

WHITEMAN AFB MO

Latitude = 38.73 N

Longitude = 93.55 W

Period of Record = 1967 to 1996

WMO No. 724467

Elevation = 869 feet

Average Pressure = 29.06 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	100	76	103	9.8	SSW
0.4% Occurrence	96	76	107	9.7	S
1.0% Occurrence	93	76	111	9.7	S
2.0% Occurrence	90	75	109	9.1	S
Mean Daily Range	19	-	-	-	-
97.5% Occurrence	14	12	7	8.4	N
99.0% Occurrence	7	6	5	7.8	NNW
99.6% Occurrence	1	0	4	8.4	N
Median of Extreme Lows	-6	-7	2	7.6	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	82	92	150	8.2	S
0.4% Occurrence	79	90	133	8.7	S
1.0% Occurrence	78	89	129	8.5	S
2.0% Occurrence	76	86	121	8.1	S
	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	0.97	6.4	S
0.4% Occurrence	139	87	0.90	6.5	S
1.0% Occurrence	132	84	0.85	7.3	S
2.0% Occurrence	127	83	0.82	7.0	S
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		89	974	677	1800

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	3.5	90	2.5 + 1.0
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 (#)
57.3	46	20	55

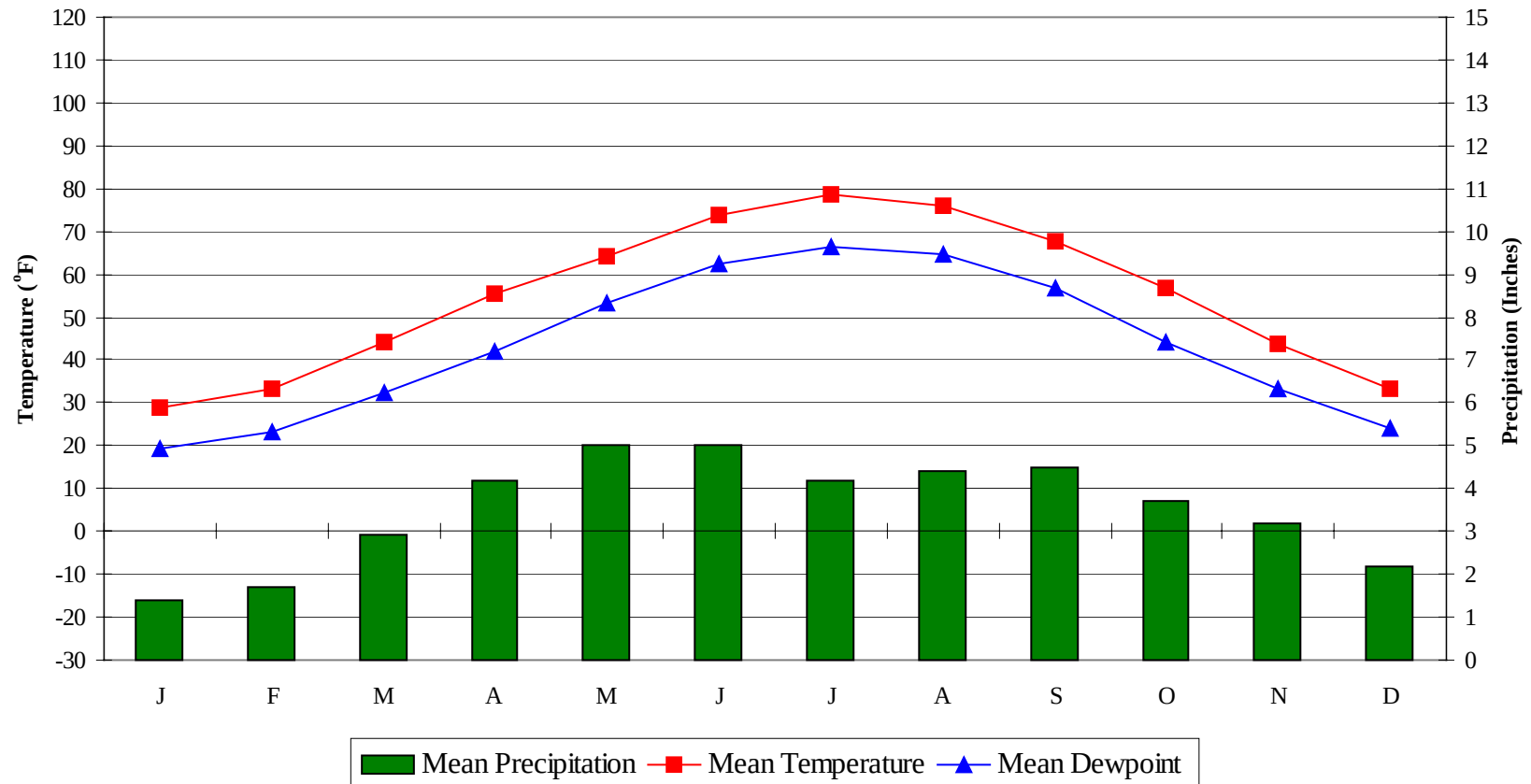
*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.

