

TULSA (AW) OK

Latitude = 36.20 N

Longitude = 95.90 W

Period of Record = 1973 to 1996

WMO No. 723560

Elevation = 676 feet

Average Pressure = 29.28 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	103	77	99	11.9	S
0.4% Occurrence	100	76	103	11.6	S
1.0% Occurrence	97	76	105	11.5	S
2.0% Occurrence	94	76	107	11.9	S
Mean Daily Range	20	-	-	-	-
97.5% Occurrence	21	19	11	9.7	N
99.0% Occurrence	14	12	8	9.5	N
99.6% Occurrence	9	8	6	10.0	N
Median of Extreme Lows	2	1	4	9.7	N
	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	95	144	11.9	S
0.4% Occurrence	80	93	134	11.6	S
1.0% Occurrence	78	91	125	11.7	S
2.0% Occurrence	77	89	121	11.6	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	87	1.00	9.7	S
0.4% Occurrence	139	87	0.90	10.1	S
1.0% Occurrence	134	86	0.88	9.8	S
2.0% Occurrence	130	84	0.85	9.3	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		259	1589	1226	2537

Other Site Data

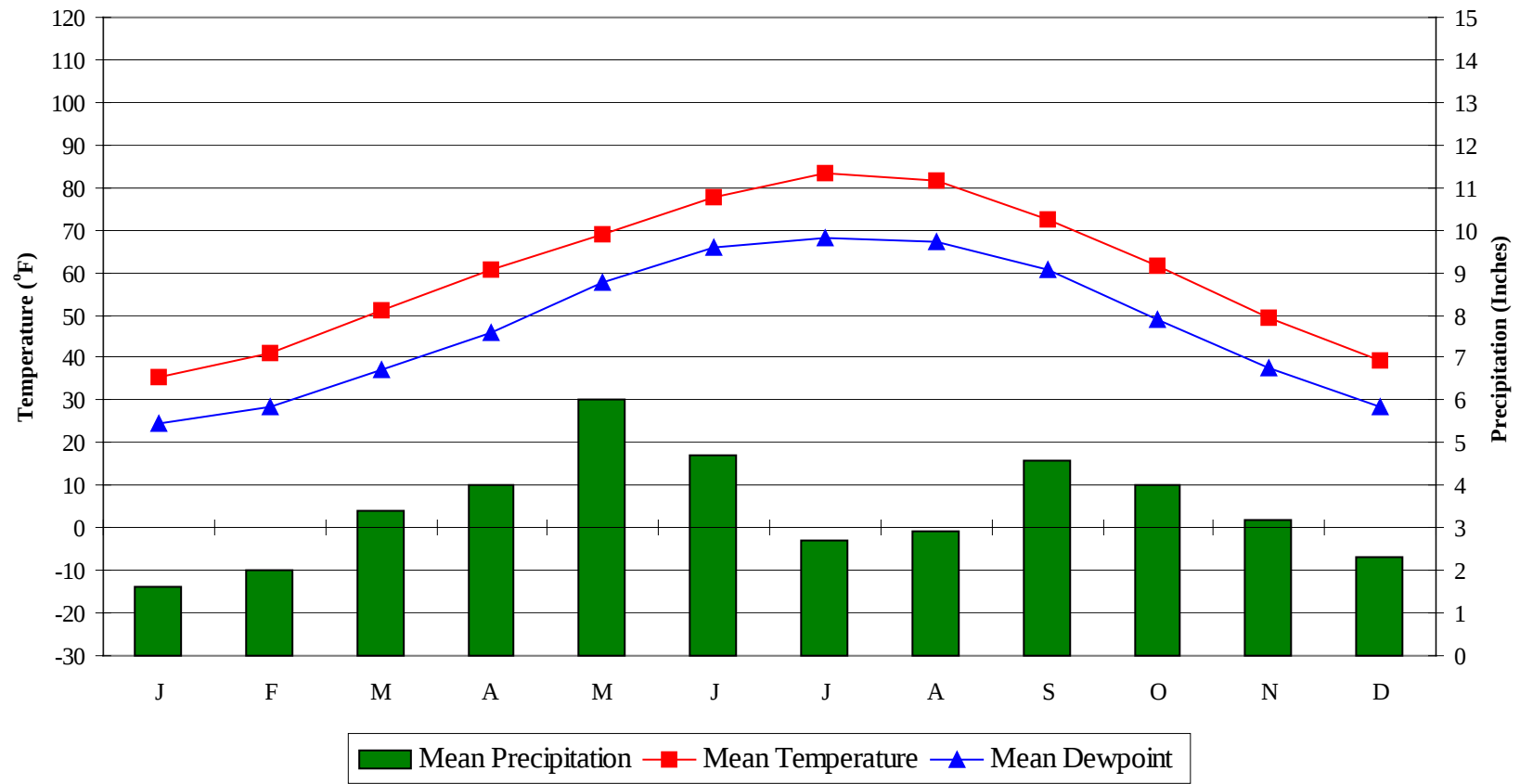
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
11	3.8	90	3.9 + 1.8
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
62.7	22	8	44

