



Focal Length 18 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	8.09	7.231	6.467	5.785

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	8.071	Infinity	7.213	Infinity	6.448	Infinity	5.767	Infinity
40.00	6.775	Infinity	6.166	Infinity	5.603	Infinity	5.086	Infinity
20.00	5.837	Infinity	5.384	Infinity	4.954	Infinity	4.55	Infinity
13.00	5.08	Infinity	4.736	Infinity	4.404	Infinity	4.085	Infinity
10.00	4.572	Infinity	4.294	Infinity	4.022	Infinity	3.756	Infinity
8.00	4.124	685.156	3.899	Infinity	3.676	Infinity	3.455	Infinity
7.00	3.855	49.278	3.659	206.238	3.463	Infinity	3.267	Infinity
6.00	3.546	22.028	3.381	33.201	3.214	77.79	3.047	Infinity
5.00	3.188	12.417	3.056	15.271	2.921	20.626	2.784	34.184
4.50	2.987	9.62	2.872	11.229	2.753	13.846	2.632	18.8
4.00	2.768	7.507	2.67	8.439	2.569	9.815	2.465	12.034
3.50	2.531	5.854	2.45	6.396	2.365	7.142	2.278	8.228
3.00	2.27	4.526	2.206	4.836	2.139	5.241	2.069	5.789
2.80	2.159	4.065	2.102	4.31	2.041	4.625	1.978	5.042
2.60	2.044	3.638	1.993	3.83	1.939	4.074	1.882	4.389
2.40	1.924	3.241	1.879	3.39	1.832	3.576	1.782	3.813
2.20	1.799	2.87	1.761	2.985	1.72	3.125	1.676	3.301
2.00	1.669	2.524	1.637	2.61	1.602	2.715	1.565	2.844
1.90	1.602	2.36	1.572	2.434	1.541	2.523	1.507	2.633
1.80	1.533	2.2	1.507	2.264	1.478	2.34	1.447	2.432
1.70	1.463	2.046	1.439	2.1	1.414	2.164	1.386	2.241
1.60	1.392	1.896	1.371	1.942	1.348	1.995	1.323	2.06
1.50	1.319	1.751	1.3	1.789	1.28	1.834	1.258	1.887
1.40	1.244	1.611	1.228	1.642	1.21	1.678	1.191	1.721
1.30	1.168	1.474	1.154	1.499	1.139	1.529	1.122	1.563
1.20	1.09	1.341	1.078	1.362	1.065	1.385	1.051	1.412
1.10	1.01	1.213	1	1.228	0.99	1.247	0.978	1.268
1.00	0.928	1.087	0.92	1.099	0.912	1.113	0.902	1.129
0.95	0.887	1.026	0.88	1.036	0.872	1.048	0.864	1.062
0.90	0.845	0.966	0.839	0.975	0.832	0.985	0.824	0.997
0.85	0.802	0.906	0.797	0.914	0.791	0.922	0.784	0.932
0.80	0.759	0.847	0.755	0.854	0.749	0.861	0.744	0.869
0.75	0.716	0.789	0.712	0.794	0.707	0.8	0.703	0.807
0.70	0.672	0.732	0.668	0.736	0.665	0.741	0.661	0.747
0.65	0.627	0.676	0.624	0.679	0.621	0.683	0.618	0.687
0.60	0.582	0.62	0.58	0.623	0.577	0.626	0.575	0.629
0.55	0.536	0.565	0.535	0.567	0.533	0.569	0.531	0.572
0.50	0.49	0.511	0.489	0.512	0.487	0.514	0.486	0.516
0.45	0.443	0.457	0.442	0.458	0.441	0.459	0.44	0.461
0.40	0.396	0.405	0.395	0.405	0.395	0.406	0.394	0.406
0.35	0.348	0.352	0.347	0.353	0.347	0.353	0.347	0.353



<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
5.178	4.638	4.156	3.727	3.344

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
5.16	Infinity	4.619	Infinity	4.137	Infinity	3.708	Infinity	3.326	Infinity
4.613	Infinity	4.18	Infinity	3.785	Infinity	3.426	Infinity	3.1	Infinity
4.17	Infinity	3.817	Infinity	3.488	Infinity	3.183	Infinity	2.903	Infinity
3.78	Infinity	3.49	Infinity	3.216	Infinity	2.958	Infinity	2.716	Infinity
3.499	Infinity	3.251	Infinity	3.014	Infinity	2.788	Infinity	2.575	Infinity
3.238	Infinity	3.027	Infinity	2.822	Infinity	2.625	Infinity	2.437	Infinity
3.074	Infinity	2.885	Infinity	2.7	Infinity	2.52	Infinity	2.347	Infinity
2.88	Infinity	2.714	Infinity	2.552	Infinity	2.392	Infinity	2.237	Infinity
2.646	133.531	2.507	Infinity	2.369	Infinity	2.233	Infinity	2.099	Infinity
2.51	31.596	2.386	138.099	2.262	Infinity	2.138	Infinity	2.016	Infinity
2.358	16.172	2.25	26.495	2.14	96.031	2.031	Infinity	1.921	Infinity
2.188	9.938	2.096	12.998	2.002	19.975	1.907	51.169	1.812	Infinity
1.996	6.566	1.92	7.743	1.843	9.72	1.764	13.69	1.683	25.56
1.912	5.614	1.843	6.442	1.772	7.736	1.7	10.023	1.626	15.096
1.823	4.81	1.761	5.397	1.697	6.262	1.631	7.657	1.564	10.255
1.73	4.122	1.675	4.538	1.617	5.124	1.558	6.005	1.498	7.465
1.631	3.526	1.582	3.82	1.532	4.219	1.48	4.786	1.426	5.65
1.526	3.005	1.484	3.211	1.441	3.481	1.395	3.85	1.348	4.376
1.471	2.768	1.433	2.94	1.393	3.162	1.351	3.458	1.307	3.871
1.415	2.546	1.38	2.688	1.343	2.869	1.304	3.107	1.264	3.431
1.356	2.336	1.325	2.453	1.291	2.6	1.256	2.791	1.219	3.045
1.296	2.138	1.268	2.233	1.238	2.353	1.206	2.505	1.172	2.703
1.234	1.95	1.209	2.028	1.182	2.124	1.154	2.244	1.124	2.398
1.17	1.773	1.148	1.835	1.124	1.911	1.099	2.006	1.072	2.125
1.104	1.605	1.085	1.654	1.064	1.714	1.042	1.787	1.019	1.878
1.036	1.445	1.019	1.483	1.002	1.53	0.983	1.586	0.962	1.654
0.965	1.293	0.951	1.322	0.936	1.357	0.92	1.4	0.903	1.451
0.892	1.148	0.881	1.17	0.869	1.196	0.855	1.227	0.841	1.264
0.854	1.078	0.844	1.097	0.833	1.119	0.822	1.146	0.809	1.177
0.816	1.01	0.807	1.026	0.798	1.045	0.787	1.067	0.776	1.093
0.777	0.944	0.77	0.957	0.761	0.973	0.752	0.991	0.742	1.013
0.738	0.879	0.731	0.89	0.724	0.903	0.716	0.918	0.707	0.935
0.697	0.815	0.692	0.824	0.685	0.835	0.678	0.847	0.671	0.861
0.656	0.753	0.652	0.76	0.646	0.769	0.64	0.778	0.634	0.79
0.615	0.692	0.611	0.698	0.606	0.704	0.601	0.712	0.596	0.721
0.572	0.633	0.569	0.637	0.565	0.642	0.561	0.648	0.557	0.655
0.529	0.575	0.526	0.578	0.523	0.581	0.52	0.586	0.517	0.591
0.484	0.518	0.482	0.52	0.48	0.523	0.478	0.526	0.476	0.529
0.439	0.462	0.438	0.463	0.437	0.465	0.435	0.467	0.433	0.469
0.393	0.407	0.392	0.408	0.392	0.409	0.391	0.41	0.389	0.412
0.346	0.354	0.346	0.354	0.345	0.355	0.345	0.356	0.344	0.356



<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
3.004	2.7	2.43	2.189	1.974

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
2.985	Infinity	2.682	Infinity	2.411	Infinity	2.171	Infinity	1.956	Infinity
2.805	Infinity	2.538	Infinity	2.296	Infinity	2.079	Infinity	1.883	Infinity
2.645	Infinity	2.408	Infinity	2.192	Infinity	1.994	Infinity	1.815	Infinity
2.491	Infinity	2.282	Infinity	2.089	Infinity	1.911	Infinity	1.747	Infinity
2.373	Infinity	2.184	Infinity	2.008	Infinity	1.844	Infinity	1.692	Infinity
2.257	Infinity	2.087	Infinity	1.927	Infinity	1.777	Infinity	1.637	Infinity
2.181	Infinity	2.023	Infinity	1.874	Infinity	1.732	Infinity	1.6	Infinity
2.087	Infinity	1.943	Infinity	1.806	Infinity	1.676	Infinity	1.552	Infinity
1.969	Infinity	1.842	Infinity	1.72	Infinity	1.602	Infinity	1.491	Infinity
1.897	Infinity	1.78	Infinity	1.666	Infinity	1.557	Infinity	1.452	Infinity
1.814	Infinity	1.707	Infinity	1.604	Infinity	1.503	Infinity	1.407	Infinity
1.717	Infinity	1.623	Infinity	1.53	Infinity	1.44	Infinity	1.352	Infinity
1.603	2113.283	1.522	Infinity	1.442	Infinity	1.363	Infinity	1.285	Infinity
1.551	35.66	1.476	Infinity	1.401	Infinity	1.327	Infinity	1.254	Infinity
1.496	16.715	1.427	59.462	1.357	Infinity	1.289	Infinity	1.22	Infinity
1.436	10.324	1.373	18.333	1.309	162.655	1.246	Infinity	1.183	Infinity
1.37	7.113	1.314	10.094	1.257	19.378	1.199	Infinity	1.141	Infinity
1.3	5.182	1.25	6.561	1.199	9.43	1.147	18.899	1.095	Infinity
1.262	4.479	1.215	5.457	1.168	7.272	1.119	11.749	1.07	40.157
1.222	3.893	1.179	4.598	1.135	5.799	1.089	8.275	1.044	16.243
1.181	3.396	1.141	3.911	1.1	4.73	1.058	6.222	1.015	9.759
1.137	2.971	1.101	3.349	1.063	3.918	1.025	4.867	0.985	6.739
1.092	2.602	1.059	2.88	1.025	3.281	0.989	3.904	0.953	4.992
1.044	2.279	1.015	2.484	0.984	2.768	0.952	3.186	0.919	3.853
0.994	1.994	0.968	2.144	0.94	2.346	0.912	2.629	0.882	3.052
0.941	1.74	0.918	1.849	0.894	1.992	0.869	2.185	0.843	2.458
0.885	1.513	0.866	1.592	0.845	1.692	0.823	1.823	0.801	2
0.826	1.309	0.81	1.364	0.793	1.433	0.774	1.521	0.755	1.636
0.795	1.215	0.781	1.26	0.765	1.317	0.748	1.388	0.731	1.48
0.764	1.124	0.75	1.162	0.736	1.209	0.722	1.266	0.706	1.339
0.731	1.038	0.719	1.069	0.707	1.107	0.694	1.153	0.68	1.211
0.697	0.956	0.687	0.981	0.676	1.011	0.665	1.048	0.652	1.093
0.663	0.878	0.654	0.898	0.645	0.922	0.634	0.95	0.624	0.986
0.627	0.803	0.62	0.819	0.612	0.837	0.603	0.859	0.594	0.886
0.59	0.731	0.584	0.743	0.578	0.757	0.57	0.774	0.562	0.794
0.553	0.662	0.548	0.671	0.542	0.682	0.536	0.694	0.53	0.709
0.513	0.596	0.51	0.603	0.505	0.61	0.501	0.619	0.495	0.63
0.473	0.533	0.47	0.537	0.467	0.543	0.463	0.549	0.459	0.556
0.431	0.472	0.429	0.475	0.427	0.478	0.424	0.482	0.422	0.487
0.388	0.413	0.387	0.415	0.385	0.417	0.384	0.42	0.382	0.422
0.344	0.357	0.343	0.358	0.342	0.359	0.341	0.36	0.34	0.362



<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
1.783	1.613	1.461	1.326	1.206

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
1.765	Infinity	1.594	Infinity	1.443	Infinity	1.308	Infinity	1.187	Infinity
1.707	Infinity	1.548	Infinity	1.406	Infinity	1.278	Infinity	1.164	Infinity
1.652	Infinity	1.504	Infinity	1.371	Infinity	1.25	Infinity	1.141	Infinity
1.597	Infinity	1.46	Infinity	1.335	Infinity	1.221	Infinity	1.118	Infinity
1.552	Infinity	1.424	Infinity	1.305	Infinity	1.197	Infinity	1.099	Infinity
1.507	Infinity	1.386	Infinity	1.275	Infinity	1.173	Infinity	1.079	Infinity
1.476	Infinity	1.361	Infinity	1.254	Infinity	1.156	Infinity	1.065	Infinity
1.437	Infinity	1.328	Infinity	1.227	Infinity	1.133	Infinity	1.047	Infinity
1.385	Infinity	1.285	Infinity	1.191	Infinity	1.104	Infinity	1.022	Infinity
1.352	Infinity	1.258	Infinity	1.169	Infinity	1.085	Infinity	1.007	Infinity
1.314	Infinity	1.225	Infinity	1.141	Infinity	1.062	Infinity	0.988	Infinity
1.267	Infinity	1.186	Infinity	1.108	Infinity	1.034	Infinity	0.964	Infinity
1.21	Infinity	1.137	Infinity	1.066	Infinity	0.999	Infinity	0.935	Infinity
1.183	Infinity	1.114	Infinity	1.047	Infinity	0.982	Infinity	0.921	Infinity
1.153	Infinity	1.088	Infinity	1.025	Infinity	0.963	Infinity	0.905	Infinity
1.121	Infinity	1.06	Infinity	1	Infinity	0.942	Infinity	0.887	Infinity
1.084	Infinity	1.028	Infinity	0.973	Infinity	0.919	Infinity	0.867	Infinity
1.044	Infinity	0.992	Infinity	0.941	Infinity	0.892	Infinity	0.843	Infinity
1.021	Infinity	0.972	Infinity	0.924	Infinity	0.877	Infinity	0.831	Infinity
0.998	Infinity	0.952	Infinity	0.906	Infinity	0.861	Infinity	0.817	Infinity
0.972	28.272	0.929	Infinity	0.886	Infinity	0.843	Infinity	0.802	Infinity
0.945	12.101	0.905	150.694	0.865	Infinity	0.825	Infinity	0.785	Infinity
0.917	7.349	0.879	16.172	0.842	Infinity	0.804	Infinity	0.767	Infinity
0.886	5.077	0.851	8.018	0.817	24.436	0.782	Infinity	0.748	Infinity
0.852	3.745	0.821	5.076	0.79	8.632	0.758	46.771	0.727	Infinity
0.816	2.87	0.789	3.56	0.761	4.93	0.732	8.933	0.703	176.584
0.777	2.252	0.753	2.634	0.728	3.279	0.703	4.582	0.677	8.554
0.735	1.791	0.714	2.011	0.693	2.343	0.671	2.9	0.648	4.013
0.713	1.602	0.694	1.769	0.674	2.013	0.653	2.395	0.633	3.076
0.689	1.434	0.672	1.562	0.654	1.741	0.635	2.008	0.616	2.445
0.665	1.285	0.649	1.382	0.633	1.514	0.616	1.703	0.598	1.991
0.639	1.15	0.625	1.224	0.61	1.321	0.595	1.455	0.579	1.65
0.612	1.029	0.6	1.084	0.587	1.156	0.573	1.251	0.559	1.383
0.584	0.919	0.573	0.96	0.562	1.012	0.55	1.079	0.538	1.169
0.554	0.819	0.545	0.848	0.535	0.885	0.525	0.932	0.515	0.994
0.523	0.727	0.515	0.748	0.507	0.774	0.499	0.806	0.49	0.847
0.49	0.642	0.484	0.657	0.478	0.675	0.471	0.696	0.463	0.723
0.455	0.564	0.451	0.574	0.446	0.586	0.44	0.6	0.435	0.617
0.419	0.492	0.415	0.498	0.412	0.506	0.408	0.514	0.404	0.524
0.38	0.425	0.378	0.429	0.375	0.433	0.373	0.438	0.37	0.443
0.339	0.363	0.338	0.365	0.336	0.367	0.335	0.369	0.333	0.372



<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
1.098	1.003	0.918	0.842

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
1.08	Infinity	0.984	Infinity	0.899	Infinity	0.823	Infinity
1.061	Infinity	0.97	Infinity	0.887	Infinity	0.814	Infinity
1.043	Infinity	0.955	Infinity	0.876	Infinity	0.805	Infinity
1.025	Infinity	0.94	Infinity	0.864	Infinity	0.795	Infinity
1.009	Infinity	0.928	Infinity	0.854	Infinity	0.787	Infinity
0.993	Infinity	0.915	Infinity	0.844	Infinity	0.779	Infinity
0.982	Infinity	0.906	Infinity	0.836	Infinity	0.773	Infinity
0.967	Infinity	0.894	Infinity	0.826	Infinity	0.765	Infinity
0.947	Infinity	0.877	Infinity	0.813	Infinity	0.754	Infinity
0.934	Infinity	0.867	Infinity	0.804	Infinity	0.747	Infinity
0.918	Infinity	0.854	Infinity	0.794	Infinity	0.739	Infinity
0.899	Infinity	0.838	Infinity	0.781	Infinity	0.728	Infinity
0.874	Infinity	0.817	Infinity	0.764	Infinity	0.714	Infinity
0.862	Infinity	0.807	Infinity	0.755	Infinity	0.707	Infinity
0.849	Infinity	0.796	Infinity	0.746	Infinity	0.699	Infinity
0.834	Infinity	0.783	Infinity	0.735	Infinity	0.69	Infinity
0.817	Infinity	0.769	Infinity	0.723	Infinity	0.68	Infinity
0.797	Infinity	0.752	Infinity	0.709	Infinity	0.668	Infinity
0.786	Infinity	0.742	Infinity	0.701	Infinity	0.661	Infinity
0.774	Infinity	0.732	Infinity	0.692	Infinity	0.654	Infinity
0.761	Infinity	0.721	Infinity	0.682	Infinity	0.646	Infinity
0.746	Infinity	0.709	Infinity	0.672	Infinity	0.637	Infinity
0.731	Infinity	0.695	Infinity	0.661	Infinity	0.627	Infinity
0.714	Infinity	0.68	Infinity	0.648	Infinity	0.616	Infinity
0.695	Infinity	0.664	Infinity	0.634	Infinity	0.604	Infinity
0.675	Infinity	0.646	Infinity	0.618	Infinity	0.59	Infinity
0.651	Infinity	0.626	Infinity	0.6	Infinity	0.575	Infinity
0.626	7.304	0.603	232.613	0.58	Infinity	0.557	Infinity
0.611	4.614	0.59	11.263	0.568	Infinity	0.547	Infinity
0.596	3.281	0.576	5.497	0.556	27.848	0.536	Infinity
0.58	2.485	0.562	3.508	0.543	6.86	0.525	Infinity
0.563	1.955	0.546	2.5	0.529	3.732	0.512	9.074
0.545	1.578	0.53	1.891	0.514	2.472	0.499	3.897
0.525	1.296	0.512	1.484	0.498	1.79	0.484	2.374
0.504	1.076	0.492	1.191	0.48	1.364	0.468	1.646
0.481	0.901	0.471	0.972	0.46	1.072	0.45	1.22
0.456	0.757	0.448	0.801	0.439	0.859	0.43	0.939
0.429	0.638	0.422	0.664	0.415	0.697	0.408	0.741
0.399	0.537	0.394	0.552	0.389	0.57	0.384	0.593
0.367	0.45	0.364	0.458	0.36	0.467	0.356	0.479
0.331	0.375	0.329	0.379	0.327	0.383	0.325	0.388



Focal Length 21 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	11.049	9.865	8.81	7.87

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	11.027	Infinity	9.843	Infinity	8.788	Infinity	7.849	Infinity
40.00	8.707	Infinity	7.958	Infinity	7.26	Infinity	6.612	Infinity
20.00	7.193	Infinity	6.679	Infinity	6.184	Infinity	5.712	Infinity
13.00	6.059	Infinity	5.693	Infinity	5.333	Infinity	4.981	Infinity
10.00	5.337	101.833	5.054	Infinity	4.77	Infinity	4.489	Infinity
8.00	4.727	28.027	4.505	40.742	4.281	83.375	4.055	Infinity
7.00	4.37	18.468	4.181	23.207	3.988	32.651	3.793	60.346
6.00	3.97	12.695	3.815	14.746	3.655	18.029	3.492	24.073
5.00	3.52	8.831	3.399	9.764	3.273	11.082	3.143	13.074
4.50	3.272	7.342	3.168	7.969	3.059	8.818	2.946	10.022
4.00	3.007	6.064	2.92	6.48	2.828	7.024	2.733	7.758
3.50	2.724	4.955	2.653	5.225	2.578	5.568	2.499	6.013
3.00	2.42	3.984	2.365	4.153	2.306	4.363	2.244	4.626
2.80	2.292	3.628	2.243	3.767	2.191	3.937	2.135	4.148
2.60	2.16	3.29	2.117	3.402	2.071	3.538	2.022	3.706
2.40	2.025	2.967	1.987	3.057	1.947	3.165	1.904	3.296
2.20	1.884	2.658	1.852	2.729	1.818	2.814	1.781	2.915
2.00	1.74	2.364	1.713	2.418	1.684	2.483	1.653	2.56
1.90	1.666	2.221	1.642	2.269	1.615	2.325	1.587	2.392
1.80	1.591	2.082	1.569	2.123	1.545	2.172	1.519	2.229
1.70	1.514	1.945	1.495	1.981	1.473	2.022	1.45	2.071
1.60	1.437	1.812	1.419	1.842	1.4	1.877	1.38	1.919
1.50	1.358	1.681	1.343	1.706	1.326	1.736	1.308	1.771
1.40	1.278	1.553	1.264	1.574	1.25	1.599	1.234	1.628
1.30	1.196	1.427	1.185	1.445	1.172	1.465	1.159	1.489
1.20	1.113	1.304	1.104	1.319	1.093	1.335	1.082	1.354
1.10	1.029	1.184	1.021	1.195	1.012	1.208	1.003	1.223
1.00	0.943	1.066	0.937	1.075	0.93	1.085	0.922	1.096
0.95	0.9	1.008	0.894	1.015	0.888	1.024	0.881	1.034
0.90	0.856	0.95	0.851	0.957	0.845	0.964	0.839	0.973
0.85	0.812	0.893	0.807	0.899	0.802	0.905	0.797	0.913
0.80	0.767	0.837	0.763	0.842	0.759	0.847	0.754	0.853
0.75	0.722	0.781	0.719	0.785	0.715	0.789	0.711	0.795
0.70	0.677	0.726	0.674	0.729	0.671	0.733	0.668	0.737
0.65	0.631	0.671	0.629	0.673	0.626	0.676	0.624	0.68
0.60	0.585	0.616	0.583	0.618	0.581	0.621	0.579	0.624
0.55	0.538	0.563	0.537	0.564	0.535	0.566	0.534	0.568



