

NORTHOLT RAF, UK

Latitude = 51.55 N

Longitude = 0.42 W

Period of Record = 1973 to 1996

WMO No. 036720

Elevation = 131 feet

Average Pressure = 29.82 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	86	66	66	9.0	E
0.4% Occurrence	82	65	68	8.5	E
1.0% Occurrence	79	64	66	8.3	E
2.0% Occurrence	76	63	65	8.9	E
Mean Daily Range	13	-	-	-	-
97.5% Occurrence	30	29	21	5.9	ENE
99.0% Occurrence	27	26	18	5.6	NNE
99.6% Occurrence	25	24	17	4.5	NE
Median of Extreme Lows	21	20	13	3.5	NNE
	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	71	84	90	7.6	E
0.4% Occurrence	68	79	83	7.6	WSW
1.0% Occurrence	66	76	79	7.8	SSW
2.0% Occurrence	64	72	74	8.3	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	94	74	0.63	6.7	WSW
0.4% Occurrence	89	72	0.60	6.5	SSW
1.0% Occurrence	84	70	0.56	7.0	SSW
2.0% Occurrence	80	69	0.54	7.6	SSW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		1	76	0	66

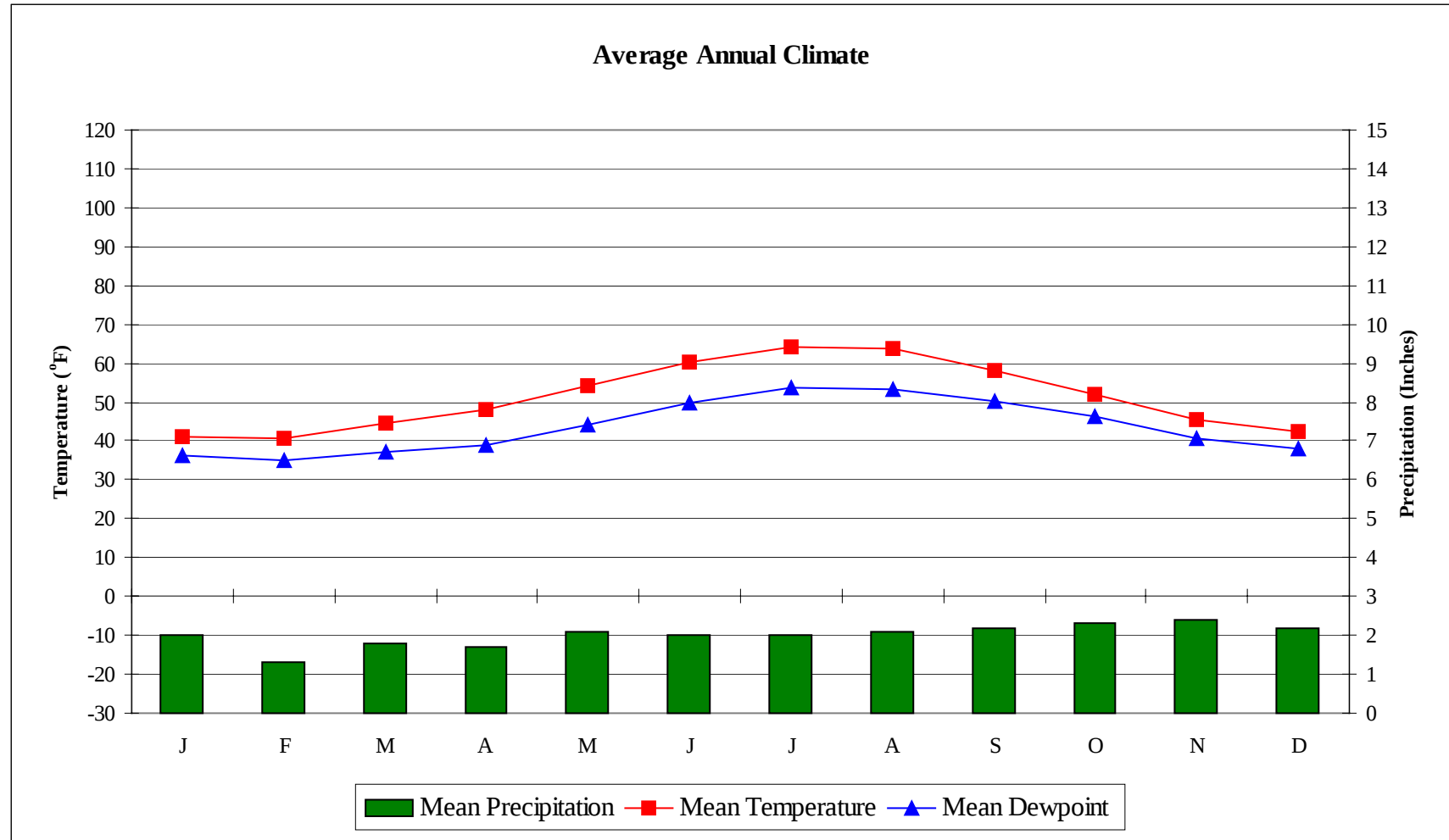
Other Site Data

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	N/A	N/A	0.0 + 0.1
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 (#)
54.0	N/A	N/A	28

