

|                                 |                                    |
|---------------------------------|------------------------------------|
| <b>ALAMEDA (FORMERLY NAS)</b>   | <b>CA</b>                          |
| Latitude = 37.78 N              | WMO No. 745060                     |
| Longitude = 122.30 W            | Elevation = 13 feet                |
| Period of Record = 1973 to 1996 | Average Pressure = 29.96 inches Hg |

### Design Criteria Data

|                                                  | Design Value      | Mean Coincident (Average) Values |                         |                        |                             |
|--------------------------------------------------|-------------------|----------------------------------|-------------------------|------------------------|-----------------------------|
|                                                  |                   | Wet Bulb Temperature (°F)        | Humidity Ratio (gr/lb)  | Wind Speed (mph)       | Prevailing Direction (NSEW) |
| <b>Dry Bulb Temperature (T)</b>                  | <b>(°F)</b>       |                                  |                         |                        |                             |
| Median of Extreme Highs                          | 94                | 67                               | 55                      | 8.0                    | NW                          |
| 0.4% Occurrence                                  | 84                | 65                               | 61                      | 8.0                    | W                           |
| 1.0% Occurrence                                  | 79                | 63                               | 62                      | 8.1                    | W                           |
| 2.0% Occurrence                                  | 76                | 63                               | 63                      | 8.1                    | W                           |
| Mean Daily Range                                 | 13                | -                                | -                       | -                      | -                           |
| 97.5% Occurrence                                 | 45                | 42                               | 34                      | 5.3                    | N                           |
| 99.0% Occurrence                                 | 42                | 40                               | 31                      | 5.0                    | NNW                         |
| 99.6% Occurrence                                 | 41                | 39                               | 30                      | 5.1                    | N                           |
| Median of Extreme Lows                           | 38                | 36                               | 27                      | 5.2                    | N                           |
|                                                  | Design Value      | 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                          | 70                | 84                               | 85                      | 7.8                    | W                           |
| 0.4% Occurrence                                  | 66                | 77                               | 75                      | 8.1                    | W                           |
| 1.0% Occurrence                                  | 65                | 75                               | 74                      | 8.3                    | W                           |
| 2.0% Occurrence                                  | 64                | 73                               | 72                      | 8.5                    | W                           |
|                                                  | Design Value      | 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                          | 99                | 75                               | 0.66                    | 7.6                    | W                           |
| 0.4% Occurrence                                  | 84                | 69                               | 0.56                    | 8.2                    | W                           |
| 1.0% Occurrence                                  | 81                | 68                               | 0.54                    | 8.2                    | W                           |
| 2.0% Occurrence                                  | 78                | 68                               | 0.52                    | 8.4                    | W                           |
| <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      |
|                                                  |                   | 4                                | 83                      | 0                      | 33                          |

### Other Site Data

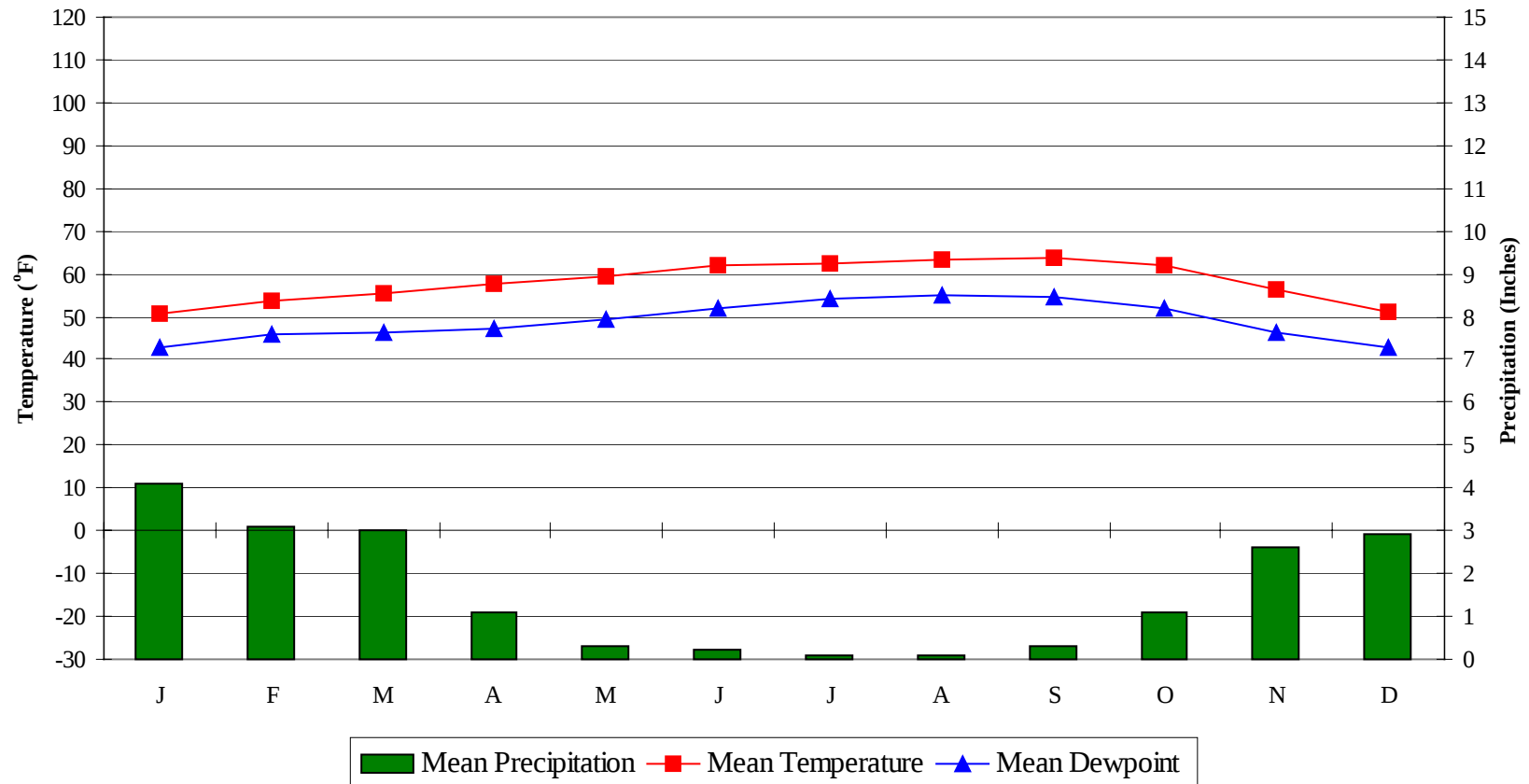
| Weather Region                                   | Rain Rate<br>100 Year Recurrence<br>(in./hr) | Basic Wind Speed<br>3 sec gust @ 33 ft<br>50 Year Recurrence (mph) | Ventilation Cooling Load Index<br>(Ton-hr/cfm/yr) Base 75°F-RH 60%<br>Latent + Sensible |
|--------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 8                                                | 1.3                                          | 85                                                                 | 0.0 + 0.1                                                                               |
| 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/ft²)                 | Average Annual<br>Freeze-Thaw Cycles<br>(#)                                             |
| 60.6                                             | 0                                            | 0                                                                  | 0                                                                                       |

