DAMASCUS INTL, SY	
Latitude = 33.41 N	Station ID = ICAO_OSDI
Longitude = 36.52 E	Elevation = 616 Meters
Period of Record = 1988 To 2017	Average Pressure = 942.8 mb

Design Criteria Data

	Mean Coincident (Average) Values				
Dry Bulb Temperature (T)	**Design Value (°C)**	**Wet Bulb Temperature (°C)**	**Humidity Ratio (g/kg)**	**Wind Speed (m/s)**	**Prevailing Direction (NSEW)**
Median of Extreme Highs	42	19	6	3.7	SW
0.4% Occurrence	40	19	6	4.4	SW
1.0% Occurrence	38	18	6	5	SSW
2.0% Occurrence	37	18	6	5	SSW
Mean Daily Range	16	-	-	-	N
97.5% Occurrence	0	-1	3	1.4	N
99.0% Occurrence	-2	-3	3	1.3	N
99.6% Occurrence	-4	-5	2	1.2	N
Median of Extreme Lows	-7	-8	2	1.4	N

Wet Bulb Temperature (T_{wb})	**Design Value (°C)**	**Dry Bulb Temperature (°C)**	**Humidity Ratio (g/kg)**	**Wind Speed (m/s)**	**Prevailing Direction (NSEW)**
Median of Extreme Highs	29	38	22	3.6	SSW
0.4% Occurrence	24	33	15	4.9	SSW
1.0% Occurrence	22	31	13	4.9	SSW
2.0% Occurrence	21	30	12	5	SSW

Humidity Ratio (HR)	**Design Value (g/kg)**	**Dry Bulb Temperature (°C)**	**Vapor Pressure (kPa)**	**Wind Speed (m/s)**	**Prevailing Direction (NSEW)**
Median of Extreme Highs	17	25	83.73	4.6	SSW
0.4% Occurrence	15	23	74.34	5.1	SSW
1.0% Occurrence	14	23	70.12	5.1	SSW
2.0% Occurrence	14	23	68.72	5.2	SSW

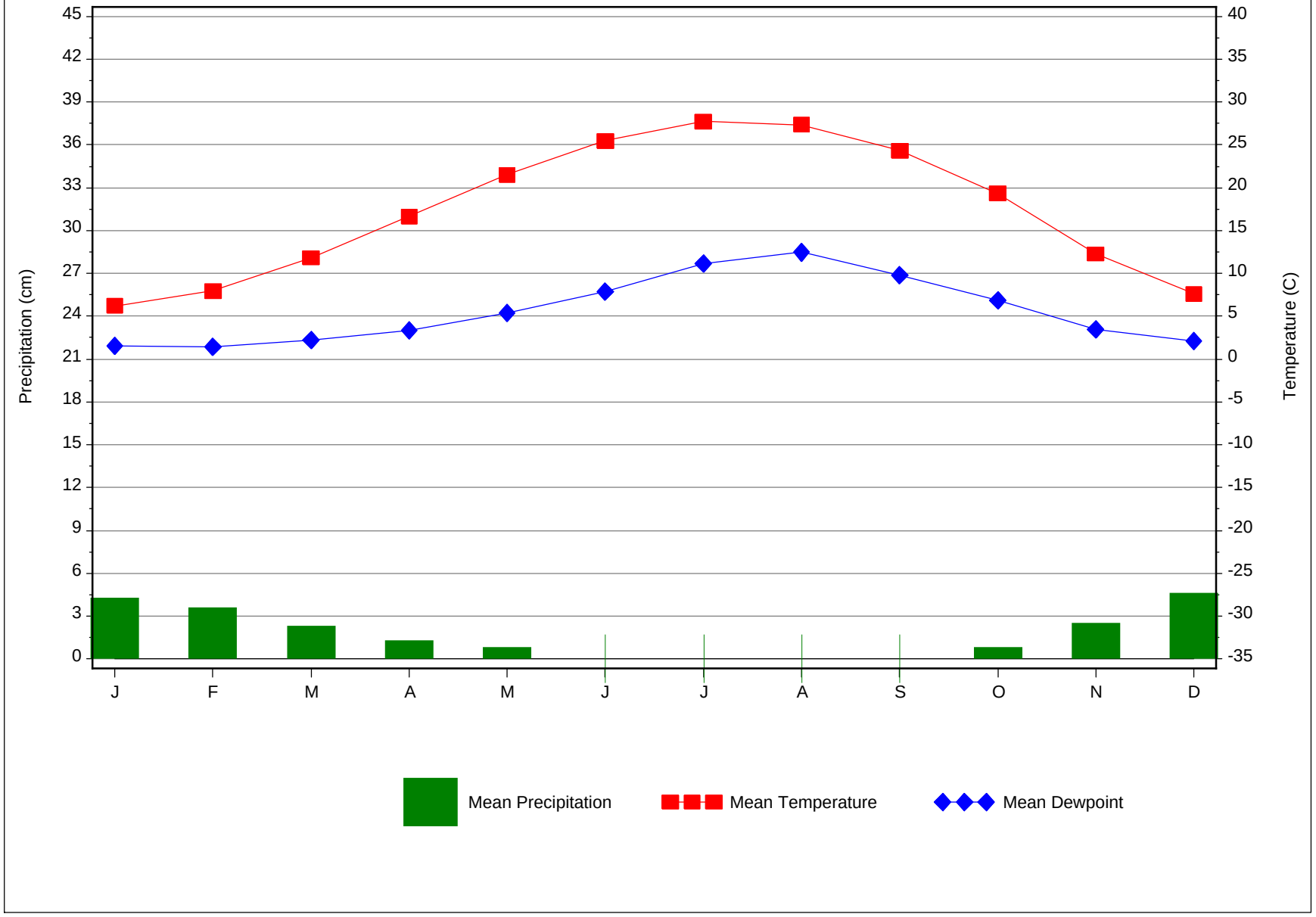
Air Conditioning/ Humid Area Criteria	**Threshold**	**T ≥ 33.9 °C**	**T ≥ 26.7 °C**	**Twb≥22.8 °C**	**Twb≥19.4 °C**
	# of Hours	596	1761	8	435

