

IZMIR, TURKEY

Latitude = 38.50 N

Longitude = 27.02 E

Period of Record = 1967 to 1996

WMO No. 172180

Elevation = 16 feet

Average Pressure = 29.91 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	102	73	80	12.9	NNW
0.4% Occurrence	97	71	76	13.0	N
1.0% Occurrence	93	70	78	13.5	NNW
2.0% Occurrence	91	70	78	13.6	N
Mean Daily Range	19	-	-	-	-
97.5% Occurrence	34	31	22	7.3	N
99.0% Occurrence	32	29	20	7.1	N
99.6% Occurrence	28	26	16	6.2	N
Median of Extreme Lows	25	23	14	6.6	N
	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	77	91	113	15.2	NNW
0.4% Occurrence	75	90	104	13.8	NNW
1.0% Occurrence	73	89	95	12.7	NNW
2.0% Occurrence	72	88	92	12.1	NNW
	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	118	87	0.78	13.6	NNW
0.4% Occurrence	111	85	0.74	12.3	N
1.0% Occurrence	104	82	0.69	10.4	NNW
2.0% Occurrence	97	81	0.65	9.4	N
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		133	1200	134	1116

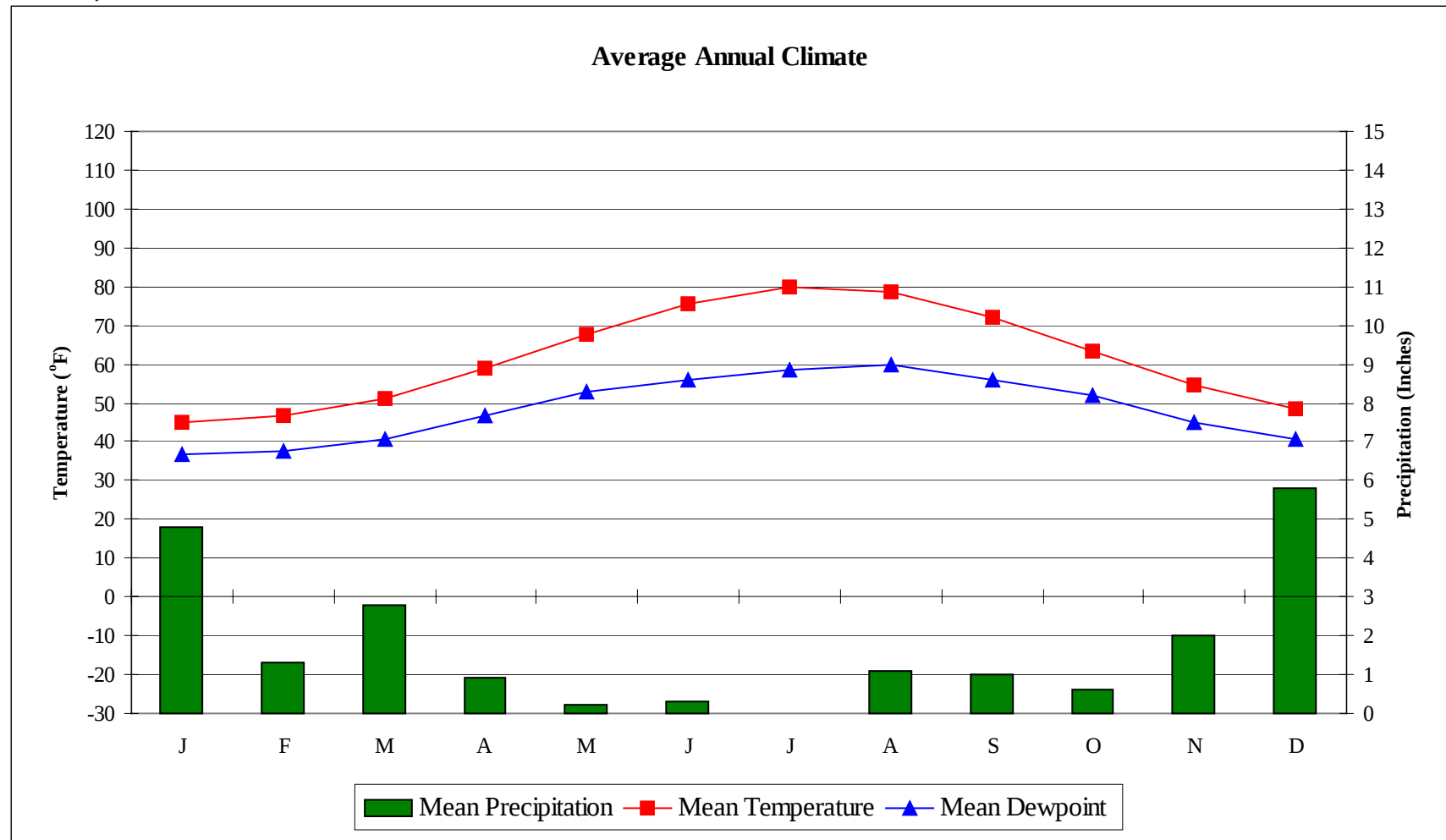
Other Site Data

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	N/A	N/A	0.4 + 1.2
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 (#)
64.3	N/A	N/A	14

