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# U. S. PETROLEUM OIL TABLES

Approved by
The American Petroleum Institute,
The U. S. Bureau of Mines, and
The U. S. Bureau of Standards.

## Reduction of Observed Degrees A.P.I. to Degrees A.P.I. at 60°F

This table shows the degrees A. P. I. at 60° F. of oils having, at the observed temperatures, the degrees A. P. I. indicated. For example, if the observed degrees A. P. I. at 78° F. is 20, the degrees A. P. I. at 60° F. will be 19. Intermediate values can be conveniently interpolated. For example, if the observed degrees A. P. I. at 78° is 20.4, the degrees A. P. I. at 60° F. will be 19.4.

The headings "Observed degrees A. P. I." and "Observed Temperature" signify the true indication of the hydrometer and the true temperature of the oil, that is, the observed readings corrected for instrumental errors. (The table is so computed as to take into account the thermal expansion of the glass of which the hydrometer is made.)

This table is based upon the results of an investigation conducted by the Bureau of Standards on the "Density and Thermal Expansion of American Petroleum Oils," and published as Technologic Paper No. 77. The same data were used in computing the tables published in Bureau of Standards Circular No. 57 , "United States Standard Table for Petroleum Oils."

It is the intention of the Bureau to publish in the near future, this and other petroleum oil tables as a Bureau Circular.

