

OFFUTT AFB/BELLEVUE NE

Latitude = 41.12 N

WMO No. 725540

Longitude = 95.92 W

Elevation = 1047 feet

Period of Record = 1967 to 1996

Average Pressure = 28.85 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	103	11.1	S
0.4% Occurrence	95	76	107	10.6	S
1.0% Occurrence	91	75	108	10.3	S
2.0% Occurrence	88	73	104	9.6	S
Mean Daily Range	18	-	-	-	-
97.5% Occurrence	6	5	5	8.1	NNW
99.0% Occurrence	0	-1	4	8.2	NW
99.6% Occurrence	-5	-6	3	7.6	NW
Median of Extreme Lows	-11	-11	2	7.2	NW
	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	8.6	SSE
0.4% Occurrence	78	89	131	8.9	S
1.0% Occurrence	77	88	126	8.7	S
2.0% Occurrence	75	85	118	8.4	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	156	92	1.00	9.2	SSE
0.4% Occurrence	137	85	0.88	7.9	SSE
1.0% Occurrence	130	84	0.82	9.9	S
2.0% Occurrence	123	82	0.79	7.2	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		64	781	424	1323

Other Site Data

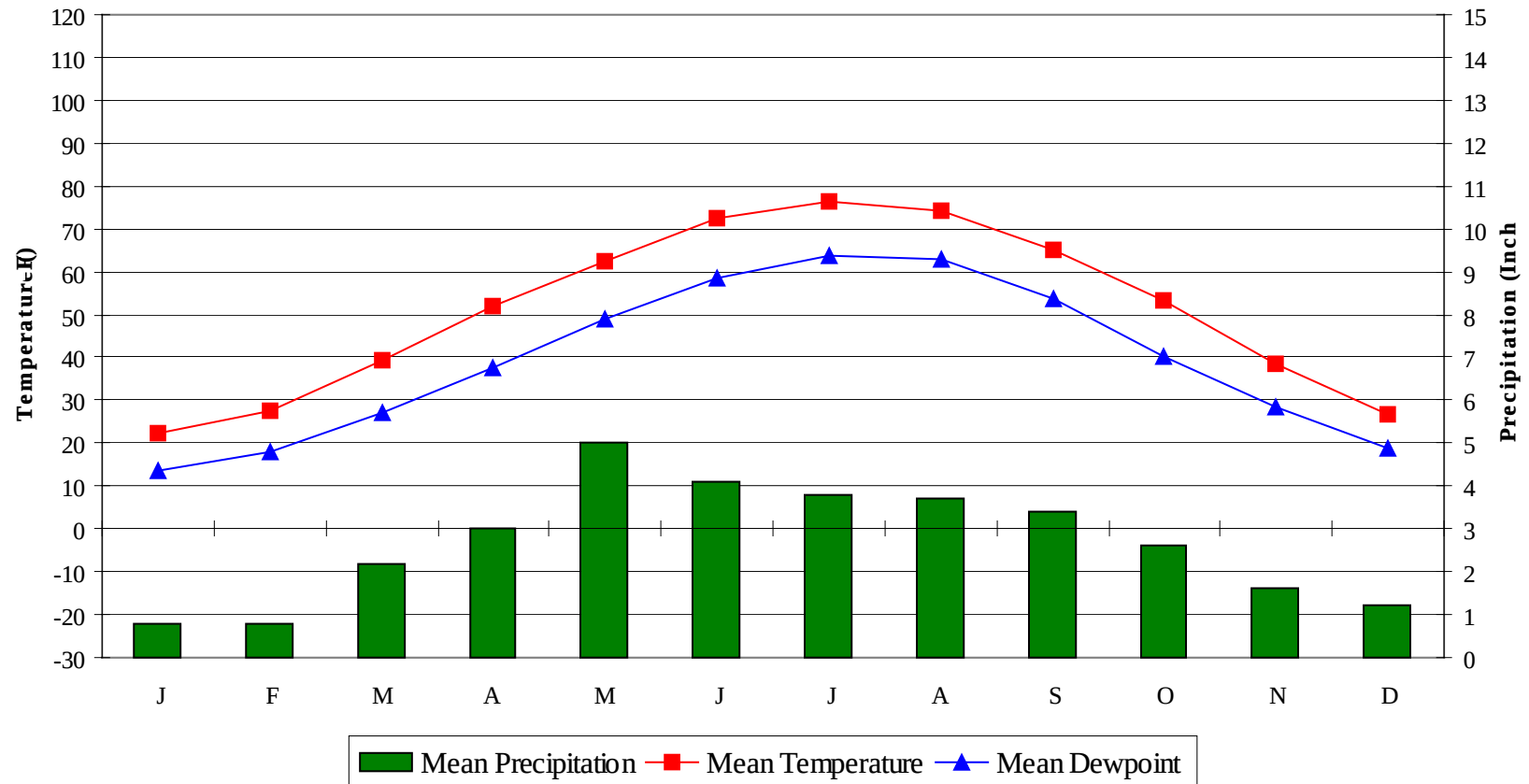
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
6	3.8	90	1.7 + 0.8
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
53.3	73	20	64