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

IZMIR, TURKEY

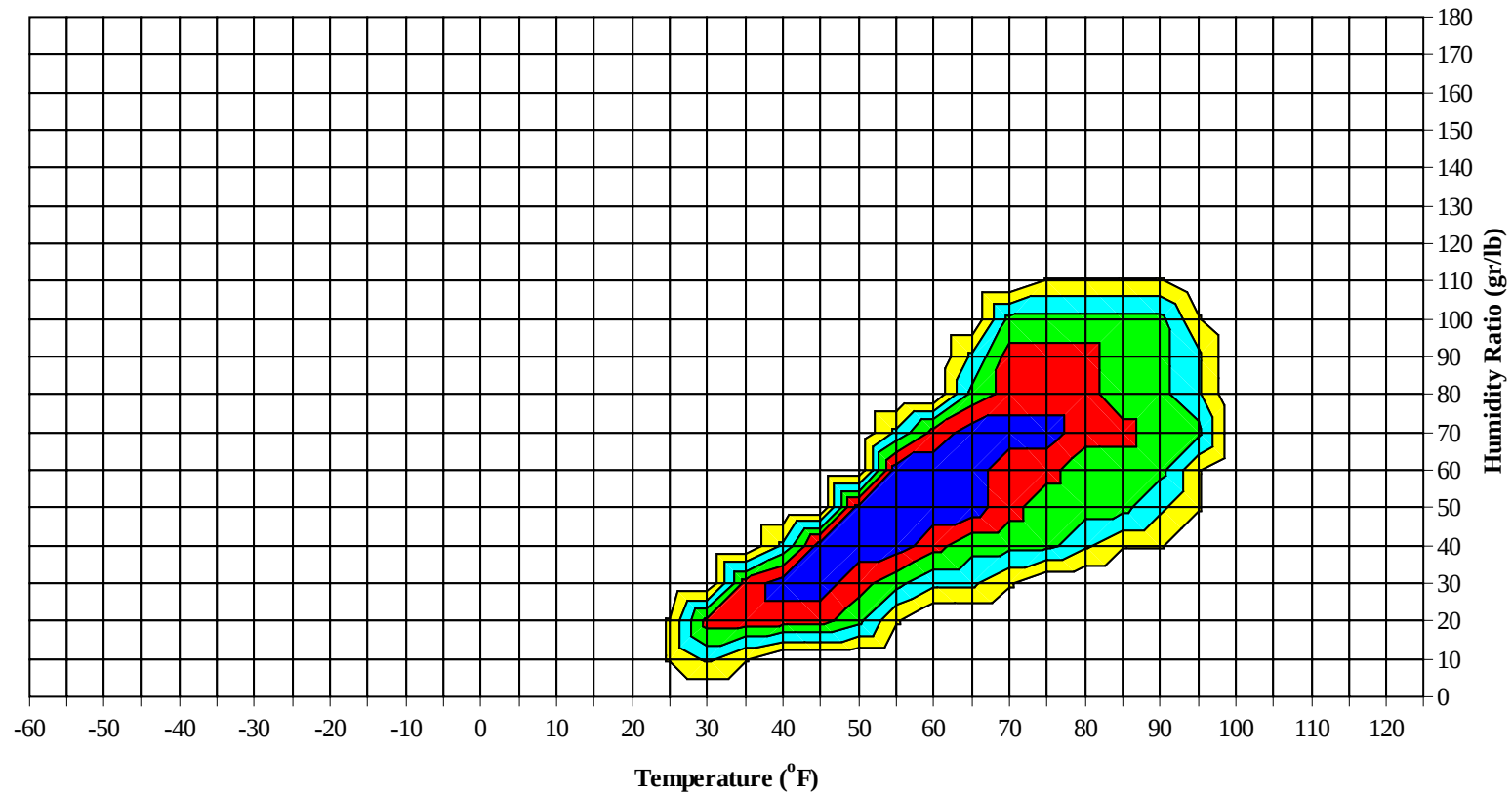
WMO No. 172180



IZMIR, TURKEY

WMO No. 172180

Long Term Psychrometric Summary

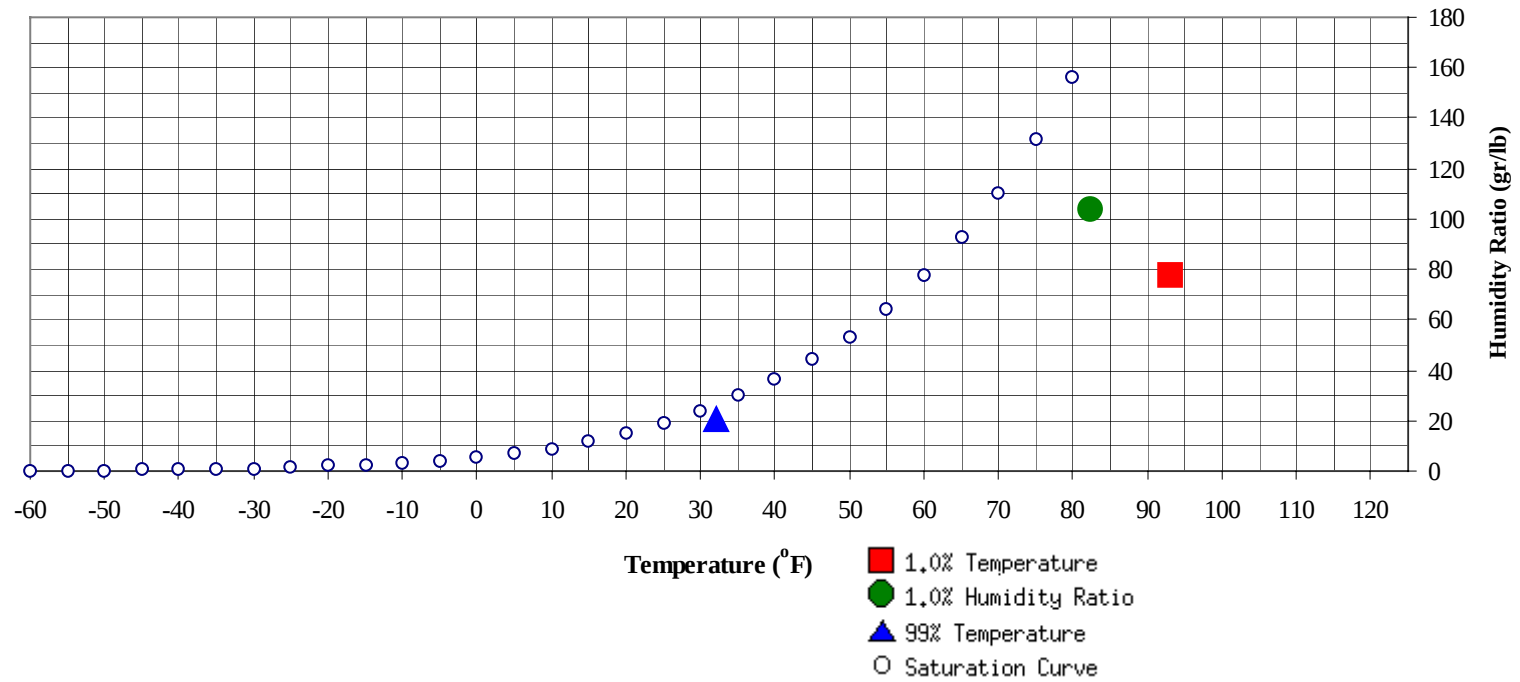


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

IZMIR, TURKEY

WMO No. 172180

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	32	20.3	10.8		103.6	82.3	72.2	68	36.0

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	93	77.9	70.7	34.6

IZMIR, TURKEY

WMO No. 172180

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		
105 / 109															
100 / 104															
95 / 99															
90 / 94															
85 / 89												0		0	65.0
80 / 84												0	0	0	64.5
75 / 79											0	1	0	1	60.1
70 / 74							1	0	1	60.1	0	9	2	11	57.9
65 / 69	0	1		1	57.0	0	4	1	5	56.5	0	23	8	31	56.0
60 / 64	2	15	5	22	54.7	3	22	12	37	53.9	5	49	28	82	53.7
55 / 59	16	39	26	81	51.4	16	47	33	95	50.9	25	59	54	138	50.9
50 / 54	36	64	50	149	47.6	36	56	51	143	47.5	50	57	68	175	47.4
45 / 49	45	60	58	164	42.8	44	45	55	144	42.9	69	32	49	149	43.1
40 / 44	35	32	43	110	38.4	36	22	30	89	38.5	41	10	23	74	38.6
35 / 39	54	24	45	123	34.2	43	19	27	89	34.3	39	6	14	59	34.3
30 / 34	45	10	18	73	29.9	35	6	14	55	29.5	17	1	3	21	29.8
25 / 29	14	2	4	20	25.1	9	1	2	12	25.2	3	0	0	3	25.6
20 / 24	1	0		1	21.9	1		0	1	21.3					

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.

IZMIR, TURKEY

WMO No. 172180

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		
105 / 109												0		0	75.0
100 / 104												1	0	1	72.8
95 / 99							1		1	67.9		8	2	10	70.8