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

NORTHOLT RAF, UK

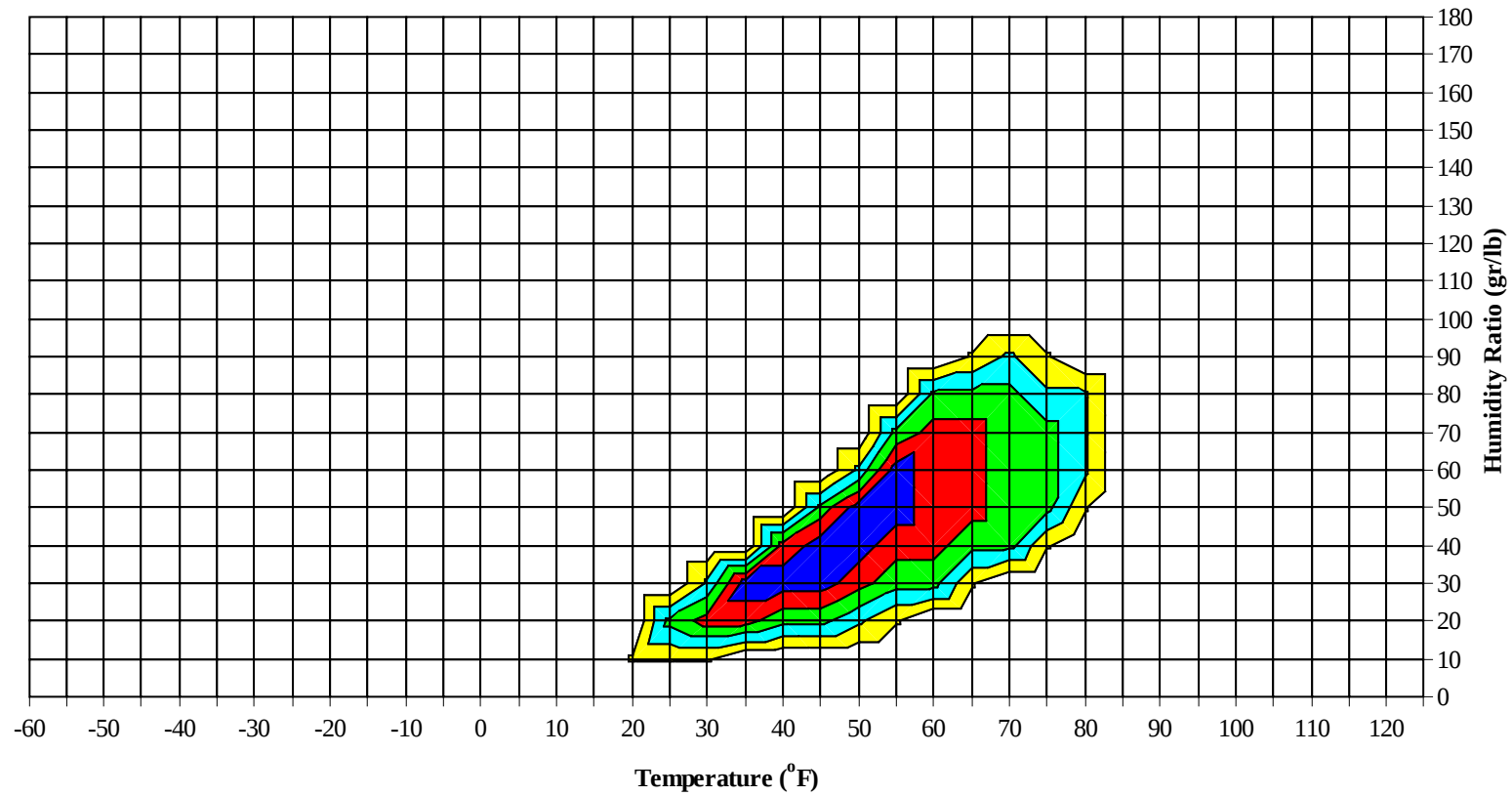
WMO No. 036720



NORTHOLT RAF, UK

WMO No. 036720

Long Term Psychrometric Summary

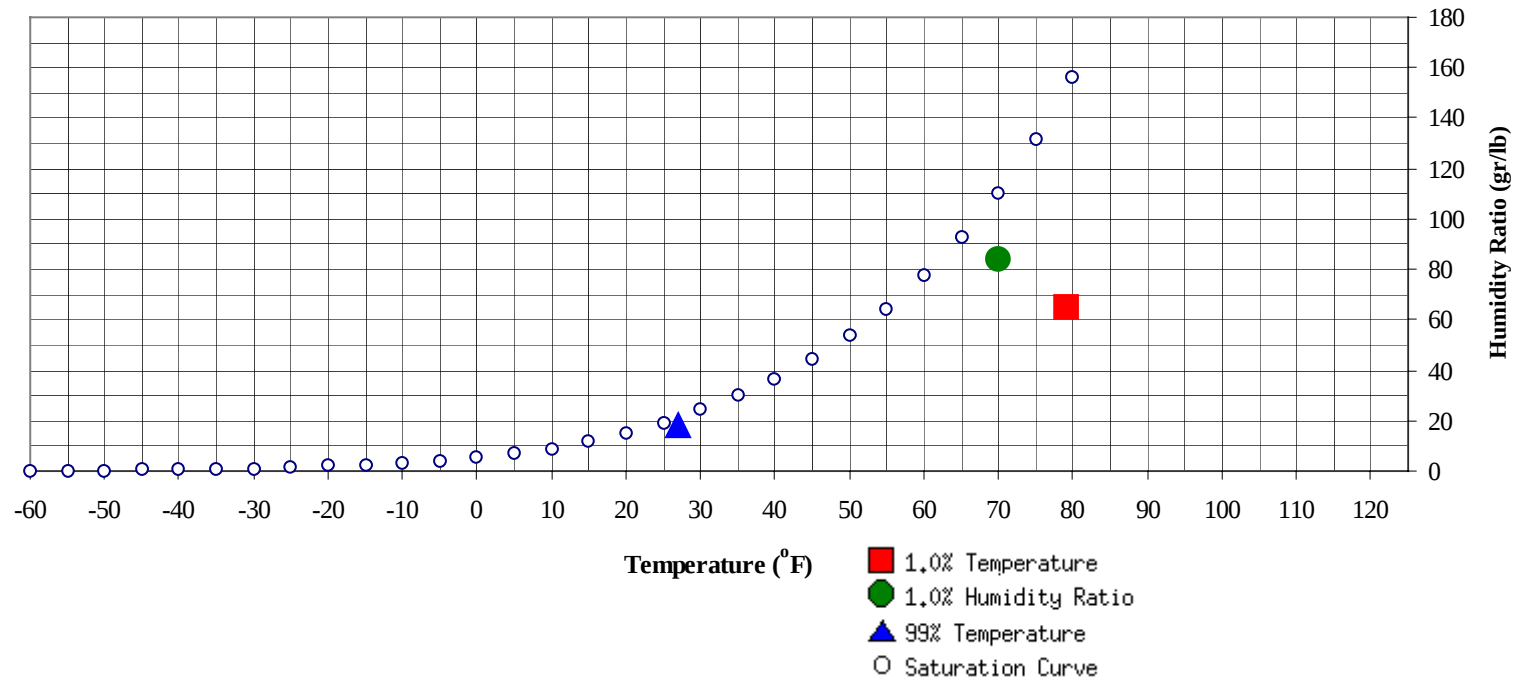


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

NORTHOLT RAF, UK

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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	27	18.1	9.3		84	70	64.9	62.1	29.9

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	79	65	64	29.1

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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											0	0	0	0	58.0
80 / 84											0	0	0	0	57.0
75 / 79							0	0	0	54.0	0	1	0	1	53.9
70 / 74							0	0	0	0	0	0	0	0	53.3
65 / 69						0	1	0	1	50.0	0	2	1	3	53.8
60 / 64	0			0		0	0	0	0	51.1	1	5	3	9	51.1
55 / 59	1	2	2	5	52.0	0	4	2	6	50.6	2	23	12	36	49.6
50 / 54	20	37	31	88	48.6	9	35	23	66	47.7	21	70	45	137	46.9
45 / 49	49	72	62	183	44.2	40	60	59	158	43.8	45	80	77	203	43.1
40 / 44	51	57	57	165	39.8	41	49	51	141	39.3	67	46	63	175	39.4
35 / 39	59	50	59	168	35.5	59	46	50	155	35.0	65	19	36	121	35.2
30 / 34	43	21	28	92	31.0	49	23	32	104	30.6	37	3	9	49	30.9
25 / 29	18	7	9	34	26.1	20	5	8	33	26.0	9	0	1	10	26.9
20 / 24	5	2	2	9	21.5	5	1	2	8	21.5	0	0	0	0	23.3
15 / 19	2	0	0	2	16.9	1	0	0	1	17.8	0	0		0	
10 / 14	0	0		0	11.3	0			0	12.0	0	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.

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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	09	17			01	09	17			01	09	17		
	To 08	To 16	To 00			To 08	To 16	To 00			To 08	To 16	To 00		
95 / 99											0 0 70.0				
90 / 94											1 0 1 68.6				
