

CHICAGO/O'HARE IL

Latitude = 41.98 N

WMO No. 725300

Longitude = 87.90 W

Elevation = 673 feet

Period of Record = 1967 to 1996

Average Pressure = 29.27 inches Hg

Design Criteria Data

	Design Value	Mean Coincident (Average) Values			
		Wet Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Dry Bulb Temperature (T)	(°F)				
Median of Extreme Highs	96	77	111	11.8	SW
0.4% Occurrence	92	75	106	11.9	SW
1.0% Occurrence	89	73	102	11.5	S
2.0% Occurrence	86	72	98	11.2	S
Mean Daily Range	18	-	-	-	-
97.5% Occurrence	7	6	5	10.8	W
99.0% Occurrence	0	-1	3	10.9	W
99.6% Occurrence	-6	-7	2	10.9	W
Median of Extreme Lows	-11	-11	2	12.1	W
	Design Value	Mean Coincident (Average) Values			
		Dry Bulb Temperature (°F)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Wet Bulb Temperature (T_{wb})	(°F)				
Median of Extreme Highs	81	92	142	10.6	SW
0.4% Occurrence	78	88	129	11.4	SW
1.0% Occurrence	76	85	122	10.8	SW
2.0% Occurrence	74	82	114	10.0	S
	Design Value	Mean Coincident (Average) Values			
		Dry Bulb Temperature (°F)	Vapor Pressure (in. Hg)	Wind Speed (mph)	Prevailing Direction (NSEW)
Humidity Ratio (HR)	(gr/lb)				
Median of Extreme Highs	145	87	0.94	9.8	SW
0.4% Occurrence	132	84	0.85	11.9	SSW
1.0% Occurrence	125	82	0.82	9.2	SSW
2.0% Occurrence	118	80	0.77	9.7	SW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		29	576	303	1079

Other Site Data

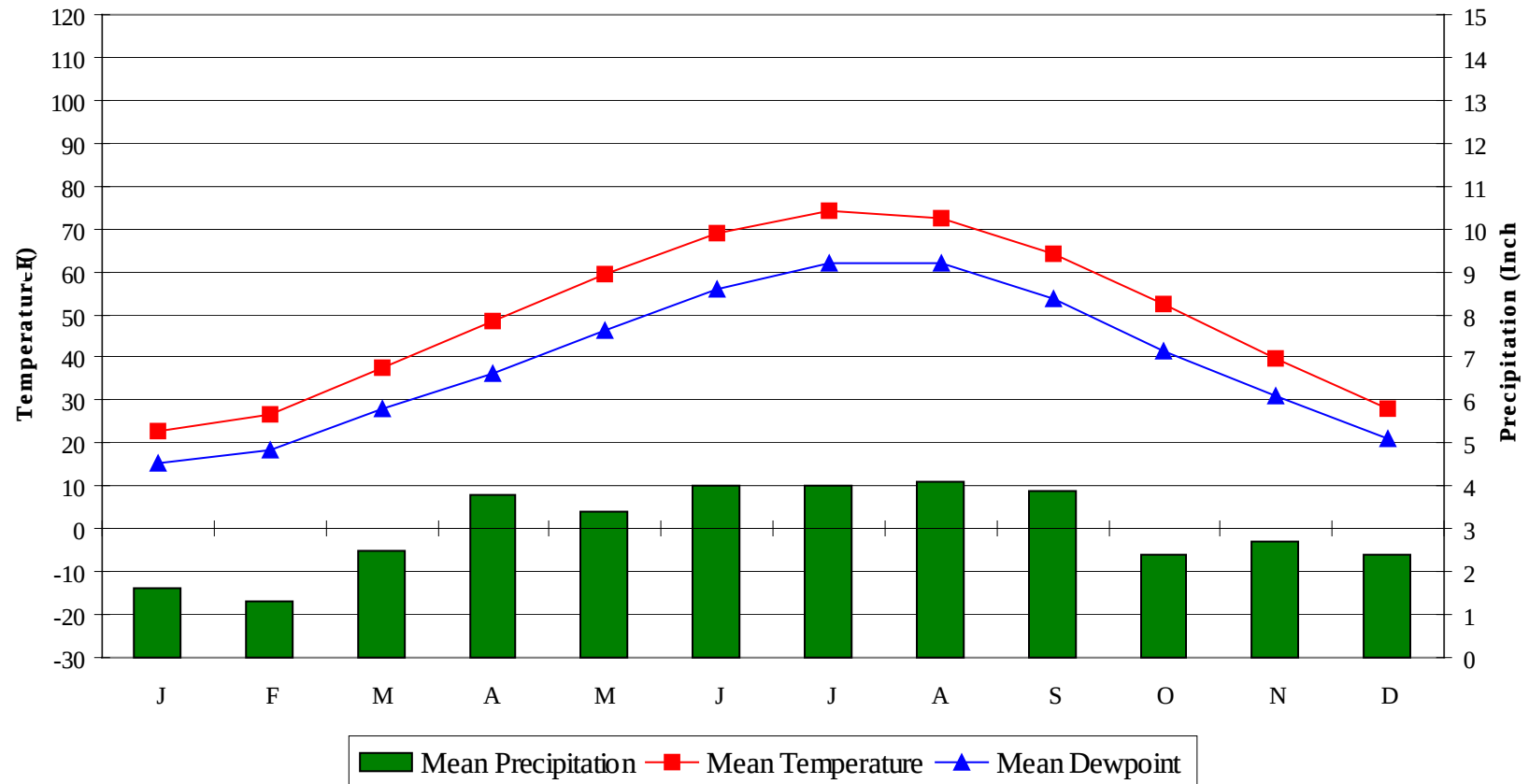
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
6	3.3	90	1.5 + 0.6
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
51.9	61	17	56

