### Design Criteria Data

<table>
<thead>
<tr>
<th>Dry Bulb Temperature (T)</th>
<th>Design Value (°F)</th>
<th>Mean Coincident (Average) Values</th>
</tr>
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<tbody>
<tr>
<td></td>
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<td>Wet Bulb Temperature (°F)</td>
</tr>
<tr>
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<td>98</td>
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<tr>
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<td>Dry Bulb Temperature (°F)</td>
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<table>
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<tr>
<th>Humidity Ratio (HR)</th>
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### Air Conditioning/ Humid Area Criteria

- **T > 93°F**
- **T > 80°F**
- **T<sub>wb</sub> ≥ 73°F**
- **T<sub>wb</sub> ≥ 67°F**

### Other Site Data

<table>
<thead>
<tr>
<th>Weather Region</th>
<th>Rain Rate 100 Year Recurrence (in./hr)</th>
<th>Basic Wind Speed 3 sec gust @ 33 ft 50 Year Recurrence (mph)</th>
<th>Ventilation Cooling Load Index (Ton-hr/CFM/yr) Base 75°F-RH 60% Latent + Sensible</th>
<th>Average Annual Freeze-Thaw Cycles (#)</th>
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<tbody>
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<td>Ground Water Temperature (°F)</td>
<td>Frost Depth 50 Year Recurrence (in.)</td>
<td>Ground Snow Load 50 Year Recurrence (lb/ft²)</td>
<td>Average Annual Freeze-Thaw Cycles (#)</td>
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*Note: Temperatures at greater depths can be estimated by adding 1.5°F per 100 feet additional depth.*
Psychrometric Summary of Peak Design Values

<table>
<thead>
<tr>
<th>99% Dry Bulb</th>
<th>MCHR (gr/lb)</th>
<th>Enthalpy (btu/lb)</th>
<th>1.0% Humidity Ratio</th>
<th>MCDB (°F)</th>
<th>MCWB (°F)</th>
<th>MC Dewpt (°F)</th>
<th>Enthalpy (btu/lb)</th>
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<table>
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<tr>
<th>1.0% Dry Bulb</th>
<th>MCHR (°F)</th>
<th>MCWB (°F)</th>
<th>Enthalpy (btu/lb)</th>
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<tr>
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<tr>
<td>Temperature Range (°F)</td>
<td>January</td>
<td>February</td>
<td>March</td>
</tr>
<tr>
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<tr>
<td><strong>Dry-Bulb Temperature Hours For An Average Year</strong> (Sheet 1 of 5)</td>
<td>Period of Record = 1973 to 1996</td>
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<th>Temperature Group (LST)</th>
<th>M C</th>
<th>Total Obs (°F)</th>
<th>Temperature Group (LST)</th>
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### Dry-Bulb Temperature Hours For An Average Year

**Period of Record = 1973 to 1996**

<table>
<thead>
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<th>Temperature Range (°F)</th>
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<tr>
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</tr>
<tr>
<td>-20 / -16</td>
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<td></td>
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</tbody>
</table>