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

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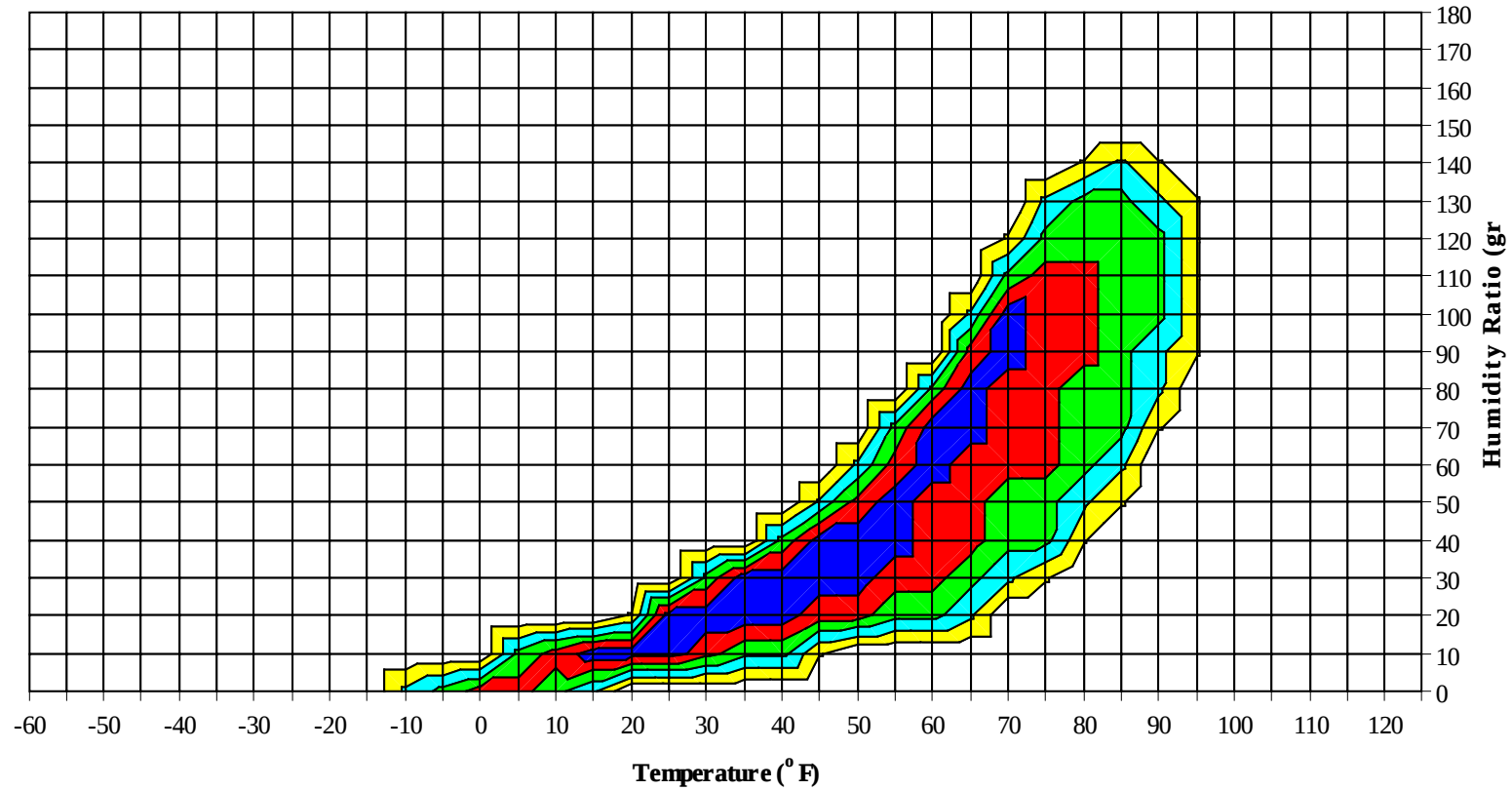
Average Annual Climate



