

CHERRY POINT MCAS NC

Latitude = 34.90 N

WMO No. 723090

Longitude = 76.88 W

Elevation = 30 feet

Period of Record = 1973 to 1996

Average Pressure = 29.98 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	80	123	6.7	W
0.4% Occurrence	93	78	124	7.1	SSW
1.0% Occurrence	91	78	121	7.4	S
2.0% Occurrence	89	77	119	7.5	S
Mean Daily Range	19	-	-	-	-
97.5% Occurrence	30	27	15	5.1	N
99.0% Occurrence	26	23	12	5.2	N
99.6% Occurrence	22	19	10	5.9	N
Median of Extreme Lows	14	12	6	7.2	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	85	93	166	8.0	S
0.4% Occurrence	81	90	142	7.4	S
1.0% Occurrence	79	87	134	7.1	SSW
2.0% Occurrence	78	86	130	6.9	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	172	89	1.14	7.6	S
0.4% Occurrence	146	86	0.97	6.6	SSW
1.0% Occurrence	141	85	0.94	6.5	SSW
2.0% Occurrence	135	84	0.90	6.0	SSW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		49	1241	1449	2927

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	4.3	130	5.4 + 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 (#)
65.5	0	0	28

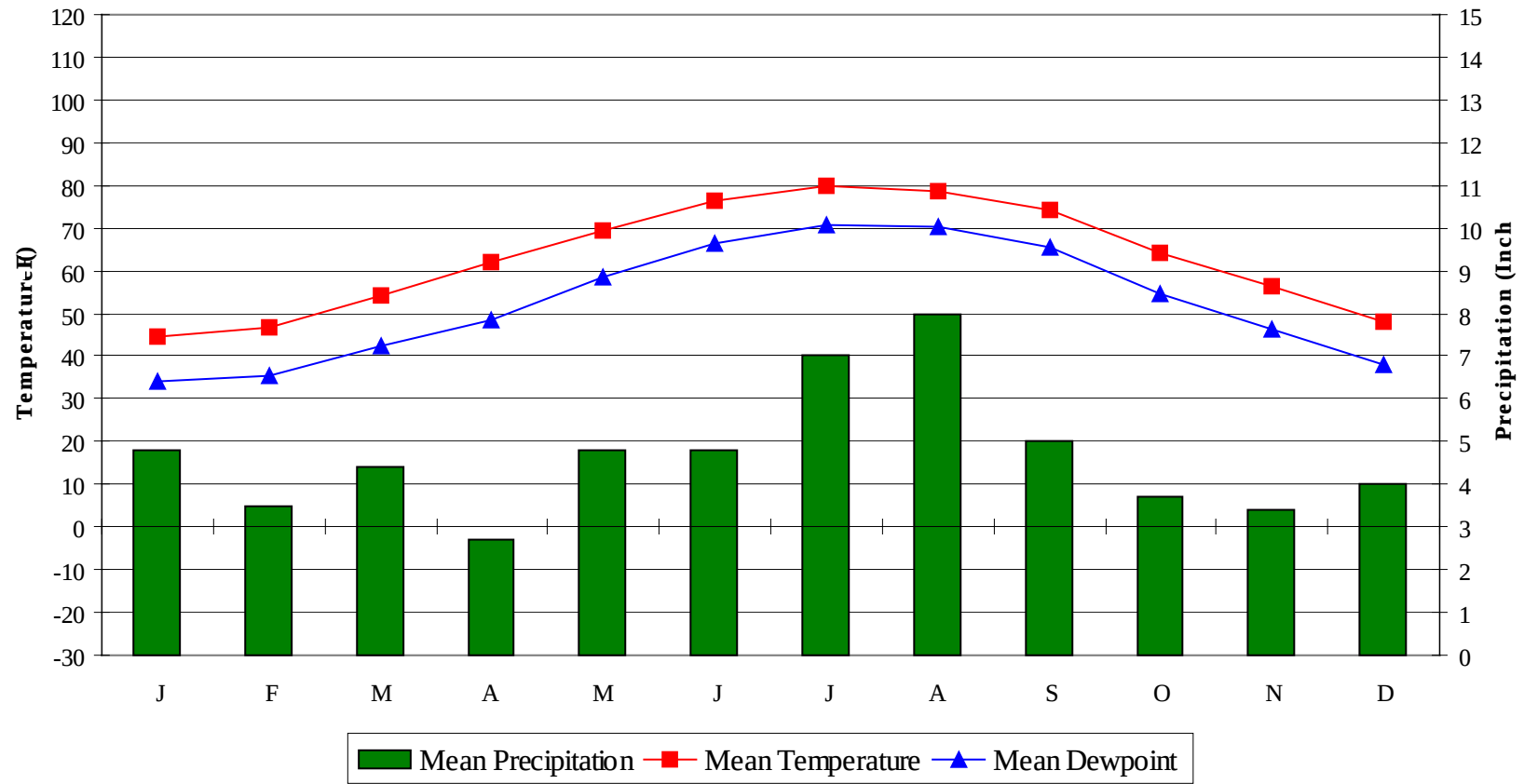
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