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Average Annual Climate

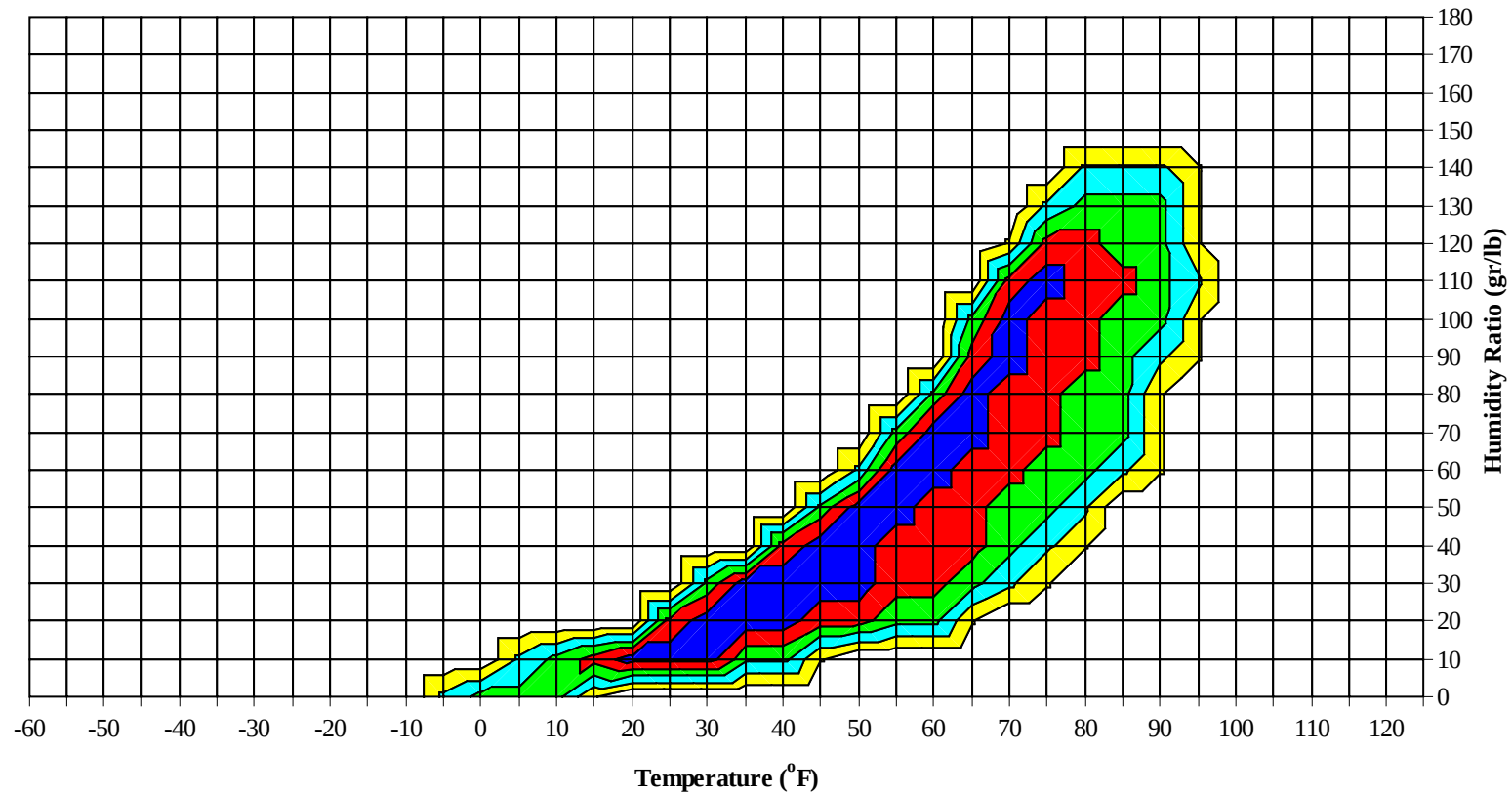


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Long Term Psychrometric Summary



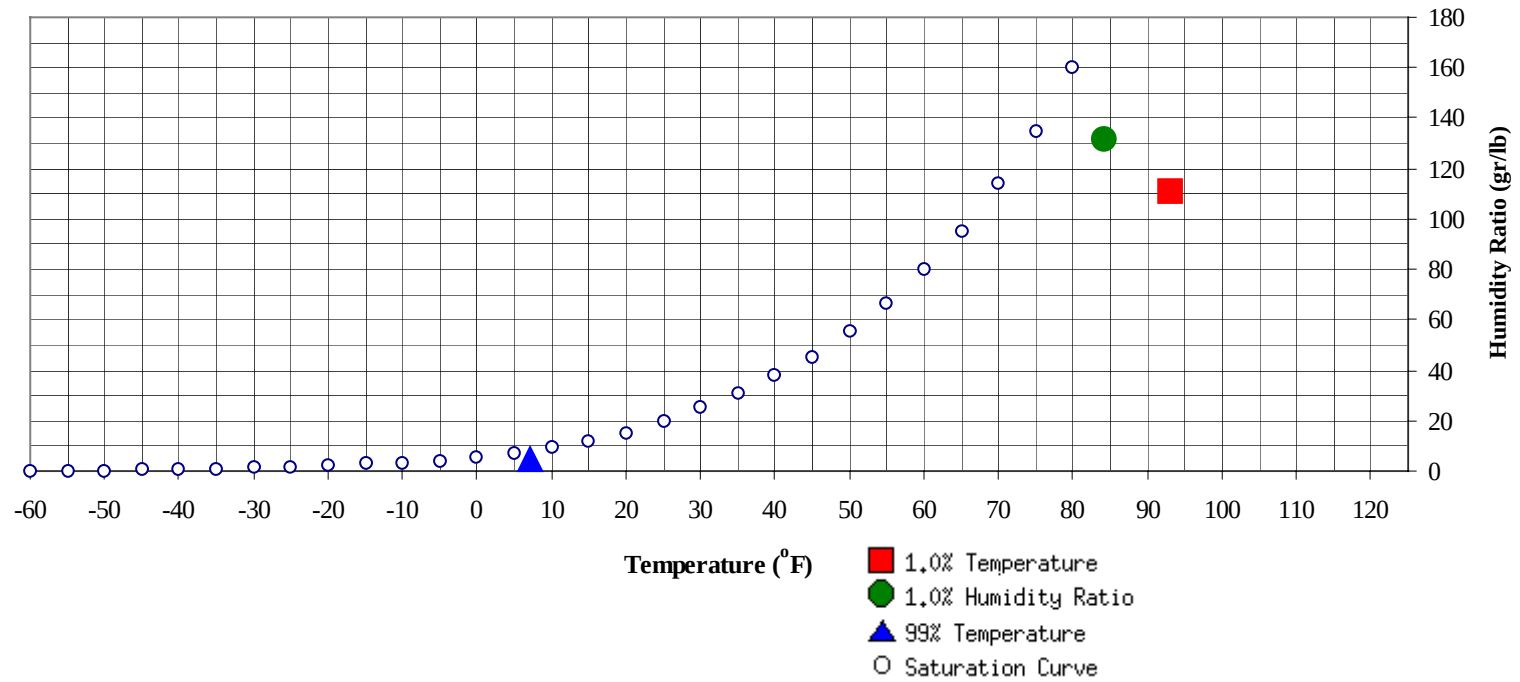
- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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Psychrometric Summary of Peak Design Values



	(°F)	MCHR	Enthalpy	1.0% Humidity Ratio	(gr/lb)	MCDB	MCWB	MC Dewpt	Enthalpy
		(gr/lb)	(btu/lb)			(°F)	(°F)	(°F)	(btu/lb)
99% Dry Bulb	7	5.1	2.5	Ratio	131.6	84.2	76.7	74	40.9

1.0% Dry Bulb	(°F)	MCHR	MCWB	Enthalpy
		(gr/lb)	(°F)	(btu/lb)
	93	111.3	75.8	39.8