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

CHICAGO/O'HARE IL

WMO No. 725300

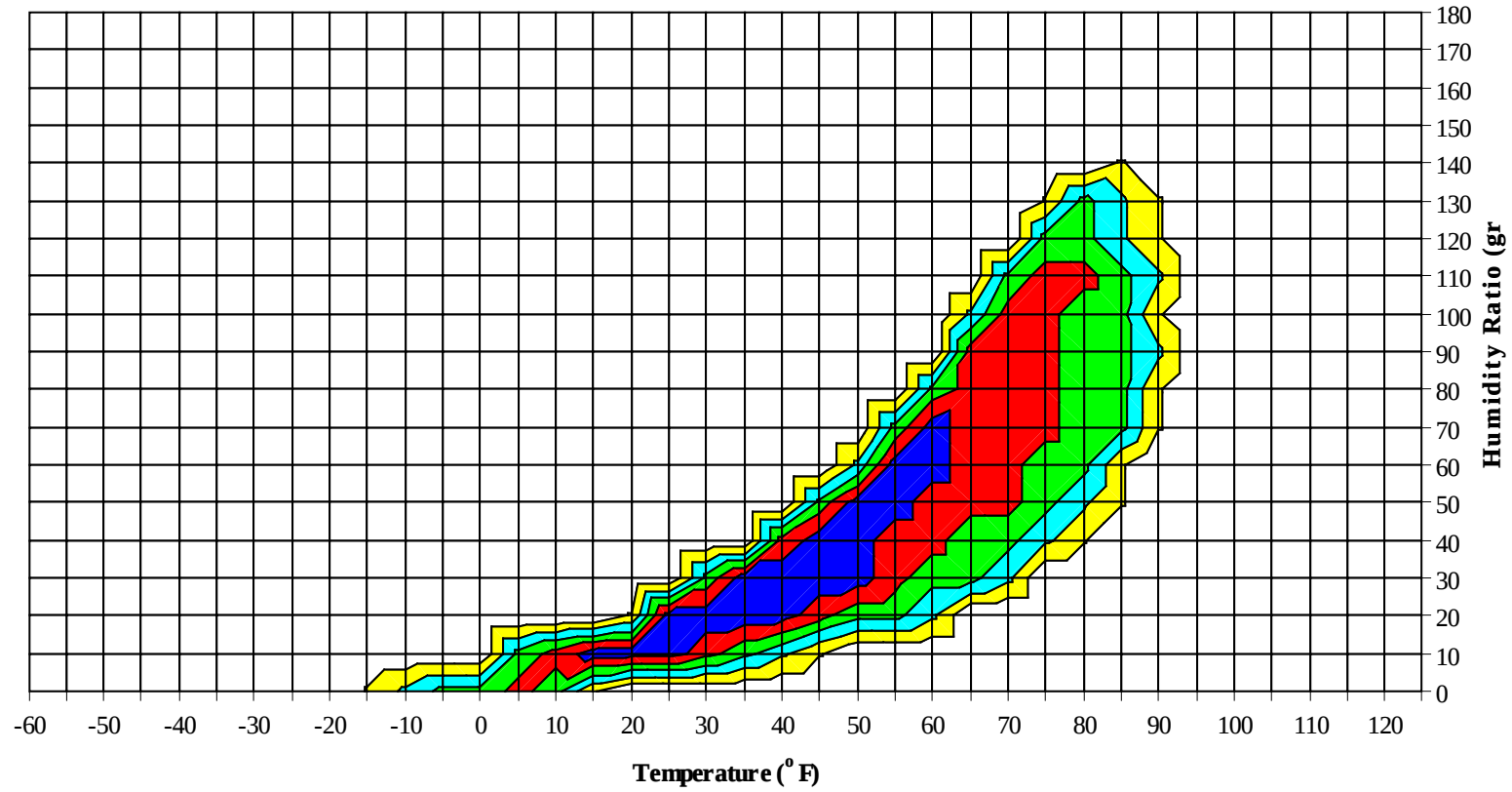
Average Annual Climate



CHICAGO/O'HARE IL

WMO No. 725300

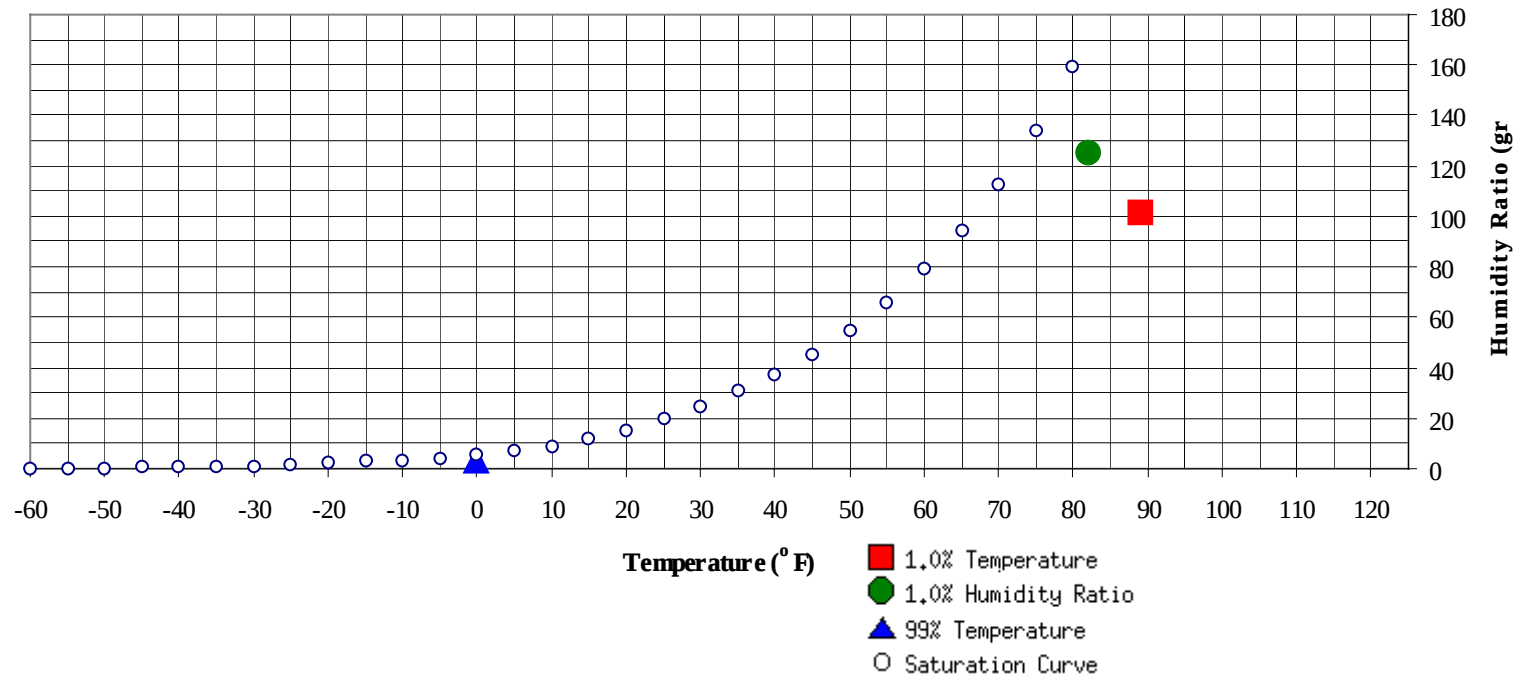
Long Term Psychrometric Summary



- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

CHICAGO/O'HARE IL

WMO No. 725300

Psychrometric Summary of Peak Design Values

99% Dry Bulb	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)	1.0% Humidity Ratio	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
	0	3.4	0.5		125.3	82.1	75.5	73	39.3