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 0 | 13.1 | 14.1 | 15.2 | 16.2 | 17.3 | 18.3 | 19.4 | 20.4 | 21.5 | 22.5 |
| 1 | 13.0 | 14.1 | 15.1 | 16.2 | 17.2 | 18.3 | 19.3 | 20.4 | 21.4 | 22.5 |
| 2 | 13.0 | 14.0 | 15.1 | 16.1 | 17.2 | 18.2 | 19.3 | 20.3 | 21.4 | 22.4 |
| 3 | 12.9 | 14.0 | 15.0 | 16.1 | 17.1 | 18.2 | 19.2 | 20.2 | 21.3 | 22.3 |
| 4 | 12.9 | 13.9 | 15.0 | 16.0 | 17.1 | 18.1 | 19.1 | 20.2 | 21.2 | 22.3 |
| 5 | 12.8 | 13.9 | 14.9 | 16.0 | 17.0 | 18.0 | 19.1 | 20.1 | 21.2 | 22.2 |
| 6 | 12.8 | 13.8 | 14.9 | 15.9 | 16.9 | 18.0 | 19.0 | 20.1 | 21.1 | 22.2 |
| 7 | 12.7 | 13.8 | 14.8 | 15.9 | 16.9 | 17.9 | 19.0 | 20.0 | 21.1 | 22.1 |
| 8 | 12.7 | 13.7 | 14.8 | 15.8 | 16.8 | 17.9 | 18.9 | 20.0 | 21.0 | 22.1 |
| 9 | 12.6 | 13.7 | 14.7 | 15.8 | 16.8 | 17.8 | 18.9 | 19.9 | 20.9 | 22.0 |
| 10 | 12.6 | 13.6 | 14.6 | 15.7 | 16.7 | 17.8 | 18.8 | 19.8 | 20.9 | 21.9 |
| 11 | 12.5 | 13.6 | 14.6 | 15.6 | 16.7 | 17.7 | 18.8 | 19.8 | 20.8 | 21.9 |
| 12 | 12.5 | 13.5 | 14.5 | 15.6 | 16.6 | 17.6 | 18.7 | 19.7 | 20.8 | 21.8 |
| 13 | 12.4 | 13.4 | 14.5 | 15.5 | 16.6 | 17.6 | 18.6 | 19.7 | 20.7 | 21.7 |
| 14 | 12.4 | 13.4 | 14.4 | 15.5 | 16.5 | 17.5 | 18.6 | 19.6 | 20.6 | 21.7 |
| 15 | 12.3 | 13.3 | 14.4 | 15.4 | 16.5 | 17.5 | 18.5 | 19.6 | 20.6 | 21.6 |
| 16 | 12.2 | 13.3 | 14.3 | 15.4 | 16.4 | 17.4 | 18.5 | 19.5 | 20.5 | 21.6 |
| 17 | 12.2 | 13.2 | 14.3 | 15.3 | 16.4 | 17.4 | 18.4 | 19.5 | 20.5 | 21.5 |
| 18 | 12.1 | 13.2 | 14.2 | 15.2 | 16.3 | 17.3 | 18.4 | 19.4 | 20.4 | 21.5 |
| 19 | 12.1 | 13.1 | 14.2 | 15.2 | 16.2 | 17.3 | 18.3 | 19.3 | 20.4 | 21.4 |
| 20 | 12.0 | 13.1 | 14.1 | 15.1 | 16.2 | 17.2 | 18.2 | 19.3 | 20.3 | 21.3 |
| 21 | 12.0 | 13.0 | 14.0 | 15.1 | 16.1 | 17.1 | 18.2 | 19.2 | 20.2 | 21.3 |
| 22 | 11.9 | 13.0 | 14.0 | 15.0 | 16.1 | 17.1 | 18.1 | 19.1 | 20.2 | 21.2 |
| 23 | 11.9 | 12.9 | 13.9 | 15.0 | 16.0 | 17.0 | 18.1 | 19.1 | 20.1 | 21.2 |
| 24 | 11.8 | 12.9 | 13.9 | 14.9 | 16.0 | 17.0 | 18.0 | 19.0 | 20.1 | 21.1 |
| 25 | 11.8 | 12.8 | 13.8 | 14.9 | 15.9 | 16.9 | 18.0 | 19.0 | 20.0 | 21.0 |
| 26 | 11.7 | 12.8 | 13.8 | 14.8 | 15.8 | 16.9 | 17.9 | 18.9 | 19.9 | 21.0 |
| 27 | 11.7 | 12.7 | 13.7 | 14.8 | 15.8 | 16.8 | 17.8 | 18.9 | 19.9 | 20.9 |
| 28 | 11.6 | 12.6 | 13.7 | 14.7 | 15.7 | 16.7 | 17.8 | 18.8 | 19.8 | 20.8 |
| 29 | 11.6 | 12.6 | 13.6 | 14.6 | 15.7 | 16.7 | 17.7 | 18.7 | 19.8 | 20.8 |
| 30 | 11.5 | 12.5 | 13.6 | 14.6 | 15.6 | 16.6 | 17.7 | 18.7 | 19.7 | 20.7 |
| 31 | 11.5 | 12.5 | 13.5 | 14.5 | 15.6 | 16.6 | 17.6 | 18.6 | 19.7 | 20.7 |
| 32 | 11.4 | 12.4 | 13.4 | 14.5 | 15.5 | 16.5 | 17.6 | 18.6 | 19.6 | 20.6 |
| 33 | 11.4 | 12.4 | 13.4 | 14.4 | 15.5 | 16.5 | 17.5 | 18.5 | 19.5 | 20.6 |
| 34 | 11.3 | 12.3 | 13.3 | 14.4 | 15.4 | 16.4 | 17.4 | 18.4 | 19.5 | 20.5 |
| 35 | 11.3 | 12.3 | 13.3 | 14.3 | 15.3 | 16.4 | 17.4 | 18.4 | 19.4 | 20.4 |
| 36 | 11.2 | 12.2 | 13.2 | 14.3 | 15.3 | 16.3 | 17.3 | 18.3 | 19.4 | 20.4 |
| 37 | 11.2 | 12.2 | 13.2 | 14.2 | 15.2 | 16.3 | 17.3 | 18.3 | 19.3 | 20.3 |
| 38 | 11.1 | 12.1 | 13.1 | 14.2 | 15.2 | 16.2 | 17.2 | 18.2 | 19.2 | 20.3 |
| 39 | 11.1 | 12.1 | 13.1 | 14.1 | 15.1 | 16.1 | 17.2 | 18.2 | 19.2 | 20.2 |
| 40 | 11.0 | 12.0 | 13.0 | 14.0 | 15.1 | 16.1 | 17.1 | 18.1 | 19.1 | 20.1 |
| 41 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 | 18.1 | 19.1 | 20.1 |
| 42 | 10.9 | 11.9 | 12.9 | 13.9 | 15.0 | 16.0 | 17.0 | 18.0 | 19.0 | 20.0 |
| 43 | 10.8 | 11.9 | 12.9 | 13.9 | 14.9 | 15.9 | 16.9 | 17.9 | 18.9 | 20.0 |
| 44 | 10.8 | 11.8 | 12.8 | 13.8 | 14.9 | 15.9 | 16.9 | 17.9 | 18.9 | 19.9 |
| 45 | 10.7 | 11.8 | 12.8 | 13.8 | 14.8 | 15.8 | 16.8 | 17.8 | 18.8 | 19.9 |
| 46 | 10.7 | 11.7 | 12.7 | 13.7 | 14.8 | 15.8 | 16.8 | 17.8 | 18.8 | 19.8 |
| 47 | 10.6 | 11.7 | 12.7 | 13.7 | 14.7 | 15.7 | 16.7 | 17.7 | 18.7 | 19.7 |
| 48 | 10.6 | 11.6 | 12.6 | 13.6 | 14.6 | 15.6 | 16.7 | 17.7 | 18.7 | 19.7 |
| 49 | 10.6 | 11.6 | 12.6 | 13.6 | 14.6 | 15.6 | 16.6 | 17.6 | 18.6 | 19.6 |
| 50 | 10.5 | 11.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 18.5 | 19.6 |
| 51 | 10.5 | 11.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 18.5 | 19.5 |
| 52 | 10.4 | 11.4 | 12.4 | 13.4 | 14.4 | 15.4 | 16.4 | 17.4 | 18.4 | 19.4 |
| 53 | 10.4 | 11.4 | 12.4 | 13.4 | 14.4 | 15.4 | 16.4 | 17.4 | 18.4 | 19.4 |
| 54 | 10.3 | 11.3 | 12.3 | 13.3 | 14.3 | 15.3 | 16.3 | 17.3 | 18.3 | 19.3 |
| 55 | 10.3 | 11.3 | 12.3 | 13.3 | 14.3 | 15.3 | 16.3 | 17.3 | 18.3 | 19.3 |
| 56 | 10.2 | 11.2 | 12.2 | 13.2 | 14.2 | 15.2 | 16.2 | 17.2 | 18.2 | 19.2 |
| 57 | 10.1 | 11.1 | 12.1 | 13.1 | 14.1 | 15.1 | 16.2 | 17.2 | 18.2 | 19.2 |
| 58 | 10.1 | 11.1 | 12.1 | 13.1 | 14.1 | 15.1 | 16.1 | 17.1 | 18.1 | 19.1 |
| 59 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 | 18.0 | 19.0 |
| 60 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 | 18.0 | 19.0 |
| 61 | 9.9 | 10.9 | 11.9 | 12.9 | 13.9 | 14.9 | 15.9 | 16.9 | 17.9 | 18.9 |
| 62 | 9.9 | 10.9 | 11.9 | 12.9 | 13.9 | 14.9 | 15.9 | 16.9 | 17.9 | 18.9 |
| 63 | 9.9 | 10.8 | 11.8 | 12.8 | 13.8 | 14.8 | 15.8 | 16.8 | 17.8 | 18.8 |
| 64 | 9.8 | 10.8 | 11.8 | 12.8 | 13.8 | 14.8 | 15.8 | 16.8 | 17.8 | 18.8 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 65 | 9.8 | 10.7 | 11.7 | 12.7 | 13.7 | 14.7 | 15.7 | 16.7 | 17.7 | 18.7 |
| 66 | 9.7 | 10.7 | 11.7 | 12.7 | 13.7 | 14.7 | 15.7 | 16.7 | 17.7 | 18.7 |
| 67 | 9.7 | 10.6 | 11.6 | 12.6 | 13.6 | 14.6 | 15.6 | 16.6 | 17.6 | 18.6 |
| 68 | 9.6 | 10.6 | 11.6 | 12.6 | 13.6 | 14.6 | 15.6 | 16.6 | 17.6 | 18.5 |
| 69 | 9.6 | 10.6 | 11.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.5 | 18.5 |
| 70 | 9.5 | 10.5 | 11.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.4 | 17.4 | 18.4 |
| 71 | 9.5 | 10.5 | 11.4 | 12.4 | 13.4 | 14.4 | 15.4 | 16.4 | 17.4 | 18.4 |
| 72 | 9.4 | 10.4 | 11.4 | 12.4 | 13.4 | 14.4 | 15.4 | 16.3 | 17.3 | 18.3 |
| 73 | 9.4 | 10.4 | 11.3 | 12.3 | 13.3 | 14.3 | 15.3 | 16.3 | 17.3 | 18.3 |
| 74 | 9.3 | 10.3 | 11.3 | 12.3 | 13.3 | 14.3 | 15.2 | 16.2 | 17.2 | 18.2 |
| 75 | 9.3 | 10.2 | 11.2 | 12.2 | 13.2 | 14.2 | 15.2 | 16.2 | 17.2 | 18.2 |
| 76 | 9.2 | 10.2 | 11.2 | 12.2 | 13.2 | 14.2 | 15.1 | 16.1 | 17.1 | 18.1 |
| 77 | 9.2 | 10.1 | 11.1 | 12.1 | 13.1 | 14.1 | 15.1 | 16.1 | 17.1 | 18.0 |
| 78 | 9.1 | 10.1 | 11.1 | 12.1 | 13.1 | 14.0 | 15.0 | 16.0 | 17.0 | 18.0 |
| 79 | 9.1 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 16.0 | 17.0 | 17.9 |
| 80 | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 13.9 | 14.9 | 15.9 | 16.9 | 17.9 |
| 81 | 9.0 | 9.9 | 10.9 | 11.9 | 12.9 | 13.9 | 14.9 | 15.8 | 16.8 | 17.8 |
| 82 | 8.9 | 9.9 | 10.9 | 11.9 | 12.9 | 13.8 | 14.8 | 15.8 | 16.8 | 17.8 |
| 83 | 8.9 | 9.8 | 10.8 | 11.8 | 12.8 | 13.8 | 14.8 | 15.7 | 16.7 | 17.7 |
| 84 | 8.8 | 9.8 | 10.8 | 11.8 | 12.8 | 13.7 | 14.7 | 15.7 | 16.7 | 17.7 |
| 85 | 8.8 | 9.8 | 10.7 | 11.7 | 12.7 | 13.7 | 14.7 | 15.6 | 16.6 | 17.6 |
| 86 | 8.7 | 9.7 | 10.7 | 11.7 | 12.6 | 13.6 | 14.6 | 15.6 | 16.6 | 17.6 |
| 87 | 8.7 | 9.7 | 10.6 | 11.6 | 12.6 | 13.6 | 14.6 | 15.5 | 16.5 | 17.5 |
| 88 | 8.6 | 9.6 | 10.6 | 11.6 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 17.4 |
| 89 | 8.6 | 9.6 | 10.5 | 11.5 | 12.5 | 13.5 | 14.5 | 15.4 | 16.4 | 17.4 |
| 90 | 8.5 | 9.5 | 10.5 | 11.5 | 12.4 | 13.4 | 14.4 | 15.4 | 16.4 | 17.3 |
| 91 | 8.5 | 9.5 | 10.4 | 11.4 | 12.4 | 13.4 | 14.4 | 15.3 | 16.3 | 17.3 |
| 92 | 8.4 | 9.4 | 10.4 | 11.4 | 12.3 | 13.3 | 14.3 | 15.3 | 16.3 | 17.2 |
| 93 | 8.4 | 9.4 | 10.3 | 11.3 | 12.3 | 13.3 | 14.3 | 15.2 | 16.2 | 17.2 |
| 94 | 8.3 | 9.3 | 10.3 | 11.3 | 12.2 | 13.2 | 14.2 | 15.2 | 16.2 | 17.1 |
| 95 | 8.3 | 9.3 | 10.2 | 11.2 | 12.2 | 13.2 | 14.2 | 15.1 | 16.1 | 17.1 |
| 96 | 8.2 | 9.2 | 10.2 | 11.2 | 12.1 | 13.1 | 14.1 | 15.1 | 16.0 | 17.0 |
| 97 | 8.2 | 9.2 | 10.1 | 11.1 | 12.1 | 13.1 | 14.0 | 15.0 | 16.0 | 17.0 |
| 98 | 8.1 | 9.1 | 10.1 | 11.1 | 12.0 | 13.0 | 14.0 | 14.9 | 15.9 | 16.9 |
| 99 | 8.1 | 9.1 | 10.0 | 11.0 | 12.0 | 13.0 | 13.9 | 14.9 | 15.9 | 16.8 |
| 100 | 8.1 | 9.0 | 10.0 | 11.0 | 11.9 | 12.9 | 13.9 | 14.9 | 15.8 | 16.8 |
| 101 | 8.0 | 9.0 | 9.9 | 10.9 | 11.9 | 12.9 | 13.8 | 14.8 | 15.8 | 16.7 |
| 102 | 8.0 | 8.9 | 9.9 | 10.9 | 11.8 | 12.8 | 13.8 | 14.8 | 15.7 | 16.7 |
| 103 | 7.9 | 8.9 | 9.9 | 10.8 | 11.8 | 12.8 | 13.7 | 14.7 | 15.7 | 16.6 |
| 104 | 7.9 | 8.8 | 9.8 | 10.8 | 11.7 | 12.7 | 13.7 | 14.6 | 15.6 | 16.6 |
| 105 | 7.8 | 8.8 | 9.8 | 10.7 | 11.7 | 12.7 | 13.6 | 14.6 | 15.6 | 16.5 |
| 106 | 7.8 | 8.8 | 9.7 | 10.7 | 11.7 | 12.6 | 13.6 | 14.6 | 15.5 | 16.5 |
| 107 | 7.7 | 8.7 | 9.7 | 10.6 | 11.6 | 12.6 | 13.5 | 14.5 | 15.5 | 16.4 |
| 108 | 7.7 | 8.7 | 9.6 | 10.6 | 11.6 | 12.5 | 13.5 | 14.5 | 15.4 | 16.4 |
| 109 | 7.6 | 8.6 | 9.6 | 10.5 | 11.5 | 12.5 | 13.4 | 14.4 | 15.4 | 16.3 |
| 110 | 7.6 | 8.6 | 9.5 | 10.5 | 11.5 | 12.4 | 13.4 | 14.4 | 15.3 | 16.3 |
| 111 | 7.6 | 8.5 | 9.5 | 10.5 | 11.4 | 12.4 | 13.3 | 14.3 | 15.3 | 16.2 |
| 112 | 7.5 | 8.5 | 9.4 | 10.4 | 11.4 | 12.3 | 13.3 | 14.2 | 15.2 | 16.2 |
| 113 | 7.5 | 8.4 | 9.4 | 10.3 | 11.3 | 12.3 | 13.2 | 14.2 | 15.1 | 16.1 |
| 114 | 7.4 | 8.4 | 9.3 | 10.3 | 11.3 | 12.2 | 13.2 | 14.1 | 15.1 | 16.1 |
| 115 | 7.4 | 8.3 | 9.3 | 10.2 | 11.2 | 12.2 | 13.1 | 14.1 | 15.0 | 16.0 |
| 116 | 7.3 | 8.3 | 9.2 | 10.2 | 11.2 | 12.1 | 13.1 | 14.0 | 15.0 | 16.0 |
| 117 | 7.3 | 8.2 | 9.2 | 10.1 | 11.1 | 12.1 | 13.0 | 14.0 | 14.9 | 15.9 |
| 118 | 7.2 | 8.2 | 9.1 | 10.1 | 11.1 | 12.0 | 13.0 | 13.9 | 14.9 | 15.9 |
| 119 | 7.2 | 8.1 | 9.1 | 10.1 | 11.0 | 12.0 | 12.9 | 13.9 | 14.8 | 15.8 |
| 120 | 7.1 | 8.1 | 9.0 | 10.0 | 11.0 | 11.9 | 12.9 | 13.8 | 14.8 | 15.8 |
| 121 | 7.1 | 8.0 | 9.0 | 10.0 | 10.9 | 11.9 | 12.8 | 13.8 | 14.7 | 15.7 |
| 122 | 7.0 | 8.0 | 8.9 | 9.9 | 10.9 | 11.8 | 12.8 | 13.7 | 14.7 | 15.6 |
| 123 | 7.0 | 7.9 | 8.9 | 9.9 | 10.8 | 11.8 | 12.7 | 13.7 | 14.6 | 15.6 |
| 124 | 6.9 | 7.9 | 8.9 | 9.8 | 10.8 | 11.7 | 12.7 | 13.6 | 14.6 | 15.5 |
| 125 | 6.9 | 7.8 | 8.8 | 9.8 | 10.7 | 11.7 | 12.6 | 13.6 | 14.5 | 15.5 |
| 126 | 6.9 | 7.8 | 8.8 | 9.7 | 10.7 | 11.6 | 12.6 | 13.5 | 14.5 | 15.4 |
| 127 | 6.8 | 7.8 | 8.7 | 9.7 | 10.6 | 11.6 | 12.5 | 13.5 | 14.4 | 15.4 |
| 128 | 6.8 | 7.7 | 8.7 | 9.6 | 10.6 | 11.5 | 12.5 | 13.4 | 14.4 | 15.3 |
| 129 | 6.7 | 7.7 | 8.6 | 9.6 | 10.5 | 11.5 | 12.4 | 13.4 | 14.3 | 15.3 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 130 | 6.7 | 7.6 | 8.6 | 9.5 | 10.5 | 11.4 | 12.4 | 13.3 | 14.3 | 15.2 |
| 131 | 6.6 | 7.6 | 8.5 | 9.5 | 10.4 | 11.4 | 12.3 | 13.3 | 14.2 | 15.2 |
| 132 | 6.6 | 7.5 | 8.5 | 9.4 | 10.4 | 11.3 | 12.3 | 13.2 | 14.2 | 15.1 |
| 133 | 6.5 | 7.5 | 8.4 | 9.4 | 10.3 | 11.3 | 12.2 | 13.2 | 14.1 | 15.1 |
| 134 | 6.5 | 7.4 | 8.4 | 9.3 | 10.3 | 11.2 | 12.2 | 13.1 | 14.1 | 15.0 |
| 135 | 6.4 | 7.4 | 8.3 | 9.3 | 10.2 | 11.2 | 12.1 | 13.1 | 14.0 | 15.0 |
| 136 | 6.4 | 7.4 | 8.3 | 9.3 | 10.2 | 11.1 | 12.1 | 13.0 | 14.0 | 14.9 |
| 137 | 6.4 | 7.3 | 8.2 | 9.2 | 10.1 | 11.1 | 12.0 | 13.0 | 13.9 | 14.9 |
| 138 | 6.3 | 7.3 | 8.2 | 9.2 | 10.1 | 11.0 | 12.0 | 12.9 | 13.9 | 14.8 |
| 139 | 6.3 | 7.2 | 8.2 | 9.1 | 10.1 | 11.0 | 11.9 | 12.9 | 13.8 | 14.8 |
| 140 | 6.2 | 7.2 | 8.1 | 9.1 | 10.0 | 10.9 | 11.9 | 12.8 | 13.8 | 14.7 |
| 141 | 6.2 | 7.1 | 8.1 | 9.0 | 10.0 | 10.9 | 11.8 | 12.8 | 13.7 | 14.6 |
| 142 | 6.1 | 7.1 | 8.0 | 9.0 | 9.9 | 10.8 | 11.8 | 12.7 | 13.7 | 14.6 |
| 143 | 6.1 | 7.0 | 8.0 | 8.9 | 9.9 | 10.8 | 11.8 | 12.7 | 13.6 | 14.6 |
| 144 | 6.0 | 7.0 | 7.9 | 8.9 | 9.8 | 10.7 | 11.7 | 12.6 | 13.6 | 14.5 |
| 145 | 6.0 | 6.9 | 7.9 | 8.8 | 9.8 | 10.7 | 11.7 | 12.6 | 13.5 | 14.5 |
| 146 | 6.0 | 6.9 | 7.8 | 8.8 | 9.7 | 10.6 | 11.6 | 12.5 | 13.5 | 14.4 |
| 147 | 5.9 | 6.9 | 7.8 | 8.7 | 9.7 | 10.6 | 11.6 | 12.5 | 13.4 | 14.4 |
| 148 | 5.9 | 6.8 | 7.7 | 8.7 | 9.6 | 10.6 | 11.5 | 12.4 | 13.4 | 14.3 |
| 149 | 5.8 | 6.8 | 7.7 | 8.7 | 9.6 | 10.5 | 11.5 | 12.4 | 13.3 | 14.3 |
| 150 | 5.8 | 6.7 | 7.7 | 8.6 | 9.5 | 10.5 | 11.4 | 12.3 | 13.3 | 14.2 |
| 151 | 5.7 | 6.7 | 7.6 | 8.6 | 9.5 | 10.4 | 11.4 | 12.3 | 13.2 | 14.2 |
| 152 | 5.7 | 6.6 | 7.6 | 8.5 | 9.4 | 10.4 | 11.3 | 12.2 | 13.2 | 14.1 |
| 153 | 5.6 | 6.6 | 7.5 | 8.5 | 9.4 | 10.3 | 11.3 | 12.2 | 13.1 | 14.1 |
| 154 | 5.6 | 6.5 | 7.5 | 8.4 | 9.4 | 10.3 | 11.2 | 12.1 | 13.1 | 14.0 |
| 155 | 5.6 | 6.5 | 7.4 | 8.4 | 9.3 | 10.2 | 11.2 | 12.1 | 13.0 | 14.0 |
| 156 | 5.5 | 6.4 | 7.4 | 8.3 | 9.3 | 10.2 | 11.1 | 12.0 | 13.0 | 13.9 |
| 157 | 5.5 | 6.4 | 7.3 | 8.3 | 9.2 | 10.1 | 11.1 | 12.0 | 12.9 | 13.8 |
| 158 | 5.4 | 6.4 | 7.3 | 8.2 | 9.2 | 10.1 | 11.0 | 11.9 | 12.9 | 13.8 |
| 159 | 5.4 | 6.3 | 7.3 | 8.2 | 9.1 | 10.0 | 11.0 | 11.9 | 12.8 | 13.7 |
| 160 | 5.3 | 6.3 | 7.2 | 8.1 | 9.1 | 10.0 | 10.9 | 11.8 | 12.8 | 13.7 |
| 161 | 5.3 | 6.2 | 7.2 | 8.1 | 9.0 | 10.0 | 10.9 | 11.8 | 12.7 | 13.6 |
| 162 | 5.3 | 6.2 | 7.1 | 8.1 | 9.0 | 9.9 | 10.8 | 11.7 | 12.7 | 13.6 |
| 163 | 5.2 | 6.2 | 7.1 | 8.0 | 8.9 | 9.9 | 10.8 | 11.7 | 12.6 | 13.5 |
| 164 | 5.2 | 6.1 | 7.0 | 8.0 | 8.9 | 9.8 | 10.7 | 11.7 | 12.6 | 13.5 |
| 165 | 5.1 | 6.1 | 7.0 | 7.9 | 8.8 | 9.8 | 10.7 | 11.6 | 12.5 | 13.4 |
| 166 | 5.1 | 6.0 | 6.9 | 7.9 | 8.8 | 9.7 | 10.6 | 11.6 | 12.5 | 13.4 |
| 167 | 5.0 | 6.0 | 6.9 | 7.8 | 8.7 | 9.7 | 10.6 | 11.5 | 12.4 | 13.3 |
| 168 | 5.0 | 5.9 | 6.9 | 7.8 | 8.7 | 9.6 | 10.6 | 11.5 | 12.4 | 13.3 |
| 169 | 5.0 | 5.9 | 6.8 | 7.8 | 8.7 | 9.6 | 10.5 | 11.4 | 12.3 | 13.3 |
| 170 | 4.9 | 5.9 | 6.8 | 7.7 | 8.6 | 9.5 | 10.5 | 11.4 | 12.3 | 13.2 |
| 171 | 4.9 | 5.8 | 6.7 | 7.7 | 8.6 | 9.5 | 10.4 | 11.3 | 12.2 | 13.2 |
| 172 | 4.9 | 5.8 | 6.7 | 7.6 | 8.5 | 9.5 | 10.4 | 11.3 | 12.2 | 13.1 |
| 173 | 4.8 | 5.7 | 6.7 | 7.6 | 8.5 | 9.4 | 10.3 | 11.2 | 12.1 | 13.1 |
| 174 | 4.8 | 5.7 | 6.6 | 7.6 | 8.5 | 9.4 | 10.3 | 11.2 | 12.1 | 13.0 |
| 175 | 4.7 | 5.6 | 6.6 | 7.5 | 8.4 | 9.3 | 10.2 | 11.2 | 12.1 | 13.0 |
| 176 | 4.7 | 5.6 | 6.5 | 7.5 | 8.4 | 9.3 | 10.2 | 11.1 | 12.0 | 12.9 |
| 177 | 4.7 | 5.6 | 6.5 | 7.4 | 8.3 | 9.2 | 10.1 | 11.1 | 12.0 | 12.9 |
| 178 | 4.6 | 5.5 | 6.4 | 7.4 | 8.3 | 9.2 | 10.1 | 11.0 | 11.9 | 12.8 |
| 179 | 4.6 | 5.5 | 6.4 | 7.3 | 8.2 | 9.2 | 10.1 | 11.0 | 11.9 | 12.8 |
| 180 | 4.5 | 5.4 | 6.4 | 7.3 | 8.2 | 9.1 | 10.0 | 10.9 | 11.8 | 12.7 |
| 181 | 4.5 | 5.4 | 6.3 | 7.3 | 8.2 | 9.1 | 10.0 | 10.9 | 11.8 | 12.7 |
| 182 | 4.4 | 5.4 | 6.3 | 7.2 | 8.1 | 9.0 | 9.9 | 10.8 | 11.7 | 12.6 |
| 183 | 4.4 | 5.3 | 6.2 | 7.2 | 8.1 | 9.0 | 9.9 | 10.8 | 11.7 | 12.6 |
| 184 | 4.3 | 5.3 | 6.2 | 7.1 | 8.0 | 8.9 | 9.8 | 10.7 | 11.6 | 12.5 |
| 185 | 4.3 | 5.2 | 6.1 | 7.1 | 8.0 | 8.9 | 9.8 | 10.7 | 11.6 | 12.5 |
| 186 | 4.3 | 5.2 | 6.1 | 7.0 | 7.9 | 8.8 | 9.8 | 10.6 | 11.6 | 12.5 |
| 187 | 4.2 | 5.1 | 6.1 | 7.0 | 7.9 | 8.8 | 9.7 | 10.6 | 11.5 | 12.4 |
| 188 | 4.2 | 5.1 | 6.0 | 6.9 | 7.8 | 8.7 | 9.7 | 10.6 | 11.5 | 12.4 |
| 189 | 4.1 | 5.0 | 6.0 | 6.9 | 7.8 | 8.7 | 9.6 | 10.5 | 11.4 | 12.3 |
| 190 | 4.1 | 5.0 | 5.9 | 6.9 | 7.8 | 8.7 | 9.6 | 10.5 | 11.4 | 12.3 |
| 191 | 4.1 | 5.0 | 5.9 | 6.8 | 7.7 | 8.6 | 9.5 | 10.4 | 11.3 | 12.2 |
| 192 | 4.0 | 4.9 | 5.8 | 6.8 | 7.7 | 8.6 | 9.5 | 10.4 | 11.3 | 12.2 |
| 193 | 4.0 | 4.9 | 5.8 | 6.7 | 7.6 | 8.5 | 9.4 | 10.3 | 11.2 | 12.1 |
| 194 | 3.9 | 4.9 | 5.8 | 6.7 | 7.6 | 8.5 | 9.4 | 10.3 | 11.2 | 12.1 |
| 195 | 3.9 | 4.8 | 5.7 | 6.6 | 7.5 | 8.4 | 9.3 | 10.2 | 11.1 | 12.0 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 20° | 21° | 22° | 23° | 24° | 25° | 26° | 27° | 28° | 29° |
| | Corresponding Degrees A.P.I. at 60°F | | | | | | | | | |
| 0 | 23.6 | 24.6 | 25.7 | 26.8 | 27.8 | 28.9 | 30.0 | 31.0 | 32.1 | 33.2 |
| 1 | 23.5 | 24.6 | 25.6 | 26.7 | 27.8 | 28.8 | 29.9 | 31.0 | 32.0 | 33.1 |
| 2 | 23.5 | 24.5 | 25.6 | 26.6 | 27.7 | 28.7 | 29.8 | 30.9 | 31.9 | 33.0 |
| 3 | 23.4 | 24.4 | 25.5 | 26.5 | 27.6 | 28.7 | 29.7 | 30.8 | 31.8 | 32.9 |
| 4 | 23.3 | 24.4 | 25.4 | 26.5 | 27.5 | 28.6 | 29.6 | 30.7 | 31.8 | 32.8 |
| 5 | 23.3 | 24.3 | 25.4 | 26.4 | 27.5 | 28.5 | 29.6 | 30.6 | 31.7 | 32.8 |
| 6 | 23.2 | 24.2 | 25.3 | 26.3 | 27.4 | 28.5 | 29.5 | 30.6 | 31.6 | 32.7 |
| 7 | 23.1 | 24.2 | 25.2 | 26.3 | 27.3 | 28.4 | 29.4 | 30.5 | 31.6 | 32.6 |
| 8 | 23.1 | 24.1 | 25.2 | 26.2 | 27.3 | 28.3 | 29.4 | 30.4 | 31.5 | 32.6 |
| 9 | 23.0 | 24.1 | 25.1 | 26.2 | 27.2 | 28.3 | 29.3 | 30.4 | 31.4 | 32.5 |
| 10 | 23.0 | 24.0 | 25.0 | 26.1 | 27.1 | 28.2 | 29.2 | 30.3 | 31.3 | 32.4 |
| 11 | 22.9 | 23.9 | 25.0 | 26.0 | 27.1 | 28.1 | 29.2 | 30.2 | 31.3 | 32.3 |
| 12 | 22.8 | 23.9 | 24.9 | 26.0 | 27.0 | 28.1 | 29.1 | 30.2 | 31.2 | 32.3 |
| 13 | 22.8 | 23.8 | 24.9 | 25.9 | 26.9 | 28.0 | 29.0 | 30.1 | 31.1 | 32.2 |
| 14 | 22.7 | 23.7 | 24.8 | 25.8 | 26.9 | 27.9 | 29.0 | 30.0 | 31.1 | 32.1 |
| 15 | 22.7 | 23.7 | 24.7 | 25.8 | 26.8 | 27.9 | 28.9 | 30.0 | 31.0 | 32.0 |
| 16 | 22.6 | 23.6 | 24.7 | 25.7 | 26.7 | 27.8 | 28.8 | 29.9 | 30.9 | 32.0 |
| 17 | 22.6 | 23.6 | 24.6 | 25.7 | 26.7 | 27.7 | 28.8 | 29.8 | 30.9 | 31.9 |
| 18 | 22.5 | 23.5 | 24.6 | 25.6 | 26.6 | 27.7 | 28.7 | 29.8 | 30.8 | 31.8 |
| 19 | 22.4 | 23.4 | 24.5 | 25.5 | 26.5 | 27.6 | 28.6 | 29.7 | 30.7 | 31.8 |
| 20 | 22.4 | 23.4 | 24.4 | 25.5 | 26.5 | 27.5 | 28.6 | 29.6 | 30.7 | 31.7 |
| 21 | 22.3 | 23.3 | 24.4 | 25.4 | 26.4 | 27.5 | 28.5 | 29.5 | 30.6 | 31.6 |
| 22 | 22.2 | 23.3 | 24.3 | 25.3 | 26.4 | 27.4 | 28.4 | 29.5 | 30.5 | 31.6 |
| 23 | 22.2 | 23.2 | 24.3 | 25.3 | 26.3 | 27.3 | 28.4 | 29.4 | 30.4 | 31.5 |
| 24 | 22.1 | 23.1 | 24.2 | 25.2 | 26.2 | 27.3 | 28.3 | 29.3 | 30.4 | 31.4 |
| 25 | 22.1 | 23.1 | 24.1 | 25.2 | 26.2 | 27.2 | 28.3 | 29.3 | 30.3 | 31.4 |
| 26 | 22.0 | 23.0 | 24.1 | 25.1 | 26.1 | 27.1 | 28.2 | 29.2 | 30.2 | 31.3 |
| 27 | 21.9 | 23.0 | 24.0 | 25.0 | 26.0 | 27.1 | 28.1 | 29.1 | 30.2 | 31.2 |
| 28 | 21.9 | 22.9 | 23.9 | 24.9 | 26.0 | 27.0 | 28.0 | 29.1 | 30.1 | 31.1 |
| 29 | 21.8 | 22.8 | 23.8 | 24.9 | 25.9 | 26.9 | 28.0 | 29.0 | 30.0 | 31.1 |
| 30 | 21.7 | 22.8 | 23.8 | 24.8 | 25.8 | 26.9 | 27.9 | 28.9 | 30.0 | 31.0 |
| 31 | 21.7 | 22.7 | 23.7 | 24.7 | 25.8 | 26.8 | 27.8 | 28.9 | 29.9 | 30.9 |
| 32 | 21.6 | 22.7 | 23.7 | 24.7 | 25.7 | 26.8 | 27.8 | 28.8 | 29.8 | 30.9 |
| 33 | 21.6 | 22.6 | 23.6 | 24.6 | 25.7 | 26.7 | 27.7 | 28.7 | 29.8 | 30.8 |
| 34 | 21.5 | 22.5 | 23.6 | 24.6 | 25.6 | 26.6 | 27.7 | 28.7 | 29.7 | 30.7 |
| 35 | 21.4 | 22.5 | 23.5 | 24.5 | 25.5 | 26.6 | 27.6 | 28.6 | 29.6 | 30.7 |
| 36 | 21.4 | 22.4 | 23.4 | 24.4 | 25.5 | 26.5 | 27.5 | 28.5 | 29.6 | 30.6 |
| 37 | 21.3 | 22.3 | 23.4 | 24.4 | 25.4 | 26.4 | 27.4 | 28.5 | 29.5 | 30.5 |
| 38 | 21.3 | 22.3 | 23.3 | 24.3 | 25.3 | 26.3 | 27.4 | 28.4 | 29.4 | 30.4 |
| 39 | 21.2 | 22.2 | 23.3 | 24.3 | 25.3 | 26.3 | 27.3 | 28.3 | 29.4 | 30.4 |
| 40 | 21.2 | 22.2 | 23.2 | 24.2 | 25.2 | 26.2 | 27.3 | 28.3 | 29.3 | 30.3 |
| 41 | 21.1 | 22.1 | 23.1 | 24.2 | 25.2 | 26.2 | 27.2 | 28.2 | 29.2 | 30.3 |
| 42 | 21.0 | 22.1 | 23.1 | 24.1 | 25.1 | 26.1 | 27.1 | 28.2 | 29.2 | 30.2 |
| 43 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 | 27.1 | 28.1 | 29.1 | 30.1 |
| 44 | 20.9 | 21.9 | 23.0 | 24.0 | 25.0 | 26.0 | 27.0 | 28.0 | 29.0 | 30.0 |
| 45 | 20.9 | 21.9 | 22.9 | 23.9 | 24.9 | 25.9 | 26.9 | 28.0 | 29.0 | 30.0 |
| 46 | 20.8 | 21.8 | 22.8 | 23.8 | 24.8 | 25.9 | 26.9 | 27.9 | 28.9 | 29.9 |
| 47 | 20.7 | 21.7 | 22.8 | 23.8 | 24.8 | 25.8 | 26.8 | 27.8 | 28.8 | 29.8 |
| 48 | 20.7 | 21.7 | 22.7 | 23.7 | 24.7 | 25.7 | 26.8 | 27.8 | 28.8 | 29.8 |
| 49 | 20.6 | 21.6 | 22.7 | 23.7 | 24.7 | 25.7 | 26.7 | 27.7 | 28.7 | 29.7 |
| 50 | 20.6 | 21.6 | 22.6 | 23.6 | 24.6 | 25.6 | 26.6 | 27.6 | 28.7 | 29.7 |
| 51 | 20.5 | 21.5 | 22.5 | 23.5 | 24.5 | 25.5 | 26.6 | 27.6 | 28.6 | 29.6 |
| 52 | 20.5 | 21.5 | 22.5 | 23.5 | 24.5 | 25.5 | 26.5 | 27.5 | 28.5 | 29.5 |
| 53 | 20.4 | 21.4 | 22.4 | 23.4 | 24.4 | 25.4 | 26.4 | 27.4 | 28.5 | 29.5 |
| 54 | 20.3 | 21.3 | 22.3 | 23.3 | 24.4 | 25.4 | 26.4 | 27.4 | 28.4 | 29.4 |
| 55 | 20.3 | 21.3 | 22.3 | 23.3 | 24.3 | 25.3 | 26.3 | 27.3 | 28.3 | 29.3 |
| 56 | 20.2 | 21.2 | 22.2 | 23.2 | 24.2 | 25.2 | 26.2 | 27.3 | 28.3 | 29.3 |
| 57 | 20.2 | 21.2 | 22.2 | 23.2 | 24.2 | 25.2 | 26.2 | 27.2 | 28.2 | 29.2 |
| 58 | 20.1 | 21.1 | 22.1 | 23.1 | 24.1 | 25.1 | 26.1 | 27.1 | 28.1 | 29.1 |
| 59 | 20.1 | 21.1 | 22.1 | 23.1 | 24.1 | 25.1 | 26.1 | 27.1 | 28.1 | 29.1 |
| 60 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 | 27.0 | 28.0 | 29.0 |
| 61 | 19.9 | 20.9 | 21.9 | 22.9 | 23.9 | 24.9 | 25.9 | 26.9 | 27.9 | 28.9 |
| 62 | 19.9 | 20.9 | 21.9 | 22.9 | 23.9 | 24.9 | 25.9 | 26.9 | 27.9 | 28.9 |
| 63 | 19.8 | 20.8 | 21.8 | 22.8 | 23.8 | 24.8 | 25.8 | 26.8 | 27.8 | 28.8 |
| 64 | 19.8 | 20.8 | 21.8 | 22.8 | 23.8 | 24.8 | 25.8 | 26.8 | 27.8 | 28.8 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | Corresponding Degrees A.P.I. at 60°F | | | | | | | | | |
| 65 | 19.7 | 20.7 | 21.7 | 22.7 | 23.7 | 24.7 | 25.7 | 26.7 | 27.7 | 28.7 |
| 66 | 19.7 | 20.7 | 21.7 | 22.6 | 23.6 | 24.6 | 25.6 | 26.6 | 27.6 | 28.6 |
| 67 | 19.6 | 20.6 | 21.6 | 22.6 | 23.6 | 24.6 | 25.6 | 26.6 | 27.6 | 28.5 |
| 68 | 19.5 | 20.5 | 21.5 | 22.5 | 23.5 | 24.5 | 25.5 | 26.5 | 27.5 | 28.5 |
| 69 | 19.5 | 20.5 | 21.5 | 22.4 | 23.4 | 24.4 | 25.4 | 26.4 | 27.4 | 28.4 |
| 70 | 19.4 | 20.4 | 21.4 | 22.4 | 23.4 | 24.4 | 25.4 | 26.4 | 27.4 | 28.3 |
| 71 | 19.4 | 20.4 | 21.4 | 22.3 | 23.3 | 24.3 | 25.3 | 26.3 | 27.3 | 28.3 |
| 72 | 19.3 | 20.3 | 21.3 | 22.3 | 23.3 | 24.3 | 25.2 | 26.2 | 27.2 | 28.2 |
| 73 | 19.2 | 20.2 | 21.2 | 22.2 | 23.2 | 24.2 | 25.2 | 26.2 | 27.2 | 28.2 |
| 74 | 19.2 | 20.2 | 21.2 | 22.2 | 23.1 | 24.1 | 25.1 | 26.1 | 27.1 | 28.1 |
| 75 | 19.1 | 20.1 | 21.1 | 22.1 | 23.1 | 24.1 | 25.1 | 26.0 | 27.0 | 28.0 |
| 76 | 19.1 | 20.1 | 21.1 | 22.0 | 23.0 | 24.0 | 25.0 | 26.0 | 27.0 | 28.0 |
| 77 | 19.0 | 20.0 | 21.0 | 22.0 | 23.0 | 24.0 | 25.0 | 25.9 | 26.9 | 27.9 |
| 78 | 19.0 | 19.9 | 20.9 | 21.9 | 22.9 | 23.9 | 24.9 | 25.9 | 26.8 | 27.8 |
| 79 | 18.9 | 19.9 | 20.9 | 21.8 | 22.8 | 23.8 | 24.8 | 25.8 | 26.8 | 27.8 |
| 80 | 18.9 | 19.9 | 20.8 | 21.8 | 22.8 | 23.8 | 24.8 | 25.7 | 26.7 | 27.7 |
| 81 | 18.8 | 19.8 | 20.8 | 21.7 | 22.7 | 23.7 | 24.7 | 25.7 | 26.7 | 27.6 |
| 82 | 18.7 | 19.7 | 20.7 | 21.7 | 22.7 | 23.6 | 24.6 | 25.6 | 26.6 | 27.6 |
| 83 | 18.7 | 19.7 | 20.6 | 21.6 | 22.6 | 23.6 | 24.6 | 25.5 | 26.5 | 27.5 |
| 84 | 18.6 | 19.6 | 20.6 | 21.6 | 22.6 | 23.5 | 24.5 | 25.5 | 26.5 | 27.4 |
| 85 | 18.6 | 19.5 | 20.5 | 21.5 | 22.5 | 23.5 | 24.5 | 25.4 | 26.4 | 27.4 |
| 86 | 18.5 | 19.5 | 20.5 | 21.4 | 22.4 | 23.4 | 24.4 | 25.4 | 26.3 | 27.3 |
| 87 | 18.4 | 19.4 | 20.4 | 21.4 | 22.4 | 23.3 | 24.3 | 25.3 | 26.3 | 27.3 |
| 88 | 18.4 | 19.4 | 20.4 | 21.3 | 22.3 | 23.3 | 24.3 | 25.2 | 26.2 | 27.2 |
| 89 | 18.3 | 19.3 | 20.3 | 21.3 | 22.2 | 23.2 | 24.2 | 25.2 | 26.2 | 27.1 |
| 90 | 18.3 | 19.3 | 20.3 | 21.2 | 22.2 | 23.2 | 24.2 | 25.1 | 26.1 | 27.1 |
| 91 | 18.2 | 19.2 | 20.2 | 21.2 | 22.1 | 23.1 | 24.1 | 25.1 | 26.0 | 27.0 |
| 92 | 18.2 | 19.2 | 20.1 | 21.1 | 22.1 | 23.0 | 24.0 | 25.0 | 26.0 | 26.9 |
| 93 | 18.1 | 19.1 | 20.1 | 21.0 | 22.0 | 23.0 | 24.0 | 24.9 | 25.9 | 26.9 |
| 94 | 18.1 | 19.0 | 20.0 | 21.0 | 22.0 | 22.9 | 23.9 | 24.9 | 25.9 | 26.8 |
| 95 | 18.0 | 19.0 | 20.0 | 20.9 | 21.9 | 22.9 | 23.8 | 24.8 | 25.8 | 26.8 |
| 96 | 18.0 | 18.9 | 19.9 | 20.9 | 21.9 | 22.8 | 23.8 | 24.8 | 25.8 | 26.7 |
| 97 | 17.9 | 18.9 | 19.9 | 20.8 | 21.8 | 22.8 | 23.7 | 24.7 | 25.7 | 26.6 |
| 98 | 17.9 | 18.8 | 19.8 | 20.8 | 21.7 | 22.7 | 23.7 | 24.6 | 25.6 | 26.6 |
| 99 | 17.8 | 18.8 | 19.8 | 20.7 | 21.7 | 22.7 | 23.6 | 24.6 | 25.6 | 26.5 |
| 100 | 17.8 | 18.7 | 19.7 | 20.7 | 21.6 | 22.6 | 23.6 | 24.5 | 25.5 | 26.5 |
| 101 | 17.7 | 18.7 | 19.6 | 20.6 | 21.6 | 22.5 | 23.5 | 24.5 | 25.4 | 26.4 |
| 102 | 17.6 | 18.6 | 19.6 | 20.5 | 21.5 | 22.5 | 23.4 | 24.4 | 25.4 | 26.3 |
| 103 | 17.6 | 18.6 | 19.5 | 20.5 | 21.5 | 22.4 | 23.4 | 24.4 | 25.3 | 26.3 |
| 104 | 17.5 | 18.5 | 19.5 | 20.4 | 21.4 | 22.3 | 23.3 | 24.3 | 25.2 | 26.2 |
| 105 | 17.5 | 18.5 | 19.4 | 20.4 | 21.3 | 22.3 | 23.3 | 24.2 | 25.2 | 26.1 |
| 106 | 17.4 | 18.4 | 19.4 | 20.3 | 21.3 | 22.2 | 23.2 | 24.2 | 25.1 | 26.1 |
| 107 | 17.4 | 18.4 | 19.3 | 20.3 | 21.2 | 22.2 | 23.2 | 24.1 | 25.1 | 26.0 |
| 108 | 17.3 | 18.3 | 19.3 | 20.2 | 21.2 | 22.1 | 23.1 | 24.0 | 25.0 | 25.9 |
| 109 | 17.3 | 18.3 | 19.2 | 20.2 | 21.1 | 22.1 | 23.0 | 24.0 | 24.9 | 25.9 |
| 110 | 17.2 | 18.2 | 19.2 | 20.1 | 21.1 | 22.0 | 23.0 | 23.9 | 24.9 | 25.8 |
| 111 | 17.2 | 18.1 | 19.1 | 20.1 | 21.0 | 22.0 | 22.9 | 23.9 | 24.8 | 25.8 |
| 112 | 17.1 | 18.1 | 19.0 | 20.0 | 20.9 | 21.9 | 22.9 | 23.8 | 24.8 | 25.7 |
| 113 | 17.1 | 18.0 | 19.0 | 19.9 | 20.9 | 21.8 | 22.8 | 23.7 | 24.7 | 25.6 |
| 114 | 17.0 | 18.0 | 18.9 | 19.9 | 20.8 | 21.8 | 22.8 | 23.7 | 24.7 | 25.6 |
| 115 | 17.0 | 17.9 | 18.9 | 19.8 | 20.8 | 21.7 | 22.7 | 23.6 | 24.6 | 25.5 |
| 116 | 16.9 | 17.9 | 18.8 | 19.8 | 20.7 | 21.7 | 22.6 | 23.6 | 24.5 | 25.5 |
| 117 | 16.9 | 17.8 | 18.8 | 19.7 | 20.7 | 21.6 | 22.6 | 23.5 | 24.5 | 25.4 |
| 118 | 16.8 | 17.8 | 18.7 | 19.7 | 20.6 | 21.6 | 22.5 | 23.5 | 24.4 | 25.3 |
| 119 | 16.8 | 17.7 | 18.7 | 19.6 | 20.6 | 21.5 | 22.5 | 23.4 | 24.4 | 25.3 |
| 120 | 16.7 | 17.7 | 18.6 | 19.6 | 20.5 | 21.4 | 22.4 | 23.3 | 24.3 | 25.2 |
| 121 | 16.6 | 17.6 | 18.5 | 19.5 | 20.4 | 21.4 | 22.3 | 23.3 | 24.2 | 25.2 |
| 122 | 16.6 | 17.5 | 18.5 | 19.4 | 20.4 | 21.3 | 22.3 | 23.2 | 24.2 | 25.1 |
| 123 | 16.5 | 17.5 | 18.4 | 19.4 | 20.3 | 21.3 | 22.2 | 23.2 | 24.1 | 25.1 |
| 124 | 16.5 | 17.4 | 18.4 | 19.3 | 20.3 | 21.2 | 22.2 | 23.1 | 24.1 | 25.0 |
| 125 | 16.4 | 17.4 | 18.3 | 19.3 | 20.2 | 21.2 | 22.1 | 23.1 | 24.0 | 24.9 |
| 126 | 16.4 | 17.3 | 18.3 | 19.2 | 20.2 | 21.1 | 22.1 | 23.0 | 24.0 | 24.9 |
| 127 | 16.3 | 17.3 | 18.2 | 19.2 | 20.1 | 21.0 | 22.0 | 22.9 | 23.9 | 24.8 |
| 128 | 16.3 | 17.2 | 18.2 | 19.1 | 20.1 | 21.0 | 21.9 | 22.9 | 23.9 | 24.8 |
| 129 | 16.2 | 17.2 | 18.1 | 19.1 | 20.0 | 20.9 | 21.9 | 22.8 | 23.8 | 24.7 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
| | Corresponding Degrees A.P.I. at 60°F | | | | | | | | | |
| 130 | 16.2 | 17.1 | 18.1 | 19.0 | 19.9 | 20.9 | 21.8 | 22.8 | 23.7 | 24.6 |
| 131 | 16.1 | 17.0 | 18.0 | 18.9 | 19.9 | 20.8 | 21.8 | 22.7 | 23.6 | 24.6 |
| 132 | 16.1 | 17.0 | 18.0 | 18.9 | 19.8 | 20.8 | 21.7 | 22.7 | 23.6 | 24.5 |
| 133 | 16.0 | 16.9 | 17.9 | 18.8 | 19.8 | 20.7 | 21.7 | 22.6 | 23.5 | 24.5 |
| 134 | 16.0 | 16.9 | 17.9 | 18.8 | 19.7 | 20.6 | 21.6 | 22.5 | 23.5 | 24.4 |
| 135 | 15.9 | 16.8 | 17.8 | 18.7 | 19.7 | 20.6 | 21.6 | 22.5 | 23.4 | 24.4 |
| 136 | 15.9 | 16.8 | 17.7 | 18.7 | 19.6 | 20.5 | 21.5 | 22.4 | 23.4 | 24.3 |
| 137 | 15.8 | 16.7 | 17.7 | 18.6 | 19.6 | 20.5 | 21.4 | 22.4 | 23.3 | 24.2 |
| 138 | 15.8 | 16.7 | 17.6 | 18.6 | 19.5 | 20.4 | 21.4 | 22.3 | 23.2 | 24.2 |
| 139 | 15.7 | 16.6 | 17.6 | 18.5 | 19.4 | 20.4 | 21.3 | 22.2 | 23.2 | 24.1 |
| 140 | 15.6 | 16.6 | 17.5 | 18.5 | 19.4 | 20.3 | 21.3 | 22.2 | 23.1 | 24.0 |
| 141 | 15.6 | 16.5 | 17.5 | 18.4 | 19.3 | 20.3 | 21.2 | 22.1 | 23.1 | 24.0 |
| 142 | 15.5 | 16.5 | 17.4 | 18.4 | 19.3 | 20.2 | 21.2 | 22.1 | 23.0 | 23.9 |
| 143 | 15.5 | 16.4 | 17.4 | 18.3 | 19.2 | 20.2 | 21.1 | 22.0 | 23.0 | 23.9 |
| 144 | 15.4 | 16.4 | 17.3 | 18.3 | 19.2 | 20.1 | 21.0 | 22.0 | 23.9 | 23.8 |
| 145 | 15.4 | 16.3 | 17.3 | 18.2 | 19.1 | 20.0 | 21.0 | 21.9 | 22.9 | 23.8 |
| 146 | 15.3 | 16.3 | 17.2 | 18.2 | 19.1 | 20.0 | 20.9 | 21.9 | 22.8 | 23.7 |
| 147 | 15.3 | 16.2 | 17.2 | 18.1 | 19.0 | 19.9 | 20.9 | 21.8 | 22.7 | 23.6 |
| 148 | 15.2 | 16.2 | 17.1 | 18.0 | 18.9 | 19.9 | 20.8 | 21.8 | 22.7 | 23.6 |
| 149 | 15.2 | 16.1 | 17.0 | 18.0 | 18.9 | 19.8 | 20.8 | 21.7 | 22.6 | 23.5 |
| 150 | 15.1 | 16.1 | 17.0 | 17.9 | 18.8 | 19.8 | 20.7 | 21.7 | 22.6 | 23.5 |
| 151 | 15.1 | 16.0 | 16.9 | 17.9 | 18.8 | 19.7 | 20.7 | 21.6 | 22.5 | 23.4 |
| 152 | 15.0 | 16.0 | 16.9 | 17.8 | 18.7 | 19.7 | 20.6 | 21.5 | 22.5 | 23.4 |
| 153 | 15.0 | 15.9 | 16.8 | 17.8 | 18.7 | 19.6 | 20.6 | 21.5 | 22.4 | 23.3 |
| 154 | 14.9 | 15.9 | 16.8 | 17.7 | 18.6 | 19.6 | 20.5 | 21.4 | 22.3 | 23.3 |
| 155 | 14.9 | 15.8 | 16.7 | 17.7 | 18.6 | 19.5 | 20.5 | 21.4 | 22.3 | 23.2 |
| 156 | 14.8 | 15.7 | 16.7 | 17.6 | 18.5 | 19.4 | 20.4 | 21.3 | 22.2 | 23.2 |
| 157 | 14.8 | 15.7 | 16.6 | 17.6 | 18.5 | 19.4 | 20.3 | 21.3 | 22.2 | 23.1 |
| 158 | 14.7 | 15.6 | 16.6 | 17.5 | 18.4 | 19.3 | 20.3 | 21.2 | 22.1 | 23.0 |
| 159 | 14.7 | 15.6 | 16.5 | 17.4 | 18.4 | 19.3 | 20.2 | 21.1 | 22.1 | 23.0 |
| 160 | 14.6 | 15.5 | 16.5 | 17.4 | 18.3 | 19.2 | 20.2 | 21.1 | 22.0 | 22.9 |
| 161 | 14.6 | 15.5 | 16.4 | 17.3 | 18.3 | 19.2 | 20.1 | 21.0 | 21.9 | 22.9 |
| 162 | 14.5 | 15.4 | 16.4 | 17.3 | 18.2 | 19.1 | 20.1 | 21.0 | 21.9 | 22.8 |
| 163 | 14.5 | 15.4 | 16.3 | 17.2 | 18.2 | 19.1 | 20.0 | 20.9 | 21.8 | 22.7 |
| 164 | 14.4 | 15.3 | 16.3 | 17.2 | 18.1 | 19.0 | 19.9 | 20.9 | 21.8 | 22.7 |
| 165 | 14.4 | 15.3 | 16.2 | 17.1 | 18.0 | 18.9 | 19.9 | 20.8 | 21.7 | 22.6 |
| 166 | 14.3 | 15.2 | 16.2 | 17.1 | 18.0 | 18.9 | 19.8 | 20.7 | 21.7 | 22.6 |
| 167 | 14.3 | 15.2 | 16.1 | 17.0 | 17.9 | 18.8 | 19.8 | 20.7 | 21.6 | 22.5 |
| 168 | 14.2 | 15.1 | 16.1 | 17.0 | 17.9 | 18.8 | 19.7 | 20.6 | 21.6 | 22.5 |
| 169 | 14.2 | 15.1 | 16.0 | 16.9 | 17.8 | 18.7 | 19.7 | 20.6 | 21.5 | 22.4 |
| 170 | 14.1 | 15.0 | 16.0 | 16.9 | 17.8 | 18.7 | 19.6 | 20.5 | 21.4 | 22.3 |
| 171 | 14.1 | 15.0 | 15.9 | 16.8 | 17.7 | 18.6 | 19.6 | 20.5 | 21.4 | 22.3 |
| 172 | 14.0 | 14.9 | 15.9 | 16.8 | 17.7 | 18.6 | 19.5 | 20.4 | 21.3 | 22.2 |
| 173 | 14.0 | 14.9 | 15.8 | 16.7 | 17.6 | 18.5 | 19.5 | 20.4 | 21.3 | 22.2 |
| 174 | 13.9 | 14.8 | 15.8 | 16.7 | 17.6 | 18.5 | 19.4 | 20.3 | 21.2 | 22.1 |
| 175 | 13.9 | 14.8 | 15.7 | 16.6 | 17.5 | 18.4 | 19.3 | 20.3 | 21.2 | 22.1 |
| 176 | 13.8 | 14.7 | 15.7 | 16.6 | 17.5 | 18.4 | 19.3 | 20.2 | 21.1 | 22.0 |
| 177 | 13.8 | 14.7 | 15.6 | 16.5 | 17.4 | 18.3 | 19.2 | 20.1 | 21.0 | 21.9 |
| 178 | 13.7 | 14.6 | 15.6 | 16.5 | 17.4 | 18.3 | 19.2 | 20.1 | 21.0 | 21.9 |
| 179 | 13.7 | 14.6 | 15.5 | 16.4 | 17.3 | 18.2 | 19.1 | 20.0 | 20.9 | 21.8 |
| 180 | 13.6 | 14.6 | 15.5 | 16.4 | 17.3 | 18.2 | 19.1 | 20.0 | 20.9 | 21.8 |
| 181 | 13.6 | 14.5 | 15.4 | 16.3 | 17.2 | 18.1 | 19.0 | 19.9 | 20.8 | 21.7 |
| 182 | 13.5 | 14.5 | 15.4 | 16.3 | 17.2 | 18.1 | 19.0 | 19.9 | 20.8 | 21.7 |
| 183 | 13.5 | 14.4 | 15.3 | 16.2 | 17.1 | 18.0 | 18.9 | 19.8 | 20.7 | 21.6 |
| 184 | 13.4 | 14.4 | 15.3 | 16.2 | 17.1 | 18.0 | 18.9 | 19.8 | 20.7 | 21.6 |
| 185 | 13.4 | 14.3 | 15.2 | 16.1 | 17.0 | 17.9 | 18.8 | 19.7 | 20.6 | 21.5 |
| 186 | 13.4 | 14.3 | 15.2 | 16.1 | 17.0 | 17.9 | 18.8 | 19.7 | 20.6 | 21.4 |
| 187 | 13.3 | 14.2 | 15.1 | 16.0 | 16.9 | 17.8 | 18.7 | 19.6 | 20.5 | 21.4 |
| 188 | 13.3 | 14.2 | 15.1 | 16.0 | 16.9 | 17.8 | 18.7 | 19.6 | 20.5 | 21.3 |
| 189 | 13.2 | 14.1 | 15.0 | 15.9 | 16.8 | 17.7 | 18.6 | 19.5 | 20.4 | 21.3 |
| 190 | 13.2 | 14.1 | 15.0 | 15.9 | 16.8 | 17.7 | 18.6 | 19.5 | 20.3 | 21.2 |
| 191 | 13.1 | 14.0 | 14.9 | 15.8 | 16.7 | 17.6 | 18.5 | 19.4 | 20.3 | 21.2 |
| 192 | 13.1 | 14.0 | 14.9 | 15.8 | 16.7 | 17.6 | 18.4 | 19.3 | 20.2 | 21.1 |
| 193 | 13.0 | 13.9 | 14.8 | 15.7 | 16.6 | 17.5 | 18.4 | 19.3 | 20.2 | 21.1 |
| 194 | 13.0 | 13.9 | 14.8 | 15.7 | 16.6 | 17.4 | 18.3 | 19.2 | 20.1 | 21.0 |
| 195 | 12.9 | 13.8 | 14.7 | 15.6 | 16.5 | 17.4 | 18.3 | 19.2 | 20.1 | 21.0 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 30° | 31° | 32° | 33° | 34° | 35° | 36° | 37° | 38° | 39° |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 0 | 34.2 | 35.3 | 36.4 | 37.4 | 38.5 | 39.6 | 40.7 | 41.8 | 42.9 | 44.0 |
| 1 | 34.1 | 35.2 | 36.3 | 37.3 | 38.4 | 39.5 | 40.6 | 41.7 | 42.8 | 43.9 |
| 2 | 34.0 | 35.1 | 36.2 | 37.2 | 38.3 | 39.4 | 40.5 | 41.6 | 42.7 | 43.8 |
| 3 | 34.0 | 35.0 | 36.1 | 37.2 | 38.2 | 39.3 | 40.4 | 41.5 | 42.6 | 43.7 |
| 4 | 33.9 | 34.9 | 36.0 | 37.1 | 38.2 | 39.2 | 40.3 | 41.4 | 42.5 | 43.6 |
| 5 | 33.8 | 34.9 | 36.0 | 37.0 | 38.1 | 39.2 | 40.2 | 41.3 | 42.4 | 43.5 |
| 6 | 33.7 | 34.8 | 35.9 | 36.9 | 38.0 | 39.1 | 40.1 | 41.2 | 42.3 | 43.4 |
| 7 | 33.7 | 34.7 | 35.8 | 36.8 | 37.9 | 39.0 | 40.1 | 41.1 | 42.2 | 43.3 |
| 8 | 33.6 | 34.7 | 35.7 | 36.8 | 37.8 | 38.9 | 40.0 | 41.1 | 42.1 | 43.2 |
| 9 | 33.5 | 34.6 | 35.7 | 36.7 | 37.8 | 38.9 | 39.9 | 41.0 | 42.1 | 43.1 |
| 10 | 33.4 | 34.5 | 35.6 | 36.6 | 37.7 | 38.8 | 39.8 | 40.9 | 42.0 | 43.1 |
| 11 | 33.4 | 34.4 | 35.5 | 36.5 | 37.6 | 38.7 | 39.7 | 40.8 | 41.9 | 43.0 |
| 12 | 33.3 | 34.4 | 35.4 | 36.5 | 37.5 | 38.6 | 39.7 | 40.7 | 41.8 | 42.9 |
| 13 | 33.2 | 34.3 | 35.3 | 36.4 | 37.5 | 38.5 | 39.6 | 40.6 | 41.7 | 42.8 |
| 14 | 33.1 | 34.2 | 35.3 | 36.3 | 37.4 | 38.5 | 39.5 | 40.6 | 41.6 | 42.7 |
| 15 | 33.1 | 34.1 | 35.2 | 36.2 | 37.3 | 38.4 | 39.4 | 40.5 | 41.6 | 42.6 |
| 16 | 33.0 | 34.1 | 35.1 | 36.2 | 37.2 | 38.3 | 39.3 | 40.4 | 41.5 | 42.5 |
| 17 | 32.9 | 34.0 | 35.0 | 36.1 | 37.1 | 38.2 | 39.3 | 40.3 | 41.4 | 42.5 |
| 18 | 32.9 | 33.9 | 35.0 | 36.0 | 37.1 | 38.2 | 39.2 | 40.3 | 41.3 | 42.4 |
| 19 | 32.8 | 33.8 | 34.9 | 36.0 | 37.0 | 38.1 | 39.1 | 40.2 | 41.2 | 42.3 |
| 20 | 32.7 | 33.8 | 34.8 | 35.9 | 36.9 | 38.0 | 39.0 | 40.1 | 41.2 | 42.2 |
| 21 | 32.6 | 33.7 | 34.7 | 35.8 | 36.8 | 37.9 | 39.0 | 40.0 | 41.1 | 42.1 |
| 22 | 32.6 | 33.6 | 34.7 | 35.7 | 36.8 | 37.8 | 38.9 | 39.9 | 41.0 | 42.1 |
| 23 | 32.5 | 33.6 | 34.6 | 35.7 | 36.7 | 37.8 | 38.8 | 39.9 | 40.9 | 42.0 |
| 24 | 32.4 | 33.5 | 34.5 | 35.6 | 36.6 | 37.7 | 38.7 | 39.8 | 40.8 | 41.9 |
| 25 | 32.4 | 33.4 | 34.5 | 35.5 | 36.5 | 37.6 | 38.6 | 39.7 | 40.7 | 41.8 |
| 26 | 32.3 | 33.3 | 34.4 | 35.4 | 36.5 | 37.5 | 38.6 | 39.6 | 40.7 | 41.7 |
| 27 | 32.2 | 33.3 | 34.3 | 35.3 | 36.4 | 37.4 | 38.5 | 39.5 | 40.6 | 41.6 |
| 28 | 32.2 | 33.2 | 34.2 | 35.3 | 36.3 | 37.4 | 38.4 | 39.4 | 40.5 | 41.5 |
| 29 | 32.1 | 33.1 | 34.2 | 35.2 | 36.2 | 37.3 | 38.3 | 39.4 | 40.4 | 41.5 |
| 30 | 32.0 | 33.0 | 34.1 | 35.1 | 36.1 | 37.2 | 38.2 | 39.3 | 40.3 | 41.4 |
| 31 | 31.9 | 33.0 | 34.0 | 35.0 | 36.1 | 37.1 | 38.2 | 39.2 | 40.3 | 41.3 |
| 32 | 31.9 | 32.9 | 34.0 | 35.0 | 36.0 | 37.1 | 38.1 | 39.1 | 40.2 | 41.2 |
| 33 | 31.8 | 32.8 | 33.9 | 34.9 | 35.9 | 37.0 | 38.0 | 39.0 | 40.1 | 41.1 |
| 34 | 31.7 | 32.8 | 33.8 | 34.8 | 35.9 | 36.9 | 37.9 | 39.0 | 40.0 | 41.1 |
| 35 | 31.7 | 32.7 | 33.7 | 34.8 | 35.8 | 36.8 | 37.9 | 38.9 | 40.0 | 41.0 |
| 36 | 31.6 | 32.6 | 33.7 | 34.7 | 35.7 | 36.8 | 37.8 | 38.8 | 39.9 | 40.9 |
| 37 | 31.5 | 32.6 | 33.6 | 34.6 | 35.6 | 36.7 | 37.7 | 38.7 | 39.8 | 40.8 |
| 38 | 31.5 | 32.5 | 33.5 | 34.6 | 35.6 | 36.6 | 37.6 | 38.7 | 39.7 | 40.7 |
| 39 | 31.4 | 32.4 | 33.5 | 34.5 | 35.5 | 36.5 | 37.6 | 38.6 | 39.6 | 40.7 |
| 40 | 31.3 | 32.3 | 33.4 | 34.4 | 35.4 | 36.5 | 37.5 | 38.5 | 39.5 | 40.6 |
| 41 | 31.3 | 32.3 | 33.3 | 34.3 | 35.4 | 36.4 | 37.4 | 38.4 | 39.4 | 40.5 |
| 42 | 31.2 | 32.2 | 33.2 | 34.3 | 35.3 | 36.3 | 37.3 | 38.3 | 39.4 | 40.4 |
| 43 | 31.1 | 32.1 | 33.2 | 34.2 | 35.2 | 36.2 | 37.2 | 38.2 | 39.3 | 40.3 |
| 44 | 31.0 | 32.1 | 33.1 | 34.1 | 35.1 | 36.2 | 37.2 | 38.2 | 39.2 | 40.3 |
| 45 | 31.0 | 32.0 | 33.0 | 34.1 | 35.1 | 36.1 | 37.1 | 38.1 | 39.2 | 40.2 |
| 46 | 30.9 | 31.9 | 32.9 | 34.0 | 35.0 | 36.0 | 37.0 | 38.1 | 39.1 | 40.1 |
| 47 | 30.8 | 31.9 | 32.9 | 33.9 | 34.9 | 36.0 | 37.0 | 38.0 | 39.0 | 40.0 |
| 48 | 30.8 | 31.8 | 32.8 | 33.8 | 34.8 | 35.9 | 36.9 | 37.9 | 38.9 | 40.0 |
| 49 | 30.7 | 31.7 | 32.8 | 33.8 | 34.8 | 35.8 | 36.8 | 37.8 | 38.8 | 39.9 |
| 50 | 30.7 | 31.7 | 32.7 | 33.7 | 34.7 | 35.7 | 36.7 | 37.7 | 38.8 | 39.8 |
| 51 | 30.6 | 31.6 | 32.6 | 33.6 | 34.7 | 35.7 | 36.7 | 37.7 | 38.7 | 39.7 |
| 52 | 30.5 | 31.5 | 32.6 | 33.6 | 34.6 | 35.6 | 36.6 | 37.6 | 38.6 | 39.6 |
| 53 | 30.4 | 31.5 | 32.5 | 33.5 | 34.5 | 35.5 | 36.5 | 37.5 | 38.5 | 39.6 |
| 54 | 30.4 | 31.4 | 32.4 | 33.4 | 34.4 | 35.4 | 36.4 | 37.5 | 38.5 | 39.5 |
| 55 | 30.3 | 31.3 | 32.3 | 33.4 | 34.4 | 35.4 | 36.4 | 37.4 | 38.4 | 39.4 |
| 56 | 30.2 | 31.2 | 32.3 | 33.3 | 34.3 | 35.3 | 36.3 | 37.3 | 38.3 | 39.3 |
| 57 | 30.2 | 31.2 | 32.2 | 33.2 | 34.2 | 35.2 | 36.2 | 37.2 | 38.2 | 39.2 |
| 58 | 30.1 | 31.1 | 32.1 | 33.1 | 34.1 | 35.1 | 36.1 | 37.1 | 38.1 | 39.2 |
| 59 | 30.0 | 31.0 | 32.1 | 33.1 | 34.1 | 35.1 | 36.1 | 37.1 | 38.1 | 39.1 |
| 60 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 | 36.0 | 37.0 | 38.0 | 39.0 |
| 61 | 29.9 | 30.9 | 31.9 | 32.9 | 33.9 | 34.9 | 35.9 | 36.9 | 37.9 | 38.9 |
| 62 | 29.9 | 30.9 | 31.9 | 32.9 | 33.9 | 34.9 | 35.9 | 36.9 | 37.9 | 38.9 |
| 63 | 29.8 | 30.8 | 31.8 | 32.8 | 33.8 | 34.8 | 35.8 | 36.8 | 37.8 | 38.8 |
| 64 | 29.7 | 30.7 | 31.7 | 32.7 | 33.7 | 34.7 | 35.7 | 36.7 | 37.7 | 38.7 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 65 | 29.7 | 30.7 | 31.7 | 32.7 | 33.7 | 34.7 | 35.6 | 36.6 | 37.6 | 38.6 |
| 66 | 29.6 | 30.6 | 31.6 | 32.6 | 33.6 | 34.6 | 35.6 | 36.6 | 37.6 | 38.6 |
| 67 | 29.5 | 30.5 | 31.5 | 32.5 | 33.5 | 34.5 | 35.5 | 36.5 | 37.5 | 38.5 |
| 68 | 29.5 | 30.5 | 31.5 | 32.4 | 33.4 | 34.4 | 35.4 | 36.4 | 37.4 | 38.4 |
| 69 | 29.4 | 30.4 | 31.4 | 32.4 | 33.4 | 34.4 | 35.3 | 36.3 | 37.3 | 38.3 |
| 70 | 29.3 | 30.3 | 31.3 | 32.3 | 33.3 | 34.3 | 35.3 | 36.2 | 37.2 | 38.2 |
| 71 | 29.3 | 30.2 | 31.2 | 32.2 | 33.2 | 34.2 | 35.2 | 36.2 | 37.2 | 38.2 |
| 72 | 29.2 | 30.2 | 31.2 | 32.2 | 33.1 | 34.1 | 35.1 | 36.1 | 37.1 | 38.1 |
| 73 | 29.1 | 30.1 | 31.1 | 32.1 | 33.1 | 34.1 | 35.0 | 36.0 | 37.0 | 38.0 |
| 74 | 29.1 | 30.0 | 31.0 | 32.0 | 33.0 | 34.0 | 35.0 | 36.0 | 36.9 | 37.9 |
| 75 | 29.0 | 30.0 | 31.0 | 31.9 | 32.9 | 33.9 | 34.9 | 35.9 | 36.9 | 37.9 |
| 76 | 28.9 | 29.9 | 30.9 | 31.9 | 32.9 | 33.9 | 34.8 | 35.8 | 36.8 | 37.8 |
| 77 | 28.9 | 29.9 | 30.9 | 31.8 | 32.8 | 33.8 | 34.8 | 35.7 | 36.7 | 37.7 |
| 78 | 28.8 | 29.8 | 30.8 | 31.7 | 32.7 | 33.7 | 34.7 | 35.7 | 36.7 | 37.6 |
| 79 | 28.7 | 29.7 | 30.7 | 31.7 | 32.6 | 33.6 | 34.6 | 35.6 | 36.6 | 37.6 |
| 80 | 28.7 | 29.6 | 30.6 | 31.6 | 32.6 | 33.6 | 34.6 | 35.5 | 36.5 | 37.5 |
| 81 | 28.6 | 29.6 | 30.6 | 31.5 | 32.5 | 33.5 | 34.5 | 35.4 | 36.4 | 37.4 |
| 82 | 28.5 | 29.5 | 30.5 | 31.5 | 32.5 | 33.4 | 34.4 | 35.4 | 36.4 | 37.3 |
| 83 | 28.5 | 29.5 | 30.4 | 31.4 | 32.4 | 33.4 | 34.3 | 35.3 | 36.3 | 37.2 |
| 84 | 28.4 | 29.4 | 30.4 | 31.3 | 32.3 | 33.3 | 34.3 | 35.2 | 36.2 | 37.2 |
| 85 | 28.4 | 29.3 | 30.3 | 31.3 | 32.2 | 33.2 | 34.2 | 35.1 | 36.1 | 37.1 |
| 86 | 28.3 | 29.3 | 30.2 | 31.2 | 32.2 | 33.1 | 34.1 | 35.1 | 36.1 | 37.0 |
| 87 | 28.2 | 29.2 | 30.2 | 31.1 | 32.1 | 33.1 | 34.1 | 35.0 | 36.0 | 37.0 |
| 88 | 28.2 | 29.1 | 30.1 | 31.1 | 32.0 | 33.0 | 34.0 | 34.9 | 35.9 | 36.9 |
| 89 | 28.1 | 29.1 | 30.1 | 31.0 | 32.0 | 33.0 | 33.9 | 34.9 | 35.9 | 36.8 |
| 90 | 28.0 | 29.0 | 30.0 | 30.9 | 31.9 | 32.9 | 33.8 | 34.8 | 35.8 | 36.7 |
| 91 | 28.0 | 28.9 | 29.9 | 30.9 | 31.8 | 32.8 | 33.8 | 34.7 | 35.7 | 36.7 |
| 92 | 27.9 | 28.9 | 29.9 | 30.8 | 31.8 | 32.7 | 33.7 | 34.7 | 35.6 | 36.6 |
| 93 | 27.9 | 28.8 | 29.8 | 30.7 | 31.7 | 32.7 | 33.6 | 34.6 | 35.6 | 36.5 |
| 94 | 27.8 | 28.7 | 29.7 | 30.7 | 31.6 | 32.6 | 33.6 | 34.5 | 35.5 | 36.5 |
| 95 | 27.7 | 28.7 | 29.7 | 30.6 | 31.6 | 32.6 | 33.5 | 34.5 | 35.4 | 36.4 |
| 96 | 27.7 | 28.6 | 29.6 | 30.5 | 31.5 | 32.5 | 33.5 | 34.4 | 35.4 | 36.3 |
| 97 | 27.6 | 28.6 | 29.5 | 30.5 | 31.5 | 32.4 | 33.4 | 34.3 | 35.3 | 36.2 |
| 98 | 27.5 | 28.5 | 29.5 | 30.4 | 31.4 | 32.4 | 33.3 | 34.3 | 35.2 | 36.2 |
| 99 | 27.5 | 28.4 | 29.4 | 30.4 | 31.3 | 32.3 | 33.3 | 34.2 | 35.2 | 36.1 |
| 100 | 27.4 | 28.4 | 29.3 | 30.3 | 31.3 | 32.2 | 33.2 | 34.1 | 35.1 | 36.1 |
| 101 | 27.3 | 28.3 | 29.3 | 30.2 | 31.2 | 32.2 | 33.1 | 34.1 | 35.0 | 36.0 |
| 102 | 27.3 | 28.2 | 29.2 | 30.2 | 31.1 | 32.1 | 33.0 | 34.0 | 34.9 | 35.9 |
| 103 | 27.2 | 28.2 | 29.1 | 30.1 | 31.0 | 32.0 | 32.9 | 33.9 | 34.9 | 35.8 |
| 104 | 27.2 | 28.1 | 29.1 | 30.0 | 31.0 | 31.9 | 32.9 | 33.8 | 34.8 | 35.7 |
| 105 | 27.1 | 28.0 | 29.0 | 30.0 | 30.9 | 31.9 | 32.8 | 33.8 | 34.7 | 35.7 |
| 106 | 27.0 | 28.0 | 29.0 | 29.9 | 30.9 | 31.8 | 32.8 | 33.7 | 34.7 | 35.6 |
| 107 | 27.0 | 27.9 | 28.9 | 29.8 | 30.8 | 31.7 | 32.7 | 33.6 | 34.6 | 35.5 |
| 108 | 26.9 | 27.9 | 28.8 | 29.8 | 30.7 | 31.7 | 32.6 | 33.6 | 34.5 | 35.5 |
| 109 | 26.9 | 27.8 | 28.8 | 29.7 | 30.7 | 31.6 | 32.6 | 33.5 | 34.4 | 35.4 |
| 110 | 26.8 | 27.7 | 28.7 | 29.6 | 30.6 | 31.5 | 32.5 | 33.4 | 34.4 | 35.3 |
| 111 | 26.7 | 27.7 | 28.6 | 29.6 | 30.5 | 31.5 | 32.4 | 33.4 | 34.3 | 35.2 |
| 112 | 26.7 | 27.6 | 28.6 | 29.5 | 30.5 | 31.4 | 32.3 | 33.3 | 34.2 | 35.2 |
| 113 | 26.6 | 27.5 | 28.5 | 29.4 | 30.4 | 31.3 | 32.3 | 33.2 | 34.1 | 35.1 |
| 114 | 26.5 | 27.5 | 28.4 | 29.4 | 30.3 | 31.3 | 32.2 | 33.1 | 34.1 | 35.0 |
| 115 | 26.5 | 27.4 | 28.4 | 29.3 | 30.3 | 31.2 | 32.1 | 33.1 | 34.0 | 34.9 |
| 116 | 26.4 | 27.4 | 28.3 | 29.3 | 30.2 | 31.2 | 32.1 | 33.0 | 34.0 | 34.9 |
| 117 | 26.4 | 27.3 | 28.3 | 29.2 | 30.1 | 31.1 | 32.0 | 32.9 | 33.9 | 34.8 |
| 118 | 26.3 | 27.3 | 28.2 | 29.1 | 30.1 | 31.0 | 31.9 | 32.9 | 33.8 | 34.7 |
| 119 | 26.3 | 27.2 | 28.2 | 29.1 | 30.0 | 31.0 | 31.9 | 32.8 | 33.7 | 34.7 |
| 120 | 26.2 | 27.1 | 28.1 | 29.0 | 30.0 | 30.9 | 31.8 | 32.7 | 33.7 | 34.6 |
| 121 | 26.1 | 27.1 | 28.0 | 28.9 | 29.9 | 30.8 | 31.7 | 32.7 | 33.6 | 34.5 |
| 122 | 26.1 | 27.0 | 28.0 | 28.9 | 29.8 | 30.7 | 31.7 | 32.6 | 33.5 | 34.5 |
| 123 | 26.0 | 26.9 | 27.9 | 28.8 | 29.8 | 30.7 | 31.6 | 32.5 | 33.5 | 34.4 |
| 124 | 25.9 | 26.9 | 27.8 | 28.7 | 29.7 | 30.6 | 31.6 | 32.5 | 33.4 | 34.3 |
| 125 | 25.9 | 26.8 | 27.8 | 28.7 | 29.6 | 30.6 | 31.5 | 32.4 | 33.3 | 34.3 |
| 126 | 25.8 | 26.8 | 27.7 | 28.6 | 29.6 | 30.5 | 31.4 | 32.3 | 33.3 | 34.2 |
| 127 | 25.8 | 26.7 | 27.6 | 28.6 | 29.5 | 30.4 | 31.3 | 32.3 | 33.2 | 34.1 |
| 128 | 25.7 | 26.6 | 27.6 | 28.5 | 29.4 | 30.4 | 31.3 | 32.2 | 33.1 | 34.1 |
| 129 | 25.6 | 26.6 | 27.5 | 28.4 | 29.4 | 30.3 | 31.2 | 32.1 | 33.1 | 34.0 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 130 | 25.6 | 26.5 | 27.4 | 28.4 | 29.3 | 30.2 | 31.2 | 32.1 | 33.0 | 33.9 |
| 131 | 25.5 | 26.4 | 27.4 | 28.3 | 29.2 | 30.2 | 31.1 | 32.0 | 32.9 | 33.9 |
| 132 | 25.5 | 26.4 | 27.3 | 28.3 | 29.2 | 30.1 | 31.0 | 31.9 | 32.9 | 33.8 |
| 133 | 25.4 | 26.3 | 27.3 | 28.2 | 29.1 | 30.1 | 31.0 | 31.9 | 32.8 | 33.7 |
| 134 | 25.3 | 26.3 | 27.2 | 28.1 | 29.1 | 30.0 | 30.9 | 31.8 | 32.7 | 33.6 |
| 135 | 25.3 | 26.2 | 27.1 | 28.1 | 29.0 | 29.9 | 30.8 | 31.7 | 32.7 | 33.6 |
| 136 | 25.2 | 26.1 | 27.1 | 28.0 | 28.9 | 29.9 | 30.8 | 31.7 | 32.6 | 33.5 |
| 137 | 25.2 | 26.1 | 27.0 | 27.9 | 28.9 | 29.8 | 30.7 | 31.6 | 32.6 | 33.5 |
| 138 | 25.1 | 26.0 | 27.0 | 27.9 | 28.8 | 29.7 | 30.6 | 31.6 | 32.5 | 33.4 |
| 139 | 25.0 | 26.0 | 26.9 | 27.8 | 28.7 | 29.7 | 30.6 | 31.5 | 32.4 | 33.3 |
| 140 | 25.0 | 25.9 | 26.8 | 27.7 | 28.7 | 29.6 | 30.5 | 31.4 | 32.3 | 33.2 |
| 141 | 24.9 | 25.8 | 26.8 | 27.7 | 28.6 | 29.5 | 30.4 | 31.3 | 32.3 | 33.2 |
| 142 | 24.9 | 25.8 | 26.7 | 27.6 | 28.5 | 29.5 | 30.4 | 31.3 | 32.2 | 33.1 |
| 143 | 24.8 | 25.7 | 26.6 | 27.6 | 28.5 | 29.4 | 30.3 | 31.2 | 32.1 | 33.0 |
| 144 | 24.7 | 25.7 | 26.6 | 27.5 | 28.4 | 29.3 | 30.2 | 31.2 | 32.1 | 33.0 |
| 145 | 24.7 | 25.6 | 26.5 | 27.4 | 28.4 | 29.3 | 30.2 | 31.1 | 32.0 | 32.9 |
| 146 | 24.6 | 25.6 | 26.5 | 27.4 | 28.3 | 29.2 | 30.1 | 31.0 | 32.0 | 32.9 |
| 147 | 24.6 | 25.5 | 26.4 | 27.3 | 28.3 | 29.2 | 30.1 | 31.0 | 31.9 | 32.8 |
| 148 | 24.5 | 25.4 | 26.4 | 27.3 | 28.2 | 29.1 | 30.0 | 30.9 | 31.8 | 32.7 |
| 149 | 24.5 | 25.4 | 26.3 | 27.2 | 28.1 | 29.1 | 30.0 | 30.9 | 31.8 | 32.7 |
| 150 | 24.4 | 25.3 | 26.3 | 27.2 | 28.1 | 29.0 | 29.9 | 30.8 | 31.7 | 32.6 |
| 151 | 24.4 | 25.3 | 26.2 | 27.1 | 28.0 | 28.9 | 29.8 | 30.7 | 31.6 | 32.5 |
| 152 | 24.3 | 25.2 | 26.1 | 27.0 | 28.0 | 28.9 | 29.8 | 30.7 | 31.6 | 32.5 |
| 153 | 24.3 | 25.2 | 26.1 | 27.0 | 27.9 | 28.8 | 29.7 | 30.6 | 31.5 | 32.4 |
| 154 | 24.2 | 25.1 | 26.0 | 26.9 | 27.8 | 28.7 | 29.6 | 30.5 | 31.4 | 32.3 |
| 155 | 24.1 | 25.0 | 25.9 | 26.9 | 27.8 | 28.7 | 29.6 | 30.5 | 31.4 | 32.3 |
| 156 | 24.1 | 25.0 | 25.9 | 26.8 | 27.7 | 28.6 | 29.5 | 30.4 | 31.3 | 32.2 |
| 157 | 24.0 | 24.9 | 25.8 | 26.7 | 27.6 | 28.5 | 29.4 | 30.3 | 31.2 | 32.1 |
| 158 | 23.9 | 24.8 | 25.8 | 26.7 | 27.6 | 28.5 | 29.4 | 30.3 | 31.2 | 32.1 |
| 159 | 23.9 | 24.8 | 25.7 | 26.6 | 27.5 | 28.4 | 29.3 | 30.2 | 31.1 | 32.0 |
| 160 | 23.8 | 24.7 | 25.6 | 26.5 | 27.4 | 28.4 | 29.3 | 30.2 | 31.1 | 31.9 |
| 161 | 23.8 | 24.7 | 25.6 | 26.5 | 27.4 | 28.3 | 29.2 | 30.1 | 31.0 | 31.9 |
| 162 | 23.7 | 24.6 | 25.5 | 26.4 | 27.3 | 28.2 | 29.1 | 30.0 | 30.9 | 31.8 |
| 163 | 23.7 | 24.6 | 25.5 | 26.4 | 27.3 | 28.2 | 29.1 | 30.0 | 30.9 | 31.7 |
| 164 | 23.6 | 24.5 | 25.4 | 26.3 | 27.2 | 28.1 | 29.0 | 29.9 | 30.8 | 31.7 |
| 165 | 23.5 | 24.4 | 25.3 | 26.2 | 27.1 | 28.0 | 28.9 | 29.8 | 30.7 | 31.6 |
| 166 | 23.5 | 24.4 | 25.3 | 26.2 | 27.1 | 28.0 | 28.9 | 29.8 | 30.7 | 31.6 |
| 167 | 23.4 | 24.3 | 25.2 | 26.1 | 27.0 | 27.9 | 28.8 | 29.7 | 30.6 | 31.5 |
| 168 | 23.4 | 24.3 | 25.2 | 26.1 | 27.0 | 27.9 | 28.7 | 29.6 | 30.5 | 31.4 |
| 169 | 23.3 | 24.2 | 25.1 | 26.0 | 26.9 | 27.8 | 28.7 | 29.6 | 30.5 | 31.3 |
| 170 | 23.2 | 24.1 | 25.0 | 25.9 | 26.8 | 27.7 | 28.6 | 29.5 | 30.4 | 31.3 |
| 171 | 23.2 | 24.1 | 25.0 | 25.9 | 26.8 | 27.7 | 28.6 | 29.5 | 30.4 | 31.2 |
| 172 | 23.1 | 24.0 | 24.9 | 25.8 | 26.7 | 27.6 | 28.5 | 29.4 | 30.3 | 31.2 |
| 173 | 23.1 | 24.0 | 24.9 | 25.8 | 26.7 | 27.6 | 28.5 | 29.3 | 30.2 | 31.1 |
| 174 | 23.0 | 23.9 | 24.8 | 25.7 | 26.6 | 27.5 | 28.4 | 29.3 | 30.2 | 31.0 |
| 175 | 22.9 | 23.8 | 24.7 | 25.6 | 26.5 | 27.4 | 28.3 | 29.2 | 30.1 | 31.0 |
| 176 | 22.9 | 23.8 | 24.7 | 25.6 | 26.5 | 27.4 | 28.3 | 29.1 | 30.0 | 30.9 |
| 177 | 22.8 | 23.7 | 24.6 | 25.5 | 26.4 | 27.3 | 28.2 | 29.1 | 30.0 | 30.9 |
| 178 | 22.8 | 23.7 | 24.6 | 25.5 | 26.4 | 27.3 | 28.1 | 29.0 | 29.9 | 30.8 |
| 179 | 22.7 | 23.6 | 24.5 | 25.4 | 26.3 | 27.2 | 28.1 | 29.0 | 29.9 | 30.7 |
| 180 | 22.7 | 23.6 | 24.5 | 25.3 | 26.2 | 27.1 | 28.0 | 28.9 | 29.8 | 30.7 |
| 181 | 22.6 | 23.5 | 24.4 | 25.3 | 26.2 | 27.1 | 28.0 | 28.8 | 29.7 | 30.6 |
| 182 | 22.6 | 23.5 | 24.4 | 25.2 | 26.1 | 27.0 | 27.9 | 28.8 | 29.7 | 30.5 |
| 183 | 22.5 | 23.4 | 24.3 | 25.2 | 26.1 | 27.0 | 27.8 | 28.7 | 29.6 | 30.5 |
| 184 | 22.5 | 23.4 | 24.3 | 25.1 | 26.0 | 26.9 | 27.8 | 28.6 | 29.5 | 30.4 |
| 185 | 22.4 | 23.3 | 24.2 | 25.1 | 25.9 | 26.8 | 27.7 | 28.6 | 29.5 | 30.3 |
| 186 | 22.3 | 23.2 | 24.1 | 25.0 | 25.9 | 26.8 | 27.6 | 28.5 | 29.4 | 30.3 |
| 187 | 22.3 | 23.2 | 24.1 | 25.0 | 25.8 | 26.7 | 27.6 | 28.5 | 29.3 | 30.2 |
| 188 | 22.2 | 23.1 | 24.0 | 24.9 | 25.8 | 26.6 | 27.5 | 28.4 | 29.3 | 30.1 |
| 189 | 22.2 | 23.1 | 24.0 | 24.8 | 25.7 | 26.6 | 27.5 | 28.3 | 29.2 | 30.1 |
| 190 | 22.1 | 23.0 | 23.9 | 24.8 | 25.7 | 26.5 | 27.4 | 28.3 | 29.1 | 30.0 |
| 191 | 22.1 | 22.9 | 23.8 | 24.7 | 25.6 | 26.5 | 27.3 | 28.2 | 29.1 | 30.0 |
| 192 | 22.0 | 22.9 | 23.8 | 24.7 | 25.5 | 26.4 | 27.3 | 28.2 | 29.0 | 29.9 |
| 193 | 21.9 | 22.8 | 23.7 | 24.6 | 25.5 | 26.4 | 27.2 | 28.1 | 29.0 | 29.8 |
| 194 | 21.9 | 22.8 | 23.7 | 24.5 | 25.4 | 26.3 | 27.2 | 28.0 | 28.9 | 29.8 |
| 195 | 21.8 | 22.7 | 23.6 | 24.5 | 25.4 | 26.3 | 27.1 | 28.0 | 28.9 | 29.7 |

