

VANDENBERG AFB CA

Latitude = 34.73 N

WMO No. 723930

Longitude = 120.50 W

Elevation = 367 feet

Period of Record = 1967 to 1996

Average Pressure = 29.58 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	88	63	55	7.6	WNW
0.4% Occurrence	81	61	53	6.9	W
1.0% Occurrence	77	60	56	7.2	NW
2.0% Occurrence	73	59	55	7.7	W
Mean Daily Range	13	-	-	-	-
97.5% Occurrence	43	40	32	4.5	ESE
99.0% Occurrence	40	37	27	4.6	ESE
99.6% Occurrence	37	34	24	5.3	ESE
Median of Extreme Lows	33	30	20	4.4	E
	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	68	80	85	6.0	W
0.4% Occurrence	66	75	81	6.6	WNW
1.0% Occurrence	64	72	77	7.7	W
2.0% Occurrence	62	69	72	8.2	NW
	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	94	73	0.62	7.1	W
0.4% Occurrence	87	68	0.58	5.2	NW
1.0% Occurrence	81	68	0.54	7.2	W
2.0% Occurrence	76	66	0.50	7.6	NW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		3	51	2	25

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	2.0	85	0.0 + 0.0
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 (#)
59.7	0	0	1

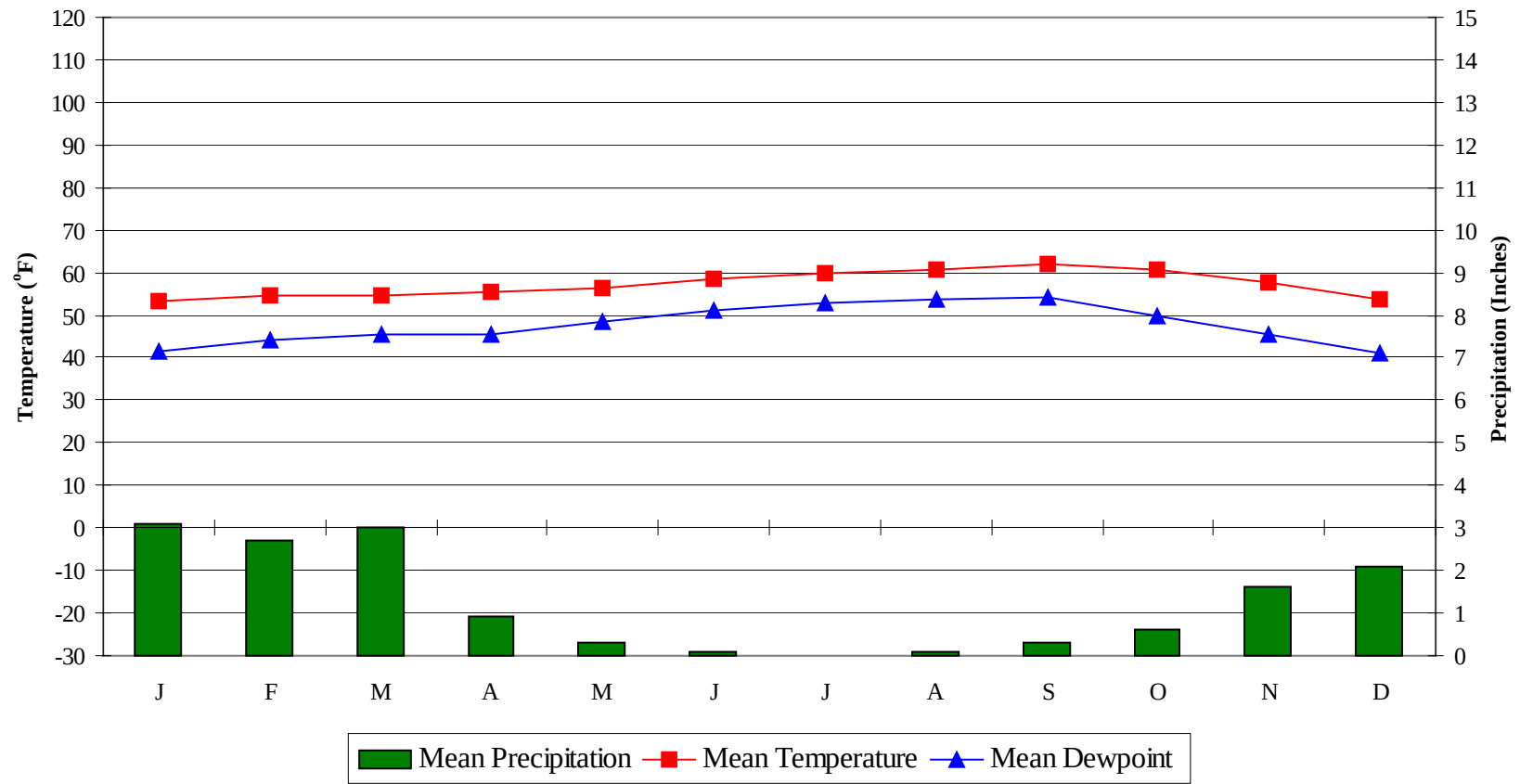
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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Average Annual Climate

