

|                                 |                                    |
|---------------------------------|------------------------------------|
| <b>SUBIC BAY INTL, RP</b>       | Station ID = ICAO_RPLB             |
| Latitude = 14.79 N              | Elevation = 64 Feet                |
| Longitude = 120.27 E            | Average Pressure = 29.75 inches Hg |
| Period of Record = 1988 To 2017 |                                    |

### Design Criteria Data

|                          | Mean Coincident (Average) Values |                           |                        |                  |                             |
|--------------------------|----------------------------------|---------------------------|------------------------|------------------|-----------------------------|
| Dry Bulb Temperature (T) | Design Value (°F)                | Wet Bulb Temperature (°F) | Humidity Ratio (gr/lb) | Wind Speed (mph) | Prevailing Direction (NSEW) |
| Median of Extreme Highs  | 99                               | 78                        | 111                    | 11               | E                           |
| 0.4% Occurrence          | 97                               | 77                        | 109                    | 11.3             | E                           |
| 1.0% Occurrence          | 95                               | 77                        | 111                    | 11.4             | E                           |
| 2.0% Occurrence          | 93                               | 77                        | 116                    | 11.1             | E                           |
| Mean Daily Range         | 13                               | -                         | -                      | -                | ENE                         |
| 97.5% Occurrence         | 73                               | 68                        | 97                     | 5.5              | ENE                         |
| 99.0% Occurrence         | 72                               | 68                        | 95                     | 5.4              | ENE                         |
| 99.6% Occurrence         | 71                               | 67                        | 91                     | 4.9              | ENE                         |
| Median of Extreme Lows   | 68                               | 65                        | 86                     | 4.2              | ENE                         |

|                                         | Design Value (°F) | Dry Bulb Temperature (°F) | Humidity Ratio (gr/lb) | Wind Speed (mph) | Prevailing Direction (NSEW) |
|-----------------------------------------|-------------------|---------------------------|------------------------|------------------|-----------------------------|
| Wet Bulb Temperature (T <sub>wb</sub> ) |                   |                           |                        |                  |                             |
| Median of Extreme Highs                 | 85                | 92                        | 168                    | 9.9              | SSW                         |
| 0.4% Occurrence                         | 82                | 89                        | 150                    | 9.7              | SW                          |
| 1.0% Occurrence                         | 81                | 88                        | 145                    | 9.9              | SW                          |
| 2.0% Occurrence                         | 80                | 87                        | 140                    | 9.5              | SW                          |

|                         | Design Value (gr/lb) | Dry Bulb Temperature (°F) | Vapor Pressure (in. Hg) | Wind Speed (mph) | Prevailing Direction (NSEW) |
|-------------------------|----------------------|---------------------------|-------------------------|------------------|-----------------------------|
| Humidity Ratio (HR)     |                      |                           |                         |                  |                             |
| Median of Extreme Highs | 171                  | 90                        | 1.12                    | 9.2              | SSW                         |
| 0.4% Occurrence         | 155                  | 87                        | 1.02                    | 9.1              | SW                          |
| 1.0% Occurrence         | 151                  | 85                        | 0.99                    | 10.5             | SW                          |
| 2.0% Occurrence         | 150                  | 86                        | 0.99                    | 8.8              | SW                          |

| Air Conditioning/<br>Humid Area Criteria | Threshold  | T ≥ 93 °F | T ≥ 80 °F | Twb ≥ 73 °F | Twb ≥ 67 °F |
|------------------------------------------|------------|-----------|-----------|-------------|-------------|
|                                          | # of Hours | 205       | 4543      | 5884        | 7206        |

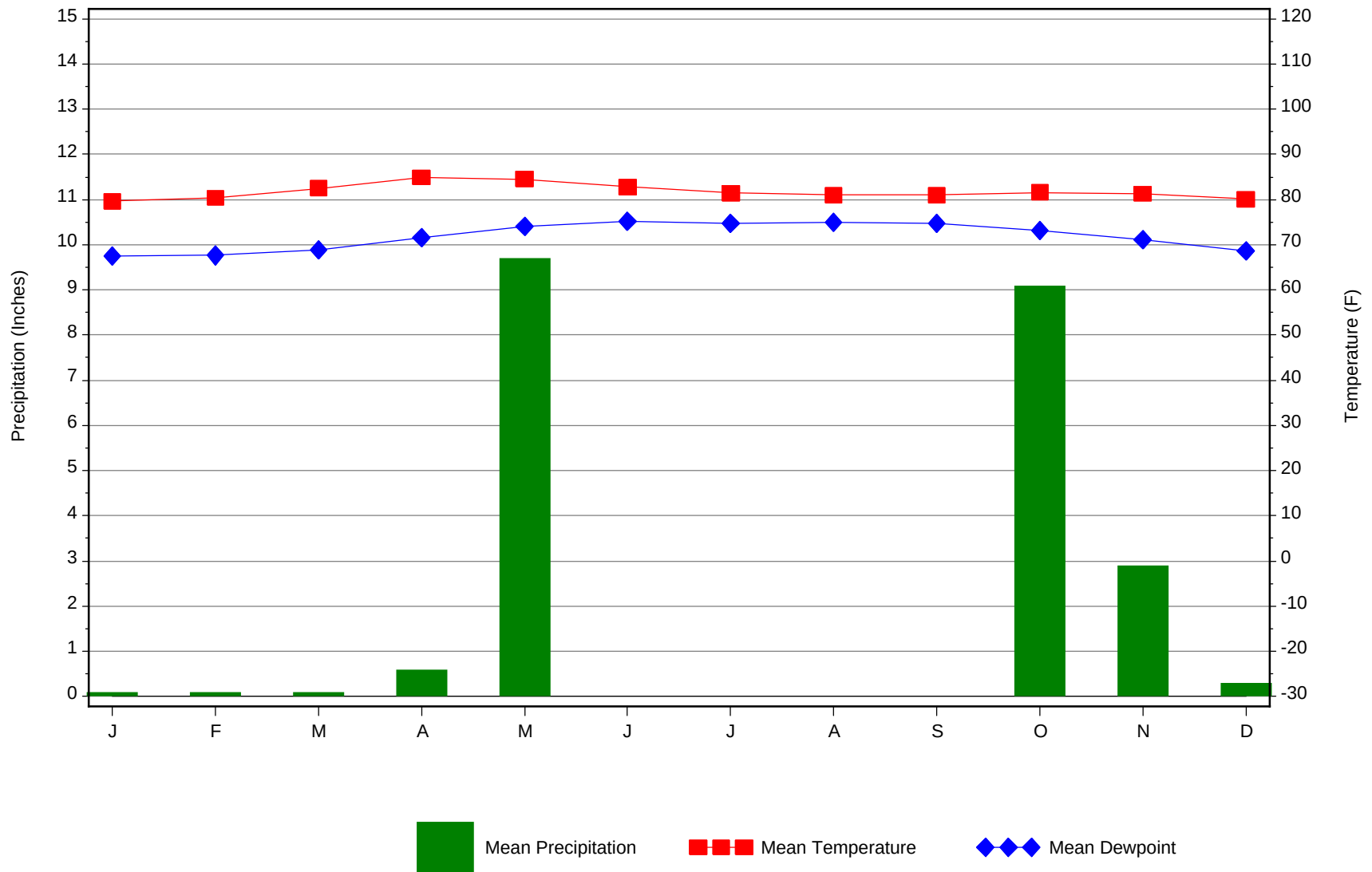
### Other Site Data

| Weather Region                                     | Rain Rate<br>100 Year Recurrence<br>(in./hr) | Basic Wind Speed<br>3 sec gust @ 33 ft<br>50 Year Recurrence (mph) | Ventilation Cooling Load Index<br>(Ton-hr/cfm/yr) Base 75°F-RH 60%<br>Latent + Sensible |
|----------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 10                                                 | N/A                                          | N/A                                                                | 20.0 + 5.3                                                                              |
| Ground Water<br>Temperature (°F)<br>50 Foot Depth* | Frost Depth<br>50 Year Recurrence<br>(in)    | Ground Snow Load<br>50 Year Recurrence<br>(lb/ft <sup>2</sup> )    | Average Annual<br>Freeze-Thaw Cycles<br>(#)                                             |
| 84.3                                               | N/A                                          | N/A                                                                | 0                                                                                       |

