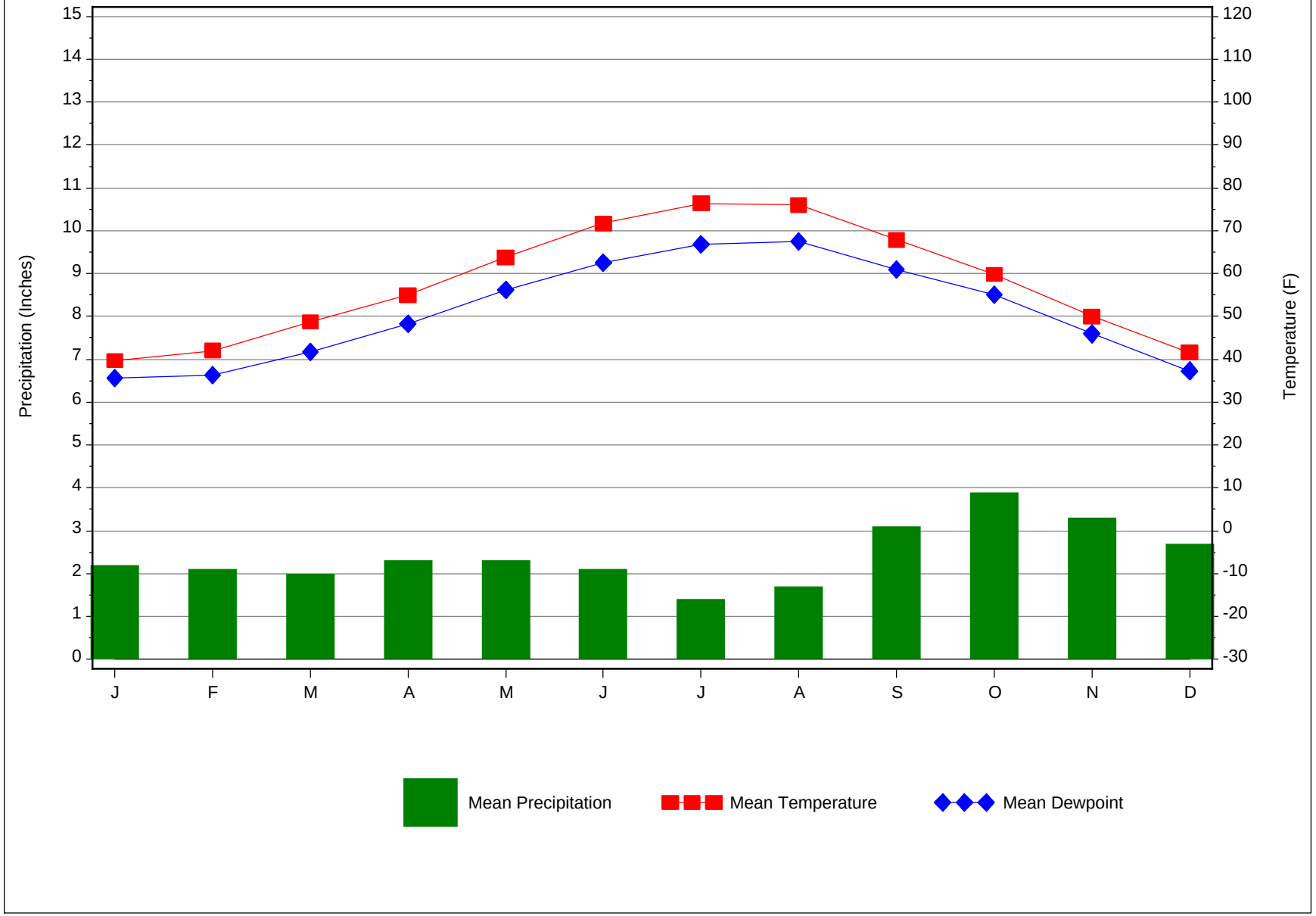
Air Conditioning/ Humid Area Criteria	**Threshold**	**T ≥ 93°F**	**T ≥ 80°F**	**Twb ≥ 73°F**	**Twb ≥ 67°F**
	# of Hours	14	700	674	1765

