ALEXANDRIA EG	
Latitude = 31.20 N	WMO No. 623180
Longitude = 29.95 E	Elevation = 23 feet
Period of Record = 1973 to 1996	Average Pressure = 29.90 inches Hg

Design Criteria Data

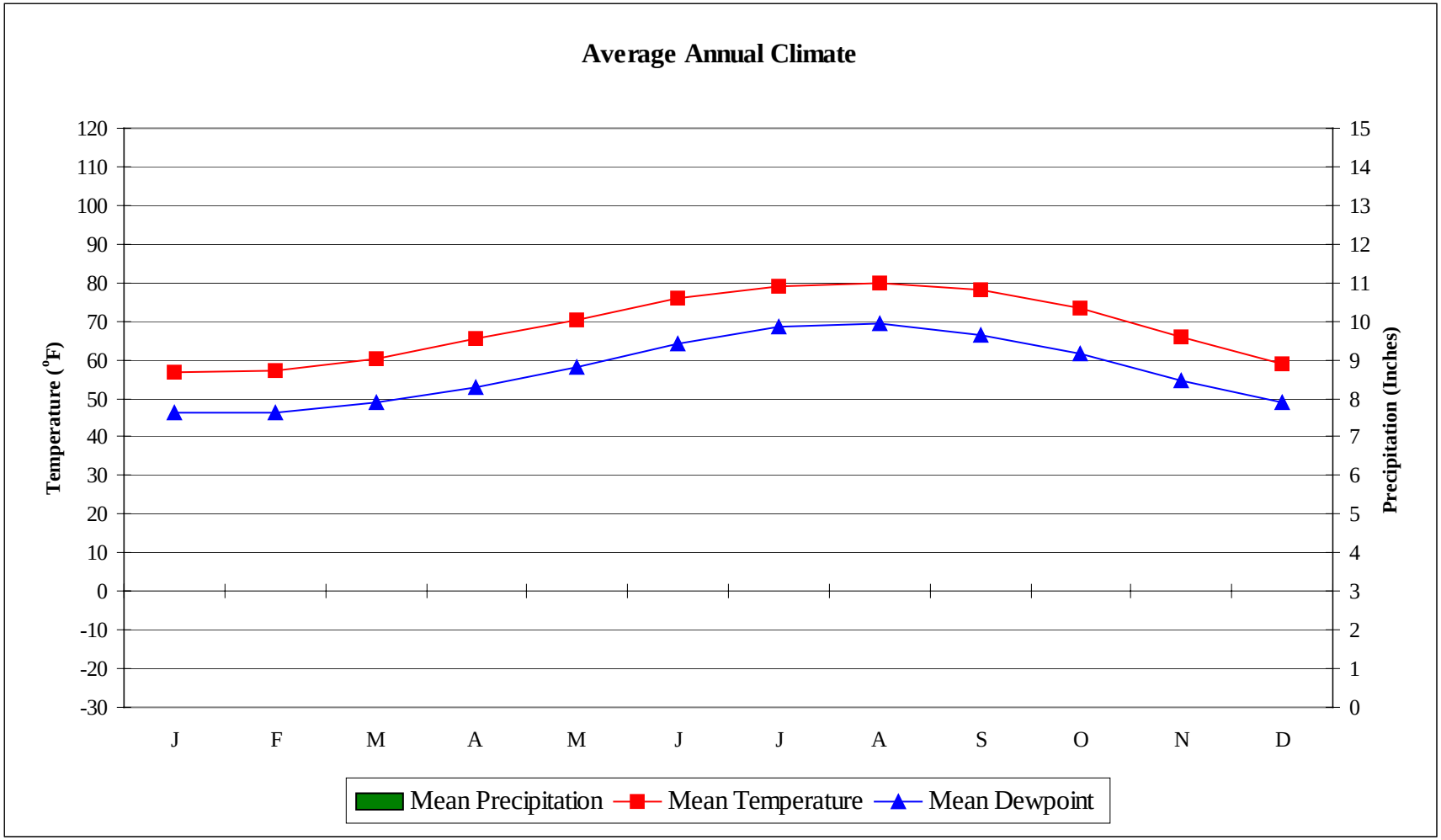
		Mean Coincident (Average) Values			
Dry Bulb Temperature (T)	**Design Value (^oF)**	Wet Bulb Temperature (^oF)	Humidity Ratio (gr/lb)	Wind Speed (mph)	Prevailing Direction (NSEW)
Median of Extreme Highs	101	71	66	10.9	W
0.4% Occurrence	91	72	89	9.3	NNW
1.0% Occurrence	88	74	102	10.3	NNW
2.0% Occurrence	86	74	106	11.5	NNW
Mean Daily Range	14	-	-	-	-
97.5% Occurrence	48	46	42	4.7	S
99.0% Occurrence	46	44	39	4.5	S
99.6% Occurrence	45	44	39	4.5	S
Median of Extreme Lows	41	39	33	4.0	S
		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	80	88	136	10.0	NNW
0.4% Occurrence	77	85	124	11.0	NNW
1.0% Occurrence	76	84	120	10.8	NNW
2.0% Occurrence	75	83	117	10.5	NNW
		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	142	84	0.94	7.3	NNW
0.4% Occurrence	131	82	0.87	8.5	NNW
1.0% Occurrence	125	82	0.83	9.1	NNW
2.0% Occurrence	122	82	0.81	9.7	NNW
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	23	1237	875	2750

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	N/A	N/A	2.3 + 1.2
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 (#)
71.1	N/A	N/A	0