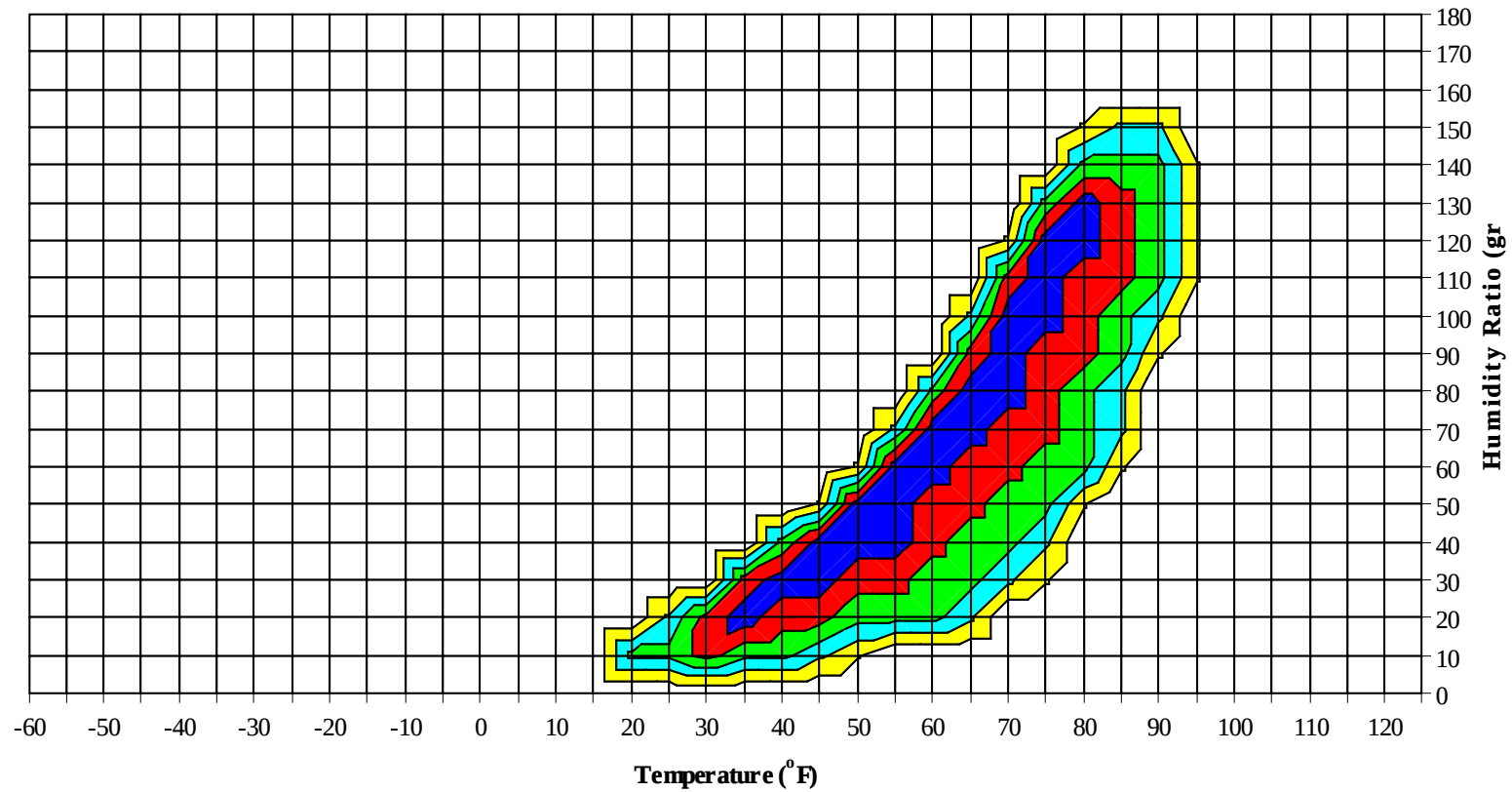
CHERRY POINT MCAS

NC

WMO No. 723090

Average Annual Climate



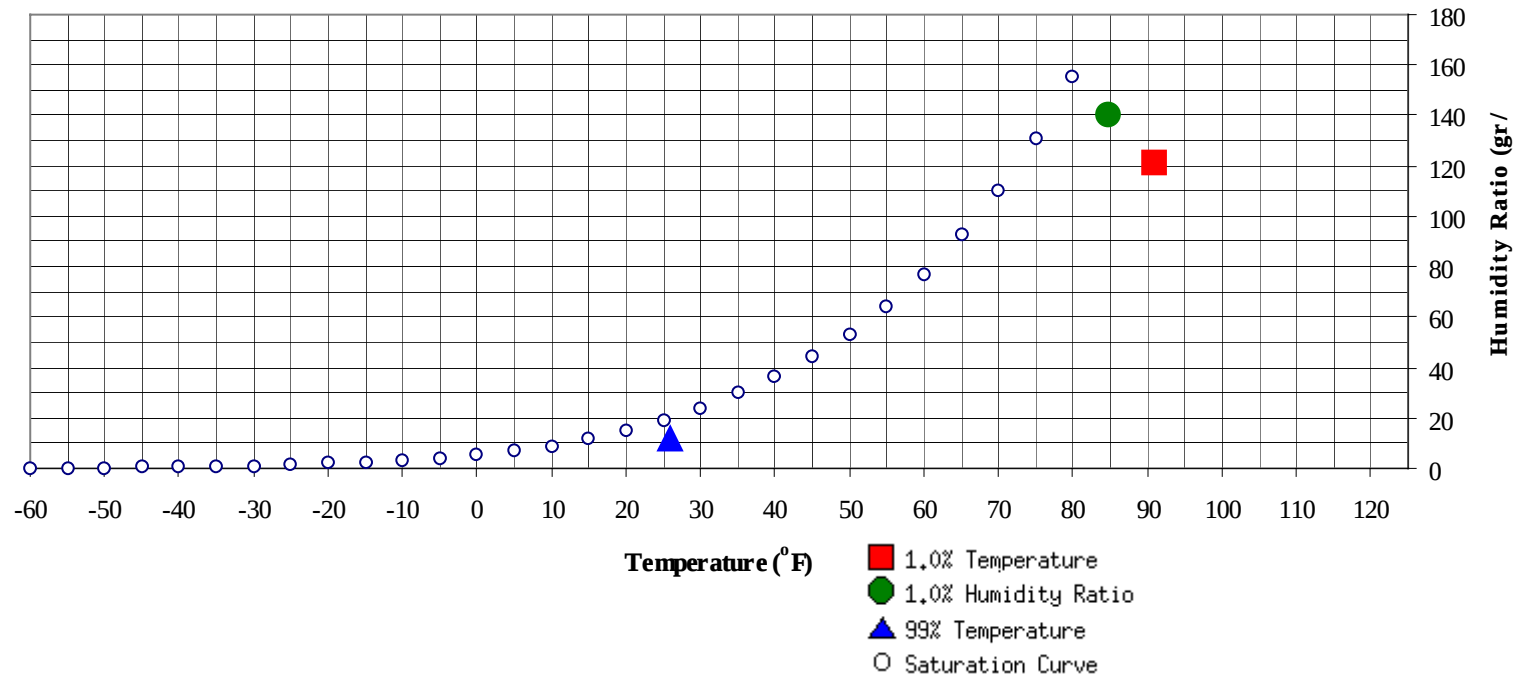
Long Term Psychrometric Summary

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

CHERRY POINT MCAS

NC

WMO No. 723090

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)
	26	12.2	8.1		140.7	84.8	79.1	77	42.4

