KEY WEST FL	
Latitude = 24.55 N	WMO No. 722010
Longitude = 81.75 W	Elevation = 20 feet
Period of Record = 1973 to 1996	Average Pressure = 29.98 inches Hg

Design Criteria Data

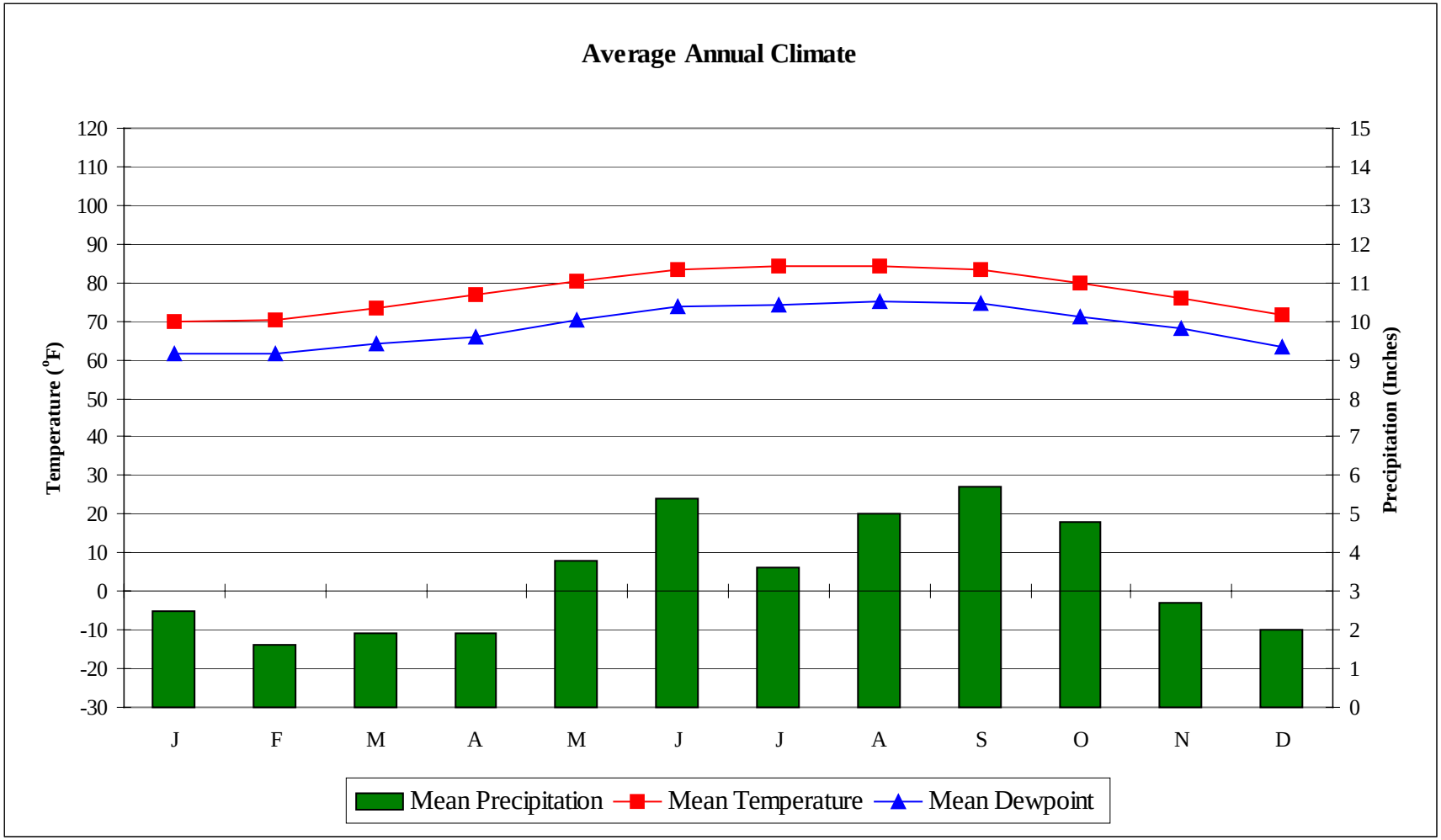
		Mean Coincident (Average) Values			
Dry Bulb Temperature (T)	**Design Value (^oF)**	Wet Bulb Temperature (^oF)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	92	80	133	9.0	SE
0.4% Occurrence	91	79	133	9.3	SE
1.0% Occurrence	90	79	133	9.6	SE
2.0% Occurrence	89	79	132	9.7	SE
Mean Daily Range	9	-	-	-	-
97.5% Occurrence	61	55	56	12.7	N
99.0% Occurrence	57	52	48	12.8	N
99.6% Occurrence	54	49	41	12.1	N
Median of Extreme Lows	51	46	38	12.2	N
		Mean Coincident (Average) Values			
Wet Bulb Temperature (T_{wb})	**Design Value (^oF)**	Dry Bulb Temperature (^oF)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	83	89	154	10.4	SE
0.4% Occurrence	81	87	144	10.4	SE
1.0% Occurrence	80	87	140	10.3	SE
2.0% Occurrence	80	87	140	10.3	SE
		Mean Coincident (Average) Values			
Humidity Ratio (HR)	**Design Value (gr/lb)**	Dry Bulb Temperature (^oF)	Vapor Pressure (in. Hg)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	172	88	1.14	6.7	WSW
0.4% Occurrence	151	85	1.00	10.5	SE
1.0% Occurrence	146	85	0.97	11.0	SE
2.0% Occurrence	146	85	0.97	10.7	SE
Air Conditioning/		$T \geq 93^oF$	$T \geq 80^oF$	$T_{wb} \geq 73^oF$	$T_{wb} \geq 67^oF$
Humid Area Criteria	# of Hours	1	4065	4822	6995

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^oF-RH 60% Latent + Sensible
10	4.3	150	15.2 + 3.6
Ground Water Temperature (^oF) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft^2)	Average Annual Freeze-Thaw Cycles (#)
80.2	0	0	0