<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
7.033	6.287	5.623	5.031	4.503

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
7.011	Infinity	6.266	Infinity	5.601	Infinity	5.009	Infinity	4.482	Infinity
6.013	Infinity	5.46	Infinity	4.953	Infinity	4.488	Infinity	4.063	Infinity
5.263	Infinity	4.838	Infinity	4.439	Infinity	4.065	Infinity	3.716	Infinity
4.639	Infinity	4.309	Infinity	3.993	Infinity	3.69	Infinity	3.403	Infinity
4.212	Infinity	3.94	Infinity	3.676	Infinity	3.42	Infinity	3.174	Infinity
3.829	Infinity	3.605	Infinity	3.385	Infinity	3.168	Infinity	2.958	Infinity
3.596	1407.079	3.399	Infinity	3.203	Infinity	3.01	Infinity	2.821	Infinity
3.326	38.717	3.158	123.646	2.99	Infinity	2.822	Infinity	2.656	Infinity
3.009	16.398	2.873	23.002	2.734	42.206	2.595	755.693	2.456	Infinity
2.829	11.847	2.709	14.912	2.587	21.074	2.463	39.556	2.338	5354.227
2.633	8.796	2.53	10.359	2.424	12.963	2.316	18.11	2.206	32.891
2.417	6.608	2.331	7.44	2.242	8.673	2.15	10.674	2.057	14.444
2.179	4.963	2.11	5.409	2.038	6.019	1.963	6.899	1.886	8.267
2.076	4.414	2.014	4.759	1.949	5.22	1.881	5.863	1.811	6.811
1.969	3.914	1.914	4.18	1.856	4.528	1.795	4.997	1.732	5.661
1.858	3.458	1.809	3.661	1.758	3.921	1.703	4.263	1.647	4.73
1.741	3.039	1.699	3.192	1.654	3.385	1.607	3.633	1.557	3.961
1.619	2.654	1.583	2.767	1.545	2.908	1.504	3.086	1.461	3.314
1.556	2.472	1.523	2.57	1.488	2.689	1.451	2.838	1.411	3.028
1.491	2.298	1.461	2.38	1.429	2.481	1.395	2.606	1.359	2.763
1.425	2.13	1.398	2.2	1.369	2.284	1.338	2.388	1.306	2.518
1.357	1.968	1.333	2.026	1.307	2.097	1.279	2.183	1.25	2.289
1.288	1.812	1.267	1.861	1.243	1.919	1.219	1.989	1.192	2.075
1.217	1.662	1.198	1.702	1.178	1.749	1.156	1.806	1.133	1.875
1.144	1.516	1.128	1.549	1.11	1.587	1.091	1.633	1.071	1.687
1.069	1.376	1.055	1.402	1.04	1.432	1.024	1.468	1.006	1.511
0.992	1.241	0.981	1.261	0.968	1.285	0.954	1.312	0.94	1.345
0.913	1.11	0.904	1.125	0.894	1.143	0.882	1.164	0.87	1.189
0.873	1.046	0.865	1.059	0.856	1.075	0.846	1.093	0.835	1.114
0.832	0.983	0.825	0.995	0.817	1.008	0.808	1.023	0.798	1.041
0.791	0.921	0.785	0.931	0.778	0.942	0.77	0.955	0.761	0.971
0.749	0.86	0.744	0.869	0.738	0.878	0.731	0.889	0.723	0.902
0.707	0.801	0.702	0.807	0.697	0.815	0.691	0.824	0.685	0.835
0.664	0.742	0.66	0.747	0.655	0.754	0.651	0.761	0.645	0.769
0.62	0.684	0.617	0.688	0.613	0.693	0.609	0.699	0.605	0.706
0.576	0.627	0.574	0.63	0.571	0.634	0.567	0.639	0.564	0.644
0.532	0.57	0.529	0.573	0.527	0.576	0.524	0.58	0.522	0.583



<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
4.034	3.615	3.242	2.91	2.614

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
4.012	Infinity	3.593	Infinity	3.22	Infinity	2.888	Infinity	2.592	Infinity
3.677	Infinity	3.325	Infinity	3.006	Infinity	2.716	Infinity	2.455	Infinity
3.393	Infinity	3.093	Infinity	2.817	Infinity	2.564	Infinity	2.332	Infinity
3.132	Infinity	2.878	Infinity	2.639	Infinity	2.418	Infinity	2.212	Infinity
2.939	Infinity	2.715	Infinity	2.504	Infinity	2.305	Infinity	2.118	Infinity
2.754	Infinity	2.559	Infinity	2.372	Infinity	2.194	Infinity	2.026	Infinity
2.636	Infinity	2.458	Infinity	2.286	Infinity	2.121	Infinity	1.964	Infinity
2.494	Infinity	2.334	Infinity	2.18	Infinity	2.031	Infinity	1.888	Infinity
2.318	Infinity	2.181	Infinity	2.047	Infinity	1.917	Infinity	1.79	Infinity
2.214	Infinity	2.09	Infinity	1.967	Infinity	1.848	Infinity	1.731	Infinity
2.096	436.577	1.986	Infinity	1.876	Infinity	1.768	Infinity	1.661	Infinity
1.962	24.08	1.866	98.967	1.77	Infinity	1.675	Infinity	1.58	Infinity
1.807	10.661	1.727	15.874	1.646	35.704	1.565	Infinity	1.483	Infinity
1.739	8.339	1.665	11.183	1.59	18.254	1.515	64.983	1.439	Infinity
1.666	6.665	1.599	8.341	1.53	11.675	1.461	21.404	1.391	422.123
1.588	5.4	1.528	6.434	1.466	8.22	1.403	12.013	1.339	25.316
1.505	4.412	1.452	5.066	1.397	6.092	1.34	7.913	1.282	11.999
1.417	3.618	1.37	4.037	1.321	4.649	1.271	5.616	1.22	7.36
1.37	3.277	1.326	3.613	1.281	4.089	1.235	4.809	1.187	6.015
1.321	2.966	1.281	3.235	1.24	3.606	1.197	4.147	1.152	5
1.271	2.682	1.234	2.897	1.196	3.186	1.156	3.594	1.115	4.208
1.218	2.421	1.185	2.592	1.151	2.817	1.114	3.126	1.077	3.572
1.164	2.181	1.134	2.316	1.103	2.491	1.07	2.724	1.036	3.05
1.108	1.96	1.081	2.065	1.053	2.2	1.024	2.376	0.993	2.614
1.049	1.754	1.026	1.836	1.001	1.939	0.975	2.071	0.948	2.244
0.988	1.563	0.967	1.626	0.946	1.703	0.923	1.801	0.899	1.927
0.924	1.385	0.907	1.432	0.888	1.49	0.869	1.561	0.848	1.652
0.857	1.218	0.843	1.253	0.828	1.295	0.812	1.347	0.794	1.41
0.823	1.139	0.81	1.169	0.796	1.205	0.782	1.248	0.766	1.301
0.788	1.063	0.776	1.088	0.764	1.118	0.751	1.154	0.737	1.197
0.752	0.988	0.742	1.009	0.731	1.034	0.719	1.064	0.706	1.1
0.715	0.917	0.706	0.934	0.697	0.954	0.686	0.979	0.675	1.008
0.678	0.847	0.67	0.861	0.662	0.878	0.653	0.897	0.643	0.921
0.639	0.779	0.633	0.791	0.626	0.804	0.618	0.819	0.61	0.838
0.6	0.714	0.594	0.723	0.589	0.733	0.582	0.745	0.575	0.76
0.56	0.65	0.555	0.657	0.55	0.665	0.545	0.674	0.539	0.685
0.518	0.588	0.515	0.593	0.511	0.599	0.507	0.606	0.502	0.614





<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
2.35	2.115	1.906	1.72	1.553

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
2.328	Infinity	2.094	Infinity	1.884	Infinity	1.698	Infinity	1.532	Infinity
2.219	Infinity	2.006	Infinity	1.815	Infinity	1.643	Infinity	1.488	Infinity
2.119	Infinity	1.926	Infinity	1.75	Infinity	1.591	Infinity	1.446	Infinity
2.022	Infinity	1.846	Infinity	1.686	Infinity	1.538	Infinity	1.404	Infinity
1.945	Infinity	1.783	Infinity	1.634	Infinity	1.496	Infinity	1.369	Infinity
1.867	Infinity	1.719	Infinity	1.581	Infinity	1.453	Infinity	1.334	Infinity
1.816	Infinity	1.676	Infinity	1.545	Infinity	1.423	Infinity	1.31	Infinity
1.752	Infinity	1.622	Infinity	1.5	Infinity	1.386	Infinity	1.279	Infinity
1.669	Infinity	1.552	Infinity	1.441	Infinity	1.337	Infinity	1.238	Infinity
1.618	Infinity	1.509	Infinity	1.405	Infinity	1.306	Infinity	1.212	Infinity
1.558	Infinity	1.458	Infinity	1.361	Infinity	1.269	Infinity	1.181	Infinity
1.487	Infinity	1.397	Infinity	1.309	Infinity	1.224	Infinity	1.143	Infinity
1.402	Infinity	1.323	Infinity	1.245	Infinity	1.17	Infinity	1.096	Infinity
1.363	Infinity	1.289	Infinity	1.216	Infinity	1.144	Infinity	1.074	Infinity
1.321	Infinity	1.252	Infinity	1.183	Infinity	1.116	Infinity	1.05	Infinity
1.275	Infinity	1.211	Infinity	1.147	Infinity	1.084	Infinity	1.023	Infinity
1.224	29.204	1.166	Infinity	1.107	Infinity	1.05	Infinity	0.993	Infinity
1.168	11.396	1.116	30.545	1.063	Infinity	1.011	Infinity	0.959	Infinity
1.138	8.425	1.089	15.546	1.039	493.744	0.989	Infinity	0.94	Infinity
1.107	6.534	1.06	10.062	1.014	26.379	0.967	Infinity	0.92	Infinity
1.073	5.225	1.03	7.219	0.986	12.827	0.943	119.165	0.899	Infinity
1.038	4.265	0.998	5.48	0.958	8.134	0.917	18.327	0.876	Infinity
1.001	3.531	0.964	4.306	0.927	5.752	0.889	9.364	0.851	33.832
0.961	2.951	0.928	3.46	0.894	4.312	0.859	6.012	0.824	11.006
0.919	2.481	0.889	2.822	0.859	3.348	0.827	4.258	0.796	6.197
0.874	2.094	0.848	2.323	0.821	2.656	0.793	3.179	0.764	4.109
0.827	1.768	0.804	1.923	0.78	2.136	0.756	2.448	0.73	2.942
0.776	1.491	0.757	1.594	0.736	1.731	0.715	1.921	0.693	2.197
0.749	1.367	0.732	1.451	0.713	1.56	0.694	1.708	0.673	1.917
0.722	1.251	0.706	1.319	0.689	1.407	0.671	1.522	0.653	1.68
0.693	1.144	0.679	1.198	0.663	1.267	0.647	1.357	0.631	1.477
0.663	1.043	0.651	1.086	0.637	1.141	0.623	1.21	0.608	1.3
0.633	0.949	0.621	0.983	0.609	1.025	0.597	1.078	0.584	1.146
0.601	0.86	0.591	0.887	0.581	0.919	0.57	0.959	0.558	1.009
0.567	0.777	0.559	0.797	0.551	0.821	0.541	0.851	0.531	0.888
0.533	0.698	0.526	0.713	0.519	0.731	0.511	0.753	0.503	0.78
0.497	0.624	0.492	0.635	0.486	0.648	0.479	0.663	0.473	0.682



<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
1.405	1.274	1.156	1.051

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
1.384	Infinity	1.252	Infinity	1.134	Infinity	1.03	Infinity
1.349	Infinity	1.224	Infinity	1.112	Infinity	1.012	Infinity
1.315	Infinity	1.197	Infinity	1.091	Infinity	0.995	Infinity
1.281	Infinity	1.17	Infinity	1.069	Infinity	0.978	Infinity
1.253	Infinity	1.147	Infinity	1.051	Infinity	0.963	Infinity
1.225	Infinity	1.124	Infinity	1.032	Infinity	0.948	Infinity
1.205	Infinity	1.108	Infinity	1.019	Infinity	0.937	Infinity
1.179	Infinity	1.087	Infinity	1.001	Infinity	0.923	Infinity
1.145	Infinity	1.059	Infinity	0.978	Infinity	0.904	Infinity
1.123	Infinity	1.041	Infinity	0.964	Infinity	0.892	Infinity
1.098	Infinity	1.019	Infinity	0.946	Infinity	0.877	Infinity
1.066	Infinity	0.993	Infinity	0.923	Infinity	0.859	Infinity
1.026	Infinity	0.959	Infinity	0.895	Infinity	0.835	Infinity
1.007	Infinity	0.943	Infinity	0.882	Infinity	0.824	Infinity
0.987	Infinity	0.925	Infinity	0.867	Infinity	0.811	Infinity
0.963	Infinity	0.906	Infinity	0.85	Infinity	0.797	Infinity
0.937	Infinity	0.883	Infinity	0.831	Infinity	0.781	Infinity
0.907	Infinity	0.857	Infinity	0.809	Infinity	0.762	Infinity
0.891	Infinity	0.843	Infinity	0.797	Infinity	0.751	Infinity
0.874	Infinity	0.828	Infinity	0.783	Infinity	0.74	Infinity
0.855	Infinity	0.812	Infinity	0.769	Infinity	0.728	Infinity
0.835	Infinity	0.794	Infinity	0.754	Infinity	0.715	Infinity
0.813	Infinity	0.775	Infinity	0.737	Infinity	0.7	Infinity
0.789	274.311	0.754	Infinity	0.719	Infinity	0.684	Infinity
0.763	13.072	0.731	Infinity	0.698	Infinity	0.666	Infinity
0.735	6.205	0.706	15.176	0.676	Infinity	0.647	Infinity
0.704	3.835	0.678	5.912	0.652	15.99	0.625	Infinity
0.671	2.634	0.648	3.421	0.624	5.244	0.6	13.877
0.653	2.231	0.631	2.753	0.609	3.781	0.587	6.702
0.633	1.908	0.614	2.264	0.593	2.89	0.573	4.265
0.613	1.643	0.595	1.89	0.577	2.29	0.558	3.038
0.592	1.422	0.576	1.596	0.559	1.858	0.541	2.299
0.57	1.235	0.555	1.357	0.54	1.533	0.524	1.805
0.546	1.074	0.533	1.16	0.519	1.279	0.506	1.451
0.521	0.935	0.509	0.995	0.498	1.075	0.485	1.186
0.494	0.813	0.484	0.854	0.474	0.908	0.464	0.979
0.465	0.705	0.457	0.733	0.449	0.768	0.44	0.814



Focal Length 25 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	14.41	12.858	11.477	10.246

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	14.385	Infinity	12.834	Infinity	11.452	Infinity	10.221	Infinity
40.00	10.65	Infinity	9.782	Infinity	8.965	Infinity	8.199	Infinity
20.00	8.455	Infinity	7.903	Infinity	7.366	Infinity	6.845	Infinity
13.00	6.919	129.592	6.548	Infinity	6.178	Infinity	5.811	Infinity
10.00	5.986	31.868	5.709	43.734	5.428	75.302	5.145	402.712
8.00	5.224	17.54	5.013	20.586	4.797	25.588	4.576	35.231
7.00	4.788	13.277	4.612	14.939	4.429	17.389	4.242	21.33
6.00	4.309	10.027	4.167	10.938	4.018	12.184	3.865	13.978
5.00	3.779	7.469	3.671	7.956	3.556	8.587	3.437	9.428
4.50	3.493	6.383	3.401	6.732	3.303	7.175	3.201	7.748
4.00	3.191	5.402	3.114	5.647	3.033	5.951	2.947	6.336
3.50	2.871	4.51	2.81	4.678	2.745	4.882	2.675	5.134
3.00	2.533	3.697	2.486	3.806	2.436	3.938	2.382	4.097
2.80	2.392	3.391	2.351	3.482	2.306	3.591	2.258	3.722
2.60	2.248	3.096	2.212	3.171	2.172	3.26	2.13	3.366
2.40	2.1	2.81	2.069	2.871	2.035	2.943	1.998	3.028
2.20	1.949	2.534	1.922	2.583	1.893	2.64	1.862	2.707
2.00	1.793	2.267	1.771	2.305	1.747	2.349	1.721	2.402
1.90	1.714	2.136	1.694	2.17	1.672	2.209	1.649	2.254
1.80	1.634	2.008	1.616	2.037	1.596	2.071	1.575	2.111
1.70	1.553	1.882	1.537	1.907	1.519	1.936	1.5	1.97
1.60	1.471	1.757	1.457	1.779	1.441	1.804	1.424	1.833
1.50	1.388	1.635	1.375	1.653	1.362	1.675	1.347	1.699
1.40	1.304	1.514	1.293	1.53	1.281	1.548	1.268	1.568
1.30	1.218	1.396	1.209	1.408	1.199	1.423	1.188	1.44
1.20	1.132	1.279	1.124	1.289	1.115	1.301	1.106	1.315
1.10	1.044	1.164	1.038	1.172	1.031	1.182	1.023	1.192
1.00	0.955	1.05	0.95	1.057	0.944	1.064	0.938	1.073
0.95	0.91	0.994	0.906	1	0.901	1.006	0.895	1.014
0.90	0.865	0.938	0.861	0.943	0.857	0.949	0.852	0.955
0.85	0.82	0.883	0.816	0.887	0.812	0.892	0.808	0.898
0.80	0.774	0.828	0.771	0.832	0.768	0.836	0.764	0.841
0.75	0.728	0.774	0.725	0.777	0.723	0.78	0.719	0.784
0.70	0.682	0.72	0.68	0.722	0.677	0.725	0.674	0.728
0.65	0.635	0.666	0.633	0.668	0.631	0.67	0.629	0.673
0.60	0.588	0.613	0.587	0.614	0.585	0.616	0.583	0.618
0.55	0.541	0.56	0.54	0.561	0.538	0.562	0.537	0.564



<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
9.149	8.172	7.301	6.526	5.835

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
9.124	Infinity	8.147	Infinity	7.276	Infinity	6.501	Infinity	5.81	Infinity
7.484	Infinity	6.819	Infinity	6.203	Infinity	5.635	Infinity	5.113	Infinity
6.343	Infinity	5.863	Infinity	5.406	Infinity	4.973	Infinity	4.565	Infinity
5.449	Infinity	5.094	Infinity	4.748	Infinity	4.414	Infinity	4.092	Infinity
4.861	Infinity	4.579	Infinity	4.3	Infinity	4.026	Infinity	3.758	Infinity
4.352	61.23	4.127	364.266	3.9	Infinity	3.676	Infinity	3.453	Infinity
4.05	28.644	3.855	46.696	3.658	161.453	3.461	Infinity	3.264	Infinity
3.706	16.756	3.543	21.596	3.378	32.031	3.21	70.442	3.042	Infinity
3.312	10.599	3.183	12.324	3.051	15.095	2.915	20.227	2.777	32.832
3.093	8.514	2.981	9.582	2.865	11.162	2.746	13.712	2.624	18.481
2.857	6.834	2.762	7.497	2.663	8.42	2.561	9.777	2.456	11.953
2.601	5.451	2.524	5.859	2.442	6.399	2.357	7.142	2.269	8.22
2.324	4.293	2.263	4.537	2.198	4.849	2.13	5.255	2.059	5.805
2.207	3.881	2.152	4.078	2.094	4.325	2.032	4.642	1.968	5.062
2.085	3.494	2.036	3.651	1.985	3.845	1.93	4.091	1.873	4.41
1.959	3.13	1.916	3.254	1.871	3.405	1.823	3.594	1.772	3.835
1.828	2.787	1.792	2.883	1.753	3	1.711	3.143	1.667	3.322
1.692	2.463	1.662	2.537	1.629	2.625	1.593	2.732	1.555	2.864
1.623	2.308	1.595	2.372	1.565	2.448	1.532	2.539	1.498	2.652
1.552	2.157	1.526	2.212	1.499	2.277	1.47	2.355	1.438	2.45
1.479	2.01	1.457	2.057	1.432	2.112	1.405	2.179	1.377	2.259
1.406	1.867	1.385	1.907	1.363	1.954	1.34	2.009	1.314	2.076
1.33	1.728	1.312	1.761	1.293	1.8	1.272	1.847	1.249	1.902
1.254	1.592	1.238	1.62	1.221	1.652	1.203	1.69	1.183	1.735
1.175	1.46	1.162	1.482	1.147	1.509	1.132	1.54	1.114	1.576
1.096	1.331	1.084	1.349	1.072	1.37	1.058	1.395	1.044	1.424
1.014	1.205	1.005	1.22	0.994	1.236	0.983	1.256	0.971	1.279
0.931	1.082	0.924	1.094	0.915	1.107	0.906	1.122	0.896	1.139
0.889	1.022	0.882	1.032	0.875	1.043	0.866	1.056	0.857	1.071
0.846	0.963	0.84	0.971	0.834	0.981	0.826	0.992	0.818	1.005
0.803	0.904	0.798	0.911	0.792	0.92	0.786	0.929	0.779	0.94
0.76	0.846	0.755	0.852	0.75	0.859	0.745	0.867	0.739	0.876
0.716	0.789	0.712	0.794	0.708	0.8	0.703	0.806	0.698	0.814
0.671	0.732	0.668	0.736	0.665	0.741	0.661	0.746	0.656	0.753
0.627	0.676	0.624	0.679	0.621	0.683	0.618	0.688	0.614	0.693
0.581	0.621	0.579	0.623	0.577	0.626	0.574	0.63	0.571	0.634
0.535	0.566	0.534	0.568	0.532	0.57	0.53	0.573	0.527	0.576



<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
5.219	4.671	4.182	3.747	3.359

