

MACDILL AFB/TAMPA FL

Latitude = 27.85 N

WMO No. 747880

Longitude = 82.52 W

Elevation = 13 feet

Period of Record = 1967 to 1996

Average Pressure = 30.00 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	79	120	6.3	W
0.4% Occurrence	93	77	115	6.6	W
1.0% Occurrence	92	77	116	6.3	W
2.0% Occurrence	91	77	116	6.5	W
Mean Daily Range	16	-	-	-	-
97.5% Occurrence	47	42	32	5.9	N
99.0% Occurrence	42	37	26	5.4	N
99.6% Occurrence	39	34	21	5.6	N
Median of Extreme Lows	32	27	15	7.3	NNE
	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	90	151	7.3	SW
0.4% Occurrence	80	89	139	7.1	SSW
1.0% Occurrence	79	88	134	6.9	W
2.0% Occurrence	79	88	134	6.9	W
	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	151	85	1.00	7.4	NW
0.4% Occurrence	146	85	0.97	6.1	S
1.0% Occurrence	141	84	0.94	6.4	SSW
2.0% Occurrence	136	83	0.90	6.6	W
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		53	2461	2753	4975

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	4.5	130	8.0 + 2.5
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 (#)
75.0	0	0	1

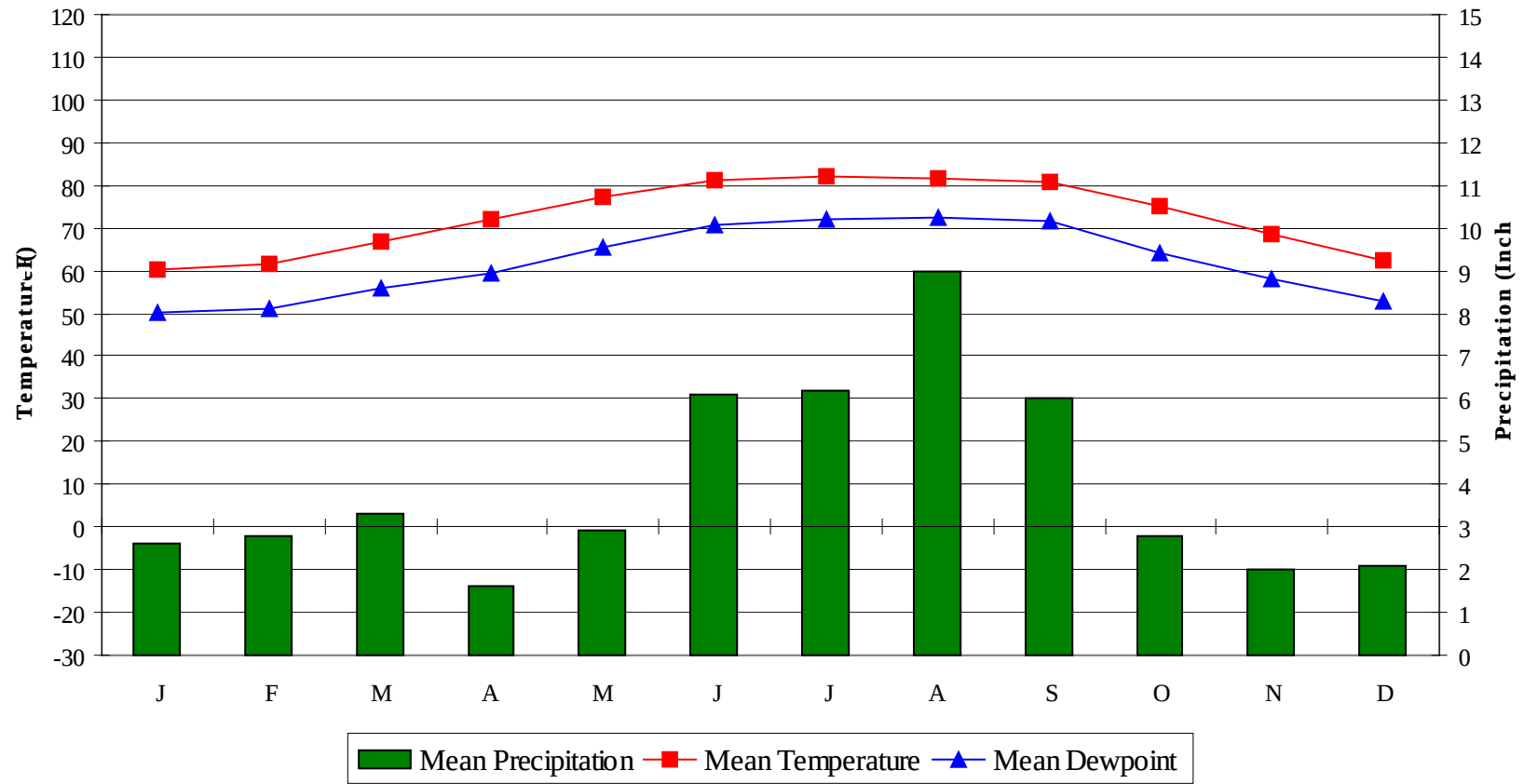
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