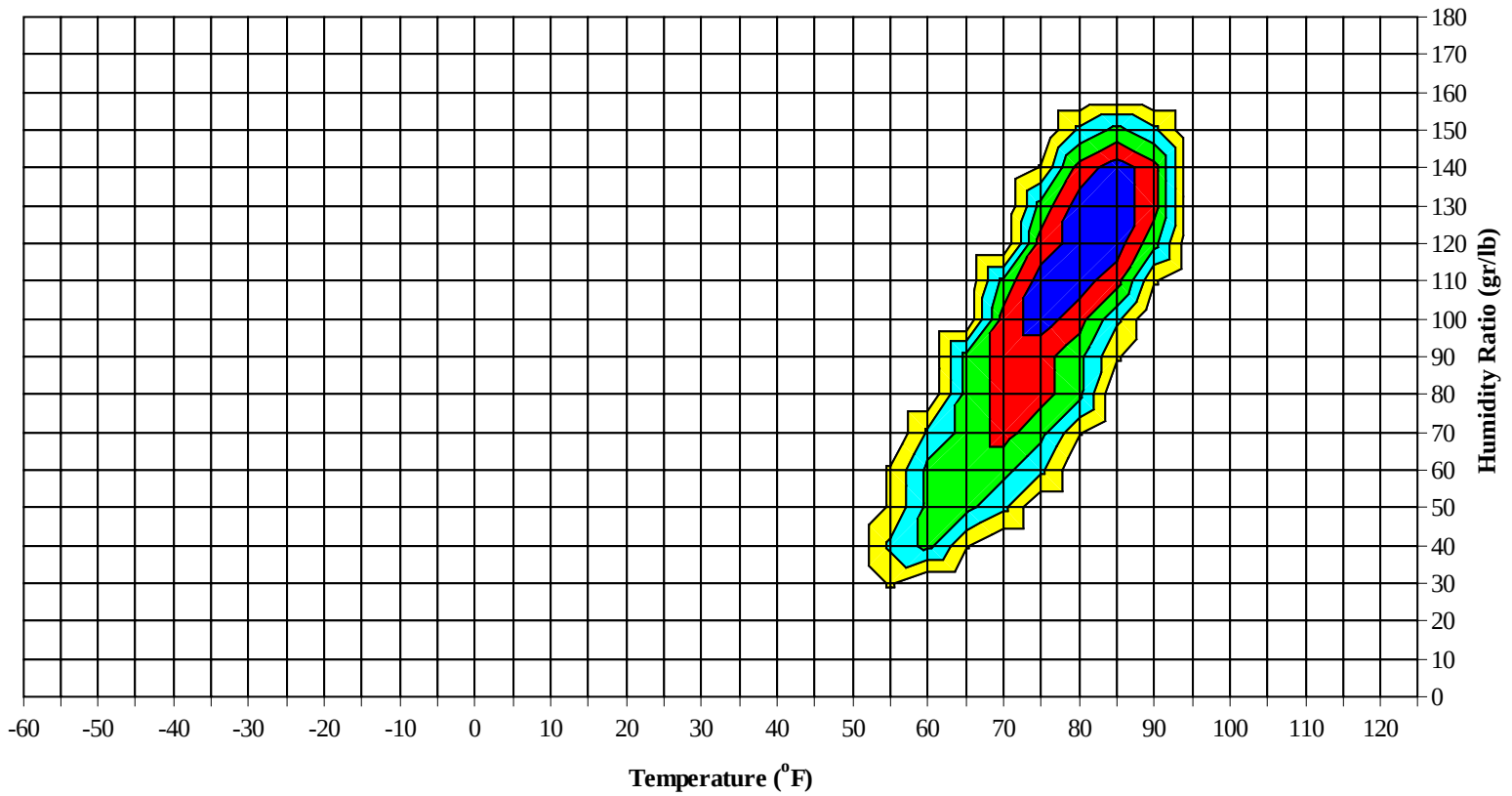
*Note: Temperatures at greater depths can be estimated by adding 1.5^oF per 100 feet additional depth.

KEY WEST FL WMO No. 722010



KEY WEST FL WMO No. 722010

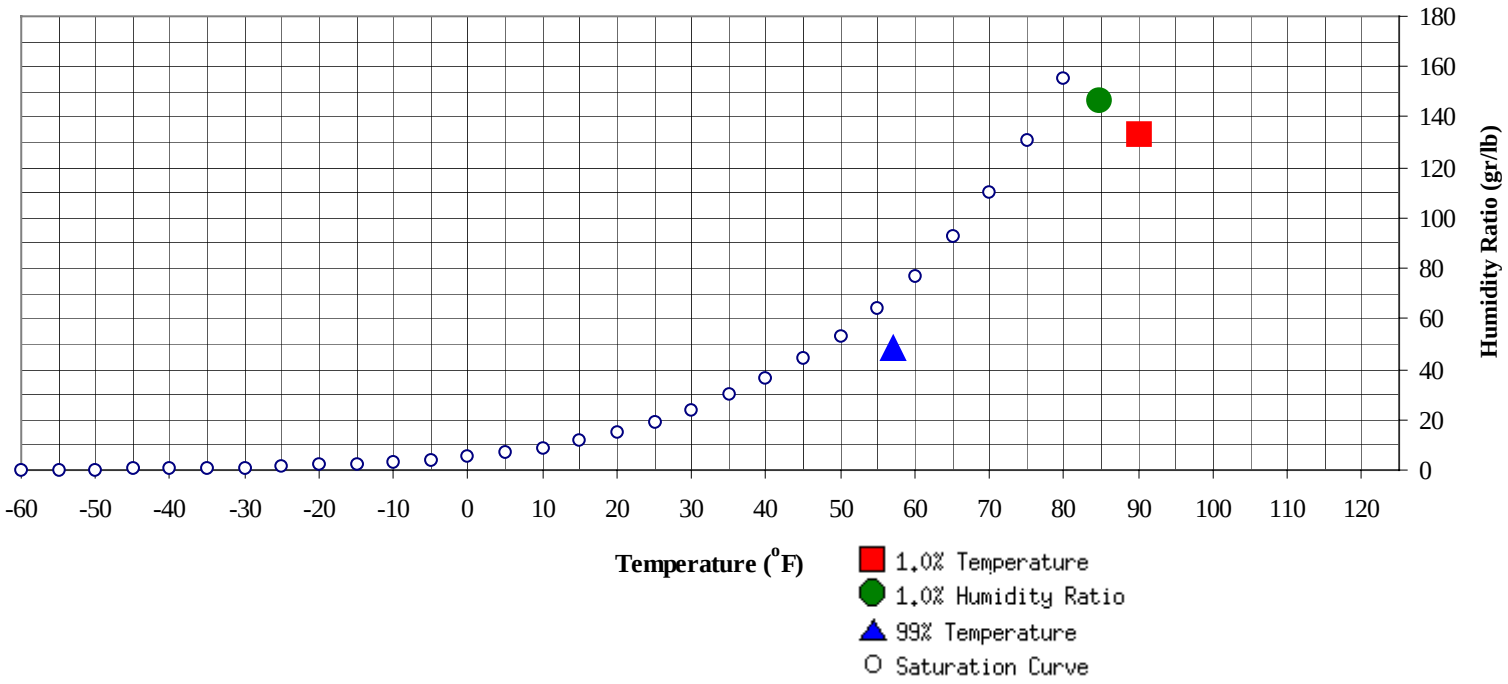
Long Term Psychrometric Summary



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

KEY WEST FL WMO No. 722010

Psychrometric Summary of Peak Design Values



	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)
99% Dry Bulb	57	48.4	21.2

	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
1.0% Humidity Ratio	146.3	84.8	79.8	78.1	43.3

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	90	133.5	79.4	42.6

KEY WEST FL WMO No. 722010

Dry-Bulb Temperature Hours For An Average Year (Sheet 1 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	January Hour Group (LST) 01 To 08	January 09 To 16	January 17 To 00	January Total Obs	January MCWB (°F)	February Hour Group (LST) 01 To 08	February 09 To 16	February 17 To 00	February Total Obs	February MCWB (°F)	March Hour Group (LST) 01 To 08	March 09 To 16	March 17 To 00	March Total Obs	March MCWB (°F)
90 / 94															
85 / 89											0	2	0	2	75.8
80 / 84		27	2	29	73.9		34	3	37	74.0	1	76	14	91	73.7
75 / 79	39	81	58	178	71.4	35	74	59	168	71.1	79	96	101	277	70.8
70 / 74	71	59	75	204	67.7	68	53	66	187	67.0	85	46	78	209	66.8
65 / 69	66	46	58	169	62.2	61	37	53	151	61.7	52	19	38	109	61.5
60 / 64	42	24	37	103	56.5	36	18	30	84	56.5	23	6	13	42	56.5
55 / 59	22	8	15	45	51.8	18	6	10	34	51.7	6	2	3	11	52.2
50 / 54	8	3	3	14	46.9	6	1	3	10	47.2	2	0	1	3	47.2
45 / 49	1	0	1	2	43.2	1	0	0	1	43.0	0			0	44.6
40 / 44	0			0	37.5										

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.