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

ALAMEDA (FORMERLY NAS) CA

WMO No. 745060

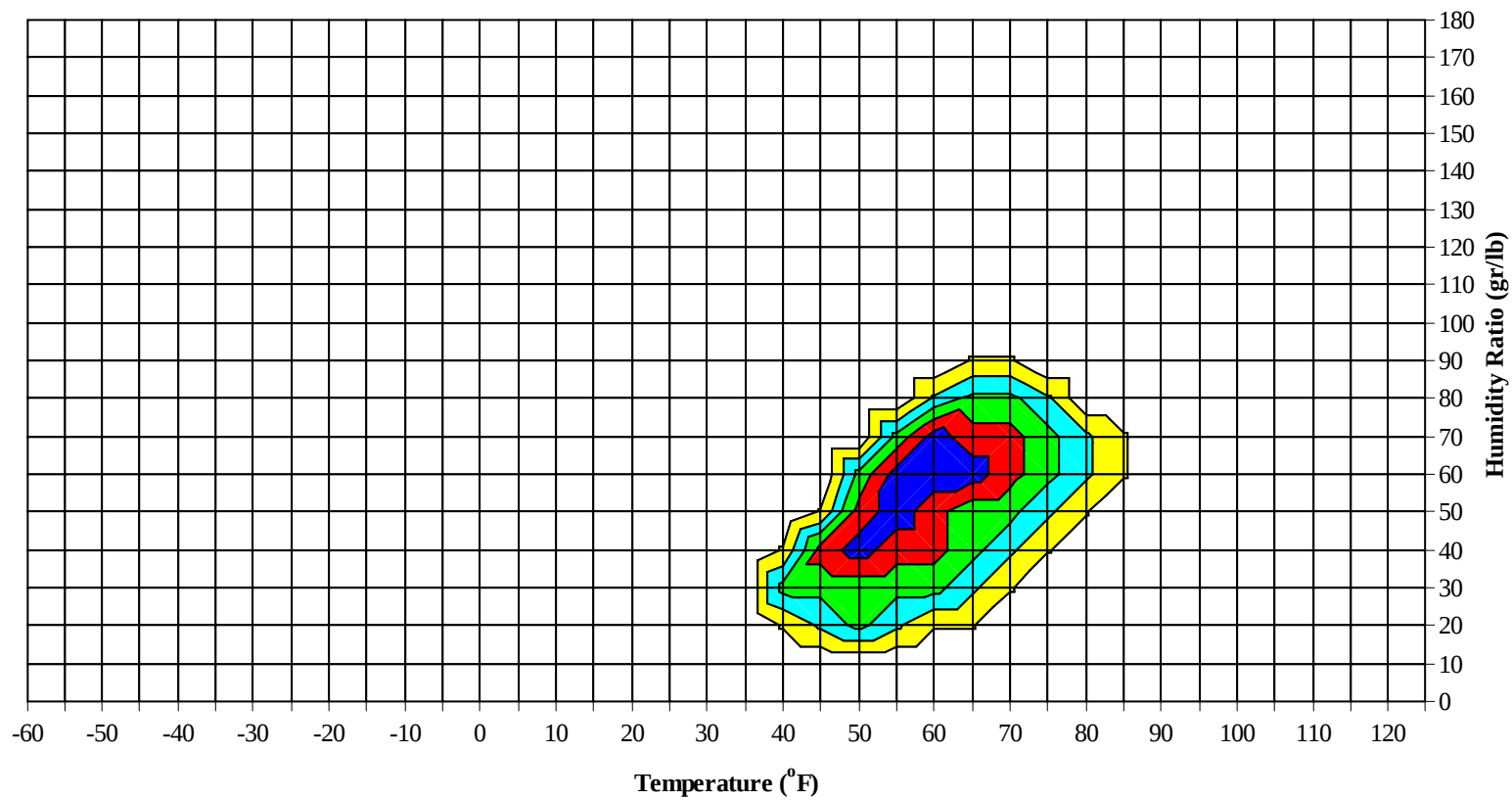
### Average Annual Climate



ALAMEDA (FORMERLY NAS) CA

WMO No. 745060

### Long Term Psychrometric Summary

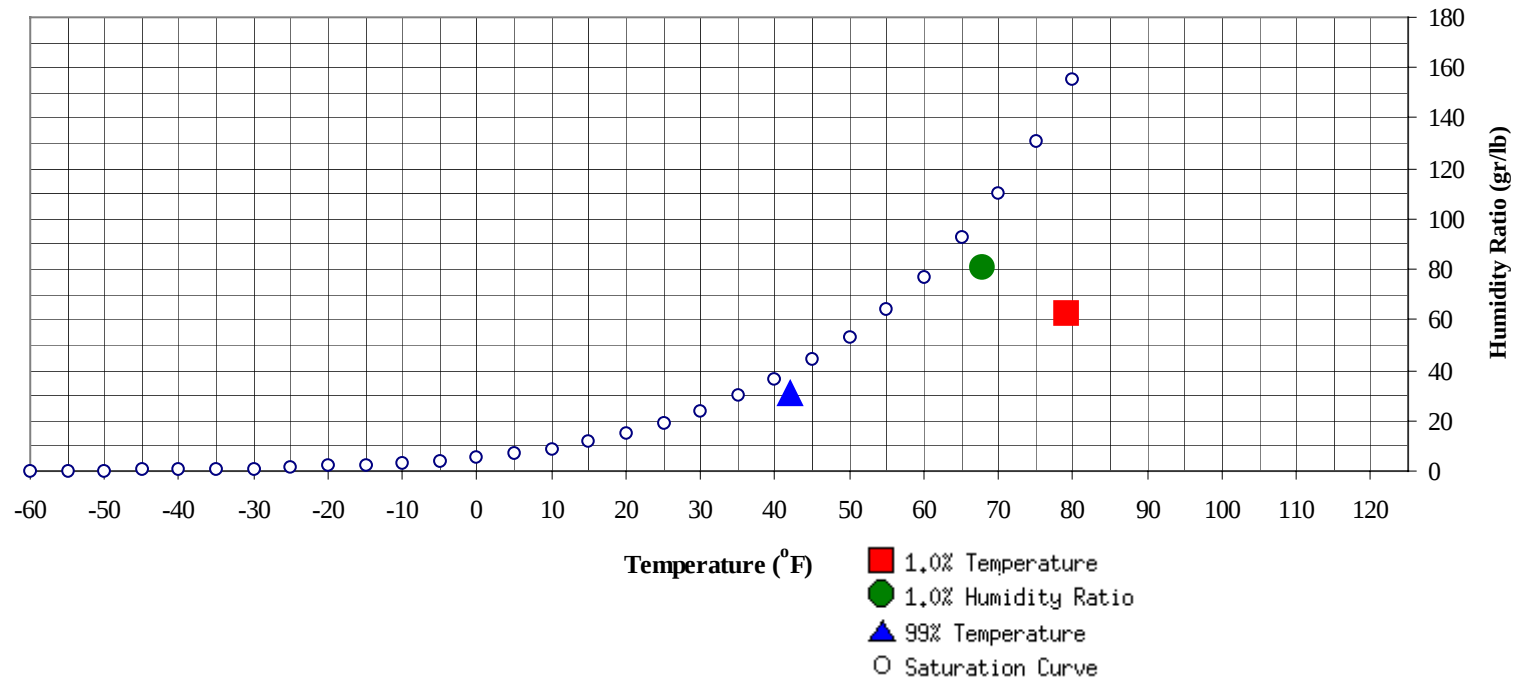


- 50% of all observations
- 80% of all observations
- 95% of all observations
- 97.5% of all observations
- 99% of all observations

ALAMEDA (FORMERLY NAS) CA

WMO No. 745060

### Psychrometric Summary of Peak Design Values



| 99% Dry Bulb | (°F) | MCHR<br>(gr/lb) | Enthalpy<br>(btu/lb) | 1.0% Humidity<br>Ratio | (gr/lb) | MCDB<br>(°F) | MCWB<br>(°F) | MC Dewpt<br>(°F) | Enthalpy<br>(btu/lb) |
|--------------|------|-----------------|----------------------|------------------------|---------|--------------|--------------|------------------|----------------------|
|              | 42   | 30.6            | 14.8                 |                        | 80.5    | 67.8         | 63.4         | 61               | 28.8                 |

| 1.0% Dry Bulb | (°F) | MCHR<br>(gr/lb) | MCWB<br>(°F) | Enthalpy<br>(btu/lb) |
|---------------|------|-----------------|--------------|----------------------|
|               | 79   | 62.7            | 63.5         | 28.8                 |

**ALAMEDA (FORMERLY NAS) CA WMO No. 745060**  
**Dry-Bulb Temperature Hours For An Average Year (Sheet 1 of 5)**  
**Period of Record = 1973 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 |              |                          |
| 120 / 124                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 115 / 119                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 110 / 114                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 105 / 109                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 100 / 104                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 95 / 99                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 90 / 94                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 85 / 89                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 80 / 84                      |                     |                |                |              |                          |                     |                |                |              |                          |                     | 0              |                | 0            | 55.5                     |
| 75 / 79                      |                     |                |                |              |                          |                     | 1              | 0              | 1            | 58.1                     |                     | 2              | 0              | 2            | 60.1                     |
| 70 / 74                      |                     | 0              |                | 0            | 52.2                     |                     | 3              | 1              | 4            | 58.2                     |                     | 7              | 1              | 8            | 56.7                     |
| 65 / 69                      |                     | 3              | 0              | 3            | 53.6                     | 0                   | 12             | 3              | 15           | 56.7                     | 0                   | 26             | 6              | 32           | 56.2                     |
| 60 / 64                      | 2                   | 20             | 5              | 27           | 52.9                     | 2                   | 43             | 19             | 64           | 54.6                     | 4                   | 71             | 27             | 102          | 54.7                     |
| 55 / 59                      | 17                  | 73             | 41             | 131          | 51.8                     | 34                  | 92             | 77             | 203          | 52.4                     | 59                  | 93             | 104            | 256          | 52.4                     |
| 50 / 54                      | 60                  | 97             | 107            | 264          | 48.3                     | 102                 | 59             | 97             | 258          | 48.9                     | 129                 | 42             | 93             | 263          | 48.8                     |
| 45 / 49                      | 104                 | 46             | 78             | 228          | 44.4                     | 69                  | 12             | 23             | 104          | 44.4                     | 52                  | 5              | 17             | 74           | 44.1                     |
| 40 / 44                      | 59                  | 9              | 16             | 84           | 40.4                     | 14                  | 2              | 4              | 20           | 39.6                     | 4                   | 1              | 1              | 6            | 39.8                     |
| 35 / 39                      | 5                   | 0              | 1              | 6            | 36.4                     | 2                   | 0              | 0              | 2            | 32.6                     |                     | 0              |                | 0            | 36.0                     |
| 30 / 34                      |                     |                |                |              |                          | 0                   |                |                | 0            | 27.3                     |                     |                |                |              |                          |
| 25 / 29                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 20 / 24                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 15 / 19                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 5 / 9                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 0 / 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.