Other Site Data

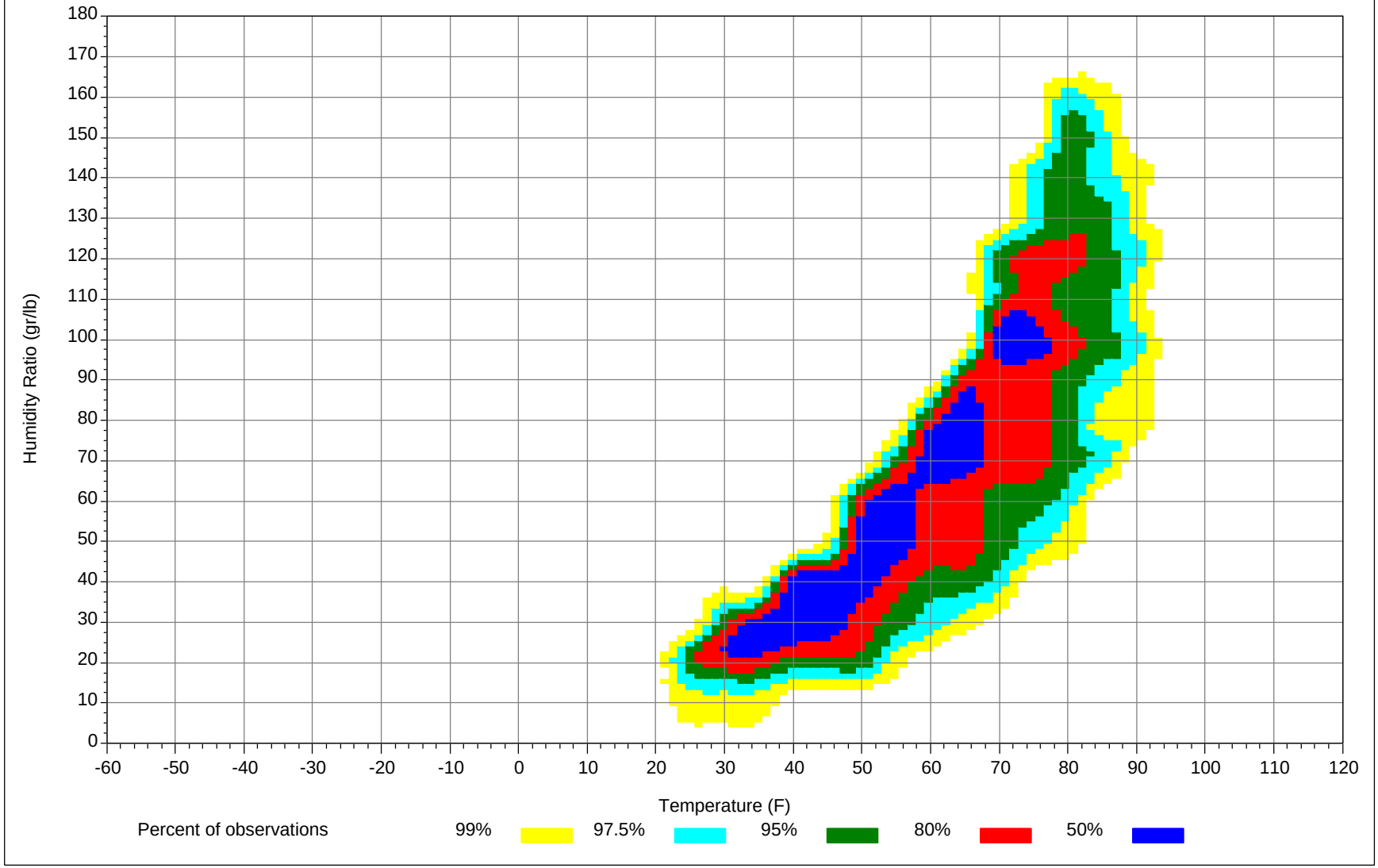
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
8	N/A	N/A	3.3 + 0.7
Ground Water Temperature (°F) 50 Foot Depth*	Frost Depth 50 Year Recurrence (in)	Ground Snow Load 50 Year Recurrence (lb/ft^2)	Average Annual Freeze-Thaw Cycles (#)
60.3	N/A	N/A	26