90 / 94							5	1	6	67.7		38	14	52	69.4
85 / 89		0		0	61.5		14	4	18	66.6	0	47	20	67	67.7
80 / 84		4	1	5	62.5		41	14	55	65.2	4	77	44	125	65.9
75 / 79	0	21	6	27	60.9	3	66	33	102	63.0	22	49	56	127	64.2
70 / 74	2	44	17	63	58.8	13	63	53	129	61.1	62	15	62	139	62.7
65 / 69	7	45	26	77	56.8	32	31	49	112	59.4	67	3	29	99	60.3
60 / 64	25	64	59	147	54.9	83	21	61	165	57.3	66	2	11	79	57.7
55 / 59	54	44	65	163	52.1	78	5	27	110	53.5	19	0	1	20	53.7
50 / 54	79	17	51	147	48.6	33	1	5	39	49.3	2	0	0	2	49.4
45 / 49	56	2	14	72	44.0	6	0	0	6	44.2	0			0	46.0
40 / 44	13	0	1	14	39.7	1		0	1	39.6					
35 / 39	5		0	5	36.0	0			0	37.3					
30 / 34															
25 / 29															
20 / 24															

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.

IZMIR, TURKEY

WMO No. 172180

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		
105 / 109		0	0	0	73.0										
100 / 104		6	1	7	73.4		1	0	1	71.6					
95 / 99		21	9	30	72.0		17	4	21	71.3		2		2	70.9
90 / 94	0	74	33	107	70.4		57	22	79	70.8		12	3	15	69.2
85 / 89	1	61	34	96	68.7	1	65	32	98	69.5		36	8	43	68.3
80 / 84	9	60	58	127	67.3	6	69	56	131	68.0	0	77	27	104	66.7
75 / 79	56	23	71	149	65.6	41	32	69	142	66.2	6	65	50	121	64.4
70 / 74	105	3	35	142	63.5	95	6	51	151	64.2	35	35	70	140	62.9
65 / 69	55	0	7	62	61.1	64	0	13	77	61.8	58	9	42	110	60.8
60 / 64	22	0	1	23	58.3	39		2	41	58.8	84	4	33	121	57.7
55 / 59	1			1	54.9	3			3	54.7	45	0	7	52	53.7
50 / 54											12		0	12	49.9
45 / 49											0			0	46.0
40 / 44															
35 / 39															
30 / 34															
25 / 29															
20 / 24															

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.