OFFUTT AFB/BELLEVUE NE

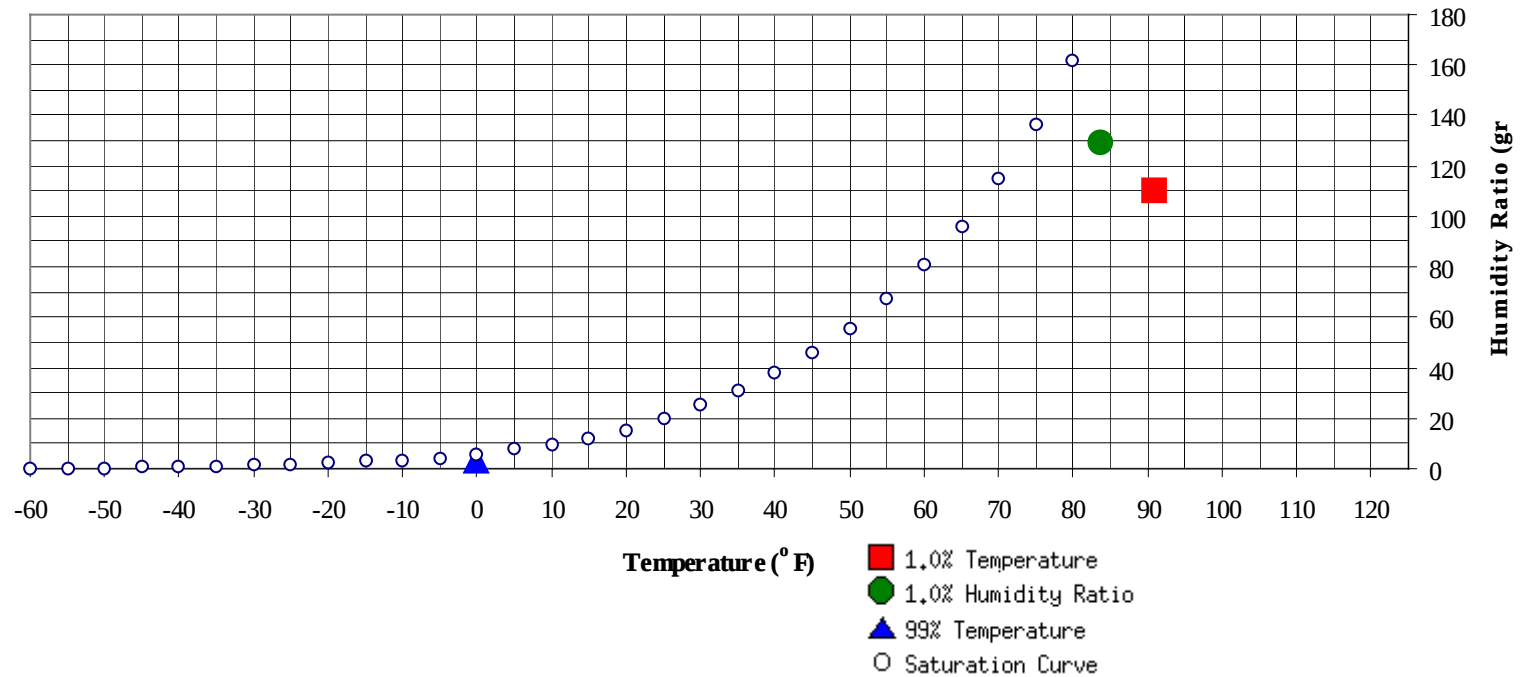
WMO No. 725540

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

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	3.5	0.5		129.5	83.7	76	73.1	40.4

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	91	109.9	74.9	39.1

OFFUTT AFB/BELLEVUE NE

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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		
105 / 109															
100 / 104															
95 / 99															
90 / 94															
85 / 89												0	0	0	62.7
80 / 84												1	0	2	60.9
75 / 79							0	0	0	53.5		3	1	4	57.7
70 / 74							0	0	1	52.9	0	5	3	8	56.0
65 / 69		0	0	0	50.9		1	0	2	50.1	0	9	6	16	53.6
60 / 64		1	0	1	49.2		3	1	4	48.6	2	14	11	28	51.3
55 / 59		2	1	3	45.4	0	6	3	9	46.5	6	19	15	41	48.3
50 / 54		5	2	7	43.5	1	11	7	19	43.3	11	25	23	59	44.5
45 / 49	1	9	6	15	40.1	2	15	12	30	40.3	18	28	30	76	41.1
40 / 44	4	18	13	35	36.8	8	21	21	50	36.9	30	37	39	106	37.3
35 / 39	16	31	30	77	33.2	27	31	34	91	33.4	48	38	40	125	33.3
30 / 34	35	35	39	109	29.5	44	33	40	118	29.5	50	29	35	115	29.1
25 / 29	39	31	35	106	24.9	36	28	30	94	24.6	38	19	22	79	24.5
20 / 24	32	31	29	92	20.1	29	23	23	75	19.9	22	10	12	44	19.9
15 / 19	29	23	26	78	15.4	20	18	18	56	15.1	10	5	6	20	15.3
10 / 14	27	22	23	73	10.5	19	14	15	48	10.5	7	2	2	12	10.6
5 / 9	24	18	21	62	5.8	18	9	10	37	5.9	4	1	1	6	6.2
0 / 4	19	13	13	45	0.9	9	6	5	20	1.0	1	0	0	2	1.5
-5 / -1	11	5	7	23	-3.3	6	2	2	10	-3.3	1	0		1	-2.8
-10 / -6	7	3	3	13	-7.5	3	1	1	5	-7.5	0			0	-6.0
-15 / -11	3	1	1	5	-12.3	1	0	0	2	-12.1					
-20 / -16	1	0		1	-16.5	1	0	0	1	-17.1					
-25 / -21	0			0	-21.0										

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 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		
105 / 109															
100 / 104												1	0	1	75.8
95 / 99		0		0	71.0		0	0	0	69.5		5	2	7	75.1
90 / 94		1	0	1	67.1		1	0	1	70.7		14	7	21	74.0
85 / 89		3	1	4	65.1		8	3	11	68.9	0	34	21	55	71.7
80 / 84		6	3	9	63.2	0	21	11	31	66.3	4	52	37	93	68.9
75 / 79	0	12	7	18	61.6	1	34	21	57	63.7	21	52	50	123	66.6
70 / 74	2	19	14	34	58.2	9	44	37	90	61.2	47	43	51	141	64.2
65 / 69	7	24	21	52	55.7	27	44	46	117	58.5	64	27	40	131	61.0
60 / 64	13	32	30	76	52.4	51	42	48	142	55.5	57	13	21	91	57.3
55 / 59	21	36	36	93	48.7	54	28	40	122	51.6	30	3	8	41	53.1
50 / 54	38	34	41	113	45.5	51	19	26	96	47.6	12	1	1	14	49.0
45 / 49	47	31	37	115	42.0	33	7	11	50	43.5	3		0	3	45.0
40 / 44	45	23	25	93	38.0	16	2	3	20	38.9	0			0	40.8
35 / 39	35	11	17	62	33.5	4	0	1	5	34.0					
30 / 34	22	5	7	34	29.4	1	0	0	1	29.5					
25 / 29	8	1	2	11	25.0	0			0	25.5					
20 / 24	2	0	1	3	20.2										
15 / 19	0	0	0	0	16.8										
10 / 14	0			0	10.1										
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 = 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		
105 / 109		1	0	1	76.1										
100 / 104		3	1	4	75.9		1	0	1	77.1					
95 / 99		10	4	14	75.8		7	2	9	76.4		1	0	1	73.8
90 / 94		26	13	38	75.4		21	8	29	75.8		7	2	9	72.4
85 / 89	1	49	30	79	73.5	0	38	20	59	73.5	0	16	6	22	71.2
80 / 84	12	63	54	129	71.3	6	56	42	105	71.3	0	28	15	43	69.1
75 / 79	40	54	62	155	68.8	26	57	57	140	68.9	6	36	28	70	66.7
70 / 74	81	33	52	165	66.5	66	43	62	172	66.4	23	45	38	106	63.8
65 / 69	71	10	24	105	62.9	76	20	37	133	62.9	40	42	45	128	60.6
60 / 64	33	2	7	42	58.5	49	6	14	70	58.6	45	34	45	124	56.6
55 / 59	8	0	1	9	54.1	19	1	3	22	54.4	47	18	32	97	52.6
50 / 54	2	0	0	2	50.1	4		0	5	50.3	39	10	18	67	48.3
45 / 49						0			0	45.3	22	4	7	33	44.0
40 / 44											12	1	3	16	39.5
35 / 39											3	0	0	4	35.2
30 / 34											1		0	1	30.9
25 / 29											0			0	26.5
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 = 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		
105 / 109															
100 / 104															
95 / 99															
90 / 94		0		0	66.4										
85 / 89		2	0	2	66.6										
80 / 84		7	2	9	64.7										
75 / 79	0	14	5	19	61.8		0	0	0	57.9					
70 / 74	2	22	12	36	59.3		1	0	1	57.0					
65 / 69	7	32	23	62	56.9	0	6	2	8	55.3		0		0	53.1
60 / 64	16	39	36	91	53.8	2	13	6	20	52.7	0	2	0	2	52.2
55 / 59	31	41	43	115	50.3	5	20	14	40	49.9	1	3	1	5	48.0
50 / 54	45	36	44	126	46.4	10	27	21	57	45.5	1	7	2	10	43.8
45 / 49	48	26	35	109	42.1	17	31	29	77	41.6	1	12	7	20	40.6
40 / 44	41	17	27	85	38.0	31	35	39	105	37.6	6	20	16	43	37.2
35 / 39	34	8	15	57	34.0	47	40	49	136	33.6	22	39	37	98	33.5
30 / 34	17	3	4	24	29.9	55	34	38	128	29.3	51	49	57	158	29.7
25 / 29	5	0	1	6	25.3	37	16	21	74	24.8	51	39	41	131	25.2
20 / 24	1	0	0	1	20.9	18	9	11	37	20.1	36	25	28	89	20.3
15 / 19	0			0	16.9	9	5	5	20	15.5	27	20	22	69	15.6
10 / 14						5	2	4	11	10.7	21	14	13	48	10.8
5 / 9						3	0	1	4	6.5	11	8	11	30	5.8
0 / 4						1	0		1	1.9	9	4	6	19	1.2
-5 / -1											4	3	2	9	-3.2
-10 / -6											4	2	2	8	-7.3
-15 / -11											2	1	1	4	-12.0
-20 / -16											1	0	0	1	-17.2
-25 / -21															