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

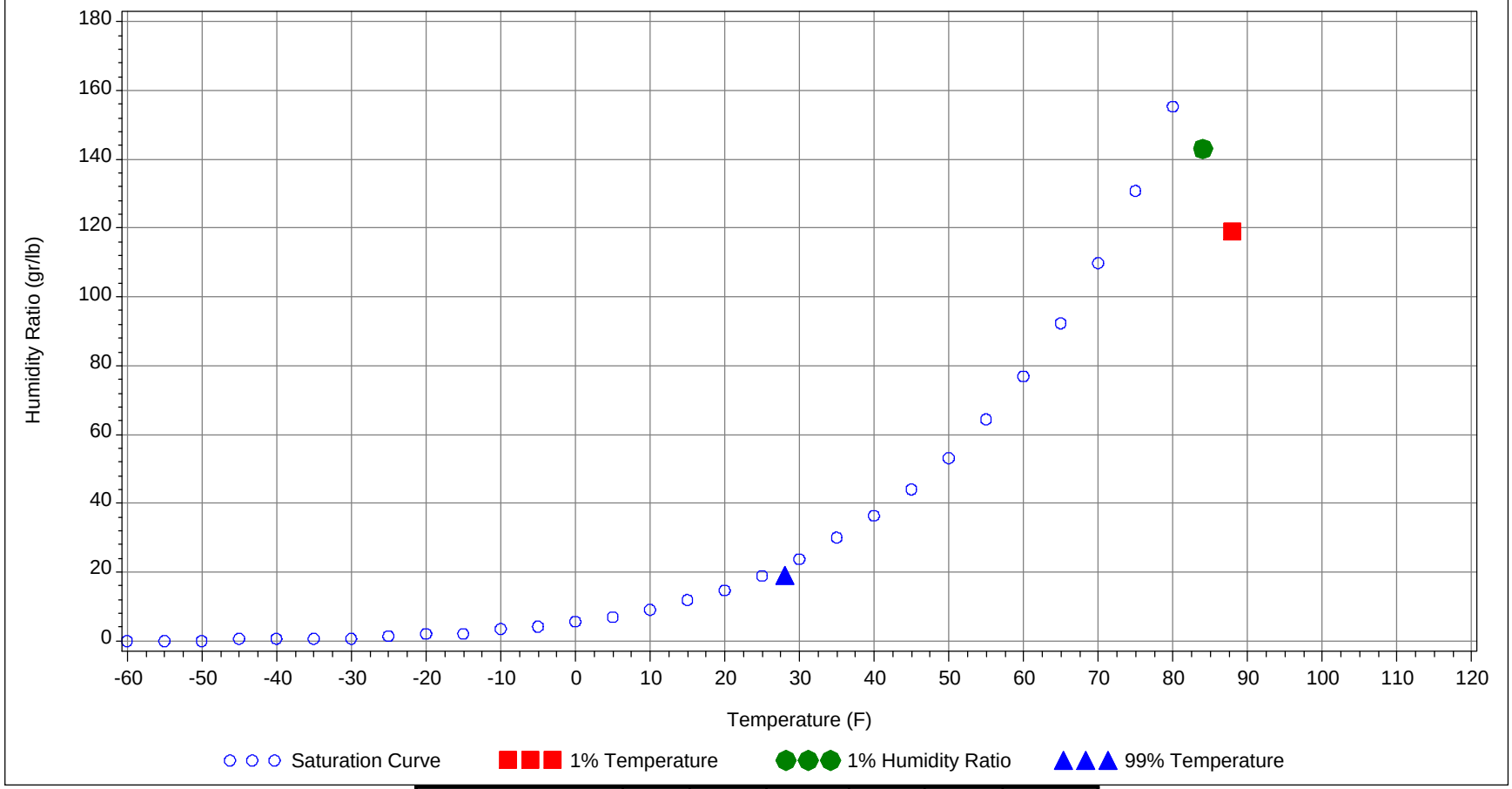
Average Annual Climate



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		119.0	40.0
99.0% Dry Bulb	28.0				19.0	9.5
1.0% Humidity Ratio	143.0	84.0	78.9	77.3		42.5

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)**
100/104															
95/ 99															
90/ 94															
85/ 89															
80/ 84															
75/ 79												0	0	0	60.5
70/ 74								0	0	52		2	0	2	58.3
65/ 69		0		0	56.3		0	0	0	54.2	0	7	3	10	55.9
60/ 64	0	2	1	3	54.5	0	5	2	7	52.7	1	26	12	39	53.9
55/ 59	4	7	5	16	50.8	2	17	8	27	49.8	10	64	39	113	51.6
50/ 54	5	21	11	37	47.1	11	46	28	85	47.1	40	77	78	195	48.5
45/ 49	24	65	51	140	43.8	36	65	62	163	43.8	71	48	67	186	44.1
40/ 44	46	58	60	164	40.3	35	39	50	124	39.9	58	13	30	101	40.3
35/ 39	73	58	75	206	36.1	68	33	48	149	36	47	8	15	70	36.5
30/ 34	64	29	37	130	31.5	50	15	21	86	31.1	17	2	3	22	31.4
25/ 29	28	7	7	42	26.6	19	4	5	28	26.3	3	0	0	3	26.4
20/ 24	3	0	0	3	22.3	2	0	1	3	21.4	1		0	1	21
15/ 19	0	0		0	18.4	1	0	0	1	17.5					
10/ 14						0	0		0	13.1					

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)**
100/104															
95/ 99													0	0	75.5
90/ 94							0	0	0	71.3		3	1	4	74.7
85/ 89							1	1	2	70.9		15	6	21	74.4
80/ 84		0	0	0	63.9		10	4	14	68.3	1	57	32	90	72.6
75/ 79		1	0	1	62.2	1	35	16	52	66.4	18	82	68	168	69.2
70/ 74	0	8	3	11	60.1	7	72	45	124	64	50	55	68	173	66
65/ 69	1	29	11	41	58.6	16	60	53	129	61.5	54	17	32	103	63.6
60/ 64	7	75	46	128	56.8	59	54	76	189	59.2	73	9	26	108	60.4
55/ 59	39	79	84	202	53.4	94	14	41	149	55.4	38	2	6	46	56
50/ 54	88	38	65	191	49.9	54	2	12	68	51.2	6	0	0	6	51.8
45/ 49	68	9	23	100	45.4	16	0	2	18	46.1	1		0	1	46.4
40/ 44	23	1	5	29	41	2		0	2	41.3					
35/ 39	14	0	1	15	36.9										
30/ 34	1		0	1	31.5										
25/ 29															
20/ 24															
15/ 19															
10/ 14															

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)**
100/104		0		0	71		0	0	0	74					
95/ 99		1	1	2	72.8		2	1	3	72.9					
90/ 94		16	6	22	75.1	0	15	3	18	76.6		1	0	1	75
85/ 89	1	41	18	60	75.9	1	41	16	58	76.6		3	1	4	73.1
80/ 84	9	105	75	189	73.8	7	100	70	177	74.4	1	24	8	33	73.1
75/ 79	43	62	82	187	70.4	35	61	85	181	70.9	5	72	38	115	69.3
70/ 74	85	18	44	147	67.7	88	21	48	157	68.2	22	78	71	171	66
65/ 69	61	4	15	80	64.8	69	6	17	92	65.1	47	35	50	132	63.6
60/ 64	40	1	6	47	61	40	2	7	49	61.4	80	22	49	151	60.6
55/ 59	8	0	1	9	56.2	7	0	1	8	56	60	5	19	84	56.1
50/ 54	1			1	51.3	1		0	1	52.8	23	1	3	27	51.8
45/ 49											1	0	0	1	46.4
40/ 44											0			0	42
35/ 39															
30/ 34															
25/ 29															
20/ 24															
15/ 19															
10/ 14															