MACDILL AFB/TAMPA

FL

WMO No. 747880

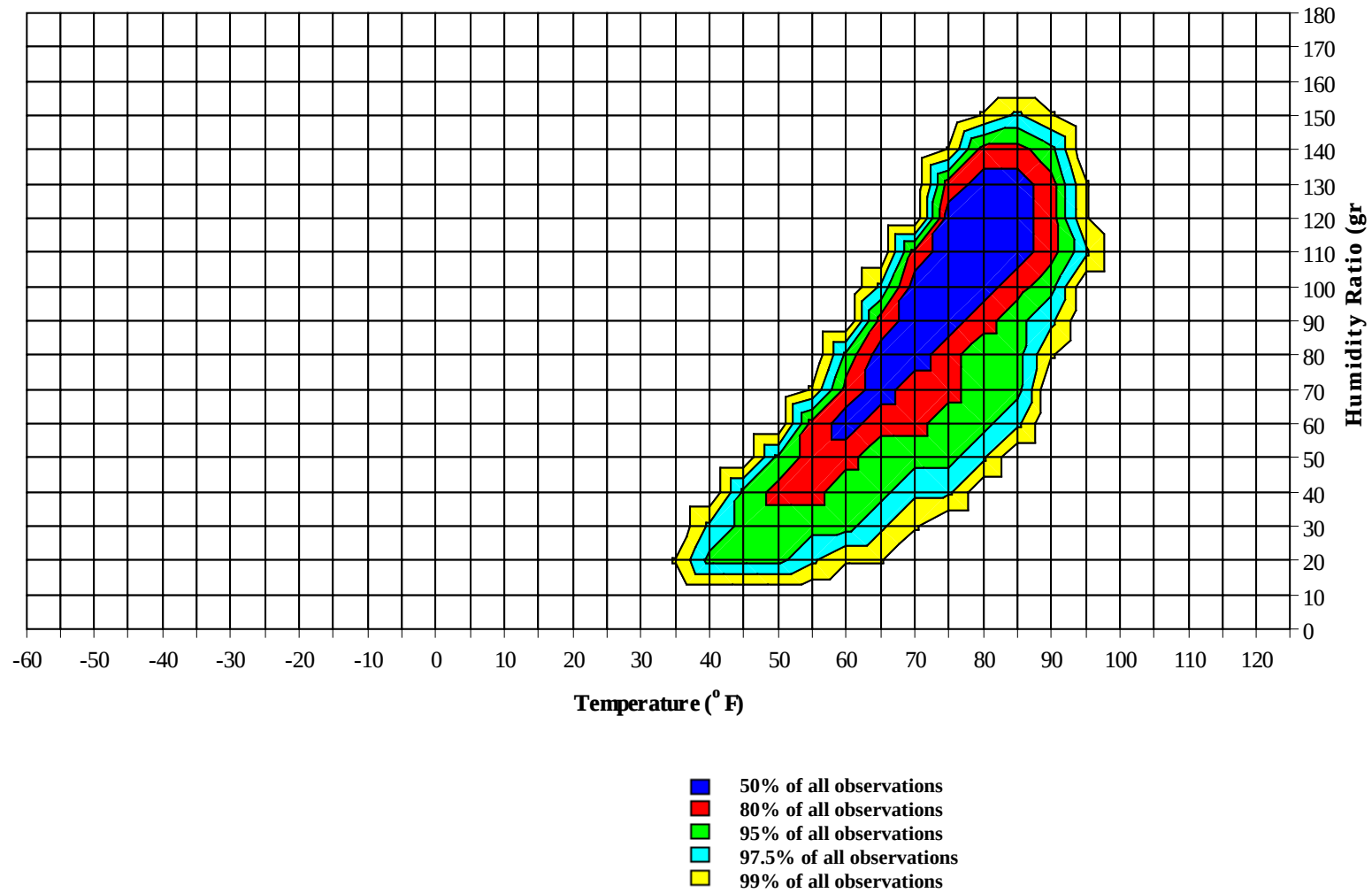
Average Annual Climate



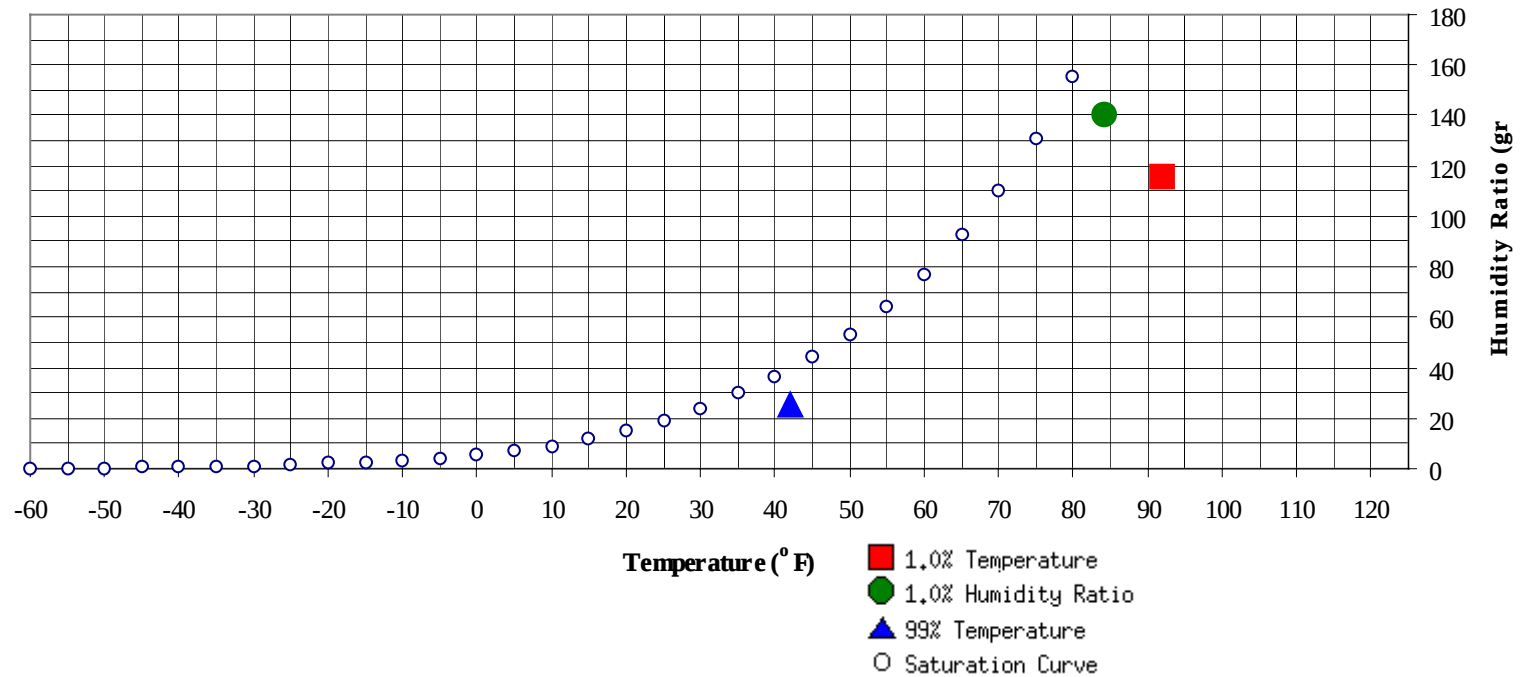
MACDILL AFB/TAMPA FL

WMO No. 747880

Long Term Psychrometric Summary



Psychrometric Summary of Peak Design Values



	(°F)	MCHR	Enthalpy	1.0% Humidity	(gr/lb)	MCDB	MCWB	MC Dewpt	Enthalpy
		(gr/lb)	(btu/lb)			(°F)	(°F)	(°F)	(btu/lb)
99% Dry Bulb	42	25.6	14.0	Ratio	140.7	84.3	78.9	77	42.3

	(°F)	MCHR	MCWB	Enthalpy
		(gr/lb)	(°F)	(btu/lb)
1.0% Dry Bulb	92	115.8	77.2	40.3

MACDILL AFB/TAMPA FL

WMO No. 747880

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	68.8		1		1	70.3		5	0	5	70.9
80 / 84		10	1	12	69.3		13	1	14	69.2		41	5	46	69.3
75 / 79		34	7	41	67.4	0	33	9	42	67.1	1	61	27	90	67.0
70 / 74	7	42	30	80	65.1	8	44	30	82	64.6	30	57	63	150	65.2
65 / 69	38	46	49	133	62.2	35	45	49	129	61.5	65	39	63	167	61.8
60 / 64	49	41	50	139	57.6	46	37	48	132	57.1	67	26	45	137	57.3
55 / 59	47	33	42	122	52.4	45	27	41	113	52.2	44	11	26	82	52.2
50 / 54	36	24	32	93	47.3	40	15	27	83	47.2	25	6	12	43	47.1
45 / 49	33	10	23	67	42.7	27	7	14	48	42.2	11	2	5	18	42.2
40 / 44	23	4	10	37	38.0	15	2	4	21	37.6	5	0	1	6	37.8
35 / 39	9	2	3	14	33.2	5	0	1	6	32.3	0	0	0	0	32.2
30 / 34	4	1	1	6	28.5	1	0	0	1	26.4	0			0	28.8
25 / 29	1	0	0	1	24.1	0			0	23.0					

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.

MACDILL AFB/TAMPA FL

WMO No. 747880

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	76.4		3	0	3	76.8
90 / 94		1		1	73.2	16	2		18	73.9		47	7	54	76.4
85 / 89		22	3	25	70.6	0	84	20	103	72.9	2	113	43	159	76.0
80 / 84	0	79	20	99	69.3	6	96	56	158	71.3	40	59	84	184	74.7
75 / 79	8	71	53	131	67.5	59	41	91	191	70.3	145	15	85	245	72.7
70 / 74	61	42	83	187	65.8	120	10	67	196	67.6	51	3	20	74	69.8
65 / 69	93	20	53	166	61.8	51	1	12	65	62.8	2	0	0	2	64.3
60 / 64	49	4	22	74	56.8	10	0	1	11	58.3	0		0	0	55.3
55 / 59	22	1	6	30	52.2	1		0	1	54.2	0			0	53.0
50 / 54	5	0	1	6	46.9	0			0	50.3					
45 / 49	1		0	1	42.0										
40 / 44	0			0	37.0										
35 / 39															
30 / 34															
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.

MACDILL AFB/TAMPA FL

WMO No. 747880

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		4	1	5	77.7		2	0	2	79.8		1	0	1	78.5
90 / 94		58	10	69	77.6		63	9	72	77.9		43	5	48	77.0
85 / 89	4	119	42	165	76.9	3	109	39	151	77.0	0	106	31	137	76.2
80 / 84	65	52	91	207	75.3	56	53	91	200	75.6	31	65	81	177	75.2
75 / 79	152	13	88	253	73.2	162	17	93	272	73.4	149	22	101	271	73.2
70 / 74	28	2	16	46	70.8	27	4	16	47	70.9	55	3	22	79	70.0
65 / 69		0		0	65.0	0	0		0	67.3	4	0	1	5	63.4
60 / 64											1		0	1	58.6
55 / 59															
50 / 54															
45 / 49															
40 / 44															
35 / 39															
30 / 34															
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.

MACDILL AFB/TAMPA FL

WMO No. 747880

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															
90 / 94		7	0	7	75.8		0		0	74.3					
85 / 89		61	8	69	73.8		11	0	11	72.2		1	0	1	73.9
80 / 84	3	89	41	133	71.7		54	9	63	70.6		15	1	16	70.2
75 / 79	53	57	86	196	70.3	4	63	39	106	68.5	0	45	10	56	67.6
70 / 74	95	24	70	189	67.4	54	49	66	169	66.5	11	49	39	99	65.5
65 / 69	59	8	29	95	62.3	64	30	56	150	62.3	47	50	61	158	62.4
60 / 64	25	2	9	37	57.2	52	18	35	105	57.0	57	35	50	142	57.9
55 / 59	9	1	3	13	52.5	29	9	18	57	51.8	46	27	38	111	52.3
50 / 54	4	0	1	5	47.7	21	4	11	36	46.6	35	15	25	76	47.4
45 / 49	0			0	46.3	11	1	4	16	42.0	25	6	16	47	42.6
40 / 44						4	0	1	5	37.8	18	3	5	26	37.4
35 / 39						1	0	0	1	34.8	6	1	2	9	32.2
30 / 34											2	0	1	3	27.2
25 / 29											0	0		0	21.5

