

WRIGHT-PATTERSON AFB OH

Latitude = 39.83 N

WMO No. 745700

Longitude = 84.05 W

Elevation = 824 feet

Period of Record = 1967 to 1996

Average Pressure = 29.12 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	76	104	9.0	W
0.4% Occurrence	91	75	107	8.7	W
1.0% Occurrence	89	74	105	8.3	W
2.0% Occurrence	86	72	99	7.9	WSW
Mean Daily Range	18	-	-	-	-
97.5% Occurrence	13	12	8	7.7	W
99.0% Occurrence	6	5	5	7.2	W
99.6% Occurrence	1	0	4	6.7	W
Median of Extreme Lows	-4	-5	3	9.3	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	80	90	140	8.1	W
0.4% Occurrence	78	88	130	7.8	W
1.0% Occurrence	76	85	122	7.6	WSW
2.0% Occurrence	75	84	118	7.2	WSW
	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	7.3	W
0.4% Occurrence	131	83	0.85	6.2	W
1.0% Occurrence	126	82	0.82	5.8	WSW
2.0% Occurrence	119	80	0.77	6.7	SW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		19	684	368	1361

Other Site Data

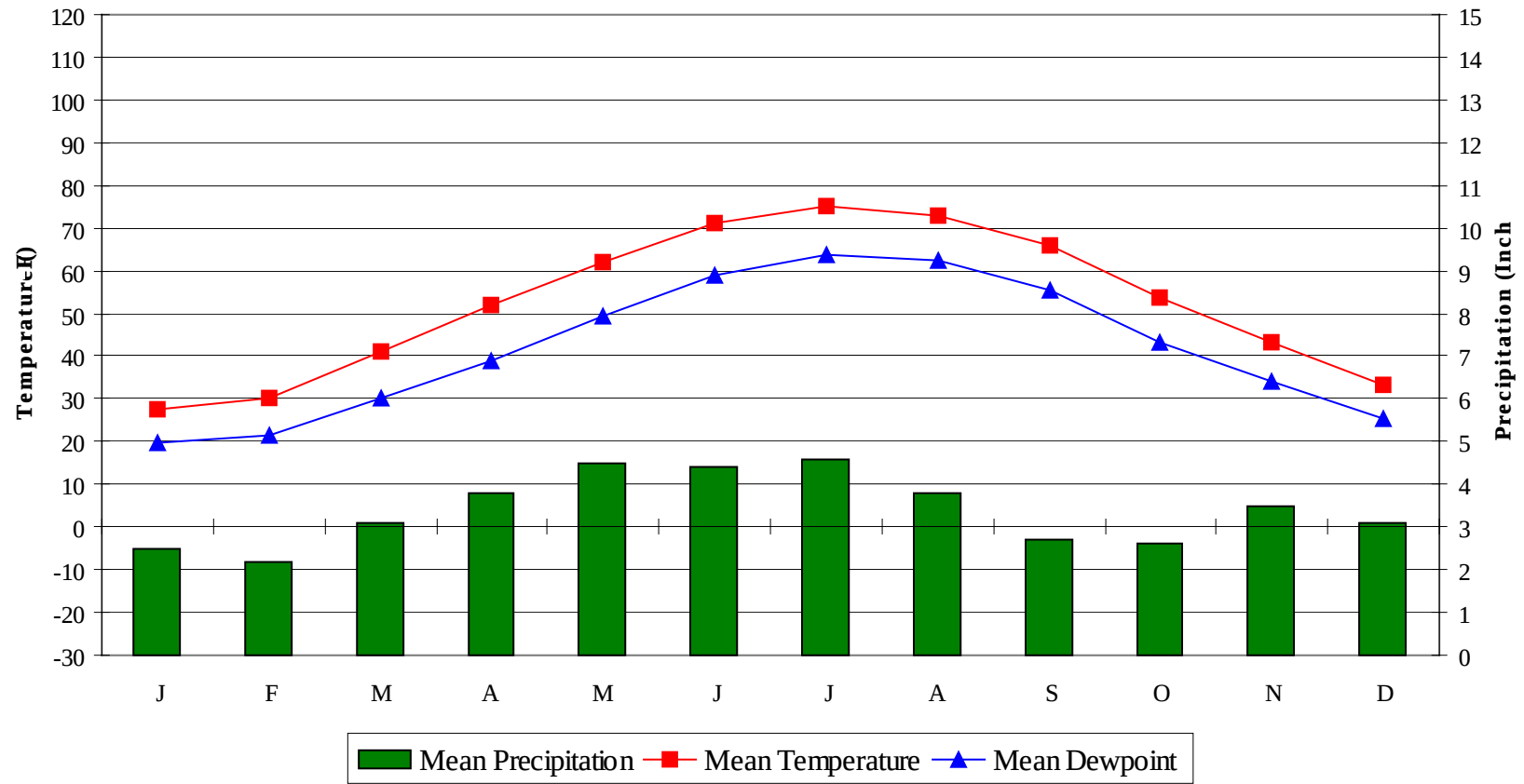
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
6	2.8	90	1.8 + 0.7
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
54.9	49	11	57