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

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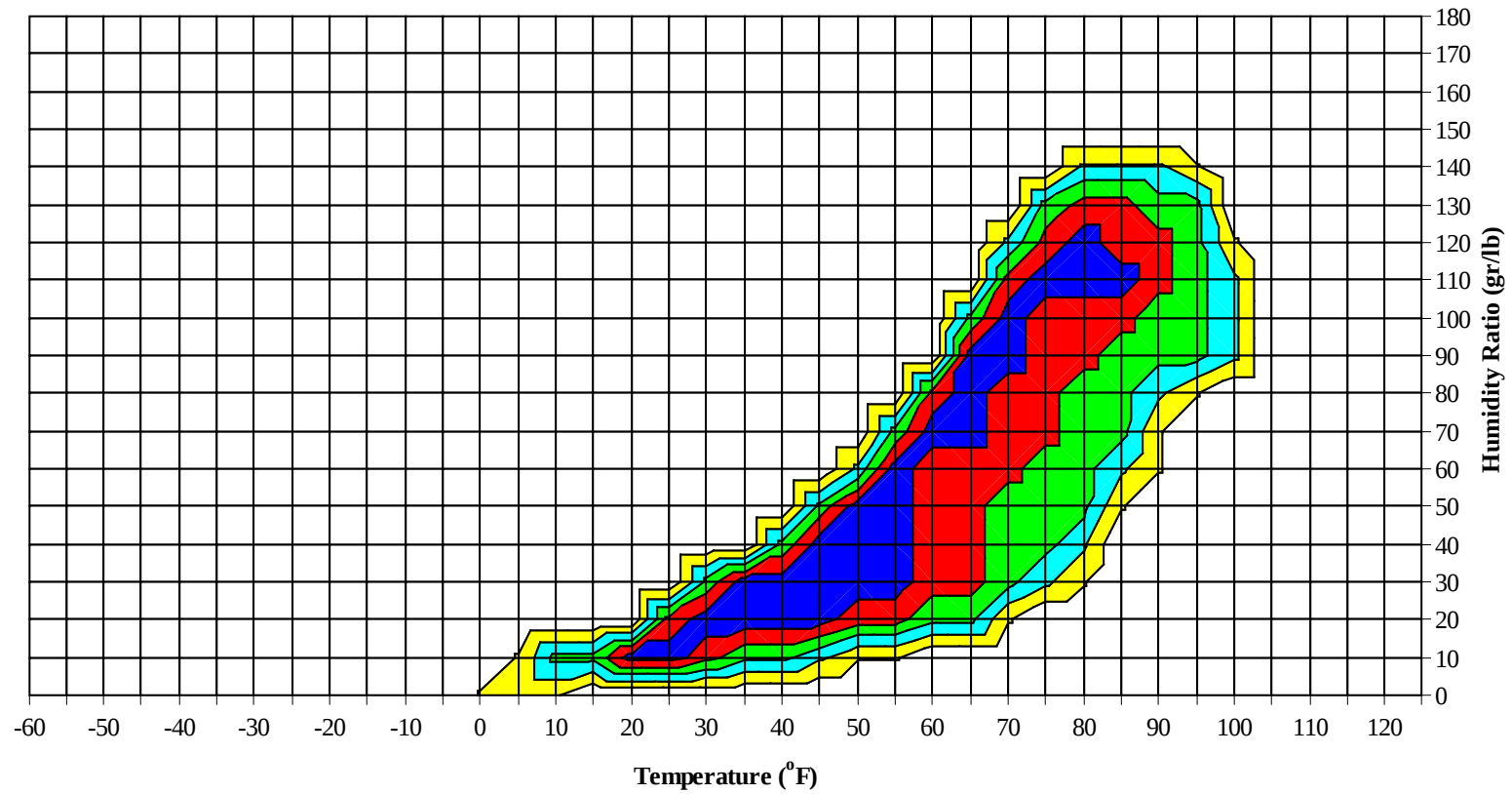
Average Annual Climate



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Long Term Psychrometric Summary

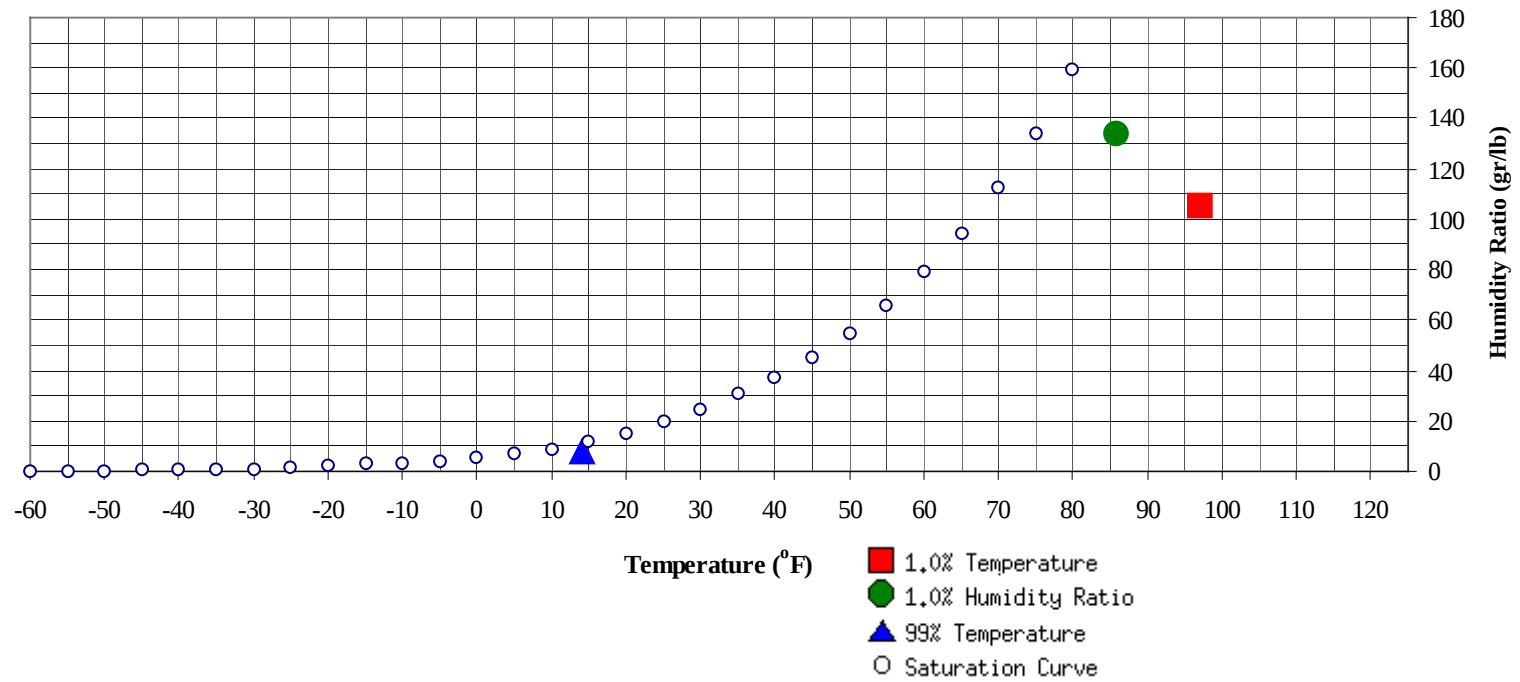


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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Psychrometric Summary of Peak Design Values