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	89	101.4	73.3	37.3

CHICAGO/O'HARE IL

WMO No. 725300

Dry-Bulb Temperature Hours For An Average Year (Sheet 1 of 5)

Period of Record = 1967 to 1996

Temperature Range (°F)	January					February					March				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
100 / 104															
95 / 99															
90 / 94															
85 / 89											00				
80 / 84											001				
75 / 79											20				
70 / 74						00					42				
65 / 69						00					17				
60 / 64	00					10					512				
55 / 59	01					41					714				
50 / 54	13					25					918				
45 / 49	25					311					1431				
40 / 44	514					820					2545				
35 / 39	2335					2540					4846				
30 / 34	4040					4440					5535				
25 / 29	3642					3634					3819				
20 / 24	3334					3026					239				
15 / 19	2624					2218					144				
10 / 14	2118					1711					71				
5 / 9	2014					167					30				
0 / 4	1710					134					100				
-5 / -1	103					51					00				
-10 / -6	73					31									
-15 / -11	41					10									
-20 / -16	11					00									
-25 / -21	10														
-30 / -26	00														

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.

CHICAGO/O'HARE IL

WMO No. 725300

Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)**Period of Record = 1967 to 1996**

Temperature Range (°F)	April					May					June				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
100 / 104												0	0	0	76.3
95 / 99												1	0	1	75.6
90 / 94		0		0	64.0		2	0	2	68.2		11	2	13	72.3
85 / 89		1	0	2	64.5		10	2	12	68.7	0	25	9	34	70.8
80 / 84		5	2	7	63.8	0	19	6	25	66.4	4	43	20	67	68.7
75 / 79	0	7	4	11	62.1	3	28	15	46	63.7	17	55	35	107	66.1
70 / 74	1	12	7	20	59.3	10	34	23	67	61.0	37	44	46	126	63.8
65 / 69	8	20	12	40	57.0	25	36	32	92	58.6	53	29	43	125	60.5
60 / 64	13	26	20	60	53.5	32	43	35	110	54.6	51	19	39	109	56.9
55 / 59	15	35	23	74	49.1	41	37	40	117	51.0	39	8	27	74	53.0
50 / 54	24	40	31	95	45.4	45	24	42	111	47.2	26	3	15	43	48.7
45 / 49	41	35	41	118	42.0	45	11	33	89	43.3	10	0	4	15	44.3
40 / 44	47	30	44	121	38.1	31	3	16	50	39.2	4		0	4	41.0
35 / 39	47	19	33	98	34.1	12	1	5	17	35.0	0		0	0	37.9
30 / 34	28	7	17	52	29.6	4	0	0	4	30.6					
25 / 29	12	1	5	17	25.3	0		0	0	26.9					
20 / 24	3	0	1	5	20.1										
15 / 19	1		0	1	16.1										
10 / 14	0			0	12.8										
5 / 9	0			0	8.5										
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-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.

CHICAGO/O'HARE IL

WMO No. 725300

Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)**Period of Record = 1967 to 1996**

Temperature Range (°F)	July					August					September				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
100 / 104		1	0	1	80.3										
95 / 99		6	1	6	76.7		3	0	3	77.4		0		0	77.1
90 / 94		22	5	27	75.7		14	3	17	76.4		3	0	3	74.3
85 / 89	1	44	17	63	73.2	0	31	10	42	73.9		10	2	12	71.2
80 / 84	11	64	37	112	70.5	7	58	28	92	71.0	0	29	8	38	68.8
75 / 79	38	58	55	151	68.2	28	71	51	151	68.5	6	41	19	66	66.3
70 / 74	63	37	58	158	65.8	65	48	65	178	66.2	26	44	39	109	64.5
65 / 69	63	13	43	119	62.6	62	17	51	129	62.6	37	45	41	124	60.6
60 / 64	45	4	24	72	58.8	47	5	27	79	58.7	46	39	48	133	56.9
55 / 59	20	0	6	26	54.5	26	0	10	36	54.7	45	18	41	104	52.7
50 / 54	6		1	7	50.2	11		2	13	50.4	40	8	24	71	49.0
45 / 49	1		0	1	45.3	2		1	2	45.3	23	2	11	37	44.7
40 / 44	0			0	38.5	0			0	41.9	10	0	5	15	40.4
35 / 39											4	0	1	5	35.7
30 / 34											1	0	0	1	31.5
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-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.

CHICAGO/O'HARE IL

WMO No. 725300

Dry-Bulb Temperature Hours For An Average Year (Sheet 4 of 5)

Period of Record = 1967 to 1996

Temperature Range (°F)	October					November					December				
	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00			01 To 08	09 To 16	17 To 00		
100 / 104															
95 / 99															
90 / 94															
85 / 89		0		0	67.8										
80 / 84		4	0	4	66.0										
75 / 79		10	3	13	63.4		0		0	63.3					
70 / 74	1	22	8	32	60.6		2	0	3	60.5					
65 / 69	9	27	18	54	58.3	0	5	3	9	59.4	0	0	0	1	63.6
60 / 64	17	41	29	87	55.1	6	12	8	26	56.6	1	2	1	4	57.8
55 / 59	30	44	35	110	51.0	11	18	14	43	52.2	2	3	2	7	53.5
50 / 54	41	49	50	139	46.9	15	27	17	59	46.9	3	5	4	13	47.2
45 / 49	50	30	46	125	43.0	20	36	28	84	42.4	5	9	6	20	43.1
40 / 44	41	14	33	88	38.9	34	43	44	121	38.4	11	23	15	49	38.5
35 / 39	35	5	19	58	34.7	44	44	46	133	33.8	35	47	43	125	34.4
30 / 34	16	1	7	24	30.7	48	31	41	120	29.4	54	59	60	173	30.0
25 / 29	6		2	7	26.2	32	14	23	69	24.9	38	34	36	109	25.0
20 / 24	1		0	1	21.1	16	4	11	31	20.4	30	21	27	77	20.2
15 / 19	0			0	18.0	9	2	4	15	15.7	25	15	19	59	15.6
10 / 14						3	1	1	5	11.0	13	12	15	40	10.5
5 / 9						1	0	1	2	6.7	13	8	11	31	5.8
0 / 4						0	0		1	2.0	9	4	6	19	1.3
-5 / -1											3	2	2	7	-3.2
-10 / -6											3	1	1	6	-7.4
-15 / -11											2	0	1	3	-12.3
-20 / -16											0	0	0	0	-16.8
-25 / -21											0	0	0	0	-21.9
-30 / -26											0			0	-25.0

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.