KEY WEST FL WMO No. 722010

Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	April Hour Group (LST) 01 To 08	April 09 To 16	April 17 To 00	April Total Obs	April MCWB (°F)	May Hour Group (LST) 01 To 08	May 09 To 16	May 17 To 00	May Total Obs	May MCWB (°F)	June Hour Group (LST) 01 To 08	June 09 To 16	June 17 To 00	June Total Obs	June MCWB (°F)
90 / 94							1		1	78.3		13	1	14	79.5
85 / 89	0	16	1	17	76.3	1	82	13	96	76.9	12	169	58	239	77.9
80 / 84	9	121	40	170	73.3	86	141	130	356	74.5	183	49	160	393	76.2
75 / 79	126	81	130	337	70.5	132	21	95	249	71.6	43	8	20	71	73.6
70 / 74	76	17	53	146	65.5	26	3	9	38	67.8	2	0	1	3	69.7
65 / 69	23	4	13	40	61.0	3	0	1	4	62.6					
60 / 64	5	1	2	8	57.4	0			0	59.0					
55 / 59	1		1	2	53.1										
50 / 54	0			0	48.3										
45 / 49															
40 / 44															

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.

KEY WEST FL WMO No. 722010

Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)

Period of Record = 1973 to 1996

Temperature Range (°F)	July Hour Group (LST) 01 To 08	July 09 To 16	July 17 To 00	July Total Obs	July MCWB (°F)	August Hour Group (LST) 01 To 08	August 09 To 16	August 17 To 00	August Total Obs	August MCWB (°F)	September Hour Group (LST) 01 To 08	September 09 To 16	September 17 To 00	September Total Obs	September MCWB (°F)
90 / 94	0	33	2	35	79.5	0	40	2	42	79.4		14	0	14	79.6
85 / 89	23	180	94	298	78.1	26	169	96	291	78.3	10	165	53	228	78.3
80 / 84	204	28	142	374	76.5	196	31	138	365	77.0	184	49	165	398	76.7
75 / 79	21	6	10	37	74.5	25	7	12	44	75.1	45	12	22	79	74.6
70 / 74	0	0	0	0	72.0	1	0	0	1	71.7	1	0	0	1	71.7
65 / 69															
60 / 64															
55 / 59															
50 / 54															
45 / 49															
40 / 44															

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.

KEY WEST FL WMO No. 722010

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)				MCWB	Hour Group (LST)				MCWB	Hour Group (LST)				MCWB
	01 To 08	09 To 16	17 To 00	Total Obs	(°F)	01 To 08	09 To 16	17 To 00	Total Obs	(°F)	01 To 08	09 To 16	17 To 00	Total Obs	(°F)
90 / 94	0	1		1	80.5										
85 / 89	1	75	7	83	77.7	0	7		7	77.7	0	0		0	77.6
80 / 84	78	125	122	325	75.3	16	106	34	156	74.9	1	35	2	38	74.0
75 / 79	134	42	103	279	72.4	107	83	125	316	72.1	49	101	73	224	71.3
70 / 74	31	4	14	49	67.8	82	30	61	173	67.3	91	58	90	239	67.6
65 / 69	4	1	2	7	61.3	28	11	18	57	61.5	62	33	51	146	62.3
60 / 64	0			0		7	2	2	11	57.1	28	14	23	65	56.9
55 / 59						0			0	48.3	13	5	7	25	51.8
50 / 54											3	1	2	6	47.5
45 / 49											1	0	0	1	43.2
40 / 44											0			0	43.0

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.

