

COOLIDGE AT

Latitude = 17.12 N

Longitude = 61.78 W

Period of Record = 1973 to 1996

WMO No. 788620

Elevation = 46 feet

Average Pressure = 29.89 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	90	79	136	15.6	E
0.4% Occurrence	88	79	133	16.4	E
1.0% Occurrence	88	79	133	16.4	E
2.0% Occurrence	88	79	133	16.4	E
Mean Daily Range	8	-	-	-	-
97.5% Occurrence	73	70	108	9.4	E
99.0% Occurrence	72	70	108	9.3	E
99.6% Occurrence	69	68	100	2.3	VARIABLE
Median of Extreme Lows	64	63	86	1.0	VARIABLE
	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	82	86	153	16.1	E
0.4% Occurrence	81	86	148	15.7	E
1.0% Occurrence	80	85	142	15.4	E
2.0% Occurrence	80	85	142	15.4	E
	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	164	86	1.08	17.1	E
0.4% Occurrence	151	84	0.99	14.4	E
1.0% Occurrence	150	84	0.99	14.7	E
2.0% Occurrence	144	83	0.96	14.3	E
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	5013	6663	8549

Other Site Data

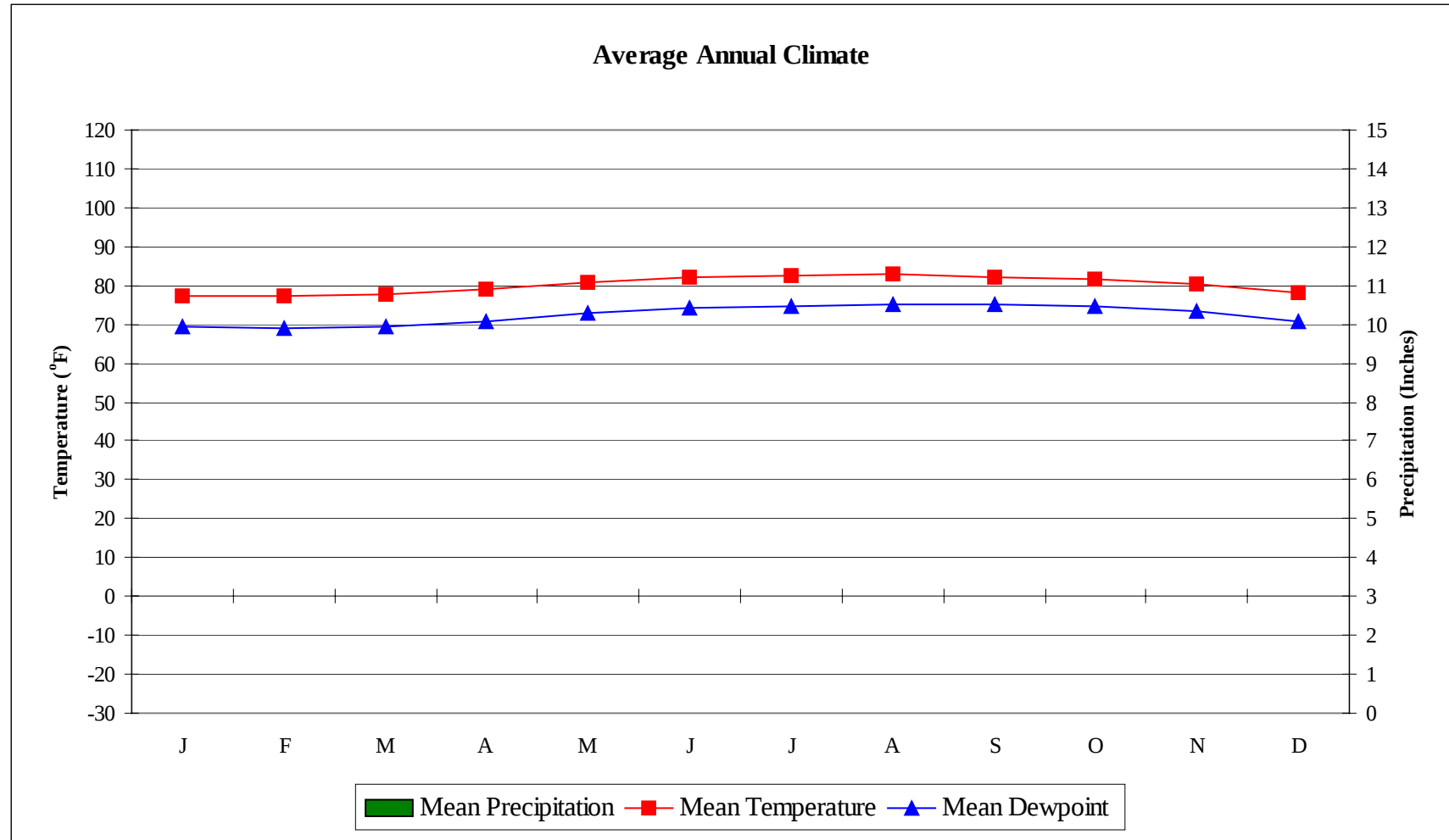
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
10	N/A	N/A	14.0 + 4.0
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
82.7	N/A	N/A	0

