

**OPTIMO ULTRA 12X** |  
Configuration FF/VV

**DEPTH-OF-FIELD TABLES**  
DISTANCE IN METERS

| **Angénieux**<sup>®</sup>

REFERENCE : 321263 - A

## **DEPTH-OF-FIELD TABLES**

**F = 36 - 435 mm**

The depths of field tables are provided for information purposes only and are estimated with a circle of confusion of 0.013mm (1/2000inch). The width of the sharpness zone grows proportionally with the focus distance and aperture and it is inversely proportional to the focal length. In practice the depth of field limits can only be defined accurately by performing screen tests in true shooting conditions.

***TABLES DE PROFONDEUR DE CHAMP***  
**F = 36 - 435 mm**

*Les tables de profondeur de champ sont fournies à titre indicatif pour un cercle de confusion moyen de 0.013mm (1/2000inch).*

*La profondeur de champ augmente proportionnellement avec la distance de mise au point ainsi qu'avec le diaphragme et est inversement proportionnelle à la focale.*

*Dans la pratique, seuls les essais filmés dans des conditions de tournage vous permettront de définir les bornes de cette profondeur de champ avec un maximum de précision.*

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		29,763	23,562	16,74	12,336	8,639	6,413	4,554
30 meters	Far	∞	∞	∞	∞	∞	∞	∞
	Near	15,159	13,412	10,945	8,921	6,858	5,408	4,051
10 meters	Far	14,639	16,768	23,666	49,96	∞	∞	∞
	Near	7,648	7,202	6,464	5,739	4,852	4,114	3,315
8 meters	Far	10,635	11,688	14,582	21,34	104,627	∞	∞
	Near	6,449	6,136	5,603	5,061	4,372	3,775	3,103
5 meters	Far	5,843	6,125	6,782	7,858	10,8	20,261	∞
	Near	4,385	4,248	4,002	3,735	3,369	3,024	2,601
4 meters	Far	4,494	4,651	5,001	5,533	6,767	9,373	29,118
	Near	3,614	3,524	3,361	3,179	2,921	2,669	2,347

**F = 36 mm**

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		29,763	23,562	16,74	12,336	8,639	6,413	4,554
3 meters	Far	3,246	3,321	3,48	3,708	4,176	4,955	7,37
	Near	2,794	2,744	2,652	2,546	2,39	2,23	2,016
2.5 meters	Far	2,657	2,703	2,8	2,935	3,2	3,603	4,627
	Near	2,364	2,331	2,268	2,195	2,085	1,97	1,811
2 meters	Far	2,088	2,114	2,167	2,238	2,372	2,561	2,978
	Near	1,921	1,901	1,863	1,818	1,75	1,676	1,57
1.5 meters	Far	1,54	1,552	1,575	1,605	1,66	1,733	1,878
	Near	1,463	1,453	1,435	1,413	1,378	1,339	1,282
1.27 meters	Far	1,295	1,301	1,315	1,333	1,365	1,407	1,486
	Near	1,247	1,241	1,229	1,215	1,193	1,168	1,129

**F = 36 mm**

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		41,504	32,811	23,25	17,081	11,903	8,785	6,181
30 meters	Far	106,109	343,272	∞	∞	∞	∞	∞
	Near	17,626	15,889	13,313	11,085	8,698	6,946	5,247
10 meters	Far	12,905	14,014	16,914	22,957	58,614	∞	∞
	Near	8,193	7,819	7,175	6,51	5,651	4,894	4,026
8 meters	Far	9,709	10,308	11,757	14,315	22,741	82,982	∞
	Near	6,824	6,567	6,117	5,637	4,994	4,405	3,702
5 meters	Far	5,571	5,75	6,143	6,727	8,027	10,537	22,971
	Near	4,544	4,436	4,239	4,018	3,701	3,387	2,98
4 meters	Far	4,339	4,441	4,661	4,973	5,612	6,668	9,885
	Near	3,715	3,647	3,518	3,371	3,155	2,934	2,636