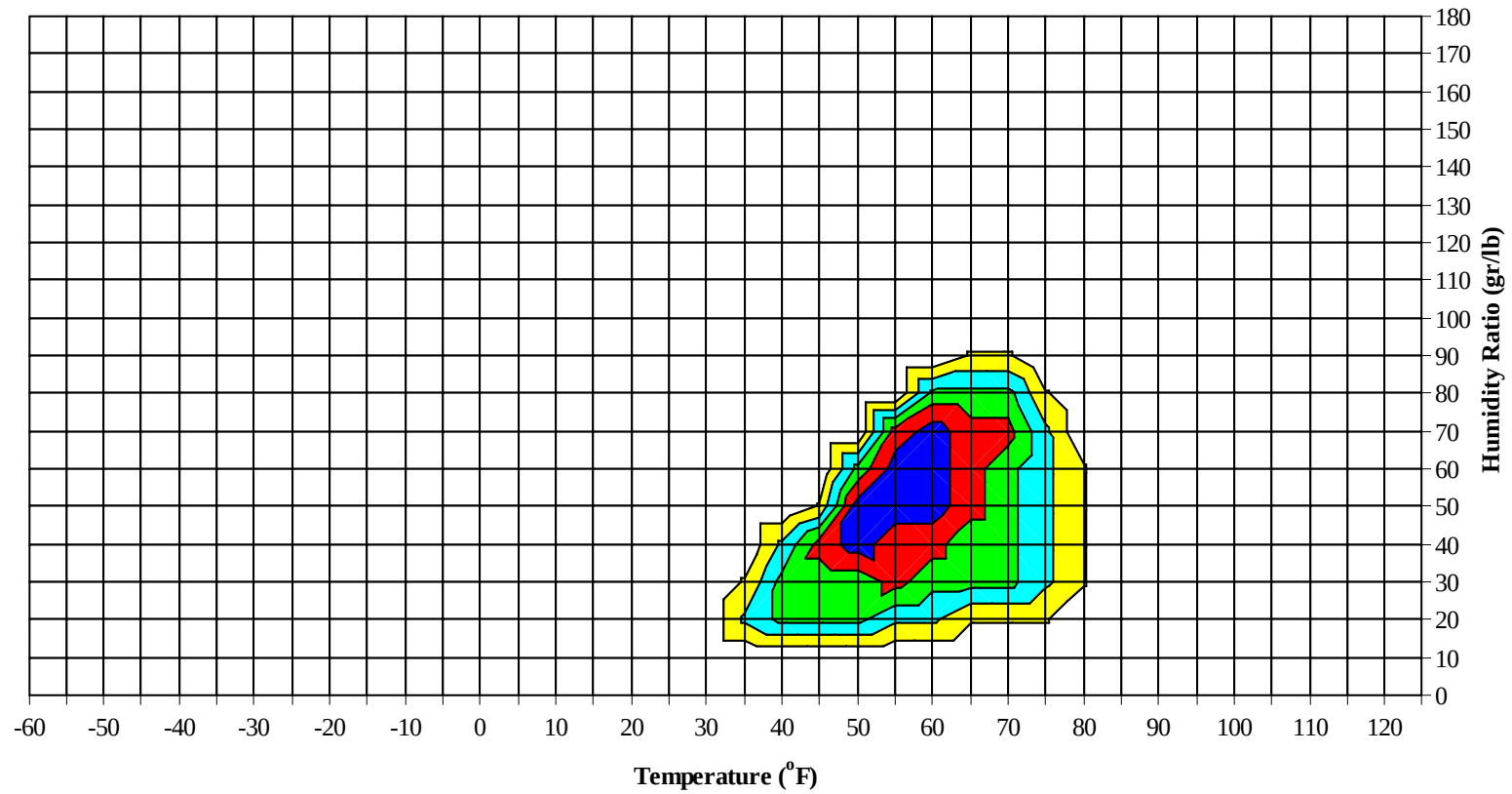


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Long Term Psychrometric Summary



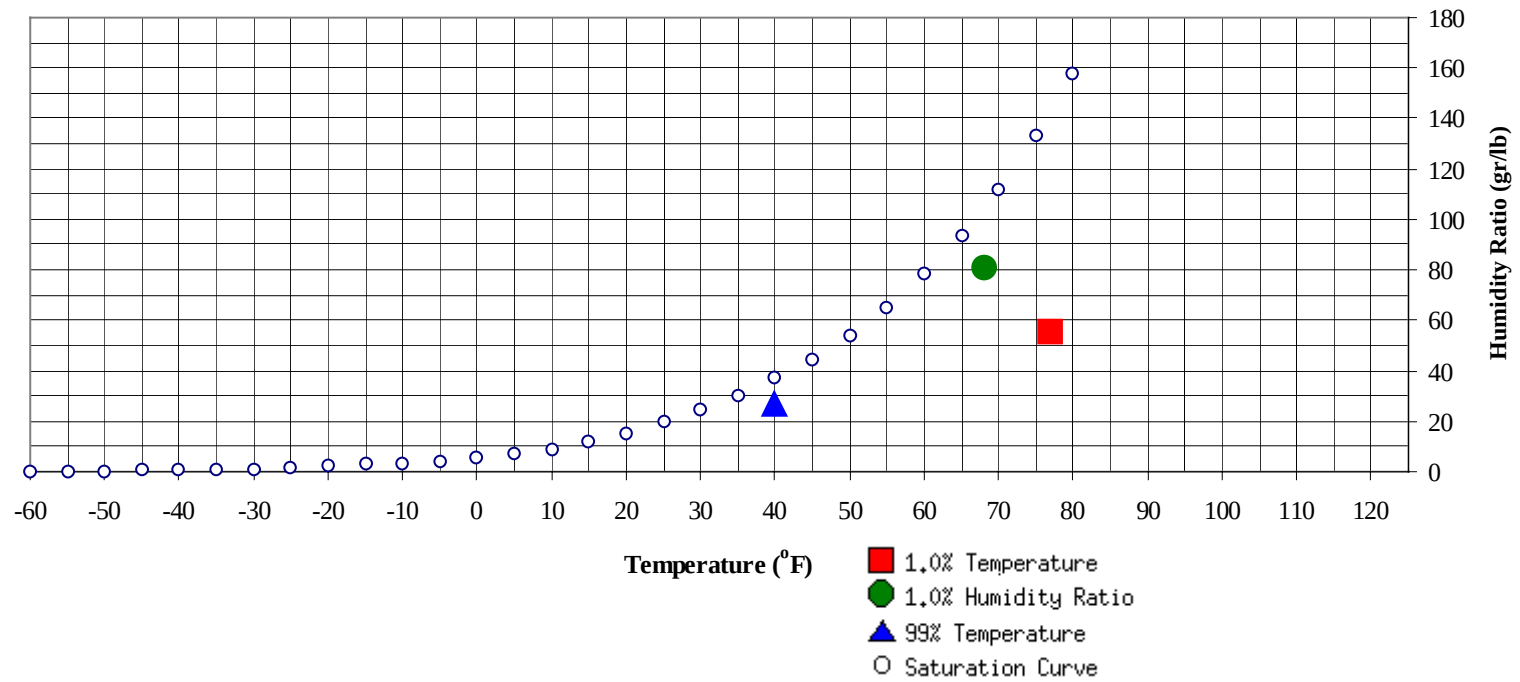
- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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Psychrometric Summary of Peak Design Values