CHICAGO/O'HARE IL

WMO No. 725300

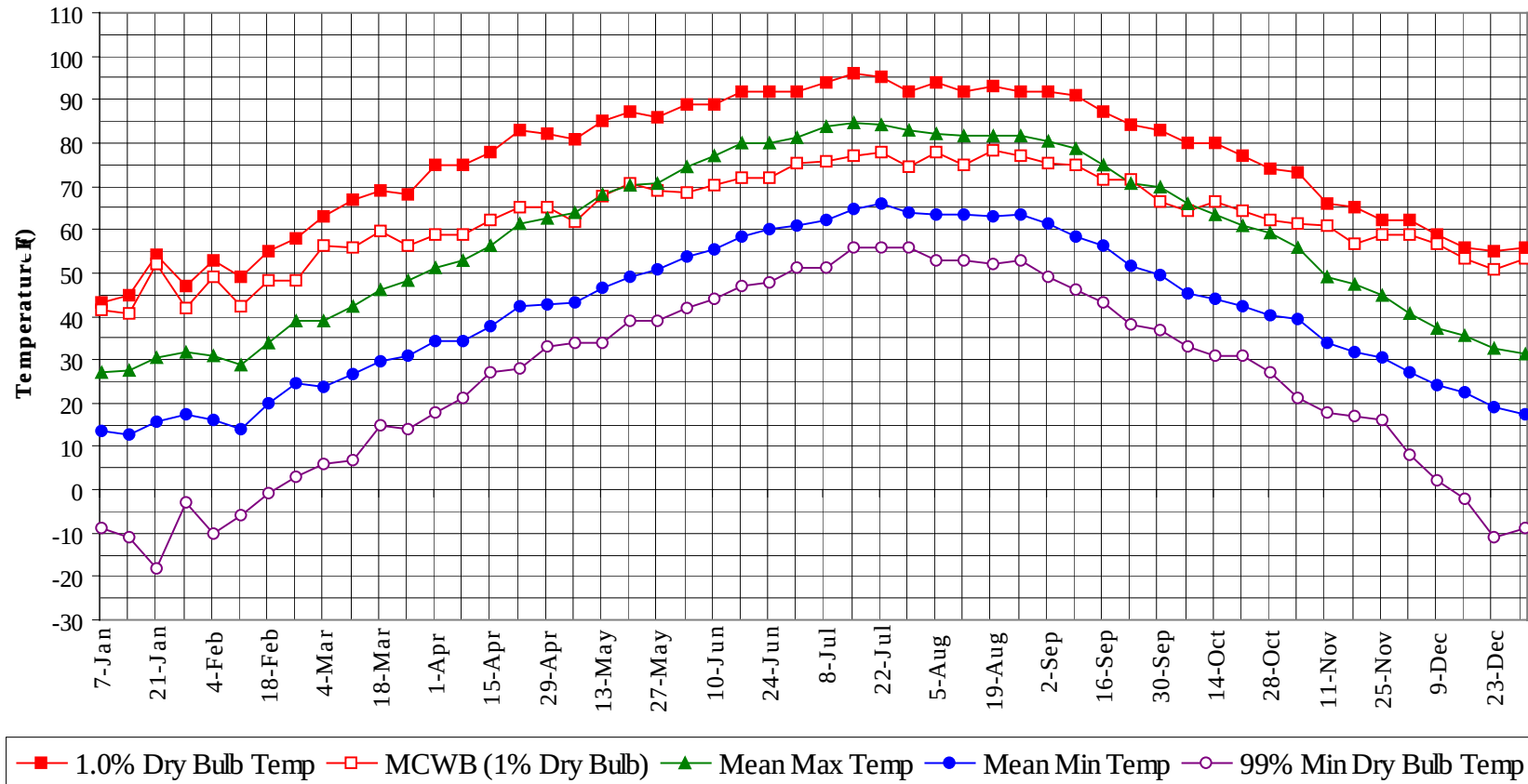
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1967 to 1996