85 / 89											2 0 2 65.9				
80 / 84						1 0 1 63.0					7 4 11 65.4				
75 / 79						8 3 10 61.1					0 18 12 30 62.7				
70 / 74	3 1 5 57.6					0 14 8 23 58.9					2 32 25 59 60.4				
65 / 69	0 8 4 13 55.2					1 25 17 42 56.2					5 43 33 81 57.9				
60 / 64	0 22 13 34 52.2					6 50 35 90 53.7					27 69 58 155 55.6				
55 / 59	4 48 33 85 49.5					27 74 60 161 50.7					82 56 68 205 52.9				
50 / 54	29 73 63 164 46.4					82 57 71 210 48.2					87 12 33 133 49.6				
45 / 49	74 61 67 202 43.1					85 18 40 143 44.5					30 1 6 36 45.5				
40 / 44	70 21 39 129 39.6					33 2 11 46 40.2					5 0 0 5 41.5				
35 / 39	44 4 17 66 35.7					12 0 3 15 36.4					1 1 37.3				
30 / 34	18 0 3 20 31.4					3 0 3 32.0									
25 / 29	2 0 2 26.7														
20 / 24	0 0 0														
15 / 19															
10 / 14															

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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		
95 / 99						0			0	69.0					
90 / 94		1	0	1	67.4	2	0		2	68.9		0		0	
85 / 89		5	3	8	66.9	3	1		4	66.1	0	0		0	
80 / 84		15	8	23	65.7	11	7		18	64.9	0	1	0	1	65.7
75 / 79	0	33	22	55	63.8	0	29	19	48	63.4	0	7	3	10	63.9
70 / 74	5	57	44	105	61.5	2	57	43	102	61.3	0	23	10	33	61.0
65 / 69	20	62	53	134	59.7	14	68	52	133	59.1	2	49	27	78	58.7
60 / 64	73	59	67	199	57.6	72	63	72	206	57.7	26	89	68	183	56.6
55 / 59	101	16	43	160	54.4	103	16	43	162	54.8	76	57	78	211	53.6
50 / 54	43	1	8	52	50.5	45	1	10	56	50.5	76	14	40	130	50.1
45 / 49	6		0	6	46.4	12		1	13	46.4	41	1	13	55	45.8
40 / 44	0			0	43.5	1			1	41.8	15		1	16	41.5
35 / 39						0			0	38.3	4		0	4	37.5
30 / 34															
25 / 29															
20 / 24															
15 / 19															
10 / 14															

