

SEYMOUR-JOHNSON AFB NC

Latitude = 35.33 N

WMO No. 723066

Longitude = 77.97 W

Elevation = 108 feet

Period of Record = 1967 to 1996

Average Pressure = 29.92 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	98	78	110	7.6	SW
0.4% Occurrence	95	77	113	7.4	WSW
1.0% Occurrence	92	76	112	6.9	W
2.0% Occurrence	90	76	111	6.5	SW
Mean Daily Range	20	-	-	-	-
97.5% Occurrence	29	26	14	4.0	N
99.0% Occurrence	24	21	11	4.6	N
99.6% Occurrence	20	17	9	5.6	N
Median of Extreme Lows	16	14	8	6.3	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	83	92	150	5.5	S
0.4% Occurrence	80	90	137	6.2	SW
1.0% Occurrence	79	89	133	6.3	SW
2.0% Occurrence	78	88	128	6.1	SW
	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	4.9	S
0.4% Occurrence	141	84	0.94	4.9	S
1.0% Occurrence	135	82	0.90	4.5	SW
2.0% Occurrence	132	82	0.88	4.6	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		86	1230	1240	2687

Other Site Data

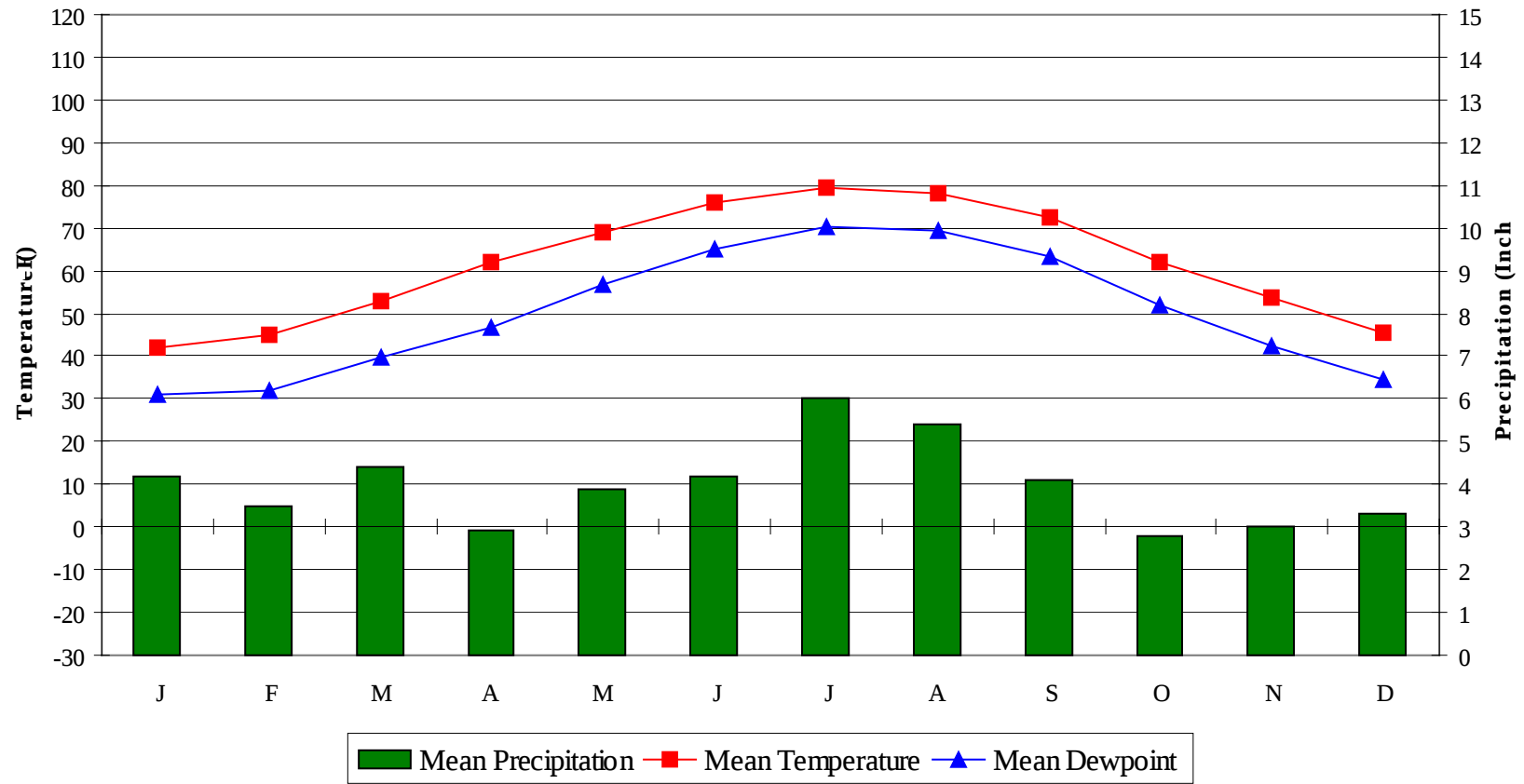
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
8	3.8	100	4.3 + 1.3
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
64.1	4	10	36