	(°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	14	7.6	4.5		134.4	85.9	77.8	75	41.7

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	97	105.7	76.3	40.0

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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		
110 / 114															
105 / 109															
100 / 104															
95 / 99												0		0	63.0
90 / 94							0		0	59.0		0	0	0	62.7
85 / 89							0	0	0	59.0		1	0	1	60.8
80 / 84							0	0	1	58.9		5	2	6	62.3
75 / 79		0	0	0	53.0		3	1	4	57.5	0	12	6	18	61.0
70 / 74		1	0	1	52.3	0	8	4	11	55.6	2	24	15	41	58.3
65 / 69		5	1	6	52.8	1	14	8	23	53.8	9	28	24	61	56.1
60 / 64	2	9	6	17	51.1	5	17	15	37	51.3	16	32	31	79	52.9
55 / 59	4	18	12	34	47.6	7	19	18	45	47.8	24	32	34	91	49.4
50 / 54	8	23	19	51	44.3	15	26	26	67	44.7	34	34	41	109	45.7
45 / 49	12	29	28	70	40.9	20	26	27	73	41.3	41	29	37	107	42.1
40 / 44	24	33	35	93	37.3	32	28	32	91	37.7	42	21	25	89	38.0
35 / 39	40	37	44	121	33.6	41	26	30	97	33.8	35	16	16	67	33.6
30 / 34	51	32	37	119	29.4	38	22	24	84	29.4	27	7	12	46	29.5
25 / 29	38	22	25	86	24.9	26	15	18	59	24.7	10	3	3	16	24.4
20 / 24	27	17	16	60	20.0	19	9	11	39	20.1	5	2	3	10	20.5
15 / 19	19	11	12	42	15.6	10	5	6	20	15.4	2	1	0	3	15.5
10 / 14	12	6	7	26	10.8	7	3	3	12	10.8	1	0		1	10.9
5 / 9	6	2	4	12	6.3	3	1	1	6	6.1	0			0	6.8
0 / 4	3	1	1	5	1.4	1	0	0	2	1.6	0			0	
-5 / -1	1	0		1	-2.2	1	0	0	1	-2.3					
-10 / -6	0			0	-5.3	0			0	-7.0					

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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WMO No. 723560

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		
110 / 114															
105 / 109															
100 / 104															
95 / 99							0	0	0	77.5		1	0	1	80.5
90 / 94		1	0	1	65.9		3	1	4	74.9		7	3	10	76.6
85 / 89		6	2	8	66.5		21	8	30	71.9	1	61	37	99	74.1
80 / 84		21	9	29	64.9	0	44	26	71	69.6	18	61	60	139	72.2
75 / 79	0	31	19	51	62.7	12	54	46	112	67.1	60	40	57	157	70.2
70 / 74	12	40	36	88	60.8	38	54	56	148	64.5	71	22	41	135	67.6
65 / 69	27	38	39	104	58.0	59	36	49	144	61.8	54	10	20	84	64.1
60 / 64	36	37	42	114	54.5	59	21	35	115	58.0	25	1	5	31	59.8
55 / 59	39	27	35	102	50.6	43	10	19	72	53.7	8		1	9	55.7
50 / 54	46	20	31	98	46.6	23	3	8	34	49.5	1			1	51.9
45 / 49	39	12	16	66	42.5	12	1	1	14	45.4					
40 / 44	26	6	8	40	38.7	2			2	41.3					
35 / 39	12	1	2	15	34.2	0			0	35.8					
30 / 34	3	0	1	3	29.9										
25 / 29	0	0	0	0	25.4										
20 / 24	0			0	21.5										
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															

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WMO No. 723560

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		
110 / 114		0		0	76.0										
105 / 109		3	1	4	75.4		1	0	1	74.9					
100 / 104		11	5	15	77.0		13	4	17	76.0		2	0	2	75.0
95 / 99		39	19	58	76.4		32	16	48	75.9		8	3	11	74.9
90 / 94	1	68	43	112	75.6	0	55	33	88	75.2	0	21	9	30	74.0
85 / 89	11	62	60	133	74.1	7	60	49	115	73.9	1	39	21	62	72.6
80 / 84	62	39	65	165	73.0	43	46	60	148	72.4	9	44	35	88	70.6
75 / 79	89	18	37	143	71.6	77	24	48	149	71.0	32	41	48	121	68.8
70 / 74	60	7	16	84	68.9	74	11	29	114	68.4	55	35	44	134	66.3
65 / 69	21	1	3	25	64.6	32	4	9	45	64.3	48	23	34	104	62.4
60 / 64	4	0	0	5	60.3	13	0	1	15	60.0	39	15	25	79	58.1
55 / 59	0			0	55.3	3		0	3	55.8	26	7	12	45	53.7
50 / 54						0			0	50.9	18	4	7	29	49.7
45 / 49											9	1	2	12	45.3
40 / 44											2	0	0	3	41.3
35 / 39											1			1	36.9
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															

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WMO No. 723560

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		
110 / 114															
105 / 109															
100 / 104															
95 / 99		0	0	0	67.8										
90 / 94		3	0	3	69.1										
85 / 89		9	2	11	68.5		0		0	62.0					
80 / 84	0	21	7	29	66.4		3	0	3	63.3					
75 / 79	3	35	19	56	64.2		8	2	10	62.4		0	0	0	62.7
70 / 74	12	43	34	88	61.8	3	18	8	28	61.4	0	3	1	4	59.6
65 / 69	26	46	45	116	59.3	7	22	15	44	58.4	2	9	4	15	58.3
60 / 64	42	37	49	129	55.8	15	30	27	72	54.8	5	15	7	27	53.4
55 / 59	46	25	38	109	51.9	22	32	30	85	50.3	5	21	14	40	48.8
50 / 54	44	16	30	89	47.7	26	37	40	103	46.2	10	28	25	64	44.8
45 / 49	38	7	17	62	43.5	39	32	40	111	42.3	20	37	36	93	41.3
40 / 44	25	3	7	34	39.6	38	26	33	97	38.2	35	39	43	117	37.8
35 / 39	10	1	2	13	35.3	40	18	28	85	34.0	45	35	45	124	33.8
30 / 34	2	0	1	3	30.9	29	7	11	48	29.4	53	27	34	114	29.7
25 / 29	0	0	0	1	24.8	14	5	5	24	24.9	33	13	19	65	24.9
20 / 24	0		0	0	20.4	4	1	2	7	20.4	18	8	10	36	20.0
15 / 19						2	0	0	3	15.2	8	4	6	18	15.4
10 / 14						1		0	1	11.4	7	3	3	13	10.6
5 / 9											3	3	2	9	6.1
0 / 4											2	1	1	5	1.1
-5 / -1											1	0	0	1	-3.1
-10 / -6											0	0		0	-7.1

