|  |  |  |
| --- | --- | --- |
| Focal length (mm) | Horizontal (°) | Vertical (°) |
| 14 | 104.3 | 81.2 |
| 15 | 100.4 | 77.3 |
| 16 | 96.7 | 73.7 |
| 17 | 93.3 | 70.4 |
| 20 | 84.0 | 61.9 |
| 24 | 73.7 | 53.1 |
| 28 | 65.5 | 46.4 |
| 35 | 54.4 | 37.8 |
| 50 | 39.6 | 27.0 |
| 70 | 28.8 | 19.5 |
| 85 | 23.9 | 16.1 |
| 100 | 20.4 | 13.7 |
| 105 | 19.5 | 13.0 |
| 135 | 15.2 | 10.2 |
| 200 | 10.3 | 6.9 |

## How to calculate the angle of view for a given lens on a full-frame 35mm camera

See: <https://en.wikipedia.org/wiki/Angle_of_view>

A full-frame 35mm sensor is 36mm wide (horizontal) by 24mm tall (vertical). For a given focal length, *f*, the formulas for calculating the horizontal (*h*) and vertical (*v*) angles of view are as follows:

αh = 2 arctan(36/2*f*)

αv = 2 arctan(24/2*f*)