**F = 45 mm**

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		41,504	32,811	23,25	17,081	11,903	8,785	6,181
3 meters	Far	3,171	3,221	3,325	3,468	3,741	4,141	5,082
	Near	2,849	2,812	2,741	2,658	2,531	2,398	2,209
2.5 meters	Far	2,609	2,641	2,706	2,793	2,954	3,181	3,665
	Near	2,401	2,376	2,329	2,272	2,185	2,091	1,955
2 meters	Far	2,062	2,08	2,115	2,163	2,248	2,362	2,589
	Near	1,943	1,928	1,9	1,866	1,812	1,753	1,665
1.5 meters	Far	1,528	1,536	1,552	1,573	1,609	1,656	1,744
	Near	1,473	1,466	1,453	1,436	1,41	1,38	1,334
1.27 meters	Far	1,287	1,292	1,302	1,314	1,336	1,363	1,413
	Near	1,253	1,249	1,241	1,23	1,213	1,194	1,164

**F = 45 mm**

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		73,649	58,133	41,08	30,078	20,846	15,287	10,646
30 meters	Far	50,012	61,039	108,7	8441,934	∞	∞	∞
	Near	21,496	19,984	17,551	15,238	12,51	10,321	8,025
10 meters	Far	11,436	11,899	12,941	14,55	18,414	27,218	146,149
	Near	8,895	8,64	8,178	7,667	6,948	6,254	5,375
8 meters	Far	8,871	9,141	9,728	10,588	12,445	15,824	29,416
	Near	7,292	7,123	6,813	6,462	5,955	5,448	4,781
5 meters	Far	5,303	5,392	5,577	5,83	6,313	7,02	8,673
	Near	4,732	4,665	4,539	4,391	4,166	3,927	3,59
4 meters	Far	4,182	4,235	4,342	4,487	4,753	5,123	5,904
	Near	3,835	3,793	3,713	3,617	3,47	3,31	3,078

**F = 60 mm**



Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		73,649	58,133	41,08	30,078	20,846	15,287	10,646
3 meters	Far	3,093	3,119	3,173	3,243	3,368	3,534	3,857
	Near	2,913	2,891	2,848	2,796	2,714	2,623	2,485
2.5 meters	Far	2,56	2,577	2,61	2,654	2,732	2,833	3,022
	Near	2,443	2,429	2,4	2,366	2,31	2,248	2,153
2 meters	Far	2,034	2,044	2,063	2,087	2,13	2,184	2,282
	Near	1,967	1,959	1,942	1,922	1,889	1,851	1,792
1.5 meters	Far	1,516	1,52	1,529	1,54	1,559	1,582	1,624
	Near	1,485	1,481	1,473	1,463	1,447	1,429	1,4
1.27 meters	Far	1,28	1,282	1,288	1,294	1,306	1,32	1,344
	Near	1,261	1,258	1,253	1,247	1,237	1,226	1,207

**F = 60 mm**

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		114,76	90,525	63,891	46,711	32,295	23,614	16,368
30 meters	Far	40,304	44,426	55,741	82,107	400,711	∞	∞
	Near	23,926	22,695	20,604	18,475	15,77	13,428	10,789
10 meters	Far	10,873	11,135	11,695	12,487	14,091	16,688	24,224
	Near	9,262	9,082	8,747	8,362	7,792	7,206	6,413
8 meters	Far	8,536	8,693	9,023	9,476	10,349	11,65	14,787
	Near	7,531	7,414	7,194	6,937	6,549	6,139	5,565
5 meters	Far	5,19	5,243	5,353	5,499	5,761	6,115	6,823
	Near	4,825	4,78	4,694	4,59	4,428	4,249	3,984
4 meters	Far	4,115	4,147	4,212	4,297	4,448	4,646	5,022
	Near	3,892	3,864	3,81	3,745	3,641	3,525	3,349