Other Site Data

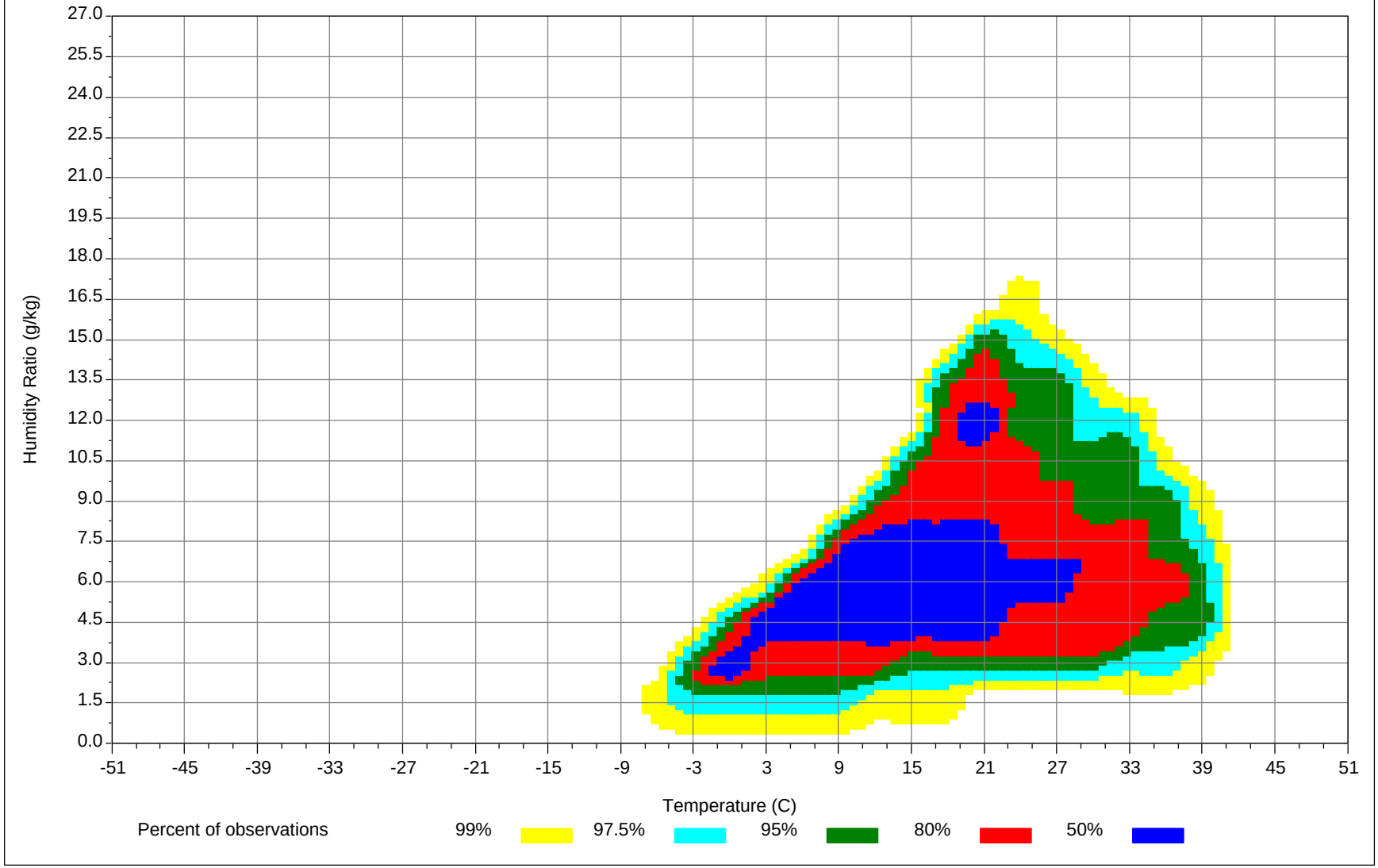
Weather Region	Rain Rate 100 Year Recurrence (cm/hr)	Basic Wind Speed 3 sec gust @ 10 m 50 Year Recurrence (m/s)	Ventilation Cooling Load Index (kWh/l/s/yr) Base 24° C-RH 60% Latent + Sensible
11	N/A	N/A	0.2 + 1.5
Ground Water Temperature (°C) 15 Meter Depth*	Frost Depth 50 Year Recurrence (cm)	Ground Snow Load 50 Year Recurrence (kN/m^2)	Average Annual Freeze-Thaw Cycles (#)
18.8	N/A	N/A	31

