

**FORT HOOD/GRAY AAF TX**

Latitude = 31.07 N

WMO No. 722576

Longitude = 97.83 W

Elevation = 1014 feet

Period of Record = 1967 to 1996

Average Pressure = 28.92 inches Hg

**Design Criteria Data**

|                                                  | <b>Design Value</b> | Mean Coincident (Average) Values |                         |                        |                             |
|--------------------------------------------------|---------------------|----------------------------------|-------------------------|------------------------|-----------------------------|
|                                                  |                     | Wet Bulb Temperature (°F)        | Humidity Ratio (gr/lb)  | Wind Speed (mph)       | Prevailing Direction (NSEW) |
| <b>Dry Bulb Temperature (T)</b>                  | <b>(°F)</b>         |                                  |                         |                        |                             |
| Median of Extreme Highs                          | 102                 | 74                               | 84                      | 8.3                    | SSE                         |
| 0.4% Occurrence                                  | 99                  | 74                               | 91                      | 8.8                    | S                           |
| 1.0% Occurrence                                  | 97                  | 74                               | 93                      | 8.9                    | S                           |
| 2.0% Occurrence                                  | 95                  | 74                               | 95                      | 8.9                    | S                           |
| Mean Daily Range                                 | 20                  | -                                | -                       | -                      | -                           |
| 97.5% Occurrence                                 | 33                  | 30                               | 21                      | 7.8                    | N                           |
| 99.0% Occurrence                                 | 27                  | 24                               | 14                      | 9.2                    | N                           |
| 99.6% Occurrence                                 | 23                  | 21                               | 12                      | 8.3                    | N                           |
| Median of Extreme Lows                           | 19                  | 17                               | 10                      | 10.2                   | N                           |
|                                                  | <b>Design Value</b> | Mean Coincident (Average) Values |                         |                        |                             |
|                                                  |                     | Dry Bulb Temperature (°F)        | Humidity Ratio (gr/lb)  | Wind Speed (mph)       | Prevailing Direction (NSEW) |
| <b>Wet Bulb Temperature (T<sub>wb</sub>)</b>     | <b>(°F)</b>         |                                  |                         |                        |                             |
| Median of Extreme Highs                          | 80                  | 91                               | 142                     | 9.5                    | S                           |
| 0.4% Occurrence                                  | 78                  | 91                               | 128                     | 9.6                    | S                           |
| 1.0% Occurrence                                  | 77                  | 90                               | 123                     | 9.5                    | S                           |
| 2.0% Occurrence                                  | 76                  | 89                               | 119                     | 9.5                    | S                           |
|                                                  | <b>Design Value</b> | Mean Coincident (Average) Values |                         |                        |                             |
|                                                  |                     | Dry Bulb Temperature (°F)        | Vapor Pressure (in. Hg) | Wind Speed (mph)       | Prevailing Direction (NSEW) |
| <b>Humidity Ratio (HR)</b>                       | <b>(gr/lb)</b>      |                                  |                         |                        |                             |
| Median of Extreme Highs                          | 146                 | 83                               | 0.94                    | 8.1                    | S                           |
| 0.4% Occurrence                                  | 133                 | 82                               | 0.85                    | 10.2                   | S                           |
| 1.0% Occurrence                                  | 129                 | 81                               | 0.83                    | 8.7                    | S                           |
| 2.0% Occurrence                                  | 127                 | 80                               | 0.82                    | 8.7                    | S                           |
| <b>Air Conditioning/<br/>Humid Area Criteria</b> | <b># of Hours</b>   | T ≥ 93°F                         | T ≥ 80°F                | T <sub>wb</sub> ≥ 73°F | T <sub>wb</sub> ≥ 67°F      |
|                                                  |                     | 321                              | 1941                    | 1309                   | 3373                        |

**Other Site Data**

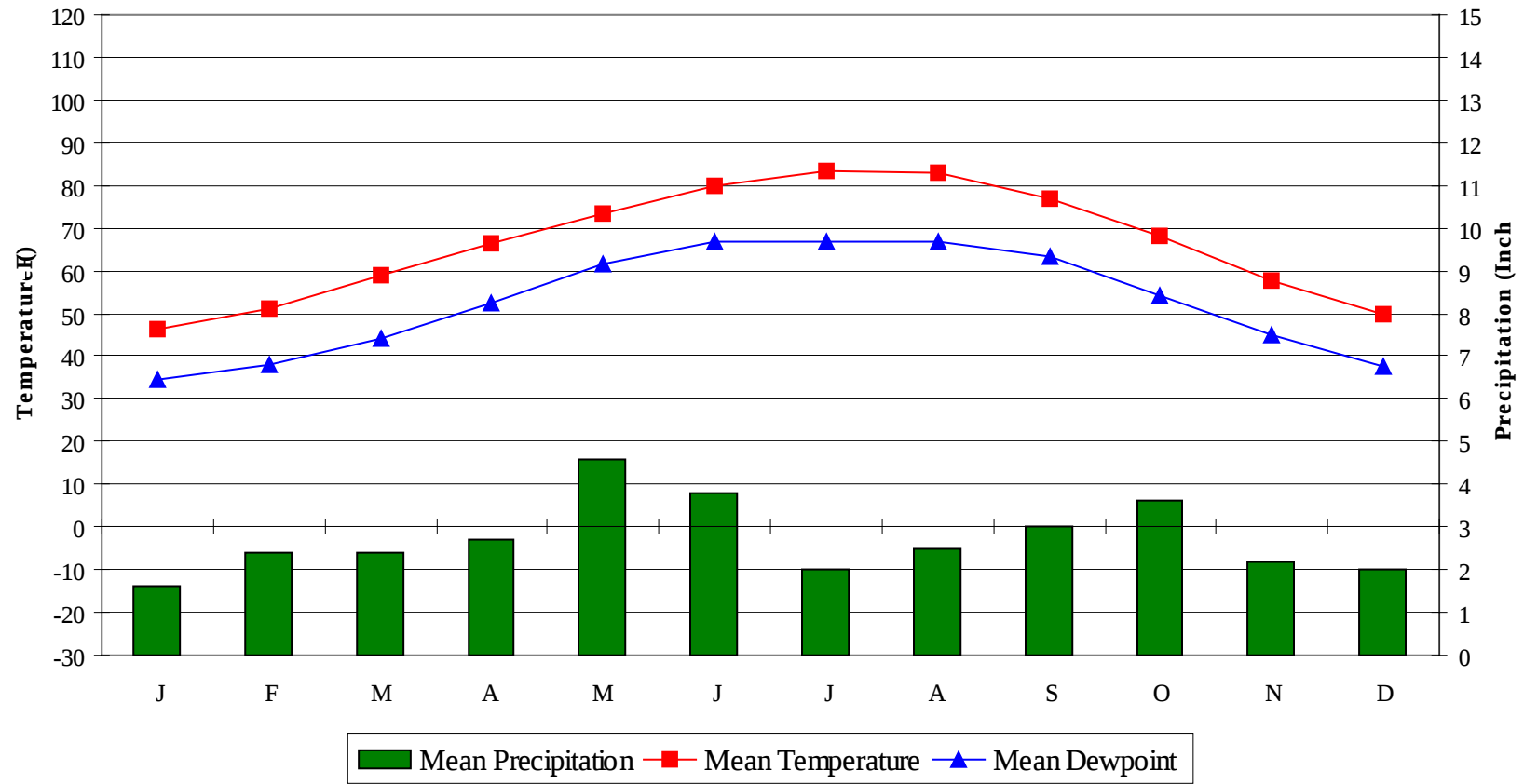
| Weather Region                                   | Rain Rate<br>100 Year Recurrence<br>(in./hr) | Basic Wind Speed<br>3 sec gust @ 33 ft<br>50 Year Recurrence (mph) | Ventilation Cooling Load Index<br>(Ton-hr/cfm/yr) Base 75°F-RH 60%<br>Latent + Sensible |
|--------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 11                                               | 4.0                                          | 90                                                                 | 4.1 + 2.2                                                                               |
| Ground Water 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>(#)                                             |
| 68.9                                             | 6                                            | 2                                                                  | 16                                                                                      |

