

ANDREWS AFB	MD	
Latitude = 38.82 N		WMO No. 745940
Longitude = 76.87 W		Elevation = 282 feet
Period of Record = 1967 to 1996		Average Pressure = 29.71 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	96	76	106	9.0	SSW
0.4% Occurrence	93	75	106	8.6	SW
1.0% Occurrence	90	74	103	8.3	SSW
2.0% Occurrence	88	73	100	8.2	SSW
Mean Daily Range	18	-	-	-	-
97.5% Occurrence	22	19	9	8.6	NW
99.0% Occurrence	17	14	7	9.1	NW
99.6% Occurrence	13	11	6	8.5	NW
Median of Extreme Lows	6	5	4	9.1	W
	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	82	92	148	8.9	SSW
0.4% Occurrence	78	88	126	7.5	SSW
1.0% Occurrence	77	87	123	7.3	SSW
2.0% Occurrence	75	84	116	6.9	SSW
	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	152	89	1.00	8.1	SW
0.4% Occurrence	132	84	0.88	6.2	S
1.0% Occurrence	127	82	0.84	6.1	S
2.0% Occurrence	120	80	0.79	6.1	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		42	802	535	1724

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	3.3	90	2.3 + 0.8
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 (#)
58.4	26	20	56

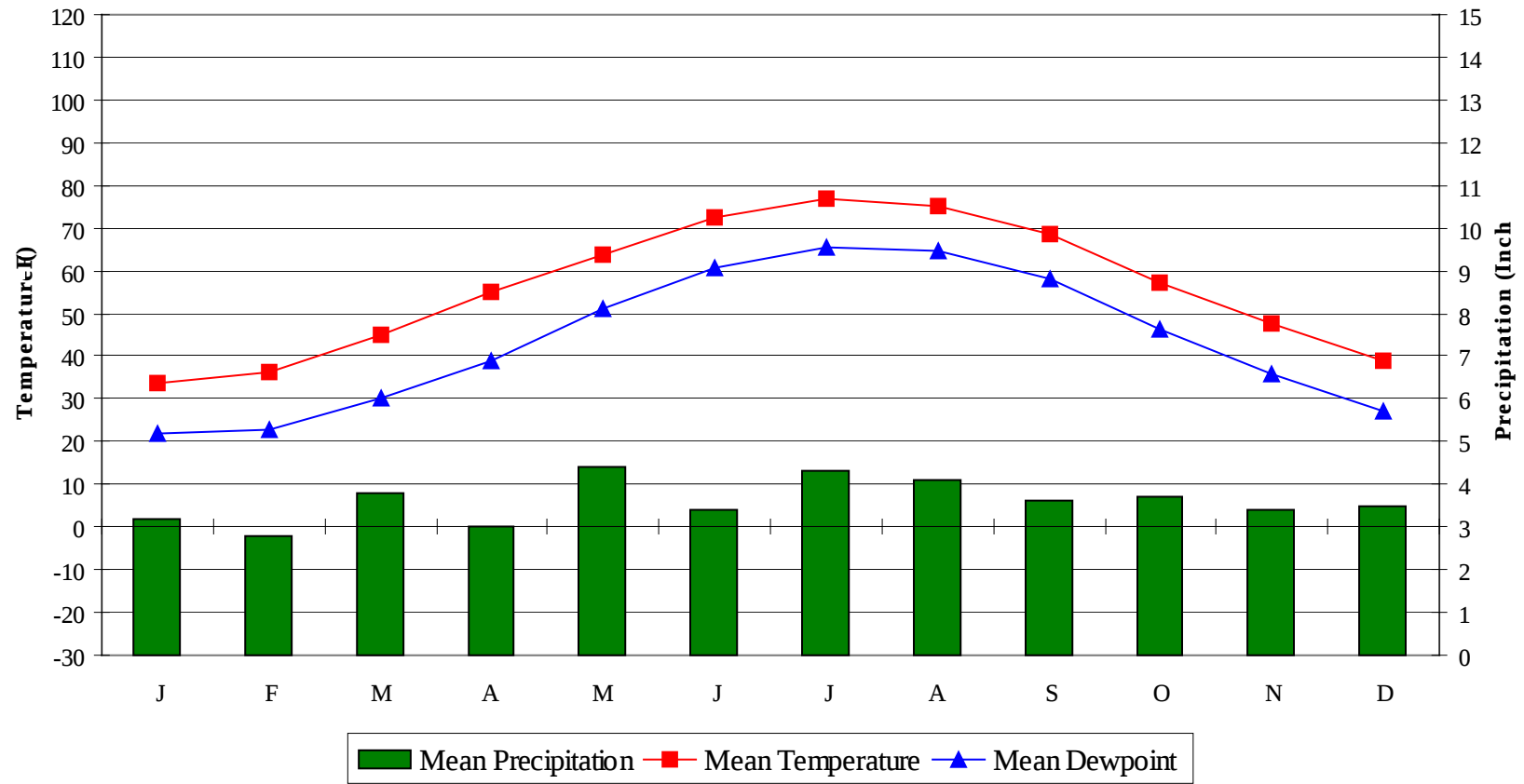
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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WMO No. 745940

Average Annual Climate

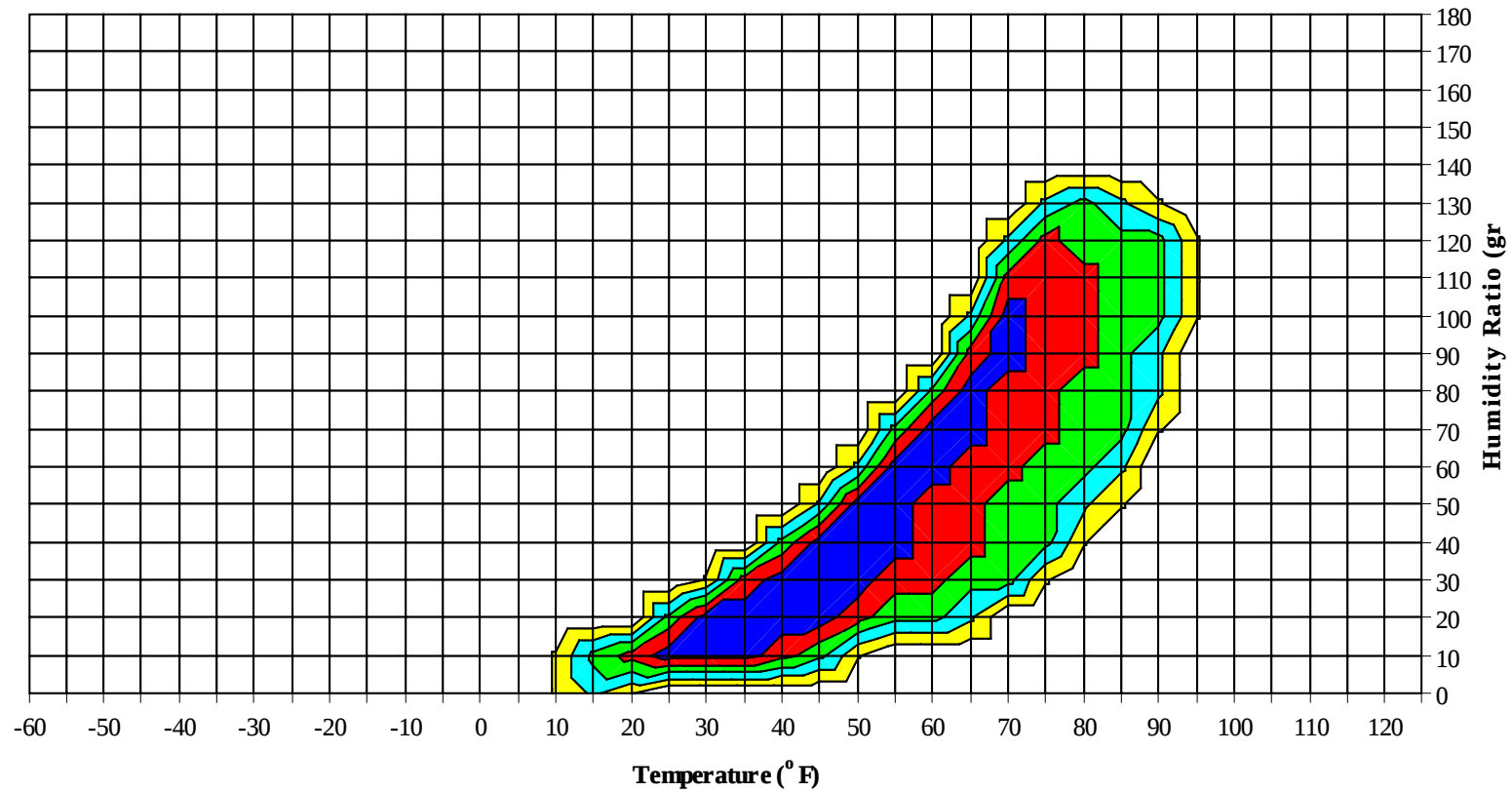


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WMO No. 745940

Long Term Psychrometric Summary

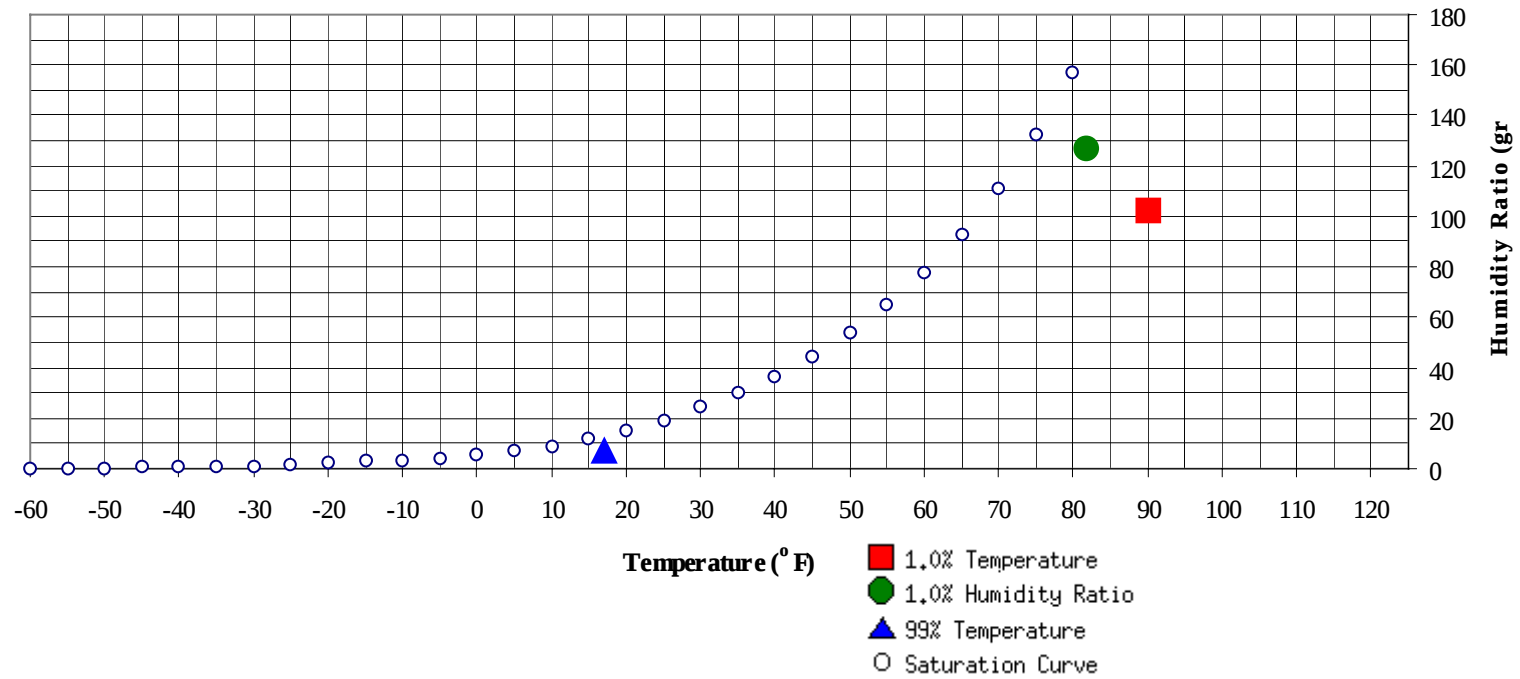


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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WMO No. 745940

