

CAGLIARI, ITALY

Latitude = 39.25 N

Longitude = 9.05 E

Period of Record = 1973 to 1996

WMO No. 165600

Elevation = 3 feet

Average Pressure = 29.94 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	97	71	75	13.2	NNW
0.4% Occurrence	91	71	84	13.2	NNW
1.0% Occurrence	88	72	91	13.3	SSE
2.0% Occurrence	86	72	96	13.1	SSE
Mean Daily Range	16	-	-	-	-
97.5% Occurrence	41	40	35	4.0	NW
99.0% Occurrence	37	36	29	4.1	NW
99.6% Occurrence	34	33	26	4.9	NW
Median of Extreme Lows	28	27	19	4.5	NW
	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	155	12.5	SSE
0.4% Occurrence	79	84	140	11.6	SSE
1.0% Occurrence	77	82	130	10.9	SSE
2.0% Occurrence	76	82	124	10.9	SSE
	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	161	85	1.07	12.3	SSE
0.4% Occurrence	141	82	0.94	10.9	SSE
1.0% Occurrence	133	81	0.88	10.6	SSE
2.0% Occurrence	125	79	0.83	10.3	SSE
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		23	670	499	1707

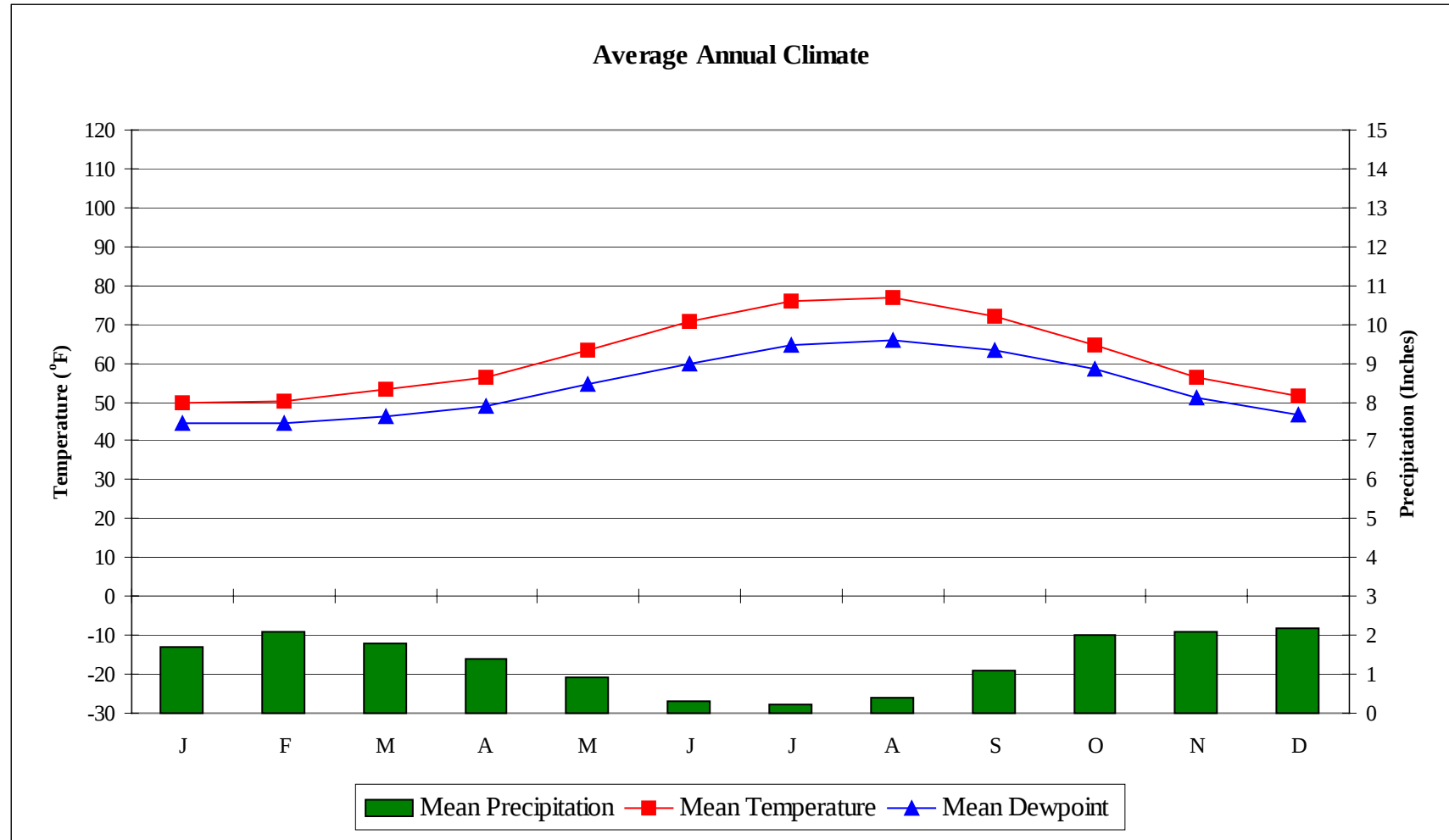
Other Site Data

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	N/A	N/A	2.6 + 0.7
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 (#)
64.2	N/A	N/A	2

