

CHAMPAIGN/URBANA IL

Latitude = 40.03 N

WMO No. 725315

Longitude = 88.28 W

Elevation = 755 feet

Period of Record = 1973 to 1996

Average Pressure = 29.18 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	79	124	12.1	SW
0.4% Occurrence	93	77	118	11.5	WSW
1.0% Occurrence	90	75	113	11.5	S
2.0% Occurrence	88	74	109	11.5	S
Mean Daily Range	18	-	-	-	-
97.5% Occurrence	10	9	7	11.9	WNW
99.0% Occurrence	3	2	5	12.6	W
99.6% Occurrence	-3	-3	4	12.1	W
Median of Extreme Lows	-10	-10	3	12.4	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	82	92	150	10.2	WSW
0.4% Occurrence	80	90	141	10.5	S
1.0% Occurrence	78	87	133	10.8	S
2.0% Occurrence	76	85	123	10.3	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	159	88	1.03	9.7	SSW
0.4% Occurrence	145	87	0.94	9.7	S
1.0% Occurrence	135	85	0.88	10.2	S
2.0% Occurrence	127	82	0.82	10.7	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		41	796	517	1421

Other Site Data

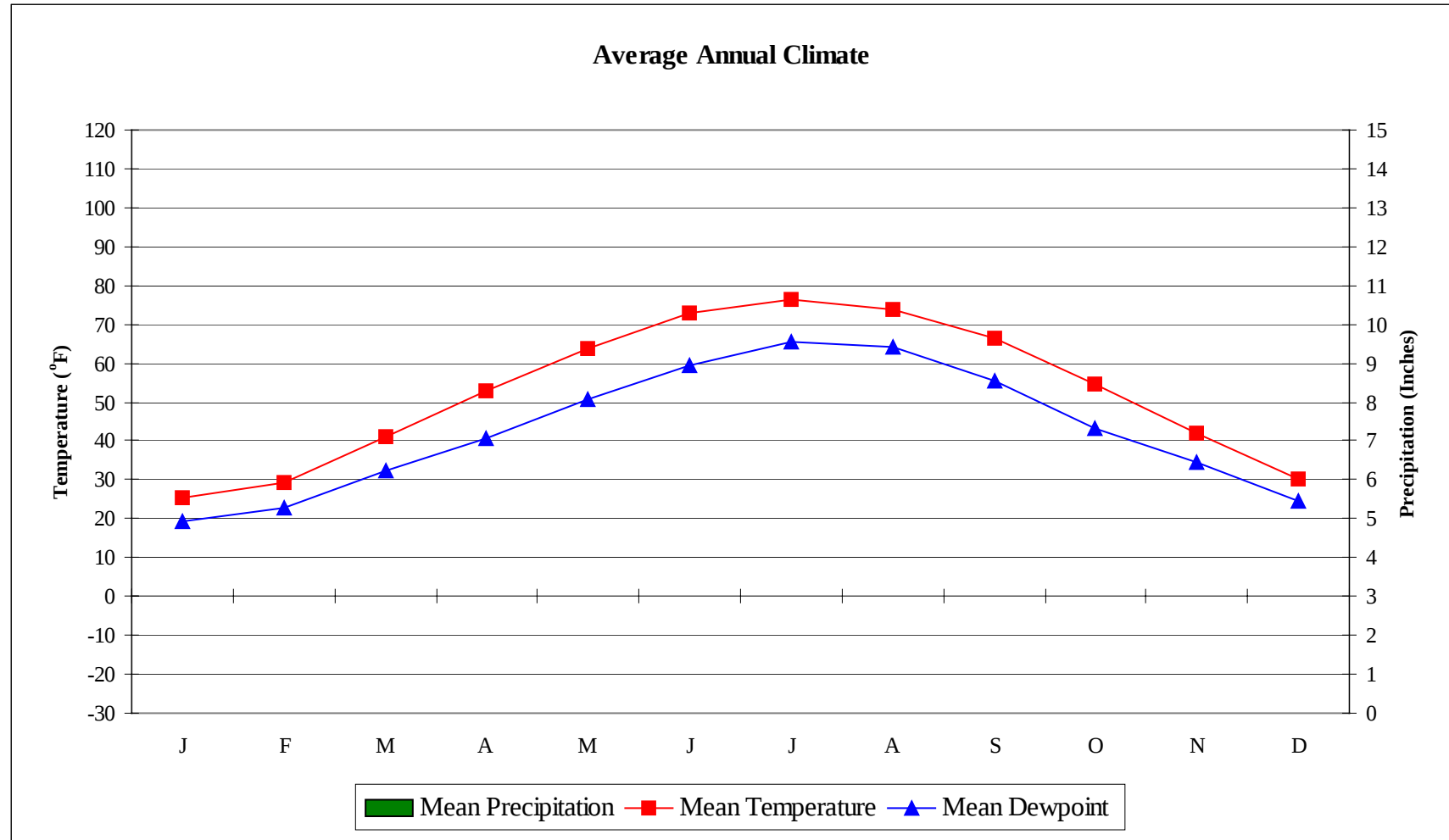
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
6	3.2	90	1.9 + 0.7
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
54.6	52	20	57