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

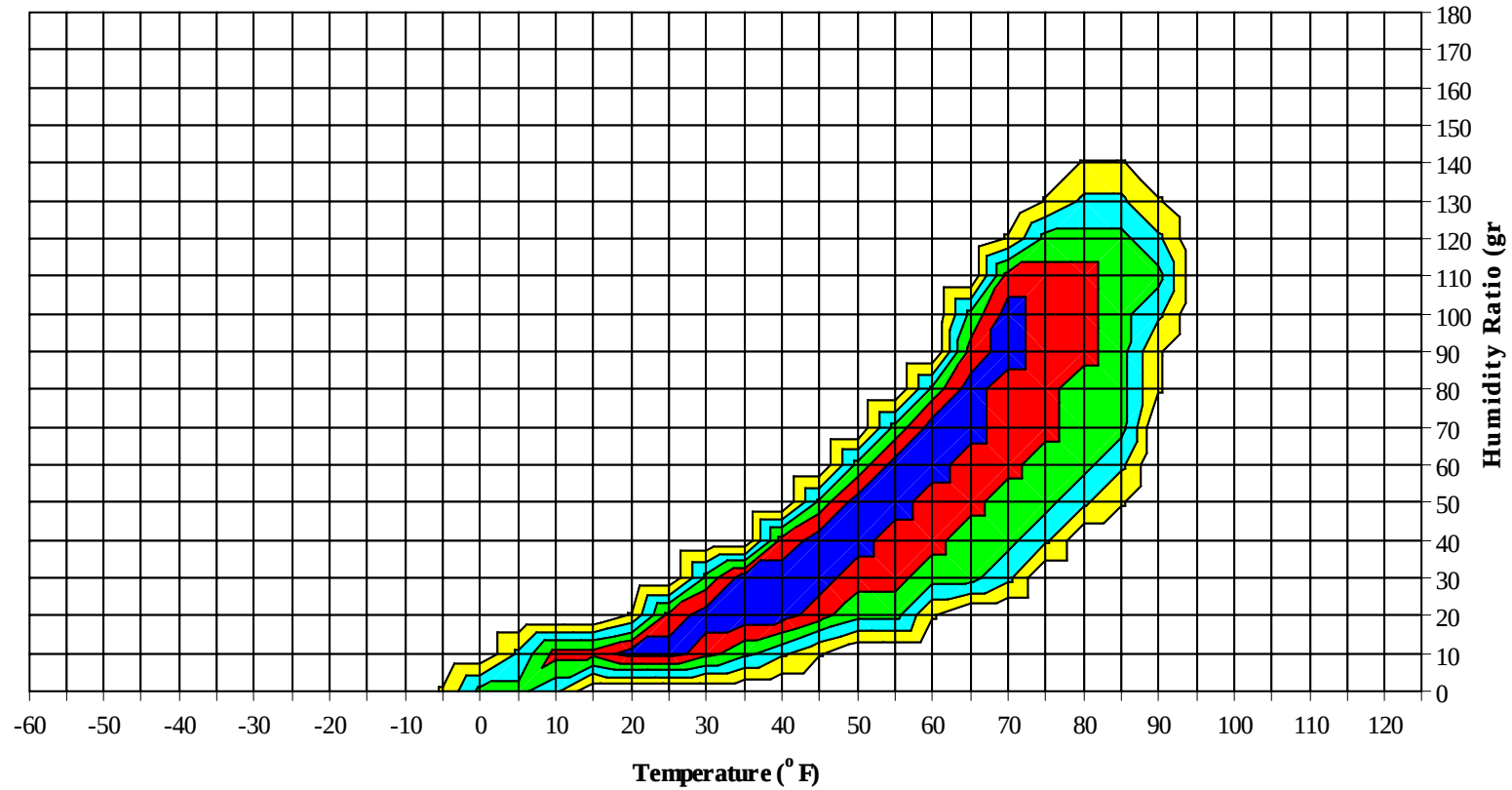
WRIGHT-PATTERSON AFB OH

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Average Annual Climate

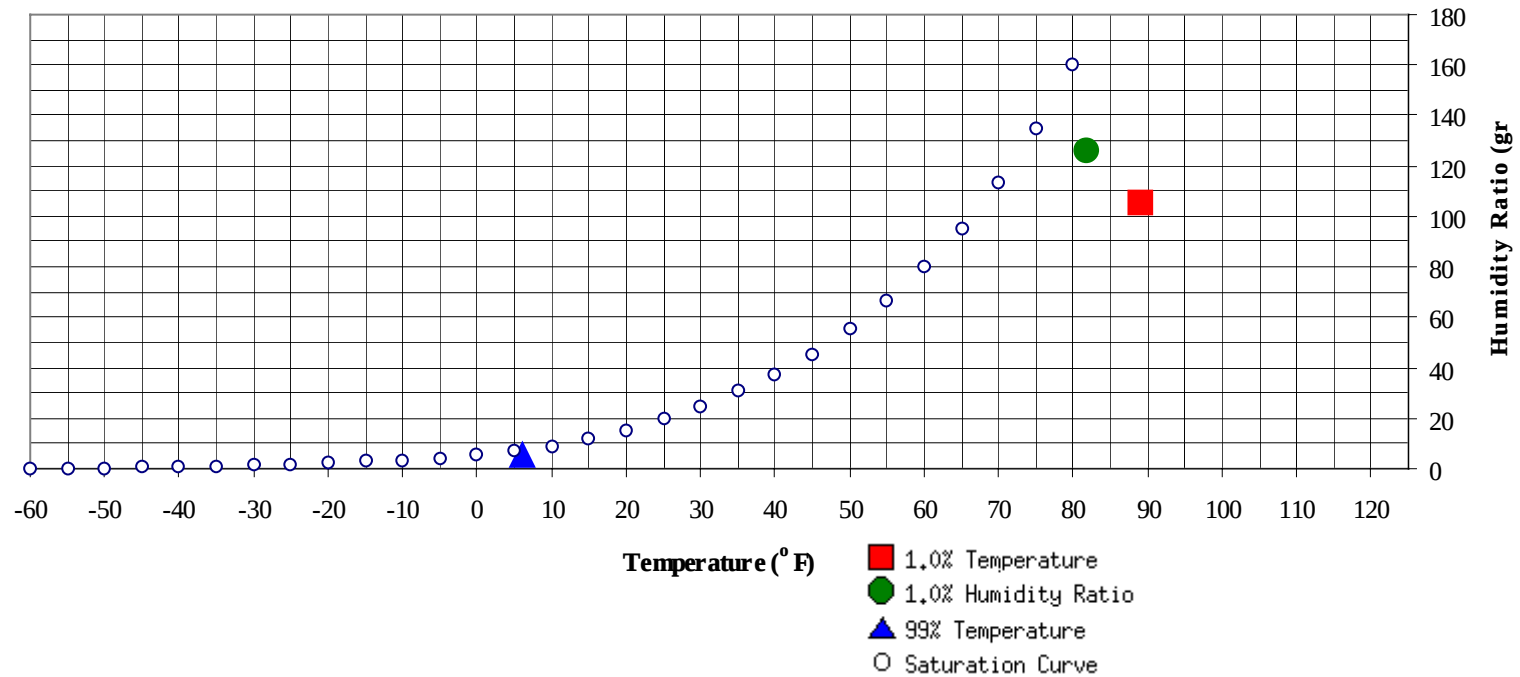


Long Term Psychrometric Summary



- 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)
	6	5.2	2.2		126	81.9	75.5	73	39.4

