

COLUMBIA SC

Latitude = 33.95 N

Longitude = 81.12 W

Period of Record = 1973 to 1996

WMO No. 723100

Elevation = 226 feet

Average Pressure = 29.80 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	100	75	93	9.1	W
0.4% Occurrence	97	76	99	8.8	WSW
1.0% Occurrence	94	75	102	8.5	W
2.0% Occurrence	92	75	103	8.4	W
Mean Daily Range	23	-	-	-	-
97.5% Occurrence	29	27	17	4.4	W
99.0% Occurrence	24	22	13	3.9	W
99.6% Occurrence	20	19	11	4.6	W
Median of Extreme Lows	14	13	8	5.4	W
	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	92	137	6.7	S
0.4% Occurrence	78	89	124	7.2	S
1.0% Occurrence	78	89	124	7.2	S
2.0% Occurrence	77	88	121	7.1	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	147	85	0.97	3.9	SW
0.4% Occurrence	133	82	0.88	5.6	S
1.0% Occurrence	129	81	0.85	6.0	S
2.0% Occurrence	127	81	0.85	5.3	SW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		146	1421	1231	2893

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	4.6 + 1.6
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 (#)
65.3	0	8	43

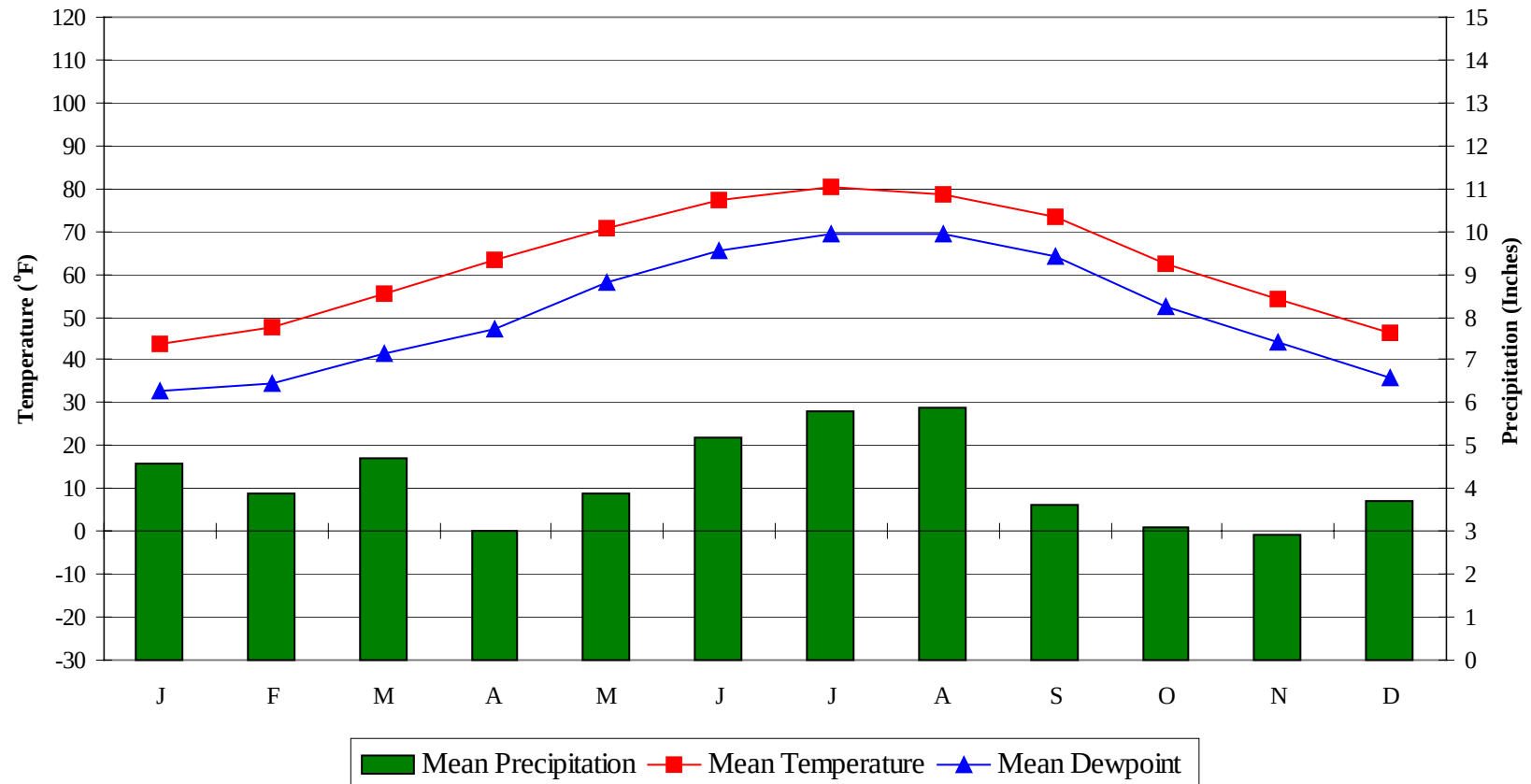
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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Average Annual Climate

