

SAIPAN MY

Latitude = 15.12 N

Longitude = 145.73 E

Period of Record = 1973 to 1996

WMO No. 912320

Elevation = 213 feet

Average Pressure = 29.66 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	85	167	11.4	E
0.4% Occurrence	91	81	146	11.1	E
1.0% Occurrence	90	81	145	11.4	E
2.0% Occurrence	89	80	144	11.4	E
Mean Daily Range	8	-	-	-	-
97.5% Occurrence	75	73	118	10.5	ENE
99.0% Occurrence	74	72	116	9.5	E
99.6% Occurrence	73	71	111	8.7	E
Median of Extreme Lows	70	69	103	7.5	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	87	89	195	9.4	E
0.4% Occurrence	83	88	159	11.1	E
1.0% Occurrence	82	87	154	11.2	E
2.0% Occurrence	82	87	154	11.2	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	203	89	1.33	7.6	E
0.4% Occurrence	163	87	1.07	11.0	E
1.0% Occurrence	160	85	1.05	9.6	E
2.0% Occurrence	158	86	1.04	11.4	E
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		6	6207	8158	8566

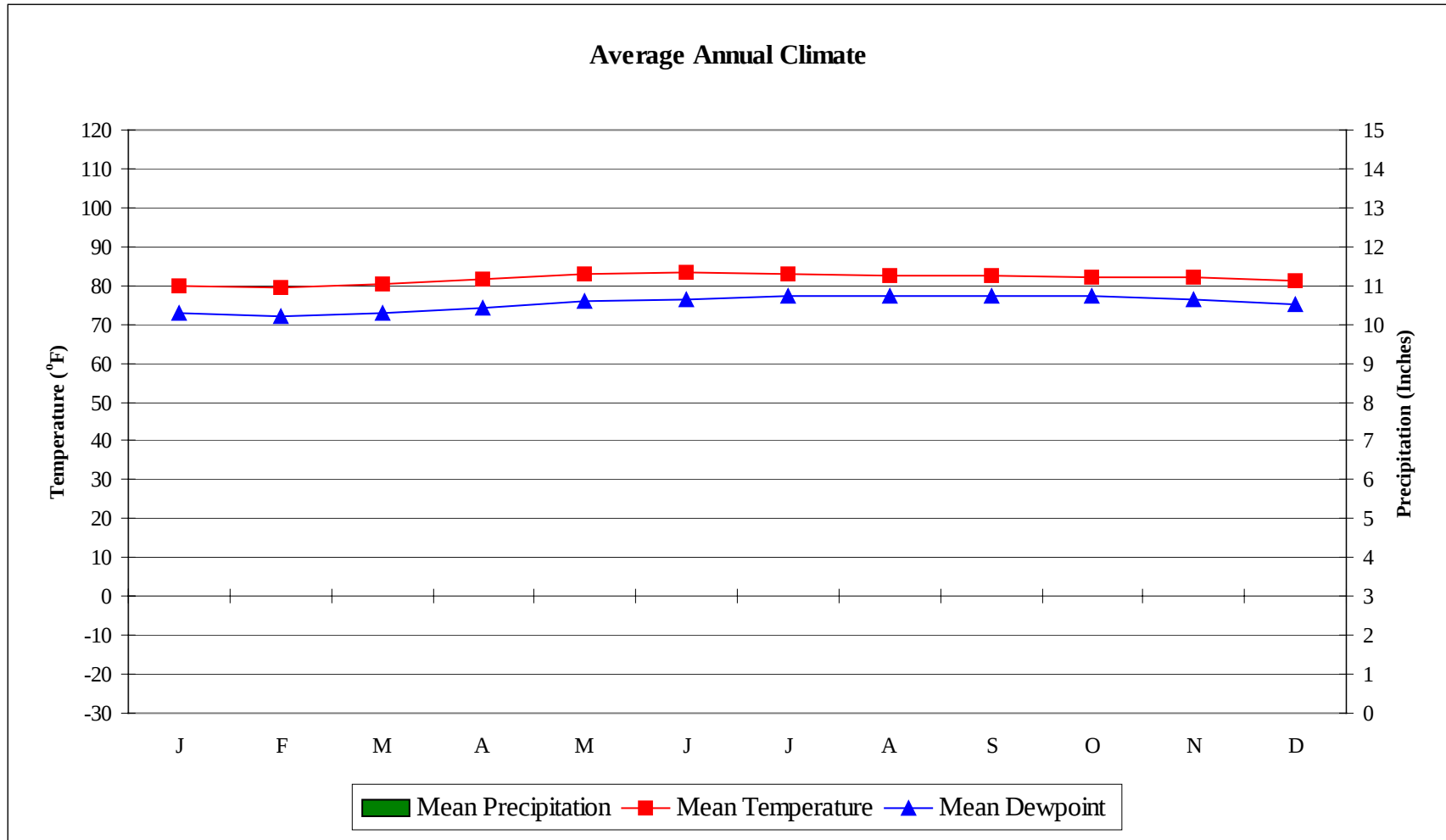
Other Site Data

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	16.8 + 5.2
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 (#)
84.2	N/A	N/A	0

