

OMAHA/EPPLEY NE

Latitude = 41.30 N

Longitude = 95.90 W

Period of Record = 1973 to 1996

WMO No. 725500

Elevation = 981 feet

Average Pressure = 28.92 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	100	76	104	13.0	S
0.4% Occurrence	96	76	109	12.8	S
1.0% Occurrence	92	75	109	12.4	S
2.0% Occurrence	89	74	105	11.7	S
Mean Daily Range	21	-	-	-	-
97.5% Occurrence	5	4	5	10.2	NNW
99.0% Occurrence	-2	-3	4	9.8	NNW
99.6% Occurrence	-8	-9	3	9.5	N
Median of Extreme Lows	-13	-13	2	10.0	NNW
	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	151	10.2	S
0.4% Occurrence	79	90	134	11.2	S
1.0% Occurrence	77	88	125	11.0	S
2.0% Occurrence	76	87	121	10.9	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	155	88	1.00	8.8	S
0.4% Occurrence	137	85	0.88	9.9	S
1.0% Occurrence	132	84	0.85	9.7	S
2.0% Occurrence	123	83	0.79	9.6	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		84	838	481	1402

Other Site Data

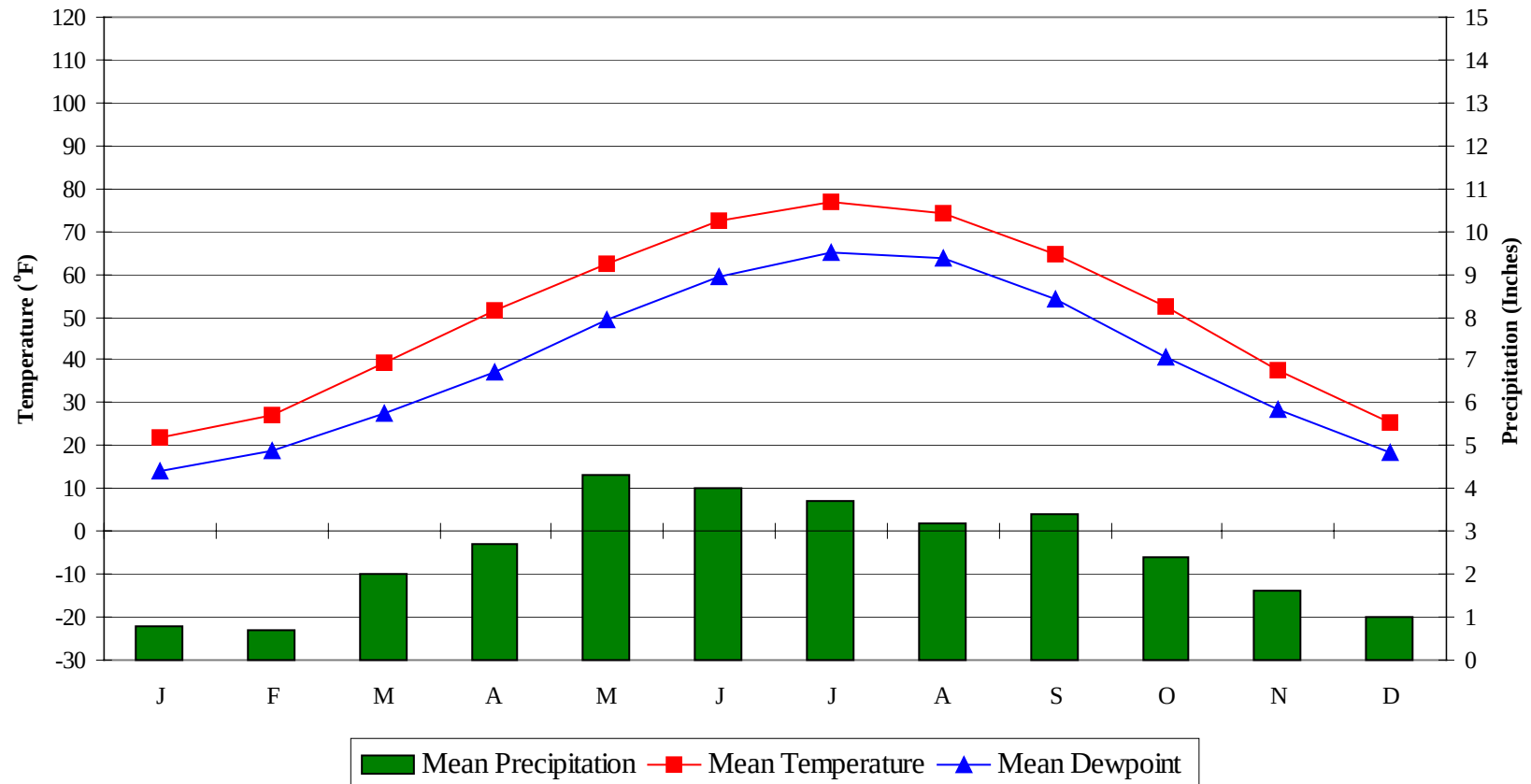
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
6	3.8	90	2.0 + 0.9
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
53.0	75	20	75