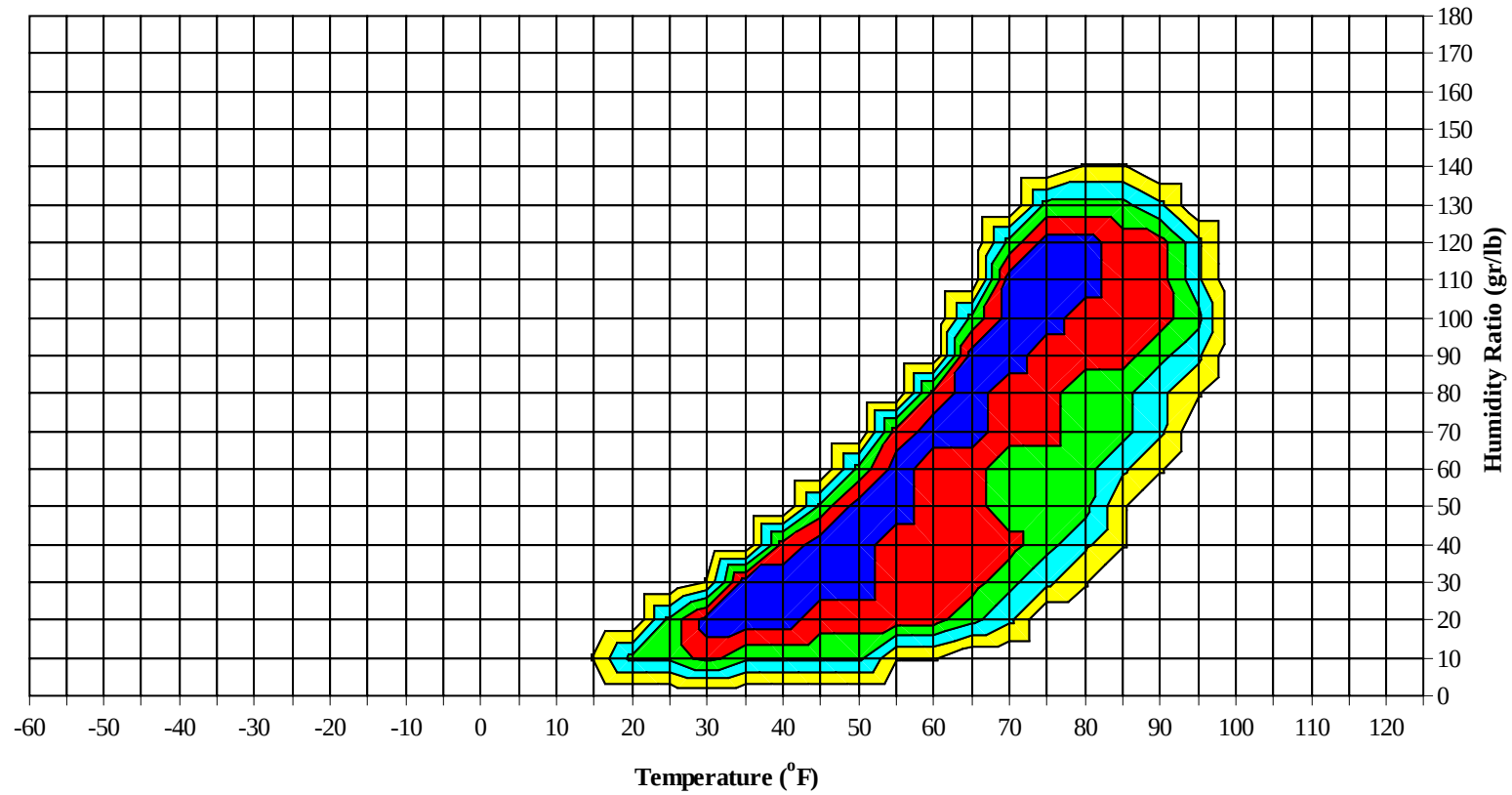


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Long Term Psychrometric Summary



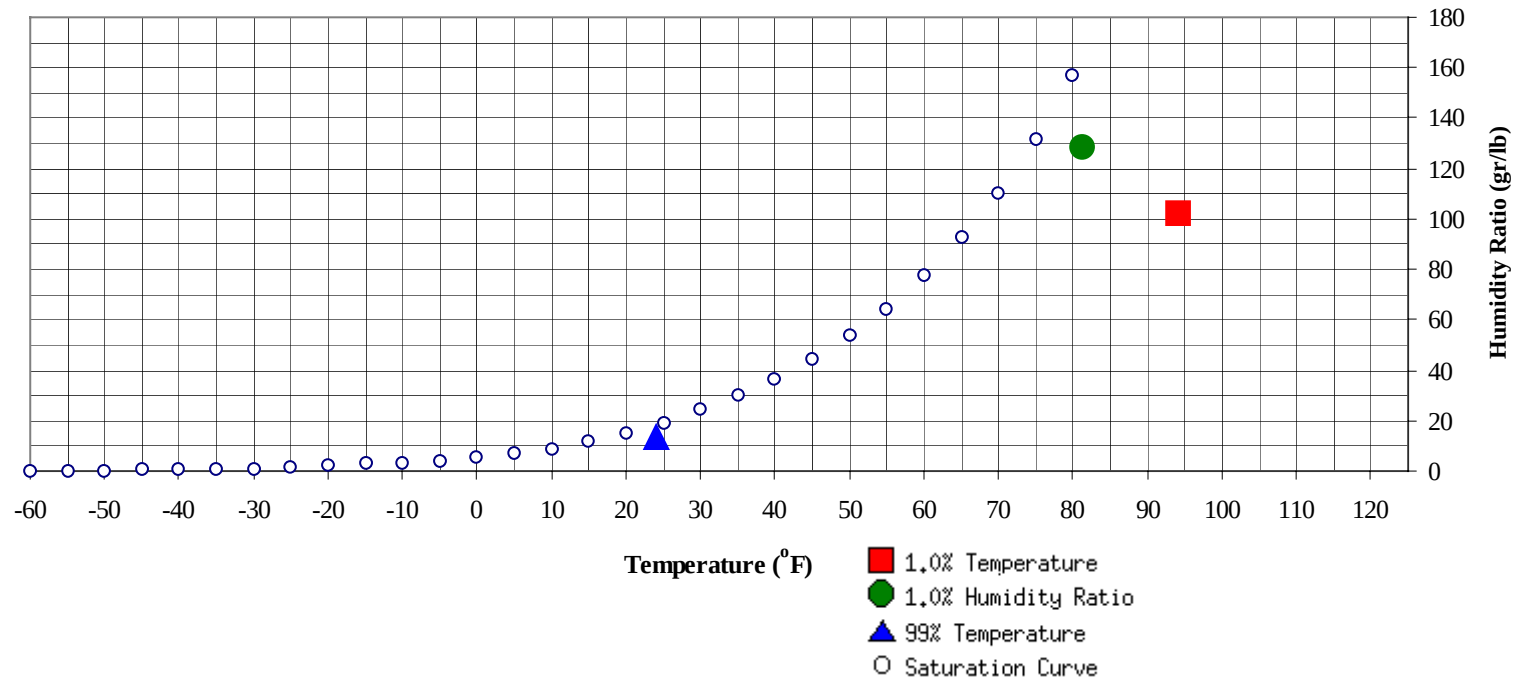
- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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Psychrometric Summary of Peak Design Values