**F = 75 mm**

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		114,76	90,525	63,891	46,711	32,295	23,614	16,368
3 meters	Far	3,059	3,075	3,108	3,15	3,224	3,318	3,49
	Near	2,944	2,929	2,9	2,865	2,809	2,745	2,645
2.5 meters	Far	2,538	2,548	2,569	2,596	2,643	2,701	2,806
	Near	2,463	2,454	2,435	2,412	2,374	2,331	2,263
2 meters	Far	2,022	2,028	2,04	2,055	2,081	2,113	2,17
	Near	1,979	1,973	1,962	1,949	1,927	1,901	1,86
1.5 meters	Far	1,51	1,513	1,518	1,525	1,537	1,551	1,576
	Near	1,49	1,488	1,482	1,476	1,466	1,453	1,433
1.27 meters	Far	1,276	1,278	1,281	1,285	1,292	1,301	1,316
	Near	1,264	1,262	1,259	1,255	1,249	1,241	1,228

**F = 75 mm**

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		224,425	176,954	124,776	91,114	62,867	45,858	31,66
30 meters	Far	34,493	35,943	39,211	44,275	56,501	84,724	523,009
	Near	26,553	25,759	24,321	22,731	20,499	18,344	15,622
10 meters	Far	10,426	10,547	10,796	11,126	11,726	12,543	14,201
	Near	9,608	9,508	9,317	9,088	8,73	8,337	7,757
8 meters	Far	8,264	8,338	8,489	8,687	9,041	9,507	10,407
	Near	7,753	7,689	7,566	7,418	7,183	6,92	6,525
5 meters	Far	5,095	5,121	5,174	5,242	5,359	5,508	5,778
	Near	4,909	4,885	4,838	4,781	4,689	4,583	4,418
4 meters	Far	4,058	4,073	4,105	4,146	4,215	4,303	4,457
	Near	3,944	3,929	3,901	3,865	3,808	3,741	3,635

**F = 105 mm**

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		224,425	176,954	124,776	91,114	62,867	45,858	31,66
3 meters	Far	3,03	3,038	3,054	3,075	3,11	3,153	3,229
	Near	2,971	2,963	2,948	2,929	2,899	2,863	2,805
2.5 meters	Far	2,519	2,524	2,535	2,548	2,57	2,598	2,646
	Near	2,481	2,476	2,466	2,454	2,434	2,41	2,372
2 meters	Far	2,011	2,014	2,02	2,027	2,04	2,056	2,082
	Near	1,989	1,986	1,981	1,973	1,962	1,948	1,925
1.5 meters	Far	1,505	1,506	1,509	1,513	1,518	1,525	1,537
	Near	1,495	1,494	1,491	1,488	1,482	1,476	1,465
1.27 meters	Far	1,273	1,274	1,276	1,278	1,281	1,286	1,293
	Near	1,267	1,266	1,264	1,262	1,259	1,255	1,248

F = 105 mm

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		370,961	292,469	206,167	150,482	103,753	75,613	52,122
30 meters	Far	32,562	33,328	34,957	37,246	41,829	49,105	69,268
	Near	27,815	27,282	26,285	25,134	23,423	21,655	19,243
10 meters	Far	10,253	10,324	10,466	10,65	10,974	11,391	12,165
	Near	9,759	9,697	9,575	9,427	9,19	8,921	8,507
8 meters	Far	8,158	8,201	8,289	8,401	8,597	8,845	9,293
	Near	7,849	7,809	7,732	7,637	7,484	7,309	7,034
5 meters	Far	5,057	5,072	5,103	5,143	5,211	5,294	5,441
	Near	4,944	4,93	4,901	4,865	4,807	4,739	4,63
4 meters	Far	4,035	4,044	4,063	4,087	4,127	4,177	4,263
	Near	3,966	3,957	3,939	3,917	3,881	3,839	3,77

F = 135 mm

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		370,961	292,469	206,167	150,482	103,753	75,613	52,122
3 meters	Far	3,018	3,023	3,032	3,045	3,065	3,09	3,133
	Near	2,982	2,978	2,968	2,957	2,938	2,915	2,879
2.5 meters	Far	2,512	2,515	2,521	2,529	2,542	2,558	2,586
	Near	2,489	2,486	2,479	2,472	2,46	2,445	2,421
2 meters	Far	2,007	2,008	2,012	2,016	2,024	2,033	2,049
	Near	1,993	1,992	1,988	1,984	1,977	1,968	1,954
1.5 meters	Far	1,503	1,504	1,506	1,508	1,511	1,515	1,522
	Near	1,497	1,496	1,495	1,492	1,489	1,485	1,479
1.27 meters	Far	1,272	1,272	1,273	1,275	1,277	1,279	1,284
	Near	1,268	1,268	1,267	1,265	1,263	1,261	1,257