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	91	121.3	77.7	40.9

CHERRY POINT MCAS

NC

WMO No. 723090

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		
100 / 104															
95 / 99															
90 / 94													0	0	68.3
85 / 89													1	1	66.5
80 / 84							1		1	67.2		4	0	4	65.6
75 / 79		1	0	2	63.7		4		4	64.5					
70 / 74	1	9	0	10	62.8	1	14	2	16	61.9	0	16	1	18	64.6
65 / 69	6	18	9	33	60.6	6	23	11	39	59.3	2	30	9	41	61.6
60 / 64	12	22	17	52	56.6	14	28	24	66	55.8	15	40	25	79	59.8
55 / 59	15	28	21	65	51.4	16	28	24	69	51.0	24	43	40	107	55.5
50 / 54	20	41	29	90	46.8	22	28	30	80	46.4	32	39	44	115	51.1
45 / 49	33	43	45	121	42.5	26	34	34	94	42.2	39	34	43	116	46.7
40 / 44	40	33	42	115	38.0	36	29	35	100	37.8	39	21	39	99	42.5
35 / 39	40	24	35	99	33.3	39	19	30	88	33.2	41	13	25	79	38.0
30 / 34	38	16	27	81	28.7	32	12	20	63	28.8	34	5	15	55	33.8
25 / 29	25	7	15	48	23.9	21	4	10	35	24.1	16	1	5	22	29.1
20 / 24	13	3	4	20	19.2	9	1	3	13	19.9	4	1	1	6	24.9
15 / 19	5	1	1	7	14.7	3	0	1	4	16.1	0	0	0	1	19.9
10 / 14	2	0	1	2	9.9	0	0	0	1	11.1	0		0	0	18.5
5 / 9	0	0	0	0	5.4	0		0	1	5.8					
0 / 4	0	0	0	0	-0.4										
-5 / -1	0			0	-3.3										

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.

CHERRY POINT MCAS

NC

WMO No. 723090

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		
100 / 104												0		0	78.8
95 / 99		0		0	72.2		0		0	74.0		3	0	3	78.4
90 / 94		1	0	1	68.2		4	0	4	74.4		20	2	22	77.3
85 / 89		6	0	6	67.6	0	22	2	24	72.5	1	62	10	73	74.7
80 / 84		19	2	21	65.9	1	58	9	68	69.9	14	84	39	137	72.4
75 / 79	1	46	8	54	64.2	13	71	38	122	67.5	64	46	83	193	71.2
70 / 74	10	53	28	91	61.9	49	48	73	170	65.5	85	19	69	174	68.2
65 / 69	35	43	55	134	59.5	69	27	59	155	62.1	49	5	26	79	63.4
60 / 64	50	33	53	136	55.6	51	13	35	98	57.4	21	1	8	30	58.5
55 / 59	44	22	39	105	51.1	34	6	21	60	53.0	6	0	1	7	54.0
50 / 54	38	13	29	80	46.8	23	1	8	32	48.9	1		0	1	49.6
45 / 49	34	4	16	54	42.9	7	0	2	9	44.6	0			0	44.0
40 / 44	20	1	7	27	38.7	1		0	2	40.4					
35 / 39	8	0	1	9	34.3	0			0	35.5					
30 / 34	1		0	2	29.7										
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															

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.

CHERRY POINT MCAS

NC

WMO No. 723090

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		
100 / 104		1		1	80.8		0		0	80.3					
95 / 99		11	1	11	80.3		3	0	4	79.8		2	0	2	77.7
90 / 94	0	46	4	50	78.6		36	2	38	78.3		12	1	12	77.0
85 / 89	4	94	25	123	76.5	1	84	16	102	76.4	0	46	4	50	75.3
80 / 84	41	64	80	184	75.0	22	76	62	160	74.8	6	73	25	104	72.9
75 / 79	108	25	94	227	73.0	98	37	101	236	73.0	43	62	75	180	71.2
70 / 74	75	7	37	119	69.5	94	11	57	162	69.5	91	32	79	202	68.0
65 / 69	15	0	6	22	64.0	26	1	9	36	64.6	57	10	37	104	63.3
60 / 64	5	0	1	6	58.9	5	0	1	7	59.6	28	3	15	46	58.3
55 / 59	1		0	1	54.9	0		0	0	56.3	11	0	4	16	54.0
50 / 54											3		1	4	49.3
45 / 49											0			0	46.3
40 / 44															
35 / 39															
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															

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.

CHERRY POINT MCAS NC

WMO No. 723090

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		
100 / 104															
95 / 99		0		0	75.8										
90 / 94		1		1	76.1										
85 / 89		5	0	6	73.5		0		0	68.0					
80 / 84	1	27	2	30	70.9		5		5	69.2		0		0	71.5
75 / 79	7	52	16	75	68.5	0	29	1	31	67.4		5	0	5	67.1
70 / 74	21	60	41	122	65.3	11	37	17	66	65.0	3	17	4	24	64.4
65 / 69	44	49	55	147	61.6	24	37	34	95	61.7	9	23	13	45	61.2
60 / 64	52	32	53	137	57.2	28	35	36	99	56.7	15	28	20	64	56.8
55 / 59	44	14	39	97	52.8	33	37	39	109	51.8	17	37	27	81	51.7
50 / 54	38	6	26	70	48.3	38	30	39	107	47.2	26	42	38	106	47.2
45 / 49	25	1	12	38	44.4	32	19	33	85	42.6	40	42	45	126	42.7
40 / 44	12	0	4	16	39.4	31	7	23	61	38.4	38	25	40	103	38.1
35 / 39	4		1	4	35.7	26	2	13	40	34.1	36	18	26	80	33.3
30 / 34	1		0	1	31.2	14	0	5	19	30.3	35	8	23	67	28.8
25 / 29						3		0	4	26.6	19	2	8	29	24.4
20 / 24											7	1	2	10	19.6
15 / 19											2	1	1	3	15.4
10 / 14											1	0	0	1	11.0
5 / 9											0	0	0	0	5.5
0 / 4											0			0	0.0
-5 / -1															