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

CAGLIARI, ITALY

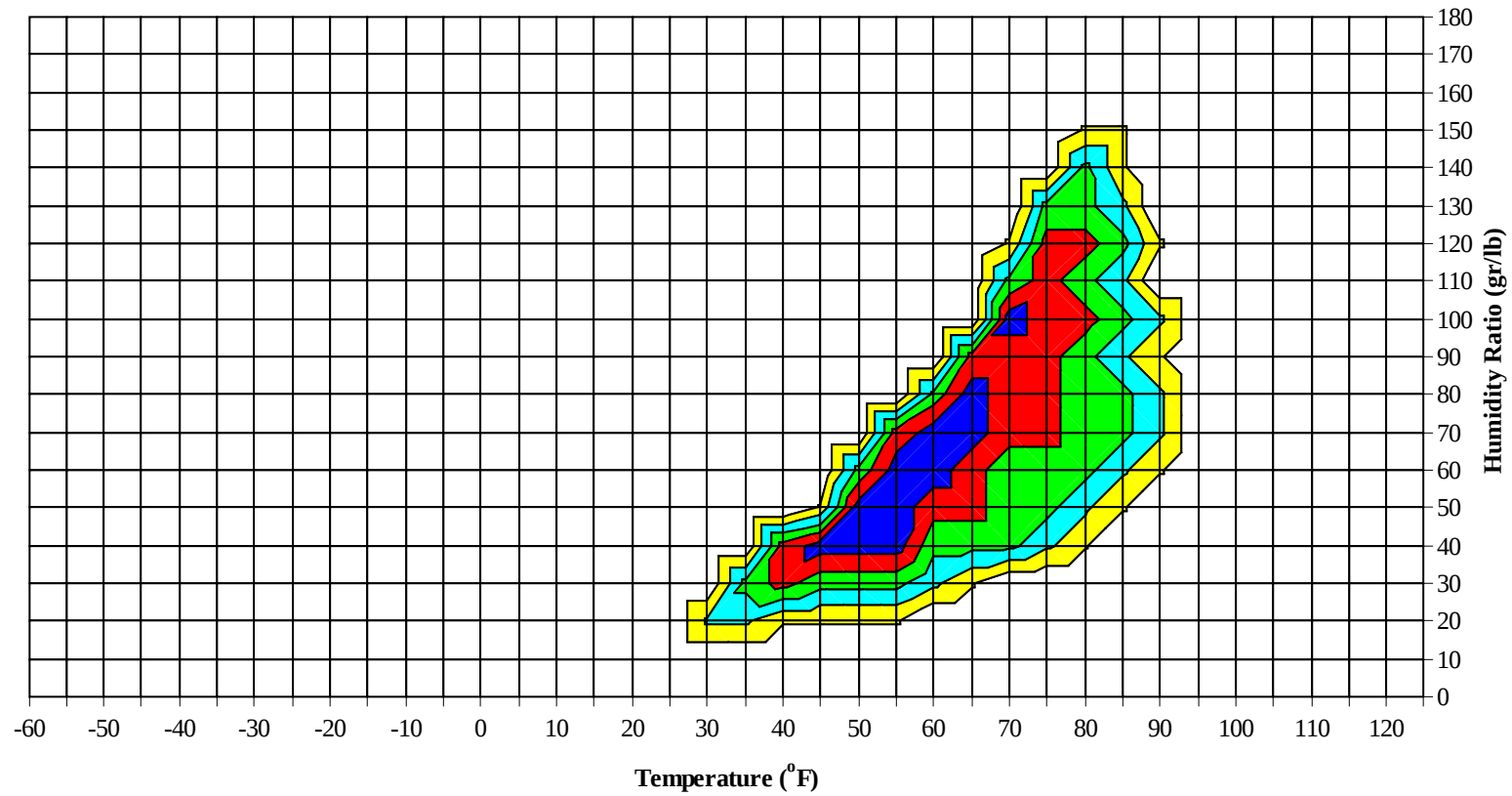
WMO No. 165600



CAGLIARI, ITALY

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Long Term Psychrometric Summary