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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		
95 / 99															
90 / 94															
85 / 89															
80 / 84		0		0	65.0										
75 / 79		1		1	63.1										
70 / 74		3	0	3	61.9										
65 / 69	0	11	3	14	59.1		0		0	58.0					
60 / 64	7	48	24	79	56.7	0	7	1	8	56.7					
55 / 59	43	86	69	198	53.1	18	38	27	83	53.6	5	14	8	26	52.8
50 / 54	67	68	78	213	49.1	40	62	50	153	49.1	32	42	39	113	49.2
45 / 49	63	26	51	140	44.8	48	65	62	176	44.3	47	65	50	161	44.4
40 / 44	35	4	17	56	41.0	47	40	47	135	40.0	53	58	57	168	39.9
35 / 39	24	2	6	31	36.7	44	20	34	98	35.8	56	45	56	156	35.6
30 / 34	9	0	0	9	32.5	27	7	15	49	31.4	34	18	31	83	31.3
25 / 29	1			1	27.6	12	1	3	16	26.6	16	5	8	29	26.1
20 / 24	0			0	24.0	3	0	0	3	22.2	6	1	0	6	22.1
15 / 19						0			0	19.0	1	0	0	1	17.8
10 / 14															

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WMO No. 036720

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

Period of Record = 1973 to 1996

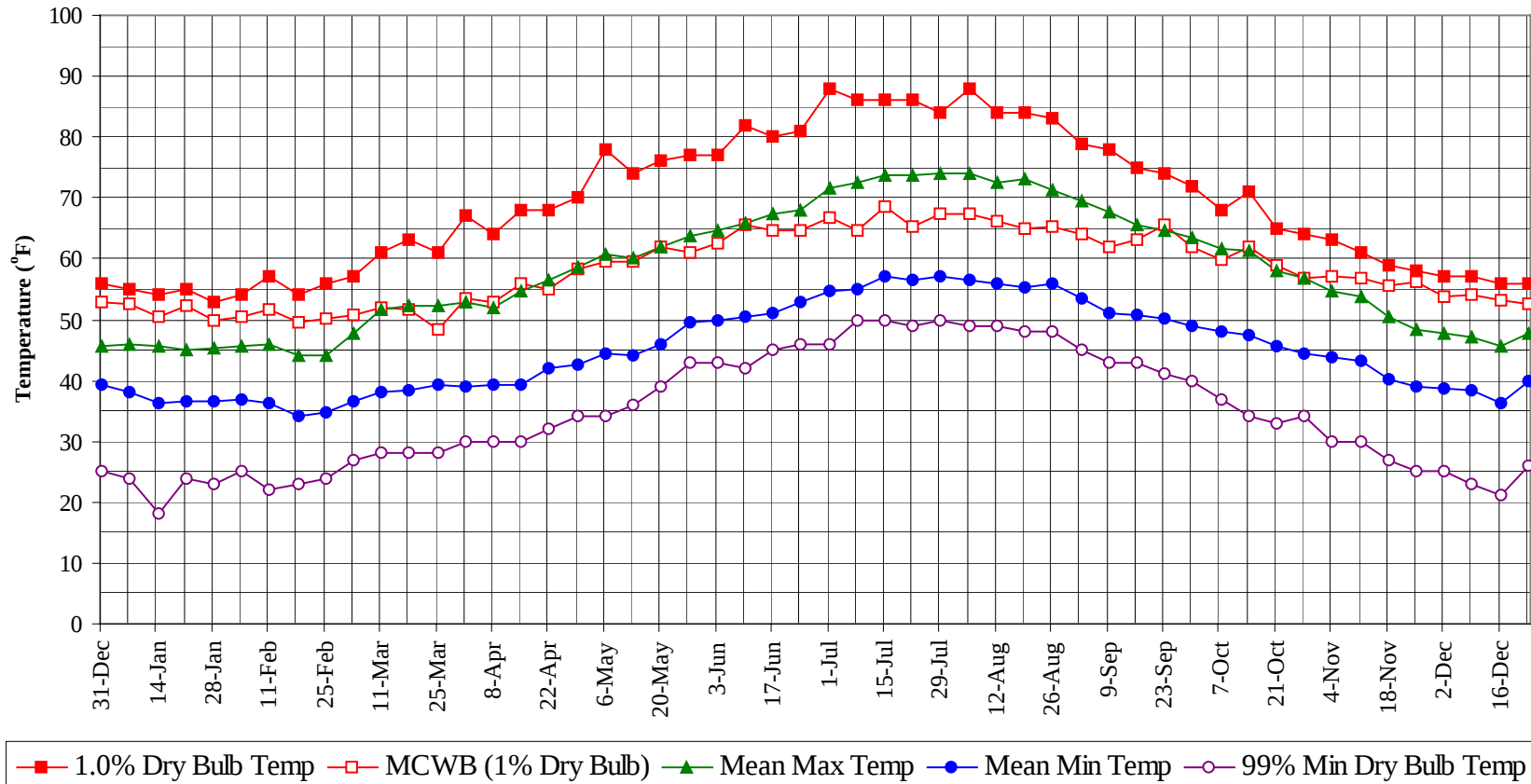
Annual Totals					
Temperature Range (°F)	Hour Group (LST)			Total Obs	M C W B (°F)
	01 To 08	09 To 16	17 To 00		
95 / 99		0		0	69.3
90 / 94		3	1	4	68.4
85 / 89	0	10	4	14	66.5
80 / 84	0	35	22	57	65.3
75 / 79	1	96	62	159	63.2
70 / 74	8	190	141	339	61.0
65 / 69	43	269	201	512	58.6
60 / 64	216	416	359	991	56.4
55 / 59	471	437	456	1364	52.9
50 / 54	558	471	490	1519	48.7
45 / 49	536	446	475	1457	44.1
40 / 44	412	273	327	1012	39.8
35 / 39	359	183	243	785	35.5
30 / 34	215	69	109	394	31.1
25 / 29	76	19	25	120	26.2
20 / 24	18	3	4	26	21.8
15 / 19	4	1	0	4	17.4
10 / 14	1	0		1	11.5