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

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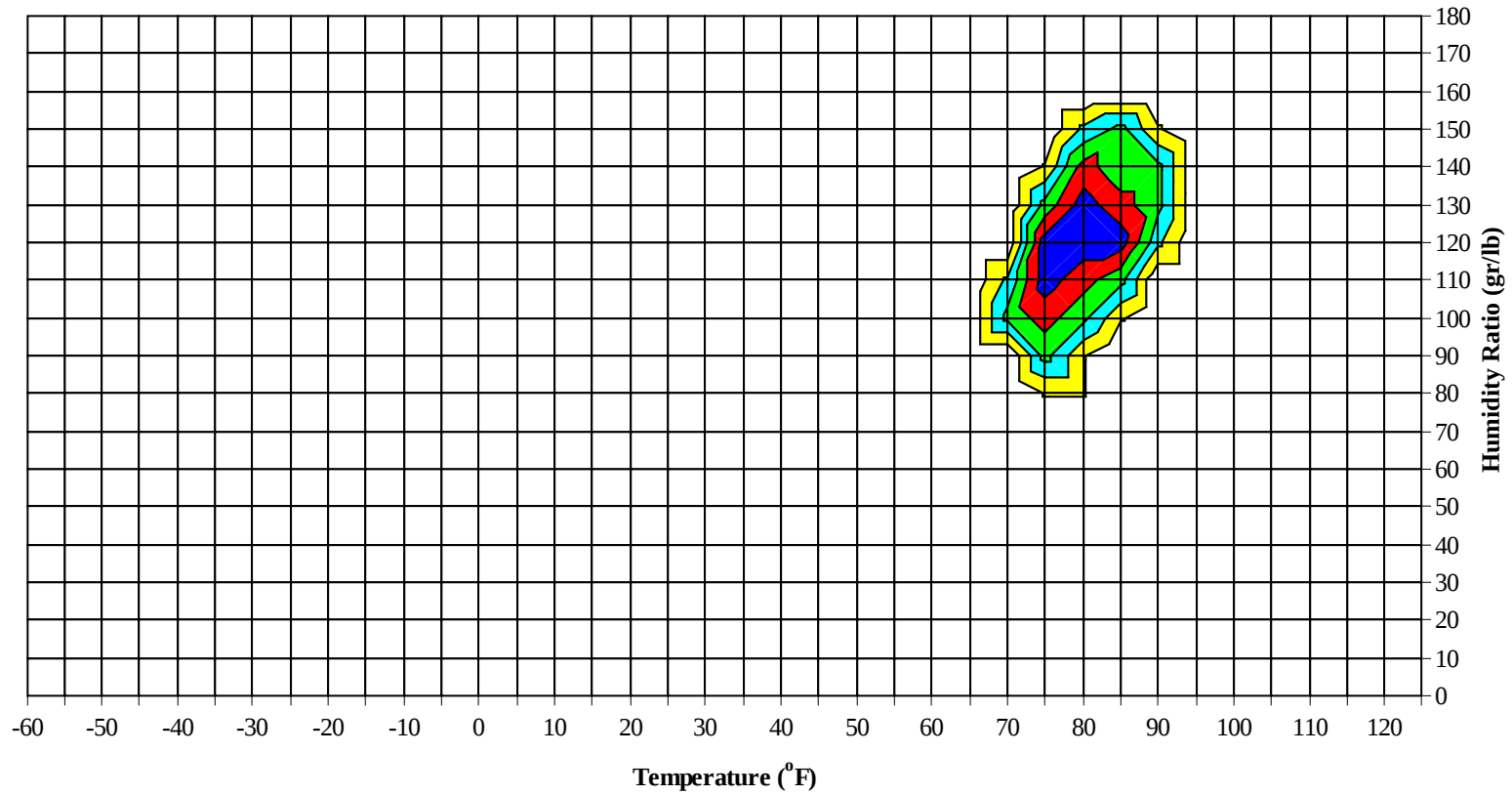
No Precipitation Data Available

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Long Term Psychrometric Summary