KEY WEST FL WMO No. 722010

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

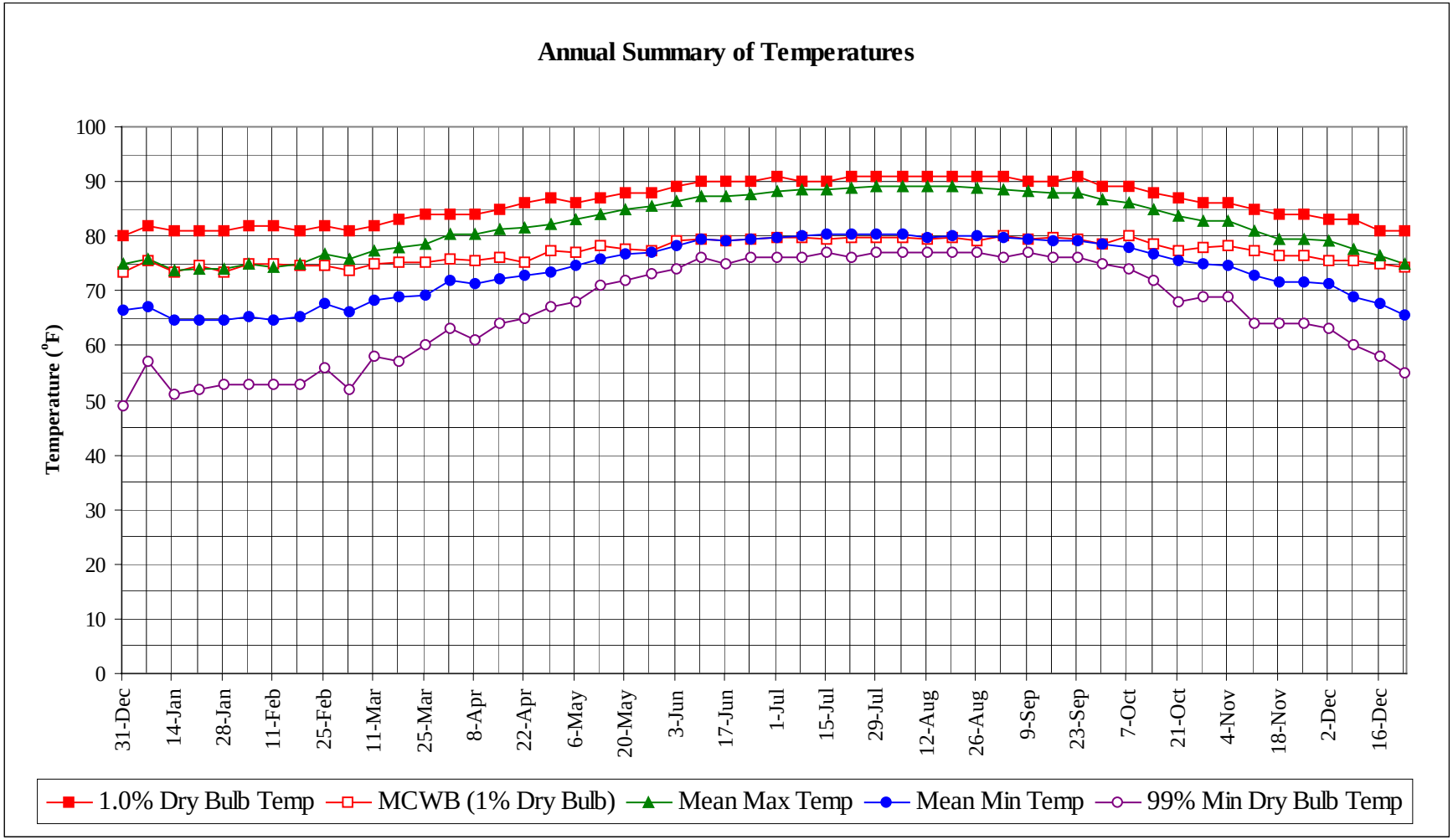
Period of Record = 1973 to 1996

Annual Totals

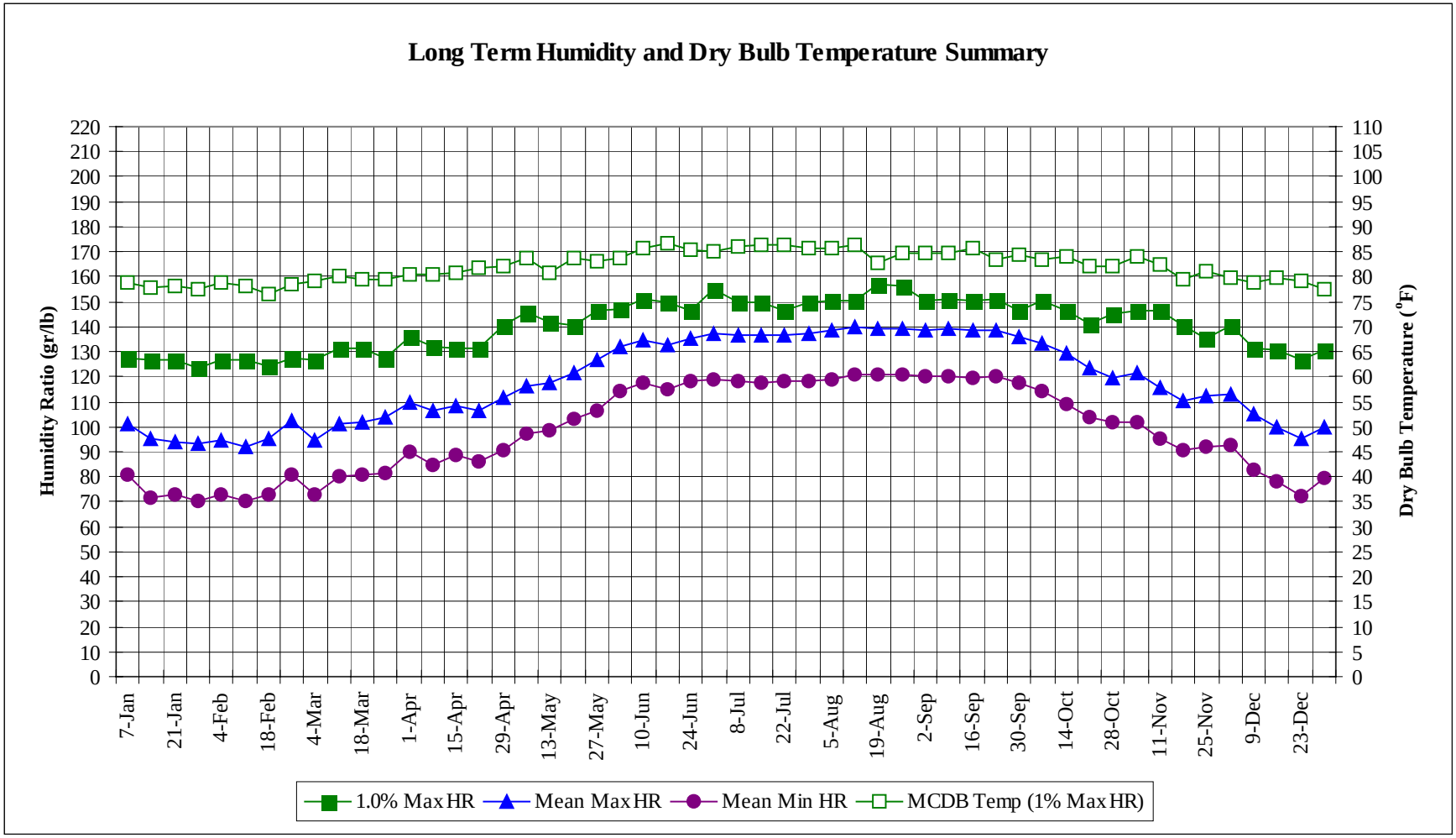
Temperature Range (°F)	Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)
90 / 94	0	102	5	107	79.5
85 / 89	74	861	320	1254	78.0
80 / 84	952	825	944	2721	75.7
75 / 79	835	615	811	2260	71.7
70 / 74	535	272	451	1257	67.1
65 / 69	300	152	235	687	61.9
60 / 64	142	66	108	316	56.6
55 / 59	61	21	37	119	51.8
50 / 54	18	6	9	33	47.1
45 / 49	4	1	1	6	43.2
40 / 44	0			0	38.3

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.

