

WHEELING/OHIO WV

Latitude = 40.18 N

Longitude = 80.65 W

Period of Record = 1973 to 1996

WMO No. 724275

Elevation = 1198 feet

Average Pressure = 28.75 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	93	75	107	7.3	W
0.4% Occurrence	90	74	108	7.3	SW
1.0% Occurrence	88	73	103	7.2	SW
2.0% Occurrence	85	71	99	7.0	SW
Mean Daily Range	16	-	-	-	-
97.5% Occurrence	13	11	7	8.5	W
99.0% Occurrence	7	6	5	8.2	WSW
99.6% Occurrence	1	0	4	8.5	WSW
Median of Extreme Lows	-2	-3	3	8.0	WSW
	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	79	88	139	6.7	SSW
0.4% Occurrence	77	86	128	7.3	SW
1.0% Occurrence	75	84	121	7.2	SW
2.0% Occurrence	74	82	117	7.0	SW
	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	141	86	0.90	5.7	SSW
0.4% Occurrence	132	82	0.85	6.7	SW
1.0% Occurrence	127	81	0.82	5.8	SSW
2.0% Occurrence	120	79	0.77	6.7	SSW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		8	578	264	1110

Other Site Data

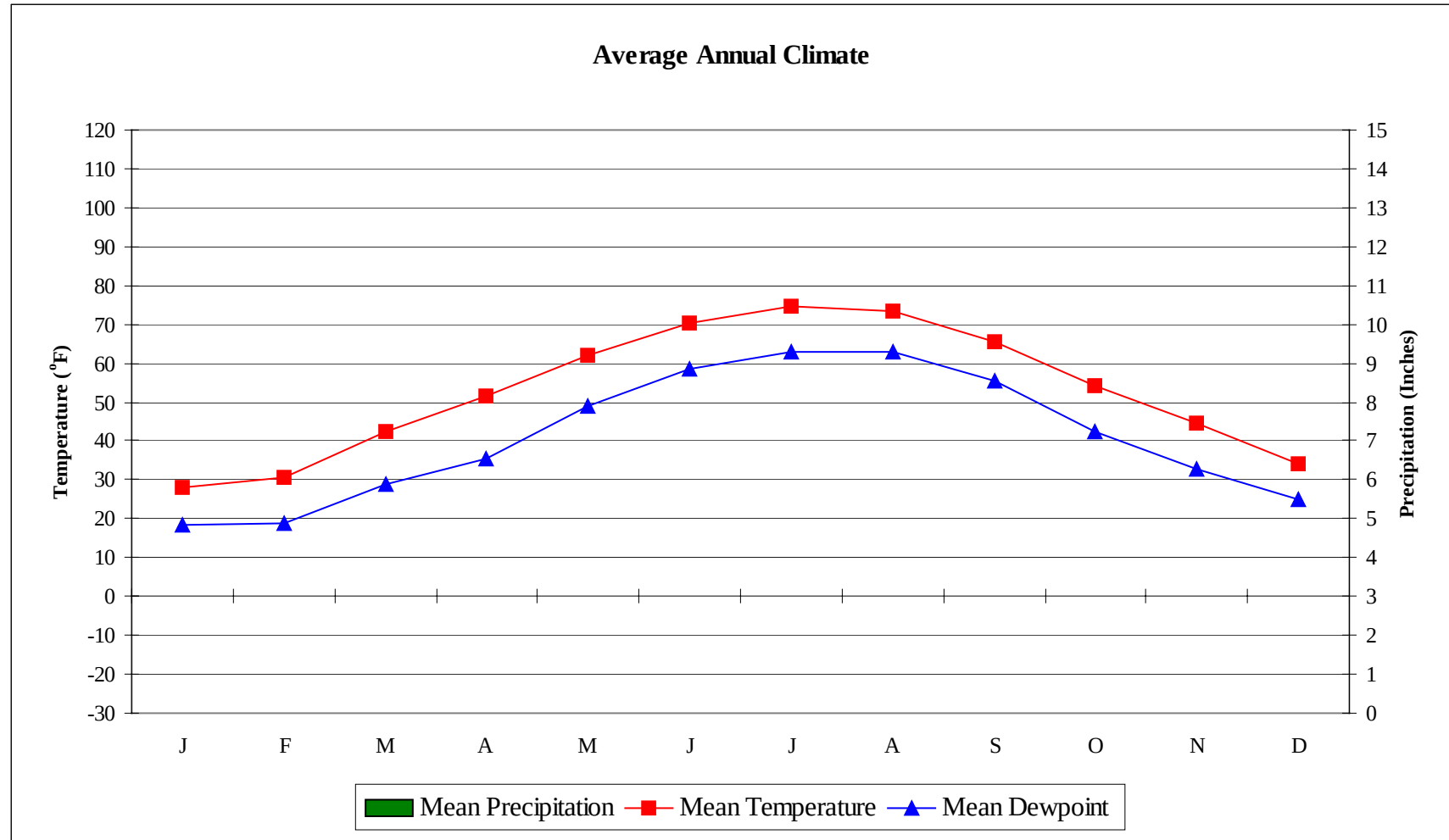
Weather Region	Rain Rate 100 Year Recurrence (in./hr)	Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)	Ventilation Cooling Load Index (Ton-hr/cfm/yr) Base 75°F-RH 60% Latent + Sensible
7	2.7	90	1.2 + 0.5
Ground Water Temperature (°F) 50 Foot Depth *	Frost Depth 50 Year Recurrence (in.)	Ground Snow Load 50 Year Recurrence (lb/ft ²)	Average Annual Freeze-Thaw Cycles (#)
55.6	N/A	N/A	41