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)**
100/104															
95/ 99															
90/ 94															
85/ 89															
80/ 84		1		1	69.4										
75/ 79	0	9	2	11	67.9		0		0	60.4					
70/ 74	3	43	18	64	65.8	1	3	1	5	62.7		0		0	60.2
65/ 69	11	52	37	100	62.9	1	10	3	14	60.9	0	1	0	1	58.7
60/ 64	54	74	77	205	59.8	10	31	19	60	58.5	2	5	2	9	55.5
55/ 59	77	43	64	184	55.5	30	56	47	133	54.5	5	9	7	21	52.1
50/ 54	63	18	35	116	50.9	60	66	67	193	50	17	41	24	82	48.5
45/ 49	32	6	13	51	45.8	56	44	55	155	45	37	70	57	164	44.1
40/ 44	8	1	1	10	41.7	35	17	26	78	40.8	50	53	58	161	40.4
35/ 39	1	0	0	1	37.8	32	10	18	60	36.7	65	45	65	175	36.3
30/ 34						14	3	4	21	31.8	51	17	28	96	31.5
25/ 29						1	0	0	1	27.5	19	5	5	29	26.7
20/ 24											1	1	1	3	22.5
15/ 19											0	0	0	0	17.6
10/ 14											1	0	0	1	12.6

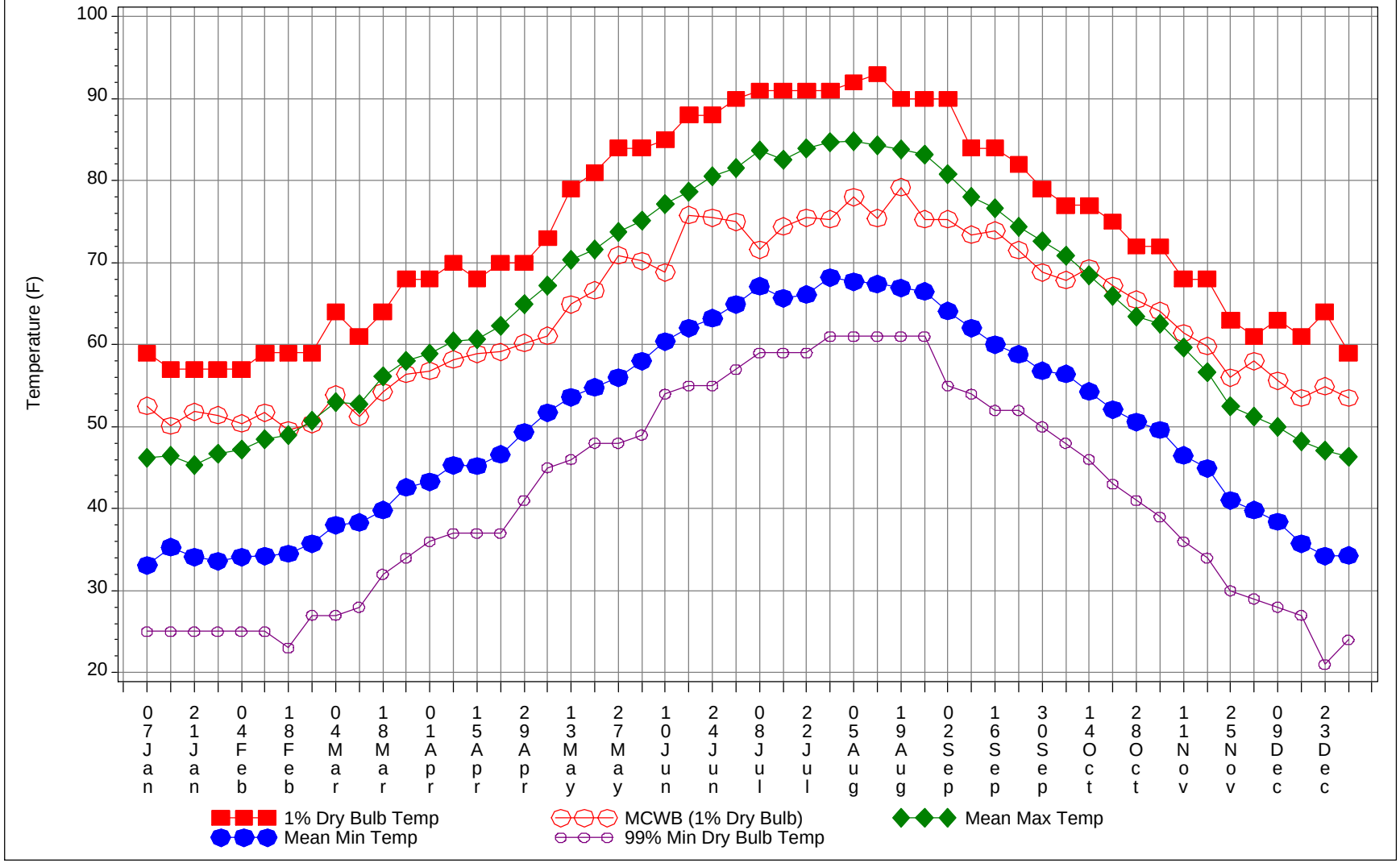
Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