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

OMAHA/EPPLEY NE

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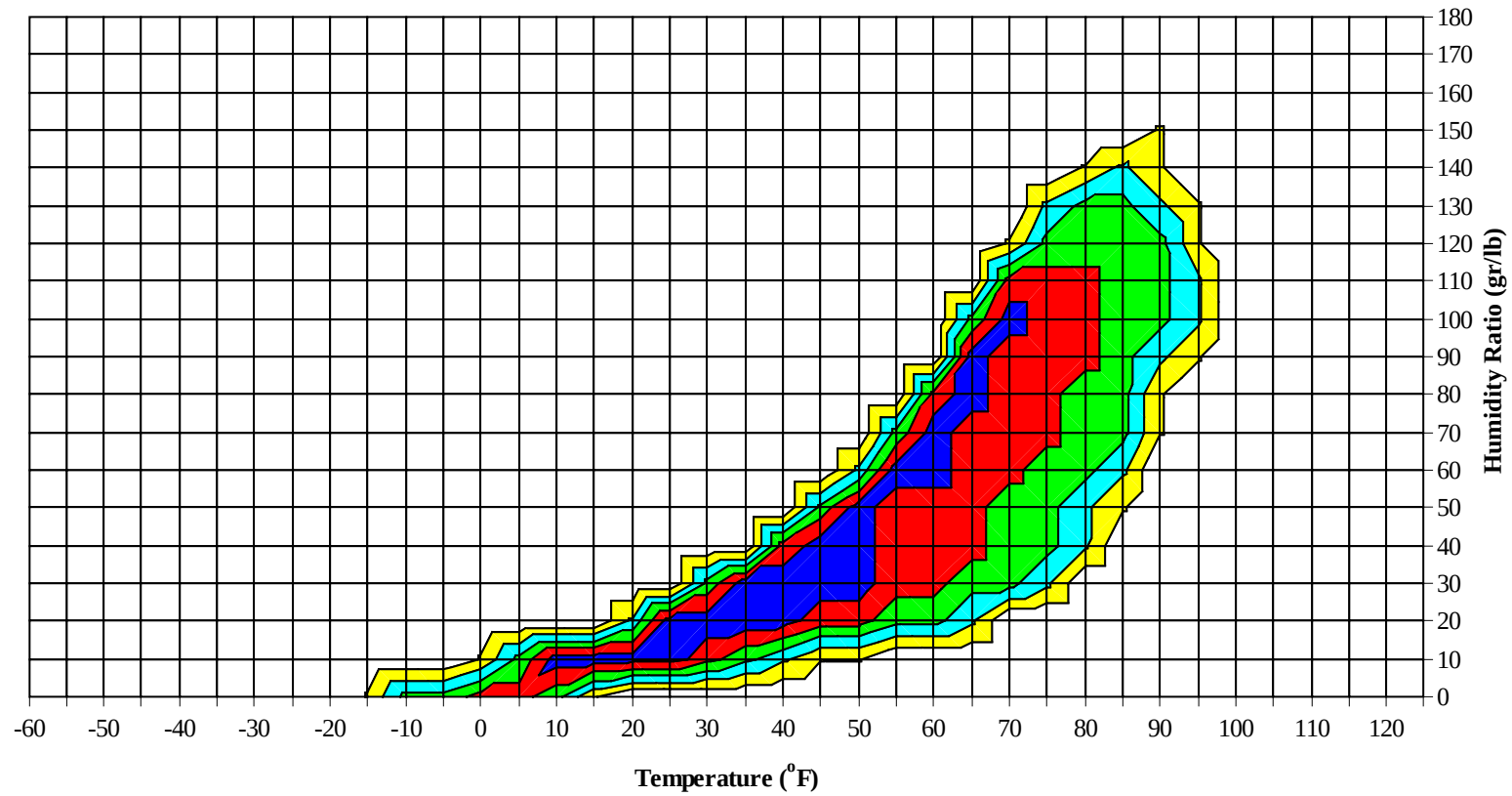
Average Annual Climate



OMAHA/EPPLEY NE

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Long Term Psychrometric Summary

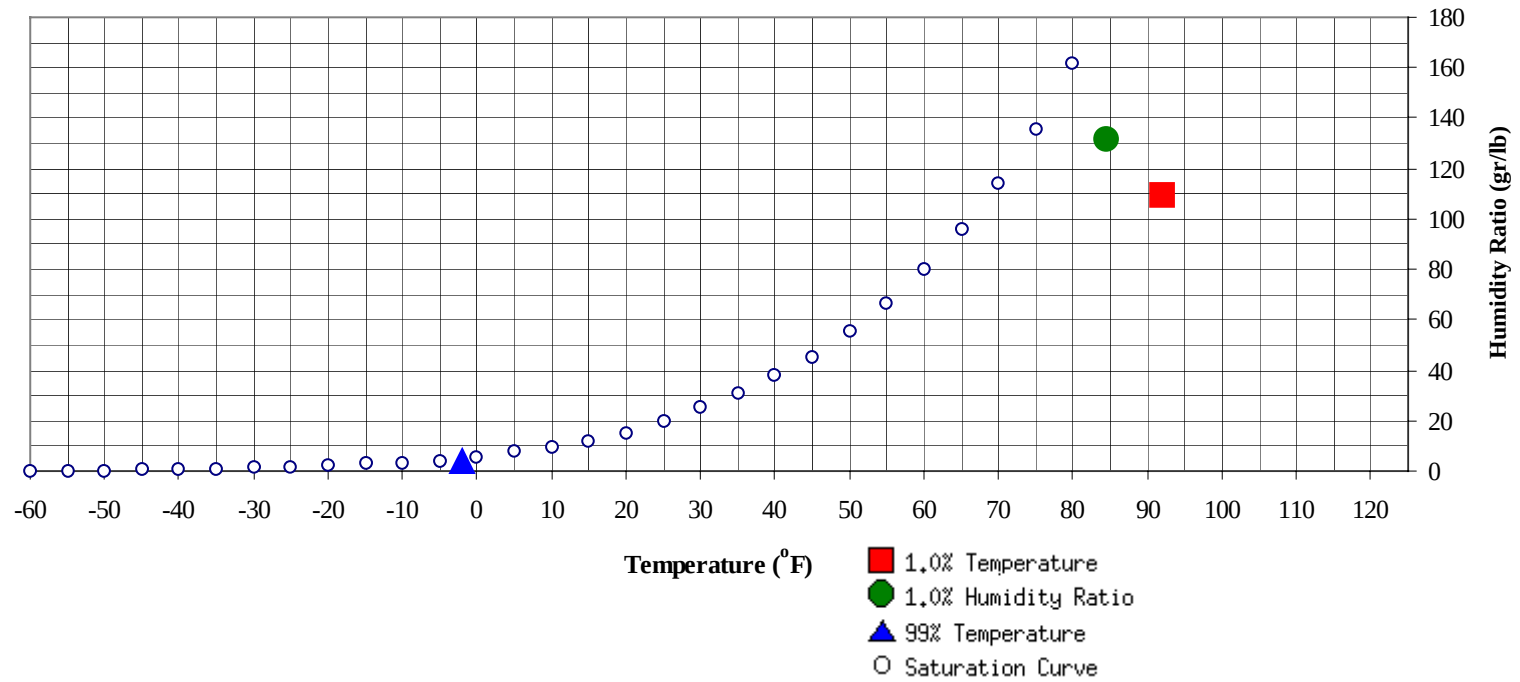


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

OMAHA/EPPLEY NE

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Psychrometric Summary of Peak Design Values



	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)	1.0% Humidity Ratio	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
99% Dry Bulb	-2	3.6	0.1		131.6	84.5	76.8	74	40.9