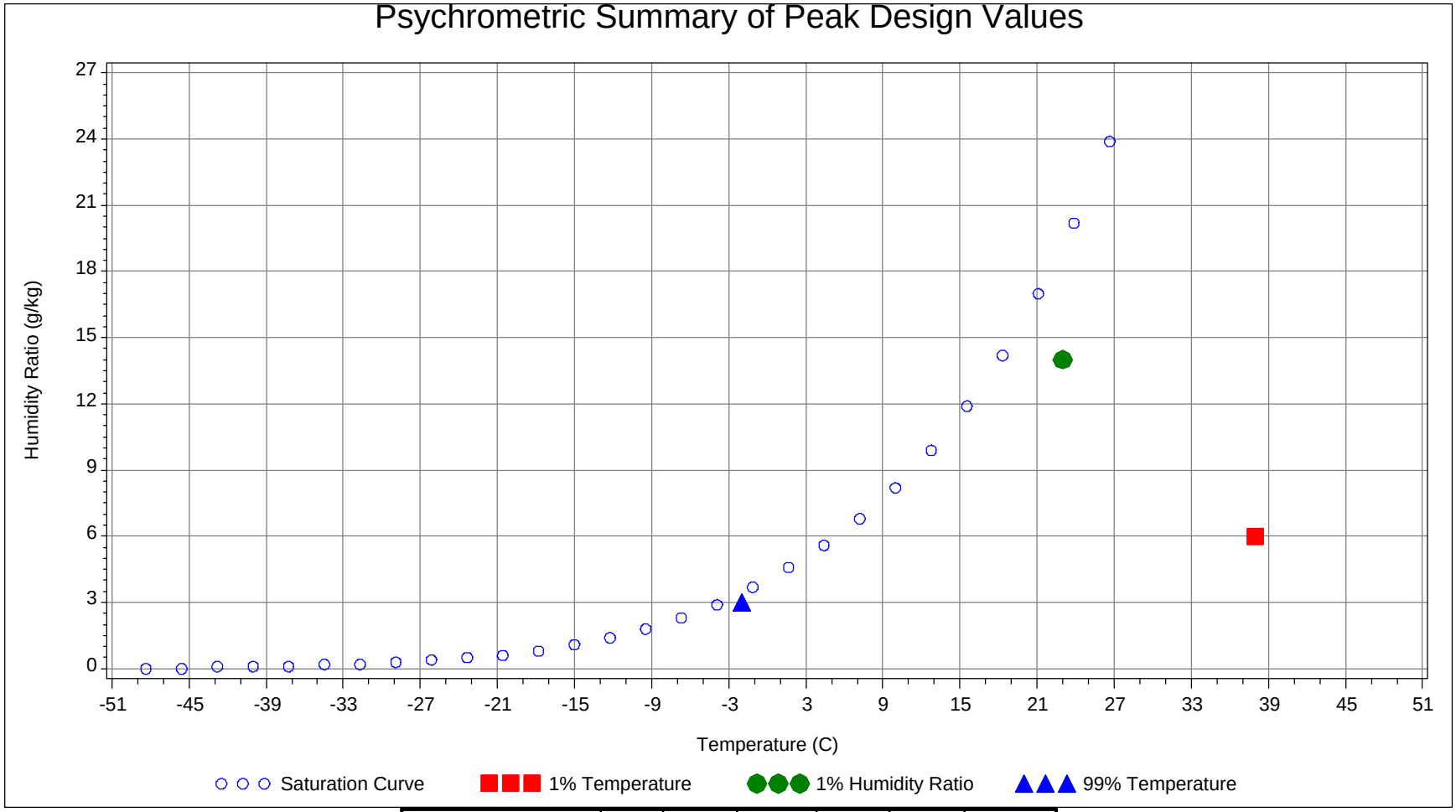
*Note: Temperatures at greater depths can be estimated by adding 0.83° C per 30 meters additional depth.

Average Annual Climate



Long Term Psychrometric Summary





	(°C) / (g/kg)	MCDB (°C)	MCWB (°C)	MCDP (°C)	MCHR (g/kg)	Enthalpy (kJ/kg)
1.0% Dry Bulb	38.0		18		6.0	53.7
99.0% Dry Bulb	-2.0				3.0	4.3
1.0% Humidity Ratio	14.0	23.0	19.7	18.2		59.4

Dry-Bulb Temperature Hours For An Average Year

	January					February					March				
Temperature Range (°C)	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**
45/ 47															
42/ 44															
39/ 41															
36/ 38															
33/ 35												0		0	14.5
30/ 32												2	0	2	14.4
27/ 29							0		0	13.7		4	1	5	13.3
24/ 26							1		1	12.3		9	2	11	12.7
21/ 23		0	0	0	11		5	1	6	11.3	0	36	9	45	11.2
18/ 20		2	0	2	10.7		11	2	13	10.1	0	35	13	48	10.3
15/ 17	0	26	2	28	9.6	0	46	12	58	9	6	77	41	124	9.4
12/ 14	0	55	12	67	8.3	2	56	26	84	7.9	18	48	52	118	8.2
9/ 11	4	53	33	90	7.2	8	39	40	87	6.9	35	22	50	107	7.1
6/ 8	52	71	100	223	5.4	61	47	84	192	5.2	97	13	64	174	5.4
3/ 5	55	23	50	128	3.3	56	12	35	103	3.1	51	1	12	64	3.2
0/ 2	82	15	40	137	0.7	68	6	21	95	0.7	35	0	4	39	0.8
-3/ -1	39	1	8	48	-2.4	21	0	3	24	-2.4	5		0	5	-2.5
-6/ -4	11	0	1	12	-5.1	5	0	1	6	-5	1			1	-4.8
-9/ -7	5		0	5	-7.9	2	0	0	2	-7.4					
-12/-10	0			0	-11.3	0	0		0	-10.5					

Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure 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.

Dry-Bulb Temperature Hours For An Average Year

	April					May					June				
Temperature Range (°C)	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**
45/ 47												0		0	19.5
42/ 44												0	0	0	18.6
39/ 41							0		0	17.9		4	1	5	18.2
36/ 38		1		1	16.4		9	1	10	16.7		41	8	49	17.4
33/ 35		2	0	2	15.3		21	5	26	16	0	48	15	63	16.8
30/ 32		20	3	23	14.5	0	63	17	80	15.2	1	79	36	116	16.3
27/ 29	0	30	9	39	13.6	2	53	25	80	14.5	4	41	36	81	15.8
24/ 26	0	33	12	45	12.7	5	38	28	71	14	12	16	34	62	15.5
21/ 23	4	61	32	97	11.9	20	44	55	119	13.1	47	9	65	121	15
18/ 20	9	36	30	75	11.1	28	12	40	80	12.4	58	1	30	89	14.4
15/ 17	34	42	60	136	10.1	80	6	54	140	11.5	92	0	14	106	13.2
12/ 14	49	11	48	108	8.9	64	1	19	84	9.9	20		1	21	10.6
9/ 11	53	3	28	84	7.7	30	0	5	35	8.3	4			4	8.5
6/ 8	66	1	16	83	5.8	16		1	17	6.3	1			1	6.8
3/ 5	17		2	19	3.5	2			2	3.9	0			0	4.5
0/ 2	6		0	6	1.2	0			0	1.3					
-3/ -1	1		0	1	-2.3										
-6/ -4	0		0	0	-5.2										
-9/ -7	0			0	-6.5										
-12/-10															

Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure 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.