Dry-Bulb Temperature Hours For An Average Year

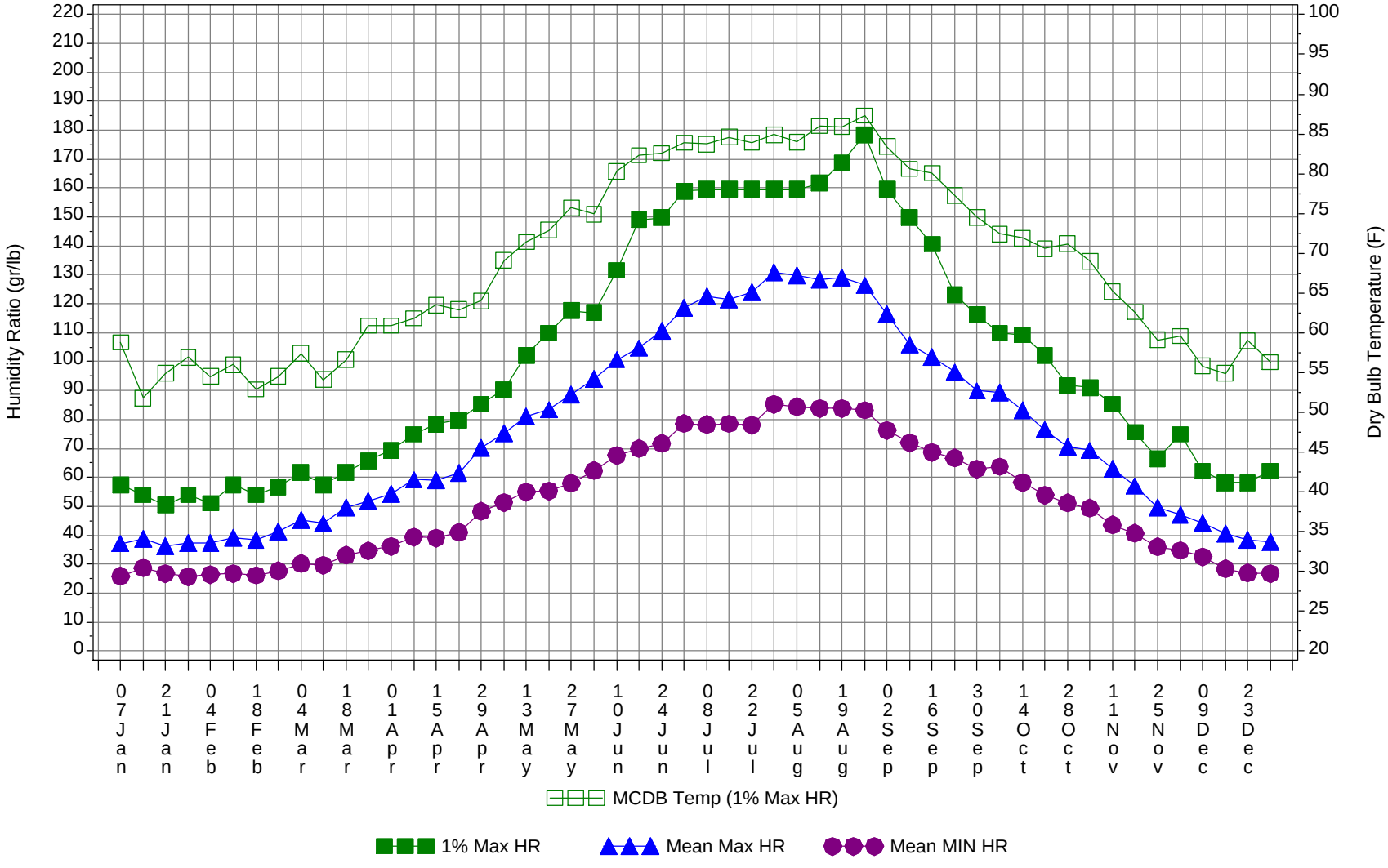
	Annual				
Temperature Range (°F)	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°F)**
100/104		0	0	0	73.3
95/ 99		3	2	5	72.9
90/ 94	0	35	11	46	75.6
85/ 89	2	101	42	145	75.8
80/ 84	19	296	189	504	73.6
75/ 79	102	322	291	715	69.7
70/ 74	257	299	298	854	66.3
65/ 69	260	222	221	703	63
60/ 64	366	307	321	994	59.2
55/ 59	373	296	322	991	54.3
50/ 54	368	310	325	1003	49.5
45/ 49	341	306	330	977	44.4
40/ 44	255	183	232	670	40.4
35/ 39	300	155	223	678	36.3
30/ 34	198	66	93	357	31.4
25/ 29	70	16	18	104	26.6
20/ 24	6	2	2	10	22
15/ 19	1	1	1	3	17.7
10/ 14	1	0	0	1	12.7