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
5.194	Infinity	4.646	Infinity	4.157	Infinity	3.722	Infinity	3.334	Infinity
4.634	Infinity	4.196	Infinity	3.796	Infinity	3.433	Infinity	3.103	Infinity
4.182	Infinity	3.825	Infinity	3.493	Infinity	3.185	Infinity	2.901	Infinity
3.785	Infinity	3.492	Infinity	3.216	Infinity	2.955	Infinity	2.712	Infinity
3.499	Infinity	3.25	Infinity	3.011	Infinity	2.783	Infinity	2.568	Infinity
3.235	Infinity	3.023	Infinity	2.817	Infinity	2.618	Infinity	2.428	Infinity
3.07	Infinity	2.879	Infinity	2.692	Infinity	2.511	Infinity	2.337	Infinity
2.874	Infinity	2.707	Infinity	2.543	Infinity	2.382	Infinity	2.226	Infinity
2.638	111.024	2.498	Infinity	2.359	Infinity	2.222	Infinity	2.087	Infinity
2.501	30.449	2.376	113.81	2.251	Infinity	2.126	Infinity	2.003	Infinity
2.348	15.968	2.239	25.754	2.129	84.102	2.018	Infinity	1.908	Infinity
2.178	9.911	2.084	12.914	1.99	19.656	1.894	48.138	1.798	Infinity
1.985	6.583	1.909	7.759	1.83	9.726	1.75	13.645	1.669	25.14
1.901	5.637	1.831	6.469	1.76	7.765	1.686	10.048	1.611	15.075
1.812	4.835	1.75	5.428	1.685	6.301	1.618	7.705	1.55	10.313
1.719	4.148	1.663	4.57	1.605	5.165	1.545	6.058	1.483	7.537
1.62	3.551	1.571	3.851	1.52	4.258	1.467	4.837	1.412	5.719
1.515	3.029	1.473	3.24	1.429	3.517	1.382	3.896	1.334	4.436
1.461	2.791	1.422	2.967	1.381	3.196	1.338	3.501	1.293	3.927
1.405	2.567	1.369	2.714	1.331	2.901	1.292	3.147	1.25	3.483
1.347	2.356	1.314	2.477	1.28	2.63	1.244	2.828	1.206	3.092
1.287	2.157	1.258	2.256	1.227	2.381	1.194	2.539	1.159	2.746
1.225	1.968	1.199	2.049	1.171	2.149	1.142	2.275	1.111	2.437
1.161	1.79	1.138	1.855	1.114	1.935	1.088	2.034	1.06	2.159
1.096	1.62	1.076	1.672	1.054	1.735	1.031	1.812	1.007	1.909
1.028	1.459	1.01	1.5	0.992	1.549	0.972	1.608	0.951	1.682
0.957	1.305	0.943	1.337	0.927	1.374	0.91	1.42	0.892	1.474
0.885	1.159	0.873	1.183	0.86	1.211	0.846	1.245	0.831	1.285
0.848	1.089	0.837	1.109	0.825	1.133	0.813	1.162	0.799	1.196
0.81	1.02	0.8	1.037	0.79	1.058	0.778	1.082	0.766	1.111
0.771	0.953	0.763	0.967	0.754	0.985	0.744	1.005	0.733	1.029
0.732	0.887	0.725	0.899	0.716	0.914	0.708	0.93	0.698	0.95
0.692	0.823	0.686	0.833	0.679	0.845	0.671	0.858	0.663	0.874
0.651	0.76	0.646	0.768	0.64	0.778	0.634	0.789	0.627	0.802
0.61	0.698	0.605	0.705	0.6	0.712	0.595	0.721	0.589	0.731
0.568	0.638	0.564	0.643	0.56	0.649	0.556	0.656	0.551	0.664
0.525	0.579	0.522	0.583	0.519	0.588	0.515	0.593	0.511	0.599



<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
3.014	2.706	2.432	2.187	1.97

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
2.989	Infinity	2.681	Infinity	2.407	Infinity	2.163	Infinity	1.945	Infinity
2.804	Infinity	2.533	Infinity	2.289	Infinity	2.069	Infinity	1.87	Infinity
2.64	Infinity	2.401	Infinity	2.182	Infinity	1.982	Infinity	1.801	Infinity
2.484	Infinity	2.273	Infinity	2.077	Infinity	1.897	Infinity	1.731	Infinity
2.364	Infinity	2.173	Infinity	1.995	Infinity	1.83	Infinity	1.676	Infinity
2.247	Infinity	2.075	Infinity	1.913	Infinity	1.762	Infinity	1.62	Infinity
2.17	Infinity	2.01	Infinity	1.859	Infinity	1.716	Infinity	1.582	Infinity
2.075	Infinity	1.929	Infinity	1.791	Infinity	1.659	Infinity	1.534	Infinity
1.955	Infinity	1.827	Infinity	1.703	Infinity	1.585	Infinity	1.472	Infinity
1.882	Infinity	1.764	Infinity	1.65	Infinity	1.539	Infinity	1.433	Infinity
1.799	Infinity	1.692	Infinity	1.587	Infinity	1.485	Infinity	1.387	Infinity
1.702	Infinity	1.607	Infinity	1.513	Infinity	1.421	Infinity	1.333	Infinity
1.587	585.435	1.506	Infinity	1.424	Infinity	1.344	Infinity	1.266	Infinity
1.536	34.922	1.46	Infinity	1.384	Infinity	1.309	Infinity	1.235	Infinity
1.48	16.754	1.41	57.9	1.34	Infinity	1.27	Infinity	1.201	Infinity
1.42	10.429	1.356	18.508	1.292	157.922	1.227	Infinity	1.163	Infinity
1.355	7.213	1.298	10.264	1.239	19.807	1.181	Infinity	1.122	Infinity
1.285	5.267	1.234	6.691	1.182	9.671	1.129	19.67	1.076	Infinity
1.247	4.556	1.199	5.57	1.151	7.462	1.101	12.19	1.051	44.287
1.208	3.962	1.163	4.696	1.118	5.953	1.072	8.572	1.025	17.253
1.166	3.458	1.126	3.996	1.084	4.856	1.041	6.438	0.997	10.261
1.123	3.026	1.086	3.423	1.047	4.023	1.008	5.031	0.967	7.051
1.078	2.651	1.044	2.944	1.009	3.369	0.973	4.034	0.935	5.207
1.031	2.322	1	2.539	0.968	2.842	0.935	3.289	0.902	4.011
0.981	2.032	0.954	2.192	0.925	2.408	0.896	2.713	0.865	3.172
0.928	1.773	0.905	1.89	0.88	2.044	0.854	2.253	0.827	2.551
0.873	1.542	0.853	1.627	0.831	1.735	0.809	1.878	0.785	2.072
0.815	1.334	0.798	1.394	0.779	1.469	0.76	1.566	0.74	1.693
0.784	1.237	0.769	1.287	0.752	1.35	0.735	1.429	0.716	1.531
0.753	1.145	0.739	1.187	0.724	1.238	0.708	1.302	0.692	1.384
0.721	1.057	0.709	1.092	0.695	1.133	0.681	1.185	0.666	1.25
0.688	0.973	0.677	1.001	0.665	1.035	0.652	1.077	0.639	1.128
0.654	0.893	0.644	0.916	0.634	0.943	0.623	0.976	0.611	1.016
0.619	0.817	0.611	0.835	0.602	0.856	0.592	0.882	0.582	0.913
0.583	0.743	0.576	0.757	0.568	0.774	0.56	0.793	0.551	0.817
0.545	0.673	0.54	0.684	0.533	0.696	0.527	0.711	0.519	0.729
0.507	0.605	0.502	0.613	0.497	0.623	0.492	0.633	0.486	0.646



<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
1.776	1.603	1.449	1.312

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
1.751	Infinity	1.578	Infinity	1.424	Infinity	1.287	Infinity
1.691	Infinity	1.531	Infinity	1.387	Infinity	1.257	Infinity
1.636	Infinity	1.486	Infinity	1.351	Infinity	1.229	Infinity
1.58	Infinity	1.441	Infinity	1.314	Infinity	1.199	Infinity
1.534	Infinity	1.404	Infinity	1.285	Infinity	1.175	Infinity
1.488	Infinity	1.366	Infinity	1.254	Infinity	1.15	Infinity
1.457	Infinity	1.341	Infinity	1.233	Infinity	1.133	Infinity
1.417	Infinity	1.308	Infinity	1.205	Infinity	1.11	Infinity
1.365	Infinity	1.264	Infinity	1.169	Infinity	1.081	Infinity
1.332	Infinity	1.237	Infinity	1.146	Infinity	1.062	Infinity
1.293	Infinity	1.204	Infinity	1.119	Infinity	1.039	Infinity
1.247	Infinity	1.164	Infinity	1.085	Infinity	1.011	Infinity
1.189	Infinity	1.115	Infinity	1.044	Infinity	0.975	Infinity
1.162	Infinity	1.092	Infinity	1.024	Infinity	0.959	Infinity
1.133	Infinity	1.066	Infinity	1.002	Infinity	0.94	Infinity
1.1	Infinity	1.038	Infinity	0.978	Infinity	0.919	Infinity
1.064	Infinity	1.006	Infinity	0.95	Infinity	0.895	Infinity
1.023	Infinity	0.971	Infinity	0.919	Infinity	0.869	Infinity
1.001	Infinity	0.951	Infinity	0.902	Infinity	0.854	Infinity
0.978	Infinity	0.931	Infinity	0.884	Infinity	0.838	Infinity
0.953	32.133	0.909	Infinity	0.864	Infinity	0.821	Infinity
0.926	13.059	0.885	640.831	0.843	Infinity	0.802	Infinity
0.898	7.813	0.859	18.383	0.821	Infinity	0.782	Infinity
0.867	5.358	0.832	8.723	0.796	31.596	0.761	Infinity
0.834	3.934	0.802	5.435	0.77	9.699	0.737	104.329
0.799	3.005	0.77	3.779	0.741	5.371	0.711	10.469
0.76	2.351	0.735	2.781	0.709	3.522	0.683	5.086
0.719	1.866	0.697	2.114	0.674	2.495	0.651	3.152
0.697	1.667	0.677	1.857	0.656	2.136	0.634	2.586
0.674	1.491	0.655	1.637	0.636	1.843	0.617	2.156
0.65	1.334	0.633	1.445	0.616	1.598	0.598	1.82
0.625	1.193	0.61	1.278	0.594	1.391	0.578	1.55
0.598	1.066	0.585	1.13	0.571	1.214	0.557	1.327
0.571	0.951	0.559	0.999	0.547	1.06	0.534	1.141
0.542	0.846	0.532	0.881	0.521	0.926	0.51	0.983
0.512	0.75	0.503	0.775	0.494	0.807	0.485	0.847
0.48	0.661	0.473	0.68	0.465	0.702	0.458	0.729



Focal Length 29 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	20.761	18.517	16.519	14.738

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	20.731	Infinity	18.487	Infinity	16.489	Infinity	14.708	Infinity
40.00	13.736	Infinity	12.723	Infinity	11.751	Infinity	10.826	Infinity
20.00	10.271	536.087	9.698	Infinity	9.128	Infinity	8.564	Infinity
13.00	8.076	34.169	7.721	42.776	7.359	59.69	6.992	107.526
10.00	6.826	18.957	6.573	21.316	6.31	24.786	6.041	30.343
8.00	5.846	12.789	5.66	13.811	5.467	15.174	5.265	17.07
7.00	5.302	10.378	5.15	11.036	4.99	11.883	4.822	13.007
6.00	4.716	8.293	4.597	8.704	4.47	9.217	4.336	9.873
5.00	4.085	6.473	3.996	6.717	3.901	7.015	3.8	7.383
4.50	3.75	5.646	3.676	5.83	3.596	6.051	3.511	6.321
4.00	3.402	4.869	3.341	5.004	3.276	5.164	3.206	5.357
3.50	3.039	4.138	2.991	4.233	2.939	4.345	2.883	4.479
3.00	2.66	3.447	2.624	3.512	2.585	3.587	2.542	3.676
2.80	2.504	3.181	2.473	3.236	2.438	3.299	2.4	3.374
2.60	2.346	2.922	2.318	2.967	2.288	3.02	2.255	3.081
2.40	2.184	2.668	2.16	2.705	2.135	2.748	2.106	2.799
2.20	2.02	2.419	2	2.449	1.978	2.484	1.954	2.525
2.00	1.852	2.176	1.836	2.2	1.818	2.228	1.798	2.259
1.90	1.768	2.056	1.753	2.078	1.736	2.102	1.718	2.13
1.80	1.682	1.938	1.669	1.957	1.654	1.978	1.638	2.002
1.70	1.596	1.821	1.584	1.837	1.571	1.855	1.556	1.877
1.60	1.509	1.705	1.498	1.719	1.487	1.735	1.474	1.753
1.50	1.421	1.59	1.412	1.602	1.402	1.616	1.39	1.631
1.40	1.332	1.477	1.324	1.487	1.315	1.498	1.306	1.511
1.30	1.242	1.364	1.236	1.373	1.228	1.382	1.22	1.393
1.20	1.152	1.253	1.146	1.26	1.14	1.268	1.133	1.276
1.10	1.061	1.143	1.056	1.148	1.051	1.155	1.045	1.162
1.00	0.969	1.034	0.965	1.038	0.961	1.043	0.956	1.049
0.95	0.922	0.98	0.919	0.984	0.916	0.988	0.911	0.993
0.90	0.876	0.926	0.873	0.929	0.87	0.933	0.866	0.937
0.85	0.829	0.872	0.827	0.875	0.824	0.878	0.821	0.882
0.80	0.782	0.819	0.78	0.822	0.777	0.824	0.775	0.827
0.75	0.735	0.766	0.733	0.768	0.731	0.77	0.729	0.773
0.70	0.687	0.713	0.686	0.715	0.684	0.717	0.682	0.719
0.65	0.64	0.661	0.638	0.662	0.637	0.664	0.635	0.666
0.60	0.592	0.609	0.591	0.61	0.59	0.611	0.588	0.612
0.55	0.544	0.557	0.543	0.558	0.542	0.558	0.541	0.56
0.50	0.495	0.505	0.495	0.506	0.494	0.506	0.493	0.507
0.45	0.447	0.454	0.446	0.454	0.446	0.454	0.445	0.455
0.40	0.398	0.402	0.397	0.403	0.397	0.403	0.397	0.403
0.35	0.349	0.351	0.348	0.352	0.348	0.352	0.348	0.352





<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
13.152	11.738	10.479	9.357	8.358

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
13.122	Infinity	11.708	Infinity	10.449	Infinity	9.327	Infinity	8.328	Infinity
9.948	Infinity	9.121	Infinity	8.345	Infinity	7.619	Infinity	6.945	Infinity
8.011	Infinity	7.47	Infinity	6.946	Infinity	6.44	Infinity	5.955	Infinity
6.622	1096.497	6.251	Infinity	5.883	Infinity	5.52	Infinity	5.163	Infinity
5.765	40.582	5.484	65.448	5.201	211.15	4.917	Infinity	4.634	Infinity
5.056	19.863	4.841	24.348	4.621	32.651	4.397	53.023	4.172	178.694
4.647	14.556	4.466	16.809	4.279	20.359	4.088	26.716	3.894	41.225
4.196	10.732	4.049	11.898	3.896	13.556	3.738	16.08	3.576	20.353
3.693	7.847	3.58	8.444	3.461	9.236	3.338	10.326	3.21	11.911
3.42	6.655	3.323	7.075	3.222	7.618	3.115	8.338	3.004	9.332
3.13	5.592	3.05	5.883	2.965	6.249	2.876	6.72	2.782	7.344
2.823	4.64	2.759	4.836	2.69	5.077	2.617	5.379	2.54	5.766
2.496	3.782	2.447	3.908	2.393	4.061	2.336	4.249	2.276	4.482
2.36	3.462	2.316	3.567	2.268	3.692	2.218	3.845	2.163	4.033
2.219	3.154	2.181	3.24	2.139	3.342	2.095	3.465	2.047	3.615
2.076	2.857	2.042	2.927	2.006	3.009	1.967	3.107	1.925	3.225
1.928	2.572	1.899	2.627	1.869	2.692	1.835	2.769	1.8	2.861
1.776	2.296	1.752	2.339	1.727	2.39	1.699	2.449	1.668	2.52
1.699	2.162	1.677	2.2	1.654	2.244	1.628	2.296	1.601	2.357
1.62	2.03	1.601	2.063	1.58	2.101	1.557	2.146	1.532	2.199
1.541	1.901	1.523	1.929	1.505	1.962	1.484	2.001	1.462	2.046
1.46	1.774	1.445	1.798	1.428	1.826	1.41	1.859	1.39	1.897
1.378	1.649	1.365	1.67	1.35	1.693	1.334	1.721	1.317	1.753
1.295	1.526	1.284	1.543	1.271	1.563	1.257	1.586	1.242	1.613
1.211	1.405	1.201	1.42	1.19	1.436	1.178	1.455	1.165	1.477
1.126	1.287	1.117	1.298	1.108	1.312	1.098	1.327	1.087	1.345
1.039	1.17	1.032	1.179	1.025	1.19	1.016	1.202	1.007	1.216
0.951	1.055	0.946	1.062	0.94	1.07	0.933	1.08	0.925	1.091
0.907	0.998	0.902	1.005	0.897	1.012	0.891	1.02	0.884	1.03
0.862	0.942	0.858	0.947	0.853	0.954	0.848	0.961	0.842	0.969
0.817	0.886	0.813	0.891	0.809	0.896	0.805	0.902	0.799	0.909
0.772	0.831	0.769	0.835	0.765	0.839	0.761	0.845	0.757	0.85
0.726	0.776	0.723	0.779	0.72	0.783	0.717	0.787	0.713	0.792
0.68	0.721	0.678	0.724	0.675	0.727	0.672	0.731	0.669	0.735
0.634	0.667	0.632	0.67	0.63	0.672	0.627	0.675	0.625	0.678
0.587	0.614	0.585	0.616	0.584	0.618	0.582	0.62	0.58	0.622
0.54	0.561	0.539	0.562	0.537	0.564	0.536	0.565	0.534	0.567
0.492	0.508	0.492	0.509	0.49	0.51	0.489	0.511	0.488	0.513
0.445	0.456	0.444	0.456	0.443	0.457	0.442	0.458	0.442	0.459
0.396	0.404	0.396	0.404	0.396	0.405	0.395	0.405	0.394	0.406
0.348	0.352	0.348	0.352	0.347	0.353	0.347	0.353	0.347	0.353



<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
7.468	6.674	5.968	5.338	4.777

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
7.438	Infinity	6.645	Infinity	5.938	Infinity	5.308	Infinity	4.748	Infinity
6.32	Infinity	5.742	Infinity	5.211	Infinity	4.724	Infinity	4.278	Infinity
5.493	Infinity	5.056	Infinity	4.643	Infinity	4.255	Infinity	3.893	Infinity
4.815	Infinity	4.479	Infinity	4.154	Infinity	3.844	Infinity	3.549	Infinity
4.355	Infinity	4.079	Infinity	3.811	Infinity	3.55	Infinity	3.299	Infinity
3.945	Infinity	3.72	Infinity	3.497	Infinity	3.278	Infinity	3.065	Infinity
3.697	106.38	3.5	Infinity	3.303	Infinity	3.108	Infinity	2.917	Infinity
3.411	29.059	3.244	56.177	3.076	Infinity	2.907	Infinity	2.74	Infinity
3.078	14.405	2.942	18.86	2.805	28.98	2.666	73.613	2.526	Infinity
2.889	10.781	2.771	13.073	2.649	17.2	2.526	26.738	2.401	71.705
2.684	8.203	2.582	9.449	2.478	11.406	2.37	14.89	2.261	22.747
2.459	6.274	2.375	6.967	2.287	7.96	2.197	9.487	2.104	12.116
2.212	4.777	2.145	5.16	2.074	5.675	2.001	6.395	1.925	7.466
2.106	4.268	2.045	4.568	1.982	4.963	1.915	5.499	1.846	6.265
1.996	3.801	1.942	4.034	1.885	4.335	1.825	4.734	1.763	5.284
1.881	3.37	1.833	3.55	1.783	3.778	1.73	4.074	1.675	4.468
1.761	2.973	1.72	3.11	1.676	3.28	1.63	3.497	1.582	3.779
1.636	2.604	1.601	2.707	1.564	2.833	1.524	2.99	1.482	3.189
1.571	2.43	1.539	2.518	1.505	2.625	1.469	2.758	1.43	2.925
1.505	2.262	1.476	2.337	1.445	2.428	1.412	2.539	1.377	2.679
1.438	2.099	1.411	2.163	1.383	2.24	1.353	2.333	1.321	2.448
1.368	1.942	1.345	1.996	1.32	2.06	1.293	2.137	1.264	2.232
1.298	1.791	1.277	1.835	1.255	1.889	1.231	1.952	1.205	2.03
1.225	1.644	1.207	1.681	1.187	1.725	1.166	1.776	1.144	1.839
1.151	1.502	1.135	1.532	1.118	1.568	1.1	1.609	1.08	1.659
1.075	1.365	1.062	1.389	1.047	1.417	1.031	1.45	1.015	1.489
0.997	1.232	0.986	1.251	0.974	1.273	0.961	1.299	0.946	1.329
0.917	1.103	0.908	1.118	0.898	1.135	0.888	1.154	0.876	1.177
0.877	1.04	0.869	1.053	0.86	1.067	0.85	1.084	0.84	1.104
0.835	0.978	0.828	0.989	0.82	1.002	0.812	1.016	0.803	1.033
0.794	0.917	0.788	0.926	0.781	0.937	0.773	0.949	0.765	0.963
0.752	0.857	0.746	0.865	0.74	0.874	0.734	0.884	0.726	0.896
0.709	0.798	0.704	0.804	0.699	0.812	0.693	0.82	0.687	0.83
0.666	0.74	0.662	0.745	0.657	0.751	0.653	0.758	0.647	0.766
0.622	0.682	0.618	0.686	0.615	0.691	0.611	0.697	0.607	0.703
0.577	0.625	0.575	0.629	0.572	0.632	0.569	0.637	0.565	0.642
0.532	0.569	0.53	0.572	0.528	0.575	0.525	0.578	0.523	0.582
0.487	0.514	0.485	0.516	0.483	0.518	0.482	0.521	0.479	0.524
0.441	0.46	0.439	0.461	0.438	0.463	0.437	0.465	0.435	0.466
0.394	0.407	0.393	0.408	0.392	0.408	0.391	0.41	0.39	0.411
0.346	0.354	0.346	0.354	0.345	0.355	0.345	0.356	0.344	0.356



<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
4.278	3.833	3.436	3.083	2.768