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

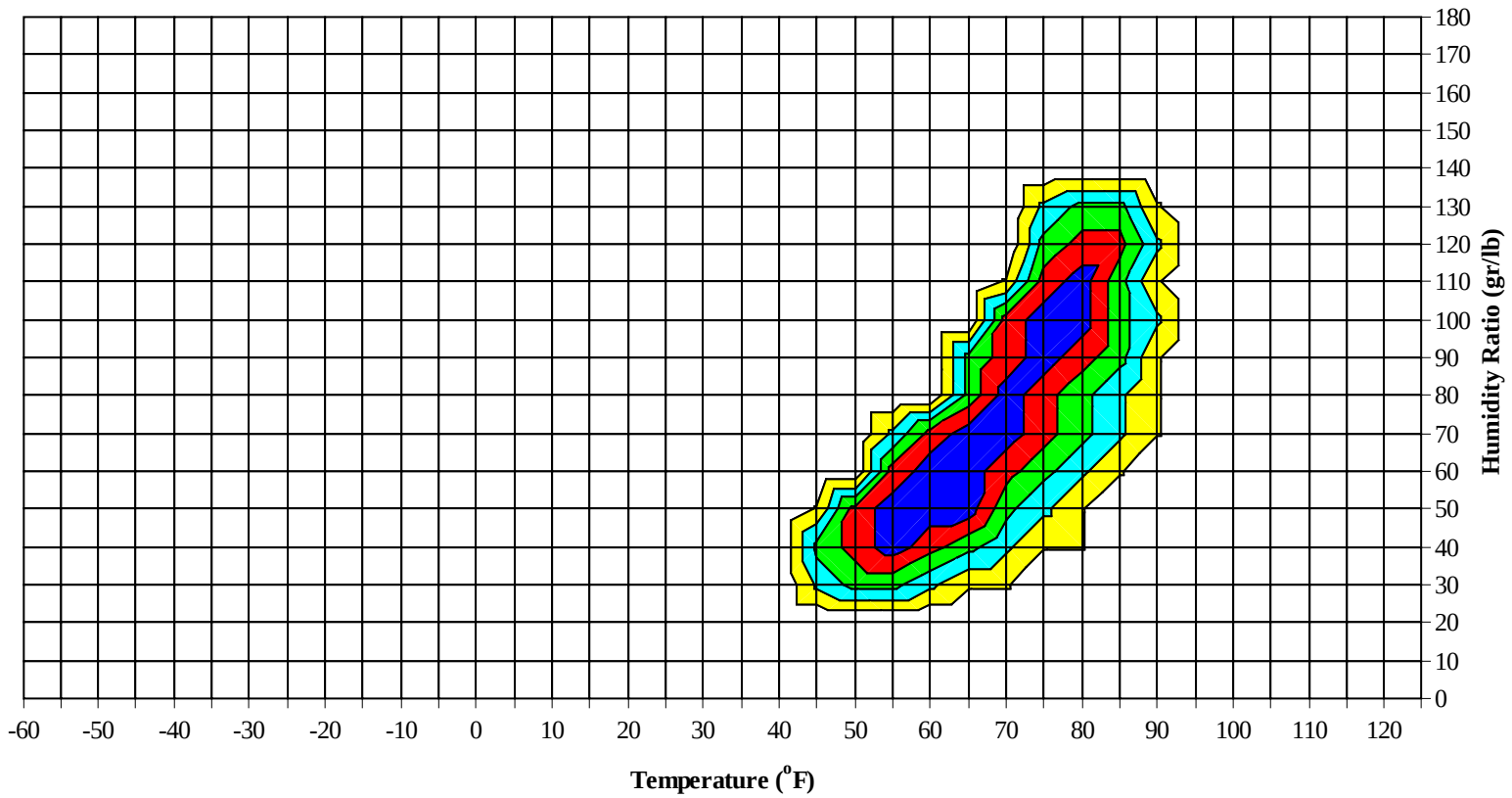
ALEXANDRIA EG WMO No. 623180



No Precipitation Data Available

ALEXANDRIA EG WMO No. 623180

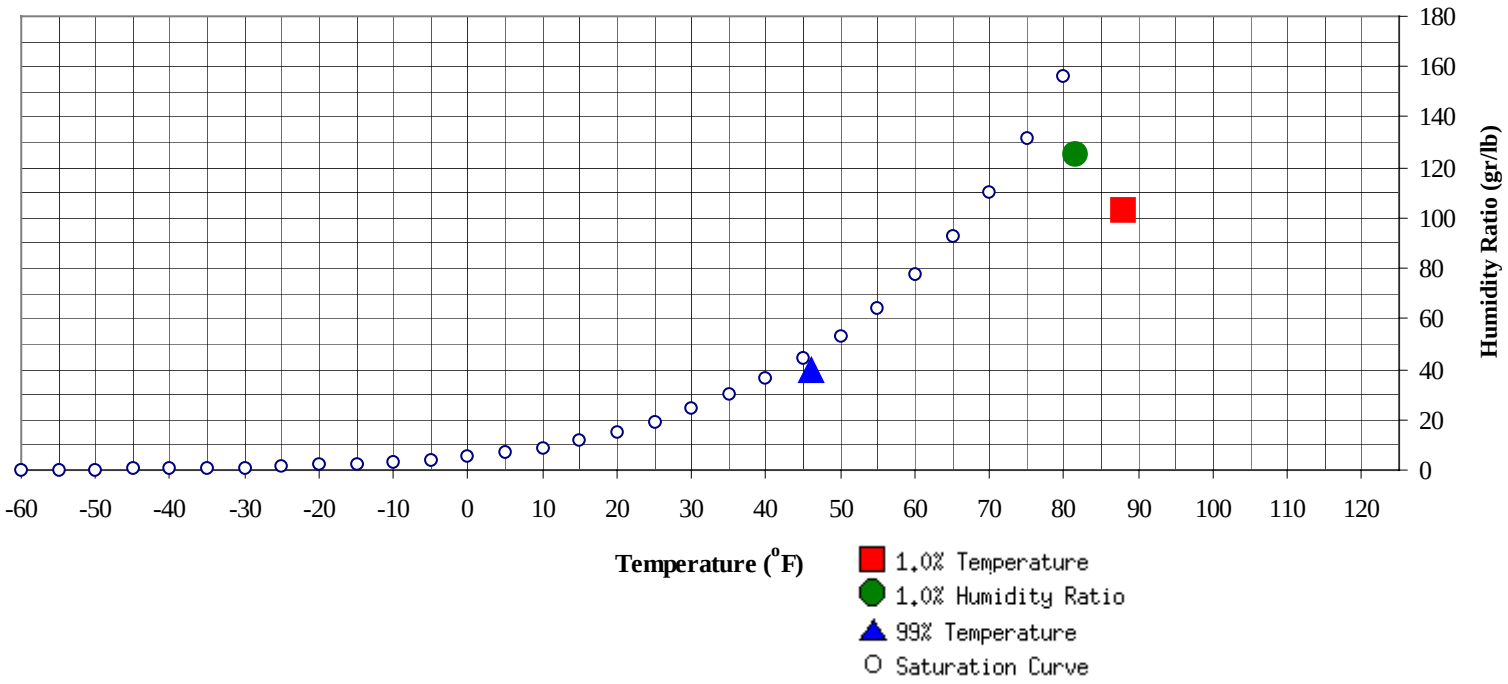
Long Term Psychrometric Summary



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

ALEXANDRIA EG WMO No. 623180

Psychrometric Summary of Peak Design Values



	(°F)	MCHR (gr/lb)	Enthalpy (btu/lb)
99% Dry Bulb	46	39.6	17.2

	(gr/lb)	MCDB (°F)	MCWB (°F)	MC Dewpt (°F)	Enthalpy (btu/lb)
1.0% Humidity Ratio	125.3	81.6	75.6	73.4	39.2

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	88	102.7	73.6	37.3

ALEXANDRIA EG WMO No. 623180

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	09 To 16	17 To 00	Total Obs	MCWB (°F)	February Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)	March Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)
105 / 109															
100 / 104															
95 / 99															
90 / 94												0	0	0	66.0
85 / 89							0	0	0	59.3		1	0	1	65.1
80 / 84		0		0	62.0		1	0	1	59.0		3	1	4	63.1
75 / 79		1	0	1	61.9		4	1	5	59.1	0	11	3	14	61.4
70 / 74	0	7	1	8	58.9	0	12	3	15	57.9	0	30	8	39	60.1
65 / 69	0	39	6	45	57.2	1	36	9	46	56.7	2	71	21	94	58.1
60 / 64	12	111	58	181	54.7	10	98	52	161	54.5	35	96	88	218	55.6
55 / 59	73	63	114	249	51.7	64	49	104	217	51.6	105	28	103	236	52.2
50 / 54	88	23	58	169	48.6	84	20	48	151	48.3	75	6	23	103	48.8
45 / 49	61	4	11	77	44.7	58	3	8	68	44.8	28	1	2	31	45.3
40 / 44	14	0	0	14	40.8	6	0	0	6	41.2	3		0	3	41.1
35 / 39	1	0	0	1	36.7	1	0		1	37.9	0		0	0	38.0
30 / 34	0	0		0			0		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.