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

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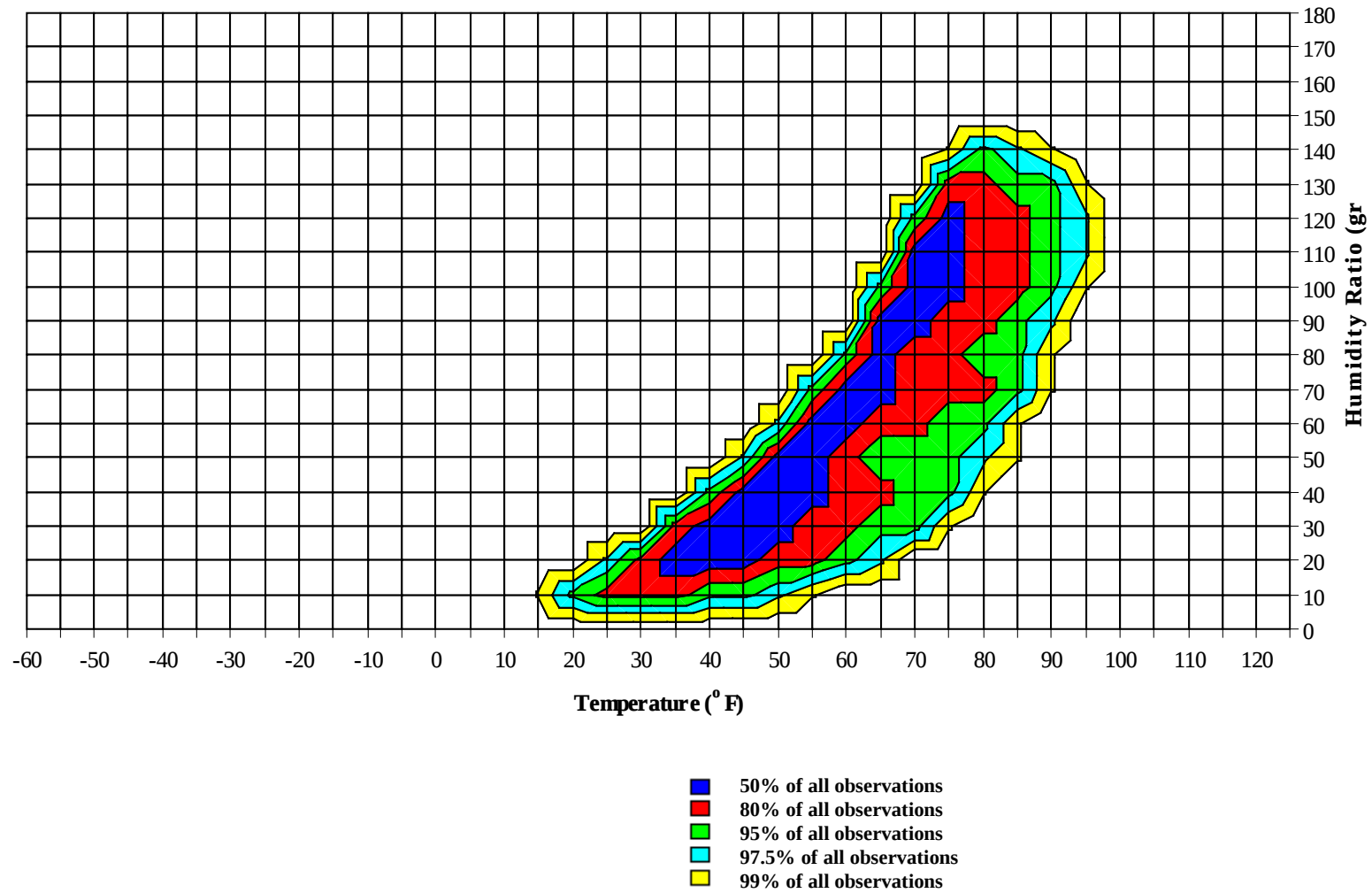
Average Annual Climate



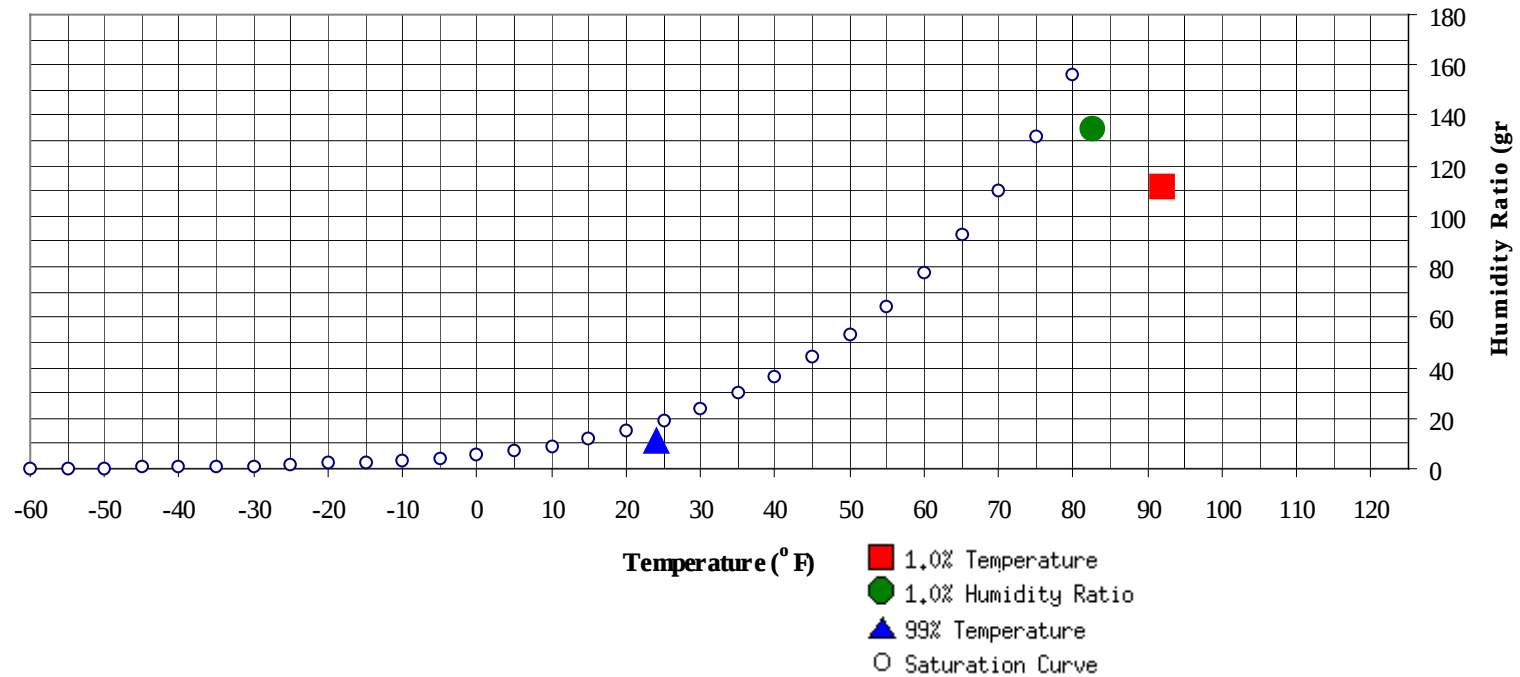
SEYMOUR-JOHNSON AFB NC

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Long Term Psychrometric Summary