	(°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	40	27.3	13.8		81.2	68.1	63.5	61	29.0

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	77	55.7	60.5	27.2

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Dry-Bulb Temperature Hours For An Average Year (Sheet 1 of 5)**Period of Record = 1967 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		
95 / 99															
90 / 94															
85 / 89							0		0	63.0		0		0	58.7
80 / 84		1		1	59.8		1		1	60.4		1		1	60.5
75 / 79		3	0	3	55.7		3	0	3	57.4		1	0	1	59.8
70 / 74	0	10	1	11	54.8		8	1	9	56.1		6	0	6	57.1
65 / 69	1	20	3	25	53.2		18	3	21	54.5	0	18	1	20	55.7
60 / 64	4	47	9	60	52.7	3	51	10	64	53.6	4	62	11	78	54.7
55 / 59	20	89	47	156	51.2	22	89	50	161	51.6	27	106	53	186	51.7
50 / 54	58	60	89	208	47.7	66	46	99	211	48.3	85	50	125	260	48.5
45 / 49	71	16	61	149	43.5	80	8	50	138	44.3	84	4	49	137	44.7
40 / 44	60	3	27	89	38.7	45	1	11	56	39.8	40	0	9	49	40.0
35 / 39	25	0	9	34	34.5	9		0	9	34.7	7			7	35.5
30 / 34	7		1	9	29.7	0			0	31.5	0			0	29.4
25 / 29	0			0	25.0										

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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Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)**Period of Record = 1967 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		
95 / 99		0		0	68.0							0		0	64.0
90 / 94		1		1	65.4							1		1	63.7
85 / 89		1		1	63.8	0	0		0	61.0	0	1		1	62.8
80 / 84		1	0	1	59.8	0	1	0	1	61.6	0	1	0	1	62.5
75 / 79	0	3	0	3	59.0	0	3	0	3	60.6	0	2	0	2	62.2
70 / 74	1	7	2	10	57.1	1	4	0	6	59.8	1	6	0	7	61.8
65 / 69	1	21	2	24	56.4	4	21	3	28	58.4	4	38	3	45	58.9
60 / 64	8	66	9	83	54.5	11	83	10	104	55.1	17	118	24	159	56.0
55 / 59	31	105	42	178	51.2	41	115	59	215	52.3	76	66	101	243	53.6
50 / 54	79	35	122	236	48.4	144	20	157	321	49.5	127	9	106	242	50.5
45 / 49	89	2	57	148	45.3	43	0	19	62	46.2	15	0	5	20	46.9
40 / 44	26	0	6	32	40.4	5		0	5	41.5	0			0	42.4
35 / 39	4		0	4	35.9										
30 / 34															
25 / 29															

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Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)**Period of Record = 1967 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		
95 / 99												1		1	65.0
90 / 94											0	2	2	4	67.4
85 / 89		0		0	66.3		0		0	64.0	0	3	0	3	63.5
80 / 84	0	1		1	65.0	0	1		1	66.7	0	5	2	7	64.3
75 / 79	0	3	0	3	64.4	0	4		4	64.3	2	9	3	15	63.9
70 / 74	1	16	0	17	62.4	1	21	2	24	62.1	5	23	6	35	61.7
65 / 69	6	63	7	76	59.6	4	83	10	96	59.7	10	78	15	102	59.7
60 / 64	21	115	38	174	57.1	25	105	56	186	57.6	41	90	66	197	57.6
55 / 59	103	46	136	285	54.5	131	33	148	312	54.8	118	28	123	269	54.9
50 / 54	113	5	66	184	51.3	85	3	32	119	51.8	53	1	21	76	51.3
45 / 49	4		0	4	47.5	2		0	2	47.1	9		2	10	45.6
40 / 44											1			1	42.6
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 = 1967 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		
95 / 99		0		0	65.0										
90 / 94		1		1	62.3										
85 / 89	0	2		2	62.2		0		0	67.0		0		0	66.0
80 / 84	0	6		6	59.6		2		2	58.9		1		1	57.1
75 / 79	0	11	0	11	59.2		7		7	57.5		2		2	55.1
70 / 74	1	26	2	29	59.0	0	19	0	19	56.0		10	0	10	53.3
65 / 69	6	65	8	79	58.4	3	41	3	47	55.3	2	22	1	25	53.0
60 / 64	28	101	46	175	56.2	12	83	23	117	54.5	2	58	7	67	52.8
55 / 59	94	35	122	251	53.4	50	71	90	211	52.0	18	88	47	153	51.2
50 / 54	79	3	54	136	49.5	86	15	89	190	48.2	51	48	90	189	47.5
45 / 49	32	0	15	47	44.8	62	2	31	95	43.7	75	14	64	154	43.2
40 / 44	5		2	7	39.6	26		4	30	39.4	66	4	30	100	38.9
35 / 39	1		0	1	32.3	2			2	34.8	28	1	7	35	34.1
30 / 34											8		1	9	29.4
25 / 29															