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

FORT HOOD/GRAY AAF TX

WMO No. 722576

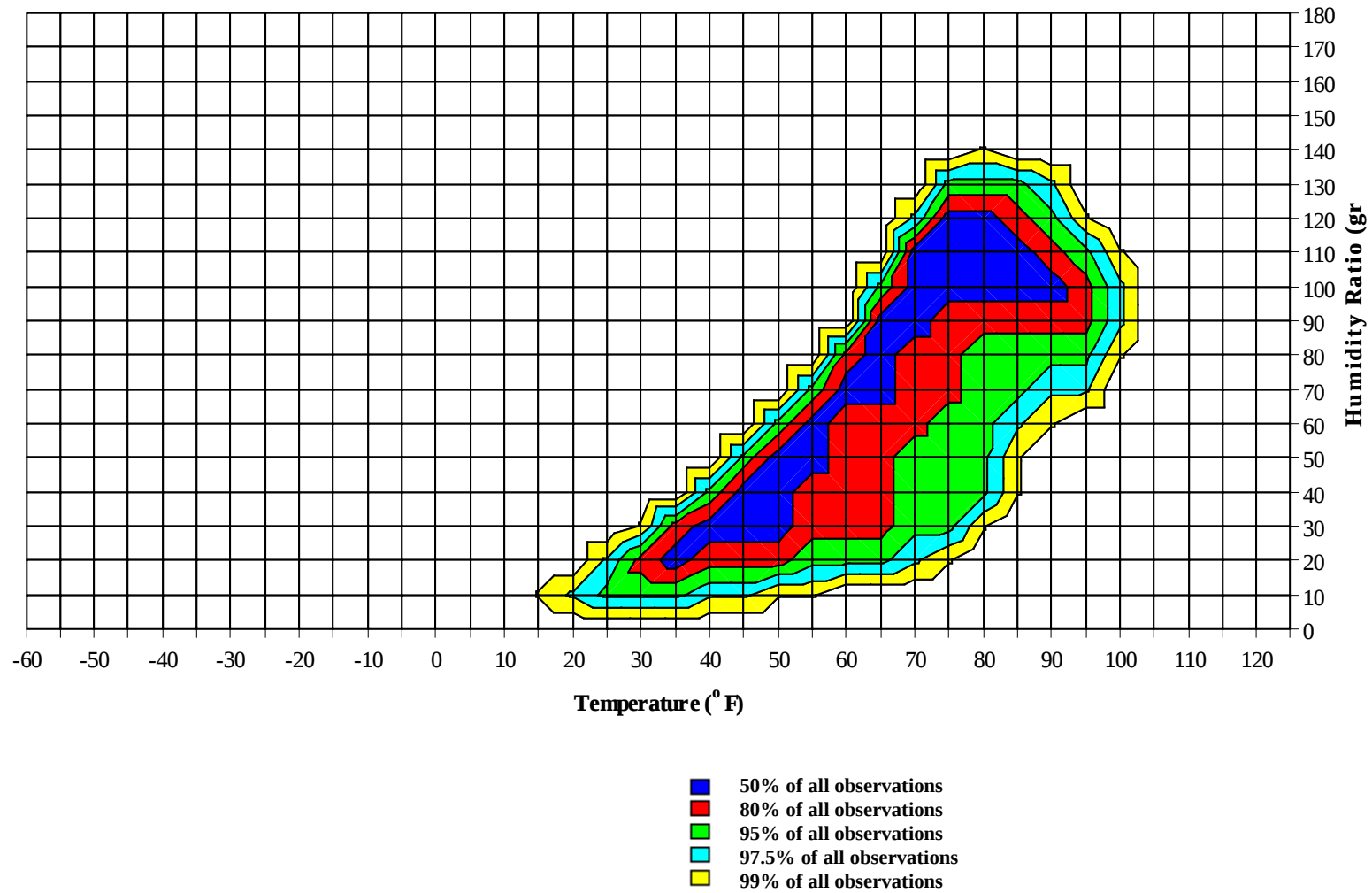
### Average Annual Climate



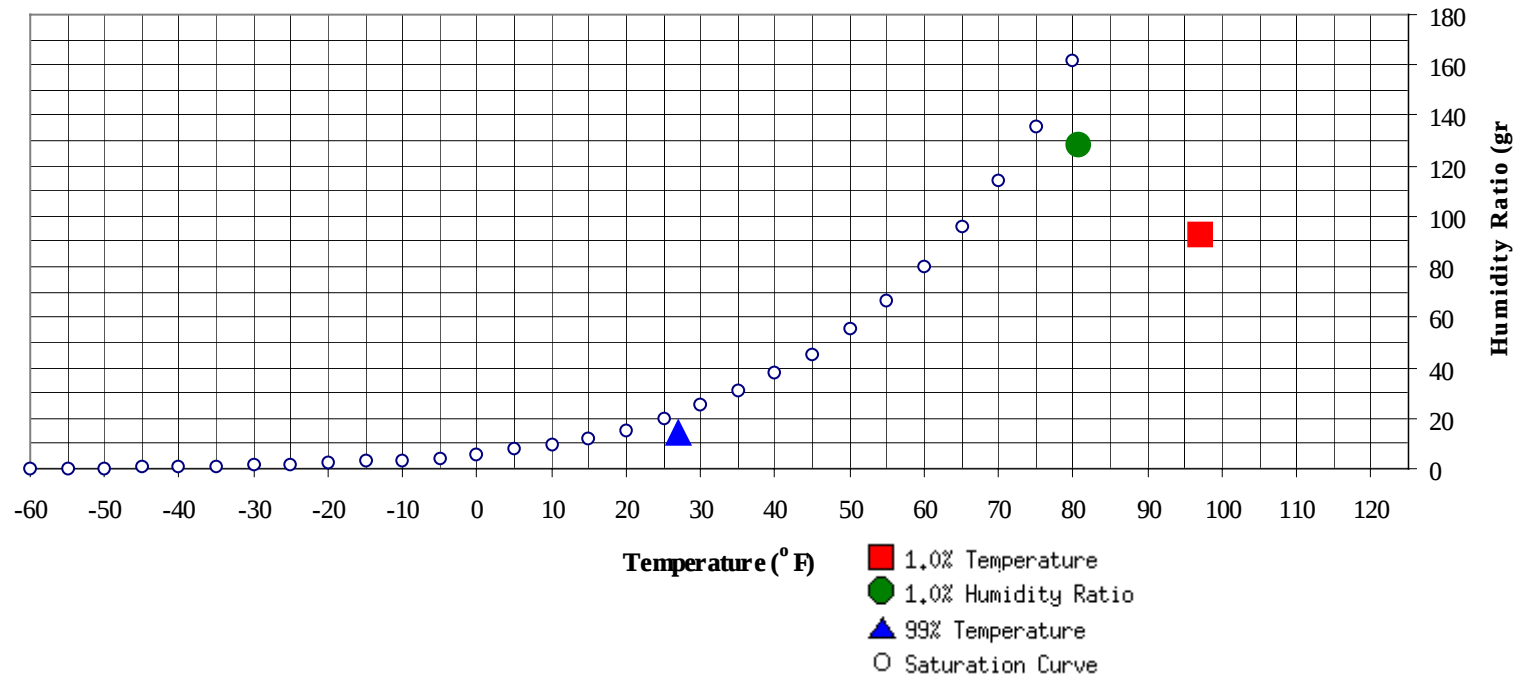
FORT HOOD/GRAY AAF TX

WMO No. 722576

### Long Term Psychrometric Summary



## Psychrometric Summary of Peak Design Values



|              | (°F) | MCHR    | Enthalpy | 1.0% Humidity | (gr/lb) | MCDB | MCWB | MC Dewpt | Enthalpy |
|--------------|------|---------|----------|---------------|---------|------|------|----------|----------|
|              |      | (gr/lb) | (btu/lb) |               |         | (°F) | (°F) | (°F)     | (btu/lb) |
| 99% Dry Bulb | 27   | 14      | 8.6      | Ratio         | 128.8   | 80.7 | 75.2 | 73.2     | 39.5     |

|               | (°F) | MCHR    | MCWB | Enthalpy |
|---------------|------|---------|------|----------|
|               |      | (gr/lb) | (°F) | (btu/lb) |
| 1.0% Dry Bulb | 97   | 92.6    | 73.8 | 37.9     |