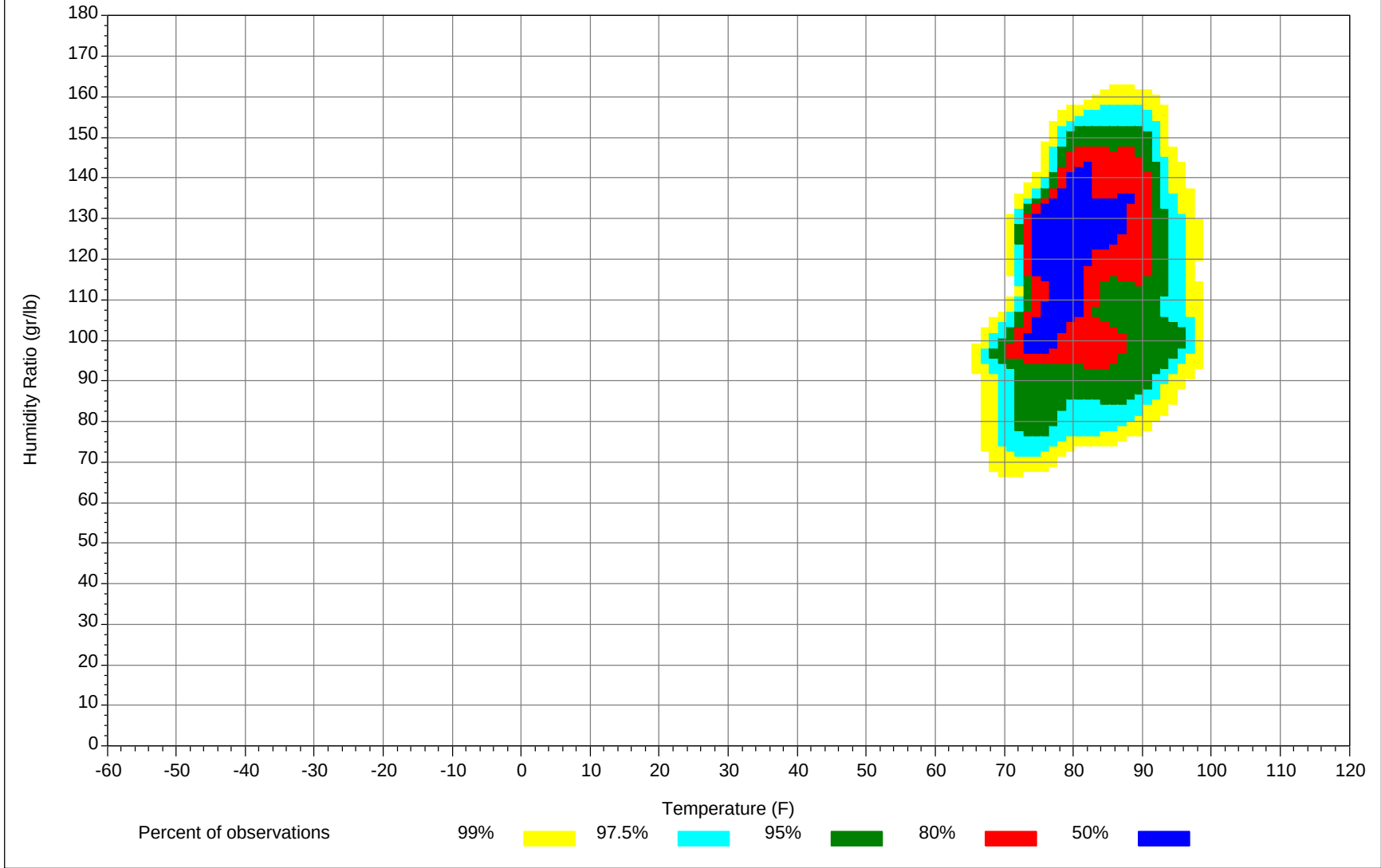
\*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.