Dry-Bulb Temperature Hours For An Average Year

	July					August					September				
Temperature Range (°C)	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**
45/ 47		0	0	0	19.5		0		0	20.5					
42/ 44		5	1	6	19.1		2	0	2	20.1		0		0	22
39/ 41		13	3	16	19		11	2	13	19.7		2	0	2	19.2
36/ 38		79	16	95	18.4		74	14	88	18.8		24	3	27	18
33/ 35	0	56	24	80	18.3	0	57	21	78	18.6		42	8	50	17.4
30/ 32	1	59	44	104	18.1	1	59	44	104	18.6	0	82	27	109	17.1
27/ 29	6	28	43	77	17.7	4	32	44	80	18.4	1	47	35	83	16.8
24/ 26	24	7	43	74	17.7	20	10	49	79	18.3	6	24	38	68	16.4
21/ 23	96	1	64	161	17.3	101	2	68	171	18	39	19	80	138	16.2
18/ 20	87	0	8	95	16.5	83	0	6	89	16.9	61	1	35	97	15.3
15/ 17	31	0	1	32	14.2	36	0	0	36	14.3	92	0	14	106	13.3
12/ 14	2		0	2	10.3	3			3	11.5	31		1	32	10.3
9/ 11	0			0	8.8	0			0	9.5	9		0	9	8.3
6/ 8											2			2	5.7
3/ 5											0			0	1.5
0/ 2															
-3/ -1															
-6/ -4															
-9/ -7															
-12/-10															

Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure 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.

Dry-Bulb Temperature Hours For An Average Year

	October					November					December				
Temperature Range (°C)	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**
45/ 47															
42/ 44															
39/ 41															
36/ 38		1		1	17.5										
33/ 35		6	0	6	16.5										
30/ 32		39	4	43	15.9		0		0	15.6					
27/ 29	0	57	11	68	15.3		5	0	5	14.2					
24/ 26	0	49	20	69	14.9		11	1	12	13.6		0		0	11.6
21/ 23	7	60	54	121	14.1		50	5	55	12.5		4	0	4	11.4
18/ 20	18	20	48	86	13.3	0	42	12	54	11.7		9	0	9	11.3
15/ 17	71	14	72	157	12	7	70	48	125	10.7	0	54	5	59	10
12/ 14	69	2	28	99	9.9	30	35	61	126	9.4	3	64	25	92	8.7
9/ 11	42	0	8	50	8	43	16	50	109	7.7	14	46	48	108	7.7
6/ 8	34	0	3	37	5.7	78	9	45	132	5.2	64	51	94	209	5.6
3/ 5	5		0	5	2.6	38	1	11	50	2.5	52	13	39	104	3.2
0/ 2	1			1	1	31	1	6	38	0.2	73	7	31	111	0.4
-3/ -1						8	0	2	10	-3.1	33	0	4	37	-2.7
-6/ -4						3	0	0	3	-5.9	7		1	8	-5.4
-9/ -7						1		0	1	-8.1	2		0	2	-7.9
-12/-10															

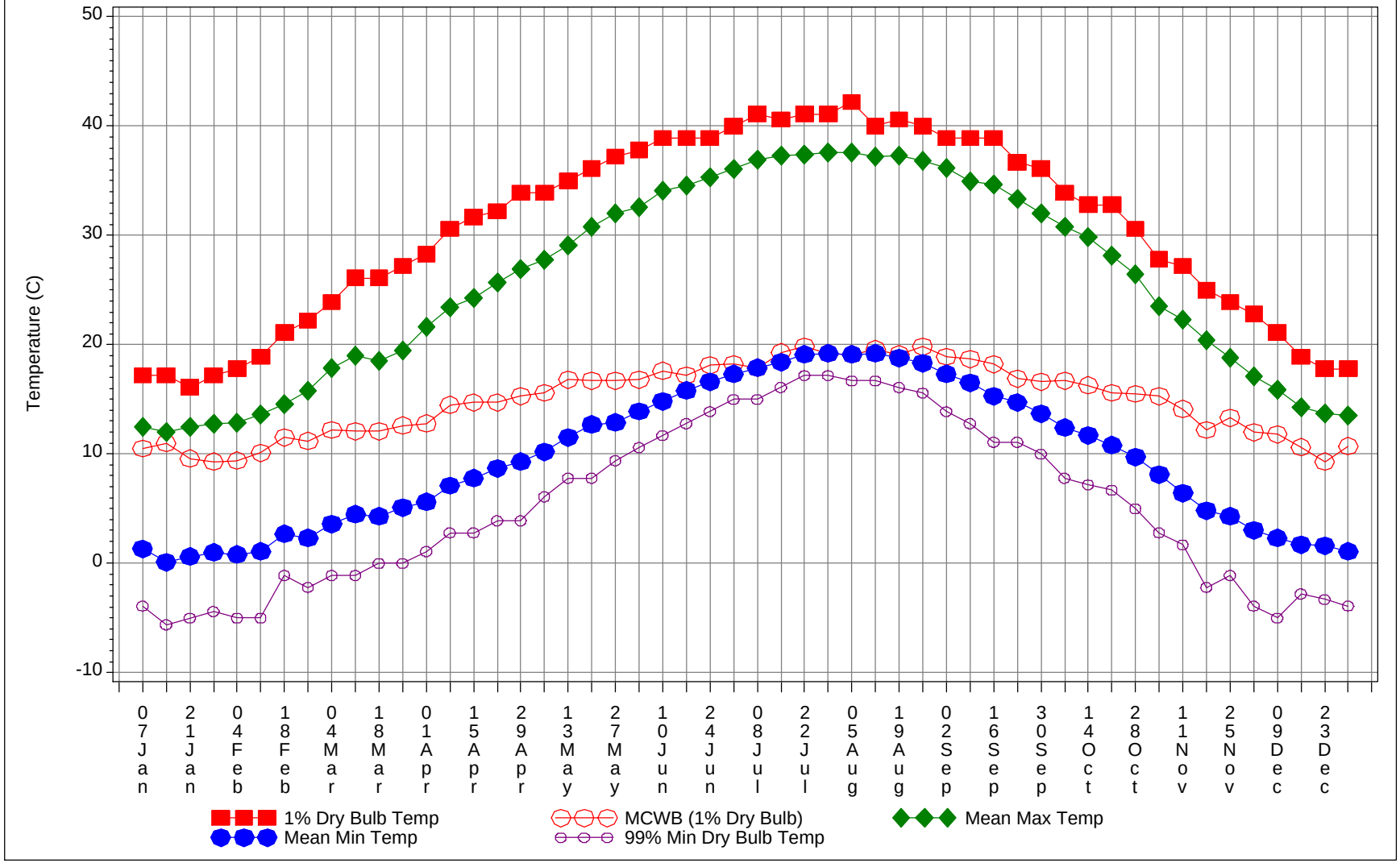
Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

Dry-Bulb Temperature Hours For An Average Year

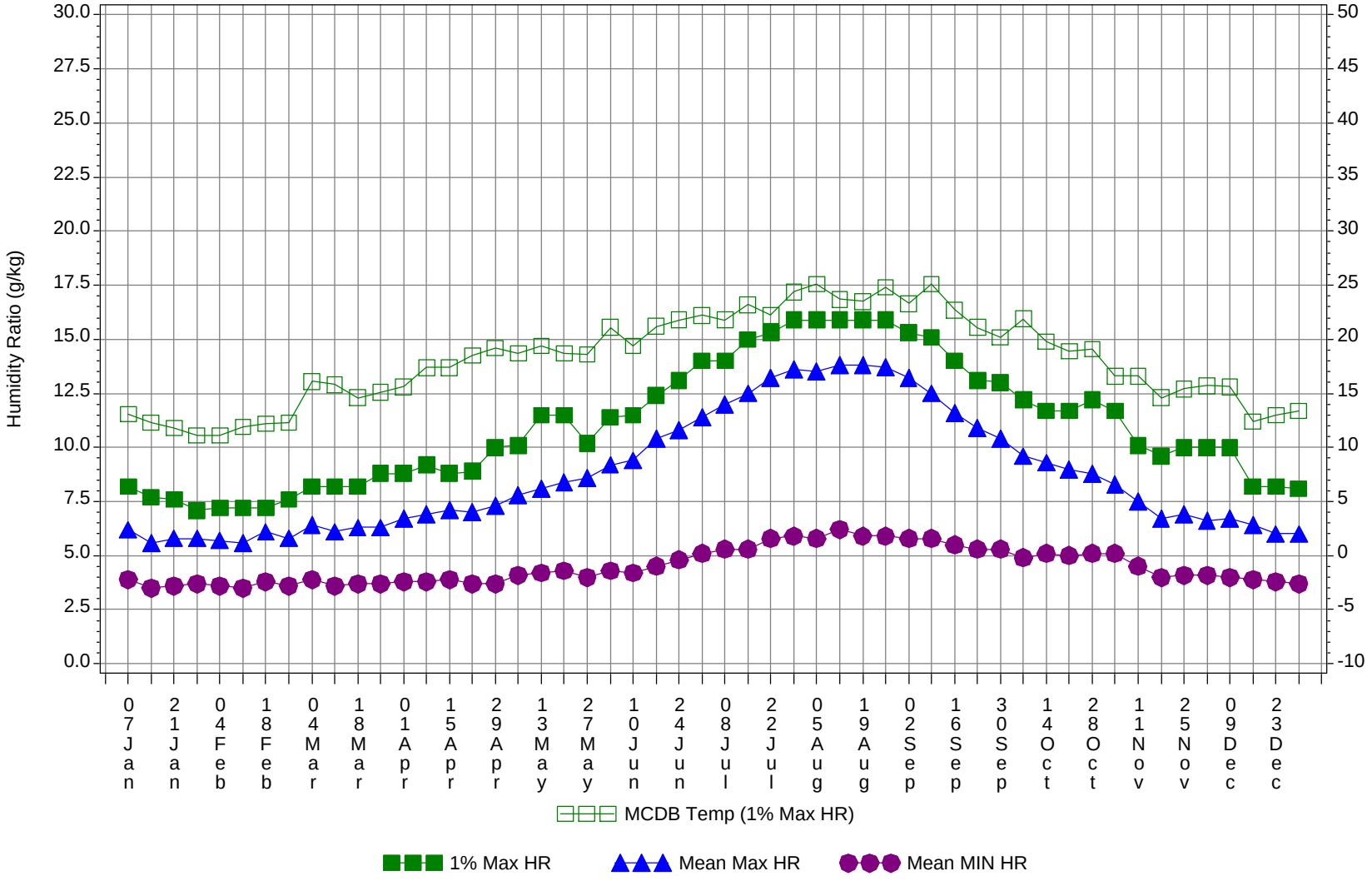
	Annual				
Temperature Range (°C)	**01 To 08 LST**	**09 To 16 LST**	**17 to 00 LST**	**Total Obs**	**MCWB (°C)**
45/ 47		0	0	0	19.7
42/ 44		7	1	8	19.4
39/ 41		30	7	37	19.1
36/ 38		228	41	269	18.3
33/ 35	0	233	74	307	17.7
30/ 32	3	402	174	579	16.9
27/ 29	18	297	204	519	16.2
24/ 26	68	199	227	494	15.7
21/ 23	314	291	433	1038	15.1
18/ 20	345	168	224	737	13.8
15/ 17	449	336	322	1107	11.3
12/ 14	290	272	272	834	9
9/ 11	243	180	263	686	7.5
6/ 8	470	192	406	1068	5.5
3/ 5	276	52	149	477	3.1
0/ 2	297	29	103	429	0.6
-3/ -1	107	2	17	126	-2.5
-6/ -4	28	0	3	31	-5.3
-9/ -7	10	0	0	10	-7.8
-12/-10	1	0		1	-11

Caution: This summary reflects the typical distribtion of temperature in a typical year. It does not reflect the typical mositure 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.