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

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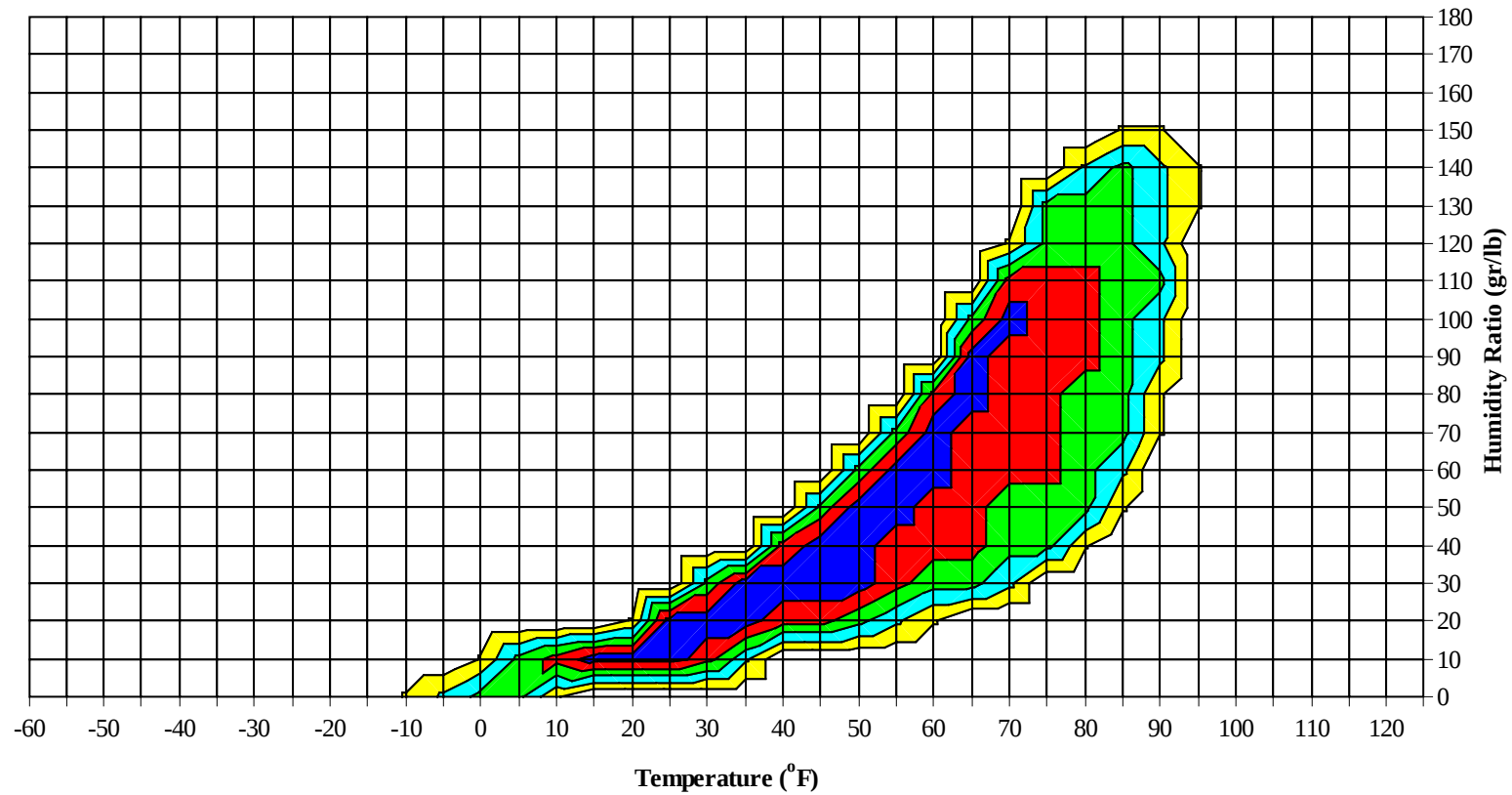
No Precipitation Data Available

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Long Term Psychrometric Summary



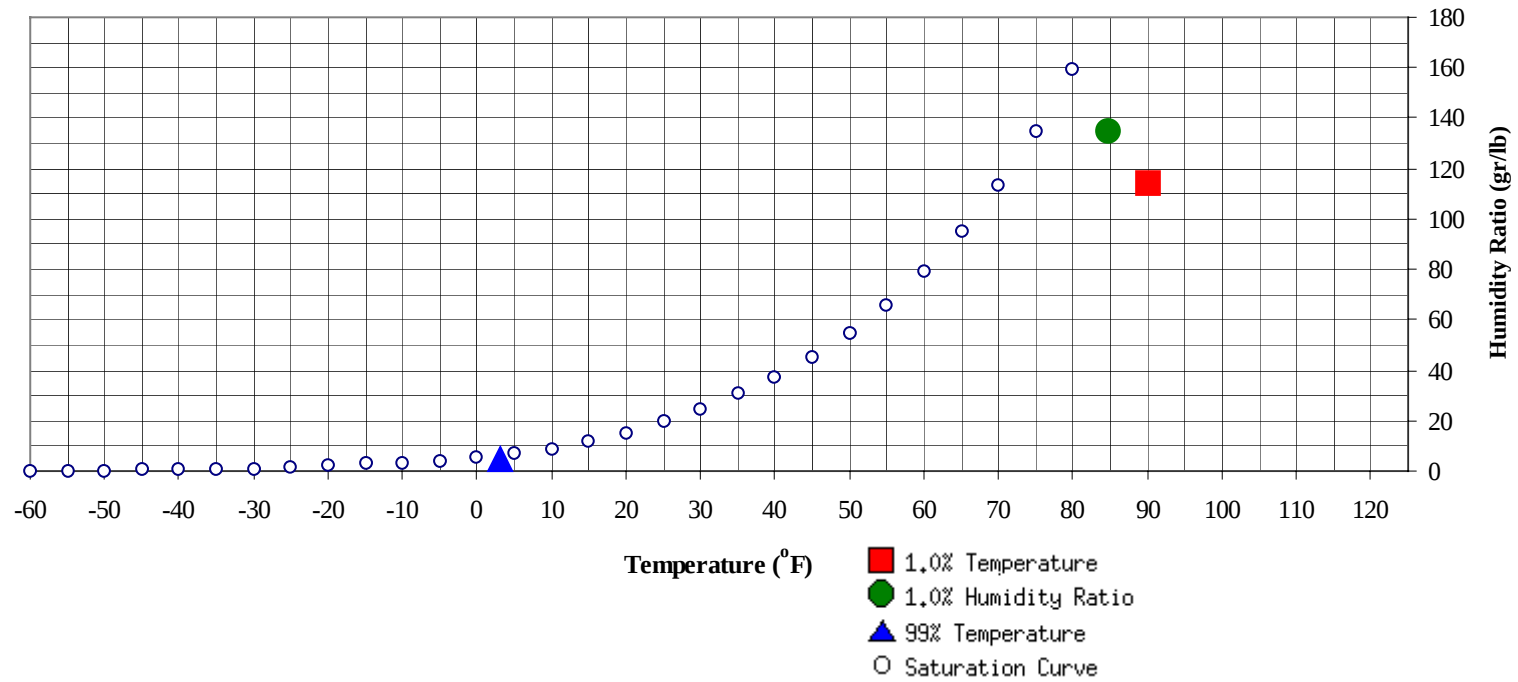
- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	3	4.7	1.4		135.1	84.6	77.5	75	41.5