IZMIR, TURKEY

WMO No. 172180

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		
105 / 109															
100 / 104															
95 / 99		0		0	71.0										
90 / 94		1	0	1	68.5										
85 / 89		4	1	5	66.8										
80 / 84		21	3	24	65.9										
75 / 79	2	52	16	70	64.0		2	0	2	62.7					
70 / 74	7	61	37	105	61.9	0	18	2	20	60.5	0	1		1	59.8
65 / 69	20	45	46	110	59.6	3	39	10	52	58.0	0	6	1	7	57.5
60 / 64	49	37	69	155	57.0	21	62	46	128	56.0	10	33	16	59	55.6
55 / 59	80	20	51	151	53.1	50	55	68	173	52.5	26	52	40	118	52.3
50 / 54	58	6	21	85	48.9	56	39	59	154	48.0	51	72	59	181	48.0
45 / 49	27	1	5	33	44.5	53	18	33	105	43.0	52	47	62	160	43.2
40 / 44	4		0	4	40.1	29	4	14	47	38.8	37	19	33	89	38.9
35 / 39	1			1	36.4	22	2	7	31	35.0	45	13	30	88	34.8
30 / 34						7	0	1	8	30.2	26	4	8	38	30.4
25 / 29						0			0	25.4	3	0	1	4	25.8
20 / 24															

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.

IZMIR, TURKEY

WMO No. 172180

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

Period of Record = 1967 to 1996

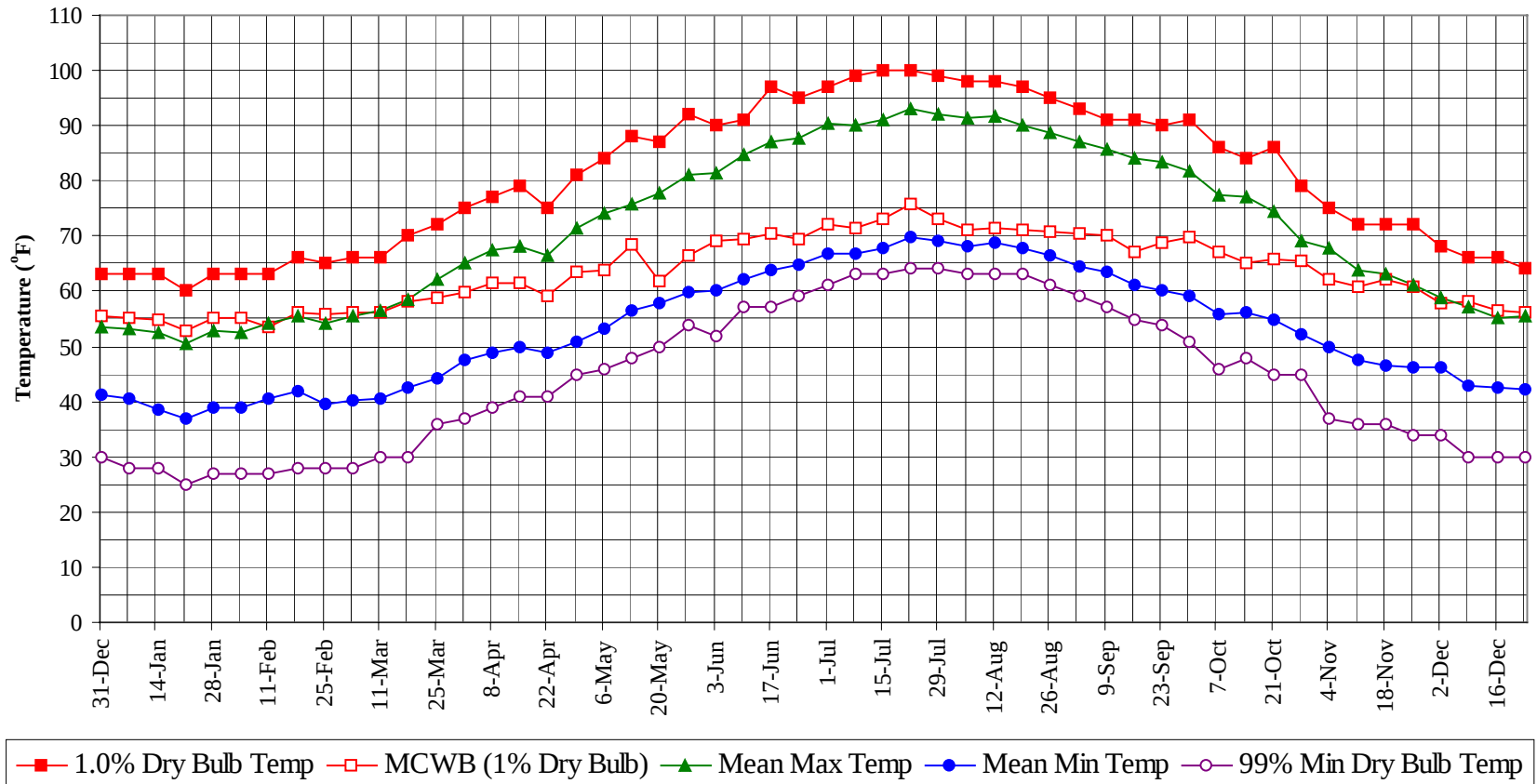
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
105 / 109		0	0	0	73.8
100 / 104		8	2	10	73.1
95 / 99		49	15	64	71.5
90 / 94	0	187	71	258	70.2
85 / 89	1	226	99	325	68.5
80 / 84	19	349	203	571	66.8
75 / 79	128	311	300	739	64.6
70 / 74	317	254	325	896	62.4
65 / 69	302	203	229	735	59.6
60 / 64	402	306	338	1046	56.4
55 / 59	408	323	369	1100	52.3
50 / 54	411	314	364	1089	48.0
45 / 49	355	207	279	841	43.2
40 / 44	196	91	147	434	38.6
35 / 39	213	67	126	405	34.5
30 / 34	136	22	46	204	29.9
25 / 29	31	3	7	41	25.3
20 / 24	2	0	0	2	21.6

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.