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
4.248	Infinity	3.803	Infinity	3.406	Infinity	3.053	Infinity	2.738	Infinity
3.871	Infinity	3.501	Infinity	3.165	Infinity	2.86	Infinity	2.584	Infinity
3.556	Infinity	3.243	Infinity	2.955	Infinity	2.69	Infinity	2.446	Infinity
3.269	Infinity	3.005	Infinity	2.758	Infinity	2.528	Infinity	2.313	Infinity
3.057	Infinity	2.827	Infinity	2.609	Infinity	2.403	Infinity	2.21	Infinity
2.857	Infinity	2.657	Infinity	2.465	Infinity	2.282	Infinity	2.108	Infinity
2.729	Infinity	2.547	Infinity	2.371	Infinity	2.202	Infinity	2.041	Infinity
2.576	Infinity	2.414	Infinity	2.257	Infinity	2.104	Infinity	1.958	Infinity
2.387	Infinity	2.249	Infinity	2.114	Infinity	1.981	Infinity	1.852	Infinity
2.276	Infinity	2.152	Infinity	2.028	Infinity	1.907	Infinity	1.788	Infinity
2.151	56.482	2.041	Infinity	1.93	Infinity	1.821	Infinity	1.713	Infinity
2.009	17.652	1.914	36.599	1.817	Infinity	1.721	Infinity	1.626	Infinity
1.847	9.213	1.767	12.536	1.686	21.211	1.604	99.124	1.523	Infinity
1.775	7.437	1.702	9.436	1.627	13.574	1.552	27.046	1.476	Infinity
1.698	6.084	1.632	7.342	1.564	9.592	1.495	14.711	1.425	37.429
1.617	5.019	1.558	5.833	1.496	7.147	1.434	9.604	1.37	15.77
1.531	4.159	1.478	4.693	1.423	5.493	1.367	6.812	1.31	9.369
1.438	3.45	1.393	3.803	1.345	4.301	1.295	5.051	1.245	6.302
1.39	3.141	1.347	3.426	1.303	3.821	1.257	4.394	1.21	5.299
1.34	2.856	1.3	3.087	1.26	3.399	1.217	3.84	1.173	4.503
1.288	2.593	1.252	2.78	1.214	3.027	1.175	3.366	1.135	3.857
1.234	2.35	1.201	2.5	1.167	2.694	1.131	2.955	1.094	3.321
1.178	2.125	1.148	2.244	1.118	2.397	1.086	2.597	1.052	2.869
1.119	1.915	1.094	2.009	1.066	2.128	1.037	2.281	1.007	2.484
1.059	1.719	1.036	1.793	1.012	1.885	0.987	2.001	0.96	2.151
0.996	1.536	0.977	1.593	0.956	1.663	0.934	1.75	0.91	1.86
0.931	1.365	0.915	1.408	0.897	1.46	0.878	1.525	0.858	1.605
0.863	1.204	0.849	1.236	0.835	1.274	0.819	1.321	0.802	1.378
0.828	1.127	0.816	1.154	0.802	1.187	0.788	1.226	0.773	1.274
0.792	1.052	0.781	1.076	0.769	1.103	0.757	1.136	0.743	1.176
0.756	0.98	0.746	0.999	0.736	1.022	0.724	1.05	0.712	1.082
0.719	0.91	0.71	0.926	0.701	0.945	0.691	0.967	0.68	0.994
0.681	0.841	0.673	0.854	0.665	0.87	0.656	0.888	0.647	0.91
0.642	0.775	0.635	0.785	0.628	0.798	0.621	0.812	0.613	0.829
0.602	0.71	0.597	0.719	0.591	0.728	0.585	0.74	0.578	0.753
0.561	0.647	0.557	0.654	0.552	0.661	0.547	0.67	0.541	0.68
0.52	0.586	0.516	0.591	0.512	0.597	0.508	0.603	0.504	0.611
0.477	0.527	0.474	0.53	0.472	0.534	0.468	0.539	0.465	0.544
0.434	0.469	0.432	0.471	0.43	0.474	0.427	0.477	0.425	0.481
0.389	0.412	0.388	0.414	0.386	0.416	0.385	0.418	0.383	0.42
0.343	0.357	0.343	0.358	0.342	0.359	0.341	0.36	0.34	0.362



<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
2.487	2.238	2.015	1.817

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
2.458	Infinity	2.208	Infinity	1.985	Infinity	1.787	Infinity
2.335	Infinity	2.11	Infinity	1.907	Infinity	1.725	Infinity
2.223	Infinity	2.02	Infinity	1.835	Infinity	1.667	Infinity
2.115	Infinity	1.931	Infinity	1.763	Infinity	1.608	Infinity
2.03	Infinity	1.861	Infinity	1.705	Infinity	1.561	Infinity
1.945	Infinity	1.791	Infinity	1.647	Infinity	1.514	Infinity
1.888	Infinity	1.744	Infinity	1.608	Infinity	1.481	Infinity
1.818	Infinity	1.685	Infinity	1.559	Infinity	1.44	Infinity
1.728	Infinity	1.608	Infinity	1.494	Infinity	1.386	Infinity
1.672	Infinity	1.561	Infinity	1.454	Infinity	1.352	Infinity
1.608	Infinity	1.506	Infinity	1.407	Infinity	1.312	Infinity
1.532	Infinity	1.44	Infinity	1.35	Infinity	1.264	Infinity
1.441	Infinity	1.361	Infinity	1.282	Infinity	1.205	Infinity
1.4	Infinity	1.324	Infinity	1.25	Infinity	1.177	Infinity
1.355	Infinity	1.285	Infinity	1.215	Infinity	1.147	Infinity
1.305	58.687	1.241	Infinity	1.177	Infinity	1.113	Infinity
1.252	16.365	1.193	110.687	1.135	Infinity	1.076	Infinity
1.193	8.778	1.14	15.908	1.088	223.191	1.035	Infinity
1.161	6.922	1.112	10.64	1.062	27.565	1.012	Infinity
1.128	5.606	1.082	7.78	1.035	13.973	0.988	159.093
1.093	4.625	1.05	5.984	1.006	9.012	0.962	21.444
1.056	3.864	1.016	4.752	0.976	6.442	0.935	10.875
1.017	3.258	0.981	3.854	0.944	4.871	0.906	6.982
0.976	2.763	0.943	3.17	0.909	3.81	0.875	4.958
0.932	2.352	0.903	2.632	0.872	3.047	0.841	3.717
0.886	2.004	0.86	2.198	0.833	2.47	0.805	2.879
0.836	1.707	0.814	1.84	0.791	2.02	0.766	2.275
0.784	1.449	0.765	1.54	0.745	1.658	0.724	1.818
0.756	1.333	0.739	1.407	0.721	1.503	0.702	1.63
0.728	1.224	0.712	1.285	0.696	1.362	0.678	1.462
0.699	1.122	0.685	1.171	0.67	1.232	0.654	1.311
0.668	1.026	0.656	1.065	0.643	1.114	0.628	1.175
0.637	0.935	0.626	0.966	0.614	1.004	0.602	1.052
0.604	0.85	0.595	0.874	0.585	0.904	0.574	0.94
0.57	0.769	0.562	0.788	0.554	0.81	0.545	0.837
0.535	0.692	0.529	0.706	0.522	0.723	0.514	0.743
0.499	0.62	0.494	0.63	0.488	0.642	0.482	0.656
0.461	0.551	0.457	0.558	0.453	0.566	0.448	0.576
0.422	0.485	0.419	0.49	0.416	0.496	0.412	0.502
0.381	0.423	0.379	0.426	0.377	0.429	0.374	0.433
0.339	0.363	0.337	0.365	0.336	0.367	0.334	0.369



Focal Length 35 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	28.57	25.474	22.716	20.259

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	28.534	Infinity	25.439	Infinity	22.681	Infinity	20.224	Infinity
40.00	16.741	Infinity	15.634	Infinity	14.556	Infinity	13.512	Infinity
20.00	11.845	65.848	11.285	91.774	10.717	164.648	10.145	1535.41
13.00	9.008	23.559	8.683	26.179	8.346	29.92	7.998	35.648
10.00	7.473	15.195	7.25	16.234	7.016	17.586	6.77	19.403
8.00	6.309	10.974	6.151	11.501	5.982	12.158	5.805	12.991
7.00	5.677	9.158	5.549	9.519	5.413	9.961	5.268	10.51
6.00	5.008	7.502	4.91	7.741	4.803	8.028	4.69	8.377
5.00	4.299	5.987	4.227	6.136	4.149	6.312	4.065	6.524
4.50	3.928	5.276	3.869	5.391	3.804	5.525	3.733	5.685
4.00	3.546	4.595	3.498	4.68	3.445	4.78	3.388	4.898
3.50	3.152	3.94	3.114	4.002	3.073	4.074	3.028	4.158
3.00	2.745	3.311	2.716	3.354	2.686	3.404	2.652	3.461
2.80	2.578	3.067	2.553	3.103	2.526	3.145	2.497	3.194
2.60	2.409	2.826	2.388	2.856	2.365	2.892	2.339	2.932
2.40	2.239	2.589	2.22	2.614	2.2	2.643	2.178	2.676
2.20	2.065	2.355	2.05	2.376	2.033	2.399	2.015	2.426
2.00	1.89	2.125	1.877	2.141	1.864	2.16	1.848	2.182
1.90	1.801	2.011	1.79	2.026	1.778	2.042	1.764	2.062
1.80	1.712	1.898	1.702	1.911	1.691	1.926	1.679	1.943
1.70	1.622	1.786	1.614	1.797	1.604	1.81	1.593	1.825
1.60	1.532	1.675	1.524	1.685	1.515	1.696	1.506	1.708
1.50	1.441	1.565	1.434	1.573	1.427	1.582	1.418	1.593
1.40	1.35	1.455	1.344	1.462	1.337	1.47	1.33	1.479
1.30	1.257	1.346	1.252	1.352	1.247	1.359	1.241	1.366
1.20	1.164	1.238	1.16	1.243	1.156	1.249	1.15	1.255
1.10	1.071	1.131	1.068	1.135	1.064	1.139	1.059	1.144
1.00	0.977	1.025	0.974	1.028	0.971	1.031	0.968	1.035
0.95	0.93	0.972	0.927	0.974	0.924	0.977	0.921	0.981
0.90	0.882	0.919	0.88	0.921	0.878	0.924	0.875	0.927
0.85	0.834	0.866	0.833	0.868	0.831	0.871	0.828	0.873
0.80	0.787	0.814	0.785	0.816	0.783	0.818	0.781	0.82
0.75	0.739	0.762	0.737	0.763	0.736	0.765	0.734	0.767
0.70	0.691	0.71	0.689	0.711	0.688	0.712	0.687	0.714
0.65	0.642	0.658	0.641	0.659	0.64	0.66	0.639	0.661
0.60	0.594	0.606	0.593	0.607	0.592	0.608	0.591	0.609
0.55	0.545	0.555	0.545	0.556	0.544	0.556	0.543	0.557
0.50	0.496	0.504	0.496	0.504	0.495	0.505	0.495	0.505
0.475	0.472	0.478	0.472	0.479	0.471	0.479	0.471	0.479
0.45	0.447	0.453	0.447	0.453	0.447	0.453	0.446	0.454



<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
18.07	16.12	14.383	12.835	11.456

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
18.035	Infinity	16.085	Infinity	14.348	Infinity	12.8	Infinity	11.421	Infinity
12.507	Infinity	11.545	Infinity	10.629	Infinity	9.762	Infinity	8.946	Infinity
9.572	Infinity	9.003	Infinity	8.441	Infinity	7.889	Infinity	7.352	Infinity
7.641	45.425	7.277	65.692	6.909	131.9	6.539	Infinity	6.168	Infinity
6.515	21.954	6.25	25.763	5.979	32.012	5.702	44.031	5.42	76.263
5.617	14.076	5.422	15.535	5.218	17.586	5.007	20.655	4.791	25.704
5.114	11.204	4.952	12.103	4.783	13.304	4.606	14.976	4.424	17.445
4.569	8.808	4.44	9.349	4.305	10.044	4.162	10.959	4.014	12.213
3.975	6.779	3.878	7.091	3.776	7.478	3.667	7.968	3.553	8.602
3.658	5.877	3.577	6.108	3.49	6.39	3.398	6.741	3.3	7.185
3.326	5.038	3.26	5.205	3.188	5.407	3.112	5.653	3.03	5.959
2.979	4.257	2.926	4.374	2.869	4.514	2.808	4.682	2.742	4.887
2.615	3.528	2.575	3.607	2.531	3.7	2.484	3.81	2.434	3.942
2.464	3.25	2.429	3.316	2.391	3.394	2.349	3.485	2.304	3.594
2.311	2.979	2.28	3.034	2.246	3.098	2.21	3.173	2.171	3.262
2.154	2.715	2.128	2.76	2.099	2.812	2.067	2.873	2.033	2.945
1.994	2.458	1.972	2.494	1.948	2.536	1.921	2.584	1.892	2.642
1.831	2.207	1.813	2.235	1.792	2.268	1.77	2.306	1.746	2.351
1.749	2.083	1.732	2.109	1.713	2.138	1.693	2.171	1.671	2.21
1.665	1.962	1.65	1.984	1.633	2.009	1.615	2.038	1.596	2.072
1.58	1.841	1.567	1.861	1.552	1.883	1.536	1.908	1.519	1.937
1.495	1.723	1.483	1.739	1.47	1.758	1.456	1.78	1.44	1.805
1.409	1.605	1.399	1.62	1.387	1.636	1.375	1.654	1.361	1.676
1.322	1.49	1.313	1.501	1.303	1.515	1.292	1.531	1.28	1.548
1.234	1.375	1.226	1.385	1.218	1.396	1.208	1.409	1.198	1.424
1.145	1.262	1.138	1.27	1.131	1.279	1.123	1.29	1.115	1.302
1.055	1.15	1.049	1.157	1.044	1.164	1.037	1.172	1.03	1.182
0.964	1.04	0.96	1.045	0.955	1.05	0.95	1.057	0.944	1.065
0.918	0.985	0.914	0.989	0.91	0.994	0.906	1	0.9	1.007
0.872	0.93	0.869	0.934	0.865	0.939	0.861	0.944	0.856	0.949
0.826	0.876	0.823	0.88	0.82	0.883	0.816	0.888	0.812	0.893
0.779	0.822	0.777	0.825	0.774	0.828	0.771	0.832	0.767	0.836
0.732	0.769	0.73	0.771	0.728	0.774	0.725	0.777	0.722	0.781
0.685	0.716	0.683	0.718	0.681	0.72	0.679	0.722	0.677	0.725
0.638	0.663	0.636	0.664	0.635	0.666	0.633	0.668	0.631	0.671
0.59	0.61	0.589	0.611	0.588	0.613	0.586	0.615	0.585	0.616
0.542	0.558	0.542	0.559	0.541	0.56	0.539	0.561	0.538	0.563
0.494	0.506	0.494	0.507	0.493	0.507	0.492	0.508	0.491	0.509
0.47	0.48	0.47	0.481	0.469	0.481	0.468	0.482	0.467	0.483
0.446	0.454	0.445	0.455	0.445	0.455	0.444	0.456	0.444	0.457



<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
10.227	9.133	8.158	7.289	6.515

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
10.192	Infinity	9.098	Infinity	8.123	Infinity	7.254	Infinity	6.48	Infinity
8.18	Infinity	7.466	Infinity	6.801	Infinity	6.186	Infinity	5.619	Infinity
6.831	Infinity	6.33	Infinity	5.85	Infinity	5.393	Infinity	4.96	Infinity
5.801	Infinity	5.438	Infinity	5.083	Infinity	4.738	Infinity	4.403	Infinity
5.137	434.311	4.853	Infinity	4.57	Infinity	4.291	Infinity	4.017	Infinity
4.57	35.469	4.345	62.008	4.119	395.773	3.893	Infinity	3.668	Infinity
4.236	21.42	4.044	28.82	3.848	47.198	3.651	167.993	3.454	Infinity
3.86	14.018	3.701	16.819	3.538	21.709	3.372	32.295	3.204	71.797
3.433	9.448	3.308	10.626	3.179	12.363	3.046	15.158	2.91	20.346
3.197	7.762	3.089	8.532	2.977	9.607	2.861	11.197	2.742	13.77
2.944	6.346	2.854	6.846	2.759	7.513	2.66	8.441	2.557	9.808
2.673	5.14	2.599	5.459	2.521	5.869	2.439	6.413	2.353	7.16
2.38	4.102	2.322	4.299	2.26	4.544	2.195	4.857	2.127	5.266
2.256	3.726	2.204	3.886	2.149	4.083	2.091	4.331	2.03	4.65
2.128	3.369	2.083	3.498	2.034	3.655	1.982	3.851	1.928	4.098
1.997	3.031	1.957	3.133	1.914	3.257	1.869	3.41	1.821	3.6
1.86	2.709	1.826	2.79	1.79	2.886	1.751	3.003	1.709	3.147
1.72	2.403	1.691	2.465	1.66	2.539	1.627	2.628	1.591	2.735
1.647	2.256	1.621	2.31	1.593	2.374	1.563	2.45	1.53	2.542
1.574	2.112	1.55	2.159	1.525	2.214	1.498	2.279	1.468	2.358
1.499	1.972	1.478	2.012	1.455	2.059	1.431	2.114	1.404	2.181
1.423	1.834	1.404	1.868	1.384	1.908	1.362	1.955	1.338	2.011
1.346	1.7	1.329	1.729	1.311	1.762	1.292	1.802	1.271	1.848
1.267	1.569	1.253	1.593	1.237	1.621	1.22	1.654	1.202	1.692
1.187	1.441	1.175	1.461	1.161	1.484	1.146	1.51	1.13	1.541
1.105	1.316	1.095	1.332	1.084	1.35	1.071	1.372	1.057	1.396
1.022	1.193	1.014	1.206	1.004	1.22	0.994	1.237	0.982	1.257
0.938	1.073	0.931	1.083	0.923	1.094	0.914	1.107	0.905	1.122
0.895	1.014	0.889	1.023	0.882	1.033	0.874	1.044	0.866	1.057
0.851	0.956	0.846	0.963	0.84	0.972	0.833	0.982	0.826	0.993
0.808	0.898	0.803	0.904	0.798	0.912	0.792	0.92	0.785	0.93
0.764	0.841	0.759	0.846	0.755	0.853	0.75	0.86	0.744	0.868
0.719	0.784	0.716	0.789	0.712	0.794	0.707	0.8	0.702	0.807
0.674	0.729	0.671	0.732	0.668	0.737	0.664	0.741	0.66	0.747
0.629	0.673	0.626	0.676	0.624	0.68	0.621	0.684	0.617	0.688
0.583	0.618	0.581	0.621	0.579	0.624	0.576	0.627	0.574	0.63
0.537	0.564	0.535	0.566	0.533	0.568	0.531	0.57	0.529	0.573
0.49	0.511	0.489	0.512	0.487	0.514	0.486	0.515	0.484	0.517
0.466	0.484	0.465	0.485	0.464	0.486	0.463	0.488	0.462	0.49
0.443	0.458	0.442	0.458	0.441	0.46	0.44	0.461	0.439	0.462



<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
5.826	5.211	4.664	4.177	3.742

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
5.791	Infinity	5.176	Infinity	4.629	Infinity	4.142	Infinity	3.707	Infinity
5.097	Infinity	4.619	Infinity	4.182	Infinity	3.783	Infinity	3.42	Infinity
4.552	Infinity	4.17	Infinity	3.813	Infinity	3.481	Infinity	3.174	Infinity
4.082	Infinity	3.774	Infinity	3.482	Infinity	3.206	Infinity	2.946	Infinity
3.75	Infinity	3.491	Infinity	3.241	Infinity	3.002	Infinity	2.774	Infinity
3.446	Infinity	3.228	Infinity	3.015	Infinity	2.809	Infinity	2.61	Infinity
3.257	Infinity	3.063	Infinity	2.872	Infinity	2.685	Infinity	2.504	Infinity
3.036	Infinity	2.867	Infinity	2.701	Infinity	2.536	Infinity	2.375	Infinity
2.772	33.161	2.632	114.988	2.493	Infinity	2.353	Infinity	2.216	Infinity
2.62	18.591	2.496	30.758	2.371	118.293	2.246	Infinity	2.121	Infinity
2.452	12.001	2.344	16.059	2.234	25.994	2.124	86.71	2.013	Infinity
2.265	8.245	2.174	9.948	2.08	12.98	1.985	19.81	1.889	49.052
2.056	5.818	1.982	6.601	1.905	7.785	1.826	9.768	1.746	13.729
1.965	5.072	1.898	5.651	1.828	6.488	1.756	7.794	1.682	10.096
1.87	4.419	1.809	4.846	1.747	5.442	1.681	6.321	1.614	7.735
1.77	3.841	1.716	4.156	1.66	4.581	1.602	5.179	1.542	6.078
1.665	3.328	1.618	3.558	1.568	3.859	1.517	4.268	1.464	4.851
1.554	2.868	1.513	3.034	1.471	3.246	1.426	3.525	1.38	3.905
1.496	2.655	1.459	2.795	1.42	2.973	1.378	3.202	1.335	3.51
1.436	2.453	1.403	2.571	1.367	2.719	1.329	2.907	1.289	3.154
1.375	2.261	1.345	2.36	1.312	2.481	1.278	2.635	1.241	2.834
1.313	2.078	1.285	2.16	1.256	2.26	1.225	2.385	1.192	2.544
1.248	1.904	1.224	1.971	1.197	2.052	1.169	2.153	1.14	2.279
1.182	1.737	1.16	1.792	1.137	1.857	1.112	1.938	1.086	2.037
1.113	1.578	1.094	1.622	1.074	1.674	1.053	1.738	1.029	1.815
1.043	1.426	1.027	1.46	1.009	1.501	0.991	1.551	0.971	1.611
0.97	1.28	0.956	1.307	0.942	1.338	0.926	1.376	0.909	1.422
0.895	1.14	0.884	1.16	0.872	1.184	0.859	1.213	0.845	1.246
0.857	1.072	0.847	1.09	0.836	1.11	0.824	1.135	0.811	1.163
0.818	1.006	0.809	1.021	0.799	1.038	0.789	1.059	0.777	1.083
0.778	0.941	0.77	0.953	0.762	0.968	0.753	0.986	0.743	1.006
0.738	0.877	0.731	0.888	0.724	0.9	0.716	0.915	0.707	0.931
0.697	0.814	0.691	0.823	0.685	0.834	0.678	0.845	0.67	0.859
0.656	0.753	0.651	0.76	0.645	0.769	0.639	0.778	0.633	0.789
0.613	0.693	0.609	0.699	0.605	0.705	0.6	0.713	0.594	0.722
0.571	0.634	0.567	0.639	0.564	0.644	0.559	0.65	0.555	0.657
0.527	0.576	0.524	0.58	0.521	0.584	0.518	0.588	0.515	0.593
0.483	0.519	0.481	0.522	0.478	0.525	0.476	0.528	0.473	0.532
0.46	0.491	0.458	0.494	0.456	0.496	0.454	0.499	0.452	0.502
0.437	0.464	0.436	0.465	0.434	0.467	0.433	0.47	0.431	0.472





