

CHARLOTTE/DOUGLAS NC

Latitude = 35.22 N

WMO No. 723140

Longitude = 80.93 W

Elevation = 768 feet

Period of Record = 1973 to 1996

Average Pressure = 29.23 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	74	96	8.3	W
0.4% Occurrence	94	75	100	8.1	W
1.0% Occurrence	91	74	103	8.0	SW
2.0% Occurrence	89	73	101	7.9	SW
Mean Daily Range	19	-	-	-	-
97.5% Occurrence	28	25	13	6.2	N
99.0% Occurrence	23	20	10	6.4	N
99.6% Occurrence	19	17	8	6.4	N
Median of Extreme Lows	12	10	6	7.8	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	79	90	130	7.8	WSW
0.4% Occurrence	77	88	121	7.6	SW
1.0% Occurrence	76	87	118	7.5	SW
2.0% Occurrence	75	85	115	7.5	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	139	82	0.90	7.3	S
0.4% Occurrence	130	82	0.85	6.9	SW
1.0% Occurrence	126	80	0.82	6.3	S
2.0% Occurrence	121	79	0.79	6.5	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		62	1077	686	2307

Other Site Data

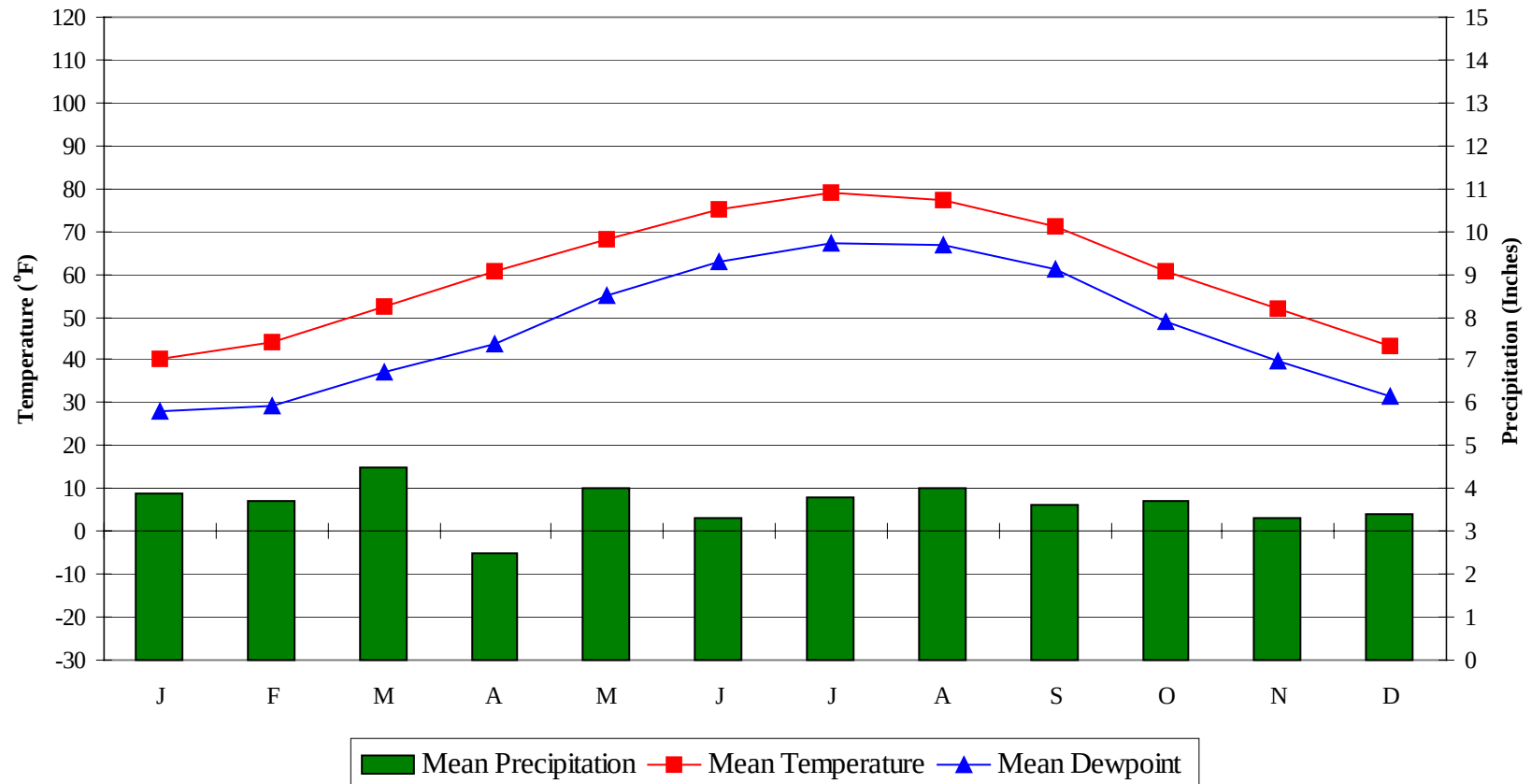
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
8	3.8	90	3.3 + 1.1
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
62.8	4	11	41