**FORT HOOD/GRAY AAF TX**

**WMO No. 722576**

**Dry-Bulb Temperature Hours For An Average Year (Sheet 1 of 5)**

**Period of Record = 1967 to 1996**

| Temperature<br>Range<br>(°F) | January             |                |                |              |                          | February            |                |                |              |                          | March               |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 105 / 109                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 100 / 104                    |                     |                |                |              |                          |                     | 0              |                | 0            | 63.0                     |                     |                |                |              |                          |
| 95 / 99                      |                     |                |                |              |                          |                     | 0              | 0              | 0            | 61.7                     |                     | 0              | 0              | 0            | 62.0                     |
| 90 / 94                      |                     |                |                |              |                          |                     | 0              | 0              | 0            | 60.2                     |                     | 1              | 0              | 1            | 63.2                     |
| 85 / 89                      |                     |                |                |              |                          |                     | 1              | 1              | 2            | 59.2                     |                     | 3              | 1              | 4            | 64.6                     |
| 80 / 84                      |                     | 1              | 0              | 1            | 60.0                     |                     | 5              | 1              | 6            | 59.8                     |                     | 12             | 4              | 16           | 63.5                     |
| 75 / 79                      |                     | 5              | 1              | 6            | 60.4                     | 0                   | 10             | 5              | 16           | 59.5                     | 0                   | 26             | 14             | 40           | 61.8                     |
| 70 / 74                      |                     | 14             | 5              | 19           | 58.6                     | 1                   | 20             | 10             | 31           | 57.7                     | 7                   | 38             | 31             | 76           | 61.0                     |
| 65 / 69                      | 5                   | 23             | 13             | 42           | 57.5                     | 8                   | 27             | 23             | 57           | 57.1                     | 26                  | 44             | 43             | 113          | 58.5                     |
| 60 / 64                      | 9                   | 26             | 20             | 55           | 53.8                     | 18                  | 28             | 28             | 74           | 54.2                     | 35                  | 38             | 42             | 115          | 54.7                     |
| 55 / 59                      | 17                  | 28             | 27             | 73           | 50.1                     | 25                  | 28             | 31             | 84           | 50.5                     | 40                  | 32             | 37             | 109          | 50.5                     |
| 50 / 54                      | 25                  | 32             | 34             | 91           | 46.0                     | 31                  | 28             | 33             | 92           | 46.3                     | 45                  | 24             | 35             | 104          | 46.6                     |
| 45 / 49                      | 37                  | 35             | 40             | 112          | 42.0                     | 37                  | 27             | 33             | 97           | 42.4                     | 39                  | 13             | 19             | 72           | 42.4                     |
| 40 / 44                      | 41                  | 29             | 36             | 107          | 37.7                     | 37                  | 21             | 27             | 85           | 38.1                     | 29                  | 10             | 11             | 50           | 38.1                     |
| 35 / 39                      | 49                  | 26             | 35             | 111          | 33.7                     | 30                  | 13             | 16             | 60           | 33.6                     | 17                  | 5              | 7              | 28           | 33.8                     |
| 30 / 34                      | 35                  | 18             | 21             | 74           | 29.5                     | 20                  | 9              | 10             | 38           | 29.6                     | 6                   | 2              | 2              | 10           | 28.9                     |
| 25 / 29                      | 15                  | 8              | 9              | 32           | 24.3                     | 11                  | 4              | 4              | 19           | 25.0                     | 2                   | 1              | 1              | 4            | 23.8                     |
| 20 / 24                      | 10                  | 3              | 4              | 17           | 20.2                     | 3                   | 2              | 2              | 7            | 20.3                     | 1                   | 0              | 0              | 1            | 20.3                     |
| 15 / 19                      | 3                   | 0              | 1              | 4            | 15.5                     | 2                   | 1              | 1              | 4            | 16.0                     | 0                   |                |                | 0            | 15.2                     |
| 10 / 14                      | 0                   | 0              | 0              | 0            | 10.2                     | 0                   | 0              | 0              | 0            | 11.6                     |                     |                |                |              |                          |
| 5 / 9                        | 0                   |                |                | 0            | 5.2                      | 0                   |                |                | 0            | 7.0                      |                     |                |                |              |                          |
| 0 / 4                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -5 / -1                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |

**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.

**FORT HOOD/GRAY AAF TX**

WMO No. 722576

**Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)**

**Period of Record = 1967 to 1996**

| Temperature<br>Range<br>(°F) | April               |                |                |              |                          | May                 |                |                |              |                          | June                |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 105 / 109                    |                     |                |                |              |                          |                     |                |                |              |                          |                     | 0              | 0              | 0            | 75.5                     |
| 100 / 104                    |                     |                |                |              |                          |                     | 0              |                | 0            | 73.2                     |                     | 2              | 1              | 3            | 75.4                     |
| 95 / 99                      |                     | 0              | 0              | 0            | 68.1                     |                     | 3              | 1              | 4            | 73.5                     |                     | 11             | 5              | 16           | 75.5                     |
| 90 / 94                      |                     | 3              | 1              | 4            | 67.8                     |                     | 11             | 5              | 17           | 73.2                     |                     | 49             | 25             | 73           | 74.4                     |
| 85 / 89                      |                     | 11             | 5              | 17           | 67.1                     |                     | 36             | 18             | 55           | 71.9                     | 0                   | 74             | 46             | 120          | 73.3                     |
| 80 / 84                      |                     | 30             | 15             | 46           | 66.2                     | 1                   | 60             | 39             | 100          | 69.9                     | 14                  | 58             | 61             | 133          | 72.1                     |
| 75 / 79                      | 1                   | 50             | 33             | 84           | 64.5                     | 24                  | 62             | 59             | 146          | 68.6                     | 85                  | 30             | 59             | 174          | 71.0                     |
| 70 / 74                      | 23                  | 54             | 53             | 130          | 63.4                     | 73                  | 42             | 58             | 174          | 66.6                     | 93                  | 13             | 33             | 139          | 68.4                     |
| 65 / 69                      | 53                  | 39             | 52             | 144          | 61.0                     | 68                  | 22             | 41             | 131          | 63.0                     | 37                  | 3              | 9              | 49           | 64.2                     |
| 60 / 64                      | 55                  | 26             | 36             | 116          | 56.4                     | 51                  | 8              | 18             | 77           | 58.6                     | 9                   | 1              | 1              | 11           | 58.7                     |
| 55 / 59                      | 46                  | 13             | 23             | 82           | 51.5                     | 20                  | 3              | 6              | 29           | 53.5                     | 2                   |                | 0              | 2            | 54.7                     |
| 50 / 54                      | 33                  | 8              | 13             | 54           | 46.9                     | 7                   | 1              | 2              | 10           | 48.9                     |                     |                |                |              |                          |
| 45 / 49                      | 19                  | 4              | 6              | 29           | 42.9                     | 2                   |                | 0              | 2            | 44.3                     |                     |                |                |              |                          |
| 40 / 44                      | 8                   | 1              | 2              | 11           | 38.3                     | 0                   |                |                | 0            | 41.0                     |                     |                |                |              |                          |
| 35 / 39                      | 2                   | 0              | 1              | 3            | 34.1                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 30 / 34                      | 1                   |                |                | 1            | 30.1                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 25 / 29                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 20 / 24                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 15 / 19                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 5 / 9                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 0 / 4                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -5 / -1                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |

**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.

**FORT HOOD/GRAY AAF TX**

**WMO No. 722576**

**Dry-Bulb Temperature Hours For An Average Year (Sheet 3 of 5)**

**Period of Record = 1967 to 1996**

| Temperature<br>Range<br>(°F) | July                |                |                |              |                          | August              |                |                |              |                          | September           |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 105 / 109                    |                     | 0              | 0              | 0            | 75.1                     |                     | 0              | 0              | 0            | 75.3                     |                     |                |                |              |                          |
| 100 / 104                    |                     | 8              | 3              | 11           | 73.6                     |                     | 8              | 2              | 10           | 74.4                     |                     | 1              | 0              | 1            | 73.9                     |
| 95 / 99                      |                     | 41             | 20             | 61           | 73.7                     |                     | 44             | 20             | 64           | 73.9                     | 0                   | 9              | 3              | 12           | 73.7                     |
| 90 / 94                      |                     | 77             | 45             | 121          | 73.4                     |                     | 73             | 39             | 112          | 73.5                     | 0                   | 38             | 14             | 53           | 73.1                     |
| 85 / 89                      | 1                   | 66             | 52             | 119          | 73.0                     | 1                   | 62             | 54             | 116          | 72.7                     | 0                   | 59             | 31             | 89           | 72.1                     |
| 80 / 84                      | 38                  | 40             | 69             | 146          | 72.3                     | 35                  | 39             | 68             | 143          | 72.1                     | 6                   | 55             | 50             | 111          | 70.8                     |
| 75 / 79                      | 127                 | 13             | 44             | 183          | 71.4                     | 122                 | 16             | 46             | 185          | 71.3                     | 64                  | 38             | 62             | 164          | 69.9                     |
| 70 / 74                      | 74                  | 4              | 14             | 92           | 69.5                     | 78                  | 6              | 19             | 102          | 68.8                     | 88                  | 21             | 43             | 152          | 67.5                     |
| 65 / 69                      | 8                   | 1              | 1              | 10           | 65.0                     | 11                  | 0              | 1              | 12           | 63.6                     | 36                  | 11             | 19             | 66           | 61.9                     |
| 60 / 64                      | 0                   |                |                | 0            | 60.2                     | 0                   |                | 0              | 0            | 58.9                     | 24                  | 6              | 10             | 40           | 57.1                     |
| 55 / 59                      |                     |                |                |              |                          |                     |                |                |              |                          | 14                  | 2              | 5              | 21           | 52.7                     |
| 50 / 54                      |                     |                |                |              |                          |                     |                |                |              |                          | 5                   | 1              | 2              | 8            | 48.4                     |
| 45 / 49                      |                     |                |                |              |                          |                     |                |                |              |                          | 2                   | 0              | 0              | 2            | 44.9                     |
| 40 / 44                      |                     |                |                |              |                          |                     |                |                |              |                          | 0                   |                |                | 0            | 41.7                     |
| 35 / 39                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 30 / 34                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 25 / 29                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 20 / 24                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 15 / 19                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 5 / 9                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 0 / 4                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| -5 / -1                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |

**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.

**FORT HOOD/GRAY AAF TX**

WMO No. 722576

**Dry-Bulb Temperature Hours For An Average Year (Sheet 4 of 5)**

**Period of Record = 1967 to 1996**

| Temperature<br>Range<br>(°F) | October             |                |                |              |                          | November            |                |                |              |                          | December            |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|---------------------|----------------|----------------|--------------|--------------------------|
|                              | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 105 / 109                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 100 / 104                    |                     | 0              |                | 0            | 68.0                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 95 / 99                      |                     | 1              | 0              | 1            | 71.6                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 90 / 94                      |                     | 6              | 1              | 7            | 70.2                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 85 / 89                      |                     | 26             | 8              | 34           | 69.4                     |                     | 0              |                | 0            | 65.8                     |                     |                |                |              |                          |
| 80 / 84                      | 0                   | 44             | 19             | 64           | 67.9                     |                     | 2              | 0              | 2            | 68.5                     |                     | 0              |                | 0            | 58.3                     |
| 75 / 79                      | 12                  | 51             | 38             | 101          | 66.1                     |                     | 11             | 2              | 13           | 67.5                     |                     | 2              | 0              | 2            | 60.5                     |
| 70 / 74                      | 40                  | 44             | 54             | 138          | 64.1                     | 1                   | 26             | 9              | 36           | 65.2                     |                     | 8              | 1              | 9            | 62.0                     |
| 65 / 69                      | 51                  | 33             | 48             | 132          | 60.6                     | 12                  | 39             | 26             | 78           | 63.5                     | 1                   | 23             | 8              | 32           | 60.9                     |
| 60 / 64                      | 52                  | 21             | 37             | 110          | 56.4                     | 24                  | 35             | 34             | 93           | 60.2                     | 14                  | 27             | 20             | 62           | 59.4                     |
| 55 / 59                      | 39                  | 12             | 22             | 73           | 51.6                     | 28                  | 35             | 35             | 98           | 55.3                     | 16                  | 33             | 28             | 77           | 55.0                     |
| 50 / 54                      | 32                  | 6              | 12             | 50           | 47.3                     | 35                  | 30             | 35             | 100          | 51.1                     | 20                  | 36             | 34             | 90           | 50.2                     |
| 45 / 49                      | 15                  | 4              | 6              | 25           | 43.5                     | 39                  | 27             | 36             | 103          | 46.8                     | 32                  | 36             | 39             | 106          | 46.2                     |
| 40 / 44                      | 5                   | 0              | 1              | 6            | 39.2                     | 37                  | 17             | 29             | 84           | 42.3                     | 39                  | 33             | 41             | 112          | 41.9                     |
| 35 / 39                      | 1                   | 0              | 1              | 2            | 34.3                     | 32                  | 12             | 19             | 63           | 38.0                     | 47                  | 22             | 35             | 104          | 37.9                     |
| 30 / 34                      | 1                   |                | 0              | 1            | 28.7                     | 21                  | 4              | 8              | 33           | 33.5                     | 40                  | 16             | 22             | 78           | 33.7                     |
| 25 / 29                      |                     |                |                |              |                          | 9                   | 2              | 3              | 14           | 29.1                     | 20                  | 8              | 12             | 40           | 29.0                     |
| 20 / 24                      |                     |                |                |              |                          | 2                   | 0              | 1              | 3            | 24.2                     | 10                  | 3              | 4              | 17           | 24.0                     |
| 15 / 19                      |                     |                |                |              |                          | 1                   |                |                | 1            | 19.9                     | 4                   | 2              | 2              | 8            | 19.4                     |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          | 2                   | 1              | 2              | 5            | 14.8                     |
| 5 / 9                        |                     |                |                |              |                          |                     |                |                |              |                          | 2                   | 0              | 0              | 2            | 9.7                      |
| 0 / 4                        |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              | 0              | 0            | 5.1                      |
| -5 / -1                      |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            | 0.8                      |
|                              |                     |                |                |              |                          |                     |                |                |              |                          | 0                   |                |                | 0            | -2.7                     |

**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.

**FORT HOOD/GRAY AAF TX**

WMO No. 722576

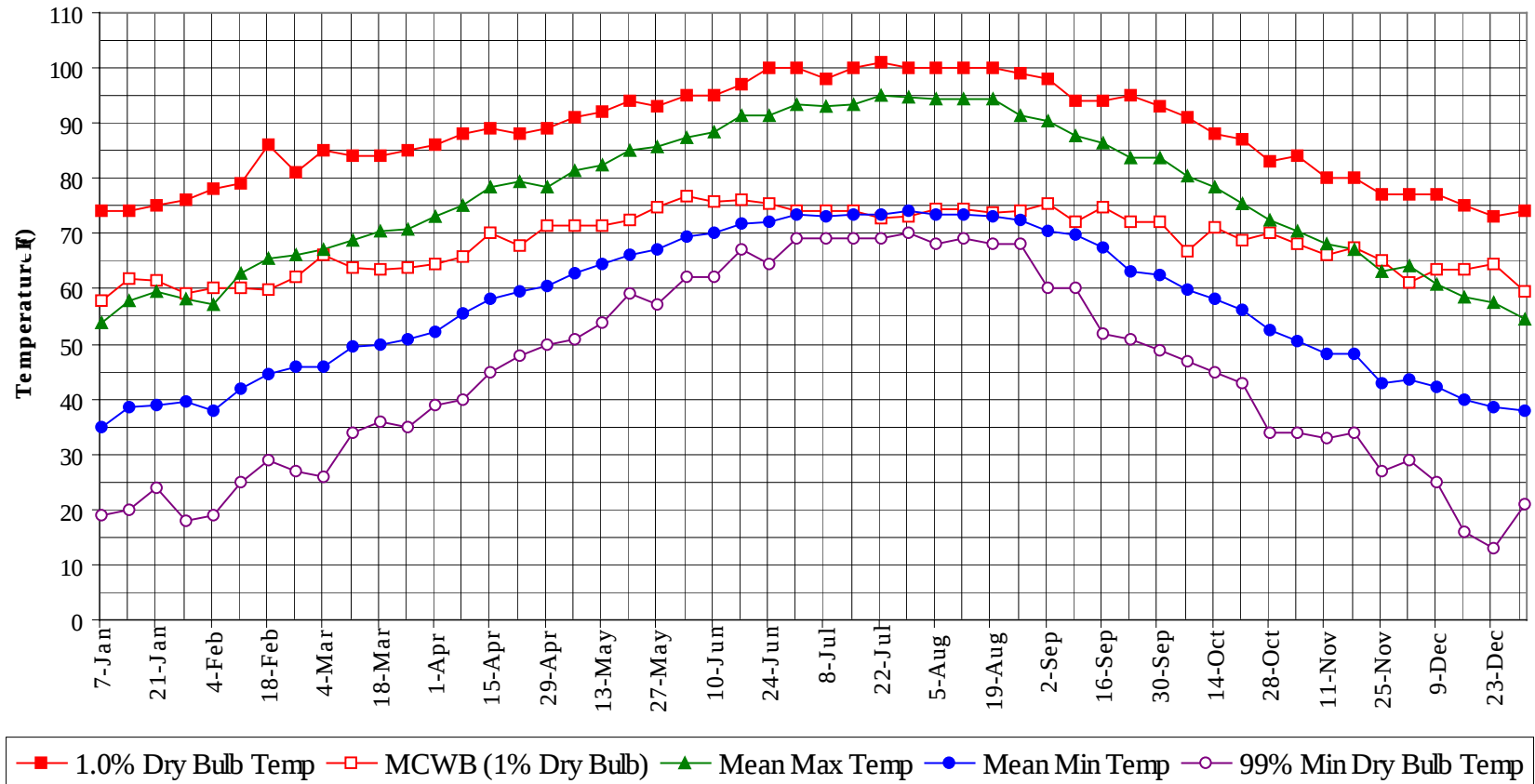
**Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)**