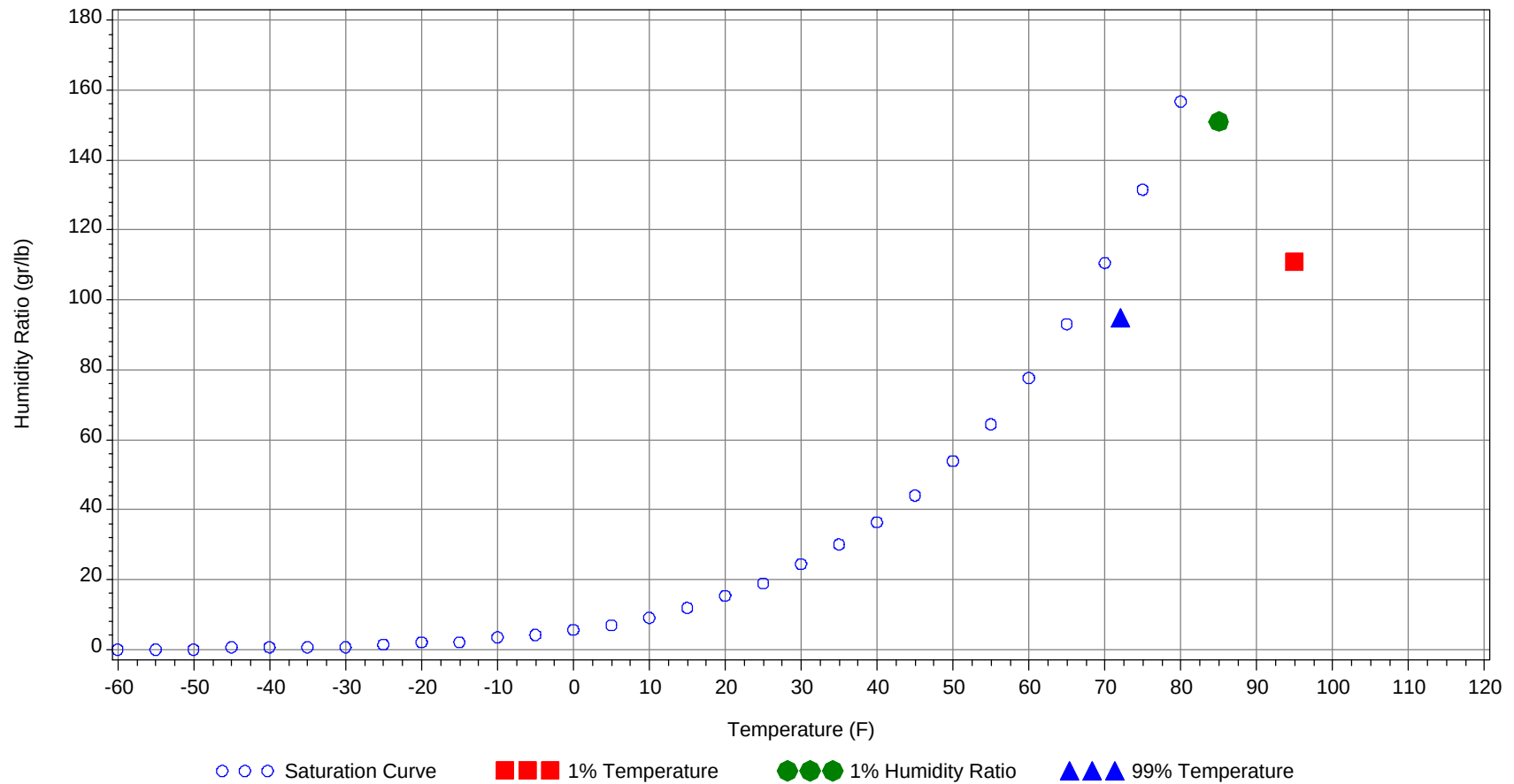
# Average Annual Climate



# Long Term Psychrometric Summary



# Psychrometric Summary of Peak Design Values



|                     | (° F) /<br>(gr/lb) | MCDB<br>(° F) | MCWB<br>(° F) | MCDP<br>(° F) | MCHR<br>(gr/lb) | Enthalpy<br>(btu/lb) |
|---------------------|--------------------|---------------|---------------|---------------|-----------------|----------------------|
| 1.0% Dry Bulb       | 95.0               |               | 77            |               | 111.0           | 40.2                 |
| 99.0% Dry Bulb      | 72.0               |               |               |               | 95.0            | 31.7                 |
| 1.0% Humidity Ratio | 151.0              | 85.0          | 80.6          | 78.8          |                 | 44.3                 |

### ***Dry-Bulb Temperature Hours For An Average Year***

|                        | January      |              |              |           |              | February     |              |              |           |              | March        |              |              |           |              |
|------------------------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|--------------|-----------|--------------|
| Temperature Range (°F) | 01 To 08 LST | 09 To 16 LST | 17 to 00 LST | Total Obs | M C W B (°F) | 01 To 08 LST | 09 To 16 LST | 17 to 00 LST | Total Obs | M C W B (°F) | 01 To 08 LST | 09 To 16 LST | 17 to 00 LST | Total Obs | M C W B (°F) |
| 100/104                |              |              |              |           |              |              |              |              |           |              |              | 0            |              | 0         | 76.5         |
| 95/ 99                 |              | 1            |              | 1         | 77.4         |              | 2            |              | 2         | 77.2         |              | 15           | 0            | 15        | 75.8         |
| 90/ 94                 | 0            | 25           | 1            | 26        | 75.3         |              | 51           | 2            | 53        | 74.4         | 0            | 99           | 9            | 108       | 74.8         |
| 85/ 89                 | 0            | 106          | 11           | 117       | 73.7         | 0            | 94           | 19           | 113       | 73.6         | 1            | 95           | 39           | 135       | 74.8         |
| 80/ 84                 | 9            | 97           | 83           | 189       | 72.6         | 10           | 67           | 88           | 165       | 72.8         | 36           | 36           | 127          | 199       | 73.7         |
| 75/ 79                 | 144          | 19           | 132          | 295       | 70.6         | 143          | 9            | 105          | 257       | 70.7         | 174          | 3            | 70           | 247       | 71.4         |
| 70/ 74                 | 90           | 1            | 21           | 112       | 67.5         | 69           | 1            | 11           | 81        | 67.6         | 37           |              | 3            | 40        | 68           |
| 65/ 69                 | 4            |              | 0            | 4         | 64.7         | 2            | 0            | 0            | 2         | 64.4         | 0            |              | 0            | 0         | 65.8         |
| 60/ 64                 | 0            |              | 0            | 0         | 61.8         |              | 0            |              | 0         | 64           |              |              |              |           |              |

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.

### ***Dry-Bulb Temperature Hours For An Average Year***

|                        | April        |              |              |           |              | May          |              |              |           |              | June         |              |              |           |              |
|------------------------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|--------------|-----------|--------------|
| Temperature Range (°F) | 01 To 08 LST | 09 To 16 LST | 17 to 00 LST | Total Obs | M C W B (°F) | 01 To 08 LST | 09 To 16 LST | 17 to 00 LST | Total Obs | M C W B (°F) | 01 To 08 LST | 09 To 16 LST | 17 to 00 LST | Total Obs | M C W B (°F) |
| 100/104                |              | 1            | 0            | 1         | 78.9         |              | 2            | 0            | 2         | 79.6         |              | 0            |              | 0         | 81.5         |
| 95/ 99                 |              | 37           | 1            | 38        | 76.3         | 0            | 29           | 2            | 31        | 77.7         | 0            | 5            | 0            | 5         | 79.3         |
| 90/ 94                 | 1            | 130          | 19           | 150       | 77           | 1            | 113          | 19           | 133       | 78.6         | 0            | 67           | 6            | 73        | 79.7         |
| 85/ 89                 | 11           | 62           | 73           | 146       | 76.7         | 20           | 67           | 77           | 164       | 78.2         | 9            | 97           | 48           | 154       | 78.8         |
| 80/ 84                 | 105          | 9            | 128          | 242       | 75.2         | 124          | 26           | 113          | 263       | 76.4         | 91           | 54           | 123          | 268       | 77.1         |
| 75/ 79                 | 120          | 1            | 19           | 140       | 72.6         | 101          | 11           | 37           | 149       | 74.7         | 137          | 16           | 63           | 216       | 75.1         |
| 70/ 74                 | 3            | 0            | 0            | 3         | 69.3         | 2            | 0            | 0            | 2         | 72.3         | 3            | 0            | 1            | 4         | 72.2         |
| 65/ 69                 |              |              |              |           |              |              |              |              |           |              | 0            |              |              | 0         | 68           |
| 60/ 64                 |              |              |              |           |              |              |              |              |           |              |              |              |              |           |              |

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.

### ***Dry-Bulb Temperature Hours For An Average Year***

|                        | July         |              |              |           |              | August       |              |              |           |              | September    |              |              |           |              |
|------------------------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|--------------|-----------|--------------|
| Temperature Range (°F) | 01 To 08 LST | 09 To 16 LST | 17 to 00 LST | Total Obs | M C W B (°F) | 01 To 08 LST | 09 To 16 LST | 17 to 00 LST | Total Obs | M C W B (°F) | 01 To 08 LST | 09 To 16 LST | 17 to 00 LST | Total Obs | M C W B (°F) |
| 100/104                |              |              |              |           |              |              |              |              |           |              |              | 0            |              | 0         | 84           |
| 95/ 99                 |              | 1            |              | 1         | 80.4         |              | 0            |              | 0         | 81.6         |              | 0            |              | 0         | 82.3         |
| 90/ 94                 | 0            | 38           | 1            | 39        | 79.4         | 0            | 20           | 1            | 21        | 79.9         | 0            | 26           | 0            | 26        | 79.2         |
| 85/ 89                 | 3            | 95           | 25           | 123       | 78.7         | 2            | 84           | 16           | 102       | 78.6         | 1            | 96           | 14           | 111       | 78.6         |
| 80/ 84                 | 70           | 82           | 116          | 268       | 77.2         | 78           | 104          | 128          | 310       | 77.4         | 55           | 89           | 116          | 260       | 77.2         |
| 75/ 79                 | 171          | 32           | 104          | 307       | 74.9         | 163          | 39           | 102          | 304       | 75           | 180          | 29           | 107          | 316       | 74.9         |
| 70/ 74                 | 4            | 1            | 2            | 7         | 71.7         | 5            | 1            | 2            | 8         | 72           | 5            | 0            | 2            | 7         | 72.2         |
| 65/ 69                 |              |              |              |           |              |              |              |              |           |              |              |              |              |           |              |
| 60/ 64                 |              |              |              |           |              |              |              |              |           |              |              |              |              |           |              |

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.