IZMIR, TURKEY

WMO No. 172180

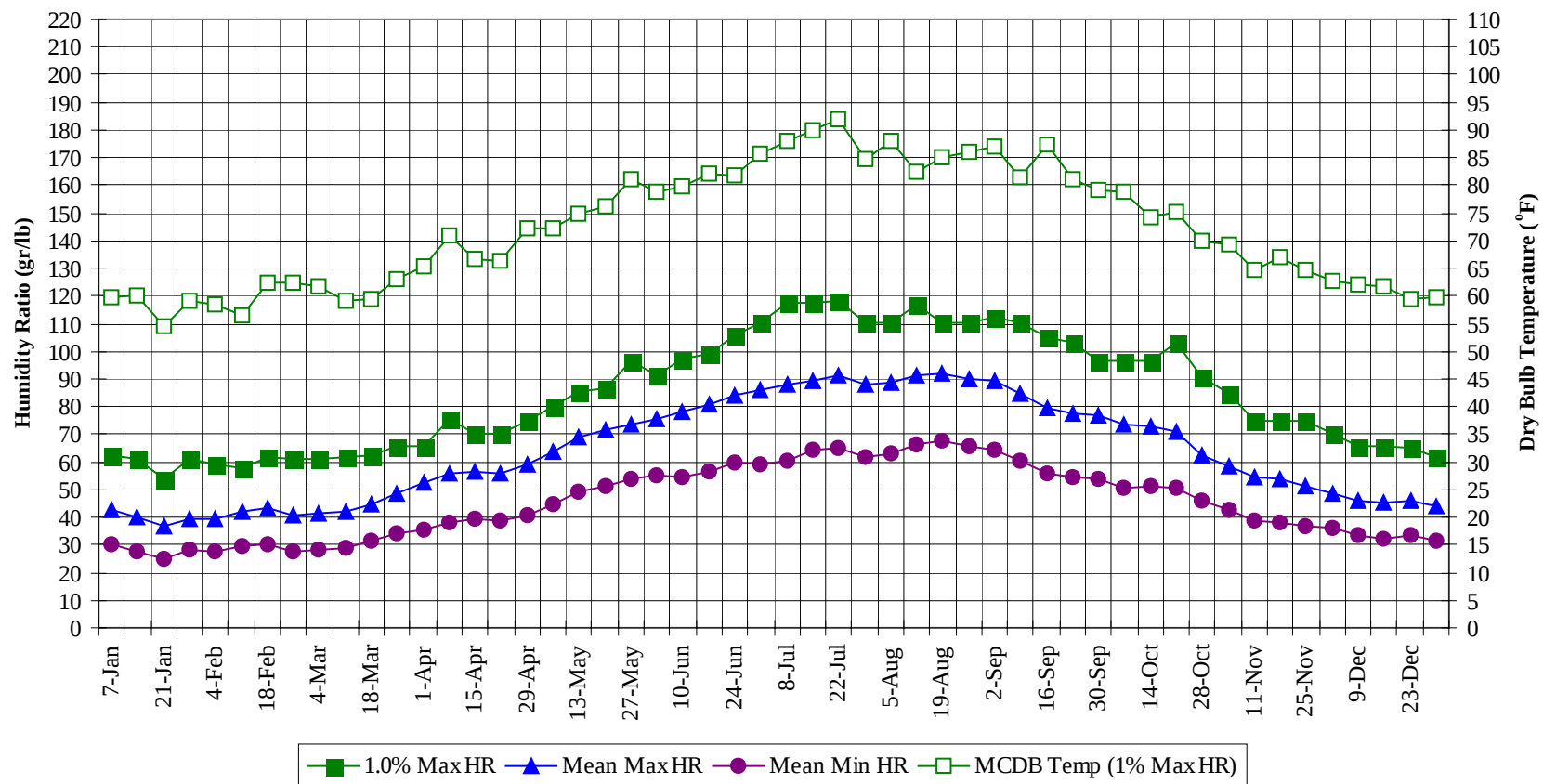
Annual Summary of Temperatures



IZMIR, TURKEY

WMO No. 172180

Long Term Humidity and Dry Bulb Temperature Summary



IZMIR, TURKEY

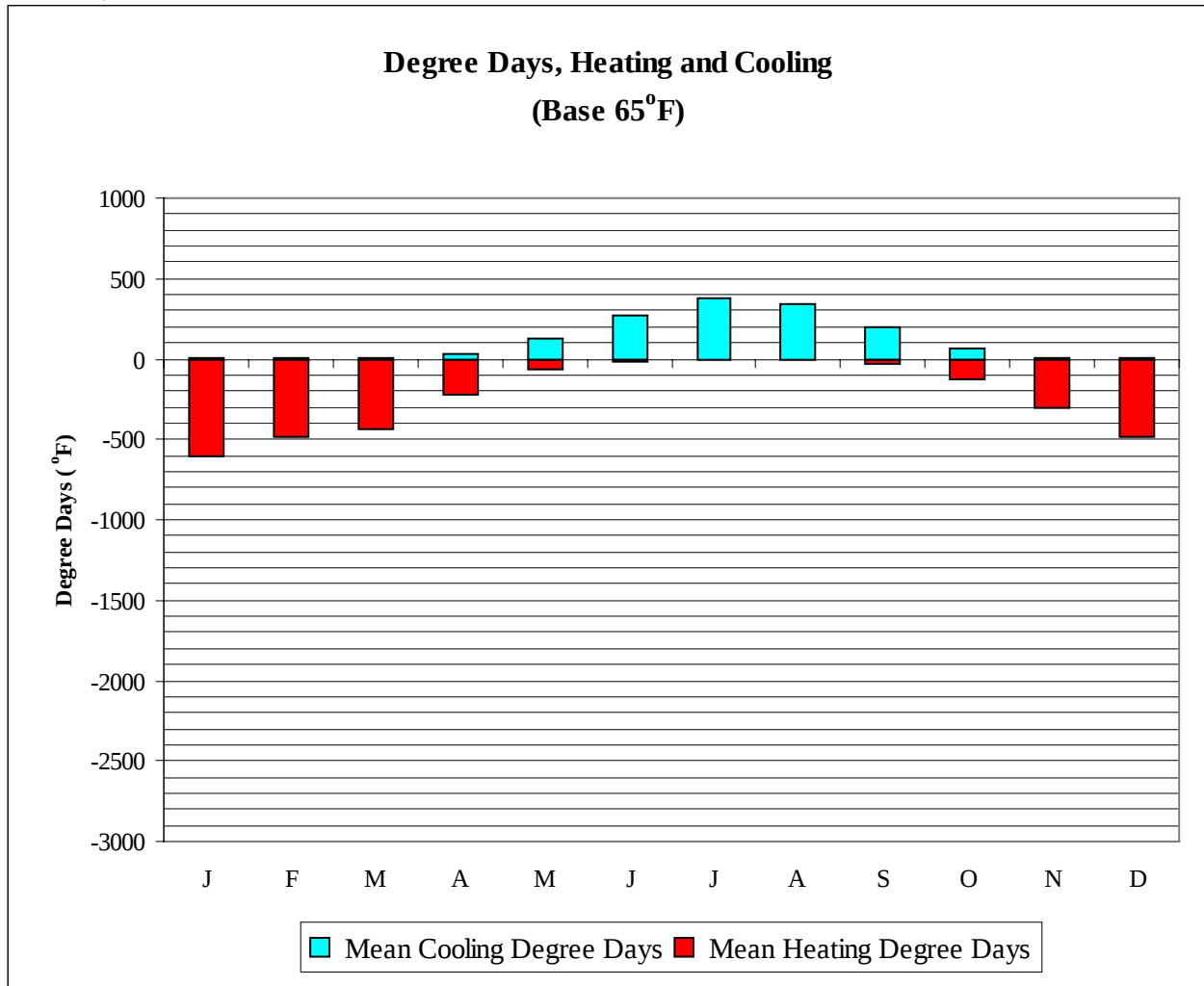
WMO No. 172180

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	63.0	55.2	53.3	40.7	28.0	62.3	59.9	42.7	30.3
14-Jan	63.0	54.7	52.5	38.6	28.0	60.9	60.1	39.8	27.9
21-Jan	60.0	53.0	50.6	36.8	25.0	53.9	54.4	36.9	25.0
28-Jan	63.0	55.3	52.7	38.9	27.0	60.9	59.2	39.4	28.1
4-Feb	63.0	55.2	52.4	38.8	27.0	58.8	58.4	39.3	27.4
11-Feb	63.0	53.5	54.3	40.4	27.0	58.1	56.6	41.8	29.8
18-Feb	66.0	56.0	55.5	41.7	28.0	61.6	62.4	43.6	30.2
25-Feb	65.0	55.7	54.2	39.5	28.0	60.9	62.4	40.6	27.7
4-Mar	66.0	56.0	55.6	40.1	28.0	60.9	61.8	41.1	28.3
11-Mar	66.0	56.2	56.3	40.5	30.0	61.6	59.2	42.2	29.2
18-Mar	70.0	58.2	58.5	42.5	30.0	62.3	59.3	44.8	31.5
25-Mar	72.0	58.7	62.2	44.4	36.0	65.8	63.1	48.6	33.9
1-Apr	75.0	60.0	65.2	47.4	37.0	65.8	65.4	52.8	35.4
8-Apr	77.0	61.6	67.5	49.0	39.0	75.6	70.8	56.1	38.3
15-Apr	79.0	61.3	68.2	49.7	41.0	70.0	66.5	56.4	39.7
22-Apr	75.0	59.1	66.6	48.9	41.0	70.0	66.3	55.9	38.9
29-Apr	81.0	63.5	71.3	51.0	45.0	74.9	72.1	59.3	40.9
6-May	84.0	63.9	74.1	53.2	46.0	79.8	72.3	63.7	44.5
13-May	88.0	68.5	75.8	56.6	48.0	85.4	74.9	69.0	49.5
20-May	87.0	61.7	77.9	57.7	50.0	86.8	76.3	71.6	51.3
27-May	92.0	66.3	81.2	59.9	54.0	96.6	81.0	73.8	53.6
3-Jun	90.0	69.2	81.5	60.2	52.0	91.0	78.9	75.7	54.9
10-Jun	91.0	69.5	84.8	62.3	57.0	97.3	79.7	78.0	54.7