F = 135 mm

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		657,162	518,088	365,143	266,456	183,634	133,756	92,116
30 meters	Far	31,393	31,79	32,607	33,694	35,684	38,414	44,042
	Near	28,726	28,403	27,783	27,043	25,892	24,634	22,791
10 meters	Far	10,141	10,18	10,257	10,356	10,526	10,738	11,112
	Near	9,863	9,827	9,756	9,668	9,525	9,36	9,097
8 meters	Far	8,088	8,112	8,16	8,221	8,326	8,455	8,679
	Near	7,914	7,891	7,846	7,791	7,7	7,594	7,424
5 meters	Far	5,032	5,041	5,058	5,08	5,117	5,162	5,239
	Near	4,969	4,96	4,944	4,923	4,889	4,849	4,784
4 meters	Far	4,019	4,025	4,035	4,048	4,071	4,098	4,144
	Near	3,981	3,976	3,966	3,953	3,932	3,907	3,867

F = 180 mm



Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		657,162	518,088	365,143	266,456	183,634	133,756	92,116
3 meters	Far	3,01	3,013	3,018	3,025	3,036	3,05	3,074
	Near	2,99	2,987	2,982	2,976	2,965	2,952	2,93
2.5 meters	Far	2,507	2,508	2,512	2,516	2,524	2,532	2,547
	Near	2,494	2,492	2,488	2,484	2,477	2,469	2,455
2 meters	Far	2,004	2,005	2,007	2,009	2,013	2,019	2,027
	Near	1,996	1,995	1,993	1,991	1,987	1,982	1,974
1.5 meters	Far	1,502	1,502	1,503	1,504	1,506	1,509	1,512
	Near	1,498	1,498	1,497	1,496	1,494	1,492	1,488
1.27 meters	Far	1,271	1,271	1,272	1,273	1,274	1,275	1,278
	Near	1,269	1,269	1,268	1,267	1,266	1,265	1,262

F = 180 mm

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		1028,396	810,774	571,34	416,877	287,255	209,188	144,011
30 meters	Far	30,875	31,119	31,614	32,259	33,397	34,876	37,662
	Near	29,174	28,959	28,544	28,04	27,237	26,333	24,952
10 meters	Far	10,09	10,114	10,163	10,225	10,33	10,459	10,682
	Near	9,912	9,888	9,842	9,785	9,691	9,581	9,403
8 meters	Far	8,056	8,071	8,102	8,14	8,205	8,284	8,42
	Near	7,945	7,93	7,901	7,865	7,806	7,736	7,621
5 meters	Far	5,02	5,026	5,037	5,051	5,074	5,102	5,15
	Near	4,98	4,974	4,964	4,951	4,929	4,902	4,859
4 meters	Far	4,012	4,016	4,022	4,031	4,045	4,062	4,091
	Near	3,988	3,984	3,978	3,97	3,956	3,94	3,914

F = 225 mm

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		1028,396	810,774	571,34	416,877	287,255	209,188	144,011
3 meters	Far	3,006	3,008	3,012	3,016	3,023	3,032	3,047
	Near	2,994	2,992	2,989	2,984	2,977	2,969	2,955
2.5 meters	Far	2,504	2,505	2,507	2,51	2,515	2,521	2,53
	Near	2,496	2,495	2,493	2,49	2,485	2,48	2,471
2 meters	Far	2,002	2,003	2,004	2,006	2,009	2,012	2,017
	Near	1,998	1,997	1,996	1,994	1,992	1,988	1,983
1.5 meters	Far	1,501	1,501	1,502	1,503	1,504	1,505	1,508
	Near	1,499	1,499	1,498	1,497	1,496	1,495	1,492
1.27 meters	Far	1,271	1,271	1,271	1,272	1,272	1,273	1,275
	Near	1,269	1,269	1,269	1,268	1,268	1,267	1,265