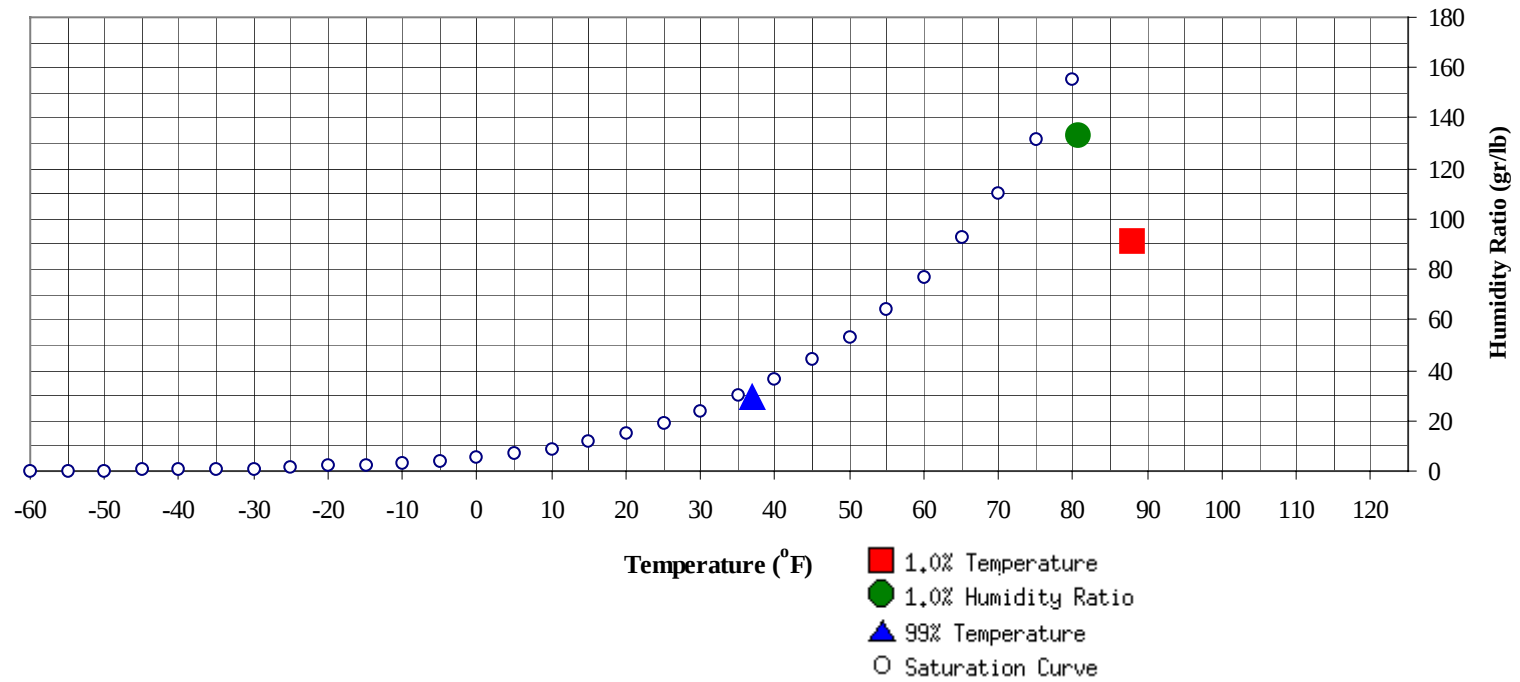


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	37	29.1	13.4		133	80.8	76.8	75.2	40.2

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	88	91.1	71.6	35.4

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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															
85 / 89															
80 / 84															
75 / 79															
70 / 74							0	0	0	59.0		3	1	4	58.1
65 / 69		1	0	1	57.9	0	3	0	3	57.6	0	12	3	15	57.3
60 / 64	1	21	4	26	56.5	1	27	8	36	55.4	3	67	24	94	55.5
55 / 59	23	91	57	171	52.7	20	77	56	153	52.6	35	90	93	218	52.8
50 / 54	60	67	97	223	49.1	51	64	90	205	48.8	73	49	87	209	49.2
45 / 49	69	39	60	168	44.9	69	35	53	157	44.7	83	21	33	137	45.1
40 / 44	49	17	19	85	40.8	44	11	13	68	40.8	35	4	6	45	41.0
35 / 39	34	10	8	52	36.7	34	6	3	43	37.0	17	1	1	19	37.0
30 / 34	12	3	2	17	31.7	5	1	0	6	32.4	3	0		3	32.2
25 / 29	1	0	0	1	27.0	0			0	28.0					

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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WMO No. 165600

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															
100 / 104												0	0	0	76.3
95 / 99												1	0	1	70.8
90 / 94							0		0	64.0		3	1	4	69.1
85 / 89							1	0	1	65.0		11	3	14	67.9
80 / 84		0		0	57.0		6	1	7	64.7	0	45	15	61	67.9
75 / 79		2	0	2	60.6		30	10	40	63.9	3	96	55	154	66.5
70 / 74	0	12	3	15	58.9	3	79	38	121	62.3	38	62	91	191	65.3
65 / 69	0	35	10	45	58.5	17	64	57	138	60.8	66	16	47	128	63.5
60 / 64	11	90	56	157	56.3	65	53	88	206	58.7	89	5	25	119	60.4
55 / 59	58	71	100	229	53.5	87	13	43	143	55.1	40	1	3	44	56.0
50 / 54	84	27	55	166	49.6	60	2	10	72	50.9	5	0	0	5	52.0
45 / 49	65	4	14	83	45.6	15	0	1	16	46.5	0			0	46.4
40 / 44	19	0	1	20	41.3	1			1	41.8					
35 / 39	3	0	0	3	37.6										
30 / 34	0			0	30.8										
25 / 29															

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 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	70.5		0		0	72.0					
100 / 104		1	0	1	72.2		0	0	0	74.0					
95 / 99		5	1	6	71.9		3	1	4	71.0		0		0	68.5
90 / 94		20	8	28	71.1	0	21	4	25	71.9	0	2	0	2	69.7
85 / 89	0	44	15	59	71.6	0	56	16	72	72.8	0	12	2	14	70.8
80 / 84	2	92	53	147	71.1	3	97	63	163	72.3	0	69	17	86	70.9
75 / 79	30	66	95	191	70.0	44	54	106	204	71.0	16	81	79	176	70.0
70 / 74	98	18	57	173	67.7	107	15	49	170	68.0	50	49	88	187	66.9
65 / 69	70	2	14	86	64.5	65	2	8	75	64.4	69	18	34	122	64.1
60 / 64	42	0	4	46	60.9	26	1	1	28	60.7	76	8	16	100	60.6
55 / 59	6			6	57.0	3	0		3	56.5	26	1	3	30	56.3
50 / 54						0	0		0	52.5	3	0		3	51.8
45 / 49															
40 / 44															
35 / 39															
30 / 34															
25 / 29															

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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															
90 / 94															
85 / 89		0		0	67.0										
80 / 84		5	0	5	70.0		0		0	65.0					
75 / 79	2	49	13	64	68.9		0	0	0	65.8					
70 / 74	21	82	58	161	66.0	1	17	2	20	64.0		0	0	0	60.4
65 / 69	29	46	63	138	62.7	5	42	16	63	61.6	0	6	1	7	60.3
60 / 64	68	40	70	179	59.6	23	72	65	160	58.1	7	50	17	74	57.4
55 / 59	78	20	34	133	55.5	62	57	84	203	54.2	35	82	77	194	53.5
50 / 54	41	4	8	53	51.1	74	34	52	160	50.2	61	57	83	201	49.5
45 / 49	9	1	1	11	46.2	50	13	17	80	45.6	71	33	48	152	45.2
40 / 44	0	0	0	0	42.1	19	3	4	26	41.3	38	11	15	64	41.0
35 / 39		0		0		6	1	1	8	37.1	29	7	5	41	37.1
30 / 34						1	0		1	32.7	7	2	1	10	31.8
25 / 29											1	0		1	27.9