17-Jun	97.0	70.3	87.1	63.7	57.0	99.4	82.0	80.5	56.4
24-Jun	95.0	69.4	87.6	64.8	59.0	105.7	81.7	84.2	59.4
1-Jul	97.0	72.3	90.3	66.7	61.0	110.6	85.8	86.0	59.4
8-Jul	99.0	71.4	90.1	66.8	63.0	117.6	88.1	88.2	60.5
15-Jul	100.0	73.1	91.1	67.9	63.0	117.6	90.1	89.5	64.1
22-Jul	100.0	75.7	93.0	69.6	64.0	118.3	92.0	91.5	65.3
29-Jul	99.0	73.0	91.9	69.2	64.0	110.6	84.7	87.8	61.7
5-Aug	98.0	71.0	91.5	68.2	63.0	110.6	88.0	89.0	63.1
12-Aug	98.0	71.5	91.6	68.8	63.0	116.9	82.5	91.3	66.2
19-Aug	97.0	71.2	90.0	67.9	63.0	110.6	85.2	92.0	67.4
26-Aug	95.0	71.0	88.9	66.4	61.0	110.6	86.1	90.2	65.6
2-Sep	93.0	70.3	87.0	64.5	59.0	112.0	87.0	89.6	64.3
9-Sep	91.0	70.1	85.7	63.4	57.0	110.6	81.4	84.9	60.2
16-Sep	91.0	67.0	84.2	61.0	55.0	105.0	87.5	79.8	55.6
23-Sep	90.0	68.7	83.3	60.1	54.0	102.9	81.1	77.2	54.3
30-Sep	91.0	69.8	81.8	59.3	51.0	96.6	79.3	76.5	53.6
7-Oct	86.0	67.2	77.6	55.7	46.0	96.6	78.7	73.3	50.3
14-Oct	84.0	65.2	77.1	56.2	48.0	96.6	74.3	72.7	51.3
21-Oct	86.0	65.9	74.6	54.8	45.0	102.9	75.2	70.9	50.4
28-Oct	79.0	65.6	69.0	52.1	45.0	90.3	70.0	62.4	45.8
4-Nov	75.0	62.2	67.8	49.9	37.0	84.7	69.3	58.7	42.6
11-Nov	72.0	60.8	63.7	47.5	36.0	74.9	64.8	54.2	38.8
18-Nov	72.0	62.1	63.2	46.4	36.0	74.9	66.9	54.1	38.2
25-Nov	72.0	60.8	61.2	46.1	34.0	74.9	64.7	51.2	36.9
2-Dec	68.0	57.9	58.9	46.1	34.0	70.0	62.6	48.9	36.3
9-Dec	66.0	58.2	57.1	43.0	30.0	65.8	62.1	46.2	33.2
16-Dec	66.0	56.4	55.1	42.6	30.0	65.8	61.6	45.1	32.4
23-Dec	64.0	56.3	55.5	42.2	30.0	65.1	59.3	46.1	33.2
31-Dec	63.0	55.6	53.6	41.2	30.0	61.6	59.7	43.9	31.6