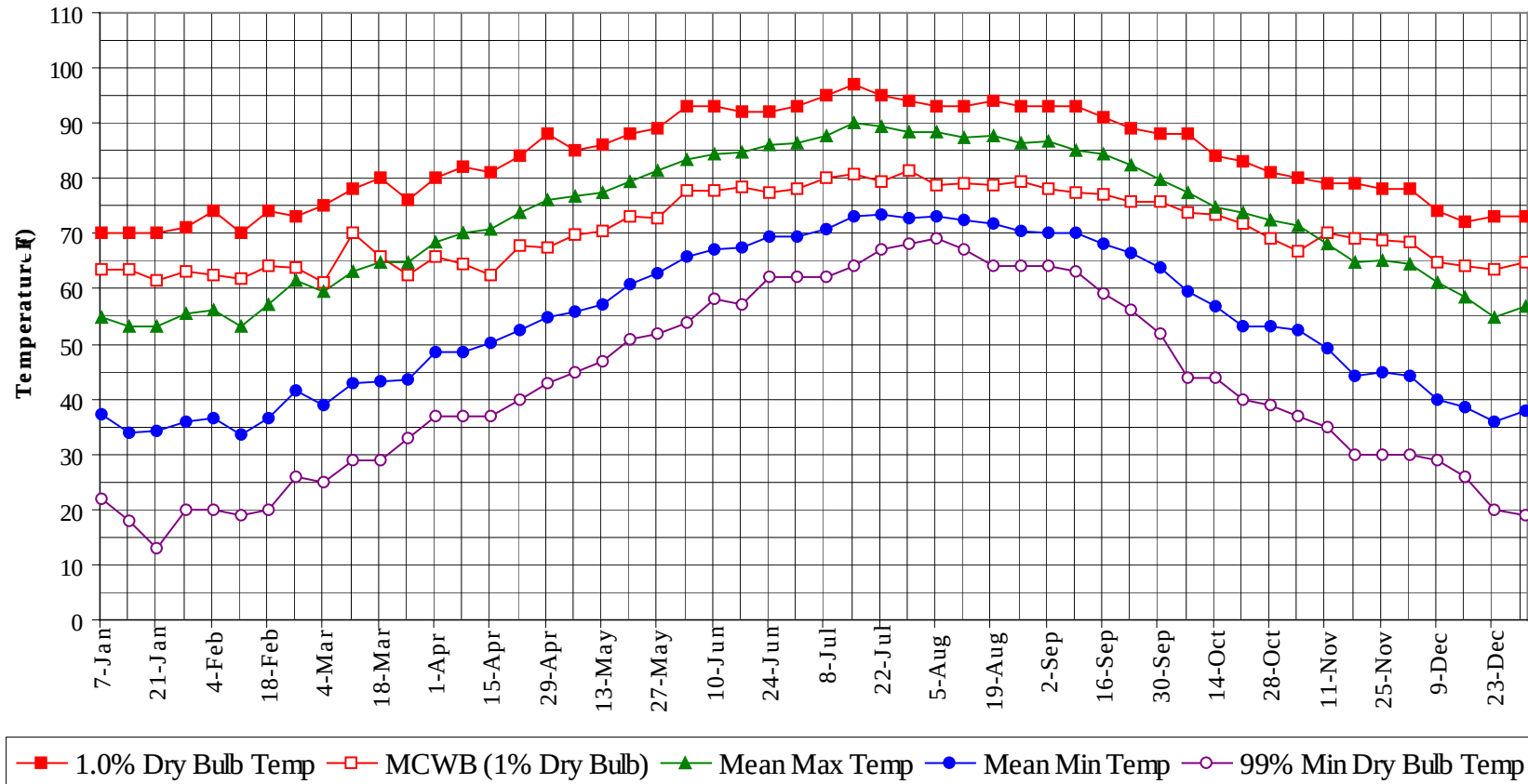
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

CHERRY POINT MCAS NC WMO No. 723090
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)
Period of Record = 1973 to 1996

