

ONTARIO CA

Latitude = 34.05 N

Longitude = 117.60 W

Period of Record = 1973 to 1996

WMO No. 722865

Elevation = 942 feet

Average Pressure = 28.93 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	109	72	61	11.2	WSW
0.4% Occurrence	102	70	65	12.9	W
1.0% Occurrence	98	70	69	12.4	W
2.0% Occurrence	95	69	70	12.5	W
Mean Daily Range	25	-	-	-	-
97.5% Occurrence	41	38	30	4.9	N
99.0% Occurrence	38	35	27	5.0	N
99.6% Occurrence	35	32	24	5.2	N
Median of Extreme Lows	30	28	18	4.5	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	78	96	118	10.9	W
0.4% Occurrence	75	94	102	12.9	W
1.0% Occurrence	73	91	94	12.2	W
2.0% Occurrence	72	90	91	11.9	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	132	87	0.85	8.8	WSW
0.4% Occurrence	111	81	0.72	10.1	W
1.0% Occurrence	103	80	0.67	9.4	WSW
2.0% Occurrence	99	79	0.65	8.4	WSW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		292	1293	132	934

Other Site Data

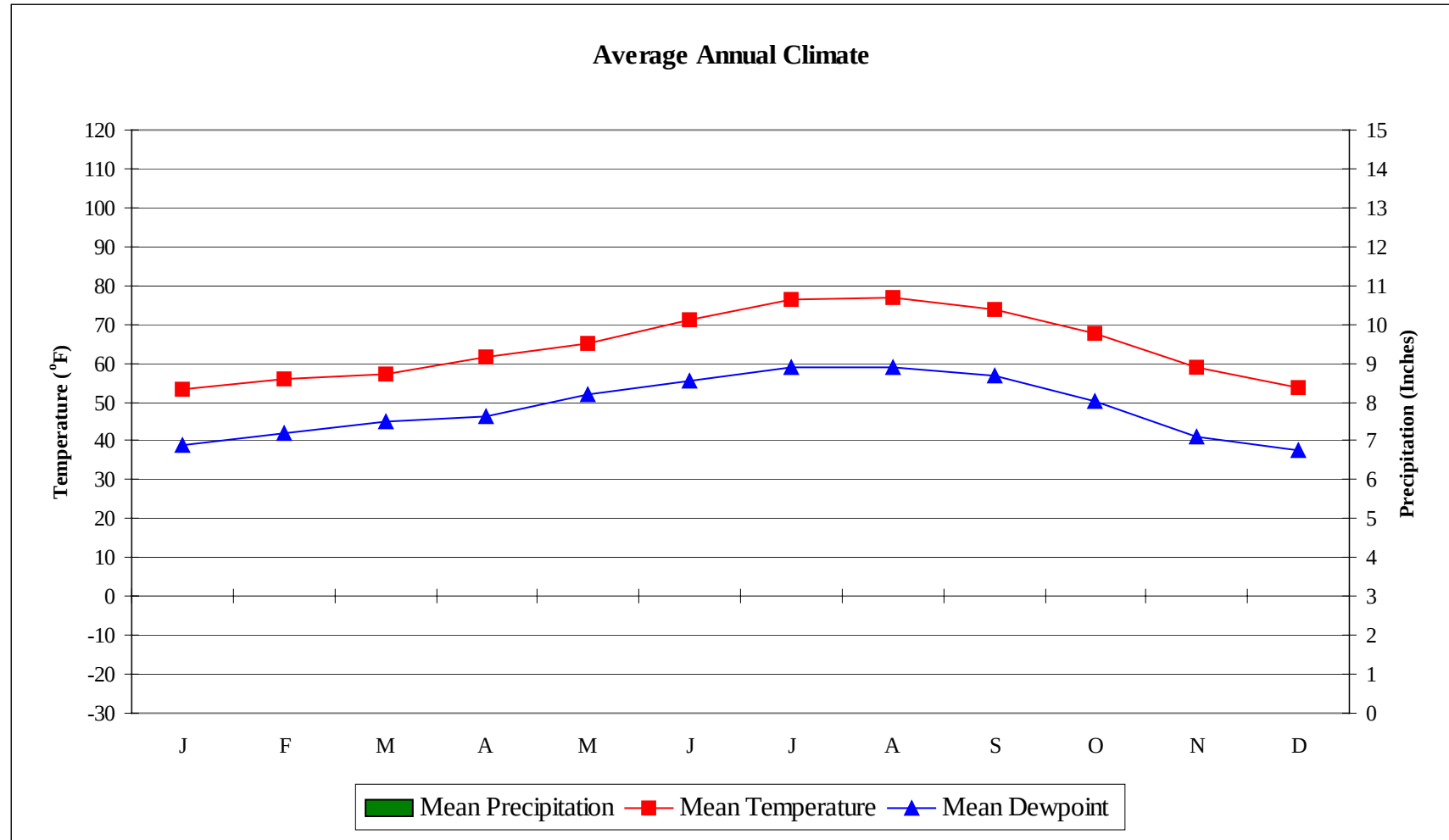
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
8	1.5	85	0.5 + 1.6
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
66.8	N/A	N/A	2