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

CHARLOTTE/DOUGLAS NC

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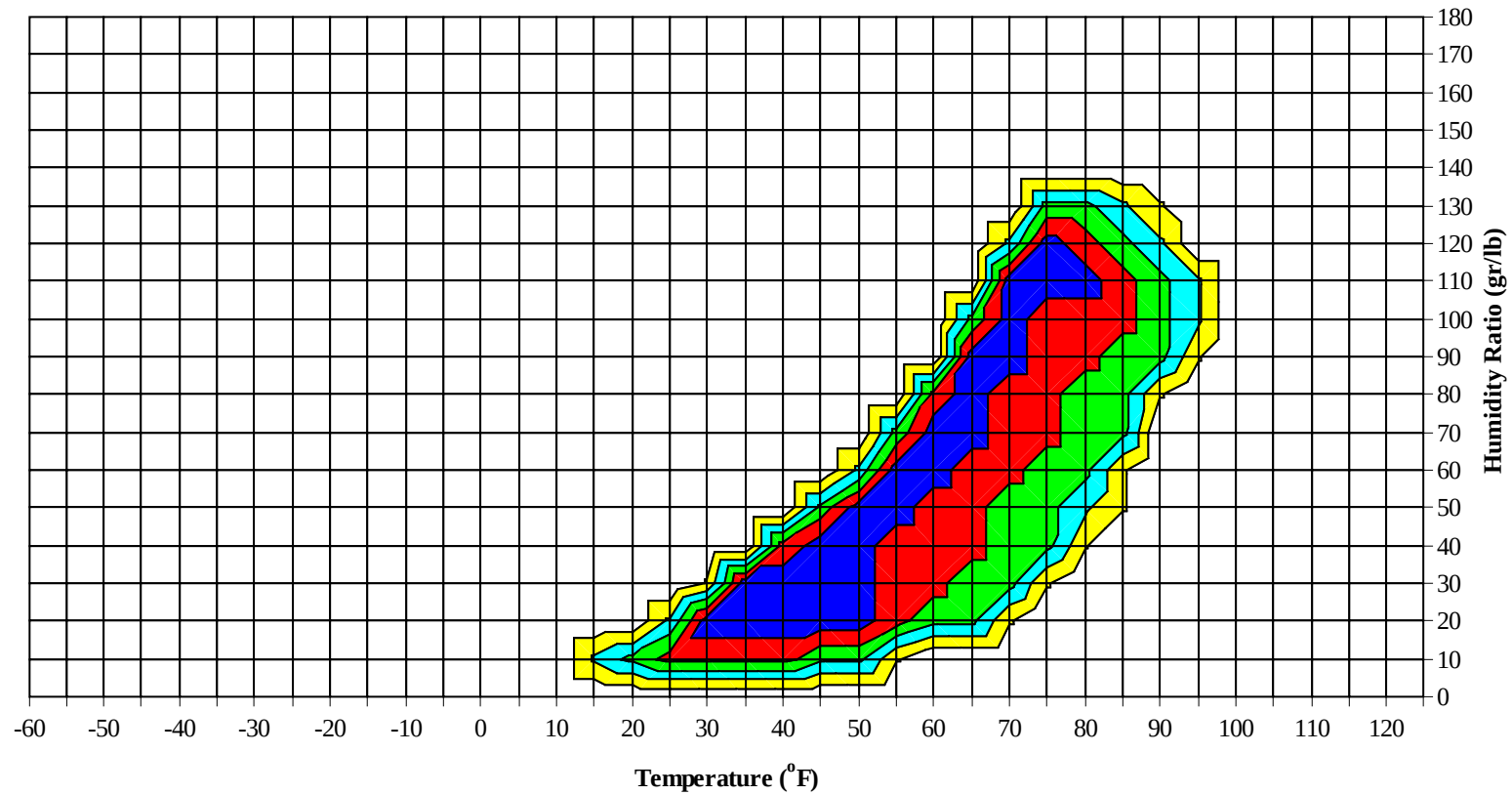
Average Annual Climate



CHARLOTTE/DOUGLAS NC

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Long Term Psychrometric Summary

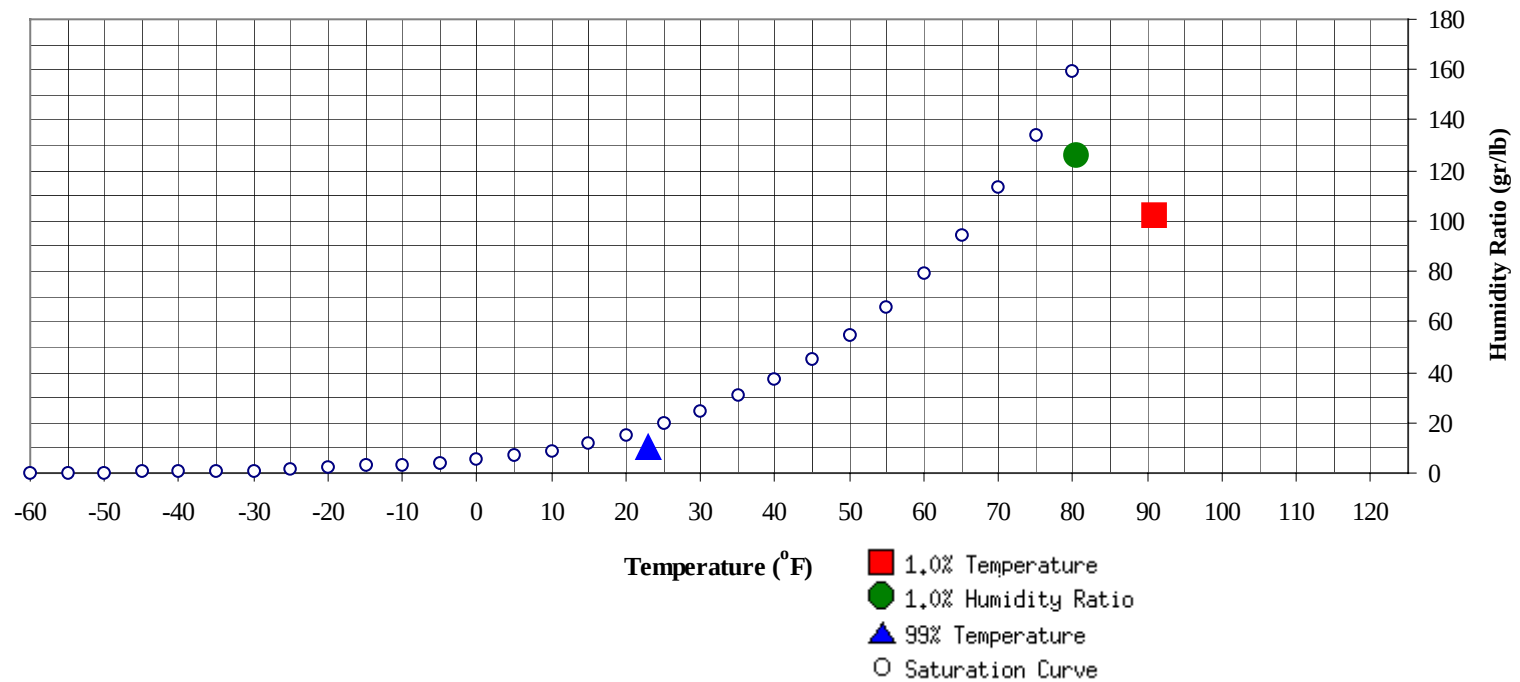


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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	23	10.1	7.1		126	80.3	75.1	73.1	39.0