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

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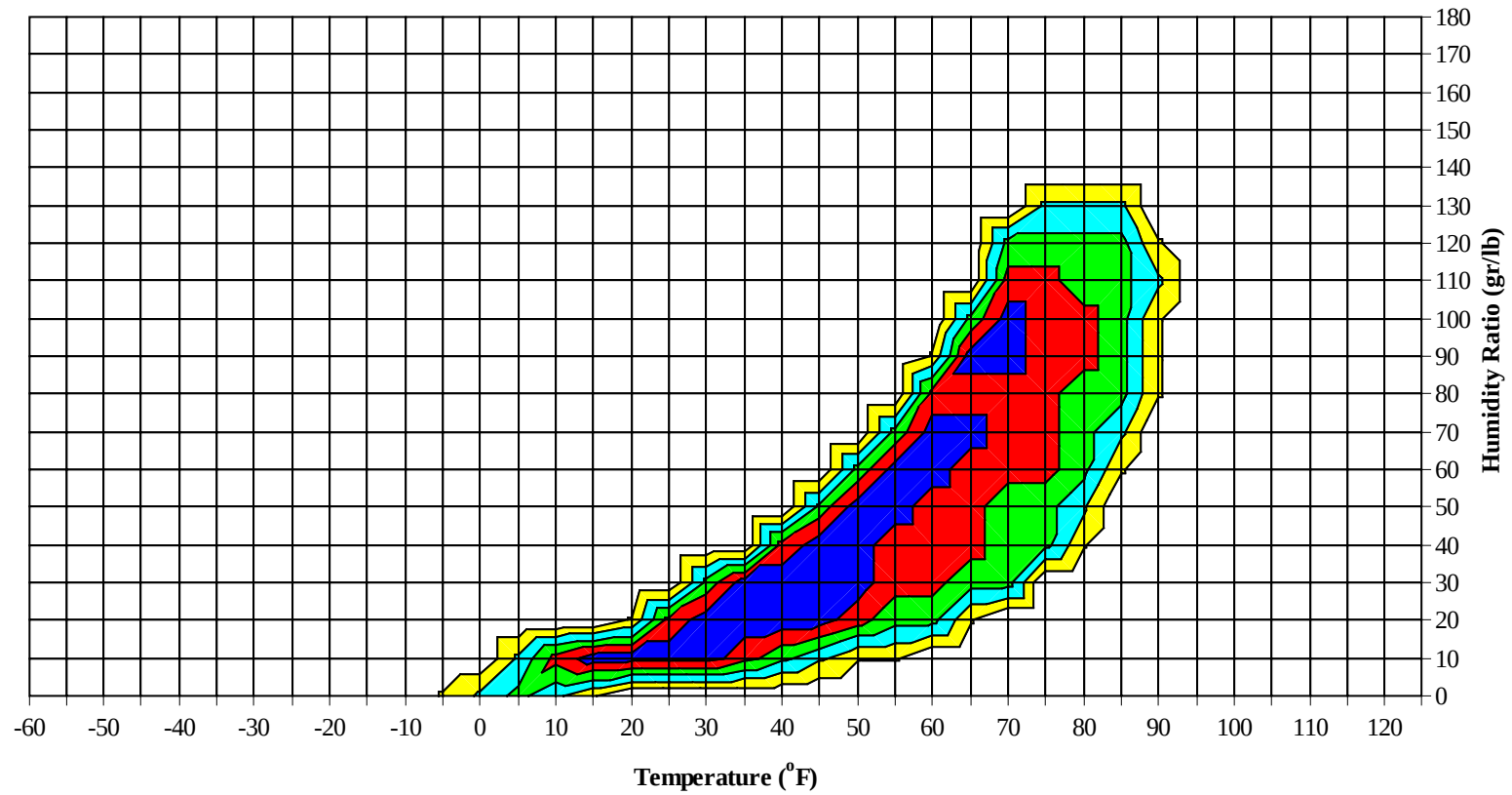
No Precipitation Data Available

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Long Term Psychrometric Summary



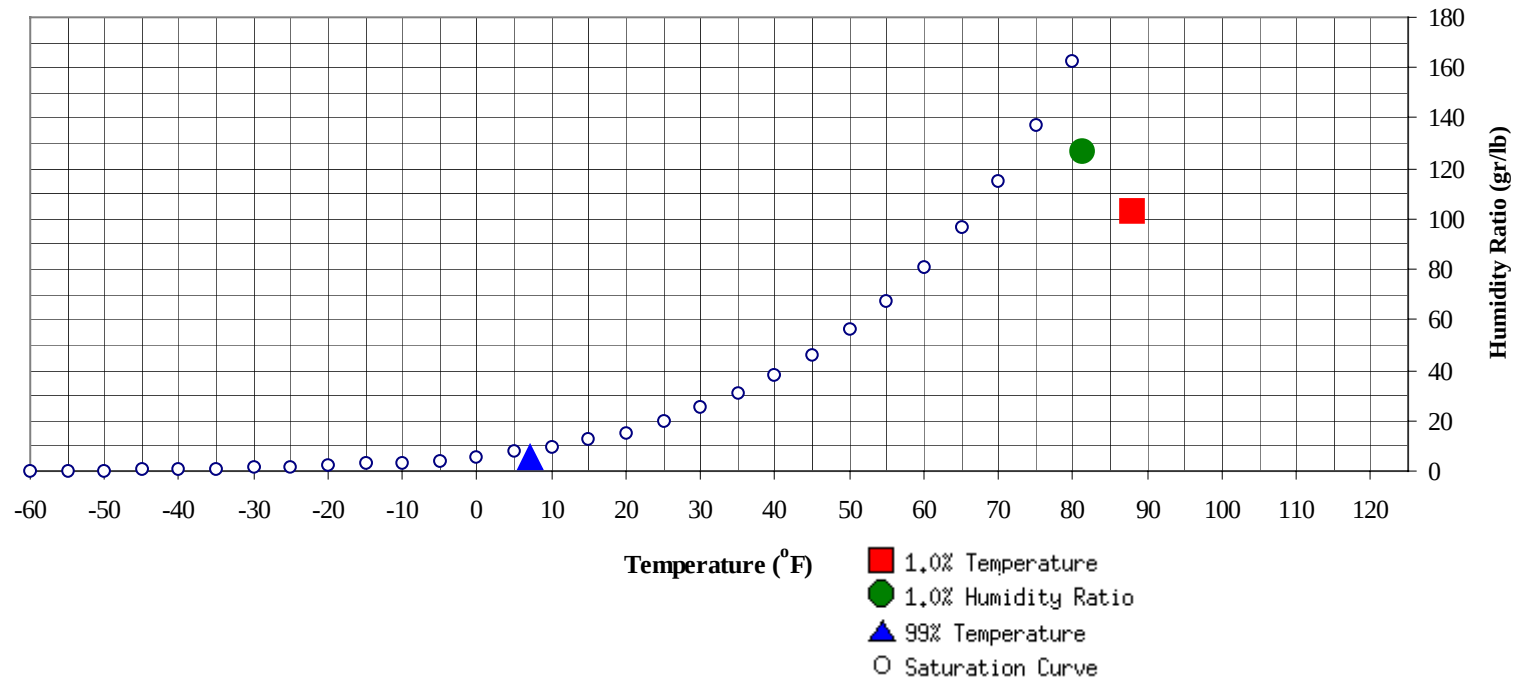
- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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Psychrometric Summary of Peak Design Values