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



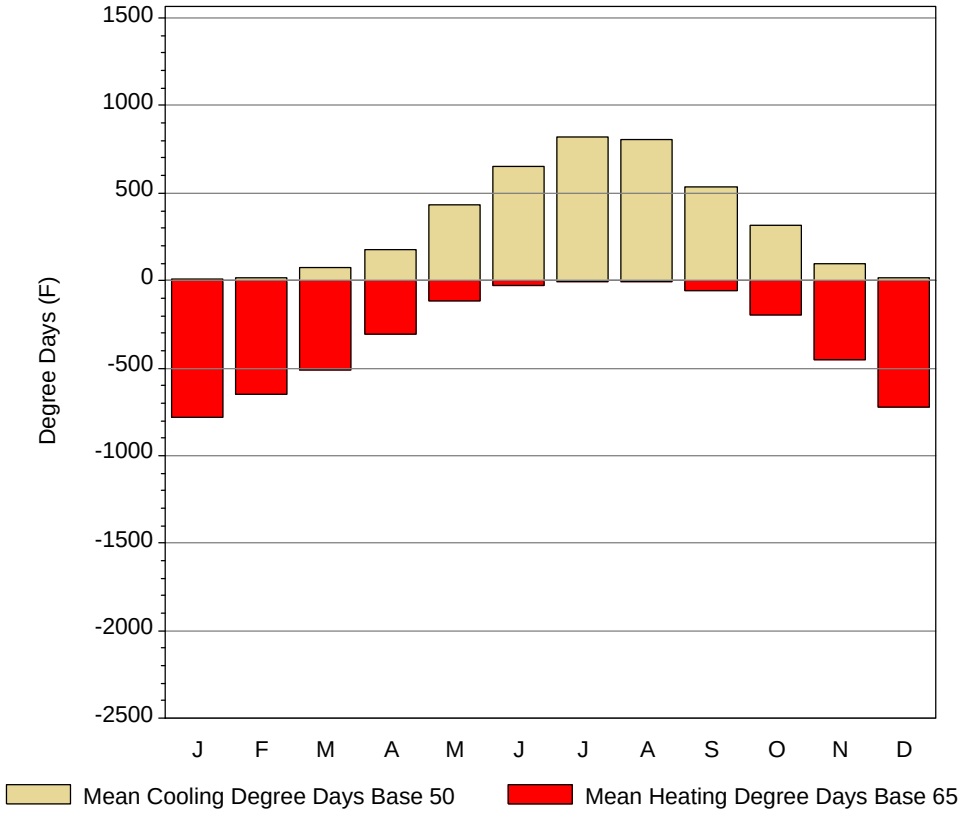
Long Term Humidity and Dry Bulb Temperature Summary