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	13.6	7.8		128.8	81.2	76	74	39.7

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	94	102	75.2	38.6

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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		
105 / 109															
100 / 104															
95 / 99															
90 / 94												0		0	67.0
85 / 89												3	1	4	65.9
80 / 84		1	0	1	66.7		2	0	2	64.9		11	4	15	63.8
75 / 79		3	1	4	64.2		7	2	9	62.2	0	23	11	34	61.1
70 / 74	0	6	2	8	61.4	0	15	7	22	58.3	3	32	21	56	59.3
65 / 69	3	15	8	26	59.1	3	23	15	41	56.5	11	36	31	78	57.3
60 / 64	9	21	17	47	55.6	11	29	25	65	54.6	26	41	42	109	54.7
55 / 59	11	30	21	62	50.6	20	29	29	78	50.4	32	35	37	104	50.7
50 / 54	18	38	35	92	46.3	19	29	29	77	45.6	39	30	39	108	47.0
45 / 49	28	42	41	111	42.2	28	31	34	93	41.5	36	18	26	80	42.7
40 / 44	41	38	42	121	38.0	32	26	30	88	37.7	35	11	20	66	38.3
35 / 39	37	26	34	97	33.4	35	19	26	80	33.5	31	5	10	46	34.4
30 / 34	38	16	25	79	29.1	33	10	16	59	29.2	24	1	4	29	30.0
25 / 29	35	7	16	58	24.7	24	3	8	35	24.7	8	0	1	9	25.9
20 / 24	19	2	4	25	20.4	14	1	2	17	20.5	2	0	1	3	20.5
15 / 19	7	1	1	9	15.8	5	0	0	5	16.3	1	0	0	1	17.4
10 / 14	3	0	0	3	11.1	0	0	0	0	12.4	0			0	10.3
5 / 9	0	0	0	0	5.7	0			0	6.2	0			0	6.5
0 / 4	0	0		0	-0.1										

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.

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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		
105 / 109												0		0	71.5
100 / 104												1	0	1	73.5
95 / 99							1	0	1	72.5		12	3	15	74.2
90 / 94		3	0	3	66.1		13	3	16	71.1		40	14	54	73.6
85 / 89		18	6	24	65.5		41	15	56	69.4	0	67	28	95	72.3
80 / 84		31	13	44	64.1	0	63	29	92	67.5	4	63	44	111	71.2
75 / 79	0	40	22	62	61.8	6	55	45	106	66.2	37	38	61	136	70.4
70 / 74	6	45	37	88	60.1	41	42	60	143	65.0	107	15	64	186	68.7
65 / 69	27	41	47	115	58.4	73	20	48	141	62.7	57	3	19	79	64.9
60 / 64	46	31	43	120	55.6	51	8	24	83	58.4	23	1	5	29	59.9
55 / 59	46	19	30	95	51.6	34	3	14	51	54.1	9	0	2	11	55.4
50 / 54	40	9	21	70	47.4	24	1	7	32	50.1	3		0	3	50.9
45 / 49	32	3	12	47	43.4	14	0	2	16	46.0	1			1	46.6
40 / 44	23	1	6	30	39.8	4		0	4	41.6	0			0	43.0
35 / 39	14		2	16	35.5	1			1	36.8					
30 / 34	5		0	5	31.4										
25 / 29	1			1	27.2										
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 = 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		
105 / 109		0	0	0	77.3										
100 / 104		5	1	6	75.2		1	0	1	76.9					
95 / 99		26	8	34	75.8		14	3	17	76.1		3	0	3	75.5
90 / 94	0	65	22	87	75.5		49	14	63	75.7		22	4	26	74.8
85 / 89	1	72	36	109	74.7	0	73	30	103	74.7	0	50	15	65	73.2
80 / 84	14	49	56	119	73.9	5	58	50	113	73.8	0	62	29	91	71.2
75 / 79	80	23	73	177	72.7	60	36	83	179	72.9	16	49	61	126	70.2
70 / 74	124	7	46	177	70.3	135	13	57	205	70.5	91	31	72	194	68.7
65 / 69	24	1	5	30	65.8	38	2	10	50	65.9	63	14	30	107	64.3
60 / 64	5		0	5	61.2	10	1	1	12	60.9	30	6	18	54	59.4
55 / 59	1			1	55.6	1			1	57.6	22	2	8	32	55.0
50 / 54											13	0	3	16	50.8
45 / 49											5		0	5	46.5
40 / 44											1			1	42.6
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 = 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		
105 / 109															
100 / 104															
95 / 99		0		0	75.0										
90 / 94		2	0	2	72.6										
85 / 89		11	1	12	70.3		1	0	1	66.0					
80 / 84	0	35	7	42	67.9		6	0	6	67.1		0		0	67.2
75 / 79	1	46	18	65	65.3		21	4	25	64.5		6	1	7	65.4
70 / 74	14	48	37	99	63.9	3	36	15	54	62.4	2	14	5	21	63.6
65 / 69	28	44	47	119	61.0	17	37	28	82	60.5	5	20	10	35	59.3
60 / 64	43	31	46	121	57.3	23	38	35	96	56.3	9	28	19	56	55.2
55 / 59	41	18	37	97	53.4	28	36	37	101	51.5	15	33	26	74	50.7
50 / 54	41	8	28	78	49.3	32	32	38	102	47.2	23	39	41	103	46.6
45 / 49	34	3	17	54	45.2	32	18	33	83	43.3	32	42	40	114	42.2
40 / 44	25	0	8	33	41.0	31	9	23	63	39.4	36	32	39	107	38.2
35 / 39	15	0	2	17	36.5	29	4	16	49	35.2	37	17	31	85	34.1
30 / 34	5		0	5	32.2	30	1	9	40	30.9	40	10	22	72	29.8
25 / 29	1		0	1	27.7	15	0	1	16	26.7	30	4	12	46	25.3
20 / 24						1	0		1	22.3	15	1	3	19	20.9
15 / 19											4	1	0	5	16.2
10 / 14											1	0	0	1	10.7
5 / 9											0			0	6.3
0 / 4															