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	90	114.1	75.6	39.5

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

Period of Record = 1973 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												0		0	63.0
80 / 84												1	0	1	64.9
75 / 79												3	1	4	61.7
70 / 74		0		0	62.0		0		0	61.0		8	2	9	59.8
65 / 69		1		1	58.6		1	0	1	57.1	1	10	5	17	57.7
60 / 64	0	1	1	2	56.5	0	3	1	4	53.5	6	16	12	33	54.6
55 / 59	1	3	1	5	52.2	0	7	4	10	50.5	10	20	15	45	50.7
50 / 54	3	6	3	11	47.7	4	10	6	21	47.2	11	26	22	60	46.5
45 / 49	3	7	5	15	43.2	6	16	11	32	42.8	23	32	30	85	42.7
40 / 44	6	17	11	33	38.9	10	22	18	50	38.7	31	38	37	107	38.5
35 / 39	21	38	34	93	34.4	29	40	38	107	34.4	48	37	43	127	34.1
30 / 34	46	48	51	145	30.3	48	37	47	131	30.1	51	29	42	122	29.7
25 / 29	43	39	38	121	25.4	32	28	30	90	25.0	31	16	21	69	25.0
20 / 24	29	30	33	92	20.4	27	22	25	74	20.3	20	8	10	37	20.5
15 / 19	21	22	23	66	15.6	17	15	16	48	15.5	10	3	4	17	15.8
10 / 14	24	16	17	57	10.8	17	11	13	41	10.8	3	1	2	5	10.7
5 / 9	20	9	14	43	6.0	15	6	9	30	6.2	3	0	1	4	5.8
0 / 4	15	7	9	31	1.2	11	3	5	20	1.4	1	0		1	1.7
-5 / -1	7	2	4	12	-3.1	4	1	2	7	-2.7					
-10 / -6	4	2	2	8	-7.1	3	1	1	5	-7.1					
-15 / -11	3	1	2	5	-12.2	1	0	0	1	-11.9					
-20 / -16	1	0	1	2	-16.6	0			0	-15.3					
-25 / -21	0	0	0	0	-22.2										

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.

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Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)

Period of Record = 1973 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												1	0	1	78.4
95 / 99											0	2	1	3	76.7
90 / 94		0	0	0	67.6		3	1	4	72.4	0	18	5	23	73.9
85 / 89		2	0	2	67.9		15	4	19	69.1	1	39	15	55	72.0
80 / 84		8	2	10	65.3	1	26	11	38	67.3	6	54	30	90	69.2
75 / 79	0	14	5	19	63.3	5	38	21	64	64.4	23	56	50	129	66.8
70 / 74	1	18	9	29	60.4	14	42	34	90	62.1	46	38	52	136	64.7
65 / 69	7	27	20	53	57.4	32	45	43	120	59.4	59	20	46	125	61.5
60 / 64	22	35	30	88	54.7	47	38	46	131	56.0	53	10	26	89	57.4
55 / 59	26	36	32	94	50.5	45	24	38	107	52.0	30	3	12	44	53.1
50 / 54	31	37	40	108	46.3	46	11	27	84	48.0	16	0	4	20	48.8
45 / 49	42	28	39	109	42.7	31	6	17	54	43.5	4		0	4	44.6
40 / 44	44	21	31	96	38.4	19	1	6	25	39.1	1			1	41.1
35 / 39	35	10	18	64	34.0	7		1	8	33.7					
30 / 34	21	3	10	35	29.9	1			1	30.1					
25 / 29	8	1	3	12	25.4	0			0	29.0					
20 / 24	3	0	0	3	21.1										
15 / 19	0			0	17.5										
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)

Period of Record = 1973 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	79.3		1	0	1	80.2					
95 / 99		8	2	10	78.4		3	1	4	80.5		1		1	78.5
90 / 94		25	6	31	77.3		14	4	18	78.5		5	1	6	76.1
85 / 89	1	54	22	77	74.9	1	38	12	51	75.7		22	3	25	72.1
80 / 84	10	67	44	121	72.0	4	67	30	100	72.0	0	37	12	49	69.1
75 / 79	39	58	61	158	69.6	22	67	54	143	69.5	5	46	24	76	66.6
70 / 74	77	28	61	166	67.5	63	40	68	170	67.2	27	45	44	116	64.8
65 / 69	65	7	35	107	63.9	71	13	47	131	63.8	41	38	46	126	61.0
60 / 64	37	1	15	52	59.2	49	4	23	76	59.5	43	24	42	109	57.0
55 / 59	15	0	2	17	54.7	26	0	9	34	54.9	43	13	33	88	53.1
50 / 54	4		0	4	50.6	12	0	1	13	51.2	41	8	22	71	48.9
45 / 49						1		0	1	46.2	23	1	10	34	45.0
40 / 44						0			0	41.6	10		3	13	40.1
35 / 39											5		1	6	35.8
30 / 34											1		0	1	31.4
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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

Period of Record = 1973 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		2	0	2	67.5										
80 / 84		7	1	8	65.6										
75 / 79		18	3	21	63.3		1		1	62.5					
70 / 74	3	28	9	39	61.3		5	0	5	61.5		0		0	62.5
65 / 69	8	36	20	64	58.5	0	11	4	15	59.6		1	0	1	61.8
60 / 64	19	43	36	98	55.4	7	17	14	38	57.3	1	3	1	6	57.5
55 / 59	31	41	39	111	50.9	17	23	16	56	52.6	3	7	4	14	52.8
50 / 54	40	35	48	122	47.0	16	28	20	64	47.3	6	10	5	21	48.1
45 / 49	47	24	39	110	43.2	20	35	29	84	43.1	6	15	8	29	43.4
40 / 44	42	11	30	83	39.0	32	37	37	106	38.9	12	25	19	56	39.1
35 / 39	33	3	16	53	34.7	45	42	46	133	34.2	34	48	44	125	34.5
30 / 34	19	1	6	26	30.5	49	27	40	116	29.8	63	57	65	185	30.3
25 / 29	5		1	6	26.1	32	9	21	61	25.4	40	28	36	103	25.4
20 / 24	1		0	1	22.3	13	3	8	24	20.6	32	18	23	73	20.6
15 / 19						6	2	4	11	16.2	19	13	15	48	15.7
10 / 14						3	0	1	4	11.2	12	9	13	34	11.2
5 / 9						1	0	0	1	7.4	7	5	6	19	6.4
0 / 4								0	0	3.0	6	3	5	15	1.8
-5 / -1											3	2	2	6	-2.7
-10 / -6											3	2	1	6	-6.9
-15 / -11											1	1	1	3	-12.0
-20 / -16											0	0	0	0	-16.0
-25 / -21											0	0	0	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.