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

SAIPAN MY

WMO No. 912320

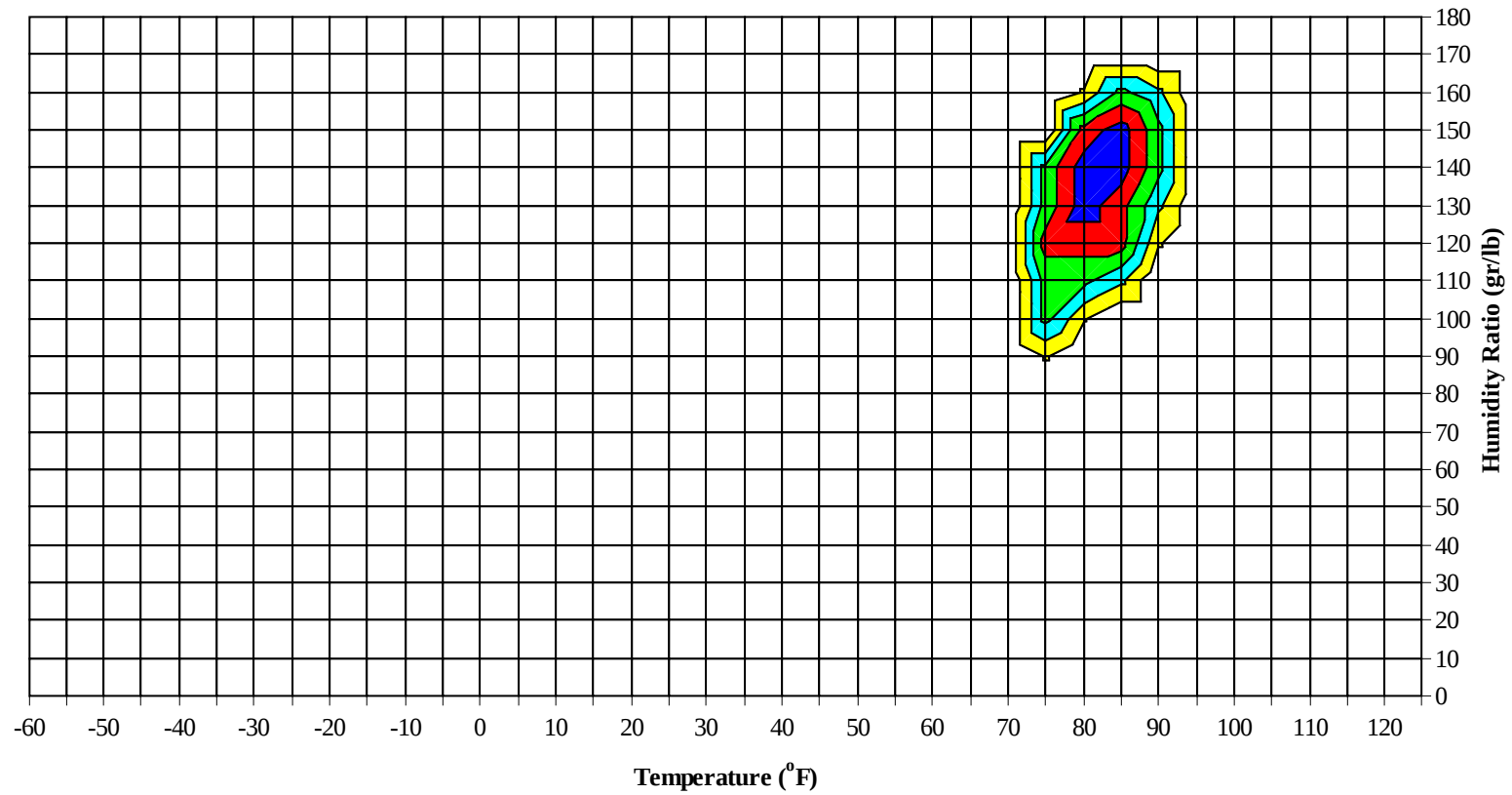


No Precipitation Data Available

SAIPAN MY

WMO No. 912320

Long Term Psychrometric Summary

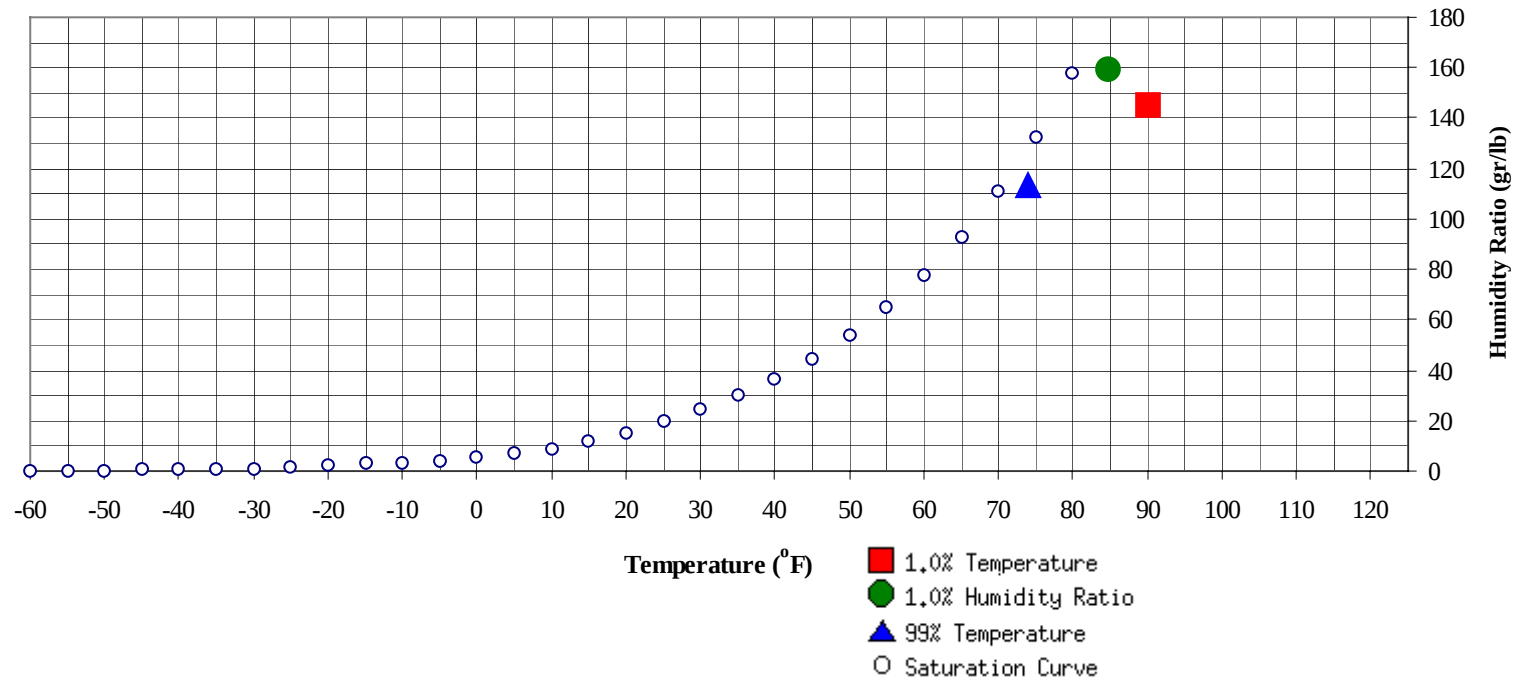


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

SAIPAN MY

WMO No. 912320

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)
	74	113.5	35.5		159.6	84.6	81.6	80.4	45.4

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	90	145	80.7	44.4

SAIPAN MY

WMO No. 912320

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	0		0	0	83.5		0		0	88.0					
90 / 94	0	1	0	1	80.4		1	0	1	78.6		2		2	79.2
85 / 89	0	52	2	54	77.5	0	37	2	39	76.7	0	63	6	69	77.4
80 / 84	22	163	77	261	76.1	6	151	51	208	75.5	24	164	88	276	75.8
75 / 79	206	32	164	401	73.9	185	34	161	381	73.1	207	18	150	375	73.7
70 / 74	21	2	5	27	70.8	33	2	9	43	70.4	17	1	5	23	71.1
65 / 69	0		0	0	67.6	0	0	0	0	66.0	0		0	0	66.3
60 / 64	0			0	64.0	0	0		0	59.5					

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.

SAIPAN MY

WMO No. 912320

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														0	0 83.0
95 / 99							0	0	0	82.5	0	0	0	0	81.6
90 / 94	0	5	0	5	78.9	0	8	0	8	80.1	0	17	1	18	80.7
85 / 89	0	112	11	124	78.3	2	165	25	192	79.1	5	173	38	216	79.6
