

## Lens Calculation for Field of View

Focal Length in MM	Field of View Horizontal	Format V-Vertical H-Horizontal	Distance Between Camera and Object in Feet						
			3	5	10	20	30	50	100
2.5 MM	70°	1/4" V	3.2	5.4	10.5	21.0	32.0	54.0	105.0
		H	4.3	7.2	14.0	28.0	43.0	72.0	140.0
	90°	1/3" V	4.4	7.2	14.0	28.0	43.0	72.0	145.0
		H	5.8	8.9	19.5	39.0	58.0	98.0	195.0
4.0 MM	43°	1/4" V	2.0	3.3	6.6	13.0	20.0	33.0	66.0
		H	2.7	4.5	8.8	18.0	27.0	45.0	88.0
	63°	1/3" V	2.7	4.5	9.0	18.0	27.0	45.0	90.0
		H	3.6	6.0	12.0	24.0	36.0	60.0	120.0
6.0 MM	33°	1/4" V	1.7	2.2	4.5	9.0	13.0	22.0	45.0
		H	1.8	3.0	6.0	12.0	18.0	30.0	60.0
	44°	1/3" V	1.8	3.0	6.0	12.0	18.0	30.0	60.0
		H	2.4	4.0	8.0	16.0	24.0	40.0	80.0
8.0 MM	25°	1/4" V	1.0	1.7	3.4	6.8	10.0	17.0	33.0
		H	1.3	2.2	4.5	9.0	13.0	22.0	45.0
	34°	1/3" V	1.3	2.2	4.5	9.0	14.0	23.0	45.0
		H	1.8	3	6	12	18	30	60
12.0 MM	17°	1/4" V	/	1.1	2.2	4.5	6.8	11.0	22.0
		H	/	1.5	3.0	6.0	9.0	15.0	30.0
	23°	1/3" V	0.9	1.5	3.0	6.0	9.0	15.0	30.0
		H	1.2	2.0	4.0	8.0	12.0	20.0	40.0

### How to Use This Chart

1. Select the focal length of the lens (e.g. 4.0 MM)
2. Select the format of the camera (e.g. 1/3")
3. Select distance between camera and object to be viewed in feet (e.g. 10 ft).  
This shows that by using a 4mm lens on a 1/3" camera, the field of view (horizontal) will be 9 ft. high and 12 ft. wide.

reference provided by: