

FYLINGDALES, UK

Latitude = 54.37 N

Longitude = 0.67 W

Period of Record = 1973 to 1996

WMO No. 032810

Elevation = 860 feet

Average Pressure = 29.02 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	77	65	73	13.7	SSE
0.4% Occurrence	72	63	72	11.2	SSW
1.0% Occurrence	69	61	69	11.8	SSW
2.0% Occurrence	66	59	64	12.0	WSW
Mean Daily Range	9	-	-	-	-
97.5% Occurrence	29	29	22	11.7	SSW
99.0% Occurrence	27	27	20	11.1	S
99.6% Occurrence	25	25	18	10.7	SW
Median of Extreme Lows	21	21	14	11.4	SSW
	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	67	72	90	11.1	WSW
0.4% Occurrence	64	69	81	11.4	WSW
1.0% Occurrence	62	66	76	11.5	SSW
2.0% Occurrence	60	64	71	11.7	WSW
	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	86	66	0.56	11.9	S
0.4% Occurrence	84	66	0.55	10.9	SW
1.0% Occurrence	78	64	0.51	12.0	WSW
2.0% Occurrence	74	62	0.48	12.6	SW
Air Conditioning/ Humid Area Criteria	# of Hours	T ≥ 93°F	T ≥ 80°F	T _{wb} ≥ 73°F	T _{wb} ≥ 67°F
		0	2	1	11

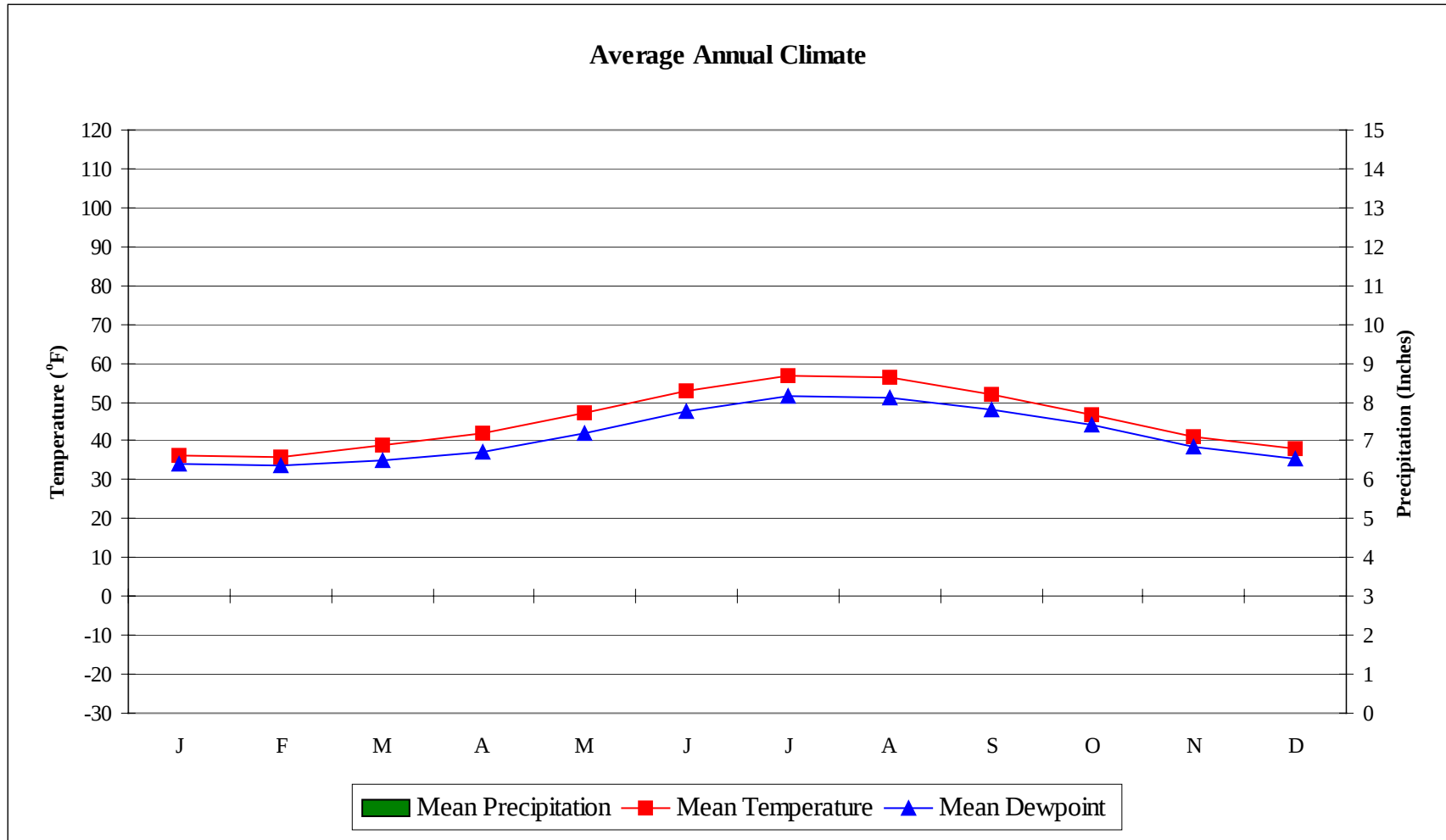
Other Site Data

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
5	N/A	N/A	0.0 + 0.0
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 (#)
47.9	N/A	N/A	29