### ***Dry-Bulb Temperature Hours For An Average Year***

|                               | October               |                       |                       |              |                           | November              |                       |                       |              |                           | December              |                       |                       |              |                           |
|-------------------------------|-----------------------|-----------------------|-----------------------|--------------|---------------------------|-----------------------|-----------------------|-----------------------|--------------|---------------------------|-----------------------|-----------------------|-----------------------|--------------|---------------------------|
| Temperature<br>Range<br>(° F) | 01<br>To<br>08<br>LST | 09<br>To<br>16<br>LST | 17<br>to<br>00<br>LST | Total<br>Obs | M<br>C<br>W<br>B<br>(° F) | 01<br>To<br>08<br>LST | 09<br>To<br>16<br>LST | 17<br>to<br>00<br>LST | Total<br>Obs | M<br>C<br>W<br>B<br>(° F) | 01<br>To<br>08<br>LST | 09<br>To<br>16<br>LST | 17<br>to<br>00<br>LST | Total<br>Obs | M<br>C<br>W<br>B<br>(° F) |
| 100/104                       |                       |                       |                       |              |                           |                       |                       |                       |              |                           |                       |                       |                       |              |                           |
| 95/ 99                        |                       | 0                     |                       | 0            | 76.8                      | 0                     | 0                     |                       | 0            | 79                        |                       |                       |                       |              |                           |
| 90/ 94                        |                       | 48                    | 1                     | 49           | 77.5                      | 0                     | 45                    | 0                     | 45           | 76.7                      | 0                     | 20                    | 0                     | 20           | 75.8                      |
| 85/ 89                        | 1                     | 118                   | 19                    | 138          | 77.4                      | 0                     | 118                   | 16                    | 134          | 76                        | 0                     | 113                   | 8                     | 121          | 74.6                      |
| 80/ 84                        | 48                    | 68                    | 132                   | 248          | 76.1                      | 36                    | 66                    | 120                   | 222          | 74.8                      | 16                    | 99                    | 92                    | 207          | 73.2                      |
| 75/ 79                        | 190                   | 14                    | 96                    | 300          | 74.1                      | 184                   | 10                    | 99                    | 293          | 72.8                      | 181                   | 15                    | 132                   | 328          | 71.3                      |
| 70/ 74                        | 9                     | 0                     | 1                     | 10           | 70.6                      | 19                    | 1                     | 4                     | 24           | 69.4                      | 48                    | 1                     | 15                    | 64           | 67.6                      |
| 65/ 69                        |                       |                       |                       |              |                           | 0                     | 0                     | 0                     | 0            | 67.5                      | 3                     | 0                     | 0                     | 3            | 64.5                      |
| 60/ 64                        |                       |                       |                       |              |                           |                       |                       |                       |              |                           | 0                     |                       |                       | 0            | 62.8                      |

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.