80 / 84	79	115	142	336	76.6	155	71	185	411	77.3	184	45	183	412	77.8
75 / 79	156	8	85	249	74.8	90	5	38	132	75.6	51	5	18	74	76.2
70 / 74	5	0	1	6	71.2	1	0	0	1	71.5	0	0	0	0	71.1
65 / 69		0		0	68.0										
60 / 64															

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SAIPAN MY

WMO No. 912320

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	91.0	0		0	0	84.0		0	0	0	88.0
95 / 99		0	0	0	80.2	0	0	0	0	82.8		0	0	0	90.0
90 / 94		16	0	16	81.2	0	13	1	14	81.6		9	1	10	81.8
85 / 89	5	157	38	200	80.0	2	140	31	173	80.3	1	141	22	164	80.4
80 / 84	160	62	169	392	78.2	150	76	168	393	78.5	135	76	166	376	78.5
75 / 79	82	13	40	135	76.4	96	19	48	163	76.3	103	15	51	169	76.5
70 / 74	1	0	0	1	72.9	0	0	0	0	73.1	1	0	0	1	73.1
65 / 69															
60 / 64															

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SAIPAN MY

WMO No. 912320

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			0	0	87.0										
95 / 99		0	0	0	83.0										
90 / 94		9	0	9	81.3	0	2	0	2	81.1		1		1	79.2
85 / 89	2	140	14	156	80.2	1	127	7	135	79.8	0	81	5	86	78.8
80 / 84	137	86	177	400	78.3	144	101	185	430	77.9	90	152	142	384	77.1
75 / 79	108	14	56	177	76.4	94	9	47	150	76.1	154	13	100	267	75.0
70 / 74	1	0	1	2	72.3	1	0	1	2	72.8	5	1	1	7	71.2
65 / 69						0			0	68.0	0			0	62.0
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.