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)
	24	10.8	7.4		135.1	82.7	77.8	75.9	41.0

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	92	111.5	76.4	39.6

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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	74.0		0		0	67.0
80 / 84							1	0	1	65.9		6	2	8	65.5
75 / 79		1	0	2	65.3		4	1	5	64.5	0	14	5	19	62.7
70 / 74	0	6	2	8	62.0	0	9	2	12	60.5	2	23	12	37	60.6
65 / 69	3	11	6	19	59.8	2	15	9	27	58.2	8	32	25	64	58.4
60 / 64	7	15	12	34	56.1	8	22	18	48	54.6	22	37	37	96	54.9
55 / 59	11	23	19	52	51.5	14	27	26	67	50.7	29	38	39	106	50.3
50 / 54	15	32	27	74	46.7	19	28	27	74	45.7	35	37	42	114	46.0
45 / 49	27	44	38	109	42.2	25	33	32	90	41.5	43	29	38	110	42.1
40 / 44	36	41	46	123	37.9	31	33	35	99	37.2	40	17	26	84	37.6
35 / 39	46	33	40	118	33.2	43	27	35	104	32.8	37	8	15	60	33.4
30 / 34	44	23	32	100	28.5	41	18	24	83	28.6	25	3	6	34	28.8
25 / 29	30	12	18	60	24.1	24	6	10	40	23.9	6	1	1	7	24.4
20 / 24	19	5	6	30	19.5	13	2	3	18	19.6	1	0	1	2	19.6
15 / 19	7	1	2	11	15.0	4	0	0	5	16.0	0			0	16.0
10 / 14	2	0	1	3	9.7	1	0		1	11.1					
5 / 9	1	0	0	1	5.8	0			0	7.8					
0 / 4	0			0	-1.3										
-5 / -1	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												0		0	77.3
95 / 99		0		0	71.0		1	0	1	75.9		5	1	6	76.5
90 / 94		2	1	2	68.4		10	2	12	72.3		27	8	35	75.2
85 / 89		10	3	13	66.6		26	9	35	70.5	0	59	22	81	73.2
80 / 84		25	9	34	64.7	0	48	20	69	68.4	6	71	42	118	71.5
75 / 79	0	35	18	53	63.0	6	59	38	103	66.1	39	49	66	154	70.2
70 / 74	7	41	33	81	60.7	34	47	63	144	64.6	92	21	67	180	68.2
65 / 69	24	42	47	113	58.4	67	30	51	148	61.8	60	6	25	91	63.8
60 / 64	46	37	45	128	55.1	54	17	30	102	57.4	29	1	8	38	58.8
55 / 59	47	25	37	109	50.9	42	8	23	73	53.3	11	1	2	13	54.5
50 / 54	44	16	28	88	46.5	32	2	10	43	49.2	2	0	0	2	49.8
45 / 49	38	5	14	57	42.5	10	0	1	12	45.0	0			0	44.5
40 / 44	25	1	6	32	38.6	1		0	2	40.4					
35 / 39	8	0	1	9	34.0	0			0	38.0					
30 / 34	1		0	1	29.9										
25 / 29	0			0	24.0										
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															

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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	0	2	77.6		1	0	1	78.2					
95 / 99		14	4	18	77.9		9	2	11	78.1		2	0	2	76.3
90 / 94		48	15	63	77.1		37	10	47	77.0		12	2	14	75.6
85 / 89	1	79	32	112	75.5	0	69	24	93	75.4		40	9	49	74.1
80 / 84	18	64	57	139	74.3	11	72	52	135	73.9	1	63	24	88	71.3
75 / 79	90	31	83	205	73.0	73	41	82	196	72.8	20	59	55	134	70.1
70 / 74	105	9	52	166	70.1	108	15	61	184	70.0	76	35	72	183	68.2
65 / 69	28	1	5	33	64.8	40	4	14	57	65.0	61	20	43	124	63.5
60 / 64	5	0	0	6	60.2	13	0	3	17	59.7	44	7	23	75	59.1
55 / 59	1			1	55.5	2	0	0	3	55.3	24	2	9	34	54.3
50 / 54						0			0	51.5	11	0	3	14	49.8
45 / 49											3		0	3	45.7
40 / 44											0			0	42.5
35 / 39															
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															

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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	74.9										
90 / 94		1	0	1	74.7										
85 / 89		5	1	5	71.4		0		0	68.3					
80 / 84	0	24	3	27	69.1		5	0	5	67.2		0		0	70.0
75 / 79	2	45	13	60	66.5	0	18	2	20	65.8		4	0	4	66.8
70 / 74	11	50	35	96	64.4	3	29	12	44	63.4	1	11	3	15	64.1
65 / 69	31	47	47	124	61.3	16	35	26	77	60.8	6	15	11	31	61.1
60 / 64	47	41	53	141	57.0	22	34	32	89	56.2	12	22	16	50	56.8
55 / 59	48	22	41	111	52.8	30	38	36	105	51.5	15	32	23	71	51.4
50 / 54	40	9	29	78	48.3	34	37	42	112	46.7	23	40	36	99	46.8
45 / 49	34	4	18	56	44.3	35	25	36	96	42.3	28	43	43	114	42.1
40 / 44	22	0	7	30	40.0	34	12	28	74	38.1	39	36	42	117	37.8
35 / 39	9	0	2	11	35.6	35	5	17	58	33.9	42	23	34	99	33.0
30 / 34	2		0	2	31.5	22	1	6	29	29.7	42	14	26	81	28.6
25 / 29	0		0	0	27.1	7	0	1	9	24.8	28	4	12	43	24.3
20 / 24						2			2	20.8	10	1	2	13	20.0
15 / 19						0			0	17.0	2	1	1	4	14.6
10 / 14											1	0	0	1	10.1
5 / 9											0	0	0	0	5.5
0 / 4											0			0	1.8
-5 / -1															