ALEXANDRIA EG WMO No. 623180

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)
105 / 109							0		0	70.0					
100 / 104		0		0	69.3		1	0	1	72.0		1	0	1	71.4
95 / 99		2	1	3	68.1		2	1	3	69.7		3	1	4	72.6
90 / 94		4	1	5	67.1	0	7	1	8	69.7		10	2	12	71.1
85 / 89		6	1	7	65.8	0	11	3	14	68.2	0	18	6	24	71.4
80 / 84	0	16	4	20	64.8	1	30	8	39	67.2	6	104	28	138	70.8
75 / 79	2	38	10	49	63.3	7	82	27	116	66.0	54	95	91	240	69.0
70 / 74	6	70	28	104	61.3	43	96	76	215	63.7	125	7	100	232	66.9
65 / 69	25	75	52	152	59.3	77	17	81	175	61.8	39	1	12	52	63.9
60 / 64	98	27	110	234	56.9	93	2	49	144	58.9	13		1	14	60.4
55 / 59	84	2	33	120	53.4	24		2	26	55.0	2		0	2	56.0
50 / 54	23	0	1	24	50.2	3		0	3	51.5					
45 / 49	2			2	46.6	0			0	46.7					
40 / 44															
35 / 39															
30 / 34															

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.

ALEXANDRIA EG WMO No. 623180

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)
105 / 109		0		0	73.0							0		0	71.0
100 / 104		0		0	72.8							0	0	0	73.1
95 / 99		0	0	0	75.4		0	0	0	77.4		1	0	1	72.5
90 / 94		5	1	6	75.3		6	1	7	75.2	0	5	1	6	73.3
85 / 89	1	45	7	53	75.1	0	88	8	96	75.2	0	41	3	44	73.6
80 / 84	20	179	69	269	73.0	28	148	84	260	73.5	9	165	44	218	71.8
75 / 79	148	17	148	313	71.3	175	5	150	330	71.8	112	27	154	294	69.8
70 / 74	72	1	22	95	68.5	40	1	5	46	68.9	88	1	37	126	67.1
65 / 69	6		0	6	65.1	5	0		5	66.2	25	0	1	26	65.1
60 / 64	1		0	1	62.7	0	0		0	63.0	5		0	5	61.2
55 / 59											0			0	55.0
50 / 54															
45 / 49															
40 / 44															
35 / 39															
30 / 34															

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.

ALEXANDRIA EG WMO No. 623180

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)
105 / 109															
100 / 104															
95 / 99		0		0	69.0										
90 / 94		3	0	3	70.8		0		0	63.7					
85 / 89	0	12	1	13	72.1	0	1		1	65.2					
80 / 84	1	87	12	100	70.6	0	8	0	8	67.0	0	0		0	67.1
75 / 79	20	115	67	202	67.7	0	56	6	62	65.4	0	3	0	3	63.7
70 / 74	94	26	123	243	65.3	14	101	46	160	62.8	0	41	2	43	60.2
65 / 69	68	4	36	108	62.3	41	44	76	161	60.2	2	76	18	96	58.1
60 / 64	52	1	9	62	59.8	80	26	79	185	57.2	36	74	94	205	55.7
55 / 59	13		1	14	56.1	73	5	28	106	54.0	73	41	90	204	52.5
50 / 54	0			0	52.5	27	0	5	32	50.0	91	12	38	141	49.3
45 / 49						5		0	5	45.0	40	2	5	46	45.0
40 / 44						0			0	41.5	6	0	0	6	40.9
35 / 39											0	0		0	37.0
30 / 34															

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.