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	91	102.3	74.1	37.9

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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		
100 / 104															
95 / 99															
90 / 94															
85 / 89												0	0	0	61.8
80 / 84							0		0	59.8		4	1	5	62.7
75 / 79		0		0	62.5		2	1	3	61.2	0	10	5	15	60.1
70 / 74		1	0	1	58.7		5	2	7	57.9	0	20	14	34	57.6
65 / 69	1	6	2	9	57.6	1	12	7	20	54.7	3	29	24	56	55.6
60 / 64	2	14	9	25	53.9	4	23	17	44	52.5	17	39	40	96	53.6
55 / 59	6	20	15	41	50.3	14	27	28	69	50.1	32	41	43	116	50.1
50 / 54	14	30	29	73	45.7	16	30	30	76	45.0	42	40	41	123	45.6
45 / 49	24	43	39	106	41.5	23	33	34	90	40.9	44	30	33	107	41.5
40 / 44	35	45	47	127	37.5	38	32	36	106	36.9	40	18	25	83	37.4
35 / 39	49	39	44	133	33.1	42	28	32	102	32.4	34	9	13	56	32.9
30 / 34	47	28	34	110	28.7	40	21	23	84	28.4	25	5	6	36	28.6
25 / 29	33	12	17	62	23.9	27	8	9	44	23.6	9	1	1	11	24.3
20 / 24	22	6	7	35	19.4	12	2	3	17	19.1	2	1	0	3	19.5
15 / 19	12	2	2	16	15.0	6	0	1	7	15.0	1	0	0	1	15.4
10 / 14	3	1	1	5	10.5	1	0	0	1	11.8	0		0	0	10.0
5 / 9	1	0	0	1	5.1	0			0	7.8	0			0	4.3
0 / 4	0	0	0	0	-0.3						0			0	3.0
-5 / -1	0		0	0	-4.5										
-10 / -6	0			0	-6.0										

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.

CHARLOTTE/DOUGLAS NC

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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															
95 / 99															
90 / 94		0		0	63.5		2	1	3	71.2		2	1	3	74.1
85 / 89		5	2	7	64.5		19	6	25	69.8		19	6	25	73.2
80 / 84		19	8	27	62.8	0	44	22	66	67.6	2	69	47	118	70.0
75 / 79		29	17	46	60.9	2	55	41	98	65.2	24	54	61	139	68.5
70 / 74	1	41	31	73	58.8	19	54	56	129	63.3	87	33	63	182	67.0
65 / 69	16	45	48	108	57.0	71	39	59	169	61.4	86	9	30	125	63.8
60 / 64	46	40	49	134	54.5	68	22	34	124	57.2	31	2	6	39	58.4
55 / 59	51	29	36	116	50.2	45	9	18	72	52.6	9	1	2	12	53.6
50 / 54	44	19	26	89	45.6	26	2	8	36	48.1	2		0	2	49.1
45 / 49	38	8	14	60	41.5	13	1	3	17	44.0	0			0	45.0
40 / 44	29	4	6	39	37.8	3	0		3	40.0					
35 / 39	12	1	2	15	33.6	0			0	35.6					
30 / 34	5		0	5	29.0										
25 / 29	0			0	26.3										
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															

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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	0	1	73.7		1	0	1	75.9					
95 / 99		13	5	18	74.6		4	1	5	74.4		0	0	0	72.6
90 / 94		41	18	59	74.7		28	10	38	74.5		8	2	10	73.7
85 / 89	0	69	39	108	73.4	0	64	28	92	73.4		30	9	39	72.5
80 / 84	10	66	59	135	72.3	3	70	53	126	72.1	0	53	25	79	70.2
75 / 79	64	37	66	167	71.1	42	51	76	168	70.9	8	55	50	114	68.4
70 / 74	126	15	52	193	69.1	135	25	66	226	69.1	71	47	71	189	67.2
65 / 69	41	4	9	54	64.6	58	4	13	75	64.8	71	27	45	143	63.1
60 / 64	7	1	1	9	60.4	10	1	1	12	59.2	45	11	24	80	58.2
55 / 59	0			0	56.0	1	0	0	1	53.5	29	5	10	44	53.5
50 / 54						0	0		0	49.3	13	2	3	18	48.9
45 / 49											4	0	0	4	45.6
40 / 44											0			0	42.6
35 / 39															
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															

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CHARLOTTE/DOUGLAS NC

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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															
90 / 94		0	0	0	72.8										
85 / 89		2	1	3	70.8										
80 / 84		13	3	16	67.4			0	1	63.9					
75 / 79	1	34	11	46	64.8		1	7	8	62.6		0		0	64.3
70 / 74	4	50	29	83	62.4	1	20	8	29	61.3	1	4	1	6	63.8
65 / 69	24	50	52	125	60.3	7	32	22	61	59.4	2	10	5	17	60.3
60 / 64	43	45	54	141	56.1	21	38	35	94	55.8	5	23	15	43	55.7
55 / 59	49	30	41	120	51.8	27	40	37	104	51.0	12	27	19	58	50.5
50 / 54	47	15	34	96	47.6	35	41	42	118	46.1	17	38	35	90	45.8
45 / 49	45	7	16	68	43.6	38	32	42	112	41.9	25	43	45	113	41.5
40 / 44	26	2	6	34	39.7	41	19	30	90	37.9	45	42	47	134	37.5
35 / 39	9	0	1	10	35.0	34	8	16	58	33.5	49	33	41	123	33.1
30 / 34	2		0	2	30.7	28	1	6	35	29.2	45	16	25	86	28.6
25 / 29	0			0	27.2	8	0	1	9	25.4	30	7	10	47	23.9
20 / 24						1	0	0	1	21.0	13	2	3	18	19.3
15 / 19											4	1	1	6	14.8
10 / 14											1	0	0	1	9.7
5 / 9											1	0	0	1	5.8
0 / 4											0			0	3.0
-5 / -1															
-10 / -6															