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

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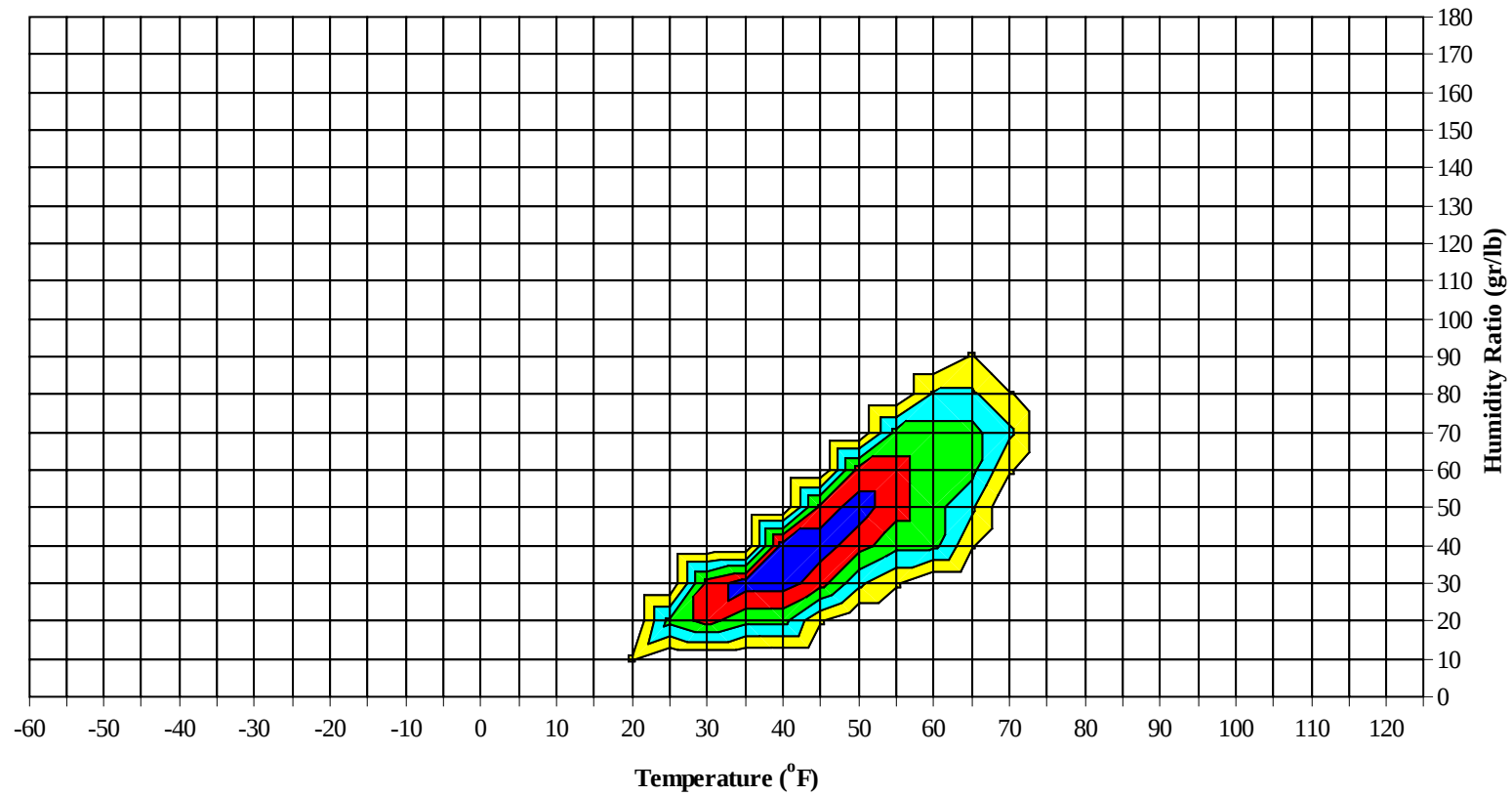


No Precipitation Data Available

FYLINGDALES, UK

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Long Term Psychrometric Summary