**Period of Record = 1967 to 1996**

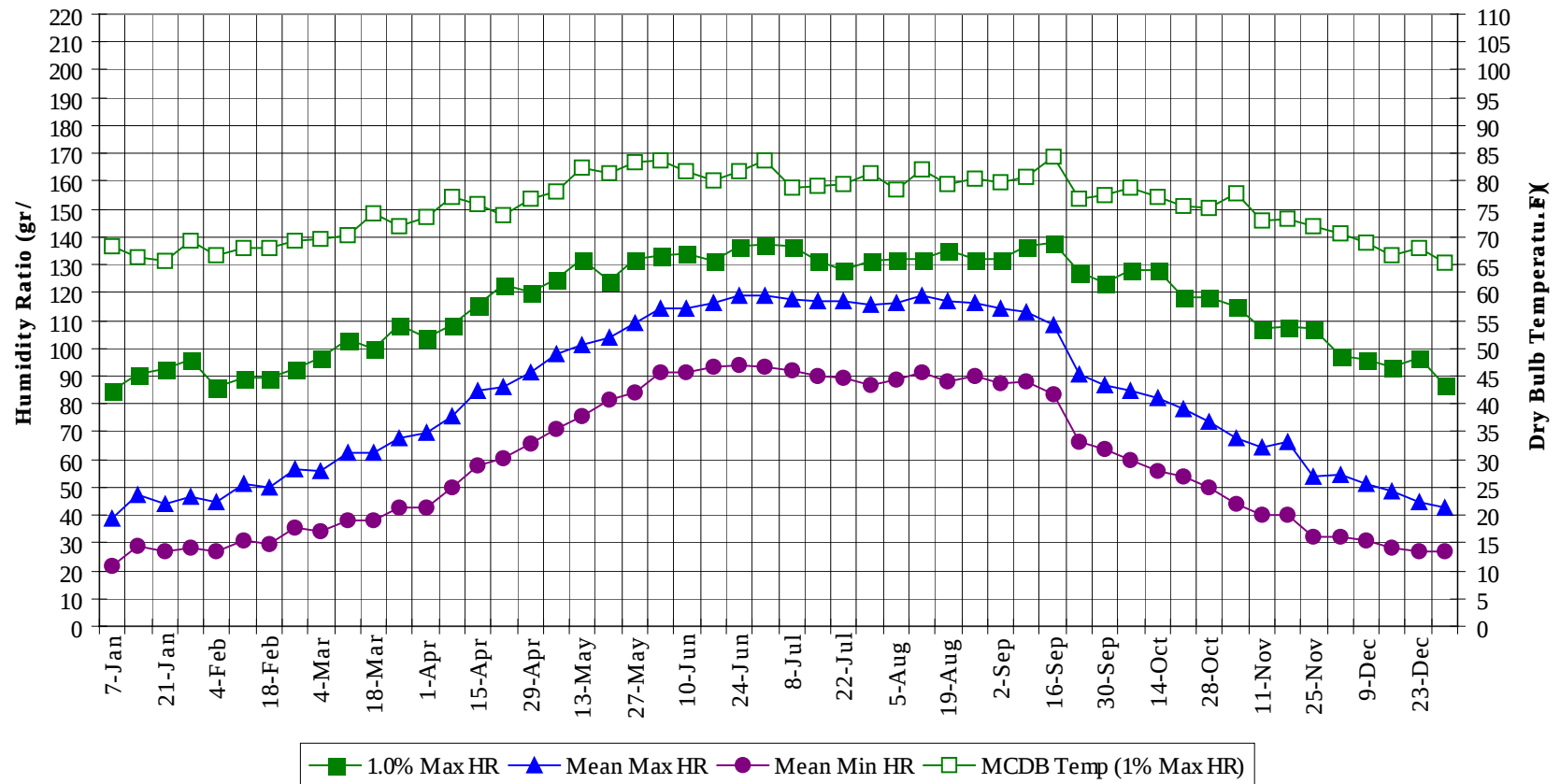
| Annual Totals                |                     |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|
| Temperature<br>Range<br>(°F) | Hour<br>Group (LST) |                |                | Total<br>Obs | M<br>C<br>W<br>B<br>(°F) |
|                              | 01<br>To<br>08      | 09<br>To<br>16 | 17<br>To<br>00 |              |                          |
| 105 / 109                    |                     | 1              | 0              | 1            | 75.2                     |
| 100 / 104                    |                     | 18             | 7              | 25           | 74.1                     |
| 95 / 99                      | 0                   | 109            | 50             | 159          | 73.9                     |
| 90 / 94                      | 0                   | 258            | 131            | 389          | 73.4                     |
| 85 / 89                      | 2                   | 338            | 216            | 557          | 72.2                     |
| 80 / 84                      | 95                  | 358            | 329            | 781          | 70.5                     |
| 75 / 79                      | 443                 | 335            | 373            | 1150         | 68.9                     |
| 70 / 74                      | 494                 | 317            | 354            | 1166         | 65.6                     |
| 65 / 69                      | 342                 | 264            | 305            | 911          | 60.6                     |
| 60 / 64                      | 296                 | 222            | 254            | 772          | 55.8                     |
| 55 / 59                      | 259                 | 184            | 221            | 664          | 51.0                     |
| 50 / 54                      | 248                 | 161            | 205            | 614          | 46.6                     |
| 45 / 49                      | 224                 | 132            | 175            | 531          | 42.3                     |
| 40 / 44                      | 198                 | 95             | 131            | 423          | 38.0                     |
| 35 / 39                      | 159                 | 66             | 89             | 314          | 33.7                     |
| 30 / 34                      | 91                  | 37             | 47             | 175          | 29.4                     |
| 25 / 29                      | 41                  | 15             | 20             | 77           | 24.4                     |
| 20 / 24                      | 18                  | 6              | 8              | 32           | 20.0                     |
| 15 / 19                      | 7                   | 2              | 4              | 13           | 15.4                     |
| 10 / 14                      | 3                   | 1              | 1              | 5            | 10.1                     |
| 5 / 9                        | 0                   | 0              | 0              | 0            | 5.6                      |
| 0 / 4                        | 0                   | 0              |                | 0            | 0.8                      |
| -5 / -1                      | 0                   |                |                | 0            | -2.7                     |