Psychrometric Summary of Peak Design Values

	(°F)	MCHR	Enthalpy	1.0% Humidity	(gr/lb)	MCDB	MCWB	MC Dewpt	Enthalpy
		(gr/lb)	(btu/lb)			(°F)	(°F)	(°F)	(btu/lb)
99% Dry Bulb	17	6.8	5.1	Ratio	126.7	81.9	76.1	73.8	39.5

	(°F)	MCHR	MCWB	Enthalpy
		(gr/lb)	(°F)	(btu/lb)
1.0% Dry Bulb	90	102.5	74.3	37.7

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WMO No. 745940

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		
100 / 104															
95 / 99															
90 / 94															
85 / 89												0		0	66.0
80 / 84												2	0	2	63.3
75 / 79							0		0	59.2		4	1	6	59.9
70 / 74		1	0	1	59.8		2	0	2	56.5		7	4	11	58.0
65 / 69	0	1	0	2	57.2	0	4	2	6	54.2	1	13	8	24	55.8
60 / 64	1	3	3	8	55.8	2	7	5	13	53.1	3	20	12	38	52.4
55 / 59	3	8	5	16	51.3	4	12	9	25	49.1	5	30	22	61	48.6
50 / 54	5	13	8	27	46.2	8	18	12	39	45.5	10	38	33	90	45.0
45 / 49	11	26	17	54	41.5	13	27	19	60	41.0	19	41	44	119	41.1
40 / 44	22	44	35	101	37.2	21	37	33	92	36.8	34	44	48	139	36.9
35 / 39	43	49	48	141	32.8	37	41	43	121	32.5	47	44	48	139	36.9
30 / 34	51	41	50	142	28.5	44	38	43	125	28.1	53	27	42	121	32.7
25 / 29	41	30	38	109	23.7	44	22	33	99	23.5	41	15	23	79	28.2
20 / 24	31	17	24	73	19.1	29	9	16	54	19.0	24	5	8	37	23.7
15 / 19	20	8	12	39	14.8	14	5	6	24	14.6	8	2	3	12	19.3
10 / 14	12	3	5	20	10.3	5	1	2	8	10.4	2	0	0	3	14.4
5 / 9	4	1	2	7	5.7	2	0	0	3	5.9	1	0	0	1	10.8
0 / 4	2	0	1	3	1.1	0	0	0	1	0.9					
-5 / -1	1	0	0	1	-3.6	0			0	-2.0					
-10 / -6	0			0	-6.0										

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.

ANDREWS AFB

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WMO No. 745940

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		
100 / 104												0		0	76.7
95 / 99		0		0	68.0		0	0	0	73.6		2	0	2	76.1
90 / 94		1	0	1	67.1		2	0	2	72.6		14	3	17	74.3
85 / 89		4	1	5	65.6		11	3	14	69.7	0	38	12	50	72.3
80 / 84		8	3	11	62.9	1	27	9	36	67.4	3	60	28	90	70.1
75 / 79	0	15	6	22	61.1	2	37	19	57	64.8	20	57	49	127	67.6
70 / 74	3	22	14	39	58.1	13	48	36	98	62.3	65	38	66	169	66.0
65 / 69	9	32	22	63	55.7	35	48	48	131	59.6	68	20	44	132	62.7
60 / 64	21	42	33	96	52.8	57	38	53	148	56.4	47	8	26	81	58.2
55 / 59	29	42	42	113	49.1	55	24	43	122	52.3	24	2	9	36	54.0
50 / 54	45	38	48	130	45.8	46	11	25	83	48.0	10		3	12	49.3
45 / 49	59	24	41	124	41.7	28	2	11	40	43.6	3		0	3	45.3
40 / 44	41	9	19	70	37.2	9	0	2	11	39.4	0			0	40.7
35 / 39	24	2	8	34	33.1	1			1	34.9					
30 / 34	8	0	1	10	28.6										
25 / 29	2	0	0	2	24.4										
20 / 24	0			0	19.0										
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -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.

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WMO No. 745940

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		
100 / 104		1	0	1	77.7		0	0	0	78.5					
95 / 99		8	2	10	76.9		5	1	6	76.3		1	0	1	74.5
90 / 94	0	32	8	41	75.3		20	4	24	75.3		7	1	8	74.1
85 / 89	1	62	22	86	73.3	0	52	15	68	73.5		18	4	22	72.5
80 / 84	13	71	44	128	71.4	5	71	36	113	71.6	1	39	12	52	70.1
75 / 79	54	47	70	171	70.1	38	60	64	161	69.8	8	53	30	91	67.9
70 / 74	99	21	70	190	68.0	94	29	74	196	67.8	43	55	55	153	65.8
65 / 69	55	6	25	85	63.7	66	10	38	114	63.7	58	40	57	154	62.0
60 / 64	20	1	6	27	59.0	32	1	13	46	59.2	57	20	44	121	57.9
55 / 59	5	0	1	6	54.8	10	0	3	13	54.3	38	6	24	68	53.5
50 / 54	0		0	0	49.9	2		0	3	49.8	23	1	10	34	49.1
45 / 49	0			0	44.7	1		0	1	44.4	10	0	3	13	44.9
40 / 44											2		0	2	41.0
35 / 39															
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -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.

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WMO No. 745940

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		
100 / 104															
95 / 99															
90 / 94															
85 / 89		2		2	69.9										
80 / 84		8	1	9	68.5		1		1	66.0					
75 / 79	0	19	4	24	65.9		5	0	5	63.6		0		0	62.0
70 / 74	6	37	14	56	63.2	1	11	3	15	61.8	0	2	0	2	61.2
65 / 69	16	44	31	92	60.3	5	17	9	31	59.2	1	5	3	8	59.5
60 / 64	35	54	46	135	56.2	12	29	19	59	55.4	4	7	5	17	56.3
55 / 59	42	43	49	135	51.5	17	35	26	79	51.1	7	14	8	29	51.4
50 / 54	49	26	44	120	47.1	31	44	38	113	46.4	11	25	15	51	46.4
45 / 49	44	11	34	88	43.0	38	43	41	122	41.4	19	42	29	89	41.8
40 / 44	32	2	17	52	38.8	45	33	47	126	37.4	37	53	49	140	37.6
35 / 39	18	0	7	25	34.6	40	16	34	90	33.0	51	45	53	150	32.8
30 / 34	5	0	1	6	30.6	33	6	18	56	29.0	52	29	43	124	28.4
25 / 29	0			0	26.6	13	1	5	19	24.8	34	16	24	74	23.7
20 / 24						3	0	1	4	20.3	19	7	12	39	19.3
15 / 19						0			0	16.6	7	2	4	13	14.7
10 / 14											4	1	1	6	10.5
5 / 9											2	0	0	2	6.1
0 / 4															
-5 / -1															
-10 / -6															

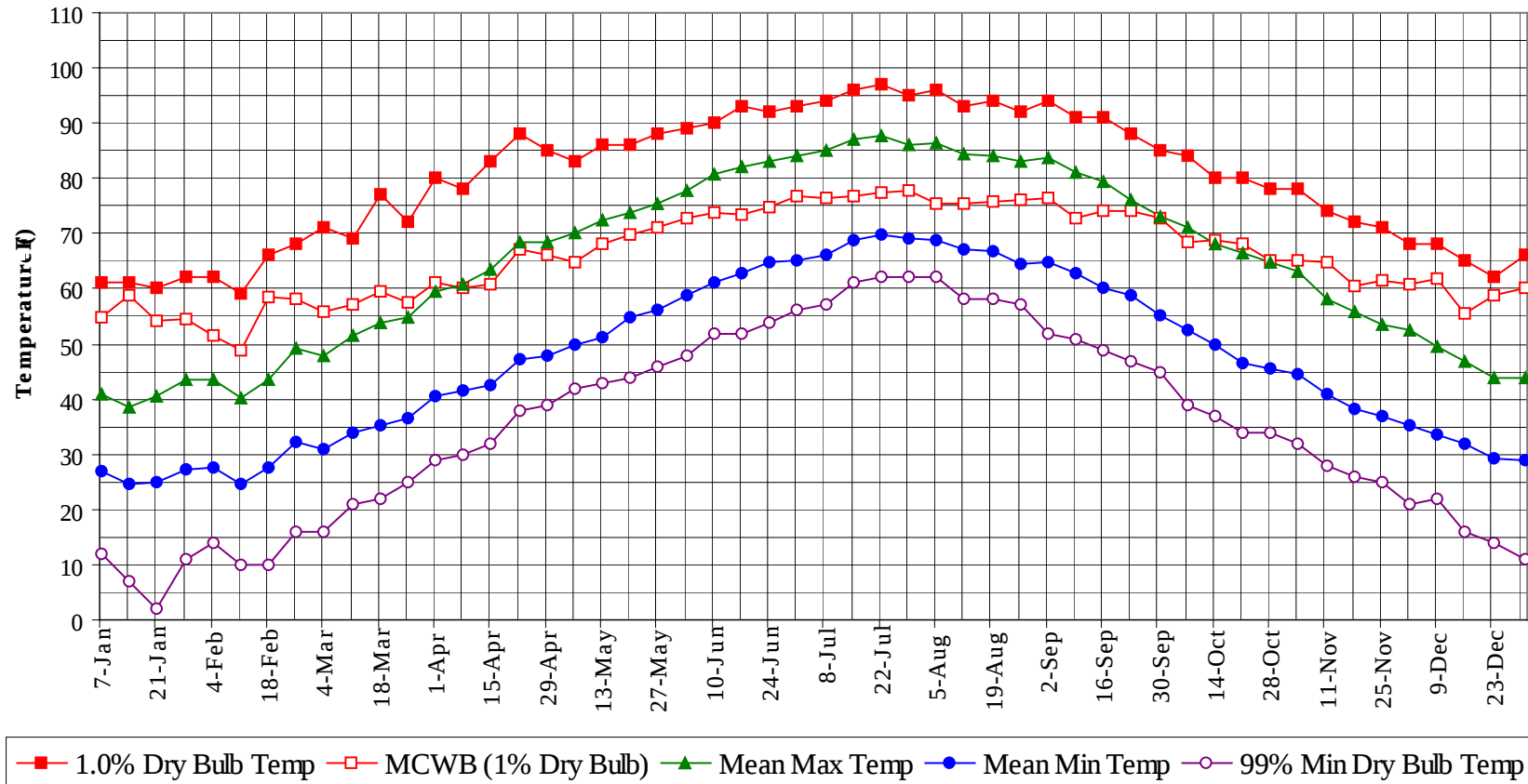
Caution: This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary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

ANDREWS AFB MD WMO No. 745940
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)
Period of Record = 1967 to 1996