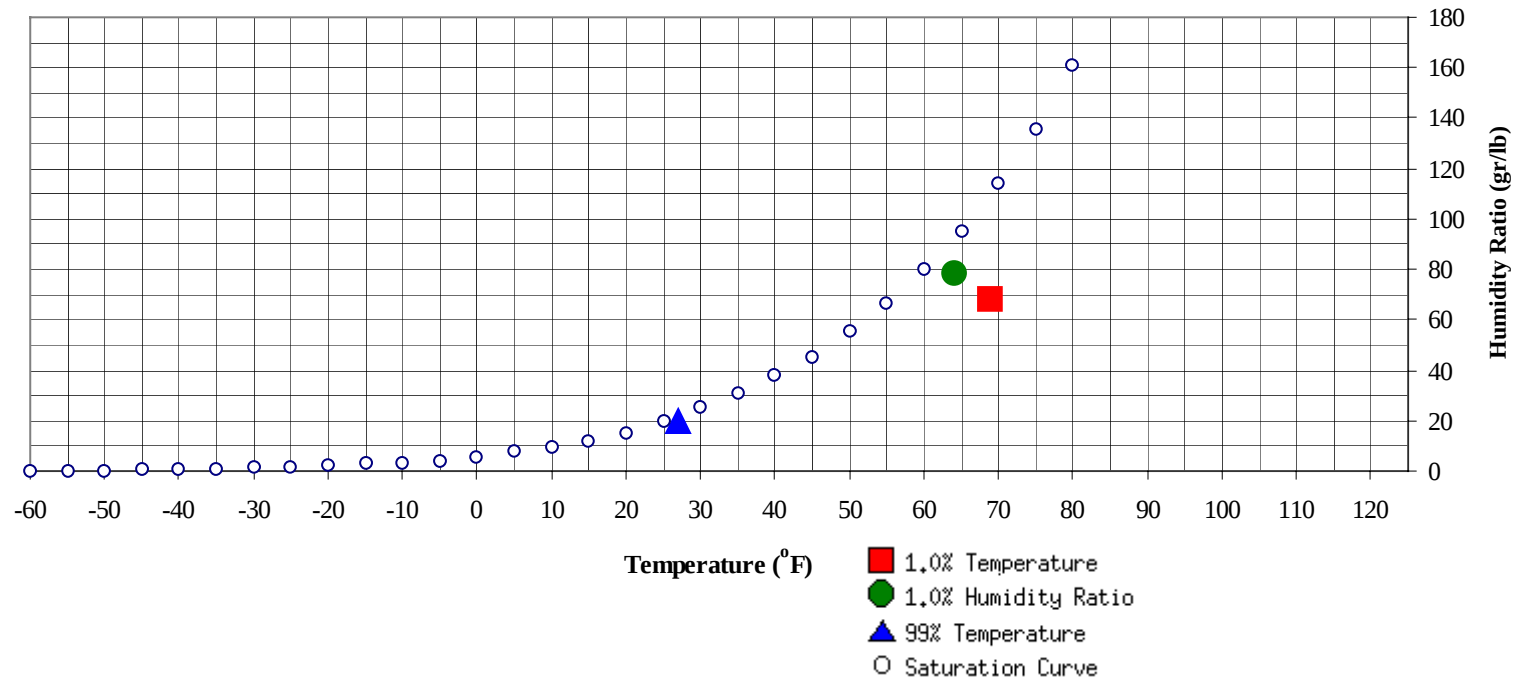


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

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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)
	27	19.8	9.5		78.4	64	61.2	59.6	27.6

1.0% Dry Bulb	(°F)	MCHR (gr/lb)	MCWB (°F)	Enthalpy (btu/lb)
	69	68.2	61.2	27.2

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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		
85 / 89															
80 / 84															
75 / 79															
70 / 74															
65 / 69															
60 / 64												0	0	0	53.2
55 / 59	0			0	58.0		0		0	53.0	3	1		4	50.1
50 / 54	1	3	4	8	48.2	0	5	3	7	49.0	1	16	7	25	47.8
45 / 49	17	27	20	65	45.0	11	25	16	52	44.5	16	51	28	95	43.9
40 / 44	38	47	39	124	40.7	29	45	35	109	40.3	40	68	54	162	40.0
35 / 39	70	78	77	225	36.1	62	66	66	194	35.9	88	73	88	250	36.0
30 / 34	89	73	83	244	31.7	87	66	81	234	31.7	86	35	62	183	31.7
25 / 29	26	16	21	64	26.9	32	15	23	70	27.2	16	2	7	25	27.3
20 / 24	5	3	4	11	21.7	3	2	2	6	22.0	1	0		1	22.8
15 / 19	1	1	1	3	18.2	0	0	0	0	17.6	0	0		0	17.3

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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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		
85 / 89															
80 / 84															
75 / 79															
70 / 74															
65 / 69		1		1	55.9		3	1	4	61.3			0	0	62.7
60 / 64		5	1	6	53.1		5	1	6	57.1			2	1	3 65.8
55 / 59		14	4	19	50.2		18	4	22	54.4			11	2	13 63.0
50 / 54	0	35	18	59	47.4	0	44	18	65	51.4	1	17	5	24	59.5
45 / 49	5	59	40	127	43.8	3	60	45	133	48.5	7	38	20	64	56.4
40 / 44	28	72	67	197	40.2	75	76	74	225	44.7	25	64	45	133	53.1
35 / 39	58	44	79	218	36.2	90	37	76	202	40.9	71	74	76	221	49.8
30 / 34	94	8	28	83	31.9	46	5	27	78	36.6	96	32	73	202	45.8
25 / 29	47	0	2	10	27.0	7	0	3	9	32.0	34	3	17	54	41.6
20 / 24	8	0		0	23.0	0		0	0	27.5	5	0	2	7	37.5
15 / 19	0					0					0		0	0	33.3

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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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		
85 / 89							0		0	63.0					
80 / 84		0	0	0	67.3		0	0	0	64.8					
75 / 79		4	0	4	63.9		4	0	4	64.1					
70 / 74		18	5	23	62.3		17	4	21	62.3		3	0	3	62.5
65 / 69	0	34	12	47	60.0	0	30	9	38	60.2	0	7	1	8	60.0
60 / 64	15	69	41	125	57.4	17	64	39	120	57.4	1	33	11	45	57.6
55 / 59	70	84	85	239	54.5	60	92	79	231	54.4	24	81	50	156	54.0
50 / 54	111	36	81	229	50.7	110	38	87	235	50.8	76	82	89	248	50.2
45 / 49	49	3	22	74	46.3	54	3	29	86	46.5	95	30	69	194	45.9
40 / 44	3		1	4	41.9	7		2	8	42.0	34	3	17	54	41.5
35 / 39											8		3	11	37.2
30 / 34											1			1	33.3
25 / 29															
20 / 24															
15 / 19															

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 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		
85 / 89															
80 / 84															
75 / 79															
70 / 74		0		0	62.5										
65 / 69		1	0	1	59.5										
60 / 64	0	5	2	7	58.0		0		0	59.0					
55 / 59	8	28	16	52	54.3	0	3	2	4	53.9		0	0	0	52.0
50 / 54	45	84	57	185	50.2	15	24	19	58	50.3	7	10	8	25	49.8
45 / 49	84	87	88	260	45.5	41	58	46	146	45.7	28	32	30	89	45.6
40 / 44	65	32	58	156	41.1	62	75	64	201	40.8	45	56	47	147	40.8
35 / 39	34	9	24	67	36.9	76	58	72	205	36.3	84	87	89	259	36.1
30 / 34	12	1	4	16	32.4	41	21	32	94	31.9	66	51	61	177	31.8
25 / 29	0			0	26.7	5	2	4	12	27.0	16	11	12	39	27.0
20 / 24						0	0	0	0	21.6	3	2	2	6	22.5
15 / 19						0			0	18.0	1	0	0	1	17.6