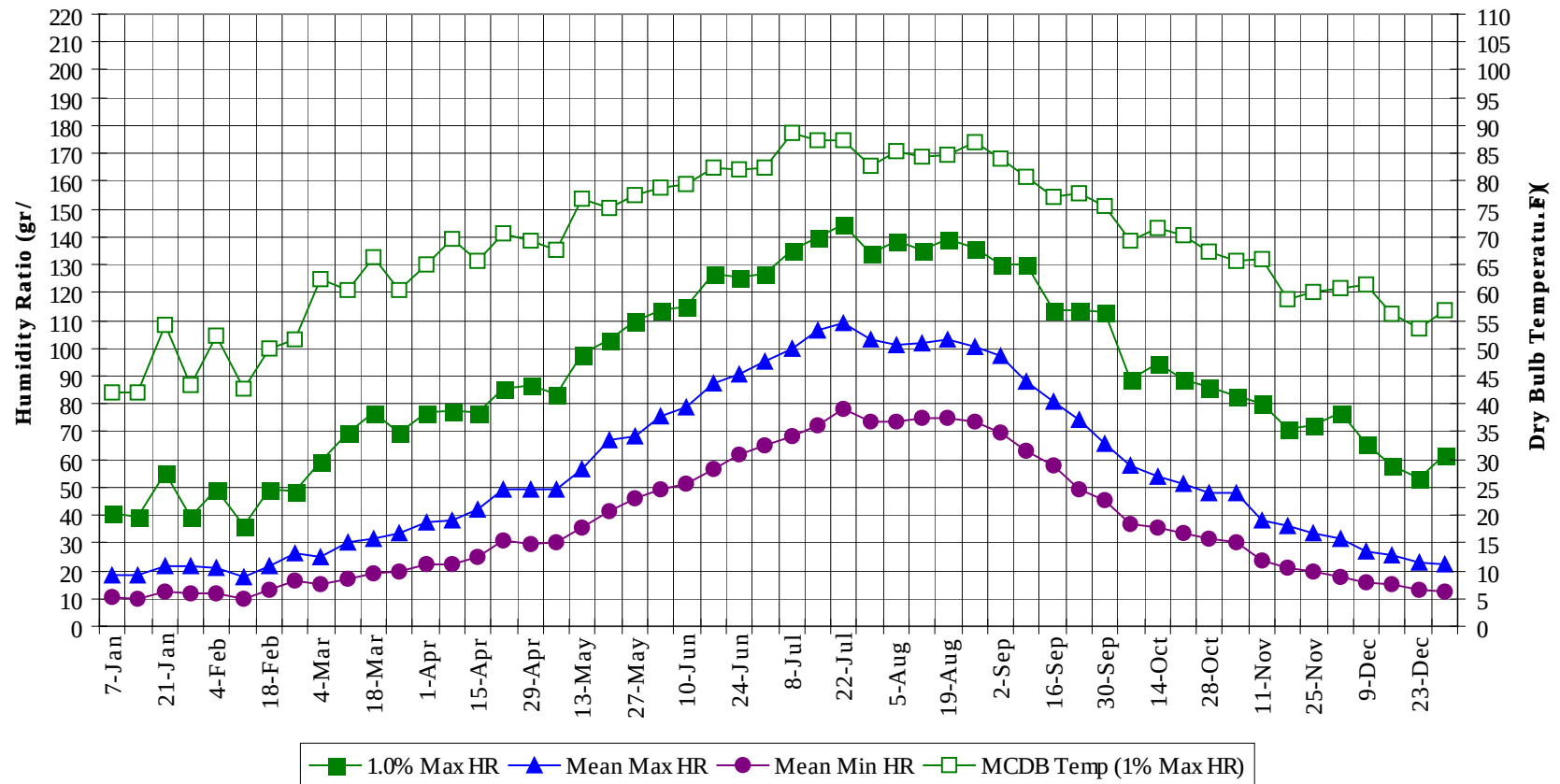
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		1	0	1	78.9
95 / 99		10	1	11	76.8
90 / 94		50	11	62	74.8
85 / 89	2	121	40	163	72.3
80 / 84	22	219	99	340	69.6
75 / 79	90	269	181	540	67.0
70 / 74	201	244	244	689	64.4
65 / 69	254	199	244	696	60.5
60 / 64	259	203	237	699	56.3
55 / 59	234	181	210	626	51.7
50 / 54	222	181	203	605	47.1
45 / 49	215	172	202	589	42.7
40 / 44	216	195	216	627	38.4
35 / 39	275	239	266	780	34.1
30 / 34	295	216	267	778	29.8
25 / 29	201	146	172	519	24.9
20 / 24	139	96	116	351	20.2
15 / 19	99	64	73	236	15.5
10 / 14	62	43	57	162	10.6
5 / 9	52	30	40	123	5.8
0 / 4	42	18	25	85	1.2
-5 / -1	18	6	11	35	-3.2
-10 / -6	13	5	6	24	-7.5
-15 / -11	6	2	4	12	-12.1
-20 / -16	2	1	1	4	-17.0
-25 / -21	1	0	0	2	-22.1
-30 / -26	0	0	0	0	-25.4

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.

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



CHICAGO/O'HARE IL

WMO No. 725300

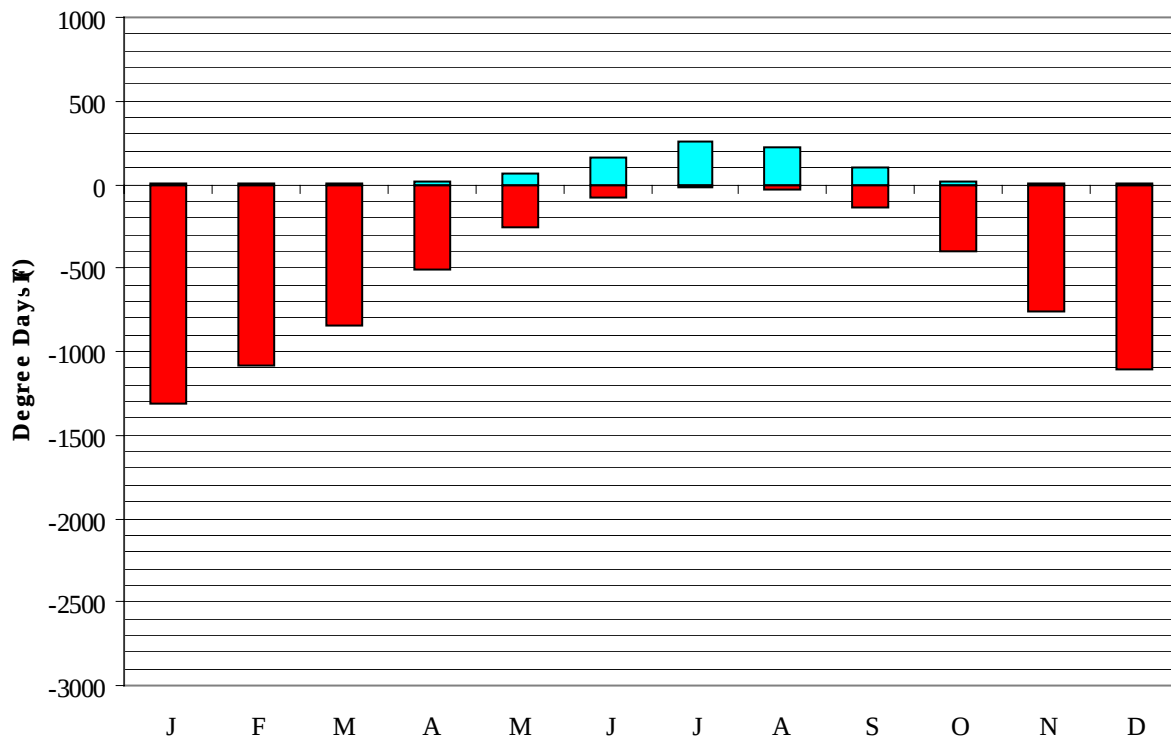
Long Term Dry Bulb Temperature and Humidity Summary