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	89	105.8	74.1	38.0

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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		
100 / 104															
95 / 99															
90 / 94															
85 / 89															
80 / 84												0	0	1	62.6
75 / 79											0	3	1	5	60.8
70 / 74							0	0	0	59.0	0	8	4	13	58.1
65 / 69		0	0	1	57.8		2	1	2	53.6	2	12	8	22	55.8
60 / 64	1	2	2	4	55.6	0	3	3	6	52.3	7	16	14	37	53.4
55 / 59	3	4	3	10	52.2	2	8	6	16	50.1	11	19	18	48	50.2
50 / 54	5	7	6	18	47.3	7	11	8	26	46.5	15	25	23	64	45.8
45 / 49	9	12	10	31	42.8	7	17	15	39	41.7	21	31	29	81	41.8
40 / 44	12	21	19	53	38.5	14	24	23	60	37.6	27	37	36	100	37.4
35 / 39	25	38	33	96	33.7	27	36	33	95	33.6	42	38	44	124	33.4
30 / 34	43	45	45	134	29.6	39	37	40	116	29.2	50	32	36	117	29.2
25 / 29	39	35	40	113	24.6	38	30	36	103	24.6	37	15	22	74	24.7
20 / 24	32	32	31	96	20.0	30	22	23	74	20.1	21	8	7	37	20.1
15 / 19	28	21	24	73	15.4	20	16	17	52	15.4	8	2	2	13	15.6
10 / 14	19	13	17	49	10.7	17	11	11	39	10.7	3	1	2	6	10.9
5 / 9	14	9	9	33	5.9	10	6	7	23	6.1	2	0	0	3	6.5
0 / 4	9	4	4	16	1.1	8	2	2	13	1.3	0	0		0	1.6
-5 / -1	4	2	2	9	-3.3	4	1	1	5	-2.7	0			0	-2.3
-10 / -6	3	1	1	5	-7.2	1	0		1	-6.5					
-15 / -11	1	1	1	3	-12.5										
-20 / -16	1	0	0	1	-16.7										
-25 / -21	0			0	-20.0										

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		
100 / 104												0		0	76.8
95 / 99												1	0	1	75.0
90 / 94		0	0	0	71.0		1	0	1	70.9		11	4	15	73.1
85 / 89		1	0	2	65.7		10	4	14	70.1	0	33	15	48	71.7
80 / 84		5	2	8	64.9	0	25	11	36	67.2	1	50	30	82	69.1
75 / 79	0	12	6	18	62.1	2	30	21	54	64.9	15	56	50	120	67.1
70 / 74	1	20	14	35	59.4	10	41	34	84	61.9	49	46	59	154	65.1
65 / 69	9	26	23	58	57.1	31	43	46	120	59.4	65	25	41	131	61.8
60 / 64	22	34	32	88	54.0	45	41	45	131	55.8	49	13	25	87	57.7
55 / 59	26	36	34	96	50.0	44	28	38	111	51.6	35	4	12	51	53.5
50 / 54	28	33	34	95	45.9	47	20	28	95	47.5	20	1	4	25	49.2
45 / 49	35	30	36	102	42.0	38	8	16	61	43.6	5		1	5	45.3
40 / 44	45	23	31	99	38.1	22	1	5	28	39.4	1		0	1	41.6
35 / 39	38	12	17	67	34.0	8	0	1	9	34.6	0			0	38.7
30 / 34	25	5	8	37	29.5	1		0	1	31.9					
25 / 29	9	1	1	12	25.2	0			0	29.0					
20 / 24	2	0	0	2	21.1										
15 / 19	0			0	16.9										
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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WMO No. 745700

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		0	0	1	76.0										
95 / 99		3	1	5	75.5		1	0	1	76.4		0	0	0	75.9
90 / 94		19	7	26	76.0		11	3	14	75.8		3	1	3	74.6
85 / 89	0	48	25	73	73.3		39	16	54	73.4		15	4	20	72.1
80 / 84	5	69	47	121	70.8	1	66	39	107	70.5	0	31	14	45	69.4
75 / 79	34	59	63	156	69.2	20	63	57	140	68.8	5	44	29	78	67.0
70 / 74	78	37	60	175	67.1	63	45	67	175	66.9	27	50	48	126	65.0
65 / 69	69	11	32	111	63.3	69	18	41	127	63.3	44	43	48	135	61.6
60 / 64	41	2	10	53	58.9	53	5	19	77	59.2	43	30	41	114	57.3
55 / 59	18	0	2	20	54.7	30	1	5	36	54.9	43	15	30	89	53.2
50 / 54	4		0	4	50.5	11		1	12	50.3	40	6	17	63	49.0
45 / 49	0			0	46.9	2		0	2	46.0	25	2	6	32	44.8
40 / 44						0			0	42.0	9	0	2	11	40.7
35 / 39											3		0	3	36.4
30 / 34											0			0	33.0
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 = 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	68.0										
80 / 84		6	1	7	66.9										
75 / 79		14	4	18	64.1		1	0	1	63.0					
70 / 74	2	24	13	39	61.7	0	5	2	7	61.3		0	0	0	62.8
65 / 69	10	34	25	69	59.0	2	11	6	20	58.8	0	1	1	2	59.4
60 / 64	23	42	38	103	55.5	10	16	16	42	56.0	2	5	4	11	56.5
55 / 59	34	42	41	117	51.4	15	25	18	58	51.5	5	9	7	22	52.6
50 / 54	39	39	43	120	47.0	22	30	27	80	47.0	10	11	10	32	47.9
45 / 49	44	28	40	111	43.0	26	35	34	96	42.6	14	20	16	49	43.0
40 / 44	44	14	27	85	38.9	35	38	39	111	38.1	19	33	27	78	38.5
35 / 39	33	4	12	49	34.6	45	40	43	129	33.6	39	50	48	138	33.9
30 / 34	15	1	4	20	30.4	41	27	35	103	29.4	51	45	53	149	29.4
25 / 29	5	0	0	5	25.9	27	8	14	50	25.1	40	31	33	104	24.7
20 / 24	0			0	22.3	11	2	4	18	20.7	26	19	23	69	20.2
15 / 19						4	1	1	6	15.9	19	11	12	41	15.5
10 / 14						1		0	1	12.0	11	6	7	25	11.0
5 / 9											5	3	4	12	6.3
0 / 4											3	2	2	6	1.6
-5 / -1											1	0	1	2	-2.8
-10 / -6											1	1	0	1	-7.6
-15 / -11											0	0	0	1	-11.3
-20 / -16											0	0		0	-16.0
-25 / -21															