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WMO No. 724467

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															
80 / 84												1	0	1	62.8
75 / 79							0		0	57.0		8	2	10	60.5
70 / 74		0		0	58.1		1	0	1	55.0	0	12	6	18	59.0
65 / 69		1	0	1	55.6	0	5	1	6	52.8	2	17	10	29	56.0
60 / 64	0	3	1	4	53.1	1	8	4	13	51.2	7	21	18	46	52.9
55 / 59	2	7	4	13	49.5	3	13	8	24	47.9	15	25	22	62	49.6
50 / 54	3	12	7	22	45.6	5	18	14	37	44.9	19	32	29	80	45.5
45 / 49	7	18	12	37	41.1	11	21	17	49	41.5	32	31	37	100	41.9
40 / 44	15	28	26	70	37.3	19	25	28	72	37.6	38	33	38	109	38.0
35 / 39	29	37	38	104	33.4	32	35	38	105	33.4	37	29	33	99	33.4
30 / 34	46	42	46	134	29.3	51	34	40	125	29.4	44	23	30	97	29.2
25 / 29	38	25	32	96	24.6	31	22	26	79	24.5	28	10	15	53	24.7
20 / 24	30	24	26	81	19.8	23	18	19	60	19.7	16	4	5	25	20.0
15 / 19	23	20	21	64	15.1	18	11	14	43	15.0	6	2	2	10	15.7
10 / 14	21	15	16	52	10.4	14	7	9	30	10.5	2	0	1	3	11.0
5 / 9	16	8	10	34	6.0	8	3	4	15	5.8	1	0	0	1	5.9
0 / 4	10	4	6	20	0.9	4	2	2	8	1.0	0	0	0	0	1.5
-5 / -1	4	1	2	7	-3.1	3	1	0	4	-3.4	0	0	0	0	-3.2
-10 / -6	2	1	1	4	-7.5	1	0	0	1	-7.3	0		0	0	-6.0
-15 / -11	1	0	0	1	-12.2	0			0	-10.8					
-20 / -16	0			0	-16.3										

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.

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WMO No. 724467

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															
100 / 104												0		0	75.8
95 / 99												2	1	3	75.9
90 / 94		0	0	0	70.1		1		1	71.3		17	5	22	75.8
85 / 89		3	1	4	68.3		9	2	11	71.4	0	45	19	64	73.9
80 / 84		11	4	15	65.4	0	30	10	40	69.0	6	61	37	104	71.1
75 / 79	0	20	9	29	62.8	2	44	23	69	65.7	29	51	55	135	68.8
70 / 74	5	28	18	51	60.2	14	52	40	106	63.1	64	37	55	156	66.3
65 / 69	15	32	27	74	57.2	44	46	56	146	60.6	64	19	40	123	62.9
60 / 64	21	37	34	92	53.6	56	34	50	140	57.0	45	6	21	72	58.3
55 / 59	33	36	41	110	50.2	54	19	36	109	52.7	23	2	6	31	54.2
50 / 54	41	29	40	110	46.5	41	10	20	71	48.3	8	0	1	9	50.1
45 / 49	46	21	34	101	42.6	25	3	9	37	44.1	1		0	1	45.5
40 / 44	40	14	20	74	38.1	9	0	2	11	39.7	0			0	43.0
35 / 39	25	6	9	40	33.9	2		0	2	34.9					
30 / 34	11	2	3	16	29.4	0			0	29.5					
25 / 29	3	0	1	4	25.1										
20 / 24	0		0	0	20.3										
15 / 19	0			0	18.0										
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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WMO No. 724467

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	72.7										
100 / 104		3	1	4	74.7		3	1	4	76.9		0		0	75.0
95 / 99		15	5	20	76.4		12	3	15	75.9		2	0	2	74.6
90 / 94		48	18	66	75.8		37	12	49	75.1		8	2	10	73.2
85 / 89	2	66	35	103	74.0	1	52	23	76	73.3		26	7	33	72.5
80 / 84	21	59	55	135	72.2	11	58	42	111	71.7	2	44	17	63	69.8
75 / 79	64	34	62	160	70.3	42	47	62	151	70.0	12	44	34	90	67.5
70 / 74	81	17	45	143	67.8	76	26	57	159	67.4	35	42	47	124	65.2
65 / 69	49	5	22	76	63.8	62	11	32	105	63.5	48	32	46	126	61.7
60 / 64	24	1	5	30	59.3	38	2	13	53	59.2	45	24	39	108	57.4
55 / 59	5	0	1	6	54.9	14	0	3	17	54.8	43	12	25	80	53.2
50 / 54	1			1	50.8	3		0	3	49.5	28	6	16	50	48.7
45 / 49						0			0	45.2	17	1	6	24	44.1
40 / 44											7	0	2	9	39.9
35 / 39											2		0	2	35.0
30 / 34											0			0	32.7
25 / 29															
20 / 24															
15 / 19															
10 / 14															
5 / 9															
0 / 4															
-5 / -1															
-10 / -6															
-15 / -11															
-20 / -16															

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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															
90 / 94		1	0	1	66.3										
85 / 89		4	0	4	67.7										
80 / 84		10	2	12	66.0		0		0	65.3					
75 / 79	0	22	6	28	63.6		2	0	2	62.3					
70 / 74	4	34	18	56	61.5	0	8	1	9	60.1		0		0	60.6
65 / 69	15	40	30	85	58.6	2	15	5	22	57.5	0	3	1	4	58.3
60 / 64	31	41	41	113	55.2	9	22	14	45	55.0	2	6	2	10	54.9
55 / 59	40	40	45	126	51.2	14	29	20	63	50.5	4	11	6	21	50.3
50 / 54	44	28	39	111	46.7	18	32	28	78	46.1	6	17	10	33	45.4
45 / 49	38	17	34	89	42.5	26	33	38	97	42.0	12	26	21	59	41.6
40 / 44	38	8	21	67	38.6	42	37	42	121	38.0	20	33	28	81	37.5
35 / 39	26	2	9	37	34.3	47	31	40	118	33.7	40	47	49	137	33.7
30 / 34	9	0	2	11	30.0	38	19	29	86	29.3	57	41	51	150	29.5
25 / 29	2		0	2	26.0	25	9	16	50	24.7	42	25	35	102	24.7
20 / 24	0			0	21.5	12	2	5	19	20.2	26	16	18	60	20.0
15 / 19						4	2	2	8	15.4	17	9	10	36	15.3
10 / 14						2	0	1	3	10.8	8	5	6	19	10.6
5 / 9						0	0	0	0	6.1	6	3	4	13	6.0
0 / 4						0			0	2.2	4	2	3	9	1.1
-5 / -1						0			0	-1.0	2	1	2	5	-2.9
-10 / -6											2	1	1	4	-7.5
-15 / -11											0	0	0	0	-12.2
-20 / -16											0	0		0	-16.5