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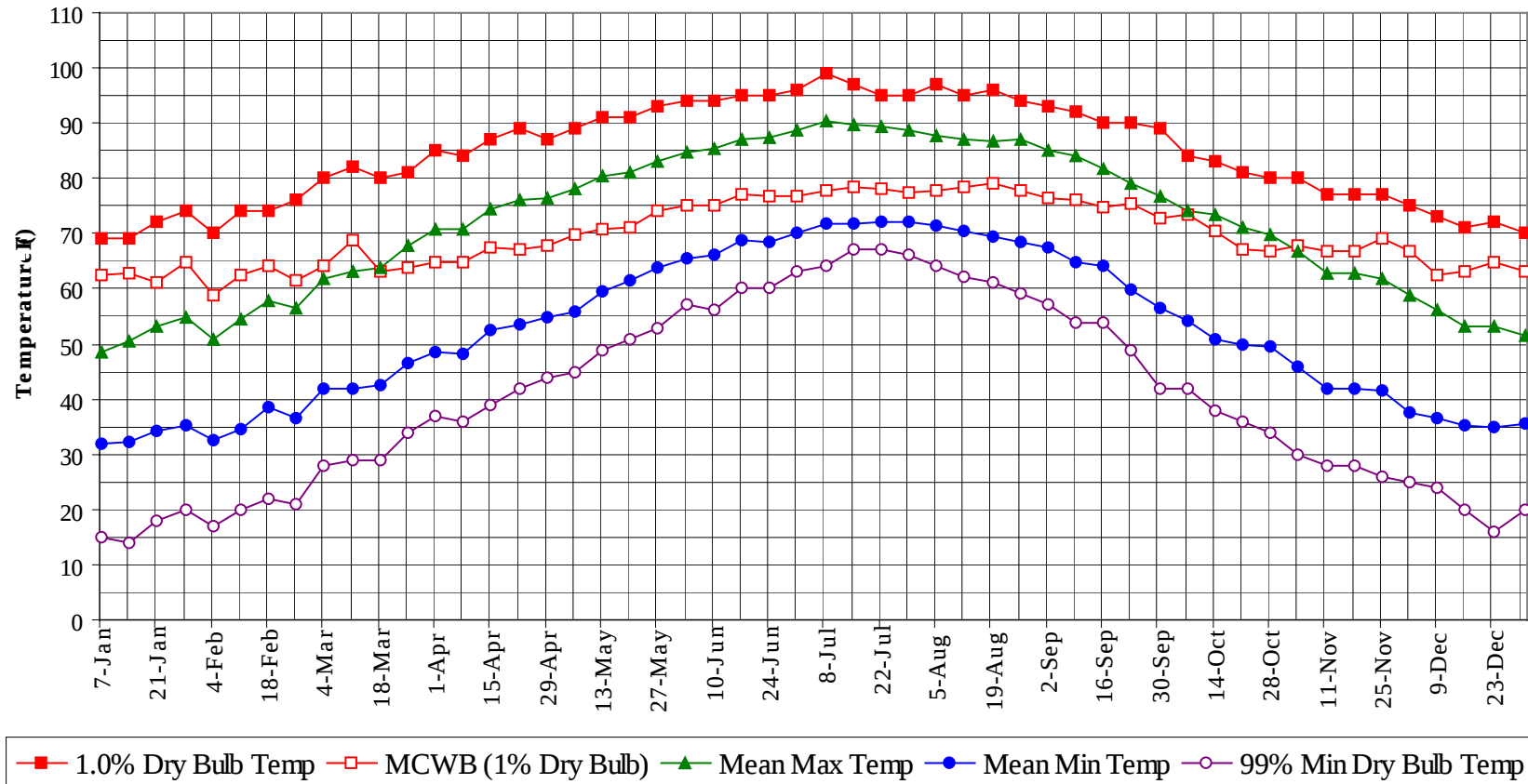
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1967 to 1996

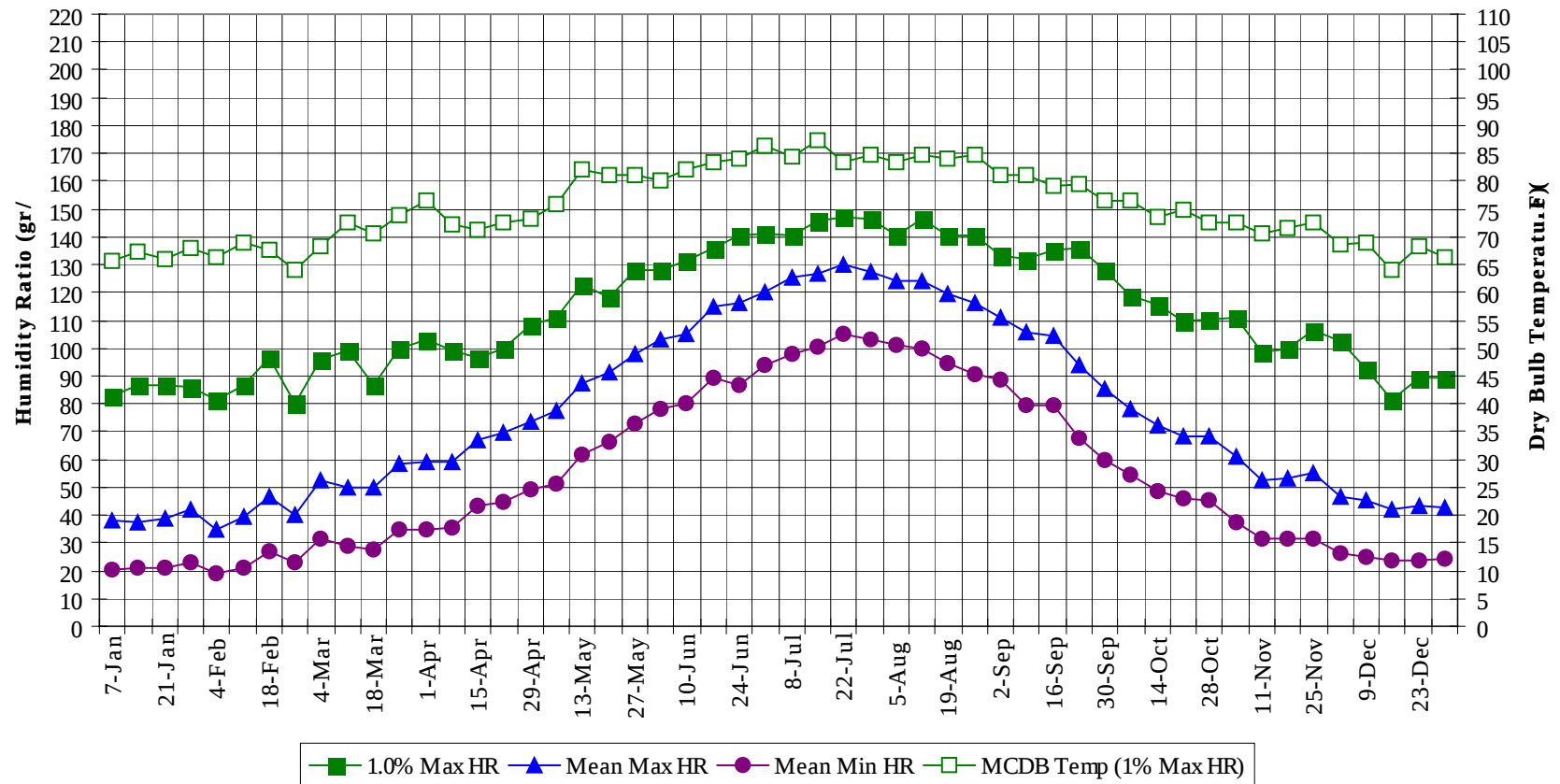
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		3	1	4	77.8
95 / 99		32	7	38	77.6
90 / 94		138	36	174	76.1
85 / 89	2	289	100	390	74.0
80 / 84	36	378	209	624	71.7
75 / 79	231	360	363	954	70.0
70 / 74	440	296	414	1149	66.9
65 / 69	346	256	309	910	61.6
60 / 64	311	235	278	824	56.6
55 / 59	274	216	255	745	51.7
50 / 54	254	202	243	698	46.9
45 / 49	243	184	220	647	42.4
40 / 44	228	141	190	560	37.9
35 / 39	220	96	143	460	33.3
30 / 34	177	59	94	330	28.7
25 / 29	95	23	43	161	24.2
20 / 24	45	8	12	65	19.7
15 / 19	13	2	4	20	15.2
10 / 14	3	1	1	5	10.1
5 / 9	1	0	0	1	5.9
0 / 4	0			0	0.1
-5 / -1	0			0	-2.0