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

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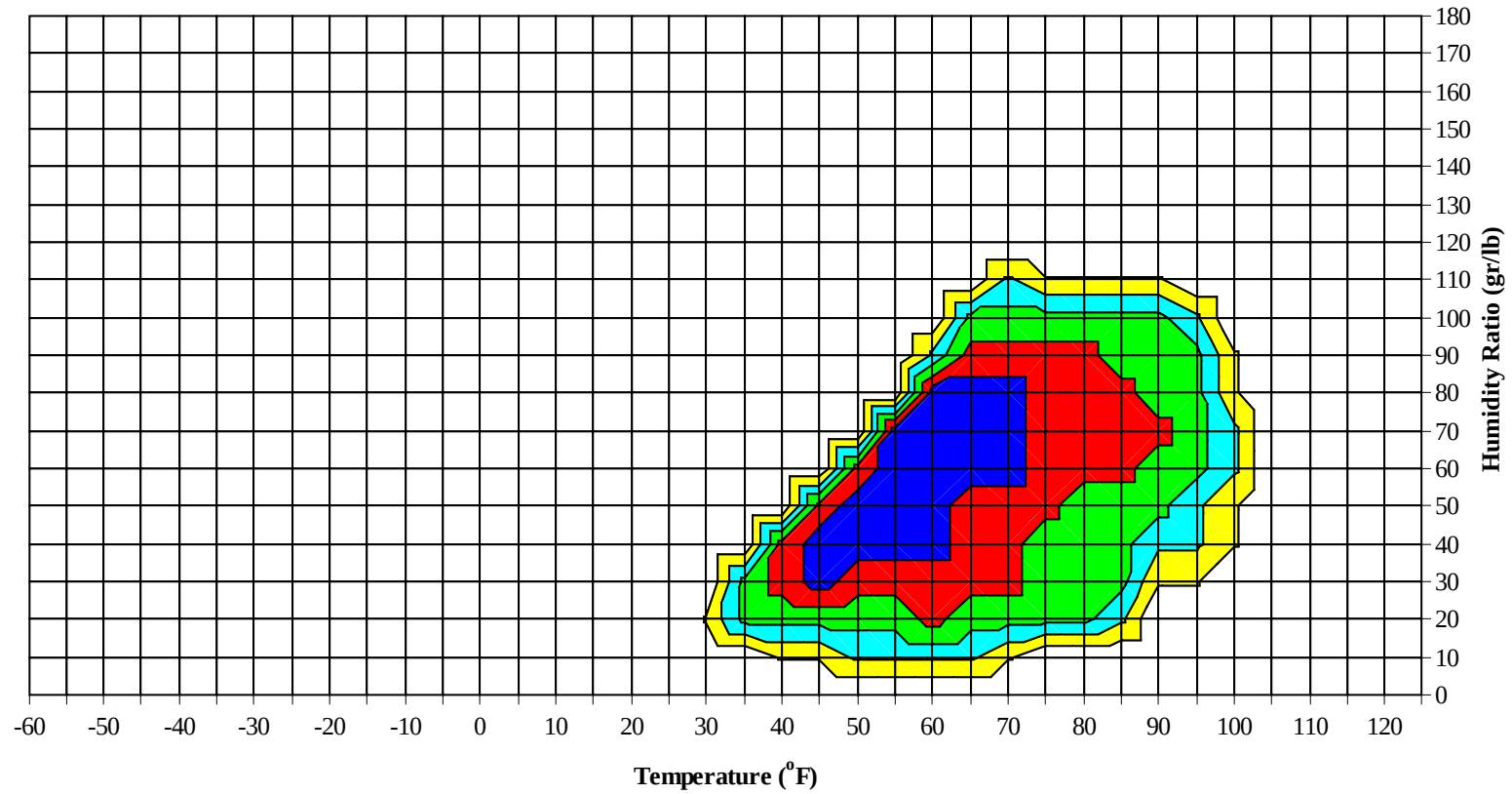
No Precipitation Data Available

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Long Term Psychrometric Summary

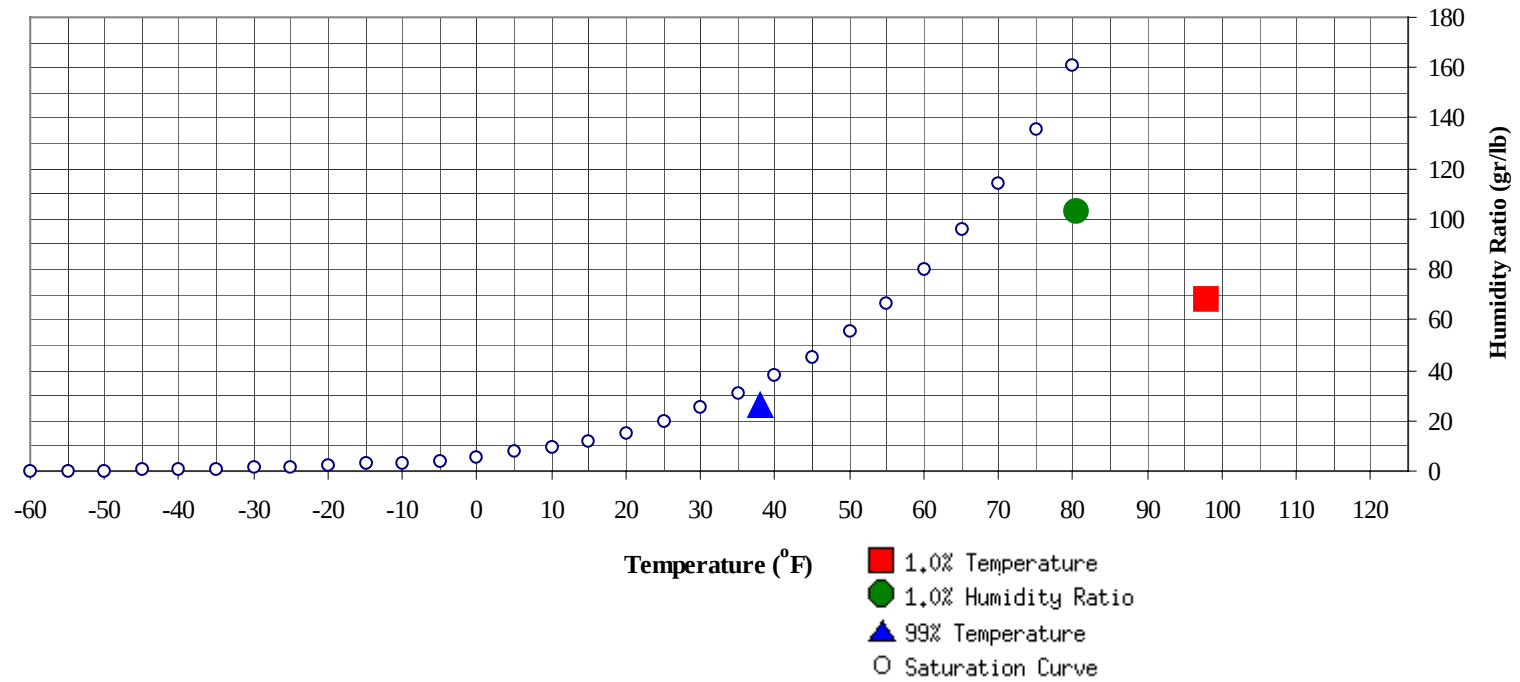


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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	38	26.5	13.2		102.9	80.3	70.9	66.9	35.4

	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
1.0% Dry Bulb	98	68.5	70	34.3

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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		
130 / 134															
125 / 129															
120 / 124															
115 / 119															
110 / 114															
105 / 109															
100 / 104															
95 / 99												0		0	64.1
90 / 94		0		0	58.0						1	0		1	62.7
85 / 89		1		1	57.8		4	0	4	60.2	4	0		4	60.8
80 / 84		6	0	6	56.1		11	1	12	58.2	11	2		13	59.0
75 / 79	0	17	2	19	54.3	0	17	4	21	56.1	19	5		24	57.7
70 / 74	0	24	6	30	52.7	1	27	10	38	54.3	1	31	11	43	56.3
65 / 69	3	37	13	53	51.2	1	35	17	53	53.1	1	39	21	61	55.1
60 / 64	4	45	25	74	50.7	6	41	32	79	52.5	7	57	40	104	53.7
55 / 59	18	53	54	125	50.2	29	47	58	134	51.4	42	53	74	169	52.1
50 / 54	51	42	74	168	47.5	59	32	60	152	48.3	84	28	63	175	49.0
45 / 49	68	17	48	133	43.7	59	9	29	97	44.1	68	5	27	100	44.8
40 / 44	64	4	20	88	39.2	47	2	11	60	39.5	34	0	5	39	40.3
35 / 39	27	1	6	34	34.6	18	0	2	20	34.9	9		0	9	35.8
30 / 34	11		1	12	30.3	3			3	30.2	1			1	31.2
25 / 29	2		0	2	25.7	0			0	26.0					
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.

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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		
130 / 134															
125 / 129															
120 / 124											0			0	82.0
115 / 119											0		0	0	78.0
110 / 114		0		0	68.5						0	0	0	0	75.7
105 / 109		0	0	0	67.6		0		0	67.5	0	3	0	3	69.5
100 / 104		0	0	0	65.6		2		2	66.6	0	7	1	8	68.1
95 / 99		2	0	2	64.7		4	1	5	66.7	0	17	3	20	69.0
90 / 94	0	7	0	7	62.9		8	1	9	65.9	0	25	6	31	68.1
85 / 89	0	13	2	15	61.5	0	20	3	23	65.3	1	39	12	52	67.0
80 / 84	0	26	6	32	60.3	0	32	8	40	64.2	3	42	22	67	65.6
75 / 79	1	31	11	43	59.1	1	42	17	60	62.4	5	36	30	71	64.0
70 / 74	2	38	19	59	57.8	3	45	27	75	60.6	13	31	42	86	62.1
65 / 69	6	45	32	83	56.1	13	45	46	104	58.5	35	25	50	110	60.3
60 / 64	23	42	54	119	54.6	60	37	74	171	56.6	100	12	58	170	58.4
55 / 59	69	27	68	163	52.4	109	12	57	178	53.8	68	2	16	86	55.2
50 / 54	79	8	37	124	49.0	48	1	14	63	49.9	13	0	1	14	51.0
45 / 49	43	1	10	54	44.6	11		1	12	45.7	1		0	1	47.1
40 / 44	15	0	2	17	40.5	2		0	2	40.8	0			0	43.0
35 / 39	2			2	36.6	0			0	37.5					
30 / 34															
25 / 29															
20 / 24															

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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		
130 / 134	0		0	0	84.7										
125 / 129	0		0	0	81.5	0		0	0	85.0					
120 / 124	0		0	0	79.5	0		0	0	83.2					
115 / 119	0		0	0	81.9	0		0	0	80.1					
110 / 114	1		0	1	81.6	0	0	0	0	76.0		0		0	73.3
105 / 109	0	2	0	2	71.6	0	2	0	2	73.4		4	0	4	71.7
100 / 104	0	10	1	11	71.4	0	12	1	13	72.8		12	1	13	70.6
95 / 99	0	34	4	38	70.7	0	32	4	36	71.2		27	3	30	69.7
90 / 94	0	57	12	69	69.9	0	63	12	75	70.1	0	37	8	45	68.5
85 / 89	1	54	24	79	68.6	1	53	26	80	69.0	1	37	15	53	67.4
80 / 84	4	42	39	85	67.3	5	39	39	83	67.6	4	39	25	68	66.1
75 / 79	15	25	46	86	65.7	19	23	50	92	65.9	12	33	39	84	64.8
70 / 74	37	15	52	104	63.9	47	16	57	120	64.4	35	27	52	114	63.1
65 / 69	80	8	49	137	62.2	86	6	45	136	62.3	69	18	60	146	61.3
60 / 64	90	1	20	111	59.9	69	1	15	84	59.2	83	6	32	120	58.9
55 / 59	20	0	1	21	55.5	20		1	21	54.9	32	1	6	39	54.9
50 / 54	0			0	51.5	1			1	49.9	5		0	5	50.8
45 / 49											0			0	47.7
40 / 44															
35 / 39															
30 / 34															
25 / 29															
20 / 24															

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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		
130 / 134															
125 / 129															
120 / 124															
115 / 119															
110 / 114		0		0	69.7										
105 / 109		1	0	1	68.9										
100 / 104		2	0	2	67.7										
95 / 99		9	0	9	66.0		0		0	61.3			0	0	68.0
90 / 94		21	1	22	64.4		3		3	61.7		0	0	0	58.8
85 / 89	0	29	5	34	63.2	0	11	0	11	59.6		2	0	2	57.7
80 / 84	1	34	11	46	62.2	0	22	2	24	57.7		8	0	8	56.3
75 / 79	2	41	20	63	61.0	1	28	6	35	55.8		17	1	18	54.5
70 / 74	9	48	36	93	60.0	1	41	12	54	54.7	0	29	5	34	52.8
65 / 69	25	37	60	122	58.8	4	43	27	74	53.8	1	42	10	53	51.5
60 / 64	83	21	72	176	57.2	14	46	50	110	52.8	4	50	26	80	50.8
55 / 59	81	5	33	119	53.6	46	28	68	142	51.1	17	50	56	123	49.5
50 / 54	34	0	8	42	48.6	72	13	46	131	47.3	48	35	72	155	46.8
45 / 49	12		1	13	43.3	54	3	22	79	43.0	62	13	49	124	42.8
40 / 44	1			1	38.2	36	0	7	43	38.9	73	3	24	100	38.6
35 / 39						10		1	11	34.4	33	0	5	38	34.0
30 / 34						1			1	30.5	8	0	0	8	29.4
25 / 29						0			0	26.0	1	0		1	25.1
20 / 24											0	0		0	21.0

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.

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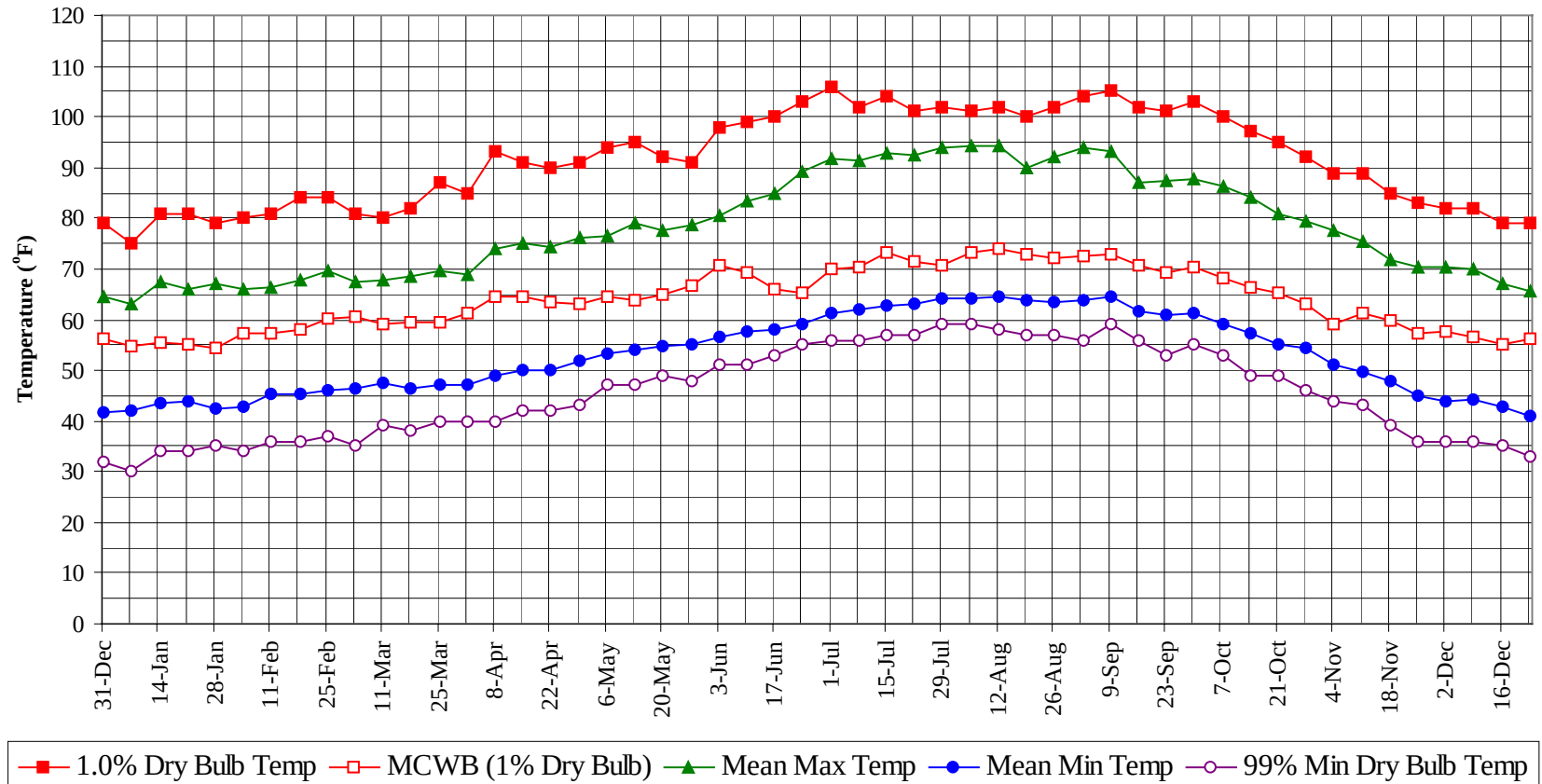
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

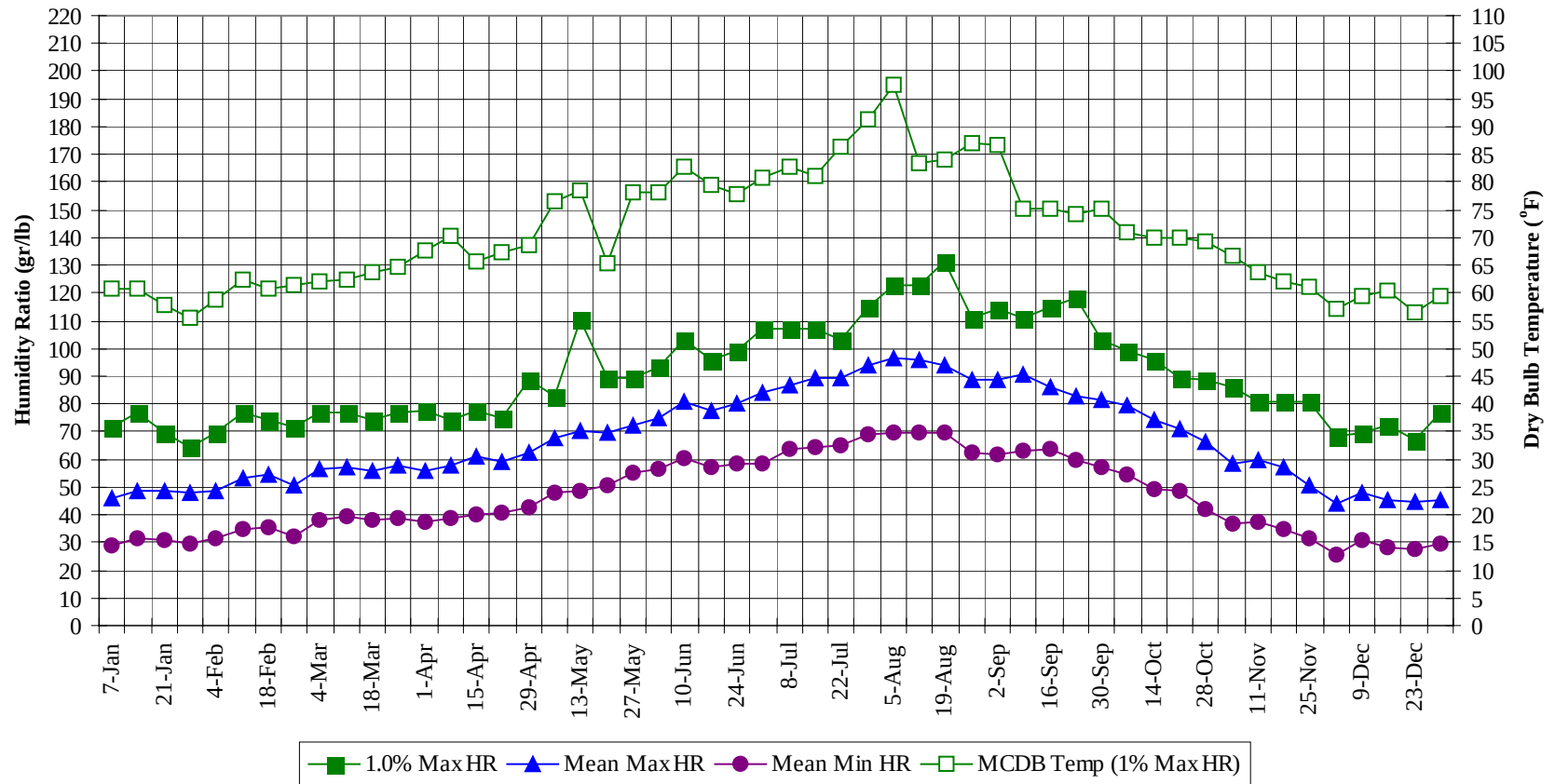
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
130 / 134	0		0	0	84.7
125 / 129	0		0	0	82.0
120 / 124	0		0	0	82.1
115 / 119	1		0	1	80.7
110 / 114	1	1	0	2	76.2
105 / 109	0	13	1	14	71.1
100 / 104	0	45	3	48	70.6
95 / 99	0	124	15	139	69.8
90 / 94	1	221	41	263	68.6
85 / 89	4	267	87	357	66.7
80 / 84	17	312	152	481	64.5
75 / 79	56	331	228	615	62.3
70 / 74	150	370	328	847	60.3
65 / 69	323	382	429	1133	58.4
60 / 64	541	360	498	1399	56.0
55 / 59	552	279	491	1322	52.3
50 / 54	496	159	377	1032	48.2
45 / 49	380	49	186	616	43.8
40 / 44	272	9	69	349	39.2
35 / 39	99	1	13	113	34.6
30 / 34	23	0	2	25	30.0
25 / 29	3	0	0	3	25.5
20 / 24	0	0		0	21.0