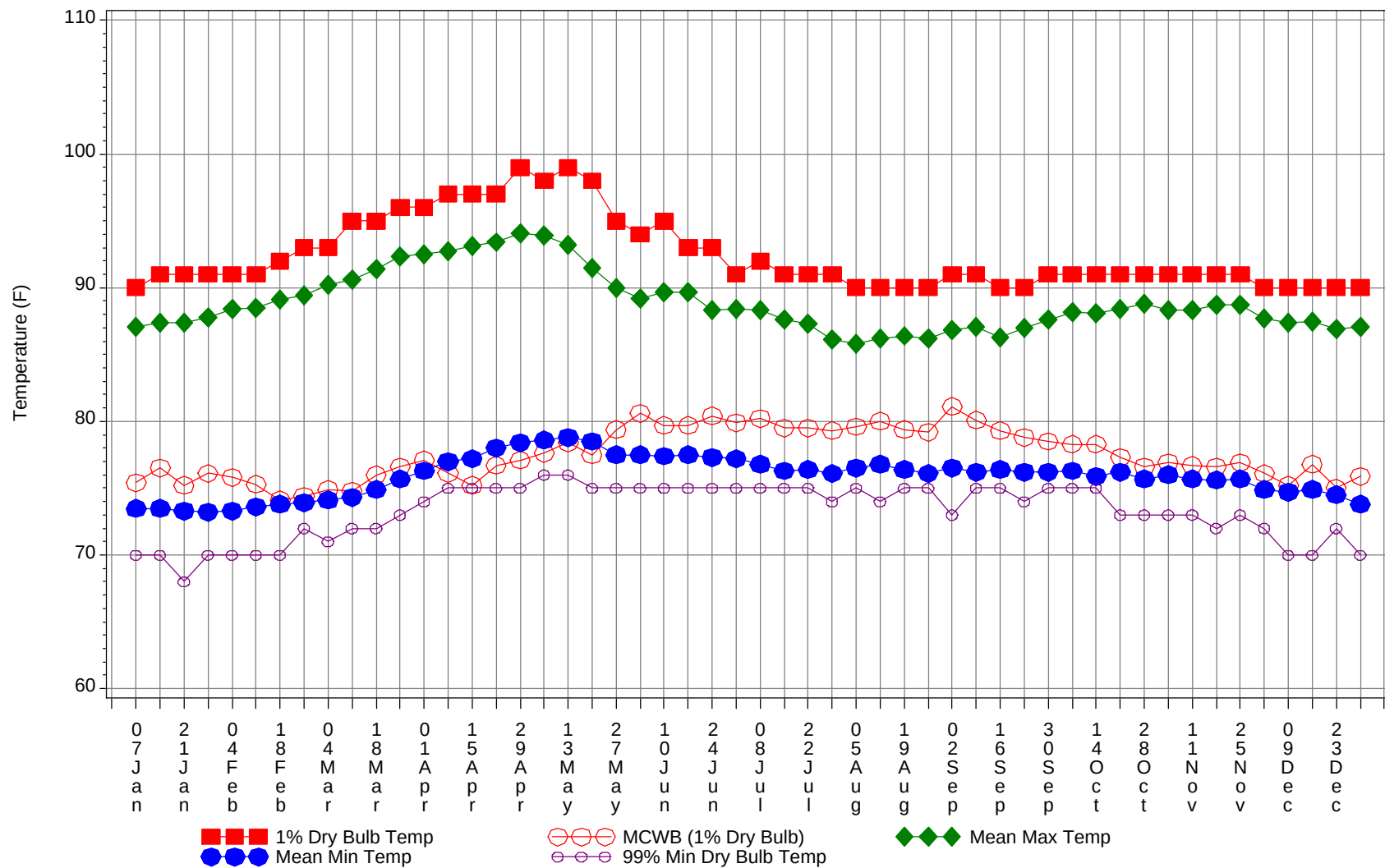


## ***Dry-Bulb Temperature Hours For An Average Year***

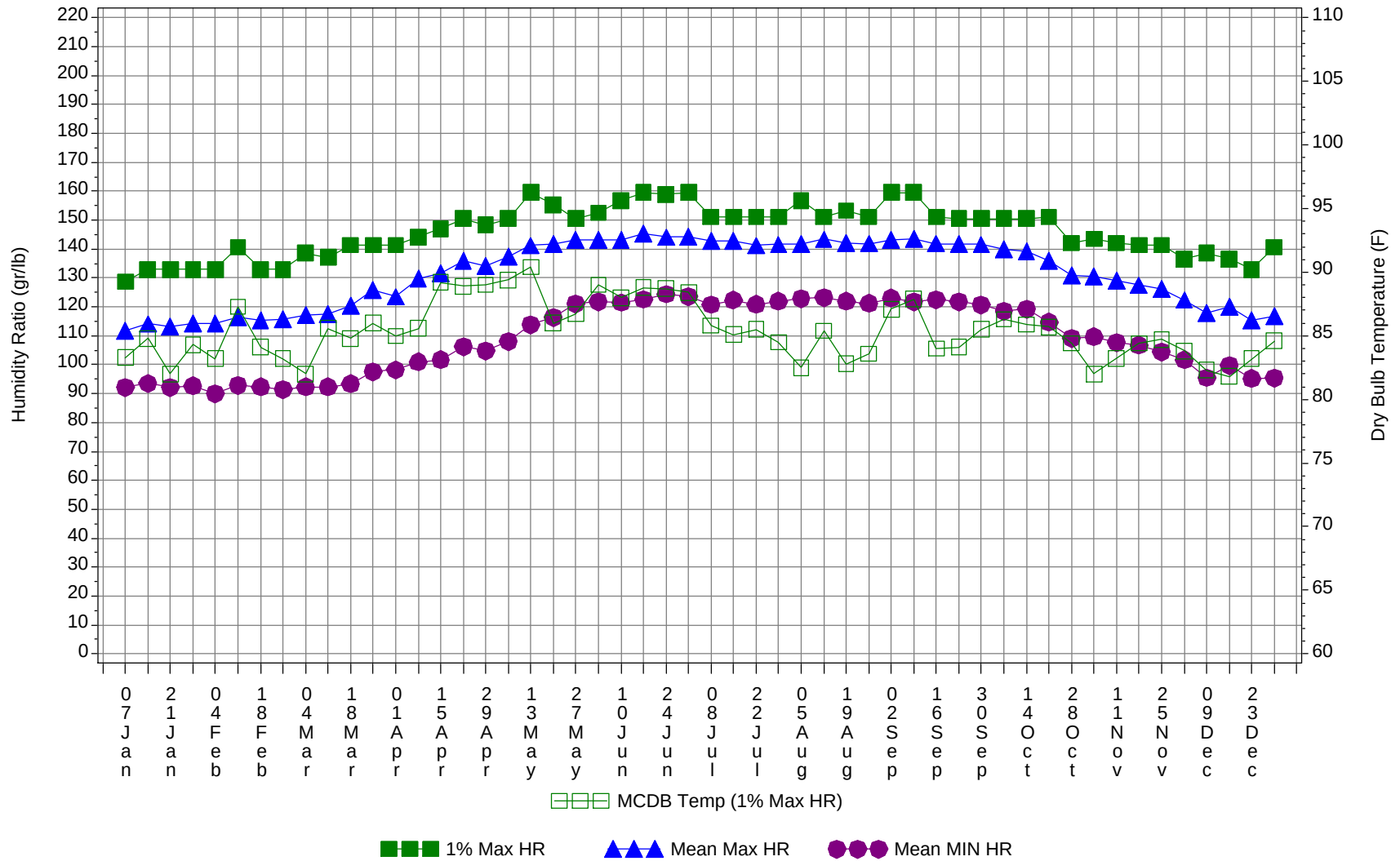
|                               | Annual                |                       |                       |              |                           |
|-------------------------------|-----------------------|-----------------------|-----------------------|--------------|---------------------------|
| Temperature<br>Range<br>(° F) | 01<br>To<br>08<br>LST | 09<br>To<br>16<br>LST | 17<br>to<br>00<br>LST | Total<br>Obs | M<br>C<br>W<br>B<br>(° F) |
| 100/104                       |                       | 3                     | 0                     | 3            | 79.3                      |
| 95/ 99                        | 0                     | 90                    | 4                     | 94           | 77                        |
| 90/ 94                        | 2                     | 682                   | 58                    | 742          | 77.3                      |
| 85/ 89                        | 49                    | 1145                  | 364                   | 1558         | 76.7                      |
| 80/ 84                        | 680                   | 797                   | 1368                  | 2845         | 75.6                      |
| 75/ 79                        | 1890                  | 199                   | 1064                  | 3153         | 73.2                      |
| 70/ 74                        | 288                   | 5                     | 61                    | 354          | 68.2                      |
| 65/ 69                        | 9                     | 0                     | 1                     | 10           | 64.7                      |
| 60/ 64                        | 0                     | 0                     | 0                     | 0            | 62.4                      |

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



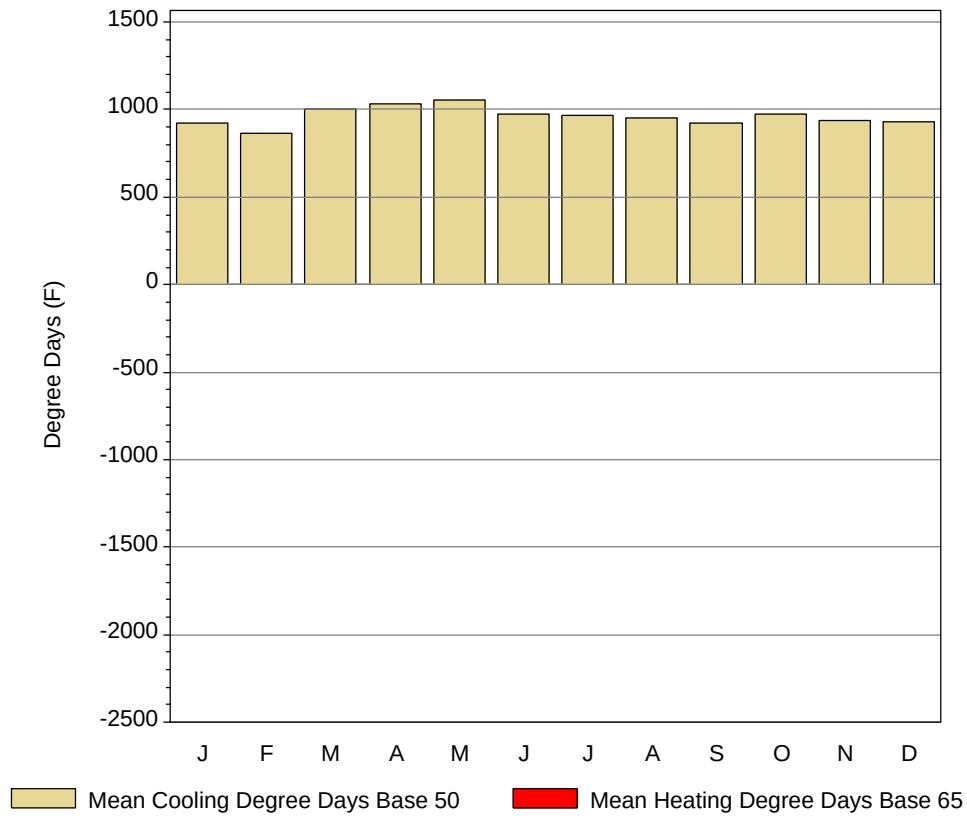
# Long Term Humidity and Dry Bulb Temperature Summary