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CHARLOTTE/DOUGLAS NC

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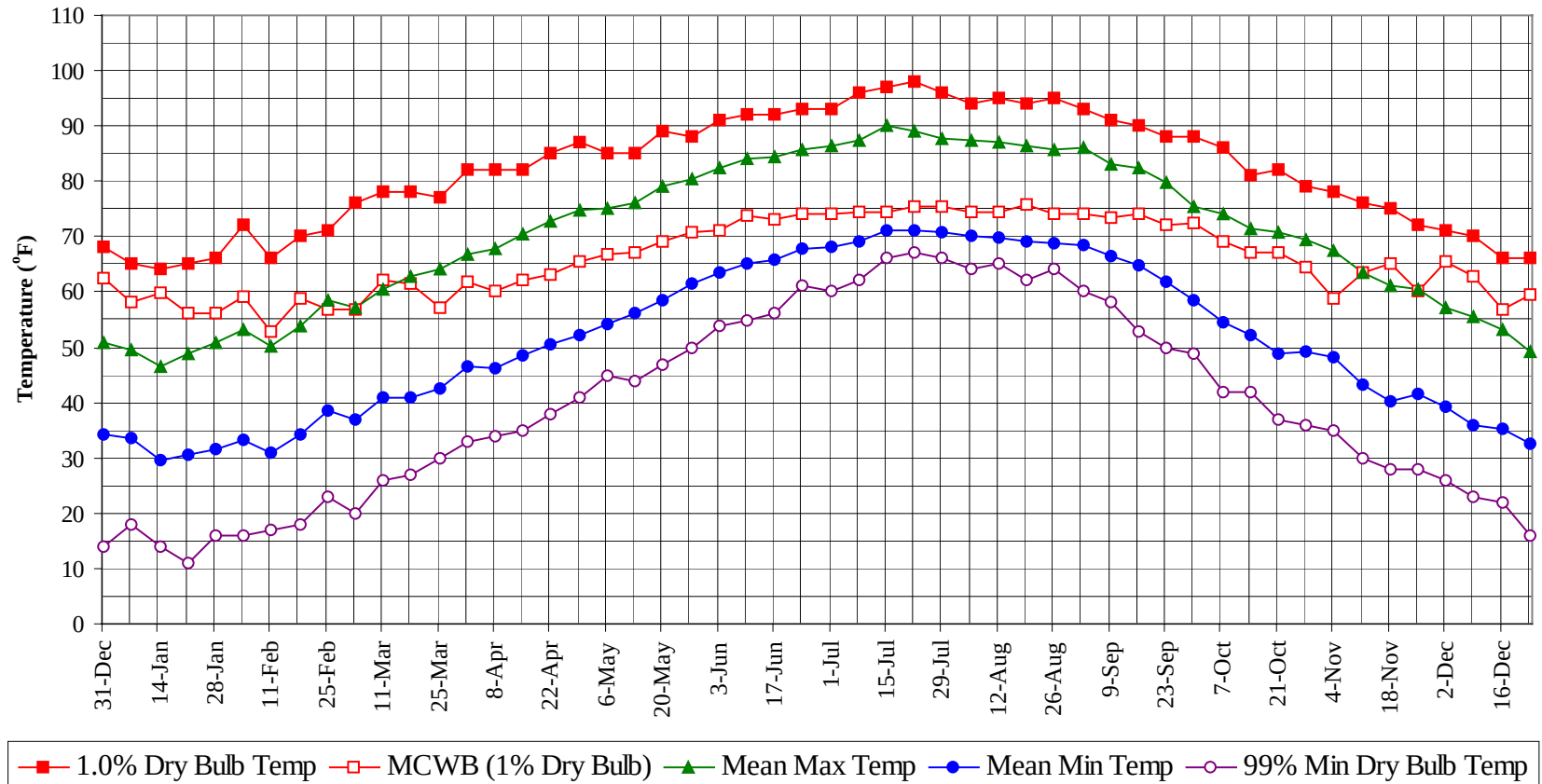
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

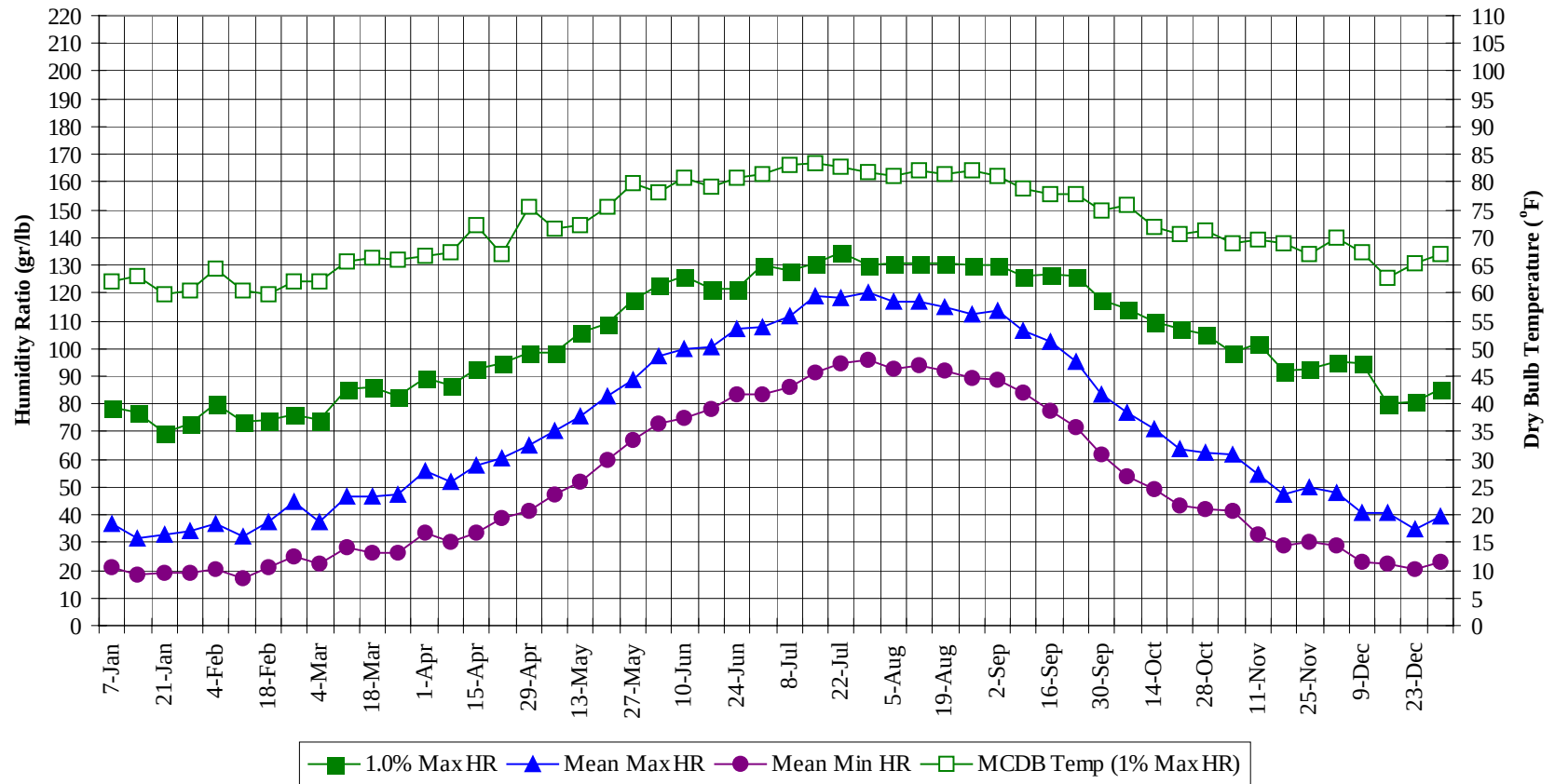
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		1	0	1	74.7
95 / 99		19	7	26	74.5
90 / 94		101	36	137	74.2
85 / 89	0	239	110	350	72.4
80 / 84	15	338	218	571	70.3
75 / 79	139	336	327	802	68.3
70 / 74	443	316	393	1153	66.0
65 / 69	378	268	317	963	61.1
60 / 64	298	260	283	841	55.8
55 / 59	273	229	249	752	51.0
50 / 54	255	218	250	723	46.1
45 / 49	255	197	227	679	41.8
40 / 44	256	162	198	616	37.6
35 / 39	228	120	149	497	33.1
30 / 34	192	72	94	358	28.7
25 / 29	107	28	39	175	23.9
20 / 24	50	11	14	75	19.4
15 / 19	24	4	4	32	15.0
10 / 14	5	1	1	7	10.6
5 / 9	3	0	1	4	5.4
0 / 4	0	0	0	0	0.8
-5 / -1	0		0	0	-4.5
-10 / -6	0			0	-6.0