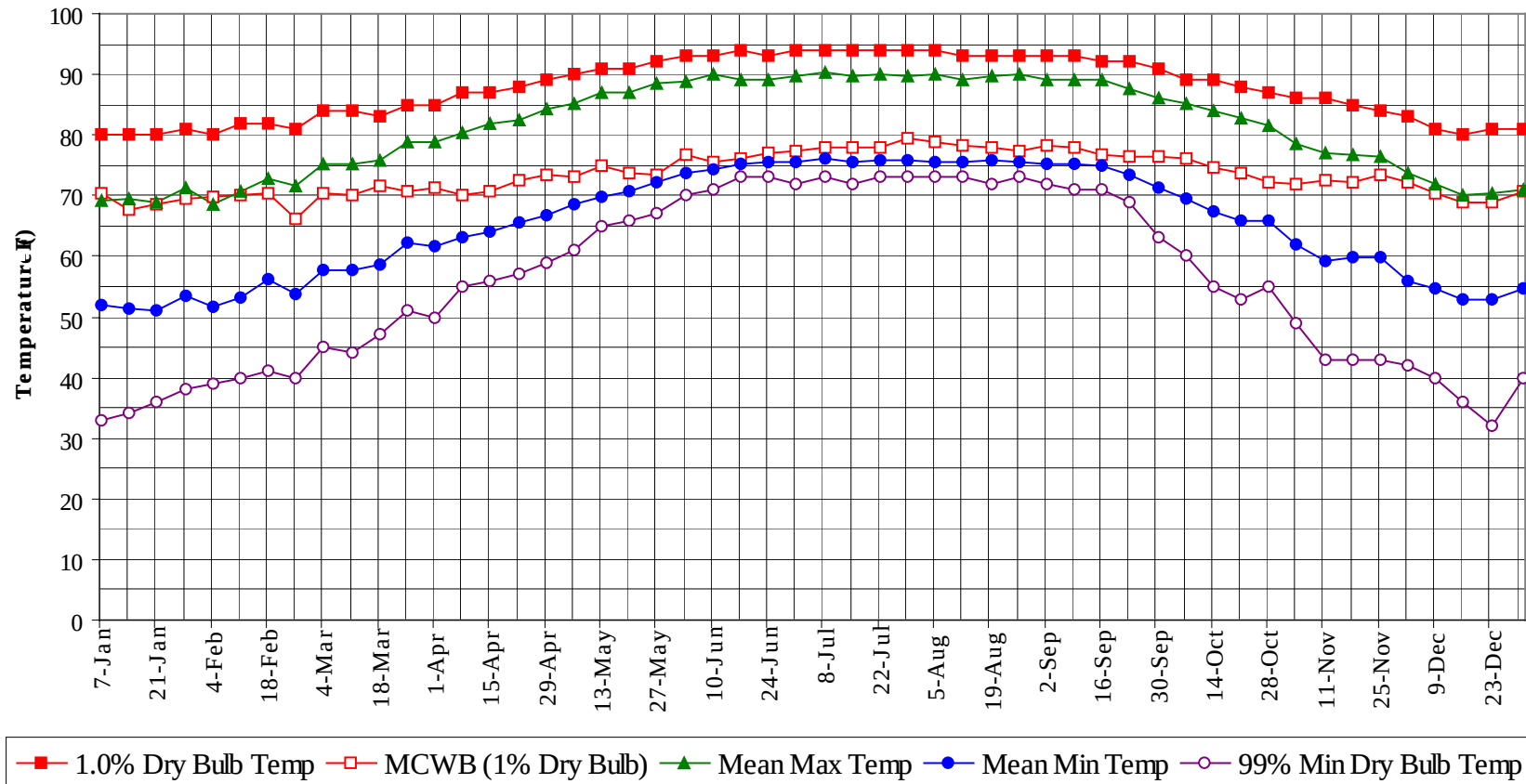
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

MACDILL AFB/TAMPA FL WMO No. 747880
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)
Period of Record = 1967 to 1996

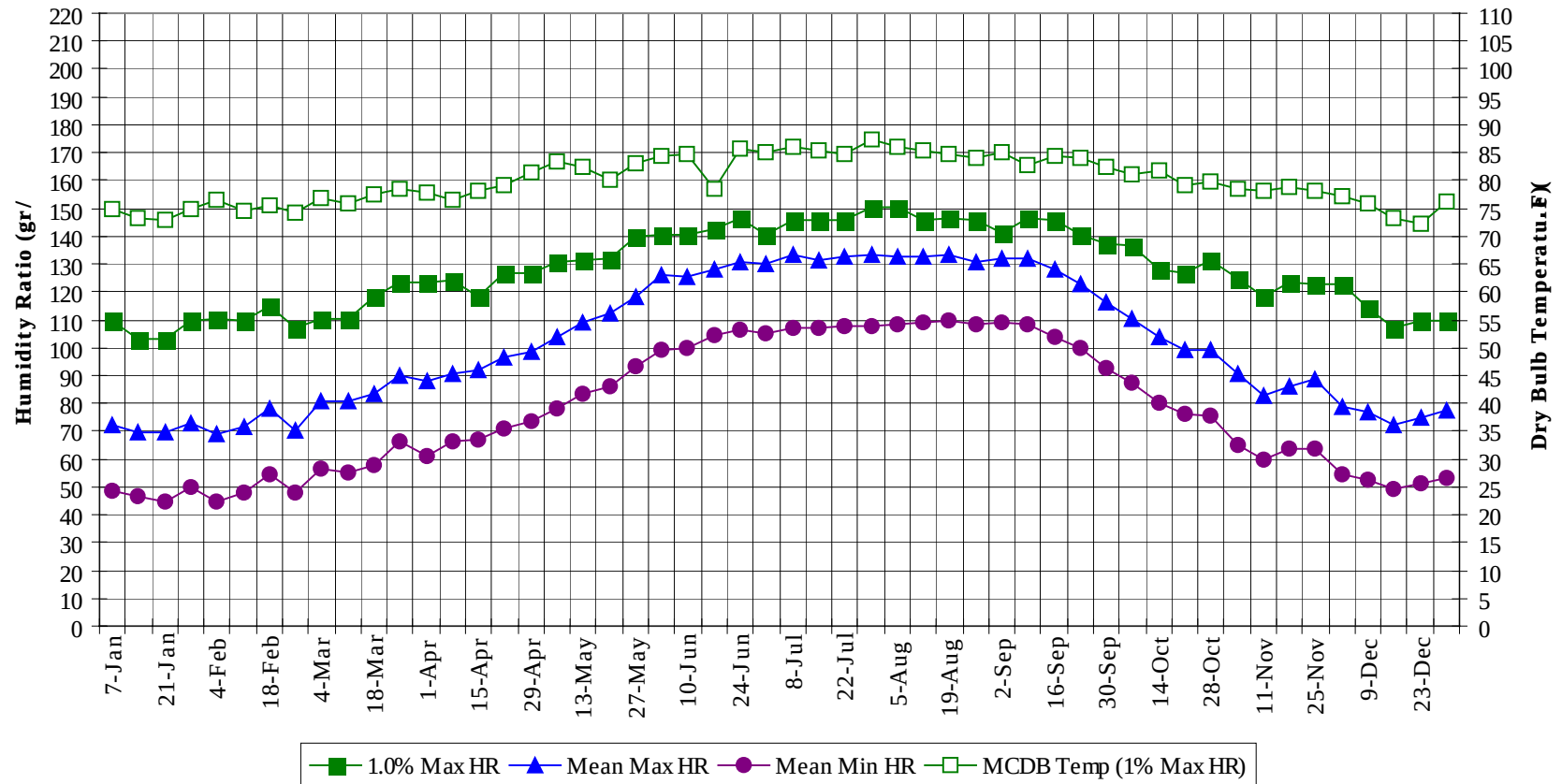
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
95 / 99		10	1	11	78.0
90 / 94		235	33	267	77.0
85 / 89	8	630	186	825	75.6
80 / 84	203	627	477	1307	73.3
75 / 79	736	472	686	1894	71.2
70 / 74	549	328	518	1395	66.9
65 / 69	456	240	375	1071	62.1
60 / 64	356	164	261	781	57.3
55 / 59	242	111	177	530	52.2
50 / 54	167	64	113	344	47.2
45 / 49	109	27	63	199	42.5
40 / 44	64	10	23	96	37.7
35 / 39	22	3	6	31	32.8
30 / 34	7	1	2	10	27.9
25 / 29	1	0	0	1	23.0