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



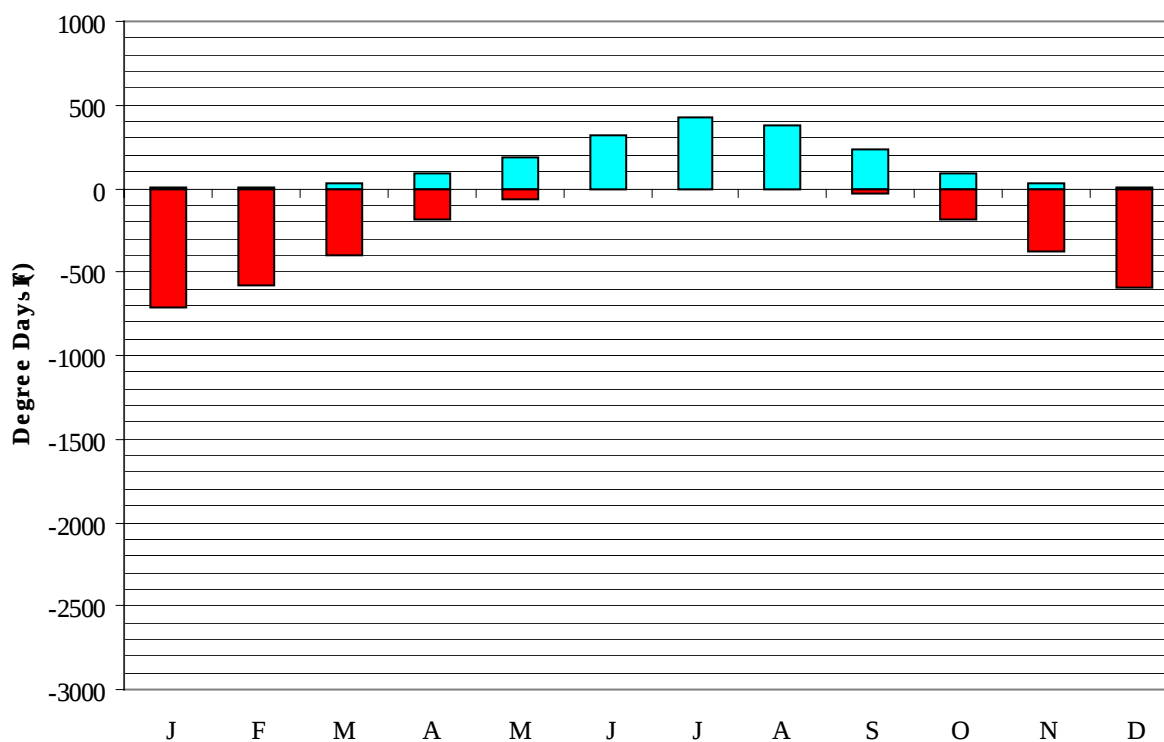
SEYMOUR-JOHNSON AFB NC

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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	62.4	48.4	32.0	15.0	82.6	65.7	37.9	20.7
14-Jan	69.0	62.9	50.6	32.2	14.0	86.8	67.3	37.7	20.7
21-Jan	72.0	61.2	53.0	34.1	18.0	86.8	66.1	38.6	21.1
28-Jan	74.0	64.7	54.9	35.4	20.0	86.1	67.9	41.8	23.2
4-Feb	70.0	58.7	50.9	32.5	17.0	81.2	66.2	34.5	19.1
11-Feb	74.0	62.3	54.6	34.5	20.0	86.8	68.9	39.3	21.2
18-Feb	74.0	64.1	58.0	38.4	22.0	96.6	67.8	46.8	26.8
25-Feb	76.0	61.4	56.7	36.6	21.0	79.8	63.9	40.1	22.8
4-Mar	80.0	64.2	61.8	41.7	28.0	95.9	68.2	52.6	31.4
11-Mar	82.0	68.7	63.1	41.7	29.0	99.4	72.4	49.9	28.8
18-Mar	80.0	63.3	63.8	42.5	29.0	86.8	70.7	50.1	27.8
25-Mar	81.0	63.9	67.8	46.6	34.0	100.1	73.8	58.4	35.1
1-Apr	85.0	64.9	70.7	48.5	37.0	102.9	76.4	59.1	34.8
8-Apr	84.0	64.8	70.9	48.1	36.0	99.4	72.2	59.2	35.2
15-Apr	87.0	67.3	74.3	52.5	39.0	96.6	71.1	66.8	43.0
22-Apr	89.0	67.0	76.0	53.4	42.0	100.1	72.6	69.9	44.4
29-Apr	87.0	67.9	76.3	54.7	44.0	108.5	73.2	73.5	49.4
6-May	89.0	69.8	78.2	55.7	45.0	111.3	75.9	77.6	51.4
13-May	91.0	70.7	80.4	59.6	49.0	122.5	82.1	87.2	61.8
20-May	91.0	71.2	81.1	61.4	51.0	118.3	81.3	91.2	66.3
27-May	93.0	74.0	83.2	63.9	53.0	128.1	81.0	97.6	73.2
3-Jun	94.0	75.2	84.8	65.5	57.0	128.1	80.2	102.9	77.9
10-Jun	94.0	75.0	85.5	66.0	56.0	131.6	82.2	105.4	79.8
17-Jun	95.0	77.0	87.0	68.8	60.0	135.8	83.4	115.0	89.2
24-Jun	95.0	76.7	87.3	68.4	60.0	140.7	83.9	116.2	86.7