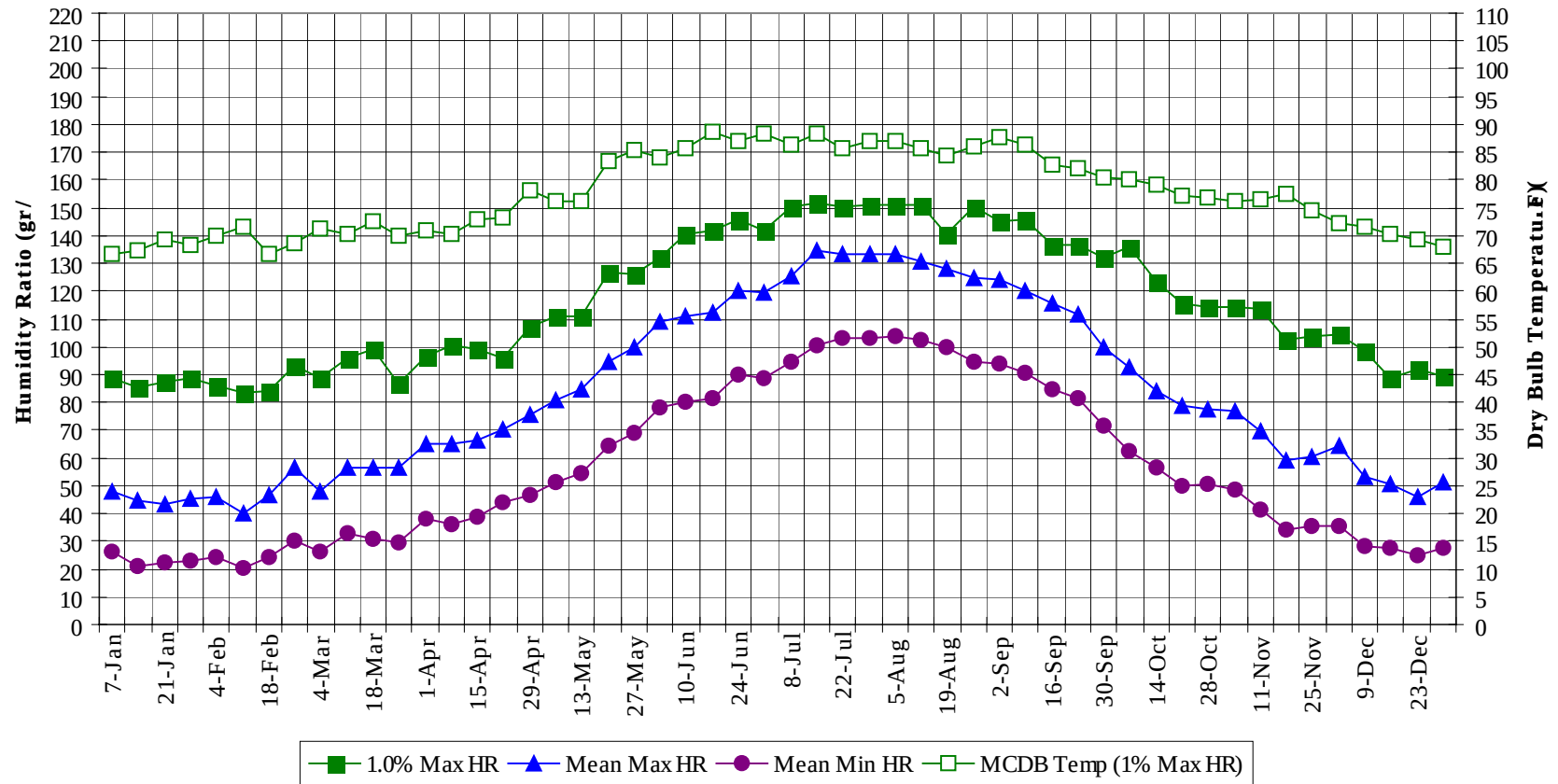
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		1		1	80.4
95 / 99		20	1	21	79.4
90 / 94	0	120	8	128	77.9
85 / 89	6	321	58	385	75.5
80 / 84	84	410	219	713	73.1
75 / 79	334	394	415	1144	70.8
70 / 74	440	337	418	1195	66.7
65 / 69	355	275	338	968	61.6
60 / 64	306	237	304	848	56.7
55 / 59	255	211	260	726	51.8
50 / 54	248	193	244	686	47.1
45 / 49	237	165	226	628	42.7
40 / 44	218	107	177	503	38.1
35 / 39	186	69	121	376	33.5
30 / 34	137	37	80	254	28.9
25 / 29	73	14	35	122	24.2
20 / 24	29	5	9	44	19.5
15 / 19	10	1	3	14	15.3
10 / 14	3	0	1	4	10.3
5 / 9	0	0	1	1	5.6
0 / 4	0	0	0	0	-0.3
-5 / -1	0			0	-3.3

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.

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary



CHERRY POINT MCAS**NC****WMO No. 723090****Long Term Dry Bulb Temperature and Humidity Summary**