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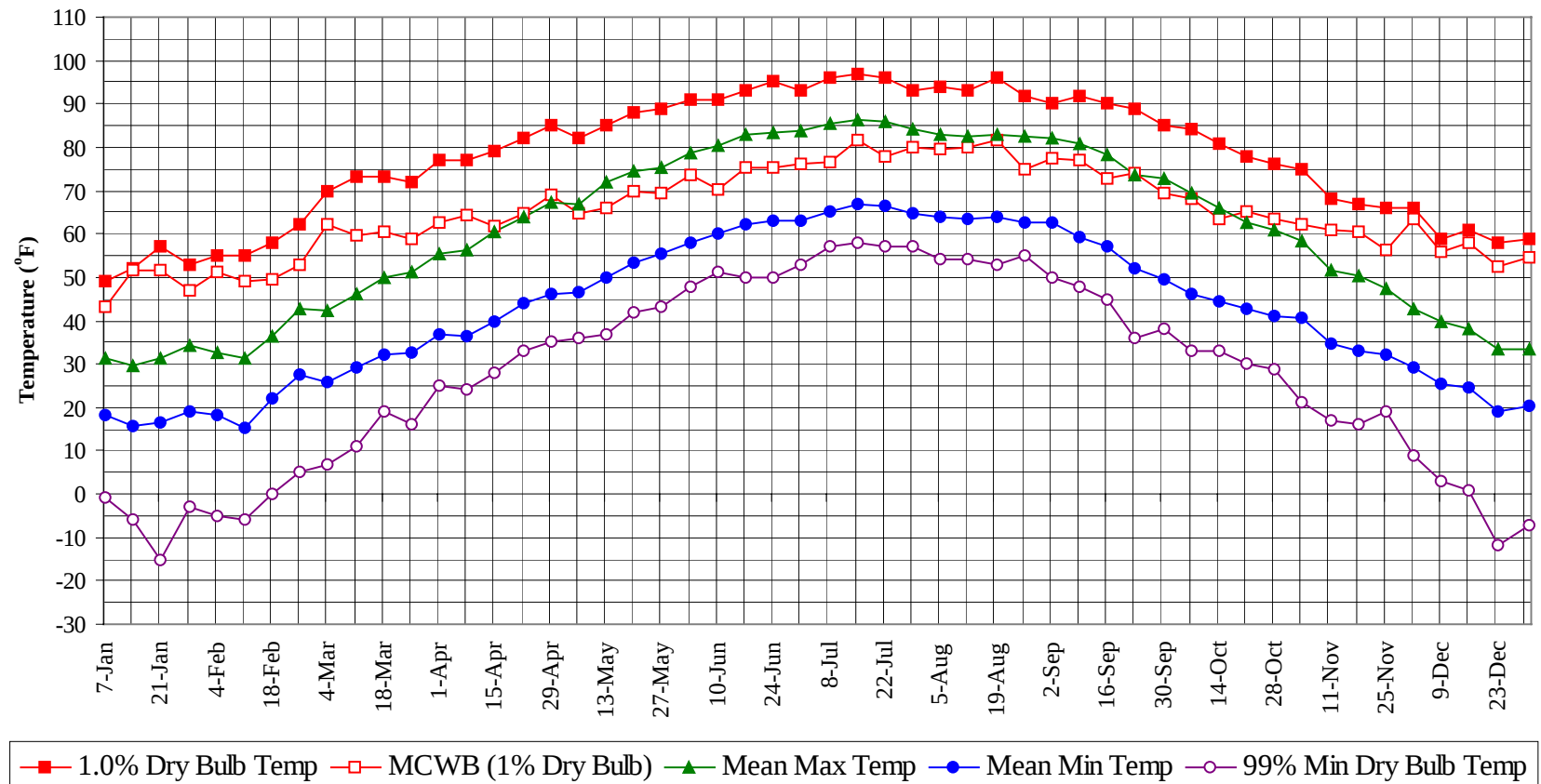
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

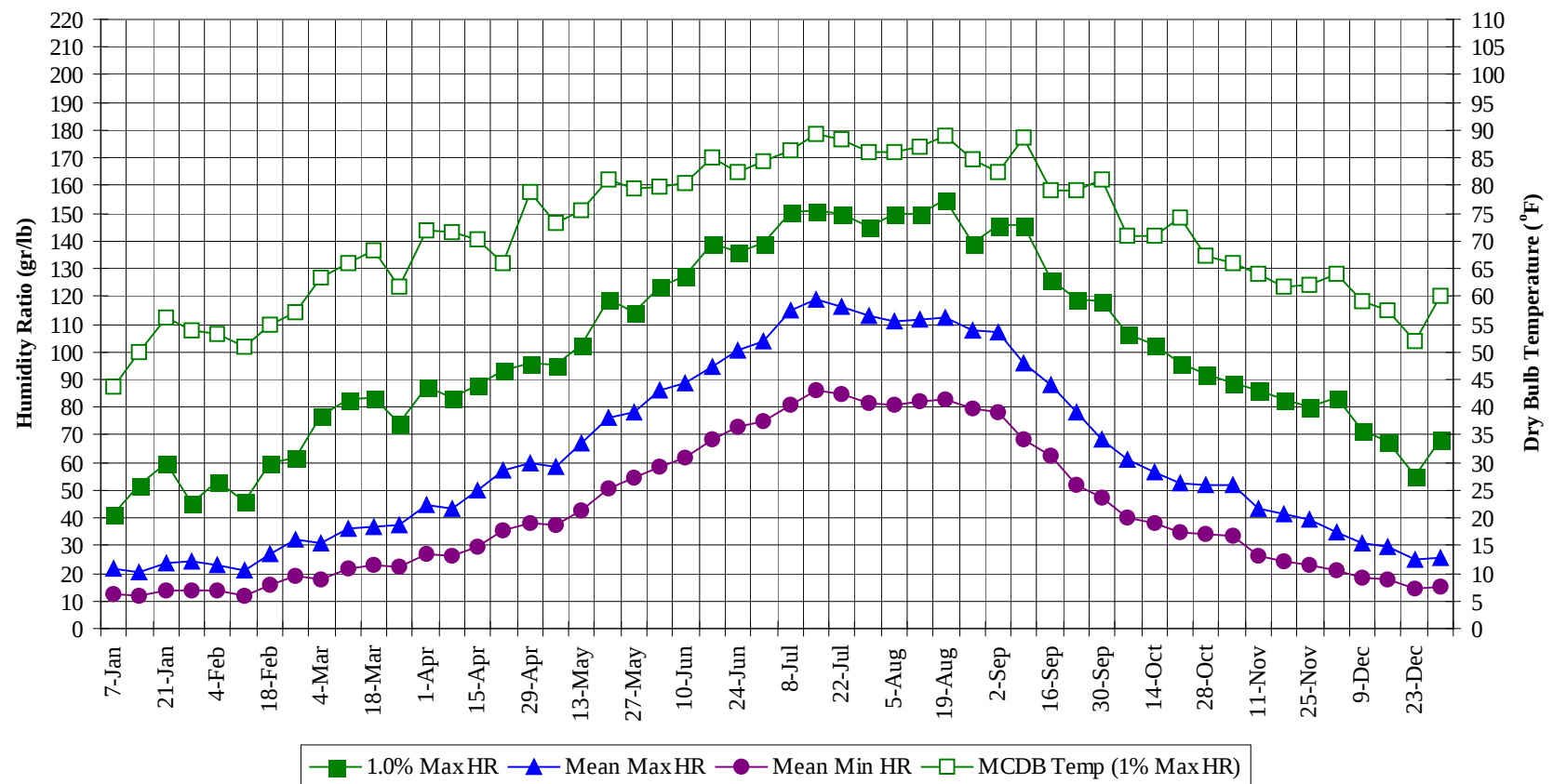
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		2	0	2	79.3
95 / 99	0	13	3	16	78.6
90 / 94	0	63	15	78	76.3
85 / 89	3	167	51	221	73.4
80 / 84	23	259	120	402	70.3
75 / 79	97	295	206	598	67.5
70 / 74	234	248	262	745	65.0
65 / 69	291	208	255	754	60.9
60 / 64	291	197	238	727	56.5
55 / 59	252	178	202	632	51.9
50 / 54	237	173	199	609	47.4
45 / 49	212	167	192	570	43.1
40 / 44	208	176	200	583	38.8
35 / 39	253	222	253	727	34.3
30 / 34	287	206	276	769	30.1
25 / 29	182	123	159	464	25.2
20 / 24	120	82	105	308	20.4
15 / 19	69	55	66	191	15.6
10 / 14	56	38	49	144	10.9
5 / 9	45	21	32	98	6.2
0 / 4	33	14	21	69	1.4
-5 / -1	12	4	7	24	-2.9
-10 / -6	9	4	5	18	-7.1
-15 / -11	4	2	3	8	-12.1
-20 / -16	1	1	1	3	-16.3
-25 / -21	0	0	0	0	-22.2