1-Jul	96.0	76.9	88.6	70.2	63.0	141.4	86.3	120.3	94.1
8-Jul	99.0	77.6	90.5	71.9	64.0	140.7	84.3	125.2	98.0
15-Jul	97.0	78.4	89.6	71.9	67.0	145.6	87.4	126.7	100.8
22-Jul	95.0	78.1	89.2	72.3	67.0	147.0	83.3	130.2	104.8
29-Jul	95.0	77.5	88.6	72.0	66.0	146.3	84.8	127.7	103.0
5-Aug	97.0	77.9	87.8	71.3	64.0	140.7	83.3	124.0	101.1
12-Aug	95.0	78.3	87.1	70.5	62.0	146.3	84.8	124.0	99.8
19-Aug	96.0	79.0	86.8	69.6	61.0	140.7	84.1	119.3	94.4
26-Aug	94.0	77.6	87.1	68.6	59.0	140.7	84.8	116.3	90.5
2-Sep	93.0	76.4	84.9	67.4	57.0	133.0	81.1	111.2	88.5
9-Sep	92.0	76.1	84.0	64.9	54.0	132.3	81.2	106.0	79.3
16-Sep	90.0	74.9	81.9	64.3	54.0	135.1	79.2	104.1	79.7
23-Sep	90.0	75.3	79.2	60.0	49.0	135.8	79.5	93.7	67.3
30-Sep	89.0	72.9	76.7	56.4	42.0	128.1	76.5	85.2	59.6
7-Oct	84.0	73.4	74.1	54.2	42.0	119.0	76.5	78.0	54.4
14-Oct	83.0	70.4	73.4	50.9	38.0	115.5	73.7	72.5	48.5
21-Oct	81.0	67.2	71.2	49.9	36.0	109.9	74.8	68.6	46.3
28-Oct	80.0	66.7	70.0	49.6	34.0	110.6	72.6	68.5	45.6
4-Nov	80.0	67.7	66.7	45.7	30.0	111.3	72.5	61.1	37.5
11-Nov	77.0	66.9	63.0	41.9	28.0	98.7	70.7	52.4	31.3
18-Nov	77.0	66.9	63.0	41.8	28.0	100.1	71.4	53.4	31.4
25-Nov	77.0	69.3	61.8	41.4	26.0	106.4	72.5	55.2	31.7
2-Dec	75.0	66.8	58.8	37.6	25.0	102.2	68.7	46.9	26.1
9-Dec	73.0	62.6	56.3	36.6	24.0	92.4	68.9	45.2	25.1
16-Dec	71.0	63.1	53.0	35.2	20.0	81.2	63.9	42.2	23.4
23-Dec	72.0	64.8	53.0	35.0	16.0	89.6	68.4	43.2	23.6
31-Dec	70.0	63.2	51.7	35.5	20.0	89.6	66.2	42.8	24.3

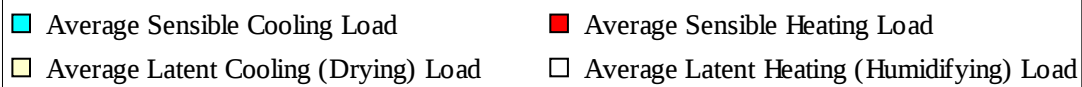
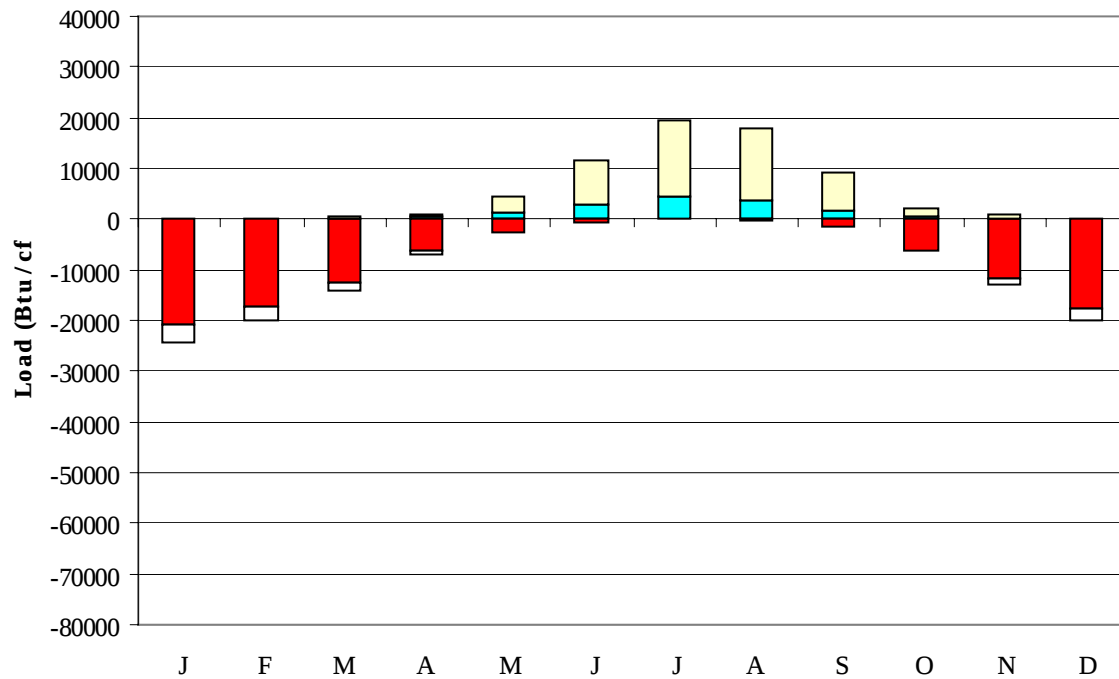
Degree Days, Heating and Cooling (Base 65°F)