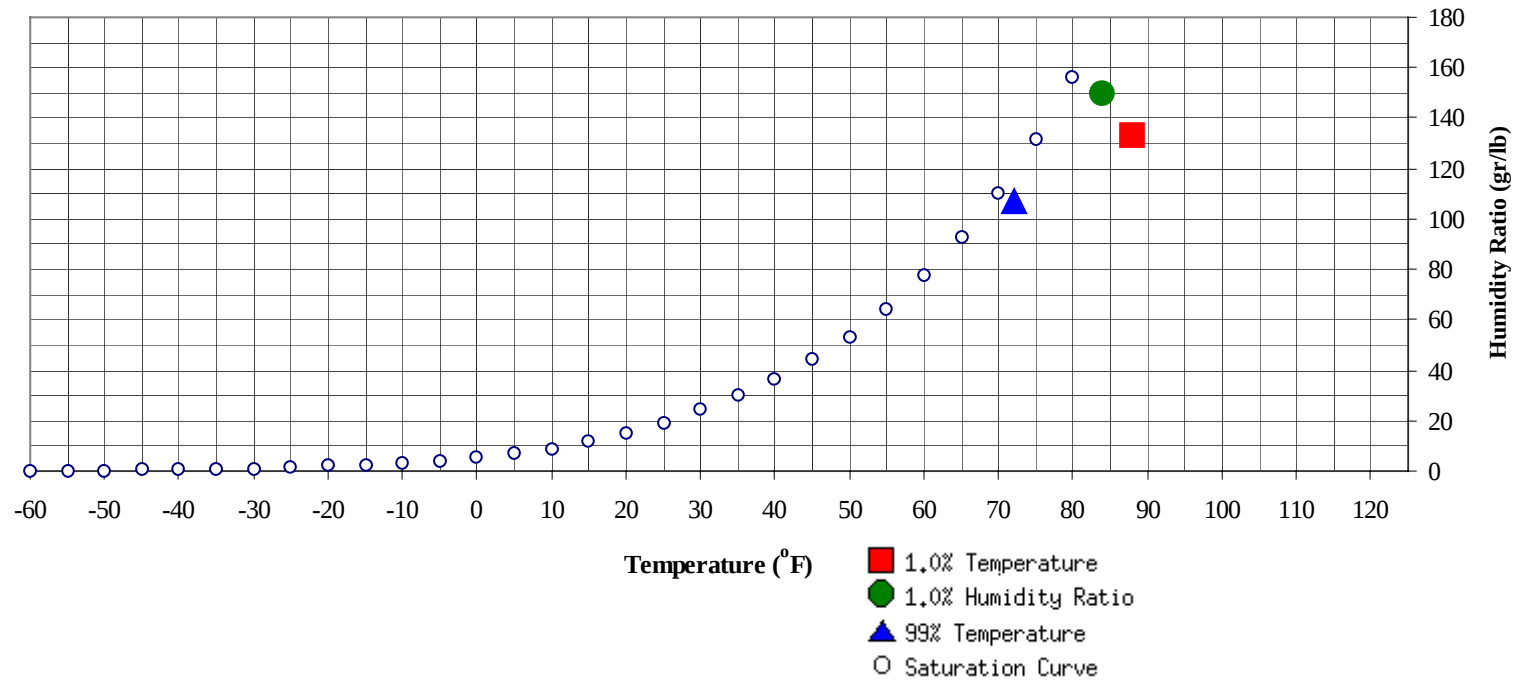


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	72	106.7	33.9		149.8	83.8	80.1	78.8	43.6

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	88	133.3	78.7	42.1

COOLIDGE AT WMO No. 788620
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		1	0	1	75.2		1		1	75.2			0	0	77.0
80 / 84	1	174	10	185	73.5	1	160	12	173	73.0	5	194	22	221	73.3
75 / 79	182	69	211	462	71.6	154	58	185	397	71.4	182	44	206	432	71.5
70 / 74	57	4	25	86	69.9	58	5	25	88	69.9	56	4	20	80	69.8
65 / 69	7	0	2	9	66.3	10	0	2	12	66.5	5	0	0	5	66.7
60 / 64	1		0	1	63.0	1	0		1	63.2	0			0	62.0

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.

COOLIDGE AT WMO No. 788620
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	76.5	0	1		1	77.0		1		1	78.7
85 / 89		19	0	19	76.1	1	64	2	67	77.1	1	127	4	132	77.8
80 / 84	20	196	51	267	74.3	66	171	129	367	75.7	157	107	204	468	76.3
75 / 79	185	23	180	387	72.6	174	11	115	299	74.2	81	5	32	118	74.7
70 / 74	34	2	9	45	70.7	7	1	2	10	71.5	1		0	1	71.8
65 / 69	1		0	1	66.2	0			0	65.0	0			0	67.0
60 / 64						0			0	62.0					

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COOLIDGE AT WMO No. 788620
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		0		0	82.0										
95 / 99		0		0	82.0										
90 / 94		4		4	80.3	0	7	0	7	80.1		7		7	79.1
85 / 89	2	165	9	176	78.1	3	177	14	194	78.4	4	140	8	152	78.5
80 / 84	192	74	220	486	76.6	197	58	215	470	76.9	154	83	192	429	77.0
75 / 79	53	5	19	77	75.3	48	6	19	73	75.6	78	9	39	125	75.5
70 / 74	1	0	0	1	72.3	0	0	0	0	72.6	4	1	1	6	72.0
65 / 69	0			0	63.0								0	0	
60 / 64															

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.

COOLIDGE AT WMO No. 788620
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	3		3	79.7						0			0	79.0
85 / 89	2	115	2	119	78.1	0	49	0	49	77.6	4			4	76.7
80 / 84	125	117	181	423	76.6	64	172	115	352	75.8	9	192	25	226	74.4
75 / 79	112	12	63	187	75.1	155	18	118	291	74.3	193	49	204	446	72.5
70 / 74	9	0	2	11	72.3	21	1	6	28	71.7	41	3	18	62	70.3
65 / 69						0			0	66.3	5		1	6	66.3
60 / 64											0			0	63.4