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WRIGHT-PATTERSON AFB OH

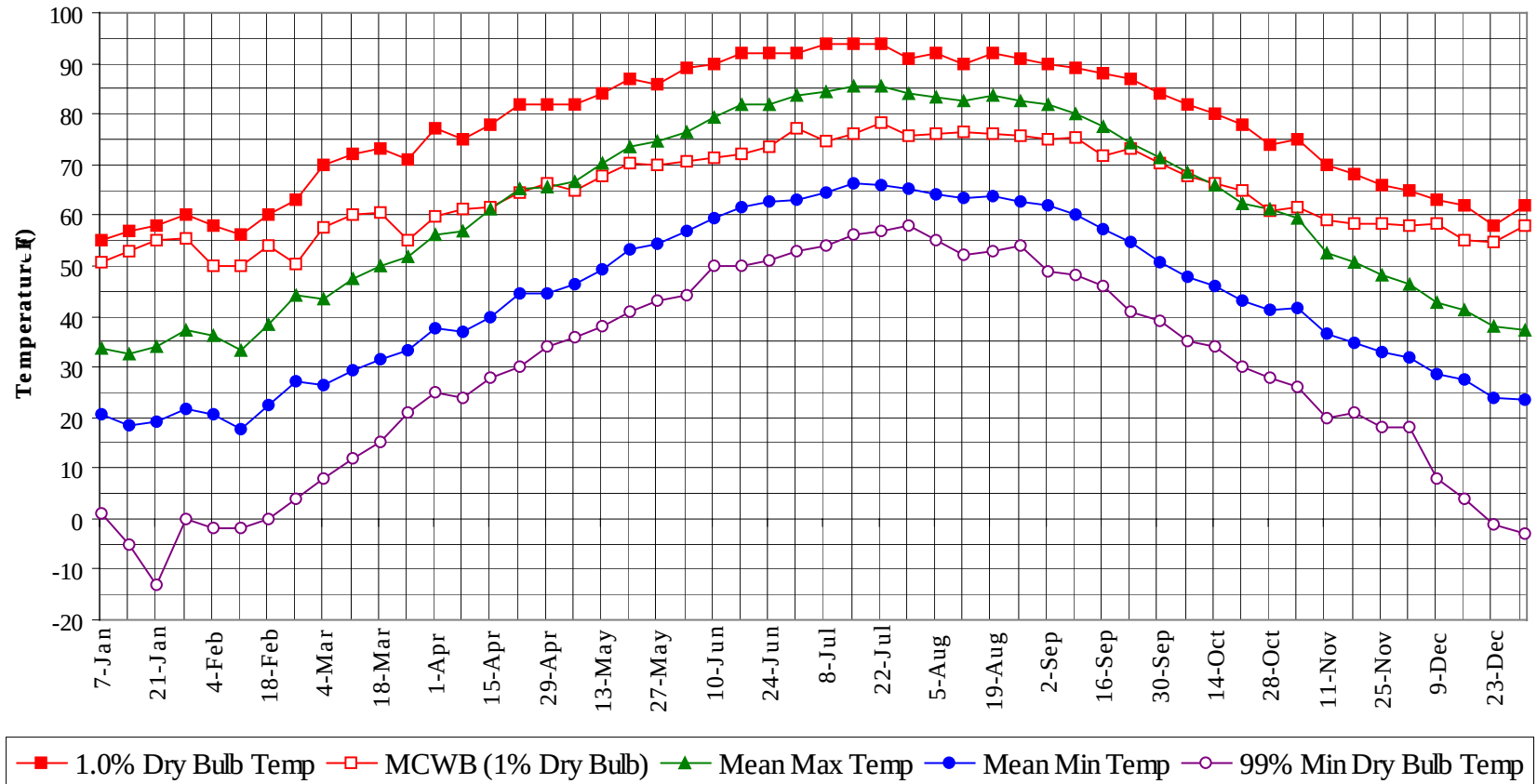
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Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)**Period of Record = 1967 to 1996**