| Observed Temperature in °F. | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 40° | 41° | 42° | 43° | 44° | 45° | 46° | 47° | 48° | 49° |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 0 | 45.1 | 46.2 | 47.3 | 48.4 | 49.5 | 50.7 | 51.8 | 52.9 | 54.1 | 55.2 |
| 1 | 45.0 | 46.1 | 47.2 | 48.3 | 49.4 | 50.6 | 51.7 | 52.8 | 54.0 | 55.1 |
| 2 | 44.9 | 46.0 | 47.1 | 48.2 | 49.3 | 50.5 | 51.6 | 52.7 | 53.8 | 55.0 |
| 3 | 44.8 | 45.9 | 47.0 | 48.1 | 49.2 | 50.4 | 51.5 | 52.6 | 53.7 | 54.9 |
| 4 | 44.7 | 45.8 | 46.9 | 48.0 | 49.1 | 50.3 | 51.4 | 52.5 | 53.6 | 54.7 |
| 5 | 44.6 | 45.7 | 46.8 | 47.9 | 49.0 | 50.1 | 51.3 | 52.4 | 53.5 | 54.6 |
| 6 | 44.5 | 45.6 | 46.7 | 47.8 | 48.9 | 50.0 | 51.2 | 52.3 | 53.4 | 54.5 |
| 7 | 44.4 | 45.5 | 46.6 | 47.7 | 48.8 | 49.9 | 51.1 | 52.2 | 53.3 | 54.4 |
| 8 | 44.3 | 45.4 | 46.5 | 47.6 | 48.7 | 49.8 | 51.0 | 52.1 | 53.2 | 54.3 |
| 9 | 44.2 | 45.3 | 46.4 | 47.5 | 48.6 | 49.7 | 50.9 | 52.0 | 53.1 | 54.2 |
| 10 | 44.1 | 45.2 | 46.3 | 47.4 | 48.5 | 49.6 | 50.8 | 51.9 | 53.0 | 54.1 |
| 11 | 44.0 | 45.1 | 46.2 | 47.3 | 48.4 | 49.5 | 50.7 | 51.8 | 52.9 | 54.0 |
| 12 | 43.9 | 45.0 | 46.1 | 47.2 | 48.3 | 49.4 | 50.5 | 51.6 | 52.8 | 53.9 |
| 13 | 43.9 | 45.0 | 46.1 | 47.1 | 48.2 | 49.3 | 50.4 | 51.5 | 52.6 | 53.7 |
| 14 | 43.8 | 44.9 | 46.0 | 47.0 | 48.1 | 49.2 | 50.3 | 51.4 | 52.5 | 53.6 |
| 15 | 43.7 | 44.8 | 45.9 | 46.9 | 48.0 | 49.1 | 50.2 | 51.3 | 52.4 | 53.5 |
| 16 | 43.6 | 44.7 | 45.8 | 46.8 | 47.9 | 49.0 | 50.1 | 51.2 | 52.3 | 53.4 |
| 17 | 43.5 | 44.6 | 45.7 | 46.8 | 47.8 | 48.9 | 50.0 | 51.1 | 52.2 | 53.3 |
| 18 | 43.4 | 44.5 | 45.6 | 46.7 | 47.7 | 48.8 | 49.9 | 51.0 | 52.1 | 53.2 |
| 19 | 43.4 | 44.4 | 45.5 | 46.6 | 47.7 | 48.7 | 49.8 | 50.9 | 52.0 | 53.1 |
| 20 | 43.3 | 44.3 | 45.4 | 46.5 | 47.6 | 48.7 | 49.7 | 50.8 | 51.9 | 53.0 |
| 21 | 43.2 | 44.3 | 45.3 | 46.4 | 47.5 | 48.6 | 49.6 | 50.7 | 51.8 | 52.9 |
| 22 | 43.1 | 44.2 | 45.2 | 46.3 | 47.4 | 48.5 | 49.5 | 50.6 | 51.7 | 52.8 |
| 23 | 43.0 | 44.1 | 45.2 | 46.2 | 47.3 | 48.4 | 49.4 | 50.5 | 51.6 | 52.7 |
| 24 | 42.9 | 44.0 | 45.1 | 46.1 | 47.2 | 48.3 | 49.3 | 50.4 | 51.5 | 52.6 |
| 25 | 42.8 | 43.9 | 45.0 | 46.0 | 47.1 | 48.2 | 49.2 | 50.3 | 51.4 | 52.5 |
| 26 | 42.8 | 43.8 | 44.9 | 45.9 | 47.0 | 48.1 | 49.1 | 50.2 | 51.3 | 52.4 |
| 27 | 42.7 | 43.7 | 44.8 | 45.9 | 46.9 | 48.0 | 49.0 | 50.1 | 51.2 | 52.3 |
| 28 | 42.6 | 43.6 | 44.7 | 45.8 | 46.8 | 47.9 | 49.0 | 50.0 | 51.1 | 52.2 |
| 29 | 42.5 | 43.6 | 44.6 | 45.7 | 46.7 | 47.8 | 48.9 | 49.9 | 51.0 | 52.1 |
| 30 | 42.4 | 43.5 | 44.5 | 45.6 | 46.6 | 47.7 | 48.8 | 49.8 | 50.9 | 52.0 |
| 31 | 42.4 | 43.4 | 44.5 | 45.5 | 46.6 | 47.6 | 48.7 | 49.7 | 50.8 | 51.9 |
| 32 | 42.3 | 43.3 | 44.4 | 45.4 | 46.5 | 47.5 | 48.6 | 49.6 | 50.7 | 51.7 |
| 33 | 42.2 | 43.2 | 44.3 | 45.3 | 46.4 | 47.4 | 48.5 | 49.5 | 50.6 | 51.6 |
| 34 | 42.1 | 43.1 | 44.2 | 45.2 | 46.3 | 47.3 | 48.4 | 49.4 | 50.5 | 51.5 |
| 35 | 42.0 | 43.1 | 44.1 | 45.2 | 46.2 | 47.2 | 48.3 | 49.3 | 50.4 | 51.4 |
| 36 | 41.9 | 43.0 | 44.0 | 45.1 | 46.1 | 47.2 | 48.2 | 49.2 | 50.3 | 51.3 |
| 37 | 41.8 | 42.9 | 43.9 | 45.0 | 46.0 | 47.1 | 48.1 | 49.1 | 50.2 | 51.2 |
| 38 | 41.8 | 42.8 | 43.9 | 44.9 | 45.9 | 47.0 | 48.0 | 49.0 | 50.1 | 51.1 |
| 39 | 41.7 | 42.7 | 43.8 | 44.8 | 45.8 | 46.9 | 47.9 | 49.0 | 50.0 | 51.0 |
| 40 | 41.6 | 42.6 | 43.7 | 44.7 | 45.7 | 46.8 | 47.8 | 48.9 | 49.9 | 50.9 |
| 41 | 41.5 | 42.5 | 43.6 | 44.6 | 45.6 | 46.7 | 47.7 | 48.8 | 49.8 | 50.8 |
| 42 | 41.4 | 42.5 | 43.5 | 44.5 | 45.6 | 46.6 | 47.6 | 48.7 | 49.7 | 50.8 |
| 43 | 41.3 | 42.4 | 43.4 | 44.4 | 45.5 | 46.5 | 47.5 | 48.6 | 49.6 | 50.7 |
| 44 | 41.3 | 42.3 | 43.3 | 44.4 | 45.4 | 46.4 | 47.5 | 48.5 | 49.5 | 50.6 |
| 45 | 41.2 | 42.2 | 43.3 | 44.3 | 45.3 | 46.3 | 47.4 | 48.4 | 49.4 | 50.5 |
| 46 | 41.1 | 42.1 | 43.2 | 44.2 | 45.2 | 46.2 | 47.3 | 48.3 | 49.3 | 50.4 |
| 47 | 41.0 | 42.0 | 43.1 | 44.1 | 45.1 | 46.1 | 47.2 | 48.2 | 49.2 | 50.3 |
| 48 | 41.0 | 42.0 | 43.0 | 44.0 | 45.0 | 46.1 | 47.1 | 48.1 | 49.1 | 50.2 |
| 49 | 40.9 | 41.9 | 42.9 | 43.9 | 44.9 | 46.0 | 47.0 | 48.0 | 49.0 | 50.1 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 40° | 41° | 42° | 43° | 44° | 45° | 46° | 47° | 48° | 49° |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 50 | 40.8 | 41.8 | 42.8 | 43.8 | 44.8 | 45.9 | 46.9 | 47.9 | 48.9 | 50.0 |
| 51 | 40.7 | 41.7 | 42.7 | 43.7 | 44.7 | 45.8 | 46.8 | 47.8 | 48.8 | 49.9 |
| 52 | 40.6 | 41.6 | 42.7 | 43.7 | 44.7 | 45.7 | 46.7 | 47.7 | 48.7 | 49.8 |
| 53 | 40.6 | 41.6 | 42.6 | 43.6 | 44.6 | 45.6 | 46.6 | 47.6 | 48.6 | 49.7 |
| 54 | 40.5 | 41.5 | 42.5 | 43.5 | 44.5 | 45.5 | 46.5 | 47.5 | 48.5 | 49.6 |
| 55 | 40.4 | 41.4 | 42.4 | 43.4 | 44.4 | 45.4 | 46.4 | 47.5 | 48.5 | 49.5 |
| 56 | 40.3 | 41.3 | 42.3 | 43.3 | 44.3 | 45.4 | 46.4 | 47.4 | 48.4 | 49.4 |
| 57 | 40.2 | 41.2 | 42.3 | 43.3 | 44.3 | 45.3 | 46.3 | 47.3 | 48.3 | 49.3 |
| 58 | 40.2 | 41.2 | 42.2 | 43.2 | 44.2 | 45.2 | 46.2 | 47.2 | 48.2 | 49.2 |
| 59 | 40.1 | 41.1 | 42.1 | 43.1 | 44.1 | 45.1 | 46.1 | 47.1 | 48.1 | 49.1 |
| 60 | 40.0 | 41.0 | 42.0 | 43.0 | 44.0 | 45.0 | 46.0 | 47.0 | 48.0 | 49.0 |
| 61 | 39.9 | 40.9 | 41.9 | 42.9 | 43.9 | 44.9 | 45.9 | 46.9 | 47.9 | 48.9 |
| 62 | 39.8 | 40.8 | 41.9 | 42.8 | 43.8 | 44.8 | 45.8 | 46.8 | 47.8 | 48.8 |
| 63 | 39.8 | 40.8 | 41.8 | 42.8 | 43.7 | 44.7 | 45.7 | 46.7 | 47.7 | 48.7 |
| 64 | 39.7 | 40.7 | 41.7 | 42.7 | 43.7 | 44.6 | 45.6 | 46.6 | 47.6 | 48.6 |
| 65 | 39.6 | 40.6 | 41.6 | 42.6 | 43.6 | 44.6 | 45.6 | 46.6 | 47.5 | 48.5 |
| 66 | 39.5 | 40.5 | 41.5 | 42.5 | 43.5 | 44.5 | 45.5 | 46.5 | 47.5 | 48.4 |
| 67 | 39.5 | 40.5 | 41.5 | 42.4 | 43.4 | 44.4 | 45.4 | 46.4 | 47.4 | 48.3 |
| 68 | 39.4 | 40.4 | 41.4 | 42.3 | 43.3 | 44.3 | 45.3 | 46.3 | 47.3 | 48.2 |
| 69 | 39.3 | 40.3 | 41.3 | 42.2 | 43.2 | 44.2 | 45.2 | 46.2 | 47.2 | 48.2 |
| 70 | 39.2 | 40.2 | 41.2 | 42.2 | 43.2 | 44.1 | 45.1 | 46.1 | 47.1 | 48.1 |
| 71 | 39.2 | 40.1 | 41.1 | 42.1 | 43.1 | 44.1 | 45.0 | 46.0 | 47.0 | 48.0 |
| 72 | 39.1 | 40.1 | 41.1 | 42.0 | 43.0 | 44.0 | 45.0 | 45.9 | 46.9 | 47.9 |
| 73 | 39.0 | 40.0 | 41.0 | 41.9 | 42.9 | 43.9 | 44.9 | 45.8 | 46.8 | 47.8 |
| 74 | 38.9 | 39.9 | 40.9 | 41.8 | 42.8 | 43.8 | 44.8 | 45.7 | 46.7 | 47.7 |
| 75 | 38.8 | 39.8 | 40.8 | 41.8 | 42.7 | 43.7 | 44.7 | 45.7 | 46.6 | 47.6 |
| 76 | 38.8 | 39.7 | 40.7 | 41.7 | 42.7 | 43.6 | 44.6 | 45.6 | 46.6 | 47.5 |
| 77 | 38.7 | 39.7 | 40.7 | 41.6 | 42.6 | 43.6 | 44.5 | 45.5 | 46.5 | 47.5 |
| 78 | 38.6 | 39.6 | 40.6 | 41.5 | 42.5 | 43.5 | 44.4 | 45.4 | 46.4 | 47.4 |
| 79 | 38.5 | 39.5 | 40.5 | 41.4 | 42.4 | 43.4 | 44.4 | 45.3 | 46.3 | 47.3 |
| 80 | 38.4 | 39.4 | 40.4 | 41.3 | 42.3 | 43.3 | 44.3 | 45.2 | 46.2 | 47.2 |
| 81 | 38.4 | 39.3 | 40.3 | 41.3 | 42.2 | 43.2 | 44.2 | 45.1 | 46.1 | 47.1 |
| 82 | 38.3 | 39.3 | 40.3 | 41.2 | 42.2 | 43.1 | 44.1 | 45.1 | 46.0 | 47.0 |
| 83 | 38.2 | 39.2 | 40.2 | 41.1 | 42.1 | 43.1 | 44.0 | 45.0 | 46.0 | 46.9 |
| 84 | 38.1 | 39.1 | 40.1 | 41.0 | 42.0 | 43.0 | 43.9 | 44.9 | 45.9 | 46.8 |
| 85 | 38.1 | 39.0 | 40.0 | 41.0 | 41.9 | 42.9 | 43.8 | 44.8 | 45.8 | 46.7 |
| 86 | 38.0 | 38.9 | 39.9 | 40.9 | 41.8 | 42.8 | 43.7 | 44.7 | 45.7 | 46.6 |
| 87 | 37.9 | 38.9 | 39.9 | 40.8 | 41.8 | 42.7 | 43.7 | 44.6 | 45.6 | 46.6 |
| 88 | 37.9 | 38.8 | 39.8 | 40.7 | 41.7 | 42.6 | 43.6 | 44.5 | 45.5 | 46.5 |
| 89 | 37.8 | 38.7 | 39.7 | 40.6 | 41.6 | 42.5 | 43.5 | 44.5 | 45.4 | 46.4 |
| 90 | 37.7 | 38.7 | 39.6 | 40.6 | 41.5 | 42.5 | 43.4 | 44.4 | 45.4 | 46.3 |
| 91 | 37.6 | 38.6 | 39.5 | 40.5 | 41.4 | 42.4 | 43.3 | 44.3 | 45.3 | 46.2 |
| 92 | 37.6 | 38.5 | 39.5 | 40.4 | 41.4 | 42.3 | 43.3 | 44.2 | 45.2 | 46.1 |
| 93 | 37.5 | 38.4 | 39.4 | 40.3 | 41.3 | 42.2 | 43.2 | 44.1 | 45.1 | 46.0 |
| 94 | 37.4 | 38.4 | 39.3 | 40.3 | 41.2 | 42.2 | 43.1 | 44.1 | 45.0 | 46.0 |
| 95 | 37.3 | 38.3 | 39.2 | 40.2 | 41.1 | 42.1 | 43.0 | 44.0 | 44.9 | 45.9 |
| 96 | 37.3 | 38.2 | 39.2 | 40.1 | 41.1 | 42.0 | 43.0 | 43.9 | 44.8 | 45.8 |
| 97 | 37.2 | 38.2 | 39.1 | 40.1 | 41.0 | 41.9 | 42.9 | 43.8 | 44.8 | 45.7 |
| 98 | 37.1 | 38.1 | 39.0 | 40.0 | 40.9 | 41.9 | 42.8 | 43.7 | 44.7 | 45.6 |
| 99 | 37.1 | 38.0 | 39.0 | 39.9 | 40.8 | 41.8 | 42.7 | 43.7 | 44.6 | 45.6 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 100 | 37.0 | 37.9 | 38.9 | 39.8 | 40.7 | 41.7 | 42.6 | 43.6 | 44.5 | 45.5 |
| 101 | 36.9 | 37.9 | 38.8 | 39.7 | 40.7 | 41.6 | 42.5 | 43.5 | 44.4 | 45.4 |
| 102 | 36.8 | 37.8 | 38.7 | 39.7 | 40.6 | 41.5 | 42.5 | 43.4 | 44.3 | 45.3 |
| 103 | 36.7 | 37.7 | 38.6 | 39.6 | 40.5 | 41.5 | 42.4 | 43.3 | 44.3 | 45.2 |
| 104 | 36.7 | 37.6 | 38.6 | 39.5 | 40.4 | 41.4 | 42.3 | 43.3 | 44.2 | 45.1 |
| 105 | 36.6 | 37.6 | 38.5 | 39.4 | 40.4 | 41.3 | 42.2 | 43.2 | 44.1 | 45.0 |
| 106 | 36.5 | 37.5 | 38.4 | 39.3 | 40.3 | 41.2 | 42.1 | 43.1 | 44.0 | 44.9 |
| 107 | 36.5 | 37.4 | 38.4 | 39.3 | 40.2 | 41.2 | 42.1 | 43.0 | 43.9 | 44.8 |
| 108 | 36.4 | 37.3 | 38.3 | 39.2 | 40.1 | 41.1 | 42.0 | 42.9 | 43.8 | 44.8 |
| 109 | 36.3 | 37.3 | 38.2 | 39.1 | 40.1 | 41.0 | 41.9 | 42.8 | 43.7 | 44.7 |
| 110 | 36.2 | 37.2 | 38.1 | 39.0 | 40.0 | 40.9 | 41.8 | 42.8 | 43.7 | 44.6 |
| 111 | 36.2 | 37.1 | 38.1 | 39.0 | 39.9 | 40.8 | 41.8 | 42.7 | 43.6 | 44.5 |
| 112 | 36.1 | 37.0 | 38.0 | 38.9 | 39.8 | 40.8 | 41.7 | 42.6 | 43.5 | 44.4 |
| 113 | 36.0 | 36.9 | 37.9 | 38.8 | 39.7 | 40.7 | 41.6 | 42.5 | 43.4 | 44.4 |
| 114 | 36.0 | 36.9 | 37.8 | 38.8 | 39.7 | 40.6 | 41.5 | 42.4 | 43.3 | 44.3 |
| 115 | 35.9 | 36.8 | 37.8 | 38.7 | 39.6 | 40.5 | 41.4 | 42.4 | 43.3 | 44.2 |
| 116 | 35.8 | 36.7 | 37.7 | 38.6 | 39.5 | 40.4 | 41.3 | 42.3 | 43.2 | 44.1 |
| 117 | 35.7 | 36.7 | 37.6 | 38.5 | 39.4 | 40.4 | 41.3 | 42.2 | 43.1 | 44.0 |
| 118 | 35.7 | 36.6 | 37.5 | 38.4 | 39.4 | 40.3 | 41.2 | 42.1 | 43.0 | 44.0 |
| 119 | 35.6 | 36.5 | 37.5 | 38.4 | 39.3 | 40.2 | 41.1 | 42.1 | 43.0 | 43.9 |
| 120 | 35.5 | 36.5 | 37.4 | 38.3 | 39.2 | 40.2 | 41.1 | 42.0 | 42.9 | 43.8 |
| 121 | 35.5 | 36.4 | 37.3 | 38.2 | 39.1 | 40.1 | 41.0 | 41.9 | 42.8 | 43.7 |
| 122 | 35.4 | 36.3 | 37.2 | 38.1 | 39.1 | 40.0 | 40.9 | 41.8 | 42.7 | 43.6 |
| 123 | 35.3 | 36.2 | 37.2 | 38.1 | 39.0 | 39.9 | 40.8 | 41.7 | 42.6 | 43.6 |
| 124 | 35.3 | 36.2 | 37.1 | 38.0 | 38.9 | 39.8 | 40.7 | 41.6 | 42.5 | 43.5 |
| 125 | 35.2 | 36.1 | 37.0 | 37.9 | 38.9 | 39.8 | 40.7 | 41.6 | 42.5 | 43.4 |
| 126 | 35.1 | 36.0 | 37.0 | 37.9 | 38.8 | 39.7 | 40.6 | 41.5 | 42.4 | 43.3 |
| 127 | 35.1 | 36.0 | 36.9 | 37.8 | 38.7 | 39.6 | 40.5 | 41.4 | 42.3 | 43.3 |
| 128 | 35.0 | 35.9 | 36.8 | 37.7 | 38.6 | 39.6 | 40.5 | 41.4 | 42.3 | 43.2 |
| 129 | 34.9 | 35.8 | 36.7 | 37.7 | 38.6 | 39.5 | 40.4 | 41.3 | 42.2 | 43.1 |
| 130 | 34.8 | 35.8 | 36.7 | 37.6 | 38.5 | 39.4 | 40.3 | 41.2 | 42.1 | 43.0 |
| 131 | 34.8 | 35.7 | 36.6 | 37.5 | 38.4 | 39.3 | 40.2 | 41.1 | 42.0 | 42.9 |
| 132 | 34.7 | 35.6 | 36.5 | 37.4 | 38.4 | 39.3 | 40.2 | 41.1 | 42.0 | 42.9 |
| 133 | 34.6 | 35.6 | 36.5 | 37.4 | 38.3 | 39.2 | 40.1 | 41.0 | 41.9 | 42.8 |
| 134 | 34.6 | 35.5 | 36.4 | 37.3 | 38.2 | 39.1 | 40.0 | 40.9 | 41.8 | 42.7 |
| 135 | 34.5 | 35.4 | 36.3 | 37.2 | 38.1 | 39.0 | 39.9 | 40.8 | 41.7 | 42.6 |
| 136 | 34.5 | 35.4 | 36.3 | 37.2 | 38.1 | 39.0 | 39.9 | 40.7 | 41.6 | 42.5 |
| 137 | 34.4 | 35.3 | 36.2 | 37.1 | 38.0 | 38.9 | 39.8 | 40.7 | 41.5 | 42.4 |
| 138 | 34.3 | 35.2 | 36.1 | 37.0 | 37.9 | 38.8 | 39.7 | 40.6 | 41.5 | 42.4 |
| 139 | 34.2 | 35.1 | 36.0 | 36.9 | 37.8 | 38.7 | 39.6 | 40.5 | 41.4 | 42.3 |
| 140 | 34.2 | 35.1 | 36.0 | 36.9 | 37.8 | 38.7 | 39.5 | 40.4 | 41.3 | 42.2 |
| 141 | 34.1 | 35.0 | 35.9 | 36.8 | 37.7 | 38.6 | 39.5 | 40.4 | 41.2 | 42.1 |
| 142 | 34.0 | 34.9 | 35.8 | 36.7 | 37.6 | 38.5 | 39.4 | 40.3 | 41.2 | 42.1 |
| 143 | 34.0 | 34.9 | 35.8 | 36.6 | 37.5 | 38.4 | 39.3 | 40.2 | 41.1 | 42.0 |
| 144 | 33.9 | 34.8 | 35.7 | 36.6 | 37.5 | 38.3 | 39.2 | 40.1 | 41.0 | 41.9 |
| 145 | 33.8 | 34.7 | 35.6 | 36.5 | 37.4 | 38.3 | 39.2 | 40.1 | 40.9 | 41.8 |
| 146 | 33.8 | 34.7 | 35.6 | 36.4 | 37.3 | 38.2 | 39.1 | 40.0 | 40.9 | 41.8 |
| 147 | 33.7 | 34.6 | 35.5 | 36.3 | 37.2 | 38.1 | 39.0 | 39.9 | 40.8 | 41.7 |
| 148 | 33.6 | 34.5 | 35.4 | 36.3 | 37.2 | 38.1 | 39.0 | 39.8 | 40.7 | 41.6 |
| 149 | 33.6 | 34.5 | 35.4 | 36.2 | 37.1 | 38.0 | 38.9 | 39.8 | 40.6 | 41.5 |
| 150 | 33.5 | 34.4 | 35.3 | 36.1 | 37.0 | 37.9 | 38.8 | 39.7 | 40.6 | 41.5 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 0 | 56.3 | 57.5 | 58.6 | 59.7 | 60.8 | 61.9 | 63.1 | 64.2 | 65.3 | 66.4 |
| 1 | 56.2 | 57.4 | 58.5 | 59.6 | 60.7 | 61.8 | 62.9 | 64.0 | 65.2 | 66.3 |
| 2 | 56.1 | 57.2 | 58.4 | 59.5 | 60.6 | 61.7 | 62.8 | 63.9 | 65.0 | 66.2 |
| 3 | 56.0 | 57.1 | 58.2 | 59.3 | 60.4 | 61.5 | 62.6 | 63.8 | 64.9 | 66.0 |
| 4 | 55.8 | 57.0 | 58.1 | 59.2 | 60.3 | 61.4 | 62.5 | 63.6 | 64.8 | 65.9 |
| 5 | 55.7 | 56.9 | 58.0 | 59.1 | 60.2 | 61.3 | 62.4 | 63.5 | 64.6 | 65.8 |
| 6 | 55.6 | 56.8 | 57.9 | 59.0 | 60.1 | 61.2 | 62.3 | 63.4 | 64.5 | 65.6 |
| 7 | 55.5 | 56.6 | 57.7 | 58.8 | 59.9 | 61.0 | 62.2 | 63.3 | 64.4 | 65.5 |
| 8 | 55.4 | 56.5 | 57.6 | 58.7 | 59.8 | 60.9 | 62.0 | 63.1 | 64.2 | 65.4 |
| 9 | 55.3 | 56.4 | 57.5 | 58.6 | 59.7 | 60.8 | 61.9 | 63.0 | 64.1 | 65.2 |
| 10 | 55.2 | 56.3 | 57.4 | 58.5 | 59.6 | 60.7 | 61.8 | 62.9 | 64.0 | 65.1 |
| 11 | 55.1 | 56.2 | 57.3 | 58.4 | 59.5 | 60.6 | 61.7 | 62.8 | 63.9 | 65.0 |
| 12 | 55.0 | 56.1 | 57.2 | 58.3 | 59.4 | 60.4 | 61.5 | 62.6 | 63.7 | 64.8 |
| 13 | 54.8 | 55.9 | 57.0 | 58.1 | 59.2 | 60.3 | 61.4 | 62.5 | 63.6 | 64.7 |
| 14 | 54.7 | 55.8 | 56.9 | 58.0 | 59.1 | 60.2 | 61.3 | 62.4 | 63.5 | 64.6 |
| 15 | 54.6 | 55.7 | 56.8 | 57.9 | 59.0 | 60.1 | 61.2 | 62.3 | 63.4 | 64.4 |
| 16 | 54.5 | 55.6 | 56.7 | 57.8 | 58.9 | 59.9 | 61.0 | 62.1 | 63.2 | 64.3 |
| 17 | 54.4 | 55.5 | 56.6 | 57.6 | 58.7 | 59.8 | 60.9 | 62.0 | 63.1 | 64.2 |
| 18 | 54.3 | 55.4 | 56.5 | 57.5 | 58.6 | 59.7 | 60.8 | 61.9 | 63.0 | 64.0 |
| 19 | 54.2 | 55.3 | 56.3 | 57.4 | 58.5 | 59.6 | 60.7 | 61.8 | 62.8 | 63.9 |
| 20 | 54.1 | 55.2 | 56.2 | 57.3 | 58.4 | 59.5 | 60.5 | 61.6 | 62.7 | 63.8 |
| 21 | 54.0 | 55.1 | 56.1 | 57.2 | 58.3 | 59.4 | 60.4 | 61.5 | 62.6 | 63.7 |
| 22 | 53.9 | 54.9 | 56.0 | 57.1 | 58.2 | 59.2 | 60.3 | 61.4 | 62.5 | 63.5 |
| 23 | 53.8 | 54.8 | 55.9 | 57.0 | 58.0 | 59.1 | 60.2 | 61.3 | 62.4 | 63.4 |
| 24 | 53.6 | 54.7 | 55.8 | 56.9 | 57.9 | 59.0 | 60.1 | 61.2 | 62.2 | 63.3 |
| 25 | 53.5 | 54.6 | 55.7 | 56.8 | 57.8 | 58.9 | 60.0 | 61.0 | 62.1 | 63.2 |
| 26 | 53.4 | 54.5 | 55.6 | 56.6 | 57.7 | 58.8 | 59.8 | 60.9 | 62.0 | 63.0 |
| 27 | 53.3 | 54.4 | 55.5 | 56.5 | 57.6 | 58.7 | 59.7 | 60.8 | 61.9 | 62.9 |
| 28 | 53.2 | 54.3 | 55.4 | 56.4 | 57.5 | 58.5 | 59.6 | 60.7 | 61.8 | 62.8 |
| 29 | 53.1 | 54.2 | 55.3 | 56.3 | 57.4 | 58.4 | 59.5 | 60.5 | 61.6 | 62.6 |
| 30 | 53.0 | 54.1 | 55.1 | 56.2 | 57.2 | 58.3 | 59.4 | 60.4 | 61.5 | 62.5 |
| 31 | 52.9 | 54.0 | 55.0 | 56.1 | 57.1 | 58.2 | 59.3 | 60.3 | 61.4 | 62.4 |
| 32 | 52.8 | 53.9 | 54.9 | 56.0 | 57.0 | 58.1 | 59.2 | 60.2 | 61.3 | 62.3 |
| 33 | 52.7 | 53.8 | 54.8 | 55.9 | 56.9 | 58.0 | 59.0 | 60.1 | 61.2 | 62.2 |
| 34 | 52.6 | 53.7 | 54.7 | 55.8 | 56.8 | 57.8 | 58.9 | 59.9 | 61.0 | 62.0 |
| 35 | 52.5 | 53.5 | 54.6 | 55.6 | 56.7 | 57.7 | 58.8 | 59.8 | 60.9 | 61.9 |
| 36 | 52.4 | 53.4 | 54.5 | 55.5 | 56.6 | 57.6 | 58.7 | 59.7 | 60.8 | 61.8 |
| 37 | 52.3 | 53.3 | 54.4 | 55.4 | 56.5 | 57.5 | 58.6 | 59.6 | 60.7 | 61.7 |
| 38 | 52.2 | 53.2 | 54.3 | 55.3 | 56.4 | 57.4 | 58.4 | 59.5 | 60.5 | 61.6 |
| 39 | 52.1 | 53.1 | 54.2 | 55.2 | 56.2 | 57.3 | 58.3 | 59.4 | 60.4 | 61.5 |
| 40 | 52.0 | 53.0 | 54.1 | 55.1 | 56.1 | 57.2 | 58.2 | 59.2 | 60.3 | 61.3 |
| 41 | 51.9 | 52.9 | 54.0 | 55.0 | 56.0 | 57.1 | 58.1 | 59.1 | 60.2 | 61.2 |
| 42 | 51.8 | 52.8 | 53.8 | 54.9 | 55.9 | 56.9 | 58.0 | 59.0 | 60.1 | 61.1 |
| 43 | 51.7 | 52.7 | 53.7 | 54.8 | 55.8 | 56.8 | 57.9 | 58.9 | 59.9 | 61.0 |
| 44 | 51.6 | 52.6 | 53.6 | 54.7 | 55.7 | 56.7 | 57.8 | 58.8 | 59.8 | 60.9 |
| 45 | 51.5 | 52.5 | 53.5 | 54.6 | 55.6 | 56.6 | 57.6 | 58.7 | 59.7 | 60.7 |
| 46 | 51.4 | 52.4 | 53.4 | 54.5 | 55.5 | 56.5 | 57.5 | 58.6 | 59.6 | 60.6 |
| 47 | 51.3 | 52.3 | 53.3 | 54.3 | 55.4 | 56.4 | 57.4 | 58.4 | 59.5 | 60.5 |
| 48 | 51.2 | 52.2 | 53.2 | 54.2 | 55.3 | 56.3 | 57.3 | 58.3 | 59.3 | 60.4 |
| 49 | 51.1 | 52.1 | 53.1 | 54.1 | 55.2 | 56.2 | 57.2 | 58.2 | 59.2 | 60.3 |
| 50 | 51.0 | 52.0 | 53.0 | 54.0 | 55.1 | 56.1 | 57.1 | 58.1 | 59.1 | 60.2 |
| 51 | 50.9 | 51.9 | 52.9 | 53.9 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 | 60.1 |
| 52 | 50.8 | 51.8 | 52.8 | 53.8 | 54.9 | 55.9 | 56.9 | 57.9 | 58.9 | 59.9 |
| 53 | 50.7 | 51.7 | 52.7 | 53.7 | 54.7 | 55.7 | 56.7 | 57.8 | 58.8 | 59.8 |
| 54 | 50.6 | 51.6 | 52.6 | 53.6 | 54.6 | 55.6 | 56.6 | 57.6 | 58.6 | 59.7 |
| 55 | 50.5 | 51.5 | 52.5 | 53.5 | 54.5 | 55.5 | 56.5 | 57.5 | 58.5 | 59.6 |
| 56 | 50.4 | 51.4 | 52.4 | 53.4 | 54.4 | 55.4 | 56.4 | 57.4 | 58.4 | 59.4 |
| 57 | 50.3 | 51.3 | 52.3 | 53.3 | 54.3 | 55.3 | 56.3 | 57.3 | 58.3 | 59.3 |
| 58 | 50.2 | 51.2 | 52.2 | 53.2 | 54.2 | 55.2 | 56.2 | 57.2 | 58.2 | 59.2 |
| 59 | 50.1 | 51.1 | 52.1 | 53.1 | 54.1 | 55.1 | 56.1 | 57.1 | 58.1 | 59.1 |
| 60 | 50.0 | 51.0 | 52.0 | 53.0 | 54.0 | 55.0 | 56.0 | 57.0 | 58.0 | 59.0 |
| 61 | 49.9 | 50.9 | 51.9 | 52.9 | 53.9 | 54.9 | 55.9 | 56.9 | 57.9 | 58.9 |
| 62 | 49.8 | 50.8 | 51.8 | 52.8 | 53.8 | 54.8 | 55.8 | 56.8 | 57.8 | 58.8 |
| 63 | 49.7 | 50.7 | 51.7 | 52.7 | 53.7 | 54.7 | 55.7 | 56.6 | 57.6 | 58.6 |
| 64 | 49.6 | 50.6 | 51.6 | 52.6 | 53.6 | 54.6 | 55.6 | 56.5 | 57.5 | 58.5 |