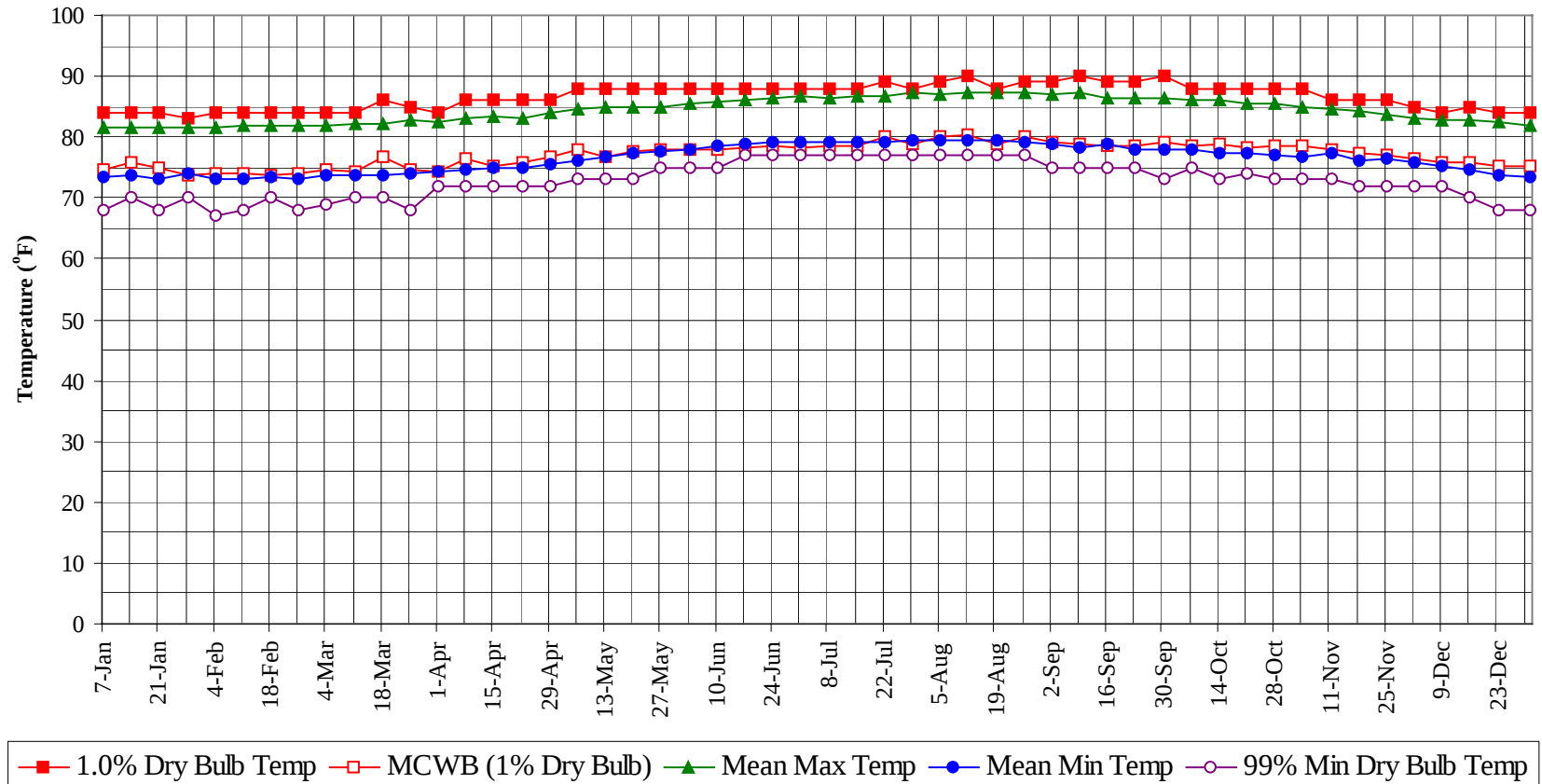
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

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[illegible]