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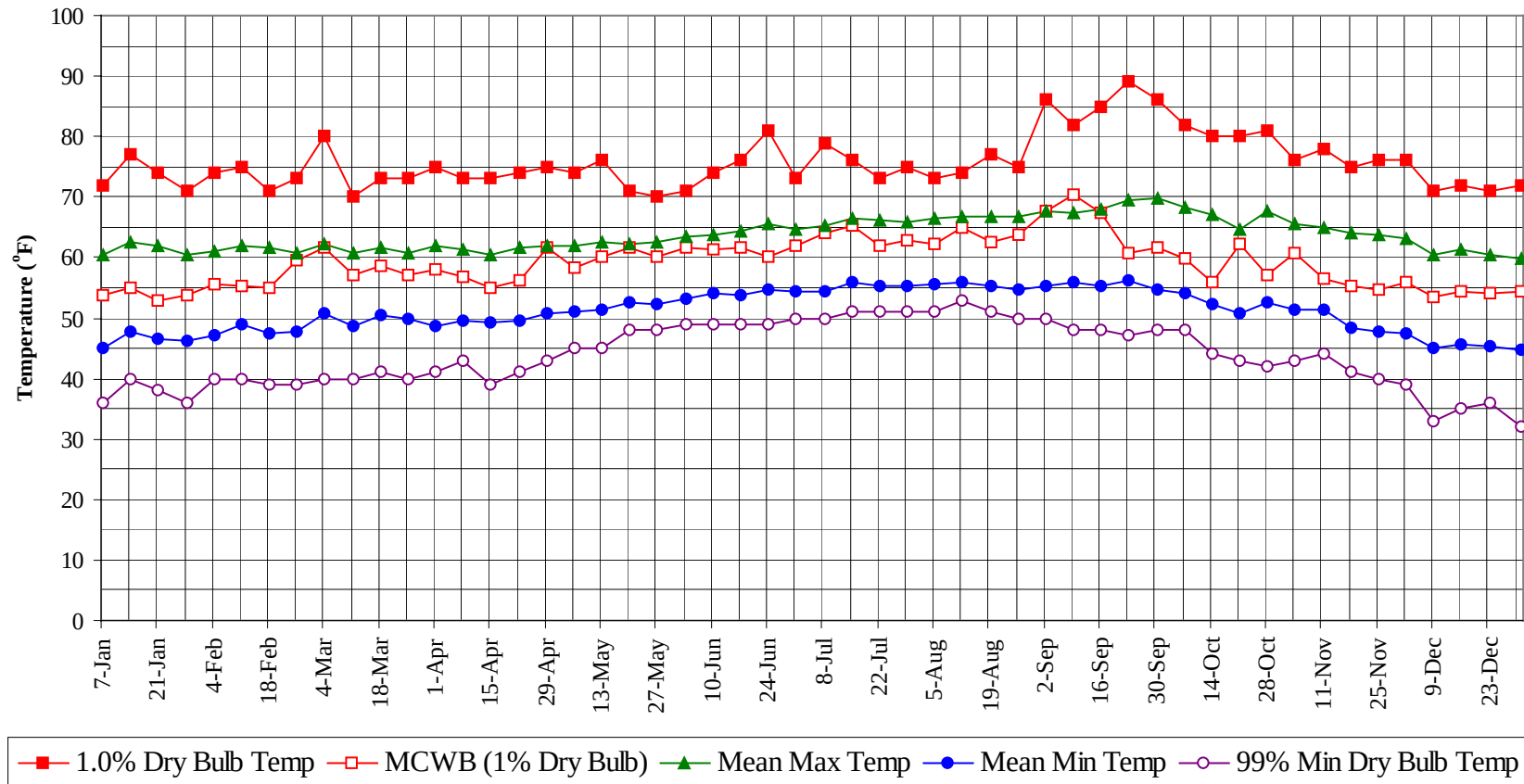
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1967 to 1996

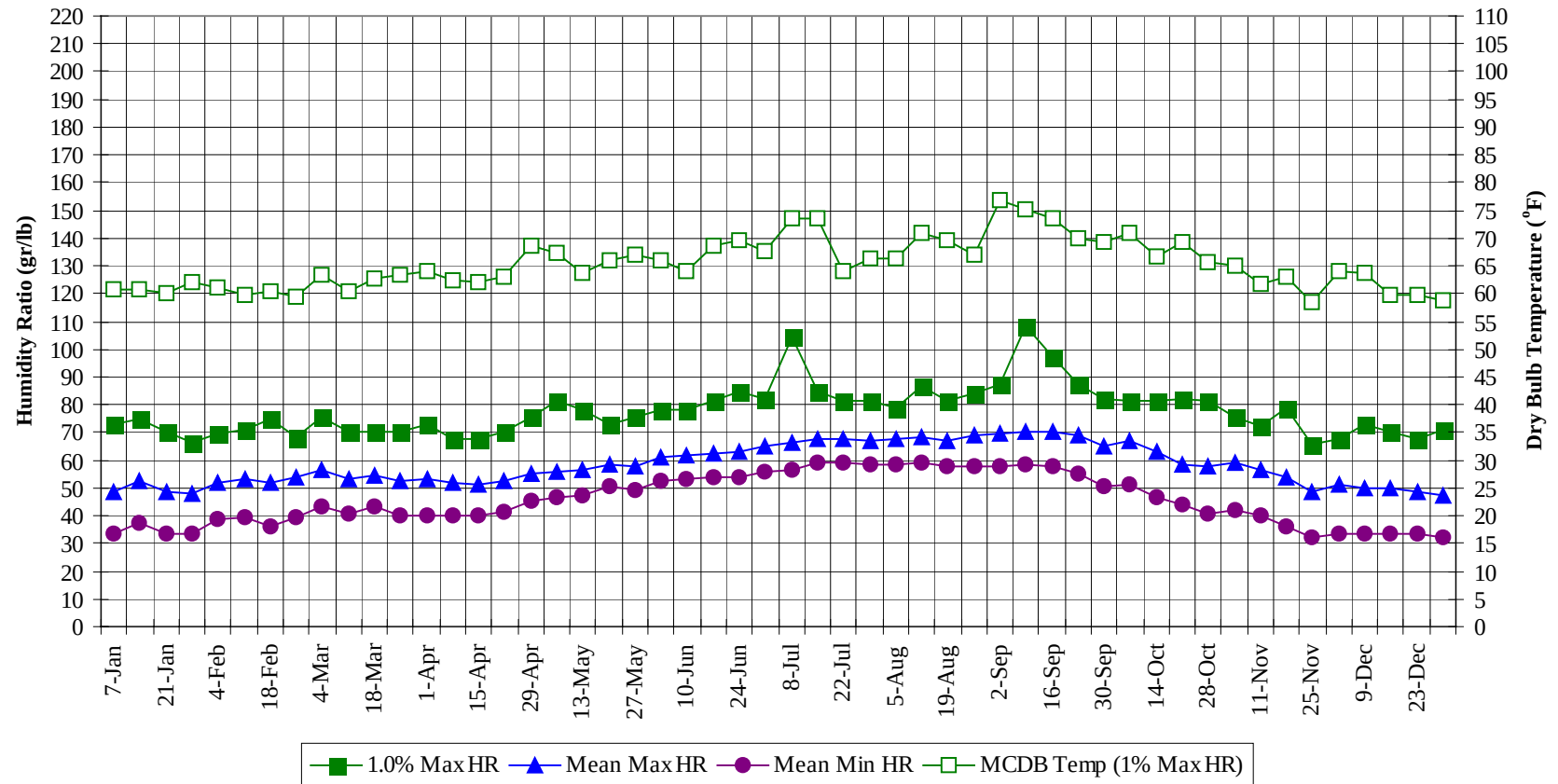
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
95 / 99		1		1	65.2
90 / 94	0	3	2	5	65.9
85 / 89	0	7	0	7	63.1
80 / 84	1	19	2	22	61.7
75 / 79	5	51	5	61	60.4
70 / 74	12	155	14	181	59.1
65 / 69	42	487	60	589	58.0
60 / 64	183	976	295	1454	55.7
55 / 59	761	872	985	2618	52.8
50 / 54	1044	295	1060	2400	49.1
45 / 49	538	46	378	963	44.4
40 / 44	251	7	98	356	39.4
35 / 39	68	1	18	87	34.5
30 / 34	15		3	18	29.5
25 / 29	0			0	25.0

