

SHAW AFB/SUMTER SC

Latitude = 33.97 N

WMO No. 747900

Longitude = 80.47 W

Elevation = 243 feet

Period of Record = 1967 to 1996

Average Pressure = 29.76 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	98	76	100	6.1	W
0.4% Occurrence	95	76	106	6.9	W
1.0% Occurrence	93	76	109	6.9	WSW
2.0% Occurrence	90	75	108	6.5	WSW
Mean Daily Range	20	-	-	-	-
97.5% Occurrence	31	27	14	4.9	NE
99.0% Occurrence	27	23	12	4.5	NNE
99.6% Occurrence	24	21	10	5.2	N
Median of Extreme Lows	17	14	7	6.0	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	81	91	144	5.9	SSW
0.4% Occurrence	79	90	132	5.6	SW
1.0% Occurrence	78	88	128	5.7	SSW
2.0% Occurrence	77	87	124	5.8	SSW
	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	152	86	1.00	3.9	S
0.4% Occurrence	137	84	0.90	4.8	SSW
1.0% Occurrence	132	82	0.88	4.5	SSW
2.0% Occurrence	128	82	0.85	5.1	SSW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		88	1339	1180	2840

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	4.0	90	4.2 + 1.4
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 (#)
65.8	0	8	29

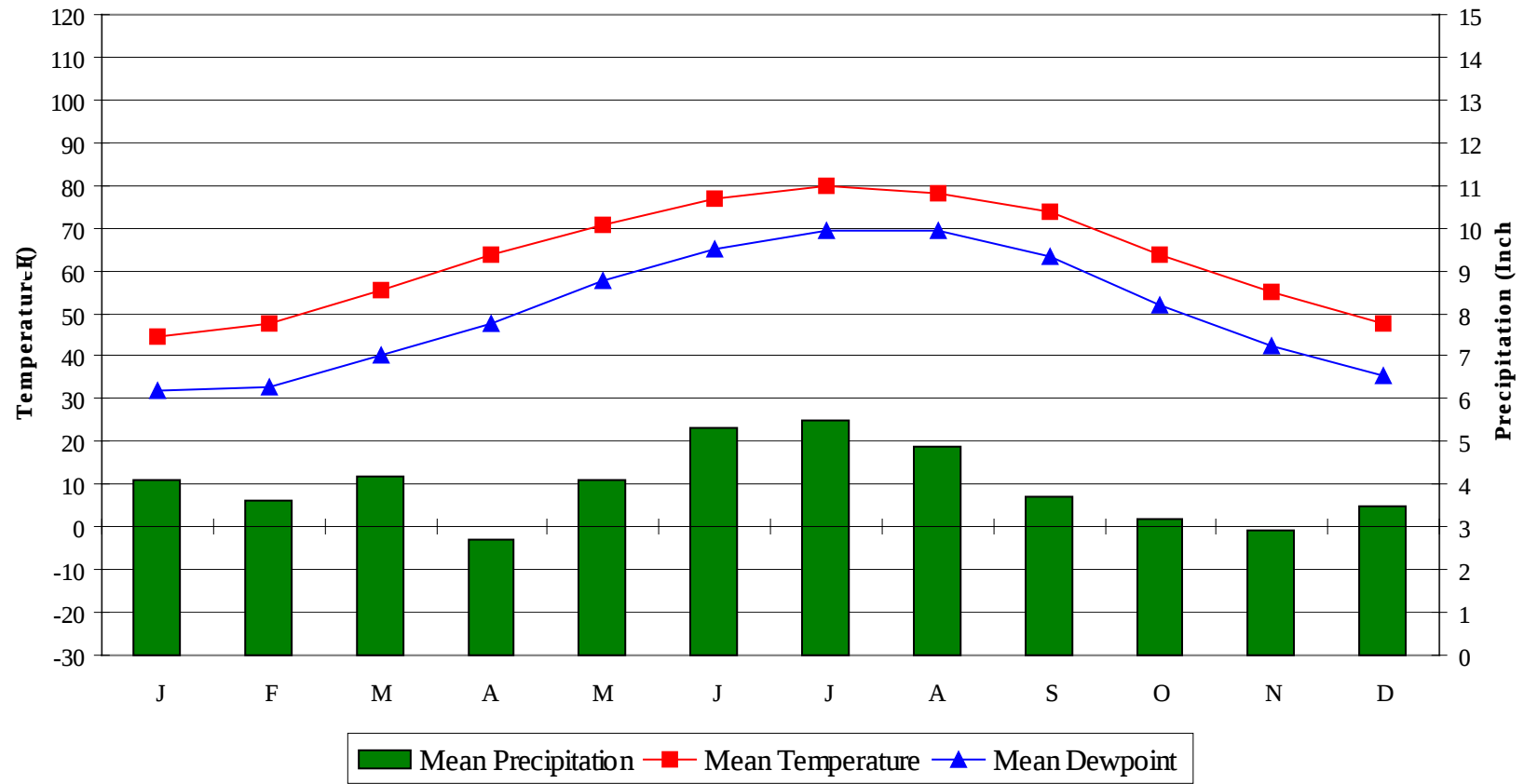
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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Average Annual Climate

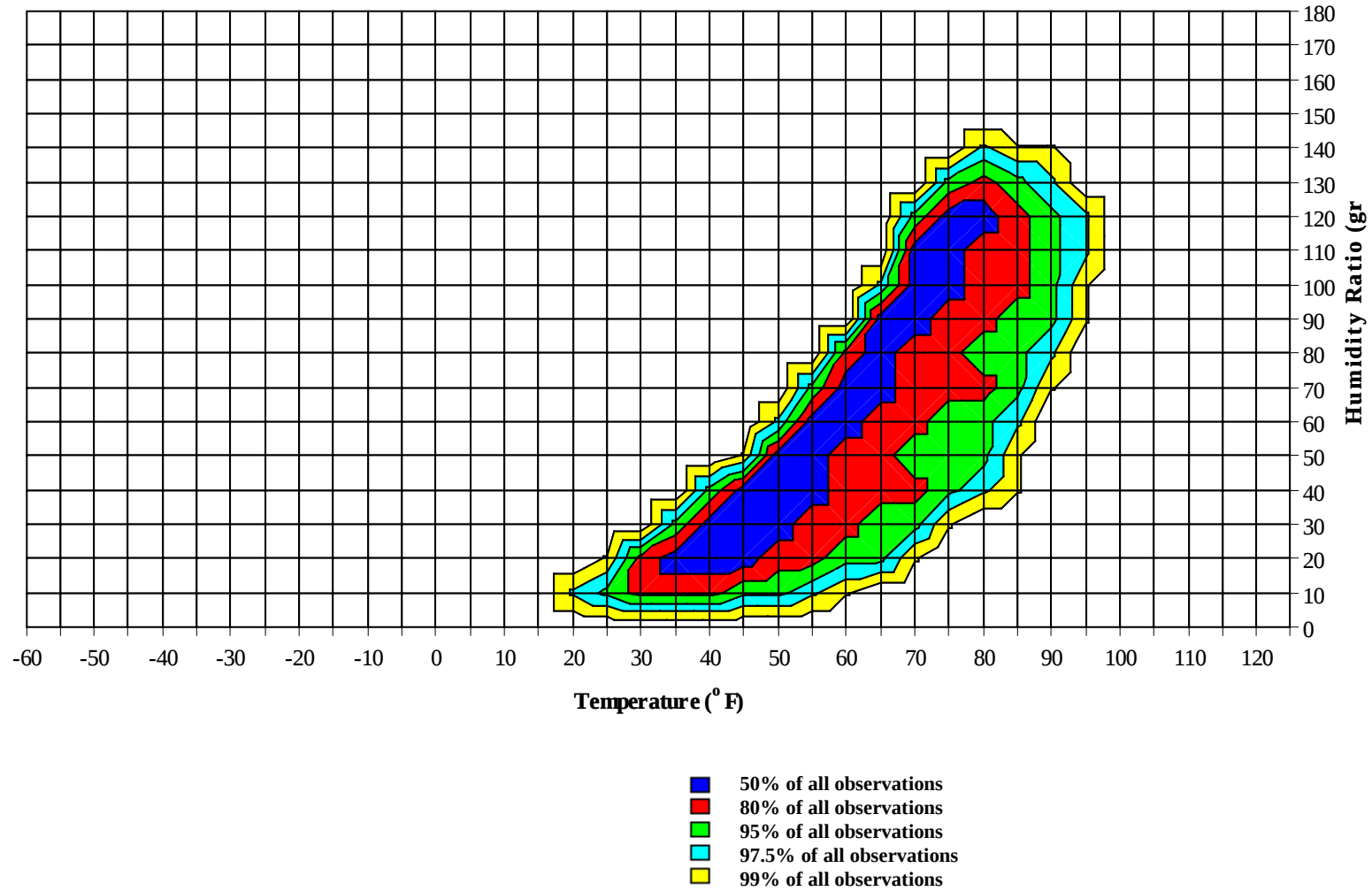


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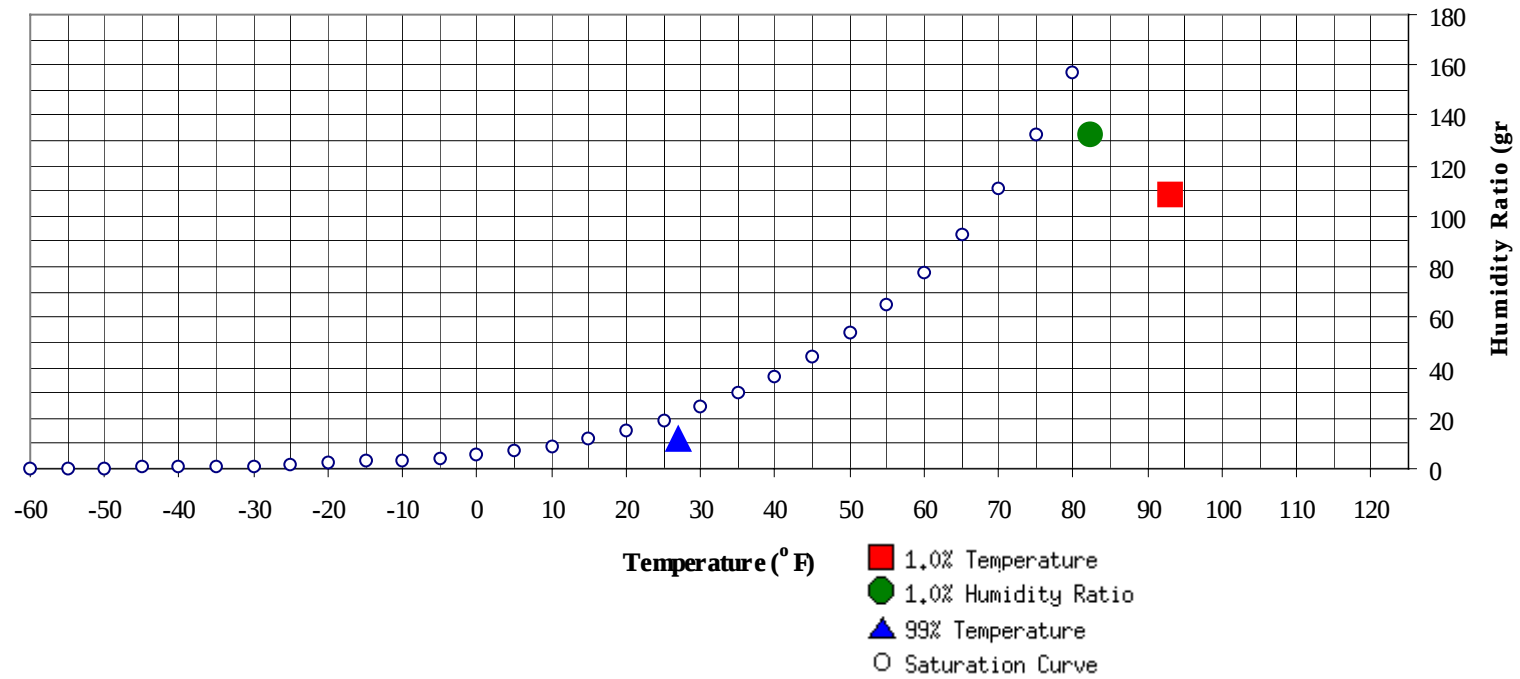
Long Term Psychrometric Summary



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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	27	12.1	8.3		132.3	82.4	77	75	40.5

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	93	108.7	76	39.4

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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							0		0	66.0		0		0	66.0
80 / 84		0		0	64.5		1	0	1	64.3		8	3	11	64.1
75 / 79		2	0	2	64.0		6	1	7	61.9		20	8	28	61.7
70 / 74		7	1	8	61.0	0	13	4	17	59.0	1	31	18	50	59.2
65 / 69	3	13	8	24	59.6	2	21	12	35	56.7	9	36	31	76	57.4
60 / 64	8	23	17	48	55.8	11	27	24	62	54.5	26	43	46	115	54.5
55 / 59	13	29	23	65	51.1	19	28	29	76	49.9	40	40	45	124	50.4
50 / 54	20	40	35	95	46.1	19	32	31	82	45.0	43	30	39	111	46.0
45 / 49	33	43	44	119	41.8	30	32	37	98	40.9	43	20	29	91	41.6
40 / 44	43	38	44	125	37.3	40	29	37	105	36.9	41	13	19	73	37.1
35 / 39	41	27	35	103	32.6	42	24	28	93	32.5	29	6	9	43	32.8
30 / 34	43	17	25	85	28.3	34	10	16	59	28.1	13	1	2	16	28.4
25 / 29	26	8	11	45	23.6	20	3	5	28	23.7	3	0	1	4	24.0
20 / 24	12	2	3	17	19.2	6	1	1	8	19.6	1	0	0	1	20.1
15 / 19	4	1	1	6	14.4	1	0	0	1	15.0	0			0	14.7
10 / 14	2	0	0	2	9.7	0	0		0	11.9					
5 / 9	0			0	5.9										
0 / 4	0			0	2.0										

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												1	0	1	75.9
95 / 99							1	0	1	71.6		6	2	8	75.1
90 / 94		2	0	2	67.6		8	2	10	71.4		27	9	36	74.7
85 / 89		14	4	18	65.7		31	11	41	69.9	0	65	27	92	72.8
80 / 84		28	11	39	64.8	0	58	25	83	67.8	5	71	45	122	71.0
75 / 79	0	39	22	61	62.4	5	62	45	112	66.0	38	46	64	148	70.0
70 / 74	8	48	39	95	60.4	42	49	69	160	64.8	106	18	67	191	68.1
65 / 69	32	44	52	127	58.4	84	25	54	163	62.2	66	5	21	92	63.8
60 / 64	55	33	48	136	55.3	58	9	26	93	57.3	20	1	4	25	58.4
55 / 59	49	21	32	102	50.8	35	4	13	51	52.7	4	0	1	5	53.5
50 / 54	45	9	20	74	46.8	20	2	4	26	48.7	1		0	1	50.2
45 / 49	31	3	8	42	42.4	4	0	0	4	44.3					
40 / 44	15	1	3	19	38.1	0	0		0	39.8					
35 / 39	5		0	5	33.8	0			0	37.0					
30 / 34	1			1	29.4										
25 / 29	0			0	26.0										
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															

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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		
100 / 104		2	1	3	76.6		1	0	1	76.6					
95 / 99		15	4	19	76.7		8	2	10	77.2		1	0	1	74.9
90 / 94		52	17	69	76.4		37	10	47	76.4		16	2	18	74.8
85 / 89	1	78	36	114	75.0	0	72	28	99	75.0		48	12	60	73.4
80 / 84	16	62	59	137	73.8	7	71	52	130	73.8	1	64	29	94	71.2
75 / 79	85	31	79	195	72.5	64	43	86	193	72.5	19	54	62	135	69.8
70 / 74	122	8	50	180	70.0	134	15	59	208	70.0	94	34	76	204	68.1
65 / 69	21	1	3	25	64.9	35	2	10	47	64.9	62	15	33	109	63.0
60 / 64	2		0	2	59.7	7	0	1	8	59.1	35	6	19	60	58.1
55 / 59	0			0	53.8	0	0	0	0	55.1	19	2	7	28	53.4
50 / 54						0	0		0	53.3	8	0	1	9	49.1
45 / 49											1		0	1	44.8
40 / 44															
35 / 39															
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															

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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		0		0	73.3										
90 / 94		1	0	1	73.1										
85 / 89		6	1	7	70.9		0		0	72.0					
80 / 84	0	29	5	33	68.1		4	0	4	67.9		0		0	68.8
75 / 79	2	50	18	70	65.9		19	2	21	64.8		6	1	7	65.6
70 / 74	16	54	41	110	64.1	3	33	13	49	62.4	1	15	4	20	63.4
65 / 69	36	48	58	143	60.7	15	39	30	84	59.7	6	20	13	39	60.4
60 / 64	55	34	47	137	56.6	27	41	38	106	55.6	13	27	21	62	55.8
55 / 59	48	17	36	100	52.1	32	37	40	110	50.7	17	37	28	82	50.7
50 / 54	40	6	25	71	47.6	36	33	42	112	45.9	27	39	41	108	46.2
45 / 49	31	3	13	47	43.3	42	20	35	96	41.7	36	44	45	126	41.7
40 / 44	16	0	4	20	38.9	34	10	25	68	37.6	43	32	41	115	37.1
35 / 39	4		1	5	33.8	31	3	12	46	33.3	43	17	30	89	32.8
30 / 34	0			0	30.2	17	0	4	21	29.0	35	8	18	61	28.2
25 / 29						3	0	0	3	25.2	21	2	5	28	23.8
20 / 24											5	1	2	8	19.4
15 / 19											1	0	0	1	15.2
10 / 14											0		0	0	10.0
5 / 9															
0 / 4															

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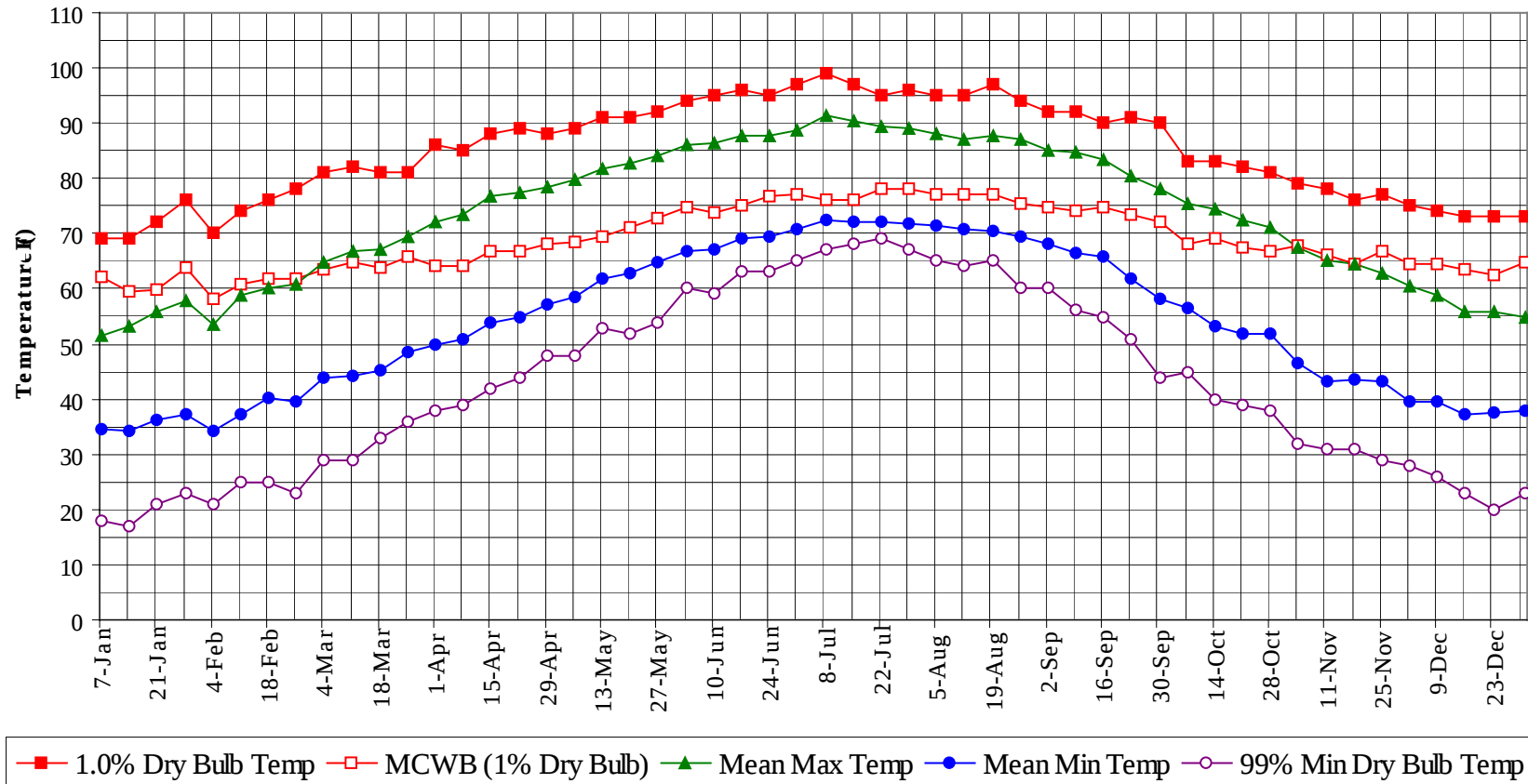
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1967 to 1996

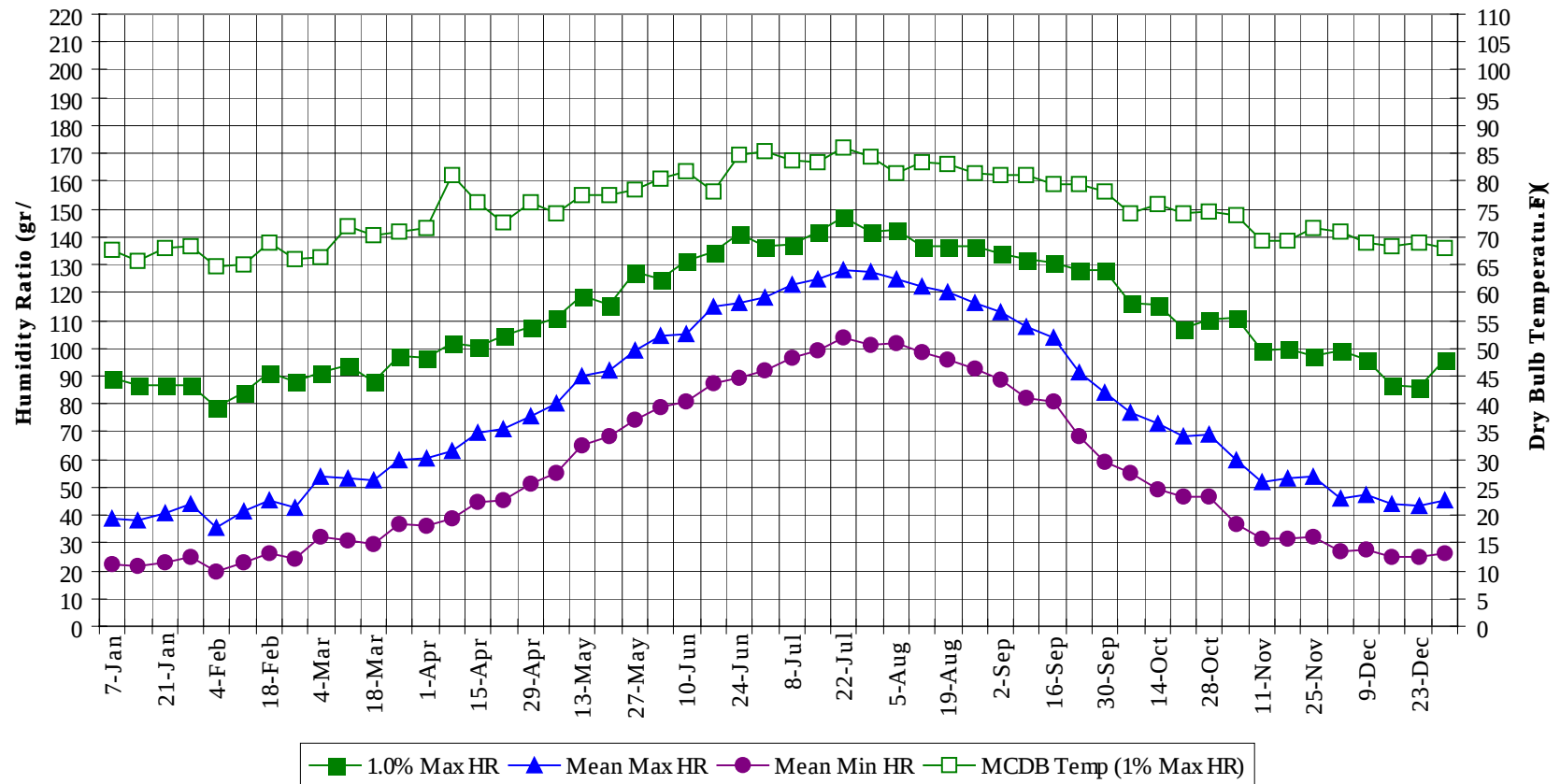
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		4	1	5	76.5
95 / 99		30	7	37	76.3
90 / 94		145	41	186	75.5
85 / 89	2	317	119	438	73.3
80 / 84	30	398	231	659	71.1
75 / 79	214	377	390	981	69.3
70 / 74	531	325	442	1298	66.5
65 / 69	373	267	324	963	61.0
60 / 64	317	243	291	852	56.0
55 / 59	277	213	252	742	51.1
50 / 54	260	188	238	686	46.3
45 / 49	249	162	208	619	41.8
40 / 44	228	121	171	520	37.3
35 / 39	191	76	113	380	32.8
30 / 34	142	35	64	241	28.3
25 / 29	74	13	22	108	23.8
20 / 24	24	4	6	33	19.4
15 / 19	6	1	1	8	14.7
10 / 14	2	0	0	2	10.0
5 / 9	0			0	5.9
0 / 4	0			0	2.0

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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

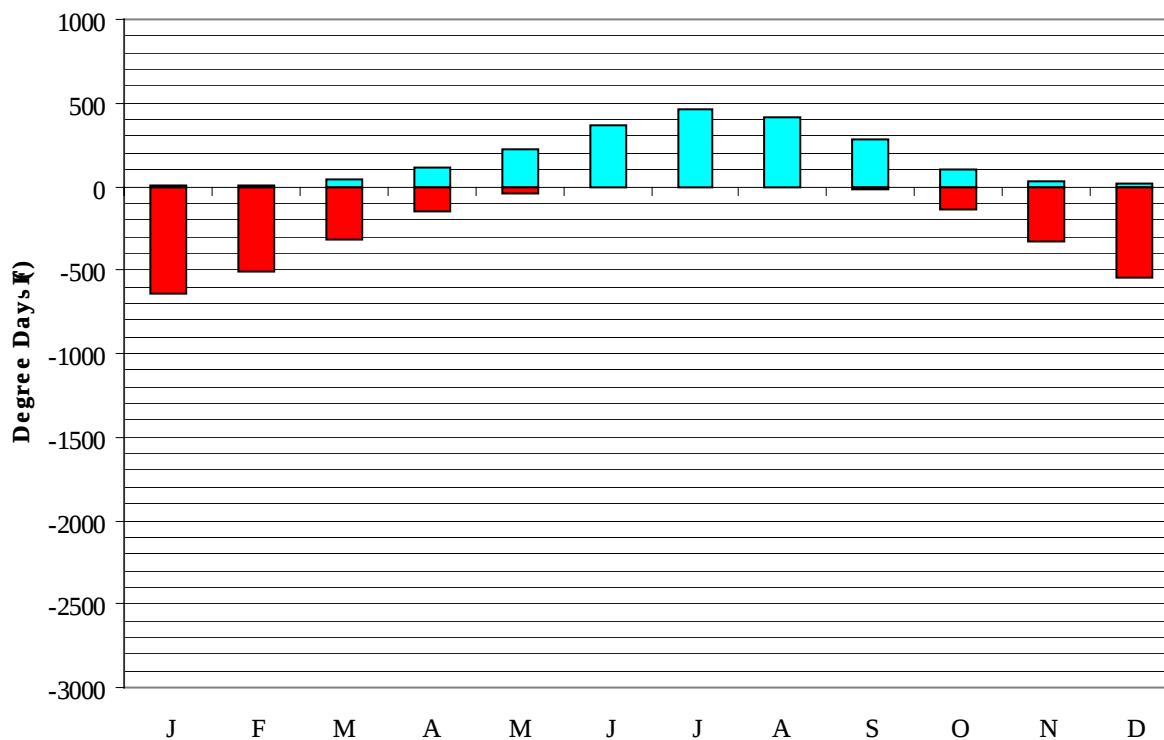
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	69.0	62.1	51.4	34.4	18.0	89.6	67.7	39.0	22.3
14-Jan	69.0	59.7	53.3	34.3	17.0	86.8	65.7	38.2	21.5
21-Jan	72.0	59.7	55.8	36.1	21.0	86.8	68.0	40.8	22.9
28-Jan	76.0	63.9	57.9	37.2	23.0	86.8	68.3	44.3	25.0
4-Feb	70.0	58.3	53.5	34.3	21.0	79.1	64.7	35.7	19.6
11-Feb	74.0	60.9	58.9	37.3	25.0	84.0	65.0	41.6	23.1
18-Feb	76.0	61.9	60.2	40.3	25.0	91.0	68.9	45.5	26.1
25-Feb	78.0	61.7	60.9	39.5	23.0	88.2	66.1	42.4	24.3
4-Mar	81.0	63.4	64.7	43.9	29.0	91.0	66.4	53.7	32.1
11-Mar	82.0	64.7	66.8	44.3	29.0	93.8	72.0	53.0	31.1
18-Mar	81.0	63.7	67.0	45.2	33.0	88.2	70.2	52.6	29.6
25-Mar	81.0	65.7	69.6	48.4	36.0	97.3	71.0	59.7	36.9
1-Apr	86.0	64.3	72.2	49.8	38.0	96.6	71.7	60.6	36.1
8-Apr	85.0	64.0	73.4	50.7	39.0	101.5	81.0	62.8	39.1
15-Apr	88.0	66.9	76.8	54.0	42.0	100.8	76.2	69.4	44.9
22-Apr	89.0	66.7	77.3	55.0	44.0	104.3	72.7	71.0	45.3
29-Apr	88.0	68.2	78.3	57.2	48.0	107.8	76.2	75.7	51.3
6-May	89.0	68.6	79.7	58.3	48.0	111.3	74.1	80.3	54.9
13-May	91.0	69.5	81.8	61.7	53.0	119.0	77.5	90.2	65.1
20-May	91.0	71.0	82.8	62.8	52.0	115.5	77.5	92.2	68.1
27-May	92.0	72.9	84.0	64.7	54.0	127.4	78.5	98.9	74.2
3-Jun	94.0	74.7	86.0	66.9	60.0	124.6	80.3	104.5	78.6
10-Jun	95.0	73.9	86.3	67.3	59.0	131.6	81.8	104.9	80.5
17-Jun	96.0	75.1	87.6	69.2	63.0	134.4	78.0	114.9	87.2
24-Jun	95.0	76.7	87.9	69.5	63.0	141.4	84.7	116.5	89.6
1-Jul	97.0	77.3	88.8	70.7	65.0	136.5	85.3	118.0	92.2
8-Jul	99.0	76.0	91.3	72.6	67.0	137.2	83.7	122.7	96.6
15-Jul	97.0	76.1	90.3	72.2	68.0	142.1	83.3	124.7	99.2
22-Jul	95.0	78.1	89.5	72.2	69.0	147.0	85.9	127.9	103.5
29-Jul	96.0	78.0	89.1	71.9	67.0	142.1	84.3	127.2	101.4
5-Aug	95.0	77.0	88.2	71.5	65.0	142.8	81.3	124.5	102.1
12-Aug	95.0	77.3	87.1	70.7	64.0	136.5	83.3	122.0	98.6
19-Aug	97.0	77.2	87.7	70.5	65.0	136.5	83.0	120.3	96.2
26-Aug	94.0	75.3	87.0	69.6	60.0	136.5	81.5	116.3	92.9
2-Sep	92.0	74.8	85.1	68.3	60.0	133.7	81.0	112.7	89.0
9-Sep	92.0	74.1	84.8	66.6	56.0	132.3	81.1	107.8	82.2
16-Sep	90.0	74.8	83.4	65.9	55.0	130.9	79.3	104.1	80.7
23-Sep	91.0	73.5	80.3	61.7	51.0	128.1	79.4	91.0	68.1
30-Sep	90.0	72.1	78.1	58.2	44.0	128.1	78.3	84.0	59.2
7-Oct	83.0	68.2	75.4	56.4	45.0	116.2	74.1	76.8	55.0
14-Oct	83.0	69.0	74.5	53.1	40.0	115.5	75.8	72.8	49.5
21-Oct	82.0	67.4	72.6	51.8	39.0	107.1	74.2	68.6	46.7
28-Oct	81.0	66.9	71.0	51.7	38.0	110.6	74.6	68.9	46.9
4-Nov	79.0	67.9	67.6	46.6	32.0	111.3	73.9	59.5	37.0
11-Nov	78.0	66.2	65.1	43.3	31.0	99.4	69.3	51.9	31.7
18-Nov	76.0	64.6	64.5	43.7	31.0	100.1	69.2	53.3	31.5
25-Nov	77.0	66.7	62.9	43.1	29.0	97.3	71.6	53.8	32.1
2-Dec	75.0	64.5	60.5	39.5	28.0	99.4	71.0	45.8	26.7
9-Dec	74.0	64.4	58.8	39.5	26.0	95.9	69.1	47.4	27.7
16-Dec	73.0	63.4	55.9	37.1	23.0	86.8	68.3	43.8	25.2
23-Dec	73.0	62.3	55.9	37.4	20.0	86.1	69.0	43.1	25.2
31-Dec	73.0	64.7	55.0	37.9	23.0	95.9	67.9	45.6	26.3