| Observed Temperature in °F. | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 65 | 49.5 | 50.5 | 51.5 | 52.5 | 53.5 | 54.5 | 55.4 | 56.4 | 57.4 | 58.4 |
| 66 | 49.4 | 50.4 | 51.4 | 52.4 | 53.4 | 54.4 | 55.3 | 56.3 | 57.3 | 58.3 |
| 67 | 49.3 | 50.3 | 51.3 | 52.3 | 53.3 | 54.3 | 55.2 | 56.2 | 57.2 | 58.2 |
| 68 | 49.2 | 50.2 | 51.2 | 52.2 | 53.2 | 54.2 | 55.1 | 56.1 | 57.1 | 58.1 |
| 69 | 49.1 | 50.1 | 51.1 | 52.1 | 53.1 | 54.1 | 55.0 | 56.0 | 57.0 | 58.0 |
| 70 | 49.0 | 50.0 | 51.0 | 52.0 | 53.0 | 54.0 | 54.9 | 55.9 | 56.9 | 57.9 |
| 71 | 49.0 | 50.0 | 50.9 | 51.9 | 52.9 | 53.9 | 54.8 | 55.8 | 56.8 | 57.8 |
| 72 | 48.9 | 49.9 | 50.8 | 51.8 | 52.8 | 53.8 | 54.7 | 55.7 | 56.7 | 57.7 |
| 73 | 48.8 | 49.8 | 50.7 | 51.7 | 52.7 | 53.7 | 54.6 | 55.6 | 56.6 | 57.6 |
| 74 | 48.7 | 49.7 | 50.6 | 51.6 | 52.6 | 53.6 | 54.5 | 55.5 | 56.5 | 57.4 |
| 75 | 48.6 | 49.6 | 50.5 | 51.5 | 52.5 | 53.5 | 54.4 | 55.4 | 56.4 | 57.3 |
| 76 | 48.5 | 49.5 | 50.4 | 51.4 | 52.4 | 53.4 | 54.3 | 55.3 | 56.3 | 57.2 |
| 77 | 48.4 | 49.4 | 50.4 | 51.3 | 52.3 | 53.3 | 54.2 | 55.2 | 56.1 | 57.1 |
| 78 | 48.3 | 49.3 | 50.3 | 51.2 | 52.2 | 53.2 | 54.1 | 55.1 | 56.0 | 57.0 |
| 79 | 48.2 | 49.2 | 50.2 | 51.1 | 52.1 | 53.1 | 54.0 | 55.0 | 55.9 | 56.9 |
| 80 | 48.1 | 49.1 | 50.1 | 51.0 | 52.0 | 53.0 | 53.9 | 54.9 | 55.8 | 56.8 |
| 81 | 48.0 | 49.0 | 50.0 | 50.9 | 51.9 | 52.9 | 53.8 | 54.8 | 55.7 | 56.7 |
| 82 | 48.0 | 48.9 | 49.9 | 50.8 | 51.8 | 52.8 | 53.7 | 54.7 | 55.6 | 56.6 |
| 83 | 47.9 | 48.8 | 49.8 | 50.8 | 51.7 | 52.7 | 53.6 | 54.6 | 55.5 | 56.5 |
| 84 | 47.8 | 48.8 | 49.7 | 50.7 | 51.6 | 52.6 | 53.5 | 54.5 | 55.4 | 56.4 |
| 85 | 47.7 | 48.7 | 49.6 | 50.6 | 51.5 | 52.5 | 53.4 | 54.4 | 55.3 | 56.3 |
| 86 | 47.6 | 48.6 | 49.5 | 50.5 | 51.4 | 52.4 | 53.3 | 54.2 | 55.2 | 56.1 |
| 87 | 47.5 | 48.5 | 49.4 | 50.4 | 51.3 | 52.3 | 53.2 | 54.1 | 55.1 | 56.0 |
| 88 | 47.4 | 48.4 | 49.3 | 50.3 | 51.2 | 52.2 | 53.1 | 54.0 | 55.0 | 55.9 |
| 89 | 47.3 | 48.3 | 49.2 | 50.2 | 51.1 | 52.1 | 53.0 | 53.9 | 54.9 | 55.8 |
| 90 | 47.2 | 48.2 | 49.1 | 50.1 | 51.0 | 52.0 | 52.9 | 53.8 | 54.8 | 55.7 |
| 91 | 47.2 | 48.1 | 49.0 | 50.0 | 50.9 | 51.9 | 52.8 | 53.7 | 54.7 | 55.6 |
| 92 | 47.1 | 48.0 | 48.9 | 49.9 | 50.8 | 51.8 | 52.7 | 53.6 | 54.6 | 55.5 |
| 93 | 47.0 | 47.9 | 48.8 | 49.8 | 50.7 | 51.7 | 52.6 | 53.5 | 54.5 | 55.4 |
| 94 | 46.9 | 47.8 | 48.8 | 49.7 | 50.7 | 51.6 | 52.5 | 53.4 | 54.4 | 55.3 |
| 95 | 46.8 | 47.8 | 48.7 | 49.6 | 50.6 | 51.5 | 52.4 | 53.3 | 54.3 | 55.2 |
| 96 | 46.7 | 47.7 | 48.6 | 49.5 | 50.5 | 51.4 | 52.3 | 53.2 | 54.2 | 55.1 |
| 97 | 46.6 | 47.6 | 48.5 | 49.4 | 50.4 | 51.3 | 52.2 | 53.1 | 54.1 | 55.0 |
| 98 | 46.6 | 47.5 | 48.4 | 49.4 | 50.3 | 51.2 | 52.1 | 53.0 | 54.0 | 54.9 |
| 99 | 46.5 | 47.4 | 48.3 | 49.3 | 50.2 | 51.1 | 52.0 | 52.9 | 53.9 | 54.8 |
| 100 | 46.4 | 47.3 | 48.2 | 49.2 | 50.1 | 51.0 | 51.9 | 52.8 | 53.8 | 54.7 |
| 101 | 46.3 | 47.2 | 48.1 | 49.1 | 50.0 | 50.9 | 51.8 | 52.7 | 53.7 | 54.6 |
| 102 | 46.2 | 47.1 | 48.0 | 49.0 | 49.9 | 50.8 | 51.7 | 52.6 | 53.6 | 54.5 |
| 103 | 46.1 | 47.0 | 48.0 | 48.9 | 49.8 | 50.7 | 51.6 | 52.5 | 53.5 | 54.4 |
| 104 | 46.0 | 47.0 | 47.9 | 48.8 | 49.7 | 50.6 | 51.5 | 52.4 | 53.4 | 54.3 |
| 105 | 46.0 | 46.9 | 47.8 | 48.7 | 49.6 | 50.5 | 51.4 | 52.3 | 53.3 | 54.2 |
| 106 | 45.9 | 46.8 | 47.7 | 48.6 | 49.5 | 50.4 | 51.3 | 52.2 | 53.2 | 54.1 |
| 107 | 45.8 | 46.7 | 47.6 | 48.5 | 49.4 | 50.4 | 51.3 | 52.2 | 53.1 | 54.0 |
| 108 | 45.7 | 46.6 | 47.5 | 48.4 | 49.3 | 50.3 | 51.2 | 52.1 | 53.0 | 53.9 |
| 109 | 45.6 | 46.5 | 47.4 | 48.3 | 49.2 | 50.2 | 51.1 | 52.0 | 52.9 | 53.8 |
| 110 | 45.5 | 46.4 | 47.3 | 48.2 | 49.2 | 50.1 | 50.0 | 51.9 | 52.8 | 53.7 |
| 111 | 45.4 | 46.4 | 47.3 | 48.2 | 49.1 | 50.0 | 50.9 | 51.8 | 52.7 | 53.6 |
| 112 | 45.4 | 46.3 | 47.2 | 48.1 | 49.0 | 49.9 | 50.8 | 51.7 | 52.6 | 53.5 |
| 113 | 45.3 | 46.2 | 47.1 | 48.0 | 48.9 | 49.8 | 50.7 | 51.6 | 52.5 | 53.4 |
| 114 | 45.2 | 46.1 | 47.0 | 47.9 | 48.8 | 49.7 | 50.6 | 51.5 | 52.4 | 53.3 |
| 115 | 45.1 | 46.0 | 46.9 | 47.8 | 48.7 | 49.6 | 50.5 | 51.4 | 52.3 | 53.2 |
| 116 | 45.0 | 45.9 | 46.8 | 47.7 | 48.6 | 49.5 | 50.4 | 51.3 | 52.2 | 53.1 |
| 117 | 45.0 | 45.8 | 46.7 | 47.6 | 48.5 | 49.4 | 50.3 | 51.2 | 52.1 | 53.0 |
| 118 | 44.9 | 45.8 | 46.7 | 47.6 | 48.5 | 49.4 | 50.2 | 51.1 | 52.0 | 52.9 |
| 119 | 44.8 | 45.7 | 46.6 | 47.5 | 48.4 | 49.3 | 50.1 | 51.0 | 51.9 | 52.8 |
| 120 | 44.7 | 45.6 | 46.5 | 47.4 | 48.3 | 49.2 | 50.0 | 50.9 | 51.8 | 52.7 |
| 121 | 44.6 | 45.5 | 46.4 | 47.3 | 48.2 | 49.1 | 50.0 | 50.8 | 51.7 | 52.6 |
| 122 | 44.5 | 45.4 | 46.3 | 47.2 | 48.1 | 49.0 | 49.9 | 50.8 | 51.6 | 52.5 |
| 123 | 44.5 | 45.4 | 46.2 | 47.1 | 48.0 | 48.9 | 49.8 | 50.7 | 51.6 | 52.4 |
| 124 | 44.4 | 45.3 | 46.2 | 47.0 | 47.9 | 48.8 | 49.7 | 50.6 | 51.5 | 52.3 |
| 125 | 44.3 | 45.2 | 46.1 | 47.0 | 47.9 | 48.7 | 49.6 | 50.5 | 51.4 | 52.2 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 60° | 61° | 62° | 63° | 64° | 65° | 66° | 67° | 68° | 69° |
| | Corresponding Degrees A.P.I. at 60°F | | | | | | | | | |
| 0 | 67.6 | 68.7 | 69.8 | 70.9 | 72.0 | 73.2 | 74.3 | 75.5 | 76.6 | 77.7 |
| 1 | 67.4 | 68.5 | 69.7 | 70.8 | 71.9 | 73.0 | 74.1 | 75.3 | 76.4 | 77.6 |
| 2 | 67.3 | 68.4 | 69.5 | 70.6 | 71.7 | 72.9 | 74.0 | 75.2 | 76.3 | 77.4 |
| 3 | 67.1 | 68.2 | 69.4 | 70.5 | 71.6 | 72.7 | 73.8 | 75.0 | 76.1 | 77.3 |
| 4 | 67.0 | 68.1 | 69.2 | 70.4 | 71.5 | 72.6 | 73.7 | 74.9 | 76.0 | 77.1 |
| 5 | 66.9 | 68.0 | 69.1 | 70.2 | 71.3 | 72.4 | 73.5 | 74.7 | 75.8 | 77.0 |
| 6 | 66.7 | 67.9 | 69.0 | 70.1 | 71.2 | 72.3 | 73.4 | 74.6 | 75.7 | 76.8 |
| 7 | 66.6 | 67.7 | 68.8 | 70.0 | 71.0 | 72.2 | 73.3 | 74.4 | 75.5 | 76.6 |
| 8 | 66.5 | 67.6 | 68.7 | 69.8 | 70.9 | 72.0 | 73.1 | 74.3 | 75.4 | 76.5 |
| 9 | 66.3 | 67.4 | 68.6 | 69.7 | 70.8 | 71.9 | 73.0 | 74.1 | 75.2 | 76.3 |
| 10 | 66.2 | 67.3 | 68.4 | 69.5 | 70.6 | 71.7 | 72.8 | 74.0 | 75.1 | 76.2 |
| 11 | 66.0 | 67.2 | 68.3 | 69.4 | 70.5 | 71.6 | 72.7 | 73.8 | 74.9 | 76.0 |
| 12 | 65.9 | 67.0 | 68.1 | 69.2 | 70.3 | 71.4 | 72.5 | 73.7 | 74.8 | 75.9 |
| 13 | 65.8 | 66.9 | 68.0 | 69.1 | 70.2 | 71.3 | 72.4 | 73.5 | 74.6 | 75.7 |
| 14 | 65.7 | 66.8 | 67.9 | 69.0 | 70.1 | 71.2 | 72.3 | 73.4 | 74.5 | 75.6 |
| 15 | 65.5 | 66.6 | 67.7 | 68.8 | 69.9 | 71.0 | 72.1 | 73.2 | 74.3 | 75.4 |
| 16 | 65.4 | 66.5 | 67.6 | 68.7 | 69.8 | 70.9 | 72.0 | 73.1 | 74.2 | 75.3 |
| 17 | 65.3 | 66.4 | 67.5 | 68.6 | 69.7 | 70.8 | 71.8 | 72.9 | 74.0 | 75.1 |
| 18 | 65.1 | 66.2 | 67.3 | 68.4 | 69.5 | 70.6 | 71.7 | 72.8 | 73.9 | 75.0 |
| 19 | 65.0 | 66.1 | 67.2 | 68.3 | 69.4 | 70.5 | 71.5 | 72.6 | 73.7 | 74.8 |
| 20 | 64.9 | 66.0 | 67.1 | 68.2 | 69.2 | 70.3 | 71.4 | 72.5 | 73.6 | 74.7 |
| 21 | 64.8 | 65.8 | 66.9 | 68.0 | 69.1 | 70.2 | 71.3 | 72.4 | 73.4 | 74.5 |
| 22 | 64.6 | 65.7 | 66.8 | 67.9 | 69.0 | 70.0 | 71.1 | 72.2 | 73.3 | 74.4 |
| 23 | 64.5 | 65.6 | 66.7 | 67.7 | 68.8 | 69.9 | 71.0 | 72.1 | 73.1 | 74.2 |
| 24 | 64.4 | 65.4 | 66.5 | 67.6 | 68.7 | 69.8 | 70.8 | 71.9 | 73.0 | 74.1 |
| 25 | 64.2 | 65.3 | 66.4 | 67.5 | 68.5 | 69.6 | 70.7 | 71.8 | 72.8 | 73.9 |
| 26 | 64.1 | 65.2 | 66.3 | 67.3 | 68.4 | 69.5 | 70.6 | 71.6 | 72.7 | 73.8 |
| 27 | 64.0 | 65.1 | 66.1 | 67.2 | 68.3 | 69.4 | 70.4 | 71.5 | 72.5 | 73.6 |
| 28 | 63.9 | 64.9 | 66.0 | 67.1 | 68.1 | 69.2 | 70.3 | 71.3 | 72.4 | 73.5 |
| 29 | 63.7 | 64.8 | 65.8 | 66.9 | 68.0 | 69.1 | 70.1 | 71.2 | 72.2 | 73.3 |
| 30 | 63.6 | 64.7 | 65.7 | 66.8 | 67.9 | 68.9 | 70.0 | 71.0 | 72.1 | 73.2 |
| 31 | 63.5 | 64.5 | 65.6 | 66.6 | 67.7 | 68.8 | 69.8 | 70.9 | 72.0 | 73.0 |
| 32 | 63.4 | 64.4 | 65.5 | 66.5 | 67.6 | 68.7 | 69.7 | 70.8 | 71.8 | 72.9 |
| 33 | 63.2 | 64.3 | 65.4 | 66.4 | 67.5 | 68.5 | 69.6 | 70.6 | 71.7 | 72.8 |
| 34 | 63.1 | 64.2 | 65.2 | 66.3 | 67.3 | 68.4 | 69.4 | 70.5 | 71.5 | 72.6 |
| 35 | 63.0 | 64.0 | 65.1 | 66.1 | 67.2 | 68.2 | 69.3 | 70.3 | 71.4 | 72.4 |
| 36 | 62.9 | 63.9 | 65.0 | 66.0 | 67.0 | 68.1 | 69.1 | 70.2 | 71.2 | 72.3 |
| 37 | 62.8 | 63.8 | 64.8 | 65.9 | 66.9 | 68.0 | 69.0 | 70.1 | 71.1 | 72.2 |
| 38 | 62.6 | 63.6 | 64.7 | 65.7 | 66.8 | 67.8 | 68.9 | 69.9 | 71.0 | 72.0 |
| 39 | 62.5 | 63.5 | 64.6 | 65.6 | 66.7 | 67.7 | 68.7 | 69.8 | 70.8 | 71.9 |
| 40 | 62.4 | 63.4 | 64.4 | 65.5 | 66.5 | 67.6 | 68.6 | 69.7 | 70.7 | 71.8 |
| 41 | 62.3 | 63.3 | 64.3 | 65.4 | 66.4 | 67.5 | 68.5 | 69.6 | 70.6 | 71.6 |
| 42 | 62.1 | 63.2 | 64.2 | 65.2 | 66.3 | 67.3 | 68.3 | 69.4 | 70.4 | 71.5 |
| 43 | 62.0 | 63.1 | 64.1 | 65.1 | 66.2 | 67.2 | 68.2 | 69.3 | 70.3 | 71.3 |
| 44 | 61.9 | 62.9 | 64.0 | 65.0 | 66.0 | 67.1 | 68.1 | 69.2 | 70.2 | 71.2 |
| 45 | 61.8 | 62.8 | 63.8 | 64.9 | 65.9 | 66.9 | 67.9 | 69.0 | 70.0 | 71.0 |
| 46 | 61.6 | 62.6 | 63.7 | 64.7 | 65.7 | 66.8 | 67.8 | 68.9 | 69.9 | 70.9 |
| 47 | 61.5 | 62.5 | 63.6 | 64.6 | 65.6 | 66.6 | 67.7 | 68.7 | 69.7 | 70.8 |
| 48 | 61.4 | 62.4 | 63.4 | 64.5 | 65.5 | 66.5 | 67.5 | 68.6 | 69.6 | 70.6 |
| 49 | 61.3 | 62.3 | 63.3 | 64.3 | 65.4 | 66.4 | 67.4 | 68.4 | 69.4 | 70.5 |
| 50 | 61.2 | 62.2 | 63.2 | 64.2 | 65.3 | 66.3 | 67.3 | 68.3 | 69.3 | 70.4 |
| 51 | 61.1 | 62.1 | 63.1 | 64.1 | 65.1 | 66.2 | 67.2 | 68.2 | 69.2 | 70.2 |
| 52 | 60.9 | 61.9 | 62.9 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 | 70.1 |
| 53 | 60.8 | 61.8 | 62.8 | 63.9 | 64.9 | 65.9 | 66.9 | 67.9 | 68.9 | 70.0 |
| 54 | 60.7 | 61.7 | 62.7 | 63.7 | 64.8 | 65.8 | 66.8 | 67.8 | 68.8 | 69.8 |
| 55 | 60.6 | 61.6 | 62.6 | 63.6 | 64.6 | 65.6 | 66.6 | 67.7 | 68.7 | 69.7 |
| 56 | 60.4 | 61.4 | 62.5 | 63.5 | 64.5 | 65.5 | 66.5 | 67.5 | 68.5 | 69.5 |
| 57 | 60.3 | 61.3 | 62.4 | 63.4 | 64.4 | 65.4 | 66.4 | 67.4 | 68.4 | 69.4 |
| 58 | 60.2 | 61.2 | 62.3 | 63.3 | 64.3 | 65.3 | 66.3 | 67.3 | 68.3 | 69.3 |
| 59 | 60.1 | 61.1 | 62.1 | 63.1 | 64.1 | 65.1 | 66.1 | 67.1 | 68.1 | 69.1 |
| 60 | 60.0 | 61.0 | 62.0 | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 | 69.0 |
| 61 | 59.9 | 60.9 | 61.9 | 62.9 | 63.9 | 64.9 | 65.9 | 66.9 | 67.9 | 68.9 |
| 62 | 59.8 | 60.8 | 61.8 | 62.8 | 63.8 | 64.8 | 65.8 | 66.8 | 67.8 | 68.8 |
| 63 | 59.6 | 60.6 | 61.6 | 62.6 | 63.6 | 64.6 | 65.6 | 66.6 | 67.6 | 68.6 |
| 64 | 59.5 | 60.5 | 61.5 | 62.5 | 63.5 | 64.5 | 65.5 | 66.5 | 67.5 | 68.5 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 60° | 61° | 62° | 63° | 64° | 65° | 66° | 67° | 68° | 69° |
| | Corresponding Degrees A.P.I. at 60°F | | | | | | | | | |
| 65 | 59.4 | 60.4 | 61.4 | 62.4 | 63.4 | 64.4 | 65.4 | 66.4 | 67.3 | 68.3 |
| 66 | 59.3 | 60.3 | 61.3 | 62.3 | 63.2 | 64.2 | 65.2 | 66.2 | 67.2 | 68.2 |
| 67 | 59.2 | 60.2 | 61.2 | 62.2 | 63.1 | 64.1 | 65.1 | 66.1 | 67.1 | 68.1 |
| 68 | 59.1 | 60.1 | 61.0 | 62.0 | 63.0 | 64.0 | 65.0 | 66.0 | 67.0 | 68.0 |
| 69 | 59.0 | 60.0 | 60.9 | 61.9 | 62.9 | 63.9 | 64.9 | 65.9 | 66.8 | 67.8 |
| 70 | 58.9 | 59.8 | 60.8 | 61.8 | 62.8 | 63.8 | 64.7 | 65.7 | 66.7 | 67.7 |
| 71 | 58.7 | 59.7 | 60.7 | 61.7 | 62.6 | 63.6 | 64.6 | 65.6 | 66.6 | 67.6 |
| 72 | 58.6 | 59.6 | 60.6 | 61.6 | 62.5 | 63.5 | 64.5 | 65.4 | 66.4 | 67.4 |
| 73 | 58.5 | 59.5 | 60.4 | 61.4 | 62.4 | 63.4 | 64.3 | 65.3 | 66.3 | 67.3 |
| 74 | 58.4 | 59.4 | 60.3 | 61.3 | 62.3 | 63.2 | 64.2 | 65.2 | 66.2 | 67.2 |
| 75 | 58.3 | 59.3 | 60.2 | 61.2 | 62.2 | 63.1 | 64.1 | 65.1 | 66.0 | 67.0 |
| 76 | 58.2 | 59.2 | 60.1 | 61.1 | 62.0 | 63.0 | 64.0 | 65.0 | 65.9 | 66.9 |
| 77 | 58.1 | 59.0 | 60.0 | 61.0 | 61.9 | 62.9 | 63.9 | 64.8 | 65.8 | 66.8 |
| 78 | 58.0 | 58.9 | 59.9 | 60.9 | 61.8 | 62.8 | 63.7 | 64.7 | 65.7 | 66.6 |
| 79 | 57.9 | 58.8 | 59.8 | 60.8 | 61.7 | 62.7 | 63.6 | 64.6 | 65.6 | 66.5 |
| 80 | 57.8 | 58.7 | 59.7 | 60.6 | 61.6 | 62.6 | 63.5 | 64.5 | 65.4 | 66.4 |
| 81 | 57.6 | 58.6 | 59.6 | 60.5 | 61.5 | 62.4 | 63.4 | 64.4 | 65.3 | 66.3 |
| 82 | 57.5 | 58.5 | 59.4 | 60.4 | 61.4 | 62.3 | 63.3 | 64.2 | 65.2 | 66.2 |
| 83 | 57.4 | 58.4 | 59.3 | 60.3 | 61.2 | 62.2 | 63.1 | 64.1 | 65.1 | 66.0 |
| 84 | 57.3 | 58.3 | 59.2 | 60.2 | 61.1 | 62.1 | 63.0 | 64.0 | 64.9 | 65.9 |
| 85 | 57.2 | 58.1 | 59.1 | 60.0 | 61.0 | 61.9 | 62.9 | 63.9 | 64.8 | 65.8 |
| 86 | 57.1 | 58.0 | 59.0 | 59.9 | 60.9 | 61.8 | 62.8 | 63.7 | 64.7 | 65.6 |
| 87 | 57.0 | 57.9 | 58.9 | 59.8 | 60.8 | 61.7 | 62.6 | 63.6 | 64.5 | 65.5 |
| 88 | 56.9 | 57.8 | 58.7 | 59.7 | 60.6 | 61.6 | 62.5 | 63.5 | 64.4 | 65.4 |
| 89 | 56.8 | 57.7 | 58.6 | 59.6 | 60.5 | 61.5 | 62.4 | 63.4 | 64.3 | 65.2 |
| 90 | 56.7 | 57.6 | 58.5 | 59.5 | 60.4 | 61.4 | 62.3 | 63.2 | 64.2 | 65.1 |
| 91 | 56.6 | 57.5 | 58.4 | 59.4 | 60.3 | 61.2 | 62.2 | 63.1 | 64.0 | 65.0 |
| 92 | 56.5 | 57.4 | 58.3 | 59.2 | 60.2 | 61.1 | 62.0 | 63.0 | 63.9 | 64.9 |
| 93 | 56.4 | 57.3 | 58.2 | 59.1 | 60.1 | 61.0 | 61.9 | 62.9 | 63.8 | 64.8 |
| 94 | 56.2 | 57.2 | 58.1 | 59.0 | 59.9 | 60.9 | 61.8 | 62.8 | 63.7 | 64.6 |
| 95 | 56.1 | 57.0 | 58.0 | 58.9 | 59.8 | 60.8 | 61.7 | 62.6 | 63.5 | 64.5 |
| 96 | 56.0 | 56.9 | 57.8 | 58.8 | 59.7 | 60.6 | 61.6 | 62.5 | 63.4 | 64.4 |
| 97 | 55.9 | 56.8 | 57.7 | 58.7 | 59.6 | 60.5 | 61.4 | 62.4 | 63.3 | 64.2 |
| 98 | 55.8 | 56.7 | 57.6 | 58.6 | 59.5 | 60.4 | 61.3 | 62.3 | 63.2 | 64.1 |
| 99 | 55.7 | 56.6 | 57.5 | 58.5 | 59.4 | 60.3 | 61.2 | 62.1 | 63.0 | 64.0 |
| 100 | 55.6 | 56.5 | 57.4 | 58.4 | 59.3 | 60.2 | 61.1 | 62.0 | 62.9 | 63.9 |
| 101 | 55.5 | 56.4 | 57.3 | 58.3 | 59.2 | 60.1 | 61.0 | 61.9 | 62.8 | 63.8 |
| 102 | 55.4 | 56.3 | 57.2 | 58.2 | 59.1 | 60.0 | 60.9 | 61.8 | 62.7 | 63.6 |
| 103 | 55.3 | 56.2 | 57.1 | 58.0 | 58.9 | 59.8 | 60.8 | 61.7 | 62.6 | 63.5 |
| 104 | 55.2 | 56.1 | 57.0 | 57.9 | 58.8 | 59.7 | 60.6 | 61.6 | 62.5 | 63.4 |
| 105 | 55.1 | 56.0 | 56.9 | 57.8 | 58.7 | 59.6 | 60.5 | 61.5 | 62.4 | 63.3 |
| 106 | 55.0 | 55.9 | 56.8 | 57.7 | 58.6 | 59.5 | 60.4 | 61.3 | 62.2 | 63.2 |
| 107 | 54.9 | 55.8 | 56.7 | 57.6 | 58.5 | 59.4 | 60.3 | 61.2 | 62.1 | 63.0 |
| 108 | 54.8 | 55.7 | 56.6 | 57.5 | 58.4 | 59.3 | 60.2 | 61.1 | 62.0 | 62.9 |
| 109 | 54.7 | 55.6 | 56.5 | 57.4 | 58.3 | 59.2 | 60.1 | 61.0 | 61.9 | 62.8 |
| 110 | 54.6 | 55.5 | 56.4 | 57.3 | 58.2 | 59.1 | 60.0 | 60.9 | 61.8 | 62.7 |
| 111 | 54.5 | 55.4 | 56.3 | 57.2 | 58.1 | 59.0 | 59.9 | 60.8 | 61.7 | 62.6 |
| 112 | 54.4 | 55.3 | 56.2 | 57.1 | 58.0 | 58.8 | 59.7 | 60.6 | 61.5 | 62.5 |
| 113 | 54.3 | 55.2 | 56.1 | 57.0 | 57.8 | 58.7 | 59.6 | 60.5 | 61.4 | 62.3 |
| 114 | 54.2 | 55.1 | 56.0 | 56.9 | 57.7 | 58.6 | 59.5 | 60.4 | 61.3 | 62.2 |
| 115 | 54.1 | 55.0 | 55.8 | 56.7 | 57.6 | 58.5 | 59.4 | 60.3 | 61.2 | 62.1 |
| 116 | 54.0 | 54.9 | 55.7 | 56.6 | 57.5 | 58.4 | 59.3 | 60.2 | 61.1 | 62.0 |
| 117 | 53.9 | 54.8 | 55.6 | 56.5 | 57.4 | 58.3 | 59.2 | 60.1 | 61.0 | 61.9 |
| 118 | 53.8 | 54.7 | 55.5 | 56.4 | 57.3 | 58.2 | 59.1 | 60.0 | 60.9 | 61.8 |
| 119 | 53.7 | 54.6 | 55.4 | 56.3 | 57.2 | 58.1 | 59.0 | 59.9 | 60.8 | 61.7 |
| 120 | 53.6 | 54.5 | 55.3 | 56.2 | 57.1 | 58.0 | 58.9 | 59.8 | 60.6 | 61.5 |
| 121 | 53.5 | 54.4 | 55.2 | 56.1 | 57.0 | 57.9 | 58.7 | 59.6 | 60.5 | 61.4 |
| 122 | 53.4 | 54.3 | 55.1 | 56.0 | 56.9 | 57.8 | 58.6 | 59.5 | 60.4 | 61.3 |
| 123 | 53.3 | 54.2 | 55.0 | 55.9 | 56.8 | 57.7 | 58.5 | 59.4 | 60.3 | 61.2 |
| 124 | 53.2 | 54.1 | 54.9 | 55.8 | 56.7 | 57.6 | 58.4 | 59.3 | 60.2 | 61.1 |
| 125 | 53.1 | 54.0 | 54.8 | 55.7 | 56.6 | 57.5 | 58.3 | 59.2 | 60.1 | 61.0 |