F = 225 mm

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		2268,899	1819,81	1282,405	935,477	644,497	469,28	322,982
30 meters	Far	30,39	30,488	30,698	30,966	31,423	31,991	32,986
	Near	29,62	29,527	29,334	29,094	28,703	28,246	27,518
10 meters	Far	10,04	10,051	10,072	10,099	10,144	10,199	10,293
	Near	9,96	9,95	9,929	9,903	9,86	9,809	9,725
8 meters	Far	8,025	8,032	8,045	8,062	8,09	8,124	8,182
	Near	7,975	7,969	7,956	7,939	7,912	7,88	7,827
5 meters	Far	5,009	5,011	5,016	5,022	5,033	5,045	5,066
	Near	4,991	4,989	4,984	4,978	4,968	4,956	4,936
4 meters	Far	4,006	4,007	4,01	4,014	4,02	4,027	4,04
	Near	3,994	3,993	3,99	3,986	3,98	3,973	3,961

**F = 340 mm**

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		2268,899	1819,81	1282,405	935,477	644,497	469,28	322,982
3 meters	Far	3,003	3,004	3,005	3,007	3,01	3,014	3,021
	Near	2,997	2,996	2,995	2,993	2,99	2,986	2,98
2.5 meters	Far	2,502	2,502	2,503	2,505	2,507	2,509	2,513
	Near	2,498	2,498	2,497	2,495	2,493	2,491	2,487
2 meters	Far	2,001	2,001	2,002	2,003	2,004	2,005	2,008
	Near	1,999	1,999	1,998	1,997	1,996	1,995	1,992
1.5 meters	Far	1,501	1,501	1,501	1,501	1,502	1,502	1,504
	Near	1,5	1,499	1,499	1,499	1,498	1,498	1,496
1.27 meters	Far	1,27	1,27	1,271	1,271	1,271	1,271	1,272
	Near	1,27	1,27	1,269	1,269	1,269	1,269	1,268

**F = 340 mm**

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		3269,341	2906,957	2047,963	1493,778	1028,937	749,167	515,601
30 meters	Far	30,27	30,304	30,433	30,597	30,876	31,217	31,803
	Near	29,735	29,702	29,579	29,426	29,174	28,877	28,395
10 meters	Far	10,028	10,032	10,045	10,062	10,09	10,124	10,181
	Near	9,972	9,969	9,956	9,939	9,912	9,879	9,826
8 meters	Far	8,018	8,02	8,028	8,039	8,056	8,077	8,113
	Near	7,983	7,98	7,972	7,962	7,945	7,924	7,891
5 meters	Far	5,006	5,007	5,01	5,014	5,02	5,028	5,041
	Near	4,994	4,993	4,99	4,986	4,98	4,972	4,96
4 meters	Far	4,004	4,004	4,006	4,009	4,012	4,017	4,025
	Near	3,996	3,996	3,994	3,992	3,988	3,983	3,976

F = 435 mm

Distance in meters | Confusion circle : 0.013 mm

APERTURE		T 4.2	T 5.60	T 8.00	T11.00	T16.00	T22.00	T32.00
HYPERFOCAL   DISTANCE		3269,341	2906,957	2047,963	1493,778	1028,937	749,167	515,601
3 meters	Far	3,002	3,002	3,003	3,004	3,006	3,009	3,013
	Near	2,998	2,998	2,997	2,996	2,994	2,991	2,987
2.5 meters	Far	2,501	2,501	2,502	2,503	2,504	2,506	2,508
	Near	2,499	2,499	2,498	2,497	2,496	2,494	2,492
2 meters	Far	2,001	2,001	2,001	2,002	2,002	2,003	2,005
	Near	1,999	1,999	1,999	1,998	1,998	1,997	1,995
1.5 meters	Far	1,5	1,5	1,501	1,501	1,501	1,502	1,502
	Near	1,5	1,5	1,499	1,499	1,499	1,498	1,498
1.22 meters	Far	1,27	1,27	1,27	1,27	1,271	1,271	1,271
	Near	1,27	1,27	1,27	1,27	1,269	1,269	1,269

F = 435 mm