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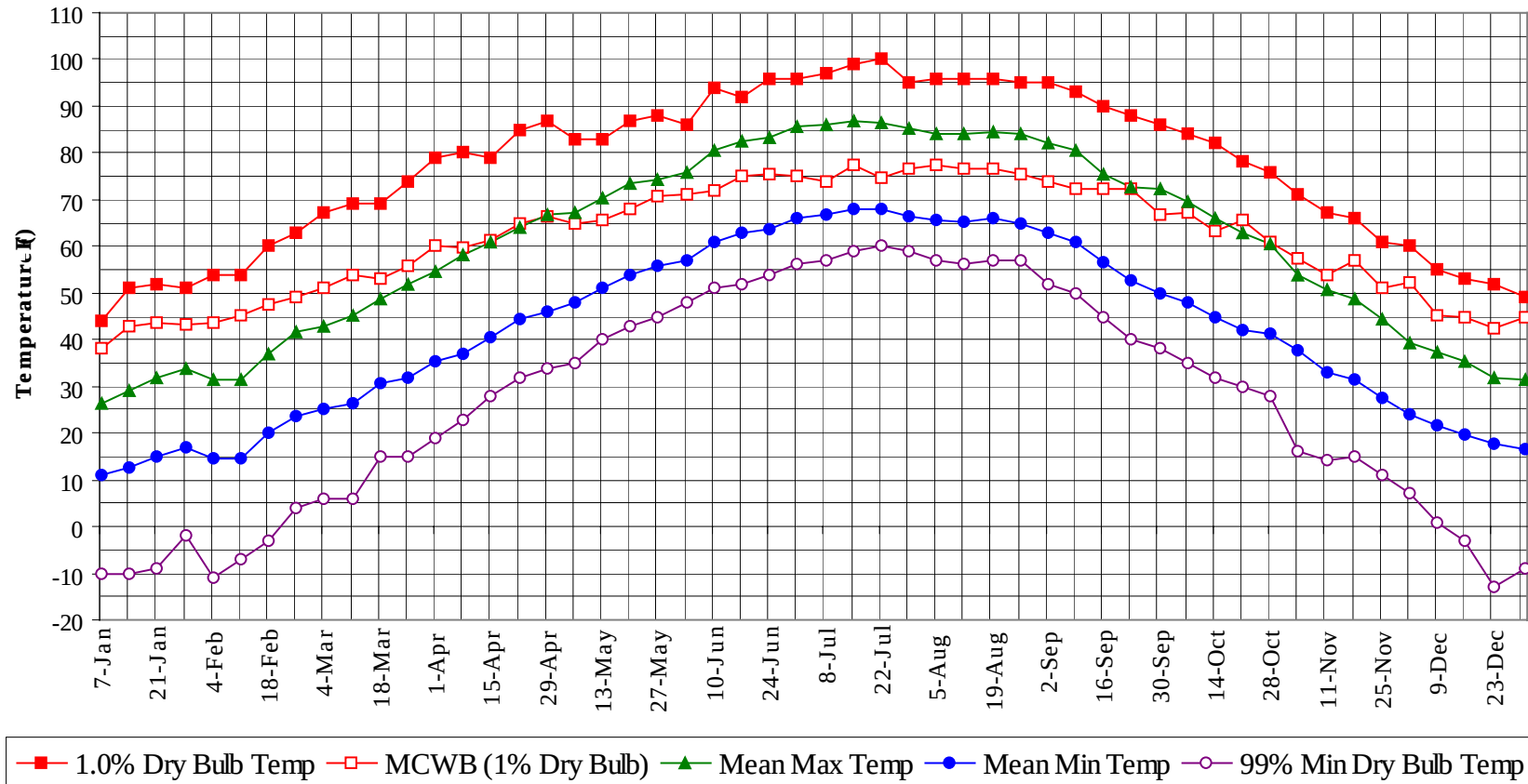
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1967 to 1996