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



MACDILL AFB/TAMPA FL

WMO No. 747880

Long Term Dry Bulb Temperature and Humidity Summary

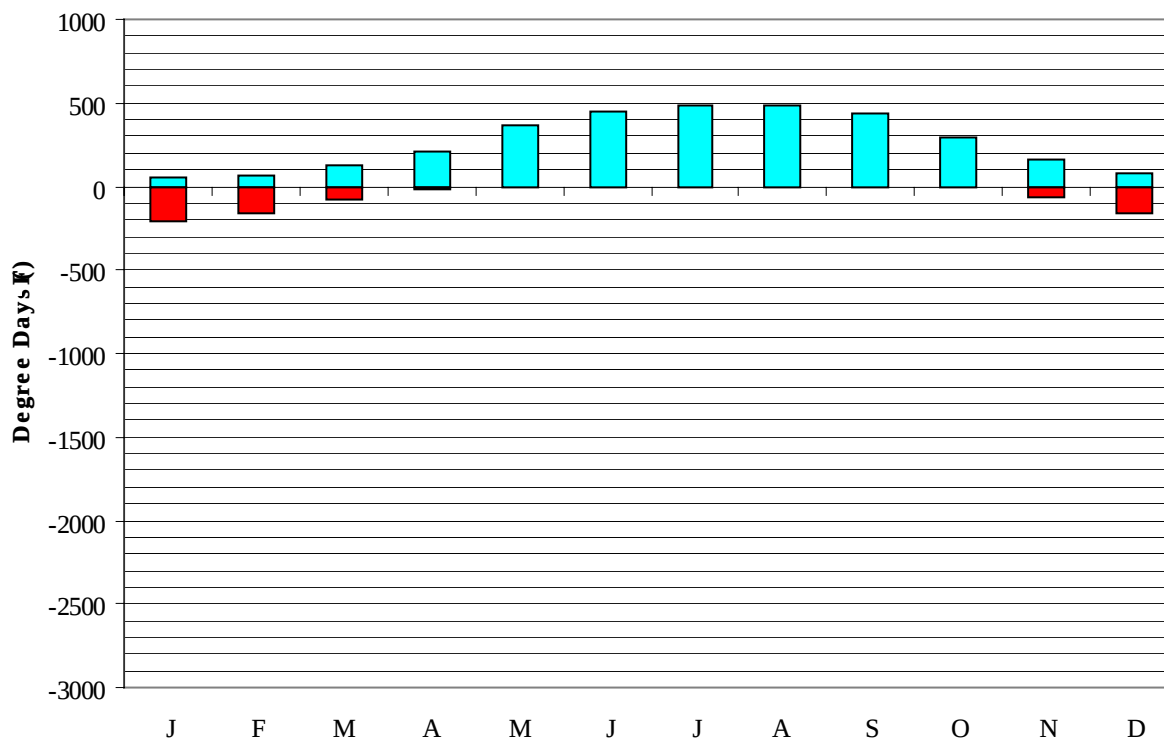
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	80.0	70.4	69.1	52.1	33.0	109.9	75.0	72.3	48.4
14-Jan	80.0	67.6	69.5	51.5	34.0	102.9	73.3	69.7	46.4
21-Jan	80.0	68.5	68.9	51.2	36.0	102.9	73.0	69.4	44.5
28-Jan	81.0	69.4	71.4	53.6	38.0	109.9	75.0	72.8	49.9
4-Feb	80.0	69.8	68.7	51.6	39.0	110.6	76.4	68.8	44.5
11-Feb	82.0	70.1	70.7	53.3	40.0	109.9	74.5	71.7	48.0
18-Feb	82.0	70.4	72.9	56.3	41.0	114.8	75.5	78.4	54.8
25-Feb	81.0	66.1	71.6	53.9	40.0	107.1	74.3	70.5	47.7
4-Mar	84.0	70.3	75.2	57.7	45.0	110.6	76.9	80.9	56.7
11-Mar	84.0	70.1	75.2	57.8	44.0	110.6	75.7	80.5	55.0
18-Mar	83.0	71.6	75.8	58.6	47.0	118.3	77.4	83.5	57.7
25-Mar	85.0	70.7	78.8	62.3	51.0	123.2	78.6	89.7	66.2
1-Apr	85.0	71.2	78.7	61.7	50.0	123.2	77.9	88.2	61.2
8-Apr	87.0	70.0	80.4	63.1	55.0	123.9	76.7	90.7	66.1
15-Apr	87.0	70.7	81.7	64.1	56.0	118.3	78.0	91.9	67.0
22-Apr	88.0	72.5	82.5	65.4	57.0	126.7	79.3	96.5	71.2
29-Apr	89.0	73.4	84.4	66.7	59.0	126.7	81.5	98.7	73.5
6-May	90.0	73.0	85.3	68.5	61.0	130.9	83.4	103.8	78.1
13-May	91.0	75.1	86.9	69.9	65.0	131.6	82.3	109.0	83.3
20-May	91.0	73.8	87.1	70.7	66.0	132.3	80.3	112.6	86.0
27-May	92.0	73.5	88.4	72.2	67.0	140.0	83.1	118.5	93.2
3-Jun	93.0	76.7	88.8	73.7	70.0	140.7	84.4	125.8	99.0
10-Jun	93.0	75.6	89.9	74.4	71.0	140.7	84.8	125.5	99.7
17-Jun	94.0	76.2	89.1	75.2	73.0	142.8	78.5	127.8	104.3
24-Jun	93.0	76.9	89.1	75.4	73.0	146.3	85.7	130.6	106.2
1-Jul	94.0	77.4	89.8	75.5	72.0	140.7	85.0	129.8	105.3
8-Jul	94.0	78.0	90.4	76.0	73.0	145.6	85.9	133.1	107.2
15-Jul	94.0	78.0	89.7	75.5	72.0	145.6	85.4	131.4	107.0
22-Jul	94.0	78.1	90.0	75.8	73.0	145.6	84.8	132.4	107.9
29-Jul	94.0	79.5	89.9	75.8	73.0	150.5	87.3	133.1	107.8
5-Aug	94.0	78.7	90.0	75.6	73.0	150.5	86.1	132.7	108.5
12-Aug	93.0	78.3	89.2	75.6	73.0	145.6	85.3	132.8	109.0
19-Aug	93.0	77.9	89.8	75.9	72.0	146.3	84.8	133.3	109.5
26-Aug	93.0	77.4	90.0	75.6	73.0	145.6	84.1	130.7	108.1
2-Sep	93.0	78.3	89.2	75.3	72.0	141.4	85.0	132.3	108.9
9-Sep	93.0	77.8	89.1	75.2	71.0	146.3	82.7	131.8	108.0
16-Sep	92.0	76.7	89.2	74.9	71.0	145.6	84.5	128.1	104.1
23-Sep	92.0	76.4	87.7	73.3	69.0	140.7	83.9	122.9	99.9
30-Sep	91.0	76.5	86.2	71.4	63.0	137.2	82.5	116.0	92.3
7-Oct	89.0	76.1	85.3	69.6	60.0	136.5	81.1	110.5	87.4
14-Oct	89.0	74.7	83.9	67.5	55.0	128.1	81.9	103.5	79.8
21-Oct	88.0	73.8	82.7	65.9	53.0	126.7	79.2	98.9	76.0
28-Oct	87.0	72.1	81.5	65.8	55.0	131.6	79.7	98.9	75.6
4-Nov	86.0	71.9	78.5	61.9	49.0	124.6	78.6	90.6	65.0
11-Nov	86.0	72.5	77.1	59.3	43.0	118.3	78.0	82.9	59.7
18-Nov	85.0	72.3	76.9	59.9	43.0	123.2	78.9	86.0	64.0
25-Nov	84.0	73.5	76.5	59.8	43.0	122.5	78.3	88.8	63.7
2-Dec	83.0	72.1	73.8	55.8	42.0	122.5	77.3	79.0	54.3
9-Dec	81.0	70.3	72.0	54.6	40.0	114.1	75.9	76.9	52.7
16-Dec	80.0	68.9	70.1	52.9	36.0	107.1	73.1	72.3	49.2
23-Dec	81.0	68.8	70.5	52.7	32.0	109.9	72.4	74.6	51.1
31-Dec	81.0	70.6	70.9	54.6	40.0	109.9	76.2	77.3	53.5