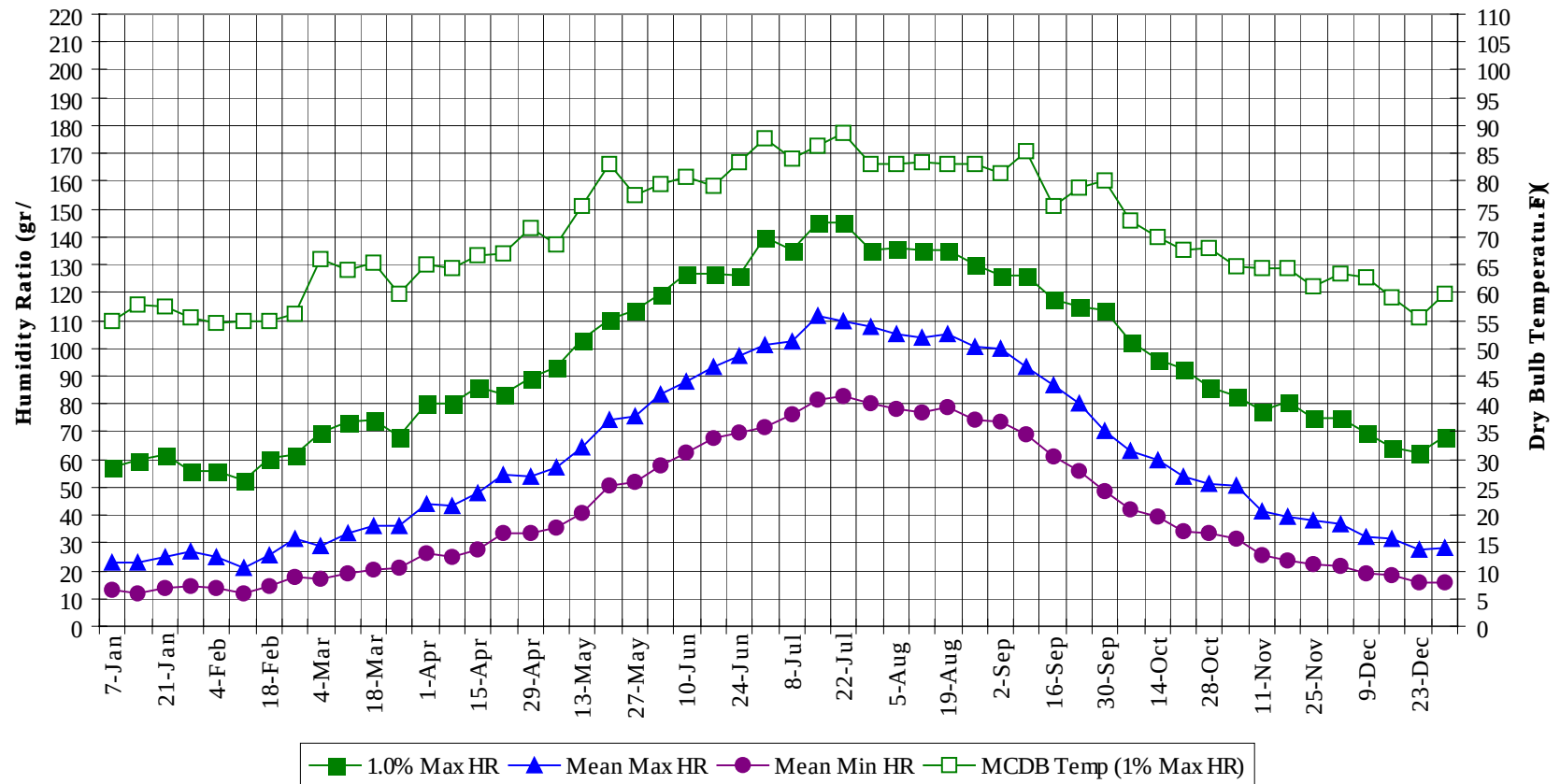
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		1	0	1	76.3
95 / 99		5	2	7	75.6
90 / 94		44	15	59	75.1
85 / 89	0	147	64	211	72.6
80 / 84	8	253	145	406	69.7
75 / 79	76	283	234	592	67.5
70 / 74	232	277	300	808	65.0
65 / 69	301	226	272	798	61.0
60 / 64	296	209	248	753	56.5
55 / 59	265	191	213	669	51.9
50 / 54	247	183	201	631	47.2
45 / 49	225	182	201	608	42.7
40 / 44	228	191	207	626	38.2
35 / 39	259	219	231	710	33.8
30 / 34	264	193	222	679	29.4
25 / 29	195	121	147	463	24.7
20 / 24	124	83	89	296	20.1
15 / 19	79	50	56	186	15.5
10 / 14	52	31	37	120	10.8
5 / 9	32	18	20	71	6.1
0 / 4	21	7	8	36	1.3
-5 / -1	9	3	4	16	-3.0
-10 / -6	5	2	1	8	-7.1
-15 / -11	2	1	1	3	-12.3
-20 / -16	1	0	0	1	-16.6
-25 / -21	0			0	-20.0

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



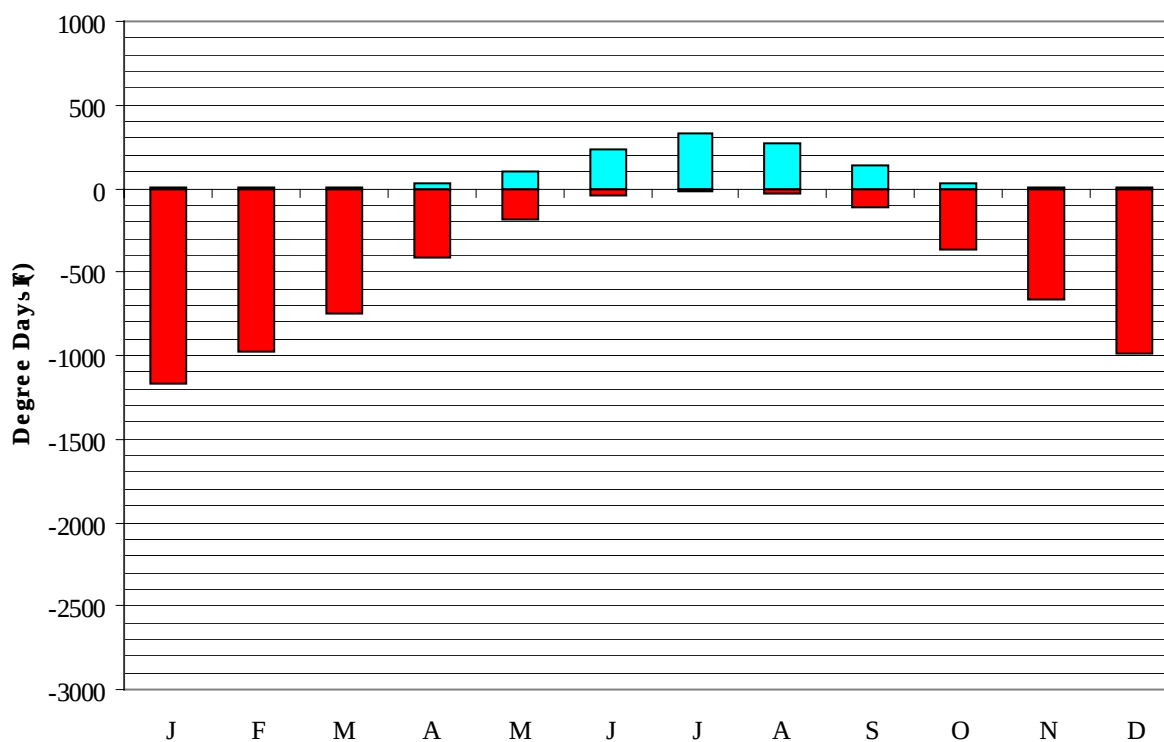
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Long Term Dry Bulb Temperature and Humidity Summary