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

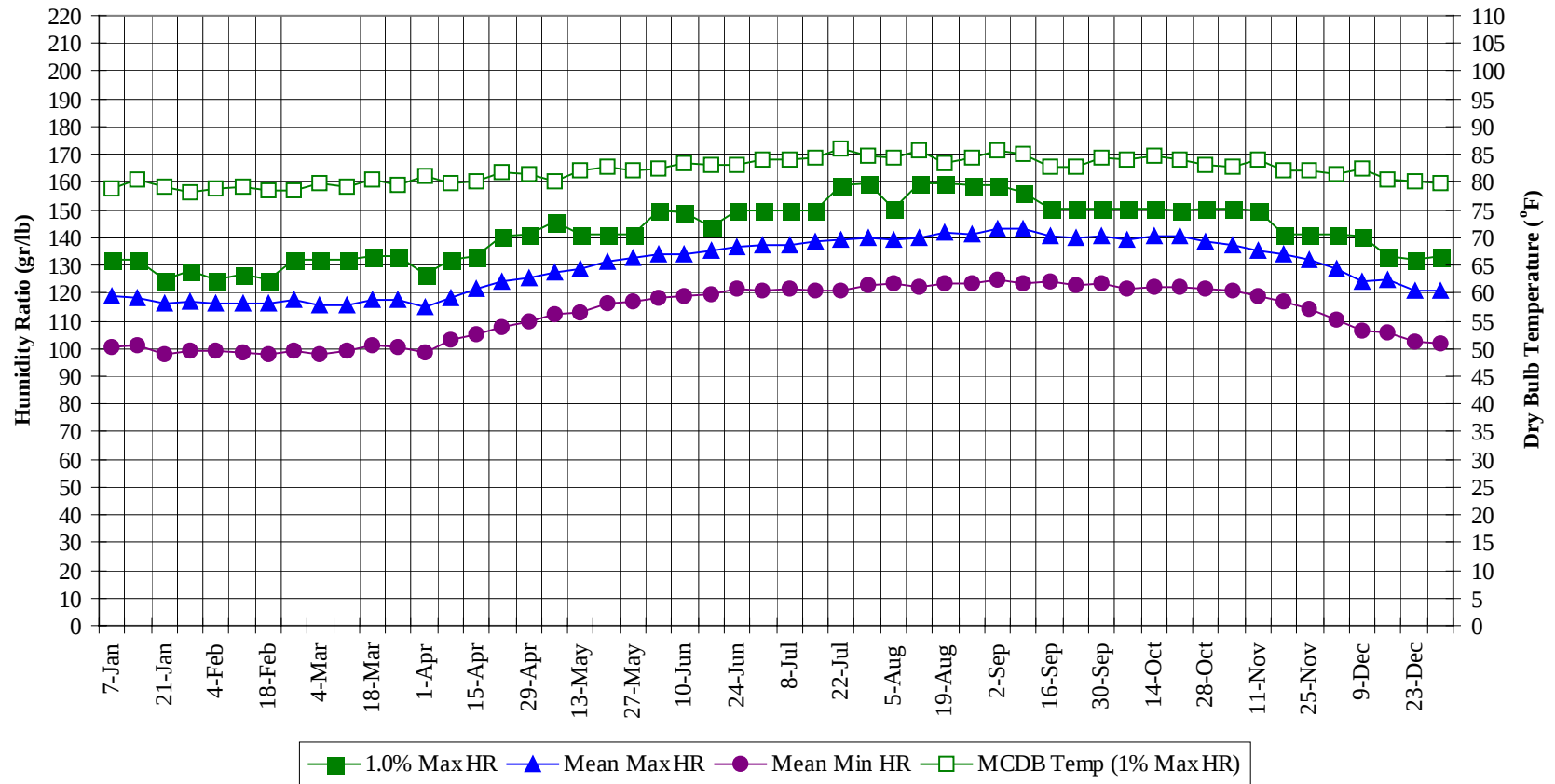


COOLIDGE

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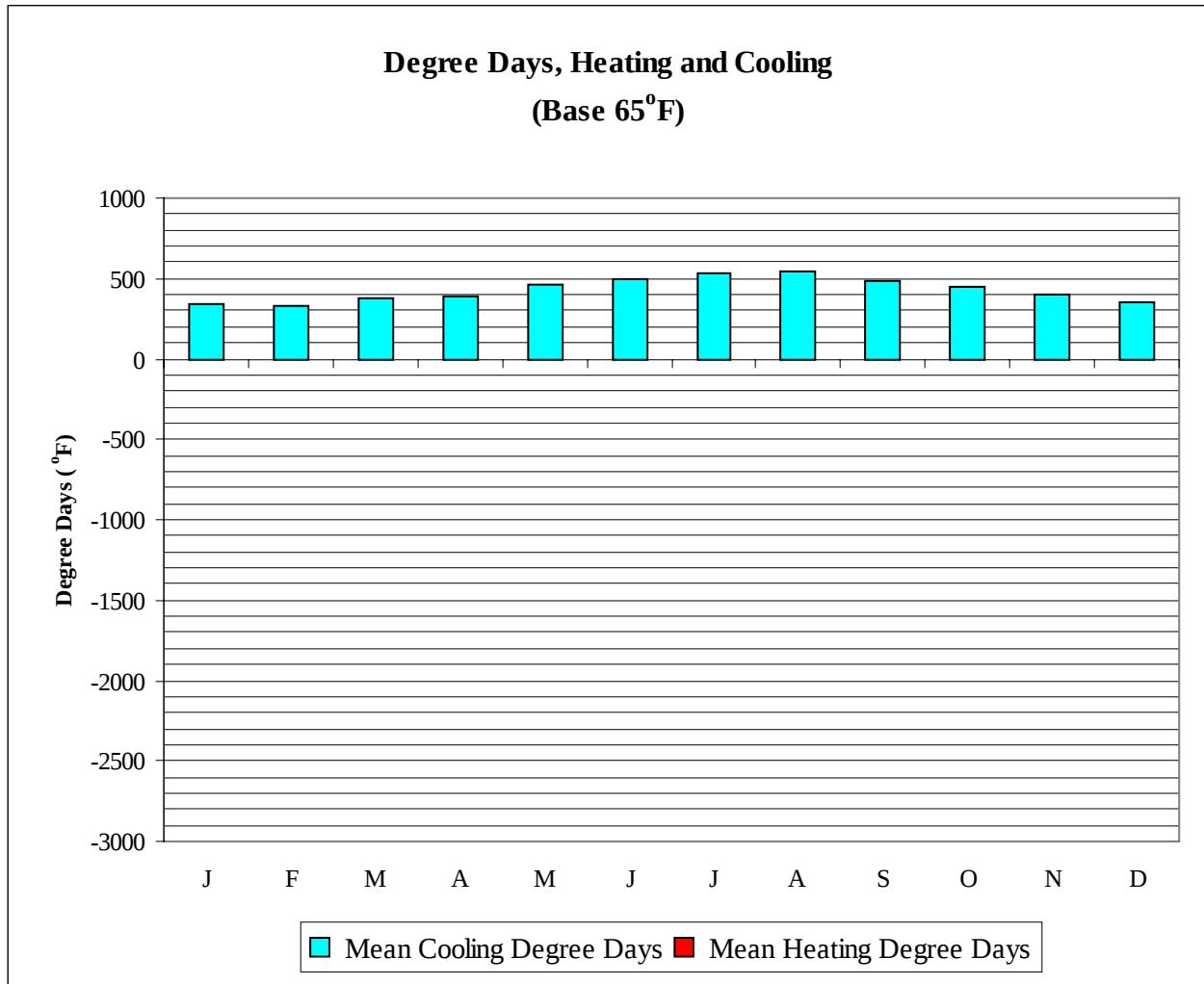
WMO No. 788620