Annual Summary of Temperatures



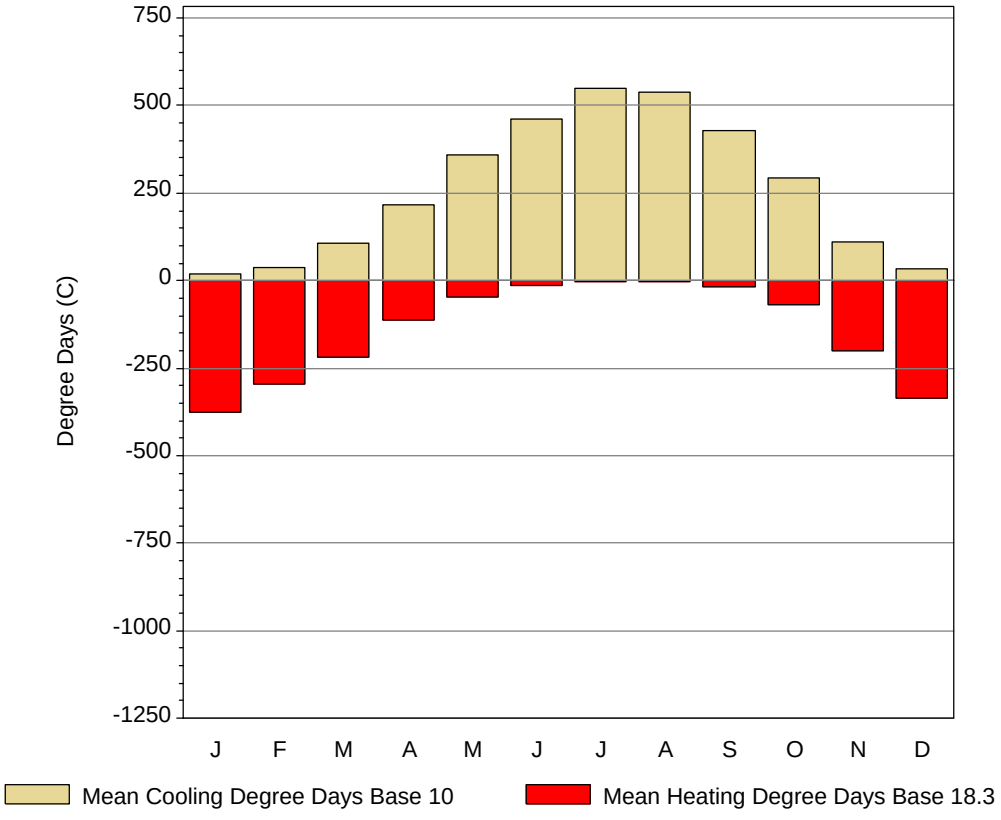
Long Term Humidity and Dry Bulb Temperature Summary



Long Term Humidity and Dry Bulb Temperature Summary

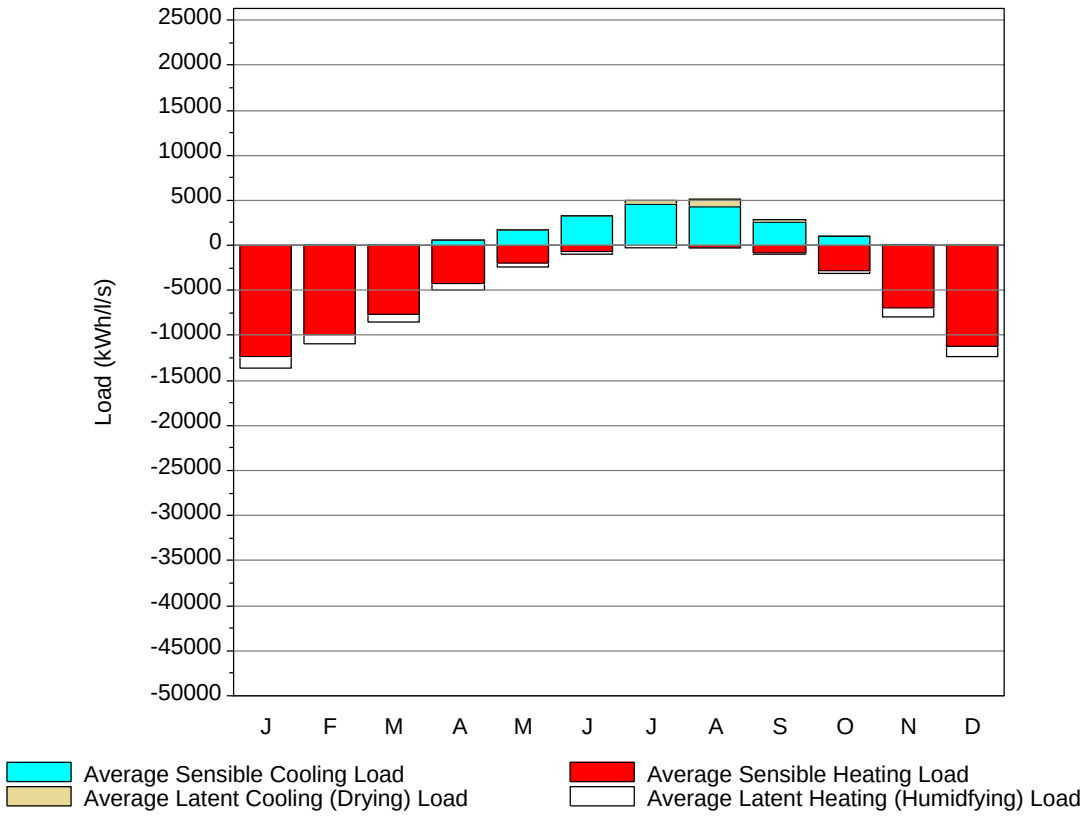
Week Ending	1.0% Temp (°C)	MCWB@ 1% Temp (°C)	Mean Max Temp (°C)	Mean Min Temp (°C)	99% Temp (°C)	1.0% HR (g/kg)	MCDB@ 1% HR (°C)	Mean Max HR (g/kg)	Mean Min HR (g/kg)
7-Jan	17.2	10.5	12.5	1.3	-3.9	8.2	13.1	6.2	3.9
14-Jan	17.2	11	12	0.1	-5.6	7.7	12.3	5.6	3.5
21-Jan	16.1	9.6	12.5	0.6	-5	7.6	11.8	5.8	3.6
28-Jan	17.2	9.3	12.8	1	-4.4	7.1	11.1	5.8	3.7
4-Feb	17.8	9.4	12.9	0.8	-5	7.2	11.1	5.7	3.6
11-Feb	18.9	10.1	13.6	1.1	-5	7.2	11.9	5.6	3.5
18-Feb	21.1	11.5	14.6	2.7	-1.1	7.2	12.2	6.1	3.8
25-Feb	22.2	11.2	15.8	2.3	-2.2	7.6	12.3	5.8	3.6
4-Mar	23.9	12.2	17.9	3.6	-1.1	8.2	16.1	6.4	3.9
11-Mar	26.1	12.1	19	4.5	-1.1	8.2	15.8	6.1	3.6
18-Mar	26.1	12.1	18.5	4.3	0	8.2	14.6	6.3	3.7
25-Mar	27.2	12.6	19.5	5.1	0	8.8	15.1	6.3	3.7
1-Apr	28.3	12.8	21.6	5.6	1.1	8.8	15.6	6.7	3.8
8-Apr	30.6	14.5	23.4	7.1	2.8	9.2	17.4	6.9	3.8
15-Apr	31.7	14.7	24.3	7.8	2.8	8.8	17.4	7.1	3.9
22-Apr	32.2	14.7	25.7	8.7	3.9	8.9	18.5	7	3.7
29-Apr	33.9	15.3	26.9	9.3	3.9	10	19.2	7.3	3.7
6-May	33.9	15.6	27.8	10.2	6.1	10.1	18.7	7.8	4.1
13-May	35	16.8	29.1	11.5	7.8	11.5	19.4	8.1	4.2
20-May	36.1	16.7	30.8	12.7	7.8	11.5	18.7	8.4	4.3
27-May	37.2	16.7	32	12.9	9.4	10.2	18.6	8.6	4
4-Jun	37.8	16.8	32.6	13.9	10.6	11.4	21.1	9.2	4.3
10-Jun	38.9	17.6	34.1	14.8	11.7	11.5	19.4	9.4	4.2
17-Jun	38.9	17.2	34.6	15.8	12.8	12.4	21.2	10.4	4.5
24-Jun	38.9	18.1	35.3	16.6	13.9	13.1	21.8	10.8	4.8
1-Jul	40	18.2	36.1	17.3	15	14	22.2	11.4	5.1
8-Jul	41.1	17.9	36.9	17.9	15	14	21.8	12	5.3
15-Jul	40.6	19.3	37.3	18.4	16.1	15	23.2	12.5	5.3
22-Jul	41.1	19.8	37.4	19.1	17.2	15.3	22.2	13.2	5.8
29-Jul	41.1	19.2	37.6	19.2	17.2	15.9	24.4	13.6	5.9
5-Aug	42.2	19.1	37.6	19.1	16.7	15.9	25.1	13.5	5.8
12-Aug	40	19.6	37.2	19.2	16.7	15.9	23.7	13.8	6.2
19-Aug	40.6	19.1	37.3	18.8	16.1	15.9	23.5	13.8	5.9
26-Aug	40	19.8	36.8	18.3	15.6	15.9	24.8	13.7	5.9
2-Sep	38.9	18.9	36.2	17.3	13.9	15.3	23.3	13.2	5.8
9-Sep	38.9	18.7	34.9	16.5	12.8	15.1	25.1	12.5	5.8
16-Sep	38.9	18.2	34.7	15.3	11.1	14	22.7	11.6	5.5
23-Sep	36.7	16.9	33.3	14.7	11.1	13.1	21.1	10.9	5.3
30-Sep	36.1	16.6	32	13.7	10	13	20.2	10.4	5.3
7-Oct	33.9	16.7	30.8	12.4	7.8	12.2	21.9	9.6	4.9
14-Oct	32.8	16.3	29.8	11.7	7.2	11.7	19.8	9.3	5.1
21-Oct	32.8	15.6	28.1	10.8	6.7	11.7	18.9	9	5
28-Oct	30.6	15.5	26.4	9.7	5	12.2	19.1	8.8	5.1
4-Nov	27.8	15.3	23.5	8.1	2.8	11.7	16.6	8.3	5.1
11-Nov	27.2	14.1	22.3	6.4	1.7	10.1	16.6	7.5	4.5
18-Nov	25	12.2	20.4	4.8	-2.2	9.6	14.6	6.7	4
25-Nov	23.9	13.3	18.8	4.3	-1.1	10	15.4	6.9	4.1
2-Dec	22.8	12	17.1	3	-3.9	10	15.7	6.6	4.1
9-Dec	21.1	11.8	15.9	2.3	-5	10	15.6	6.7	4
16-Dec	18.9	10.6	14.3	1.7	-2.8	8.2	12.4	6.4	3.9
23-Dec	17.8	9.3	13.7	1.6	-3.3	8.2	13	6	3.8
31-Dec	17.8	10.7	13.5	1.1	-3.9	8.1	13.4	6	3.7