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	55.0	50.5	33.7	20.6	1.0	57.4	54.8	22.9	13.1
14-Jan	57.0	52.8	32.7	18.5	-5.0	59.5	57.6	22.7	11.9
21-Jan	58.0	55.1	34.2	19.0	-13.0	61.6	57.6	24.6	13.7
28-Jan	60.0	55.2	37.4	21.7	0.0	56.0	55.4	26.6	14.4
4-Feb	58.0	50.0	36.1	20.6	-2.0	56.0	54.4	25.3	13.6
11-Feb	56.0	49.8	33.5	17.8	-2.0	52.5	54.7	21.0	11.7
18-Feb	60.0	53.9	38.3	22.3	0.0	60.2	54.9	25.8	14.5
25-Feb	63.0	50.4	44.1	27.2	4.0	61.6	56.1	31.3	17.9
4-Mar	70.0	57.6	43.4	26.6	8.0	69.3	65.9	28.8	16.9
11-Mar	72.0	60.3	47.3	29.2	12.0	73.5	64.1	33.6	19.0
18-Mar	73.0	60.4	49.9	31.4	15.0	74.2	65.4	35.9	20.3
25-Mar	71.0	55.2	51.7	33.1	21.0	68.6	59.8	36.2	20.8
1-Apr	77.0	59.6	56.2	37.7	25.0	79.8	65.0	43.9	26.0
8-Apr	75.0	61.3	56.9	36.9	24.0	79.8	64.4	43.6	25.2
15-Apr	78.0	61.5	61.4	39.9	28.0	86.1	66.6	47.6	27.8
22-Apr	82.0	64.4	65.1	44.4	30.0	83.3	67.1	54.6	33.8
29-Apr	82.0	66.3	65.6	44.4	34.0	89.6	71.5	54.1	33.6
6-May	82.0	64.7	66.6	46.5	36.0	93.1	68.7	56.8	35.7
13-May	84.0	67.8	70.1	49.3	38.0	102.9	75.5	64.1	41.0
20-May	87.0	70.4	73.5	53.2	41.0	110.6	83.1	73.9	50.7
27-May	86.0	69.9	74.5	54.4	43.0	113.4	77.5	75.5	52.0
3-Jun	89.0	70.7	76.5	57.0	44.0	119.7	79.3	83.5	57.8
10-Jun	90.0	71.3	79.5	59.3	50.0	126.7	80.8	87.9	62.1
17-Jun	92.0	72.2	82.1	61.5	50.0	126.7	79.1	93.0	67.5
24-Jun	92.0	73.4	82.0	62.5	51.0	126.0	83.3	97.1	69.5
1-Jul	92.0	77.1	83.6	63.2	53.0	140.0	87.8	101.3	71.9
8-Jul	94.0	74.6	84.4	64.6	54.0	135.1	84.0	102.5	76.2
15-Jul	94.0	76.2	85.4	66.3	56.0	144.9	86.3	111.7	81.8
22-Jul	94.0	78.1	85.4	66.0	57.0	144.9	88.6	109.8	82.5
29-Jul	91.0	75.8	84.0	65.3	58.0	135.1	82.9	108.0	80.0
5-Aug	92.0	76.0	83.5	64.3	55.0	135.8	83.1	105.3	78.4
12-Aug	90.0	76.5	82.5	63.4	52.0	135.1	83.5	103.9	76.7
19-Aug	92.0	76.0	83.8	63.7	53.0	135.1	83.2	105.0	79.0
26-Aug	91.0	75.9	82.7	62.8	54.0	130.2	82.9	100.8	74.3
2-Sep	90.0	74.9	82.0	62.1	49.0	126.0	81.4	99.8	73.8
9-Sep	89.0	75.3	79.9	60.2	48.0	126.0	85.4	93.4	68.7
16-Sep	88.0	71.9	77.6	57.3	46.0	117.6	75.6	86.7	61.1
23-Sep	87.0	73.2	74.1	54.6	41.0	114.8	78.7	80.2	55.7
30-Sep	84.0	70.2	71.4	50.6	39.0	113.4	80.1	70.6	48.8
7-Oct	82.0	67.6	68.4	47.7	35.0	102.2	72.7	63.4	41.9
14-Oct	80.0	66.4	65.8	45.9	34.0	95.9	70.0	59.9	39.4
21-Oct	78.0	65.0	62.4	43.2	30.0	92.4	67.5	53.6	34.2
28-Oct	74.0	60.8	61.1	41.4	28.0	86.1	68.1	51.0	33.5
4-Nov	75.0	61.7	59.6	41.6	26.0	82.6	64.6	50.4	31.5
11-Nov	70.0	58.9	52.5	36.5	20.0	77.7	64.2	41.5	25.7
18-Nov	68.0	58.3	50.7	34.7	21.0	80.5	64.2	39.4	23.4
25-Nov	66.0	58.5	48.3	33.1	18.0	74.9	61.2	37.8	22.4
2-Dec	65.0	57.9	46.4	32.0	18.0	74.9	63.4	36.9	21.5
9-Dec	63.0	58.4	42.9	28.6	8.0	69.3	62.6	32.3	18.7
16-Dec	62.0	55.1	41.2	27.6	4.0	64.4	59.2	31.2	18.4
23-Dec	58.0	54.7	37.9	24.0	-1.0	62.3	55.3	27.8	15.6
31-Dec	62.0	58.0	37.1	23.5	-3.0	68.6	59.7	28.3	16.0