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CAGLIARI, ITALY

WMO No. 165600

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

Period of Record = 1973 to 1996

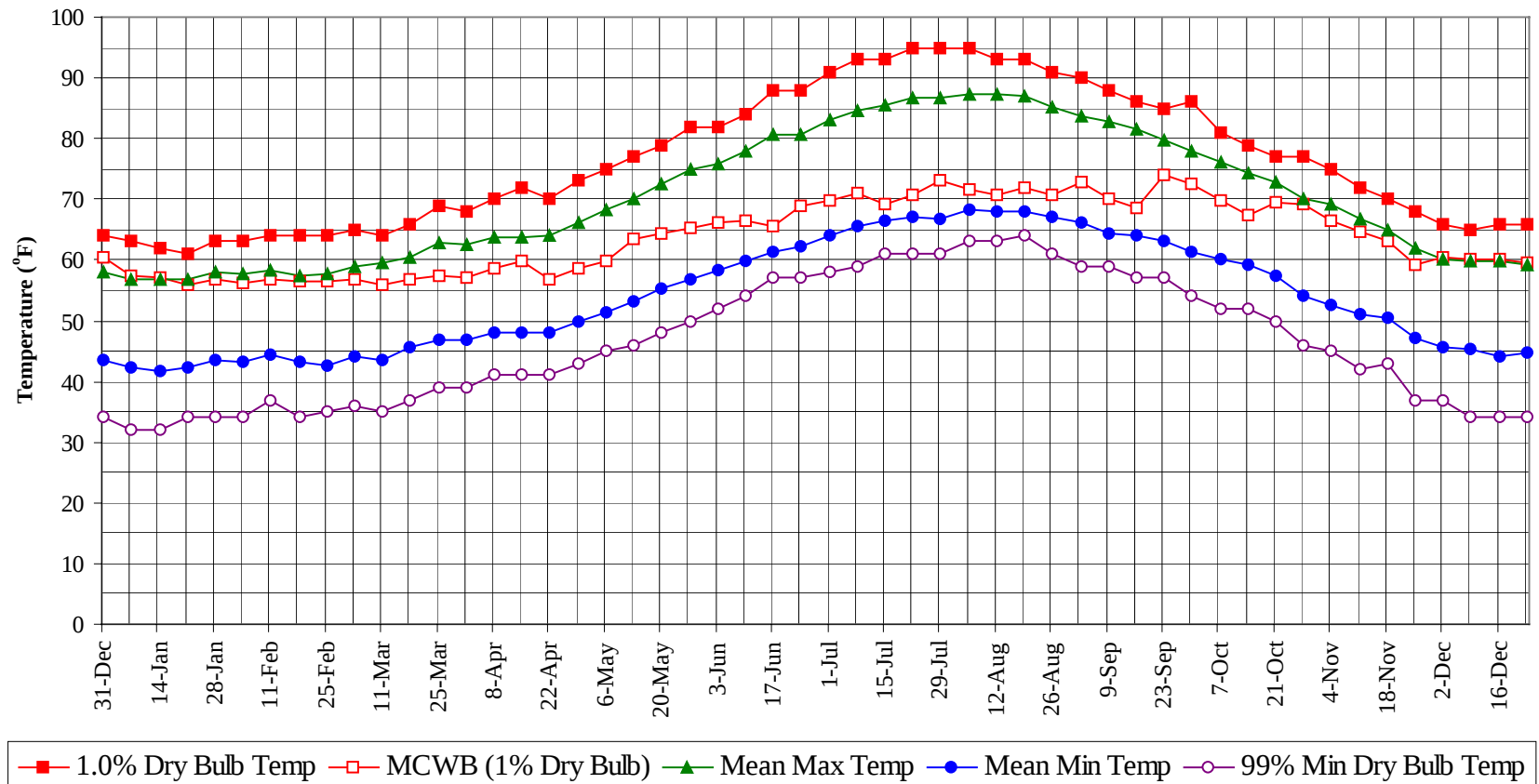
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
105 / 109	0			0	70.9
100 / 104	1			0	1 73.1
95 / 99	9			3	12 71.5
90 / 94	0	45	13	58	71.2
85 / 89	0	122	36	158	71.7
80 / 84	6	311	147	464	71.0
75 / 79	93	373	353	820	69.2
70 / 74	312	334	380	1026	66.0
65 / 69	318	248	250	816	62.6
60 / 64	410	435	382	1227	58.4
55 / 59	472	507	556	1536	53.8
50 / 54	514	309	490	1312	49.5
45 / 49	433	148	231	812	45.2
40 / 44	207	48	58	313	41.0
35 / 39	124	25	18	167	36.9
30 / 34	28	6	3	37	31.9
25 / 29	2	0	0	2	27.4