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. 724467

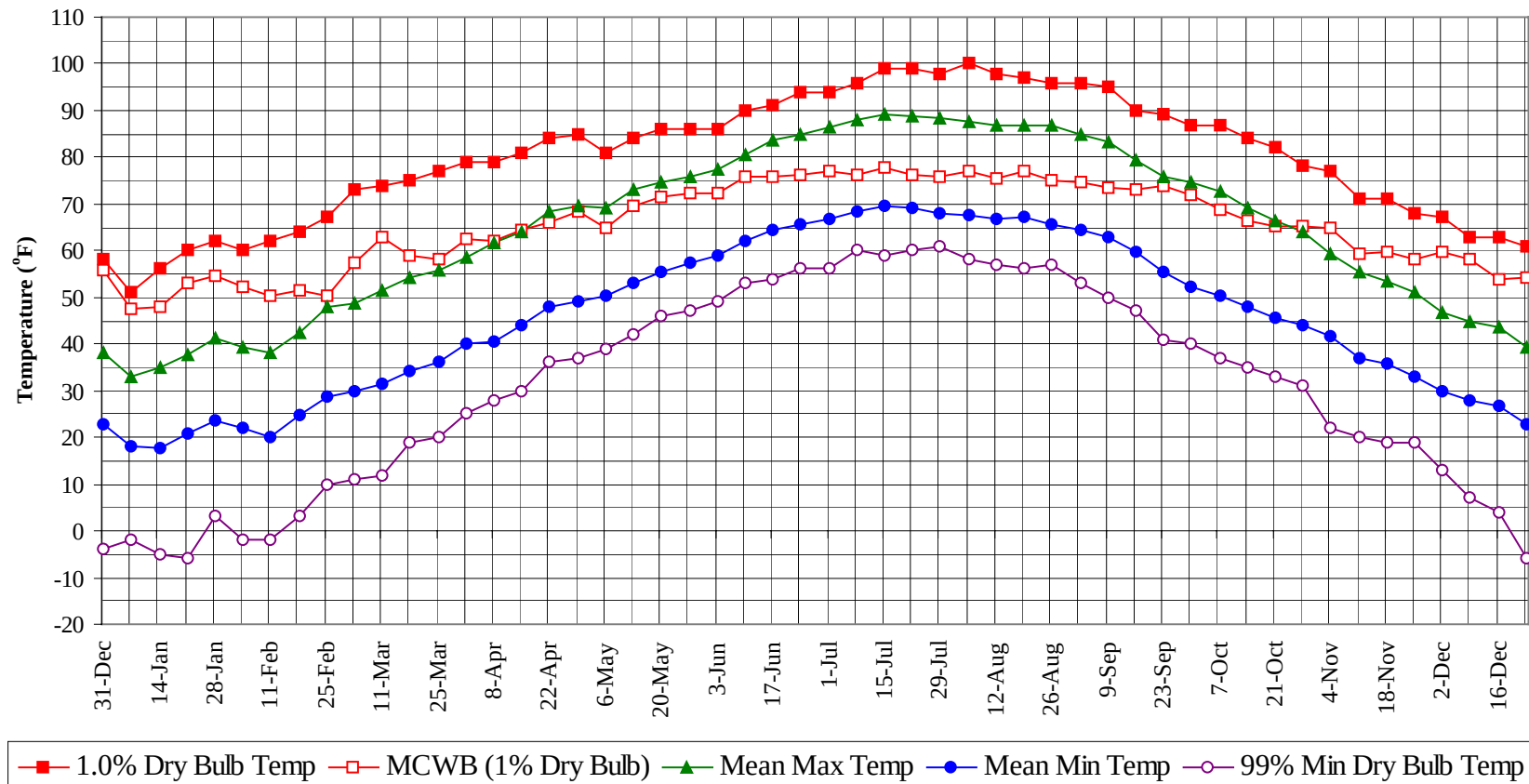
Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)