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



VANDENBERG AFB**CA****WMO No. 723930****Long Term Dry Bulb Temperature and Humidity Summary**

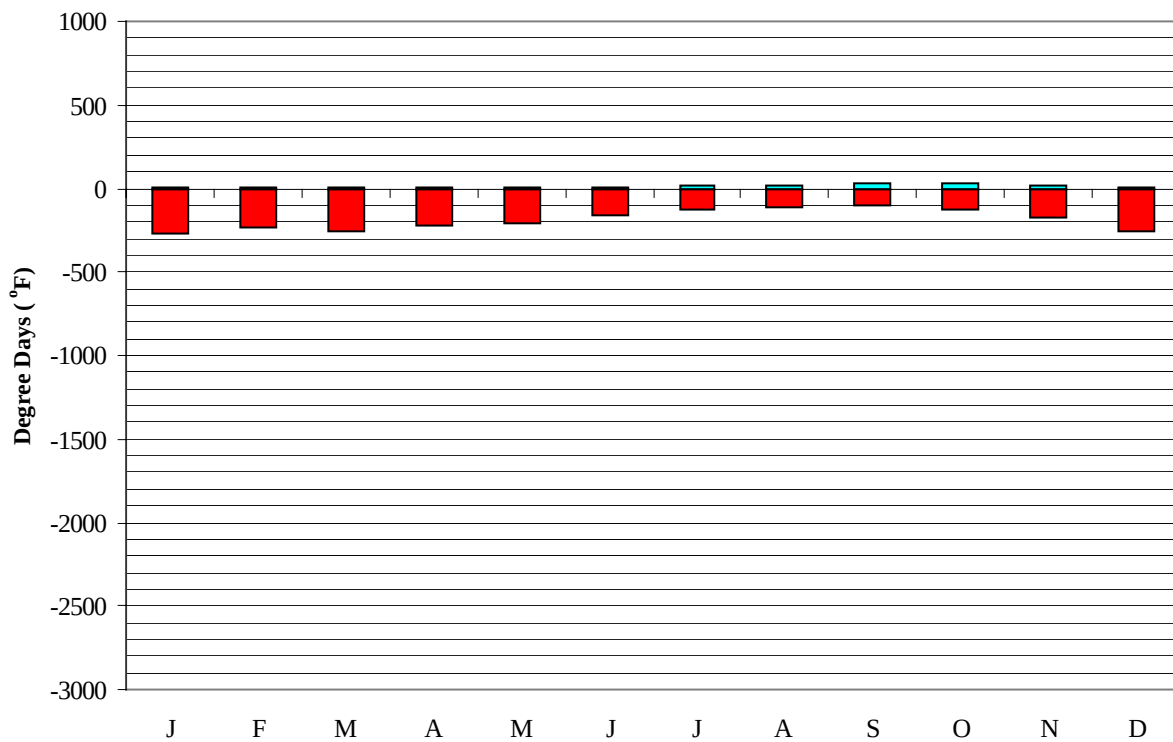
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	72.0	53.8	60.4	45.0	36.0	72.8	60.9	48.7	33.6
14-Jan	77.0	55.0	62.5	47.8	40.0	74.9	60.8	52.7	37.6
21-Jan	74.0	52.8	61.8	46.4	38.0	70.0	60.2	48.5	33.3
28-Jan	71.0	53.6	60.4	46.3	36.0	66.5	62.1	47.9	33.7
4-Feb	74.0	55.5	60.9	47.3	40.0	69.3	61.2	51.8	38.5
11-Feb	75.0	55.3	62.1	48.9	40.0	70.7	59.8	53.5	39.3
18-Feb	71.0	55.0	61.7	47.5	39.0	74.9	60.5	52.0	36.3
25-Feb	73.0	59.5	60.8	47.7	39.0	68.6	59.3	53.9	39.3
4-Mar	80.0	61.6	62.3	50.9	40.0	75.6	63.2	56.2	43.6
11-Mar	70.0	57.1	60.8	48.5	40.0	70.0	60.4	52.9	40.5
18-Mar	73.0	58.6	61.6	50.5	41.0	70.0	62.9	54.5	43.1
25-Mar	73.0	57.0	60.8	49.8	40.0	70.0	63.4	52.7	40.0
1-Apr	75.0	58.1	61.9	48.7	41.0	72.8	64.0	52.9	39.9
8-Apr	73.0	56.9	61.3	49.6	43.0	67.9	62.5	52.1	40.0
15-Apr	73.0	55.1	60.4	49.3	39.0	67.9	62.1	51.2	40.2
22-Apr	74.0	56.3	61.7	49.6	41.0	70.0	63.1	52.8	41.6
29-Apr	75.0	61.6	61.8	50.9	43.0	75.6	68.7	55.5	45.2
6-May	74.0	58.4	61.8	50.9	45.0	81.2	67.2	56.1	46.5
13-May	76.0	60.0	62.4	51.5	45.0	78.4	63.8	56.3	47.2
20-May	71.0	61.7	62.2	52.6	48.0	72.8	66.0	58.4	50.4
27-May	70.0	60.1	62.4	52.3	48.0	75.6	67.0	57.6	49.4
3-Jun	71.0	61.5	63.3	53.3	49.0	78.4	66.1	60.8	52.8
10-Jun	74.0	61.3	63.7	54.1	49.0	78.4	64.1	61.7	53.0
17-Jun	76.0	61.7	64.2	53.7	49.0	81.2	68.6	62.3	53.8
24-Jun	81.0	60.0	65.5	54.7	49.0	84.7	69.5	62.9	53.8
1-Jul	73.0	62.0	64.6	54.3	50.0	81.9	67.6	65.0	55.7
8-Jul	79.0	64.0	65.2	54.4	50.0	104.3	73.4	66.4	56.5
15-Jul	76.0	65.4	66.6	56.0	51.0	84.7	73.7	67.7	59.0
22-Jul	73.0	62.0	66.0	55.2	51.0	81.2	63.9	67.5	59.0
29-Jul	75.0	62.8	65.9	55.3	51.0	81.2	66.5	67.3	58.6
5-Aug	73.0	62.2	66.4	55.6	51.0	79.1	66.3	67.9	58.8
12-Aug	74.0	65.0	66.7	56.0	53.0	86.8	71.1	68.3	58.8
19-Aug	77.0	62.6	66.7	55.4	51.0	81.2	69.6	67.2	57.8
26-Aug	75.0	63.8	66.8	54.8	50.0	84.0	67.0	68.9	57.8
2-Sep	86.0	67.6	67.8	55.3	50.0	87.5	76.8	69.4	57.6
9-Sep	82.0	70.3	67.3	55.8	48.0	108.5	75.2	70.4	58.4
16-Sep	85.0	67.3	68.0	55.4	48.0	97.3	73.7	70.4	57.8
23-Sep	89.0	60.7	69.4	56.2	47.0	87.5	69.8	68.8	55.1
30-Sep	86.0	61.6	69.7	54.6	48.0	81.9	69.2	65.1	50.3
7-Oct	82.0	59.7	68.3	54.0	48.0	81.2	70.8	66.7	51.0
14-Oct	80.0	56.0	67.0	52.3	44.0	81.2	66.8	63.3	46.5
21-Oct	80.0	62.2	64.8	50.8	43.0	81.9	69.4	58.7	44.1
28-Oct	81.0	57.3	67.7	52.7	42.0	81.2	65.8	57.6	40.6
4-Nov	76.0	60.7	65.5	51.2	43.0	75.6	65.1	58.9	41.9
11-Nov	78.0	56.4	65.0	51.3	44.0	72.1	61.8	56.8	40.3
18-Nov	75.0	55.3	64.1	48.3	41.0	79.1	63.0	53.8	35.9
25-Nov	76.0	54.7	63.7	47.8	40.0	65.8	58.5	48.6	32.1
2-Dec	76.0	56.0	63.3	47.3	39.0	67.9	64.0	51.1	33.4
9-Dec	71.0	53.4	60.3	45.0	33.0	72.8	63.7	49.8	33.7
16-Dec	72.0	54.3	61.3	45.8	35.0	70.0	59.8	50.2	33.3
23-Dec	71.0	54.1	60.5	45.3	36.0	67.9	59.9	48.6	33.5
31-Dec	72.0	54.3	59.8	44.6	32.0	70.7	58.8	47.1	32.4

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



■ Mean Cooling Degree Days
 ■ Mean Heating Degree Days

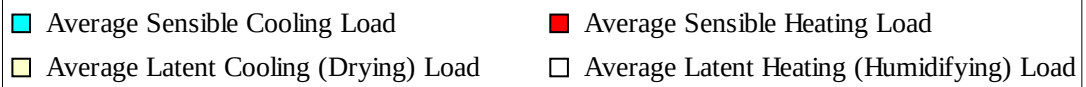
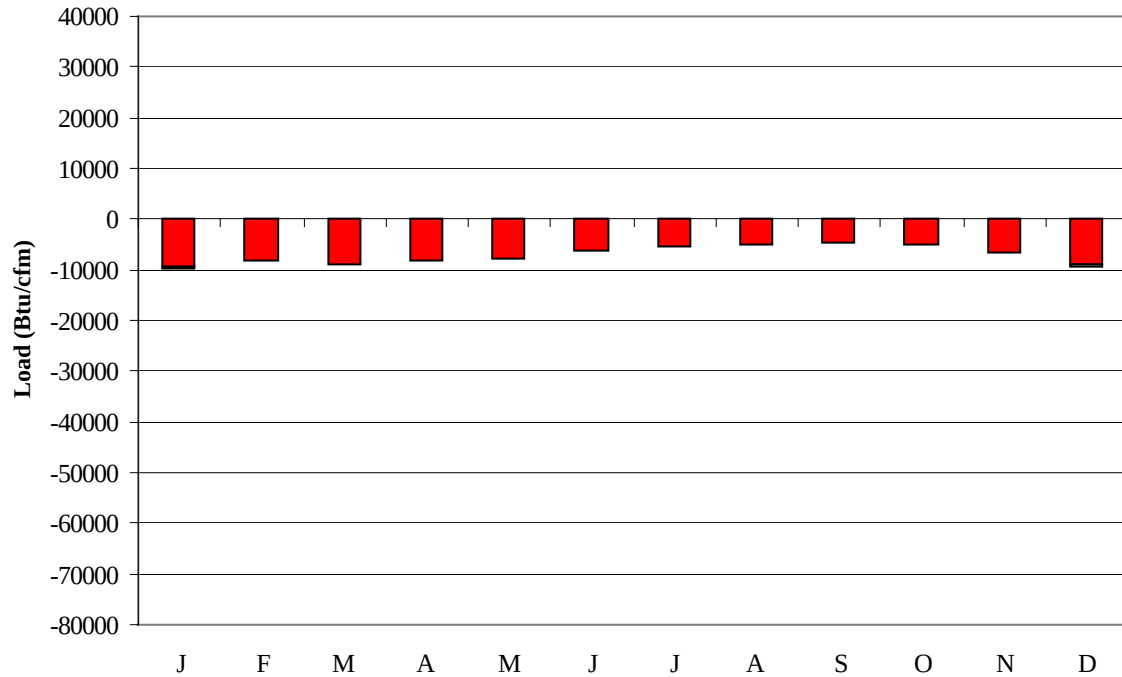
	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	7	272
FEB	6	235
MAR	4	254
APR	10	227
MAY	6	209
JUN	11	158
JUL	14	129
AUG	17	117
SEP	33	101
OCT	30	124
NOV	16	171
DEC	7	262
ANN	161	2259