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



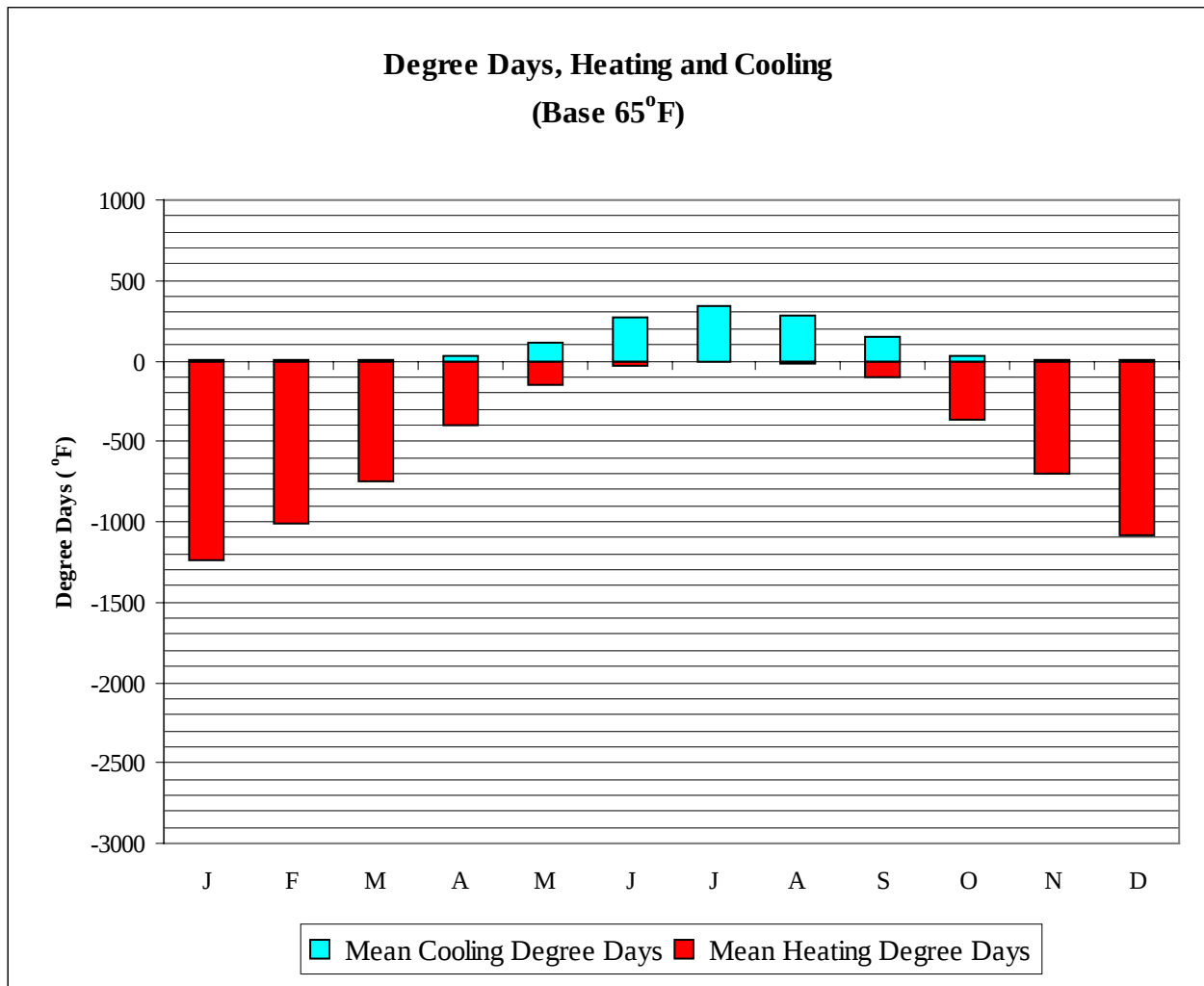
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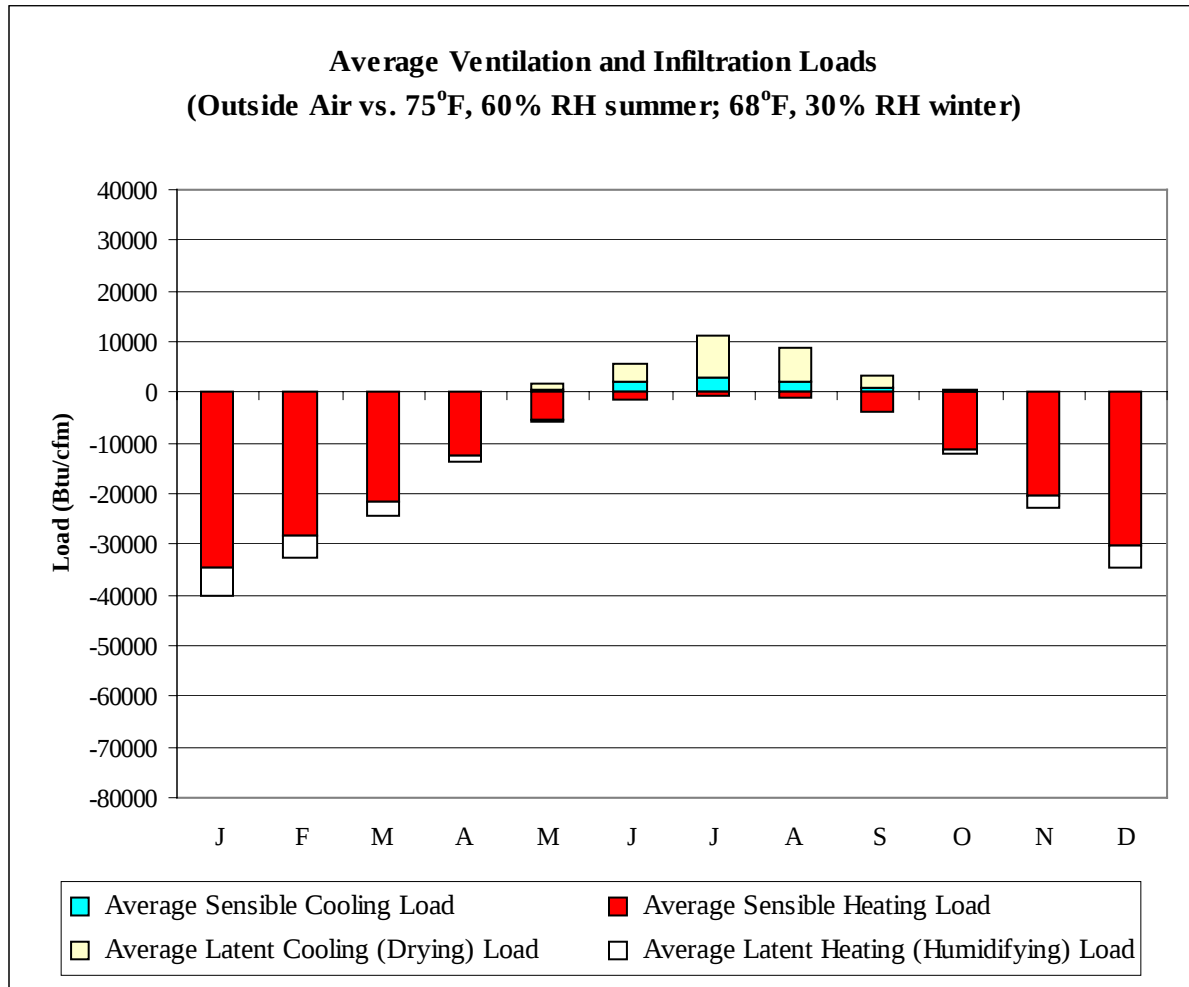
WMO No. 725315