Long Term Humidity and Dry Bulb Temperature Summary

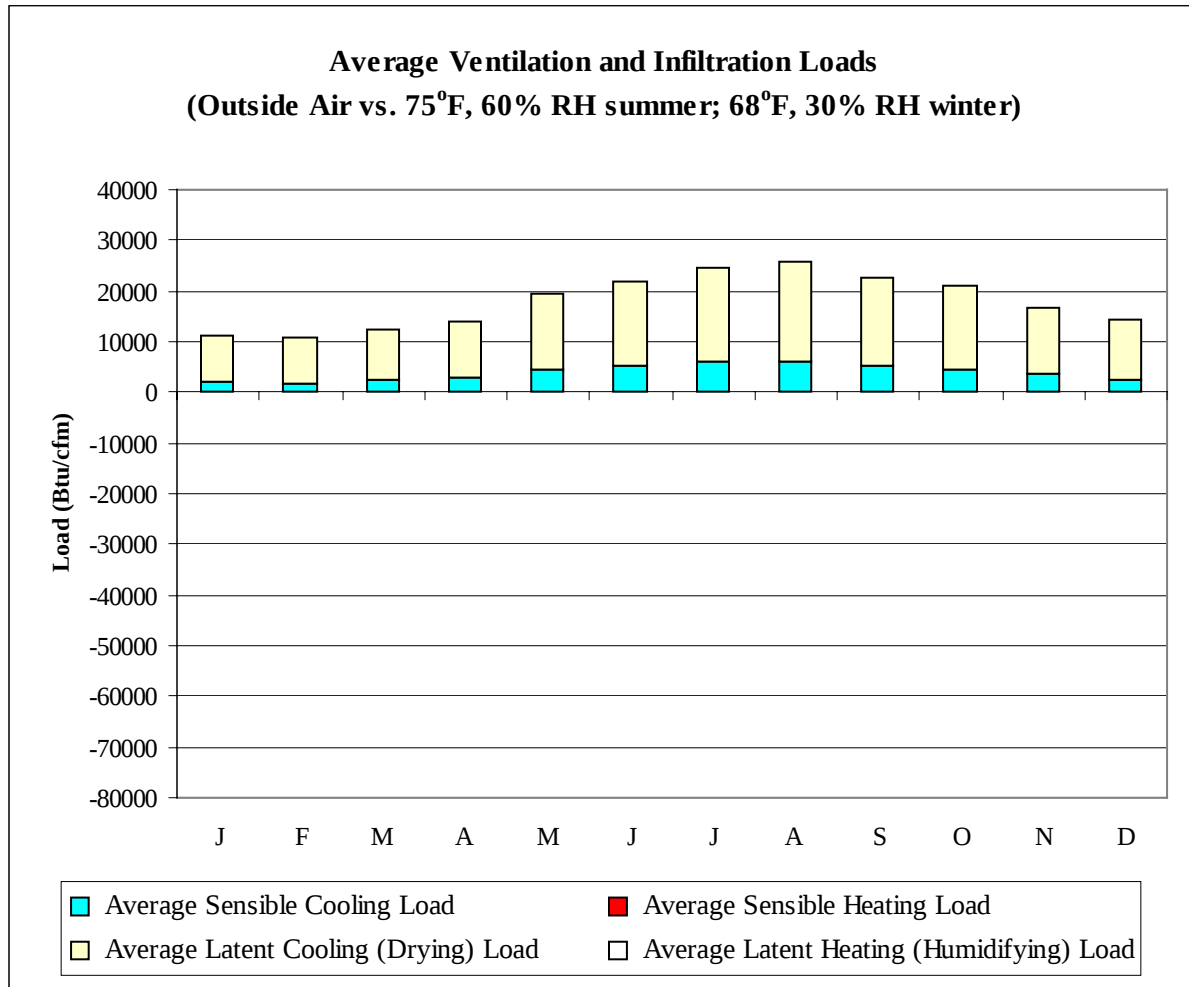


COOLIDGE**AT****WMO No. 788620****Long Term Dry Bulb Temperature and Humidity Summary**