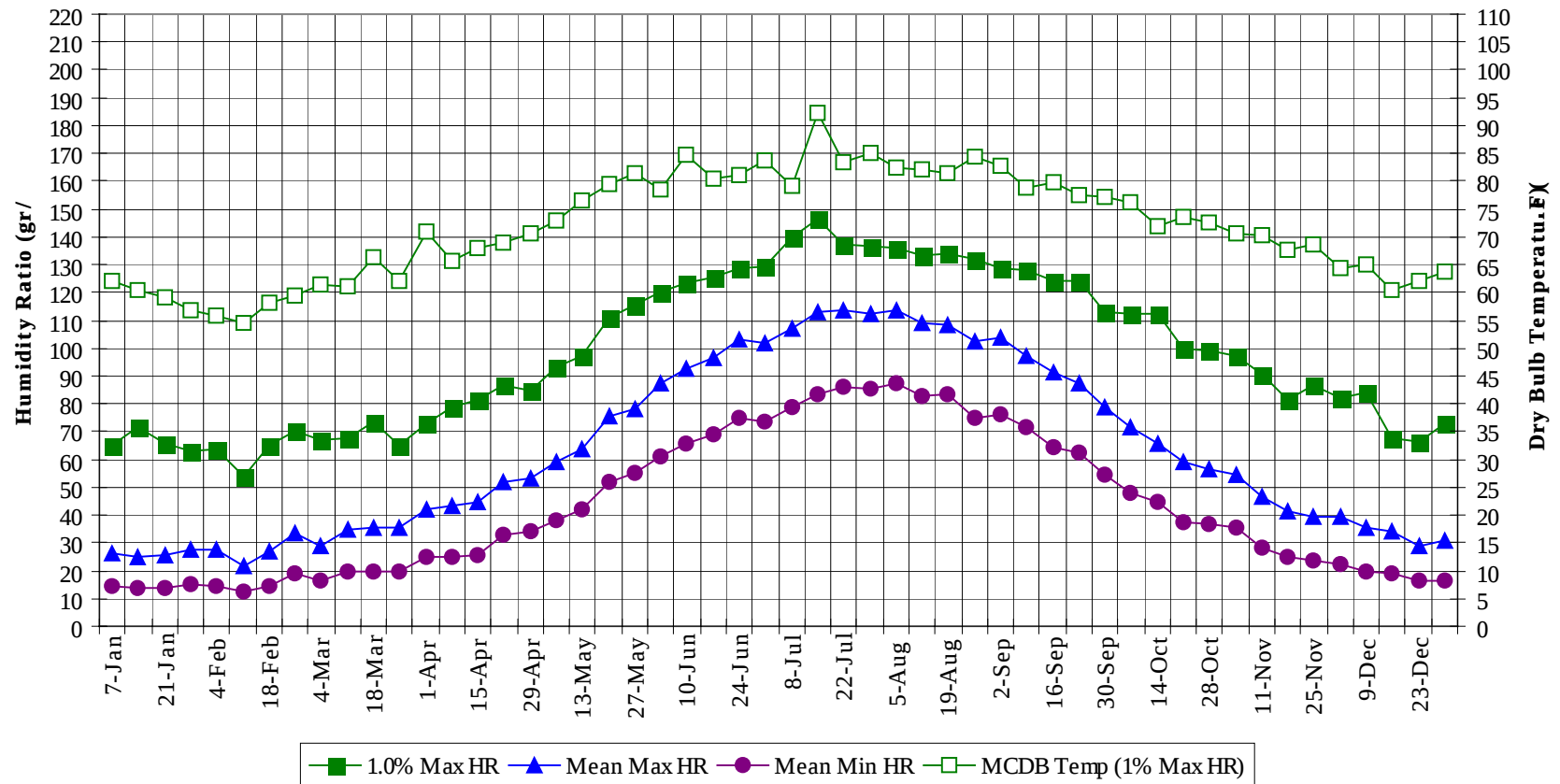
Temperature Range (°F)	Annual Totals				
	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
100 / 104		1	0	1	77.8
95 / 99		16	3	19	76.4
90 / 94	0	77	16	93	74.8
85 / 89	2	188	57	247	72.7
80 / 84	22	287	133	442	70.4
75 / 79	124	297	244	665	68.2
70 / 74	325	272	337	934	65.7
65 / 69	317	238	286	842	61.1
60 / 64	292	230	263	785	56.3
55 / 59	244	217	239	701	51.3
50 / 54	250	214	236	699	46.5
45 / 49	258	216	239	713	41.8
40 / 44	257	224	252	733	37.4
35 / 39	268	182	235	684	32.8
30 / 34	235	130	179	544	28.4
25 / 29	160	74	110	344	23.7
20 / 24	90	36	56	182	19.2
15 / 19	44	15	21	80	14.7
10 / 14	22	5	9	35	10.4
5 / 9	7	2	3	12	5.8
0 / 4	2	0	1	4	1.1
-5 / -1	1	0	0	1	-3.6
-10 / -6	0			0	-6.0