<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
3.355	3.011	2.703	2.43

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
3.32	Infinity	2.976	Infinity	2.668	Infinity	2.395	Infinity
3.09	Infinity	2.792	Infinity	2.522	Infinity	2.278	Infinity
2.89	Infinity	2.63	Infinity	2.39	Infinity	2.172	Infinity
2.702	Infinity	2.475	Infinity	2.263	Infinity	2.068	Infinity
2.559	Infinity	2.355	Infinity	2.165	Infinity	1.987	Infinity
2.42	Infinity	2.239	Infinity	2.067	Infinity	1.905	Infinity
2.329	Infinity	2.162	Infinity	2.002	Infinity	1.851	Infinity
2.219	Infinity	2.068	Infinity	1.922	Infinity	1.784	Infinity
2.081	Infinity	1.948	Infinity	1.82	Infinity	1.697	Infinity
1.997	Infinity	1.876	Infinity	1.758	Infinity	1.643	Infinity
1.903	Infinity	1.793	Infinity	1.686	Infinity	1.581	Infinity
1.793	Infinity	1.697	Infinity	1.601	Infinity	1.508	Infinity
1.665	25.414	1.583	757.307	1.501	Infinity	1.42	Infinity
1.607	15.18	1.531	35.451	1.455	Infinity	1.379	Infinity
1.546	10.366	1.476	16.888	1.406	59.318	1.335	Infinity
1.48	7.568	1.416	10.486	1.352	18.672	1.288	168.069
1.408	5.739	1.352	7.244	1.294	10.321	1.236	19.991
1.331	4.449	1.281	5.285	1.23	6.719	1.178	9.724
1.29	3.937	1.244	4.57	1.196	5.591	1.147	7.497
1.248	3.491	1.205	3.973	1.16	4.712	1.115	5.977
1.203	3.099	1.164	3.467	1.123	4.008	1.08	4.874
1.157	2.752	1.121	3.033	1.083	3.432	1.044	4.037
1.109	2.442	1.076	2.657	1.042	2.952	1.006	3.379
1.058	2.164	1.029	2.327	0.998	2.546	0.966	2.85
1.005	1.912	0.979	2.036	0.952	2.197	0.923	2.414
0.949	1.685	0.927	1.777	0.903	1.895	0.878	2.049
0.891	1.477	0.872	1.545	0.851	1.63	0.829	1.739
0.83	1.287	0.813	1.336	0.796	1.397	0.778	1.472
0.798	1.198	0.783	1.239	0.767	1.29	0.751	1.353
0.765	1.112	0.752	1.147	0.738	1.189	0.723	1.241
0.732	1.03	0.72	1.059	0.707	1.094	0.694	1.136
0.697	0.951	0.687	0.975	0.676	1.003	0.664	1.037
0.662	0.875	0.653	0.895	0.643	0.917	0.633	0.945
0.626	0.803	0.618	0.818	0.61	0.836	0.601	0.857
0.588	0.732	0.582	0.744	0.575	0.758	0.567	0.775
0.55	0.665	0.545	0.674	0.539	0.685	0.533	0.697
0.511	0.599	0.506	0.606	0.502	0.614	0.497	0.623
0.47	0.536	0.467	0.541	0.463	0.547	0.459	0.554
0.449	0.506	0.447	0.51	0.443	0.514	0.44	0.52
0.428	0.475	0.426	0.479	0.423	0.483	0.42	0.487



Focal Length 40 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	39.638	35.335	31.502	28.087

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	39.595	Infinity	35.293	Infinity	31.46	Infinity	28.045	Infinity
40.00	19.988	Infinity	18.839	Infinity	17.698	Infinity	16.573	Infinity
20.00	13.368	40.005	12.849	45.618	12.312	54.156	11.762	68.58
13.00	9.853	19.171	9.571	20.359	9.273	21.884	8.96	23.895
10.00	8.041	13.254	7.854	13.807	7.653	14.485	7.441	15.332
8.00	6.705	9.933	6.575	10.238	6.436	10.602	6.286	11.045
7.00	5.994	8.425	5.891	8.642	5.779	8.899	5.659	9.206
6.00	5.251	7.007	5.172	7.155	5.087	7.329	4.994	7.534
5.00	4.475	5.671	4.418	5.766	4.356	5.877	4.289	6.007
4.50	4.073	5.031	4.027	5.105	3.976	5.191	3.92	5.291
4.00	3.662	4.41	3.625	4.466	3.584	4.531	3.539	4.606
3.50	3.242	3.805	3.213	3.846	3.181	3.894	3.146	3.948
3.00	2.812	3.217	2.79	3.246	2.767	3.279	2.741	3.317
2.80	2.637	2.986	2.618	3.011	2.597	3.039	2.575	3.072
2.60	2.46	2.758	2.444	2.779	2.426	2.803	2.407	2.83
2.40	2.282	2.532	2.268	2.55	2.253	2.569	2.236	2.592
2.20	2.101	2.309	2.09	2.323	2.077	2.339	2.063	2.358
2.00	1.92	2.088	1.91	2.099	1.9	2.112	1.888	2.127
1.90	1.828	1.978	1.82	1.989	1.81	2	1.8	2.013
1.80	1.736	1.869	1.729	1.878	1.72	1.888	1.711	1.9
1.70	1.644	1.761	1.637	1.769	1.63	1.778	1.621	1.788
1.60	1.551	1.653	1.545	1.66	1.538	1.667	1.531	1.676
1.50	1.457	1.546	1.452	1.552	1.447	1.558	1.44	1.566
1.40	1.363	1.439	1.359	1.444	1.354	1.449	1.349	1.456
1.30	1.269	1.333	1.265	1.337	1.261	1.342	1.257	1.347
1.20	1.174	1.227	1.171	1.231	1.168	1.234	1.164	1.239
1.10	1.079	1.122	1.076	1.125	1.074	1.128	1.071	1.131
1.00	0.983	1.017	0.981	1.02	0.979	1.022	0.977	1.025
0.95	0.935	0.965	0.933	0.967	0.931	0.969	0.929	0.972
0.90	0.887	0.913	0.886	0.915	0.884	0.917	0.882	0.919
0.85	0.839	0.862	0.837	0.863	0.836	0.865	0.834	0.867
0.80	0.79	0.81	0.789	0.811	0.788	0.813	0.786	0.814
0.75	0.742	0.758	0.741	0.759	0.74	0.761	0.739	0.762
0.70	0.693	0.707	0.692	0.708	0.691	0.709	0.69	0.71
0.65	0.644	0.656	0.644	0.656	0.643	0.657	0.642	0.658
0.60	0.596	0.605	0.595	0.605	0.594	0.606	0.594	0.606
0.55	0.547	0.554	0.546	0.554	0.546	0.554	0.545	0.555
0.50	0.497	0.503	0.497	0.503	0.497	0.503	0.496	0.504
0.45	0.448	0.452	0.448	0.452	0.448	0.452	0.447	0.453
0.40	0.399	0.401	0.399	0.401	0.398	0.402	0.398	0.402
0.35	0.349	0.351	0.349	0.351	0.349	0.351	0.349	0.351



<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
25.044	22.334	19.919	17.768	15.851

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
25.002	Infinity	22.292	Infinity	19.877	Infinity	17.726	Infinity	15.809	Infinity
15.471	Infinity	14.397	Infinity	13.358	Infinity	12.359	Infinity	11.404	Infinity
11.2	97.881	10.631	188.335	10.059	Infinity	9.487	Infinity	8.918	Infinity
8.634	26.647	8.295	30.61	7.945	36.757	7.587	47.477	7.223	70.655
7.216	16.411	6.98	17.82	6.733	19.723	6.476	22.416	6.211	26.484
6.126	11.588	5.957	12.267	5.777	13.132	5.589	14.262	5.392	15.791
5.53	9.578	5.392	10.034	5.246	10.601	5.091	11.321	4.928	12.256
4.894	7.779	4.787	8.074	4.672	8.434	4.55	8.879	4.421	9.439
4.216	6.159	4.137	6.341	4.052	6.558	3.961	6.82	3.864	7.142
3.859	5.409	3.794	5.547	3.723	5.711	3.646	5.907	3.564	6.145
3.49	4.694	3.437	4.796	3.379	4.917	3.317	5.06	3.25	5.232
3.108	4.012	3.066	4.085	3.021	4.172	2.972	4.273	2.918	4.393
2.712	3.361	2.681	3.412	2.647	3.47	2.609	3.539	2.569	3.619
2.55	3.109	2.522	3.152	2.492	3.201	2.459	3.259	2.424	3.326
2.385	2.861	2.361	2.897	2.335	2.938	2.307	2.986	2.275	3.042
2.218	2.618	2.197	2.647	2.175	2.681	2.151	2.721	2.124	2.767
2.048	2.379	2.031	2.403	2.012	2.43	1.991	2.462	1.969	2.499
1.876	2.144	1.862	2.163	1.846	2.185	1.829	2.21	1.81	2.239
1.788	2.028	1.776	2.045	1.762	2.064	1.746	2.087	1.729	2.112
1.701	1.913	1.689	1.928	1.677	1.945	1.663	1.964	1.648	1.987
1.612	1.799	1.602	1.812	1.591	1.827	1.579	1.844	1.565	1.863
1.523	1.686	1.514	1.697	1.504	1.71	1.494	1.725	1.482	1.742
1.433	1.574	1.426	1.584	1.417	1.595	1.408	1.607	1.397	1.622
1.343	1.463	1.336	1.471	1.329	1.48	1.321	1.491	1.312	1.503
1.252	1.353	1.246	1.36	1.24	1.367	1.233	1.376	1.225	1.386
1.16	1.244	1.155	1.249	1.15	1.256	1.144	1.263	1.137	1.271
1.067	1.135	1.063	1.14	1.059	1.145	1.054	1.151	1.049	1.157
0.974	1.028	0.971	1.032	0.967	1.036	0.963	1.04	0.959	1.045
0.927	0.975	0.924	0.978	0.921	0.981	0.918	0.985	0.914	0.99
0.88	0.921	0.877	0.924	0.875	0.927	0.872	0.931	0.868	0.935
0.832	0.869	0.83	0.871	0.828	0.874	0.825	0.877	0.822	0.88
0.785	0.816	0.783	0.818	0.781	0.82	0.779	0.823	0.776	0.826
0.737	0.763	0.736	0.765	0.734	0.767	0.732	0.769	0.73	0.772
0.689	0.711	0.688	0.713	0.687	0.714	0.685	0.716	0.683	0.718
0.641	0.659	0.64	0.66	0.639	0.661	0.638	0.663	0.636	0.665
0.593	0.607	0.592	0.608	0.591	0.609	0.59	0.61	0.589	0.612
0.545	0.556	0.544	0.556	0.543	0.557	0.542	0.558	0.541	0.559
0.496	0.504	0.495	0.505	0.495	0.505	0.494	0.506	0.494	0.507
0.447	0.453	0.447	0.453	0.446	0.454	0.446	0.454	0.445	0.455
0.398	0.402	0.398	0.402	0.398	0.402	0.397	0.403	0.397	0.403
0.349	0.351	0.349	0.351	0.349	0.351	0.348	0.352	0.348	0.352



<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
14.143	12.622	11.267	10.059	8.984

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
14.102	Infinity	12.581	Infinity	11.225	Infinity	10.018	Infinity	8.942	Infinity
10.495	Infinity	9.636	Infinity	8.827	Infinity	8.069	Infinity	7.362	Infinity
8.357	Infinity	7.808	Infinity	7.272	Infinity	6.754	Infinity	6.256	Infinity
6.854	156.756	6.483	Infinity	6.113	Infinity	5.746	Infinity	5.385	Infinity
5.938	33.277	5.66	46.781	5.378	86.129	5.094	1632.09	4.81	Infinity
5.187	17.956	4.975	21.233	4.758	26.722	4.537	37.699	4.312	70.172
4.757	13.513	4.58	15.275	4.396	17.903	4.207	22.206	4.015	30.451
4.284	10.16	4.141	11.116	3.991	12.433	3.836	14.346	3.677	17.355
3.76	7.542	3.651	8.049	3.535	8.708	3.415	9.593	3.289	10.833
3.477	6.436	3.384	6.798	3.285	7.259	3.182	7.858	3.073	8.664
3.177	5.439	3.1	5.693	3.018	6.009	2.931	6.409	2.84	6.929
2.861	4.536	2.799	4.709	2.732	4.92	2.662	5.181	2.587	5.511
2.525	3.714	2.477	3.827	2.426	3.962	2.372	4.127	2.313	4.33
2.385	3.405	2.343	3.499	2.297	3.611	2.249	3.746	2.197	3.911
2.241	3.108	2.205	3.185	2.165	3.276	2.122	3.386	2.076	3.518
2.095	2.82	2.063	2.882	2.028	2.956	1.991	3.044	1.951	3.149
1.944	2.542	1.917	2.592	1.888	2.65	1.856	2.719	1.821	2.802
1.789	2.273	1.767	2.312	1.742	2.358	1.716	2.411	1.687	2.475
1.711	2.142	1.69	2.176	1.668	2.216	1.644	2.263	1.618	2.318
1.631	2.013	1.613	2.043	1.593	2.077	1.571	2.118	1.547	2.166
1.55	1.886	1.534	1.912	1.516	1.942	1.496	1.977	1.475	2.017
1.468	1.761	1.454	1.783	1.438	1.809	1.421	1.839	1.402	1.873
1.386	1.638	1.373	1.657	1.359	1.679	1.344	1.704	1.327	1.733
1.302	1.517	1.291	1.533	1.279	1.551	1.265	1.572	1.251	1.596
1.217	1.398	1.207	1.411	1.197	1.426	1.185	1.443	1.173	1.463
1.13	1.28	1.122	1.291	1.114	1.303	1.104	1.318	1.094	1.334
1.043	1.165	1.036	1.174	1.029	1.183	1.021	1.195	1.013	1.207
0.954	1.051	0.949	1.058	0.943	1.066	0.937	1.074	0.93	1.084
0.91	0.995	0.905	1.001	0.9	1.008	0.894	1.015	0.888	1.024
0.865	0.939	0.86	0.944	0.856	0.95	0.851	0.957	0.845	0.964
0.819	0.884	0.816	0.888	0.812	0.893	0.807	0.899	0.802	0.905
0.774	0.829	0.77	0.833	0.767	0.837	0.763	0.842	0.759	0.847
0.728	0.774	0.725	0.777	0.722	0.781	0.719	0.785	0.715	0.79
0.681	0.72	0.679	0.723	0.677	0.726	0.674	0.729	0.671	0.733
0.635	0.666	0.633	0.668	0.631	0.671	0.629	0.674	0.626	0.677
0.588	0.613	0.586	0.615	0.585	0.617	0.583	0.619	0.581	0.621
0.54	0.56	0.539	0.561	0.538	0.563	0.537	0.564	0.535	0.566
0.493	0.508	0.492	0.508	0.491	0.51	0.49	0.511	0.489	0.512
0.445	0.455	0.444	0.456	0.444	0.457	0.443	0.458	0.442	0.459
0.397	0.404	0.396	0.404	0.396	0.404	0.395	0.405	0.395	0.406
0.348	0.352	0.348	0.352	0.347	0.353	0.347	0.353	0.347	0.353



<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
8.025	7.172	6.411	5.733	5.13

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
7.984	Infinity	7.13	Infinity	6.37	Infinity	5.692	Infinity	5.088	Infinity
6.705	Infinity	6.097	Infinity	5.537	Infinity	5.022	Infinity	4.55	Infinity
5.779	Infinity	5.326	Infinity	4.896	Infinity	4.492	Infinity	4.114	Infinity
5.031	Infinity	4.687	Infinity	4.354	Infinity	4.034	Infinity	3.729	Infinity
4.528	Infinity	4.249	Infinity	3.976	Infinity	3.71	Infinity	3.452	Infinity
4.086	2411.725	3.859	Infinity	3.635	Infinity	3.413	Infinity	3.195	Infinity
3.819	52.368	3.622	277.992	3.424	Infinity	3.228	Infinity	3.034	Infinity
3.513	22.727	3.347	34.916	3.179	88.425	3.011	Infinity	2.842	Infinity
3.159	12.681	3.026	15.701	2.89	21.469	2.751	36.686	2.612	184.174
2.96	9.795	2.844	11.487	2.724	14.269	2.602	19.636	2.477	34.146
2.744	7.626	2.645	8.602	2.542	10.054	2.436	12.421	2.328	16.922
2.509	5.937	2.426	6.503	2.341	7.288	2.252	8.437	2.16	10.266
2.251	4.583	2.186	4.907	2.117	5.332	2.045	5.911	1.971	6.736
2.141	4.114	2.082	4.371	2.021	4.702	1.956	5.141	1.888	5.748
2.027	3.68	1.975	3.882	1.92	4.138	1.861	4.47	1.801	4.916
1.908	3.277	1.862	3.433	1.814	3.629	1.762	3.879	1.708	4.207
1.784	2.901	1.745	3.021	1.703	3.17	1.658	3.356	1.611	3.594
1.656	2.55	1.622	2.641	1.586	2.751	1.548	2.888	1.507	3.059
1.589	2.383	1.559	2.462	1.526	2.556	1.491	2.672	1.453	2.817
1.521	2.222	1.494	2.289	1.464	2.37	1.432	2.468	1.398	2.589
1.452	2.066	1.427	2.123	1.4	2.191	1.371	2.273	1.34	2.374
1.381	1.914	1.359	1.962	1.335	2.019	1.309	2.088	1.281	2.172
1.309	1.767	1.289	1.807	1.268	1.855	1.245	1.912	1.22	1.98
1.235	1.625	1.218	1.658	1.199	1.697	1.179	1.744	1.157	1.799
1.159	1.487	1.144	1.514	1.128	1.546	1.111	1.583	1.092	1.628
1.082	1.353	1.069	1.374	1.056	1.4	1.041	1.43	1.024	1.465
1.003	1.222	0.992	1.24	0.981	1.26	0.968	1.283	0.955	1.31
0.922	1.096	0.913	1.109	0.904	1.124	0.894	1.142	0.883	1.163
0.881	1.034	0.873	1.045	0.865	1.059	0.856	1.074	0.845	1.092
0.839	0.973	0.832	0.983	0.825	0.994	0.817	1.007	0.808	1.023
0.797	0.913	0.791	0.921	0.784	0.931	0.777	0.942	0.769	0.955
0.754	0.853	0.749	0.86	0.743	0.869	0.737	0.878	0.73	0.889
0.711	0.795	0.707	0.801	0.702	0.807	0.697	0.815	0.691	0.824
0.667	0.737	0.664	0.742	0.66	0.747	0.655	0.754	0.65	0.761
0.623	0.68	0.62	0.684	0.617	0.688	0.613	0.694	0.609	0.699
0.579	0.624	0.576	0.627	0.573	0.63	0.57	0.634	0.567	0.639
0.533	0.568	0.531	0.571	0.529	0.573	0.527	0.576	0.524	0.58
0.487	0.514	0.486	0.515	0.484	0.517	0.482	0.52	0.48	0.522
0.441	0.46	0.44	0.461	0.439	0.462	0.437	0.464	0.436	0.466
0.394	0.406	0.393	0.407	0.392	0.408	0.392	0.409	0.391	0.41
0.346	0.354	0.346	0.354	0.345	0.355	0.345	0.355	0.344	0.356



<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
4.592	4.113	3.686	3.305

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
4.55	Infinity	4.071	Infinity	3.644	Infinity	3.264	Infinity
4.118	Infinity	3.725	Infinity	3.367	Infinity	3.042	Infinity
3.761	Infinity	3.433	Infinity	3.129	Infinity	2.849	Infinity
3.439	Infinity	3.165	Infinity	2.907	Infinity	2.666	Infinity
3.204	Infinity	2.967	Infinity	2.741	Infinity	2.527	Infinity
2.983	Infinity	2.778	Infinity	2.581	Infinity	2.392	Infinity
2.843	Infinity	2.657	Infinity	2.477	Infinity	2.303	Infinity
2.676	Infinity	2.512	Infinity	2.351	Infinity	2.196	Infinity
2.472	Infinity	2.333	Infinity	2.195	Infinity	2.06	Infinity
2.352	207.731	2.227	Infinity	2.102	Infinity	1.979	Infinity
2.218	28.664	2.107	133.533	1.996	Infinity	1.886	Infinity
2.066	13.599	1.971	21.497	1.875	62.845	1.779	Infinity
1.894	7.998	1.815	10.15	1.734	14.601	1.653	29.043
1.818	6.633	1.745	8.032	1.672	10.553	1.596	16.386
1.737	5.542	1.672	6.474	1.604	7.996	1.536	10.906
1.652	4.65	1.593	5.279	1.533	6.235	1.471	7.846
1.561	3.907	1.509	4.335	1.456	4.948	1.4	5.893
1.465	3.279	1.42	3.569	1.373	3.966	1.324	4.539
1.414	3	1.373	3.238	1.329	3.558	1.284	4.006
1.362	2.741	1.324	2.936	1.284	3.193	1.242	3.545
1.308	2.5	1.273	2.658	1.236	2.864	1.198	3.14
1.252	2.275	1.22	2.403	1.187	2.568	1.152	2.783
1.194	2.064	1.165	2.167	1.136	2.298	1.104	2.466
1.134	1.867	1.109	1.949	1.082	2.052	1.054	2.182
1.071	1.681	1.05	1.746	1.026	1.826	1.001	1.926
1.007	1.507	0.988	1.558	0.968	1.619	0.946	1.695
0.94	1.343	0.924	1.381	0.907	1.428	0.888	1.484
0.87	1.187	0.857	1.216	0.843	1.251	0.828	1.292
0.835	1.113	0.823	1.138	0.81	1.167	0.796	1.202
0.798	1.041	0.787	1.062	0.776	1.086	0.764	1.116
0.761	0.97	0.751	0.988	0.741	1.008	0.73	1.033
0.723	0.902	0.715	0.916	0.706	0.933	0.696	0.954
0.684	0.835	0.677	0.847	0.669	0.861	0.661	0.877
0.645	0.77	0.639	0.779	0.632	0.791	0.625	0.804
0.604	0.706	0.599	0.714	0.594	0.723	0.588	0.733
0.563	0.644	0.559	0.65	0.555	0.657	0.55	0.665
0.521	0.584	0.518	0.588	0.514	0.594	0.51	0.6
0.478	0.525	0.476	0.528	0.473	0.532	0.47	0.537
0.434	0.468	0.432	0.47	0.43	0.473	0.428	0.476
0.389	0.412	0.388	0.413	0.387	0.415	0.385	0.417
0.344	0.357	0.343	0.358	0.342	0.359	0.341	0.36



Focal Length 50 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	55.741	49.682	44.283	39.473