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	49.0	43.1	31.1	18.2	-1.0	41.3	43.6	21.6	12.8
14-Jan	52.0	51.8	29.5	15.6	-6.0	51.8	50.0	20.5	11.9
21-Jan	57.0	51.8	31.4	16.7	-15.0	59.5	56.3	23.8	13.5
28-Jan	53.0	47.2	34.3	19.0	-3.0	45.5	53.9	24.3	13.5
4-Feb	55.0	51.4	32.6	18.2	-5.0	53.2	53.2	22.9	13.5
11-Feb	55.0	49.0	31.3	15.4	-6.0	46.2	50.8	21.2	11.8
18-Feb	58.0	49.4	36.5	21.8	0.0	59.5	55.0	27.2	15.7
25-Feb	62.0	52.9	42.9	27.5	5.0	61.6	57.3	32.0	19.0
4-Mar	70.0	62.4	42.4	25.7	7.0	77.0	63.4	31.2	17.8
11-Mar	73.0	59.6	46.1	29.2	11.0	82.6	65.9	36.0	21.6
18-Mar	73.0	60.6	49.9	32.2	19.0	83.3	68.2	36.6	23.0
25-Mar	72.0	58.8	51.3	32.7	16.0	74.2	61.8	37.5	22.6
1-Apr	77.0	62.8	55.3	37.0	25.0	87.5	71.8	44.6	27.2
8-Apr	77.0	64.4	56.4	36.3	24.0	83.3	71.7	43.0	26.0
15-Apr	79.0	61.8	60.4	39.8	28.0	88.2	70.2	49.9	29.4
22-Apr	82.0	64.9	64.0	44.0	33.0	93.1	66.1	56.9	35.6
29-Apr	85.0	69.2	67.5	46.3	35.0	95.9	78.9	59.7	37.9
6-May	82.0	64.8	66.9	46.4	36.0	95.2	73.4	58.3	37.2
13-May	85.0	65.9	71.8	49.8	37.0	102.2	75.5	66.7	43.0
20-May	88.0	69.8	74.4	53.2	42.0	119.0	81.1	76.4	50.8
27-May	89.0	69.2	75.4	55.3	43.0	114.1	79.6	77.9	54.3
3-Jun	91.0	73.6	78.6	58.0	48.0	123.2	79.9	85.7	58.7
10-Jun	91.0	70.1	80.3	60.0	51.0	127.4	80.4	88.7	61.5
17-Jun	93.0	75.2	83.1	62.1	50.0	139.3	85.2	94.8	68.0
24-Jun	95.0	75.3	83.5	63.2	50.0	135.8	82.6	100.2	72.8
1-Jul	93.0	76.3	83.6	63.2	53.0	139.3	84.4	103.6	74.9
8-Jul	96.0	76.5	85.6	65.1	57.0	150.5	86.4	114.6	80.5
15-Jul	97.0	81.5	86.1	66.7	58.0	151.2	89.2	119.2	86.3
22-Jul	96.0	77.9	85.8	66.4	57.0	149.8	88.4	116.5	84.7
29-Jul	93.0	79.9	84.0	64.7	57.0	144.9	86.0	112.6	81.7
5-Aug	94.0	79.4	83.1	63.9	54.0	149.8	86.1	110.7	81.1
12-Aug	93.0	79.9	82.6	63.5	54.0	149.8	87.0	111.7	81.8
19-Aug	96.0	81.5	83.1	63.7	53.0	154.7	89.0	112.5	82.8
26-Aug	92.0	75.0	82.7	62.8	55.0	139.3	84.8	107.8	79.7
2-Sep	90.0	77.5	82.0	62.5	50.0	145.6	82.3	106.8	78.2
9-Sep	92.0	76.9	80.7	59.1	48.0	145.6	88.7	95.6	68.4
16-Sep	90.0	72.9	78.5	57.1	45.0	126.0	79.2	87.9	62.2
23-Sep	89.0	74.2	73.8	52.0	36.0	119.0	79.2	78.3	51.6
30-Sep	85.0	69.4	72.9	49.6	38.0	118.3	81.2	68.5	47.0
7-Oct	84.0	68.1	69.3	46.3	33.0	106.4	71.0	60.8	40.2
14-Oct	81.0	63.4	66.1	44.6	33.0	102.2	71.0	56.8	37.8
21-Oct	78.0	65.3	62.8	42.6	30.0	95.9	74.3	52.5	35.0
28-Oct	76.0	63.4	61.1	41.2	29.0	91.7	67.3	52.2	33.9
4-Nov	75.0	62.3	58.3	40.5	21.0	88.9	66.1	52.1	33.3
11-Nov	68.0	60.7	51.8	34.8	17.0	86.1	64.1	43.0	26.5
18-Nov	67.0	60.3	50.5	33.2	16.0	82.6	61.9	41.3	24.3
25-Nov	66.0	56.3	47.3	32.1	19.0	79.8	62.1	39.2	23.3
2-Dec	66.0	63.4	42.8	29.1	9.0	83.3	64.0	34.9	20.9
9-Dec	59.0	55.9	39.9	25.5	3.0	71.4	59.0	31.0	18.3
16-Dec	61.0	58.2	38.3	24.5	1.0	67.9	57.6	29.6	17.7
23-Dec	58.0	52.5	33.4	19.2	-12.0	55.3	51.8	24.7	14.7
31-Dec	59.0	54.5	33.4	20.1	-7.0	68.6	60.2	25.3	15.0