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	43.0	41.6	27.0	13.8	-9.0	40.6	42.1	18.4	10.3
14-Jan	45.0	40.6	27.3	12.7	-11.0	39.2	41.9	18.7	9.8
21-Jan	54.0	51.9	30.5	15.7	-18.0	55.3	54.2	21.7	12.2
28-Jan	47.0	41.8	31.9	17.4	-3.0	39.2	43.5	21.5	11.6
4-Feb	53.0	49.2	31.0	16.2	-10.0	49.0	52.1	20.8	11.5
11-Feb	49.0	42.5	28.8	14.1	-6.0	36.4	42.8	18.0	10.1
18-Feb	55.0	48.1	33.7	19.8	-1.0	49.0	49.9	21.9	13.1
25-Feb	58.0	48.2	38.9	24.6	3.0	48.3	51.6	26.4	16.4
4-Mar	63.0	56.4	39.0	23.5	6.0	58.8	62.3	25.0	14.8
11-Mar	67.0	56.0	42.5	26.5	7.0	69.3	60.3	30.0	17.3
18-Mar	69.0	59.5	46.0	29.4	15.0	77.0	66.4	31.7	19.1
25-Mar	68.0	56.2	48.5	30.8	14.0	69.3	60.6	33.4	19.4
1-Apr	75.0	58.7	51.3	34.3	18.0	77.0	65.0	37.7	22.2
8-Apr	75.0	58.9	53.1	34.5	21.0	77.7	69.7	38.2	22.1
15-Apr	78.0	62.2	56.2	37.8	27.0	77.0	65.5	42.2	24.8
22-Apr	83.0	65.0	61.2	42.2	28.0	85.4	70.5	49.4	30.7
29-Apr	82.0	65.4	62.6	42.7	33.0	86.8	69.2	49.0	29.8
6-May	81.0	61.6	63.9	43.2	34.0	83.3	67.7	49.1	30.3
13-May	85.0	67.7	68.1	46.5	34.0	98.0	77.0	56.4	35.4
20-May	87.0	70.6	70.4	49.3	39.0	102.9	75.2	66.8	41.2
27-May	86.0	69.0	70.8	51.0	39.0	109.9	77.4	68.5	46.1
3-Jun	89.0	68.5	74.4	53.9	42.0	113.4	78.9	75.6	49.0
10-Jun	89.0	70.3	77.0	55.2	44.0	114.8	79.6	78.9	51.3
17-Jun	92.0	72.0	79.9	58.5	47.0	126.7	82.4	87.1	56.7
24-Jun	92.0	72.1	80.1	60.0	48.0	125.3	82.1	90.6	61.9
1-Jul	92.0	75.5	81.1	60.8	51.0	126.7	82.5	95.1	64.9
8-Jul	94.0	75.8	84.0	62.4	51.0	135.1	88.5	100.1	68.3
15-Jul	96.0	77.2	84.4	64.7	56.0	140.0	87.5	106.1	72.4
22-Jul	95.0	77.9	84.3	65.9	56.0	144.2	87.3	108.7	78.0
29-Jul	92.0	74.4	82.9	64.1	56.0	133.7	82.6	102.9	73.3
5-Aug	94.0	77.9	82.2	63.5	53.0	138.6	85.3	100.9	73.5
12-Aug	92.0	75.0	81.8	63.6	53.0	135.1	84.3	101.7	74.8
19-Aug	93.0	78.4	81.6	63.2	52.0	139.3	84.7	103.0	74.8
26-Aug	92.0	77.2	81.7	63.3	53.0	135.8	87.2	100.5	73.8
2-Sep	92.0	75.4	80.2	61.6	49.0	130.2	84.1	97.2	69.9
9-Sep	91.0	74.8	78.5	58.5	46.0	130.2	80.8	88.3	62.9
16-Sep	87.0	71.5	75.0	56.4	43.0	113.4	77.2	80.8	57.5
23-Sep	84.0	71.6	70.5	51.6	38.0	113.4	78.0	74.1	49.4
30-Sep	83.0	66.5	70.0	49.6	37.0	112.7	75.4	65.6	45.1
7-Oct	80.0	64.4	66.0	45.1	33.0	88.9	69.2	58.0	36.9
14-Oct	80.0	66.5	63.5	43.9	31.0	94.5	71.6	53.9	35.6
21-Oct	77.0	64.3	60.8	42.4	31.0	88.9	70.2	51.2	33.3
28-Oct	74.0	62.2	59.0	40.2	27.0	86.1	67.3	47.9	31.3
4-Nov	73.0	61.3	55.7	39.3	21.0	82.6	65.7	47.8	30.0
11-Nov	66.0	60.8	49.0	33.9	18.0	79.8	65.9	38.1	23.6
18-Nov	65.0	56.9	47.5	32.0	17.0	70.7	58.9	35.8	21.2
25-Nov	62.0	58.7	44.9	30.3	16.0	72.1	60.0	33.3	19.6
2-Dec	62.0	58.9	40.5	27.1	8.0	77.0	60.7	31.3	18.0
9-Dec	59.0	56.7	37.4	24.0	2.0	65.8	61.4	27.3	15.9
16-Dec	56.0	53.2	35.6	22.3	-2.0	58.1	56.0	25.3	15.2
23-Dec	55.0	50.8	32.8	19.1	-11.0	53.2	53.6	23.2	13.3
31-Dec	56.0	53.4	31.2	17.3	-9.0	61.6	56.7	22.4	12.5