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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Period of Record = 1973 to 1996

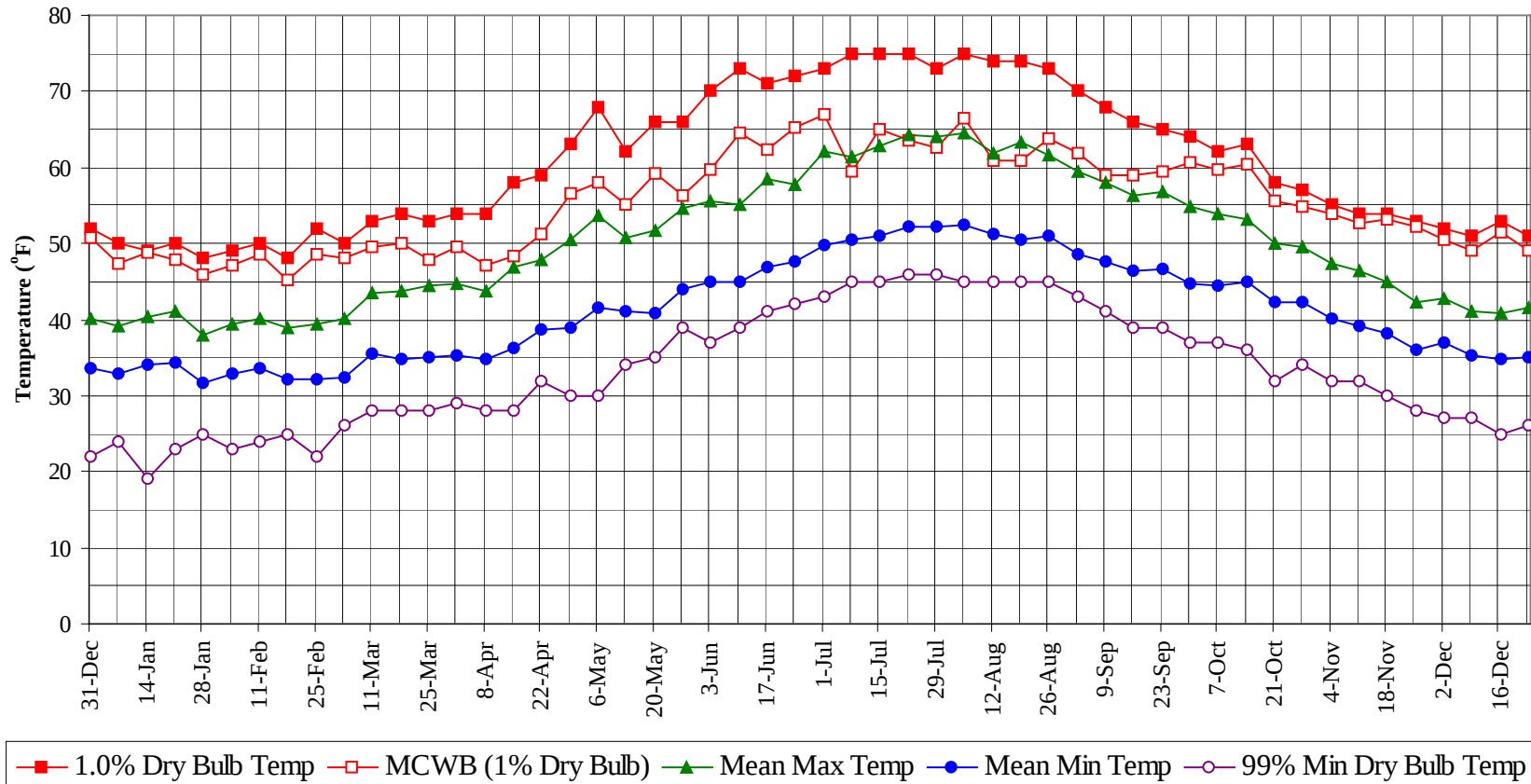
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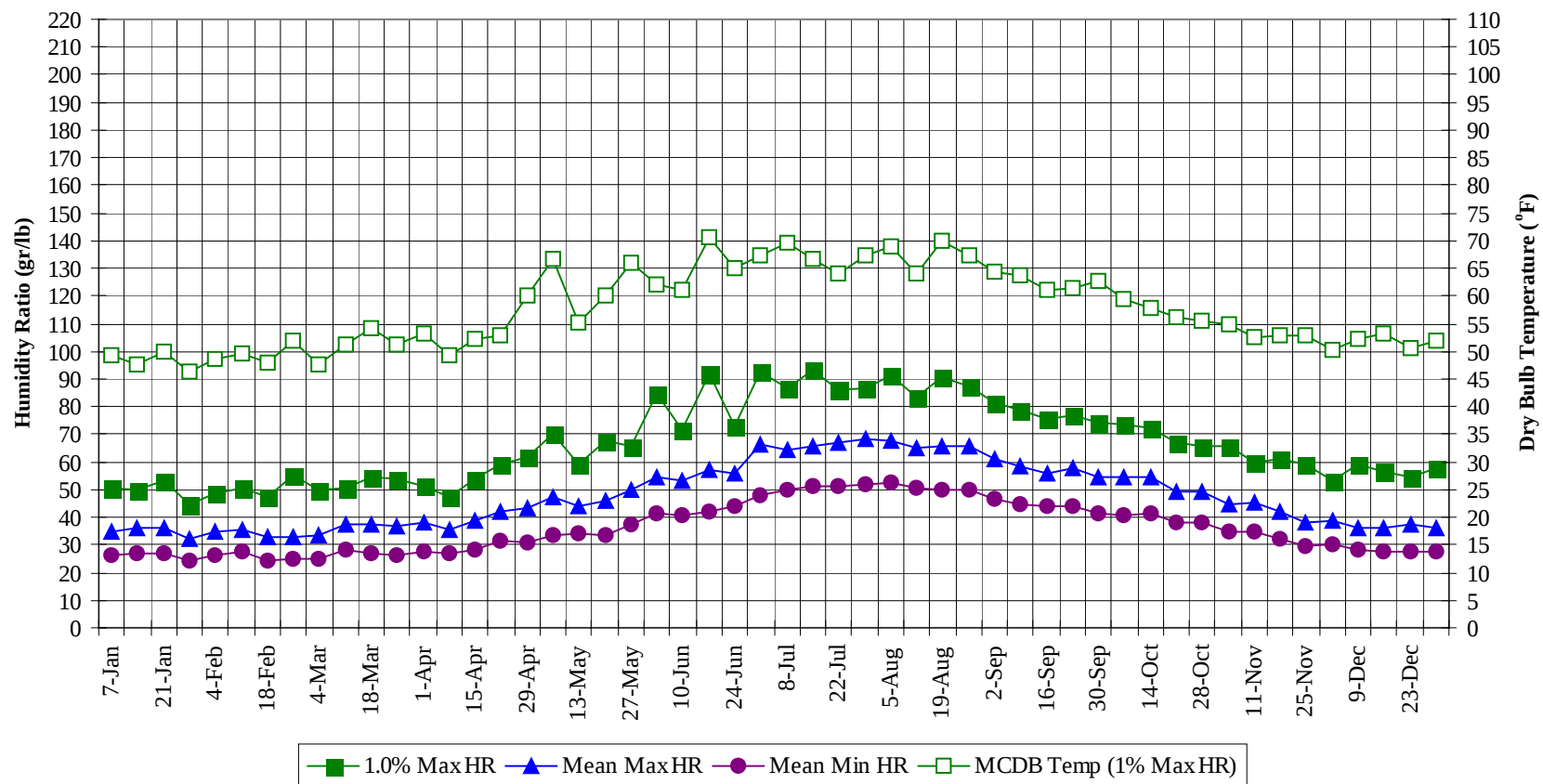
Annual Summary of Temperatures