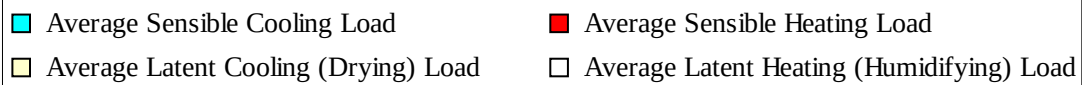
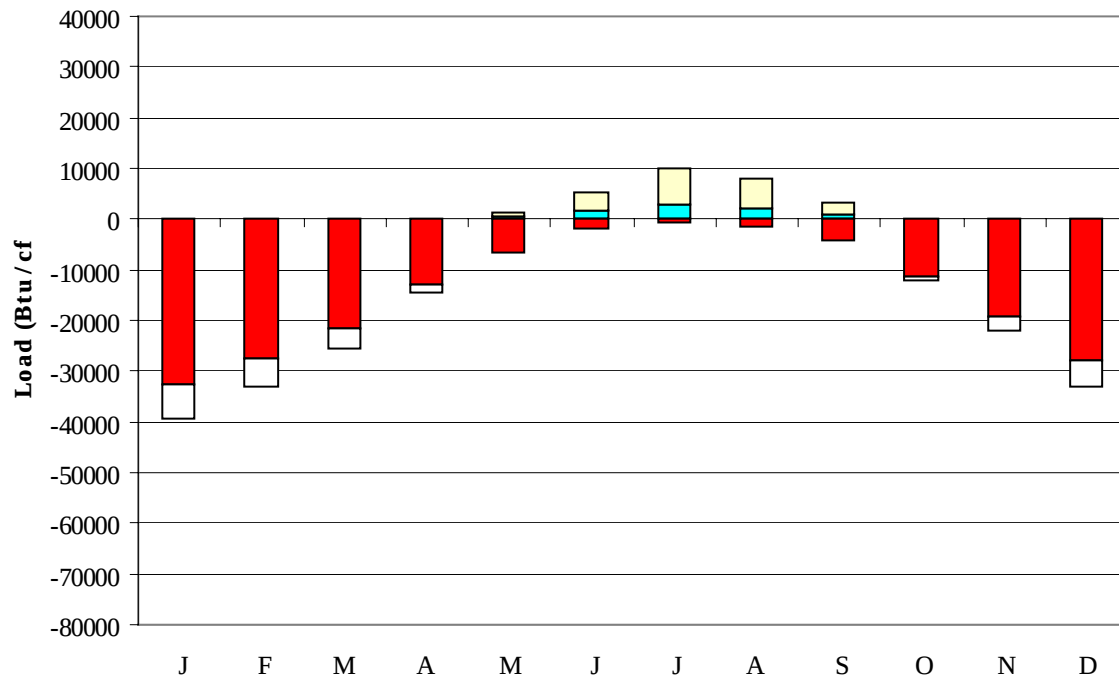
Degree Days, Heating and Cooling (Base 65°F)



■ Mean Cooling Degree Days
 ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1166
FEB	0	981
MAR	8	747
APR	30	418
MAY	98	187
JUN	234	44
JUL	325	14
AUG	272	27
SEP	138	115
OCT	29	362
NOV	4	661
DEC	0	989
ANN	1138	5711

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	-32622	0	-6605
FEB	0	-27621	0	-5521
MAR	11	-21674	4	-3733
APR	111	-12858	60	-1543
MAY	555	-6428	915	-224
JUN	1731	-1853	3631	-6
JUL	2715	-738	7457	0
AUG	2026	-1259	6192	0
SEP	788	-4159	2599	-29
OCT	76	-11397	226	-712
NOV	2	-19397	14	-2643
DEC	0	-28042	0	-5007
ANN	8015	-168048	21098	-26023

Average Annual Solar Radiation – Nearest Available Site

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

City: DAYTON
 State: OH
 WBAN No: 93815
 Lat(N): 39.9
 Long(W): 84.22
 Elev(ft): 1004

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1
 Overhang: 0.531
 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	600	830	1130	1500	1790	1970	1910	1730	1400	1010	620	480	1250
	Std Dev	48	78	72	142	145	116	109	107	97	85	64	43	38
	Minimum	500	670	1010	1210	1490	1770	1710	1460	1220	820	480	390	1190
	Maximum	730	1030	1280	1800	2080	2250	2090	1960	1600	1270	740	570	1320
	Diffuse	350	460	610	730	840	880	860	760	610	450	360	310	600
Clear Day	Global	890	1240	1720	2200	2510	2620	2540	2260	1840	1340	940	780	1740
NORTH	Global	200	270	350	440	550	620	590	480	380	290	210	170	380
	Diffuse	200	270	350	430	500	540	520	460	380	290	210	170	360
Clear Day	Global	190	250	330	430	580	680	620	470	360	270	200	170	380
EAST	Global	380	520	680	880	1020	1090	1070	990	840	640	400	310	740
	Diffuse	240	320	430	520	600	640	630	570	470	350	250	210	440
Clear Day	Global	670	870	1120	1330	1420	1450	1420	1330	1150	910	690	590	1080
SOUTH	Global	870	970	960	920	840	790	820	950	1090	1120	820	710	900
	Diffuse	350	420	490	540	570	580	570	520	440	440	340	300	480
Clear Day	Global	1870	1930	1790	1420	1090	940	990	1250	1600	1830	1820	1780	1520
WEST	Global	400	530	670	850	990	1080	1070	1000	840	630	390	310	730
	Diffuse	250	330	430	530	610	650	640	580	480	360	250	210	440
Clear Day	Global	670	870	1120	1330	1420	1450	1420	1330	1150	910	690	590	1080

Average Annual Solar Heat and Illumination – Nearest Available Site

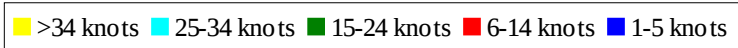
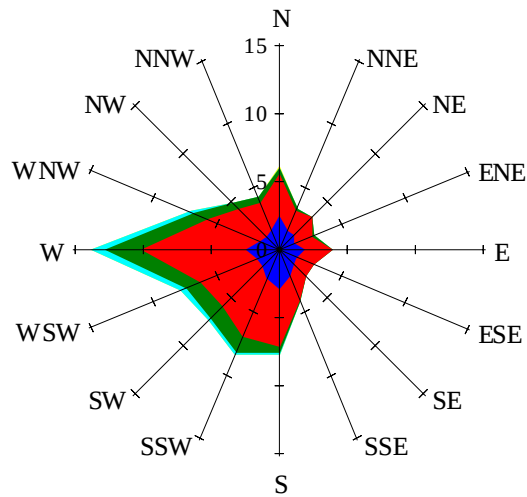
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	390	570	800	1070	1290	1430	1390	1250	1000	700	410	320	890
NORTH	Unshaded	140	190	240	300	360	410	390	330	260	200	150	120	260
	Shaded	120	160	210	270	320	360	340	290	240	180	130	100	230
EAST	Unshaded	260	370	480	630	720	780	760	710	600	450	280	210	520
	Shaded	230	320	420	540	620	660	650	610	520	400	240	190	450
SOUTH	Unshaded	650	710	670	600	520	480	500	600	730	800	610	530	620
	Shaded	630	650	530	400	350	360	360	390	530	700	580	510	500
WEST	Unshaded	270	370	470	600	700	770	760	710	600	450	270	210	520
	Shaded	240	320	410	520	600	650	650	610	520	390	240	190	450