WMO No. 912320

Period of Record = 1973 to 1996

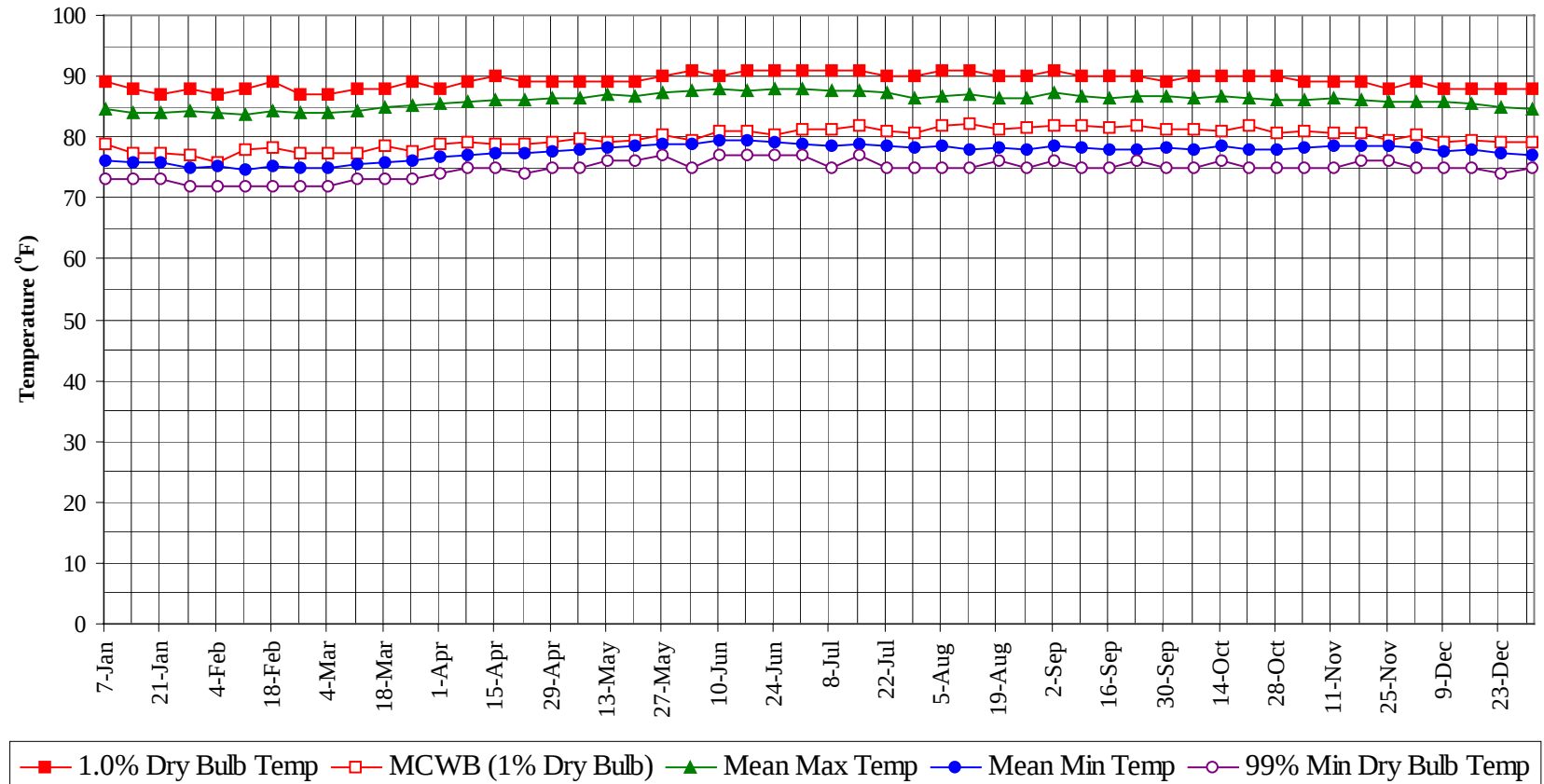
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Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate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