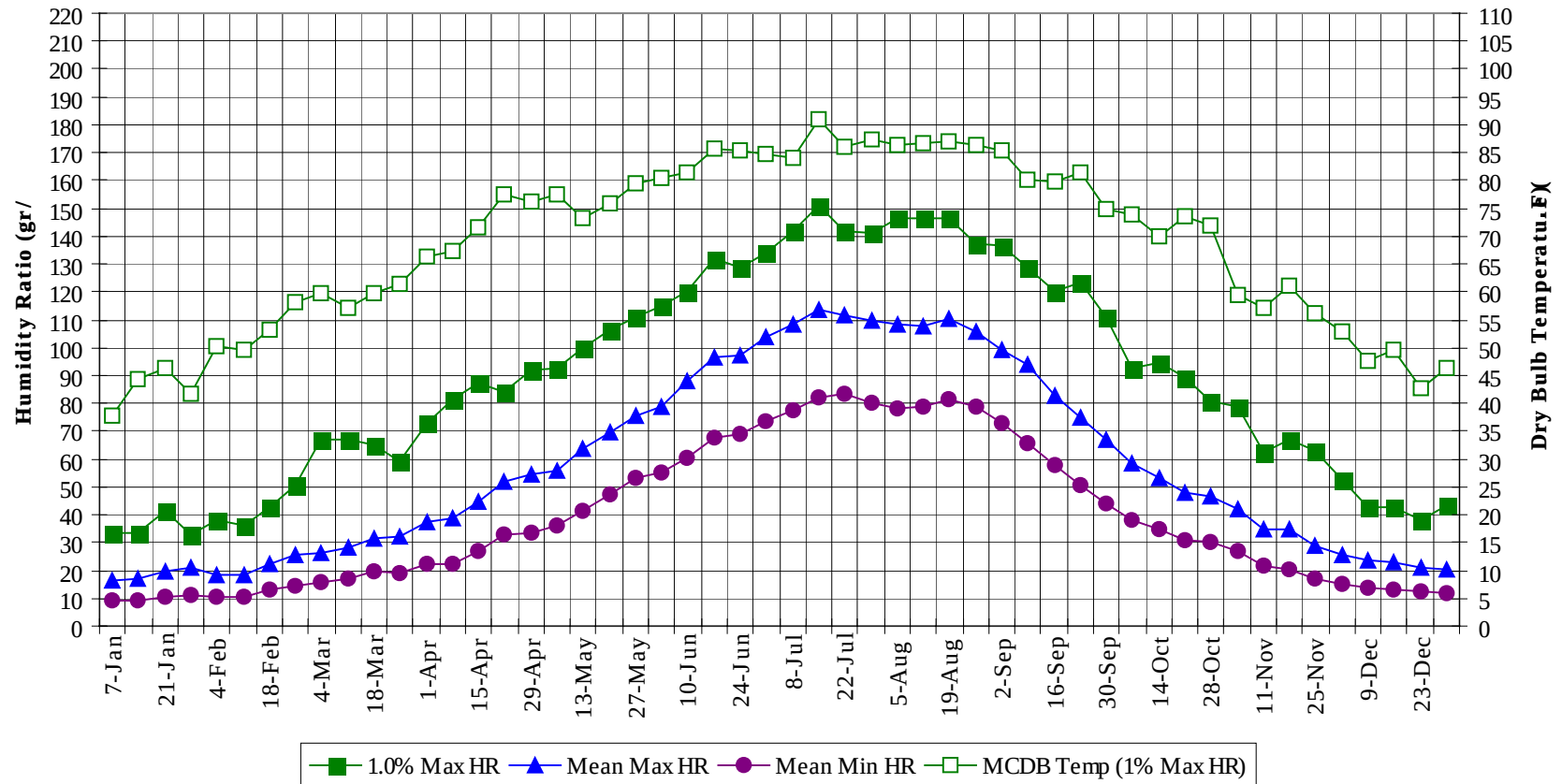
Temperature Range (°F)	Annual Totals				
	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
105 / 109		1	0	1	76.1
100 / 104		5	1	6	76.1
95 / 99		23	8	31	75.7
90 / 94		69	29	98	74.8
85 / 89	2	147	80	229	72.4
80 / 84	22	231	163	416	69.8
75 / 79	93	258	229	580	67.1
70 / 74	228	252	266	745	64.1
65 / 69	289	215	242	746	60.2
60 / 64	266	200	218	683	55.5
55 / 59	220	177	196	593	50.8
50 / 54	212	175	186	573	46.3
45 / 49	193	164	175	531	41.9
40 / 44	193	176	187	557	37.6
35 / 39	237	201	225	664	33.5
30 / 34	280	192	225	697	29.5
25 / 29	217	137	154	508	24.8
20 / 24	142	99	105	346	20.1
15 / 19	97	72	78	247	15.4
10 / 14	82	56	58	195	10.6
5 / 9	60	37	44	141	5.9
0 / 4	40	23	26	89	1.0
-5 / -1	21	10	11	42	-3.3
-10 / -6	14	6	6	27	-7.4
-15 / -11	7	2	2	11	-12.2
-20 / -16	2	0	0	3	-17.0
-25 / -21	0			0	-21.0