ALEXANDRIA EG WMO No. 623180

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

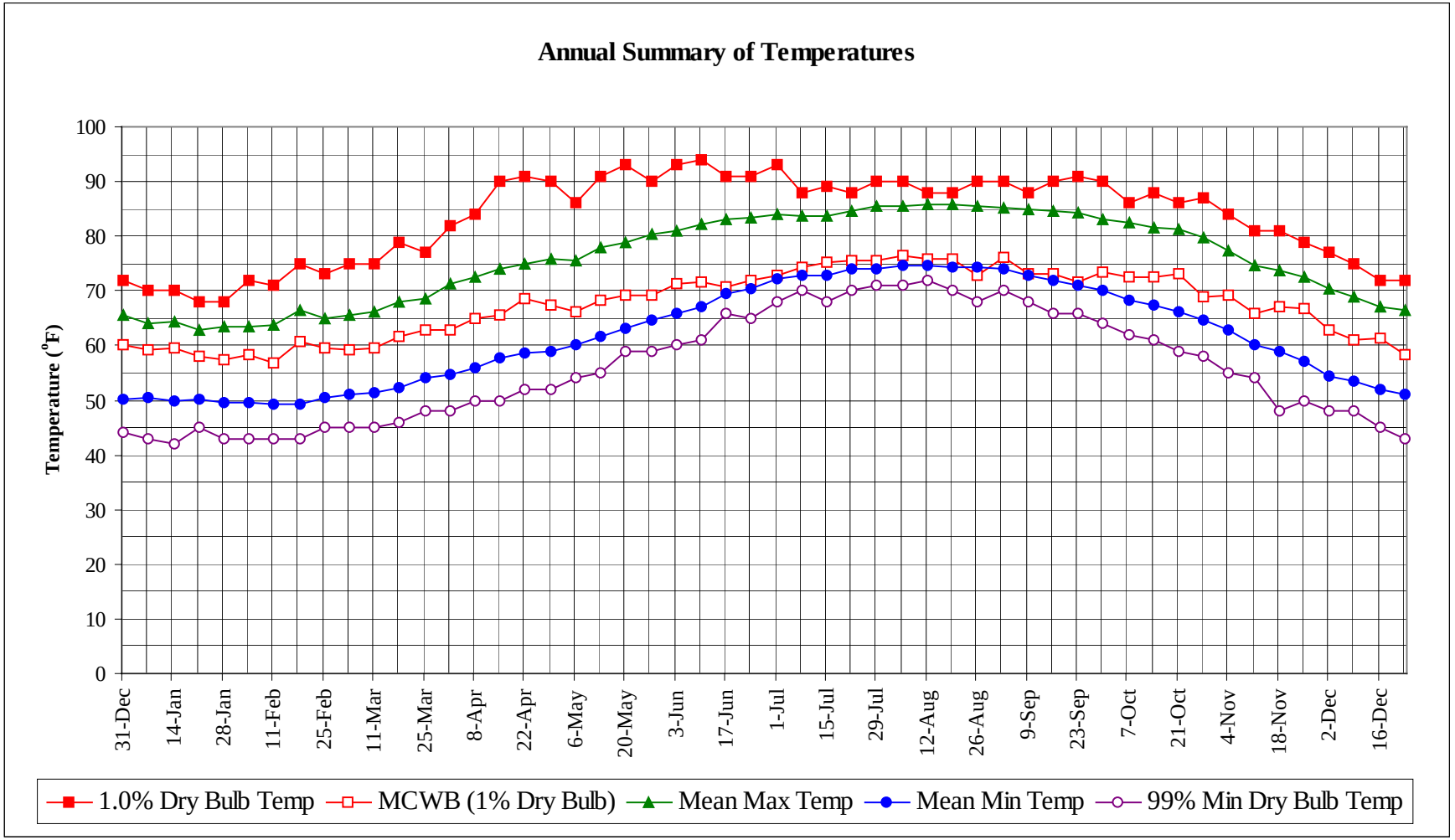
Period of Record = 1973 to 1996

Annual Totals

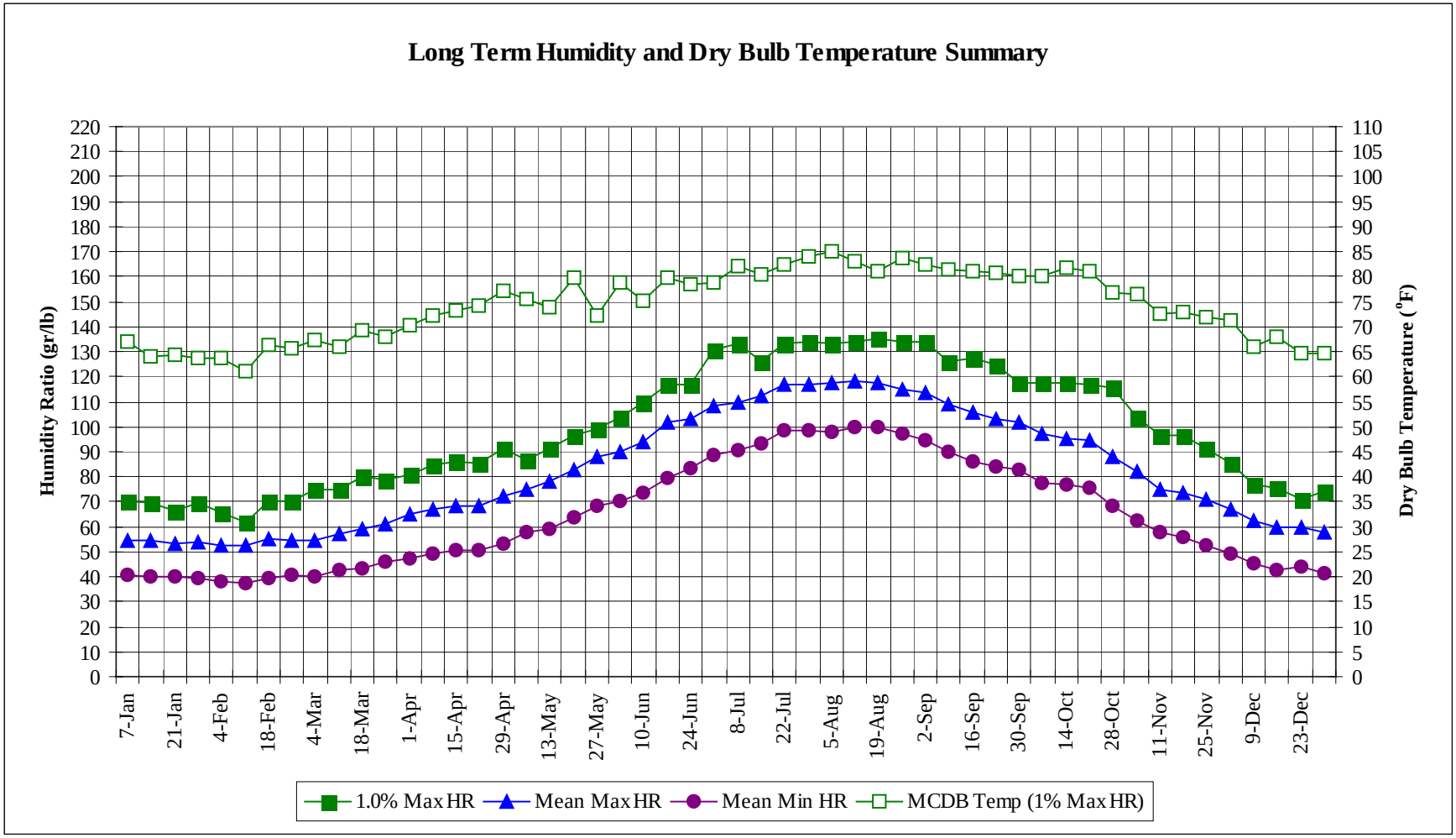
Temperature Range (°F)	Hour Group (LST) 01 To 08	09 To 16	17 To 00	Total Obs	MCWB (°F)
105 / 109		0		0	71.0
100 / 104		3	1	4	71.8
95 / 99		9	3	12	71.1
90 / 94	0	41	8	49	71.7
85 / 89	2	226	28	256	73.7
80 / 84	67	744	249	1060	71.9
75 / 79	526	454	654	1633	69.4
70 / 74	486	396	450	1333	64.8
65 / 69	291	361	314	966	60.2
60 / 64	440	430	544	1415	56.4
55 / 59	507	186	473	1166	52.5
50 / 54	382	61	169	612	48.9
45 / 49	189	9	26	224	44.9
40 / 44	28	0	1	29	40.9
35 / 39	2	0	0	2	37.2
30 / 34	0	0		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.