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



ANDREWS AFB

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WMO No. 745940

Long Term Dry Bulb Temperature and Humidity Summary

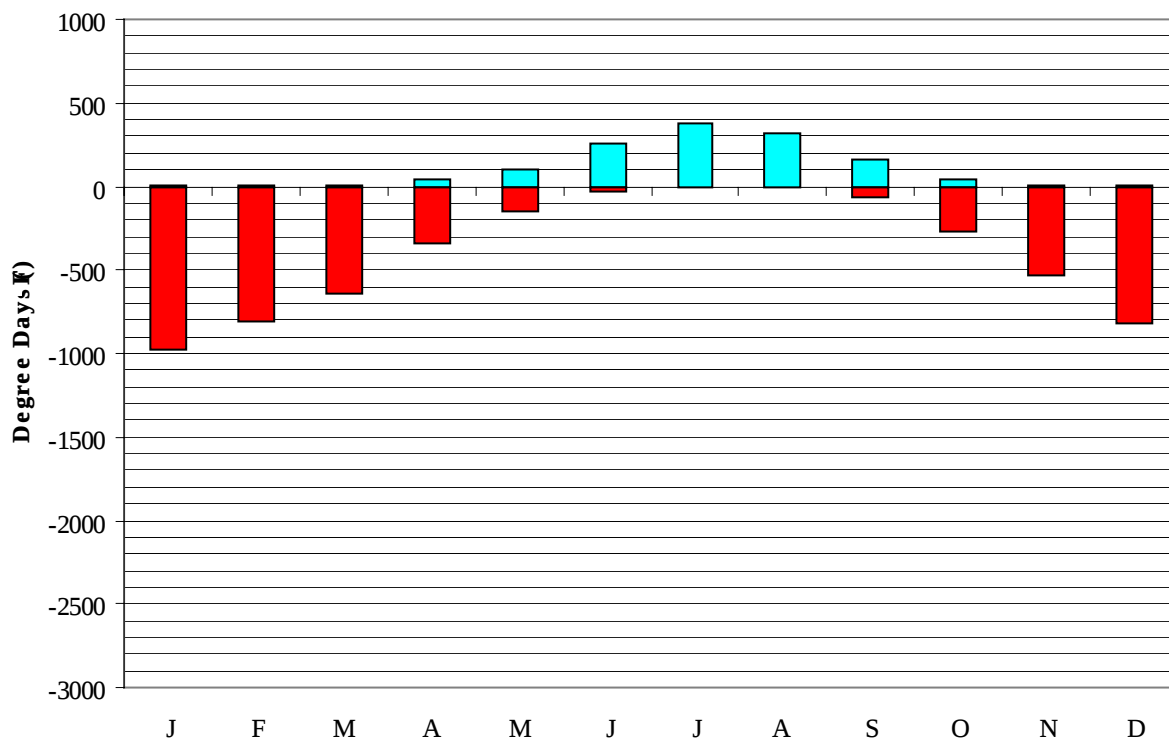
Week Ending	1.0% Temp (°F)	MCWB @ 1% Temp (°F)	Mean Max Temp (°F)	Mean Min Temp (°F)	99% Temp (°F)	1.0% HR (gr/lb)	MCDB @ 1% HR (°F)	Mean Max HR (gr/lb)	Mean Min HR (gr/lb)
7-Jan	61.0	54.7	40.7	26.8	12.0	65.1	62.0	26.3	14.4
14-Jan	61.0	58.7	38.6	24.5	7.0	71.4	60.4	24.9	13.5
21-Jan	60.0	54.2	40.6	24.9	2.0	65.8	59.2	25.7	13.7
28-Jan	62.0	54.6	43.4	27.1	11.0	63.0	56.9	27.8	15.2
4-Feb	62.0	51.4	43.4	27.5	14.0	63.7	55.8	27.4	14.4
11-Feb	59.0	48.9	40.2	24.6	10.0	53.9	54.4	21.8	12.2
18-Feb	66.0	58.5	43.5	27.5	10.0	65.1	58.1	26.9	14.7
25-Feb	68.0	58.1	49.3	32.2	16.0	70.0	59.5	33.5	18.8
4-Mar	71.0	55.7	47.9	31.0	16.0	67.2	61.3	28.8	16.4
11-Mar	69.0	57.1	51.5	33.8	21.0	67.9	61.1	34.9	19.5
18-Mar	77.0	59.5	54.0	35.4	22.0	73.5	66.3	35.2	19.7
25-Mar	72.0	57.4	54.8	36.6	25.0	65.1	62.1	35.6	20.0
1-Apr	80.0	61.1	59.5	40.6	29.0	72.8	70.9	41.8	25.2
8-Apr	78.0	60.3	60.7	41.4	30.0	79.1	65.5	43.2	24.9
15-Apr	83.0	60.8	63.4	42.5	32.0	81.2	68.0	44.7	25.8
22-Apr	88.0	67.1	68.4	47.1	38.0	86.8	69.1	51.8	32.6
29-Apr	85.0	66.0	68.5	47.8	39.0	84.7	70.7	53.4	34.2
6-May	83.0	64.9	70.2	49.9	42.0	93.1	73.0	59.1	38.1
13-May	86.0	68.2	72.4	51.2	43.0	97.3	76.4	63.8	42.3
20-May	86.0	69.8	73.7	54.8	44.0	111.3	79.4	75.4	52.0
27-May	88.0	71.3	75.3	56.2	46.0	115.5	81.4	78.4	54.9
3-Jun	89.0	72.7	77.9	58.7	48.0	120.4	78.5	87.2	61.2
10-Jun	90.0	73.7	80.8	61.1	52.0	123.2	84.6	92.8	65.4
17-Jun	93.0	73.6	82.1	62.9	52.0	125.3	80.4	96.3	68.9
24-Jun	92.0	74.7	83.2	65.0	54.0	128.8	81.2	102.8	75.1
1-Jul	93.0	76.8	84.2	65.0	56.0	129.5	83.7	101.7	73.7
8-Jul	94.0	76.4	85.0	66.3	57.0	140.0	79.0	107.1	78.8
15-Jul	96.0	76.8	87.0	68.7	61.0	146.3	92.4	113.2	83.5
22-Jul	97.0	77.6	87.9	69.7	62.0	137.2	83.4	113.6	86.1
29-Jul	95.0	77.7	85.9	69.1	62.0	136.5	85.1	112.5	85.2
5-Aug	96.0	75.4	86.4	68.7	62.0	135.8	82.4	113.7	87.3
12-Aug	93.0	75.4	84.4	67.2	58.0	133.0	82.1	108.9	82.9
19-Aug	94.0	75.6	84.0	66.8	58.0	133.7	81.5	108.4	83.2
26-Aug	92.0	76.1	83.0	64.6	57.0	132.3	84.4	102.8	74.9
2-Sep	94.0	76.6	83.9	64.7	52.0	128.8	82.8	104.0	76.3
9-Sep	91.0	72.7	81.2	62.9	51.0	128.1	78.8	97.5	71.8
16-Sep	91.0	74.0	79.4	60.0	49.0	123.9	79.7	91.5	64.2
23-Sep	88.0	74.1	76.2	58.7	47.0	123.9	77.6	87.5	62.6
30-Sep	85.0	72.6	73.1	55.2	45.0	112.7	77.1	79.1	54.2
7-Oct	84.0	68.3	71.2	52.4	39.0	112.0	76.1	71.9	47.6
14-Oct	80.0	68.7	68.3	49.9	37.0	112.0	72.0	65.8	44.6
21-Oct	80.0	68.1	66.5	46.5	34.0	100.1	73.5	59.4	37.6
28-Oct	78.0	65.0	64.7	45.5	34.0	99.4	72.4	56.5	36.6
4-Nov	78.0	65.0	63.3	44.6	32.0	97.3	70.6	54.3	35.5
11-Nov	74.0	64.6	58.3	40.8	28.0	90.3	70.3	46.6	28.4
18-Nov	72.0	60.3	55.9	38.2	26.0	81.2	67.5	41.1	24.7
25-Nov	71.0	61.6	53.6	36.9	25.0	86.8	68.7	39.2	23.5
2-Dec	68.0	60.9	52.4	35.3	21.0	81.9	64.3	39.1	22.4
9-Dec	68.0	61.7	49.7	33.5	22.0	84.0	64.9	35.2	19.7
16-Dec	65.0	55.6	46.9	31.9	16.0	67.9	60.5	34.0	19.1
23-Dec	62.0	58.9	43.9	29.4	14.0	66.5	62.0	28.9	16.2
31-Dec	66.0	60.1	44.0	29.1	11.0	72.8	63.7	30.8	16.7