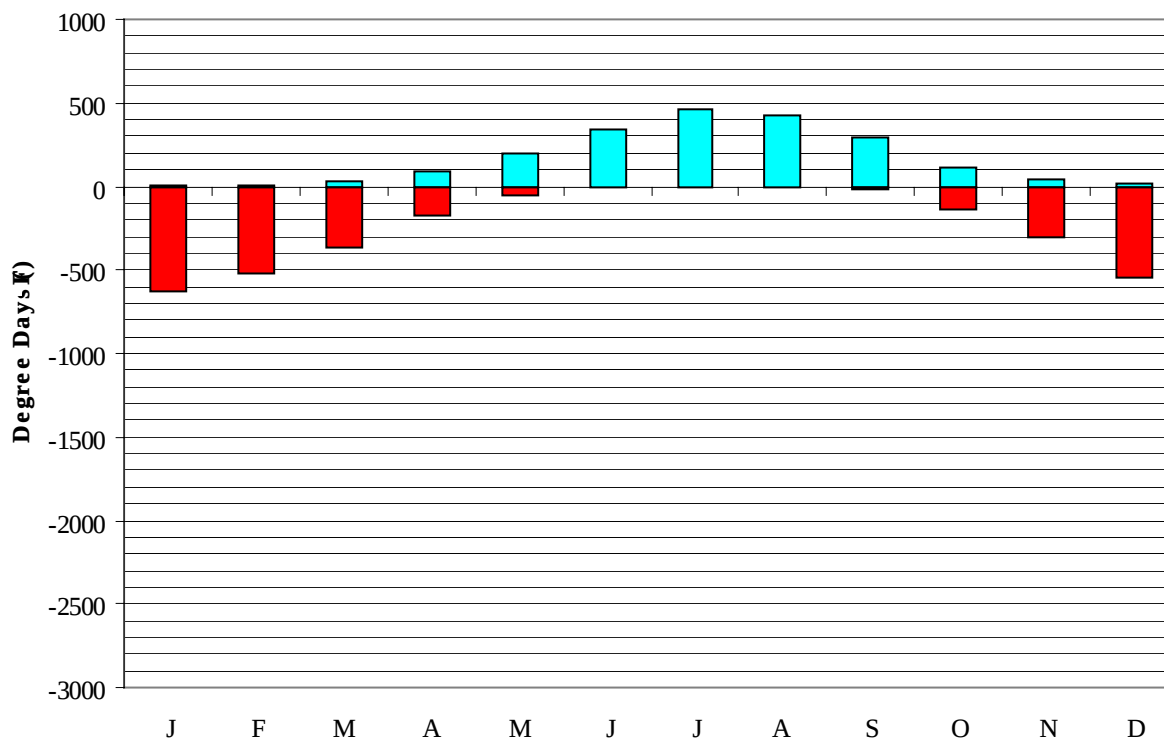
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	70.0	63.5	55.0	37.3	22.0	88.9	66.8	47.8	26.0
14-Jan	70.0	63.6	53.1	34.0	18.0	85.4	67.4	44.5	21.3
21-Jan	70.0	61.5	53.3	34.4	13.0	87.5	69.4	43.2	22.3
28-Jan	71.0	63.3	55.6	36.0	20.0	88.9	68.4	45.4	23.1
4-Feb	74.0	62.4	56.2	36.6	20.0	86.1	69.9	45.9	24.1
11-Feb	70.0	61.9	53.1	33.4	19.0	83.3	71.4	40.1	20.4
18-Feb	74.0	64.2	57.1	36.4	20.0	84.0	66.6	46.9	24.6
25-Feb	73.0	63.8	61.6	41.7	26.0	93.1	68.5	56.2	30.4
4-Mar	75.0	61.2	59.4	39.0	25.0	88.9	71.2	48.2	26.1
11-Mar	78.0	70.1	63.2	42.8	29.0	95.9	70.3	56.5	32.7
18-Mar	80.0	65.8	64.8	43.1	29.0	99.4	72.6	56.7	30.9
25-Mar	76.0	62.5	64.7	43.5	33.0	86.8	69.9	56.3	29.7
1-Apr	80.0	65.7	68.5	48.4	37.0	96.6	71.0	65.2	37.9
8-Apr	82.0	64.4	70.2	48.6	37.0	100.8	70.3	64.8	36.4
15-Apr	81.0	62.5	70.7	50.0	37.0	99.4	72.8	66.4	38.6
22-Apr	84.0	67.8	73.7	52.6	40.0	95.9	73.1	70.1	44.3
29-Apr	88.0	67.6	76.2	54.8	43.0	107.1	78.2	75.3	46.6
6-May	85.0	69.6	76.7	55.9	45.0	111.3	76.1	80.5	51.4
13-May	86.0	70.6	77.6	57.3	47.0	111.3	76.1	84.4	54.5
20-May	88.0	73.1	79.4	61.0	51.0	126.7	83.5	94.4	64.4
27-May	89.0	72.7	81.4	62.7	52.0	126.0	85.3	99.6	69.2
3-Jun	93.0	77.6	83.6	65.8	54.0	132.3	83.9	109.1	78.4
10-Jun	93.0	77.9	84.4	67.2	58.0	140.7	85.8	111.3	80.1
17-Jun	92.0	78.4	84.6	67.5	57.0	142.1	88.5	112.6	81.7
24-Jun	92.0	77.5	86.1	69.6	62.0	145.6	86.9	120.1	90.1
1-Jul	93.0	77.9	86.5	69.6	62.0	142.1	88.3	119.6	88.4
8-Jul	95.0	79.9	87.7	70.9	62.0	150.5	86.4	125.7	94.4
15-Jul	97.0	80.7	90.1	73.2	64.0	151.9	88.5	134.3	100.3
22-Jul	95.0	79.3	89.3	73.5	67.0	150.5	85.7	133.1	103.3
29-Jul	94.0	81.3	88.5	72.8	68.0	151.2	86.9	133.1	103.0
5-Aug	93.0	78.9	88.3	73.1	69.0	151.2	87.1	133.4	103.5
12-Aug	93.0	79.2	87.6	72.4	67.0	151.2	85.6	130.5	102.3
19-Aug	94.0	78.7	87.6	71.9	64.0	140.7	84.5	128.0	99.9
26-Aug	93.0	79.6	86.4	70.6	64.0	150.5	86.2	124.9	94.4
2-Sep	93.0	78.1	86.8	70.3	64.0	144.9	87.8	123.9	94.0
9-Sep	93.0	77.4	85.2	70.0	63.0	145.6	86.5	120.5	90.9
16-Sep	91.0	77.3	84.4	68.1	59.0	136.5	82.7	115.4	84.6
23-Sep	89.0	75.7	82.4	66.5	56.0	136.5	82.2	111.5	81.2
30-Sep	88.0	75.8	79.8	63.7	52.0	132.3	80.4	100.0	71.9
7-Oct	88.0	73.9	77.4	59.4	44.0	135.8	80.1	92.6	62.5
14-Oct	84.0	73.5	74.7	56.7	44.0	123.2	79.0	84.3	56.8
21-Oct	83.0	71.7	73.8	53.0	40.0	115.5	77.1	78.5	49.7
28-Oct	81.0	69.2	72.6	53.1	39.0	114.1	77.0	77.7	50.7
4-Nov	80.0	66.8	71.3	52.5	37.0	114.1	76.2	77.0	48.8
11-Nov	79.0	70.0	68.1	49.1	35.0	113.4	76.5	69.4	41.2
18-Nov	79.0	69.1	64.9	44.1	30.0	102.2	77.4	59.4	34.4
25-Nov	78.0	68.7	65.1	44.8	30.0	103.6	74.5	60.6	35.7
2-Dec	78.0	68.5	64.5	44.1	30.0	104.3	72.1	64.2	35.5
9-Dec	74.0	64.8	61.1	39.9	29.0	98.7	71.5	53.4	28.0
16-Dec	72.0	64.2	58.5	38.5	26.0	88.9	70.3	50.7	27.3
23-Dec	73.0	63.6	54.8	35.8	20.0	91.7	69.4	46.2	24.6
31-Dec	73.0	64.7	56.7	38.0	19.0	89.6	68.0	50.9	27.5