**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



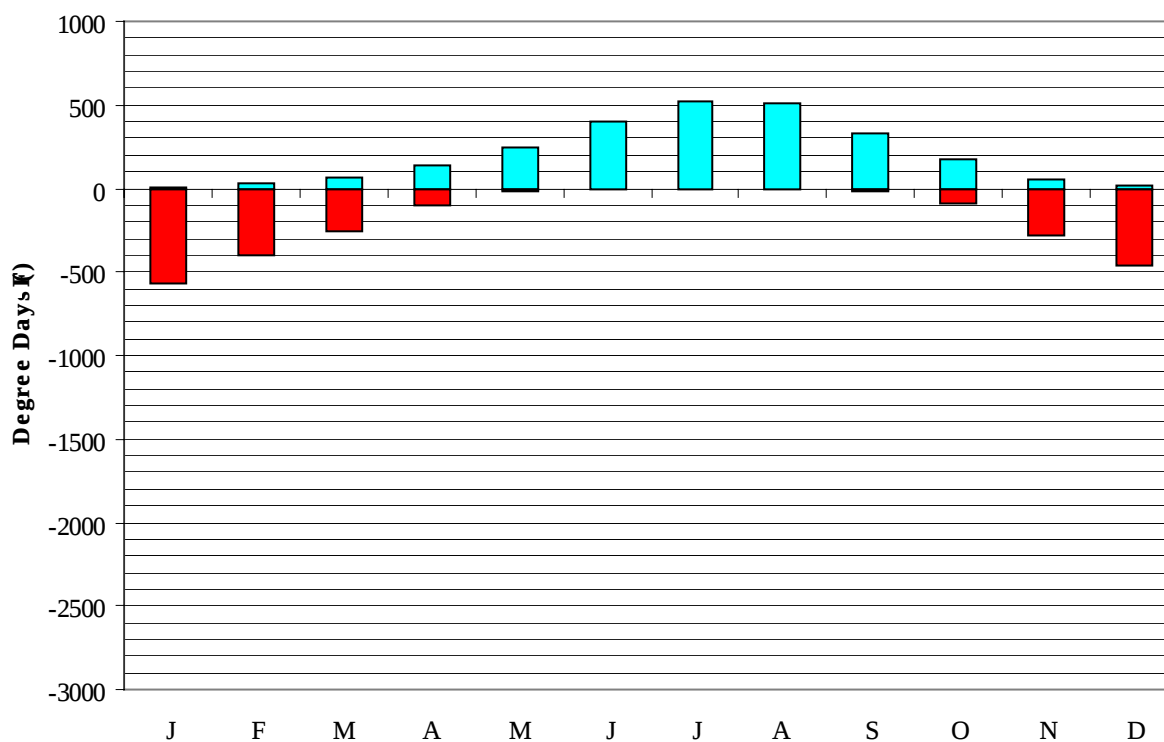
**FORT HOOD/GRAY AAF TX**

WMO No. 722576

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

| Week<br>Ending | 1.0%<br>Temp (°F) | MCWB @<br>1% Temp (°F) | Mean Max<br>Temp (°F) | Mean Min<br>Temp (°F) | 99%<br>Temp (°F) | 1.0%<br>HR (gr/lb) | MCDB @<br>1% HR (°F) | Mean Max<br>HR (gr/lb) | Mean Min<br>HR (gr/lb) |
|----------------|-------------------|------------------------|-----------------------|-----------------------|------------------|--------------------|----------------------|------------------------|------------------------|
| 7-Jan          | 74.0              | 57.7                   | 53.7                  | 35.0                  | 19.0             | 84.7               | 68.3                 | 38.9                   | 21.9                   |
| 14-Jan         | 74.0              | 61.8                   | 57.7                  | 38.7                  | 20.0             | 90.3               | 66.2                 | 47.1                   | 28.8                   |
| 21-Jan         | 75.0              | 61.4                   | 59.5                  | 39.0                  | 24.0             | 92.4               | 65.6                 | 44.3                   | 26.7                   |
| 28-Jan         | 76.0              | 59.0                   | 58.2                  | 39.6                  | 18.0             | 95.9               | 69.4                 | 47.0                   | 28.5                   |
| 4-Feb          | 78.0              | 60.3                   | 57.1                  | 38.0                  | 19.0             | 86.1               | 66.8                 | 44.7                   | 26.8                   |
| 11-Feb         | 79.0              | 60.2                   | 62.8                  | 42.0                  | 25.0             | 89.6               | 67.9                 | 51.5                   | 30.9                   |
| 18-Feb         | 86.0              | 59.9                   | 65.5                  | 44.5                  | 29.0             | 89.6               | 68.1                 | 50.2                   | 29.4                   |
| 25-Feb         | 81.0              | 62.2                   | 66.0                  | 45.9                  | 27.0             | 92.4               | 69.4                 | 56.3                   | 35.7                   |
| 4-Mar          | 85.0              | 66.0                   | 67.3                  | 45.9                  | 26.0             | 96.6               | 69.5                 | 55.8                   | 34.4                   |
| 11-Mar         | 84.0              | 63.8                   | 68.6                  | 49.4                  | 34.0             | 102.9              | 70.2                 | 62.6                   | 38.4                   |
| 18-Mar         | 84.0              | 63.4                   | 70.5                  | 49.7                  | 36.0             | 100.1              | 74.2                 | 62.5                   | 37.9                   |
| 25-Mar         | 85.0              | 63.7                   | 70.8                  | 51.0                  | 35.0             | 108.5              | 72.0                 | 67.6                   | 42.4                   |
| 1-Apr          | 86.0              | 64.6                   | 73.2                  | 52.2                  | 39.0             | 103.6              | 73.7                 | 69.3                   | 42.6                   |
| 8-Apr          | 88.0              | 65.7                   | 75.2                  | 55.4                  | 40.0             | 108.5              | 77.2                 | 75.5                   | 50.0                   |
| 15-Apr         | 89.0              | 70.3                   | 78.3                  | 58.1                  | 45.0             | 115.5              | 75.8                 | 84.5                   | 57.9                   |
| 22-Apr         | 88.0              | 67.7                   | 79.3                  | 59.5                  | 48.0             | 122.5              | 73.9                 | 86.3                   | 60.3                   |
| 29-Apr         | 89.0              | 71.3                   | 78.3                  | 60.6                  | 50.0             | 120.4              | 76.8                 | 91.4                   | 65.6                   |
| 6-May          | 91.0              | 71.6                   | 81.4                  | 62.9                  | 51.0             | 124.6              | 78.2                 | 97.8                   | 71.1                   |
| 13-May         | 92.0              | 71.4                   | 82.6                  | 64.3                  | 54.0             | 132.3              | 82.5                 | 101.4                  | 75.5                   |
| 20-May         | 94.0              | 72.4                   | 85.1                  | 66.3                  | 59.0             | 123.9              | 81.4                 | 104.0                  | 81.6                   |
| 27-May         | 93.0              | 74.9                   | 85.6                  | 67.0                  | 57.0             | 132.3              | 83.5                 | 109.1                  | 83.9                   |
| 3-Jun          | 95.0              | 76.8                   | 87.4                  | 69.5                  | 62.0             | 133.0              | 83.8                 | 114.1                  | 91.0                   |
| 10-Jun         | 95.0              | 75.9                   | 88.5                  | 70.0                  | 62.0             | 133.7              | 81.6                 | 114.3                  | 91.6                   |
| 17-Jun         | 97.0              | 76.1                   | 91.3                  | 71.8                  | 67.0             | 131.6              | 80.3                 | 116.1                  | 93.0                   |
| 24-Jun         | 100.0             | 75.3                   | 91.5                  | 72.1                  | 64.5             | 136.5              | 81.8                 | 119.1                  | 94.0                   |
| 1-Jul          | 100.0             | 74.2                   | 93.3                  | 73.3                  | 69.0             | 137.2              | 83.7                 | 118.8                  | 93.1                   |
| 8-Jul          | 98.0              | 74.1                   | 93.1                  | 73.2                  | 69.0             | 136.5              | 78.9                 | 117.8                  | 91.8                   |
| 15-Jul         | 100.0             | 74.2                   | 93.5                  | 73.3                  | 69.0             | 131.6              | 79.3                 | 116.8                  | 90.0                   |
| 22-Jul         | 101.0             | 72.9                   | 94.9                  | 73.6                  | 69.0             | 128.1              | 79.4                 | 116.9                  | 89.0                   |
| 29-Jul         | 100.0             | 73.2                   | 94.7                  | 74.0                  | 70.0             | 131.6              | 81.4                 | 115.5                  | 86.9                   |
| 5-Aug          | 100.0             | 74.3                   | 94.4                  | 73.5                  | 68.0             | 132.3              | 78.6                 | 116.1                  | 88.9                   |
| 12-Aug         | 100.0             | 74.5                   | 94.3                  | 73.5                  | 69.0             | 132.3              | 82.2                 | 118.9                  | 91.6                   |
| 19-Aug         | 100.0             | 73.7                   | 94.3                  | 73.2                  | 68.0             | 135.1              | 79.4                 | 116.6                  | 88.2                   |
| 26-Aug         | 99.0              | 74.1                   | 91.5                  | 72.3                  | 68.0             | 132.3              | 80.3                 | 116.1                  | 90.1                   |
| 2-Sep          | 98.0              | 75.6                   | 90.5                  | 70.6                  | 60.0             | 132.3              | 79.8                 | 114.0                  | 87.6                   |
| 9-Sep          | 94.0              | 72.2                   | 87.7                  | 69.7                  | 60.0             | 136.5              | 80.9                 | 113.0                  | 87.8                   |
| 16-Sep         | 94.0              | 74.6                   | 86.3                  | 67.5                  | 52.0             | 137.9              | 84.4                 | 108.6                  | 83.3                   |
| 23-Sep         | 95.0              | 72.0                   | 83.8                  | 63.0                  | 51.0             | 127.4              | 76.9                 | 90.9                   | 66.5                   |
| 30-Sep         | 93.0              | 72.0                   | 83.8                  | 62.6                  | 49.0             | 123.2              | 77.5                 | 87.0                   | 64.0                   |
| 7-Oct          | 91.0              | 66.8                   | 80.5                  | 60.0                  | 47.0             | 128.1              | 78.7                 | 84.5                   | 59.8                   |
| 14-Oct         | 88.0              | 71.2                   | 78.4                  | 58.1                  | 45.0             | 128.1              | 77.2                 | 82.2                   | 56.0                   |
| 21-Oct         | 87.0              | 68.8                   | 75.5                  | 56.3                  | 43.0             | 118.3              | 75.6                 | 78.4                   | 53.8                   |
| 28-Oct         | 83.0              | 70.0                   | 72.3                  | 52.6                  | 34.0             | 118.3              | 75.4                 | 73.4                   | 49.6                   |
| 4-Nov          | 84.0              | 68.2                   | 70.5                  | 50.4                  | 34.0             | 114.8              | 77.8                 | 67.9                   | 43.8                   |
| 11-Nov         | 80.0              | 66.0                   | 68.1                  | 48.1                  | 33.0             | 107.1              | 73.0                 | 64.4                   | 40.0                   |
| 18-Nov         | 80.0              | 67.5                   | 67.2                  | 48.1                  | 34.0             | 107.8              | 73.1                 | 66.1                   | 40.4                   |
| 25-Nov         | 77.0              | 65.1                   | 63.0                  | 42.9                  | 27.0             | 107.1              | 72.1                 | 53.7                   | 32.0                   |
| 2-Dec          | 77.0              | 61.1                   | 64.3                  | 43.4                  | 29.0             | 97.3               | 70.6                 | 54.3                   | 32.1                   |
| 9-Dec          | 77.0              | 63.3                   | 60.9                  | 42.1                  | 25.0             | 95.9               | 69.1                 | 51.4                   | 31.1                   |
| 16-Dec         | 75.0              | 63.4                   | 58.7                  | 40.0                  | 16.0             | 93.1               | 66.6                 | 48.8                   | 28.3                   |
| 23-Dec         | 73.0              | 64.6                   | 57.4                  | 38.6                  | 13.0             | 96.6               | 67.9                 | 45.0                   | 27.1                   |
| 31-Dec         | 74.0              | 59.4                   | 54.4                  | 37.7                  | 21.0             | 86.8               | 65.4                 | 42.6                   | 26.7                   |

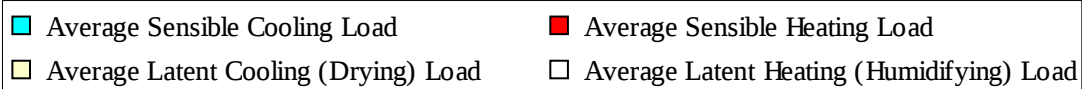
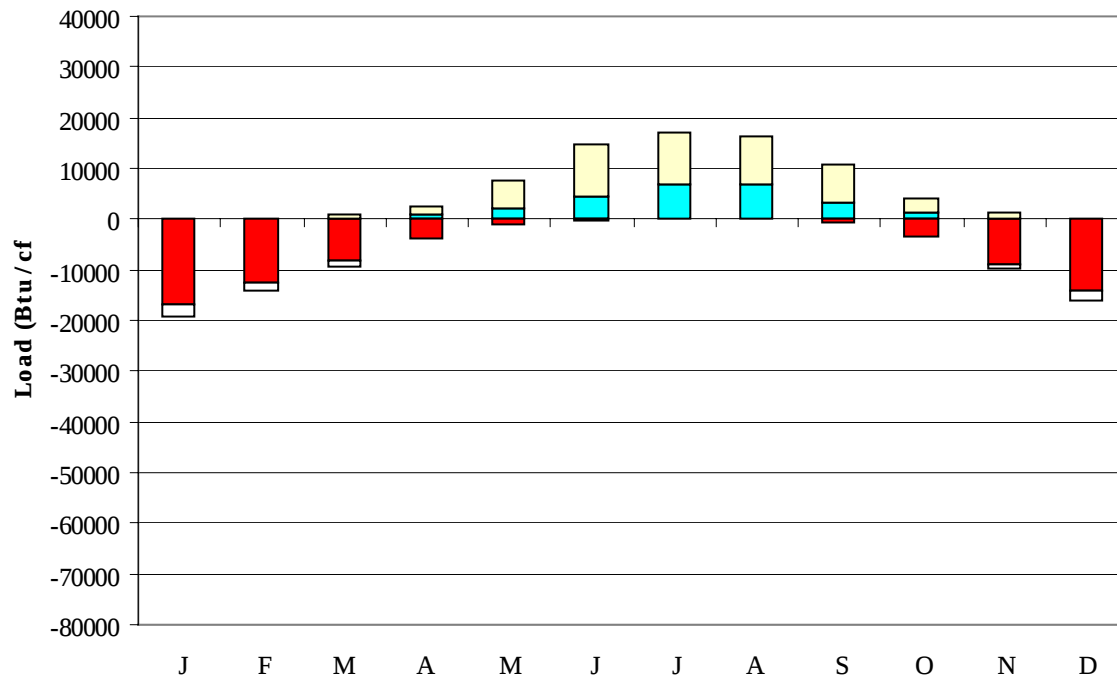
**Degree Days, Heating and Cooling**  
(Base 65°F)