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	92	109.3	75.1	39.3

OMAHA/EPPLEY NE

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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		
105 / 109															
100 / 104															
95 / 99															
90 / 94															
85 / 89												0	0	0	61.5
80 / 84												1	0	1	60.5
75 / 79												3	1	4	56.9
70 / 74							1	0	1	52.1		0	5	3	8 55.3
65 / 69		0		0	49.3		2	1	3	50.8		0	10	7	17 53.1
60 / 64		1	0	1	47.7		4	2	6	48.2		2	16	11	29 50.7
55 / 59		3	0	3	44.5	1	7	3	11	45.9		6	21	14	41 48.1
50 / 54		5	2	7	42.2	1	11	7	19	43.0		9	26	23	58 44.4
45 / 49	1	10	5	16	39.8	2	15	11	28	40.2		20	29	28	77 41.2
40 / 44	5	18	13	36	36.3	6	22	19	47	36.9		29	38	37	104 37.5
35 / 39	14	30	26	70	33.1	22	31	31	84	33.6		46	38	42	127 33.7
30 / 34	31	35	37	103	29.6	45	33	44	122	29.9		46	25	35	106 29.5
25 / 29	36	32	36	104	25.1	35	27	27	89	24.9		38	16	22	76 24.9
20 / 24	36	31	35	102	20.5	30	22	25	77	20.3		23	9	13	45 20.4
15 / 19	29	23	25	77	15.6	23	16	18	57	15.7		12	6	6	24 15.7
10 / 14	26	18	20	64	10.7	19	14	14	47	10.7		7	3	3	13 10.8
5 / 9	23	19	22	64	6.0	13	8	9	30	6.2		4	1	2	7 6.2
0 / 4	19	12	14	45	1.1	10	5	6	21	1.4		2	0	1	3 1.4
-5 / -1	13	6	7	26	-3.1	7	3	4	14	-2.8		1	0	0	1 -2.8
-10 / -6	11	3	4	18	-7.3	6	2	2	10	-7.3		1			1 -7.2
-15 / -11	4	1	1	6	-11.5	3	1	1	5	-11.8		0			0 -10.3
-20 / -16	1	0	0	1	-17.2	1	0	0	1	-16.8					
-25 / -21	0	0	0	0	-21.1	0	0		0	-21.6					

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.

OMAHA/EPPLEY NE

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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		
105 / 109															
100 / 104												1	0	1	75.8
95 / 99		0		0	68.0		0	0	0	72.7		5	2	7	75.6
90 / 94		1	0	1	65.9		2	0	2	70.9		18	7	25	74.4
85 / 89		3	1	4	64.9		10	3	13	69.4	0	39	22	61	71.7
80 / 84		7	4	11	63.3		24	12	36	66.0	4	53	37	94	69.0
75 / 79		13	8	21	60.9	2	36	21	59	63.6	22	47	42	111	67.0
70 / 74	1	20	13	34	57.8	9	47	34	90	61.0	43	38	45	126	64.8
65 / 69	8	27	20	55	55.1	25	44	42	111	58.8	60	24	42	126	62.0
60 / 64	13	31	26	70	52.1	47	37	47	131	55.8	54	11	26	91	58.2
55 / 59	20	33	31	84	48.7	51	25	40	116	52.0	34	3	13	50	54.1
50 / 54	31	34	38	103	45.4	49	16	27	92	48.1	17	1	3	21	50.1
45 / 49	44	28	35	107	42.2	37	6	15	58	44.0	6		1	7	45.8
40 / 44	44	25	28	97	38.4	19	1	5	25	39.9	1			1	42.7
35 / 39	35	11	21	67	34.0	7		0	7	35.1	0			0	38.0
30 / 34	25	5	10	40	29.8	2		0	2	30.8					
25 / 29	13	2	3	18	25.2	0			0	26.3					
20 / 24	4	1	1	6	20.6										
15 / 19	0	0	0	0	15.7										
10 / 14	0			0	11.3										
5 / 9	0			0	7.3										
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		
105 / 109		1	0	1	75.9			0	0	75.0					
100 / 104		5	1	6	75.7		2	0	2	76.6		0		0	73.0
95 / 99		14	5	19	76.5		10	3	13	76.5		2	0	2	73.8
90 / 94		33	14	47	75.5		24	9	33	75.8		8	2	10	72.4
85 / 89	1	50	31	82	73.8	0	38	21	59	74.0	0	16	6	22	71.2
80 / 84	14	61	52	127	71.4	7	57	41	105	71.5	1	30	15	46	69.0
75 / 79	43	48	55	146	69.5	28	51	50	129	69.4	5	37	25	67	66.6
70 / 74	71	26	48	145	67.4	63	39	61	163	67.0	23	42	35	100	64.1
65 / 69	67	8	30	105	63.9	71	18	36	125	63.6	38	42	41	121	61.1
60 / 64	38	2	11	51	60.0	45	6	20	71	59.5	44	31	41	116	57.3
55 / 59	13	0	1	14	55.8	25	1	8	34	55.3	41	17	33	91	53.0
50 / 54	2			2	51.9	9	0	1	10	51.2	38	10	21	69	49.0
45 / 49						1			1	47.3	28	4	11	43	44.7
40 / 44						0			0	44.0	14	1	6	21	40.4
35 / 39											7	0	2	9	36.1
30 / 34											2	0	0	2	31.5
25 / 29											0			0	26.7
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		
105 / 109															
100 / 104															
95 / 99															
90 / 94		1	0	1	67.1										
85 / 89		2	0	2	66.1										
80 / 84		7	2	9	63.6										
75 / 79	0	13	4	17	61.6		1		1	59.1					
70 / 74	1	23	10	34	59.0		2	0	2	56.9					
65 / 69	5	33	19	57	56.6	0	6	2	8	56.0		1	0	1	56.2
60 / 64	16	40	34	90	54.2	2	13	6	21	53.0	0	2	0	2	52.0
55 / 59	28	39	40	107	50.6	5	21	13	39	49.4	0	3	1	4	48.0
50 / 54	38	39	45	122	46.7	10	26	19	55	45.8	1	7	2	10	43.9
45 / 49	50	27	41	118	42.9	15	31	25	71	41.7	1	12	5	18	40.2
40 / 44	44	13	25	82	38.7	26	34	35	95	37.7	5	23	14	42	37.0
35 / 39	33	7	19	59	34.5	42	36	47	124	33.8	20	38	35	93	33.5
30 / 34	23	3	8	34	30.3	52	34	40	125	29.7	44	49	53	146	29.9
25 / 29	9	1	2	12	26.2	41	17	28	85	25.2	50	37	46	133	25.4
20 / 24	2	0	0	2	21.7	22	9	13	44	20.6	40	24	30	94	20.6
15 / 19	0		0	0	17.6	12	6	7	25	15.9	26	17	21	64	15.8
10 / 14						6	3	4	13	10.8	21	14	13	48	11.0
5 / 9						5	1	3	9	6.3	13	9	10	32	6.2
0 / 4						2	0	0	2	1.5	9	6	9	24	1.2
-5 / -1						0			0	-1.8	6	2	4	12	-3.0
-10 / -6						0			0	-6.0	4	3	3	10	-7.5
-15 / -11											3	2	2	7	-12.0
-20 / -16											2	0	1	3	-17.3
-25 / -21											1	0	0	1	-20.8