ANDREWS AFB

MD

WMO No. 745940

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



■ Mean Cooling Degree Days
 ■ Mean Heating Degree Days

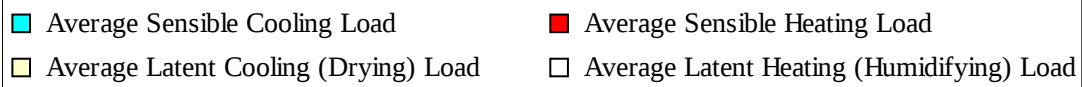
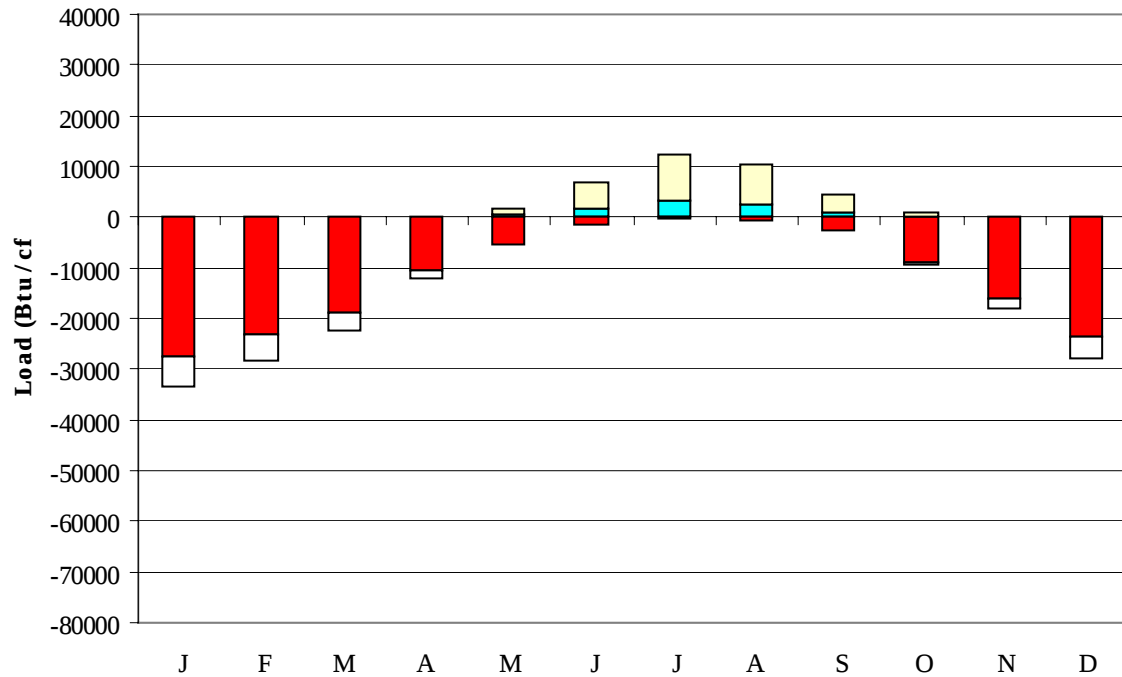
	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	974
FEB	1	814
MAR	10	635
APR	40	336
MAY	106	145
JUN	254	29
JUL	376	5
AUG	321	11
SEP	167	66
OCT	40	271
NOV	9	527
DEC	1	817
ANN	1326	4630

ANDREWS AFB

MD

WMO No. 745940

Average Ventilation and Infiltration Loads
(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)



	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	0	-27651	1	-5864
FEB	0	-23283	2	-5121
MAR	30	-18771	2	-3557
APR	204	-10666	54	-1531
MAY	584	-5255	1153	-181
JUN	1895	-1334	4805	-3
JUL	3348	-316	9015	0
AUG	2553	-609	8038	-1
SEP	991	-2681	3652	-6
OCT	124	-8911	650	-493
NOV	15	-15870	103	-2216
DEC	0	-23558	13	-4337
ANN	9744	-138905	27488	-23310

Average Annual Solar Radiation – Nearest Available Site

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

City: BALTIMORE
 State: MD
 WBAN No: 93721
 Lat(N): 39.18
 Long(W): 76.67
 Elev(ft): 154

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1
 Overhang: 0.51
 Vert Gap: 0.317

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	650	910	1230	1550	1780	1950	1910	1690	1390	1050	710	560	1280
	Std Dev	46	70	92	134	131	115	120	85	104	85	62	40	34
	Minimum	550	760	1070	1230	1570	1740	1680	1500	1170	910	560	480	1210
	Maximum	750	1020	1410	1830	2050	2180	2140	1810	1570	1240	830	620	1360
	Diffuse	300	410	530	680	800	850	820	750	600	440	320	270	560
Clear Day	Global	930	1280	1740	2200	2490	2580	2500	2230	1820	1350	960	810	1740
NORTH	Global	200	260	340	430	530	610	570	470	380	290	210	180	370
	Diffuse	200	260	340	420	490	530	510	450	380	290	210	180	350
Clear Day	Global	190	240	320	430	570	670	620	480	370	280	200	160	380
EAST	Global	440	590	750	910	990	1070	1050	950	830	660	480	380	760
	Diffuse	240	320	410	510	580	630	610	560	470	360	260	210	430
Clear Day	Global	700	900	1130	1320	1410	1420	1380	1290	1130	900	700	620	1080
SOUTH	Global	1050	1130	1090	950	810	770	800	920	1060	1170	1050	950	980
	Diffuse	340	410	470	520	550	570	560	560	520	440	350	310	470
Clear Day	Global	1910	1950	1770	1390	1050	910	960	1210	1550	1790	1820	1820	1510
WEST	Global	450	590	760	900	980	1060	1040	950	830	660	470	390	760
	Diffuse	240	320	420	520	590	630	620	570	470	360	260	210	430
Clear Day	Global	700	900	1130	1320	1410	1420	1380	1290	1130	900	700	620	1080

Average Annual Solar Heat and Illumination – Nearest Available Site

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

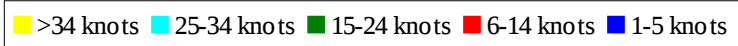
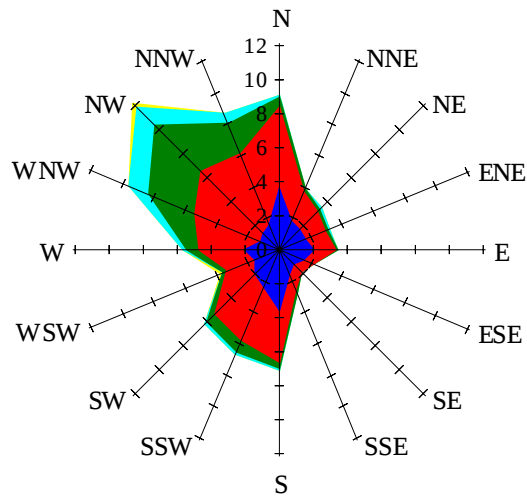
AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
HORIZ	Unshaded	420	620	870	1120	1290	1420	1390	1220	990	730	470	360	910
NORTH	Unshaded	140	180	230	290	350	400	380	320	260	200	150	120	250
	Shaded	120	160	210	260	310	350	340	290	230	180	130	110	220
EAST	Unshaded	300	410	530	650	700	760	740	680	590	470	330	260	530
	Shaded	270	370	470	560	600	640	630	580	510	410	300	240	470
SOUTH	Unshaded	790	820	760	620	500	470	490	580	720	840	780	720	670
	Shaded	770	770	600	410	340	350	350	380	520	740	760	700	560
WEST	Unshaded	310	410	540	640	700	750	740	680	590	470	320	260	530
	Shaded	280	370	480	560	600	640	630	580	510	410	290	240	470