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



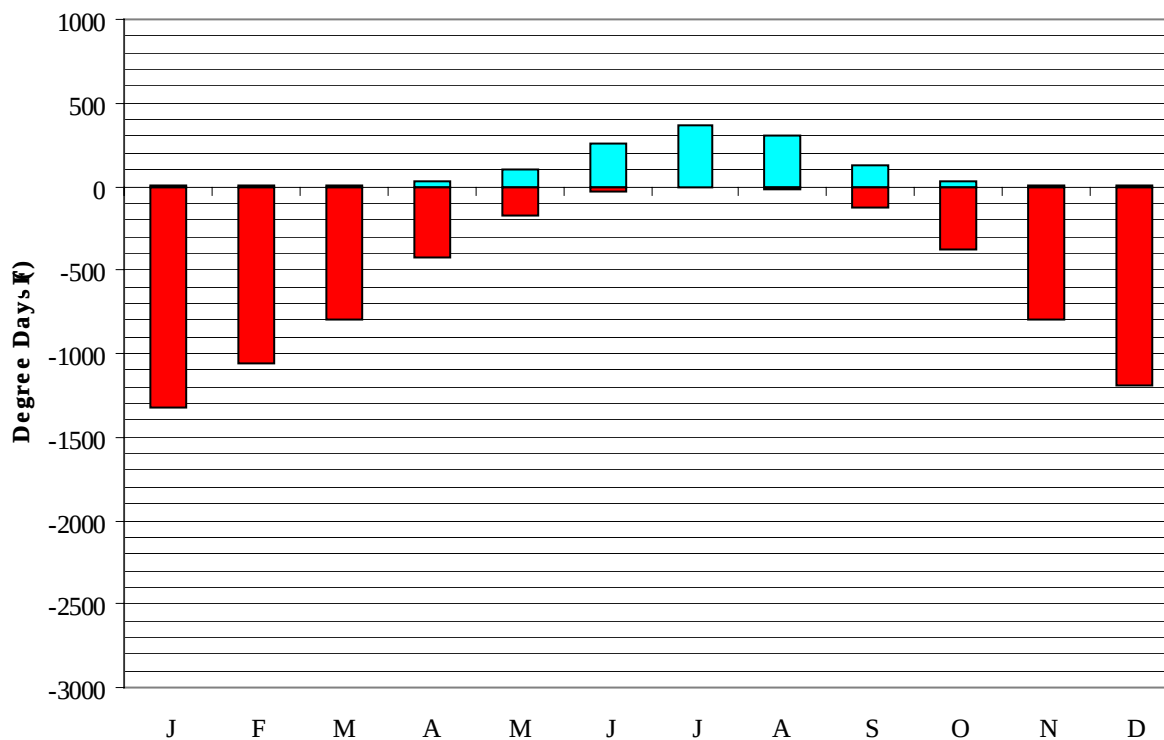
OFFUTT AFB/BELLEVUE NE

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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	44.0	38.1	26.4	11.0	-10.0	33.6	37.7	16.6	9.0
14-Jan	51.0	42.8	29.2	12.5	-10.0	33.6	44.2	17.1	9.1
21-Jan	52.0	43.7	32.0	14.9	-9.0	41.3	46.4	19.6	10.8
28-Jan	51.0	43.2	33.9	17.0	-2.0	32.9	41.6	20.8	11.2
4-Feb	54.0	43.7	31.4	14.5	-11.0	37.8	50.4	18.6	10.7
11-Feb	54.0	45.3	31.5	14.6	-7.0	36.4	49.6	18.4	10.5
18-Feb	60.0	47.6	36.8	20.0	-3.0	42.7	53.2	22.3	13.2
25-Feb	63.0	49.2	41.6	23.7	4.0	50.4	58.0	25.5	14.7
4-Mar	67.0	51.2	42.9	25.2	6.0	67.2	59.9	26.6	15.7
11-Mar	69.0	53.7	45.3	26.3	6.0	67.2	57.0	28.4	16.9
18-Mar	69.0	52.9	48.8	30.6	15.0	65.1	59.7	31.5	19.5
25-Mar	74.0	55.9	51.7	32.0	15.0	58.8	61.6	31.9	19.3
1-Apr	79.0	60.1	54.8	35.3	19.0	72.8	66.3	37.7	22.2
8-Apr	80.0	59.6	58.3	37.0	23.0	81.2	67.4	38.8	22.5
15-Apr	79.0	61.5	60.9	40.3	28.0	87.5	71.5	44.6	27.1
22-Apr	85.0	64.6	64.2	44.5	32.0	84.0	77.6	51.7	32.9
29-Apr	87.0	66.6	66.7	45.8	34.0	91.7	76.3	54.4	33.8
6-May	83.0	64.9	67.1	47.9	35.0	92.4	77.5	55.5	35.9
13-May	83.0	65.5	70.4	51.0	40.0	100.1	73.1	63.9	41.1
20-May	87.0	68.1	73.6	53.9	43.0	106.4	76.0	69.5	47.5
27-May	88.0	70.8	74.2	55.9	45.0	111.3	79.4	75.5	53.0
3-Jun	86.0	71.1	75.7	57.1	48.0	114.8	80.6	79.0	55.0
10-Jun	94.0	71.9	80.5	60.8	51.0	120.4	81.3	88.3	60.7
17-Jun	92.0	75.1	82.5	63.0	52.0	132.3	85.6	96.7	67.9
24-Jun	96.0	75.5	83.2	63.8	54.0	128.8	85.5	97.4	69.1
1-Jul	96.0	75.0	85.6	66.1	56.0	133.7	84.7	103.7	73.9
8-Jul	97.0	73.8	85.9	66.7	57.0	142.1	84.2	108.2	77.7
15-Jul	99.0	77.5	86.8	68.0	59.0	151.2	91.1	113.9	82.3
22-Jul	100.0	74.5	86.3	67.9	60.0	142.1	86.1	111.9	83.1
29-Jul	95.0	76.6	85.1	66.5	59.0	141.4	87.3	109.7	80.3
5-Aug	96.0	77.5	84.0	65.8	57.0	146.3	86.3	108.3	78.4
12-Aug	96.0	76.8	84.2	65.4	56.0	146.3	86.8	107.9	78.7
19-Aug	96.0	76.8	84.4	66.1	57.0	146.3	87.0	110.1	81.3
26-Aug	95.0	75.5	84.0	65.0	57.0	137.2	86.5	105.9	78.7
2-Sep	95.0	74.0	82.1	62.9	52.0	136.5	85.4	99.5	72.8
9-Sep	93.0	72.2	80.6	60.9	50.0	128.8	80.2	93.8	65.9
16-Sep	90.0	72.2	75.6	56.5	45.0	120.4	79.9	82.6	58.1
23-Sep	88.0	72.3	72.8	52.9	40.0	123.2	81.3	75.1	50.5
30-Sep	86.0	66.8	72.4	50.1	38.0	111.3	75.0	67.2	44.2
7-Oct	84.0	67.3	69.5	47.8	35.0	92.4	73.7	58.6	37.9
14-Oct	82.0	63.4	66.0	44.7	32.0	94.5	69.8	52.9	34.5
21-Oct	78.0	65.6	62.8	42.1	30.0	89.6	73.4	47.9	30.9
28-Oct	76.0	61.1	60.6	41.2	28.0	80.5	72.0	46.9	30.3
4-Nov	71.0	57.3	54.0	37.7	16.0	79.1	59.5	41.7	26.9
11-Nov	67.0	53.9	50.9	33.0	14.0	62.3	57.1	34.9	21.5
18-Nov	66.0	56.9	48.6	31.3	15.0	67.2	61.2	34.6	20.6
25-Nov	61.0	51.2	44.6	27.7	11.0	63.0	56.0	28.6	17.3
2-Dec	60.0	52.3	39.5	24.0	7.0	52.5	53.0	25.5	15.2
9-Dec	55.0	45.2	37.3	21.5	1.0	42.7	47.5	23.4	13.5
16-Dec	53.0	44.9	35.3	19.6	-3.0	42.7	49.6	22.9	13.0
23-Dec	52.0	42.6	32.0	17.6	-13.0	37.8	42.7	20.9	12.4
31-Dec	49.0	45.0	31.6	16.4	-9.0	43.4	46.1	20.6	11.8