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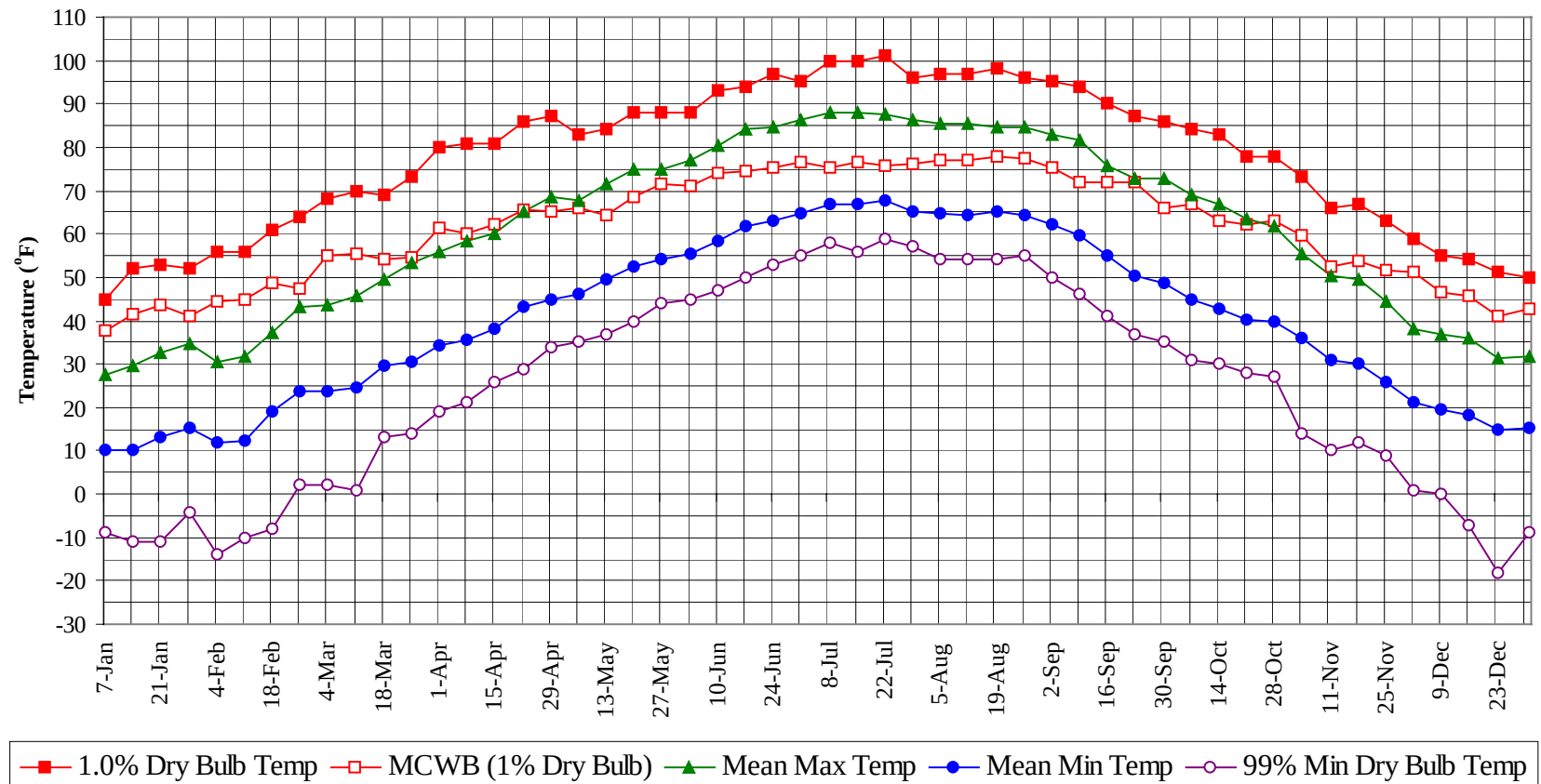
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