**ALAMEDA (FORMERLY NAS) CA WMO No. 745060**  
**Dry-Bulb Temperature Hours For An Average Year (Sheet 2 of 5)**  
**Period of Record = 1973 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 |              |                          |
| 120 / 124                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 115 / 119                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 110 / 114                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 105 / 109                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 100 / 104                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 95 / 99                      |                     |                |                |              |                          |                     | 0              |                | 0            | 64.0                     |                     | 1              |                | 1            | 65.5                     |
| 90 / 94                      |                     | 0              |                | 0            | 69.0                     |                     | 0              |                | 0            | 62.9                     |                     | 2              | 0              | 2            | 65.2                     |
| 85 / 89                      |                     | 1              | 0              | 1            | 64.8                     |                     | 1              | 0              | 1            | 64.1                     |                     | 4              | 1              | 5            | 64.5                     |
| 80 / 84                      |                     | 2              | 1              | 3            | 62.8                     | 0                   | 4              | 0              | 4            | 63.0                     | 0                   | 8              | 2              | 10           | 64.1                     |
| 75 / 79                      |                     | 7              | 1              | 8            | 60.7                     | 0                   | 11             | 2              | 13           | 61.6                     | 1                   | 13             | 4              | 18           | 62.7                     |
| 70 / 74                      | 0                   | 16             | 4              | 20           | 58.8                     | 1                   | 21             | 5              | 27           | 60.2                     | 3                   | 39             | 8              | 50           | 60.9                     |
| 65 / 69                      | 2                   | 41             | 11             | 54           | 56.7                     | 5                   | 66             | 15             | 85           | 58.0                     | 9                   | 89             | 30             | 128          | 58.8                     |
| 60 / 64                      | 13                  | 93             | 39             | 144          | 54.7                     | 26                  | 103            | 54             | 183          | 55.5                     | 45                  | 68             | 73             | 186          | 56.4                     |
| 55 / 59                      | 78                  | 65             | 107            | 250          | 52.2                     | 102                 | 39             | 117            | 258          | 52.8                     | 137                 | 15             | 107            | 259          | 53.7                     |
| 50 / 54                      | 125                 | 14             | 71             | 210          | 48.7                     | 109                 | 3              | 54             | 167          | 49.4                     | 45                  | 1              | 16             | 62           | 50.6                     |
| 45 / 49                      | 21                  | 1              | 7              | 29           | 44.5                     | 4                   | 0              | 1              | 5            | 45.1                     | 0                   | 0              | 0              | 0            | 46.8                     |
| 40 / 44                      | 1                   | 0              | 0              | 1            | 40.3                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 35 / 39                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 30 / 34                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 25 / 29                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 20 / 24                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 15 / 19                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 5 / 9                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 0 / 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.

**ALAMEDA (FORMERLY NAS) CA WMO No. 745060**

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

**Period of Record = 1973 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 |              |                          |
| 120 / 124                    |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            | 82.3                     |
| 115 / 119                    |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            |                          |
| 110 / 114                    |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            |                          |
| 105 / 109                    |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            |                          |
| 100 / 104                    |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            | 67.0                     |
| 95 / 99                      |                     | 0              |                | 0            | 70.8                     |                     | 0              |                | 0            | 70.0                     | 0                   | 1              |                | 1            | 68.8                     |
| 90 / 94                      |                     | 1              |                | 1            | 68.8                     |                     | 1              |                | 1            | 68.9                     | 0                   | 1              | 0              | 1            | 66.3                     |
| 85 / 89                      |                     | 3              | 0              | 3            | 66.5                     |                     | 2              | 0              | 2            | 66.4                     | 0                   | 4              | 0              | 4            | 65.9                     |
| 80 / 84                      |                     | 7              | 1              | 8            | 65.4                     |                     | 7              | 1              | 8            | 65.4                     | 0                   | 11             | 1              | 12           | 64.6                     |
| 75 / 79                      | 0                   | 17             | 3              | 20           | 63.8                     | 0                   | 18             | 3              | 21           | 64.1                     | 0                   | 22             | 5              | 27           | 63.4                     |
| 70 / 74                      | 2                   | 54             | 10             | 66           | 62.0                     | 2                   | 66             | 11             | 78           | 62.5                     | 2                   | 60             | 12             | 74           | 62.2                     |
| 65 / 69                      | 13                  | 102            | 39             | 154          | 59.9                     | 11                  | 97             | 41             | 148          | 60.4                     | 16                  | 90             | 42             | 148          | 60.3                     |
| 60 / 64                      | 63                  | 53             | 93             | 209          | 57.6                     | 93                  | 48             | 116            | 257          | 57.9                     | 100                 | 44             | 113            | 257          | 57.8                     |
| 55 / 59                      | 153                 | 10             | 99             | 262          | 54.7                     | 135                 | 9              | 75             | 219          | 55.1                     | 118                 | 7              | 66             | 191          | 55.0                     |
| 50 / 54                      | 17                  | 0              | 4              | 21           | 52.1                     | 7                   | 0              | 2              | 9            | 51.8                     | 4                   |                | 1              | 5            | 52.0                     |
| 45 / 49                      |                     |                |                |              |                          | 0                   |                |                | 0            | 46.0                     |                     |                |                |              |                          |
| 40 / 44                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 35 / 39                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 30 / 34                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 25 / 29                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 20 / 24                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 15 / 19                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 5 / 9                        |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 0 / 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.

**ALAMEDA (FORMERLY NAS) CA WMO No. 745060**

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

**Period of Record = 1973 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 |              |                          |
| 120 / 124                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 115 / 119                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 110 / 114                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 105 / 109                    |                     |                |                |              |                          |                     |                |                |              |                          |                     |                |                |              |                          |
| 100 / 104                    |                     | 0              |                | 0            | 67.0                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 95 / 99                      |                     | 0              |                | 0            | 66.0                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 90 / 94                      |                     | 1              | 0              | 1            | 65.9                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 85 / 89                      |                     | 3              | 0              | 3            | 64.1                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 80 / 84                      |                     | 9              | 1              | 10           | 63.0                     |                     |                |                |              |                          |                     |                |                |              |                          |
| 75 / 79                      | 0                   | 17             | 3              | 20           | 62.1                     |                     | 3              | 0              | 3            | 58.6                     |                     |                |                |              |                          |
| 70 / 74                      | 1                   | 42             | 9              | 52           | 60.6                     | 0                   | 11             | 1              | 12           | 58.4                     |                     | 0              |                | 0            | 53.9                     |
| 65 / 69                      | 11                  | 82             | 34             | 127          | 59.1                     | 0                   | 31             | 7              | 38           | 57.0                     |                     | 3              | 0              | 3            | 54.7                     |
| 60 / 64                      | 60                  | 73             | 92             | 225          | 56.9                     | 11                  | 79             | 41             | 131          | 55.2                     | 2                   | 29             | 4              | 35           | 53.7                     |
| 55 / 59                      | 141                 | 21             | 101            | 263          | 54.0                     | 77                  | 80             | 105            | 261          | 52.2                     | 26                  | 88             | 52             | 166          | 51.7                     |
| 50 / 54                      | 34                  | 0              | 9              | 43           | 50.2                     | 103                 | 31             | 75             | 209          | 48.2                     | 71                  | 86             | 108            | 264          | 48.0                     |
| 45 / 49                      | 0                   |                | 0              | 0            | 44.7                     | 45                  | 4              | 12             | 61           | 43.4                     | 98                  | 34             | 66             | 198          | 43.8                     |
| 40 / 44                      | 0                   |                |                | 0            | 43.0                     | 5                   | 0              | 0              | 5            | 38.8                     | 43                  | 7              | 16             | 66           | 39.8                     |
| 35 / 39                      |                     |                |                |              |                          |                     |                |                |              |                          | 7                   | 1              | 1              | 9            | 35.1                     |
| 30 / 34                      |                     |                |                |              |                          |                     |                |                |              |                          | 1                   | 0              | 1              | 2            | 26.6                     |
| 25 / 29                      |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            | 22.1                     |
| 20 / 24                      |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            |                          |
| 15 / 19                      |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            |                          |
| 10 / 14                      |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            |                          |
| 5 / 9                        |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            |                          |
| 0 / 4                        |                     |                |                |              |                          |                     |                |                |              |                          | 0                   | 0              |                | 0            | 1.5                      |