**Long Term Humidity and Dry Bulb Temperature Summary**

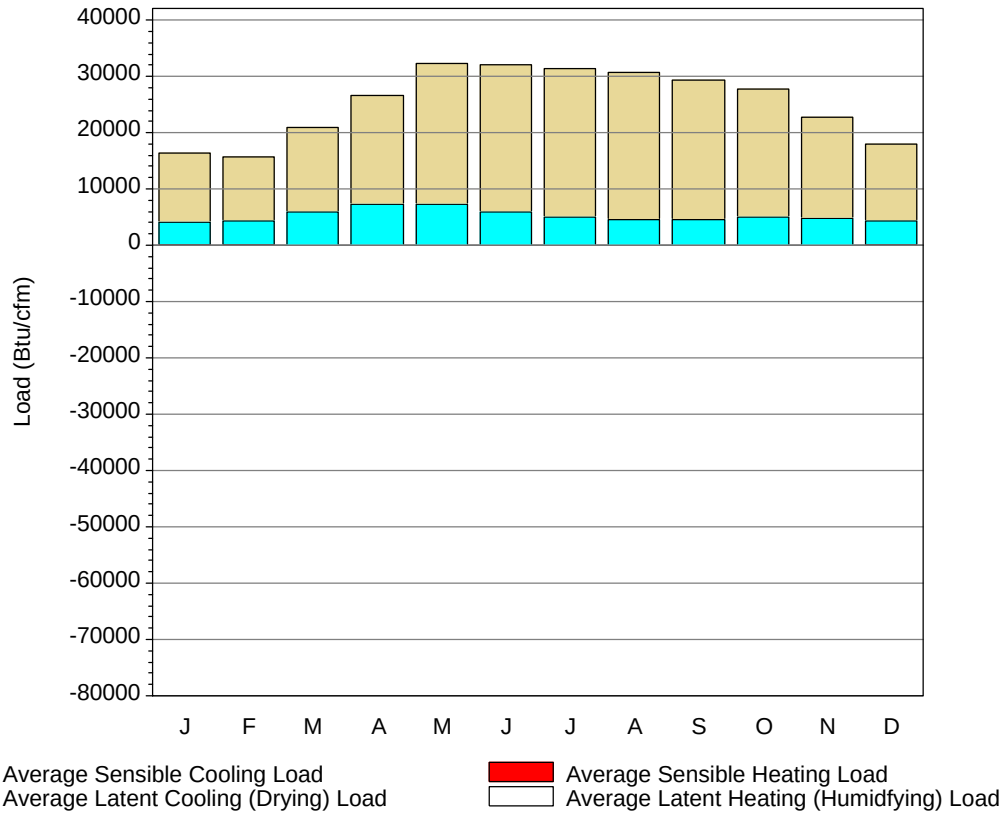
| Week Ending | 1.0% Temp (° F) | MCWB@ 1% Temp (° F) | Mean Max Temp (° F) | Mean Min Temp (° F) | 99% Temp (° F) | 1.0% HR (gr/lb) | MCDB@ 1% HR (° F) | Mean Max HR (gr/lb) | Mean Min HR (gr/lb) |
|-------------|-----------------|---------------------|---------------------|---------------------|----------------|-----------------|-------------------|---------------------|---------------------|
| 7-Jan       | 90              | 75.4                | 87.1                | 73.5                | 70             | 128.8           | 83.3              | 111.8               | 92.2                |
| 14-Jan      | 91              | 76.5                | 87.4                | 73.5                | 70             | 133             | 84.8              | 114.1               | 93.5                |
| 21-Jan      | 91              | 75.2                | 87.4                | 73.3                | 68             | 133             | 82                | 113.3               | 92.2                |
| 28-Jan      | 91              | 76.1                | 87.8                | 73.2                | 70             | 133             | 84.3              | 114.4               | 92.7                |
| 4-Feb       | 91              | 75.8                | 88.4                | 73.3                | 70             | 133             | 83.2              | 114.3               | 89.9                |
| 11-Feb      | 91              | 75.3                | 88.5                | 73.6                | 70             | 140.7           | 87.3              | 116.5               | 92.9                |
| 18-Feb      | 92              | 74.1                | 89.1                | 73.8                | 70             | 133             | 84.1              | 115.5               | 92.3                |
| 25-Feb      | 93              | 74.4                | 89.4                | 73.9                | 72             | 133             | 83.2              | 115.8               | 91.5                |
| 4-Mar       | 93              | 74.9                | 90.2                | 74.1                | 71             | 138.6           | 82                | 117.3               | 92.3                |
| 11-Mar      | 95              | 74.8                | 90.6                | 74.3                | 72             | 137.2           | 85.6              | 117.4               | 92.3                |
| 18-Mar      | 95              | 76                  | 91.4                | 74.9                | 72             | 141.4           | 84.8              | 120.4               | 93.4                |
| 25-Mar      | 96              | 76.6                | 92.3                | 75.7                | 73             | 141.4           | 86                | 125.9               | 97.5                |
| 1-Apr       | 96              | 77.1                | 92.5                | 76.3                | 74             | 141.4           | 85                | 123.5               | 98.2                |
| 8-Apr       | 97              | 76.1                | 92.7                | 77                  | 75             | 144.2           | 85.6              | 129.9               | 101                 |
| 15-Apr      | 97              | 75.2                | 93.1                | 77.2                | 75             | 147             | 89.2              | 131.5               | 101.7               |
| 22-Apr      | 97              | 76.7                | 93.4                | 78                  | 75             | 150.5           | 88.9              | 135.9               | 106.3               |
| 29-Apr      | 99              | 77.1                | 94.1                | 78.4                | 75             | 148.4           | 89                | 134.1               | 104.8               |
| 6-May       | 98              | 77.6                | 93.9                | 78.6                | 76             | 150.5           | 89.4              | 137.4               | 108.1               |
| 13-May      | 99              | 78.4                | 93.2                | 78.8                | 76             | 159.6           | 90.4              | 141.2               | 113.8               |
| 20-May      | 98              | 77.5                | 91.5                | 78.5                | 75             | 155.4           | 86                | 141.7               | 116.4               |
| 27-May      | 95              | 79.4                | 90                  | 77.5                | 75             | 150.5           | 86.7              | 143.1               | 121                 |
| 4-Jun       | 94              | 80.6                | 89.2                | 77.5                | 75             | 152.6           | 89                | 143.1               | 121.8               |
| 10-Jun      | 95              | 79.7                | 89.7                | 77.4                | 75             | 156.8           | 88                | 143.3               | 121.5               |
| 17-Jun      | 93              | 79.7                | 89.7                | 77.5                | 75             | 159.6           | 88.8              | 145.3               | 122.6               |
| 24-Jun      | 93              | 80.4                | 88.3                | 77.3                | 75             | 158.9           | 88.7              | 144.1               | 124.4               |
| 1-Jul       | 91              | 79.9                | 88.4                | 77.2                | 75             | 159.6           | 88.4              | 144.3               | 123.6               |
| 8-Jul       | 92              | 80.2                | 88.3                | 76.8                | 75             | 151.2           | 85.8              | 142.8               | 120.8               |
| 15-Jul      | 91              | 79.5                | 87.6                | 76.3                | 75             | 151.2           | 85.1              | 142.9               | 122.4               |
| 22-Jul      | 91              | 79.5                | 87.3                | 76.4                | 75             | 151.2           | 85.5              | 141.2               | 120.9               |
| 29-Jul      | 91              | 79.3                | 86.1                | 76.1                | 74             | 151.2           | 84.5              | 141.6               | 121.9               |
| 5-Aug       | 90              | 79.6                | 85.8                | 76.5                | 75             | 156.8           | 82.5              | 141.8               | 122.8               |
| 12-Aug      | 90              | 80                  | 86.2                | 76.8                | 74             | 151.2           | 85.4              | 143.4               | 123.3               |
| 19-Aug      | 90              | 79.4                | 86.4                | 76.4                | 75             | 153.3           | 82.8              | 142.2               | 121.9               |
| 26-Aug      | 90              | 79.2                | 86.2                | 76.1                | 75             | 151.2           | 83.6              | 141.9               | 121.2               |
| 2-Sep       | 91              | 81.1                | 86.8                | 76.5                | 73             | 159.6           | 87.1              | 143.3               | 123                 |
| 9-Sep       | 91              | 80.1                | 87.1                | 76.2                | 75             | 159.6           | 87.9              | 143.6               | 121.8               |
| 16-Sep      | 90              | 79.3                | 86.3                | 76.4                | 75             | 151.2           | 84                | 141.9               | 122.5               |
| 23-Sep      | 90              | 78.8                | 87                  | 76.2                | 74             | 150.5           | 84.1              | 141.7               | 121.7               |
| 30-Sep      | 91              | 78.5                | 87.6                | 76.2                | 75             | 150.5           | 85.5              | 141.6               | 120.7               |
| 7-Oct       | 91              | 78.3                | 88.2                | 76.3                | 75             | 150.5           | 86.3              | 139.8               | 118.6               |
| 14-Oct      | 91              | 78.3                | 88.1                | 75.9                | 75             | 150.5           | 85.9              | 139.1               | 119.2               |
| 21-Oct      | 91              | 77.3                | 88.4                | 76.2                | 73             | 151.2           | 85.7              | 136                 | 114.7               |
| 28-Oct      | 91              | 76.6                | 88.8                | 75.7                | 73             | 142.1           | 84.4              | 131                 | 109.2               |
| 4-Nov       | 91              | 76.9                | 88.3                | 76                  | 73             | 143.5           | 82                | 130.6               | 109.7               |
| 11-Nov      | 91              | 76.7                | 88.3                | 75.7                | 73             | 142.1           | 83.2              | 129.1               | 107.7               |
| 18-Nov      | 91              | 76.6                | 88.7                | 75.6                | 72             | 141.4           | 84.4              | 127.5               | 106.8               |
| 25-Nov      | 91              | 76.9                | 88.7                | 75.7                | 73             | 141.4           | 84.7              | 126.2               | 104.5               |
| 2-Dec       | 90              | 76.1                | 87.7                | 74.9                | 72             | 136.5           | 83.8              | 122.4               | 101.8               |
| 9-Dec       | 90              | 75.2                | 87.4                | 74.7                | 70             | 138.6           | 82.3              | 117.9               | 95.5                |
| 16-Dec      | 90              | 76.8                | 87.5                | 74.9                | 70             | 136.5           | 81.8              | 120.2               | 99.8                |
| 23-Dec      | 90              | 75                  | 86.9                | 74.5                | 72             | 133             | 83.2              | 115.5               | 95.2                |
| 31-Dec      | 90              | 75.9                | 87.1                | 73.8                | 70             | 140.7           | 84.6              | 116.9               | 95.4                |