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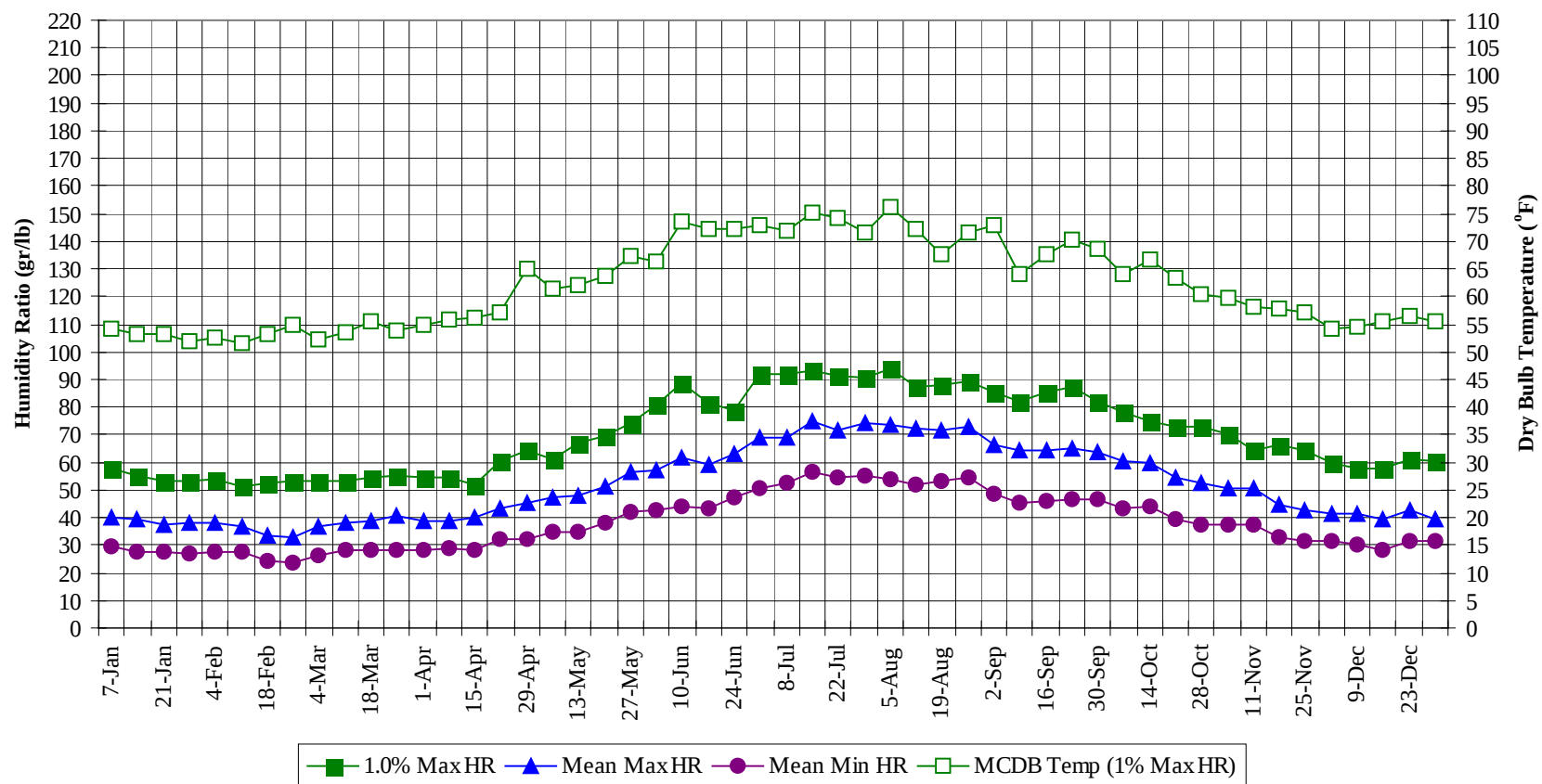
NORTHOLT RAF, UK

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Annual Summary of Temperatures