CHICAGO/O'HARE IL

WMO No. 725300

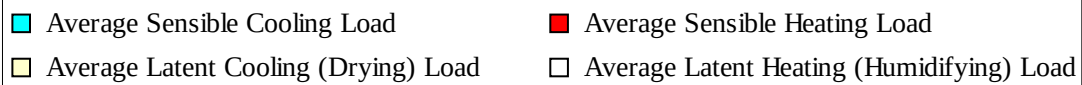
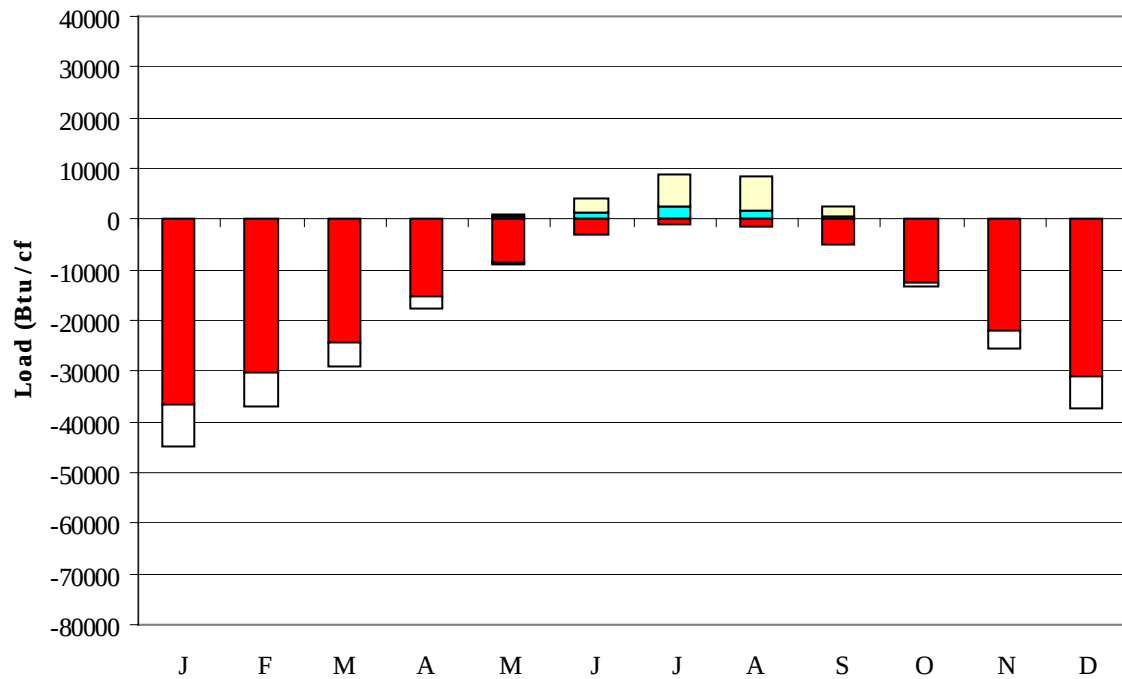
Degree Days, Heating and Cooling
(Base 65°F)



■ Mean Cooling Degree Days ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1315
FEB	0	1085
MAR	3	849
APR	18	511
MAY	68	256
JUN	167	75
JUL	255	21
AUG	219	29
SEP	96	138
OCT	19	400
NOV	1	760
DEC	0	1108
ANN	846	6547

Average Ventilation and Infiltration Loads
(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)



	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	-36495	0	-8261
FEB	0	-30330	0	-6753
MAR	8	-24358	7	-4631
APR	89	-15360	34	-2093
MAY	442	-8373	614	-448
JUN	1378	-2896	2628	-17
JUL	2569	-1020	6443	-1
AUG	1867	-1327	6566	-1
SEP	615	-4926	2012	-72
OCT	54	-12441	109	-907
NOV	0	-22009	7	-3563
DEC	0	-31040	5	-6394
ANN	7022	-190575	18425	-33141

Average Annual Solar Radiation – Nearest Available Site

(Source: National Renewable Energy Laboratory, Golden CO, 1995)

City: CHICAGO
 State: IL
 WBAN No: 94846
 Lat(N): 41.78
 Long(W): 87.75
 Elev(ft): 623

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1
 Overhang: 0.585
 Vert Gap: 0.327

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	570	820	1100	1450	1800	1990	1940	1700	1330	950	570	460	1220
	Std Dev	46	70	68	115	147	115	105	111	98	68	47	43	36
	Minimum	460	710	970	1260	1510	1800	1730	1510	1140	790	450	380	1170
	Maximum	650	950	1220	1690	2130	2290	2110	1940	1560	1090	670	550	1330
	Diffuse	320	450	600	730	830	870	860	760	610	450	330	280	590
Clear Day	Global	810	1160	1640	2150	2480	2600	2520	2220	1770	1260	850	690	1680
NORTH	Global	190	260	350	430	550	620	590	480	370	280	200	160	370
	Diffuse	190	260	350	430	500	540	530	460	370	280	200	160	360
Clear Day	Global	180	240	330	430	580	680	620	480	360	270	190	160	380
EAST	Global	390	520	680	860	1020	1100	1090	980	800	610	370	300	730
	Diffuse	230	320	420	520	600	650	640	570	460	350	230	190	430
Clear Day	Global	620	820	1080	1300	1430	1460	1420	1310	1120	870	630	540	1050
SOUTH	Global	910	1020	980	940	880	840	870	980	1070	1080	800	740	930
	Diffuse	340	430	500	540	580	590	600	580	520	440	330	290	480
Clear Day	Global	1770	1880	1790	1470	1150	1010	1060	1300	1620	1790	1730	1660	1520
WEST	Global	380	530	660	830	1010	1090	1080	980	800	590	370	310	720
	Diffuse	230	320	420	520	610	650	640	580	470	350	240	200	440
Clear Day	Global	620	820	1080	1300	1430	1460	1420	1310	1120	870	630	540	1050

Average Annual Solar Heat and Illumination – Nearest Available Site

(Source: National Renewable Energy Laboratory, Golden CO, 1995)

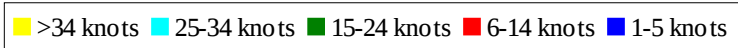
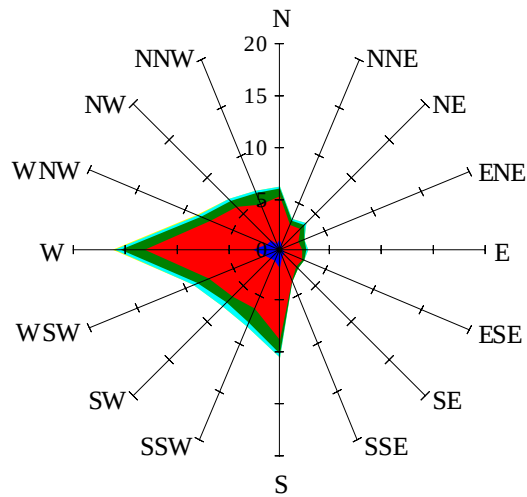
AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Unshaded	370	560	770	1040	1300	1440	1400	1220	950	650	380	290	870
NORTH	Unshaded	130	180	240	300	360	410	390	330	260	190	140	110	250
	Shaded	110	160	210	260	320	350	340	290	230	170	120	95	220
EAST	Unshaded	260	360	480	610	730	780	770	700	570	430	260	200	510
	Shaded	230	310	410	510	610	650	640	590	480	370	220	180	430
SOUTH	Unshaded	690	750	690	620	550	520	540	630	730	780	600	560	640
	Shaded	660	680	540	400	350	360	360	390	520	680	570	540	500
WEST	Unshaded	260	370	460	590	720	770	770	700	570	420	260	210	510
	Shaded	230	320	390	500	600	640	640	590	490	360	220	180	430