| Observed Temperature in °F | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 70 | 71 | 72 | 73 | 84 | 75 | 76 | 77 | 78 | 79 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 0 | 78.8 | 80.0 | 81.2 | 82.3 | 83.4 | 84.6 | 85.7 | 86.9 | 88.1 | 89.2 |
| 1 | 78.7 | 79.8 | 81.0 | 82.1 | 83.3 | 84.4 | 85.6 | 86.7 | 87.9 | 89.0 |
| 2 | 78.5 | 79.7 | 80.9 | 82.0 | 83.1 | 84.3 | 85.4 | 86.5 | 87.7 | 88.8 |
| 3 | 78.4 | 79.5 | 80.7 | 81.8 | 82.9 | 84.1 | 85.2 | 86.3 | 87.5 | 88.7 |
| 4 | 78.2 | 79.3 | 80.5 | 81.6 | 82.7 | 83.9 | 85.0 | 86.2 | 87.3 | 88.5 |
| 5 | 78.1 | 79.2 | 80.4 | 81.5 | 82.6 | 83.7 | 84.9 | 86.0 | 87.2 | 88.3 |
| 6 | 77.9 | 79.0 | 80.2 | 81.3 | 82.4 | 83.6 | 84.7 | 85.8 | 87.0 | 88.1 |
| 7 | 77.8 | 78.9 | 80.0 | 81.1 | 82.2 | 83.4 | 84.5 | 85.7 | 86.8 | 88.0 |
| 8 | 77.6 | 78.7 | 79.9 | 81.0 | 82.1 | 83.2 | 84.4 | 85.5 | 86.7 | 87.8 |
| 9 | 77.4 | 78.5 | 79.7 | 80.8 | 81.9 | 83.1 | 84.2 | 85.3 | 86.5 | 87.6 |
| 10 | 77.3 | 78.4 | 79.5 | 80.6 | 81.7 | 82.9 | 84.0 | 85.1 | 86.3 | 87.4 |
| 11 | 77.1 | 78.2 | 79.4 | 80.5 | 81.6 | 82.7 | 83.8 | 85.0 | 86.1 | 87.2 |
| 12 | 77.0 | 78.1 | 79.2 | 80.3 | 81.4 | 82.5 | 83.6 | 84.8 | 85.9 | 87.0 |
| 13 | 76.8 | 77.9 | 79.1 | 80.1 | 81.2 | 82.4 | 83.5 | 84.6 | 85.7 | 86.9 |
| 14 | 76.7 | 77.8 | 78.9 | 80.0 | 81.1 | 82.2 | 83.3 | 84.4 | 85.6 | 86.7 |
| 15 | 76.5 | 77.6 | 78.7 | 79.8 | 80.9 | 82.0 | 83.1 | 84.2 | 85.4 | 86.5 |
| 16 | 76.4 | 77.5 | 78.6 | 79.7 | 80.8 | 81.9 | 83.0 | 84.1 | 85.2 | 86.3 |
| 17 | 76.2 | 77.3 | 78.4 | 79.5 | 80.6 | 81.7 | 82.8 | 83.9 | 85.0 | 86.1 |
| 18 | 76.1 | 77.2 | 78.3 | 79.4 | 80.4 | 81.5 | 82.6 | 83.7 | 84.9 | 86.0 |
| 19 | 75.9 | 77.0 | 78.1 | 79.2 | 80.3 | 81.4 | 82.5 | 83.6 | 84.7 | 85.8 |
| 20 | 75.8 | 76.9 | 78.0 | 79.0 | 80.1 | 81.2 | 82.3 | 83.4 | 84.5 | 85.6 |
| 21 | 75.6 | 76.7 | 77.8 | 78.9 | 79.9 | 81.0 | 82.1 | 83.2 | 84.3 | 85.4 |
| 22 | 75.5 | 76.5 | 77.6 | 78.7 | 79.8 | 80.9 | 82.0 | 83.0 | 84.1 | 85.2 |
| 23 | 75.3 | 76.4 | 77.5 | 78.6 | 79.6 | 80.7 | 81.8 | 82.9 | 84.0 | 85.1 |
| 24 | 75.1 | 76.2 | 77.3 | 78.4 | 79.4 | 80.5 | 81.6 | 82.7 | 83.8 | 84.9 |
| 25 | 75.0 | 76.1 | 77.2 | 78.2 | 79.3 | 80.4 | 81.5 | 82.5 | 83.6 | 84.7 |
| 26 | 74.9 | 75.9 | 77.0 | 78.1 | 79.1 | 80.2 | 81.3 | 82.4 | 83.5 | 84.6 |
| 27 | 74.7 | 75.8 | 76.9 | 77.9 | 79.0 | 80.1 | 81.2 | 82.2 | 83.3 | 84.4 |
| 28 | 74.6 | 75.6 | 76.7 | 77.8 | 78.8 | 79.9 | 81.0 | 82.1 | 83.2 | 84.2 |
| 29 | 74.4 | 75.5 | 76.6 | 77.6 | 78.7 | 79.8 | 80.8 | 81.9 | 83.0 | 84.1 |
| 30 | 74.3 | 75.3 | 76.4 | 77.5 | 78.5 | 79.6 | 80.7 | 81.7 | 82.8 | 83.9 |
| 31 | 74.1 | 75.2 | 76.3 | 77.3 | 78.4 | 79.4 | 80.5 | 81.6 | 82.7 | 83.7 |
| 32 | 74.0 | 75.0 | 76.1 | 77.2 | 78.2 | 79.3 | 80.4 | 81.4 | 82.5 | 83.6 |
| 33 | 73.8 | 74.9 | 76.0 | 77.0 | 78.1 | 79.1 | 80.2 | 81.2 | 82.3 | 83.4 |
| 34 | 73.7 | 74.7 | 75.8 | 76.9 | 77.9 | 79.0 | 80.0 | 81.1 | 82.2 | 83.2 |
| 35 | 73.5 | 74.6 | 75.6 | 76.7 | 77.7 | 78.8 | 79.8 | 80.9 | 82.0 | 83.0 |
| 36 | 73.4 | 74.4 | 75.5 | 76.5 | 77.6 | 78.6 | 79.7 | 80.7 | 81.8 | 82.9 |
| 37 | 73.2 | 74.3 | 75.3 | 76.4 | 77.4 | 78.5 | 79.5 | 80.6 | 81.6 | 82.7 |
| 38 | 73.1 | 74.1 | 75.2 | 76.2 | 77.3 | 78.3 | 79.4 | 80.4 | 81.5 | 82.5 |
| 39 | 72.9 | 74.0 | 75.0 | 76.1 | 77.1 | 78.2 | 79.2 | 80.3 | 81.3 | 82.4 |
| 40 | 72.8 | 73.8 | 74.9 | 75.9 | 77.0 | 78.0 | 79.1 | 80.1 | 81.2 | 82.2 |
| 41 | 72.7 | 73.7 | 74.8 | 75.8 | 76.8 | 77.9 | 78.9 | 79.9 | 81.0 | 82.0 |
| 42 | 72.5 | 73.5 | 74.6 | 75.6 | 76.7 | 77.7 | 78.8 | 79.8 | 80.8 | 81.9 |
| 43 | 72.4 | 73.4 | 74.5 | 75.5 | 76.5 | 77.6 | 78.6 | 79.6 | 80.7 | 81.7 |
| 44 | 72.2 | 73.2 | 74.3 | 75.3 | 76.3 | 77.4 | 78.4 | 79.4 | 80.5 | 81.5 |