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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		
105 / 109		0	0	0	75.9
100 / 104		7	2	9	75.3
95 / 99		56	15	71	75.5
90 / 94	0	193	58	251	74.7
85 / 89	1	333	132	466	72.7
80 / 84	23	380	232	635	70.7
75 / 79	199	348	377	924	69.2
70 / 74	521	305	420	1246	66.8
65 / 69	346	258	299	902	61.4
60 / 64	285	236	277	798	56.5
55 / 59	260	206	241	707	51.8
50 / 54	253	188	242	683	47.3
45 / 49	243	160	207	610	42.8
40 / 44	229	119	170	517	38.5
35 / 39	199	73	122	394	34.1
30 / 34	175	38	77	290	29.7
25 / 29	113	14	38	165	25.2
20 / 24	52	4	10	66	20.6
15 / 19	17	2	2	21	16.1
10 / 14	4	0	1	5	11.1
5 / 9	1	0	0	1	6.0
0 / 4	0	0		0	-0.1

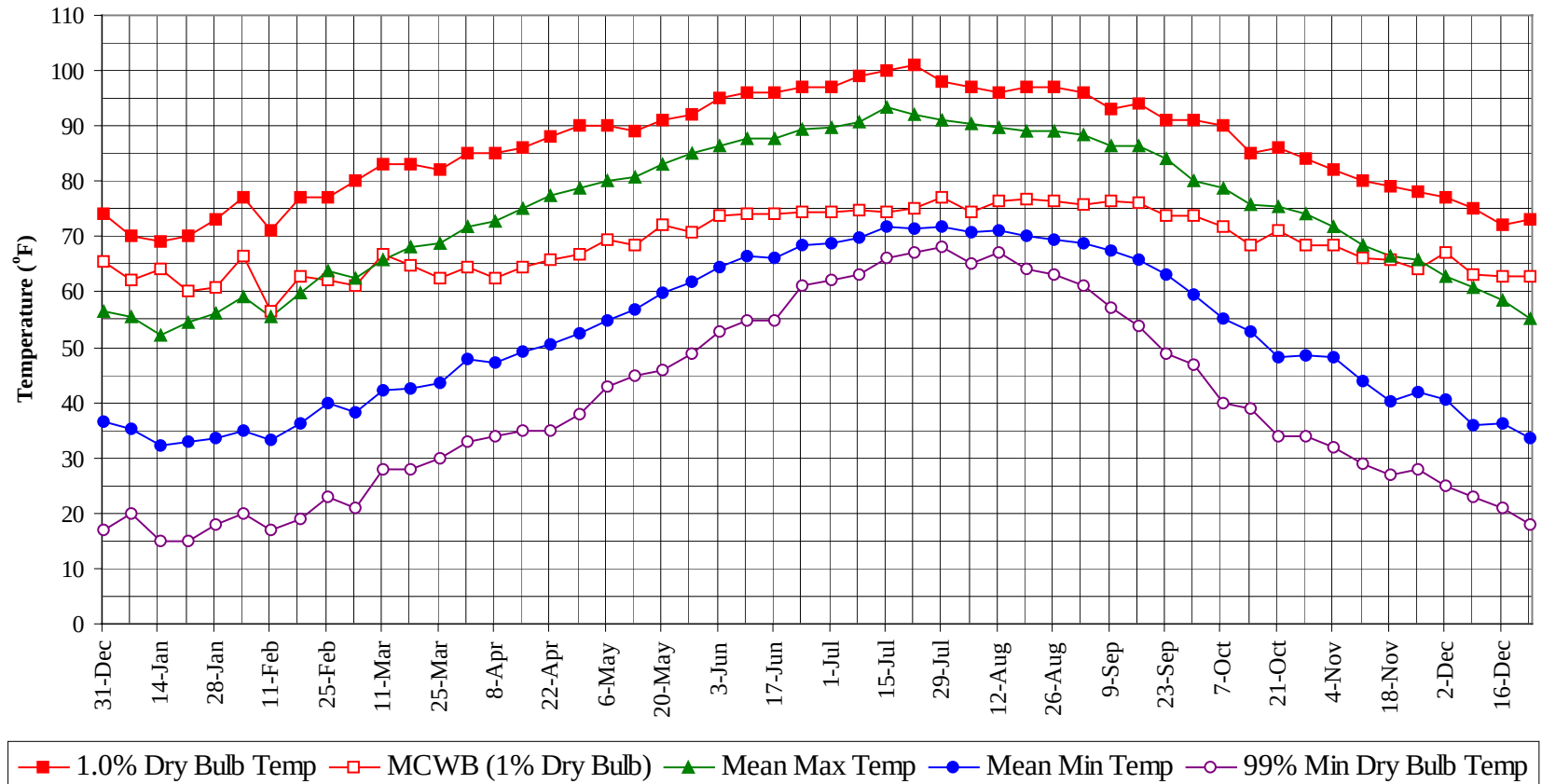
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

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Annual Summary of Temperatures