IZMIR, TURKEY

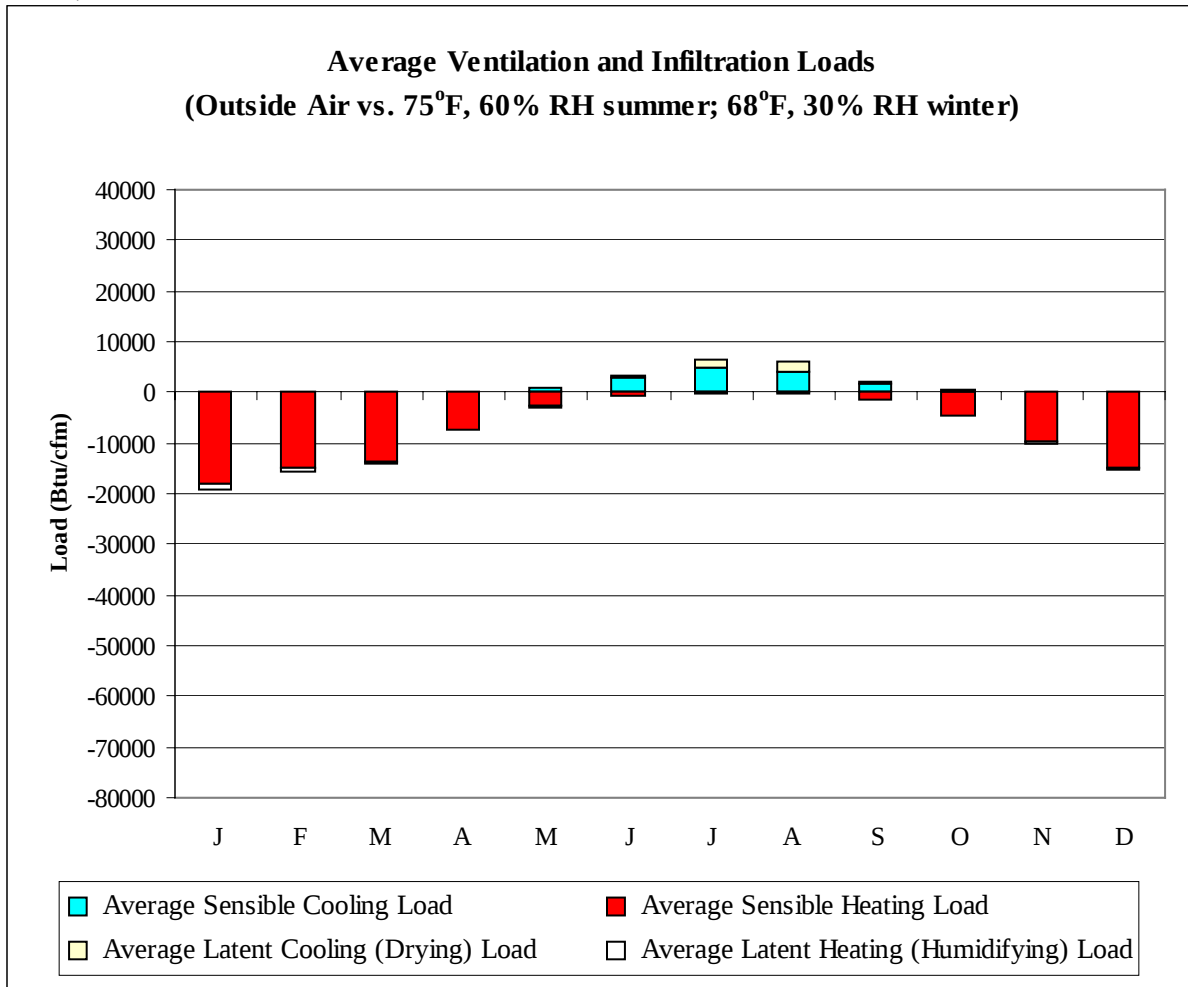
WMO No. 172180



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	600
FEB	0	489
MAR	4	433
APR	29	217
MAY	128	66
JUN	273	12
JUL	378	1
AUG	337	3
SEP	198	26
OCT	69	121
NOV	7	303
DEC	0	485
ANN	1424	2756