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

Period of Record = 1973 to 1996

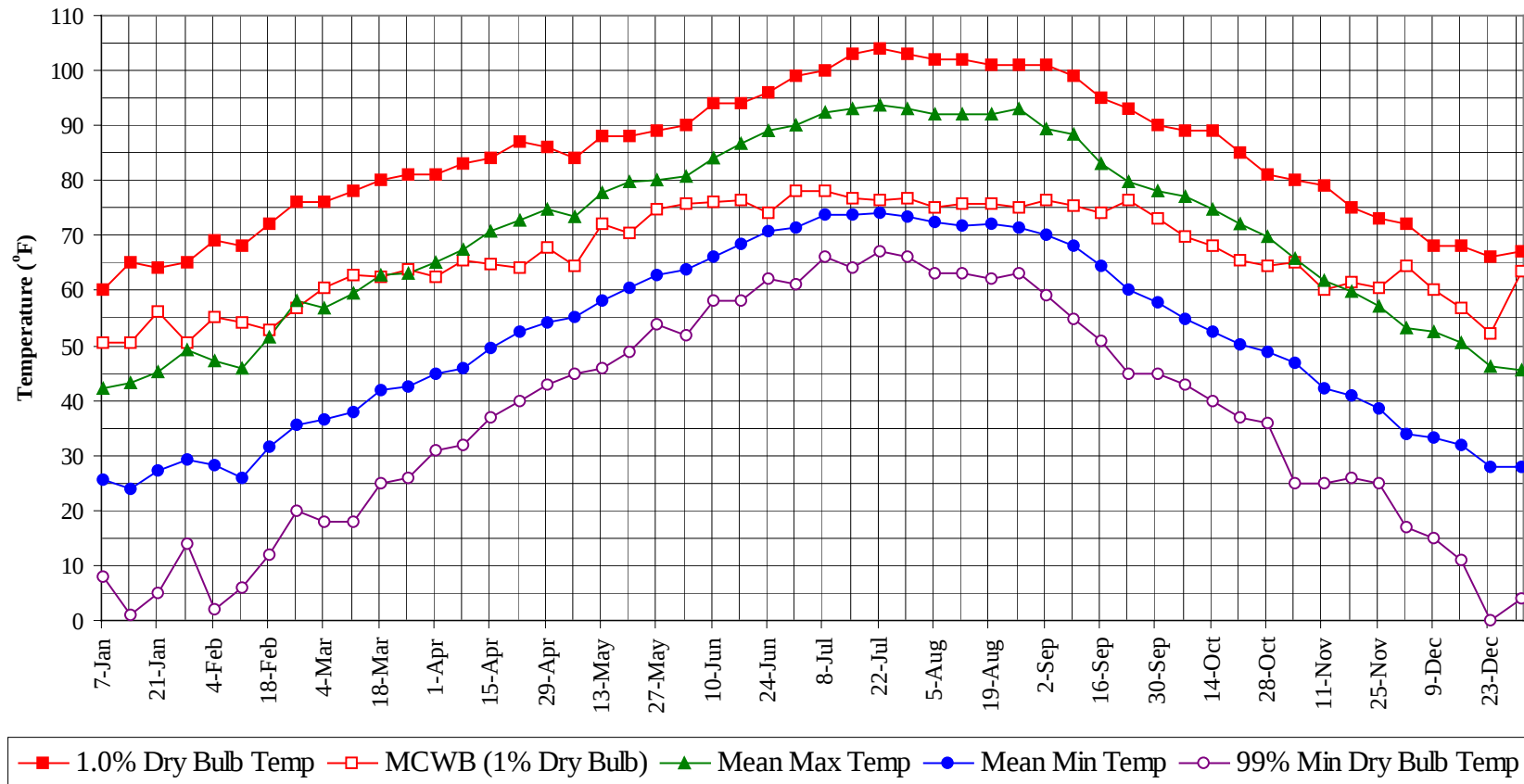
Annual Totals						
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)	
	01 To 08	09 To 16	17 To 00			
110 / 114	0			0	76.0	
105 / 109	3			1	5	75.3
100 / 104	26			10	36	76.5
95 / 99	87			40	127	76.1
90 / 94	1	188	103	292	75.2	
85 / 89	21	257	178	456	73.4	
80 / 84	133	282	262	677	71.3	
75 / 79	272	264	280	817	68.7	
70 / 74	325	266	282	873	65.0	
65 / 69	283	235	250	768	60.4	
60 / 64	261	216	242	719	55.6	
55 / 59	226	195	214	635	50.8	
50 / 54	227	192	229	648	46.3	
45 / 49	231	174	205	610	42.1	
40 / 44	227	156	185	568	38.0	
35 / 39	224	135	167	525	33.8	
30 / 34	202	96	121	419	29.5	
25 / 29	122	59	70	251	24.8	
20 / 24	73	37	42	153	20.1	
15 / 19	41	21	24	86	15.5	
10 / 14	28	12	13	53	10.8	
5 / 9	14	6	7	27	6.2	
0 / 4	7	2	2	11	1.3	
-5 / -1	2	1	0	3	-2.5	
-10 / -6	1	0		1	-6.7	