Period of Record = 1967 to 1996

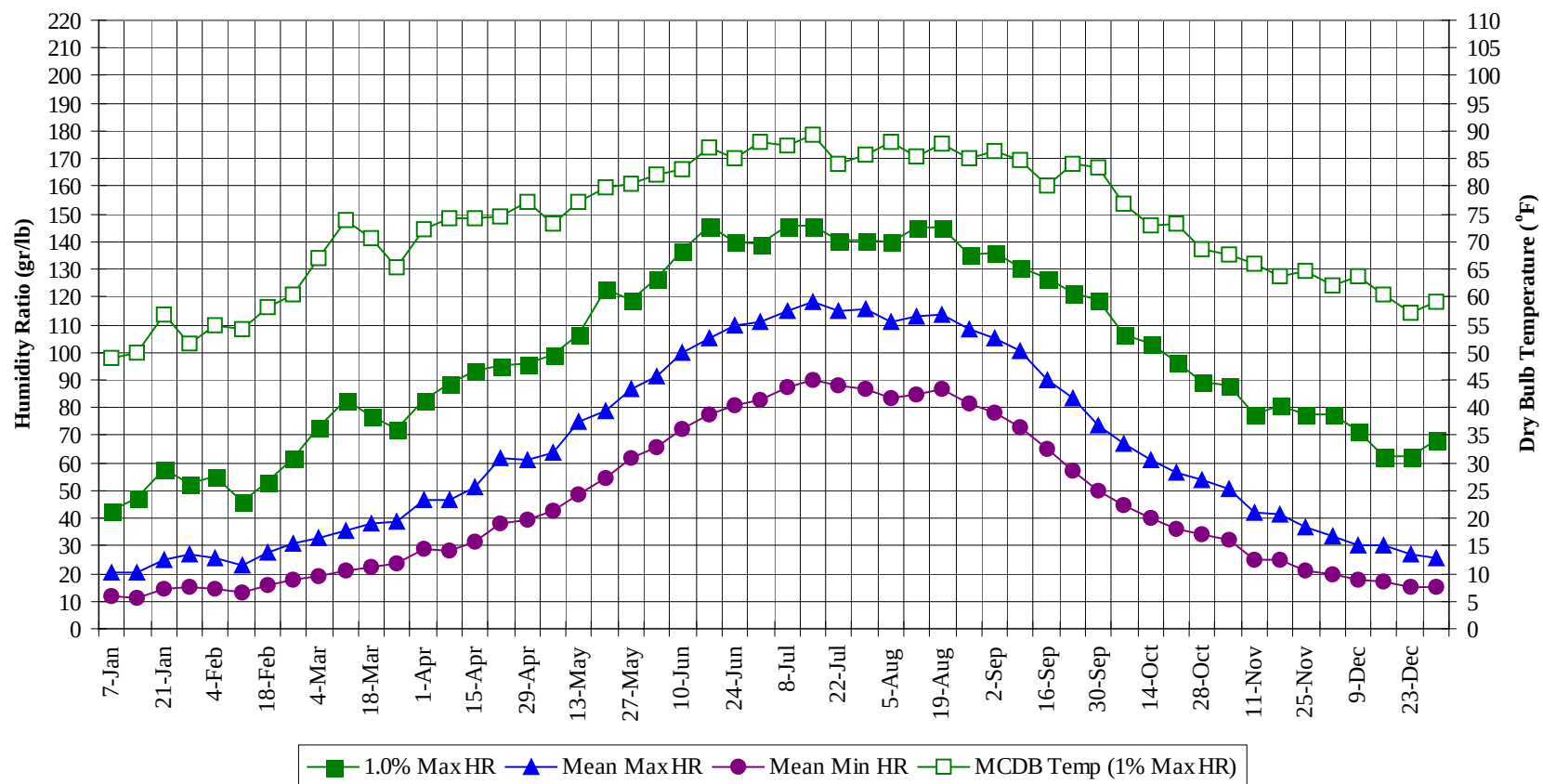
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
105 / 109		0		0	72.7
100 / 104		7	2	9	75.6
95 / 99		31	9	40	76.1
90 / 94		112	37	149	75.3
85 / 89	3	205	86	294	73.4
80 / 84	39	275	167	481	70.9
75 / 79	151	271	252	674	68.3
70 / 74	280	259	287	826	65.2
65 / 69	302	227	273	802	60.9
60 / 64	281	206	243	730	56.2
55 / 59	251	195	219	665	51.4
50 / 54	218	185	204	607	46.6
45 / 49	215	171	208	594	42.2
40 / 44	229	179	205	613	38.0
35 / 39	240	185	216	641	33.6
30 / 34	257	159	199	615	29.4
25 / 29	169	91	123	383	24.6
20 / 24	106	63	72	241	19.9
15 / 19	67	43	48	158	15.1
10 / 14	46	27	33	106	10.5
5 / 9	31	14	18	63	5.9
0 / 4	19	8	11	38	1.0
-5 / -1	9	3	4	16	-3.1
-10 / -6	6	2	2	10	-7.4
-15 / -11	2	0	1	3	-12.0
-20 / -16	1	0		1	-16.5

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Annual Summary of Temperatures