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	84.0	74.6	81.6	73.5	68.0	132.3	78.9	119.0	100.8
14-Jan	84.0	75.7	81.4	73.7	70.0	132.3	80.6	118.1	101.0
21-Jan	84.0	74.9	81.6	73.2	68.0	124.6	79.1	115.9	97.6
28-Jan	83.0	73.7	81.5	74.0	70.0	128.1	78.0	116.8	99.4
4-Feb	84.0	74.0	81.7	73.1	67.0	124.6	78.9	116.0	99.4
11-Feb	84.0	74.0	81.8	73.1	68.0	126.7	79.0	116.4	98.8
18-Feb	84.0	73.6	81.8	73.3	70.0	124.6	78.6	116.1	97.7
25-Feb	84.0	74.1	81.9	73.2	68.0	132.3	78.6	117.4	99.3
4-Mar	84.0	74.5	82.0	73.7	69.0	132.3	79.7	115.6	98.2
11-Mar	84.0	74.4	82.0	73.8	70.0	132.3	79.2	115.7	99.2
18-Mar	86.0	76.7	82.3	73.7	70.0	133.0	80.4	117.8	101.4
25-Mar	85.0	74.6	82.7	73.9	68.0	133.0	79.6	117.3	100.2
1-Apr	84.0	74.4	82.4	74.3	72.0	126.7	81.1	115.2	98.8
8-Apr	86.0	76.3	83.2	74.5	72.0	132.3	79.8	118.5	103.2
15-Apr	86.0	75.3	83.4	74.8	72.0	133.0	80.2	121.5	104.8
22-Apr	86.0	75.8	83.1	75.1	72.0	140.7	81.8	124.0	107.9
29-Apr	86.0	76.7	83.9	75.7	72.0	141.4	81.4	125.3	109.5
6-May	88.0	77.9	84.6	76.3	73.0	145.6	80.0	127.5	112.2
13-May	88.0	76.8	84.8	76.7	73.0	141.4	82.2	129.0	113.1
20-May	88.0	77.6	84.8	77.3	73.0	141.4	82.6	131.4	116.1
27-May	88.0	77.9	85.0	77.6	75.0	141.4	82.0	132.6	116.6
3-Jun	88.0	78.1	85.4	77.9	75.0	149.8	82.5	134.2	118.2
10-Jun	88.0	78.0	85.8	78.6	75.0	149.1	83.4	134.2	118.7
17-Jun	88.0	78.3	86.1	79.0	77.0	143.5	83.1	135.0	119.5
24-Jun	88.0	78.4	86.4	79.3	77.0	149.8	83.1	136.6	121.6
1-Jul	88.0	78.3	86.7	79.2	77.0	149.8	84.0	137.3	120.6
8-Jul	88.0	78.6	86.5	79.2	77.0	149.8	84.0	137.0	121.2
15-Jul	88.0	78.5	86.8	79.1	77.0	149.8	84.2	138.3	121.2
22-Jul	89.0	80.1	86.8	79.2	77.0	158.9	85.9	139.2	121.1
29-Jul	88.0	79.0	87.2	79.4	77.0	159.6	84.9	140.1	123.0
5-Aug	89.0	80.0	87.0	79.4	77.0	150.5	84.4	139.3	123.5
12-Aug	90.0	80.5	87.3	79.6	77.0	159.6	85.6	140.1	122.4
19-Aug	88.0	78.9	87.3	79.4	77.0	159.6	83.5	141.6	123.3
26-Aug	89.0	79.9	87.3	79.3	77.0	158.9	84.5	141.0	123.8
2-Sep	89.0	79.3	87.1	78.8	75.0	158.9	85.6	142.9	124.7
9-Sep	90.0	79.0	87.2	78.3	75.0	156.1	85.0	143.1	123.7
16-Sep	89.0	78.5	86.3	78.7	75.0	150.5	82.9	140.5	124.0
23-Sep	89.0	78.6	86.3	78.0	75.0	150.5	82.9	139.6	122.9
30-Sep	90.0	79.2	86.5	77.9	73.0	150.5	84.3	140.6	123.1
7-Oct	88.0	78.6	86.2	78.0	75.0	150.5	84.1	139.3	121.7
14-Oct	88.0	79.0	86.2	77.3	73.0	150.5	84.6	140.6	122.3
21-Oct	88.0	78.4	85.6	77.4	74.0	149.8	84.2	140.5	122.4
28-Oct	88.0	78.7	85.5	77.2	73.0	150.5	83.0	138.9	121.8
4-Nov	88.0	78.6	84.9	76.8	73.0	150.5	82.8	137.0	121.1
11-Nov	86.0	77.9	84.6	77.3	73.0	149.8	84.0	135.4	118.7
18-Nov	86.0	77.5	84.3	76.2	72.0	141.4	82.1	133.9	117.1
25-Nov	86.0	77.1	83.7	76.3	72.0	141.4	82.2	132.0	114.0
2-Dec	85.0	76.6	83.0	75.8	72.0	141.4	81.3	128.8	110.1
9-Dec	84.0	75.7	82.8	75.4	72.0	140.7	82.3	123.9	106.2
16-Dec	85.0	75.9	82.7	74.6	70.0	133.0	80.5	124.5	105.5
23-Dec	84.0	75.2	82.6	73.7	68.0	132.3	80.3	121.1	102.5
31-Dec	84.0	75.1	81.8	73.4	68.0	133.0	79.8	120.8	101.9



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	341	0
FEB	335	0
MAR	379	0
APR	387	0
MAY	466	0
JUN	496	0
JUL	537	0
AUG	540	0
SEP	486	0
OCT	455	0
NOV	401	0
DEC	349	0
ANN	5171	0



	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	1937	-7	9313	0
FEB	1885	-8	8858	0
MAR	2389	-2	9821	0
APR	2997	-1	11086	0
MAY	4451	0	15099	0
JUN	5403	0	16616	0
JUL	6077	0	18592	0
AUG	6191	0	19611	0
SEP	5306	0	17431	0
OCT	4651	0	16453	0
NOV	3629	-2	13242	0
DEC	2577	-5	11923	0
ANN	47493	-25	168045	0

Average Annual Solar Radiation – Nearest Available Site
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