Degree Days, Heating and Cooling
(Base 18.3 C) & Cooling (Base 10 C)



Month	Mean Cooling Degree Days (°C) Base 10	Mean Cooling Degree Days (°C) Base 18.3	Mean Heating Degree Days (°C) Base 18.3
JAN	18	0	377
FEB	37	2	295
MAR	106	16	217
APR	215	64	114
MAY	359	147	48
JUN	463	226	13
JUL	548	292	2
AUG	538	282	3
SEP	430	197	17
OCT	294	100	69
NOV	112	17	199
DEC	34	1	334
ANN	3154	1344	1688

Average Ventilation and Infiltration Loads
(Outside Air vs 24C, 60% RH summer; 20C, 30% RH winter)



Month	Average Sensible Cooling Load (kWh/l/s)	Average Sensible Heating Load (kWh/l/s)	Average Latent Cooling Load (kWh/l/s)	Average Latent Heating Load (kWh/l/s)
JAN	0	-12405	0	-1217
FEB	2	-9889	0	-1094
MAR	63	-7595	0	-982
APR	523	-4223	1	-698
MAY	1753	-2003	2	-410
JUN	3291	-692	47	-222
JUL	4496	-179	554	-86
AUG	4222	-208	948	-33
SEP	2634	-865	215	-106
OCT	944	-2765	30	-304
NOV	48	-7010	2	-957
DEC	0	-11153	1	-1198
ANN	17976	-58987	1801	-7306

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

Station Information		Shading Geometry in Dimensionless Units	
City, State, WBAN	N/A	N/A	N/A
Lat, Lon, Elev	N/A	N/A	N/A
Press Stn Type	N/A	N/A	N/A

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													
	Std.Dev.													
	Minimum													
	Maximum													
	Diffuse													
Clear Day	Global													
NORTH	Global													
	Diffuse													
Clear Day	Global													
EAST	Global													
	Diffuse													
Clear Day	Global													
SOUTH	Global													
	Diffuse													
Clear Day	Global													
WEST	Global													
	Diffuse													
Clear Day	Global													