■ Mean Cooling Degree Days
 ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	4	716
FEB	7	578
MAR	29	404
APR	89	184
MAY	185	69
JUN	319	9
JUL	422	1
AUG	378	3
SEP	237	29
OCT	85	180
NOV	30	372
DEC	8	590
ANN	1793	3135

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	-20906	59	-3443
FEB	12	-17081	97	-2892
MAR	111	-12555	249	-1651
APR	548	-6292	478	-546
MAY	1368	-2723	2920	-28
JUN	2985	-502	8629	0
JUL	4461	-65	15140	0
AUG	3675	-181	14270	0
SEP	1805	-1303	7554	0
OCT	395	-6235	1829	-144
NOV	68	-11601	672	-1201
DEC	8	-17504	200	-2645
ANN	15439	-96948	52097	-12550

Average Annual Solar Radiation – Nearest Available Site

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

City: RALEIGH
 State: NC
 WBAN No: 13722
 Lat(N): 35.87
 Long(W): 78.78
 Elev(ft): 440

Stn Type: Primary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1
 Overhang: 0.417
 Vert Gap: 0.293

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	770	1030	1380	1730	1900	2000	1920	1740	1470	1190	860	700	1390
	Std Dev	62	93	111	125	103	120	129	128	116	96	82	58	38
	Minimum	640	800	1150	1530	1620	1790	1640	1380	1220	1020	650	520	1280
	Maximum	890	1200	1600	2020	2080	2250	2140	1920	1690	1390	960	830	1450
	Diffuse	340	440	570	720	870	940	950	860	690	490	360	310	630
Clear Day	Global	1080	1410	1860	2280	2520	2600	2520	2290	1920	1480	1110	950	1840
NORTH	Global	220	290	370	460	570	640	600	510	410	320	240	200	400
	Diffuse	220	290	370	450	520	560	540	490	410	320	240	200	380
Clear Day	Global	210	260	340	430	580	680	620	490	380	300	220	190	390
EAST	Global	500	650	820	1000	1040	1080	1040	950	840	720	550	460	810
	Diffuse	270	350	450	550	620	660	650	600	500	390	290	250	470
Clear Day	Global	770	960	1170	1340	1410	1410	1370	1290	1160	960	770	690	1110
SOUTH	Global	1130	1190	1140	980	800	730	750	870	1030	1220	1190	1100	1010
	Diffuse	370	430	500	550	580	580	590	590	550	480	400	350	500
Clear Day	Global	1980	1970	1720	1280	950	800	850	1110	1490	1790	1880	1910	1470
WEST	Global	510	650	830	990	1030	1070	1010	950	850	740	560	470	800
	Diffuse	270	350	450	560	630	670	660	610	510	400	300	250	470
Clear Day	Global	770	960	1170	1340	1410	1410	1370	1290	1160	960	770	690	1110

Average Annual Solar Heat and Illumination – Nearest Available Site

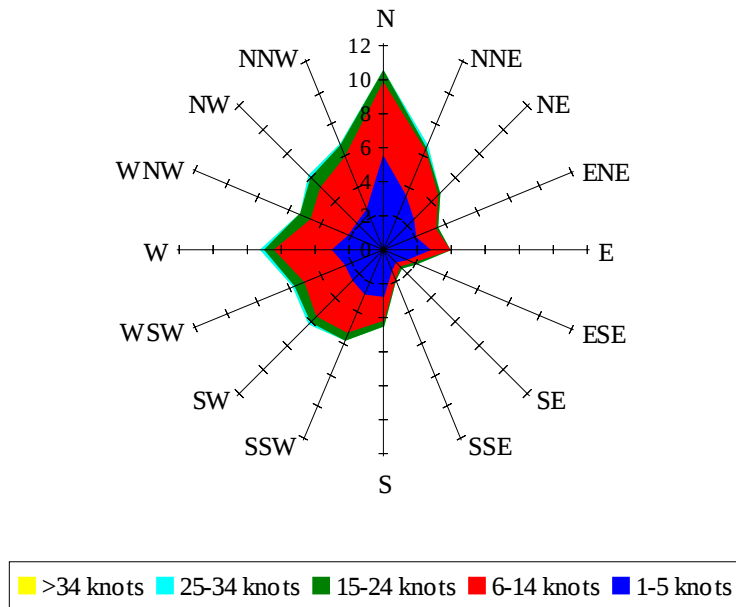
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	510	710	980	1250	1380	1460	1390	1250	1050	840	580	460	990
NORTH	Unshaded	150	200	250	310	370	410	400	340	280	220	170	140	270
	Shaded	140	180	230	290	340	380	360	310	260	200	150	130	250
EAST	Unshaded	350	460	580	710	740	760	740	680	590	510	380	320	570
	Shaded	320	420	530	640	660	680	650	600	530	460	350	290	510
SOUTH	Unshaded	850	860	780	620	490	450	460	550	690	870	880	830	690
	Shaded	830	810	640	450	370	370	370	400	530	780	860	810	600
WEST	Unshaded	350	460	590	700	730	750	720	670	600	520	390	320	570
	Shaded	320	420	530	630	650	670	640	600	540	470	360	300	510