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	55.689	Infinity	49.63	Infinity	44.232	Infinity	39.423	Infinity
40.00	23.365	140.758	22.236	203.823	21.092	410.317	19.942	Infinity
20.00	14.783	30.997	14.327	33.242	13.847	36.186	13.347	40.184
13.00	10.593	16.849	10.359	17.484	10.108	18.258	9.841	19.214
10.00	8.523	12.111	8.372	12.433	8.208	12.816	8.033	13.276
8.00	7.033	9.283	6.931	9.469	6.82	9.688	6.699	9.946
7.00	6.253	7.956	6.172	8.092	6.084	8.25	5.989	8.435
6.00	5.447	6.682	5.386	6.777	5.32	6.886	5.247	7.014
5.00	4.614	5.459	4.571	5.521	4.524	5.593	4.472	5.675
4.50	4.187	4.865	4.152	4.914	4.113	4.97	4.071	5.035
4.00	3.753	4.283	3.725	4.32	3.694	4.363	3.66	4.413
3.50	3.312	3.712	3.29	3.739	3.267	3.771	3.24	3.807
3.00	2.863	3.151	2.847	3.171	2.83	3.193	2.81	3.219
2.80	2.681	2.93	2.668	2.947	2.652	2.966	2.635	2.988
2.60	2.498	2.711	2.487	2.725	2.473	2.741	2.459	2.76
2.40	2.314	2.493	2.304	2.505	2.293	2.518	2.281	2.534
2.20	2.129	2.277	2.12	2.286	2.111	2.297	2.101	2.31
2.00	1.942	2.062	1.935	2.07	1.927	2.079	1.919	2.089
1.90	1.848	1.955	1.842	1.962	1.835	1.97	1.827	1.979
1.80	1.754	1.849	1.748	1.855	1.742	1.862	1.735	1.87
1.70	1.659	1.743	1.654	1.748	1.649	1.755	1.643	1.762
1.60	1.564	1.638	1.56	1.642	1.555	1.648	1.55	1.654
1.50	1.469	1.532	1.465	1.536	1.461	1.541	1.457	1.546
1.40	1.374	1.428	1.37	1.431	1.367	1.435	1.363	1.439
1.30	1.278	1.323	1.275	1.326	1.272	1.329	1.269	1.333
1.20	1.181	1.219	1.179	1.222	1.177	1.224	1.174	1.227
1.10	1.085	1.116	1.083	1.118	1.081	1.12	1.079	1.122
1.00	0.988	1.012	0.986	1.014	0.985	1.016	0.983	1.018
0.95	0.939	0.961	0.938	0.962	0.937	0.964	0.935	0.966
0.90	0.891	0.91	0.89	0.911	0.888	0.912	0.887	0.914
0.85	0.842	0.858	0.841	0.859	0.84	0.86	0.839	0.862
0.80	0.793	0.807	0.792	0.808	0.791	0.809	0.79	0.81
0.75	0.744	0.756	0.743	0.757	0.743	0.758	0.742	0.759
0.70	0.695	0.705	0.694	0.706	0.694	0.706	0.693	0.707
0.65	0.646	0.654	0.645	0.655	0.645	0.655	0.644	0.656
0.60	0.597	0.603	0.596	0.604	0.596	0.604	0.595	0.605
0.55	0.547	0.553	0.547	0.553	0.547	0.553	0.546	0.554
0.50	0.498	0.502	0.498	0.502	0.498	0.502	0.497	0.503
0.485	0.483	0.487	0.483	0.487	0.483	0.487	0.483	0.487
0.47	0.468	0.472	0.468	0.472	0.468	0.472	0.468	0.472



<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
35.188	31.371	27.97	24.94	22.241

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
35.138	Infinity	31.321	Infinity	27.92	Infinity	24.891	Infinity	22.191	Infinity
18.793	Infinity	17.652	Infinity	16.528	Infinity	15.426	Infinity	14.353	Infinity
12.826	45.878	12.289	54.566	11.738	69.316	11.176	99.561	10.606	195.395
9.558	20.414	9.259	21.954	8.946	23.988	8.618	26.777	8.279	30.801
7.845	13.833	7.644	14.517	7.431	15.372	7.205	16.462	6.968	17.887
6.569	10.252	6.429	10.62	6.278	11.067	6.118	11.615	5.948	12.3
5.885	8.653	5.773	8.912	5.652	9.222	5.523	9.597	5.385	10.057
5.168	7.163	5.082	7.338	4.989	7.545	4.889	7.792	4.781	8.09
4.415	5.771	4.353	5.883	4.285	6.014	4.212	6.168	4.133	6.351
4.024	5.11	3.973	5.196	3.917	5.297	3.856	5.415	3.79	5.555
3.623	4.469	3.582	4.535	3.536	4.611	3.487	4.699	3.434	4.802
3.211	3.849	3.179	3.897	3.144	3.952	3.106	4.016	3.064	4.09
2.789	3.248	2.765	3.281	2.739	3.32	2.71	3.364	2.679	3.415
2.617	3.013	2.596	3.041	2.573	3.074	2.548	3.111	2.52	3.155
2.443	2.781	2.425	2.804	2.405	2.832	2.383	2.863	2.359	2.9
2.267	2.551	2.252	2.571	2.235	2.594	2.216	2.62	2.196	2.65
2.089	2.324	2.076	2.341	2.062	2.359	2.047	2.38	2.029	2.405
1.909	2.1	1.899	2.113	1.887	2.128	1.874	2.145	1.86	2.165
1.819	1.989	1.809	2.001	1.799	2.014	1.787	2.029	1.775	2.046
1.728	1.879	1.719	1.889	1.71	1.901	1.7	1.914	1.688	1.929
1.636	1.769	1.629	1.778	1.621	1.789	1.611	1.8	1.601	1.813
1.544	1.66	1.538	1.668	1.53	1.677	1.522	1.687	1.513	1.698
1.452	1.552	1.446	1.559	1.44	1.566	1.433	1.575	1.425	1.585
1.359	1.444	1.354	1.45	1.348	1.457	1.342	1.464	1.335	1.472
1.265	1.337	1.261	1.342	1.256	1.347	1.251	1.354	1.245	1.36
1.171	1.231	1.167	1.235	1.163	1.239	1.159	1.244	1.154	1.25
1.076	1.125	1.073	1.128	1.07	1.132	1.067	1.136	1.063	1.14
0.981	1.02	0.979	1.022	0.976	1.025	0.973	1.028	0.97	1.032
0.933	0.968	0.931	0.97	0.929	0.972	0.926	0.975	0.924	0.978
0.885	0.915	0.883	0.917	0.882	0.919	0.879	0.922	0.877	0.925
0.837	0.863	0.836	0.865	0.834	0.867	0.832	0.869	0.83	0.871
0.789	0.811	0.788	0.813	0.786	0.814	0.785	0.816	0.783	0.818
0.741	0.76	0.74	0.761	0.738	0.762	0.737	0.764	0.735	0.765
0.692	0.708	0.691	0.709	0.69	0.71	0.689	0.711	0.688	0.713
0.644	0.657	0.643	0.657	0.642	0.658	0.641	0.659	0.64	0.66
0.595	0.605	0.594	0.606	0.594	0.607	0.593	0.607	0.592	0.608
0.546	0.554	0.546	0.555	0.545	0.555	0.544	0.556	0.544	0.556
0.497	0.503	0.497	0.503	0.496	0.504	0.496	0.504	0.495	0.505
0.482	0.488	0.482	0.488	0.482	0.488	0.481	0.489	0.481	0.489
0.468	0.472	0.467	0.473	0.467	0.473	0.467	0.474	0.466	0.474





<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
19.836	17.694	15.785	14.085	12.57

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
19.787	Infinity	17.644	Infinity	15.736	Infinity	14.035	Infinity	12.52	Infinity
13.316	Infinity	12.318	Infinity	11.364	Infinity	10.457	Infinity	9.599	Infinity
10.034	Infinity	9.461	Infinity	8.893	Infinity	8.332	Infinity	7.783	Infinity
7.929	37.063	7.57	48.046	7.205	72.065	6.836	164.675	6.465	Infinity
6.721	19.815	6.463	22.548	6.197	26.688	5.924	33.636	5.646	47.571
5.768	13.174	5.579	14.317	5.381	15.866	5.176	18.065	4.964	21.402
5.238	10.629	5.082	11.357	4.919	12.303	4.748	13.576	4.57	15.365
4.666	8.453	4.543	8.902	4.413	9.468	4.276	10.198	4.132	11.166
4.047	6.57	3.956	6.834	3.858	7.159	3.754	7.563	3.644	8.076
3.718	5.72	3.642	5.918	3.559	6.158	3.471	6.452	3.378	6.819
3.376	4.924	3.313	5.069	3.245	5.242	3.173	5.451	3.095	5.708
3.018	4.177	2.968	4.279	2.914	4.4	2.857	4.545	2.794	4.719
2.644	3.474	2.607	3.543	2.566	3.624	2.522	3.72	2.474	3.834
2.49	3.205	2.457	3.263	2.421	3.331	2.382	3.411	2.34	3.506
2.333	2.941	2.304	2.99	2.273	3.046	2.239	3.112	2.202	3.19
2.173	2.684	2.149	2.724	2.122	2.77	2.092	2.824	2.06	2.887
2.01	2.433	1.99	2.465	1.967	2.502	1.942	2.545	1.915	2.596
1.845	2.187	1.827	2.212	1.808	2.242	1.788	2.276	1.765	2.315
1.76	2.066	1.745	2.089	1.728	2.114	1.709	2.144	1.688	2.179
1.676	1.946	1.662	1.966	1.646	1.989	1.629	2.015	1.611	2.045
1.59	1.828	1.578	1.845	1.564	1.865	1.549	1.888	1.532	1.914
1.503	1.711	1.492	1.726	1.48	1.743	1.467	1.763	1.452	1.785
1.416	1.596	1.407	1.608	1.396	1.623	1.384	1.64	1.372	1.659
1.328	1.481	1.32	1.492	1.311	1.504	1.3	1.518	1.289	1.534
1.239	1.368	1.232	1.377	1.224	1.387	1.215	1.399	1.206	1.412
1.149	1.256	1.143	1.264	1.137	1.272	1.129	1.282	1.121	1.292
1.058	1.146	1.053	1.152	1.048	1.158	1.042	1.166	1.035	1.175
0.967	1.036	0.963	1.041	0.958	1.046	0.954	1.052	0.948	1.059
0.921	0.982	0.917	0.986	0.913	0.991	0.909	0.996	0.904	1.002
0.874	0.928	0.871	0.931	0.868	0.935	0.864	0.94	0.86	0.945
0.828	0.874	0.825	0.877	0.822	0.881	0.819	0.884	0.815	0.889
0.781	0.821	0.778	0.823	0.776	0.826	0.773	0.829	0.77	0.833
0.734	0.767	0.732	0.77	0.73	0.772	0.727	0.775	0.724	0.778
0.686	0.714	0.685	0.716	0.683	0.718	0.681	0.721	0.679	0.723
0.639	0.662	0.637	0.663	0.636	0.665	0.634	0.667	0.632	0.669
0.591	0.609	0.59	0.611	0.589	0.612	0.587	0.613	0.586	0.615
0.543	0.557	0.542	0.558	0.541	0.559	0.54	0.56	0.539	0.562
0.495	0.505	0.494	0.506	0.493	0.507	0.493	0.508	0.492	0.509
0.48	0.49	0.48	0.491	0.479	0.491	0.478	0.492	0.477	0.493
0.466	0.474	0.465	0.475	0.465	0.476	0.464	0.476	0.463	0.477



<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
11.22	10.018	8.946	7.992	7.142

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
11.171	Infinity	9.968	Infinity	8.897	Infinity	7.943	Infinity	7.093	Infinity
8.792	Infinity	8.035	Infinity	7.33	Infinity	6.675	Infinity	6.069	Infinity
7.248	Infinity	6.73	Infinity	6.232	Infinity	5.756	Infinity	5.303	Infinity
6.095	Infinity	5.728	Infinity	5.366	Infinity	5.013	Infinity	4.669	Infinity
5.363	89.137	5.079	5519.958	4.795	Infinity	4.513	Infinity	4.234	Infinity
4.746	27.019	4.524	38.354	4.299	72.715	4.073	Infinity	3.846	Infinity
4.386	18.04	4.197	22.439	4.004	30.937	3.808	53.967	3.61	335.751
3.983	12.501	3.827	14.447	3.667	17.519	3.504	23.037	3.337	35.725
3.528	8.744	3.407	9.641	3.281	10.901	3.151	12.783	3.017	15.873
3.279	7.284	3.175	7.891	3.066	8.708	2.953	9.858	2.836	11.583
3.013	6.027	2.925	6.432	2.834	6.959	2.738	7.666	2.638	8.658
2.728	4.933	2.657	5.197	2.582	5.531	2.503	5.962	2.42	6.537
2.422	3.971	2.367	4.138	2.309	4.343	2.246	4.599	2.181	4.928
2.294	3.619	2.245	3.755	2.193	3.922	2.137	4.128	2.078	4.388
2.162	3.282	2.119	3.393	2.072	3.527	2.023	3.691	1.97	3.895
2.025	2.962	1.988	3.05	1.948	3.157	1.904	3.286	1.858	3.445
1.885	2.655	1.853	2.725	1.818	2.808	1.781	2.908	1.741	3.03
1.74	2.361	1.713	2.416	1.684	2.48	1.653	2.556	1.619	2.648
1.666	2.219	1.642	2.267	1.615	2.323	1.586	2.389	1.556	2.468
1.591	2.08	1.569	2.122	1.545	2.17	1.519	2.227	1.491	2.295
1.514	1.944	1.494	1.98	1.473	2.021	1.45	2.07	1.424	2.128
1.436	1.811	1.419	1.841	1.4	1.877	1.379	1.918	1.356	1.967
1.357	1.681	1.342	1.706	1.325	1.736	1.307	1.771	1.287	1.811
1.277	1.553	1.264	1.574	1.249	1.599	1.233	1.628	1.216	1.662
1.196	1.428	1.184	1.445	1.171	1.466	1.158	1.489	1.143	1.517
1.113	1.305	1.103	1.319	1.092	1.336	1.08	1.355	1.068	1.377
1.028	1.185	1.02	1.196	1.011	1.209	1.002	1.224	0.991	1.242
0.942	1.067	0.936	1.076	0.929	1.086	0.921	1.097	0.912	1.111
0.899	1.009	0.893	1.016	0.887	1.025	0.88	1.035	0.872	1.047
0.855	0.951	0.85	0.958	0.844	0.965	0.838	0.974	0.831	0.984
0.811	0.894	0.806	0.9	0.801	0.906	0.796	0.914	0.79	0.922
0.766	0.838	0.762	0.842	0.758	0.848	0.753	0.854	0.748	0.862
0.721	0.782	0.718	0.786	0.714	0.79	0.71	0.796	0.706	0.802
0.676	0.726	0.673	0.73	0.67	0.733	0.667	0.738	0.663	0.743
0.63	0.671	0.628	0.674	0.625	0.677	0.623	0.681	0.619	0.685
0.584	0.617	0.582	0.619	0.58	0.622	0.578	0.624	0.575	0.628
0.538	0.563	0.536	0.565	0.535	0.567	0.533	0.569	0.531	0.571
0.491	0.51	0.49	0.511	0.488	0.512	0.487	0.514	0.485	0.516
0.477	0.494	0.476	0.495	0.474	0.496	0.473	0.498	0.472	0.499
0.462	0.478	0.461	0.479	0.46	0.48	0.459	0.482	0.458	0.483



<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
6.384	5.709	5.108	4.573

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
6.335	Infinity	5.66	Infinity	5.059	Infinity	4.524	Infinity
5.51	Infinity	4.996	Infinity	4.526	Infinity	4.095	Infinity
4.875	Infinity	4.471	Infinity	4.094	Infinity	3.741	Infinity
4.336	Infinity	4.017	Infinity	3.712	Infinity	3.422	Infinity
3.961	Infinity	3.695	Infinity	3.437	Infinity	3.189	Infinity
3.622	Infinity	3.4	Infinity	3.182	Infinity	2.97	Infinity
3.413	Infinity	3.216	Infinity	3.022	Infinity	2.831	Infinity
3.169	94.322	3	Infinity	2.831	Infinity	2.665	Infinity
2.88	21.822	2.742	37.824	2.602	220.192	2.462	Infinity
2.716	14.43	2.593	19.971	2.469	35.263	2.343	262.226
2.535	10.138	2.428	12.561	2.32	17.206	2.21	29.558
2.334	7.334	2.245	8.505	2.153	10.377	2.059	13.811
2.112	5.359	2.039	5.947	1.965	6.787	1.887	8.077
2.015	4.723	1.95	5.169	1.882	5.786	1.812	6.689
1.915	4.155	1.856	4.492	1.795	4.945	1.732	5.582
1.809	3.643	1.758	3.897	1.703	4.229	1.647	4.68
1.699	3.18	1.654	3.369	1.606	3.611	1.556	3.929
1.583	2.76	1.544	2.898	1.503	3.072	1.46	3.295
1.522	2.564	1.487	2.682	1.45	2.828	1.41	3.014
1.461	2.376	1.428	2.476	1.394	2.599	1.358	2.753
1.397	2.197	1.368	2.28	1.337	2.383	1.304	2.51
1.332	2.025	1.306	2.094	1.278	2.179	1.248	2.283
1.265	1.86	1.242	1.917	1.217	1.987	1.19	2.072
1.197	1.701	1.176	1.748	1.154	1.805	1.131	1.873
1.126	1.549	1.108	1.587	1.089	1.633	1.069	1.687
1.054	1.403	1.039	1.433	1.022	1.469	1.004	1.512
0.979	1.262	0.966	1.286	0.953	1.314	0.938	1.347
0.903	1.126	0.892	1.145	0.881	1.166	0.868	1.191
0.863	1.061	0.854	1.076	0.844	1.095	0.833	1.116
0.824	0.996	0.815	1.009	0.806	1.025	0.796	1.043
0.783	0.932	0.776	0.944	0.768	0.957	0.759	0.972
0.742	0.87	0.736	0.88	0.729	0.891	0.721	0.904
0.701	0.809	0.695	0.817	0.689	0.826	0.683	0.837
0.659	0.748	0.654	0.755	0.649	0.763	0.643	0.771
0.616	0.689	0.612	0.695	0.608	0.701	0.603	0.708
0.573	0.631	0.569	0.635	0.566	0.64	0.562	0.645
0.529	0.574	0.526	0.577	0.523	0.581	0.52	0.585
0.484	0.518	0.482	0.52	0.48	0.523	0.477	0.526
0.47	0.501	0.468	0.503	0.467	0.506	0.464	0.508
0.457	0.485	0.455	0.487	0.453	0.489	0.451	0.491



Focal Length 65 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	103.823	92.517	82.444	73.47

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	103.745	Infinity	92.441	Infinity	82.37	Infinity	73.398	Infinity
50.00	33.81	96.155	32.522	108.429	31.189	126.569	29.817	155.846
30.00	23.326	42.063	22.709	44.245	22.053	46.981	21.361	50.486
15.00	13.14	17.48	12.944	17.842	12.731	18.266	12.499	18.767
10.00	9.146	11.032	9.052	11.174	8.948	11.337	8.834	11.526
8.00	7.448	8.642	7.386	8.728	7.317	8.826	7.242	8.939
7.00	6.576	7.483	6.528	7.547	6.474	7.62	6.416	7.704
6.00	5.688	6.349	5.652	6.394	5.612	6.446	5.569	6.506
5.00	4.784	5.237	4.759	5.268	4.731	5.303	4.7	5.342
4.50	4.325	4.69	4.305	4.714	4.282	4.742	4.257	4.773
4.00	3.863	4.148	3.846	4.167	3.829	4.188	3.809	4.212
3.75	3.63	3.879	3.615	3.895	3.6	3.914	3.582	3.935
3.50	3.396	3.611	3.383	3.625	3.369	3.641	3.354	3.66
3.25	3.16	3.345	3.15	3.357	3.138	3.371	3.125	3.386
3.00	2.924	3.08	2.915	3.09	2.905	3.102	2.894	3.115
2.90	2.829	2.974	2.821	2.984	2.812	2.994	2.801	3.007
2.80	2.734	2.869	2.726	2.878	2.718	2.888	2.708	2.899
2.70	2.639	2.764	2.632	2.772	2.624	2.781	2.615	2.791
2.60	2.544	2.659	2.537	2.666	2.53	2.675	2.521	2.684
2.50	2.448	2.554	2.442	2.561	2.435	2.569	2.427	2.577
2.40	2.353	2.45	2.347	2.456	2.341	2.463	2.333	2.471
2.30	2.257	2.345	2.251	2.351	2.246	2.357	2.239	2.364
2.20	2.161	2.241	2.156	2.246	2.151	2.252	2.145	2.258
2.10	2.064	2.137	2.06	2.142	2.055	2.147	2.05	2.153
2.00	1.968	2.033	1.964	2.037	1.96	2.042	1.955	2.047
1.95	1.92	1.982	1.916	1.985	1.912	1.99	1.907	1.995
1.90	1.871	1.93	1.868	1.933	1.864	1.938	1.86	1.942
1.85	1.823	1.878	1.82	1.882	1.816	1.885	1.812	1.89
1.80	1.774	1.826	1.771	1.83	1.768	1.833	1.764	1.838
1.75	1.726	1.775	1.723	1.778	1.72	1.781	1.716	1.785
1.70	1.677	1.723	1.675	1.726	1.672	1.729	1.668	1.733
1.65	1.629	1.672	1.626	1.674	1.623	1.678	1.62	1.681
1.60	1.58	1.62	1.578	1.623	1.575	1.626	1.572	1.629
1.55	1.532	1.569	1.529	1.571	1.527	1.574	1.524	1.577
1.50	1.483	1.518	1.481	1.52	1.478	1.522	1.476	1.525
1.45	1.434	1.466	1.432	1.468	1.43	1.471	1.428	1.473
1.40	1.385	1.415	1.384	1.417	1.382	1.419	1.379	1.421
1.35	1.336	1.364	1.335	1.366	1.333	1.367	1.331	1.37
1.30	1.288	1.313	1.286	1.314	1.284	1.316	1.282	1.318
1.25	1.239	1.262	1.237	1.263	1.236	1.265	1.234	1.266
1.20	1.19	1.211	1.188	1.212	1.187	1.213	1.185	1.215
1.15	1.141	1.16	1.139	1.161	1.138	1.162	1.137	1.164
1.10	1.092	1.109	1.09	1.11	1.089	1.111	1.088	1.112
1.05	1.042	1.058	1.041	1.059	1.04	1.06	1.039	1.061
1.00	0.993	1.007	0.992	1.008	0.991	1.009	0.99	1.01
0.975	0.969	0.981	0.968	0.982	0.967	0.983	0.966	0.984
0.95	0.944	0.956	0.943	0.957	0.942	0.958	0.942	0.959
0.925	0.919	0.931	0.919	0.931	0.918	0.932	0.917	0.933
0.90	0.895	0.905	0.894	0.906	0.893	0.907	0.893	0.908
0.875	0.87	0.88	0.869	0.881	0.869	0.881	0.868	0.882
0.85	0.845	0.855	0.845	0.855	0.844	0.856	0.844	0.857
0.825	0.821	0.829	0.82	0.83	0.82	0.83	0.819	0.831
0.80	0.796	0.804	0.796	0.804	0.795	0.805	0.794	0.806
0.775	0.771	0.779	0.771	0.779	0.77	0.78	0.77	0.78
0.75	0.747	0.753	0.746	0.754	0.746	0.754	0.745	0.755
0.725	0.722	0.728	0.722	0.728	0.721	0.729	0.721	0.729
0.70	0.697	0.703	0.697	0.703	0.696	0.704	0.696	0.704
0.675	0.672	0.678	0.672	0.678	0.672	0.678	0.671	0.679
0.65	0.648	0.652	0.647	0.653	0.647	0.653	0.647	0.653