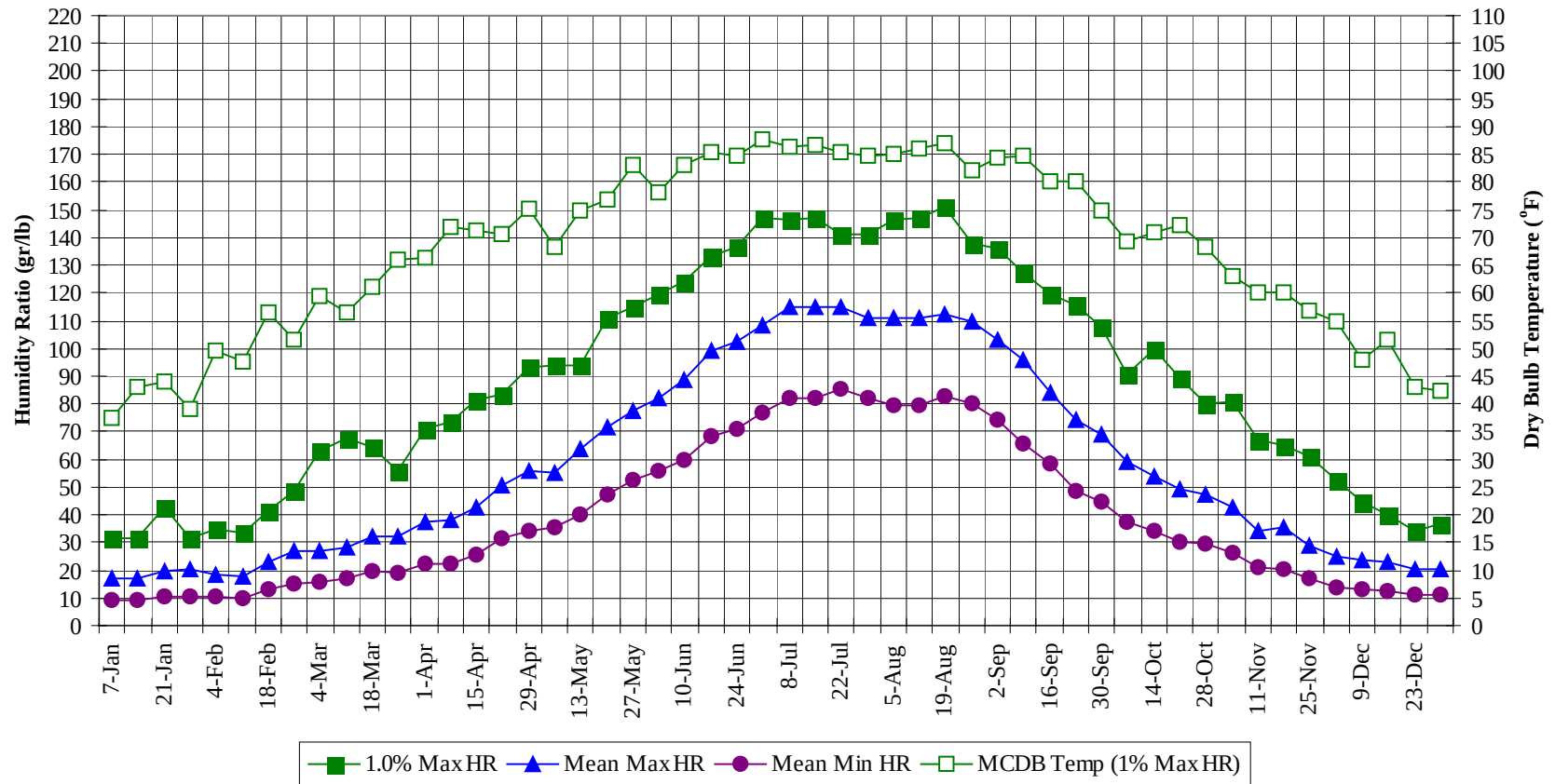
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
105 / 109		1	0	1	75.9
100 / 104		8	2	10	75.8
95 / 99		30	10	40	76.2
90 / 94		87	33	120	74.8
85 / 89	2	158	85	245	72.6
80 / 84	25	240	162	427	69.8
75 / 79	100	248	206	554	67.3
70 / 74	211	243	248	702	64.5
65 / 69	274	215	240	729	60.6
60 / 64	261	195	224	680	56.1
55 / 59	223	174	198	595	51.3
50 / 54	204	173	188	565	46.6
45 / 49	206	162	178	546	42.3
40 / 44	193	175	181	549	37.9
35 / 39	226	191	222	639	33.8
30 / 34	269	185	227	681	29.8
25 / 29	223	131	164	518	25.2
20 / 24	158	96	117	371	20.5
15 / 19	102	68	77	247	15.7
10 / 14	78	52	54	184	10.8
5 / 9	59	38	47	144	6.1
0 / 4	43	24	31	98	1.2
-5 / -1	27	12	15	54	-3.0
-10 / -6	22	8	10	40	-7.3
-15 / -11	10	3	3	16	-11.7
-20 / -16	4	1	2	7	-17.1
-25 / -21	1	0	0	1	-21.0