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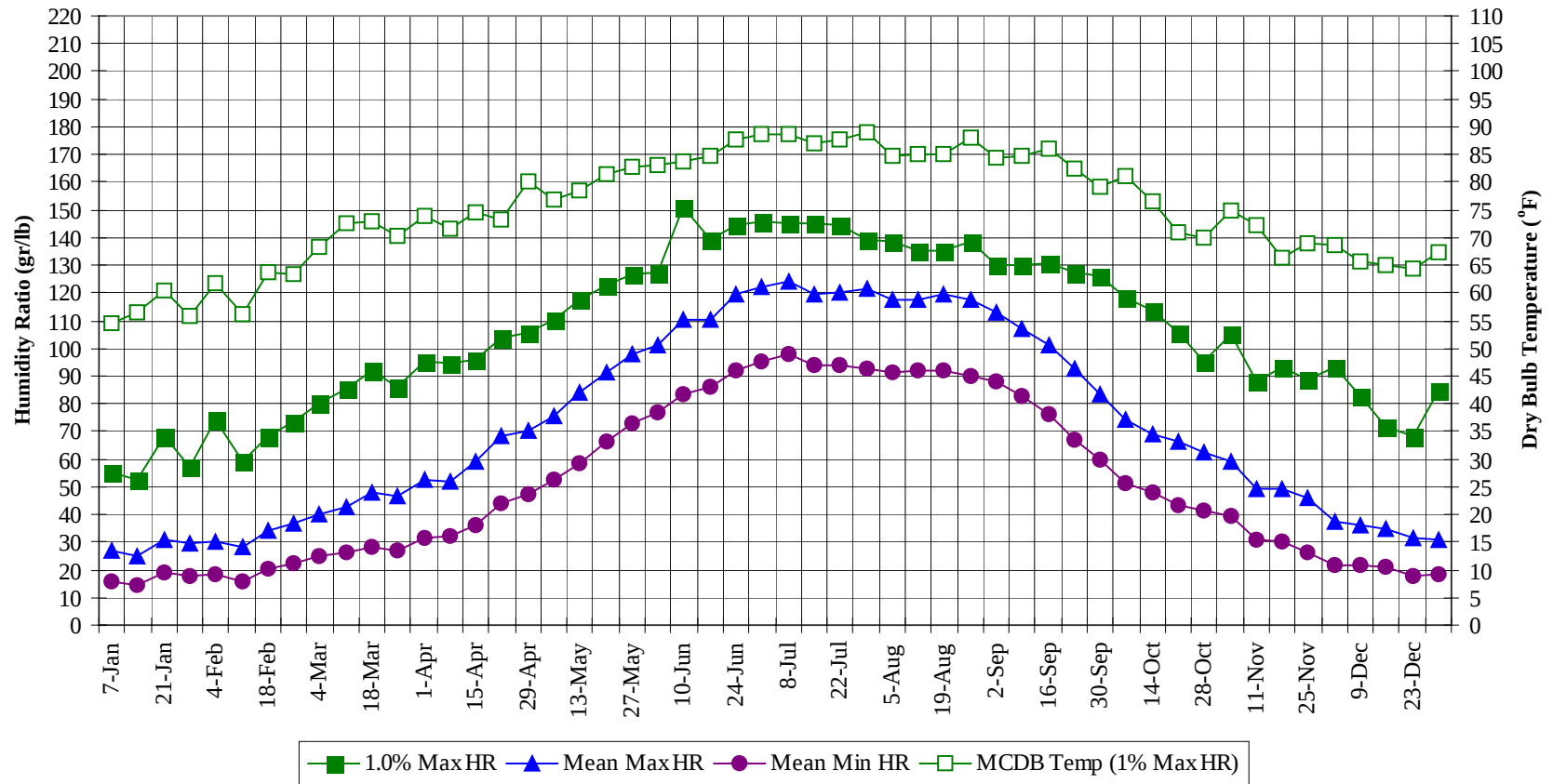
Annual Summary of Temperatures



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Long Term Humidity and Dry Bulb Temperature Summary



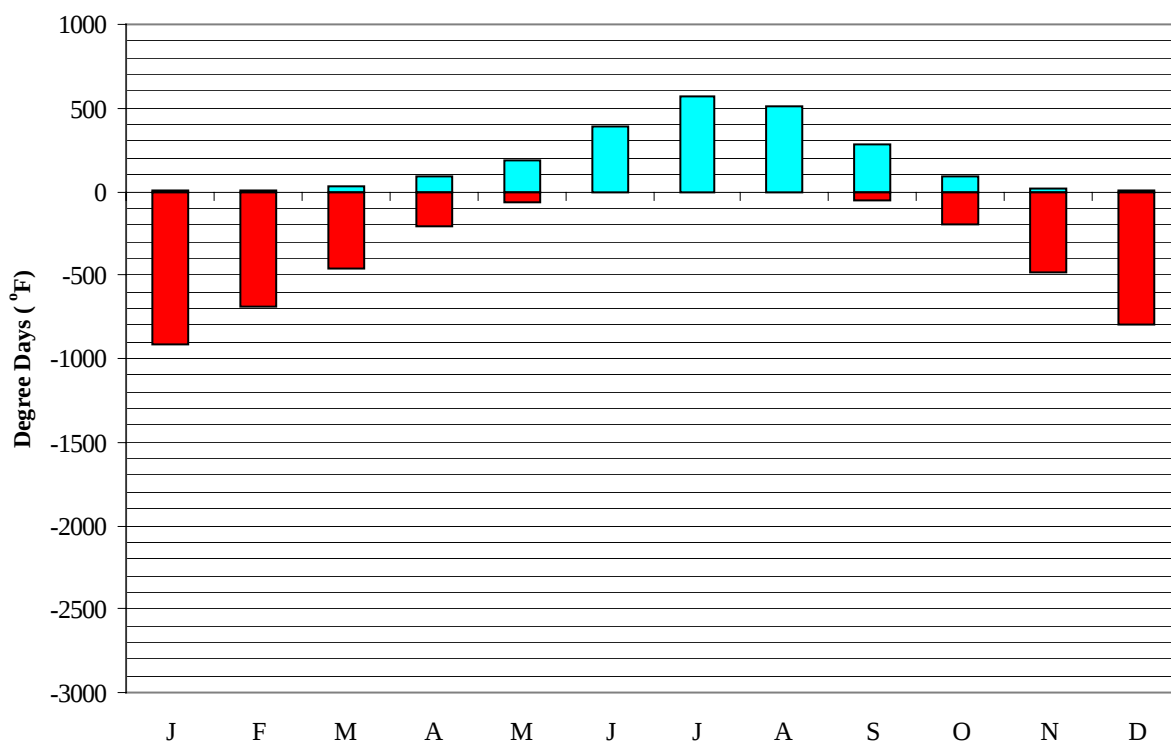
TULSA (AW) OK**WMO No. 723560****Long Term Dry Bulb Temperature and Humidity Summary**