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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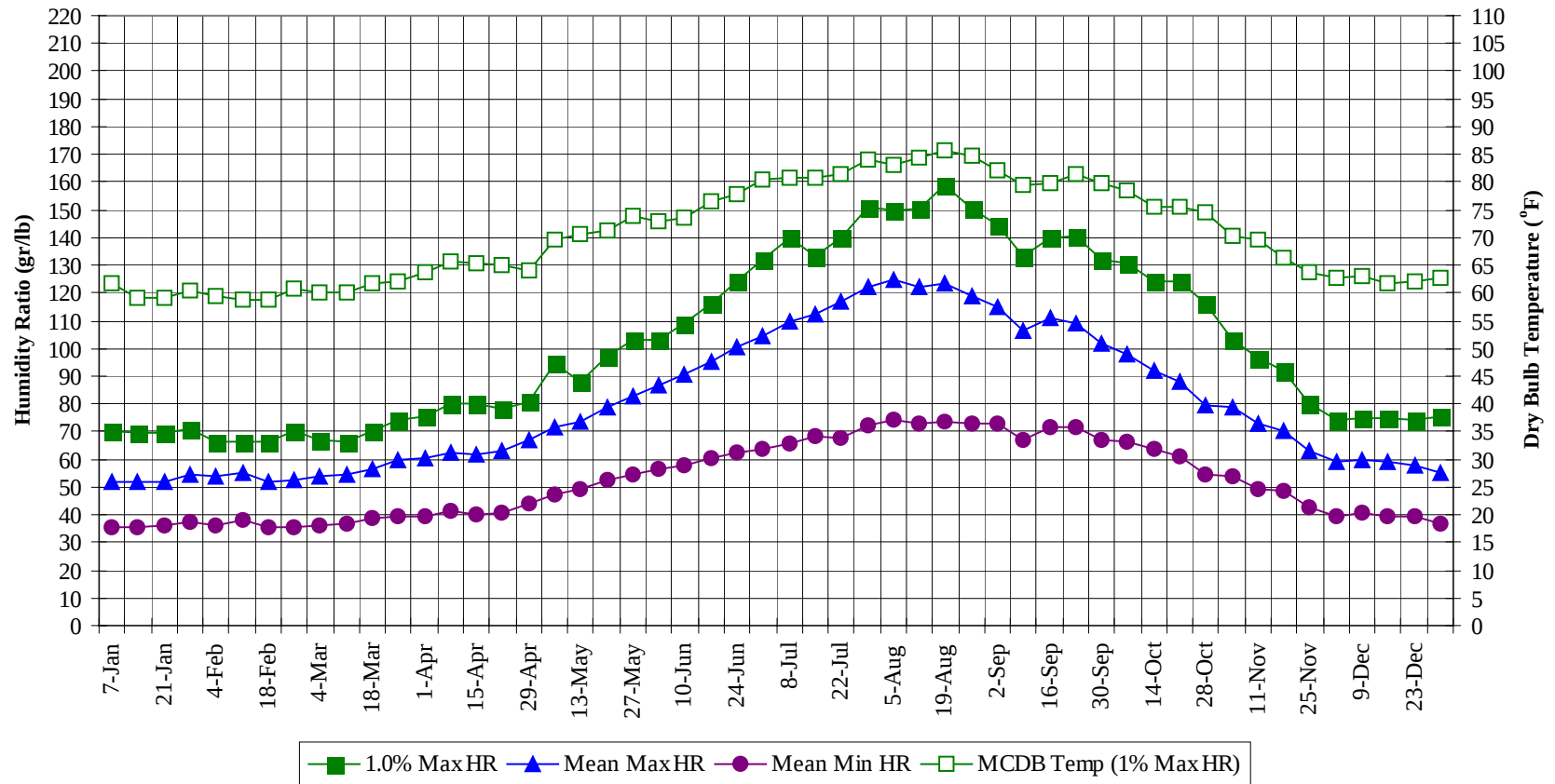
Annual Summary of Temperatures



CAGLIARI, ITALY

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Long Term Humidity and Dry Bulb Temperature Summary