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary

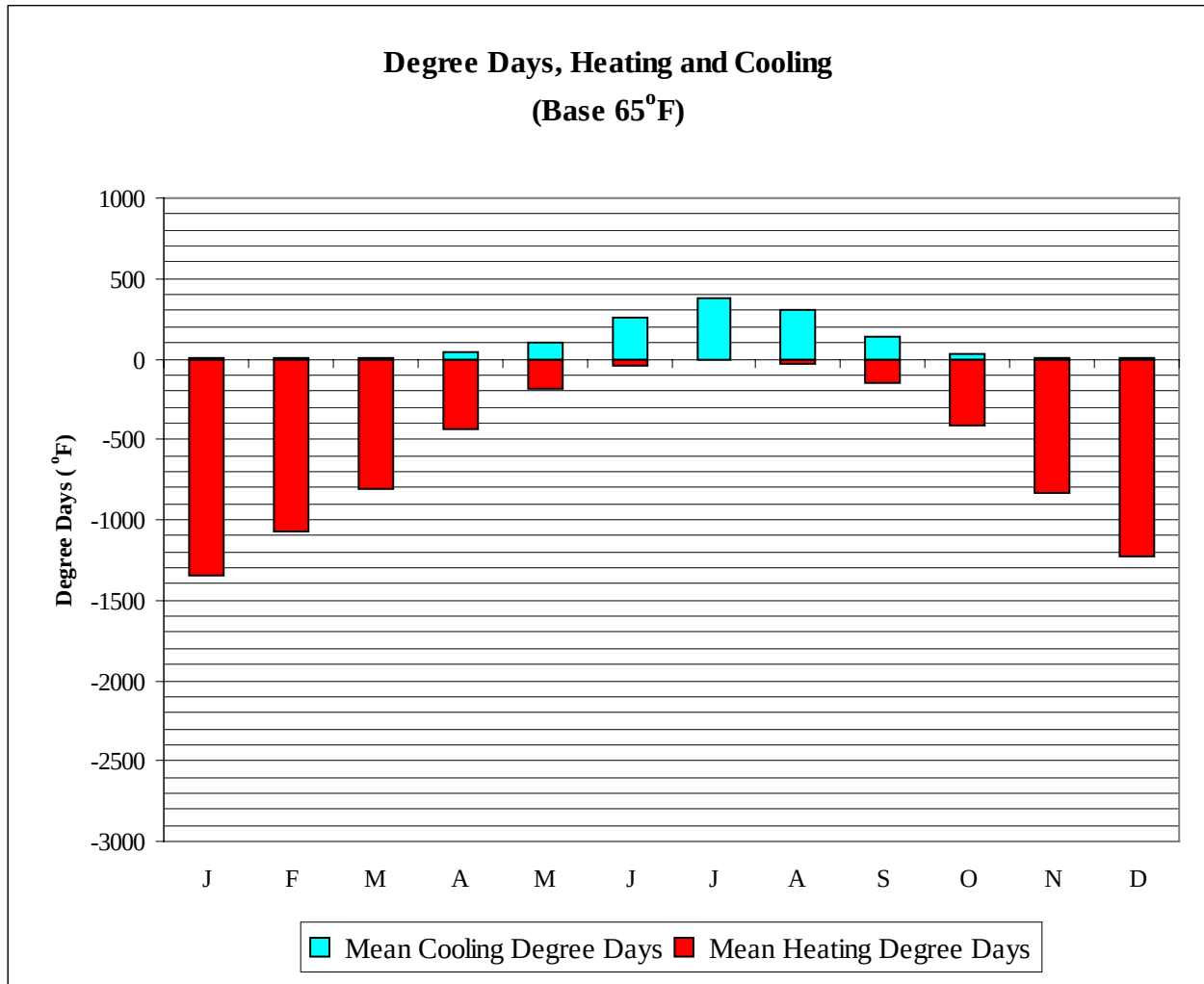


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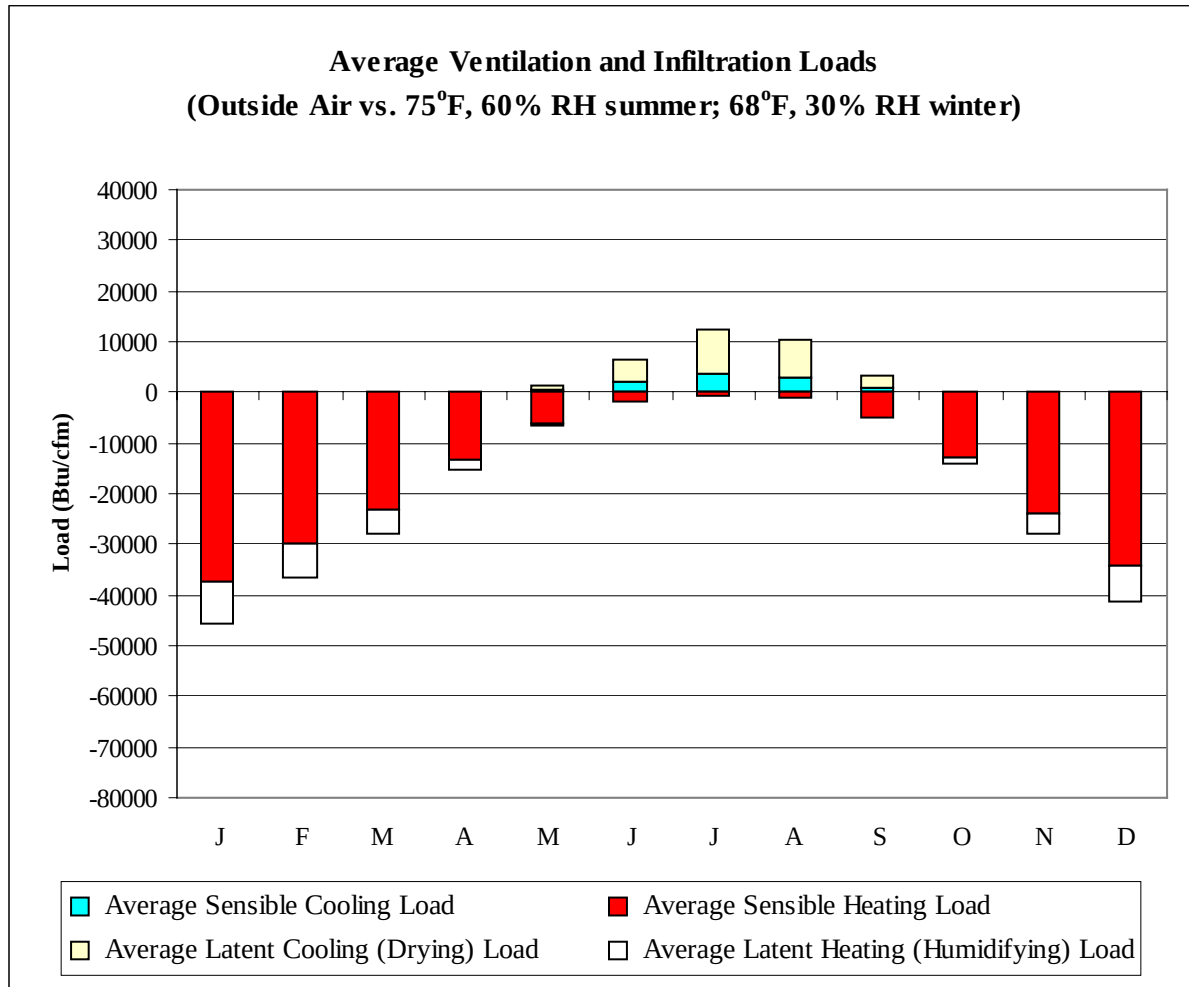
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Long Term Dry Bulb Temperature and Humidity Summary

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	45.0	37.5	27.5	10.1	-9.0	31.5	37.4	17.1	9.1
14-Jan	52.0	41.7	29.7	10.3	-11.0	31.5	42.9	17.1	9.0
21-Jan	53.0	43.8	32.7	13.2	-11.0	42.7	43.9	19.7	10.5
28-Jan	52.0	41.2	34.6	15.2	-4.0	31.5	39.1	20.5	10.7
4-Feb	56.0	44.6	30.6	11.9	-14.0	35.0	49.6	18.2	10.2
11-Feb	56.0	44.9	31.6	12.2	-10.0	33.6	47.7	18.0	10.1
18-Feb	61.0	48.5	37.2	18.9	-8.0	41.3	56.5	22.8	13.4
25-Feb	64.0	47.4	43.2	23.6	2.0	48.3	51.5	26.8	15.3
4-Mar	68.0	55.1	43.6	23.8	2.0	63.0	59.5	27.1	15.6
11-Mar	70.0	55.3	45.7	24.7	1.0	67.9	56.6	28.6	16.9
18-Mar	69.0	54.1	49.4	29.5	13.0	64.4	60.9	32.5	19.5
25-Mar	73.0	54.4	53.2	30.3	14.0	56.0	66.1	32.1	19.1
1-Apr	80.0	61.2	55.7	34.4	19.0	70.7	66.4	37.4	22.2
8-Apr	81.0	60.0	58.5	35.7	21.0	73.5	71.9	37.8	22.2
15-Apr	81.0	62.4	60.3	38.2	26.0	81.2	71.3	42.9	25.9
22-Apr	86.0	65.8	65.0	43.0	29.0	83.3	70.5	50.4	31.8
29-Apr	87.0	65.1	68.4	44.9	34.0	93.1	75.1	55.6	34.1
6-May	83.0	66.1	67.8	46.0	35.0	93.8	68.4	55.0	35.5
13-May	84.0	64.2	71.6	49.4	37.0	93.8	75.0	64.0	40.1
20-May	88.0	68.6	74.9	52.4	40.0	111.3	76.9	71.5	47.3
27-May	88.0	71.4	75.0	54.2	44.0	114.8	83.0	77.5	52.5
3-Jun	88.0	71.3	77.0	55.5	45.0	119.7	78.0	82.2	55.6
10-Jun	93.0	74.0	80.4	58.4	47.0	123.9	83.0	89.0	59.5
17-Jun	94.0	74.7	84.1	61.8	50.0	133.0	85.3	99.1	68.1
24-Jun	97.0	75.5	84.5	63.1	53.0	136.5	84.8	102.4	70.6
1-Jul	95.0	76.4	86.5	64.8	55.0	147.0	87.8	108.4	76.7
8-Jul	100.0	75.5	87.9	66.7	58.0	146.3	86.4	115.0	81.8
15-Jul	100.0	76.4	87.9	66.7	56.0	147.0	86.7	115.1	82.4
22-Jul	101.0	75.8	87.5	67.6	59.0	141.4	85.4	114.9	85.1
29-Jul	96.0	76.1	86.2	65.2	57.0	141.4	84.6	111.3	82.1
5-Aug	97.0	77.1	85.4	64.8	54.0	146.3	85.2	111.3	79.7
12-Aug	97.0	77.1	85.5	64.5	54.0	147.0	86.1	110.8	79.6
19-Aug	98.0	77.7	84.6	65.2	54.0	151.2	87.0	112.4	82.6
26-Aug	96.0	77.6	84.8	64.2	55.0	137.9	82.0	109.4	79.8
2-Sep	95.0	75.4	82.9	62.0	50.0	135.8	84.4	102.9	74.3
9-Sep	94.0	72.0	81.6	59.7	46.0	127.4	84.7	95.9	65.8
16-Sep	90.0	72.1	75.8	55.0	41.0	119.7	80.2	84.4	58.3
23-Sep	87.0	71.9	73.0	50.5	37.0	115.5	80.1	74.2	48.5
30-Sep	86.0	65.8	72.7	48.6	35.0	107.8	74.9	68.7	44.6
7-Oct	84.0	66.8	68.8	45.0	31.0	90.3	69.4	58.9	37.3
14-Oct	83.0	63.1	66.8	42.9	30.0	100.1	70.9	53.9	34.3
21-Oct	78.0	62.0	63.4	40.4	28.0	89.6	72.4	49.4	30.2
28-Oct	78.0	62.9	61.7	39.7	27.0	79.8	68.2	47.0	29.5
4-Nov	73.0	59.7	55.3	36.0	14.0	80.5	63.0	42.5	26.5
11-Nov	66.0	52.3	50.4	31.1	10.0	67.2	60.0	34.1	20.8
18-Nov	67.0	53.9	49.5	30.0	12.0	65.1	60.2	35.3	20.3
25-Nov	63.0	51.6	44.3	25.6	9.0	60.9	56.7	29.1	16.9
2-Dec	59.0	51.2	37.9	21.1	1.0	52.5	54.7	24.9	14.1
9-Dec	55.0	46.6	37.0	19.4	0.0	44.8	48.0	23.4	13.1
16-Dec	54.0	45.6	35.9	18.0	-7.0	39.9	51.6	23.2	12.7
23-Dec	51.0	41.2	31.4	14.6	-18.0	34.3	43.1	20.1	11.3
31-Dec	50.0	42.7	31.8	15.4	-9.0	37.1	42.4	20.2	11.5