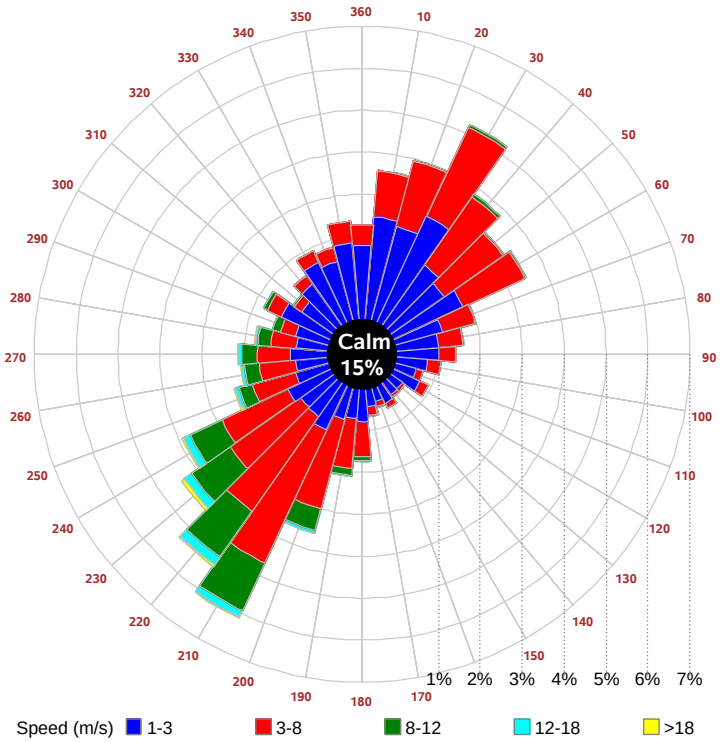
Average Annual Solar Radiation - Nearest Available Site
Source: National Renewable Energy Laboratory, Golden CO, 1995

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													
NORTH	Unshaded													
	Shaded													
EAST	Unshaded													
	Shaded													
SOUTH	Unshaded													
	Shaded													
WEST	Unshaded													
	Shaded													

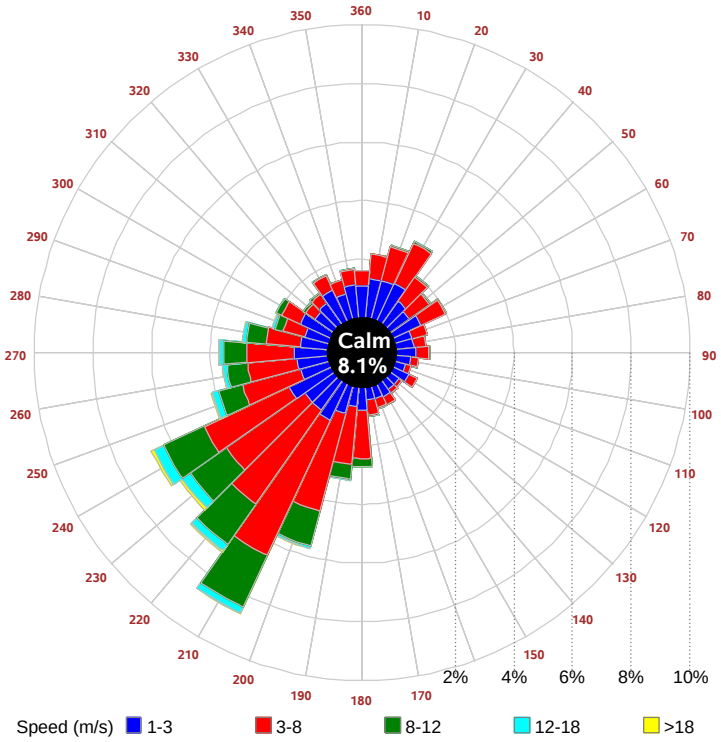
AVERAGE INCIDENT ILLUMINENCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9											
				March					June		
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear										
	M.Cloudy										
NORTH	M.Clear										
	M.Cloudy										
EAST	M.Clear										
	M.Cloudy										
SOUTH	M.Clear										
	M.Cloudy										
WEST	M.Clear										
	M.Cloudy										
M.Clear	(% hrs)										

				Sept					Dec		
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear										
	M.Cloudy										
NORTH	M.Clear										
	M.Cloudy										
EAST	M.Clear										
	M.Cloudy										
SOUTH	M.Clear										
	M.Cloudy										
WEST	M.Clear										
	M.Cloudy										
M.Clear	(% hrs)										

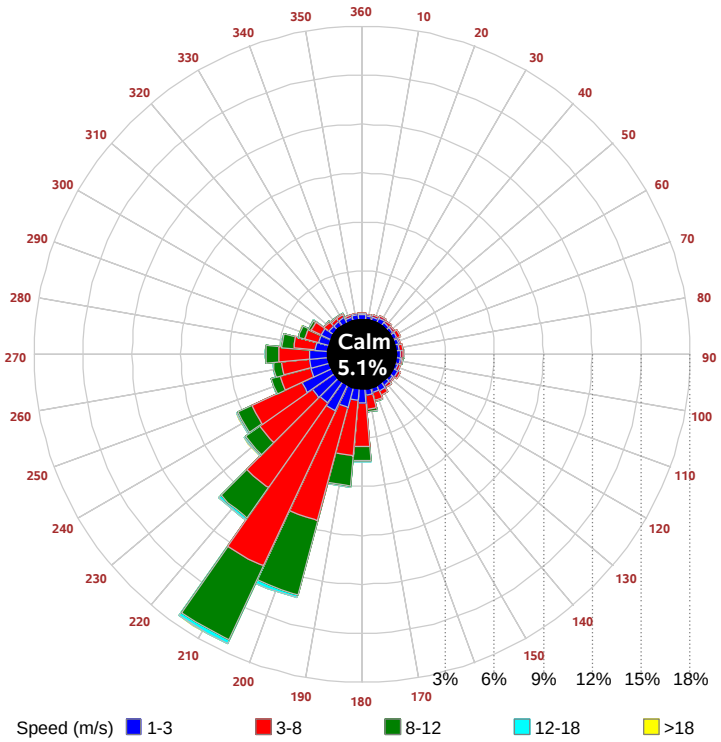
Wind Summary - December, January, and February



Wind Summary - March, April, and May



Wind Summary - June, July, and August



Wind Summary - September, October, and November