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1237
FEB	0	1009
MAR	7	744
APR	30	404
MAY	116	154
JUN	265	30
JUL	342	9
AUG	283	19
SEP	147	106
OCT	31	361
NOV	2	698
DEC	0	1082
ANN	1223	5853



	Average Sensible Cooling Load	Average Sensible Heating Load	Average Latent Cooling Load	Average Latent Heating Load
	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)
JAN	0	-34461	0	-5709
FEB	0	-28336	0	-4439
MAR	14	-21618	32	-2605
APR	121	-12519	110	-1013
MAY	669	-5450	1041	-185
JUN	2097	-1349	3620	-4
JUL	2958	-492	8087	0
AUG	2098	-945	6738	0
SEP	895	-3859	2395	-53
OCT	95	-11414	243	-602
NOV	1	-20374	34	-2213
DEC	0	-30454	3	-4296
ANN	8948	-171271	22303	-21119

Average Annual Solar Radiation – Nearest Available Site

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

City: SPRINGFIELD
 State: IL
 WBAN No: 93822
 Lat(N): 39.83
 Long(W): 89.67
 Elev(ft): 614

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.529
 Vert Gap: 0.32

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	660	910	1180	1570	1890	2070	2030	1810	1460	1080	680	540	1330
	Std Dev	48	65	95	123	152	115	104	113	101	88	66	51	40
	Minimum	520	790	990	1350	1490	1860	1840	1550	1240	880	550	450	1260
	Maximum	740	1050	1400	1800	2200	2340	2260	2010	1690	1250	850	650	1440
	Diffuse	320	430	590	700	790	810	790	700	570	420	340	290	570
Clear Day	Global	900	1250	1730	2210	2520	2630	2550	2270	1850	1360	950	790	1750
NORTH	Global	200	270	350	440	550	630	600	480	380	290	210	180	380
	Diffuse	200	270	350	430	500	530	520	460	370	290	210	180	360
Clear Day	Global	180	240	330	430	580	680	630	480	350	270	200	160	380
EAST	Global	450	590	730	930	1080	1150	1140	1050	880	700	450	370	790
	Diffuse	250	330	430	530	600	630	620	560	470	360	260	220	440
Clear Day	Global	690	890	1140	1340	1450	1470	1440	1350	1170	930	710	610	1100
SOUTH	Global	1060	1130	1030	980	870	810	850	980	1150	1230	990	900	1000
	Diffuse	350	430	490	540	560	570	570	560	510	440	350	310	480
Clear Day	Global	1900	1960	1800	1410	1080	930	980	1250	1610	1850	1860	1820	1530
WEST	Global	450	590	710	910	1050	1140	1150	1070	890	690	460	370	790
	Diffuse	250	330	430	530	610	640	630	570	470	360	260	220	440
Clear Day	Global	690	890	1140	1340	1450	1470	1440	1350	1170	930	710	610	1100

Average Annual Solar Heat and Illumination – Nearest Available Site

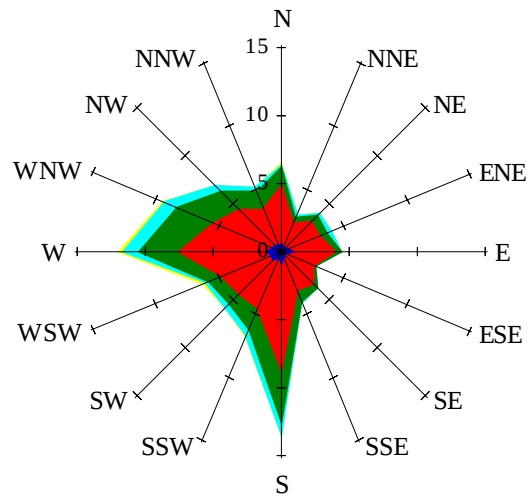
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	430	620	830	1130	1370	1510	1480	1310	1040	750	450	350	940
NORTH	Unshaded	140	190	250	300	360	410	390	320	260	200	150	120	260
	Shaded	120	170	220	270	320	360	350	290	230	180	130	110	230
EAST	Unshaded	310	410	510	660	770	820	810	740	630	490	310	250	560
	Shaded	280	370	450	570	660	700	690	640	540	440	280	230	490
SOUTH	Unshaded	800	830	720	640	530	490	510	620	770	890	740	680	680
	Shaded	780	770	570	420	350	350	360	390	560	780	710	660	560
WEST	Unshaded	310	410	500	650	750	810	820	760	630	490	320	250	560
	Shaded	280	370	440	560	640	690	700	660	550	430	280	220	490