<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
65.475	58.353	52.007	46.354	41.318

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
65.404	Infinity	58.282	Infinity	51.938	Infinity	46.285	Infinity	41.249	Infinity
28.416	210.527	26.992	347.412	25.555	1287.595	24.115	Infinity	22.681	Infinity
20.635	55.103	19.877	61.409	19.09	70.465	18.278	84.453	17.446	108.684
12.25	19.364	11.981	20.081	11.694	20.952	11.387	22.025	11.062	23.37
8.71	11.746	8.575	12.003	8.428	12.306	8.269	12.664	8.098	13.093
7.159	9.07	7.068	9.221	6.969	9.397	6.861	9.603	6.743	9.846
6.351	7.8	6.28	7.912	6.202	8.04	6.116	8.189	6.023	8.364
5.52	6.574	5.467	6.652	5.408	6.742	5.343	6.846	5.273	6.966
4.666	5.388	4.628	5.439	4.586	5.499	4.54	5.567	4.49	5.645
4.229	4.809	4.198	4.85	4.164	4.897	4.127	4.95	4.085	5.012
3.786	4.24	3.762	4.272	3.735	4.307	3.705	4.348	3.672	4.395
3.563	3.959	3.541	3.986	3.517	4.017	3.491	4.053	3.461	4.093
3.337	3.68	3.318	3.704	3.297	3.73	3.274	3.761	3.249	3.795
3.11	3.404	3.094	3.423	3.076	3.446	3.056	3.472	3.034	3.501
2.881	3.129	2.868	3.146	2.852	3.165	2.835	3.186	2.816	3.211
2.789	3.02	2.777	3.036	2.762	3.053	2.746	3.073	2.729	3.096
2.697	2.911	2.685	2.926	2.672	2.942	2.657	2.96	2.64	2.981
2.605	2.803	2.594	2.816	2.581	2.831	2.567	2.848	2.552	2.867
2.512	2.695	2.502	2.707	2.49	2.721	2.477	2.736	2.463	2.754
2.419	2.587	2.409	2.598	2.399	2.611	2.387	2.625	2.374	2.641
2.326	2.48	2.317	2.49	2.307	2.501	2.296	2.514	2.284	2.529
2.232	2.373	2.224	2.382	2.215	2.392	2.205	2.404	2.194	2.418
2.138	2.266	2.131	2.274	2.123	2.284	2.113	2.294	2.103	2.307
2.044	2.159	2.037	2.167	2.03	2.176	2.022	2.185	2.012	2.196
1.949	2.053	1.943	2.06	1.937	2.068	1.929	2.076	1.921	2.086
1.902	2.001	1.896	2.007	1.89	2.014	1.883	2.022	1.875	2.032
1.855	1.948	1.849	1.954	1.843	1.961	1.837	1.968	1.829	1.977
1.807	1.895	1.802	1.901	1.797	1.907	1.79	1.914	1.783	1.922
1.76	1.842	1.755	1.848	1.75	1.854	1.744	1.86	1.737	1.868
1.712	1.79	1.708	1.795	1.703	1.8	1.697	1.807	1.691	1.814
1.664	1.737	1.66	1.742	1.655	1.747	1.65	1.753	1.644	1.76
1.617	1.685	1.613	1.689	1.608	1.694	1.603	1.7	1.598	1.706
1.569	1.633	1.565	1.637	1.561	1.641	1.556	1.646	1.551	1.652
1.521	1.58	1.517	1.584	1.514	1.588	1.509	1.593	1.504	1.599
1.473	1.528	1.47	1.532	1.466	1.536	1.462	1.54	1.458	1.545
1.425	1.476	1.422	1.479	1.419	1.483	1.415	1.487	1.411	1.492
1.377	1.424	1.374	1.427	1.371	1.43	1.367	1.434	1.364	1.439
1.329	1.372	1.326	1.375	1.323	1.378	1.32	1.382	1.316	1.386
1.28	1.32	1.278	1.323	1.275	1.326	1.272	1.329	1.269	1.333
1.232	1.269	1.23	1.271	1.227	1.273	1.225	1.276	1.222	1.28
1.184	1.217	1.182	1.219	1.179	1.221	1.177	1.224	1.174	1.227
1.135	1.165	1.133	1.167	1.131	1.169	1.129	1.172	1.127	1.174
1.087	1.114	1.085	1.115	1.083	1.117	1.081	1.12	1.079	1.122
1.038	1.062	1.037	1.064	1.035	1.066	1.033	1.068	1.031	1.07
0.989	1.011	0.988	1.012	0.987	1.014	0.985	1.016	0.983	1.018
0.965	0.985	0.964	0.987	0.962	0.988	0.961	0.99	0.959	0.992
0.941	0.96	0.939	0.961	0.938	0.962	0.937	0.964	0.935	0.966
0.916	0.934	0.915	0.935	0.914	0.936	0.912	0.938	0.911	0.94
0.892	0.909	0.891	0.91	0.89	0.911	0.888	0.912	0.887	0.914
0.867	0.883	0.866	0.884	0.865	0.885	0.864	0.886	0.863	0.888
0.843	0.857	0.842	0.858	0.841	0.859	0.84	0.86	0.839	0.862
0.818	0.832	0.817	0.833	0.817	0.834	0.816	0.835	0.814	0.836
0.794	0.806	0.793	0.807	0.792	0.808	0.791	0.809	0.79	0.81
0.769	0.781	0.769	0.782	0.768	0.782	0.767	0.783	0.766	0.784
0.745	0.755	0.744	0.756	0.743	0.757	0.743	0.758	0.742	0.759
0.72	0.73	0.72	0.731	0.719	0.731	0.718	0.732	0.717	0.733
0.696	0.705	0.695	0.705	0.694	0.706	0.694	0.706	0.693	0.707
0.671	0.679	0.67	0.68	0.67	0.68	0.669	0.681	0.669	0.682
0.646	0.654	0.646	0.654	0.645	0.655	0.645	0.655	0.644	0.656



<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
36.831	32.833	29.272	26.1	23.273

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
36.763	Infinity	32.765	Infinity	29.204	Infinity	26.032	Infinity	23.205	Infinity
21.263	Infinity	19.87	Infinity	18.51	Infinity	17.191	Infinity	15.918	Infinity
16.598	160.368	15.74	344.287	14.878	Infinity	14.017	Infinity	13.162	Infinity
10.718	25.09	10.358	27.352	9.981	30.434	9.59	34.846	9.186	41.626
7.915	13.61	7.718	14.242	7.509	15.026	7.288	16.016	7.055	17.297
6.617	10.133	6.48	10.476	6.333	10.891	6.176	11.397	6.009	12.026
5.923	8.569	5.813	8.812	5.696	9.102	5.569	9.451	5.434	9.876
5.196	7.107	5.112	7.272	5.022	7.466	4.924	7.698	4.819	7.976
4.434	5.736	4.374	5.842	4.308	5.966	4.237	6.111	4.159	6.283
4.04	5.083	3.99	5.165	3.935	5.261	3.876	5.373	3.812	5.504
3.635	4.45	3.595	4.512	3.551	4.584	3.503	4.668	3.451	4.766
3.429	4.14	3.394	4.194	3.355	4.255	3.312	4.327	3.266	4.411
3.22	3.835	3.189	3.881	3.155	3.933	3.118	3.994	3.077	4.065
3.009	3.535	2.982	3.573	2.953	3.617	2.92	3.668	2.884	3.727
2.795	3.239	2.772	3.271	2.747	3.307	2.719	3.35	2.688	3.398
2.709	3.122	2.687	3.151	2.664	3.185	2.637	3.224	2.609	3.269
2.622	3.005	2.602	3.032	2.58	3.064	2.555	3.099	2.528	3.141
2.535	2.889	2.516	2.914	2.496	2.943	2.473	2.976	2.448	3.014
2.447	2.774	2.43	2.797	2.411	2.823	2.389	2.854	2.366	2.888
2.359	2.66	2.343	2.681	2.325	2.705	2.306	2.732	2.284	2.764
2.271	2.546	2.256	2.565	2.239	2.587	2.221	2.612	2.201	2.641
2.182	2.433	2.168	2.45	2.153	2.47	2.136	2.493	2.118	2.519
2.092	2.32	2.08	2.336	2.066	2.354	2.051	2.374	2.034	2.398
2.002	2.209	1.991	2.223	1.978	2.239	1.964	2.257	1.949	2.278
1.912	2.097	1.902	2.11	1.89	2.124	1.878	2.141	1.864	2.159
1.866	2.042	1.857	2.054	1.846	2.067	1.834	2.083	1.821	2.101
1.821	1.987	1.812	1.998	1.802	2.011	1.79	2.025	1.778	2.042
1.775	1.932	1.767	1.942	1.757	1.954	1.746	1.968	1.734	1.984
1.73	1.877	1.721	1.887	1.712	1.898	1.702	1.911	1.691	1.925
1.684	1.822	1.676	1.831	1.667	1.842	1.658	1.854	1.647	1.868
1.638	1.768	1.63	1.776	1.622	1.786	1.613	1.797	1.603	1.81
1.592	1.713	1.585	1.721	1.577	1.731	1.569	1.741	1.559	1.753
1.545	1.659	1.539	1.667	1.532	1.675	1.524	1.685	1.515	1.696
1.499	1.605	1.493	1.612	1.486	1.62	1.479	1.629	1.471	1.639
1.453	1.551	1.447	1.557	1.441	1.565	1.434	1.573	1.426	1.583
1.406	1.497	1.401	1.503	1.395	1.51	1.389	1.518	1.381	1.526
1.359	1.443	1.354	1.449	1.349	1.455	1.343	1.462	1.337	1.47
1.312	1.39	1.308	1.395	1.303	1.401	1.298	1.407	1.291	1.415
1.265	1.337	1.261	1.341	1.257	1.347	1.252	1.353	1.246	1.359
1.218	1.283	1.215	1.288	1.21	1.292	1.206	1.298	1.201	1.304
1.171	1.23	1.168	1.234	1.164	1.239	1.16	1.244	1.155	1.249
1.124	1.178	1.121	1.181	1.117	1.185	1.113	1.189	1.109	1.194
1.076	1.125	1.074	1.128	1.07	1.131	1.067	1.135	1.063	1.14
1.029	1.072	1.026	1.075	1.023	1.078	1.02	1.082	1.017	1.086
0.981	1.02	0.979	1.022	0.976	1.025	0.974	1.028	0.97	1.032
0.957	0.994	0.955	0.996	0.953	0.999	0.95	1.002	0.947	1.005
0.933	0.967	0.931	0.97	0.929	0.972	0.927	0.975	0.924	0.978
0.909	0.941	0.907	0.943	0.905	0.946	0.903	0.948	0.9	0.951
0.885	0.915	0.884	0.917	0.882	0.919	0.879	0.922	0.877	0.925
0.861	0.889	0.86	0.891	0.858	0.893	0.856	0.895	0.853	0.898
0.837	0.863	0.836	0.865	0.834	0.867	0.832	0.869	0.83	0.871
0.813	0.837	0.812	0.839	0.81	0.841	0.808	0.843	0.806	0.845
0.789	0.811	0.788	0.813	0.786	0.814	0.785	0.816	0.783	0.818
0.765	0.786	0.764	0.787	0.762	0.788	0.761	0.79	0.759	0.792
0.741	0.76	0.739	0.761	0.738	0.762	0.737	0.764	0.735	0.765
0.716	0.734	0.715	0.735	0.714	0.736	0.713	0.738	0.711	0.739
0.692	0.708	0.691	0.709	0.69	0.71	0.689	0.712	0.688	0.713
0.668	0.682	0.667	0.683	0.666	0.684	0.665	0.685	0.664	0.687
0.644	0.657	0.643	0.657	0.642	0.658	0.641	0.659	0.64	0.661



<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
20.755	18.511	16.513	14.732	13.146

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
20.687	Infinity	18.444	Infinity	16.445	Infinity	14.665	Infinity	13.079	Infinity
14.699	Infinity	13.536	Infinity	12.434	Infinity	11.395	Infinity	10.419	Infinity
12.321	Infinity	11.497	Infinity	10.695	Infinity	9.92	Infinity	9.175	Infinity
8.772	53.277	8.351	77.733	7.924	160.626	7.494	Infinity	7.066	Infinity
6.811	19.006	6.556	21.38	6.293	24.872	6.022	30.469	5.745	40.791
5.833	12.821	5.647	13.85	5.452	15.224	5.249	17.134	5.038	19.95
5.29	10.403	5.137	11.066	4.976	11.921	4.807	13.054	4.631	14.616
4.706	8.313	4.586	8.728	4.458	9.246	4.323	9.908	4.181	10.776
4.076	6.488	3.986	6.735	3.891	7.036	3.788	7.409	3.68	7.878
3.742	5.66	3.667	5.845	3.586	6.069	3.5	6.342	3.408	6.68
3.394	4.881	3.333	5.017	3.267	5.179	3.196	5.375	3.12	5.614
3.215	4.509	3.16	4.624	3.101	4.761	3.037	4.925	2.969	5.123
3.032	4.147	2.984	4.244	2.931	4.358	2.874	4.494	2.813	4.658
2.845	3.796	2.803	3.876	2.757	3.971	2.707	4.082	2.653	4.216
2.655	3.455	2.618	3.521	2.578	3.598	2.535	3.688	2.488	3.796
2.577	3.321	2.543	3.381	2.505	3.452	2.464	3.535	2.42	3.634
2.499	3.189	2.467	3.244	2.431	3.309	2.393	3.385	2.352	3.474
2.42	3.058	2.39	3.109	2.357	3.168	2.321	3.237	2.282	3.318
2.341	2.928	2.312	2.975	2.282	3.028	2.248	3.091	2.212	3.165
2.26	2.8	2.234	2.842	2.206	2.891	2.175	2.948	2.141	3.015
2.179	2.674	2.155	2.712	2.129	2.756	2.1	2.807	2.069	2.868
2.098	2.548	2.076	2.583	2.051	2.623	2.025	2.669	1.996	2.723
2.015	2.425	1.995	2.455	1.973	2.491	1.948	2.533	1.921	2.581
1.932	2.302	1.914	2.33	1.893	2.362	1.871	2.398	1.846	2.441
1.848	2.181	1.832	2.205	1.813	2.234	1.793	2.266	1.77	2.304
1.806	2.121	1.79	2.144	1.772	2.17	1.753	2.201	1.732	2.237
1.764	2.061	1.749	2.083	1.732	2.108	1.713	2.136	1.693	2.17
1.721	2.001	1.707	2.022	1.691	2.045	1.673	2.072	1.654	2.103
1.678	1.942	1.665	1.961	1.65	1.983	1.633	2.008	1.615	2.037
1.636	1.883	1.623	1.901	1.608	1.922	1.593	1.945	1.575	1.972
1.592	1.825	1.58	1.841	1.567	1.86	1.552	1.882	1.536	1.908
1.549	1.766	1.538	1.782	1.525	1.8	1.511	1.82	1.496	1.843
1.505	1.708	1.495	1.723	1.483	1.739	1.47	1.758	1.455	1.78
1.462	1.651	1.452	1.664	1.441	1.679	1.428	1.697	1.415	1.717
1.418	1.593	1.408	1.606	1.398	1.62	1.386	1.636	1.374	1.654
1.374	1.536	1.365	1.548	1.355	1.561	1.344	1.576	1.333	1.593
1.329	1.48	1.321	1.49	1.312	1.502	1.302	1.516	1.291	1.531
1.285	1.423	1.277	1.433	1.269	1.444	1.26	1.456	1.249	1.47
1.24	1.367	1.233	1.376	1.225	1.386	1.217	1.397	1.207	1.41
1.195	1.311	1.189	1.319	1.181	1.328	1.174	1.338	1.165	1.35
1.15	1.255	1.144	1.263	1.137	1.271	1.13	1.28	1.122	1.291
1.104	1.2	1.099	1.207	1.093	1.214	1.087	1.222	1.079	1.232
1.059	1.145	1.054	1.151	1.049	1.157	1.043	1.165	1.036	1.174
1.013	1.09	1.009	1.095	1.004	1.101	0.998	1.108	0.993	1.116
0.967	1.036	0.963	1.04	0.959	1.046	0.954	1.052	0.949	1.058
0.944	1.009	0.94	1.013	0.936	1.018	0.932	1.023	0.927	1.03
0.921	0.982	0.917	0.986	0.913	0.99	0.909	0.995	0.904	1.001
0.897	0.955	0.894	0.958	0.891	0.963	0.887	0.967	0.882	0.973
0.874	0.928	0.871	0.931	0.868	0.935	0.864	0.94	0.86	0.945
0.851	0.901	0.848	0.904	0.845	0.908	0.841	0.912	0.837	0.917
0.828	0.874	0.825	0.877	0.822	0.88	0.819	0.884	0.815	0.889
0.804	0.847	0.802	0.85	0.799	0.853	0.796	0.857	0.792	0.861
0.781	0.821	0.778	0.823	0.776	0.826	0.773	0.829	0.77	0.833
0.757	0.794	0.755	0.796	0.753	0.799	0.75	0.802	0.747	0.806
0.733	0.767	0.732	0.77	0.729	0.772	0.727	0.775	0.724	0.778
0.71	0.741	0.708	0.743	0.706	0.745	0.704	0.748	0.701	0.751
0.686	0.715	0.684	0.716	0.683	0.718	0.681	0.721	0.678	0.723
0.662	0.688	0.661	0.69	0.659	0.692	0.657	0.694	0.655	0.696
0.639	0.662	0.637	0.663	0.636	0.665	0.634	0.667	0.632	0.669



<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
11.732	10.473	9.352	8.352

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
11.665	Infinity	10.406	Infinity	9.284	Infinity	8.285	Infinity
9.507	Infinity	8.659	Infinity	7.872	Infinity	7.146	Infinity
8.463	Infinity	7.787	Infinity	7.147	Infinity	6.546	Infinity
6.64	Infinity	6.22	Infinity	5.81	Infinity	5.41	Infinity
5.463	65.912	5.179	214.667	4.894	Infinity	4.61	Infinity
4.822	24.475	4.601	32.863	4.376	53.498	4.149	182.602
4.449	16.891	4.261	20.477	4.069	26.905	3.873	41.617
4.033	11.953	3.879	13.629	3.72	16.182	3.557	20.508
3.566	8.482	3.447	9.283	3.322	10.387	3.192	11.993
3.311	7.106	3.208	7.656	3.1	8.385	2.988	9.393
3.039	5.909	2.953	6.28	2.862	6.758	2.767	7.391
2.896	5.366	2.818	5.669	2.736	6.053	2.649	6.553
2.748	4.856	2.678	5.101	2.604	5.408	2.526	5.801
2.595	4.377	2.534	4.573	2.468	4.816	2.398	5.123
2.437	3.925	2.383	4.08	2.325	4.271	2.264	4.509
2.373	3.751	2.321	3.892	2.267	4.065	2.208	4.279
2.307	3.581	2.259	3.709	2.207	3.865	2.152	4.057
2.24	3.415	2.195	3.531	2.146	3.671	2.095	3.843
2.173	3.253	2.13	3.357	2.085	3.483	2.036	3.636
2.104	3.094	2.065	3.188	2.022	3.3	1.976	3.437
2.035	2.938	1.998	3.022	1.958	3.123	1.915	3.244
1.964	2.786	1.93	2.861	1.893	2.95	1.853	3.058
1.892	2.637	1.861	2.704	1.827	2.783	1.79	2.877
1.82	2.491	1.791	2.55	1.759	2.62	1.726	2.703
1.746	2.348	1.72	2.4	1.691	2.461	1.66	2.534
1.709	2.278	1.683	2.327	1.656	2.384	1.626	2.451
1.671	2.208	1.647	2.254	1.621	2.307	1.593	2.37
1.633	2.139	1.61	2.182	1.586	2.231	1.559	2.29
1.595	2.071	1.573	2.111	1.55	2.157	1.524	2.211
1.557	2.004	1.536	2.04	1.514	2.083	1.489	2.134
1.518	1.937	1.498	1.971	1.477	2.011	1.454	2.057
1.479	1.871	1.461	1.902	1.441	1.939	1.419	1.982
1.44	1.805	1.422	1.834	1.403	1.868	1.383	1.908
1.4	1.74	1.384	1.767	1.366	1.798	1.347	1.835
1.36	1.676	1.345	1.7	1.328	1.729	1.31	1.763
1.32	1.612	1.306	1.635	1.29	1.661	1.273	1.692
1.279	1.549	1.266	1.57	1.251	1.594	1.236	1.622
1.238	1.487	1.226	1.506	1.212	1.527	1.198	1.553
1.197	1.425	1.186	1.442	1.173	1.462	1.159	1.485
1.155	1.364	1.145	1.379	1.133	1.397	1.121	1.418
1.114	1.303	1.104	1.317	1.093	1.333	1.082	1.352
1.071	1.243	1.063	1.255	1.053	1.27	1.042	1.286
1.029	1.183	1.021	1.194	1.012	1.207	1.002	1.222
0.986	1.124	0.979	1.134	0.971	1.146	0.962	1.159
0.943	1.066	0.936	1.075	0.929	1.085	0.921	1.096
0.921	1.037	0.915	1.045	0.908	1.054	0.901	1.065
0.899	1.008	0.893	1.016	0.887	1.024	0.88	1.035
0.877	0.979	0.872	0.986	0.866	0.995	0.859	1.004
0.855	0.951	0.85	0.957	0.844	0.965	0.838	0.974
0.833	0.922	0.828	0.928	0.823	0.935	0.817	0.944
0.811	0.894	0.806	0.9	0.801	0.906	0.796	0.914
0.789	0.866	0.784	0.871	0.78	0.877	0.775	0.884
0.766	0.838	0.762	0.842	0.758	0.848	0.753	0.854
0.744	0.81	0.74	0.814	0.736	0.819	0.732	0.825
0.721	0.782	0.718	0.786	0.714	0.791	0.71	0.796
0.698	0.754	0.695	0.758	0.692	0.762	0.688	0.767
0.676	0.726	0.673	0.73	0.67	0.734	0.666	0.738
0.653	0.699	0.65	0.702	0.647	0.706	0.644	0.71
0.63	0.672	0.628	0.675	0.625	0.678	0.622	0.681