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	27	65	81	71	38	35	75	98	98	77
	M.Cloudy	15	37	48	42	22	22	50	70	70	54
NORTH	M.Clear	8	13	15	14	10	21	16	17	17	16
	M.Cloudy	7	14	17	15	9	12	16	19	19	17
EAST	M.Clear	64	66	22	14	10	68	79	45	17	16
	M.Cloudy	19	30	19	15	9	28	45	35	19	17
SOUTH	M.Clear	27	66	83	72	38	10	25	45	46	28
	M.Cloudy	11	30	40	34	17	9	21	35	35	23
WEST	M.Clear	8	13	15	57	72	10	16	17	39	74
	M.Cloudy	7	14	17	29	26	9	16	19	31	47
M.Clear	(% hrs)	27	23	22	20	21	41	37	31	29	30
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	16	57	82	81	57	6	34	46	34	7
	M.Cloudy	10	34	54	56	37	4	19	25	19	5
NORTH	M.Clear	6	13	16	16	13	3	9	11	9	3
	M.Cloudy	5	13	17	17	13	2	8	11	8	2
EAST	M.Clear	46	75	42	16	13	22	44	12	9	3
	M.Cloudy	14	33	29	17	13	5	15	11	8	2
SOUTH	M.Clear	11	48	73	73	48	17	70	87	71	18
	M.Cloudy	6	24	43	44	27	4	19	27	21	5
WEST	M.Clear	6	13	16	40	73	3	9	11	43	23
	M.Cloudy	5	13	17	29	36	2	8	11	15	6
M.Clear	(% hrs)	43	40	35	33	37	20	21	20	19	19

Wind Summary - December, January, and February

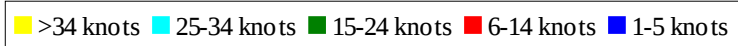
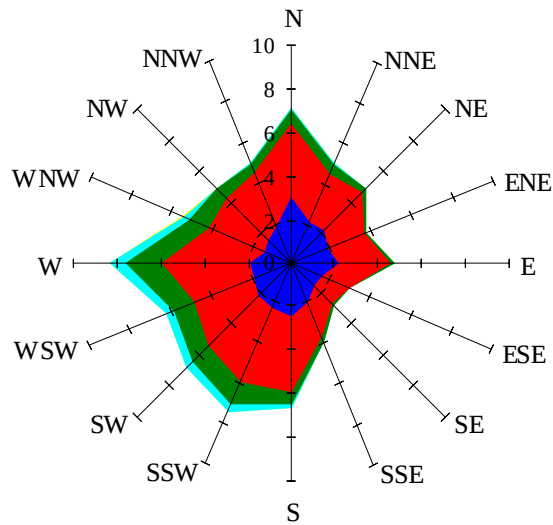
Labels of Percent Frequency on North Axis



Percent Calm = 11.19

Wind Summary - March, April, and May

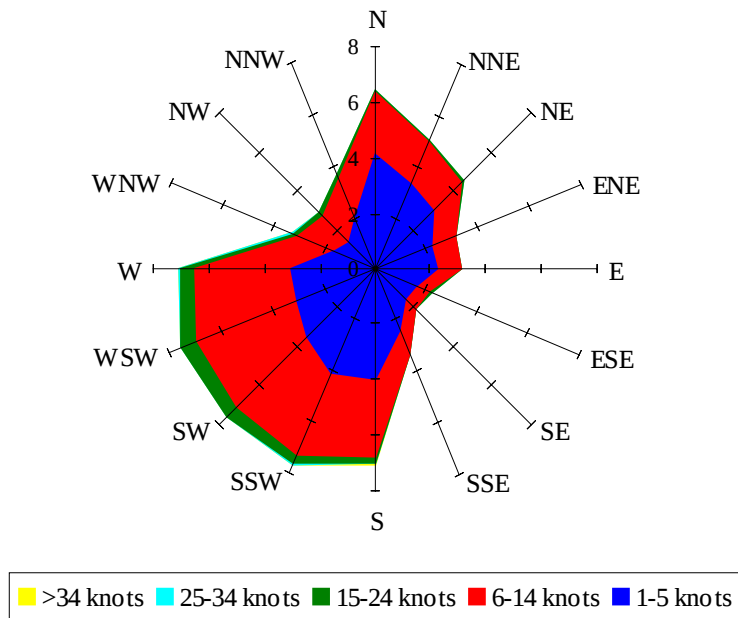
Labels of Percent Frequency on North Axis



Percent Calm = 14.94

Wind Summary - June, July, and August

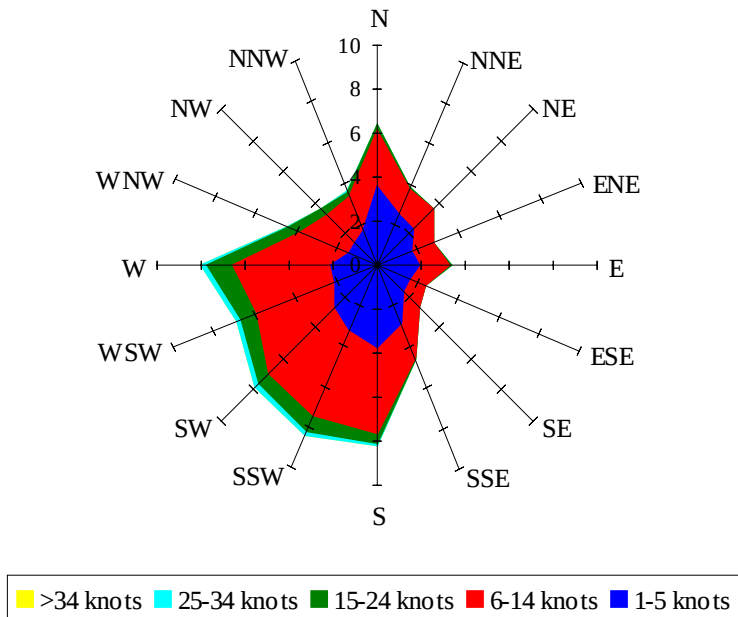
Labels of Percent Frequency on North Axis



Percent Calm = 23.69

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 19.82