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)
	7	5.5	2.5		126.7	81.1	75.1	72.9	39.3

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	88	103.3	73	37.4

WHEELING/OHIO WV

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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		
95 / 99															
90 / 94															
85 / 89															
80 / 84												1	0	1	61.6
75 / 79												3	1	4	60.9
70 / 74		0		0								8	6	13	56.8
65 / 69		1	0	1	57.8	0	2	0	2	52.4	5	11	9	24	54.3
60 / 64	2	2	1	5	53.1	2	5	4	10	51.3	6	12	15	34	52.2
55 / 59	5	6	4	15	48.7	3	8	8	18	48.5	14	21	24	58	49.0
50 / 54	5	9	7	20	45.3	8	12	10	31	44.6	20	29	27	76	45.1
45 / 49	6	13	13	32	41.8	11	18	16	45	40.6	25	31	30	86	40.7
40 / 44	12	20	20	52	37.0	14	20	24	58	37.2	33	35	34	102	36.6
35 / 39	23	36	31	90	33.0	23	29	25	76	32.7	31	32	34	97	32.4
30 / 34	39	42	43	124	29.0	29	38	37	104	28.6	42	32	37	110	28.3
25 / 29	38	37	41	115	24.3	29	29	33	92	23.8	37	19	17	74	24.2
20 / 24	30	29	30	89	19.7	29	26	24	79	19.3	17	8	9	34	19.4
15 / 19	26	23	22	71	15.0	23	16	20	59	14.9	11	5	5	20	15.6
10 / 14	26	15	17	57	10.5	18	11	12	42	10.3	5	2	1	7	10.5
5 / 9	18	7	11	36	5.9	18	7	8	33	6.0	2	0	0	2	6.4
0 / 4	12	5	5	21	1.1	11	2	3	16	1.4	2		0	2	2.0
-5 / -1	5	2	2	8	-3.4	6	1	0	7	-2.5					
-10 / -6	3	2	1	6	-7.0	2	0		2	-6.6					
-15 / -11	2	1	1	3	-12.3	0			0	-10.3					
-20 / -16	0	0	0	0	-16.8										
-25 / -21	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.

WHEELING/OHIO WV

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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		
95 / 99															
90 / 94		0		0			1	0	1	68.0		4	2	6	74.4
85 / 89		1	0	1	62.6		7	3	10	68.8		19	9	28	71.6
80 / 84		5	3	8	62.1		20	14	33	67.0	0	45	28	73	69.5
75 / 79	0	9	8	17	60.6	0	29	22	51	64.1	4	56	47	108	66.7
70 / 74	1	19	15	36	58.0	8	38	34	81	61.4	38	55	59	151	64.4
65 / 69	10	21	20	51	54.9	29	42	46	117	58.7	63	36	47	146	62.1
60 / 64	17	29	26	72	52.0	43	41	42	126	55.6	55	17	27	98	57.9
55 / 59	24	33	31	88	48.4	43	30	34	108	51.5	39	7	12	58	53.6
50 / 54	25	33	36	95	44.4	45	24	27	96	47.7	25	2	6	34	49.5
45 / 49	35	33	32	101	41.0	38	14	19	70	43.6	10	0	2	12	45.3
40 / 44	38	28	31	97	37.2	28	3	6	37	39.6	6		0	6	41.7
35 / 39	39	18	22	79	33.1	10	0	1	11	35.2	0			0	38.0
30 / 34	29	7	10	46	29.1	4	0		4	31.3					
25 / 29	15	3	4	22	24.5	0			0	24.3					
20 / 24	6	1	0	6	19.8										
15 / 19	1		0	1	14.9										
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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WHEELING/OHIO WV

WMO No. 724275

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		
95 / 99		2	1	3	71.1		1	0	1	76.1					
90 / 94		12	5	17	75.2		8	2	10	75.0		2	0	2	72.7
85 / 89		35	21	55	73.0		28	13	41	73.0		8	2	10	71.9
80 / 84	3	63	45	111	70.4	0	60	39	99	70.7		23	10	33	69.4
75 / 79	17	65	61	143	68.3	11	61	59	132	68.5	1	39	26	67	66.7
70 / 74	70	48	66	183	66.5	68	52	71	191	66.6	23	50	48	120	64.5
65 / 69	76	19	35	130	62.9	81	27	44	151	63.5	42	45	52	140	61.4
60 / 64	52	5	12	70	58.7	50	9	15	73	59.4	42	38	48	128	57.1
55 / 59	23	0	2	25	54.7	26	1	4	31	54.8	49	25	30	104	53.2
50 / 54	5	0	0	5	50.5	10		1	11	50.5	41	10	18	68	49.4
45 / 49	1			1	46.6	3		0	3	46.5	27	2	5	34	45.2
40 / 44						0			0	42.6	10	0	1	11	40.8
35 / 39											4		0	4	36.6
30 / 34											0			0	32.0
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															
-25 / -21															

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WHEELING/OHIO WV

WMO No. 724275

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		
95 / 99															
90 / 94															
85 / 89															
80 / 84		2	0	2	65.7		0		0	61.0					
75 / 79		11	3	14	63.8		2	0	2	62.2		0		0	64.0
70 / 74	1	24	12	37	60.8	0	7	3	10	59.6		0		0	61.0
65 / 69	6	33	25	63	57.7	3	15	9	28	56.4	0	2	1	3	57.0
60 / 64	23	40	39	102	54.8	15	20	21	55	53.9	3	5	3	11	54.0
55 / 59	28	40	42	111	50.7	21	23	21	65	50.0	6	11	11	28	51.6
50 / 54	38	40	43	121	46.9	15	26	29	70	45.3	11	16	13	40	46.3
45 / 49	47	31	38	116	42.7	24	33	29	86	41.3	9	25	18	52	41.6
40 / 44	40	20	27	86	38.8	34	36	34	104	37.1	17	32	29	79	37.6
35 / 39	35	6	14	56	34.7	39	37	41	118	33.2	35	41	46	121	33.1
30 / 34	23	2	4	28	30.7	42	29	37	108	29.2	60	44	47	151	28.9
25 / 29	6	0	1	7	26.1	32	9	13	55	25.0	39	29	35	104	24.4
20 / 24	1		0	1	21.8	11	2	3	16	20.5	25	19	20	64	19.9
15 / 19						2	1	1	3	16.4	19	12	14	45	15.3
10 / 14						0	0	0	0	10.4	11	6	7	24	10.7
5 / 9						2	0	0	2	6.0	6	3	4	13	6.1
0 / 4											3	2	2	7	1.2
-5 / -1											2	0	0	2	-2.7
-10 / -6											0	0		0	-8.0
-15 / -11											0	0		0	-12.7
-20 / -16															
-25 / -21															