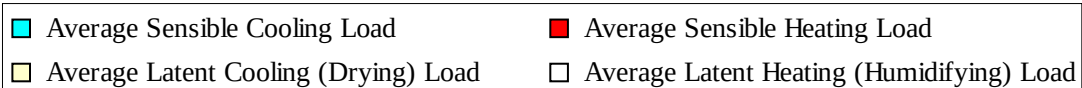
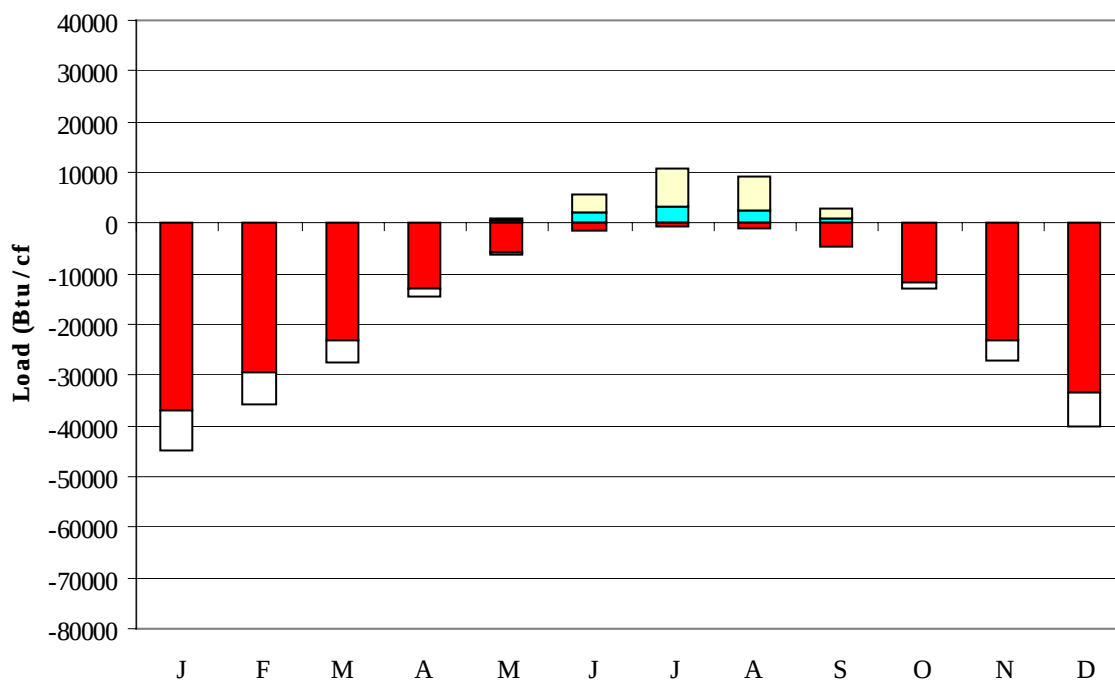
Degree Days, Heating and Cooling
(Base 65°F)



Mean Cooling Degree Days Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1329
FEB	0	1058
MAR	7	802
APR	34	421
MAY	96	170
JUN	259	33
JUL	361	8
AUG	301	17
SEP	131	126
OCT	31	381
NOV	1	801
DEC	0	1194
ANN	1221	6340