■ Mean Cooling Degree Days ■ Mean Heating Degree Days

|     | Mean Cooling<br>Degree Days (°F) | Mean Heating<br>Degree Days (°F) |
|-----|----------------------------------|----------------------------------|
| JAN | 11                               | 566                              |
| FEB | 24                               | 404                              |
| MAR | 60                               | 255                              |
| APR | 132                              | 98                               |
| MAY | 251                              | 23                               |
| JUN | 407                              | 2                                |
| JUL | 519                              | 0                                |
| AUG | 513                              | 0                                |
| SEP | 335                              | 16                               |
| OCT | 170                              | 89                               |
| NOV | 52                               | 278                              |
| DEC | 17                               | 456                              |
| ANN | 2491                             | 2187                             |

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



|     | Average Sensible Cooling Load (Btu/cfm) | Average Sensible Heating Load (Btu/cfm) | Average Latent Cooling Load (Btu/cfm) | Average Latent Heating Load (Btu/cfm) |
|-----|-----------------------------------------|-----------------------------------------|---------------------------------------|---------------------------------------|
| JAN | 15                                      | -16864                                  | 80                                    | -2523                                 |
| FEB | 97                                      | -12357                                  | 70                                    | -1728                                 |
| MAR | 257                                     | -8335                                   | 495                                   | -922                                  |
| APR | 734                                     | -3625                                   | 1812                                  | -279                                  |
| MAY | 1989                                    | -1112                                   | 5678                                  | -10                                   |
| JUN | 4574                                    | -123                                    | 9999                                  | 0                                     |
| JUL | 6818                                    | -6                                      | 10312                                 | 0                                     |
| AUG | 6671                                    | -10                                     | 9795                                  | 0                                     |
| SEP | 3401                                    | -709                                    | 7332                                  | -5                                    |
| OCT | 1210                                    | -3321                                   | 2723                                  | -147                                  |
| NOV | 169                                     | -8914                                   | 972                                   | -899                                  |
| DEC | 28                                      | -13883                                  | 210                                   | -2000                                 |
| ANN | 25963                                   | -69259                                  | 49478                                 | -8513                                 |

## Average Annual Solar Radiation – Nearest Available Site

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

City: AUSTIN  
 State: TX  
 WBAN No: 13958  
 Lat(N): 30.3  
 Long(W): 97.7  
 Elev(ft): 620

Stn Type: Secondary  
 SHADING GEOMETRY IN DIMENSIONLESS UNITS

Window: 1  
 Overhang: 0.889  
 Vert Gap: 0.65

| 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  | 940  | 1200 | 1500 | 1720 | 1870 | 2090 | 2150 | 2010 | 1660 | 1380 | 1050 | 880  | 1540 |
|                                                                               | Std Dev | 77   | 97   | 116  | 161  | 149  | 130  | 137  | 111  | 118  | 109  | 103  | 68   | 32   |
|                                                                               | Minimum | 800  | 980  | 1240 | 1480 | 1450 | 1810 | 1770 | 1740 | 1410 | 1110 | 800  | 770  | 1500 |
|                                                                               | Maximum | 1110 | 1400 | 1740 | 2100 | 2110 | 2310 | 2380 | 2230 | 1930 | 1550 | 1250 | 1080 | 1610 |
|                                                                               | Diffuse | 410  | 490  | 630  | 740  | 830  | 810  | 750  | 700  | 640  | 500  | 420  | 380  | 610  |
| Clear Day                                                                     | Global  | 1320 | 1630 | 2030 | 2380 | 2560 | 2620 | 2570 | 2400 | 2100 | 1720 | 1370 | 1210 | 1990 |
| NORTH                                                                         | Global  | 270  | 320  | 400  | 460  | 560  | 640  | 610  | 500  | 410  | 340  | 280  | 250  | 420  |
|                                                                               | Diffuse | 270  | 320  | 400  | 450  | 500  | 520  | 510  | 460  | 410  | 340  | 280  | 250  | 390  |
| Clear Day                                                                     | Global  | 240  | 290  | 360  | 440  | 590  | 710  | 650  | 490  | 370  | 310  | 250  | 230  | 410  |
| EAST                                                                          | Global  | 570  | 690  | 810  | 870  | 900  | 1010 | 1100 | 1070 | 910  | 780  | 620  | 540  | 820  |
|                                                                               | Diffuse | 320  | 380  | 470  | 540  | 580  | 610  | 610  | 580  | 510  | 420  | 340  | 300  | 470  |
| Clear Day                                                                     | Global  | 880  | 1050 | 1220 | 1340 | 1390 | 1390 | 1370 | 1340 | 1230 | 1070 | 900  | 820  | 1170 |
| SOUTH                                                                         | Global  | 1200 | 1210 | 1080 | 850  | 660  | 590  | 640  | 820  | 1040 | 1260 | 1260 | 1200 | 980  |
|                                                                               | Diffuse | 420  | 460  | 520  | 530  | 520  | 510  | 510  | 530  | 540  | 500  | 440  | 400  | 490  |
| Clear Day                                                                     | Global  | 2050 | 1930 | 1600 | 1090 | 740  | 610  | 660  | 930  | 1360 | 1770 | 1980 | 2040 | 1390 |
| WEST                                                                          | Global  | 610  | 760  | 920  | 1000 | 1060 | 1170 | 1160 | 1100 | 970  | 870  | 680  | 580  | 910  |
|                                                                               | Diffuse | 330  | 390  | 490  | 560  | 610  | 630  | 620  | 590  | 520  | 430  | 350  | 300  | 480  |
| Clear Day                                                                     | Global  | 880  | 1050 | 1220 | 1340 | 1390 | 1390 | 1370 | 1340 | 1230 | 1070 | 900  | 820  | 1170 |

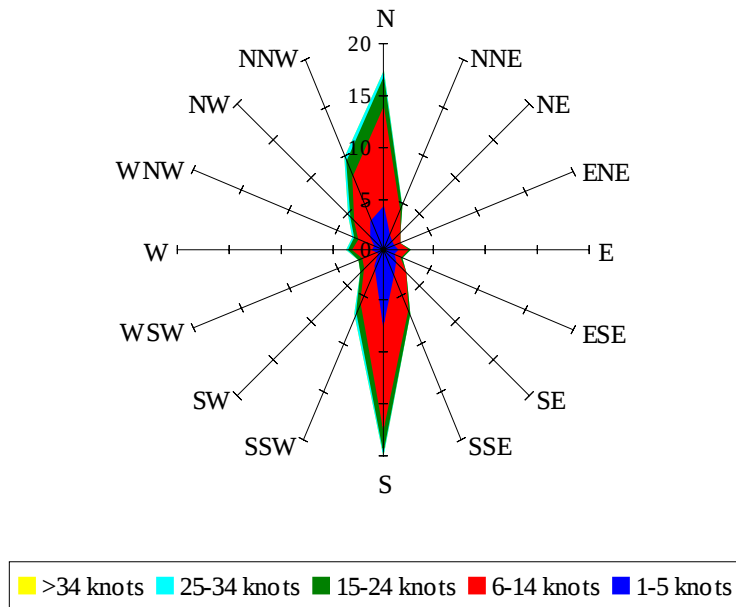
## Average Annual Solar Heat and Illumination – Nearest Available Site

(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 | 650 | 840 | 1070 | 1250 | 1360 | 1530 | 1580 | 1470 | 1210 | 990 | 730 | 600 | 1110 |
| NORTH                                                                                               | Unshaded | 180 | 220 | 270  | 320  | 360  | 400  | 390  | 330  | 280  | 240 | 200 | 170 | 280  |
|                                                                                                     | Shaded   | 160 | 190 | 240  | 280  | 310  | 350  | 340  | 300  | 250  | 210 | 170 | 150 | 250  |
| EAST                                                                                                | Unshaded | 390 | 480 | 570  | 610  | 640  | 710  | 780  | 760  | 640  | 550 | 430 | 370 | 580  |
|                                                                                                     | Shaded   | 340 | 410 | 480  | 500  | 510  | 570  | 620  | 620  | 530  | 460 | 370 | 320 | 480  |
| SOUTH                                                                                               | Unshaded | 880 | 860 | 720  | 520  | 400  | 370  | 380  | 480  | 660  | 880 | 920 | 900 | 660  |
|                                                                                                     | Shaded   | 830 | 700 | 410  | 320  | 320  | 320  | 320  | 330  | 340  | 620 | 840 | 860 | 520  |
| WEST                                                                                                | Unshaded | 430 | 530 | 650  | 720  | 760  | 830  | 830  | 780  | 690  | 620 | 480 | 400 | 640  |
|                                                                                                     | Shaded   | 370 | 460 | 540  | 590  | 620  | 680  | 680  | 650  | 580  | 530 | 410 | 350 | 540  |

