

Hyperfocal Distance Tables for Circle of Confusion Constant 0.030

Note: Applicable cameras for these tables are listed below the tables.

18-mm focal length lens

F-stop	f/3.5	f/4	f/4.5	f/5	f/5.6	f/6.3	f/7.1	f/8	f/9	f/10	f/11	f/13	f/14	f/16	f/18	f/20	f/22
Focus at (ft.)	10.2	8.92	7.93	7.15	6.39	5.68	5.05	4.49	4	3.6	3.28	2.78	2.59	2.27	2.03	1.83	1.67
Sharp at (ft.)	5.09	4.46	3.97	3.57	3.19	2.84	2.52	2.24	2	1.8	1.64	1.39	1.29	1.14	1.01	0.92	0.83

20-mm focal length lens

F-stop	f/3.5	f/4	f/4.5	f/5	f/5.6	f/6.3	f/7.1	f/8	f/9	f/10	f/11	f/13	f/14	f/16	f/18	f/20	f/22
Focus at (ft.)	12.6	11	9.79	8.81	7.88	7.01	6.23	5.53	4.93	4.44	4.04	3.43	3.19	2.8	2.5	2.25	2.05
Sharp at (ft.)	6.28	5.5	4.89	4.41	3.94	3.5	3.11	2.77	2.46	2.22	2.02	1.72	1.6	1.4	1.25	1.13	1.03

24-mm focal length lens

F-stop	f/3.5	f/4	f/4.5	f/5	f/5.6	f/6.3	f/7.1	f/8	f/9	f/10	f/11	f/13	f/14	f/16	f/18	f/20	f/22
Focus at (ft.)	18.1	15.8	14.1	12.7	11.3	10.1	8.95	7.95	7.08	6.38	5.81	4.92	4.58	4.02	3.58	3.23	2.94
Sharp at (ft.)	9.04	7.91	7.04	6.34	5.66	5.04	4.48	3.98	3.54	3.19	2.9	2.46	2.29	2.01	1.79	1.61	1.47

28-mm focal length lens

F-stop	f/3.5	f/4	f/4.5	f/5	f/5.6	f/6.3	f/7.1	f/8	f/9	f/10	f/11	f/13	f/14	f/16	f/18	f/20	f/22
Focus at (ft.)	24.6	21.5	19.1	17.2	15.4	13.7	12.2	10.8	9.62	8.67	7.89	6.69	6.22	5.45	4.86	4.38	3.99
Sharp at (ft.)	12.3	10.8	9.57	8.62	7.7	6.85	6.08	5.4	4.81	4.33	3.94	3.34	3.11	2.73	2.43	2.19	1.99

35-mm focal length lens

F-stop	f/3.5	f/4	f/4.5	f/5	f/5.6	f/6.3	f/7.1	f/8	f/9	f/10	f/11	f/13	f/14	f/16	f/18	f/20	f/22
Focus at (ft.)	38.4	33.6	29.9	26.9	24	21.4	19	16.9	15	13.5	12.3	10.4	9.68	8.49	7.56	6.81	6.2
Sharp at (ft.)	19.2	16.8	14.9	13.5	12	10.7	9.49	8.43	7.5	6.76	6.15	5.21	4.84	4.24	3.78	3.41	3.1

45-mm focal length lens

F-stop	f/3.5	f/4	f/4.5	f/5	f/5.6	f/6.3	f/7.1	f/8	f/9	f/10	f/11	f/13	f/14	f/16	f/18	f/20	f/22
Focus at (ft.)	63.4	55.5	49.4	44.4	39.7	35.3	31.3	27.8	24.8	22.3	20.3	17.2	16	14	12.5	11.2	10.2
Sharp at (ft.)	31.7	27.8	24.7	22.2	19.8	17.6	15.7	13.9	12.4	11.1	10.1	8.59	7.98	6.99	6.23	5.61	5.11

55-mm focal length lens

F-stop	f/3.5	f/4	f/4.5	f/5	f/5.6	f/6.3	f/7.1	f/8	f/9	f/10	f/11	f/13	f/14	f/16	f/18	f/20	f/22
Focus at (ft.)	94.7	82.9	73.7	66.3	59.3	52.7	46.8	41.5	36.9	33.3	30.3	25.6	23.8	20.9	18.6	16.7	15.2
Sharp at (ft.)	47.3	41.4	36.8	33.2	29.6	26.3	23.4	20.8	18.5	16.6	15.1	12.8	11.9	10.4	9.28	8.36	7.61

70-mm focal length lens

F-stop	f/3.5	f/4	f/4.5	f/5	f/5.6	f/6.3	f/7.1	f/8	f/9	f/10	f/11	f/13	f/14	f/16	f/18	f/20	f/22
Focus at (ft.)	153	134	119	107	95.9	85.3	75.7	67.2	59.8	53.8	48.9	41.5	38.5	33.7	30	27	24.6
Sharp at (ft.)	76.7	67.1	59.7	53.7	48	42.6	37.9	33.6	29.9	26.9	24.5	20.7	19.3	16.9	15	13.5	12.3

85-mm focal length lens

F-stop	f/3.5	f/4	f/4.5	f/5	f/5.6	f/6.3	f/7.1	f/8	f/9	f/10	f/11	f/13	f/14	f/16	f/18	f/20	f/22
Focus at (ft.)	226	198	176	158	141	126	112	99	88.1	79.3	72.1	61.1	56.7	49.7	44.2	39.8	36.2
Sharp at (ft.)	113	98.9	87.9	79.2	70.7	62.8	55.8	49.5	44	39.6	36.1	30.5	28.4	24.8	22.1	19.9	18.1

105-mm focal length lens

F-stop	f/3.5	f/4	f/4.5	f/5	f/5.6	f/6.3	f/7.1	f/8	f/9	f/10	f/11	f/13	f/14	f/16	f/18	f/20	f/22
Focus at (ft.)	345	302	268	241	216	192	170	151	134	121	110	93.1	86.5	75.7	67.3	60.6	55.1
Sharp at (ft.)	172	151	134	121	108	95.9	85.1	75.5	67.2	60.5	55	46.5	43.2	37.9	33.7	30.3	27.6

Use these tables for the following cameras:

Canon: 1DS, 1Ds Mark II, 1Ds Mark III, 5D

Kodak: DCS-14N, DCS Pro