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	60.0	50.5	42.2	25.5	8.0	55.3	54.7	26.7	16.0
14-Jan	65.0	50.4	43.2	24.1	1.0	52.5	56.4	24.9	14.2
21-Jan	64.0	56.1	45.1	27.2	5.0	68.6	60.4	31.0	18.8
28-Jan	65.0	50.5	49.0	29.2	14.0	57.4	55.7	29.4	17.6
4-Feb	69.0	55.3	47.1	28.1	2.0	74.2	61.8	30.1	18.5
11-Feb	68.0	54.1	45.9	25.8	6.0	58.8	56.2	28.5	16.0
18-Feb	72.0	52.8	51.5	31.6	12.0	68.6	63.5	34.0	20.1
25-Feb	76.0	56.7	58.3	35.5	20.0	73.5	63.4	36.8	22.1
4-Mar	76.0	60.4	57.0	36.6	18.0	79.8	68.2	40.4	24.9
11-Mar	78.0	62.9	59.4	37.9	18.0	85.4	72.5	42.5	26.0
18-Mar	80.0	62.5	62.7	41.9	25.0	91.7	73.0	47.9	28.0
25-Mar	81.0	63.9	63.3	42.5	26.0	86.1	70.2	46.3	27.2
1-Apr	81.0	62.5	65.0	44.7	31.0	95.2	74.0	52.4	31.7
8-Apr	83.0	65.4	67.6	45.7	32.0	94.5	71.6	52.0	32.4
15-Apr	84.0	64.7	70.6	49.5	37.0	95.9	74.6	58.9	36.3
22-Apr	87.0	64.1	72.7	52.6	40.0	103.6	73.2	68.0	44.0
29-Apr	86.0	68.0	74.6	54.0	43.0	105.7	80.0	70.4	47.3
6-May	84.0	64.5	73.4	55.1	45.0	110.6	76.8	75.8	52.9
13-May	88.0	72.2	77.6	58.1	46.0	117.6	78.5	84.2	58.6
20-May	88.0	70.4	79.6	60.6	49.0	122.5	81.6	91.3	66.3
27-May	89.0	74.7	80.2	62.9	54.0	126.7	82.8	97.9	73.0
3-Jun	90.0	75.8	80.8	63.7	52.0	127.4	83.0	101.5	77.1
10-Jun	94.0	76.2	84.1	66.0	58.0	151.2	83.7	110.0	83.1
17-Jun	94.0	76.3	86.8	68.3	58.0	139.3	84.7	110.4	86.0
24-Jun	96.0	74.0	89.0	70.7	62.0	144.2	87.7	119.4	91.8
1-Jul	99.0	78.2	90.0	71.3	61.0	145.6	88.5	122.2	95.2
8-Jul	100.0	78.2	92.5	73.6	66.0	144.9	88.6	124.0	97.7
15-Jul	103.0	76.8	92.9	73.7	64.0	144.9	87.0	119.8	94.2
22-Jul	104.0	76.6	93.8	74.2	67.0	144.2	87.7	120.2	94.2
29-Jul	103.0	76.7	93.0	73.4	66.0	139.3	89.1	121.3	92.7
5-Aug	102.0	75.3	92.0	72.5	63.0	138.6	84.8	117.4	91.2
12-Aug	102.0	75.8	91.9	71.9	63.0	135.1	84.9	117.8	92.1
19-Aug	101.0	75.8	92.0	72.1	62.0	135.1	85.1	119.6	92.0
26-Aug	101.0	75.3	93.2	71.4	63.0	138.6	88.0	117.5	89.9
2-Sep	101.0	76.4	89.5	70.1	59.0	130.2	84.5	113.0	87.9
9-Sep	99.0	75.6	88.4	68.1	55.0	130.2	84.8	107.3	82.9
16-Sep	95.0	74.0	83.1	64.6	51.0	130.9	85.9	101.5	76.4
23-Sep	93.0	76.3	79.9	60.3	45.0	127.4	82.4	92.6	66.9
30-Sep	90.0	73.1	78.0	57.7	45.0	126.0	79.1	83.6	59.9
7-Oct	89.0	69.7	77.0	54.8	43.0	118.3	81.0	74.0	51.0
14-Oct	89.0	68.0	74.7	52.5	40.0	113.4	76.5	69.2	47.7
21-Oct	85.0	65.4	72.3	50.1	37.0	105.7	70.9	66.4	43.6
28-Oct	81.0	64.4	69.9	48.8	36.0	95.2	69.8	62.3	41.4
4-Nov	80.0	65.1	65.9	46.8	25.0	105.0	74.9	59.4	39.1
11-Nov	79.0	60.1	61.7	42.2	25.0	88.2	72.4	49.2	30.7
18-Nov	75.0	61.5	60.0	41.0	26.0	93.1	66.4	49.0	30.5
25-Nov	73.0	60.6	57.3	38.4	25.0	88.9	69.0	45.9	26.5
2-Dec	72.0	64.6	53.2	33.8	17.0	93.1	68.7	37.2	22.0
9-Dec	68.0	60.0	52.4	33.3	15.0	82.6	65.8	36.1	21.9
16-Dec	68.0	56.7	50.5	32.0	11.0	71.4	65.2	35.0	21.0
23-Dec	66.0	52.3	46.3	28.0	0.0	68.6	64.5	31.2	17.8
31-Dec	67.0	63.6	45.6	27.8	4.0	84.7	67.4	30.8	18.3