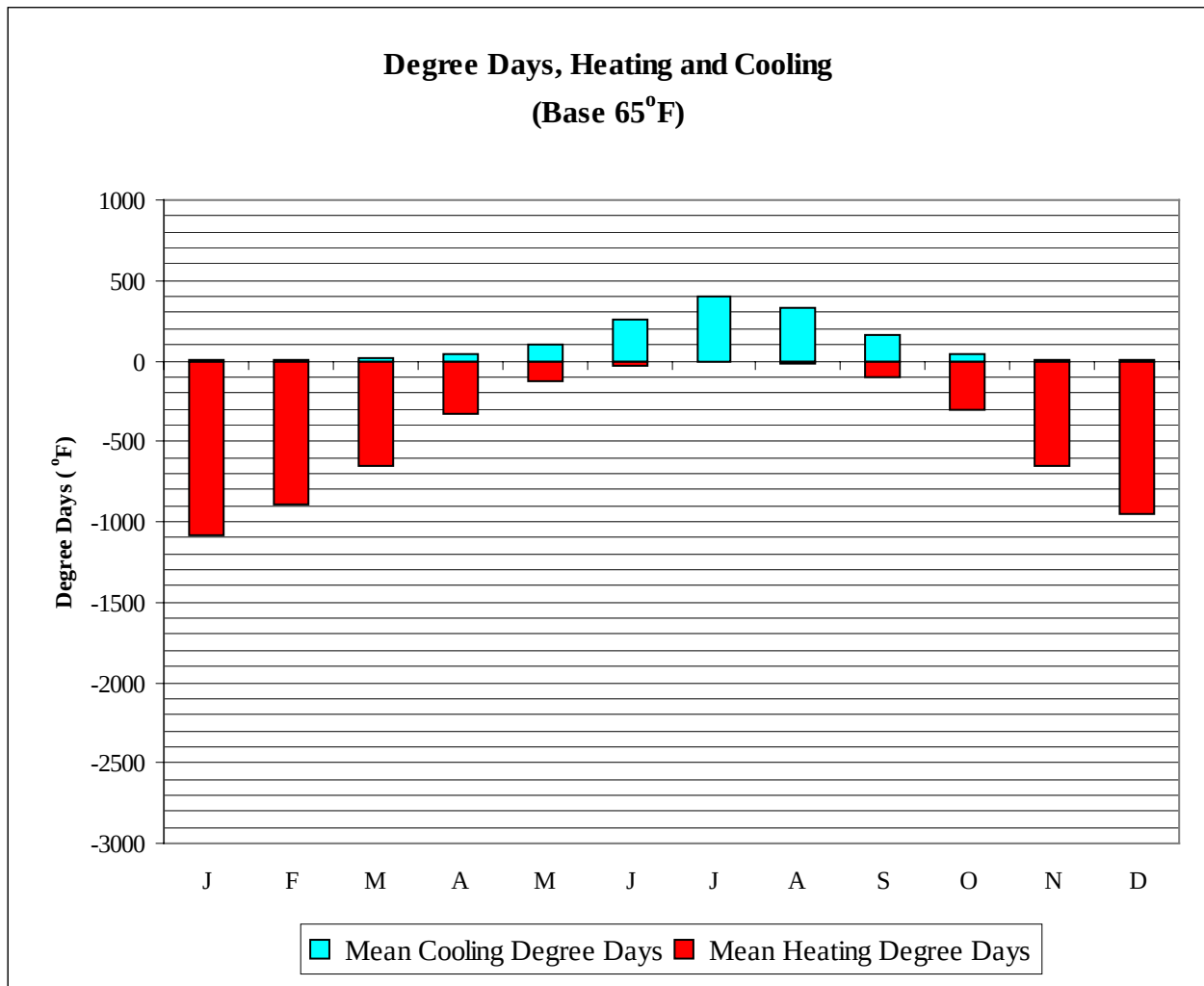


Long Term Humidity and Dry Bulb Temperature Summary



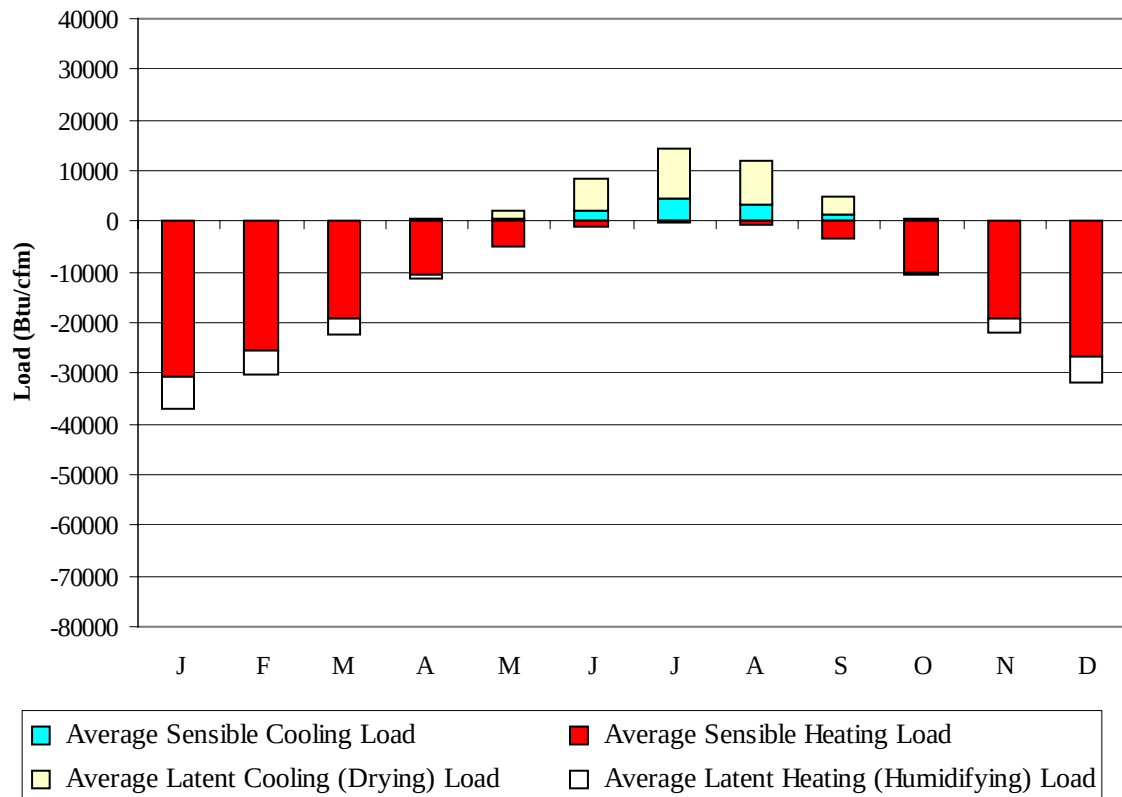
WHITEMAN AFB**MO****WMO No. 724467****Long Term Dry Bulb Temperature and Humidity Summary**

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	51.0	47.7	33.2	18.1	-2.0	42.7	48.8	20.5	11.8
14-Jan	56.0	47.8	34.9	17.6	-5.0	47.6	49.8	20.5	11.0
21-Jan	60.0	53.0	37.8	21.0	-6.0	58.1	56.7	25.2	14.2
28-Jan	62.0	54.5	41.4	23.6	3.0	52.5	51.5	26.6	14.9
4-Feb	60.0	52.2	39.2	22.1	-2.0	55.3	54.8	25.8	14.4
11-Feb	62.0	50.4	38.0	20.1	-2.0	46.2	54.2	23.0	12.8
18-Feb	64.0	51.7	42.3	24.7	3.0	53.2	58.0	27.5	15.8
25-Feb	67.0	50.4	47.9	28.7	10.0	61.6	60.3	30.7	18.0
4-Mar	73.0	57.3	48.6	30.0	11.0	72.8	67.1	33.1	19.3
11-Mar	74.0	62.8	51.3	31.4	12.0	82.6	73.7	35.5	20.9
18-Mar	75.0	59.1	54.4	34.2	19.0	77.0	70.7	38.2	22.2
25-Mar	77.0	58.0	55.9	36.2	20.0	72.1	65.2	39.0	23.5
1-Apr	79.0	62.4	58.7	39.9	25.0	82.6	72.2	46.3	28.9
8-Apr	79.0	62.2	61.6	40.6	28.0	88.9	74.2	46.5	28.2
15-Apr	81.0	64.3	64.2	44.0	30.0	93.1	74.2	51.2	31.7
22-Apr	84.0	66.1	68.3	48.0	36.0	95.2	74.7	61.7	37.8
29-Apr	85.0	68.3	69.6	48.9	37.0	95.9	77.3	61.1	39.4
6-May	81.0	64.7	69.3	50.1	39.0	99.4	73.2	64.0	42.8
13-May	84.0	69.4	73.1	53.0	42.0	106.4	77.1	74.8	48.5
20-May	86.0	71.4	74.8	55.6	46.0	122.5	79.7	79.1	54.7
27-May	86.0	72.3	75.9	57.5	47.0	119.0	80.3	86.5	61.4
3-Jun	86.0	72.5	77.2	58.8	49.0	126.7	82.0	91.0	65.4
10-Jun	90.0	75.9	80.5	62.1	53.0	136.5	83.0	99.8	72.4
17-Jun	91.0	76.0	83.7	64.6	54.0	145.6	87.0	105.3	77.4
24-Jun	94.0	76.1	84.8	65.6	56.0	140.0	85.1	109.6	80.7
1-Jul	94.0	77.1	86.2	66.7	56.0	139.3	88.1	110.7	82.8
8-Jul	96.0	76.1	88.0	68.5	60.0	145.6	87.4	115.1	87.3
15-Jul	99.0	77.9	89.0	69.5	59.0	145.6	89.2	118.1	90.2
22-Jul	99.0	76.4	88.8	69.3	60.0	140.7	84.0	115.1	88.2
29-Jul	98.0	76.0	88.5	68.1	61.0	140.7	85.6	115.5	86.9
5-Aug	100.0	76.9	87.8	67.5	58.0	140.0	88.0	110.8	83.7
12-Aug	98.0	75.3	86.8	66.9	57.0	144.9	85.4	112.7	85.0
19-Aug	97.0	77.0	86.8	67.3	56.0	144.9	87.8	113.7	86.9
26-Aug	96.0	74.9	86.9	65.8	57.0	135.1	85.2	108.6	81.6
2-Sep	96.0	74.6	84.9	64.6	53.0	135.8	86.4	105.2	77.8
9-Sep	95.0	73.6	83.3	62.9	50.0	130.9	84.6	100.5	73.0
16-Sep	90.0	73.1	79.2	59.6	47.0	126.7	80.1	89.9	64.8
23-Sep	89.0	73.8	75.6	55.4	41.0	121.8	84.0	83.1	57.2
30-Sep	87.0	72.1	74.7	52.4	40.0	119.0	83.6	73.7	49.8
7-Oct	87.0	68.7	72.6	50.4	37.0	106.4	77.0	67.1	44.5
14-Oct	84.0	66.5	69.0	47.8	35.0	102.9	72.8	61.2	40.1
21-Oct	82.0	65.4	66.4	45.7	33.0	96.6	73.2	56.7	36.0
28-Oct	78.0	65.1	64.2	44.0	31.0	89.6	68.7	53.9	34.2
4-Nov	77.0	64.7	59.2	41.8	22.0	88.2	67.8	50.3	32.2
11-Nov	71.0	59.2	55.5	36.9	20.0	77.7	65.9	41.8	25.1
18-Nov	71.0	59.8	53.6	35.9	19.0	80.5	63.8	41.7	25.2
25-Nov	68.0	58.3	51.1	32.9	19.0	77.7	64.6	36.9	21.1
2-Dec	67.0	59.8	46.6	29.8	13.0	77.7	62.1	33.5	19.6
9-Dec	63.0	58.3	44.6	28.0	7.0	71.4	63.9	30.3	17.8
16-Dec	63.0	53.9	43.5	26.6	4.0	62.3	60.4	30.0	16.9
23-Dec	61.0	54.1	39.2	22.9	-6.0	62.3	57.2	26.9	15.0
31-Dec	58.0	55.7	38.0	22.8	-4.0	68.6	59.0	25.7	15.0