**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.
| Temperature Range (°F) | July | | | | | | August | | | | | | September | | | | |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                        | 01   | 09   | 17   | Total | M    | C    | 01   | 09   | 17   | Total | M    | C    | 01   | 09   | 17   | Total |
|                        | To   | To   | To   | Obs   | W    | B    | To   | To   | To   | Obs   | W    | B    | To   | To   | To   | Obs   |
| 105 / 109              | 0    | 0    | 0    | 78.0  | 0    | 0    | 0    | 78.0  | 0    | 0    | 0    | 78.0  | 0    | 0    | 0    | 73.8  |
| 100 / 99               | 3    | 1    | 4    | 78.5  | 0    | 1    | 4    | 76.7  | 0    | 0    | 0    | 73.8  | 0    | 0    | 0    | 73.8  |
| 95 / 94                | 0    | 17   | 5    | 22.3  | 0    | 3    | 14   | 77.2  | 2    | 0    | 2    | 74.8  | 5    | 11   | 3    | 14.7  |
| 90 / 89                | 6    | 17   | 47   | 124.0 | 4    | 77   | 35   | 76.7  | 0    | 28   | 10   | 72.0  | 0    | 28   | 10   | 72.0  |
| 85 / 84                | 38   | 58   | 65   | 161.2 | 26   | 63   | 53   | 141.7 | 5    | 41   | 25   | 71.7  | 21   | 47   | 42   | 68.0  |
| 80 / 79                | 77   | 31   | 57   | 165.0 | 56   | 46   | 60   | 162.7 | 21   | 47   | 42   | 68.0  | 43   | 43   | 50   | 136   |
| 75 / 74                | 75   | 14   | 37   | 126.7 | 75   | 23   | 52   | 151.7 | 43   | 43   | 50   | 136   | 136   | 136   | 50   | 136   |
| 70 / 69                | 36   | 3    | 10   | 49.3  | 53   | 7    | 21   | 81.3  | 42   | 30   | 40   | 112   | 112   | 112   | 40   | 112   |
| 65 / 64                | 14   | 0    | 2    | 59.3  | 26   | 1    | 8    | 59.3  | 35   | 59.3 | 35   | 59.3  | 59.3  | 59.3  | 35   | 59.3  |
| 60 / 59                | 2    | 1    | 3    | 56.8  | 8    | 0    | 0    | 56.8  | 38   | 12   | 20   | 53.4  | 38   | 12   | 20   | 53.4  |
| 55 / 54                | 0    | 0    | 53.0 | 1    | 1    | 49.3 | 24   | 4    | 11   | 39   | 49.4  | 12   | 1    | 3    | 45.0  |
| 50 / 49                |      |      |      | 58.7  |      |      |      | 58.7  |      |      | 58.7  | 58.7  | 58.7  | 58.7  | 58.7  |
| 45 / 44                |      |      |      | 53.0  |      |      |      | 53.0  |      |      | 53.0  | 53.0  | 53.0  | 53.0  | 53.0  |
| 40 / 39                |      |      |      | 53.0  |      |      |      | 53.0  |      |      | 53.0  | 53.0  | 53.0  | 53.0  | 53.0  |
| 35 / 34                |      |      |      | 48.0  |      |      |      | 48.0  |      |      | 48.0  | 48.0  | 48.0  | 48.0  | 48.0  |
| 30 / 29                |      |      |      | 43.0  |      |      |      | 43.0  |      |      | 43.0  | 43.0  | 43.0  | 43.0  | 43.0  |
| 25 / 24                |      |      |      | 38.0  |      |      |      | 38.0  |      |      | 38.0  | 38.0  | 38.0  | 38.0  | 38.0  |
| 20 / 19                |      |      |      | 33.0  |      |      |      | 33.0  |      |      | 33.0  | 33.0  | 33.0  | 33.0  | 33.0  |
| 15 / 14                |      |      |      | 28.0  |      |      |      | 28.0  |      |      | 28.0  | 28.0  | 28.0  | 28.0  | 28.0  |
| 10 / 9                 |      |      |      | 23.0  |      |      |      | 23.0  |      |      | 23.0  | 23.0  | 23.0  | 23.0  | 23.0  |
| 5 / 4                  |      |      |      | 18.0  |      |      |      | 18.0  |      |      | 18.0  | 18.0  | 18.0  | 18.0  | 18.0  |
| 0 / -4                 |      |      |      | 13.0  |      |      |      | 13.0  |      |      | 13.0  | 13.0  | 13.0  | 13.0  | 13.0  |
| -5 / -1                |      |      |      | 8.0   |      |      |      | 8.0   |      |      | 8.0   | 8.0   | 8.0   | 8.0   | 8.0   |
| -10 / -6               |      |      |      | 3.0   |      |      |      | 3.0   |      |      | 3.0   | 3.0   | 3.0   | 3.0   | 3.0   |
| -20 / -16              |      |      |      | -7.0  |      |      |      | -7.0  |      |      | -7.0  | -7.0  | -7.0  | -7.0  | -7.0  |

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<table>
<thead>
<tr>
<th>Temperature Range (°F)</th>
<th>October</th>
<th>November</th>
<th>December</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Group (LST)</td>
<td>M C</td>
<td>Total B</td>
</tr>
<tr>
<td>105 / 109</td>
<td>01 09 17 08 16 00 Obs (°F)</td>
<td>0</td>
<td>0 68.5</td>
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<td>100 / 104</td>
<td>01 09 17 08 16 00 Obs (°F)</td>
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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 Totals

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Long Term Humidity and Dry Bulb Temperature Summary

Humidity Ratio (gr/lb)

Dry Bulb Temperature (°F)

- 1.0% Max HR
- Mean Max HR
- Mean Min HR
- MCDB Temp (1% Max HR)
### Long Term Dry Bulb Temperature and Humidity Summary

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

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### Average Ventilation and Infiltration Loads

(Outside Air vs. 75°F, 60% RH summer; 68°F, 30% RH winter)

#### Average Sensible Cooling Load

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

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## 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

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<td>10</td>
<td>22</td>
<td>50</td>
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<tr>
<td></td>
<td>M.Cloudy</td>
<td>7</td>
<td>15</td>
<td>18</td>
<td>35</td>
<td>35</td>
<td>4</td>
<td>10</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>M.Clear (%) hrs</td>
<td>47</td>
<td>47</td>
<td>41</td>
<td>41</td>
<td>43</td>
<td>31</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>32</td>
</tr>
</tbody>
</table>
Percent Calm = 3.06

Percent Calm = 4.07
Wind Summary - June, July, and August

Percent Calm = 4.99

Wind Summary - September, October, and November

Percent Calm = 5.85