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.

Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary

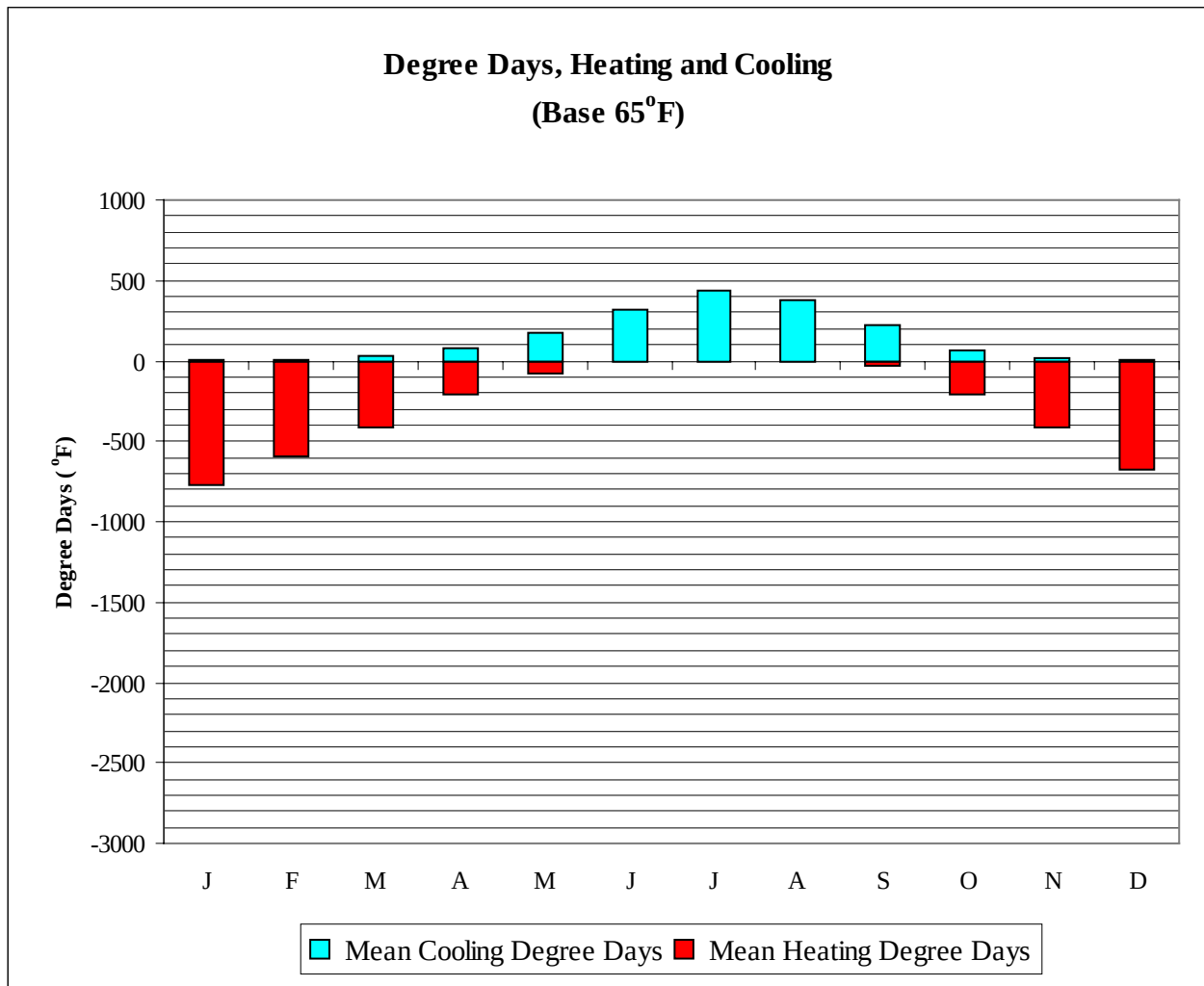


CHARLOTTE/DOUGLAS NC

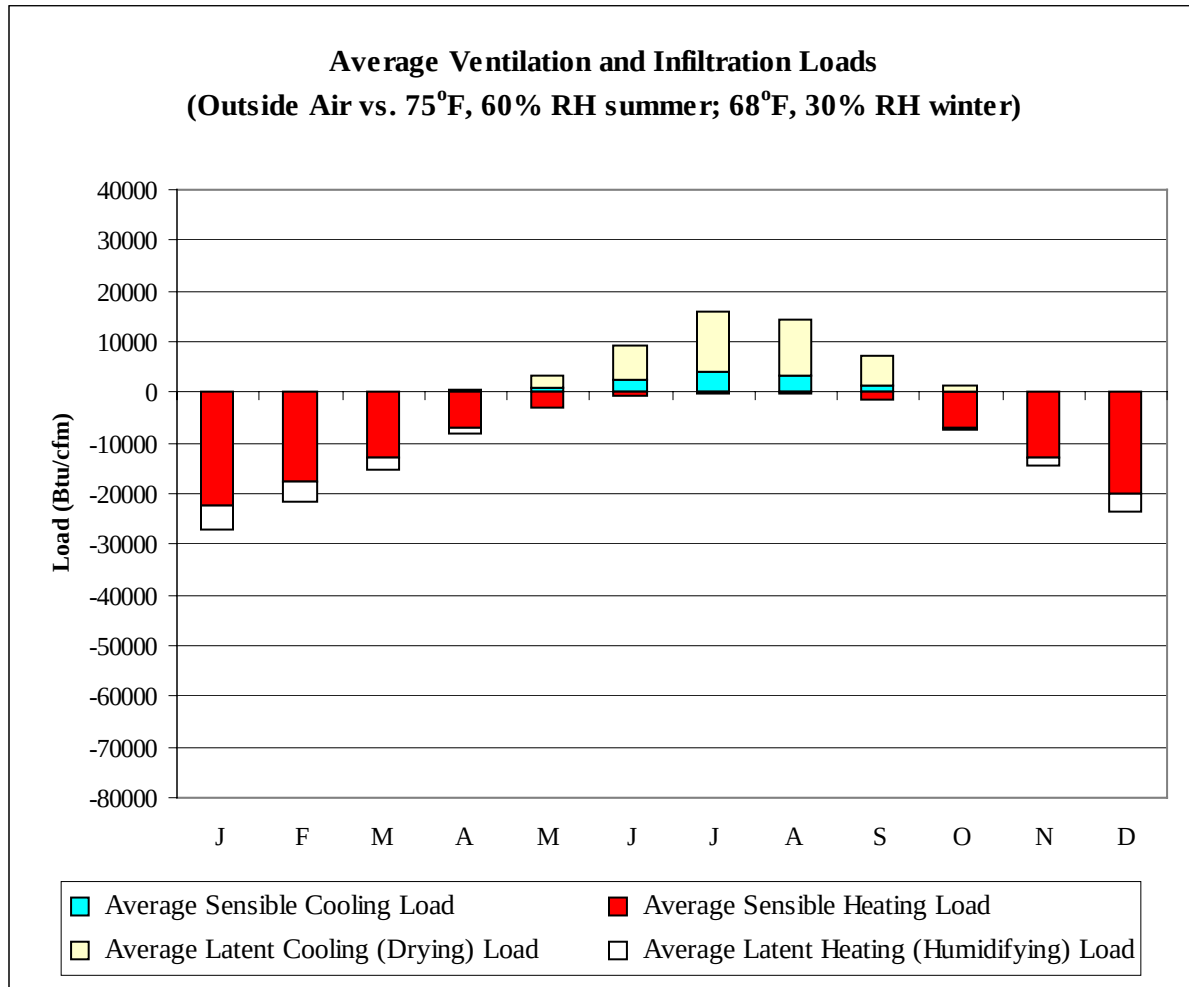
WMO No. 723140

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	65.0	58.3	49.4	33.7	18.0	79.1	62.2	36.9	21.2
14-Jan	64.0	59.9	46.5	29.7	14.0	77.0	63.0	31.7	18.1
21-Jan	65.0	56.2	48.8	30.7	11.0	69.3	59.6	33.2	19.0
28-Jan	66.0	56.1	51.0	31.7	16.0	72.8	60.5	34.2	19.1
4-Feb	72.0	59.2	53.2	33.1	16.0	79.8	64.4	36.6	20.6
11-Feb	66.0	52.8	50.2	31.1	17.0	73.5	60.4	32.5	17.0
18-Feb	70.0	58.8	53.8	34.3	18.0	74.2	59.9	37.3	20.9
25-Feb	71.0	56.8	58.4	38.5	23.0	76.3	62.1	44.6	24.8
4-Mar	76.0	56.8	57.2	36.9	20.0	74.2	62.0	37.4	22.2
11-Mar	78.0	62.3	60.5	40.8	26.0	85.4	65.8	46.5	28.3
18-Mar	78.0	61.4	62.8	41.0	27.0	86.1	66.3	46.6	26.4
25-Mar	77.0	57.3	64.0	42.4	30.0	82.6	65.9	47.3	26.4
1-Apr	82.0	61.9	66.8	46.6	33.0	89.6	66.5	56.0	33.8
8-Apr	82.0	60.0	67.9	46.2	34.0	86.8	67.2	52.0	30.4
15-Apr	82.0	62.0	70.6	48.4	35.0	92.4	72.2	57.5	33.7
22-Apr	85.0	63.1	72.9	50.6	38.0	94.5	66.9	60.3	39.0
29-Apr	87.0	65.5	74.7	52.1	41.0	98.7	75.4	64.9	41.7
6-May	85.0	67.0	75.1	54.2	45.0	98.7	71.7	70.2	47.3
13-May	85.0	67.1	76.2	56.1	44.0	105.7	72.3	75.5	52.2
20-May	89.0	69.0	78.9	58.6	47.0	109.2	75.6	82.5	59.7
27-May	88.0	70.9	80.3	61.4	50.0	117.6	79.7	88.9	66.8
3-Jun	91.0	71.2	82.3	63.5	54.0	122.5	78.1	97.4	73.2
10-Jun	92.0	73.7	84.2	65.1	55.0	126.0	80.8	99.9	75.1
17-Jun	92.0	73.2	84.5	65.8	56.0	121.8	79.1	100.7	78.4