Long Term Humidity and Dry Bulb Temperature Summary

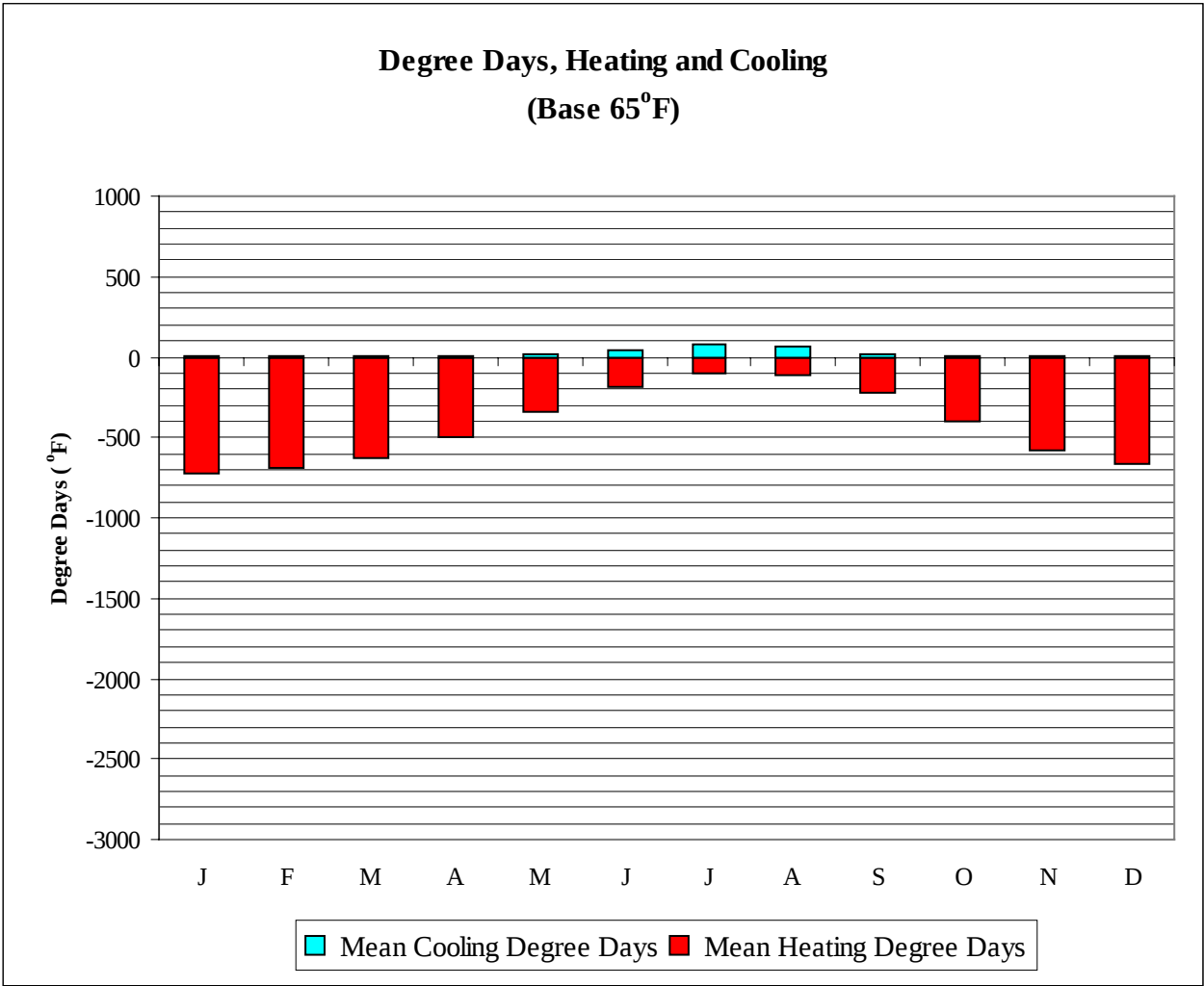


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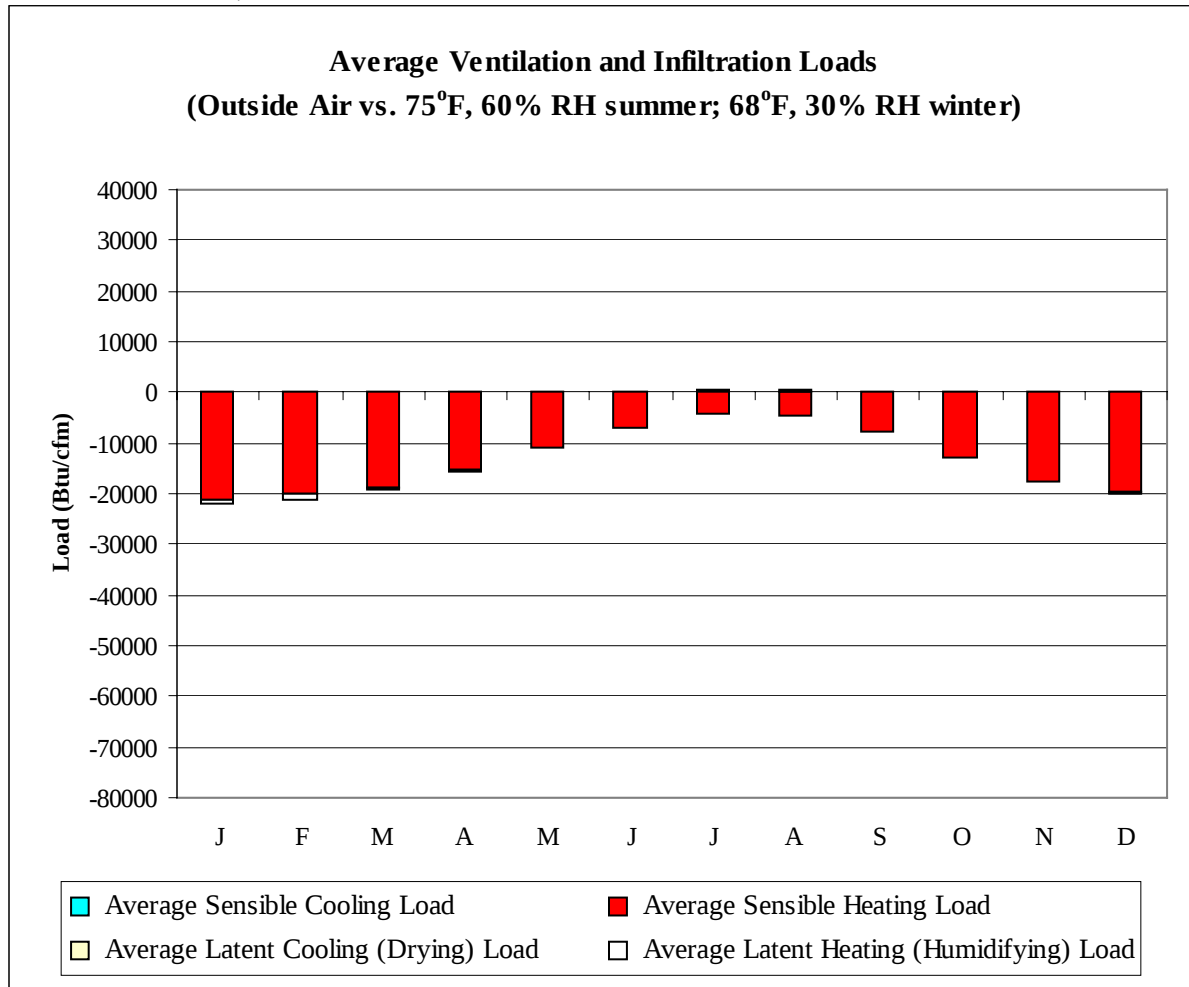
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Long Term Dry Bulb Temperature and Humidity Summary