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Annual Summary of Temperatures

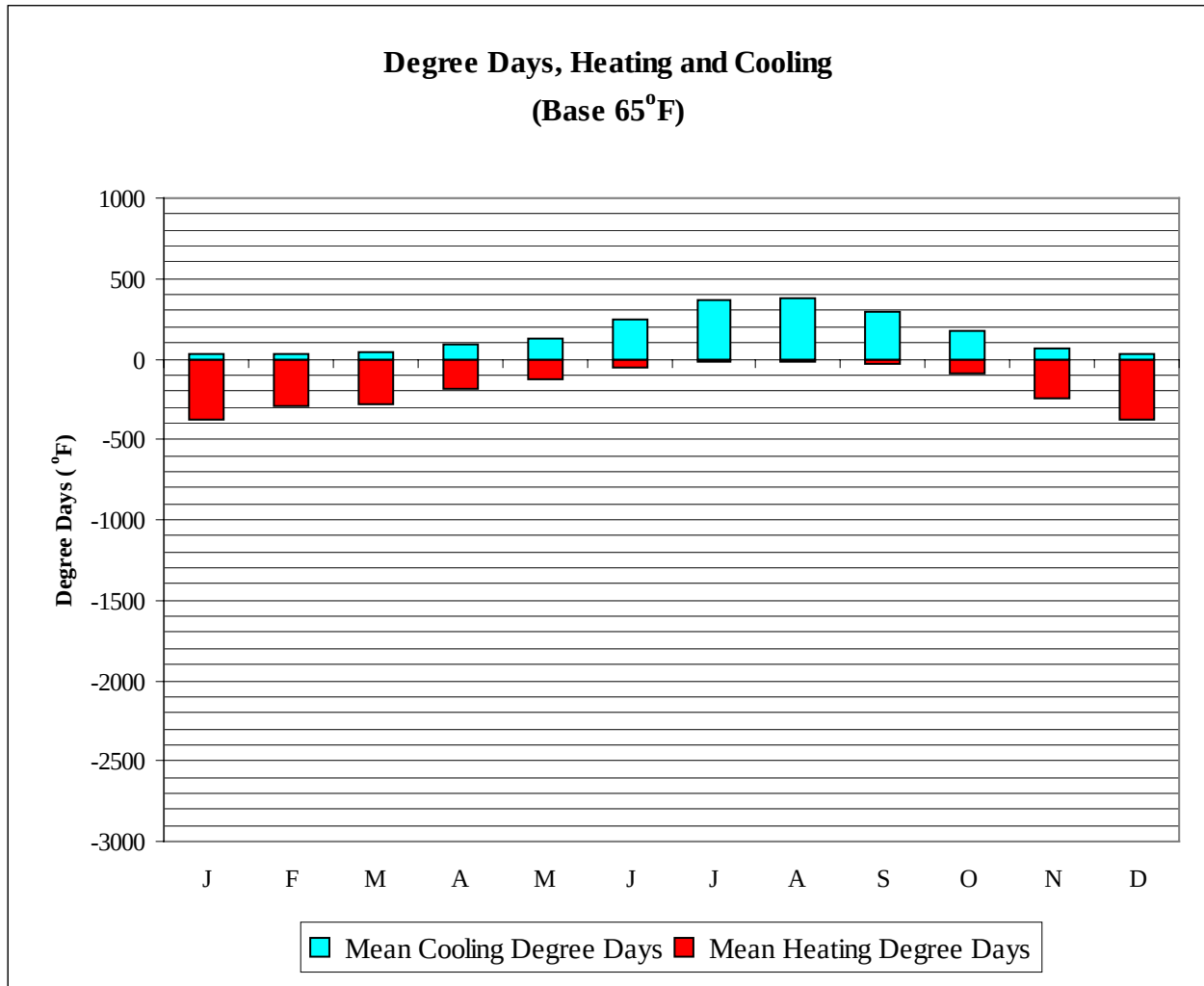


Long Term Humidity and Dry Bulb Temperature Summary

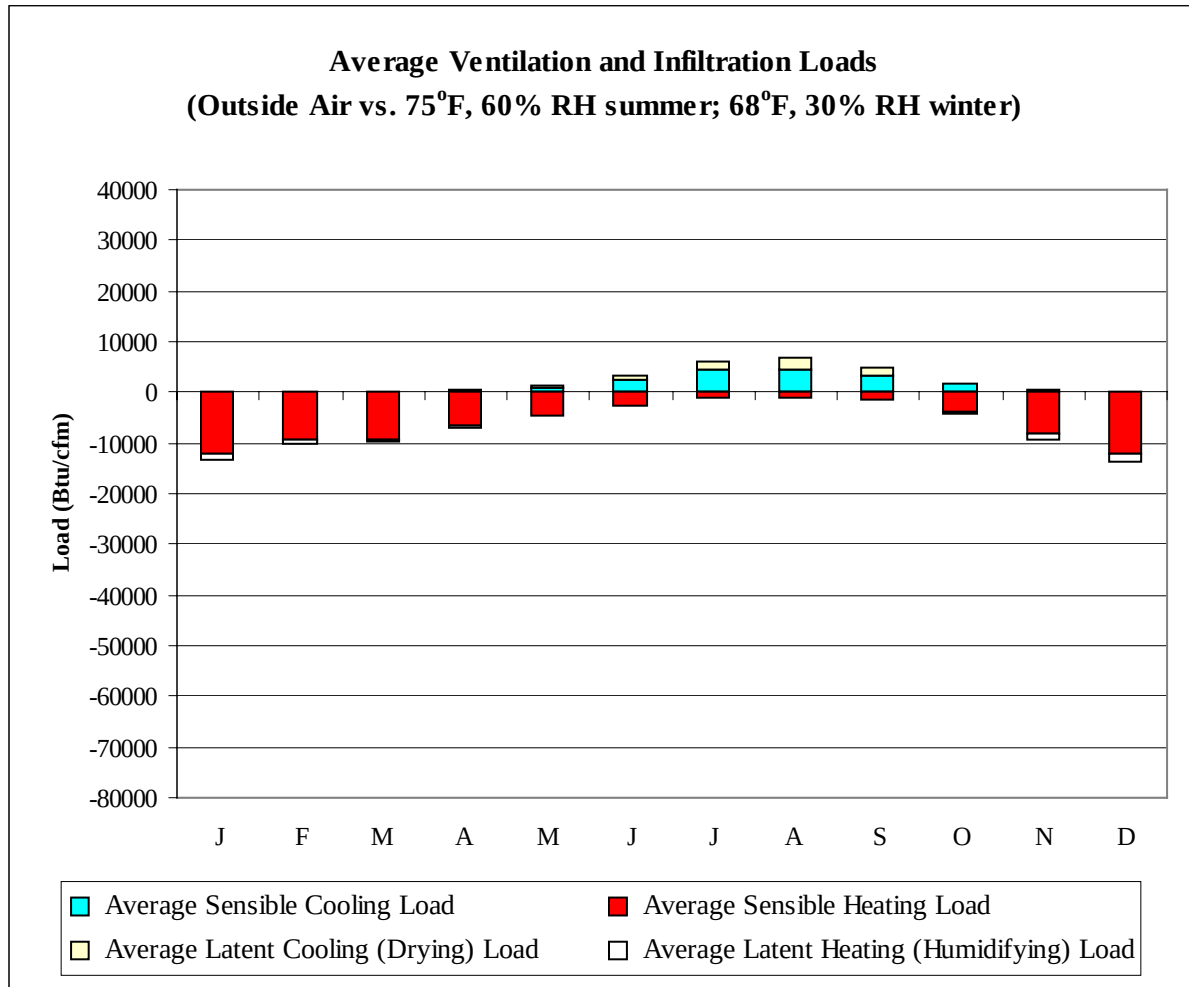


ONTARIO**CA****WMO No. 722865****Long Term Dry Bulb Temperature and Humidity Summary**

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	75.0	54.7	63.1	42.0	30.0	71.4	60.8	45.7	29.1
14-Jan	81.0	55.3	67.4	43.5	34.0	77.0	60.7	48.6	31.8
21-Jan	81.0	55.2	65.8	43.8	34.0	69.3	57.9	48.3	31.1
28-Jan	79.0	54.3	67.0	42.5	35.0	64.4	55.6	47.6	29.6
4-Feb	80.0	57.2	66.1	42.9	34.0	69.3	58.7	48.8	31.3
11-Feb	81.0	57.3	66.5	45.2	36.0	77.0	62.6	53.1	34.8
18-Feb	84.0	58.1	67.6	45.1	36.0	74.2	60.7	54.5	35.5
25-Feb	84.0	60.1	69.8	45.9	37.0	71.4	61.2	50.7	32.3
4-Mar	81.0	60.6	67.4	46.3	35.0	77.0	62.1	56.6	38.3
11-Mar	80.0	59.1	67.7	47.4	39.0	77.0	62.3	57.0	39.6
18-Mar	82.0	59.5	68.7	46.3	38.0	74.2	63.7	55.7	37.9
25-Mar	87.0	59.5	69.7	47.1	40.0	77.0	64.7	57.9	39.0
1-Apr	85.0	61.2	69.0	47.1	40.0	77.7	67.5	56.0	37.3
8-Apr	93.0	64.7	73.8	49.0	40.0	74.2	70.4	57.6	39.0
15-Apr	91.0	64.7	75.1	49.9	42.0	77.7	65.7	61.1	40.0
22-Apr	90.0	63.5	74.2	50.1	42.0	74.9	67.4	59.4	40.8
29-Apr	91.0	63.2	76.1	51.7	43.0	88.9	68.7	62.5	43.0
6-May	94.0	64.7	76.4	53.4	47.0	82.6	76.5	67.5	48.1
13-May	95.0	63.9	78.9	54.2	47.0	110.6	78.4	70.1	48.9
20-May	92.0	65.0	77.7	54.8	49.0	89.6	65.4	69.9	50.7
27-May	91.0	66.6	78.6	55.1	48.0	89.6	78.0	72.0	54.8
3-Jun	98.0	70.6	80.6	56.7	51.0	93.1	78.0	74.8	56.8
10-Jun	99.0	69.3	83.4	57.7	51.0	102.9	82.7	80.6	60.3