FYLINGDALES, UK

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Long Term Humidity and Dry Bulb Temperature Summary

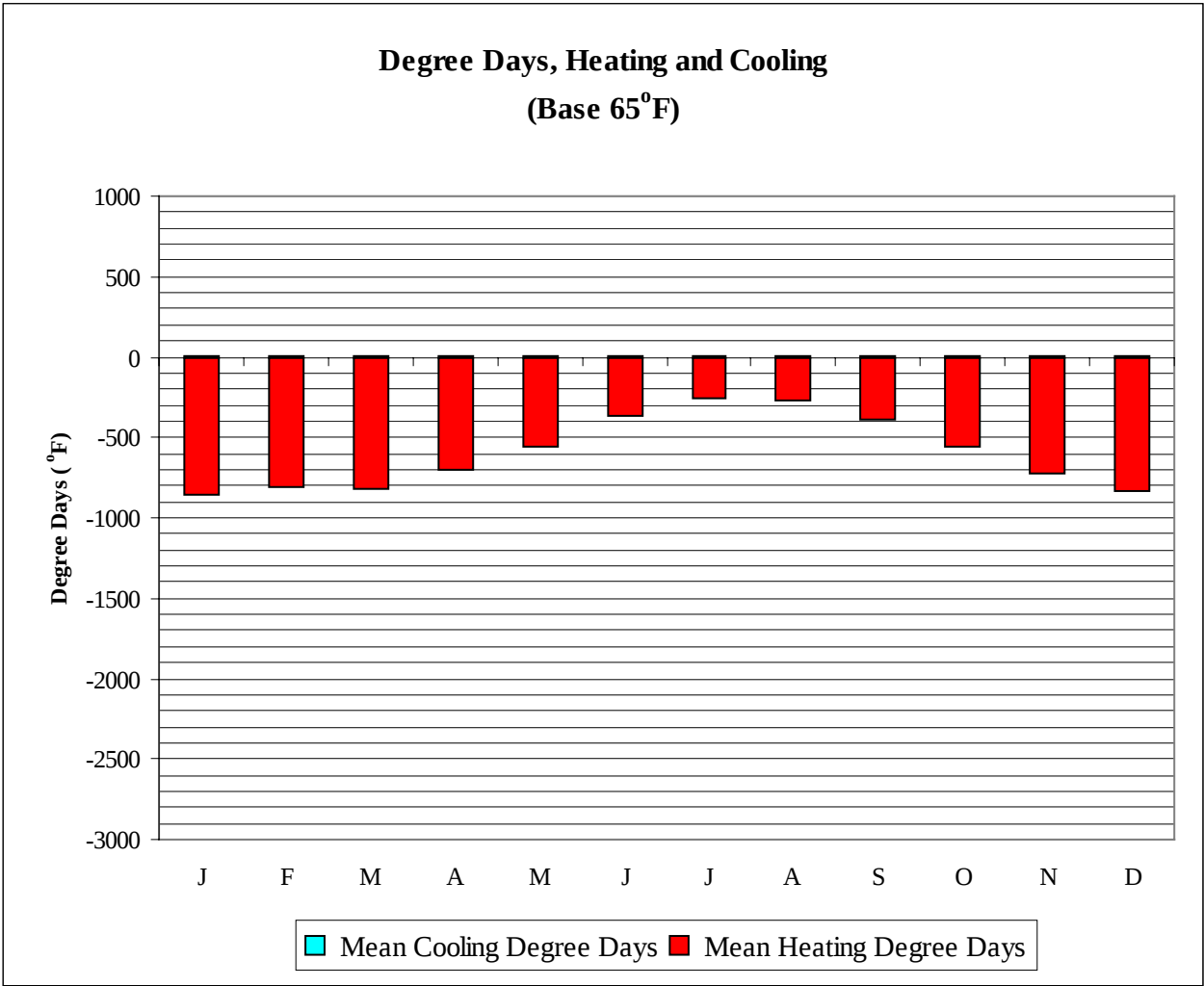


FYLINGDALES, UK

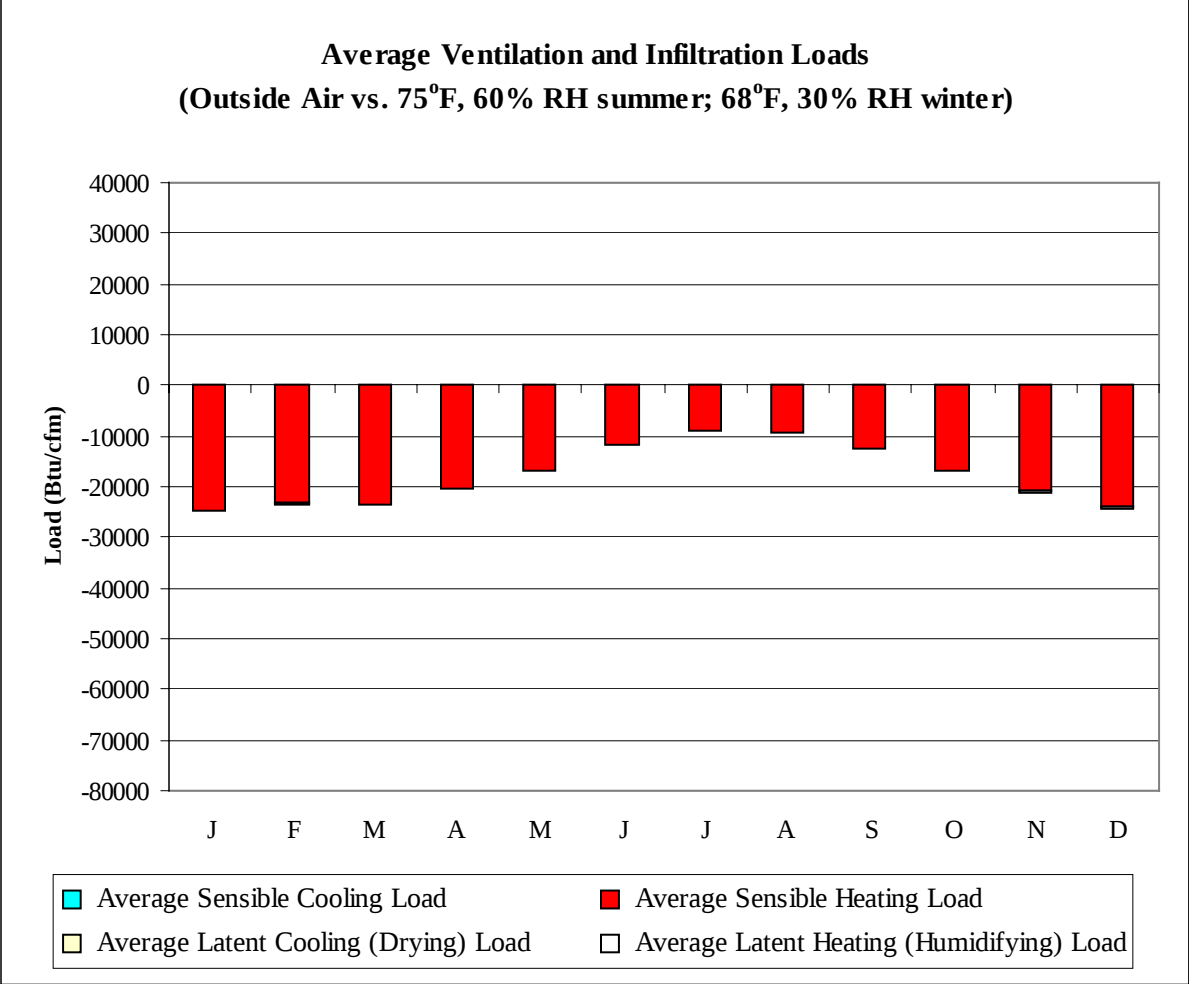
WMO No. 032810

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	50.0	47.4	39.1	32.9	24.0	50.4	49.3	34.9	26.3
14-Jan	49.0	48.8	40.4	34.1	19.0	49.7	47.6	35.9	27.1
21-Jan	50.0	47.9	41.1	34.2	23.0	53.2	50.0	36.2	26.8
28-Jan	48.0	46.0	38.0	31.7	25.0	44.8	46.3	32.3	24.2
4-Feb	49.0	47.2	39.5	32.8	23.0	48.3	48.5	34.5	26.3
11-Feb	50.0	48.5	40.2	33.6	24.0	50.4	49.7	35.2	27.5
18-Feb	48.0	45.3	38.9	32.2	25.0	47.6	47.8	32.7	24.2
25-Feb	52.0	48.7	39.3	32.1	22.0	55.3	51.8	33.0	24.7
4-Mar	50.0	48.0	40.1	32.5	26.0	49.7	47.5	33.8	25.2
11-Mar	53.0	49.4	43.5	35.6	28.0	50.4	51.1	37.4	28.0
18-Mar	54.0	50.0	43.7	34.9	28.0	54.6	54.3	37.2	27.1
25-Mar	53.0	47.8	44.4	35.1	28.0	53.9	51.3	37.0	26.4
1-Apr	54.0	49.4	44.8	35.2	29.0	51.1	53.1	37.9	27.3
8-Apr	54.0	47.3	43.8	34.7	28.0	47.6	49.3	35.7	26.9
15-Apr	58.0	48.3	46.9	36.4	28.0	53.9	52.3	38.8	27.9
22-Apr	59.0	51.2	47.9	38.8	32.0	58.8	53.0	42.2	31.6
29-Apr	63.0	56.6	50.5	38.9	30.0	61.6	60.0	43.2	31.0