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WHEELING/OHIO WV

WMO No. 724275

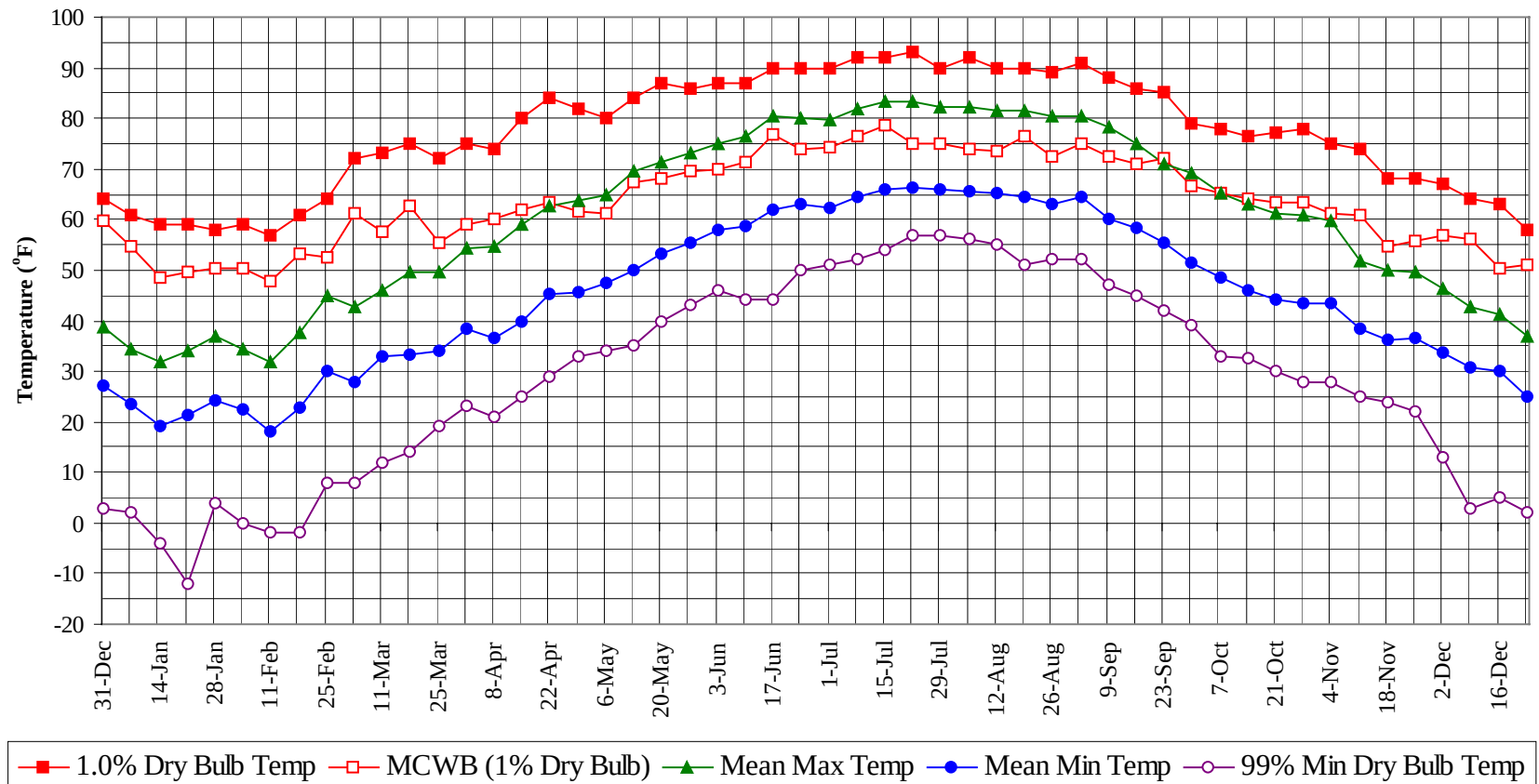
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1973 to 1996