ALEXANDRIA EG WMO No. 623180



ALEXANDRIA EG WMO No. 623180

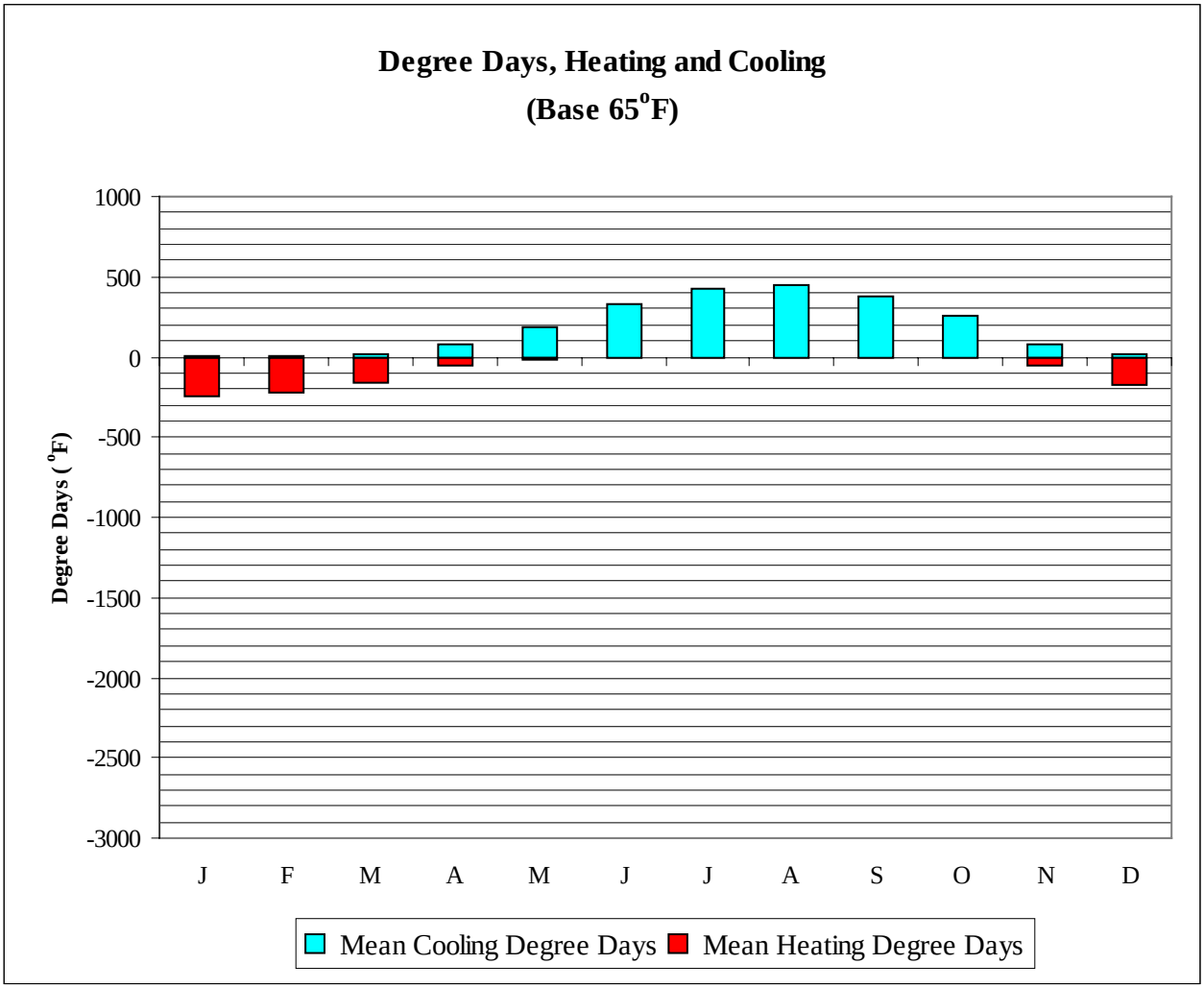


ALEXANDRIA EG WMO No. 623180

Long Term Dry Bulb Temperature and Humidity Summary

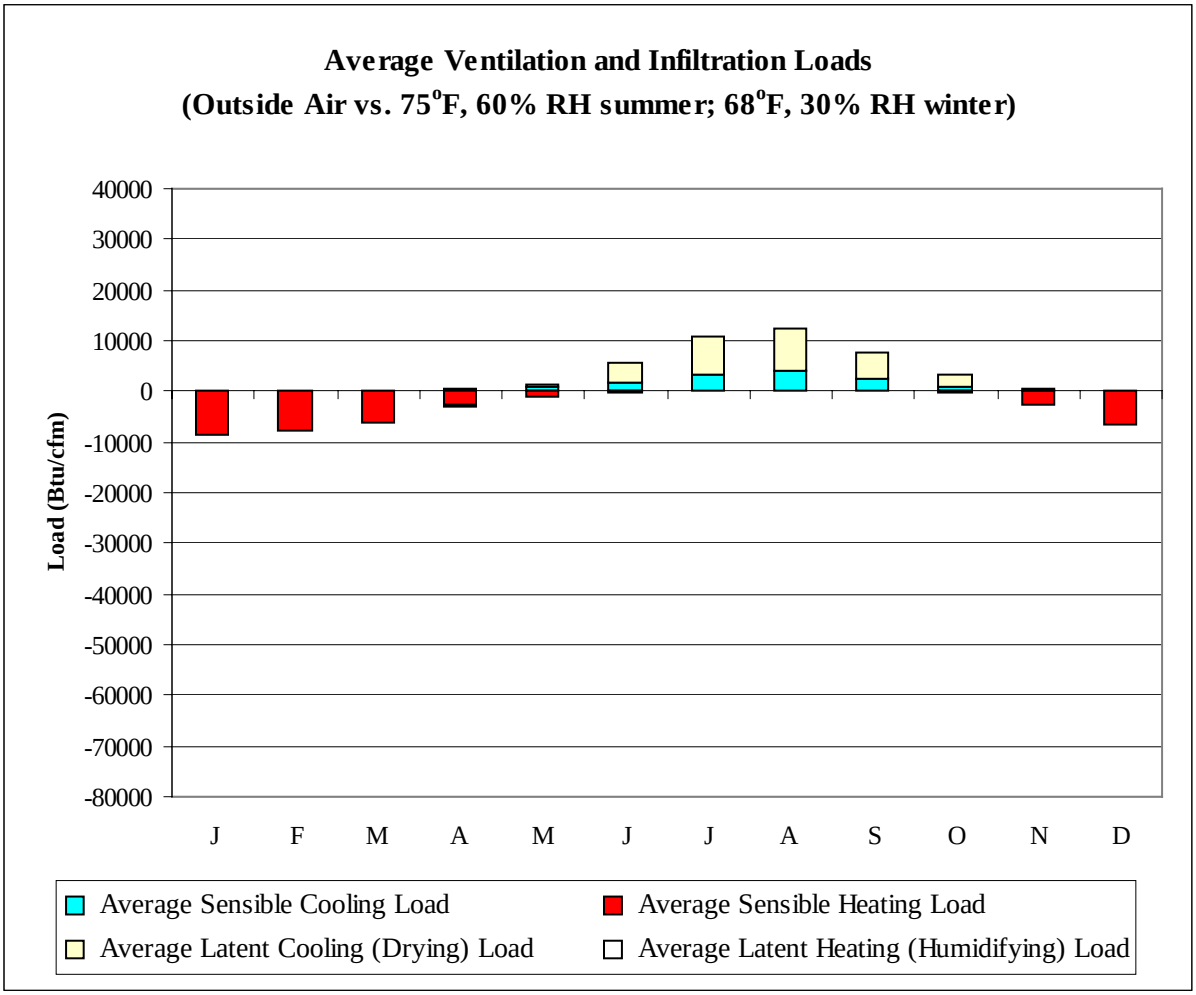
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	70.0	59.2	64.0	50.3	43.0	70.0	67.0	54.4	40.4
14-Jan	70.0	59.6	64.2	49.9	42.0	69.3	63.9	54.6	39.8
21-Jan	68.0	57.9	62.9	50.2	45.0	66.5	64.3	53.1	40.0
28-Jan	68.0	57.6	63.6	49.4	43.0	69.3	63.6	53.6	39.2
4-Feb	72.0	58.2	63.6	49.5	43.0	65.8	63.6	52.5	38.4
11-Feb	71.0	56.7	63.7	49.2	43.0	61.6	61.0	52.5	37.5
18-Feb	75.0	60.8	66.5	49.4	43.0	70.0	66.4	55.4	39.6
25-Feb	73.0	59.5	65.1	50.5	45.0	70.0	65.6	54.7	40.7
4-Mar	75.0	59.2	65.4	51.0	45.0	74.9	67.5	54.4	39.8
11-Mar	75.0	59.4	66.1	51.3	45.0	74.9	66.1	56.9	42.4
18-Mar	79.0	61.7	67.9	52.4	46.0	79.8	69.3	58.8	43.5
25-Mar	77.0	62.8	68.6	54.1	48.0	79.1	68.1	61.4	46.0
1-Apr	82.0	62.9	71.3	54.7	48.0	80.5	70.1	65.0	47.5
8-Apr	84.0	65.0	72.6	56.0	50.0	84.7	72.3	66.7	49.3
15-Apr	90.0	65.5	74.2	57.7	50.0	86.1	73.3	68.3	50.4
22-Apr	91.0	68.6	74.9	58.6	52.0	85.4	74.2	68.2	50.8
29-Apr	90.0	67.3	75.9	59.0	52.0	91.0	77.1	72.2	53.4
6-May	86.0	66.3	75.7	60.2	54.0	86.8	75.7	74.7	57.8
13-May	91.0	68.3	78.1	61.7	55.0	91.0	74.0	78.2	59.4
20-May	93.0	69.1	78.8	63.2	59.0	96.6	79.7	82.6	63.8
27-May	90.0	69.3	80.4	64.8	59.0	99.4	72.4	88.3	68.2
3-Jun	93.0	71.2	80.9	66.0	60.0	103.6	78.9	89.9	70.0
10-Jun	94.0	71.6	82.1	67.1	61.0	109.9	75.1	94.2	73.6
17-Jun	91.0	70.8	83.0	69.5	66.0	116.9	79.7	101.6	79.1
24-Jun	91.0	71.8	83.3	70.4	65.0	116.9	78.5	103.2	83.1
1-Jul	93.0	72.7	83.9	72.2	68.0	130.9	78.8	108.3	88.6
8-Jul	88.0	74.4	83.8	72.8	70.0	133.0	82.1	109.8	90.7
15-Jul	89.0	75.3	83.8	72.9	68.0	126.0	80.5	112.1	93.1
22-Jul	88.0	75.6	84.6	73.9	70.0	133.0	82.4	116.9	98.8