CAGLIARI, ITALY

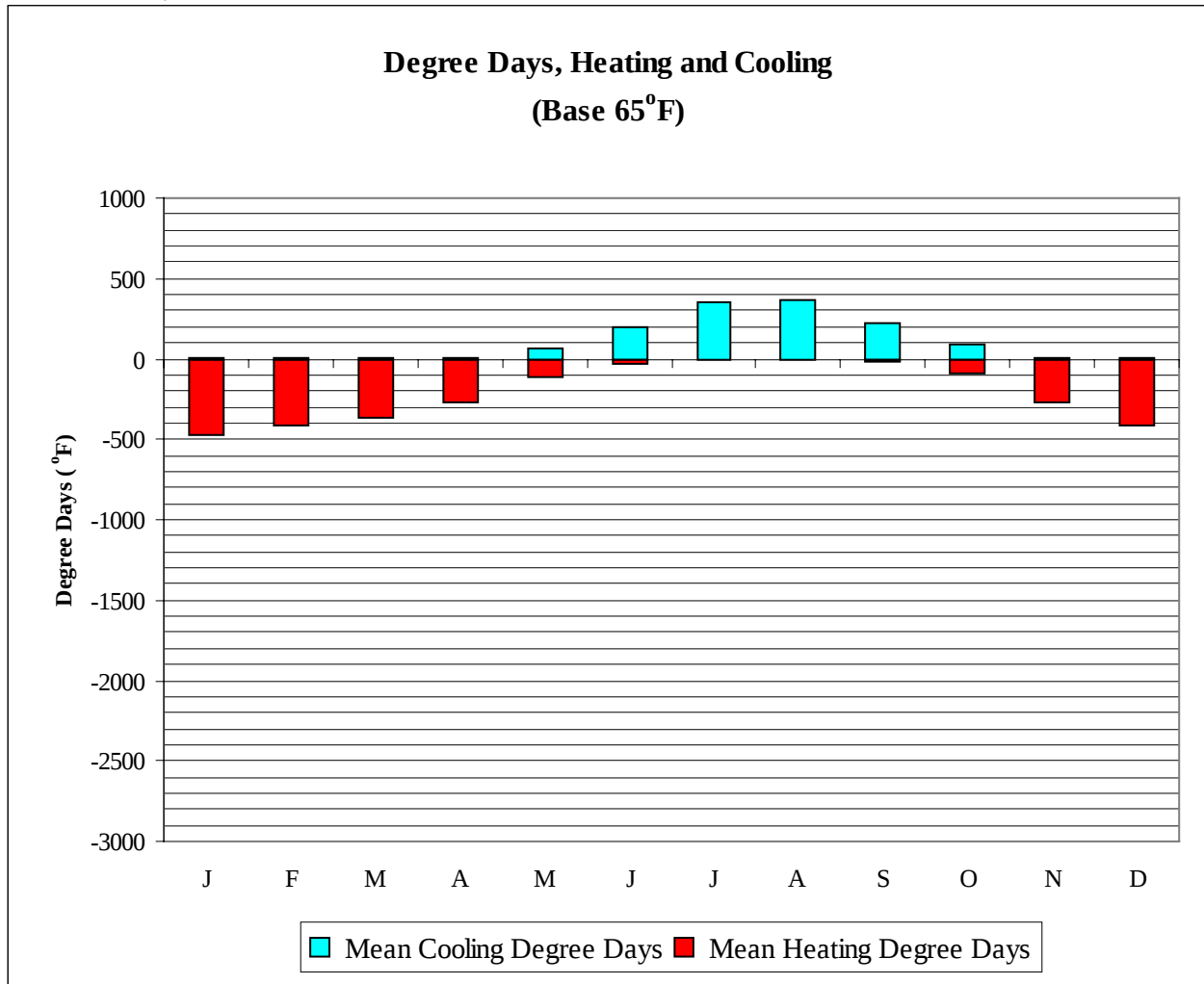
WMO No. 165600

Long Term Dry Bulb Temperature and Humidity Summary

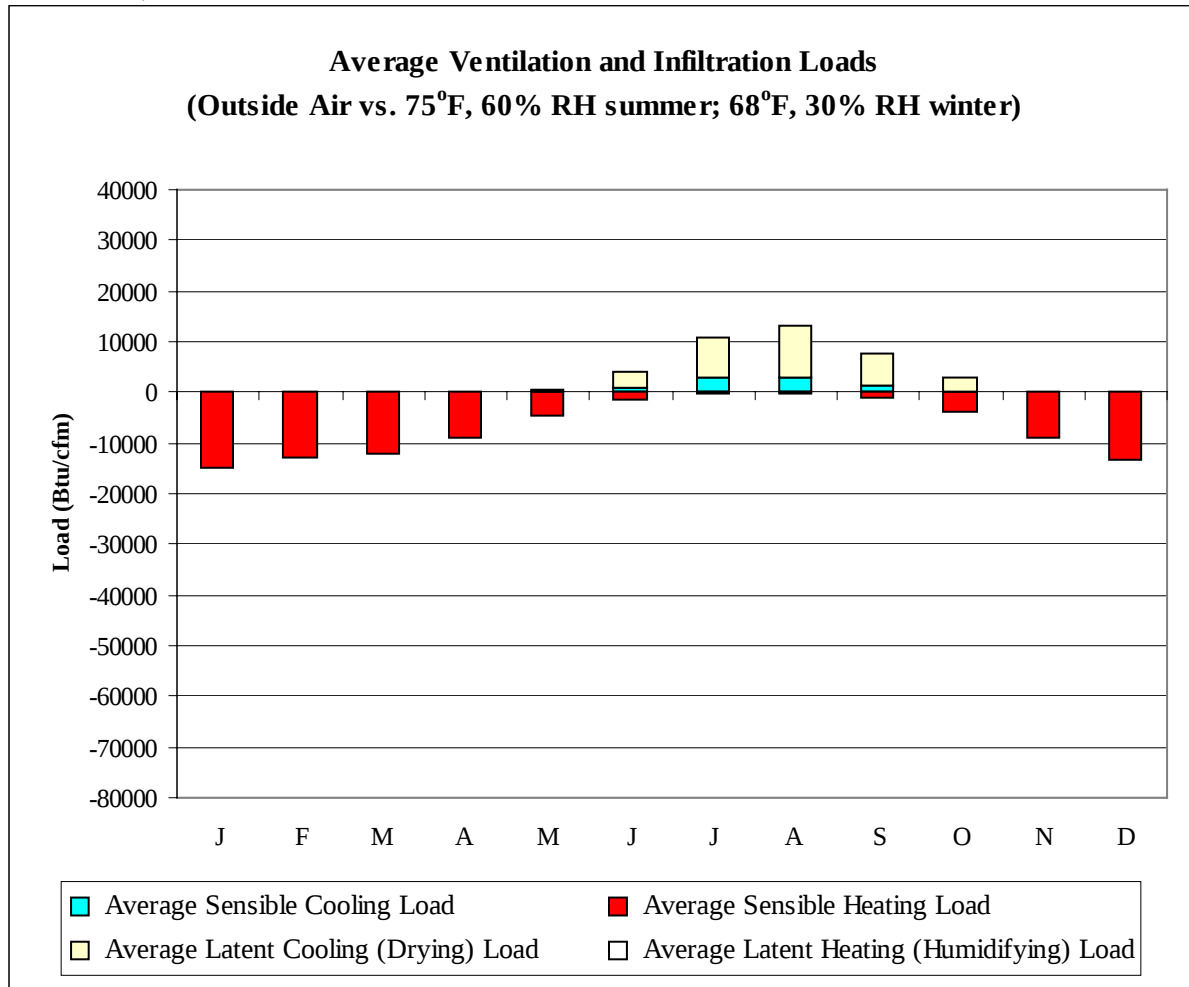
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	63.0	57.3	56.9	42.4	32.0	70.0	61.6	52.2	35.3
14-Jan	62.0	57.3	56.9	41.7	32.0	69.3	59.3	52.1	35.5
21-Jan	61.0	56.0	56.8	42.4	34.0	69.3	59.3	52.2	36.0
28-Jan	63.0	56.7	57.9	43.5	34.0	70.7	60.3	54.4	37.4
4-Feb	63.0	56.2	57.6	43.1	34.0	66.5	59.5	53.8	36.2
11-Feb	64.0	56.7	58.4	44.5	37.0	66.5	58.8	55.1	38.3
18-Feb	64.0	56.5	57.4	43.1	34.0	66.5	58.7	51.9	35.2
25-Feb	64.0	56.6	57.7	42.6	35.0	70.0	60.7	52.3	35.6
4-Mar	65.0	56.8	58.8	44.1	36.0	67.2	60.0	53.7	36.0
11-Mar	64.0	56.0	59.4	43.5	35.0	66.5	60.0	54.5	36.6
18-Mar	66.0	56.8	60.4	45.5	37.0	70.0	61.8	56.4	38.6
25-Mar	69.0	57.5	62.8	46.7	39.0	74.2	62.1	59.5	39.7
1-Apr	68.0	57.2	62.5	46.7	39.0	75.6	63.6	60.2	39.2
8-Apr	70.0	58.6	63.9	48.0	41.0	79.8	65.7	62.3	41.2
15-Apr	72.0	59.8	63.7	48.2	41.0	79.8	65.4	61.8	39.8
22-Apr	70.0	56.7	64.0	48.0	41.0	78.4	65.0	62.8	41.0
29-Apr	73.0	58.6	66.1	49.8	43.0	80.5	64.1	66.8	44.3
6-May	75.0	59.9	68.2	51.3	45.0	94.5	69.7	71.8	47.3
13-May	77.0	63.6	70.1	53.3	46.0	88.2	70.5	73.8	49.2
20-May	79.0	64.5	72.4	55.3	48.0	97.3	71.3	79.0	52.5
27-May	82.0	65.3	74.8	56.9	50.0	102.9	73.9	83.0	54.6
3-Jun	82.0	66.3	75.9	58.2	52.0	102.9	72.7	86.9	56.7
10-Jun	84.0	66.6	78.1	59.7	54.0	109.2	73.4	90.4	58.0
17-Jun	88.0	65.5	80.6	61.5	57.0	116.2	76.4	95.4	60.5
24-Jun	88.0	68.9	80.8	62.4	57.0	123.9	78.0	100.7	62.5
1-Jul	91.0	69.7	83.1	64.0	58.0	132.3	80.5	104.4	63.8
8-Jul	93.0	71.0	84.5	65.5	59.0	140.0	80.8	109.7	66.0