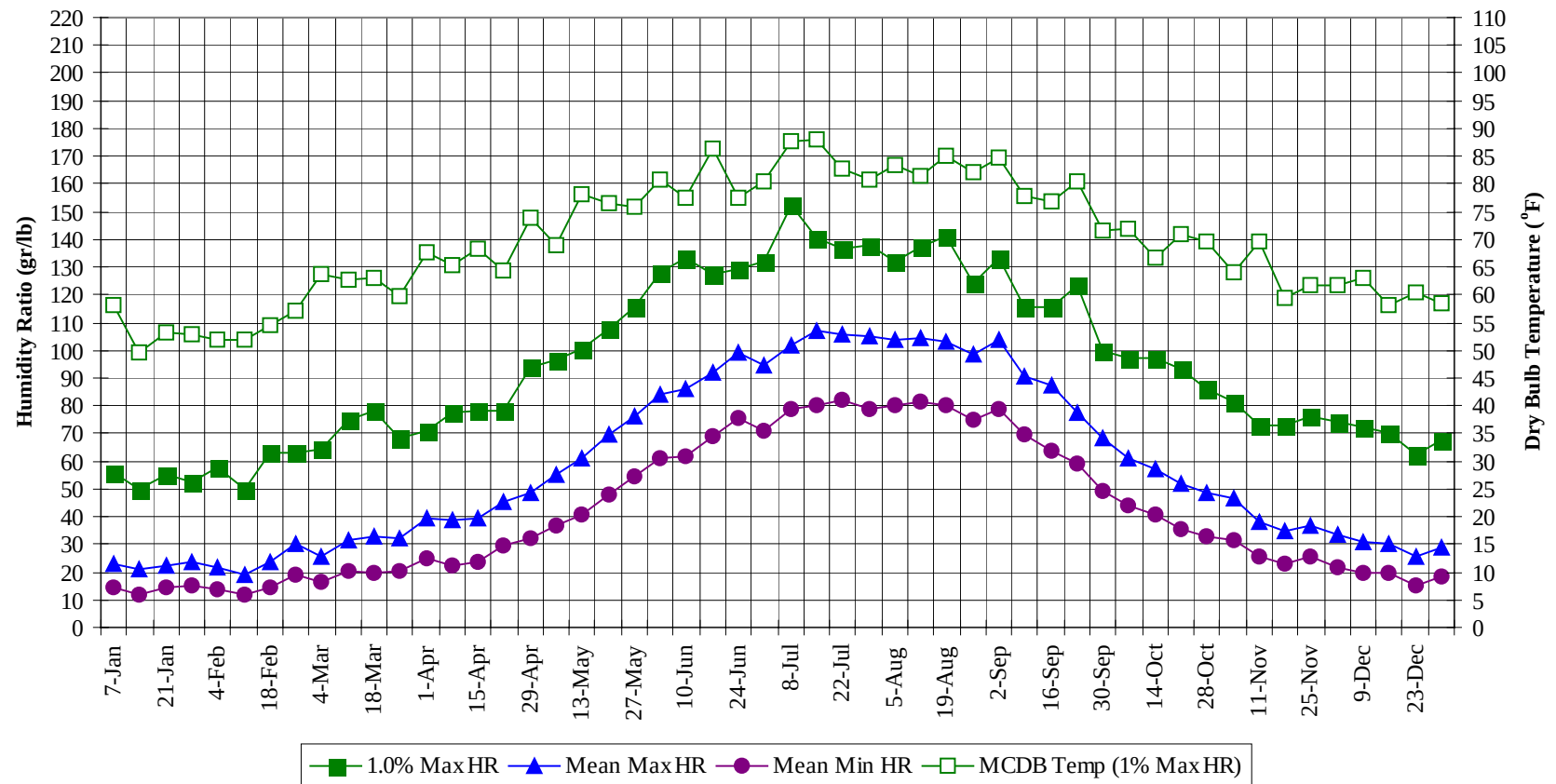
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
95 / 99		2	1	3	73.0
90 / 94		26	9	35	74.7
85 / 89		100	49	148	72.3
80 / 84	4	224	137	365	69.7
75 / 79	36	284	225	545	66.9
70 / 74	225	309	308	843	64.3
65 / 69	336	258	284	878	60.5
60 / 64	324	227	249	800	55.8
55 / 59	291	207	222	719	51.1
50 / 54	254	202	218	674	46.5
45 / 49	238	196	203	637	41.9
40 / 44	227	189	209	625	37.6
35 / 39	228	191	218	637	33.1
30 / 34	247	184	216	647	28.9
25 / 29	180	121	147	448	24.3
20 / 24	109	83	88	281	19.7
15 / 19	76	54	63	192	15.1
10 / 14	57	33	39	128	10.5
5 / 9	44	17	24	84	6.0
0 / 4	26	8	9	44	1.3
-5 / -1	12	2	2	16	-3.0
-10 / -6	4	2	1	7	-7.0
-15 / -11	1	1	1	3	-12.0
-20 / -16	0	0	0	0	-16.8
-25 / -21	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.

Annual Summary of Temperatures



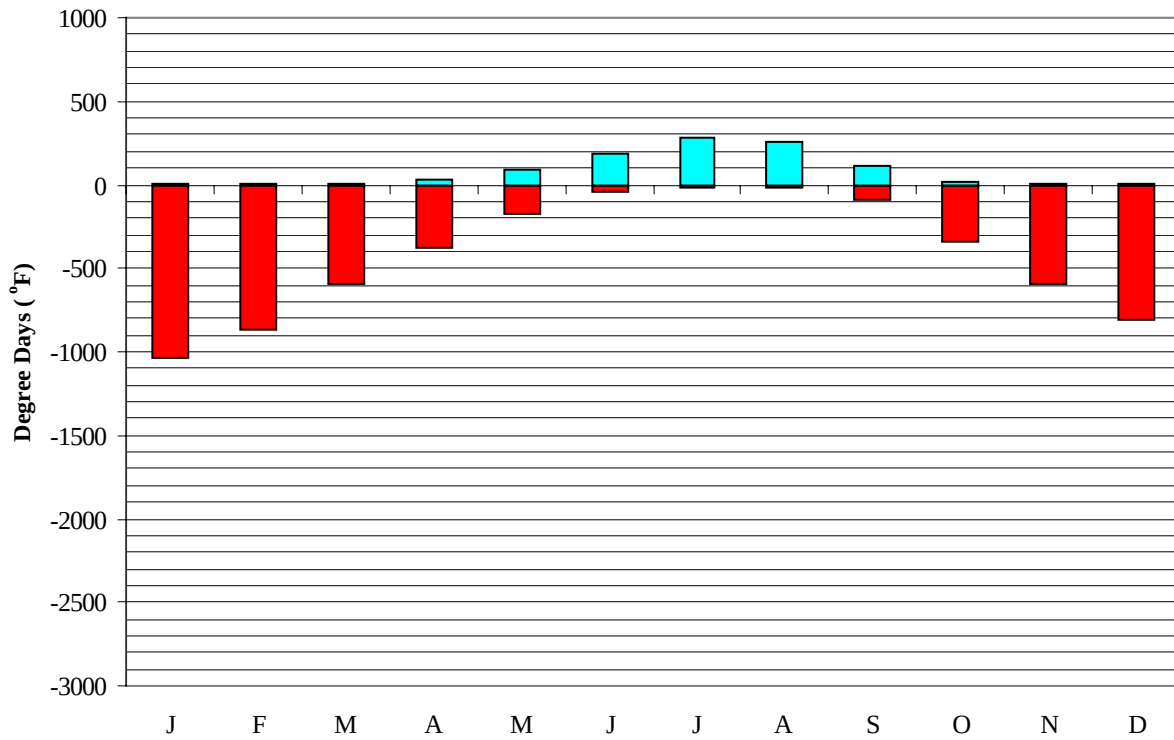
Long Term Humidity and Dry Bulb Temperature Summary