29-Jul	90.0	75.4	85.5	74.1	71.0	133.7	84.1	117.1	98.4
5-Aug	90.0	76.6	85.6	74.6	71.0	133.0	85.2	117.5	97.6
12-Aug	88.0	76.0	85.7	74.7	72.0	133.7	83.0	118.1	100.0
19-Aug	88.0	75.9	85.8	74.2	70.0	135.1	81.0	117.4	99.8
26-Aug	90.0	72.7	85.5	74.4	68.0	133.7	83.6	115.0	96.9
2-Sep	90.0	76.1	85.1	74.1	70.0	133.7	82.4	113.4	94.8
9-Sep	88.0	73.2	84.9	72.8	68.0	126.0	81.6	109.1	90.2
16-Sep	90.0	73.0	84.5	72.0	66.0	127.4	81.0	105.9	86.2
23-Sep	91.0	71.8	84.3	71.1	66.0	124.6	80.8	103.0	84.4
30-Sep	90.0	73.5	83.2	70.2	64.0	117.6	80.0	102.0	82.8
7-Oct	86.0	72.4	82.4	68.2	62.0	117.6	80.1	96.9	77.3
14-Oct	88.0	72.5	81.5	67.2	61.0	117.6	81.7	95.4	77.1
21-Oct	86.0	73.0	81.2	66.2	59.0	116.9	81.0	94.7	75.8
28-Oct	87.0	69.0	79.7	64.6	58.0	115.5	76.8	87.9	68.4
4-Nov	84.0	69.2	77.4	62.8	55.0	103.6	76.6	82.1	62.3
11-Nov	81.0	65.9	74.8	60.1	54.0	96.6	72.6	74.6	57.5
18-Nov	81.0	67.1	73.7	58.9	48.0	96.6	72.9	73.4	55.5
25-Nov	79.0	66.6	72.4	57.1	50.0	91.0	71.8	71.0	52.7
2-Dec	77.0	62.8	70.5	54.4	48.0	85.4	71.1	66.8	49.3
9-Dec	75.0	61.0	68.8	53.5	48.0	77.0	66.0	62.3	45.4
16-Dec	72.0	61.4	67.1	52.1	45.0	75.6	68.1	59.7	42.9
23-Dec	72.0	58.5	66.5	51.2	43.0	70.7	64.8	59.5	43.9
31-Dec	72.0	60.2	65.7	50.1	44.0	74.2	64.6	57.6	41.2

ALEXANDRIA EG WMO No. 623180



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	4	247
FEB	7	221
MAR	20	161
APR	83	58
MAY	186	13
JUN	330	1
JUL	420	0
AUG	450	0
SEP	376	0
OCT	260	5
NOV	81	55
DEC	13	176
ANN	2231	937

ALEXANDRIA EG WMO No. 623180



	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	1	-8604	2	-26
FEB	11	-7783	0	-20
MAR	38	-6197	8	-6
APR	355	-2827	71	-4
MAY	768	-933	613	0
JUN	1887	-76	3708	0
JUL	3292	-4	7364	0
AUG	3990	-2	8498	0
SEP	2682	-30	5114	0
OCT	1100	-345	2139	0
NOV	105	-2621	315	0
DEC	4	-6572	7	-11
ANN	14233	-35994	27839	-67