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	1086
FEB	1	894
MAR	12	657
APR	45	331
MAY	105	131
JUN	262	24
JUL	396	6
AUG	334	13
SEP	166	96
OCT	46	310
NOV	5	650
DEC	0	948
ANN	1372	5146

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 Load	Average Latent Heating Load
	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)	(Btu/cfm)
JAN	0	-30462	0	-6357
FEB	0	-25359	0	-4994
MAR	29	-19286	20	-3026
APR	209	-10445	173	-994
MAY	557	-4819	1546	-86
JUN	2289	-1117	6295	0
JUL	4442	-342	9962	0
AUG	3433	-691	8470	0
SEP	1284	-3519	3402	-51
OCT	204	-9954	319	-733
NOV	4	-19101	17	-2760
DEC	0	-26891	1	-5025
ANN	12451	-151986	30205	-24026

Average Annual Solar Radiation – Nearest Available Site

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

City: KANSAS CITY
 State: MO
 WBAN No: 3947
 Lat(N): 39.3
 Long(W): 94.72
 Elev(ft): 1034

Stn Type: Secondary
 SHADING GEOMETRY IN DIMENSIONLESS UNITS
 Window: 1
 Overhang: 0.514
 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	700	940	1240	1610	1870	2050	2080	1830	1460	1120	740	590	1360
	Std Dev	57	71	114	112	128	127	144	129	130	107	73	53	42
	Minimum	560	790	980	1330	1560	1750	1800	1550	1060	930	590	490	1280
	Maximum	820	1100	1410	1870	2130	2360	2350	2040	1760	1390	890	700	1490
	Diffuse	300	420	560	680	790	810	760	680	560	410	320	280	550
Clear Day	Global	940	1280	1760	2230	2530	2640	2560	2290	1870	1390	990	820	1780
NORTH	Global	200	270	350	440	550	630	600	480	380	290	210	180	380
	Diffuse	200	270	350	430	500	530	510	450	370	290	210	180	360
Clear Day	Global	190	240	320	420	580	680	630	460	350	270	200	160	380
EAST	Global	480	610	760	940	1040	1110	1130	1040	880	730	500	400	800
	Diffuse	240	330	430	520	590	630	620	550	460	350	260	220	430
Clear Day	Global	700	900	1140	1350	1450	1470	1440	1350	1180	950	740	630	1110
SOUTH	Global	1170	1170	1100	990	850	780	840	980	1130	1280	1120	1030	1040
	Diffuse	350	420	490	530	560	560	560	550	500	430	350	320	470
Clear Day	Global	1940	1980	1800	1400	1060	910	960	1220	1610	1870	1900	1870	1540
WEST	Global	480	610	760	940	1070	1160	1190	1080	910	730	500	420	820
	Diffuse	250	330	430	530	600	640	630	570	470	360	260	220	440
Clear Day	Global	700	900	1140	1350	1450	1470	1440	1350	1180	950	740	630	1110

Average Annual Solar Heat and Illumination – Nearest Available Site

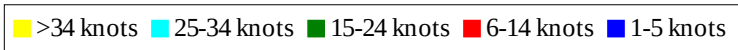
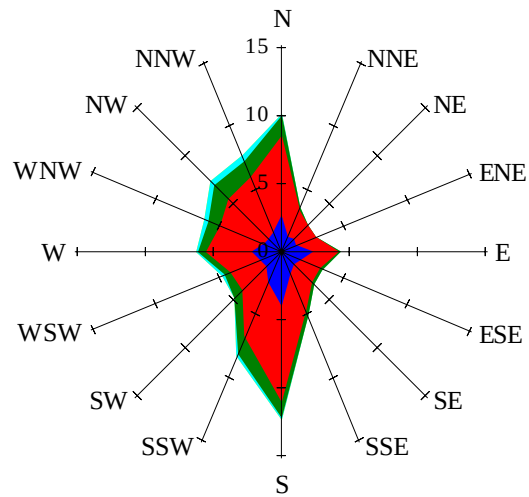
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

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	450	640	880	1160	1350	1490	1520	1330	1050	780	490	380	960
NORTH	Unshaded	140	190	240	300	360	410	390	320	260	200	150	120	260
	Shaded	120	170	220	270	320	360	350	290	230	180	130	110	230
EAST	Unshaded	330	430	540	670	740	790	810	740	620	510	350	280	570
	Shaded	300	380	470	580	630	680	700	650	550	460	310	250	500
SOUTH	Unshaded	880	850	760	640	520	470	500	610	760	920	840	780	710
	Shaded	860	790	610	420	350	350	380	550	810	810	760	590	590
WEST	Unshaded	330	430	540	670	760	830	850	780	650	510	350	280	580
	Shaded	300	380	470	580	660	710	740	680	570	460	320	260	510