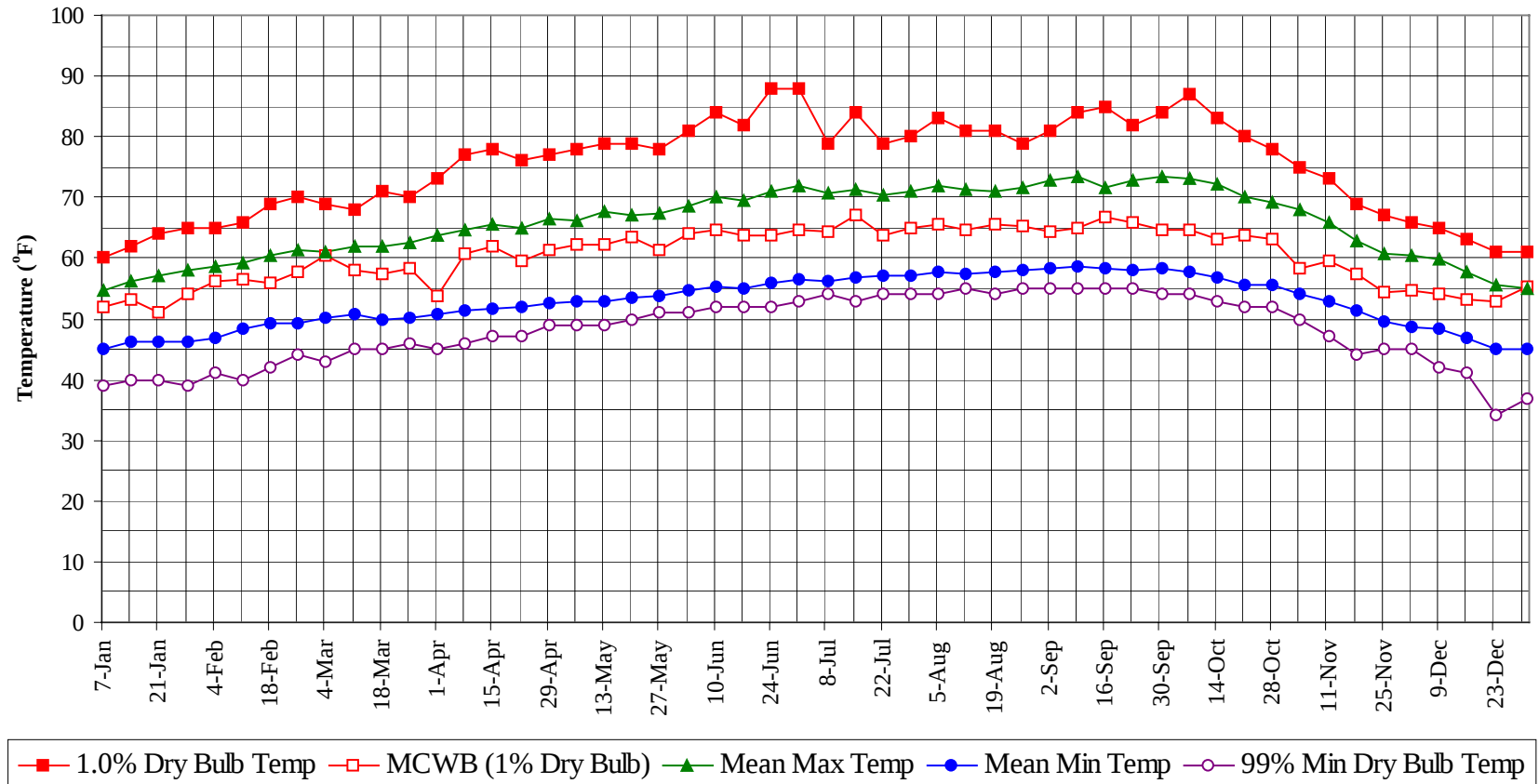
**Caution:** This summary reflects the typical distribution of temperature in a typical year. It does not reflect the typical moisture distribution. Because wet bulb temperatures are averaged, this summary understates the annual moisture load. For accurate moisture load data, see the long-term humidity summary and the ventilation and infiltration load pages in this manual.

**ALAMEDA (FORMERLY NAS) CA WMO No. 745060**  
**Dry-Bulb Temperature Hours For An Average Year (Sheet 5 of 5)**  
**Period of Record = 1973 to 1996**

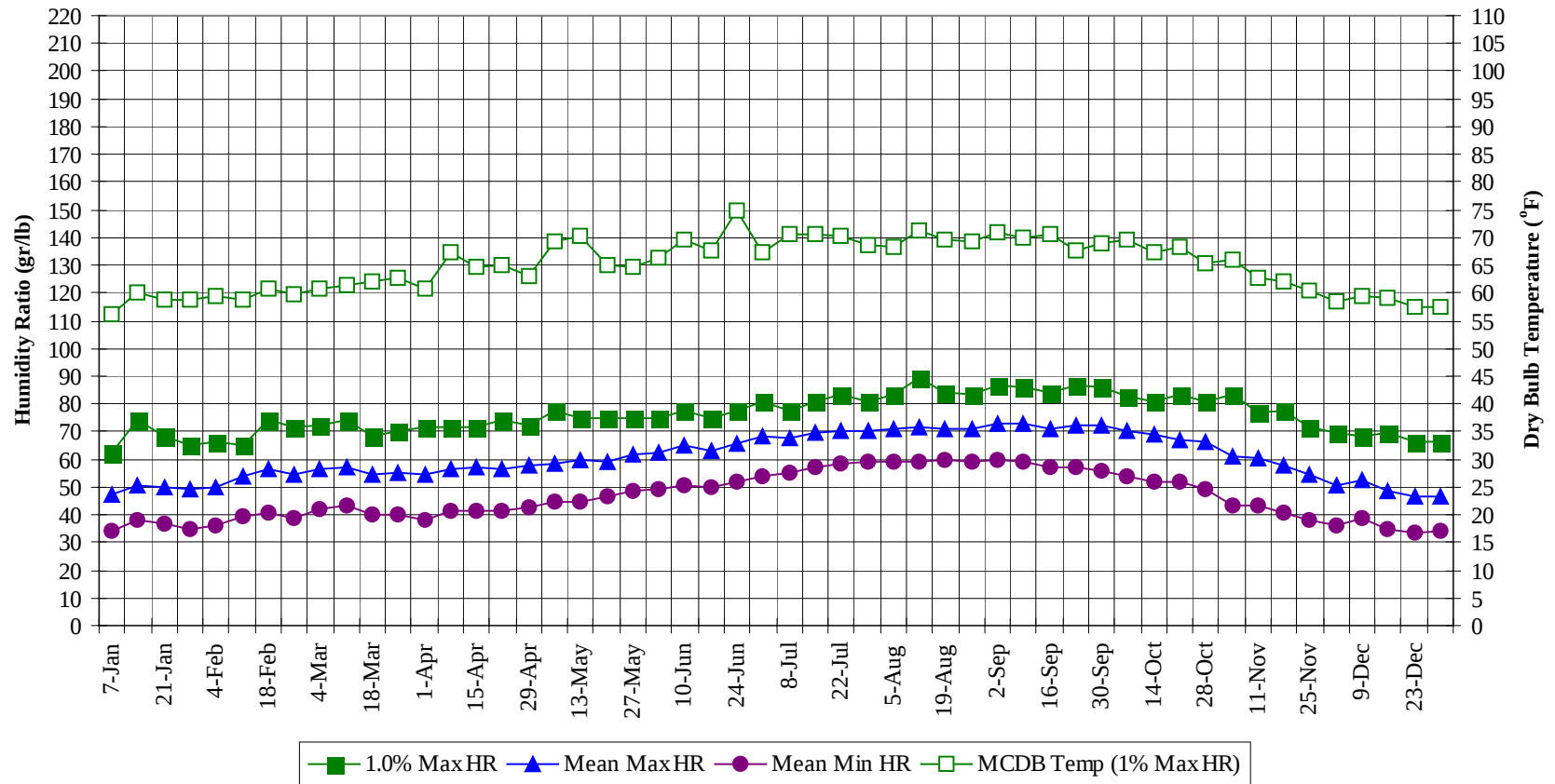
| Annual Totals                |                     |                |                |              |                          |
|------------------------------|---------------------|----------------|----------------|--------------|--------------------------|
| Temperature<br>Range<br>(°F) | Hour<br>Group (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 |              |                          |
| 120 / 124                    | 0                   | 0              |                | 0            | 82.3                     |
| 115 / 119                    | 0                   | 0              |                | 0            |                          |
| 110 / 114                    | 0                   | 0              |                | 0            |                          |
| 105 / 109                    | 0                   | 0              |                | 0            |                          |
| 100 / 104                    | 0                   | 0              |                | 0            | 67.0                     |
| 95 / 99                      | 0                   | 2              |                | 2            | 67.2                     |
| 90 / 94                      | 0                   | 6              | 0              | 6            | 66.2                     |
| 85 / 89                      | 0                   | 17             | 2              | 19           | 65.2                     |
| 80 / 84                      | 0                   | 48             | 7              | 55           | 64.2                     |
| 75 / 79                      | 2                   | 110            | 21             | 133          | 62.8                     |
| 70 / 74                      | 10                  | 318            | 62             | 390          | 61.2                     |
| 65 / 69                      | 68                  | 644            | 226            | 939          | 59.1                     |
| 60 / 64                      | 420                 | 726            | 671            | 1817         | 56.4                     |
| 55 / 59                      | 1076                | 593            | 1050           | 2719         | 53.2                     |
| 50 / 54                      | 808                 | 333            | 638            | 1779         | 48.8                     |
| 45 / 49                      | 395                 | 102            | 204            | 701          | 44.1                     |
| 40 / 44                      | 126                 | 19             | 36             | 181          | 40.0                     |
| 35 / 39                      | 14                  | 1              | 2              | 17           | 35.2                     |
| 30 / 34                      | 1                   | 0              | 1              | 2            | 26.7                     |
| 25 / 29                      | 0                   | 0              |                | 0            | 22.1                     |
| 20 / 24                      | 0                   | 0              |                | 0            |                          |
| 15 / 19                      | 0                   | 0              |                | 0            |                          |
| 10 / 14                      | 0                   | 0              |                | 0            |                          |
| 5 / 9                        | 0                   | 0              |                | 0            |                          |
| 0 / 4                        | 0                   | 0              |                | 0            | 1.5                      |
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**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