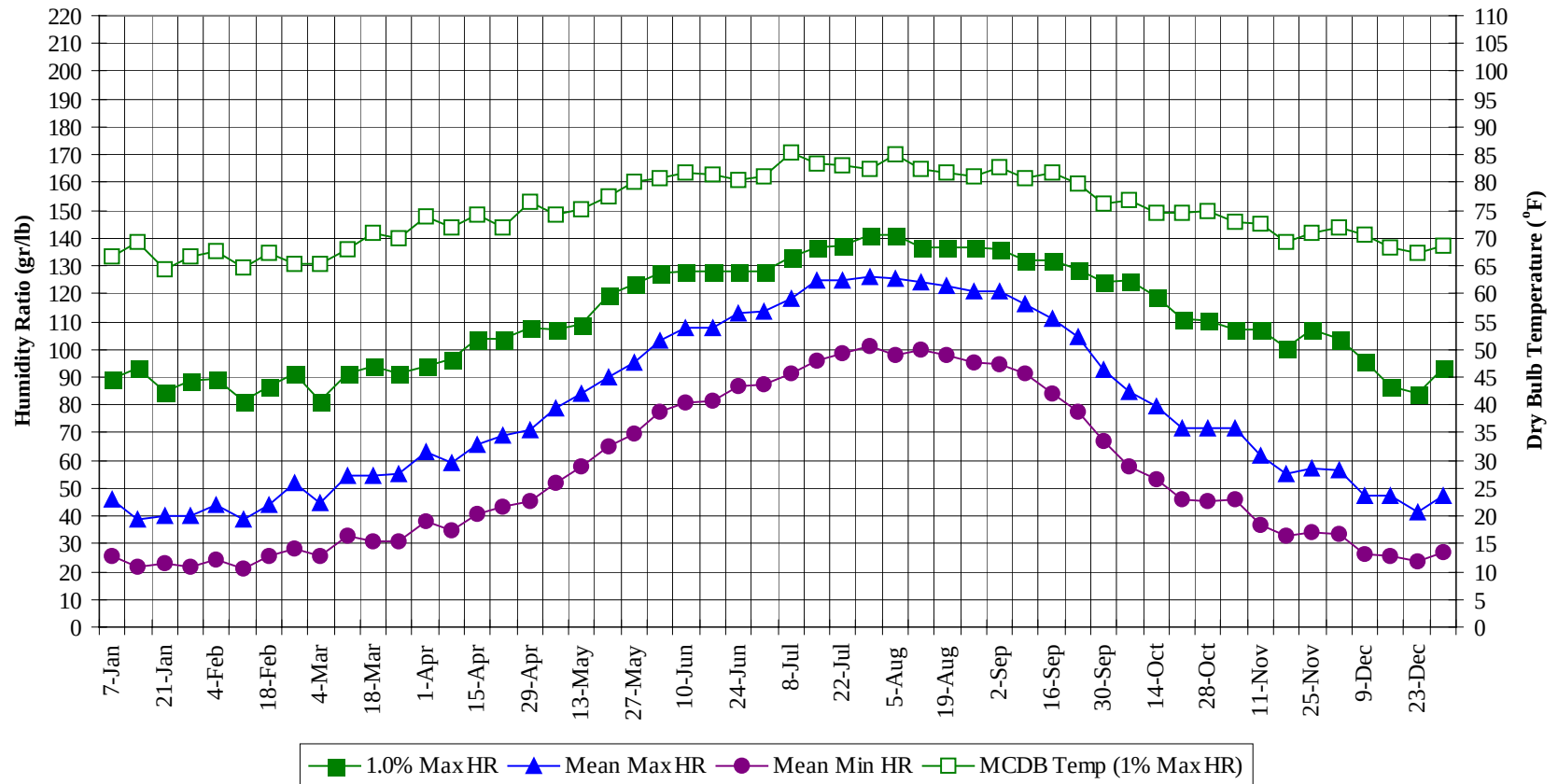


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Long Term Humidity and Dry Bulb Temperature Summary



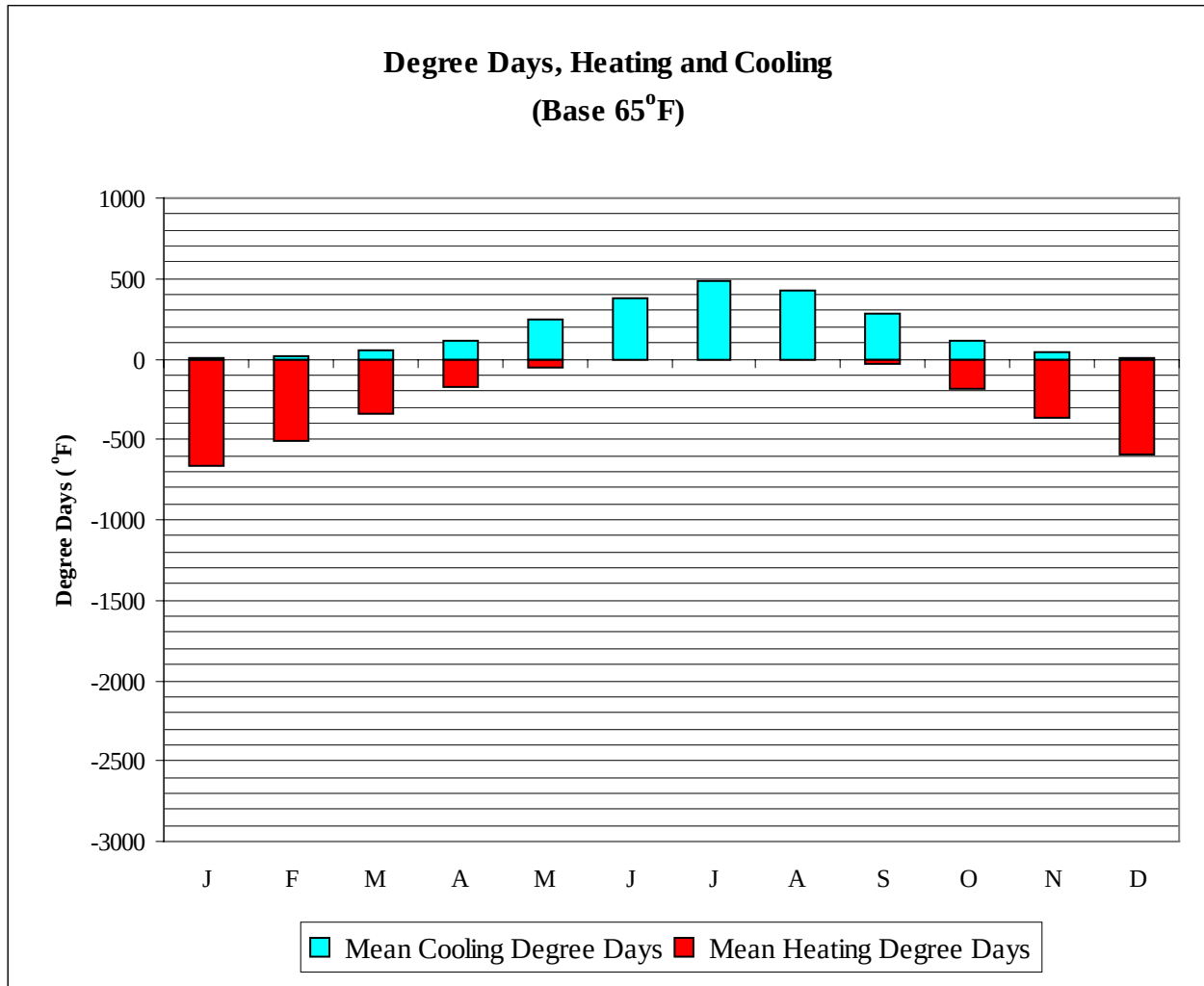
COLUMBIA**SC****WMO No. 723100****Long Term Dry Bulb Temperature and Humidity Summary**

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	62.3	55.4	35.3	20.0	89.6	66.6	45.8	25.9
14-Jan	69.0	64.1	52.2	32.2	15.0	93.1	69.2	39.0	21.4
21-Jan	70.0	60.2	54.4	33.0	15.0	84.7	64.4	40.2	22.7
28-Jan	73.0	60.7	56.2	33.4	18.0	88.9	66.8	40.1	21.8
4-Feb	77.0	66.3	59.2	34.9	20.0	89.6	67.6	44.3	24.5
11-Feb	71.0	56.5	55.5	33.2	17.0	81.2	64.8	38.8	21.2
18-Feb	77.0	62.9	59.8	36.1	19.0	86.8	67.3	43.9	25.6
25-Feb	77.0	62.3	63.7	39.9	23.0	91.0	65.5	51.6	28.4
4-Mar	80.0	61.3	62.5	38.3	21.0	81.2	65.4	45.0	25.7
11-Mar	83.0	66.7	65.8	42.2	28.0	91.0	67.9	54.5	32.9
18-Mar	83.0	64.9	68.0	42.5	28.0	93.8	70.8	54.5	31.1
25-Mar	82.0	62.5	68.8	43.5	30.0	91.0	69.9	55.3	30.7
1-Apr	85.0	64.5	71.9	47.9	33.0	93.8	73.7	63.2	38.4
8-Apr	85.0	62.6	72.7	47.3	34.0	96.6	72.0	58.9	34.9
15-Apr	86.0	64.5	75.0	49.2	35.0	103.6	74.1	65.7	40.5
22-Apr	88.0	65.7	77.5	50.6	35.0	103.6	72.0	68.7	43.2
29-Apr	90.0	66.7	78.9	52.6	38.0	107.8	76.4	71.1	45.6
6-May	90.0	69.5	80.2	54.8	43.0	107.1	74.2	78.9	52.2
13-May	89.0	68.6	80.8	56.7	45.0	109.2	75.3	84.0	57.6
20-May	91.0	72.2	83.2	59.8	46.0	119.7	77.5	89.9	64.8
27-May	92.0	70.9	84.9	61.9	49.0	123.2	80.0	95.1	69.6
3-Jun	95.0	73.7	86.5	64.4	53.0	127.4	80.8	103.2	77.5
10-Jun	96.0	74.1	87.9	66.5	55.0	128.1	81.6	108.0	81.0
17-Jun	96.0	74.2	87.7	66.2	55.0	128.1	81.3	107.9	81.6
24-Jun	97.0	74.5	89.4	68.4	61.0	128.1	80.5	113.1	86.4
1-Jul	97.0	74.4	89.6	68.6	62.0	128.1	81.0	113.9	87.2
8-Jul	99.0	74.8	90.7	69.9	63.0	133.0	85.5	118.1	91.3
15-Jul	100.0	74.4	93.3	71.7	66.0	136.5	83.4	124.6	95.9
22-Jul	101.0	75.1	92.0	71.6	67.0	137.2	83.1	124.5	98.8
29-Jul	98.0	77.0	91.1	71.8	68.0	141.4	82.6	126.3	101.1
5-Aug	97.0	74.5	90.3	70.7	65.0	141.4	85.0	125.3	97.8
12-Aug	96.0	76.3	89.7	71.0	67.0	136.5	82.4	124.2	99.6
19-Aug	97.0	76.8	89.1	70.0	64.0	136.5	81.8	122.5	97.9
26-Aug	97.0	76.4	89.2	69.4	63.0	136.5	81.0	120.7	95.4
2-Sep	96.0	75.9	88.6	68.8	61.0	135.8	82.7	120.5	94.4
9-Sep	93.0	76.3	86.3	67.5	57.0	132.3	80.7	115.9	91.0
16-Sep	94.0	76.2	86.4	65.8	54.0	132.3	81.8	111.1	84.1
23-Sep	91.0	73.9	84.1	63.1	49.0	128.8	79.8	104.5	77.4
30-Sep	91.0	73.9	80.1	59.5	47.0	123.9	76.1	92.3	67.0
7-Oct	90.0	71.9	78.8	55.1	40.0	124.6	77.0	85.0	57.6
14-Oct	85.0	68.6	75.8	52.8	39.0	119.0	74.5	79.2	53.4
21-Oct	86.0	71.1	75.4	48.3	34.0	111.3	74.6	71.8	45.8
28-Oct	84.0	68.3	74.0	48.4	34.0	110.6	74.9	71.3	45.6
4-Nov	82.0	68.3	71.9	48.3	32.0	107.1	72.9	71.4	45.9
11-Nov	80.0	66.1	68.3	43.9	29.0	107.1	72.4	61.8	36.7
18-Nov	79.0	65.7	66.3	40.1	27.0	100.8	69.4	55.2	32.5
25-Nov	78.0	64.1	65.9	41.9	28.0	107.1	71.0	57.2	33.9
2-Dec	77.0	67.1	62.9	40.6	25.0	103.6	71.9	56.8	33.4
9-Dec	75.0	63.1	60.7	35.9	23.0	95.9	70.5	47.1	26.1
16-Dec	72.0	62.8	58.5	36.2	21.0	86.8	68.3	47.3	25.4
23-Dec	73.0	62.8	55.1	33.5	18.0	84.0	67.3	41.3	23.6
31-Dec	74.0	65.4	56.7	36.5	17.0	93.1	68.8	47.0	26.8