| Observed Temperature in °F. | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 45 | 72.1 | 73.1 | 74.2 | 75.2 | 76.2 | 77.2 | 78.3 | 79.3 | 80.3 | 81.4 |
| 46 | 71.9 | 72.9 | 74.0 | 75.0 | 76.0 | 77.1 | 78.1 | 79.1 | 80.2 | 81.2 |
| 47 | 71.8 | 72.8 | 73.9 | 74.9 | 75.9 | 76.9 | 78.0 | 79.0 | 80.0 | 81.1 |
| 48 | 71.7 | 72.7 | 73.7 | 74.7 | 75.7 | 76.8 | 77.8 | 78.8 | 79.8 | 80.9 |
| 49 | 71.5 | 72.5 | 73.6 | 74.6 | 75.6 | 76.6 | 77.7 | 78.7 | 79.7 | 80.7 |
| 50 | 71.4 | 72.4 | 73.4 | 74.5 | 75.5 | 76.5 | 77.5 | 78.5 | 79.6 | 80.6 |
| 51 | 71.2 | 72.2 | 73.3 | 74.3 | 75.3 | 76.3 | 77.4 | 78.4 | 79.4 | 80.4 |
| 52 | 71.1 | 72.1 | 73.2 | 74.2 | 75.2 | 76.2 | 77.2 | 78.2 | 79.3 | 80.3 |
| 53 | 71.0 | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.1 | 78.1 | 79.1 | 80.1 |
| 54 | 70.8 | 71.8 | 72.9 | 73.9 | 74.9 | 75.9 | 76.9 | 77.9 | 78.9 | 80.0 |
| 55 | 70.7 | 71.7 | 72.7 | 73.7 | 74.7 | 75.7 | 76.8 | 77.8 | 78.8 | 79.8 |
| 56 | 70.5 | 71.5 | 72.6 | 73.6 | 74.6 | 75.6 | 76.6 | 77.6 | 78.6 | 79.6 |
| 57 | 70.4 | 71.4 | 72.4 | 73.4 | 74.4 | 75.4 | 76.5 | 77.5 | 78.5 | 79.5 |
| 58 | 70.3 | 71.3 | 72.3 | 73.3 | 74.3 | 75.3 | 76.3 | 77.3 | 78.3 | 79.3 |
| 59 | 70.1 | 71.1 | 72.2 | 73.2 | 74.2 | 75.2 | 76.2 | 77.2 | 78.2 | 79.2 |
| 60 | 70.0 | 71.0 | 72.0 | 73.0 | 74.0 | 75.0 | 76.0 | 77.0 | 78.0 | 79.0 |
| 61 | 69.9 | 70.9 | 71.9 | 72.9 | 73.9 | 74.9 | 75.9 | 76.8 | 77.8 | 78.8 |
| 62 | 69.8 | 70.8 | 71.8 | 72.7 | 73.7 | 74.7 | 75.7 | 76.7 | 77.7 | 78.7 |
| 63 | 69.6 | 70.6 | 71.6 | 72.6 | 73.6 | 74.6 | 75.6 | 76.5 | 77.5 | 78.5 |
| 64 | 69.5 | 70.5 | 71.5 | 72.4 | 73.4 | 74.4 | 75.4 | 76.4 | 77.4 | 78.4 |
| 65 | 69.3 | 70.3 | 71.3 | 72.3 | 73.3 | 74.3 | 75.2 | 76.2 | 77.2 | 78.2 |
| 66 | 69.2 | 70.2 | 71.2 | 72.2 | 73.1 | 74.1 | 75.1 | 76.1 | 77.1 | 78.1 |
| 67 | 69.1 | 70.1 | 71.1 | 72.0 | 73.0 | 74.0 | 75.0 | 75.9 | 76.9 | 77.9 |
| 68 | 68.9 | 69.9 | 70.9 | 71.9 | 72.9 | 73.9 | 74.8 | 75.8 | 76.8 | 77.8 |
| 69 | 68.8 | 69.8 | 70.8 | 71.7 | 72.7 | 73.7 | 74.7 | 75.6 | 76.6 | 77.6 |
| 70 | 68.6 | 69.6 | 70.6 | 71.6 | 72.6 | 73.6 | 74.5 | 75.5 | 76.5 | 77.5 |
| 71 | 68.5 | 69.5 | 70.5 | 71.4 | 72.4 | 73.4 | 74.4 | 75.3 | 76.3 | 77.3 |
| 72 | 68.4 | 69.4 | 70.4 | 71.3 | 72.3 | 73.3 | 74.2 | 75.2 | 76.2 | 77.1 |
| 73 | 68.3 | 69.3 | 70.3 | 71.2 | 72.2 | 73.1 | 74.1 | 75.0 | 76.0 | 77.0 |
| 74 | 68.1 | 69.1 | 70.1 | 71.0 | 72.0 | 73.0 | 73.9 | 74.9 | 75.9 | 76.8 |
| 75 | 68.0 | 69.0 | 70.0 | 70.9 | 71.9 | 72.9 | 73.8 | 74.8 | 75.8 | 76.7 |
| 76 | 67.9 | 68.8 | 69.8 | 70.8 | 71.7 | 72.7 | 73.7 | 74.6 | 75.6 | 76.6 |
| 77 | 67.7 | 68.7 | 69.7 | 70.6 | 71.6 | 72.6 | 73.5 | 74.5 | 75.5 | 76.4 |
| 78 | 67.6 | 68.6 | 69.6 | 70.5 | 71.5 | 72.4 | 73.4 | 74.4 | 75.3 | 76.3 |
| 79 | 67.5 | 68.4 | 69.4 | 70.4 | 71.3 | 72.3 | 73.2 | 74.2 | 75.2 | 76.1 |
| 80 | 67.4 | 68.3 | 69.3 | 70.2 | 71.2 | 72.2 | 73.1 | 74.1 | 75.0 | 76.0 |
| 81 | 67.2 | 68.2 | 69.1 | 70.1 | 71.0 | 72.0 | 73.0 | 73.9 | 74.9 | 75.8 |
| 82 | 67.1 | 68.1 | 69.0 | 70.0 | 70.9 | 71.9 | 72.8 | 73.8 | 74.7 | 75.6 |
| 83 | 67.0 | 67.9 | 68.9 | 69.8 | 70.8 | 71.7 | 72.6 | 73.6 | 74.6 | 75.5 |
| 84 | 66.8 | 67.8 | 68.7 | 69.7 | 70.6 | 71.6 | 72.5 | 73.4 | 74.4 | 75.3 |
| 85 | 66.7 | 67.6 | 68.6 | 69.5 | 70.5 | 71.4 | 72.4 | 73.3 | 74.3 | 75.2 |
| 86 | 66.6 | 67.5 | 68.5 | 69.4 | 70.4 | 71.3 | 72.2 | 73.2 | 74.1 | 75.1 |
| 87 | 66.4 | 67.4 | 68.4 | 69.3 | 70.2 | 71.2 | 72.1 | 73.0 | 74.0 | 74.9 |
| 88 | 66.3 | 67.2 | 68.2 | 69.1 | 70.1 | 71.0 | 72.0 | 72.9 | 73.8 | 74.8 |
| 89 | 66.2 | 67.1 | 68.1 | 69.0 | 70.0 | 70.9 | 71.8 | 72.8 | 73.7 | 74.6 |
| 90 | 66.1 | 67.0 | 68.0 | 68.9 | 69.8 | 70.8 | 71.7 | 72.6 | 73.6 | 74.5 |