24-Jun	93.0	74.1	85.6	67.6	61.0	121.8	80.9	106.8	83.2
1-Jul	93.0	74.2	86.3	68.0	60.0	130.2	81.3	107.6	83.3
8-Jul	96.0	74.3	87.5	69.2	62.0	128.1	83.1	111.6	86.0
15-Jul	97.0	74.5	90.1	71.2	66.0	130.9	83.5	118.6	91.4
22-Jul	98.0	75.5	89.1	71.2	67.0	134.4	82.8	118.4	94.6
29-Jul	96.0	75.4	87.8	70.9	66.0	130.2	81.6	120.1	96.1
5-Aug	94.0	74.5	87.5	70.1	64.0	130.9	81.2	117.0	92.9
12-Aug	95.0	74.4	86.9	69.9	65.0	130.9	81.9	116.6	93.8
19-Aug	94.0	75.7	86.3	69.1	62.0	130.9	81.4	114.8	92.0
26-Aug	95.0	74.0	85.8	68.9	64.0	130.2	82.2	112.3	89.3
2-Sep	93.0	74.0	86.0	68.5	60.0	130.2	81.2	113.4	88.6
9-Sep	91.0	73.3	83.0	66.5	58.0	126.0	78.7	106.1	83.9
16-Sep	90.0	74.1	82.5	64.9	53.0	126.7	78.0	102.6	77.7
23-Sep	88.0	72.0	79.7	61.9	50.0	126.0	78.0	95.2	71.7
30-Sep	88.0	72.4	75.6	58.3	49.0	117.6	74.9	83.7	62.0
7-Oct	86.0	69.2	74.2	54.6	42.0	114.1	75.7	77.1	54.1
14-Oct	81.0	67.2	71.4	52.2	42.0	109.9	71.9	70.9	49.5
21-Oct	82.0	67.3	70.9	49.0	37.0	107.1	70.5	63.8	43.3
28-Oct	79.0	64.3	69.5	49.2	36.0	105.0	71.2	62.7	41.8
4-Nov	78.0	58.8	67.4	48.1	35.0	98.7	69.0	61.9	41.1
11-Nov	76.0	63.6	63.3	43.3	30.0	101.5	69.5	54.2	33.2
18-Nov	75.0	65.3	61.0	40.4	28.0	91.7	69.0	47.3	29.0
25-Nov	72.0	60.3	60.5	41.5	28.0	92.4	66.9	49.9	30.3
2-Dec	71.0	65.5	57.1	39.4	26.0	95.2	69.9	48.2	29.0
9-Dec	70.0	62.9	55.6	36.0	23.0	94.5	67.3	40.6	23.2
16-Dec	66.0	56.7	53.2	35.2	22.0	79.8	62.7	40.5	22.5
23-Dec	66.0	59.5	49.3	32.5	16.0	80.5	65.4	34.8	20.3
31-Dec	68.0	62.5	50.9	34.2	14.0	85.4	66.9	39.6	22.9