SHAW AFB/SUMTER

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WMO No. 747900

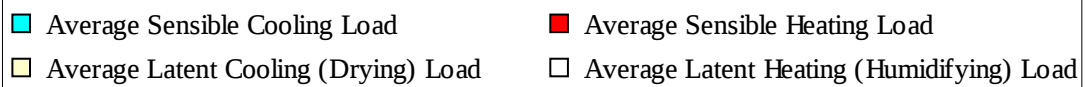
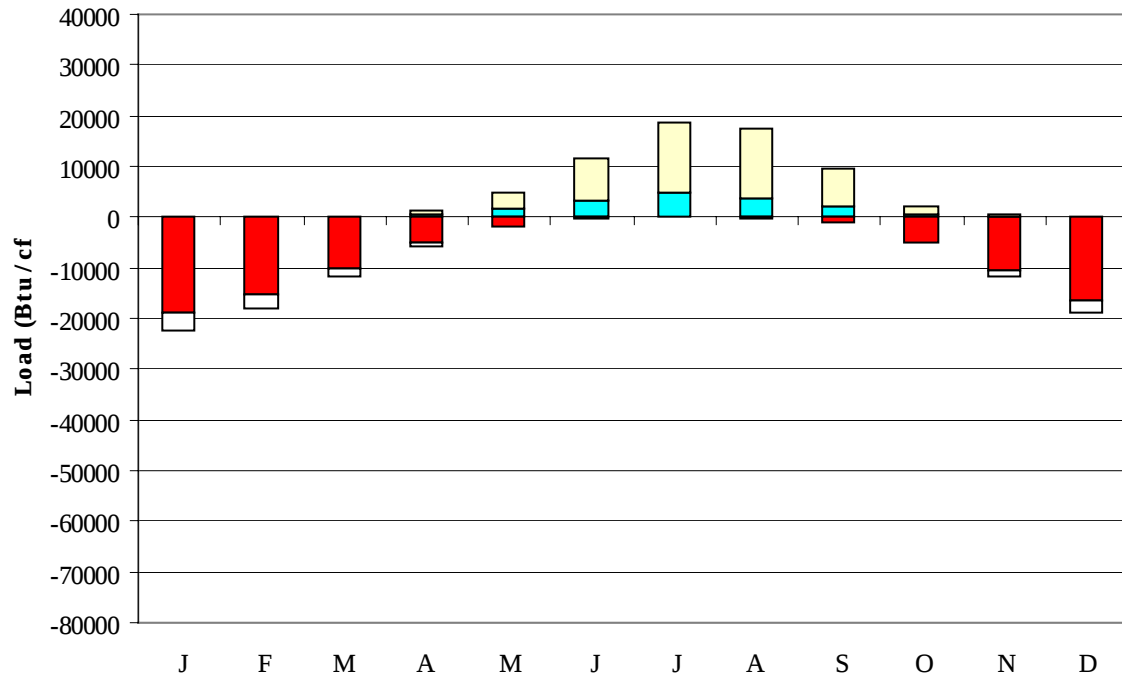
Degree Days, Heating and Cooling
(Base 65°F)