| bserved empera-ure in °F. | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 0 | 90.4 | 91.6 | 92.7 | 93.9 | 95.1 | 96.3 | 97.5 | 98.7 | 99.9 | 101.1 |
| 1 | 90.2 | 91.4 | 92.5 | 93.7 | 94.9 | 96.1 | 97.3 | 98.5 | 99.7 | 100.9 |
| 2 | 90.0 | 91.2 | 92.4 | 93.5 | 94.7 | 95.9 | 97.1 | 98.3 | 99.5 | 100.7 |
| 3 | 89.8 | 91.0 | 92.2 | 93.3 | 94.5 | 95.7 | 96.9 | 98.1 | 99.3 | 100.4 |
| 4 | 89.6 | 90.8 | 92.0 | 93.1 | 94.3 | 95.5 | 96.7 | 97.9 | 99.1 | 100.2 |
| 5 | 89.4 | 90.6 | 91.8 | 92.9 | 94.1 | 95.3 | 96.5 | 97.7 | 98.9 | 100.0 |
| 6 | 89.3 | 90.4 | 91.6 | 92.7 | 93.9 | 95.1 | 96.3 | 97.5 | 98.7 | 99.8 |
| 7 | 89.1 | 90.2 | 91.4 | 92.5 | 93.7 | 94.9 | 96.0 | 97.2 | 98.4 | 99.6 |
| 8 | 88.9 | 90.0 | 91.2 | 92.4 | 93.5 | 94.7 | 95.8 | 97.0 | 98.2 | 99.3 |
| 9 | 88.7 | 89.8 | 91.0 | 92.2 | 93.3 | 94.5 | 95.6 | 96.8 | 98.0 | 99.1 |
| 10 | 88.6 | 89.7 | 90.8 | 92.0 | 93.1 | 94.2 | 95.4 | 96.6 | 97.8 | 98.9 |
| 11 | 88.4 | 89.5 | 90.6 | 91.8 | 92.9 | 94.0 | 95.2 | 96.4 | 97.5 | 98.7 |
| 12 | 88.2 | 89.3 | 90.4 | 91.6 | 92.7 | 93.8 | 95.0 | 96.1 | 97.3 | 98.4 |
| 13 | 88.0 | 89.1 | 90.2 | 91.4 | 92.5 | 93.6 | 94.8 | 95.9 | 97.1 | 98.2 |
| 14 | 87.8 | 88.9 | 90.0 | 91.2 | 92.3 | 93.4 | 94.6 | 95.7 | 96.9 | 98.0 |
| 15 | 87.6 | 88.7 | 89.9 | 91.0 | 92.1 | 93.2 | 94.4 | 95.5 | 96.7 | 97.8 |
| 16 | 87.5 | 88.6 | 89.7 | 90.8 | 91.9 | 93.0 | 94.2 | 95.3 | 96.5 | 97.6 |
| 17 | 87.3 | 88.4 | 89.5 | 90.6 | 91.7 | 92.8 | 94.0 | 95.1 | 96.3 | 97.4 |
| 18 | 87.1 | 88.2 | 89.3 | 90.4 | 91.5 | 92.6 | 93.8 | 94.9 | 96.1 | 97.2 |
| 19 | 86.9 | 88.0 | 89.1 | 90.2 | 91.3 | 92.4 | 93.6 | 94.7 | 95.9 | 97.0 |
| 20 | 86.7 | 87.8 | 88.9 | 90.0 | 91.1 | 92.2 | 93.4 | 94.5 | 95.7 | 96.8 |
| 21 | 86.5 | 87.6 | 88.7 | 89.8 | 90.9 | 92.0 | 93.2 | 94.3 | 95.4 | 96.5 |
| 22 | 86.4 | 87.5 | 88.6 | 89.7 | 90.8 | 91.9 | 93.0 | 94.1 | 95.2 | 96.3 |
| 23 | 86.2 | 87.3 | 88.4 | 89.5 | 90.6 | 91.7 | 92.8 | 93.9 | 95.0 | 96.1 |
| 24 | 86.0 | 87.1 | 88.2 | 89.3 | 90.4 | 91.5 | 92.6 | 93.7 | 94.8 | 95.9 |
| 25 | 85.8 | 86.9 | 88.0 | 89.1 | 90.2 | 91.3 | 92.4 | 93.5 | 94.6 | 95.7 |
| 26 | 85.6 | 86.7 | 87.8 | 88.9 | 90.0 | 91.1 | 92.2 | 93.3 | 94.4 | 95.5 |
| 27 | 85.4 | 86.5 | 87.6 | 88.7 | 89.8 | 90.9 | 92.0 | 93.1 | 94.2 | 95.3 |
| 28 | 85.3 | 86.4 | 87.4 | 88.5 | 89.6 | 90.7 | 91.8 | 92.9 | 94.0 | 95.1 |
| 29 | 85.1 | 86.2 | 87.3 | 88.4 | 89.4 | 90.5 | 91.6 | 92.7 | 93.8 | 94.9 |
| 30 | 84.9 | 86.0 | 87.1 | 88.2 | 89.3 | 90.3 | 91.4 | 92.5 | 93.6 | 94.7 |
| 31 | 84.8 | 85.8 | 86.9 | 88.0 | 89.1 | 90.2 | 91.2 | 92.3 | 93.4 | 94.5 |
| 32 | 84.6 | 85.7 | 86.7 | 87.8 | 88.9 | 90.0 | 91.0 | 92.1 | 93.2 | 94.3 |
| 33 | 84.4 | 85.5 | 86.5 | 87.6 | 88.7 | 89.8 | 90.8 | 91.9 | 93.0 | 94.1 |
| 34 | 84.2 | 85.3 | 86.4 | 87.4 | 88.5 | 89.6 | 90.7 | 91.7 | 92.8 | 93.9 |
| 35 | 84.1 | 85.1 | 86.2 | 87.2 | 88.3 | 89.4 | 90.5 | 91.5 | 92.6 | 93.7 |
| 36 | 83.9 | 85.0 | 86.0 | 87.1 | 88.2 | 89.2 | 90.3 | 91.3 | 92.4 | 93.5 |
| 37 | 83.7 | 84.8 | 85.9 | 86.9 | 88.0 | 89.0 | 90.1 | 91.2 | 92.2 | 93.3 |
| 38 | 83.6 | 84.6 | 85.7 | 86.7 | 87.8 | 88.8 | 89.9 | 91.0 | 92.1 | 93.1 |
| 39 | 83.4 | 84.5 | 85.5 | 86.6 | 87.6 | 88.7 | 89.7 | 90.8 | 91.9 | 92.9 |
| 40 | 83.2 | 84.3 | 85.4 | 86.4 | 87.5 | 88.5 | 89.6 | 90.6 | 91.7 | 92.7 |
| 41 | 83.1 | 84.1 | 85.2 | 86.2 | 87.3 | 88.3 | 89.4 | 90.4 | 91.5 | 92.5 |
| 42 | 82.9 | 83.9 | 85.0 | 86.0 | 87.1 | 88.1 | 89.2 | 90.2 | 91.3 | 92.4 |
| 43 | 82.7 | 83.8 | 84.8 | 85.9 | 86.9 | 88.0 | 89.0 | 90.0 | 91.1 | 92.2 |
| 44 | 82.6 | 83.6 | 84.7 | 85.7 | 86.7 | 87.8 | 88.8 | 89.9 | 90.9 | 92.0 |