IZMIR, TURKEY

WMO No. 172180



	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	0	-17900	0	-1172
FEB	0	-14715	0	-910
MAR	3	-13493	0	-619
APR	64	-7495	4	-42
MAY	740	-2823	145	-8
JUN	2737	-637	724	-2
JUL	4926	-135	1686	-1
AUG	4050	-236	1842	0
SEP	1562	-1256	730	0
OCT	284	-4518	217	-10
NOV	3	-9855	7	-262
DEC	0	-14813	0	-576
ANN	14369	-87876	5355	-3602

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

No Solar Radiation
Data Available

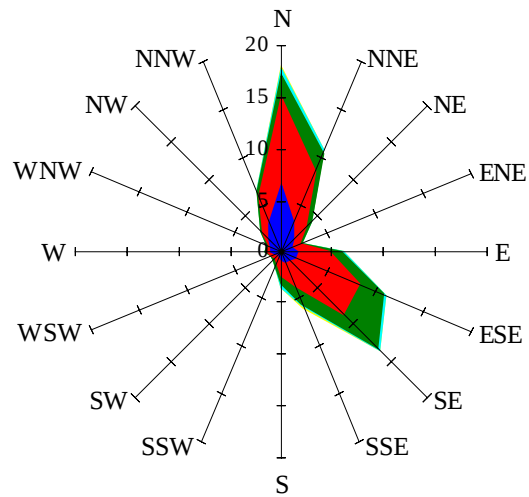


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

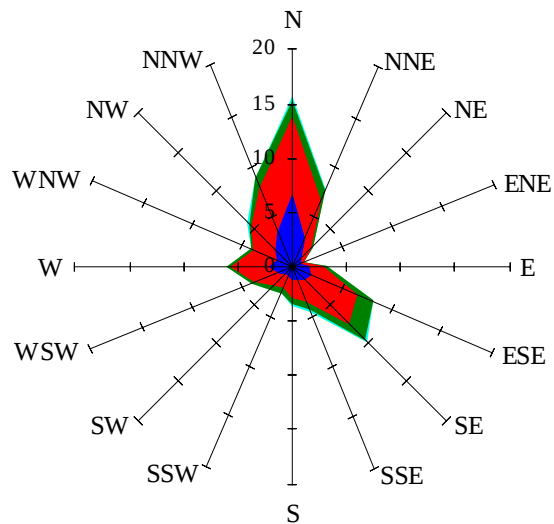
Labels of Percent Frequency on North Axis



Percent Calm = 9.49

Wind Summary - March, April, and May

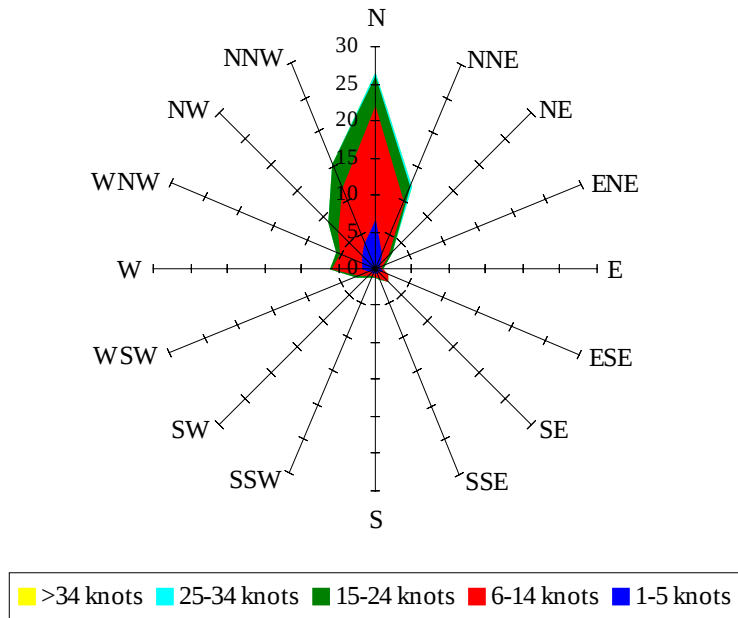
Labels of Percent Frequency on North Axis



Percent Calm = 10.85

Wind Summary - June, July, and August

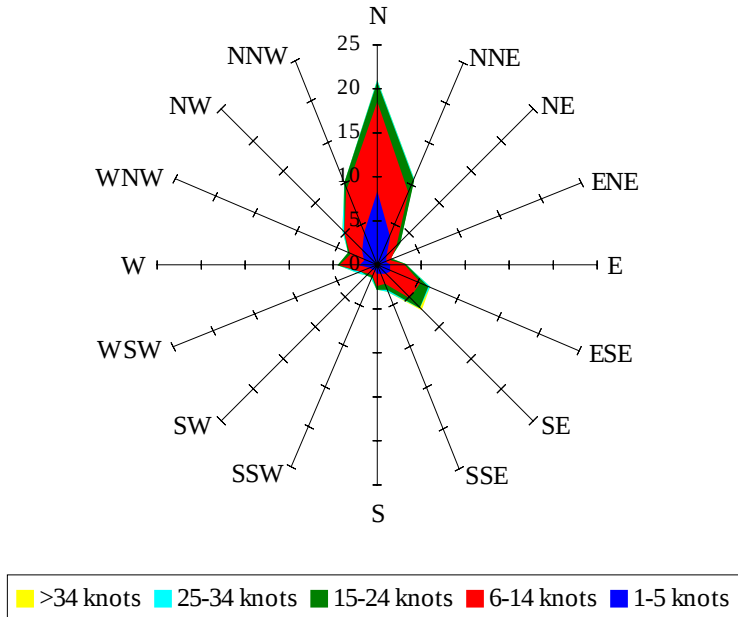
Labels of Percent Frequency on North Axis



Percent Calm = 9.55

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 12.98