■ Mean Cooling Degree Days ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	5	639
FEB	11	506
MAR	40	322
APR	112	145
MAY	223	44
JUN	361	4
JUL	464	0
AUG	415	1
SEP	280	21
OCT	105	139
NOV	33	332
DEC	12	542
ANN	2061	2695

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	3	-18909	98	-3328
FEB	18	-15172	67	-2810
MAR	141	-10277	186	-1518
APR	669	-5167	579	-533
MAY	1548	-1894	3225	-39
JUN	3235	-292	8446	0
JUL	4686	-26	14084	0
AUG	3741	-91	13813	0
SEP	2080	-973	7536	-1
OCT	458	-4973	1746	-180
NOV	64	-10548	583	-1264
DEC	11	-16309	199	-2620
ANN	16654	-84631	50562	-12293

Average Annual Solar Radiation – Nearest Available Site

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

City: COLUMBIA
 State: SC
 WBAN No: 13883
 Lat(N): 33.95
 Long(W): 81.12
 Elev(ft): 226

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1
 Overhang: 0.364
 Vert Gap: 0.275

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	820	1080	1410	1790	1930	1990	1920	1740	1510	1270	930	760	1430
	Std Dev	59	95	119	108	108	124	137	125	117	114	73	56	33
	Minimum	680	930	1180	1560	1720	1720	1570	1510	1260	1030	700	620	1360
	Maximum	970	1280	1620	2040	2140	2220	2170	2000	1730	1490	1060	870	1480
	Diffuse	350	440	570	670	820	880	890	810	670	490	370	320	610
Clear Day	Global	1150	1480	1910	2300	2520	2590	2520	2300	1960	1540	1180	1030	1880
NORTH	Global	230	290	370	450	550	620	580	490	410	330	250	210	400
	Diffuse	230	290	370	440	500	530	520	470	410	330	250	210	380
Clear Day	Global	220	270	340	430	580	690	630	490	390	310	230	200	400
EAST	Global	520	670	830	1020	1050	1050	1030	960	850	760	580	490	820
	Diffuse	280	350	450	540	610	630	630	580	500	400	310	260	460
Clear Day	Global	800	990	1180	1330	1380	1380	1340	1270	1150	970	800	730	1110
SOUTH	Global	1140	1210	1120	970	760	670	700	830	1020	1260	1230	1160	1000
	Diffuse	370	430	500	530	550	550	560	560	550	490	410	360	490
Clear Day	Global	1990	1950	1670	1220	880	740	790	1050	1440	1760	1890	1930	1440
WEST	Global	530	680	840	1010	1030	1040	970	930	870	780	600	500	810
	Diffuse	280	350	460	550	610	640	630	590	510	410	310	260	470
Clear Day	Global	800	990	1180	1330	1380	1380	1340	1270	1150	970	800	730	1110

Average Annual Solar Heat and Illumination – Nearest Available Site

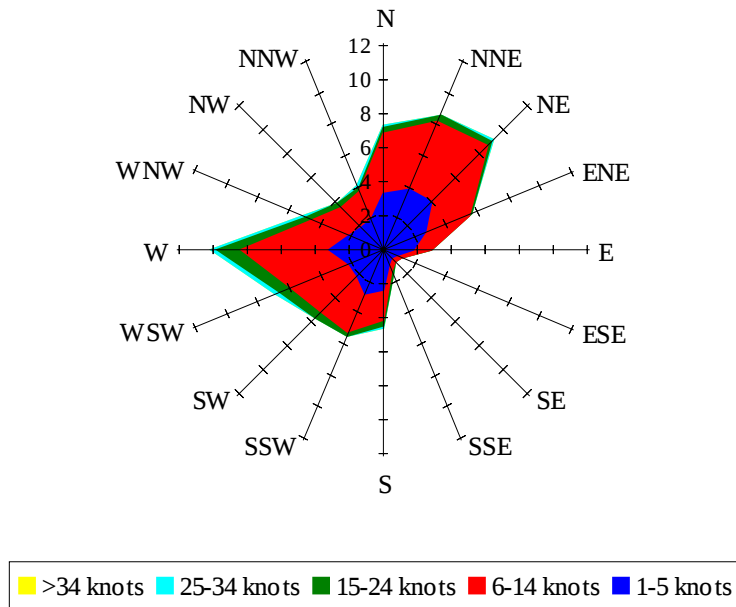
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	550	750	1010	1300	1410	1450	1400	1270	1090	900	630	500	1020
NORTH	Unshaded	160	200	260	310	360	400	380	330	280	230	170	150	270
	Shaded	150	190	240	290	340	370	350	310	260	210	160	140	250
EAST	Unshaded	360	470	590	730	740	740	730	680	600	530	410	340	580
	Shaded	340	440	540	660	670	670	660	610	550	490	380	320	530
SOUTH	Unshaded	850	870	760	600	460	410	430	510	670	890	910	870	680
	Shaded	840	820	640	440	360	360	390	390	540	810	890	860	610
WEST	Unshaded	370	480	600	720	730	730	690	660	620	550	420	340	570
	Shaded	340	440	550	660	660	660	620	590	560	500	390	320	530