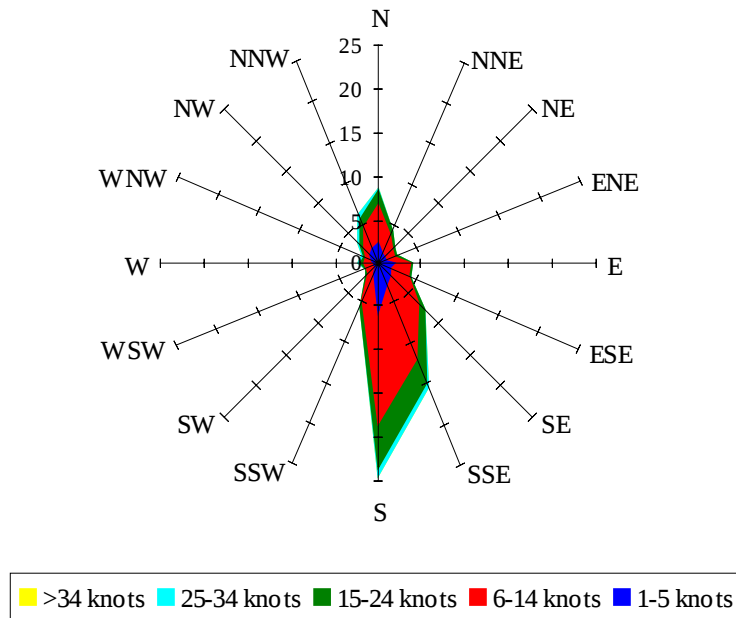
| AVERAGE INCIDENT ILLUMINANCE (klux-hr) FOR MOSTLY CLEAR AND MOSTLY CLOUDY CONDITIONS, Percentage Uncertainty = 9 |          | March |      |     |     |     | June |      |     |     |     |
|------------------------------------------------------------------------------------------------------------------|----------|-------|------|-----|-----|-----|------|------|-----|-----|-----|
|                                                                                                                  |          | 9am   | 11am | 1pm | 3pm | 5pm | 9am  | 11am | 1pm | 3pm | 5pm |
| HORIZ.                                                                                                           | M.Clear  | 35    | 77   | 95  | 82  | 43  | 34   | 77   | 102 | 102 | 76  |
|                                                                                                                  | M.Cloudy | 19    | 46   | 59  | 52  | 28  | 21   | 56   | 78  | 80  | 59  |
| NORTH                                                                                                            | M.Clear  | 9     | 14   | 16  | 15  | 10  | 24   | 18   | 17  | 17  | 17  |
|                                                                                                                  | M.Cloudy | 8     | 17   | 19  | 17  | 11  | 13   | 18   | 19  | 19  | 18  |
| EAST                                                                                                             | M.Clear  | 76    | 69   | 21  | 15  | 10  | 65   | 77   | 43  | 17  | 17  |
|                                                                                                                  | M.Cloudy | 20    | 34   | 21  | 17  | 11  | 26   | 51   | 36  | 19  | 17  |
| SOUTH                                                                                                            | M.Clear  | 29    | 61   | 74  | 64  | 35  | 10   | 17   | 29  | 29  | 17  |
|                                                                                                                  | M.Cloudy | 12    | 31   | 42  | 37  | 19  | 9    | 17   | 27  | 27  | 17  |
| WEST                                                                                                             | M.Clear  | 9     | 14   | 16  | 63  | 79  | 10   | 17   | 17  | 42  | 75  |
|                                                                                                                  | M.Cloudy | 8     | 17   | 19  | 36  | 35  | 9    | 17   | 19  | 36  | 55  |
| M.Clear                                                                                                          | (% hrs)  | 32    | 35   | 39  | 42  | 43  | 26   | 37   | 41  | 45  | 54  |
|                                                                                                                  |          | Sept  |      |     |     |     | Dec  |      |     |     |     |
|                                                                                                                  |          | 9am   | 11am | 1pm | 3pm | 5pm | 9am  | 11am | 1pm | 3pm | 5pm |
| HORIZ.                                                                                                           | M.Clear  | 20    | 66   | 92  | 91  | 62  | 18   | 53   | 66  | 51  | 15  |
|                                                                                                                  | M.Cloudy | 12    | 44   | 68  | 67  | 44  | 10   | 30   | 38  | 30  | 10  |
| NORTH                                                                                                            | M.Clear  | 7     | 14   | 17  | 17  | 14  | 6    | 11   | 13  | 11  | 5   |
|                                                                                                                  | M.Cloudy | 6     | 15   | 19  | 19  | 15  | 5    | 12   | 14  | 12  | 4   |
| EAST                                                                                                             | M.Clear  | 55    | 77   | 42  | 17  | 14  | 52   | 54   | 13  | 11  | 5   |
|                                                                                                                  | M.Cloudy | 17    | 42   | 34  | 19  | 15  | 11   | 23   | 14  | 12  | 4   |
| SOUTH                                                                                                            | M.Clear  | 12    | 43   | 63  | 62  | 41  | 39   | 82   | 94  | 80  | 35  |
|                                                                                                                  | M.Cloudy | 7     | 28   | 45  | 45  | 28  | 10   | 30   | 38  | 32  | 11  |
| WEST                                                                                                             | M.Clear  | 7     | 14   | 17  | 45  | 76  | 6    | 11   | 14  | 55  | 47  |
|                                                                                                                  | M.Cloudy | 6     | 15   | 19  | 35  | 46  | 5    | 12   | 15  | 25  | 14  |
| M.Clear                                                                                                          | (% hrs)  | 38    | 40   | 43  | 44  | 49  | 34   | 37   | 39  | 40  | 41  |

# **Wind Summary - December, January, and February** **Labels of Percent Frequency on North Axis**



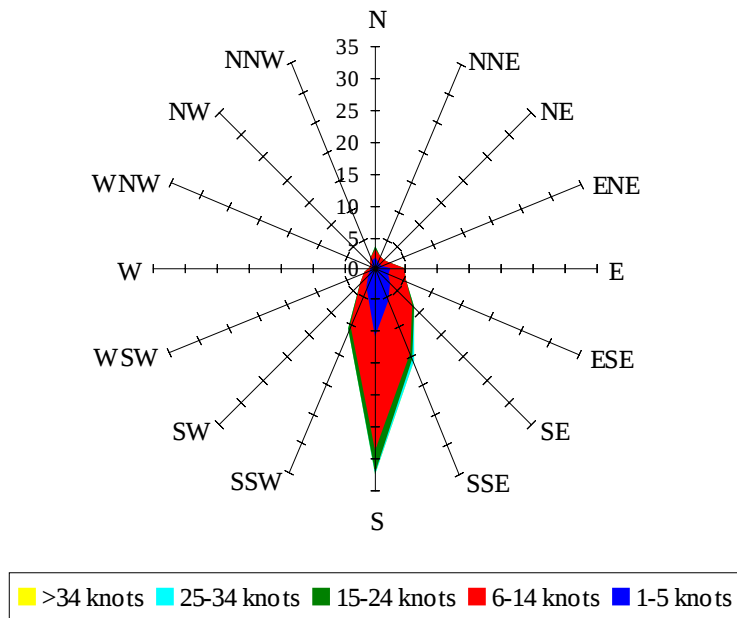
Percent Calm = 7.17

# **Wind Summary - March, April, and May** **Labels of Percent Frequency on North Axis**



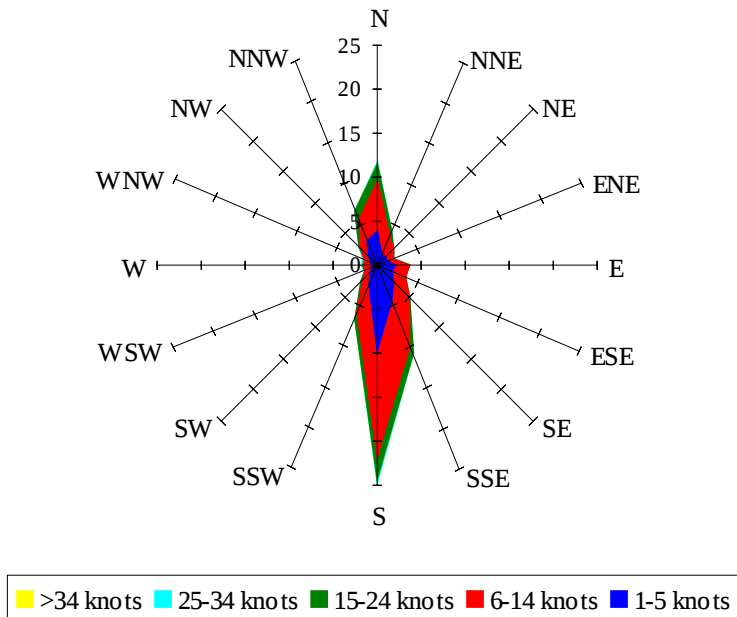
Percent Calm = 5.51

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



Percent Calm = 6.15

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



Percent Calm = 8.44