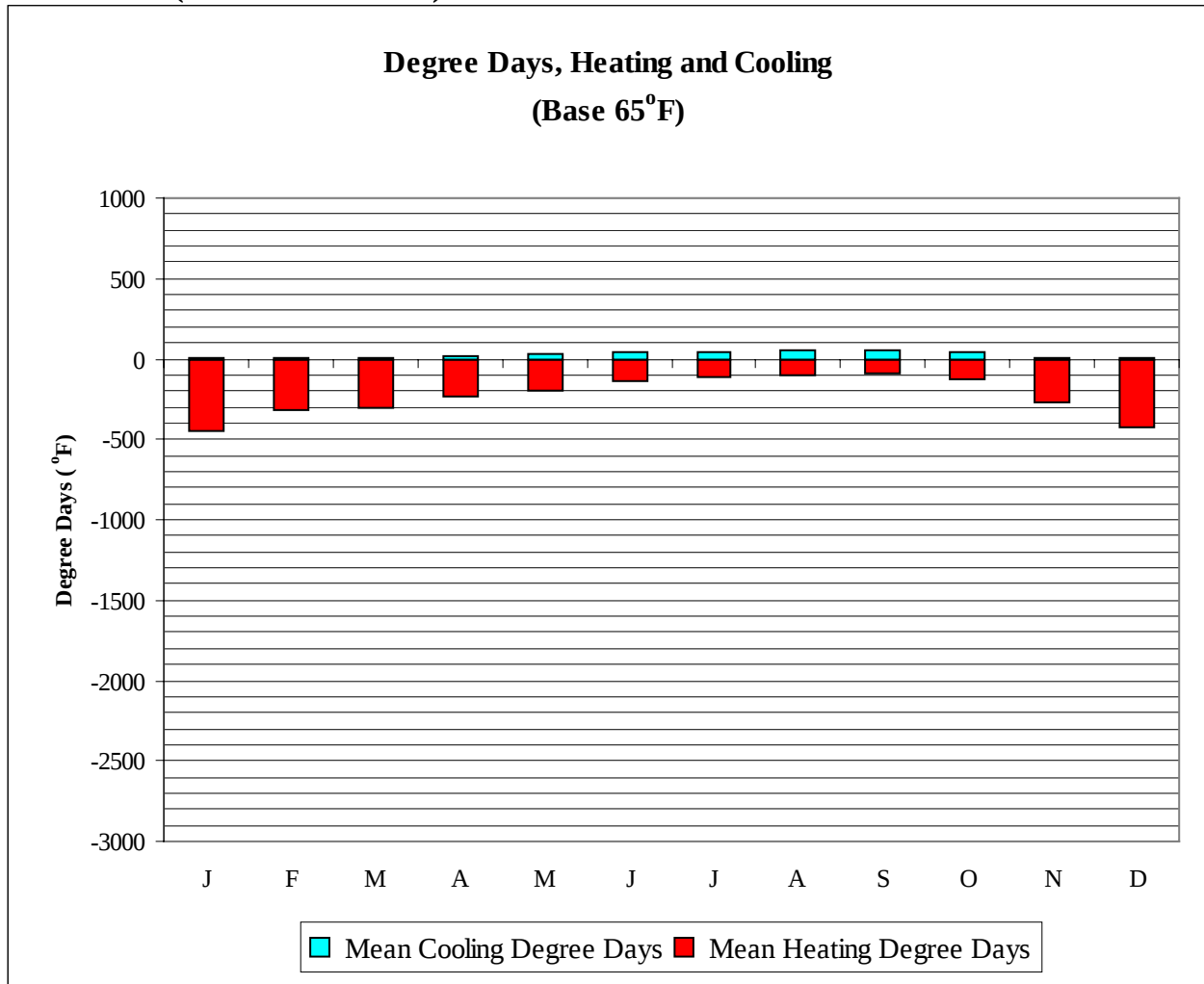


**ALAMEDA (FORMERLY NAS) CA**

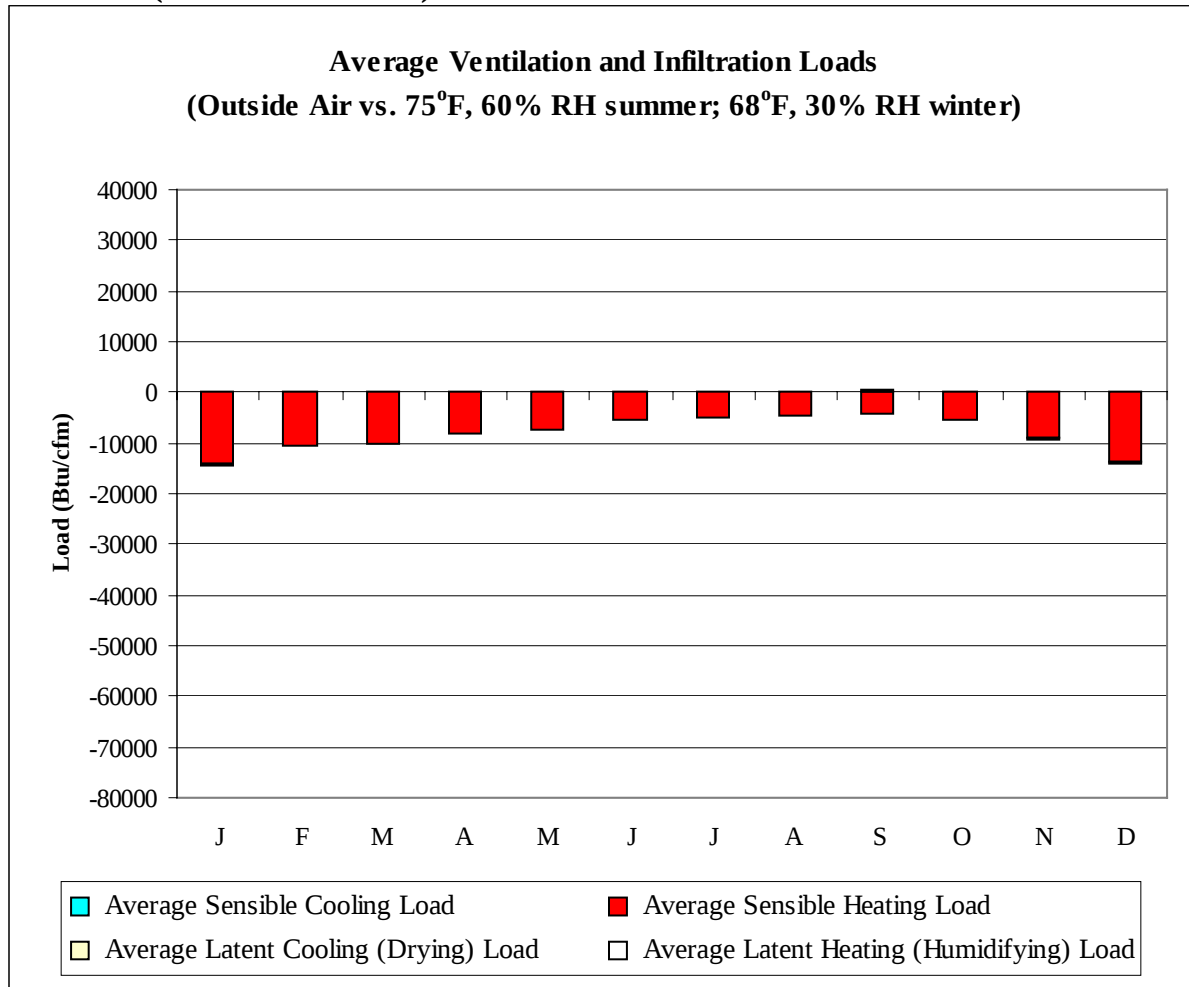
WMO No. 745060

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

| Week Ending | 1.0% Temp (°F) | MCWB @ 1% Temp (°F) | Mean Max Temp (°F) | Mean Min Temp (°F) | 99% Temp (°F) | 1.0% HR (gr/lb) | MCDB @ 1% HR (°F) | Mean Max HR (gr/lb) | Mean Min HR (gr/lb) |
|-------------|----------------|---------------------|--------------------|--------------------|---------------|-----------------|-------------------|---------------------|---------------------|
| 7-Jan       | 60.0           | 52.0                | 54.6               | 44.9               | 39.0          | 62.3            | 56.3              | 47.1                | 34.2                |
| 14-Jan      | 62.0           | 53.2                | 56.1               | 46.1               | 40.0          | 74.2            | 60.1              | 50.7                | 37.9                |
| 21-Jan      | 64.0           | 51.0                | 57.0               | 46.3               | 40.0          | 68.6            | 58.7              | 49.9                | 36.9                |
| 28-Jan      | 65.0           | 54.0                | 58.0               | 46.2               | 39.0          | 65.1            | 58.9              | 49.1                | 35.1                |
| 4-Feb       | 65.0           | 56.1                | 58.6               | 46.7               | 41.0          | 66.5            | 59.5              | 49.9                | 36.3                |
| 11-Feb      | 66.0           | 56.5                | 59.3               | 48.4               | 40.0          | 65.1            | 58.7              | 53.6                | 39.2                |
| 18-Feb      | 69.0           | 56.0                | 60.5               | 49.2               | 42.0          | 74.2            | 60.7              | 56.3                | 40.5                |
| 25-Feb      | 70.0           | 57.7                | 61.5               | 49.3               | 44.0          | 71.4            | 59.7              | 54.7                | 39.0                |
| 4-Mar       | 69.0           | 60.4                | 61.1               | 50.3               | 43.0          | 72.1            | 60.7              | 56.7                | 42.1                |
| 11-Mar      | 68.0           | 58.2                | 61.9               | 50.7               | 45.0          | 74.2            | 61.3              | 57.2                | 43.1                |
| 18-Mar      | 71.0           | 57.3                | 62.0               | 50.0               | 45.0          | 68.6            | 61.9              | 54.8                | 39.8                |
| 25-Mar      | 70.0           | 58.2                | 62.4               | 50.3               | 46.0          | 70.0            | 62.9              | 55.1                | 39.8                |
| 1-Apr       | 73.0           | 53.7                | 63.8               | 50.7               | 45.0          | 71.4            | 60.9              | 54.8                | 38.2                |
| 8-Apr       | 77.0           | 60.8                | 64.5               | 51.5               | 46.0          | 71.4            | 67.4              | 56.2                | 41.2                |
| 15-Apr      | 78.0           | 62.0                | 65.6               | 51.8               | 47.0          | 71.4            | 64.6              | 57.0                | 41.6                |
| 22-Apr      | 76.0           | 59.5                | 65.0               | 51.8               | 47.0          | 74.2            | 64.9              | 56.7                | 41.3                |
| 29-Apr      | 77.0           | 61.3                | 66.4               | 52.6               | 49.0          | 72.1            | 63.1              | 58.1                | 42.9                |
| 6-May       | 78.0           | 62.3                | 66.1               | 53.0               | 49.0          | 77.7            | 69.2              | 58.5                | 45.0                |
| 13-May      | 79.0           | 62.4                | 67.5               | 52.9               | 49.0          | 74.9            | 70.2              | 59.5                | 44.9                |
| 20-May      | 79.0           | 63.4                | 67.0               | 53.5               | 50.0          | 74.9            | 64.9              | 59.4                | 46.4                |
| 27-May      | 78.0           | 61.5                | 67.4               | 53.8               | 51.0          | 74.9            | 64.6              | 61.5                | 48.5                |
| 3-Jun       | 81.0           | 64.0                | 68.7               | 54.6               | 51.0          | 74.9            | 66.2              | 62.4                | 49.0                |
| 10-Jun      | 84.0           | 64.8                | 70.2               | 55.2               | 52.0          | 77.7            | 69.5              | 64.9                | 50.7                |
| 17-Jun      | 82.0           | 63.8                | 69.3               | 55.1               | 52.0          | 74.9            | 67.6              | 62.9                | 50.0                |
| 24-Jun      | 88.0           | 63.8                | 71.1               | 55.8               | 52.0          | 77.7            | 74.8              | 65.7                | 51.9                |