SAIPAN MY

WMO No. 912320

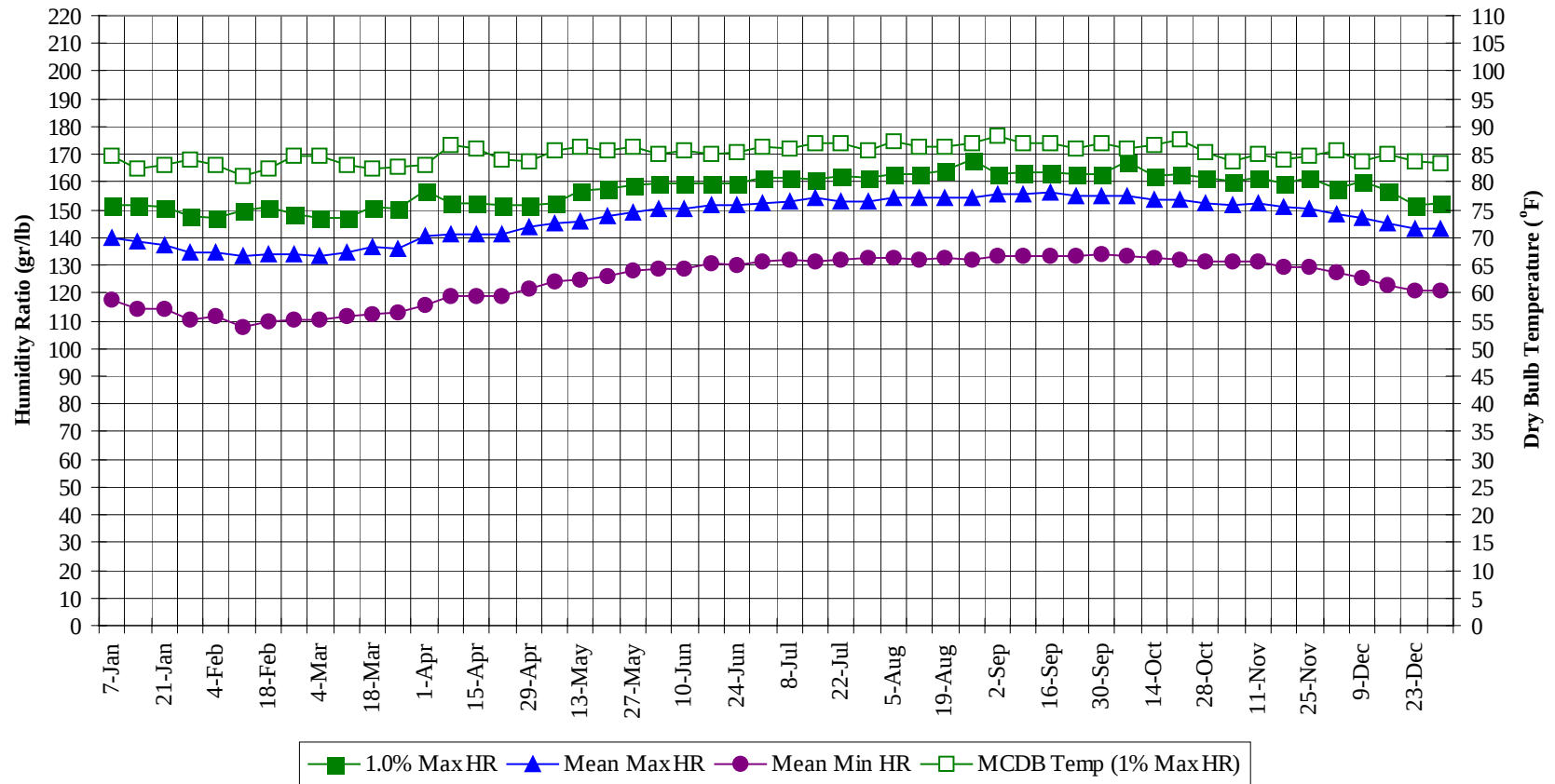
Annual Summary of Temperatures



SAIPAN MY

WMO No. 912320

Long Term Humidity and Dry Bulb Temperature Summary



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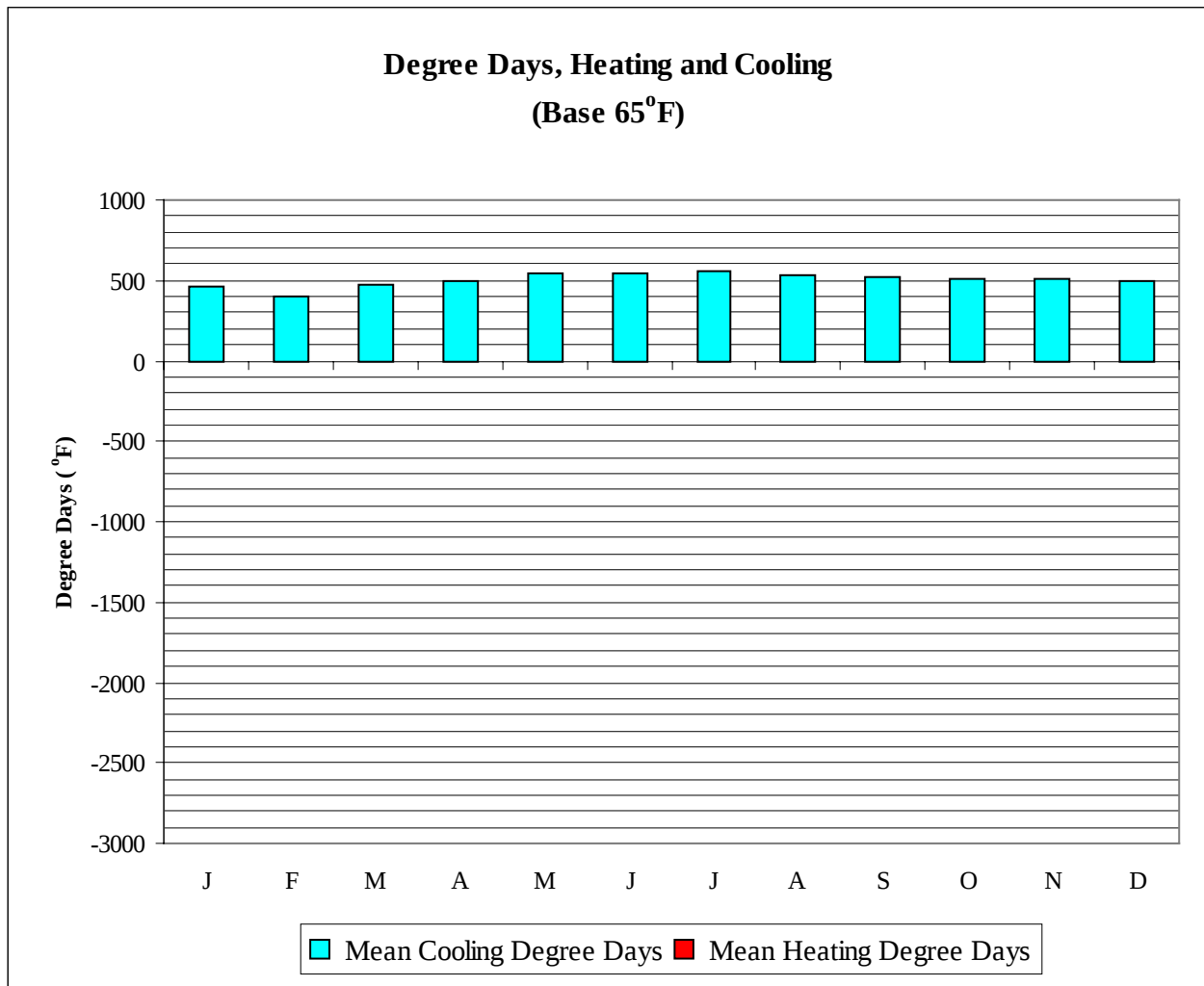
WMO No. 912320