WHEELING/OHIO**WV****WMO No. 724275****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	61.0	54.8	34.2	23.4	2.0	56.0	58.2	23.0	14.3
14-Jan	59.0	48.5	31.9	19.2	-4.0	49.7	49.5	20.9	12.1
21-Jan	59.0	49.5	34.1	21.5	-12.0	55.3	53.2	22.5	14.2
28-Jan	58.0	50.2	36.7	24.3	4.0	52.5	52.7	23.8	14.9
4-Feb	59.0	50.5	34.5	22.3	0.0	58.1	52.0	21.8	13.7
11-Feb	57.0	47.6	31.9	18.2	-2.0	49.7	51.9	19.1	11.6
18-Feb	61.0	53.4	37.7	22.9	-2.0	63.0	54.5	23.5	14.4
25-Feb	64.0	52.6	44.9	30.0	8.0	63.0	57.1	30.4	19.0
4-Mar	72.0	61.1	42.6	27.7	8.0	64.4	63.6	25.6	16.6
11-Mar	73.0	57.7	46.0	32.8	12.0	74.9	62.6	31.4	20.3
18-Mar	75.0	62.7	49.5	33.5	14.0	78.4	62.9	32.7	19.6
25-Mar	72.0	55.4	49.5	34.0	19.0	68.6	59.8	31.9	20.3
1-Apr	75.0	59.0	54.2	38.4	23.0	70.7	67.6	39.2	24.8
8-Apr	74.0	60.0	54.5	36.6	21.0	77.7	65.5	38.9	22.6
15-Apr	80.0	62.0	58.9	39.7	25.0	78.4	68.2	39.4	23.9
22-Apr	84.0	63.4	62.6	45.1	29.0	78.4	64.4	45.4	29.9
29-Apr	82.0	61.6	63.6	45.6	33.0	93.8	74.0	48.4	32.2
6-May	80.0	61.2	64.9	47.5	34.0	96.6	69.1	55.1	36.8
13-May	84.0	67.3	69.4	50.0	35.0	100.8	78.2	60.8	40.5
20-May	87.0	68.0	71.3	53.3	40.0	107.8	76.5	69.8	48.2
27-May	86.0	69.5	73.3	55.3	43.0	115.5	75.8	76.3	54.6
3-Jun	87.0	70.0	75.1	58.0	46.0	128.1	80.8	84.0	61.2
10-Jun	87.0	71.5	76.5	58.7	44.0	133.0	77.4	86.2	61.8
17-Jun	90.0	76.8	80.4	61.8	44.0	127.4	86.4	91.8	68.8
24-Jun	90.0	73.9	79.9	63.2	50.0	129.5	77.4	99.0	75.3
1-Jul	90.0	74.3	79.8	62.3	51.0	132.3	80.6	94.8	70.8
8-Jul	92.0	76.4	81.7	64.6	52.0	152.6	87.5	101.8	78.9
15-Jul	92.0	78.5	83.3	66.0	54.0	140.7	87.9	107.2	80.1
22-Jul	93.0	74.9	83.5	66.4	57.0	136.5	82.8	105.5	82.0
29-Jul	90.0	75.2	82.1	66.1	57.0	137.9	80.8	105.4	79.1
5-Aug	92.0	73.9	82.4	65.6	56.0	132.3	83.4	103.6	80.1
12-Aug	90.0	73.6	81.5	65.1	55.0	137.2	81.4	104.4	81.5
19-Aug	90.0	76.6	81.5	64.6	51.0	141.4	85.0	102.9	79.8
26-Aug	89.0	72.6	80.5	63.0	52.0	123.9	82.2	98.7	75.0
2-Sep	91.0	75.1	80.6	64.4	52.0	133.0	84.8	103.6	78.8
9-Sep	88.0	72.5	78.1	60.3	47.0	115.5	78.0	90.7	69.6
16-Sep	86.0	71.1	75.1	58.3	45.0	115.5	76.8	87.1	63.5
23-Sep	85.0	71.9	71.1	55.5	42.0	123.2	80.5	77.8	59.0
30-Sep	79.0	66.7	69.1	51.3	39.0	100.1	71.7	68.4	49.2
7-Oct	78.0	65.2	65.3	48.5	33.0	97.3	71.9	61.2	44.0
14-Oct	76.5	64.2	63.1	46.2	32.5	97.3	66.6	57.3	40.8
21-Oct	77.0	63.5	61.3	44.1	30.0	93.1	71.0	51.7	35.2
28-Oct	78.0	63.3	60.8	43.5	28.0	86.1	69.8	48.4	33.0
4-Nov	75.0	61.2	59.8	43.4	28.0	81.2	64.1	46.5	31.4
11-Nov	74.0	60.8	51.7	38.2	25.0	72.8	69.6	38.2	25.6
18-Nov	68.0	54.8	50.0	36.3	24.0	72.8	59.6	35.0	23.0
25-Nov	68.0	55.9	49.6	36.7	22.0	76.3	61.7	37.1	25.5
2-Dec	67.0	57.0	46.3	33.6	13.0	74.2	61.8	33.7	21.4
9-Dec	64.0	56.2	42.5	30.6	3.0	72.1	63.0	30.6	19.9
16-Dec	63.0	50.2	41.4	30.1	5.0	70.0	58.1	29.9	19.9
23-Dec	58.0	51.1	36.7	25.0	2.0	62.3	60.4	25.4	15.2
31-Dec	64.0	59.6	38.8	27.1	3.0	67.9	58.3	29.2	18.1