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	55.0	52.5	46.1	38.1	24.0	58.1	54.1	40.2	29.4
14-Jan	54.0	50.4	45.5	36.2	18.0	55.3	53.2	39.2	27.6
21-Jan	55.0	52.2	45.1	36.6	24.0	53.2	53.1	37.4	27.3
28-Jan	53.0	50.0	45.4	36.5	23.0	53.2	52.0	38.2	26.8
4-Feb	54.0	50.6	45.8	36.8	25.0	53.9	52.5	38.1	27.7
11-Feb	57.0	51.7	46.1	36.2	22.0	51.1	51.7	36.8	27.4
18-Feb	54.0	49.6	44.1	34.0	23.0	52.5	53.4	33.4	24.3
25-Feb	56.0	50.2	44.3	34.7	24.0	53.2	54.7	33.0	23.9
4-Mar	57.0	50.8	47.8	36.4	27.0	53.2	52.1	36.9	26.1
11-Mar	61.0	51.8	51.6	38.1	28.0	53.2	53.5	38.1	28.5
18-Mar	63.0	51.8	52.3	38.3	28.0	54.6	55.6	38.9	28.3
25-Mar	61.0	48.4	52.4	39.2	28.0	55.3	54.0	40.6	28.4
1-Apr	67.0	53.6	52.8	39.1	30.0	54.6	54.8	38.9	28.0
8-Apr	64.0	52.7	52.1	39.4	30.0	54.6	55.7	38.7	28.9
15-Apr	68.0	55.8	54.6	39.4	30.0	51.8	56.3	40.2	27.9
22-Apr	68.0	55.0	56.5	42.1	32.0	60.2	57.1	43.6	32.1
29-Apr	70.0	58.4	58.7	42.7	34.0	64.4	65.0	45.0	32.0
6-May	78.0	59.4	60.8	44.5	34.0	60.9	61.3	47.5	34.5
13-May	74.0	59.5	60.2	44.2	36.0	67.2	62.1	47.8	34.8
20-May	76.0	61.9	61.8	46.1	39.0	69.3	63.8	51.4	37.8
27-May	77.0	61.1	63.6	49.5	43.0	74.2	67.4	56.6	42.2
3-Jun	77.0	62.7	64.7	49.8	43.0	80.5	66.3	57.4	42.6
10-Jun	82.0	65.5	65.9	50.5	42.0	88.9	73.7	61.5	44.3
17-Jun	80.0	64.6	67.4	51.2	45.0	81.2	72.2	59.2	43.2
24-Jun	81.0	64.6	68.1	52.7	46.0	79.1	72.1	62.8	47.0
1-Jul	88.0	66.9	71.5	54.7	46.0	91.7	72.8	69.0	50.8
8-Jul	86.0	64.7	72.6	55.1	50.0	91.7	71.8	69.2	52.7
15-Jul	86.0	68.6	73.6	57.0	50.0	93.1	75.1	74.5	56.7
22-Jul	86.0	65.1	73.6	56.6	49.0	91.0	74.3	71.8	54.4
29-Jul	84.0	67.5	73.9	57.1	50.0	90.3	71.7	74.1	55.4
5-Aug	88.0	67.4	74.1	56.6	49.0	93.8	76.1	73.6	54.2
12-Aug	84.0	66.3	72.4	56.0	49.0	87.5	72.3	72.2	52.1
19-Aug	84.0	65.0	73.3	55.3	48.0	88.2	67.6	71.7	52.9
26-Aug	83.0	65.3	71.4	55.8	48.0	89.6	71.5	72.8	54.3
2-Sep	79.0	64.1	69.4	53.6	45.0	85.4	72.8	66.7	48.4
9-Sep	78.0	62.0	67.6	51.1	43.0	81.9	64.0	64.3	45.3
16-Sep	75.0	63.0	65.5	50.7	43.0	85.4	67.6	64.1	46.3
23-Sep	74.0	65.5	64.7	50.3	41.0	87.5	70.2	64.7	46.8
30-Sep	72.0	61.9	63.5	49.0	40.0	81.9	68.8	63.6	46.9
7-Oct	68.0	59.9	61.7	47.9	37.0	78.4	64.0	60.4	43.5
14-Oct	71.0	62.0	61.4	47.5	34.0	74.9	66.8	59.6	43.8
21-Oct	65.0	58.8	57.9	45.7	33.0	72.8	63.3	54.5	39.6
28-Oct	64.0	56.8	56.8	44.4	34.0	72.8	60.5	52.8	37.7
4-Nov	63.0	57.2	54.8	43.7	30.0	70.0	59.7	50.4	37.6
11-Nov	61.0	56.9	53.9	43.3	30.0	64.4	58.0	50.9	37.4
18-Nov	59.0	55.6	50.4	40.1	27.0	66.5	57.8	44.7	32.9
25-Nov	58.0	56.2	48.3	38.8	25.0	64.4	57.0	42.9	31.6
2-Dec	57.0	53.8	47.7	38.6	25.0	59.5	54.3	41.6	31.5
9-Dec	57.0	54.0	47.2	38.4	23.0	58.1	54.5	41.1	30.1
16-Dec	56.0	53.2	45.6	36.3	21.0	58.1	55.6	39.2	28.4
23-Dec	56.0	52.7	47.8	40.0	26.0	60.9	56.4	42.8	31.4
31-Dec	56.0	52.8	45.6	39.3	25.0	60.2	55.6	39.4	31.4



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	722
FEB	0	687
MAR	1	627
APR	2	494
MAY	13	337
JUN	43	189
JUL	83	103
AUG	71	108
SEP	17	220
OCT	2	401
NOV	0	583
DEC	0	662
ANN	232	5133