KEY WEST FL WMO No. 722010



KEY WEST FL WMO No. 722010

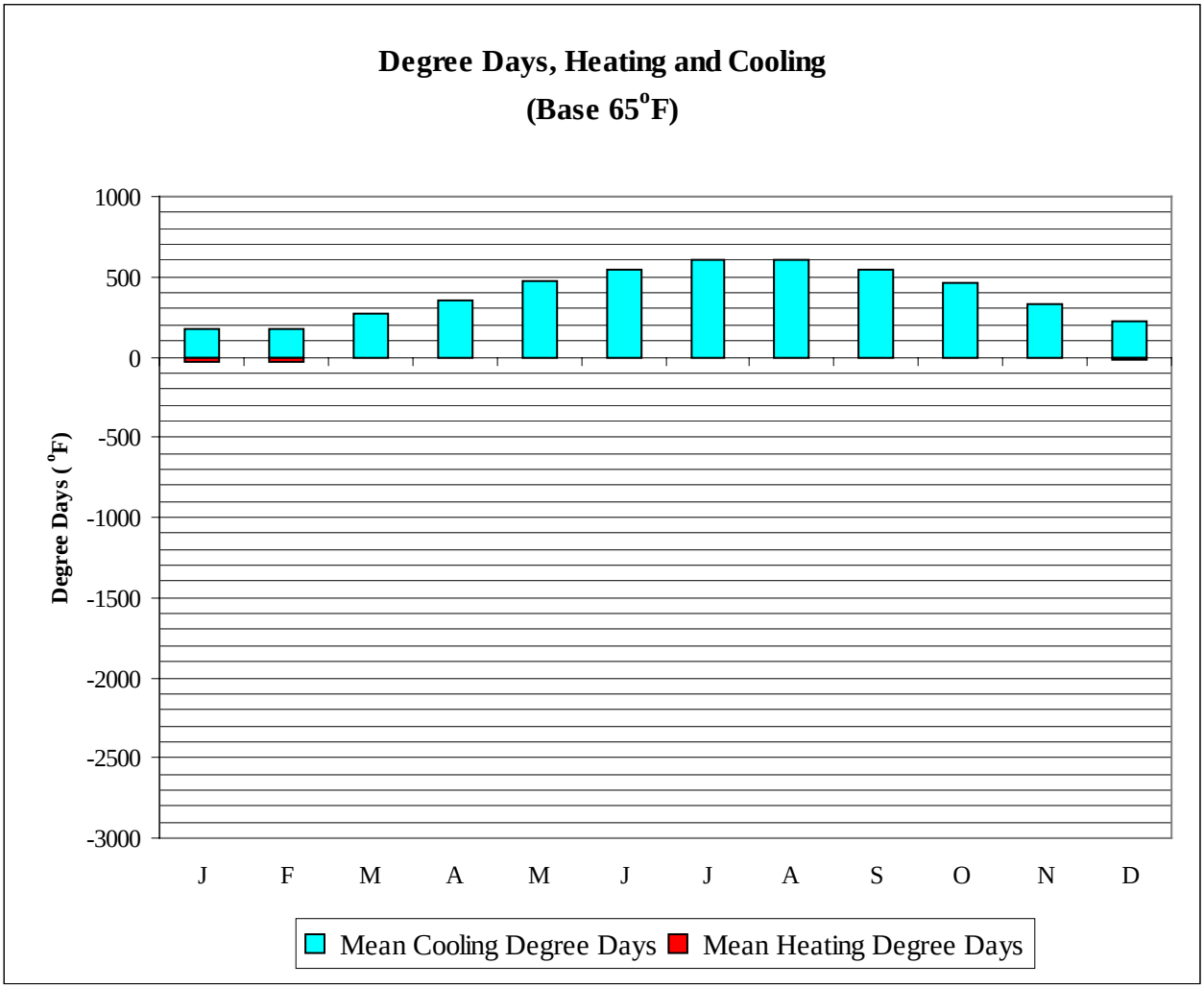


KEY WEST FL WMO No. 722010

Long Term Dry Bulb Temperature and Humidity Summary

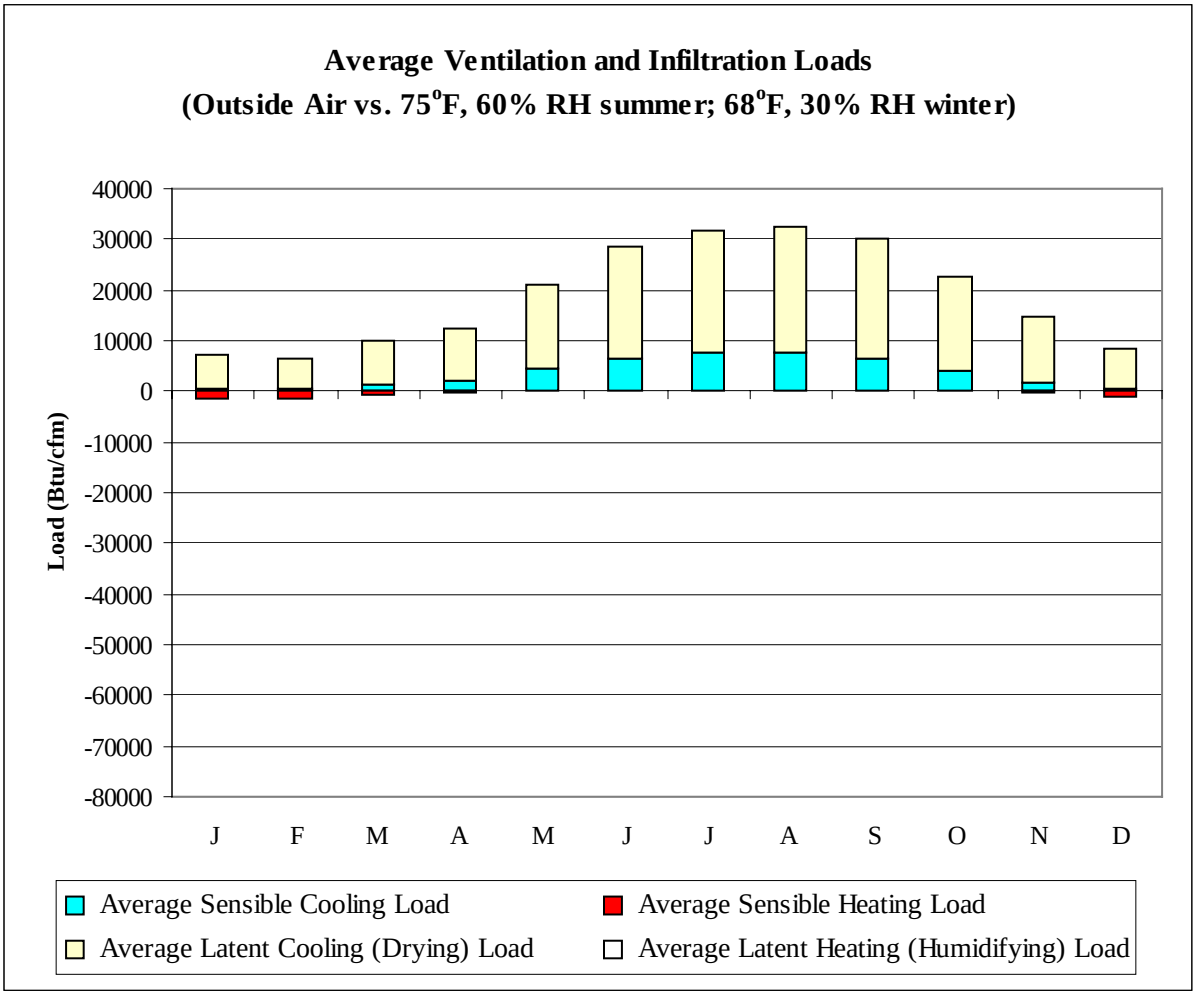
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	82.0	75.6	75.8	67.2	57.0	127.4	78.7	101.3	80.6
14-Jan	81.0	73.5	73.8	64.6	51.0	126.7	77.9	95.4	71.4
21-Jan	81.0	74.6	74.1	64.7	52.0	126.7	78.2	94.2	73.0
28-Jan	81.0	73.3	74.0	64.6	53.0	123.2	77.6	93.4	70.0
4-Feb	82.0	74.9	74.9	65.3	53.0	126.7	78.7	94.4	73.0
11-Feb	82.0	74.8	74.2	64.7	53.0	126.7	78.0	92.0	70.2
18-Feb	81.0	74.7	74.9	65.2	53.0	123.9	76.5	95.4	72.8
25-Feb	82.0	74.7	76.8	67.8	56.0	127.4	78.6	102.3	80.5
4-Mar	81.0	73.6	75.8	66.2	52.0	126.7	79.1	94.4	72.7
11-Mar	82.0	74.8	77.4	68.4	58.0	131.6	80.2	101.0	80.2
18-Mar	83.0	75.2	78.0	68.9	57.0	131.6	79.4	101.6	80.5
25-Mar	84.0	75.4	78.5	69.1	60.0	127.4	79.5	103.9	81.4
1-Apr	84.0	75.8	80.3	72.1	63.0	135.8	80.5	109.5	90.1
8-Apr	84.0	75.5	80.3	71.3	61.0	132.3	80.5	106.1	85.0
15-Apr	85.0	76.1	81.3	72.3	64.0	131.6	80.9	108.5	88.8
22-Apr	86.0	75.3	81.6	72.8	65.0	131.6	81.9	106.2	85.8
29-Apr	87.0	77.4	82.3	73.4	67.0	140.7	82.2	111.3	90.8
6-May	86.0	77.0	83.1	74.7	68.0	145.6	83.6	115.9	97.2
13-May	87.0	78.4	83.9	75.9	71.0	142.1	80.8	117.3	98.6
20-May	88.0	77.7	84.9	76.7	72.0	140.7	83.7	121.4	103.1
27-May	88.0	77.3	85.4	77.0	73.0	146.3	83.1	126.6	106.5
3-Jun	89.0	79.3	86.3	78.1	74.0	147.0	83.7	132.2	114.2
10-Jun	90.0	79.6	87.3	79.3	76.0	151.2	85.6	134.8	117.3
17-Jun	90.0	79.1	87.3	79.1	75.0	149.8	86.6	132.9	114.9
24-Jun	90.0	79.3	87.6	79.5	76.0	146.3	85.5	135.5	118.0
1-Jul	91.0	79.9	88.4	79.7	76.0	154.7	85.0	137.2	118.7
8-Jul	90.0	79.7	88.6	80.1	76.0	149.8	86.1	136.8	118.0
15-Jul	90.0	79.4	88.5	80.3	77.0	149.8	86.3	136.3	117.5
22-Jul	91.0	79.8	88.8	80.2	76.0	146.3	86.2	136.8	118.0
29-Jul	91.0	79.6	89.1	80.4	77.0	149.8	85.7	137.1	118.5
5-Aug	91.0	79.7	89.0	80.4	77.0	150.5	85.6	138.5	118.8
12-Aug	91.0	79.4	89.1	79.8	77.0	150.5	86.3	140.1	121.0
19-Aug	91.0	79.7	89.1	80.2	77.0	156.8	82.8	139.1	121.1
26-Aug	91.0	79.0	88.9	80.0	77.0	156.1	84.8	139.4	120.7
2-Sep	91.0	79.9	88.4	79.6	76.0	150.5	84.8	138.7	120.2
9-Sep	90.0	79.5	88.2	79.5	77.0	151.2	84.8	139.5	120.4
16-Sep	90.0	79.8	87.8	79.2	76.0	150.5	85.5	138.5	119.6
23-Sep	91.0	79.5	87.9	79.3	76.0	151.2	83.5	138.7	120.3
30-Sep	89.0	78.6	86.7	78.6	75.0	146.3	84.4	136.1	117.7
7-Oct	89.0	80.0	86.0	78.1	74.0	150.5	83.5	133.2	114.3
14-Oct	88.0	78.7	84.9	76.8	72.0	146.3	84.1	129.2	109.2
21-Oct	87.0	77.5	83.7	75.4	68.0	141.4	82.1	123.4	103.8
28-Oct	86.0	77.9	82.9	74.8	69.0	144.9	82.0	119.8	101.7
4-Nov	86.0	78.3	82.6	74.7	69.0	146.3	84.0	121.6	102.0
11-Nov	85.0	77.4	81.0	72.9	64.0	146.3	82.3	115.3	95.0
18-Nov	84.0	76.5	79.4	71.6	64.0	140.7	79.5	110.1	91.0
25-Nov	84.0	76.3	79.4	71.7	64.0	135.1	81.1	112.1	92.3
2-Dec	83.0	75.5	79.3	71.4	63.0	140.7	79.9	112.8	92.4
9-Dec	83.0	75.5	77.5	69.0	60.0	131.6	78.7	105.2	82.9
16-Dec	81.0	74.9	76.5	67.6	58.0	130.9	79.8	100.0	78.4
23-Dec	81.0	74.3	74.8	65.7	55.0	126.7	79.3	95.1	72.4
31-Dec	80.0	73.5	74.9	66.5	49.0	130.9	77.6	100.0	79.3