| 1-Jul       | 88.0           | 64.8                | 71.9               | 56.5               | 53.0          | 80.5            | 67.5              | 68.1                | 53.9                |
| 8-Jul       | 79.0           | 64.5                | 70.8               | 56.2               | 54.0          | 77.7            | 70.4              | 67.7                | 55.1                |
| 15-Jul      | 84.0           | 67.1                | 71.3               | 56.7               | 53.0          | 80.5            | 70.5              | 69.4                | 56.8                |
| 22-Jul      | 79.0           | 63.9                | 70.5               | 57.1               | 54.0          | 83.3            | 70.3              | 70.5                | 58.5                |
| 29-Jul      | 80.0           | 64.9                | 71.0               | 57.1               | 54.0          | 80.5            | 68.6              | 70.2                | 59.3                |
| 5-Aug       | 83.0           | 65.6                | 71.8               | 57.6               | 54.0          | 83.3            | 68.4              | 70.9                | 59.0                |
| 12-Aug      | 81.0           | 64.6                | 71.2               | 57.6               | 55.0          | 89.6            | 71.4              | 71.5                | 59.2                |
| 19-Aug      | 81.0           | 65.6                | 71.0               | 57.8               | 54.0          | 84.0            | 69.7              | 71.0                | 59.4                |
| 26-Aug      | 79.0           | 65.4                | 71.6               | 57.9               | 55.0          | 83.3            | 69.1              | 71.2                | 59.4                |
| 2-Sep       | 81.0           | 64.3                | 72.7               | 58.3               | 55.0          | 86.8            | 70.9              | 72.9                | 59.8                |
| 9-Sep       | 84.0           | 64.9                | 73.4               | 58.6               | 55.0          | 86.1            | 70.0              | 72.7                | 59.2                |
| 16-Sep      | 85.0           | 66.8                | 71.7               | 58.3               | 55.0          | 84.0            | 70.7              | 70.6                | 56.9                |
| 23-Sep      | 82.0           | 65.9                | 72.9               | 58.1               | 55.0          | 86.8            | 67.7              | 72.3                | 56.9                |
| 30-Sep      | 84.0           | 64.7                | 73.5               | 58.4               | 54.0          | 86.1            | 69.0              | 72.0                | 55.8                |
| 7-Oct       | 87.0           | 64.6                | 73.1               | 57.7               | 54.0          | 82.6            | 69.6              | 70.2                | 54.1                |
| 14-Oct      | 83.0           | 63.1                | 72.2               | 56.9               | 53.0          | 80.5            | 67.4              | 68.7                | 51.6                |
| 21-Oct      | 80.0           | 63.8                | 70.1               | 55.6               | 52.0          | 83.3            | 68.2              | 67.2                | 51.7                |
| 28-Oct      | 78.0           | 63.1                | 69.3               | 55.6               | 52.0          | 80.5            | 65.2              | 66.6                | 49.3                |
| 4-Nov       | 75.0           | 58.3                | 68.0               | 54.0               | 50.0          | 83.3            | 66.1              | 61.2                | 43.7                |
| 11-Nov      | 73.0           | 59.4                | 65.9               | 52.8               | 47.0          | 77.0            | 62.8              | 60.5                | 43.1                |
| 18-Nov      | 69.0           | 57.4                | 63.0               | 51.4               | 44.0          | 77.7            | 62.1              | 57.7                | 40.7                |
| 25-Nov      | 67.0           | 54.4                | 60.6               | 49.6               | 45.0          | 71.4            | 60.4              | 54.3                | 38.0                |
| 2-Dec       | 66.0           | 54.7                | 60.3               | 48.5               | 45.0          | 69.3            | 58.4              | 50.5                | 35.8                |
| 9-Dec       | 65.0           | 54.2                | 59.8               | 48.4               | 42.0          | 68.6            | 59.4              | 52.8                | 38.6                |
| 16-Dec      | 63.0           | 53.3                | 57.8               | 47.0               | 41.0          | 69.3            | 59.2              | 48.4                | 34.5                |
| 23-Dec      | 61.0           | 53.0                | 55.5               | 45.0               | 34.0          | 66.5            | 57.4              | 46.9                | 33.5                |
| 31-Dec      | 61.0           | 55.3                | 54.9               | 45.2               | 37.0          | 66.5            | 57.5              | 46.9                | 34.3                |