17-Jun	100.0	66.0	84.9	57.8	53.0	95.9	79.5	77.8	57.2
24-Jun	103.0	65.2	89.1	59.1	55.0	99.4	77.9	80.0	58.1
1-Jul	106.0	70.1	91.6	61.4	56.0	107.1	80.7	84.2	58.4
8-Jul	102.0	70.3	91.2	61.9	56.0	107.1	82.6	86.6	63.4
15-Jul	104.0	73.2	93.0	62.7	57.0	107.1	81.2	89.0	64.4
22-Jul	101.0	71.6	92.3	63.1	57.0	102.9	86.4	89.5	65.0
29-Jul	102.0	70.8	94.0	64.0	59.0	114.8	91.3	94.1	69.2
5-Aug	101.0	73.3	94.2	64.1	59.0	122.5	97.4	96.6	69.9
12-Aug	102.0	74.1	94.2	64.5	58.0	122.5	83.5	95.6	69.5
19-Aug	100.0	72.8	89.9	63.7	57.0	131.6	84.1	94.0	69.5
26-Aug	102.0	72.0	92.1	63.3	57.0	111.3	86.9	88.7	62.7
2-Sep	104.0	72.4	93.9	63.8	56.0	114.1	86.8	88.7	61.5
9-Sep	105.0	72.9	93.1	64.6	59.0	111.3	75.4	90.8	62.7
16-Sep	102.0	70.6	86.9	61.6	56.0	114.8	75.3	86.3	64.0
23-Sep	101.0	69.4	87.5	61.0	53.0	118.3	74.1	82.6	59.4
30-Sep	103.0	70.2	87.9	61.2	55.0	102.9	75.3	81.7	56.9
7-Oct	100.0	68.3	86.1	59.0	53.0	99.4	71.0	79.3	54.3
14-Oct	97.0	66.2	84.2	57.4	49.0	95.9	69.9	74.4	49.1
21-Oct	95.0	65.1	80.8	55.2	49.0	89.6	69.8	70.8	48.8
28-Oct	92.0	63.2	79.5	54.5	46.0	88.9	69.3	66.1	41.7
4-Nov	89.0	59.2	77.5	51.1	44.0	86.1	66.6	58.3	36.9
11-Nov	89.0	61.3	75.4	49.6	43.0	80.5	63.6	59.6	37.1
18-Nov	85.0	59.9	71.9	47.7	39.0	80.5	62.0	57.1	35.1
25-Nov	83.0	57.4	70.5	45.1	36.0	80.5	61.2	50.8	31.4
2-Dec	82.0	57.7	70.2	44.0	36.0	68.6	57.1	43.9	25.9
9-Dec	82.0	56.6	70.0	44.1	36.0	69.3	59.5	48.2	30.6
16-Dec	79.0	55.2	67.3	42.8	35.0	72.1	60.3	45.2	28.1
23-Dec	79.0	56.3	65.8	41.1	33.0	67.2	56.4	44.9	27.7
31-Dec	79.0	56.1	64.4	41.6	32.0	77.0	59.5	45.2	29.3