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	89.0	78.9	84.7	76.1	73.0	151.9	84.8	140.2	117.5
14-Jan	88.0	77.4	84.0	75.9	73.0	151.9	82.4	138.7	114.0
21-Jan	87.0	77.4	84.1	75.7	73.0	151.2	83.1	137.5	114.5
28-Jan	88.0	76.9	84.1	75.1	72.0	147.7	84.1	134.5	110.2
4-Feb	87.0	76.0	84.0	75.1	72.0	147.0	83.0	134.7	111.3
11-Feb	88.0	78.0	83.8	74.8	72.0	149.8	81.3	133.6	107.8
18-Feb	89.0	78.1	84.2	75.1	72.0	151.2	82.4	134.1	109.8
25-Feb	87.0	77.4	84.1	74.8	72.0	148.4	84.8	134.0	110.3
4-Mar	87.0	77.5	84.1	75.1	72.0	147.0	84.8	133.3	110.5
11-Mar	88.0	77.4	84.4	75.5	73.0	147.0	83.0	134.7	111.5
18-Mar	88.0	78.4	84.8	75.9	73.0	151.2	82.3	136.7	112.5
25-Mar	89.0	77.7	85.1	76.1	73.0	150.5	82.9	135.8	112.7
1-Apr	88.0	78.8	85.6	76.6	74.0	156.8	83.0	140.6	115.9
8-Apr	89.0	79.1	85.8	77.0	75.0	152.6	86.6	141.0	119.1
15-Apr	90.0	78.8	86.3	77.4	75.0	152.6	86.0	141.3	118.9
22-Apr	89.0	78.9	86.3	77.4	74.0	151.9	84.2	141.5	119.2
29-Apr	89.0	79.2	86.6	77.6	75.0	151.9	83.6	144.1	121.4
6-May	89.0	79.7	86.4	78.0	75.0	152.6	85.7	144.9	124.0
13-May	89.0	79.2	86.9	78.4	76.0	156.8	86.4	146.0	125.1
20-May	89.0	79.6	86.8	78.5	76.0	157.5	85.8	147.6	126.3
27-May	90.0	80.5	87.2	79.0	77.0	158.9	86.2	149.2	128.4
3-Jun	91.0	79.3	87.7	78.9	75.0	159.6	85.2	150.4	128.9
10-Jun	90.0	80.9	88.0	79.3	77.0	159.6	85.8	150.6	128.7
17-Jun	91.0	80.9	87.6	79.3	77.0	159.6	84.9	151.7	130.4
24-Jun	91.0	80.5	87.9	79.2	77.0	159.6	85.3	151.6	130.2
1-Jul	91.0	81.3	87.8	79.0	77.0	161.7	86.5	152.3	131.1
8-Jul	91.0	81.4	87.5	78.6	75.0	161.7	86.1	153.1	131.8
15-Jul	91.0	81.8	87.7	78.9	77.0	161.0	86.9	154.4	131.3
22-Jul	90.0	80.9	87.2	78.4	75.0	162.4	87.1	153.1	131.9
29-Jul	90.0	80.8	86.6	78.2	75.0	161.7	85.8	152.7	132.4
5-Aug	91.0	81.8	86.8	78.5	75.0	163.1	87.4	154.1	132.7
12-Aug	91.0	82.1	86.9	78.1	75.0	163.1	86.3	154.3	132.0
19-Aug	90.0	81.2	86.4	78.1	76.0	164.5	86.4	154.5	132.8
26-Aug	90.0	81.7	86.5	77.8	75.0	168.0	87.1	154.2	132.2
2-Sep	91.0	81.9	87.2	78.4	76.0	163.1	88.2	155.4	133.5
9-Sep	90.0	81.9	86.7	78.2	75.0	163.8	87.2	156.0	133.5
16-Sep	90.0	81.4	86.4	78.0	75.0	163.8	87.0	156.1	133.6
23-Sep	90.0	81.8	86.8	78.1	76.0	163.1	86.0	155.3	133.4
30-Sep	89.0	81.1	86.7	78.3	75.0	163.1	87.0	154.9	133.9
7-Oct	90.0	81.3	86.4	78.0	75.0	167.3	86.1	155.2	133.2
14-Oct	90.0	80.8	86.9	78.4	76.0	162.4	86.6	153.8	133.0
21-Oct	90.0	81.9	86.5	77.9	75.0	163.1	87.7	153.4	131.9
28-Oct	90.0	80.6	86.0	78.0	75.0	161.7	85.3	152.3	131.4
4-Nov	89.0	81.0	86.2	78.2	75.0	160.3	83.8	151.5	131.6
11-Nov	89.0	80.6	86.3	78.4	75.0	161.7	85.2	152.2	131.2
18-Nov	89.0	80.6	86.2	78.5	76.0	159.6	83.9	151.0	129.5
25-Nov	88.0	79.5	85.8	78.6	76.0	161.7	84.7	150.7	129.6
2-Dec	89.0	80.4	85.8	78.1	75.0	157.5	85.6	148.7	127.6
9-Dec	88.0	79.0	85.7	77.7	75.0	160.3	83.6	147.2	125.6
16-Dec	88.0	79.4	85.4	77.9	75.0	156.8	84.9	145.4	123.0
23-Dec	88.0	79.1	85.0	77.2	74.0	151.9	83.7	143.0	120.7
31-Dec	88.0	79.2	84.7	77.0	75.0	152.6	83.5	142.8	120.8