|     | Mean Cooling<br>Degree Days (°F) | Mean Heating<br>Degree Days (°F) |
|-----|----------------------------------|----------------------------------|
| JAN | 0                                | 448                              |
| FEB | 2                                | 318                              |
| MAR | 5                                | 301                              |
| APR | 16                               | 236                              |
| MAY | 24                               | 200                              |
| JUN | 46                               | 140                              |
| JUL | 47                               | 119                              |
| AUG | 50                               | 105                              |
| SEP | 59                               | 93                               |
| OCT | 41                               | 130                              |
| NOV | 7                                | 265                              |
| DEC | 0                                | 427                              |
| ANN | 298                              | 2782                             |



|     | Average Sensible<br>Cooling Load | Average Sensible<br>Heating Load | Average Latent<br>Cooling Load | Average Latent<br>Heating Load |
|-----|----------------------------------|----------------------------------|--------------------------------|--------------------------------|
|     | (Btu/cfm)                        | (Btu/cfm)                        | (Btu/cfm)                      | (Btu/cfm)                      |
| JAN | 0                                | -14018                           | 2                              | -294                           |
| FEB | 1                                | -10397                           | 2                              | -190                           |
| MAR | 3                                | -10134                           | 1                              | -155                           |
| APR | 49                               | -8261                            | 7                              | -84                            |
| MAY | 80                               | -7310                            | 7                              | -10                            |
| JUN | 224                              | -5483                            | 13                             | -2                             |
| JUL | 146                              | -4923                            | 32                             | 0                              |
| AUG | 119                              | -4497                            | 90                             | 0                              |
| SEP | 226                              | -4067                            | 112                            | -1                             |
| OCT | 150                              | -5201                            | 43                             | -32                            |
| NOV | 3                                | -9093                            | 13                             | -224                           |
| DEC | 0                                | -13487                           | 0                              | -439                           |
| ANN | 1001                             | -96871                           | 322                            | -1431                          |

## Average Annual Solar Radiation – Nearest Available Site

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

City: SAN FRANCISCO  
 State: CA  
 WBAN No: 23234  
 Lat(N): 37.62  
 Long(W): 122.38  
 Elev(ft): 16

Stn Type: Secondary  
 SHADING GEOMETRY IN DIMENSIONLESS UNITS  
 Window: 1  
 Overhang: 0.466  
 Vert Gap: 0.307

| 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  | 680  | 940  | 1340 | 1800 | 2120 | 2270 | 2330 | 2060 | 1700 | 1230 | 790  | 620  | 1490 |
|                                                                               | Std Dev | 66   | 122  | 147  | 163  | 126  | 144  | 84   | 109  | 101  | 79   | 84   | 75   | 33   |
|                                                                               | Minimum | 570  | 740  | 1060 | 1390 | 1790 | 1920 | 2190 | 1810 | 1480 | 1020 | 670  | 450  | 1400 |
|                                                                               | Maximum | 790  | 1240 | 1680 | 2030 | 2360 | 2520 | 2490 | 2300 | 1910 | 1400 | 930  | 760  | 1540 |
|                                                                               | Diffuse | 310  | 420  | 530  | 640  | 710  | 720  | 650  | 610  | 500  | 410  | 330  | 280  | 510  |
| Clear Day                                                                     | Global  | 940  | 1280 | 1760 | 2230 | 2530 | 2640 | 2570 | 2310 | 1900 | 1410 | 1010 | 840  | 1790 |
| NORTH                                                                         | Global  | 200  | 270  | 350  | 440  | 550  | 620  | 590  | 470  | 380  | 300  | 220  | 180  | 380  |
|                                                                               | Diffuse | 200  | 270  | 350  | 430  | 490  | 520  | 500  | 450  | 380  | 300  | 220  | 180  | 360  |
| Clear Day                                                                     | Global  | 200  | 260  | 340  | 430  | 580  | 680  | 630  | 480  | 370  | 290  | 220  | 190  | 390  |
| EAST                                                                          | Global  | 430  | 580  | 780  | 1000 | 1100 | 1120 | 1140 | 1030 | 930  | 720  | 500  | 400  | 810  |
|                                                                               | Diffuse | 250  | 330  | 430  | 530  | 590  | 610  | 590  | 550  | 470  | 370  | 280  | 220  | 440  |
| Clear Day                                                                     | Global  | 670  | 860  | 1100 | 1310 | 1420 | 1440 | 1410 | 1330 | 1170 | 930  | 710  | 610  | 1080 |
| SOUTH                                                                         | Global  | 1050 | 1140 | 1170 | 1070 | 900  | 800  | 860  | 1050 | 1300 | 1370 | 1150 | 1050 | 1080 |
|                                                                               | Diffuse | 350  | 430  | 500  | 540  | 550  | 540  | 530  | 530  | 510  | 470  | 390  | 330  | 470  |
| Clear Day                                                                     | Global  | 1790 | 1840 | 1710 | 1340 | 1020 | 870  | 920  | 1180 | 1550 | 1790 | 1790 | 1740 | 1460 |
| WEST                                                                          | Global  | 460  | 600  | 820  | 1060 | 1200 | 1260 | 1320 | 1210 | 1060 | 810  | 530  | 430  | 900  |
|                                                                               | Diffuse | 250  | 330  | 440  | 550  | 610  | 630  | 610  | 570  | 480  | 380  | 280  | 230  | 450  |
| Clear Day                                                                     | Global  | 670  | 860  | 1100 | 1310 | 1420 | 1440 | 1410 | 1330 | 1170 | 930  | 710  | 610  | 1080 |

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

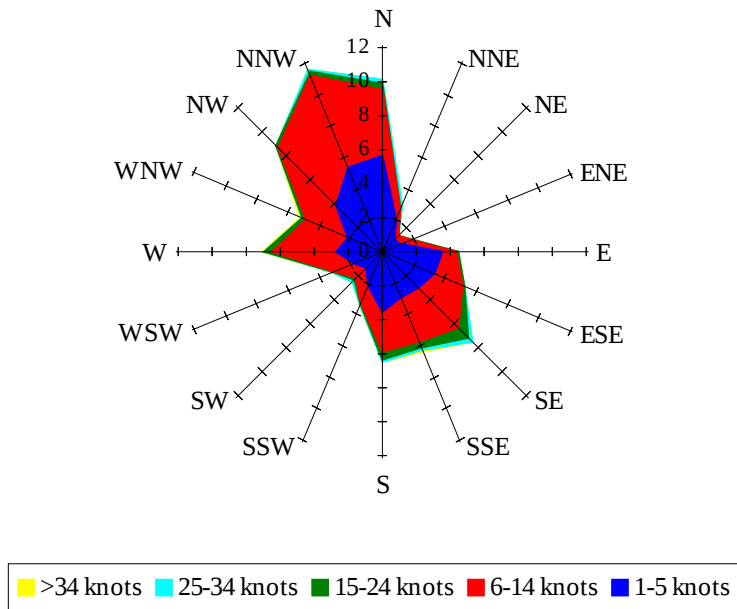
(Source: National Renewable Energy Laboratory, Golden CO, 1995)

| AVERAGE TRANSMITTED SOLAR RADIATION (Btu/sq.ft./day) FOR DOUBLE GLAZING, Percentage Uncertainty = 9 |          | Jan | Feb | Mar | Apr  | May  | Jun  | Jul  | Aug  | Sep  | Oct | Nov | Dec | Year |
|-----------------------------------------------------------------------------------------------------|----------|-----|-----|-----|------|------|------|------|------|------|-----|-----|-----|------|
| HORIZ                                                                                               | Unshaded | 450 | 650 | 960 | 1300 | 1560 | 1670 | 1720 | 1520 | 1240 | 860 | 530 | 400 | 1070 |
| NORTH                                                                                               | Unshaded | 140 | 190 | 240 | 300  | 360  | 400  | 380  | 320  | 260  | 210 | 150 | 130 | 260  |
|                                                                                                     | Shaded   | 130 | 170 | 220 | 280  | 330  | 360  | 350  | 290  | 240  | 190 | 140 | 120 | 240  |
| EAST                                                                                                | Unshaded | 290 | 400 | 550 | 710  | 780  | 790  | 800  | 730  | 650  | 500 | 350 | 270 | 570  |
|                                                                                                     | Shaded   | 260 | 360 | 490 | 630  | 670  | 680  | 690  | 630  | 580  | 450 | 310 | 250 | 500  |
| SOUTH                                                                                               | Unshaded | 790 | 830 | 810 | 680  | 530  | 460  | 490  | 640  | 870  | 990 | 860 | 790 | 730  |
|                                                                                                     | Shaded   | 770 | 780 | 650 | 460  | 350  | 350  | 340  | 400  | 630  | 880 | 830 | 780 | 600  |
| WEST                                                                                                | Unshaded | 320 | 420 | 580 | 750  | 850  | 900  | 940  | 860  | 750  | 570 | 360 | 290 | 640  |
|                                                                                                     | Shaded   | 290 | 380 | 520 | 660  | 740  | 780  | 820  | 750  | 670  | 510 | 330 | 270 | 560  |