6-May	68.0	58.0	53.6	41.6	30.0	70.0	66.5	47.6	33.8
13-May	62.0	55.0	50.8	41.0	34.0	58.8	55.3	43.9	33.8
20-May	66.0	59.3	51.8	41.0	35.0	67.9	60.0	46.2	33.5
27-May	66.0	56.3	54.7	44.0	39.0	65.8	66.0	49.8	37.6
3-Jun	70.0	59.6	55.7	45.1	37.0	84.7	62.0	54.3	41.2
10-Jun	73.0	64.5	55.0	45.1	39.0	71.4	61.0	53.1	40.7
17-Jun	71.0	62.3	58.5	47.0	41.0	91.7	70.7	57.3	42.1
24-Jun	72.0	65.3	57.8	47.6	42.0	72.8	65.0	55.7	43.7
1-Jul	73.0	66.9	62.2	49.8	43.0	92.4	67.3	66.0	48.1
8-Jul	75.0	59.6	61.5	50.6	45.0	86.8	69.5	64.6	49.6
15-Jul	75.0	65.0	62.9	51.0	45.0	93.1	66.5	65.9	51.0
22-Jul	75.0	63.5	64.2	52.1	46.0	86.1	64.0	66.7	51.4
29-Jul	73.0	62.6	64.0	52.1	46.0	86.8	67.3	68.6	51.8
5-Aug	75.0	66.6	64.6	52.4	45.0	91.0	69.0	67.5	52.3
12-Aug	74.0	61.0	61.9	51.2	45.0	83.3	64.0	65.2	50.8
19-Aug	74.0	61.0	63.2	50.6	45.0	90.3	70.0	65.8	49.6
26-Aug	73.0	63.8	61.6	50.9	45.0	87.5	67.3	66.0	49.9
2-Sep	70.0	61.9	59.4	48.7	43.0	81.2	64.5	60.9	46.7
9-Sep	68.0	58.9	58.1	47.6	41.0	79.1	63.6	58.7	44.8
16-Sep	66.0	59.0	56.3	46.5	39.0	75.6	61.0	56.1	44.1
23-Sep	65.0	59.5	56.7	46.7	39.0	77.0	61.5	57.9	43.8
30-Sep	64.0	60.7	54.8	44.7	37.0	74.2	62.9	54.6	41.6