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	38	75	87	71	33	41	82	102	98	71
	M.Cloudy	21	45	54	46	21	27	56	75	73	52
NORTH	M.Clear	10	14	15	14	9	21	17	18	18	17
	M.Cloudy	9	16	17	15	8	14	18	20	20	17
EAST	M.Clear	75	62	15	14	9	70	75	37	18	17
	M.Cloudy	25	32	17	15	8	32	45	31	20	17
SOUTH	M.Clear	35	68	80	65	31	12	25	40	38	20
	M.Cloudy	15	35	42	36	16	11	22	33	32	19
WEST	M.Clear	10	14	18	65	72	12	17	18	49	76
	M.Cloudy	9	16	18	35	29	11	18	20	38	48
M.Clear	(% hrs)	41	39	38	36	37	40	41	34	29	35

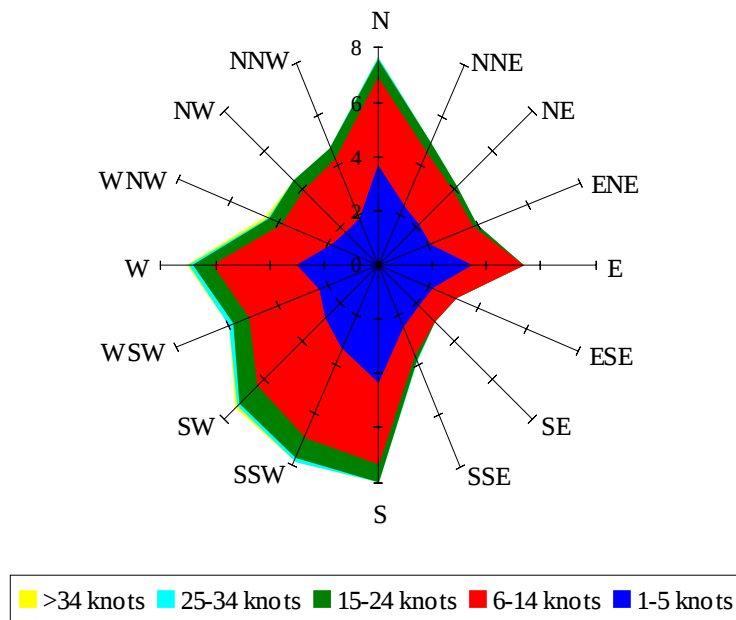
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	24	66	86	81	51	16	45	54	37	5
	M.Cloudy	14	39	60	57	35	9	27	32	22	4
NORTH	M.Clear	8	15	17	17	13	6	10	11	9	3
	M.Cloudy	6	15	19	18	13	4	10	12	9	2
EAST	M.Clear	54	72	34	17	13	44	44	11	9	3
	M.Cloudy	17	33	27	18	13	12	20	12	9	2
SOUTH	M.Clear	16	51	70	65	39	37	80	90	69	15
	M.Cloudy	8	26	43	41	23	11	31	37	26	4
WEST	M.Clear	8	15	17	49	71	6	10	19	51	21
	M.Cloudy	6	15	19	34	37	4	10	14	21	6
M.Clear	(% hrs)	42	44	39	36	40	38	38	37	38	40

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



Percent Calm = 19.17

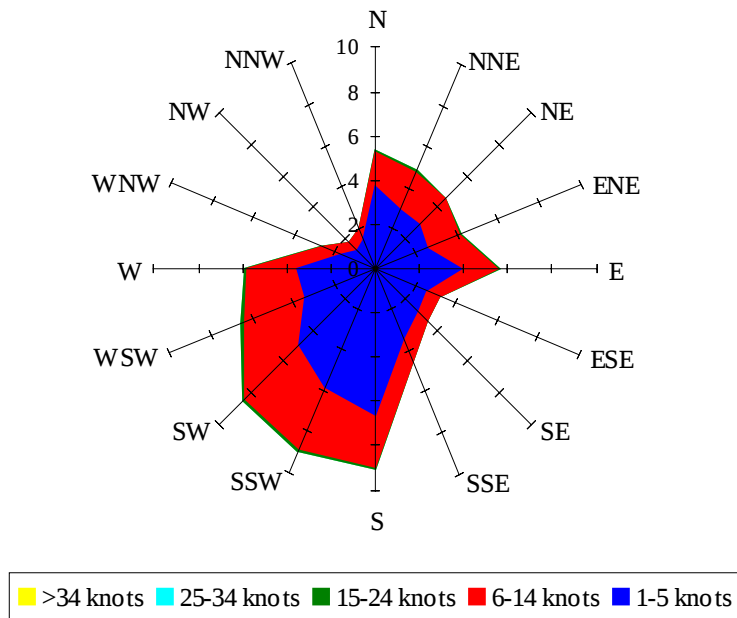
Wind Summary - March, April, and May **Labels of Percent Frequency on North Axis**



Percent Calm = 15.28

Wind Summary - June, July, and August

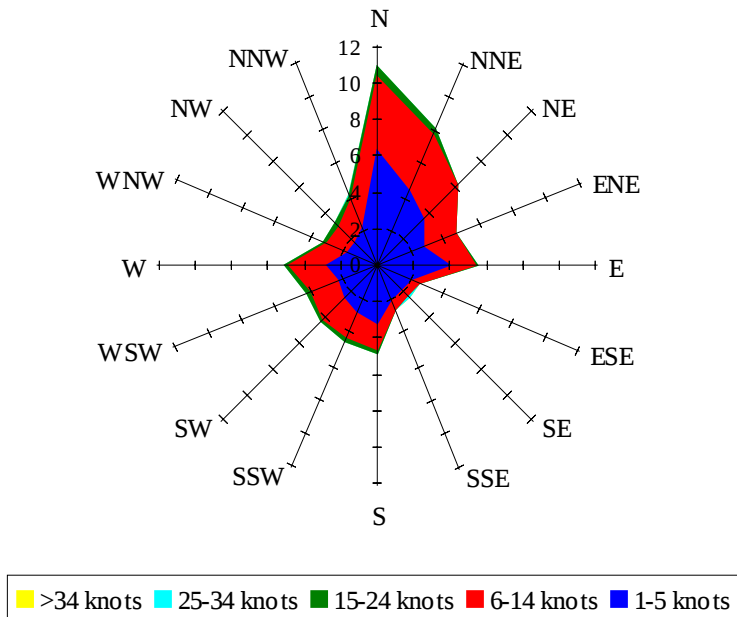
Labels of Percent Frequency on North Axis



Percent Calm = 19.45

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 24.09