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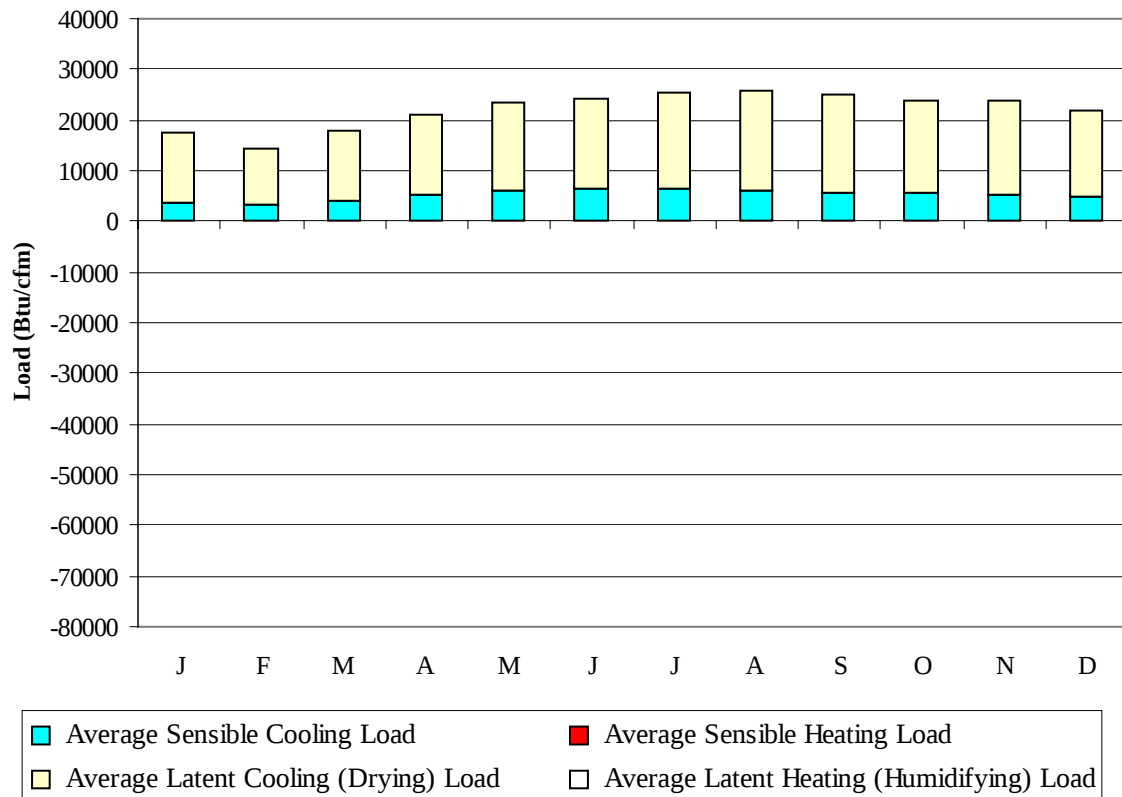


	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	458	0
FEB	407	0
MAR	474	0
APR	502	0
MAY	547	0
JUN	547	0
JUL	554	0
AUG	538	0
SEP	518	0
OCT	507	0
NOV	507	0
DEC	500	0
ANN	6059	0

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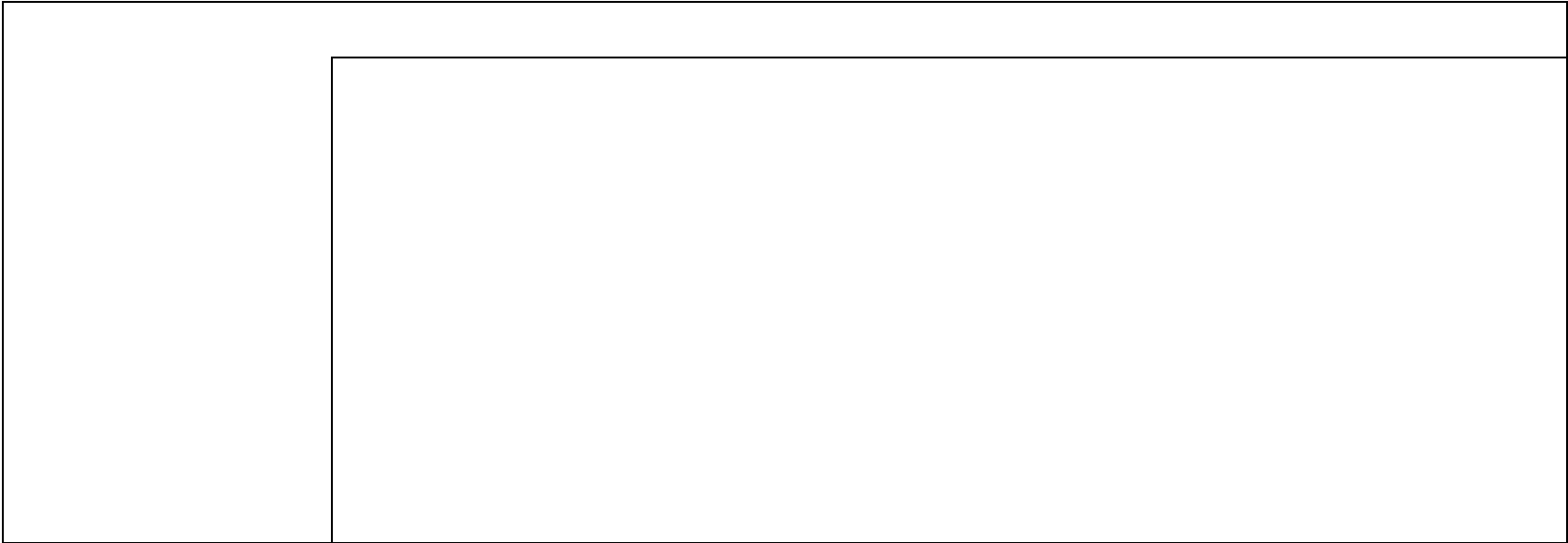
Average Ventilation and Infiltration Loads
(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)



	Average Sensible Cooling Load	Average Sensible Heating Load	Average Latent Cooling Load	Average Latent Heating Load
	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)
JAN	3848	0	13799	0
FEB	3196	-1	11174	0
MAR	4220	0	13585	0
APR	5174	0	15824	0
MAY	6108	0	17177	0
JUN	6448	0	17920	0
JUL	6275	0	19298	0
AUG	5886	0	19781	0
SEP	5653	0	19347	0
OCT	5463	0	18493	0
NOV	5420	0	18529	0
DEC	4915	0	17081	0
ANN	62606	-1	202008	0