7-Oct	62.0	59.6	53.8	44.5	37.0	73.5	59.5	54.2	40.6
14-Oct	63.0	60.5	53.2	44.9	36.0	72.1	57.7	54.4	41.7
21-Oct	58.0	55.5	50.1	42.2	32.0	67.2	56.0	49.1	38.0
28-Oct	57.0	54.9	49.6	42.3	34.0	65.8	55.6	49.6	38.4
4-Nov	55.0	53.9	47.5	40.0	32.0	65.8	55.0	44.7	35.0
11-Nov	54.0	52.6	46.5	39.3	32.0	59.5	52.5	45.6	34.9
18-Nov	54.0	53.1	44.9	38.2	30.0	60.9	53.0	41.9	32.2
25-Nov	53.0	52.3	42.3	36.0	28.0	58.8	53.0	38.1	29.4
2-Dec	52.0	50.5	42.8	37.0	27.0	53.2	50.3	38.5	30.4
9-Dec	51.0	49.0	41.0	35.2	27.0	58.8	52.3	36.4	28.5
16-Dec	53.0	51.5	40.8	34.7	25.0	56.7	53.3	36.1	27.6
23-Dec	51.0	49.0	41.5	35.0	26.0	54.6	50.7	37.6	27.3
31-Dec	52.0	50.8	40.2	33.6	22.0	58.1	52.0	35.8	27.4



	Mean Cooling Degree Days (°F)	Mean Heating Degree Days (°F)
JAN	0	859
FEB	0	814
MAR	0	815
APR	0	695
MAY	0	555
JUN	3	368
JUL	6	257
AUG	6	270
SEP	0	391
OCT	0	561
NOV	0	720
DEC	0	833
ANN	16	7138



	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	-24570	0	-277
FEB	0	-23237	0	-286
MAR	0	-23432	0	-240
APR	0	-20231	0	-136
MAY	0	-16671	3	-46
JUN	2	-11747	9	-3
JUL	3	-8856	16	0
AUG	5	-9148	8	0
SEP	0	-12328	0	-3
OCT	0	-16868	0	-26
NOV	0	-20968	0	-106
DEC	0	-23989	0	-203
ANN	10	-212045	36	-1326