Long Term Humidity and Dry Bulb Temperature Summary

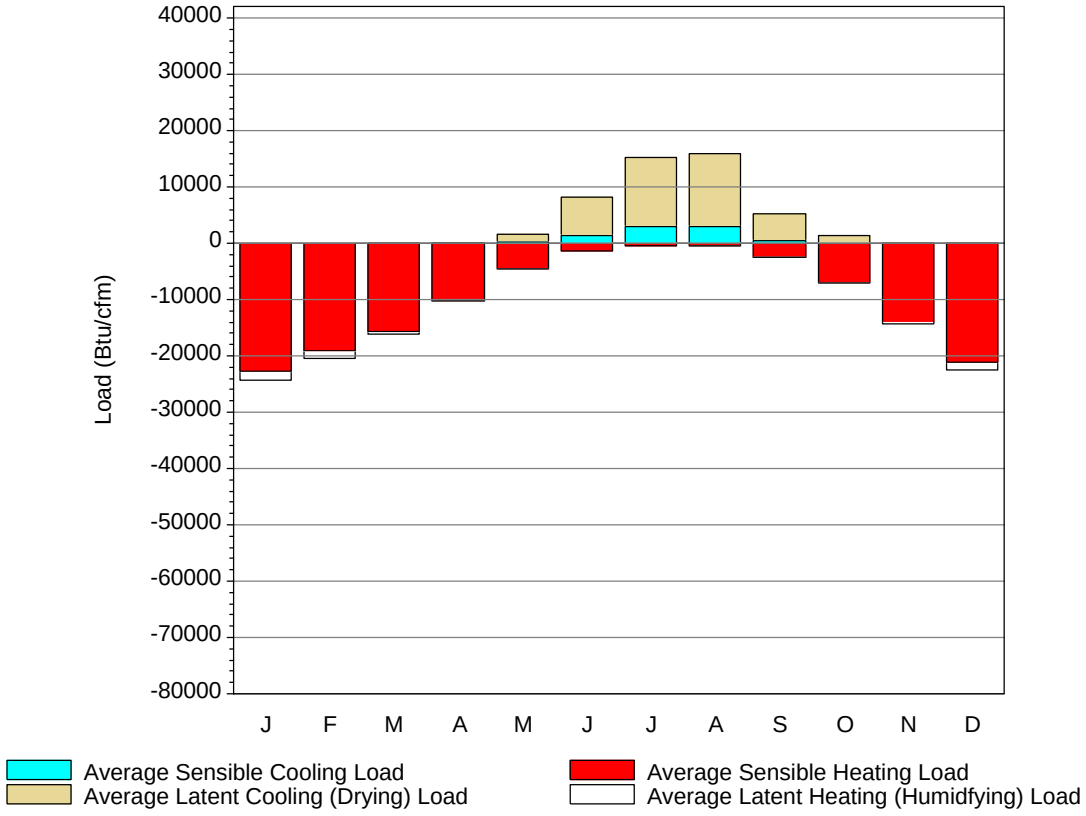
Week Ending	1.0% Temp (°F)	MCWB@ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB@ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	59	52.5	46.2	33.1	25	57.4	58.8	37.1	25.8
14-Jan	57	50.1	46.4	35.3	25	53.9	51.8	38.8	28.8
21-Jan	57	51.8	45.3	34.1	25	50.4	54.9	36.3	26.8
28-Jan	57	51.4	46.7	33.6	25	53.9	56.9	37.3	25.7
4-Feb	57	50.4	47.2	34.1	25	51.1	54.5	37.2	26.4
11-Feb	59	51.7	48.5	34.2	25	57.4	56	39.1	26.7
18-Feb	59	49.6	49	34.5	23	53.9	52.9	38.5	26.1
25-Feb	59	50.3	50.7	35.7	27	56.7	54.5	41.2	27.6
4-Mar	64	53.9	53	38	27	61.6	57.4	45.4	30.2
11-Mar	61	51.2	52.8	38.3	28	57.4	54.1	44	29.7
18-Mar	64	54.2	56.1	39.8	32	61.6	56.6	49.6	33.1
25-Mar	68	56.4	58	42.6	34	65.8	60.9	51.7	34.6
1-Apr	68	56.8	58.9	43.3	36	69.3	60.9	54.2	36.2
8-Apr	70	58.2	60.4	45.3	37	74.9	61.8	59.2	39.4
15-Apr	68	58.9	60.7	45.2	37	78.4	63.5	58.9	39
22-Apr	70	59.1	62.3	46.6	37	79.8	62.9	61.5	41
29-Apr	70	60.2	65	49.3	41	85.4	64	70.3	48.3
6-May	73	61.1	67.2	51.7	45	90.3	69.1	75.3	51.3
13-May	79	64.9	70.4	53.6	46	102.2	71.4	81.1	55
20-May	81	66.6	71.6	54.8	48	109.9	72.9	83.4	55.3
27-May	84	70.9	73.7	56	48	117.6	75.7	88.6	58
4-Jun	84	70.2	75.1	58	49	116.9	74.9	94	62.4
10-Jun	85	68.8	77.2	60.4	54	131.6	80.3	100.7	67.5
17-Jun	88	75.8	78.7	62	55	149.1	82.3	104.7	70
24-Jun	88	75.5	80.6	63.2	55	149.8	82.6	110.8	71.8
1-Jul	90	75	81.6	64.9	57	158.9	83.9	118.7	78.6
8-Jul	91	71.6	83.7	67.1	59	159.6	83.7	122.6	78.3
15-Jul	91	74.4	82.6	65.7	59	159.6	84.6	121.6	78.5
22-Jul	91	75.5	83.9	66.1	59	159.6	83.9	124.1	78
29-Jul	91	75.3	84.7	68.2	61	159.6	84.9	130.9	85.2
5-Aug	92	78	84.8	67.7	61	159.6	84	129.7	84.4
12-Aug	93	75.4	84.3	67.4	61	161.7	86	128.4	83.9
19-Aug	90	79.2	83.8	66.9	61	168.7	85.9	129.1	83.8
26-Aug	90	75.3	83.2	66.5	61	178.5	87.3	126.4	83.2
2-Sep	90	75.3	80.8	64.1	55	159.6	83.4	116.4	76.2
9-Sep	84	73.4	78	62	54	149.8	80.6	105.8	71.9
16-Sep	84	73.9	76.6	60	52	140.7	80.1	101.6	68.7
23-Sep	82	71.5	74.4	58.8	52	123.2	77.3	96.4	66.7
30-Sep	79	68.8	72.6	56.8	50	116.2	74.5	89.9	62.9
7-Oct	77	67.9	70.9	56.4	48	109.9	72.4	89.3	63.7
14-Oct	77	69.3	68.5	54.3	46	109.2	71.9	83.3	58.2
21-Oct	75	67.2	65.9	52.1	43	102.2	70.6	76.5	53.9
28-Oct	72	65.5	63.4	50.6	41	91.7	71.2	70.6	51.1
4-Nov	72	64.1	62.5	49.6	39	91	69	69.3	49.3
11-Nov	68	61.4	59.6	46.5	36	85.4	65.2	63.1	43.6
18-Nov	68	59.8	56.7	44.9	34	75.6	62.6	57	40.7
25-Nov	63	56	52.5	41	30	66.5	59.1	49.6	35.9
2-Dec	61	58	51.2	39.8	29	74.9	59.6	47.2	34.8
9-Dec	63	55.6	50	38.4	28	62.3	55.8	44.2	32.5
16-Dec	61	53.5	48.2	35.7	27	58.1	54.9	40.7	28.4
23-Dec	64	54.9	47.1	34.2	21	58.1	59	38.3	26.9
31-Dec	59	53.5	46.3	34.3	24	62.3	56.3	37.7	26.7

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	8.4	0	783.5
FEB	16.2	0	650.3
MAR	74.6	1.5	509.2
APR	179.9	6.4	308.3
MAY	430.6	80.2	117.3
JUN	649.8	227.6	27.8
JUL	817.7	359.2	6.5
AUG	804.4	345.8	6.4
SEP	536.2	142.5	56.4
OCT	313.3	30.8	192.9
NOV	97.2	2.2	450.9
DEC	16	0.2	724.9
ANN	3944.3	1196.4	3834.4

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	-22719	0	-1495
FEB	0	-19053	0	-1327
MAR	0	-15581	1	-571
APR	3	-10203	55	-105
MAY	205	-4548	1476	-1
JUN	1346	-1336	6751	0
JUL	3068	-423	12206	0
AUG	2870	-428	13114	-1
SEP	505	-2448	4844	-1
OCT	23	-6955	1286	-11
NOV	0	-13977	66	-286
DEC	0	-21197	1	-1220
ANN	8020	-118868	39800	-5018