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	1	773
FEB	4	597
MAR	24	418
APR	76	207
MAY	170	72
JUN	316	9
JUL	432	1
AUG	381	2
SEP	224	35
OCT	68	205
NOV	16	413
DEC	3	675
ANN	1714	3407



	Average Sensible Cooling Load	Average Sensible Heating Load	Average Latent Cooling Load	Average Latent Heating Load
	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)
JAN	0	-22435	9	-4571
FEB	6	-17616	7	-3927
MAR	62	-12984	53	-2396
APR	362	-7002	220	-988
MAY	1010	-2903	2188	-81
JUN	2578	-511	6605	0
JUL	4224	-82	11754	0
AUG	3245	-136	11116	0
SEP	1450	-1539	5890	-4
OCT	227	-7005	1048	-300
NOV	15	-12820	267	-1800
DEC	0	-19863	87	-3766
ANN	13179	-104896	39244	-17833

Average Annual Solar Radiation – Nearest Available Site

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

City: CHARLOTTE
 State: NC
 WBAN No: 13881
 Lat(N): 35.22
 Long(W): 80.93
 Elev(ft): 768

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.399
 Vert Gap: 0.288

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	790	1040	1380	1740	1900	1990	1930	1760	1490	1230	880	710	1410
	Std Dev	62	95	120	117	93	128	143	116	116	104	88	51	34
	Minimum	630	880	1150	1490	1740	1740	1670	1540	1260	1050	620	620	1340
	Maximum	890	1210	1630	2020	2080	2260	2190	2020	1710	1430	1040	830	1460
	Diffuse	340	440	560	680	820	880	880	790	660	470	360	310	600
Clear Day	Global	1110	1440	1880	2290	2530	2610	2530	2300	1940	1510	1140	990	1860
NORTH	Global	230	290	360	450	550	620	580	490	400	320	240	200	400
	Diffuse	230	290	360	440	500	540	520	470	400	320	240	200	380
Clear Day	Global	210	260	340	430	580	690	630	490	380	300	230	200	400
EAST	Global	510	650	820	990	1020	1040	1020	950	850	740	560	470	800
	Diffuse	270	350	440	530	600	630	630	580	500	390	300	250	460
Clear Day	Global	780	970	1180	1340	1400	1400	1360	1280	1160	960	790	710	1110
SOUTH	Global	1140	1190	1130	970	780	700	730	860	1040	1260	1200	1120	1010
	Diffuse	370	430	490	530	560	560	560	560	540	480	390	340	490
Clear Day	Global	2000	1970	1710	1260	920	780	830	1090	1470	1780	1900	1930	1470
WEST	Global	520	660	830	990	1030	1060	1010	980	870	760	580	470	810
	Diffuse	270	350	450	540	610	640	630	590	510	400	300	250	460
Clear Day	Global	780	970	1180	1340	1400	1400	1360	1280	1160	960	790	710	1110

Average Annual Solar Heat and Illumination – Nearest Available Site

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

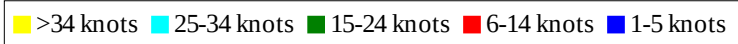
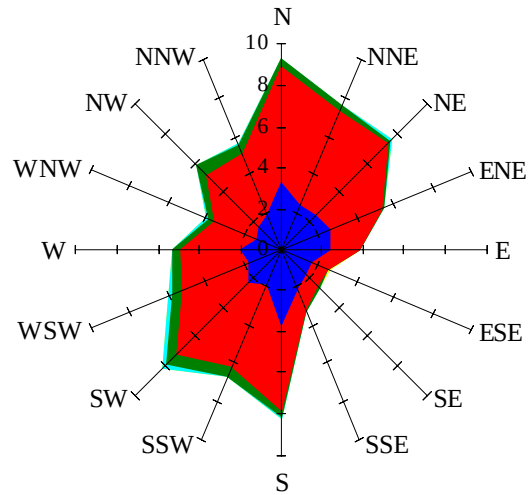
AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Unshaded	520	720	990	1260	1390	1450	1400	1280	1070	860	600	470	1000
NORTH	Unshaded	160	200	250	300	360	400	380	330	280	220	170	140	270
	Shaded	140	180	230	280	330	370	350	310	260	200	150	130	250
EAST	Unshaded	350	460	580	710	730	740	720	680	600	520	390	320	570
	Shaded	320	420	530	640	650	660	640	610	540	480	360	300	510
SOUTH	Unshaded	850	860	770	610	470	430	440	540	690	890	890	840	690
	Shaded	830	810	640	440	360	360	360	390	540	800	870	820	600
WEST	Unshaded	360	470	590	710	730	750	720	690	620	540	400	320	580
	Shaded	340	430	540	640	650	670	640	620	560	490	370	300	520