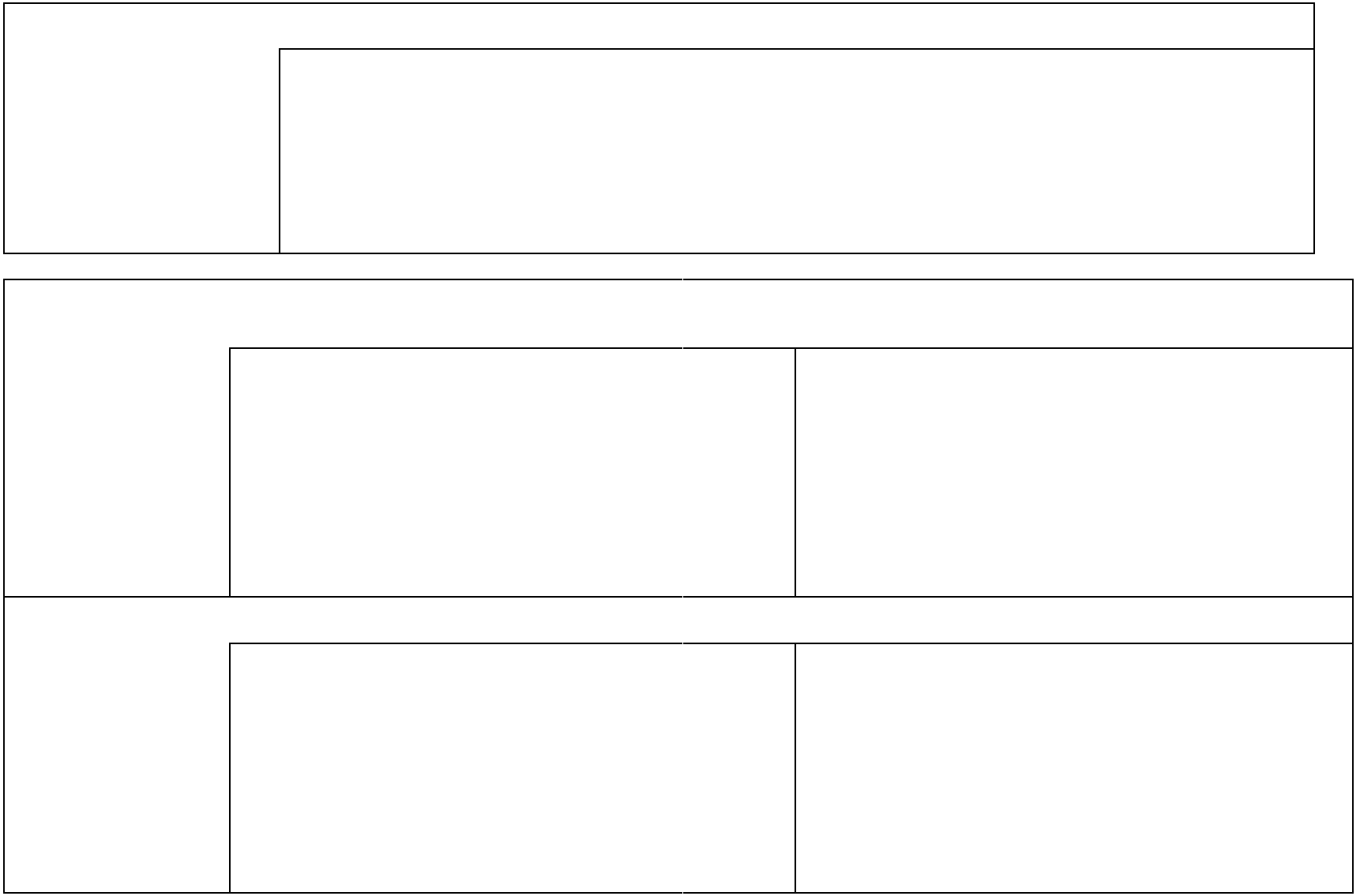
Average Annual Solar Radiation – Nearest Available Site

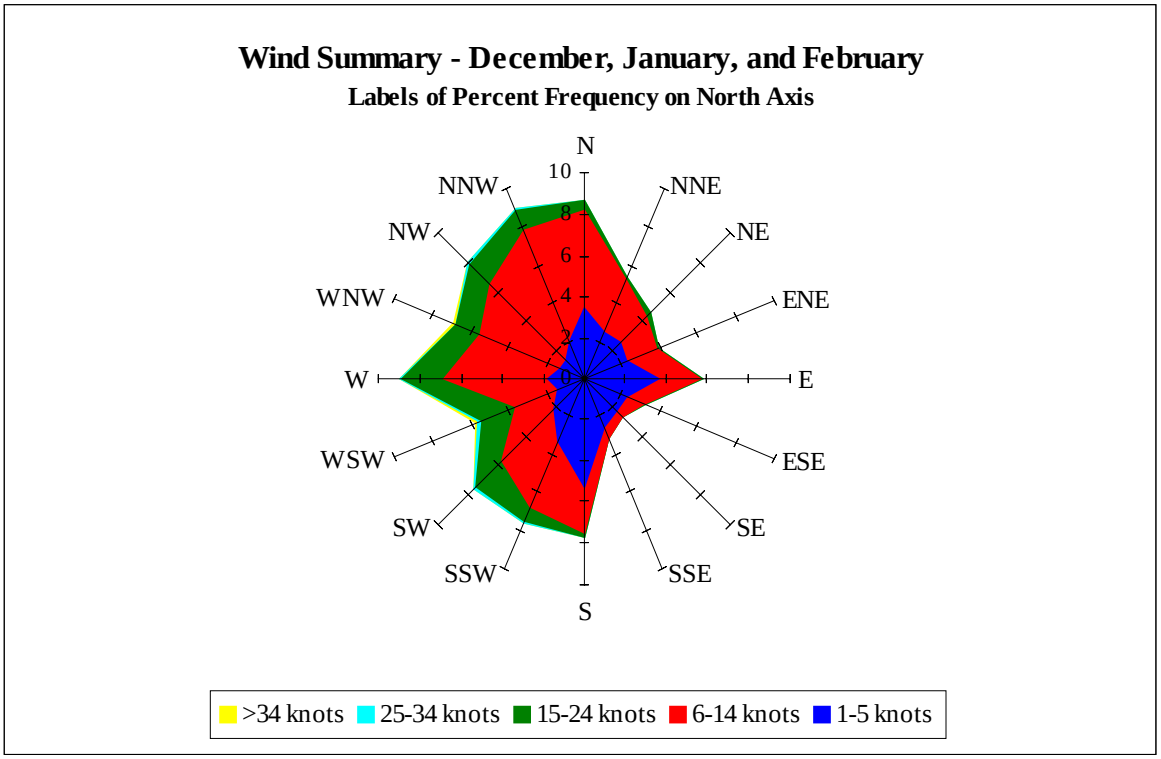
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

No Solar Radiation
Data Available

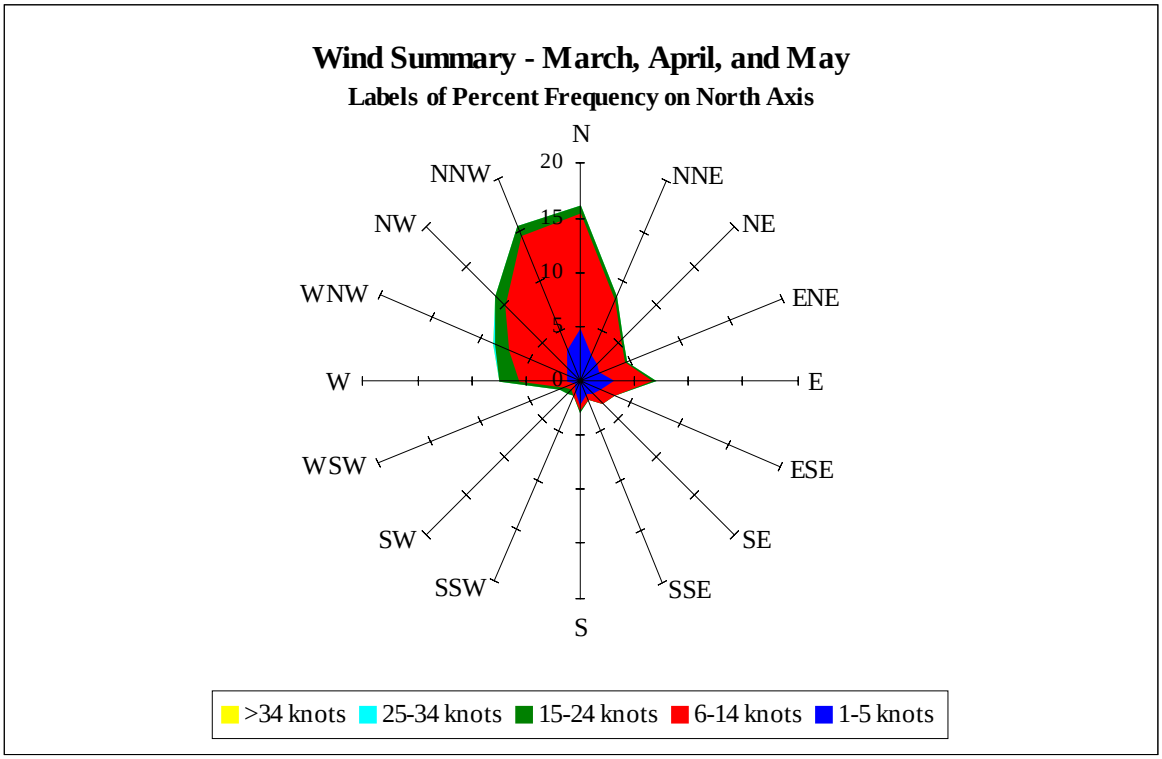
Average Annual Solar Heat and Illumination – Nearest Available Site