## Degree Days, Heating and Cooling (Base 65 F) & Cooling (Base 50F)



| Month | Mean Cooling Degree Days (°F) Base 50 | Mean Cooling Degree Days (°F) Base 65 | Mean Heating Degree Days (°F) Base 65 |
|-------|---------------------------------------|---------------------------------------|---------------------------------------|
| JAN   | 921.4                                 | 456.6                                 | 0                                     |
| FEB   | 864.3                                 | 440.3                                 | 0                                     |
| MAR   | 1004.3                                | 539.3                                 | 0                                     |
| APR   | 1034.9                                | 584.9                                 | 0                                     |
| MAY   | 1058.3                                | 593.3                                 | 0                                     |
| JUN   | 975.1                                 | 525.1                                 | 0                                     |
| JUL   | 967                                   | 502                                   | 0                                     |
| AUG   | 949.3                                 | 484.3                                 | 0                                     |
| SEP   | 921.7                                 | 471.7                                 | 0                                     |
| OCT   | 971.6                                 | 506.6                                 | 0                                     |
| NOV   | 935.6                                 | 485.6                                 | 0                                     |
| DEC   | 931.5                                 | 466.5                                 | 0                                     |
| ANN   | 11535                                 | 6056.2                                | 0                                     |

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



| Month | 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   | 4091                                    | -2                                      | 12199                                 | 0                                     |
| FEB   | 4293                                    | -1                                      | 11452                                 | 0                                     |
| MAR   | 6037                                    | 0                                       | 14975                                 | 0                                     |
| APR   | 7396                                    | 0                                       | 19270                                 | 0                                     |
| MAY   | 7358                                    | 0                                       | 24876                                 | 0                                     |
| JUN   | 5849                                    | 0                                       | 26242                                 | 0                                     |
| JUL   | 4990                                    | 0                                       | 26368                                 | 0                                     |
| AUG   | 4554                                    | 0                                       | 26088                                 | 0                                     |
| SEP   | 4473                                    | 0                                       | 24912                                 | 0                                     |
| OCT   | 5115                                    | 0                                       | 22561                                 | 0                                     |
| NOV   | 4860                                    | 0                                       | 17856                                 | 0                                     |
| DEC   | 4230                                    | -1                                      | 13787                                 | 0                                     |
| ANN   | 63246                                   | -4                                      | 240586                                | 0                                     |

| Station Information |     | Shading Geometry in Dimensionless Units |     |
|---------------------|-----|-----------------------------------------|-----|
| City, State, WBAN   | N/A | N/A                                     | N/A |
| Lat, Lon, Elev      | N/A | N/A                                     | N/A |
| Press Stn Type      | N/A | N/A                                     | N/A |

| AVERAGE INCIDENT SOLAR RADIATION<br>(Btu/sq.ft./day), Percentage Uncertainty = 9 |          |     |     |     |     |     |     |     |     |     |     |     |     |      |
|----------------------------------------------------------------------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                                                                  |          | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Year |
| HORIZ.                                                                           | Global   |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                  | Std.Dev. |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                  | Minimum  |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                  | Maximum  |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                  | Diffuse  |     |     |     |     |     |     |     |     |     |     |     |     |      |
| Clear Day                                                                        | Global   |     |     |     |     |     |     |     |     |     |     |     |     |      |
| NORTH                                                                            | Global   |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                  | Diffuse  |     |     |     |     |     |     |     |     |     |     |     |     |      |
| Clear Day                                                                        | Global   |     |     |     |     |     |     |     |     |     |     |     |     |      |
| EAST                                                                             | Global   |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                  | Diffuse  |     |     |     |     |     |     |     |     |     |     |     |     |      |
| Clear Day                                                                        | Global   |     |     |     |     |     |     |     |     |     |     |     |     |      |
| SOUTH                                                                            | Global   |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                  | Diffuse  |     |     |     |     |     |     |     |     |     |     |     |     |      |
| Clear Day                                                                        | Global   |     |     |     |     |     |     |     |     |     |     |     |     |      |
| WEST                                                                             | Global   |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                  | Diffuse  |     |     |     |     |     |     |     |     |     |     |     |     |      |
| Clear Day                                                                        | Global   |     |     |     |     |     |     |     |     |     |     |     |     |      |

**Average Annual Solar Radiation - Nearest Available Site Source: National Renewable Energy Laboratory, Golden CO, 1995**