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	-36870	0	-8191
FEB	0	-29626	0	-6325
MAR	22	-23130	3	-4330
APR	172	-12933	55	-1659
MAY	487	-5978	619	-233
JUN	2158	-1486	3581	-1
JUL	3353	-476	7408	0
AUG	2535	-890	6589	0
SEP	896	-4543	2161	-97
OCT	118	-11890	81	-1151
NOV	0	-23068	1	-3918
DEC	0	-33351	0	-6808
ANN	9741	-184241	20498	-32713

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

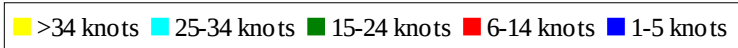
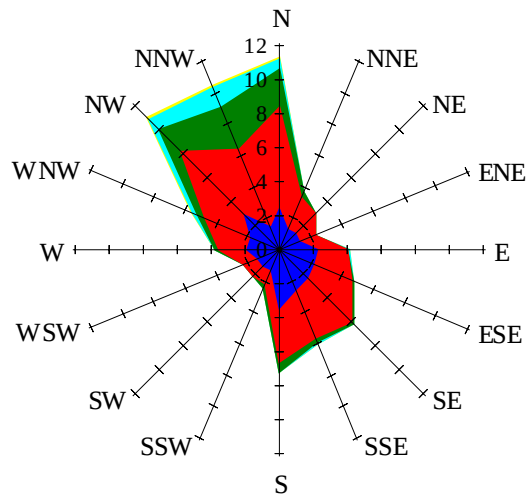
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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

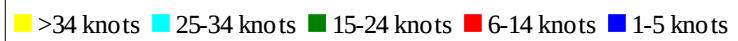
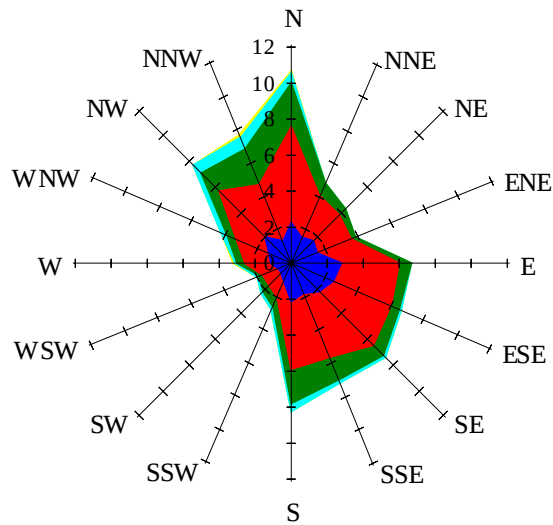
Labels of Percent Frequency on North Axis



Percent Calm = 14.83

Wind Summary - March, April, and May

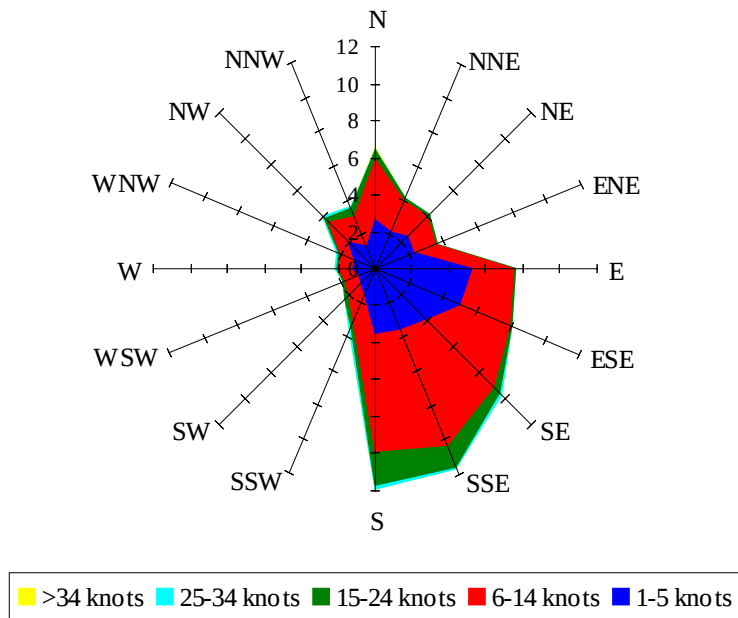
Labels of Percent Frequency on North Axis



Percent Calm = 11.03

Wind Summary - June, July, and August

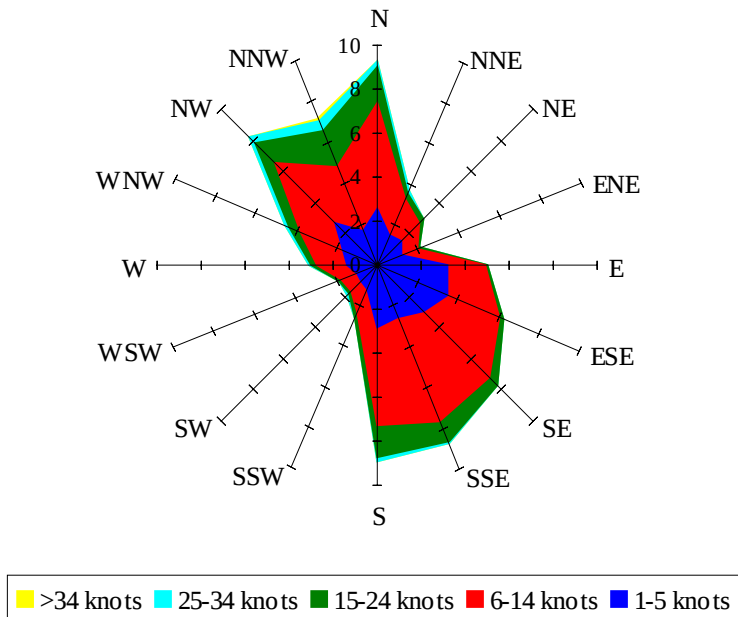
Labels of Percent Frequency on North Axis



Percent Calm = 13.43

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 15.84