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

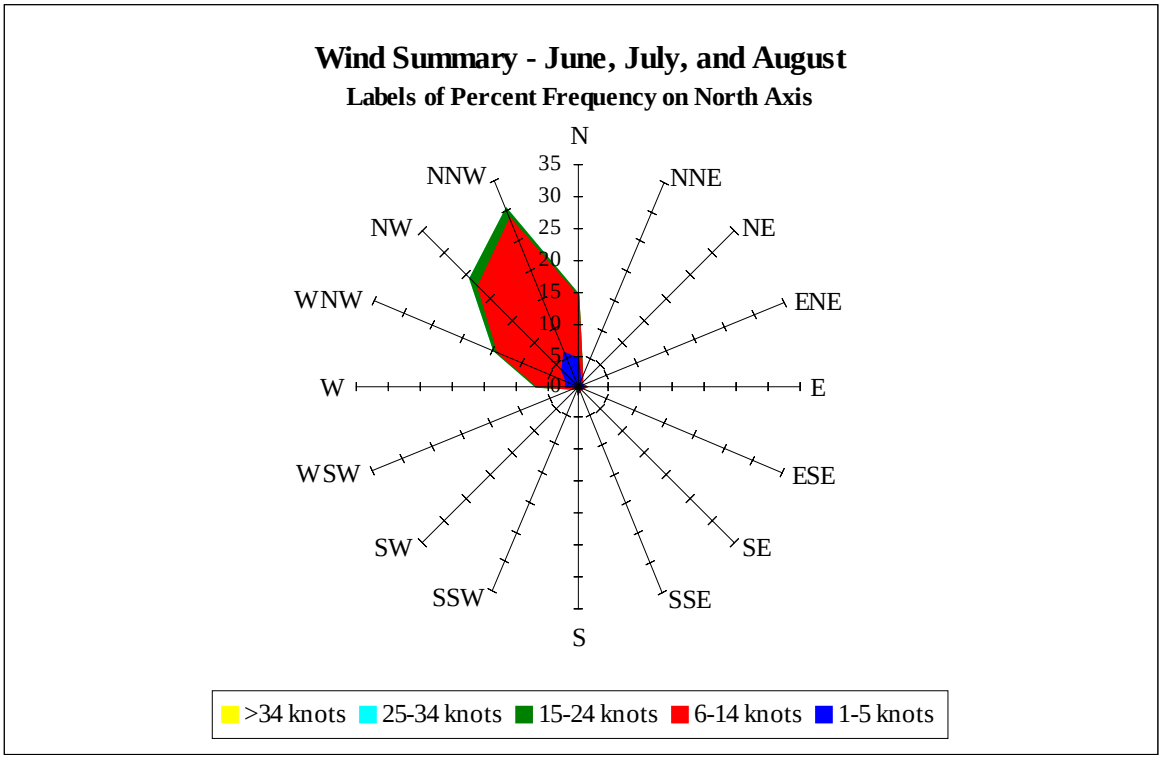




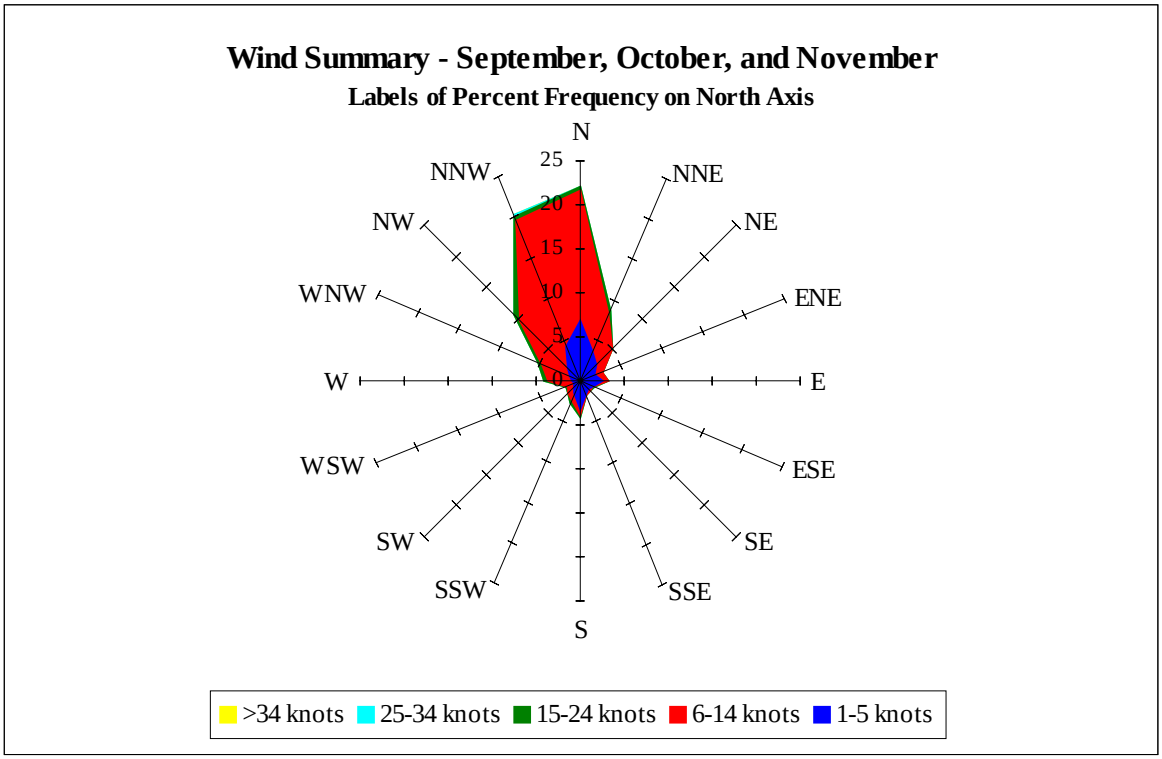
Percent Calm = 2.01



Percent Calm = 0.86



Percent Calm = 0.83



Percent Calm = 2.13