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	40	70	76	57	20	51	85	100	92	64
	M.Cloudy	23	42	48	34	12	33	59	71	67	45
NORTH	M.Clear	10	14	15	13	7	16	17	17	17	15
	M.Cloudy	9	15	16	13	6	13	18	19	19	15
EAST	M.Clear	70	51	15	13	7	77	68	26	17	15
	M.Cloudy	24	27	16	13	6	38	44	24	19	15
SOUTH	M.Clear	43	76	82	61	20	13	37	51	44	20
	M.Cloudy	18	35	41	28	9	12	28	38	34	18
WEST	M.Clear	10	14	28	66	52	13	17	17	56	78
	M.Cloudy	9	15	21	29	16	12	18	19	41	46
M.Clear	(% hrs)	28	25	22	23	24	40	39	33	32	34

		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	30	66	81	71	40	14	37	40	21	0
	M.Cloudy	18	41	52	48	26	8	21	23	13	0
NORTH	M.Clear	9	14	16	15	11	5	10	10	7	0
	M.Cloudy	8	15	17	16	10	4	9	10	6	0
EAST	M.Clear	64	65	23	15	11	36	33	10	7	0
	M.Cloudy	22	33	20	16	10	8	14	10	6	0
SOUTH	M.Clear	24	60	76	66	34	35	76	81	50	0
	M.Cloudy	12	31	43	38	18	8	24	26	14	0
WEST	M.Clear	9	14	16	55	67	5	10	24	41	0
	M.Cloudy	8	15	17	33	30	4	9	13	12	0
M.Clear	(% hrs)	42	41	37	36	40	25	26	26	27	30

Wind Summary - December, January, and February

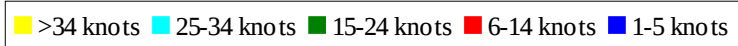
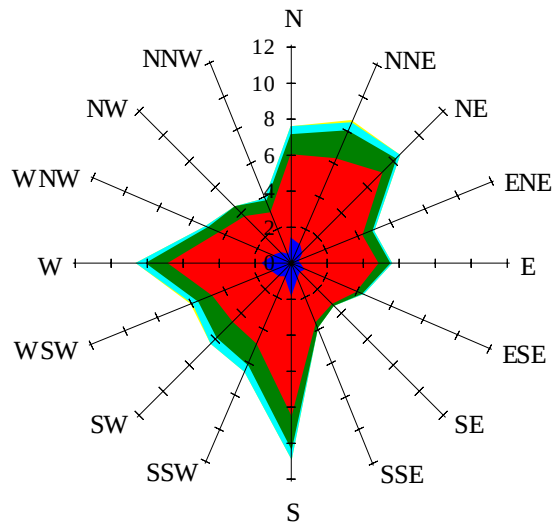
Labels of Percent Frequency on North Axis



Percent Calm = 2.19

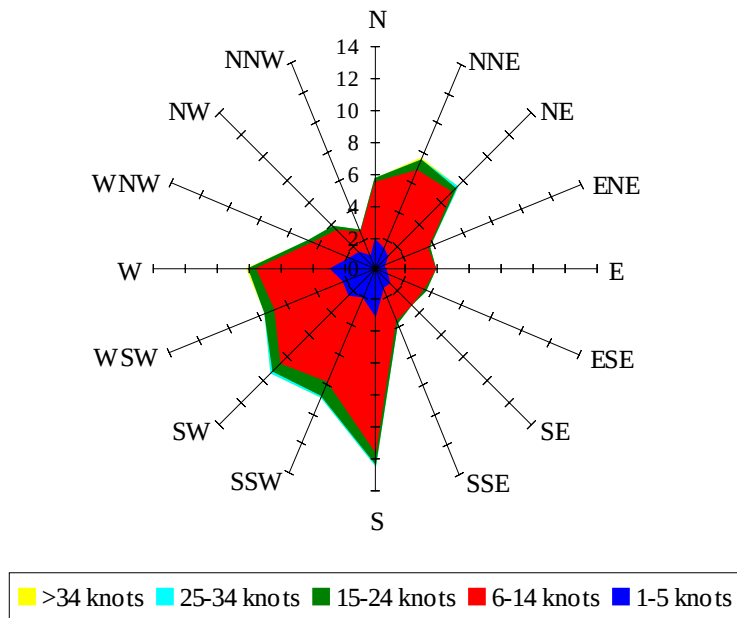
Wind Summary - March, April, and May

Labels of Percent Frequency on North Axis



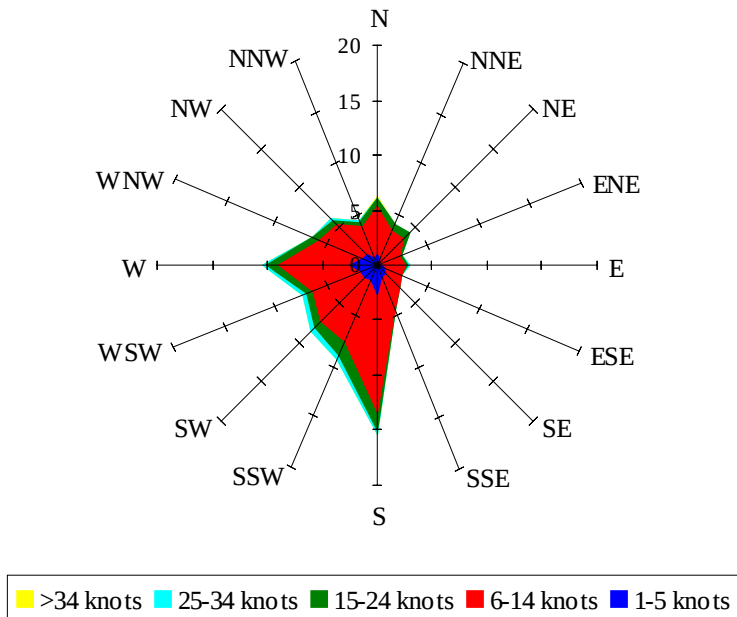
Percent Calm = 3.00

Wind Summary - June, July, and August **Labels of Percent Frequency on North Axis**



Percent Calm = 5.36

Wind Summary - September, October, and November **Labels of Percent Frequency on North Axis**



Percent Calm = 3.83