KEY WEST FL WMO No. 722010



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	179	34
FEB	174	26
MAR	273	9
APR	352	1
MAY	476	0
JUN	548	0
JUL	601	0
AUG	600	0
SEP	548	0
OCT	461	0
NOV	327	1
DEC	219	20
ANN	4759	91

KEY WEST FL WMO No. 722010



	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	467	-1625	6788	-11
FEB	509	-1294	6068	-12
MAR	1152	-525	8769	0
APR	2151	-91	10119	0
MAY	4401	-2	16515	0
JUN	6451	0	21966	0
JUL	7556	0	24130	0
AUG	7532	0	25071	0
SEP	6458	0	23777	0
OCT	4070	-3	18588	0
NOV	1824	-103	12724	0
DEC	647	-972	7911	-7
ANN	43218	-4615	182426	-30

Average Annual Solar Radiation – Nearest Available Site

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

City: KEY WEST
State: FL
WBAN No: 12836
Lat(N): 24.55
Long(W): 81.75
Elev(ft): 3

Stn Type: Secondary
SHADING GEOMETRY IN DIMENSIONLESS UNITS
Window: 1
Overhang: 1.335
Vert Gap: 0.2

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	1160	1410	1730	2000	2010	1940	1940	1850	1650	1450	1220	1090	1620
	Std Dev	85	86	105	91	99	115	71	73	71	94	77	64	33
	Minimum	950	1170	1460	1810	1740	1640	1760	1660	1460	1280	1040	960	1560
	Maximum	1290	1540	1910	2180	2160	2130	2040	1950	1760	1620	1340	1210	1680
	Diffuse	390	440	530	610	750	830	840	800	720	560	440	380	610
Clear Day	Global	1490	1770	2100	2360	2470	2480	2440	2330	2120	1810	1510	1390	2020
NORTH	Global	280	320	380	450	570	650	610	490	420	360	300	270	430
	Diffuse	280	320	380	430	480	520	510	470	420	360	300	270	400
Clear Day	Global	270	310	360	440	610	750	670	490	400	350	290	260	430
EAST	Global	710	820	960	1070	1040	980	990	960	890	830	720	660	890
	Diffuse	350	410	480	550	590	600	610	590	540	460	380	340	490
Clear Day	Global	940	1070	1210	1290	1290	1270	1250	1230	1170	1060	930	880	1130
SOUTH	Global	1380	1320	1120	790	550	480	510	650	890	1170	1330	1380	960
	Diffuse	460	480	500	490	480	480	480	510	540	530	490	460	490
Clear Day	Global	1960	1780	1380	870	560	470	500	730	1160	1590	1840	1950	1230
WEST	Global	700	830	990	1090	1040	980	980	950	870	820	720	670	890
	Diffuse	350	400	480	550	590	600	610	590	540	460	390	340	490
Clear Day	Global	940	1070	1210	1290	1290	1270	1250	1230	1170	1060	930	880	1130