15-Jul	93.0	69.2	85.5	66.5	61.0	133.0	80.7	112.0	68.6
22-Jul	95.0	70.6	86.8	67.0	61.0	140.0	81.4	116.6	67.8
29-Jul	95.0	73.1	86.8	66.9	61.0	151.2	84.0	122.3	72.2
5-Aug	95.0	71.7	87.2	68.2	63.0	149.8	83.2	125.1	74.2
12-Aug	93.0	70.7	87.2	68.0	63.0	150.5	84.3	122.2	73.2
19-Aug	93.0	72.1	86.9	67.9	64.0	158.9	85.8	123.6	73.5
26-Aug	91.0	70.7	85.3	67.1	61.0	150.5	84.7	119.2	73.2
2-Sep	90.0	72.8	83.8	66.0	59.0	144.2	82.1	114.9	73.2
9-Sep	88.0	70.2	82.8	64.2	59.0	133.0	79.3	106.7	66.8
16-Sep	86.0	68.7	81.4	64.0	57.0	140.0	79.8	110.8	71.3
23-Sep	85.0	74.0	79.9	63.2	57.0	140.7	81.3	109.0	71.6
30-Sep	86.0	72.5	77.8	61.5	54.0	132.3	79.6	101.8	67.0
7-Oct	81.0	69.7	76.0	60.2	52.0	130.9	78.6	97.6	66.6
14-Oct	79.0	67.5	74.3	59.2	52.0	123.9	75.7	91.7	63.7
21-Oct	77.0	69.4	72.7	57.4	50.0	123.9	75.6	88.3	61.2
28-Oct	77.0	69.3	70.0	54.1	46.0	116.2	74.5	79.5	54.6
4-Nov	75.0	66.5	69.2	52.7	45.0	102.9	70.4	78.8	53.6
11-Nov	72.0	64.6	66.7	51.0	42.0	96.6	69.5	72.9	49.0
18-Nov	70.0	63.0	64.8	50.6	43.0	91.7	66.4	70.5	48.4
25-Nov	68.0	59.4	62.0	47.1	37.0	79.8	63.6	63.4	42.6
2-Dec	66.0	60.5	60.0	45.7	37.0	74.2	62.7	58.8	39.7
9-Dec	65.0	60.0	59.8	45.4	34.0	74.9	63.1	59.6	41.0
16-Dec	66.0	60.1	59.7	44.2	34.0	74.9	61.7	58.9	39.2
23-Dec	66.0	59.4	59.2	44.8	34.0	74.2	62.2	57.9	39.5
31-Dec	64.0	60.3	58.1	43.5	34.0	75.6	62.7	55.4	37.0

CAGLIARI, ITALY

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	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	477
FEB	0	413
MAR	2	370
APR	8	267
MAY	67	113
JUN	199	25
JUL	350	5
AUG	371	3
SEP	224	18
OCT	87	95
NOV	9	264
DEC	0	419
ANN	1317	2469