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	38	71	81	65	28	45	82	99	94	67
	M.Cloudy	22	42	49	40	16	28	54	69	67	46
NORTH	M.Clear	9	14	15	13	8	19	17	17	17	16
	M.Cloudy	9	14	16	14	7	13	17	19	19	15
EAST	M.Clear	73	57	15	13	8	73	72	33	17	16
	M.Cloudy	26	30	16	14	7	32	42	27	19	15
SOUTH	M.Clear	38	71	81	65	28	12	31	45	42	21
	M.Cloudy	16	35	41	32	12	11	23	34	32	18
WEST	M.Clear	9	14	21	65	66	12	17	17	50	76
	M.Cloudy	9	14	18	32	22	11	17	19	37	44
M.Clear	(% hrs)	35	32	33	33	39	43	42	38	35	39

		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	26	65	83	77	47	14	40	46	29	3
	M.Cloudy	15	38	54	51	30	8	23	26	17	2
NORTH	M.Clear	8	14	16	16	12	5	10	10	8	2
	M.Cloudy	7	14	17	17	11	4	9	10	7	1
EAST	M.Clear	59	69	30	16	12	39	39	10	8	2
	M.Cloudy	19	31	23	17	11	10	17	10	7	1
SOUTH	M.Clear	19	55	73	66	38	36	79	87	63	7
	M.Cloudy	9	27	42	39	20	10	27	31	20	2
WEST	M.Clear	8	14	16	51	70	5	10	20	48	10
	M.Cloudy	7	14	17	32	32	4	9	13	16	3
M.Clear	(% hrs)	45	46	40	39	43	33	34	32	35	37

Wind Summary - December, January, and February

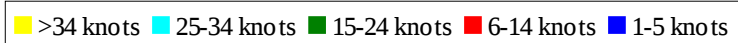
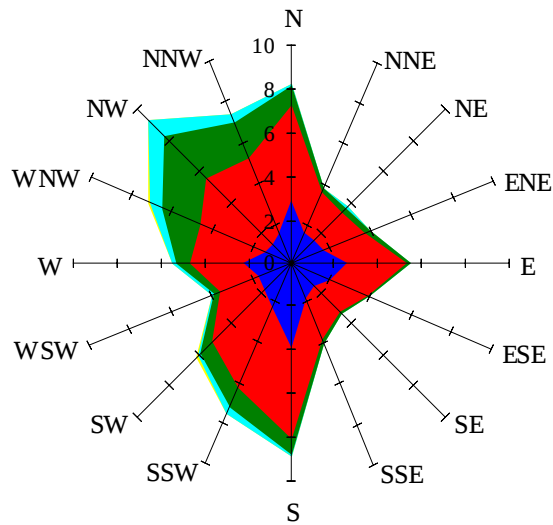
Labels of Percent Frequency on North Axis



Percent Calm = 11.86

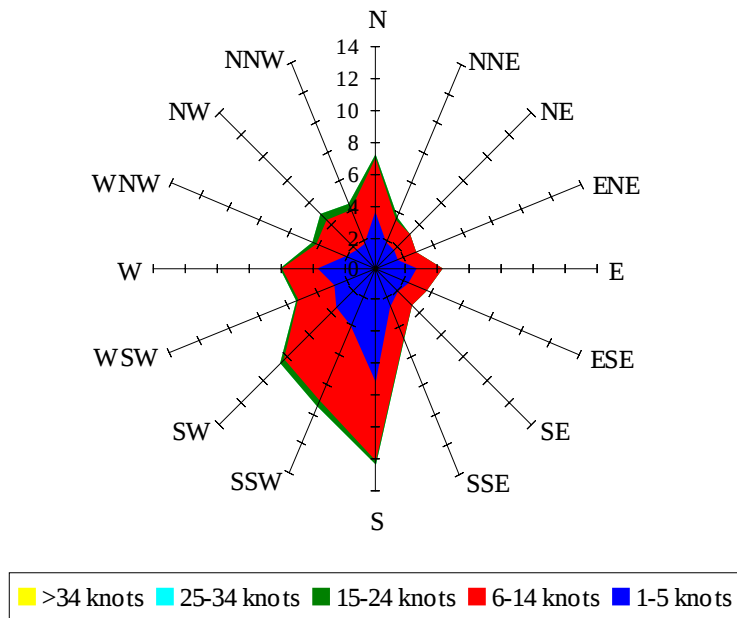
Wind Summary - March, April, and May

Labels of Percent Frequency on North Axis



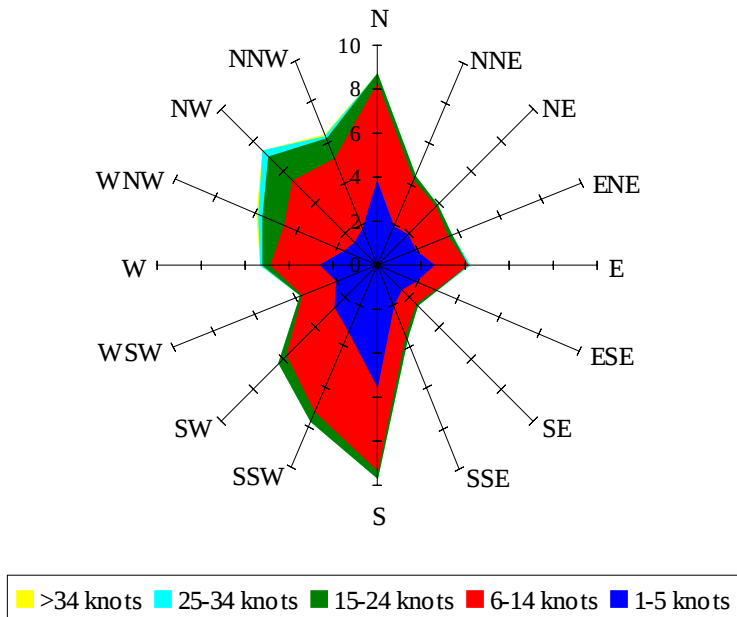
Percent Calm = 9.04

Wind Summary - June, July, and August **Labels of Percent Frequency on North Axis**



Percent Calm = 13.52

Wind Summary - September, October, and November **Labels of Percent Frequency on North Axis**



Percent Calm = 14.15