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

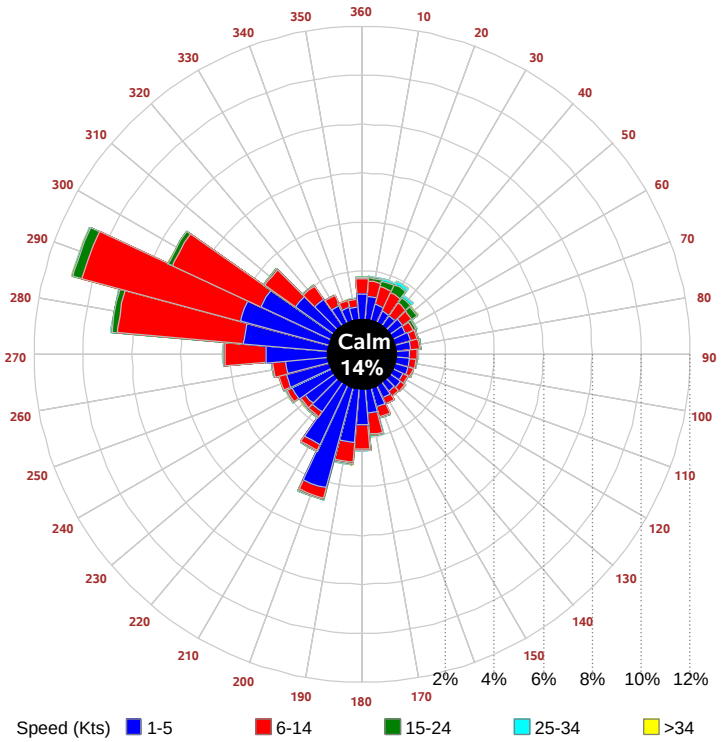
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ.	Global													
	Std.Dev.													
	Minimum													
	Maximum													
	Diffuse													
Clear Day	Global													
NORTH	Global													
	Diffuse													
Clear Day	Global													
EAST	Global												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

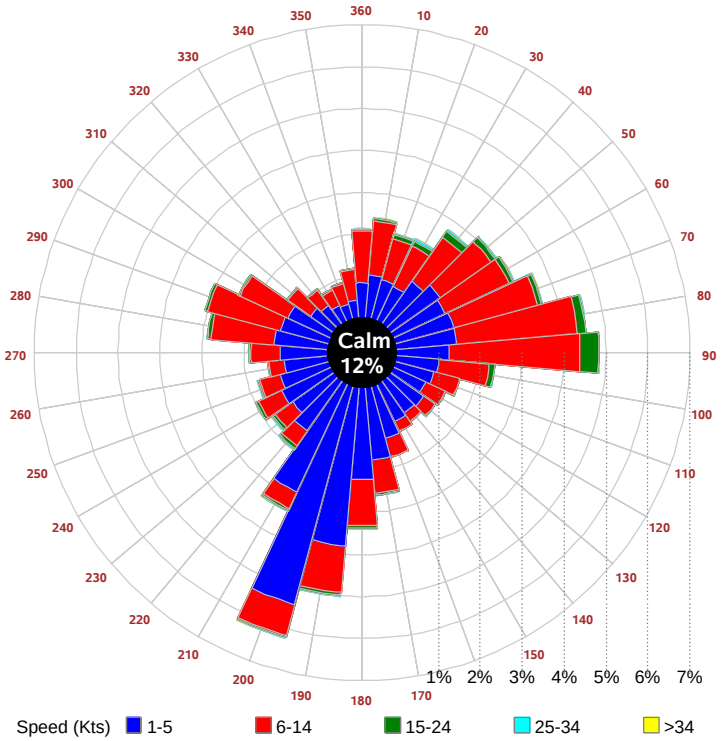
AVERAGE INCIDENT ILLUMINENCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9											
				March					June		
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear										
	M.Cloudy										
NORTH	M.Clear										
	M.Cloudy										
EAST	M.Clear										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

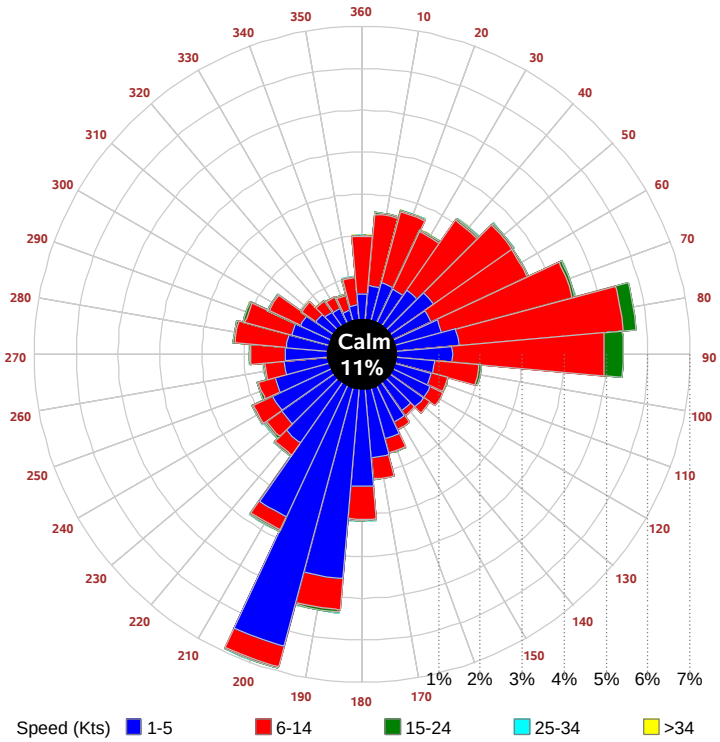
Wind Summary - December, January, and February



Wind Summary - March, April, and May



Wind Summary - June, July, and August



Wind Summary - September, October, and November