TULSA (AW) OK

WMO No. 723560

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



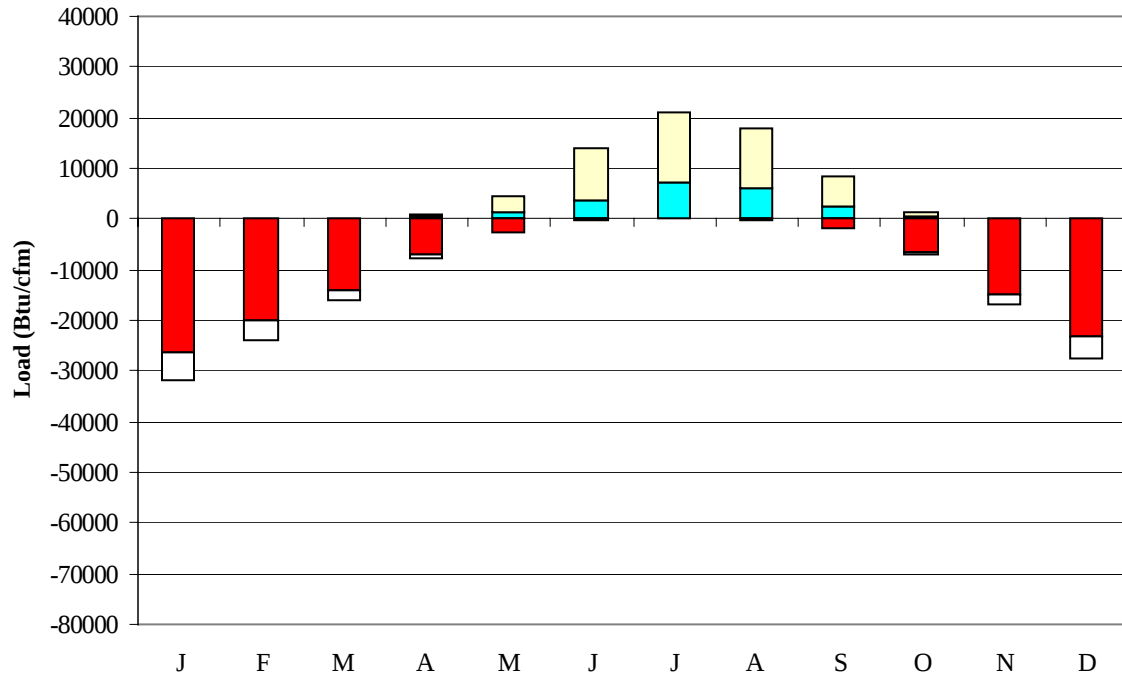
■ Mean Cooling Degree Days ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	1	917
FEB	7	686
MAR	30	457
APR	86	210
MAY	191	65
JUN	387	7
JUL	569	1
AUG	514	2
SEP	276	51
OCT	94	199
NOV	18	491
DEC	2	800
ANN	2175	3886

TULSA (AW) OK

WMO No. 723560

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	-26167	0	-5485
FEB	13	-19899	2	-3926
MAR	92	-13937	75	-2158
APR	416	-7022	550	-617
MAY	1164	-2629	3376	-15
JUN	3805	-385	10306	0
JUL	7211	-49	13677	0
AUG	6175	-156	11816	0
SEP	2515	-1988	5991	-16
OCT	498	-6741	929	-323
NOV	37	-14862	166	-2037
DEC	0	-23114	17	-4262
ANN	21926	-116949	46905	-18839

Average Annual Solar Radiation – Nearest Available Site

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

City: TULSA
 State: OK
 WBAN No: 13968
 Lat(N): 36.2
 Long(W): 95.9
 Elev(ft): 676

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1
 Overhang: 0.426
 Vert Gap: 0.296

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	800	1030	1370	1690	1870	2040	2110	1900	1500	1200	840	710	1420
	Std Dev	74	72	116	114	121	125	134	117	125	123	85	52	32
	Minimum	640	870	1120	1470	1650	1810	1940	1660	1190	970	710	610	1380
	Maximum	920	1150	1590	2000	2100	2360	2460	2080	1700	1390	1020	820	1530
	Diffuse	340	450	590	710	810	820	750	680	610	460	370	310	580
Clear Day	Global	1070	1410	1870	2300	2560	2640	2580	2340	1960	1510	1120	960	1860
NORTH	Global	230	290	370	460	560	640	610	490	390	310	240	200	400
	Diffuse	230	290	370	440	500	530	510	450	390	310	240	200	370
Clear Day	Global	210	270	340	430	580	690	630	470	360	290	220	190	390
EAST	Global	520	650	810	950	1020	1080	1150	1070	880	750	540	470	820
	Diffuse	270	350	450	540	600	620	610	560	480	380	290	250	450
Clear Day	Global	760	960	1180	1360	1430	1450	1410	1340	1200	1000	800	710	1130
SOUTH	Global	1210	1200	1130	970	780	720	770	930	1070	1260	1160	1140	1030
	Diffuse	380	440	510	540	550	550	540	540	520	460	390	350	480
Clear Day	Global	1990	1980	1740	1300	940	800	850	1130	1530	1850	1950	1950	1500
WEST	Global	530	660	830	980	1060	1150	1180	1090	910	770	560	480	850
	Diffuse	280	350	450	550	610	640	620	570	490	390	290	250	460
Clear Day	Global	760	960	1180	1360	1430	1450	1410	1340	1200	1000	800	710	1130

Average Annual Solar Heat and Illumination – Nearest Available Site

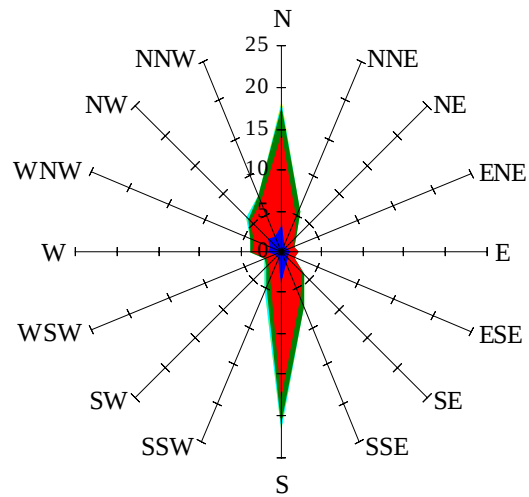
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	530	710	970	1220	1360	1490	1540	1390	1080	840	570	460	1010
NORTH	Unshaded	160	200	260	310	360	410	390	320	270	220	170	140	270
	Shaded	140	180	230	280	330	370	360	300	250	200	150	130	240
EAST	Unshaded	360	460	570	680	720	770	820	770	620	530	370	320	580
	Shaded	330	420	520	600	640	680	730	680	560	480	340	300	520
SOUTH	Unshaded	910	870	770	610	480	430	450	570	710	890	860	860	700
	Shaded	890	810	640	440	350	350	350	390	540	800	840	840	600
WEST	Unshaded	370	470	590	700	750	820	850	780	650	540	390	330	600
	Shaded	340	420	530	620	670	730	760	700	590	500	360	310	540