| 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  | 38    | 73   | 84  | 68  | 30  | 44   | 83   | 103 | 99  | 72  |
|                                                                                                                  | M.Cloudy | 22    | 46   | 54  | 44  | 18  | 26   | 51   | 74  | 75  | 51  |
| NORTH                                                                                                            | M.Clear  | 10    | 14   | 15  | 14  | 9   | 20   | 16   | 17  | 17  | 15  |
|                                                                                                                  | M.Cloudy | 9     | 15   | 16  | 14  | 7   | 13   | 17   | 19  | 18  | 16  |
| EAST                                                                                                             | M.Clear  | 71    | 59   | 15  | 14  | 9   | 75   | 74   | 34  | 17  | 15  |
|                                                                                                                  | M.Cloudy | 28    | 34   | 16  | 14  | 7   | 29   | 40   | 29  | 18  | 16  |
| SOUTH                                                                                                            | M.Clear  | 36    | 69   | 80  | 64  | 28  | 11   | 28   | 43  | 40  | 20  |
|                                                                                                                  | M.Cloudy | 17    | 38   | 46  | 38  | 14  | 10   | 22   | 34  | 33  | 18  |
| WEST                                                                                                             | M.Clear  | 10    | 14   | 21  | 65  | 66  | 11   | 16   | 17  | 50  | 80  |
|                                                                                                                  | M.Cloudy | 9     | 15   | 18  | 38  | 26  | 10   | 17   | 19  | 40  | 50  |
| M.Clear                                                                                                          | (% hrs)  | 36    | 38   | 40  | 41  | 42  | 46   | 60   | 67  | 71  | 70  |
|                                                                                                                  |          | Sept  |      |     |     |     | Dec  |      |     |     |     |
|                                                                                                                  |          | 9am   | 11am | 1pm | 3pm | 5pm | 9am  | 11am | 1pm | 3pm | 5pm |
| HORIZ.                                                                                                           | M.Clear  | 26    | 67   | 88  | 83  | 52  | 14   | 41   | 49  | 32  | 3   |
|                                                                                                                  | M.Cloudy | 15    | 42   | 61  | 59  | 34  | 8    | 24   | 29  | 19  | 3   |
| NORTH                                                                                                            | M.Clear  | 8     | 14   | 16  | 16  | 12  | 5    | 10   | 11  | 9   | 2   |
|                                                                                                                  | M.Cloudy | 7     | 14   | 17  | 17  | 12  | 4    | 9    | 11  | 8   | 1   |
| EAST                                                                                                             | M.Clear  | 61    | 72   | 32  | 16  | 12  | 37   | 40   | 11  | 9   | 2   |
|                                                                                                                  | M.Cloudy | 20    | 37   | 26  | 17  | 12  | 11   | 18   | 11  | 8   | 1   |
| SOUTH                                                                                                            | M.Clear  | 18    | 54   | 73  | 68  | 40  | 33   | 76   | 86  | 63  | 8   |
|                                                                                                                  | M.Cloudy | 9     | 30   | 50  | 47  | 25  | 10   | 29   | 36  | 25  | 3   |
| WEST                                                                                                             | M.Clear  | 8     | 14   | 16  | 52  | 77  | 5    | 10   | 20  | 47  | 12  |
|                                                                                                                  | M.Cloudy | 7     | 14   | 17  | 38  | 41  | 4    | 9    | 14  | 20  | 4   |
| M.Clear                                                                                                          | (% hrs)  | 48    | 63   | 72  | 77  | 76  | 35   | 39   | 43  | 42  | 44  |

### Wind Summary - December, January, and February

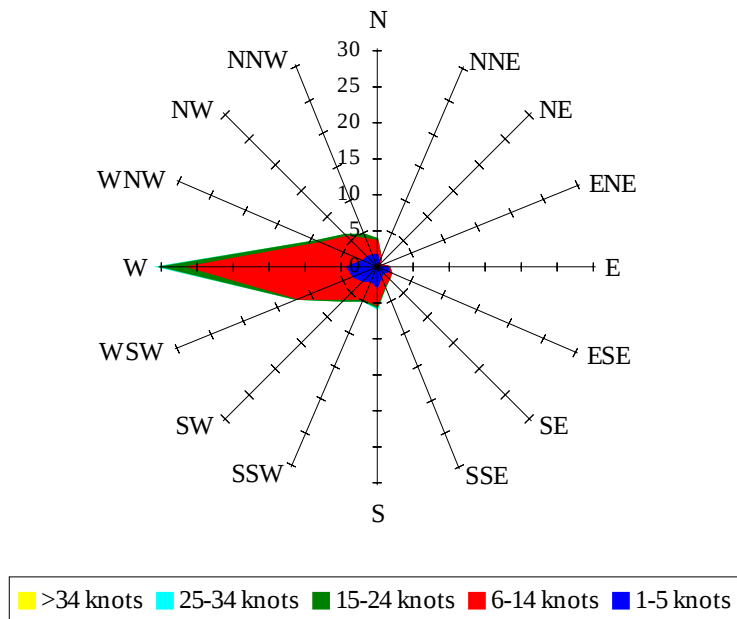
Labels of Percent Frequency on North Axis



Percent Calm = 12.96

### Wind Summary - March, April, and May

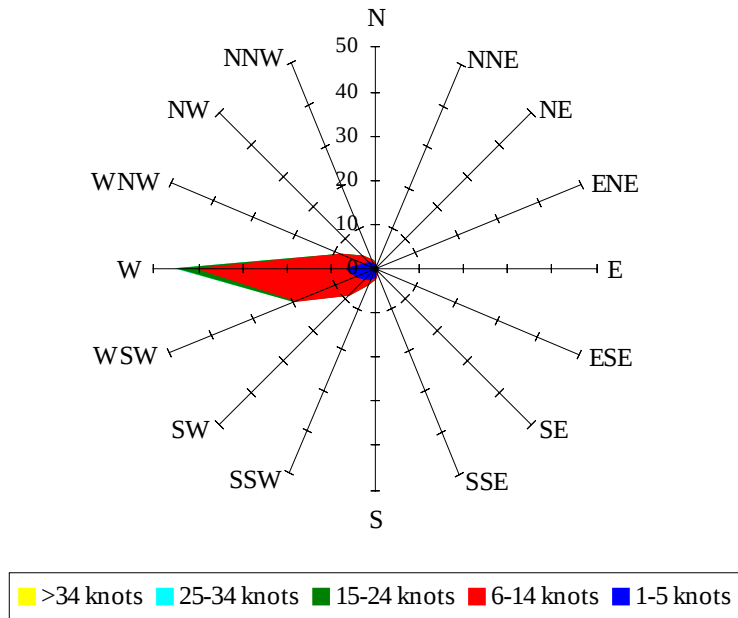
Labels of Percent Frequency on North Axis



Percent Calm = 5.40

### Wind Summary - June, July, and August

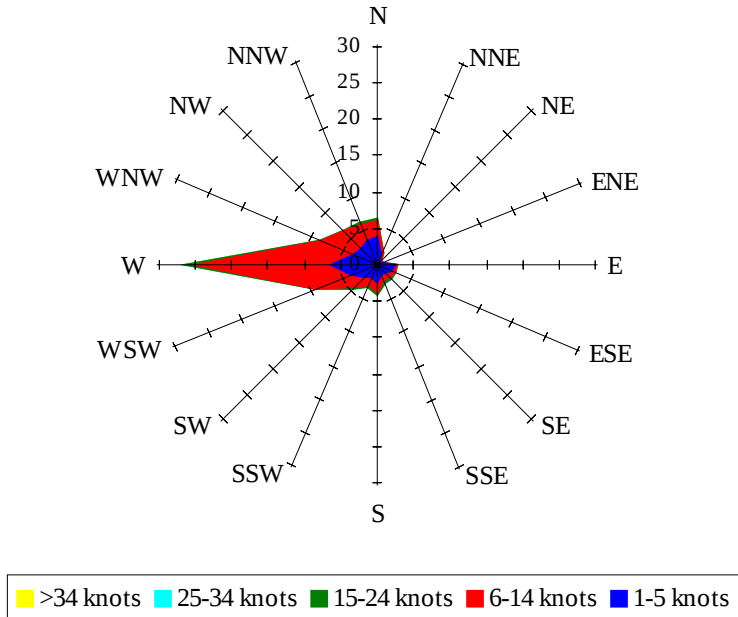
Labels of Percent Frequency on North Axis



Percent Calm = 3.89

### Wind Summary - September, October, and November

Labels of Percent Frequency on North Axis



Percent Calm = 10.87