| Observed Temperature in °F. | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 45 | 82.4 | 83.4 | 84.5 | 85.5 | 86.6 | 87.6 | 88.6 | 89.7 | 90.7 | 91.8 |
| 46 | 82.2 | 83.2 | 84.3 | 85.3 | 86.4 | 87.4 | 88.4 | 89.5 | 90.5 | 91.6 |
| 47 | 82.1 | 83.1 | 84.1 | 85.2 | 86.2 | 87.2 | 88.3 | 89.3 | 90.4 | 91.4 |
| 48 | 81.9 | 82.9 | 84.0 | 85.0 | 86.0 | 87.1 | 88.1 | 89.1 | 90.2 | 91.2 |
| 49 | 81.8 | 82.8 | 83.8 | 84.8 | 85.9 | 86.9 | 87.9 | 88.9 | 90.0 | 91.0 |
| 50 | 81.6 | 82.6 | 83.6 | 84.7 | 85.7 | 86.7 | 87.7 | 88.8 | 89.8 | 90.8 |
| 51 | 81.4 | 82.4 | 83.5 | 84.5 | 85.5 | 86.6 | 87.6 | 88.6 | 89.6 | 90.7 |
| 52 | 81.3 | 82.3 | 83.3 | 84.3 | 85.4 | 86.4 | 87.4 | 88.4 | 89.4 | 90.5 |
| 53 | 81.1 | 82.1 | 83.1 | 84.1 | 85.2 | 86.2 | 87.2 | 88.2 | 89.2 | 90.3 |
| 54 | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.1 | 90.1 |
| 55 | 80.8 | 81.8 | 82.8 | 83.8 | 84.8 | 85.8 | 86.8 | 87.8 | 88.9 | 89.9 |
| 56 | 80.6 | 81.6 | 82.6 | 83.6 | 84.7 | 85.7 | 86.7 | 87.7 | 88.7 | 89.7 |
| 57 | 80.5 | 81.5 | 82.5 | 83.5 | 84.5 | 85.5 | 86.5 | 87.5 | 88.5 | 89.5 |
| 58 | 80.3 | 81.3 | 82.3 | 83.3 | 84.3 | 85.3 | 86.3 | 87.3 | 88.3 | 89.3 |
| 59 | 80.2 | 81.2 | 82.2 | 83.2 | 84.2 | 85.2 | 86.2 | 87.2 | 88.2 | 89.2 |
| 60 | 80.0 | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 88.0 | 89.0 |
| 61 | 79.8 | 80.8 | 81.8 | 82.8 | 83.8 | 84.8 | 85.8 | 86.8 | 87.8 | 88.8 |
| 62 | 79.7 | 80.7 | 81.7 | 82.7 | 83.7 | 84.7 | 85.7 | 86.7 | 87.7 | 88.7 |
| 63 | 79.5 | 80.5 | 81.5 | 82.5 | 83.5 | 84.5 | 85.5 | 86.5 | 87.5 | 88.5 |
| 64 | 79.4 | 80.4 | 81.3 | 82.3 | 83.3 | 84.3 | 85.3 | 86.3 | 87.3 | 88.3 |
| 65 | 79.2 | 80.2 | 81.2 | 82.2 | 83.2 | 84.1 | 85.1 | 86.1 | 87.1 | 88.1 |
| 66 | 79.1 | 80.0 | 81.0 | 82.0 | 83.0 | 84.0 | 85.0 | 86.0 | 87.0 | 87.9 |
| 67 | 78.9 | 79.9 | 80.9 | 81.9 | 82.9 | 83.8 | 84.8 | 85.8 | 86.8 | 87.8 |
| 68 | 78.8 | 79.7 | 80.7 | 81.7 | 82.7 | 83.6 | 84.6 | 85.6 | 86.6 | 87.6 |
| 69 | 78.6 | 79.6 | 80.6 | 81.5 | 82.5 | 83.5 | 84.5 | 85.5 | 86.5 | 87.4 |
| 70 | 78.4 | 79.4 | 80.4 | 81.4 | 82.4 | 83.3 | 84.3 | 85.3 | 86.3 | 87.2 |
| 71 | 78.3 | 79.3 | 80.2 | 81.2 | 82.2 | 83.1 | 84.1 | 85.1 | 86.1 | 87.0 |
| 72 | 78.1 | 79.1 | 80.1 | 81.1 | 82.0 | 83.0 | 84.0 | 84.9 | 85.9 | 86.9 |
| 73 | 78.0 | 78.9 | 79.9 | 80.9 | 81.9 | 82.8 | 83.8 | 84.8 | 85.8 | 86.7 |
| 74 | 77.8 | 78.8 | 79.8 | 80.7 | 81.7 | 82.7 | 83.6 | 84.6 | 85.6 | 86.5 |
| 75 | 77.7 | 78.7 | 79.6 | 80.6 | 81.6 | 82.5 | 83.5 | 84.4 | 85.4 | 86.4 |
| 76 | 77.5 | 78.5 | 79.4 | 80.4 | 81.4 | 82.3 | 83.3 | 84.3 | 85.2 | 86.2 |
| 77 | 77.4 | 78.4 | 79.3 | 80.3 | 81.2 | 82.2 | 83.2 | 84.1 | 85.1 | 86.0 |
| 78 | 77.2 | 78.2 | 79.1 | 80.1 | 81.1 | 82.0 | 83.0 | 83.9 | 84.9 | 85.8 |
| 79 | 77.1 | 78.0 | 79.0 | 79.9 | 80.9 | 81.8 | 82.8 | 83.8 | 84.7 | 85.7 |
| 80 | 76.9 | 77.8 | 78.8 | 79.8 | 80.7 | 81.7 | 82.6 | 83.6 | 84.6 | 85.5 |
| 81 | 76.8 | 77.7 | 78.7 | 79.6 | 80.6 | 81.5 | 82.5 | 83.4 | 84.4 | 85.3 |
| 82 | 76.6 | 77.5 | 78.5 | 79.4 | 80.4 | 81.3 | 82.3 | 83.2 | 84.2 | 85.1 |
| 83 | 76.5 | 77.4 | 78.4 | 79.3 | 80.3 | 81.2 | 82.2 | 83.1 | 84.1 | 85.0 |
| 84 | 76.3 | 77.2 | 78.2 | 79.1 | 80.1 | 81.0 | 82.0 | 82.9 | 83.9 | 84.8 |
| 85 | 76.2 | 77.1 | 78.0 | 79.0 | 79.9 | 80.9 | 81.8 | 82.8 | 83.7 | 84.7 |
| 86 | 76.0 | 77.0 | 77.9 | 78.8 | 79.8 | 80.7 | 81.7 | 82.6 | 83.6 | 84.5 |
| 87 | 75.9 | 76.8 | 77.7 | 78.7 | 79.6 | 80.6 | 81.5 | 82.5 | 83.4 | 84.3 |
| 88 | 75.7 | 76.6 | 77.6 | 78.5 | 79.5 | 80.4 | 81.3 | 82.3 | 83.2 | 84.2 |
| 89 | 75.6 | 76.5 | 77.4 | 78.4 | 79.3 | 80.3 | 81.2 | 82.2 | 83.1 | 84.0 |
| 90 | 75.5 | 76.4 | 77.3 | 78.2 | 79.2 | 80.1 | 81.0 | 82.0 | 82.9 | 83.8 |

| Observed Temperature in °F. | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 0 | 102.3 | 103.5 | 104.7 | 105.9 | 107.1 | 108.3 | 109.5 | 110.7 | 111.9 | 113.1 |
| 1 | 102.1 | 103.3 | 104.5 | 105.7 | 106.8 | 108.0 | 109.3 | 110.5 | 111.7 | 112.8 |
| 2 | 101.9 | 103.0 | 104.2 | 105.4 | 106.6 | 107.8 | 109.0 | 110.2 | 111.4 | 112.6 |
| 3 | 101.6 | 102.8 | 104.0 | 105.2 | 106.4 | 107.6 | 108.8 | 110.0 | 111.2 | 112.3 |
| 4 | 101.4 | 102.6 | 103.8 | 105.0 | 106.1 | 107.3 | 108.5 | 109.7 | 110.9 | 112.1 |
| 5 | 101.2 | 102.3 | 103.5 | 104.7 | 105.9 | 107.1 | 108.3 | 109.5 | 110.6 | 111.8 |
| 6 | 101.0 | 102.1 | 103.3 | 104.5 | 105.7 | 106.8 | 108.0 | 109.2 | 110.4 | 111.6 |
| 7 | 100.7 | 101.9 | 103.1 | 104.2 | 105.4 | 106.6 | 107.8 | 109.0 | 110.1 | 111.3 |
| 8 | 100.5 | 101.6 | 102.8 | 104.0 | 105.2 | 106.4 | 107.5 | 108.7 | 109.9 | 111.1 |
| 9 | 100.3 | 101.4 | 102.6 | 103.8 | 104.9 | 106.1 | 107.3 | 108.4 | 109.6 | 110.8 |
| 10 | 100.0 | 101.2 | 102.4 | 103.6 | 104.7 | 105.9 | 107.0 | 108.2 | 109.4 | 110.5 |
| 11 | 99.8 | 101.0 | 102.2 | 103.3 | 104.4 | 105.7 | 106.8 | 108.0 | 109.1 | 110.3 |
| 12 | 99.6 | 100.7 | 101.9 | 103.1 | 104.2 | 105.4 | 106.6 | 107.7 | 108.9 | 110.0 |
| 13 | 99.4 | 100.5 | 101.7 | 102.8 | 104.0 | 105.2 | 106.3 | 107.5 | 108.6 | 109.8 |
| 14 | 99.2 | 100.3 | 101.5 | 102.6 | 103.7 | 104.9 | 106.1 | 107.2 | 108.4 | 109.6 |
| 15 | 99.0 | 100.1 | 101.3 | 102.4 | 103.5 | 104.7 | 105.8 | 107.0 | 108.1 | 109.3 |
| 16 | 98.7 | 99.9 | 101.0 | 102.2 | 103.3 | 104.5 | 105.6 | 106.8 | 107.9 | 109.0 |
| 17 | 98.5 | 99.6 | 100.8 | 101.9 | 103.0 | 104.2 | 105.4 | 106.5 | 107.6 | 108.8 |
| 18 | 98.3 | 99.4 | 100.6 | 101.7 | 102.8 | 104.0 | 105.1 | 106.3 | 107.4 | 108.5 |
| 19 | 98.1 | 99.2 | 100.4 | 101.5 | 102.6 | 103.7 | 104.8 | 106.0 | 107.1 | 108.2 |
| 20 | 97.9 | 99.0 | 100.1 | 101.2 | 102.3 | 103.5 | 104.6 | 105.8 | 106.9 | 108.0 |
| 21 | 97.7 | 98.8 | 99.9 | 101.0 | 102.1 | 103.3 | 104.4 | 105.5 | 106.6 | 107.8 |
| 22 | 97.5 | 98.6 | 99.7 | 100.8 | 101.9 | 103.1 | 104.2 | 105.3 | 106.4 | 107.5 |
| 23 | 97.2 | 98.3 | 99.5 | 100.6 | 101.7 | 102.8 | 103.9 | 105.1 | 106.2 | 107.3 |
| 24 | 97.0 | 98.1 | 99.3 | 100.4 | 101.5 | 102.6 | 103.7 | 104.8 | 106.0 | 107.1 |
| 25 | 96.8 | 97.9 | 99.1 | 100.2 | 101.3 | 102.4 | 103.5 | 104.6 | 105.7 | 106.8 |
| 26 | 96.6 | 97.7 | 98.8 | 99.9 | 101.0 | 102.2 | 103.3 | 104.4 | 105.5 | 106.6 |
| 27 | 96.4 | 97.5 | 98.6 | 99.7 | 100.8 | 101.9 | 103.0 | 104.1 | 105.2 | 106.4 |
| 28 | 96.2 | 97.3 | 98.4 | 99.5 | 100.6 | 101.7 | 102.8 | 103.9 | 105.0 | 106.1 |
| 29 | 96.0 | 97.1 | 98.2 | 99.3 | 100.4 | 101.5 | 102.6 | 103.7 | 104.8 | 105.9 |
| 30 | 95.8 | 96.9 | 98.0 | 99.1 | 100.2 | 101.3 | 102.4 | 103.4 | 104.5 | 105.6 |
| 31 | 95.6 | 96.7 | 97.8 | 98.8 | 99.9 | 101.0 | 102.1 | 103.2 | 104.3 | 105.4 |
| 32 | 95.4 | 96.5 | 97.6 | 98.6 | 99.7 | 100.8 | 101.9 | 103.0 | 104.1 | 105.2 |
| 33 | 95.2 | 96.3 | 97.4 | 98.4 | 99.5 | 100.6 | 101.7 | 102.8 | 103.9 | 105.0 |
| 34 | 95.0 | 96.1 | 97.2 | 98.2 | 99.3 | 100.4 | 101.5 | 102.5 | 103.6 | 104.7 |
| 35 | 94.8 | 95.9 | 97.0 | 98.0 | 99.1 | 100.2 | 101.3 | 102.3 | 103.4 | 104.5 |
| 36 | 94.6 | 95.7 | 96.8 | 97.8 | 98.9 | 100.0 | 101.0 | 102.1 | 103.2 | 104.3 |
| 37 | 94.4 | 95.5 | 96.6 | 97.6 | 98.7 | 99.8 | 100.8 | 101.9 | 103.0 | 104.1 |
| 38 | 94.2 | 95.3 | 96.4 | 97.4 | 98.5 | 99.6 | 100.6 | 101.7 | 102.7 | 103.8 |
| 39 | 94.0 | 95.1 | 96.1 | 97.2 | 98.2 | 99.3 | 100.4 | 101.4 | 102.5 | 103.6 |
| 40 | 93.8 | 94.9 | 95.9 | 97.0 | 98.0 | 99.1 | 100.2 | 101.2 | 102.3 | 103.4 |
| 41 | 93.6 | 94.7 | 95.7 | 96.8 | 97.8 | 98.9 | 99.9 | 101.0 | 102.0 | 103.1 |
| 42 | 93.4 | 94.5 | 95.5 | 96.6 | 97.6 | 98.7 | 99.7 | 100.8 | 101.8 | 102.9 |
| 43 | 93.2 | 94.3 | 95.3 | 96.4 | 97.4 | 98.5 | 99.5 | 100.6 | 101.6 | 102.7 |
| 44 | 93.0 | 94.1 | 95.1 | 96.2 | 97.2 | 98.2 | 99.3 | 100.3 | 101.4 | 102.5 |

| Observed Temperature in °F. | Observed Degrees A.P.I. | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 |
| | Corresponding Degrees A.P.I. at 60°F. | | | | | | | | | |
| 45 | 92.8 | 93.9 | 94.9 | 95.9 | 97.0 | 98.0 | 99.1 | 100.1 | 101.2 | 102.2 |
| 46 | 92.6 | 93.7 | 94.7 | 95.7 | 96.8 | 97.8 | 98.9 | 99.9 | 101.0 | 102.0 |
| 47 | 92.4 | 93.5 | 94.5 | 95.5 | 96.6 | 97.6 | 98.7 | 99.7 | 100.7 | 101.8 |
| 48 | 92.2 | 93.3 | 94.3 | 95.3 | 96.4 | 97.4 | 98.5 | 99.5 | 100.5 | 101.6 |
| 49 | 92.0 | 93.1 | 94.1 | 95.1 | 96.2 | 97.2 | 98.2 | 99.3 | 100.3 | 101.3 |
| 50 | 91.9 | 92.9 | 93.9 | 94.9 | 96.0 | 97.0 | 98.0 | 99.0 | 100.1 | 101.1 |
| 51 | 91.7 | 92.7 | 93.7 | 94.8 | 95.8 | 96.8 | 97.8 | 98.8 | 99.9 | 100.9 |
| 52 | 91.5 | 92.5 | 93.6 | 94.6 | 95.6 | 96.6 | 97.6 | 98.6 | 99.7 | 100.7 |
| 53 | 91.3 | 92.3 | 93.4 | 94.4 | 95.4 | 96.4 | 97.4 | 98.4 | 99.5 | 100.5 |
| 54 | 91.1 | 92.1 | 93.2 | 94.2 | 95.2 | 96.2 | 97.2 | 98.2 | 99.3 | 100.3 |
| 55 | 90.9 | 91.9 | 93.0 | 94.0 | 95.0 | 96.0 | 97.0 | 98.0 | 99.0 | 100.1 |
| 56 | 90.7 | 91.7 | 92.8 | 93.8 | 94.8 | 95.8 | 96.8 | 97.8 | 98.8 | 99.9 |
| 57 | 90.5 | 91.5 | 92.6 | 93.6 | 94.6 | 95.6 | 96.6 | 97.6 | 98.6 | 99.6 |
| 58 | 90.3 | 91.3 | 92.4 | 93.4 | 94.4 | 95.4 | 96.4 | 97.4 | 98.4 | 99.4 |
| 59 | 90.2 | 91.2 | 92.2 | 93.2 | 94.2 | 95.2 | 96.2 | 97.2 | 98.2 | 99.2 |
| 60 | 90.0 | 91.0 | 92.0 | 93.0 | 94.0 | 95.0 | 96.0 | 97.0 | 98.0 | 99.0 |
| 61 | 89.8 | 90.8 | 91.8 | 92.8 | 93.8 | 94.8 | 95.8 | 96.8 | 97.8 | 98.8 |
| 62 | 89.7 | 90.6 | 91.6 | 92.6 | 93.6 | 94.6 | 95.6 | 96.6 | 97.6 | 98.6 |
| 63 | 89.4 | 90.4 | 91.4 | 92.4 | 93.4 | 94.4 | 95.4 | 96.4 | 97.4 | 98.4 |
| 64 | 89.3 | 90.2 | 91.2 | 92.2 | 93.2 | 94.2 | 95.2 | 96.2 | 97.2 | 98.2 |
| 65 | 89.1 | 90.0 | 91.0 | 92.0 | 93.0 | 94.0 | 95.0 | 96.0 | 97.0 | 98.0 |
| 66 | 88.9 | 89.9 | 90.8 | 91.8 | 92.8 | 93.8 | 94.8 | 95.8 | 96.8 | 97.8 |
| 67 | 88.7 | 89.7 | 90.7 | 91.6 | 92.6 | 93.6 | 94.6 | 95.6 | 96.6 | 97.5 |
| 68 | 88.6 | 89.5 | 90.5 | 91.5 | 92.5 | 93.5 | 94.4 | 95.4 | 96.4 | 97.3 |
| 69 | 88.4 | 89.4 | 90.3 | 91.3 | 92.3 | 93.3 | 94.2 | 95.2 | 96.2 | 97.1 |
| 70 | 88.2 | 89.2 | 90.1 | 91.1 | 92.1 | 93.1 | 94.0 | 95.0 | 96.0 | 96.9 |
| 71 | 88.0 | 89.0 | 89.9 | 90.9 | 91.9 | 92.9 | 93.8 | 94.8 | 95.8 | 96.7 |
| 72 | 87.8 | 88.8 | 89.8 | 90.7 | 91.7 | 92.7 | 93.6 | 94.6 | 95.6 | 96.5 |
| 73 | 87.7 | 88.6 | 89.6 | 90.6 | 91.5 | 92.5 | 93.4 | 94.4 | 95.4 | 96.3 |
| 74 | 87.5 | 88.5 | 89.4 | 90.4 | 91.3 | 92.3 | 93.2 | 94.2 | 95.2 | 96.1 |
| 75 | 87.3 | 88.3 | 89.2 | 90.2 | 91.2 | 92.1 | 93.1 | 94.0 | 95.0 | 96.0 |
| 76 | 87.2 | 88.1 | 89.1 | 90.0 | 91.0 | 92.0 | 92.9 | 93.9 | 94.8 | 95.8 |
| 77 | 87.0 | 87.9 | 88.9 | 89.8 | 90.8 | 91.8 | 92.7 | 93.7 | 94.6 | 95.6 |
| 78 | 86.8 | 87.7 | 88.7 | 89.7 | 90.6 | 91.6 | 92.5 | 93.5 | 94.4 | 95.4 |
| 79 | 86.6 | 87.6 | 88.5 | 89.5 | 90.4 | 91.4 | 92.3 | 93.3 | 94.2 | 95.2 |
| 80 | 86.5 | 87.4 | 88.4 | 89.3 | 90.2 | 91.2 | 92.1 | 93.1 | 94.0 | 95.0 |
| 81 | 86.3 | 87.2 | 88.2 | 89.1 | 90.1 | 91.0 | 91.9 | 92.9 | 93.8 | 94.8 |
| 82 | 86.1 | 87.0 | 88.0 | 88.9 | 89.9 | 90.8 | 91.8 | 92.7 | 93.6 | 94.6 |
| 83 | 86.0 | 86.9 | 87.8 | 88.8 | 89.7 | 90.7 | 91.6 | 92.5 | 93.4 | 94.4 |
| 84 | 85.8 | 86.7 | 87.6 | 88.6 | 89.5 | 90.5 | 91.4 | 92.3 | 93.2 | 94.2 |
| 85 | 85.6 | 86.5 | 87.5 | 88.4 | 89.4 | 90.3 | 91.2 | 92.2 | 93.1 | 94.0 |
| 86 | 85.4 | 86.4 | 87.3 | 88.2 | 89.2 | 90.1 | 91.0 | 92.0 | 92.9 | 93.8 |
| 87 | 85.3 | 86.2 | 87.1 | 88.0 | 89.0 | 89.9 | 90.8 | 91.8 | 92.7 | 93.6 |
| 88 | 85.1 | 86.0 | 87.0 | 87.9 | 88.8 | 89.7 | 90.6 | 91.6 | 92.5 | 93.4 |
| 89 | 84.9 | 85.9 | 86.8 | 87.7 | 88.6 | 89.6 | 90.5 | 91.4 | 92.3 | 93.2 |
| 90 | 84.8 | 85.7 | 86.6 | 87.5 | 88.5 | 89.4 | 90.3 | 91.2 | 92.2 | 93.1 |