Average Annual Solar Heat and Illumination – Nearest Available Site

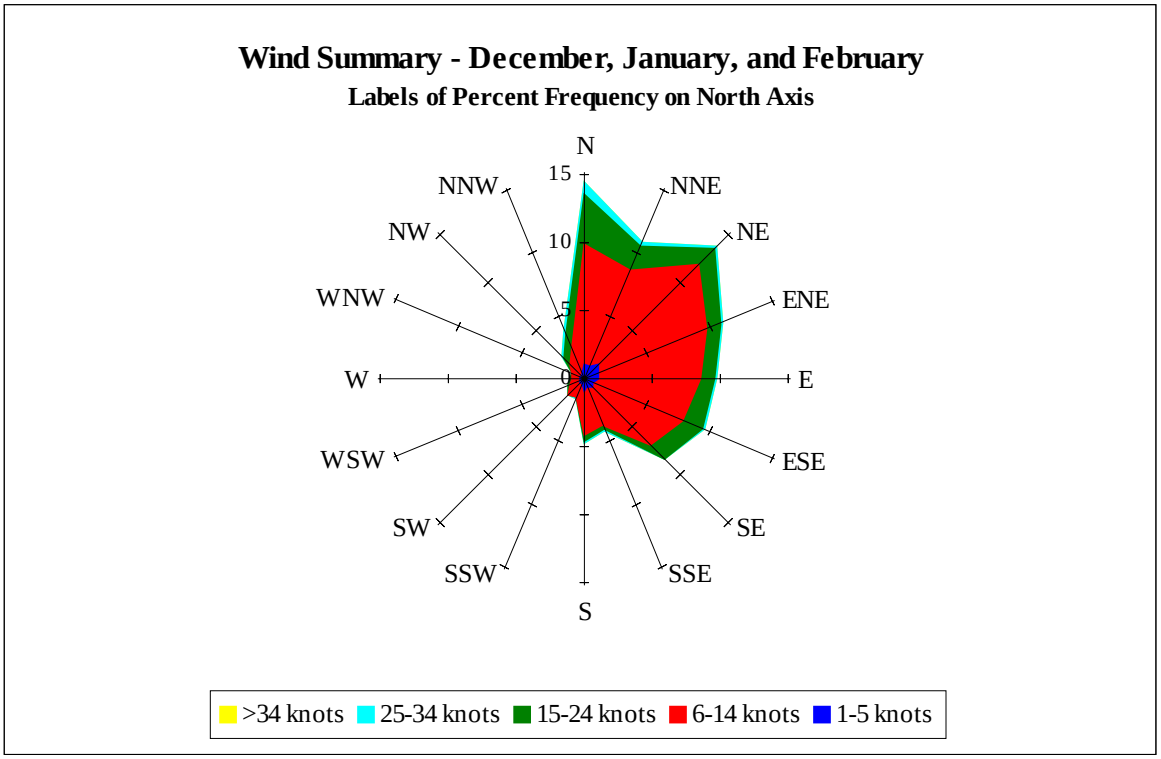
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9

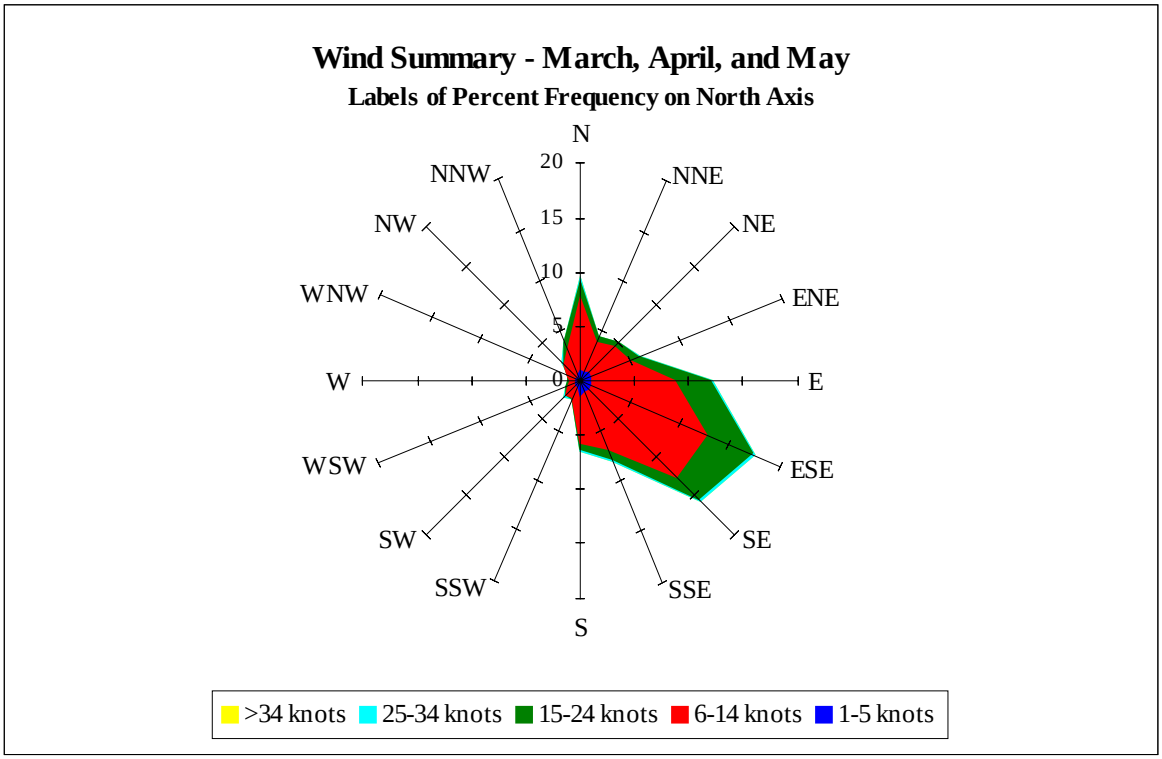
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Unshaded	810	1010	1260	1470	1480	1420	1420	1350	1200	1050	860	760	1170
NORTH	Unshaded	200	230	260	300	360	400	380	330	290	250	210	190	280
	Shaded	150	170	210	240	260	270	260	240	220	190	160	140	210
EAST	Unshaded	500	580	680	760	730	690	700	680	630	580	500	460	620
	Shaded	280	320	360	400	380	360	360	350	330	310	280	260	330
SOUTH	Unshaded	1000	920	700	450	340	330	340	390	550	790	960	1020	650
	Shaded	280	220	240	260	250	250	250	250	250	230	240	310	250
WEST	Unshaded	490	590	700	780	740	690	690	670	620	580	500	460	630
	Shaded	280	320	370	410	380	360	360	350	320	310	280	270	330

AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9

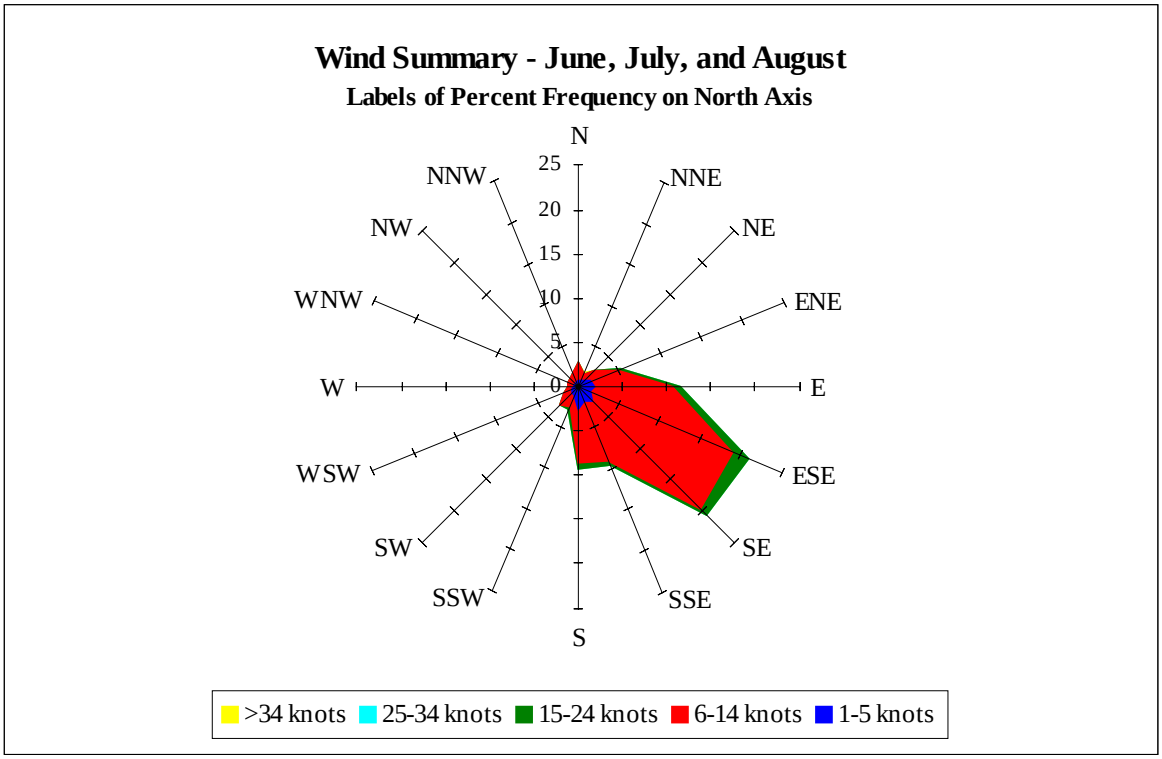
		March					June				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	37	79	96	82	42	30	74	100	99	72
	M.Cloudy	27	60	72	64	31	23	57	81	79	57
NORTH	M.Clear	10	15	16	16	11	23	24	17	18	25
	M.Cloudy	10	17	18	17	11	16	22	19	19	22
EAST	M.Clear	71	67	19	16	11	54	73	41	18	17
	M.Cloudy	40	48	20	17	11	32	53	36	19	17
SOUTH	M.Clear	26	53	64	55	30	10	17	19	19	17
	M.Cloudy	18	40	49	43	21	9	17	20	20	17
WEST	M.Clear	10	15	16	63	75	10	17	17	44	73
	M.Cloudy	10	17	18	48	44	9	17	19	37	54
M.Clear	(% hrs)	53	53	54	54	56	33	34	31	32	35
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	19	66	93	91	60	23	58	71	55	18
	M.Cloudy	16	53	76	74	48	16	42	51	40	13
NORTH	M.Clear	8	16	18	18	16	7	13	14	12	6
	M.Cloudy	7	16	19	19	16	7	14	15	13	6
EAST	M.Clear	41	72	41	18	16	51	52	14	12	6
	M.Cloudy	26	54	36	19	16	25	34	15	13	6
SOUTH	M.Clear	10	37	55	53	34	39	75	86	72	33
	M.Cloudy	8	30	45	44	27	20	46	55	44	16
WEST	M.Clear	8	16	18	47	72	7	13	17	55	46
	M.Cloudy	7	16	19	40	52	7	14	17	35	21
M.Clear	(% hrs)	27	27	25	22	23	44	46	46	46	48



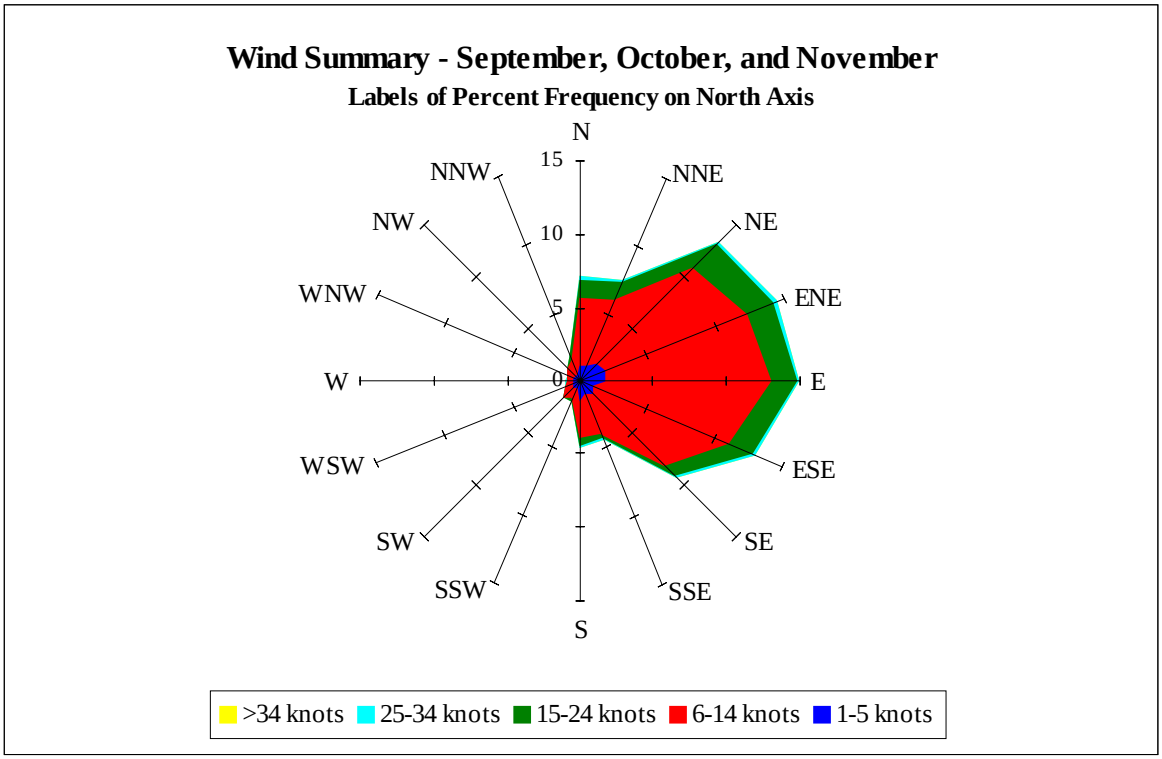
Percent Calm = 1.95



Percent Calm = 1.98



Percent Calm = 3.51



Percent Calm = 2.99