	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	-21079	0	-751
FEB	0	-20021	0	-993
MAR	6	-18689	0	-652
APR	0	-15122	0	-358
MAY	25	-10970	3	-98
JUN	152	-6796	47	-8
JUL	330	-4225	175	0
AUG	247	-4466	99	0
SEP	21	-7798	35	-4
OCT	1	-12788	1	-55
NOV	0	-17440	0	-339
DEC	0	-19483	0	-490
ANN	782	-158877	360	-3748

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

No Solar Radiation
Data Available

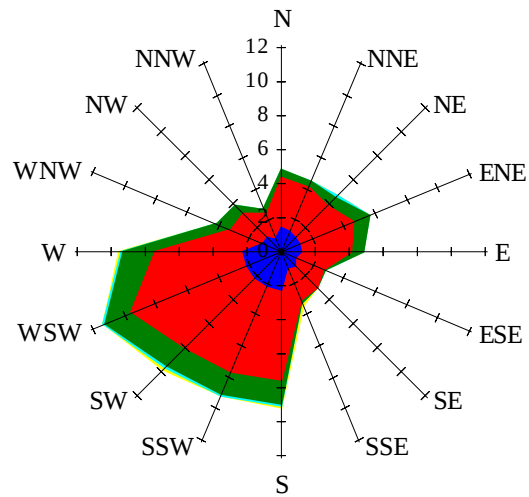


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

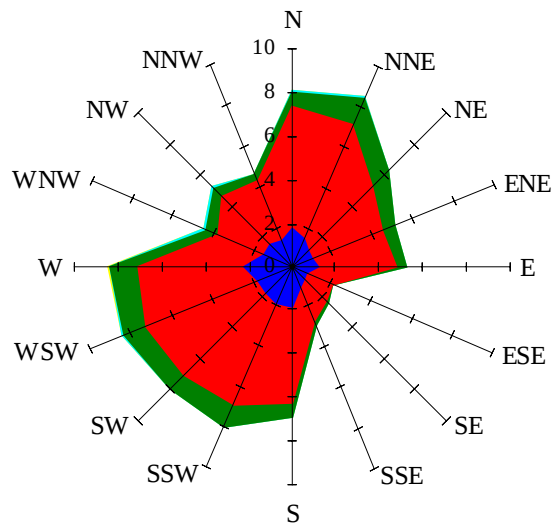
Labels of Percent Frequency on North Axis



Percent Calm = 7.86

Wind Summary - March, April, and May

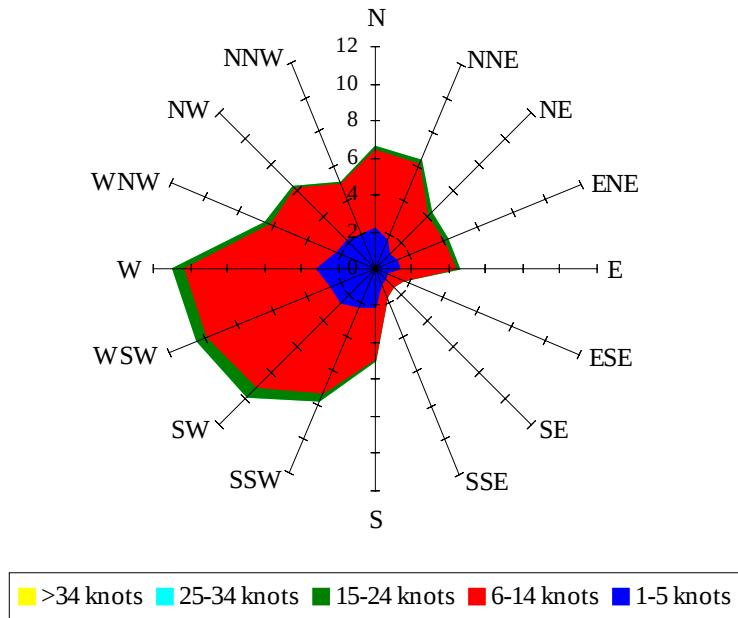
Labels of Percent Frequency on North Axis



Percent Calm = 5.97

Wind Summary - June, July, and August

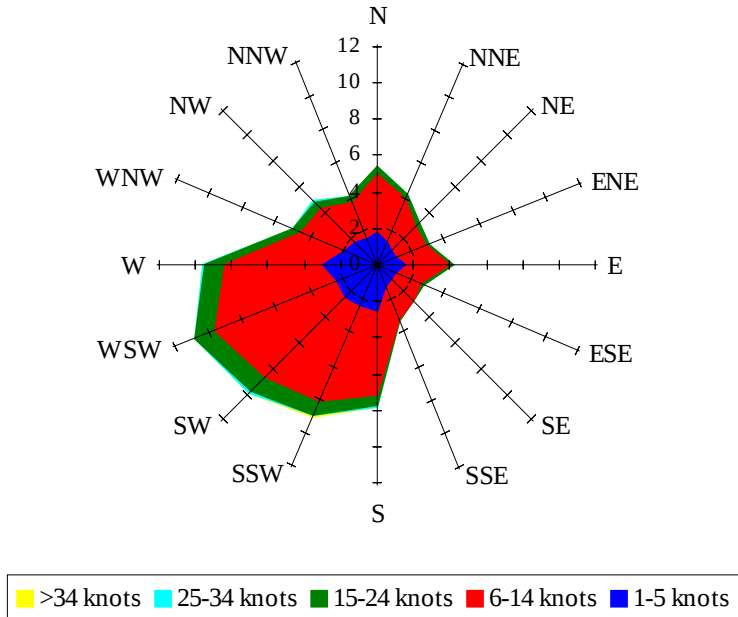
Labels of Percent Frequency on North Axis



Percent Calm = 7.84

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 10.50