CHERRY POINT MCAS

NC

WMO No. 723090

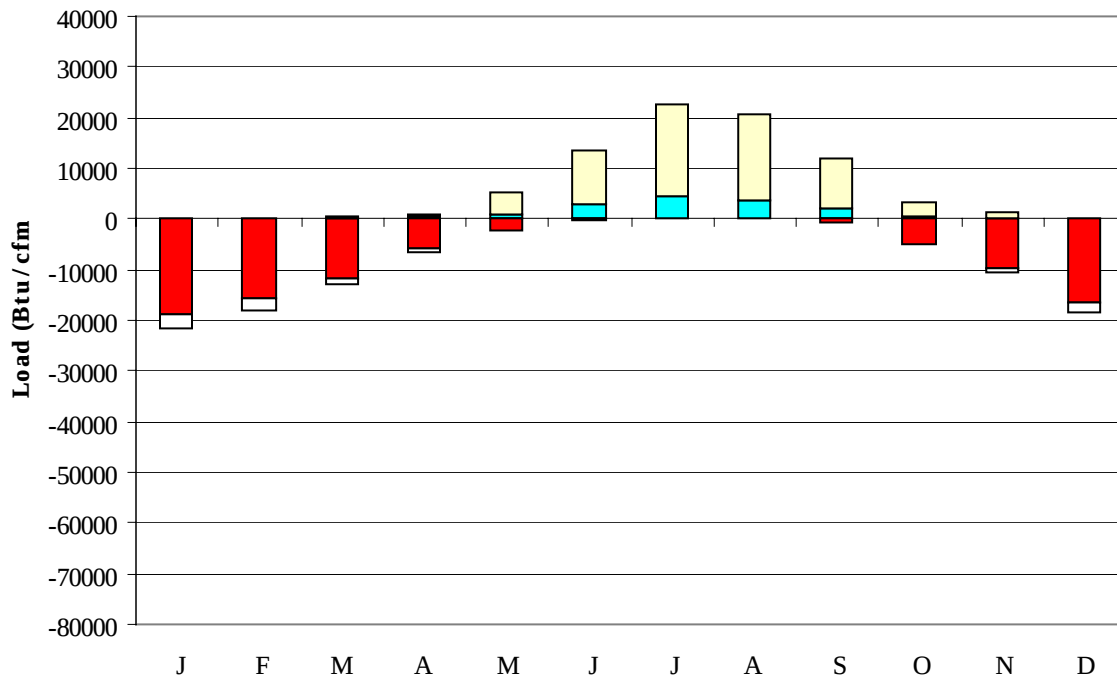
Degree Days, Heating and Cooling
(Base 65°F)



■ Mean Cooling Degree Days ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	5	632
FEB	9	522
MAR	29	369
APR	84	172
MAY	196	55
JUN	346	6
JUL	465	1
AUG	422	1
SEP	294	12
OCT	110	134
NOV	44	305
DEC	12	542
ANN	2016	2751

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	1	-18700	95	-3019
FEB	9	-15587	101	-2470
MAR	71	-11626	301	-1285
APR	342	-5972	658	-415
MAY	1086	-2250	4070	-23
JUN	2767	-356	10826	0
JUL	4583	-63	17968	0
AUG	3708	-64	16949	0
SEP	1989	-613	9867	0
OCT	438	-4849	2779	-81
NOV	86	-9743	1056	-784
DEC	7	-16278	259	-2252
ANN	15087	-86101	64929	-10329

Average Annual Solar Radiation – Nearest Available Site

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

City: WILMINGTON
 State: NC
 WBAN No: 13748
 Lat(N): 34.27
 Long(W): 77.9
 Elev(ft): 30

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1
 Overhang: 1.049
 Vert Gap: 0.661

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	1070	1430	1800	1930	1990	1900	1720	1470	1240	930	750	1420
	Std Dev	57	89	102	112	121	138	112	103	120	101	77	49	32
	Minimum	690	890	1280	1640	1630	1710	1570	1490	1190	1040	670	670	1340
	Maximum	950	1260	1640	2070	2100	2260	2070	1930	1700	1420	1030	870	1490
	Diffuse	350	440	560	680	820	890	900	830	690	500	370	320	610
Clear Day	Global	1130	1460	1890	2290	2520	2590	2510	2290	1950	1530	1160	1010	1860
NORTH	Global	230	290	370	450	560	620	590	500	410	330	250	220	400
	Diffuse	230	290	370	440	510	540	530	480	410	330	250	220	380
Clear Day	Global	220	270	340	430	590	680	630	490	390	310	230	200	400
EAST	Global	530	670	840	1030	1050	1060	1030	970	860	750	590	490	820
	Diffuse	280	350	450	550	610	640	640	590	510	410	310	260	470
Clear Day	Global	790	970	1170	1330	1390	1390	1350	1280	1160	970	790	720	1110
SOUTH	Global	1170	1200	1150	980	770	680	700	830	1010	1230	1250	1170	1010
	Diffuse	370	440	500	540	550	560	560	570	550	490	410	370	490
Clear Day	Global	1970	1930	1670	1230	890	750	800	1060	1440	1750	1870	1910	1440
WEST	Global	540	670	850	1010	1040	1050	1000	930	840	750	600	500	820
	Diffuse	280	360	460	550	620	650	640	590	510	410	310	270	470
Clear Day	Global	790	970	1170	1330	1390	1390	1350	1280	1160	970	790	720	1110

Average Annual Solar Heat and Illumination – Nearest Available Site

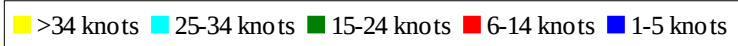
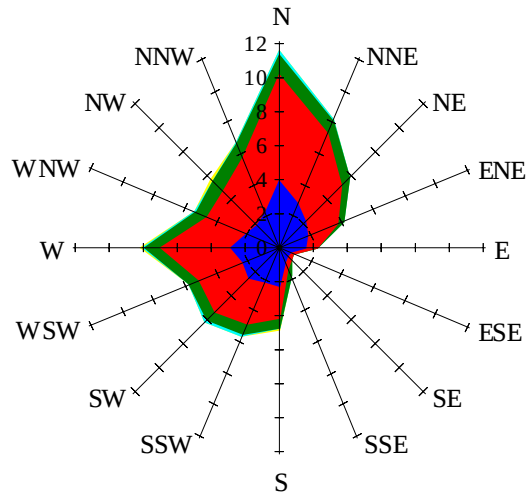
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	740	1020	1310	1410	1450	1380	1250	1060	870	630	500	1020
NORTH	Unshaded	160	200	260	310	370	400	380	330	280	230	170	150	270
	Shaded	130	170	220	270	310	340	320	280	240	190	150	130	230
EAST	Unshaded	370	470	600	730	740	750	730	690	610	530	410	340	580
	Shaded	310	390	470	580	580	580	570	540	480	430	340	290	460
SOUTH	Unshaded	870	870	780	610	460	420	430	510	660	870	930	880	690
	Shaded	820	690	390	310	330	330	330	320	590	590	830	840	510
WEST	Unshaded	370	470	600	720	740	740	710	660	590	530	410	340	570
	Shaded	310	390	480	560	570	570	540	510	470	430	340	290	460