MACDILL AFB/TAMPA

FL

WMO No. 747880

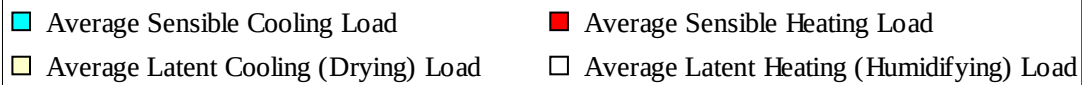
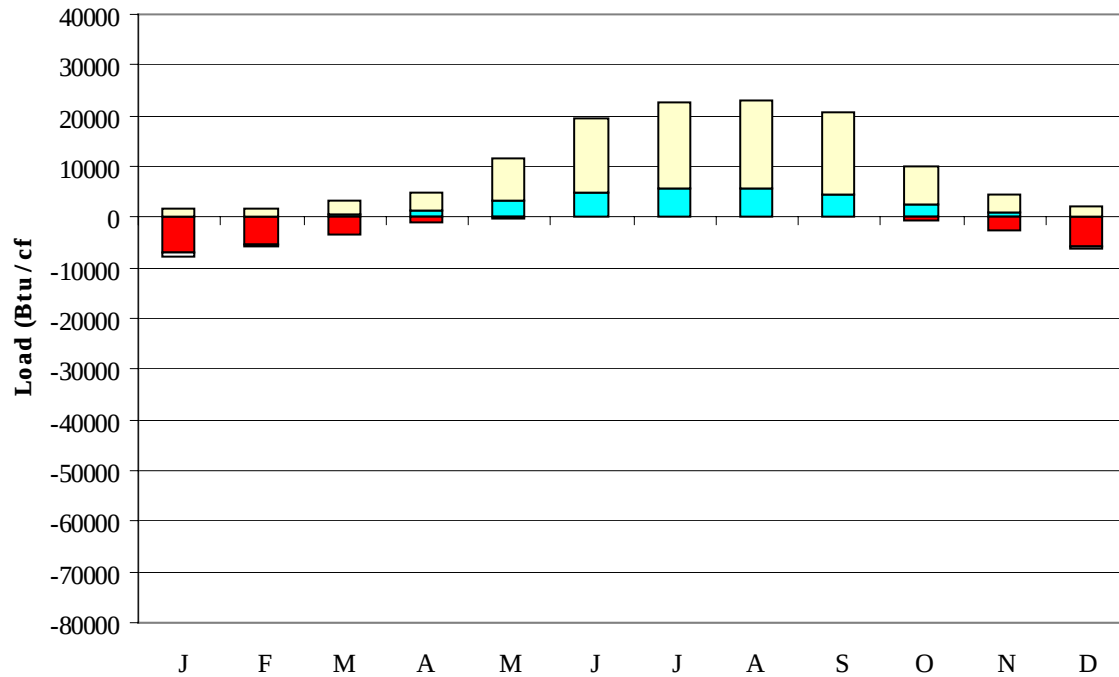
Degree Days, Heating and Cooling
(Base 65°F)



■ Mean Cooling Degree Days ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	58	210
FEB	62	158
MAR	131	82
APR	214	21
MAY	364	1
JUN	453	0
JUL	489	0
AUG	481	0
SEP	438	0
OCT	298	10
NOV	158	64
DEC	75	160
ANN	3220	706

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	151	-7138	1384	-451
FEB	185	-5591	1357	-331
MAR	555	-3238	2605	-132
APR	1315	-1063	3595	-23
MAY	3292	-129	8150	0
JUN	5017	-3	14603	0
JUL	5666	0	16958	0
AUG	5461	0	17434	0
SEP	4604	-8	16036	0
OCT	2314	-505	7600	-2
NOV	797	-2527	3839	-105
DEC	221	-5667	1861	-332
ANN	29578	-25869	95422	-1376

Average Annual Solar Radiation – Nearest Available Site

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

City: TAMPA
 State: FL
 WBAN No: 12842
 Lat(N): 27.97
 Long(W): 82.53
 Elev(ft): 10

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1
 Overhang: 0.796
 Vert Gap: 0.634

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	1020	1270	1600	1960	2030	1930	1840	1730	1550	1410	1130	970	1540
	Std Dev	83	85	120	87	113	134	104	118	103	84	81	70	55
	Minimum	820	1080	1380	1830	1820	1630	1620	1470	1360	1150	950	840	1410
	Maximum	1160	1430	1760	2170	2230	2180	2030	1980	1720	1550	1260	1090	1640
	Diffuse	400	460	570	650	770	870	870	820	720	550	420	370	620
Clear Day	Global	1370	1680	2050	2360	2500	2520	2470	2330	2060	1720	1400	1260	1980
NORTH	Global	270	320	380	460	570	620	580	490	420	360	290	260	420
	Diffuse	270	320	380	440	490	520	510	470	420	360	290	260	390
Clear Day	Global	250	300	360	440	600	710	640	490	400	340	270	240	420
EAST	Global	620	740	910	1080	1090	1040	1030	1010	920	850	690	600	880
	Diffuse	330	390	470	550	600	620	620	590	540	450	360	310	490
Clear Day	Global	890	1050	1200	1310	1330	1300	1280	1240	1160	1030	880	820	1130
SOUTH	Global	1280	1250	1120	870	630	540	570	700	910	1220	1320	1300	980
	Diffuse	430	470	510	520	510	500	510	530	550	530	470	430	500
Clear Day	Global	1990	1860	1500	1010	670	560	600	850	1260	1660	1880	1960	1310
WEST	Global	640	770	920	1070	1060	950	860	830	800	810	680	610	830
	Diffuse	340	390	480	560	600	610	600	570	520	450	360	320	480
Clear Day	Global	890	1050	1200	1310	1330	1300	1280	1240	1160	1030	880	820	1130

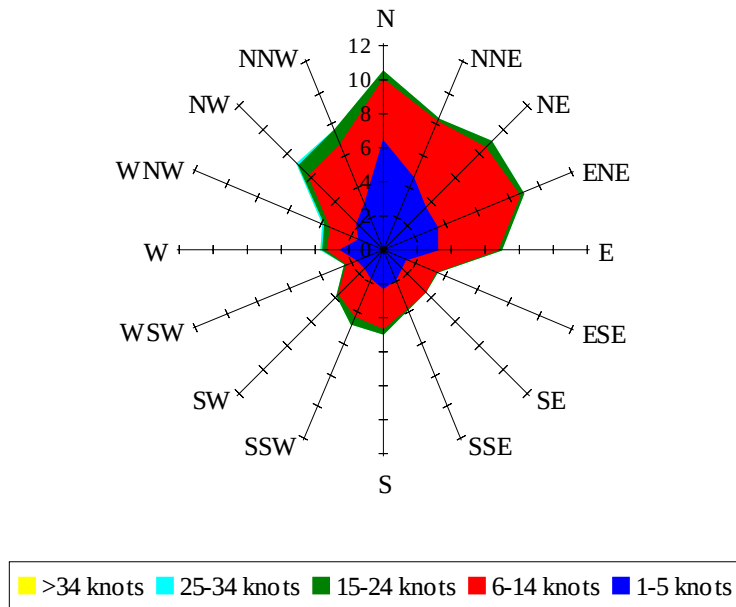
Average Annual Solar Heat and Illumination – Nearest Available Site

(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	710	900	1160	1430	1490	1400	1340	1260	1120	1010	790	660	1110
NORTH	Unshaded	190	220	260	310	360	400	370	330	290	250	200	180	280
	Shaded	170	200	240	280	320	340	330	290	260	220	180	160	250
EAST	Unshaded	430	520	650	770	780	740	740	720	660	600	480	420	620
	Shaded	380	450	560	650	660	620	620	610	560	520	430	370	540
SOUTH	Unshaded	940	890	730	510	380	350	360	420	580	840	960	970	660
	Shaded	890	730	420	320	320	310	310	320	350	620	890	940	540
WEST	Unshaded	450	540	660	770	750	670	610	580	570	570	480	420	590
	Shaded	400	470	560	650	630	560	500	490	480	490	410	370	500

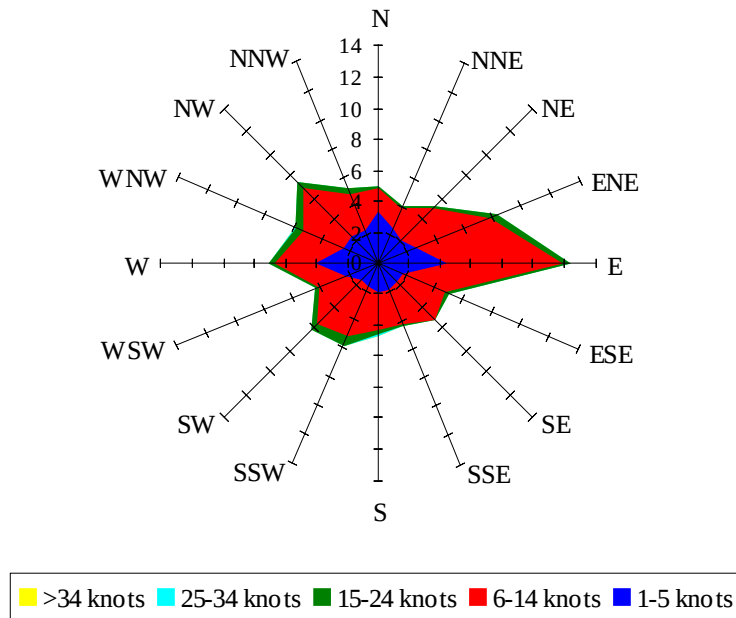
AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9		March					June				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	37	78	94	81	43	32	75	100	100	74
	M.Cloudy	23	54	66	57	29	23	57	78	77	53
NORTH	M.Clear	10	15	16	15	11	23	21	18	18	21
	M.Cloudy	9	16	18	17	11	15	20	19	19	19
EAST	M.Clear	75	68	21	15	11	59	75	43	18	17
	M.Cloudy	31	44	20	17	11	32	52	36	19	17
SOUTH	M.Clear	28	57	69	60	33	11	17	25	26	17
	M.Cloudy	15	38	47	40	20	9	17	24	24	17
WEST	M.Clear	10	15	16	62	77	11	17	18	43	74
	M.Cloudy	9	16	18	41	38	9	17	19	36	48
M.Clear	(% hrs)	43	43	44	44	45	43	36	30	28	26
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	19	64	90	88	59	19	55	66	51	16
	M.Cloudy	14	47	69	66	41	12	35	45	35	11
NORTH	M.Clear	8	16	18	18	16	6	12	13	12	6
	M.Cloudy	6	16	19	19	14	5	12	15	12	5
EAST	M.Clear	47	74	42	18	16	50	52	14	12	6
	M.Cloudy	22	46	34	19	14	16	29	15	12	5
SOUTH	M.Clear	11	40	58	57	37	38	78	87	74	32
	M.Cloudy	7	28	44	42	25	13	39	49	39	14
WEST	M.Clear	8	16	18	45	71	6	12	15	53	44
	M.Cloudy	6	16	19	35	42	5	12	15	30	18
M.Clear	(% hrs)	49	43	28	23	25	43	45	41	42	44

Wind Summary - December, January, and February **Labels of Percent Frequency on North Axis**



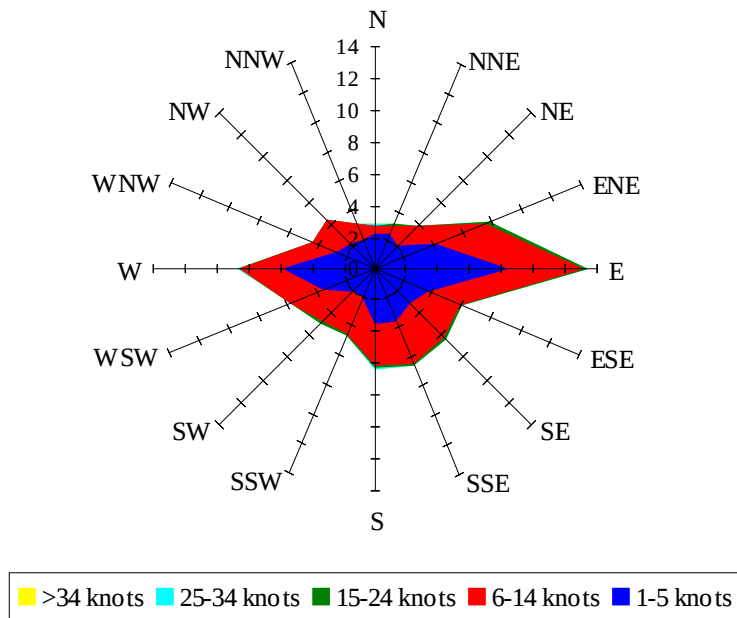
Percent Calm = 8.50

Wind Summary - March, April, and May **Labels of Percent Frequency on North Axis**



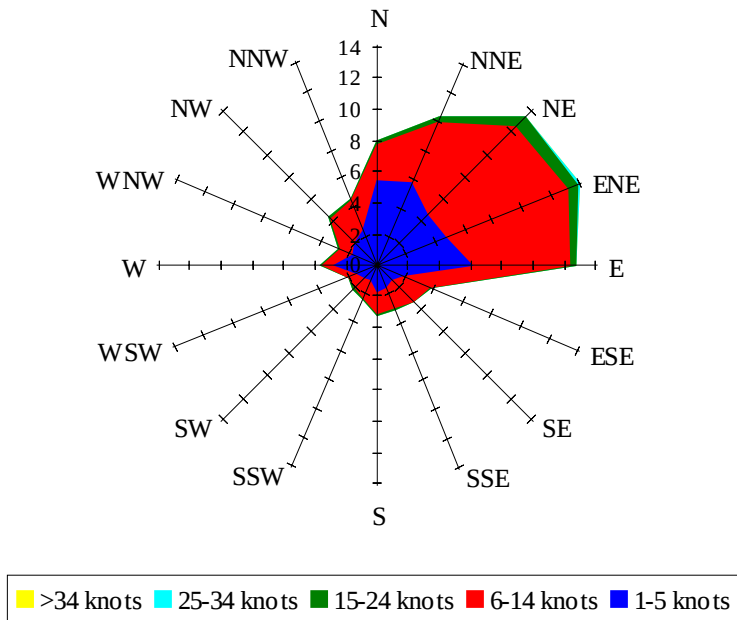
Percent Calm = 5.87

Wind Summary - June, July, and August **Labels of Percent Frequency on North Axis**



Percent Calm = 9.36

Wind Summary - September, October, and November **Labels of Percent Frequency on North Axis**



Percent Calm = 7.48