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	25	380
FEB	35	292
MAR	42	287
APR	90	191
MAY	126	123
JUN	244	56
JUL	368	18
AUG	378	15
SEP	296	27
OCT	170	91
NOV	66	243
DEC	28	378
ANN	1867	2101



	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	88	-11989	0	-1455
FEB	163	-9419	2	-802
MAR	209	-9483	4	-417
APR	675	-6632	29	-299
MAY	1013	-4712	172	-33
JUN	2657	-2440	562	-18
JUL	4357	-1046	1728	-1
AUG	4437	-892	2329	-1
SEP	3315	-1422	1359	-38
OCT	1557	-3663	267	-404
NOV	416	-8093	10	-1169
DEC	111	-11913	2	-1613
ANN	18998	-71704	6464	-6250

Average Annual Solar Radiation – Nearest Available Site

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

City: LONG BEACH
 State: CA
 WBAN No: 23129
 Lat(N): 33.82
 Long(W): 118.15
 Elev(ft): 56

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.361
 Vert Gap: 0.274

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	880	1140	1500	1900	2040	2130	2300	2120	1700	1320	990	820	1570
	Std Dev	75	107	110	101	132	177	85	73	112	78	63	62	37
	Minimum	740	930	1310	1700	1710	1650	2070	1920	1360	1140	870	670	1470
	Maximum	1050	1370	1760	2150	2270	2370	2460	2230	1880	1440	1090	920	1630
	Diffuse	360	460	600	690	810	830	720	650	600	490	380	330	580
Clear Day	Global	1100	1420	1870	2280	2530	2610	2550	2340	1990	1540	1160	1000	1870
NORTH	Global	240	300	380	460	560	620	590	490	400	330	260	220	410
	Diffuse	240	300	380	450	510	530	510	460	400	330	260	220	380
Clear Day	Global	230	290	370	460	590	690	640	490	390	320	250	220	410
EAST	Global	560	670	830	980	920	920	1040	980	830	710	590	520	800
	Diffuse	300	380	480	560	600	610	600	560	490	410	320	280	470
Clear Day	Global	740	910	1130	1290	1370	1390	1370	1300	1160	960	770	680	1090
SOUTH	Global	1290	1290	1200	1020	790	690	760	970	1160	1320	1350	1290	1090
	Diffuse	430	490	540	560	560	540	530	540	540	510	450	410	510
Clear Day	Global	1830	1820	1630	1230	890	750	800	1060	1450	1740	1810	1800	1400
WEST	Global	580	720	920	1120	1210	1260	1310	1240	1070	860	650	540	960
	Diffuse	310	380	490	570	630	650	630	590	520	420	330	280	490
Clear Day	Global	740	910	1130	1290	1370	1390	1370	1300	1160	960	770	680	1090

Average Annual Solar Heat and Illumination – Nearest Available Site

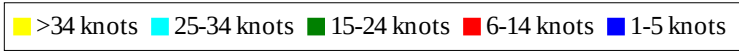
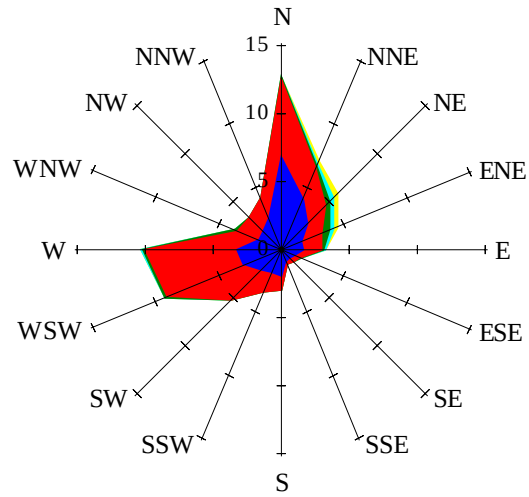
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	600	800	1080	1380	1490	1560	1700	1560	1240	940	680	540	1130
NORTH	Unshaded	170	210	270	310	370	400	380	320	280	230	180	160	270
	Shaded	160	200	250	300	340	370	360	310	260	220	170	150	260
EAST	Unshaded	380	470	580	690	640	640	730	690	580	490	410	350	550
	Shaded	360	430	530	630	580	570	650	620	530	450	380	330	500
SOUTH	Unshaded	970	930	810	630	470	410	440	570	760	940	1000	970	740
	Shaded	950	880	690	470	360	350	350	400	590	850	980	950	650
WEST	Unshaded	400	500	650	800	860	890	930	890	760	600	450	370	680
	Shaded	370	470	600	730	780	810	850	810	690	560	420	350	620