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	40	77	89	72	32	42	82	102	97	70
	M.Cloudy	24	48	56	47	21	29	58	77	74	50
NORTH	M.Clear	10	15	16	14	9	22	17	17	18	16
	M.Cloudy	9	16	17	15	8	16	18	20	20	17
EAST	M.Clear	76	61	16	14	9	70	74	35	18	16
	M.Cloudy	28	35	17	15	8	37	48	31	20	17
SOUTH	M.Clear	35	67	77	63	29	12	24	37	35	17
	M.Cloudy	17	37	43	36	15	11	22	32	30	17
WEST	M.Clear	10	15	20	66	71	12	17	17	50	77
	M.Cloudy	9	16	19	38	28	11	18	20	39	47
M.Clear	(% hrs)	41	40	40	39	39	36	36	31	31	34
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	25	67	88	82	52	18	49	57	38	6
	M.Cloudy	16	45	62	58	34	11	29	34	24	4
NORTH	M.Clear	9	15	17	17	14	6	11	12	9	3
	M.Cloudy	7	16	19	18	13	5	11	12	9	2
EAST	M.Clear	56	71	33	17	14	46	44	12	9	3
	M.Cloudy	23	39	27	18	13	15	22	12	9	2
SOUTH	M.Clear	17	51	69	63	37	40	82	91	69	15
	M.Cloudy	10	30	44	42	22	13	33	38	29	5
WEST	M.Clear	9	15	17	51	72	6	11	21	53	22
	M.Cloudy	7	16	19	36	36	5	11	15	24	7
M.Clear	(% hrs)	39	39	33	32	36	41	39	40	39	39

Wind Summary - December, January, and February

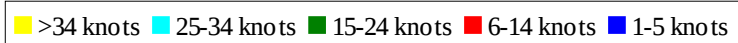
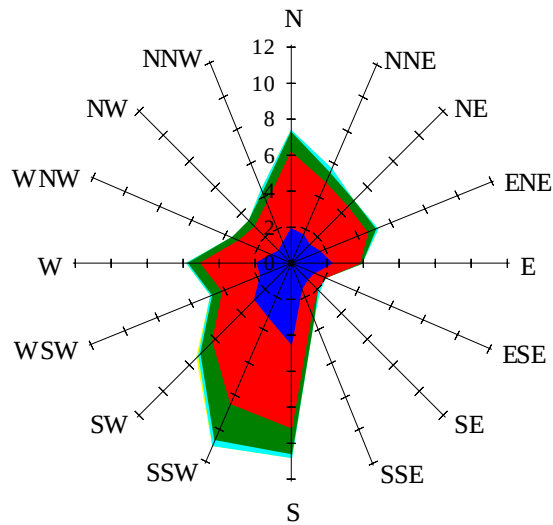
Labels of Percent Frequency on North Axis



Percent Calm = 17.31

Wind Summary - March, April, and May

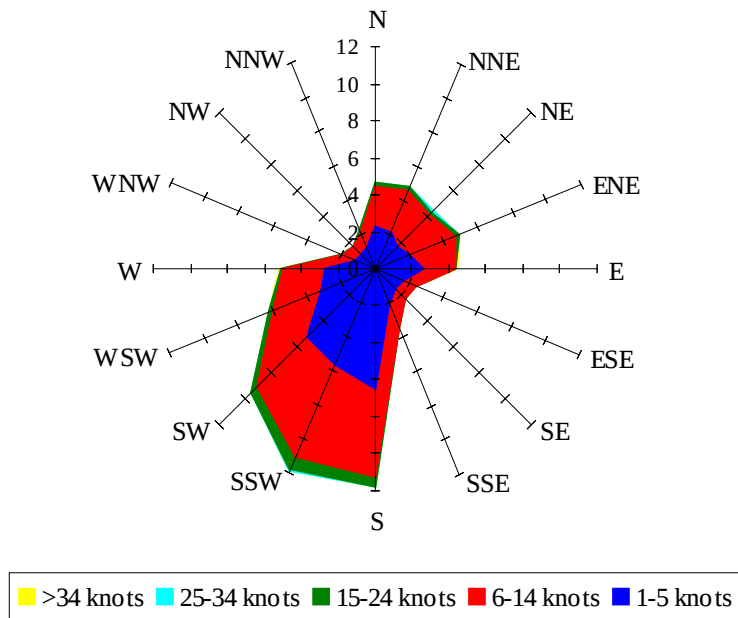
Labels of Percent Frequency on North Axis



Percent Calm = 15.45

Wind Summary - June, July, and August

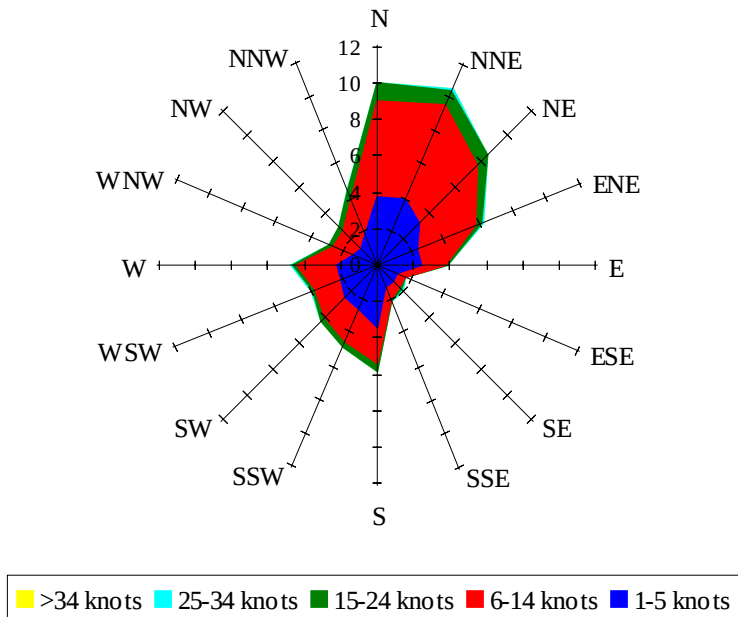
Labels of Percent Frequency on North Axis



Percent Calm = 18.54

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 21.66