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

No Solar Radiation
Data Available

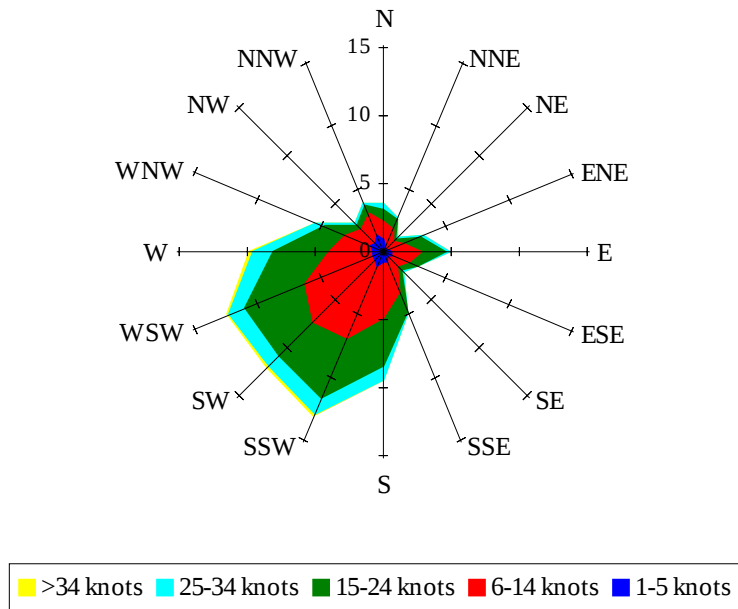


Average Annual Solar Heat and Illumination – Nearest Available Site

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

Wind Summary - December, January, and February

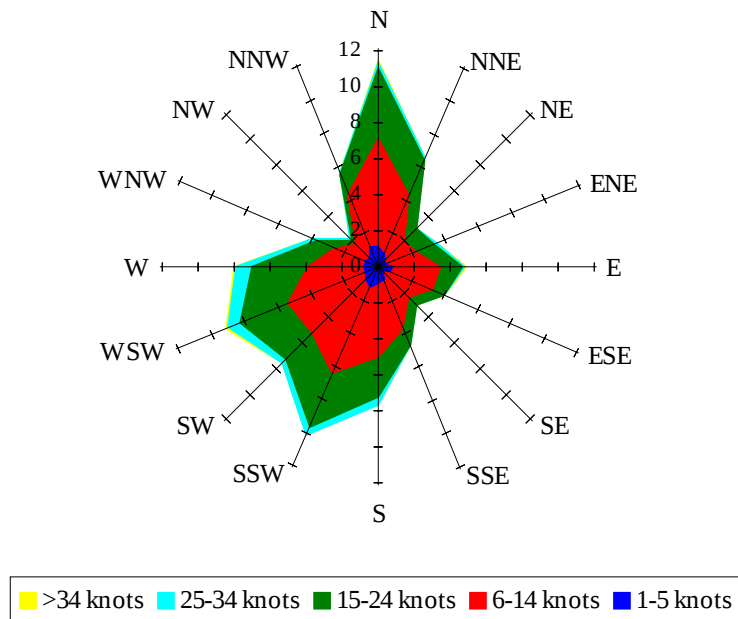
Labels of Percent Frequency on North Axis



Percent Calm = 6.18

Wind Summary - March, April, and May

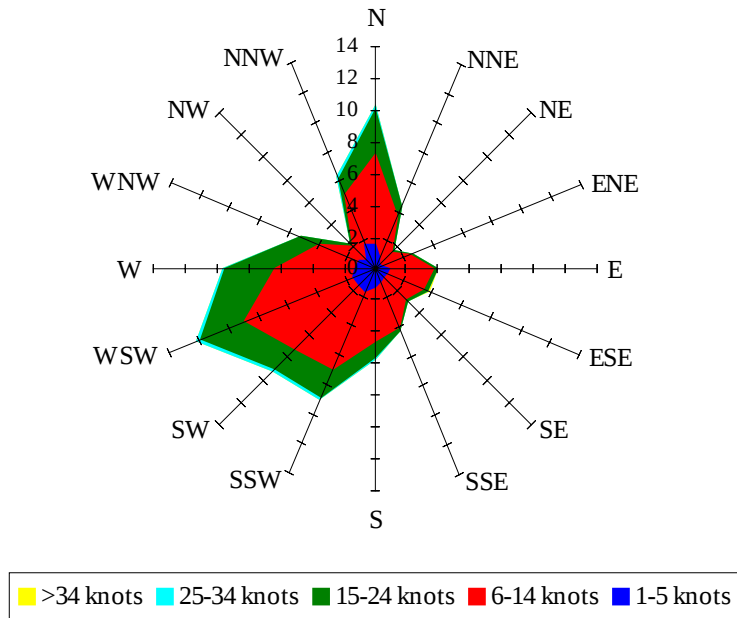
Labels of Percent Frequency on North Axis



Percent Calm = 5.33

Wind Summary - June, July, and August

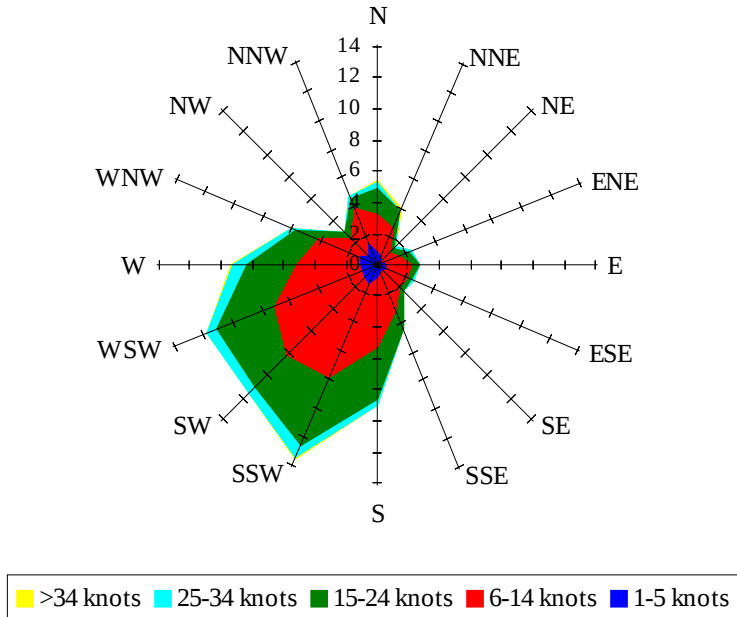
Labels of Percent Frequency on North Axis



Percent Calm = 7.89

Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 6.55