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	46	80	88	67	24	49	88	106	99	67
	M.Cloudy	29	54	61	47	17	28	51	70	70	47
NORTH	M.Clear	12	16	16	14	8	21	17	17	17	17
	M.Cloudy	11	17	18	15	7	14	19	21	20	17
EAST	M.Clear	73	54	16	14	8	75	71	27	17	15
	M.Cloudy	33	35	18	15	7	26	34	25	20	16
SOUTH	M.Clear	39	69	76	57	21	13	26	37	32	15
	M.Cloudy	21	43	48	37	12	12	22	30	28	16
WEST	M.Clear	12	16	29	70	58	13	17	17	57	81
	M.Cloudy	11	17	24	43	27	12	19	21	42	47
M.Clear	(% hrs)	40	42	48	51	52	23	44	61	71	75
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	33	75	93	83	48	23	51	55	33	3
	M.Cloudy	18	44	64	57	32	15	34	38	23	3
NORTH	M.Clear	10	16	17	16	12	7	12	12	9	2
	M.Cloudy	8	16	19	18	12	6	12	13	9	1
EAST	M.Clear	66	69	25	16	12	47	38	12	9	2
	M.Cloudy	20	33	23	18	12	20	23	13	9	1
SOUTH	M.Clear	22	54	69	61	33	44	81	85	59	6
	M.Cloudy	11	29	46	41	21	19	41	47	30	3
WEST	M.Clear	10	16	17	59	76	7	12	27	51	9
	M.Cloudy	8	16	19	39	38	6	12	19	26	4
M.Clear	(% hrs)	34	50	69	76	78	47	50	52	53	55

Wind Summary - December, January, and February

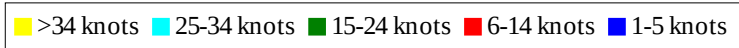
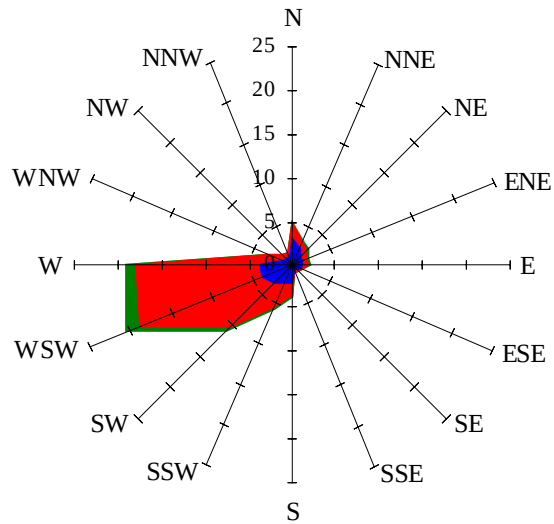
Labels of Percent Frequency on North Axis



Percent Calm = 21.27

Wind Summary - March, April, and May

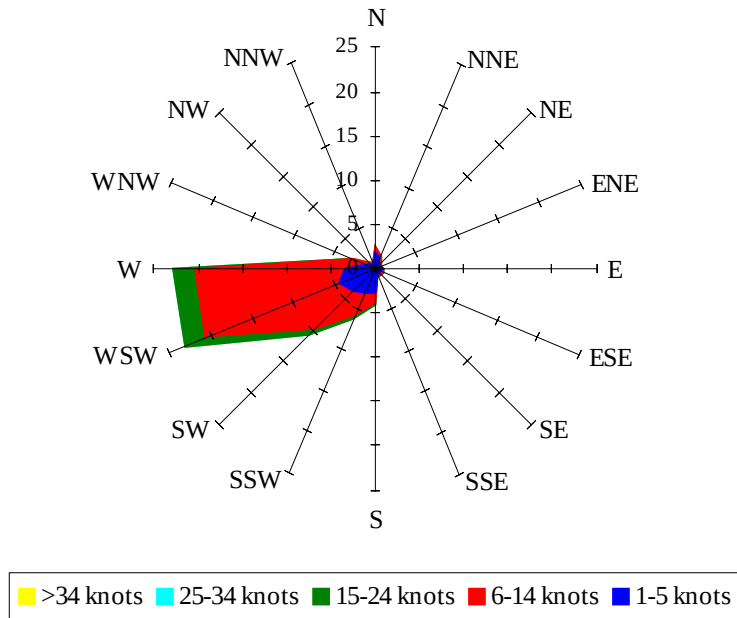
Labels of Percent Frequency on North Axis



Percent Calm = 16.35

Wind Summary - June, July, and August

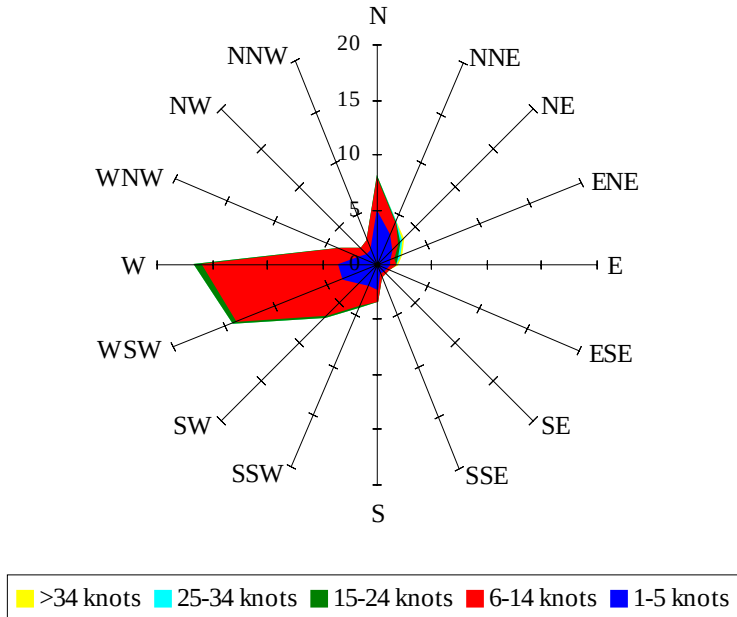
Labels of Percent Frequency on North Axis



Percent Calm = 19.91

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 24.42