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WMO No. 723100

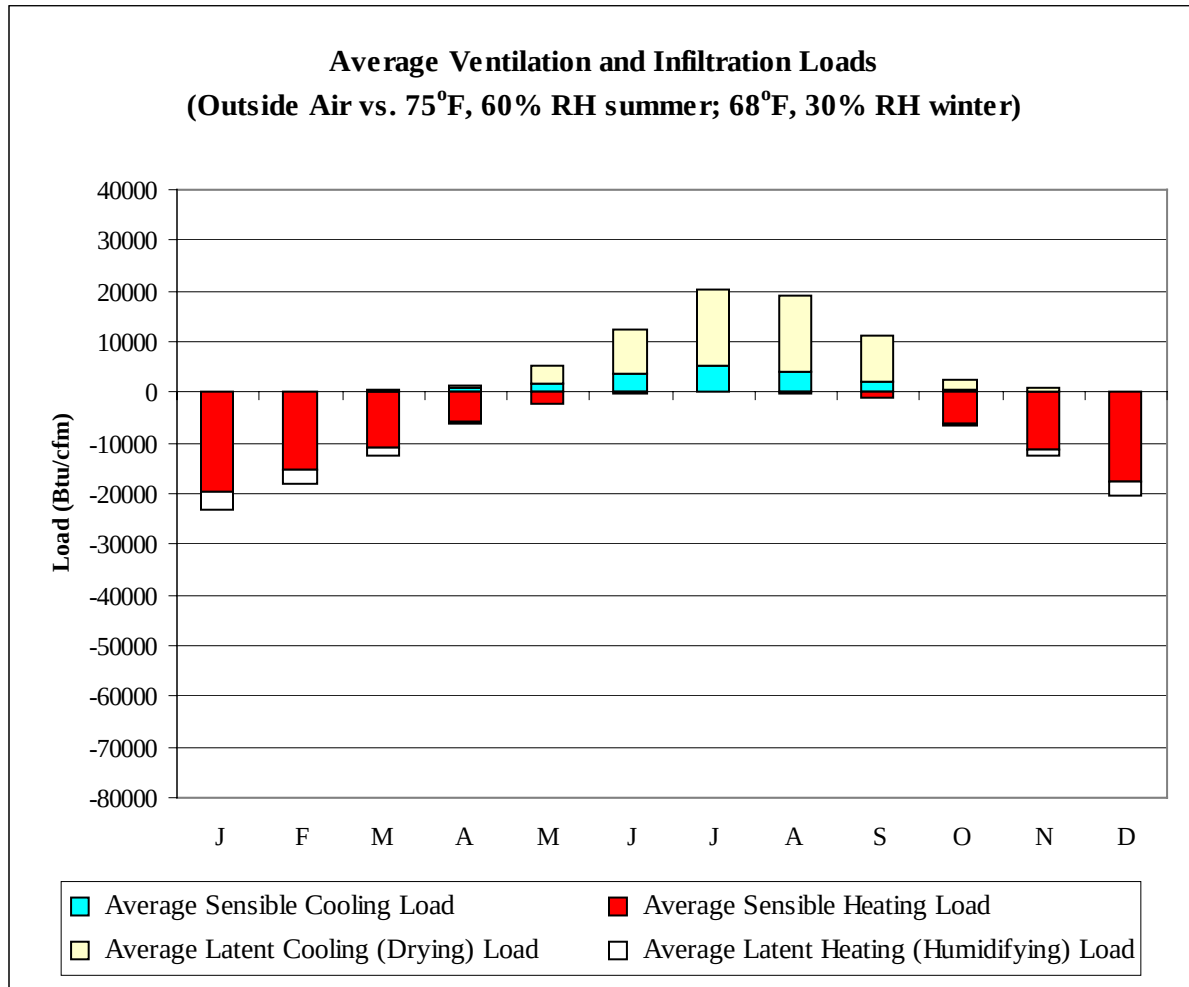


	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	6	664
FEB	15	507
MAR	51	346
APR	119	171
MAY	241	59
JUN	374	8
JUL	480	1
AUG	423	2
SEP	285	30
OCT	110	187
NOV	38	362
DEC	11	592
ANN	2152	2929

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SC

WMO No. 723100



	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	8	-19541	107	-3442
FEB	30	-15148	92	-2775
MAR	214	-10900	212	-1464
APR	776	-5836	631	-516
MAY	1878	-2282	3392	-30
JUN	3617	-425	8934	-1
JUL	5173	-58	15025	0
AUG	4037	-119	15007	0
SEP	2267	-1225	8738	-1
OCT	598	-6320	2027	-156
NOV	94	-11299	752	-1102
DEC	11	-17610	209	-2701
ANN	18703	-90763	55126	-12188

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
Clear Day	Diffuse	350	440	570	670	820	880	890	810	670	490	370	320	610
	Global	1150	1480	1910	2300	2520	2590	2520	2300	1960	1540	1180	1030	1880
	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
	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
	Global	800	990	1180	1330	1380	1380	1340	1270	1150	970	800	730	1110
Clear Day	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
	Global	1990	1950	1670	1220	880	740	790	1050	1440	1760	1890	1930	1440
	Global	530	680	840	1010	1030	1040	970	930	870	780	600	500	810
Clear Day	Diffuse	280	350	460	550	610	640	630	590	510	410	310	260	470
	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)