VANDENBERG AFB

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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	5	-9331	0	-297
FEB	7	-8167	2	-136
MAR	6	-8879	2	-63
APR	39	-8025	2	-28
MAY	12	-7588	3	-4
JUN	56	-6159	9	0
JUL	15	-5286	37	0
AUG	11	-5005	19	0
SEP	132	-4430	92	-1
OCT	85	-5109	15	-57
NOV	19	-6473	4	-140
DEC	7	-9033	0	-327
ANN	394	-83485	185	-1053

Average Annual Solar Radiation – Nearest Available Site

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

City: SANTA MARIA
 State: CA
 WBAN No: 23273
 Lat(N): 34.9
 Long(W): 120.45
 Elev(ft): 236

Stn Type: Primary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1
 Overhang: 0.39
 Vert Gap: 0.285

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	900	1170	1540	1960	2210	2340	2370	2150	1770	1380	1010	840	1640
	Std Dev	77	105	135	131	143	130	61	72	85	78	78	57	41
	Minimum	720	960	1280	1670	1770	2010	2260	1980	1600	1210	860	720	1530
	Maximum	1040	1340	1820	2200	2490	2550	2500	2280	1940	1500	1140	950	1700
	Diffuse	320	420	550	630	710	710	640	590	530	430	330	290	510
Clear Day	Global	1100	1440	1890	2330	2590	2690	2630	2400	2020	1560	1170	1000	1900
NORTH	Global	230	300	370	460	560	630	580	470	390	320	250	210	400
	Diffuse	230	300	370	440	500	520	490	450	390	320	250	210	370
Clear Day	Global	220	270	340	430	600	700	650	480	370	290	230	200	400
EAST	Global	600	730	910	1050	1060	1040	1040	960	890	790	660	570	860
	Diffuse	290	370	470	550	590	600	580	540	470	400	310	270	450
Clear Day	Global	780	960	1190	1360	1450	1470	1450	1380	1230	1020	820	730	1150
SOUTH	Global	1390	1390	1280	1080	850	730	790	1000	1250	1450	1470	1430	1180
	Diffuse	400	470	520	540	540	530	520	520	510	480	420	380	490
Clear Day	Global	1960	1930	1700	1260	910	760	820	1090	1500	1840	1940	1940	1470
WEST	Global	600	740	940	1150	1270	1340	1350	1280	1100	890	670	570	990
	Diffuse	290	370	470	550	610	620	600	560	490	400	320	270	460
Clear Day	Global	780	960	1190	1360	1450	1470	1450	1380	1230	1020	820	730	1150

Average Annual Solar Heat and Illumination – Nearest Available Site

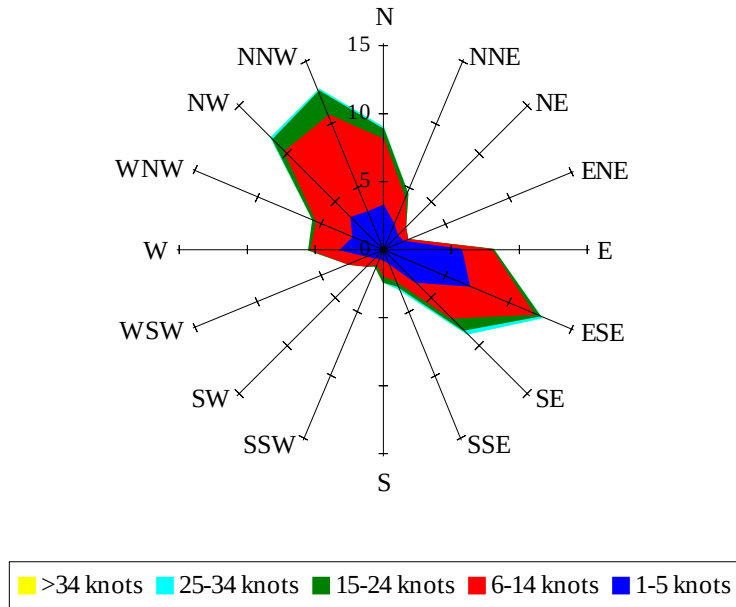
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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 NORTH	Unshaded	600	810	1110	1430	1630	1730	1760	1590	1290	980	680	550	1180
	Unshaded	160	200	260	310	370	400	370	320	270	220	170	150	270
	Shaded	150	190	240	290	340	370	350	300	250	210	160	140	250
EAST	Unshaded	410	510	650	750	750	730	720	670	620	550	450	390	600
	Shaded	380	470	590	680	660	640	630	590	560	510	420	370	540
SOUTH	Unshaded	1040	1010	870	670	490	420	450	590	820	1030	1090	1080	800
	Shaded	1030	950	720	470	350	340	340	390	630	930	1070	1060	690
WEST	Unshaded	410	520	660	820	900	950	960	910	790	630	460	390	700
	Shaded	380	480	610	750	810	850	860	820	720	580	430	370	640