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	88	75	37	38	80	101	98	73
	M.Cloudy	20	44	55	47	23	24	52	72	73	51
NORTH	M.Clear	9	14	15	14	9	22	16	17	18	16
	M.Cloudy	8	15	17	15	9	13	17	20	19	17
EAST	M.Clear	74	65	17	14	9	69	77	40	18	16
	M.Cloudy	25	33	18	15	9	29	43	32	19	17
SOUTH	M.Clear	32	66	79	67	34	11	23	38	37	20
	M.Cloudy	14	33	43	37	17	10	20	31	31	19
WEST	M.Clear	9	14	15	63	75	11	16	17	45	75
	M.Cloudy	8	15	17	35	30	10	17	20	36	47
M.Clear	(% hrs)	39	39	36	37	37	39	40	37	35	39

		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	21	64	87	84	55	14	45	56	41	8
	M.Cloudy	12	39	57	59	37	8	26	31	24	5
NORTH	M.Clear	8	14	17	17	14	5	10	11	10	4
	M.Cloudy	6	15	18	18	13	4	10	12	9	3
EAST	M.Clear	53	74	38	17	14	42	47	11	10	4
	M.Cloudy	15	35	28	18	13	11	20	12	9	3
SOUTH	M.Clear	14	48	69	66	41	34	80	92	74	22
	M.Cloudy	7	26	41	43	24	9	29	34	27	6
WEST	M.Clear	8	14	17	46	72	5	10	16	52	30
	M.Cloudy	6	15	18	33	37	4	10	13	21	8
M.Clear	(% hrs)	41	42	39	38	45	40	39	39	38	40

Wind Summary - December, January, and February

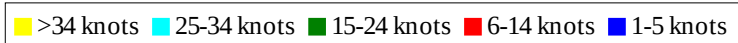
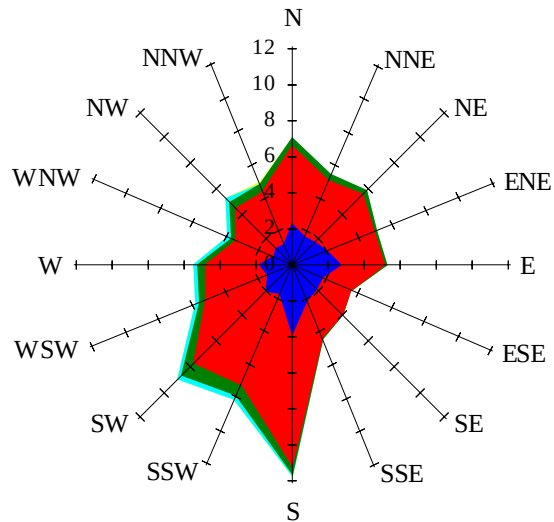
Labels of Percent Frequency on North Axis



Percent Calm = 8.90

Wind Summary - March, April, and May

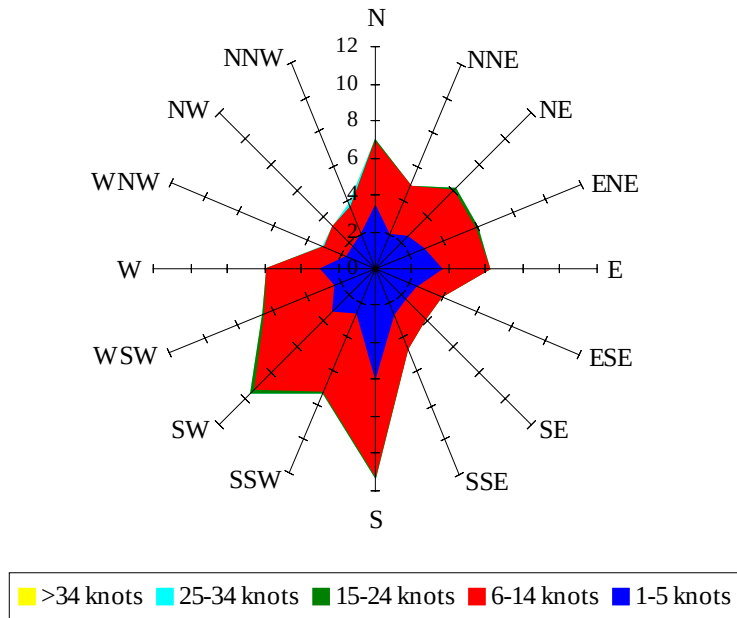
Labels of Percent Frequency on North Axis



Percent Calm = 6.70

Wind Summary - June, July, and August

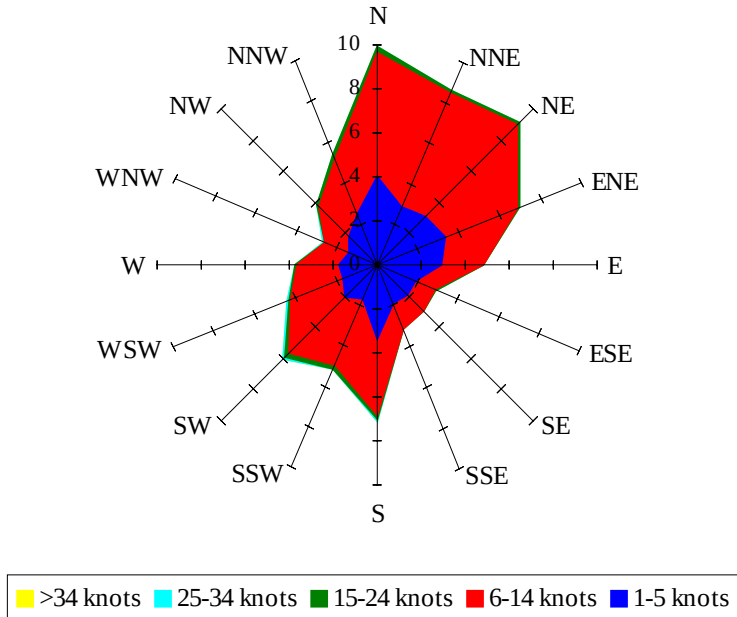
Labels of Percent Frequency on North Axis



Percent Calm = 7.71

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 13.18