No Solar Radiation
Data Available

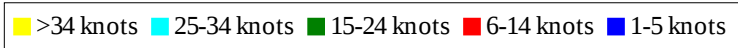
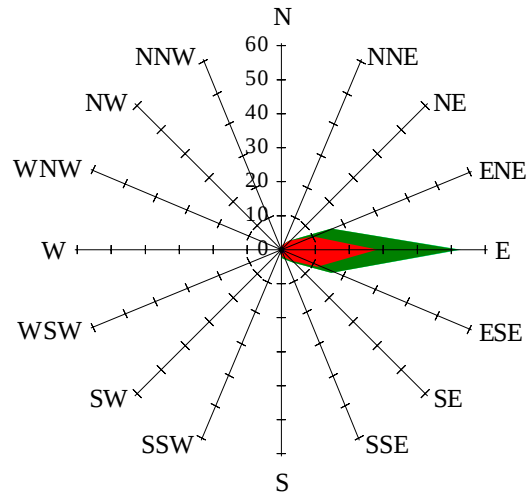


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

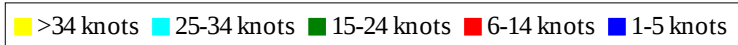
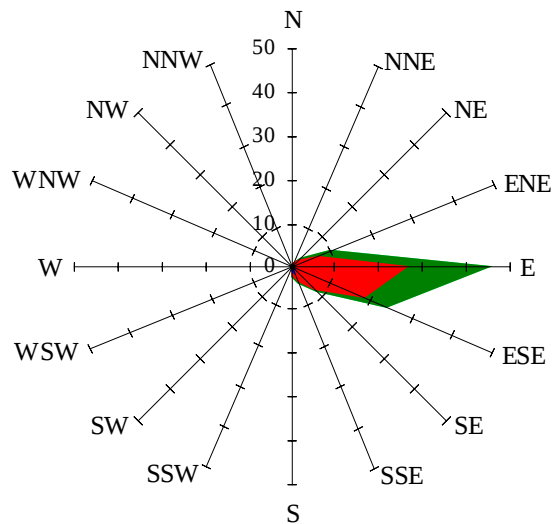
Labels of Percent Frequency on North Axis



Percent Calm = 3.59

Wind Summary - March, April, and May

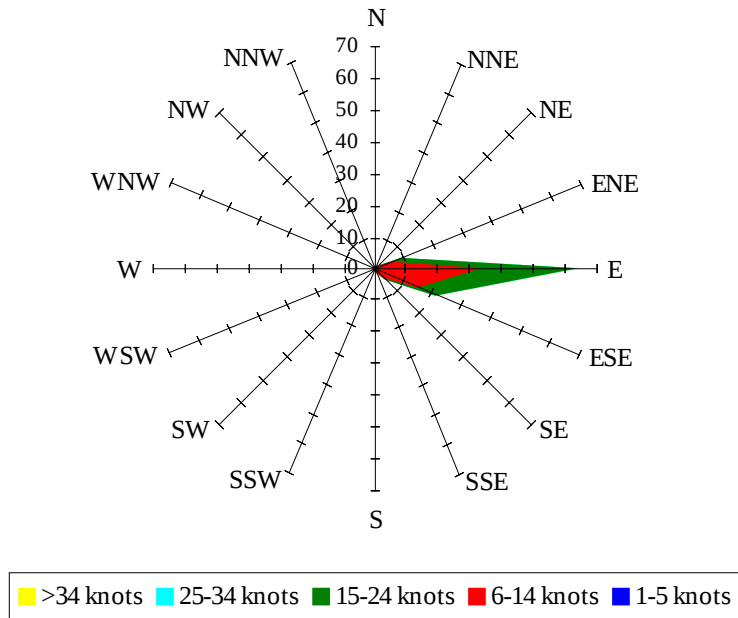
Labels of Percent Frequency on North Axis



Percent Calm = 2.37

Wind Summary - June, July, and August

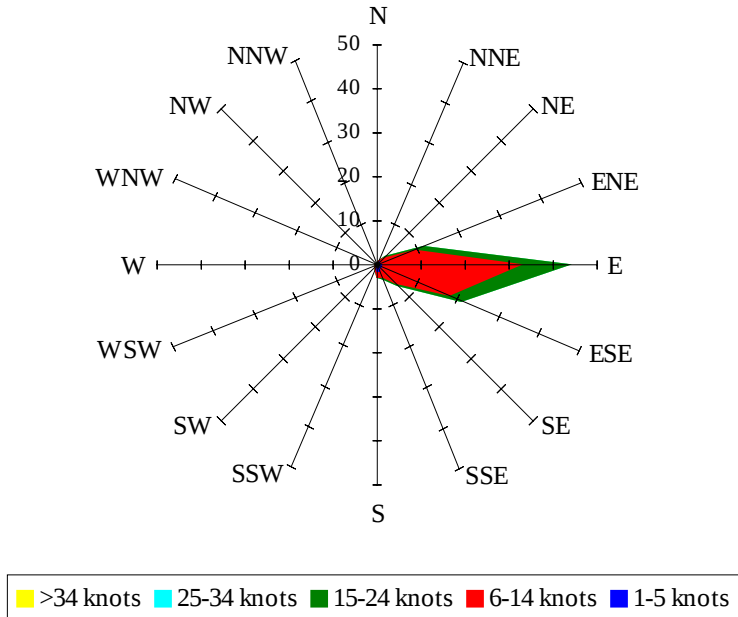
Labels of Percent Frequency on North Axis



Percent Calm = 0.45

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 5.28