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	44	79	89	70	29	48	87	106	101	71
	M.Cloudy	28	54	60	48	19	28	51	78	77	52
NORTH	M.Clear	11	15	16	14	8	22	16	17	17	15
	M.Cloudy	11	17	18	15	8	14	19	20	20	16
EAST	M.Clear	77	58	16	14	8	80	74	31	17	15
	M.Cloudy	35	37	18	15	8	29	36	28	20	16
SOUTH	M.Clear	39	70	78	62	26	12	25	39	35	15
	M.Cloudy	21	43	49	38	14	11	22	33	31	16
WEST	M.Clear	11	15	25	70	68	12	16	17	54	83
	M.Cloudy	11	17	22	41	29	11	19	20	43	52
M.Clear	(% hrs)	48	48	50	51	51	32	61	74	80	81
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	31	73	92	85	52	21	50	56	36	4
	M.Cloudy	17	42	65	61	34	14	34	38	25	3
NORTH	M.Clear	9	14	16	16	12	7	11	12	9	2
	M.Cloudy	8	16	19	18	12	6	12	13	9	2
EAST	M.Clear	70	73	29	16	12	50	42	12	9	2
	M.Cloudy	19	33	25	18	12	21	26	13	9	2
SOUTH	M.Clear	22	55	71	65	37	46	85	92	67	11
	M.Cloudy	10	28	47	44	23	19	45	49	33	4
WEST	M.Clear	9	14	16	56	80	7	11	24	54	16
	M.Cloudy	8	16	19	39	41	6	12	18	28	6
M.Clear	(% hrs)	35	59	75	78	80	53	53	54	53	54

Wind Summary - December, January, and February

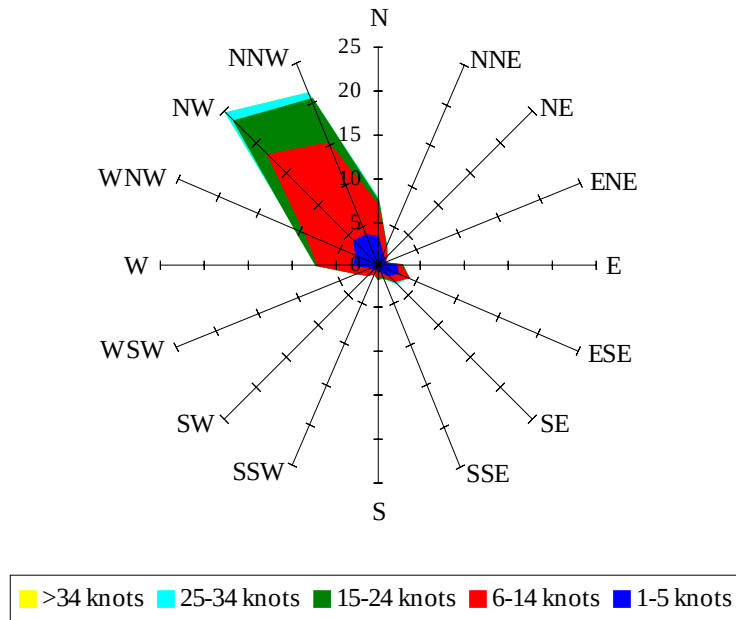
Labels of Percent Frequency on North Axis



Percent Calm = 7.63

Wind Summary - March, April, and May

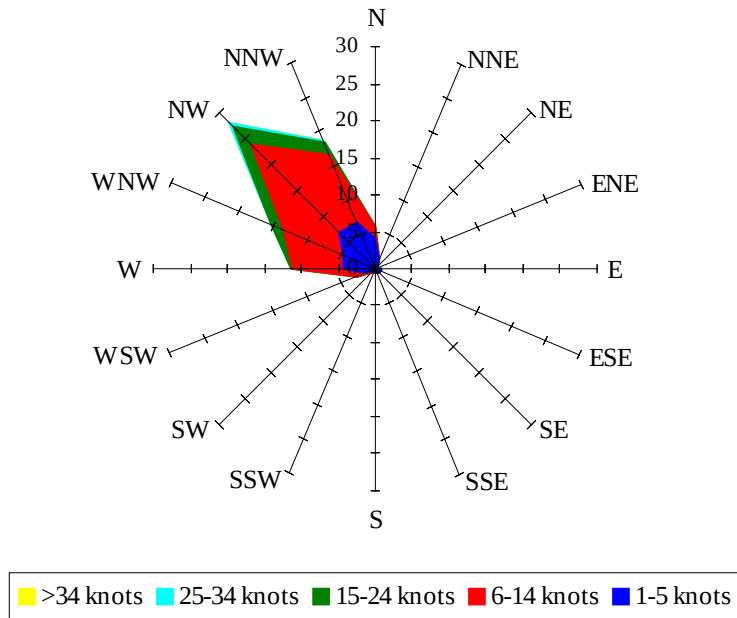
Labels of Percent Frequency on North Axis



Percent Calm = 7.16

Wind Summary - June, July, and August

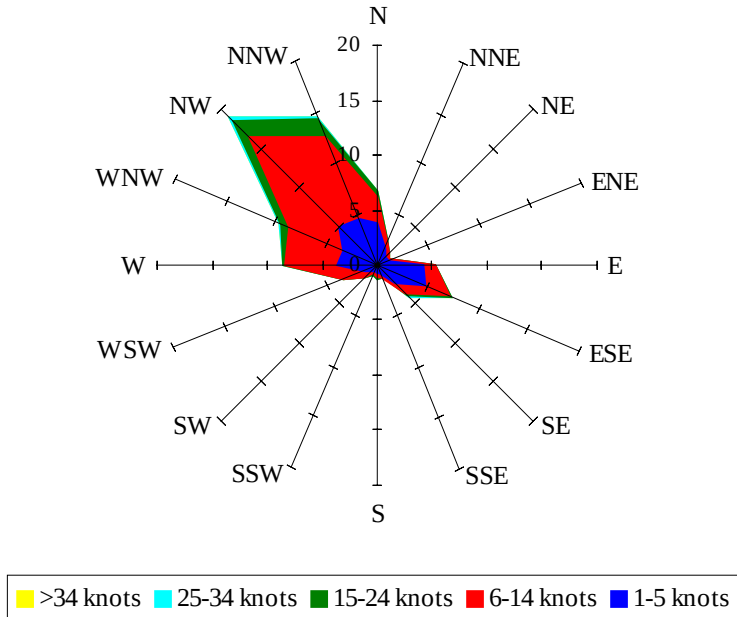
Labels of Percent Frequency on North Axis



Percent Calm = 11.46

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 11.90