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	75	89	76	38	37	79	101	99	72
	M.Cloudy	21	45	55	48	24	24	54	74	74	51
NORTH	M.Clear	9	14	15	14	10	22	17	17	17	17
	M.Cloudy	8	15	17	16	9	14	17	20	19	16
EAST	M.Clear	75	66	17	14	10	66	76	41	17	17
	M.Cloudy	25	34	18	16	9	30	45	33	19	16
SOUTH	M.Clear	31	65	78	66	33	11	21	36	35	19
	M.Cloudy	14	34	42	37	17	10	19	31	30	18
WEST	M.Clear	9	14	15	63	75	11	17	17	45	74
	M.Cloudy	8	15	17	36	31	10	17	20	36	46
M.Clear	(% hrs)	38	39	38	37	38	38	43	39	36	37

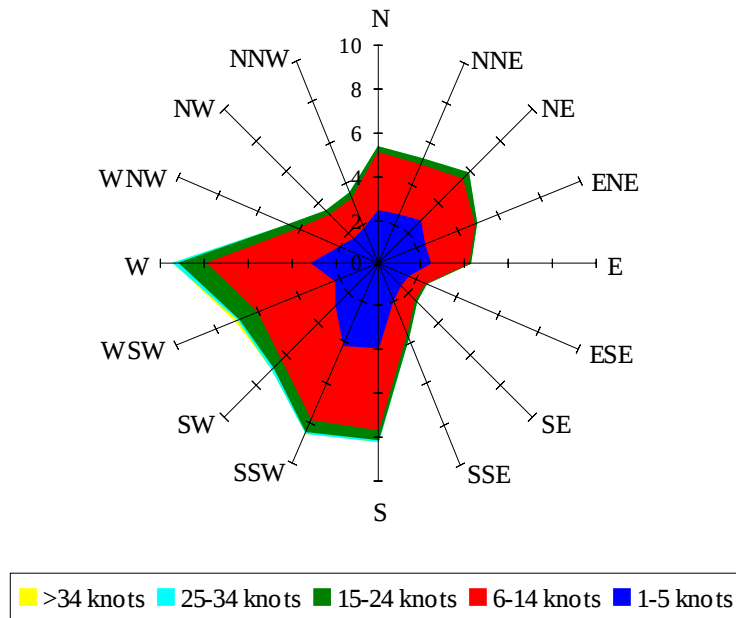
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	21	65	88	85	56	15	47	58	43	9
	M.Cloudy	12	39	60	60	38	9	27	34	25	6
NORTH	M.Clear	8	15	17	17	14	5	10	12	10	4
	M.Cloudy	6	15	19	19	14	4	10	12	10	3
EAST	M.Clear	51	74	38	17	14	44	48	12	10	4
	M.Cloudy	14	35	29	19	14	11	21	12	10	3
SOUTH	M.Clear	13	47	67	65	40	35	80	92	75	24
	M.Cloudy	7	26	42	42	25	10	31	38	29	7
WEST	M.Clear	8	15	17	46	72	5	10	16	52	33
	M.Cloudy	6	15	19	33	38	4	10	14	22	9
M.Clear	(% hrs)	41	44	41	39	43	40	39	40	40	41

Wind Summary - December, January, and February **Labels of Percent Frequency on North Axis**



Percent Calm = 18.08

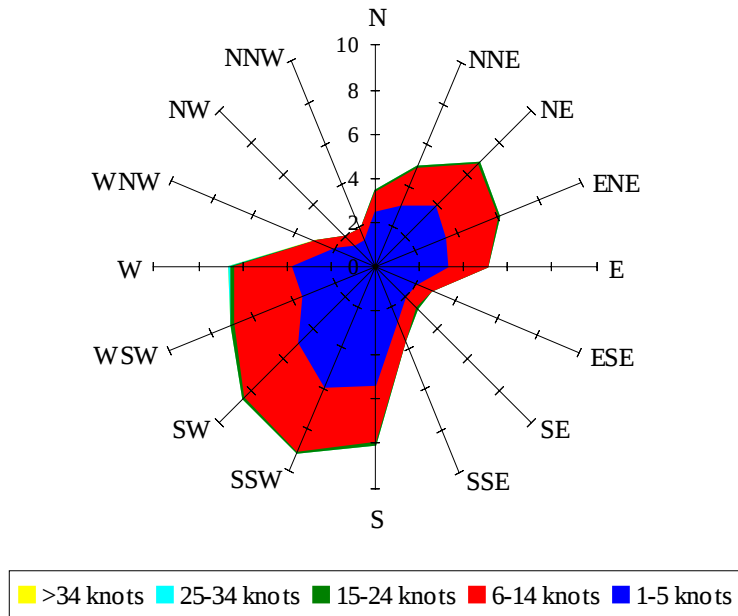
Wind Summary - March, April, and May **Labels of Percent Frequency on North Axis**



Percent Calm = 14.60

Wind Summary - June, July, and August

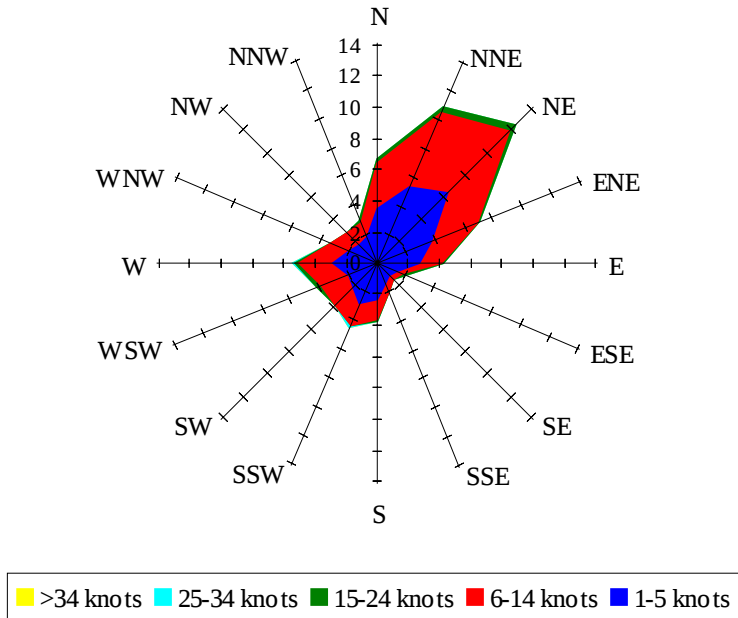
Labels of Percent Frequency on North Axis



Percent Calm = 19.30

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 23.22