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	34	69	82	68	32	42	81	101	98	73
	M.Cloudy	20	42	51	42	20	27	55	70	72	53
NORTH	M.Clear	9	13	15	13	9	20	16	17	17	16
	M.Cloudy	8	15	17	15	8	14	17	19	19	16
EAST	M.Clear	73	62	15	13	9	75	76	38	17	16
	M.Cloudy	24	31	17	15	8	35	46	30	19	16
SOUTH	M.Clear	35	70	83	69	33	11	28	45	43	24
	M.Cloudy	15	34	43	34	15	10	23	35	35	21
WEST	M.Clear	9	13	16	63	71	11	16	17	46	78
	M.Cloudy	8	15	17	32	26	10	17	19	37	50
M.Clear	(% hrs)	34	32	31	30	32	39	40	39	38	41
		Sept					Dec				
		9am	11am	1pm	3pm	5pm	9am	11am	1pm	3pm	5pm
HORIZ.	M.Clear	23	63	85	81	53	11	39	48	33	4
	M.Cloudy	13	37	53	53	34	7	23	29	20	3
NORTH	M.Clear	7	13	16	15	12	4	9	10	8	2
	M.Cloudy	6	14	17	17	13	3	9	11	8	2
EAST	M.Clear	61	73	35	15	12	36	43	10	8	2
	M.Cloudy	18	34	25	17	13	9	18	11	8	2
SOUTH	M.Clear	17	53	75	71	43	30	79	92	70	13
	M.Cloudy	8	27	41	41	25	8	27	34	24	4
WEST	M.Clear	7	13	16	48	75	4	9	16	49	18
	M.Cloudy	6	14	17	31	37	3	9	13	18	5
M.Clear	(% hrs)	46	47	47	46	47	35	36	35	36	37

Wind Summary - December, January, and February

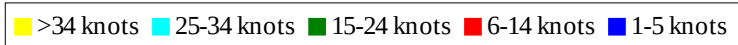
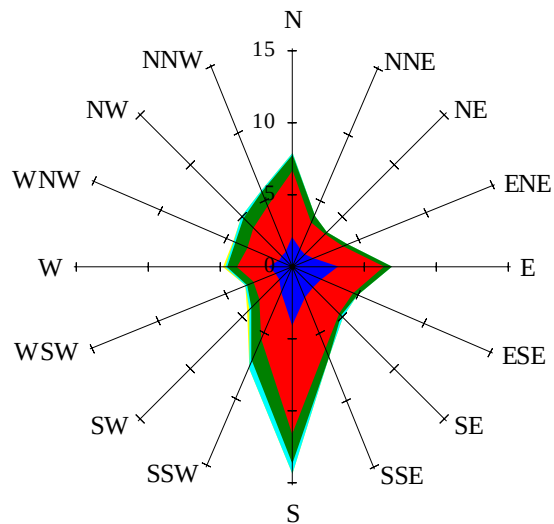
Labels of Percent Frequency on North Axis



Percent Calm = 8.87

Wind Summary - March, April, and May

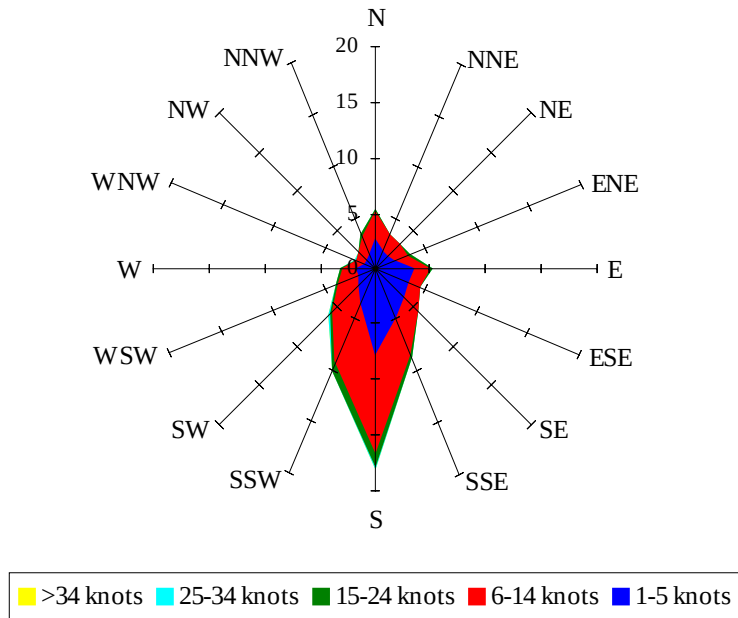
Labels of Percent Frequency on North Axis



Percent Calm = 8.98

Wind Summary - June, July, and August

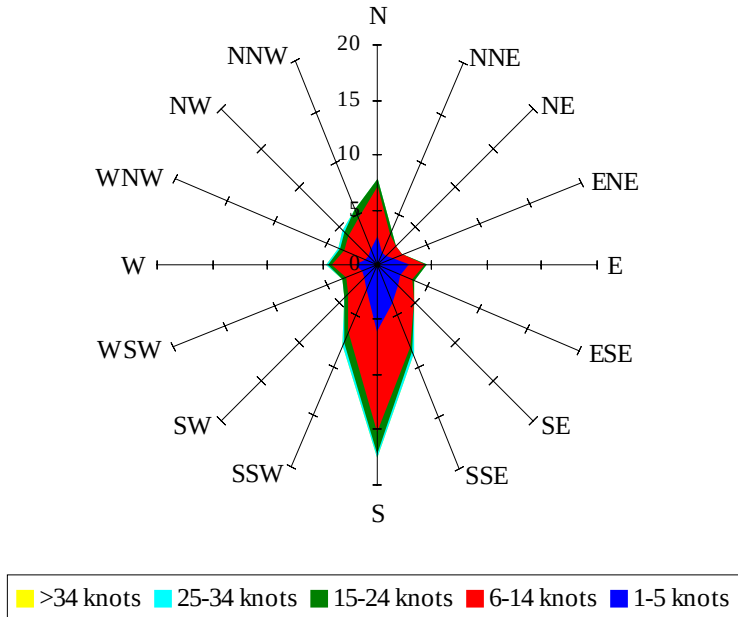
Labels of Percent Frequency on North Axis



Percent Calm = 14.43

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 12.52