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

No Solar Radiation
Data Available

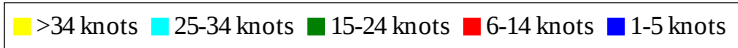
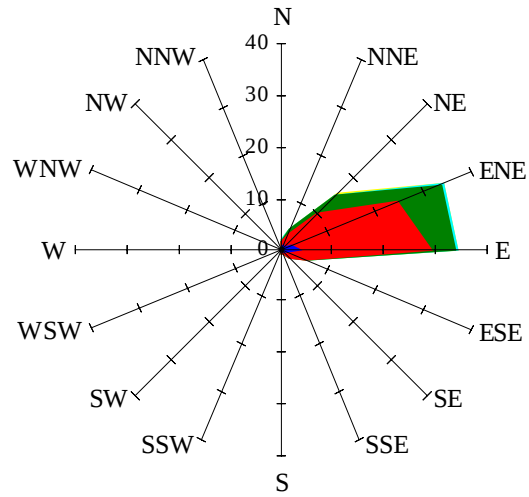


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

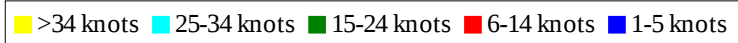
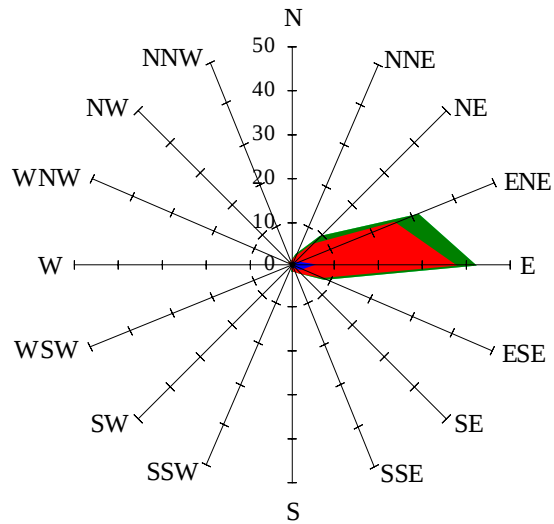
Labels of Percent Frequency on North Axis



Percent Calm = 0.37

Wind Summary - March, April, and May

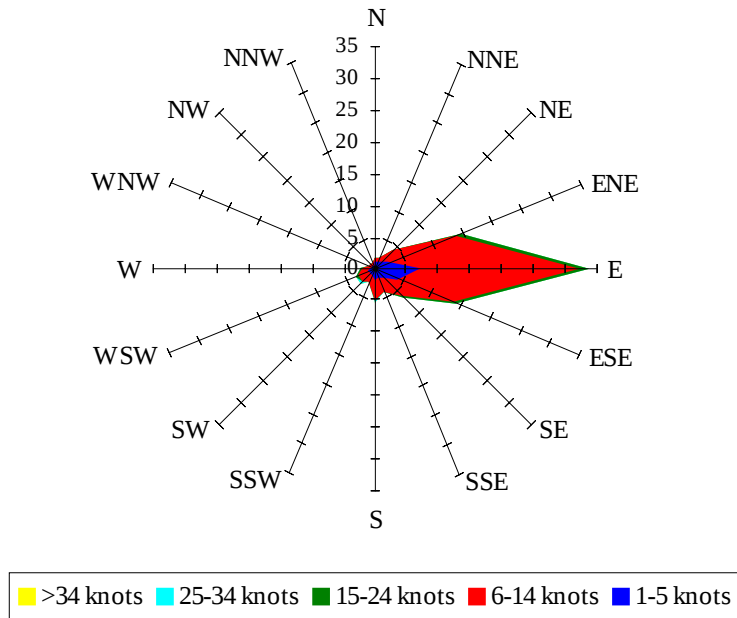
Labels of Percent Frequency on North Axis



Percent Calm = 0.74

Wind Summary - June, July, and August

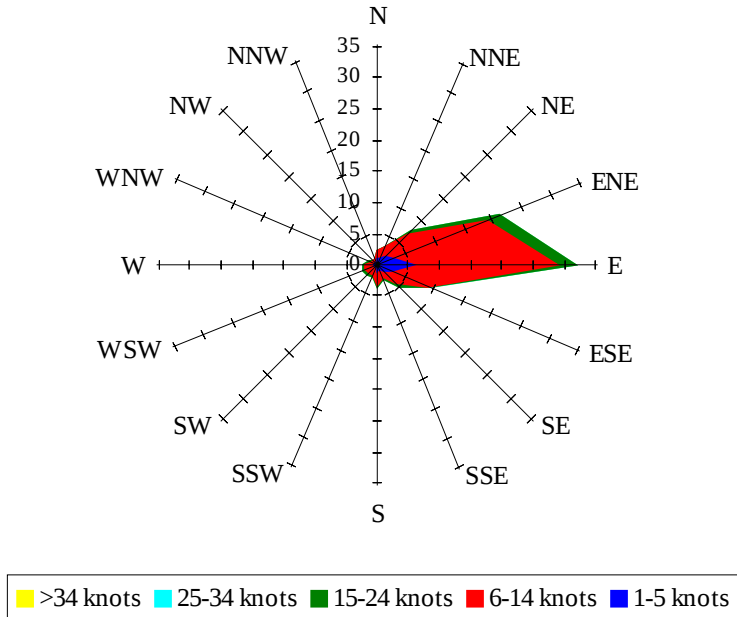
Labels of Percent Frequency on North Axis



Percent Calm = 3.02

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 1.81