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	35	73	87	74	37	39	80	103	101	75
	M.Cloudy	19	44	54	45	22	24	51	71	73	54
NORTH	M.Clear	9	14	15	14	9	22	16	17	17	16
	M.Cloudy	8	16	18	16	9	14	17	19	19	17
EAST	M.Clear	74	65	17	14	9	72	77	40	17	16
	M.Cloudy	22	32	19	16	9	30	43	32	19	17
SOUTH	M.Clear	33	67	81	69	34	11	24	40	39	21
	M.Cloudy	13	33	43	35	16	10	20	32	32	20
WEST	M.Clear	9	14	15	63	74	11	16	17	45	78
	M.Cloudy	8	16	18	33	28	10	17	19	36	50
M.Clear	(% hrs)	38	37	38	39	39	43	42	38	37	45
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	22	65	88	85	56	13	44	55	39	7
	M.Cloudy	13	39	55	57	37	8	26	33	23	5
NORTH	M.Clear	7	14	16	16	13	5	10	11	9	3
	M.Cloudy	6	14	18	18	14	4	10	12	9	3
EAST	M.Clear	58	76	38	16	13	42	47	11	9	3
	M.Cloudy	17	35	27	18	14	10	20	12	9	3
SOUTH	M.Clear	15	50	71	69	43	34	81	93	74	21
	M.Cloudy	7	26	40	42	25	9	29	36	26	6
WEST	M.Clear	7	14	16	47	76	5	10	16	51	29
	M.Cloudy	6	14	18	32	37	4	10	14	20	8
M.Clear	(% hrs)	44	44	44	42	47	40	39	40	42	43

Wind Summary - December, January, and February

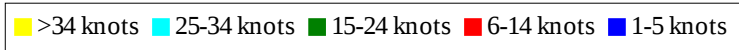
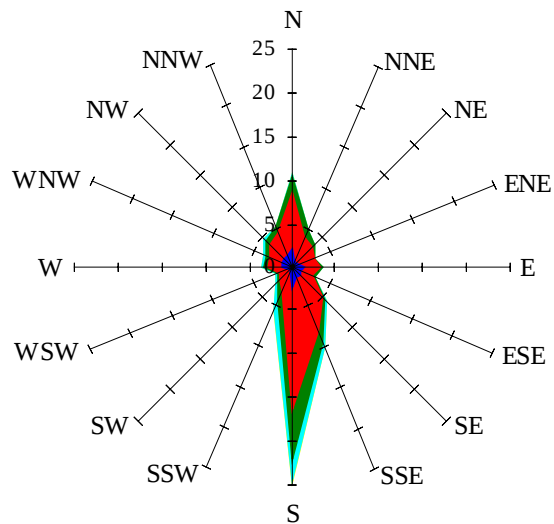
Labels of Percent Frequency on North Axis



Percent Calm = 7.33

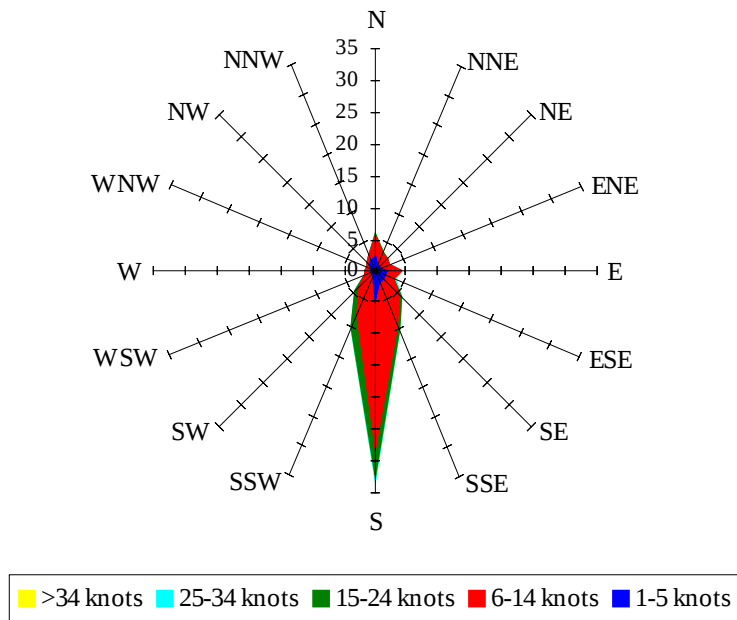
Wind Summary - March, April, and May

Labels of Percent Frequency on North Axis



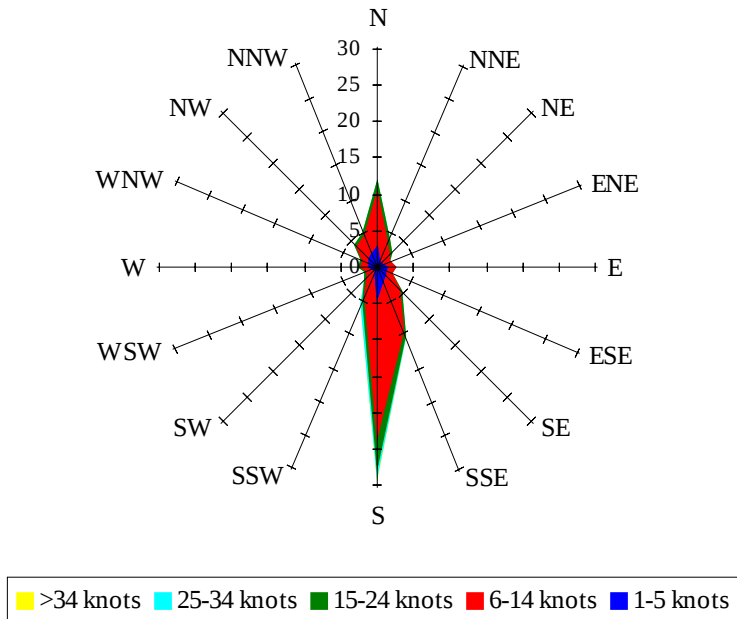
Percent Calm = 5.59

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



Percent Calm = 7.10

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



Percent Calm = 8.18