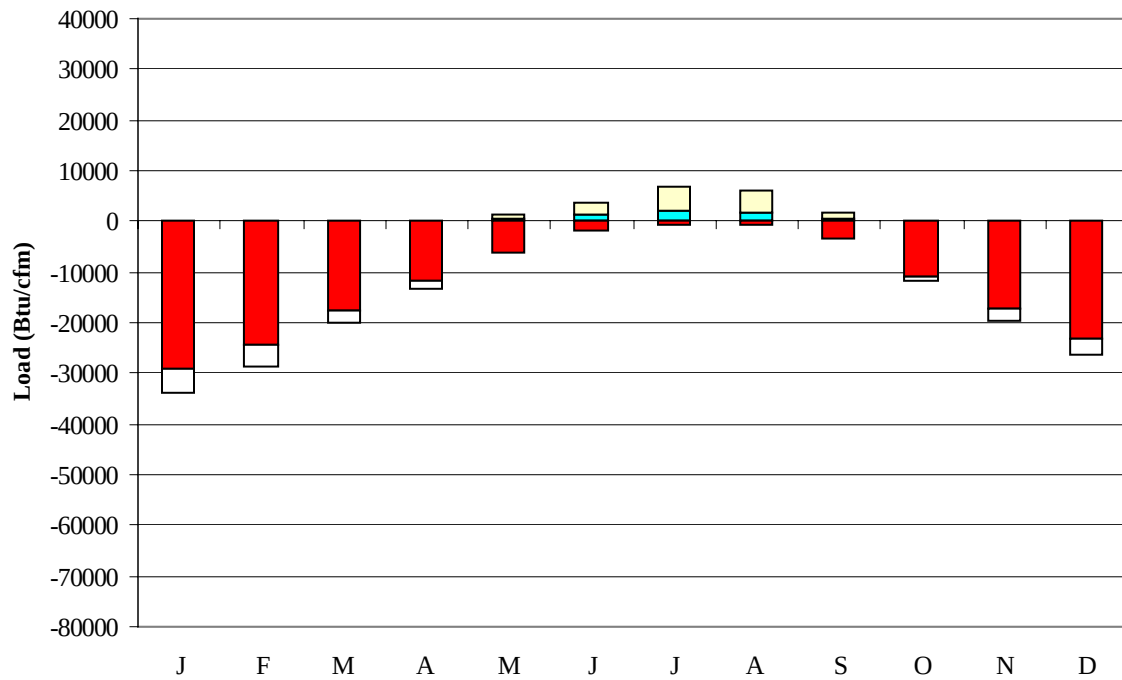
Degree Days, Heating and Cooling
(Base 65°F)



■ Mean Cooling Degree Days
 ■ Mean Heating Degree Days

	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1030
FEB	0	863
MAR	7	596
APR	27	381
MAY	92	178
JUN	191	42
JUL	282	12
AUG	257	14
SEP	110	91
OCT	23	340
NOV	5	587
DEC	0	814
ANN	994	4948

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 (Drying) Load ■ Average Latent Heating (Humidifying) Load

	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	-28970	0	-4809
FEB	0	-24422	0	-4223
MAR	7	-17463	2	-2470
APR	84	-11706	22	-1505
MAY	431	-6167	757	-206
JUN	1122	-1763	2544	-7
JUL	2111	-619	4567	-1
AUG	1627	-758	4366	0
SEP	447	-3491	1431	-15
OCT	28	-10918	108	-602
NOV	4	-17402	4	-2153
DEC	0	-23194	0	-3302
ANN	5861	-146873	13801	-19293

Average Annual Solar Radiation – Nearest Available Site

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

City: PITTSBURGH
 State: PA
 WBAN No: 94823
 Lat(N): 40.5
 Long(W): 80.22
 Elev(ft): 1224

Stn Type: Primary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.548
 Vert Gap: 0.323

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	550	790	1110	1450	1730	1920	1880	1660	1330	960	580	440	1200
	Std Dev	43	68	83	146	148	118	133	90	104	72	59	34	36
	Minimum	430	690	960	1120	1430	1610	1670	1480	1160	790	470	370	1130
	Maximum	620	980	1340	1720	1980	2160	2120	1850	1540	1210	680	500	1280
	Diffuse	370	500	640	770	910	980	970	850	680	490	370	320	650
Clear Day	Global	860	1210	1680	2180	2480	2600	2520	2240	1800	1310	900	750	1710
NORTH	Global	200	280	360	440	550	630	600	500	390	290	210	170	390
	Diffuse	200	280	360	440	520	560	550	480	390	290	210	170	370
Clear Day	Global	190	250	330	440	580	680	630	480	360	280	200	170	380
EAST	Global	350	480	660	840	970	1050	1050	950	800	610	370	280	700
	Diffuse	240	330	430	530	620	670	660	590	490	360	250	200	450
Clear Day	Global	630	840	1080	1310	1410	1440	1410	1300	1130	880	660	570	1060
SOUTH	Global	740	880	950	900	830	800	830	930	1020	1040	740	600	850
	Diffuse	350	440	510	550	590	620	620	600	550	450	340	300	490
Clear Day	Global	1800	1890	1770	1430	1110	960	1020	1260	1590	1790	1760	1710	1510
WEST	Global	340	490	660	820	960	1050	1020	950	780	590	370	280	690
	Diffuse	240	330	440	540	620	680	670	600	490	360	250	200	450
Clear Day	Global	630	840	1080	1310	1410	1440	1410	1300	1130	880	660	570	1060

Average Annual Solar Heat and Illumination – Nearest Available Site

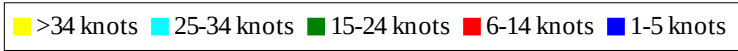
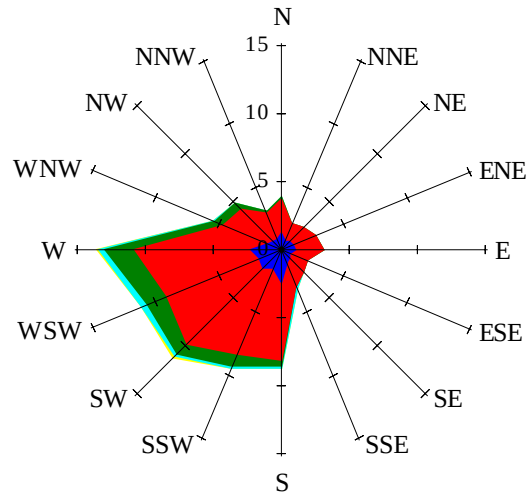
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	360	540	780	1040	1250	1390	1360	1190	950	660	390	290	850
NORTH	Unshaded	140	190	250	300	370	420	400	340	270	200	140	120	260
	Shaded	120	160	220	270	320	360	350	300	240	180	120	100	230
EAST	Unshaded	240	340	460	600	690	750	750	680	570	420	250	190	500
	Shaded	210	290	400	510	580	630	630	580	490	370	220	170	420
SOUTH	Unshaded	550	640	660	600	530	500	520	600	700	750	550	440	590
	Shaded	520	580	520	400	360	370	380	390	500	650	520	420	470
WEST	Unshaded	240	340	460	580	680	750	730	680	560	420	250	190	490
	Shaded	210	300	400	490	570	630	610	580	480	360	220	160	420