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	41	73	80	63	24	49	85	102	95	67
	M.Cloudy	23	44	50	38	15	33	60	73	71	49
NORTH	M.Clear	10	14	15	13	7	18	16	17	17	15
	M.Cloudy	9	16	17	14	7	14	18	19	19	16
EAST	M.Clear	74	55	15	13	7	79	72	29	17	15
	M.Cloudy	25	29	17	14	7	40	47	26	19	16
SOUTH	M.Clear	41	75	82	64	25	12	33	47	42	20
	M.Cloudy	17	36	41	30	11	12	27	37	34	18
WEST	M.Clear	10	14	25	67	61	12	16	17	54	79
	M.Cloudy	9	16	21	31	21	12	18	19	41	50
M.Clear	(% hrs)	30	27	26	25	26	45	42	37	37	38
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	29	68	85	77	45	15	41	46	27	1
	M.Cloudy	18	43	57	52	30	9	24	27	16	1
NORTH	M.Clear	9	14	16	15	11	5	10	10	8	1
	M.Cloudy	8	15	17	17	11	4	10	11	7	0
EAST	M.Clear	67	69	26	15	11	41	38	10	8	1
	M.Cloudy	25	36	22	17	11	11	17	11	7	0
SOUTH	M.Clear	23	59	76	68	37	39	81	88	60	2
	M.Cloudy	12	32	45	41	21	10	28	31	18	1
WEST	M.Clear	9	14	16	55	74	5	10	23	48	3
	M.Cloudy	8	15	17	35	36	4	10	14	16	1
M.Clear	(% hrs)	46	46	43	44	46	29	28	28	29	31

Wind Summary - December, January, and February

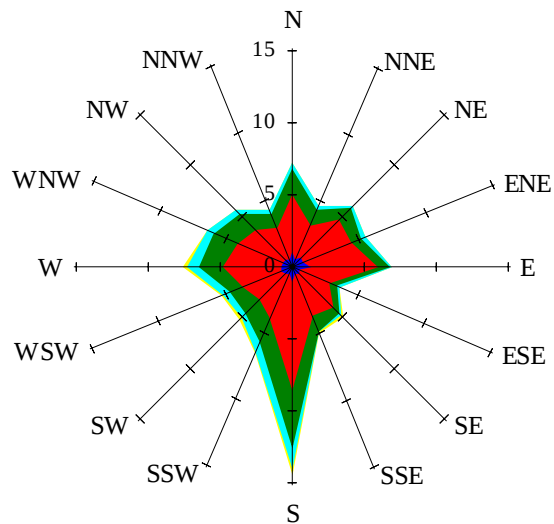
Labels of Percent Frequency on North Axis



Percent Calm = 3.05

Wind Summary - March, April, and May

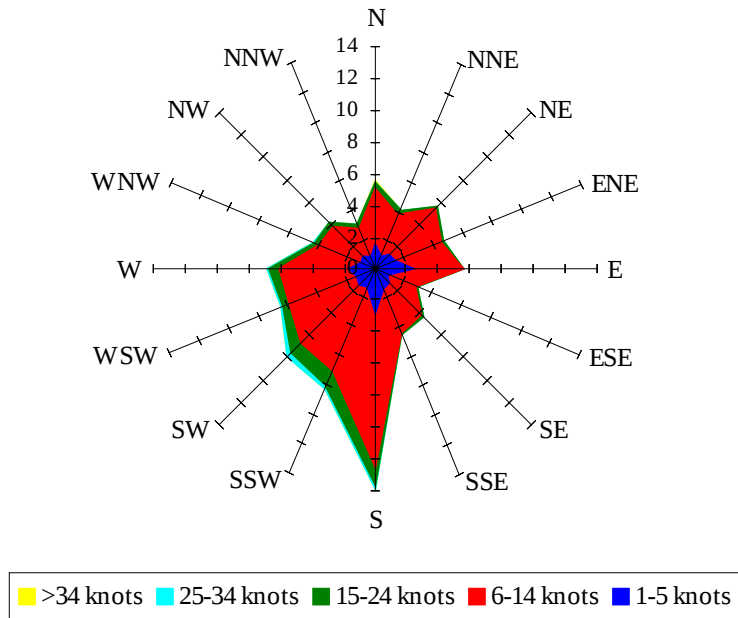
Labels of Percent Frequency on North Axis



Percent Calm = 3.06

Wind Summary - June, July, and August

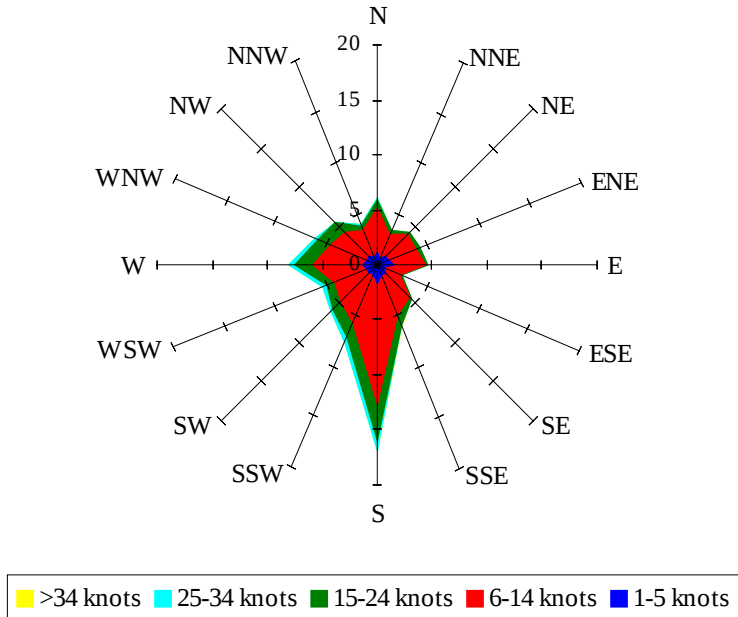
Labels of Percent Frequency on North Axis



Percent Calm = 8.17

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 5.51