	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	-14777	0	-207
FEB	0	-12901	0	-118
MAR	0	-11959	5	-92
APR	2	-9107	18	-33
MAY	113	-4501	574	-2
JUN	962	-1308	3035	-1
JUL	2862	-357	7993	0
AUG	3081	-226	10042	-1
SEP	1145	-1017	6300	0
OCT	112	-3840	2592	-1
NOV	1	-8988	213	-27
DEC	0	-13245	4	-116
ANN	8278	-82226	30776	-598

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

No Solar Radiation
Data Available

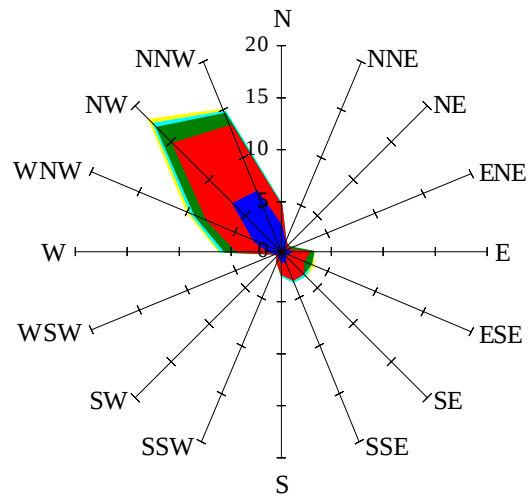


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

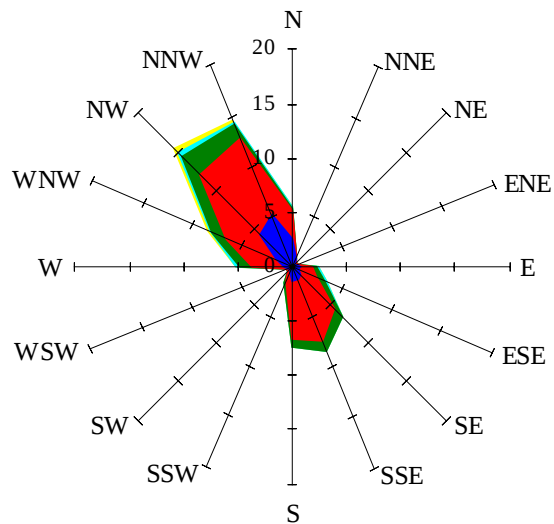
Labels of Percent Frequency on North Axis



Percent Calm = 26.57

Wind Summary - March, April, and May

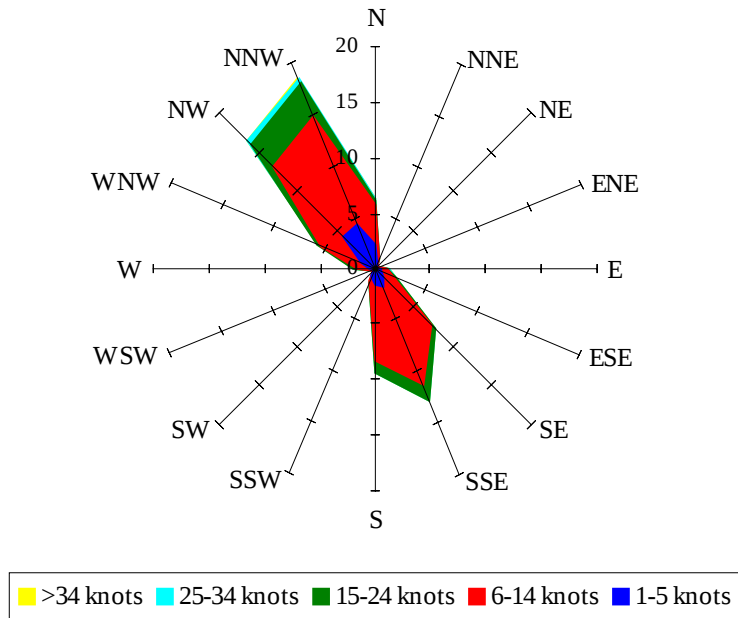
Labels of Percent Frequency on North Axis



Percent Calm = 18.43

Wind Summary - June, July, and August

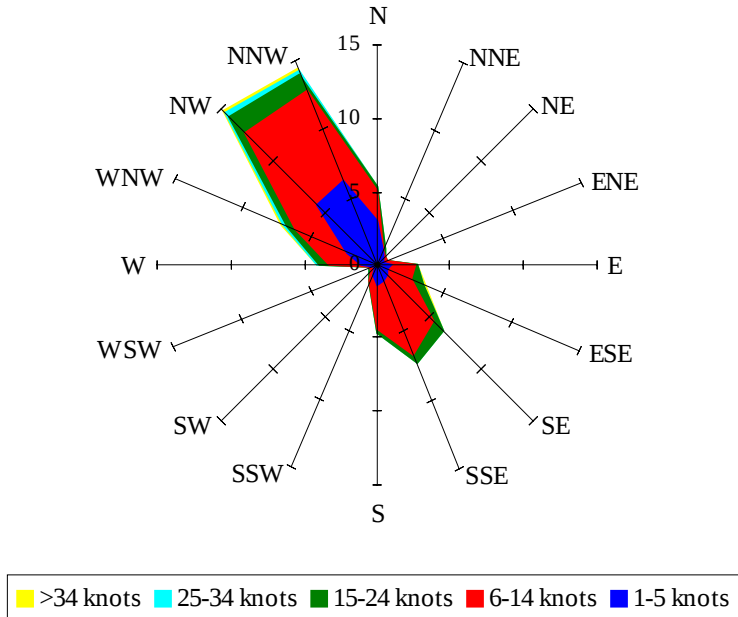
Labels of Percent Frequency on North Axis



Percent Calm = 14.34

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 24.71