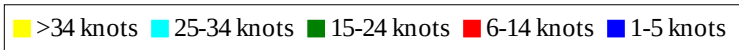
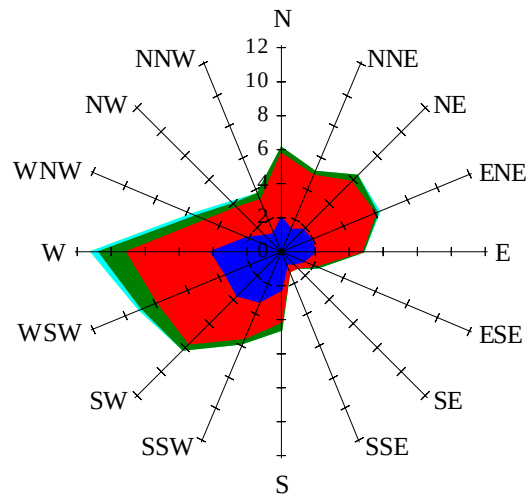
AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Unshaded	550	750	1010	1300	1410	1450	1400	1270	1090	900	630	500	1020
NORTH	Unshaded	160	200	260	310	360	400	380	330	280	230	170	150	270
	Shaded	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	360	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

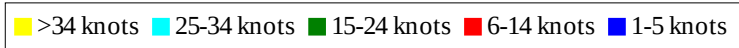
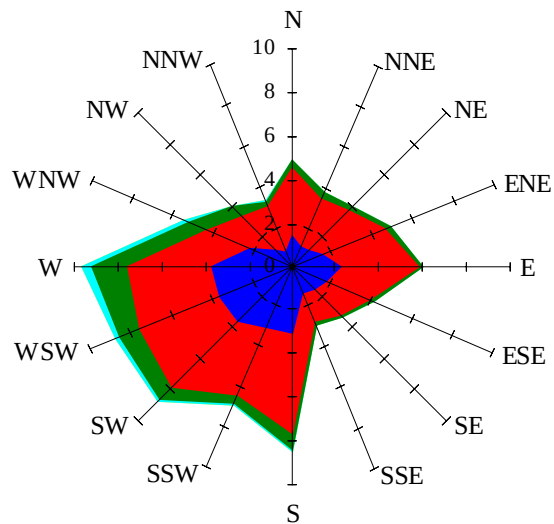
Labels of Percent Frequency on North Axis



Percent Calm = 14.92

Wind Summary - March, April, and May

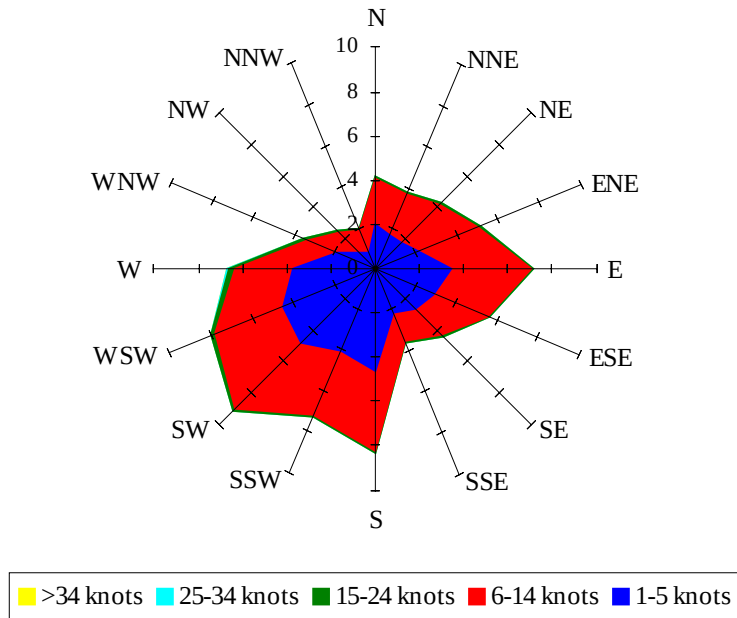
Labels of Percent Frequency on North Axis



Percent Calm = 11.50

Wind Summary - June, July, and August

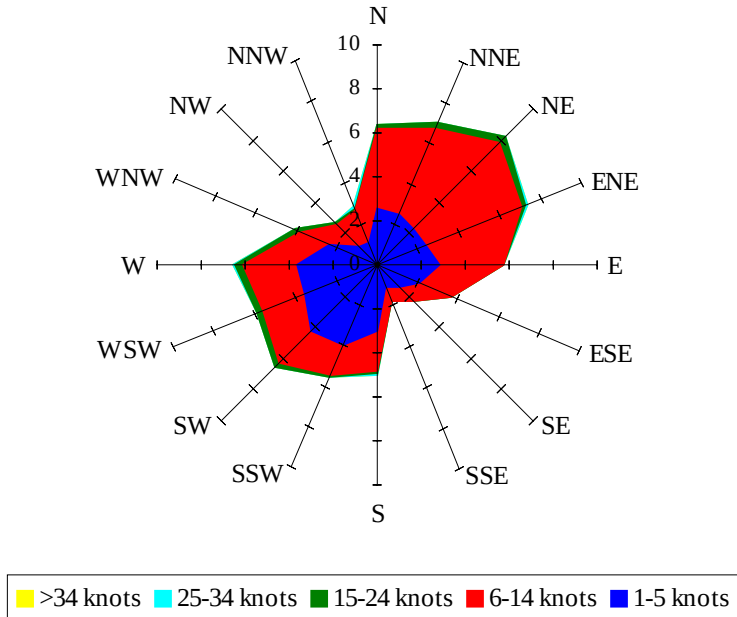
Labels of Percent Frequency on North Axis



Percent Calm = 15.18

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 18.32