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1344
FEB	0	1075
MAR	7	809
APR	37	439
MAY	101	182
JUN	261	41
JUL	374	10
AUG	308	24
SEP	136	146
OCT	30	417
NOV	1	830
DEC	0	1225
ANN	1256	6542



	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	-37237	0	-8541
FEB	0	-30045	0	-6515
MAR	25	-23296	0	-4529
APR	203	-13396	40	-1820
MAY	558	-6273	819	-241
JUN	2292	-1772	4348	-1
JUL	3726	-603	8827	0
AUG	2732	-1117	7718	-1
SEP	947	-5074	2269	-99
OCT	128	-12924	93	-1189
NOV	0	-23817	0	-4204
DEC	0	-34169	0	-7263
ANN	10611	-189723	24114	-34403

Average Annual Solar Radiation – Nearest Available Site

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

City: OMAHA
 State: NE
 WBAN No: 94918
 Lat(N): 41.37
 Long(W): 96.52
 Elev(ft): 1326

Stn Type: Primary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.573
 Vert Gap: 0.326

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	1230	1590	1870	2110	2070	1810	1410	1040	670	540	1330
	Std Dev	55	76	140	143	132	127	122	118	136	115	60	41	55
	Minimum	490	730	870	1230	1590	1800	1810	1610	1130	740	490	460	1180
	Maximum	740	1050	1430	1810	2110	2330	2330	2030	1710	1230	810	600	1410
	Diffuse	300	420	560	690	820	850	820	720	570	410	320	270	560
Clear Day	Global	850	1210	1700	2200	2520	2650	2560	2260	1820	1310	910	740	1730
NORTH	Global	190	260	340	440	560	640	600	490	370	280	200	170	380
	Diffuse	190	260	340	430	500	550	530	460	370	280	200	170	360
Clear Day	Global	170	230	320	420	580	690	640	460	340	260	180	150	370
EAST	Global	450	590	760	920	1050	1140	1120	1010	850	670	460	380	780
	Diffuse	240	330	420	520	600	650	640	560	450	340	250	210	430
Clear Day	Global	670	880	1140	1350	1470	1500	1470	1350	1170	920	690	590	1100
SOUTH	Global	1170	1200	1140	1020	900	860	900	1020	1140	1230	1040	990	1050
	Diffuse	360	430	490	540	580	590	590	570	500	430	350	320	480
Clear Day	Global	1920	1990	1850	1470	1140	980	1040	1290	1660	1880	1880	1830	1570
WEST	Global	470	610	760	930	1060	1190	1170	1070	860	670	450	380	800
	Diffuse	240	330	430	530	620	660	650	580	460	350	250	210	440
Clear Day	Global	670	880	1140	1350	1470	1500	1470	1350	1170	920	690	590	1100