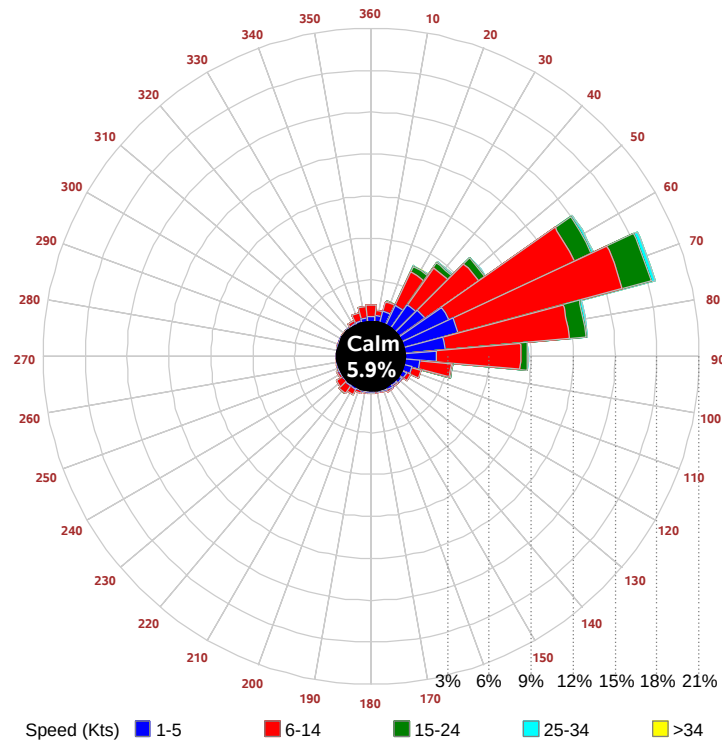
| AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9 |          |     |     |     |     |     |     |     |     |     |     |     |     |      |
|-----------------------------------------------------------------------------------------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                                                                                     |          | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Year |
| HORIZ.                                                                                              | Unshaded |     |     |     |     |     |     |     |     |     |     |     |     |      |
| NORTH                                                                                               | Unshaded |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                     | Shaded   |     |     |     |     |     |     |     |     |     |     |     |     |      |
| EAST                                                                                                | Unshaded |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                     | Shaded   |     |     |     |     |     |     |     |     |     |     |     |     |      |
| SOUTH                                                                                               | Unshaded |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                     | Shaded   |     |     |     |     |     |     |     |     |     |     |     |     |      |
| WEST                                                                                                | Unshaded |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                     | Shaded   |     |     |     |     |     |     |     |     |     |     |     |     |      |

| 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  |     |      |       |     |     |     |      |     |      |     |  |
|                                                                                                                  | M.Cloudy |     |      |       |     |     |     |      |     |      |     |  |
| NORTH                                                                                                            | M.Clear  |     |      |       |     |     |     |      |     |      |     |  |
|                                                                                                                  | M.Cloudy |     |      |       |     |     |     |      |     |      |     |  |
| EAST                                                                                                             | M.Clear  |     |      |       |     |     |     |      |     |      |     |  |
|                                                                                                                  | M.Cloudy |     |      |       |     |     |     |      |     |      |     |  |
| SOUTH                                                                                                            | M.Clear  |     |      |       |     |     |     |      |     |      |     |  |
|                                                                                                                  | M.Cloudy |     |      |       |     |     |     |      |     |      |     |  |
| WEST                                                                                                             | M.Clear  |     |      |       |     |     |     |      |     |      |     |  |
|                                                                                                                  | M.Cloudy |     |      |       |     |     |     |      |     |      |     |  |
| M.Clear                                                                                                          | (% hrs)  |     |      |       |     |     |     |      |     |      |     |  |

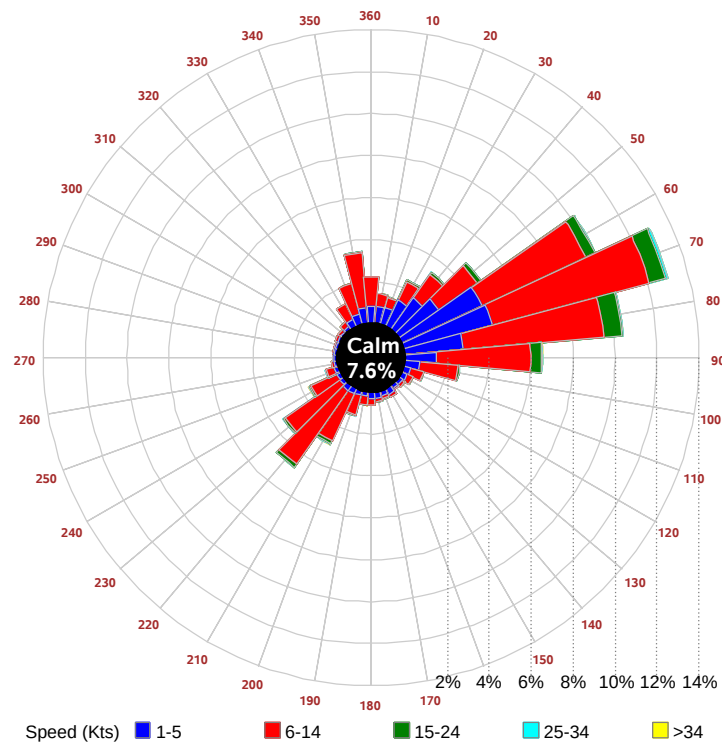
|         |          |     |      | Sept |     |     |     |      |     | Dec |     |  |
|---------|----------|-----|------|------|-----|-----|-----|------|-----|-----|-----|--|
|         |          | 9am | 11am | 1pm  | 3pm | 5pm | 9am | 11am | 1pm | 3pm | 5pm |  |
| HORIZ.  | M.Clear  |     |      |      |     |     |     |      |     |     |     |  |
|         | M.Cloudy |     |      |      |     |     |     |      |     |     |     |  |
| NORTH   | M.Clear  |     |      |      |     |     |     |      |     |     |     |  |
|         | M.Cloudy |     |      |      |     |     |     |      |     |     |     |  |
| EAST    | M.Clear  |     |      |      |     |     |     |      |     |     |     |  |
|         | M.Cloudy |     |      |      |     |     |     |      |     |     |     |  |
| SOUTH   | M.Clear  |     |      |      |     |     |     |      |     |     |     |  |
|         | M.Cloudy |     |      |      |     |     |     |      |     |     |     |  |
| WEST    | M.Clear  |     |      |      |     |     |     |      |     |     |     |  |
|         | M.Cloudy |     |      |      |     |     |     |      |     |     |     |  |
| M.Clear | (% hrs)  |     |      |      |     |     |     |      |     |     |     |  |



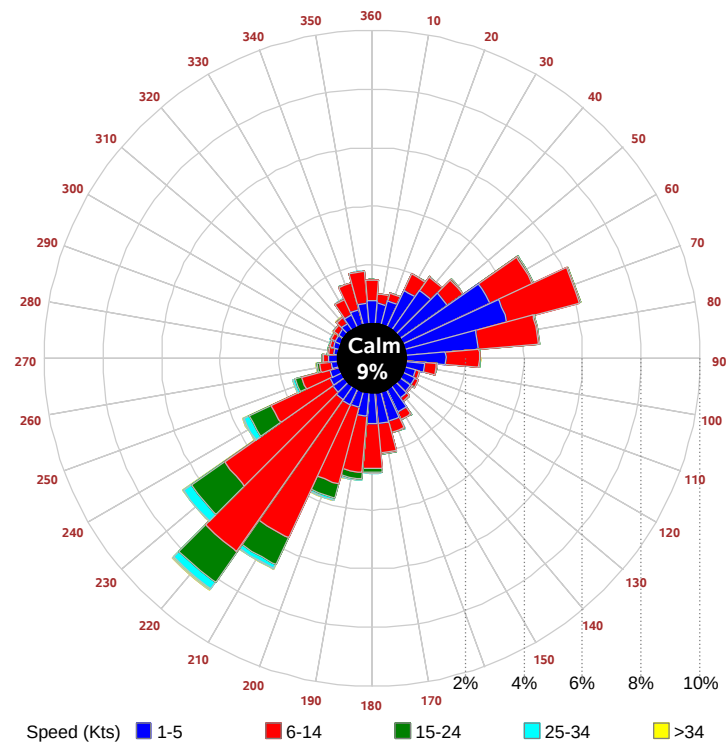
## Wind Summary - December, January, and February



## Wind Summary - March, April, and May



## Wind Summary - June, July, and August



## Wind Summary - September, October, and November