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	32	67	80	67	31	40	79	99	96	72
	M.Cloudy	18	40	48	40	19	25	53	70	71	51
NORTH	M.Clear	9	14	15	14	9	19	16	17	18	16
	M.Cloudy	8	15	17	15	8	13	17	20	20	17
EAST	M.Clear	67	61	16	14	9	70	75	39	18	16
	M.Cloudy	20	29	17	15	8	29	43	31	20	17
SOUTH	M.Clear	32	69	82	69	31	11	30	47	45	26
	M.Cloudy	13	32	39	32	13	10	23	36	36	21
WEST	M.Clear	9	14	16	61	65	11	16	17	45	75
	M.Cloudy	8	15	17	29	22	10	17	20	36	45
M.Clear	(% hrs)	24	22	24	20	23	36	32	24	22	26
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	21	60	81	77	50	9	35	44	30	3
	M.Cloudy	12	37	55	53	33	5	19	25	17	3
NORTH	M.Clear	7	14	17	16	13	4	9	11	9	2
	M.Cloudy	6	14	18	17	13	3	8	10	7	1
EAST	M.Clear	51	70	36	16	13	25	39	11	9	2
	M.Cloudy	15	32	27	17	13	6	14	10	7	1
SOUTH	M.Clear	15	52	74	69	42	21	70	83	61	9
	M.Cloudy	7	26	44	42	24	5	20	25	17	2
WEST	M.Clear	7	14	17	46	68	4	9	16	42	11
	M.Cloudy	6	14	18	31	34	3	8	11	14	3
M.Clear	(% hrs)	40	39	28	25	31	16	15	15	14	16

Wind Summary - December, January, and February

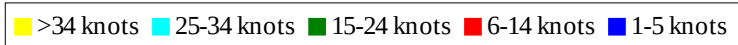
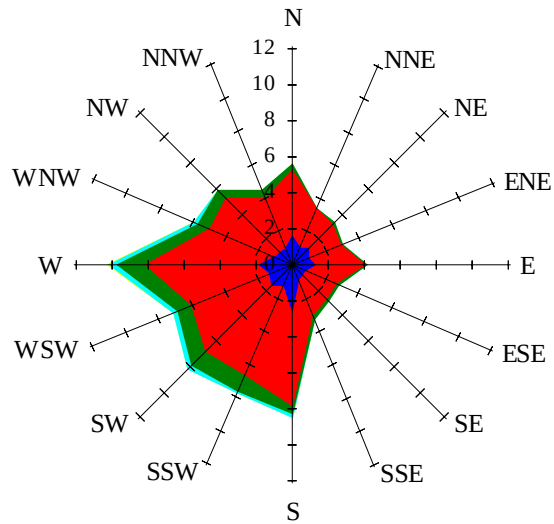
Labels of Percent Frequency on North Axis



Percent Calm = 12.35

Wind Summary - March, April, and May

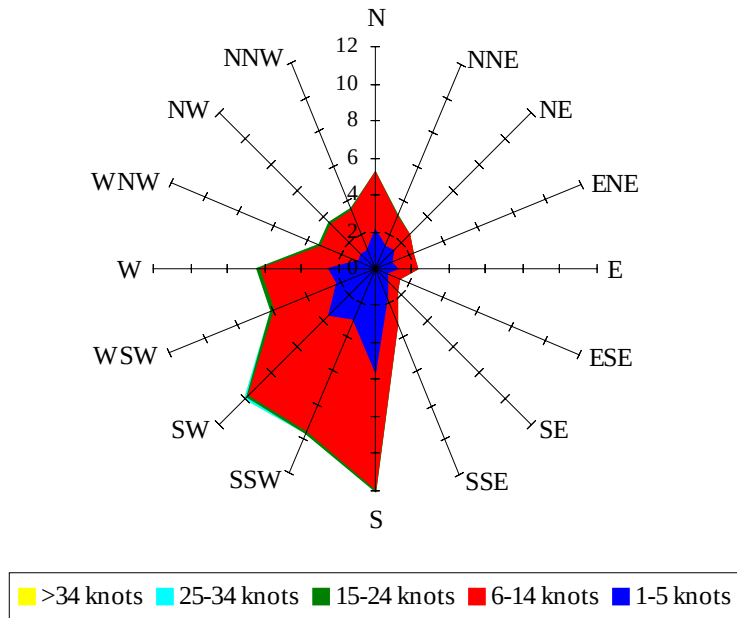
Labels of Percent Frequency on North Axis



Percent Calm = 14.89

Wind Summary - June, July, and August

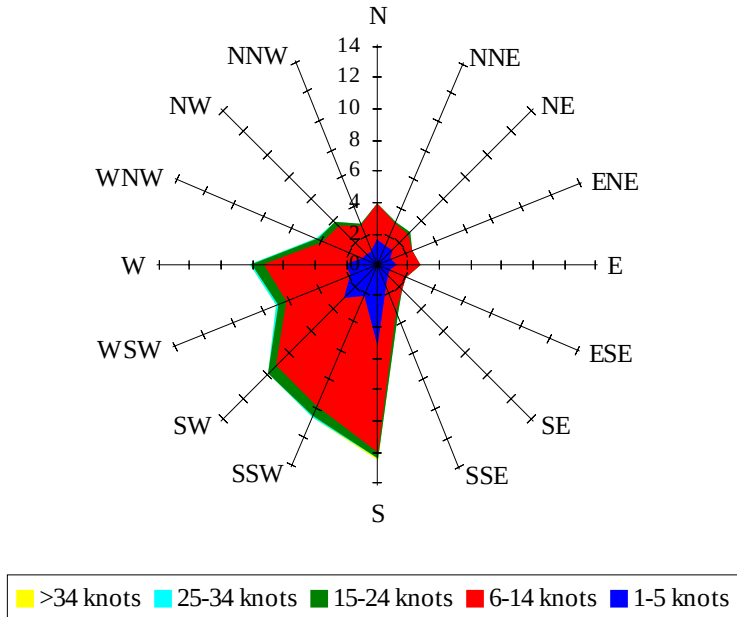
Labels of Percent Frequency on North Axis



Percent Calm = 24.08

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 19.90