Average Annual Solar Heat and Illumination – Nearest Available Site

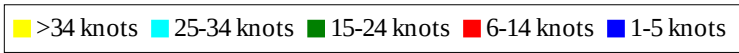
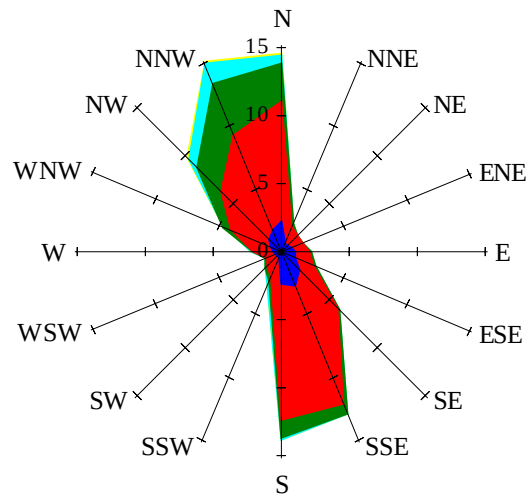
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	420	620	860	1140	1360	1540	1510	1310	1010	720	440	340	940
NORTH	Unshaded	140	180	240	300	370	420	390	320	260	190	140	120	260
	Shaded	120	160	210	260	320	370	350	290	230	170	120	100	230
EAST	Unshaded	310	410	540	650	750	810	800	720	600	470	310	260	550
	Shaded	280	360	460	560	620	670	670	610	520	410	280	230	470
SOUTH	Unshaded	880	880	800	670	560	520	550	650	780	890	780	750	730
	Shaded	860	820	620	420	350	360	360	390	550	770	750	730	580
WEST	Unshaded	320	420	540	670	750	850	840	770	610	470	310	260	570
	Shaded	290	370	460	570	630	710	700	650	520	410	280	230	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	31	67	81	69	34	40	79	101	99	76
	M.Cloudy	17	40	51	43	21	26	54	75	75	57
NORTH	M.Clear	8	13	15	14	9	20	16	17	17	16
	M.Cloudy	7	14	17	15	8	14	17	19	19	17
EAST	M.Clear	70	64	17	14	9	73	77	41	17	16
	M.Cloudy	22	32	17	15	8	33	47	34	19	17
SOUTH	M.Clear	32	71	87	74	36	11	30	49	48	28
	M.Cloudy	13	34	44	37	16	10	24	39	39	24
WEST	M.Clear	8	13	15	61	72	11	16	17	44	77
	M.Cloudy	7	14	17	33	27	10	17	19	36	52
M.Clear	(% hrs)	35	32	32	29	30	39	42	40	38	40
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	19	58	83	80	54	7	34	45	31	4
	M.Cloudy	11	35	51	51	34	5	21	28	19	3
NORTH	M.Clear	7	13	16	16	13	3	9	10	8	2
	M.Cloudy	5	13	17	17	12	2	8	11	8	2
EAST	M.Clear	51	72	38	16	13	27	43	10	8	2
	M.Cloudy	15	32	25	17	12	7	18	11	8	2
SOUTH	M.Clear	14	51	76	74	47	22	74	89	70	13
	M.Cloudy	6	25	40	40	25	6	27	37	26	4
WEST	M.Clear	7	13	16	45	74	3	9	13	46	16
	M.Cloudy	5	13	17	29	35	2	8	12	19	5
M.Clear	(% hrs)	48	47	45	45	46	35	33	32	30	34

Wind Summary - December, January, and February

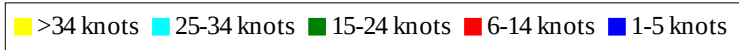
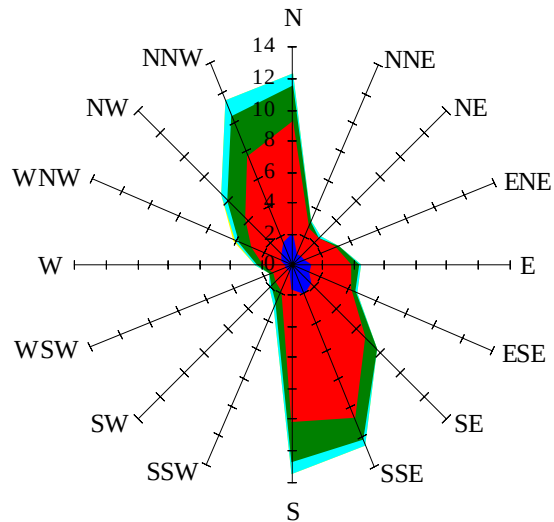
Labels of Percent Frequency on North Axis



Percent Calm = 6.32

Wind Summary - March, April, and May

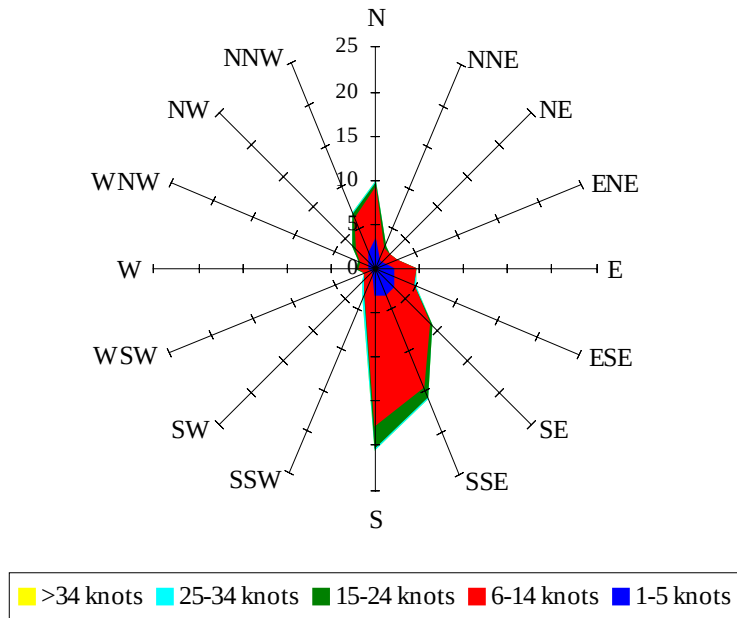
Labels of Percent Frequency on North Axis



Percent Calm = 6.06

Wind Summary - June, July, and August

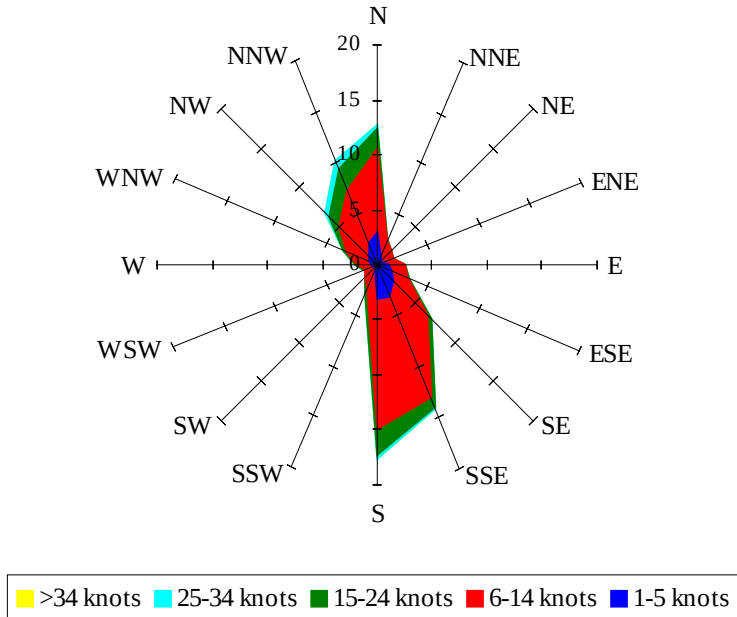
Labels of Percent Frequency on North Axis



Percent Calm = 8.17

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 8.48