Focal Length 75 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	130.421	116.216	103.56	92.285

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	130.329	Infinity	116.127	Infinity	103.474	Infinity	92.202	Infinity
60.00	41.164	110.817	39.642	123.658	38.063	142.153	36.434	170.844
30.00	24.441	38.856	23.9	40.315	23.32	42.09	22.702	44.278
20.00	17.381	23.558	17.107	24.083	16.809	24.702	16.487	25.435
15.00	13.485	16.903	13.32	17.17	13.14	17.48	12.944	17.842
10.00	9.311	10.801	9.233	10.908	9.147	11.031	9.053	11.172
9.00	8.44	9.641	8.376	9.726	8.306	9.823	8.228	9.934
8.00	7.557	8.5	7.506	8.565	7.45	8.64	7.387	8.726
7.00	6.66	7.377	6.621	7.426	6.577	7.482	6.529	7.546
6.00	5.751	6.272	5.722	6.307	5.689	6.347	5.654	6.393
5.00	4.828	5.185	4.808	5.209	4.785	5.236	4.76	5.266
4.50	4.361	4.648	4.345	4.667	4.327	4.689	4.306	4.713
4.00	3.891	4.116	3.878	4.13	3.864	4.147	3.848	4.165
3.80	3.702	3.904	3.69	3.917	3.677	3.931	3.663	3.948
3.40	3.322	3.482	3.313	3.492	3.303	3.504	3.291	3.517
3.20	3.131	3.272	3.123	3.281	3.114	3.291	3.104	3.302
3.00	2.94	3.062	2.933	3.07	2.925	3.079	2.916	3.089
2.90	2.844	2.958	2.838	2.965	2.83	2.974	2.822	2.983
2.80	2.748	2.854	2.742	2.861	2.735	2.868	2.727	2.877
2.70	2.652	2.75	2.646	2.756	2.64	2.763	2.633	2.771
2.60	2.556	2.646	2.55	2.652	2.545	2.658	2.538	2.665
2.50	2.459	2.542	2.454	2.547	2.449	2.553	2.443	2.56
2.40	2.363	2.439	2.358	2.443	2.353	2.449	2.348	2.455
2.30	2.266	2.335	2.262	2.339	2.257	2.344	2.252	2.35
2.20	2.169	2.232	2.165	2.236	2.161	2.24	2.157	2.245
2.10	2.072	2.129	2.069	2.132	2.065	2.136	2.061	2.141
2.00	1.975	2.026	1.972	2.029	1.968	2.033	1.965	2.037
1.95	1.926	1.974	1.923	1.977	1.92	1.981	1.917	1.985
1.90	1.878	1.923	1.875	1.926	1.872	1.929	1.868	1.933
1.85	1.829	1.872	1.826	1.874	1.823	1.877	1.82	1.881
1.80	1.78	1.82	1.778	1.823	1.775	1.826	1.772	1.829
1.75	1.731	1.769	1.729	1.772	1.726	1.774	1.724	1.777
1.70	1.682	1.718	1.68	1.72	1.678	1.723	1.675	1.726
1.65	1.634	1.667	1.632	1.669	1.629	1.671	1.627	1.674
1.60	1.585	1.616	1.583	1.618	1.581	1.62	1.578	1.622
1.55	1.536	1.565	1.534	1.566	1.532	1.568	1.53	1.571
1.50	1.487	1.514	1.485	1.515	1.483	1.517	1.481	1.519
1.45	1.438	1.463	1.436	1.464	1.435	1.466	1.433	1.468
1.40	1.389	1.412	1.387	1.413	1.386	1.415	1.384	1.416
1.35	1.34	1.361	1.338	1.362	1.337	1.363	1.335	1.365
1.30	1.29	1.31	1.289	1.311	1.288	1.312	1.287	1.314
1.25	1.241	1.259	1.24	1.26	1.239	1.261	1.238	1.263
1.20	1.192	1.208	1.191	1.209	1.19	1.21	1.189	1.211
1.15	1.143	1.157	1.142	1.158	1.141	1.159	1.14	1.16
1.10	1.094	1.107	1.093	1.107	1.092	1.108	1.091	1.109
1.05	1.044	1.056	1.044	1.057	1.043	1.057	1.042	1.058
1.00	0.995	1.005	0.994	1.006	0.994	1.007	0.993	1.007
0.975	0.97	0.98	0.97	0.98	0.969	0.981	0.968	0.982
0.95	0.945	0.955	0.945	0.955	0.944	0.956	0.944	0.956
0.925	0.921	0.929	0.92	0.93	0.92	0.93	0.919	0.931
0.90	0.896	0.904	0.896	0.905	0.895	0.905	0.894	0.906
0.875	0.871	0.879	0.871	0.879	0.87	0.88	0.87	0.88
0.85	0.847	0.853	0.846	0.854	0.846	0.854	0.845	0.855
0.825	0.822	0.828	0.821	0.829	0.821	0.829	0.821	0.83
0.80	0.797	0.803	0.797	0.803	0.796	0.804	0.796	0.804
0.775	0.772	0.778	0.772	0.778	0.772	0.778	0.771	0.779
0.75	0.748	0.753	0.747	0.753	0.747	0.753	0.746	0.754



<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
82.24	73.291	65.319	58.216	51.888

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
82.158	Infinity	73.211	Infinity	65.239	Infinity	58.137	Infinity	51.81	Infinity
34.764	220.907	33.065	329.244	31.345	732.833	29.617	Infinity	27.892	Infinity
22.046	47.024	21.354	50.543	20.628	55.18	19.869	61.518	19.082	70.63
16.141	26.312	15.769	27.372	15.372	28.669	14.949	30.281	14.502	32.321
12.731	18.267	12.5	18.769	12.25	19.366	11.982	20.083	11.694	20.955
8.949	11.335	8.836	11.524	8.712	11.744	8.577	12.001	8.43	12.303
8.143	10.062	8.049	10.21	7.947	10.382	7.835	10.581	7.713	10.814
7.319	8.824	7.243	8.937	7.161	9.067	7.07	9.218	6.971	9.394
6.476	7.618	6.417	7.702	6.353	7.798	6.282	7.909	6.204	8.037
5.614	6.444	5.57	6.504	5.522	6.571	5.469	6.649	5.41	6.738
4.732	5.301	4.701	5.34	4.667	5.385	4.63	5.437	4.588	5.496
4.284	4.74	4.259	4.771	4.231	4.807	4.2	4.848	4.166	4.894
3.83	4.187	3.81	4.211	3.788	4.238	3.764	4.269	3.737	4.305
3.647	3.967	3.629	3.989	3.609	4.013	3.587	4.041	3.563	4.073
3.278	3.532	3.264	3.548	3.248	3.568	3.23	3.589	3.211	3.614
3.093	3.315	3.08	3.33	3.066	3.347	3.05	3.366	3.033	3.387
2.906	3.1	2.895	3.113	2.883	3.128	2.869	3.144	2.854	3.163
2.813	2.993	2.802	3.005	2.791	3.019	2.778	3.034	2.764	3.051
2.719	2.886	2.709	2.897	2.698	2.91	2.687	2.924	2.673	2.94
2.625	2.78	2.616	2.79	2.606	2.802	2.595	2.814	2.583	2.829
2.531	2.674	2.522	2.683	2.513	2.693	2.503	2.705	2.492	2.719
2.436	2.568	2.429	2.576	2.42	2.586	2.411	2.597	2.4	2.609
2.341	2.462	2.334	2.47	2.327	2.478	2.318	2.488	2.308	2.5
2.247	2.356	2.24	2.363	2.233	2.371	2.225	2.38	2.216	2.391
2.151	2.251	2.146	2.257	2.139	2.265	2.132	2.273	2.124	2.282
2.056	2.146	2.051	2.152	2.045	2.158	2.038	2.166	2.031	2.174
1.96	2.041	1.956	2.047	1.95	2.052	1.945	2.059	1.938	2.066
1.913	1.989	1.908	1.994	1.903	1.999	1.897	2.006	1.891	2.013
1.865	1.937	1.86	1.941	1.856	1.947	1.85	1.953	1.844	1.959
1.817	1.885	1.813	1.889	1.808	1.894	1.803	1.9	1.798	1.906
1.769	1.833	1.765	1.837	1.761	1.841	1.756	1.847	1.751	1.852
1.72	1.781	1.717	1.784	1.713	1.789	1.709	1.794	1.704	1.799
1.672	1.729	1.669	1.732	1.665	1.736	1.661	1.741	1.656	1.746
1.624	1.677	1.621	1.68	1.617	1.684	1.614	1.688	1.609	1.693
1.576	1.625	1.573	1.628	1.57	1.632	1.566	1.636	1.562	1.64
1.527	1.573	1.525	1.576	1.522	1.579	1.518	1.583	1.515	1.587
1.479	1.522	1.477	1.524	1.474	1.527	1.471	1.531	1.467	1.535
1.431	1.47	1.428	1.472	1.426	1.475	1.423	1.478	1.419	1.482
1.382	1.418	1.38	1.421	1.378	1.423	1.375	1.426	1.372	1.43
1.334	1.367	1.332	1.369	1.329	1.371	1.327	1.374	1.324	1.377
1.285	1.316	1.283	1.317	1.281	1.32	1.279	1.322	1.276	1.325
1.236	1.264	1.235	1.266	1.233	1.268	1.231	1.27	1.228	1.273
1.187	1.213	1.186	1.214	1.184	1.216	1.182	1.218	1.18	1.221
1.139	1.162	1.137	1.163	1.136	1.165	1.134	1.167	1.132	1.169
1.09	1.11	1.089	1.112	1.087	1.113	1.086	1.115	1.084	1.117
1.041	1.059	1.04	1.06	1.039	1.062	1.037	1.063	1.036	1.065
0.992	1.008	0.991	1.009	0.99	1.01	0.989	1.012	0.987	1.013
0.967	0.983	0.966	0.984	0.965	0.985	0.964	0.986	0.963	0.987
0.943	0.957	0.942	0.958	0.941	0.959	0.94	0.96	0.939	0.962
0.918	0.932	0.917	0.933	0.917	0.934	0.916	0.935	0.914	0.936
0.894	0.906	0.893	0.907	0.892	0.908	0.891	0.909	0.89	0.91
0.869	0.881	0.868	0.882	0.868	0.883	0.867	0.883	0.866	0.884
0.845	0.856	0.844	0.856	0.843	0.857	0.842	0.858	0.841	0.859
0.82	0.83	0.819	0.831	0.819	0.831	0.818	0.832	0.817	0.833
0.795	0.805	0.795	0.805	0.794	0.806	0.793	0.807	0.793	0.808
0.771	0.779	0.77	0.78	0.77	0.78	0.769	0.781	0.768	0.782
0.746	0.754	0.746	0.754	0.745	0.755	0.744	0.756	0.744	0.756



<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
46.251	41.228	36.754	32.767	29.216

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
46.173	Infinity	41.151	Infinity	36.677	Infinity	32.691	Infinity	29.14	Infinity
26.182	Infinity	24.497	Infinity	22.847	Infinity	21.243	Infinity	19.693	Infinity
18.27	84.725	17.438	109.204	16.591	161.678	15.733	351.352	14.871	Infinity
14.031	34.967	13.538	38.508	13.024	43.451	12.493	50.773	11.946	62.631
11.388	22.029	11.063	23.375	10.72	25.098	10.359	27.364	9.983	30.452
8.272	12.661	8.101	13.089	7.918	13.605	7.722	14.237	7.513	15.02
7.58	11.089	7.437	11.415	7.283	11.804	7.117	12.274	6.94	12.849
6.863	9.599	6.746	9.841	6.62	10.127	6.483	10.47	6.337	10.883
6.119	8.185	6.026	8.359	5.926	8.564	5.817	8.806	5.7	9.094
5.346	6.842	5.276	6.962	5.199	7.102	5.116	7.266	5.026	7.46
4.543	5.563	4.492	5.642	4.437	5.732	4.377	5.837	4.312	5.96
4.129	4.947	4.088	5.008	4.043	5.079	3.993	5.161	3.939	5.256
3.707	4.346	3.674	4.392	3.638	4.446	3.598	4.508	3.555	4.579
3.536	4.109	3.506	4.15	3.473	4.198	3.437	4.253	3.398	4.316
3.189	3.642	3.165	3.674	3.139	3.711	3.11	3.753	3.078	3.802
3.014	3.412	2.993	3.44	2.969	3.472	2.943	3.509	2.915	3.551
2.837	3.184	2.818	3.208	2.798	3.236	2.775	3.267	2.75	3.304
2.748	3.071	2.731	3.093	2.711	3.119	2.69	3.148	2.666	3.181
2.659	2.958	2.642	2.979	2.624	3.002	2.604	3.029	2.582	3.06
2.569	2.846	2.554	2.865	2.537	2.887	2.519	2.911	2.498	2.94
2.479	2.734	2.465	2.752	2.449	2.772	2.432	2.794	2.413	2.82
2.388	2.623	2.376	2.639	2.361	2.657	2.345	2.678	2.328	2.702
2.298	2.513	2.286	2.527	2.273	2.544	2.258	2.562	2.242	2.584
2.207	2.402	2.196	2.416	2.184	2.431	2.17	2.448	2.155	2.467
2.115	2.293	2.105	2.305	2.094	2.318	2.082	2.334	2.068	2.351
2.023	2.184	2.014	2.194	2.004	2.206	1.993	2.22	1.981	2.236
1.931	2.075	1.923	2.085	1.913	2.095	1.903	2.108	1.892	2.122
1.884	2.021	1.877	2.03	1.868	2.04	1.859	2.052	1.848	2.065
1.838	1.967	1.831	1.975	1.823	1.985	1.813	1.996	1.803	2.008
1.791	1.913	1.785	1.921	1.777	1.93	1.768	1.94	1.759	1.952
1.745	1.859	1.738	1.867	1.731	1.875	1.723	1.885	1.714	1.896
1.698	1.805	1.692	1.813	1.685	1.821	1.678	1.83	1.669	1.84
1.651	1.752	1.646	1.759	1.639	1.766	1.632	1.774	1.624	1.784
1.604	1.699	1.599	1.705	1.593	1.712	1.586	1.72	1.579	1.728
1.557	1.645	1.552	1.651	1.547	1.657	1.541	1.665	1.534	1.673
1.51	1.592	1.506	1.597	1.5	1.603	1.495	1.61	1.488	1.618
1.463	1.539	1.459	1.544	1.454	1.549	1.448	1.556	1.442	1.563
1.416	1.486	1.412	1.491	1.407	1.496	1.402	1.502	1.397	1.508
1.368	1.433	1.365	1.437	1.36	1.442	1.356	1.448	1.351	1.454
1.321	1.381	1.317	1.384	1.314	1.389	1.309	1.394	1.305	1.399
1.273	1.328	1.27	1.331	1.267	1.335	1.263	1.34	1.258	1.345
1.226	1.275	1.223	1.279	1.219	1.282	1.216	1.286	1.212	1.291
1.178	1.223	1.175	1.226	1.172	1.229	1.169	1.233	1.165	1.237
1.13	1.171	1.128	1.174	1.125	1.176	1.122	1.18	1.119	1.184
1.082	1.119	1.08	1.121	1.077	1.124	1.075	1.127	1.072	1.13
1.034	1.067	1.032	1.069	1.03	1.071	1.027	1.074	1.025	1.077
0.986	1.015	0.984	1.017	0.982	1.019	0.98	1.021	0.977	1.024
0.961	0.989	0.96	0.991	0.958	0.993	0.956	0.995	0.954	0.997
0.937	0.963	0.936	0.965	0.934	0.967	0.932	0.969	0.93	0.971
0.913	0.937	0.912	0.939	0.91	0.941	0.908	0.942	0.906	0.945
0.889	0.911	0.888	0.913	0.886	0.914	0.884	0.916	0.883	0.918
0.865	0.886	0.863	0.887	0.862	0.888	0.86	0.89	0.859	0.892
0.84	0.86	0.839	0.861	0.838	0.863	0.836	0.864	0.835	0.866
0.816	0.834	0.815	0.835	0.814	0.837	0.812	0.838	0.811	0.84
0.792	0.808	0.791	0.81	0.79	0.811	0.788	0.812	0.787	0.814
0.767	0.783	0.766	0.784	0.765	0.785	0.764	0.786	0.763	0.787
0.743	0.757	0.742	0.758	0.741	0.759	0.74	0.76	0.739	0.761



<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
26.052	23.233	20.722	18.485	16.492

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
25.976	Infinity	23.158	Infinity	20.647	Infinity	18.41	Infinity	16.416	Infinity
18.204	Infinity	16.781	Infinity	15.429	Infinity	14.151	Infinity	12.95	Infinity
14.011	Infinity	13.157	Infinity	12.316	Infinity	11.493	Infinity	10.692	Infinity
11.388	84.917	10.821	141.51	10.249	564.05	9.675	Infinity	9.104	Infinity
9.592	34.876	9.189	41.681	8.775	53.39	8.354	78.035	7.927	162.256
7.292	16.009	7.059	17.289	6.815	18.996	6.562	21.368	6.299	24.859
6.752	13.563	6.553	14.467	6.343	15.638	6.124	17.204	5.895	19.387
6.18	11.389	6.014	12.016	5.838	12.808	5.652	13.834	5.457	15.204
5.574	9.442	5.439	9.866	5.295	10.391	5.143	11.051	4.982	11.902
4.928	7.69	4.823	7.966	4.711	8.302	4.591	8.714	4.464	9.23
4.241	6.104	4.164	6.275	4.081	6.478	3.992	6.724	3.896	7.023
3.88	5.366	3.816	5.497	3.747	5.651	3.672	5.835	3.592	6.057
3.507	4.662	3.455	4.759	3.399	4.873	3.338	5.008	3.272	5.169
3.354	4.389	3.307	4.475	3.256	4.575	3.2	4.693	3.14	4.833
3.042	3.858	3.004	3.923	2.962	3.999	2.916	4.088	2.867	4.193
2.883	3.599	2.849	3.656	2.811	3.721	2.771	3.797	2.726	3.887
2.722	3.345	2.692	3.393	2.658	3.449	2.622	3.514	2.582	3.59
2.64	3.22	2.612	3.264	2.581	3.315	2.547	3.375	2.509	3.445
2.558	3.095	2.532	3.136	2.502	3.183	2.471	3.238	2.436	3.302
2.476	2.972	2.451	3.01	2.424	3.053	2.394	3.103	2.361	3.161
2.392	2.85	2.369	2.884	2.344	2.923	2.316	2.969	2.286	3.022
2.308	2.729	2.287	2.76	2.264	2.796	2.238	2.837	2.21	2.885
2.224	2.609	2.204	2.637	2.183	2.669	2.159	2.707	2.133	2.75
2.139	2.489	2.121	2.515	2.101	2.544	2.079	2.578	2.055	2.617
2.053	2.371	2.037	2.394	2.018	2.421	1.998	2.451	1.976	2.486
1.967	2.254	1.952	2.275	1.935	2.298	1.917	2.325	1.897	2.356
1.88	2.138	1.866	2.156	1.851	2.177	1.835	2.201	1.816	2.229
1.836	2.08	1.823	2.097	1.809	2.117	1.793	2.14	1.776	2.166
1.792	2.023	1.78	2.039	1.767	2.057	1.752	2.079	1.735	2.103
1.748	1.965	1.737	1.981	1.724	1.998	1.71	2.018	1.694	2.041
1.704	1.908	1.693	1.923	1.681	1.939	1.668	1.957	1.653	1.979
1.66	1.852	1.649	1.865	1.638	1.88	1.625	1.897	1.611	1.917
1.615	1.795	1.606	1.807	1.595	1.822	1.583	1.838	1.57	1.856
1.571	1.739	1.562	1.75	1.551	1.763	1.54	1.779	1.528	1.796
1.526	1.683	1.517	1.693	1.508	1.706	1.497	1.72	1.486	1.736
1.481	1.627	1.473	1.637	1.464	1.648	1.454	1.661	1.443	1.676
1.436	1.571	1.428	1.58	1.42	1.591	1.411	1.603	1.401	1.616
1.39	1.516	1.383	1.524	1.376	1.534	1.367	1.545	1.358	1.557
1.345	1.46	1.338	1.468	1.331	1.477	1.323	1.487	1.315	1.499
1.299	1.405	1.293	1.413	1.287	1.421	1.279	1.43	1.271	1.441
1.253	1.351	1.248	1.357	1.242	1.365	1.235	1.373	1.228	1.383
1.207	1.296	1.202	1.302	1.197	1.309	1.191	1.317	1.184	1.325
1.161	1.242	1.157	1.247	1.152	1.253	1.146	1.26	1.14	1.268
1.115	1.188	1.111	1.193	1.106	1.198	1.101	1.204	1.095	1.211
1.068	1.134	1.065	1.138	1.06	1.143	1.056	1.149	1.051	1.155
1.022	1.08	1.018	1.084	1.014	1.089	1.01	1.093	1.006	1.099
0.975	1.027	0.972	1.03	0.968	1.034	0.965	1.039	0.961	1.043
0.951	1	0.948	1.003	0.945	1.007	0.942	1.011	0.938	1.016
0.928	0.974	0.925	0.977	0.922	0.98	0.919	0.984	0.915	0.988
0.904	0.947	0.902	0.95	0.899	0.953	0.896	0.957	0.892	0.961
0.88	0.921	0.878	0.923	0.876	0.926	0.873	0.93	0.869	0.933
0.857	0.894	0.855	0.897	0.852	0.899	0.849	0.902	0.846	0.906
0.833	0.868	0.831	0.87	0.829	0.873	0.826	0.875	0.823	0.879
0.809	0.842	0.807	0.844	0.805	0.846	0.803	0.849	0.8	0.852
0.785	0.815	0.784	0.817	0.782	0.819	0.78	0.822	0.777	0.825
0.762	0.789	0.76	0.791	0.758	0.793	0.756	0.795	0.754	0.798
0.738	0.763	0.736	0.764	0.735	0.766	0.733	0.768	0.731	0.771



<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
14.716	13.134	11.725	10.469

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
14.641	Infinity	13.059	Infinity	11.65	Infinity	10.394	Infinity
11.825	Infinity	10.777	Infinity	9.804	Infinity	8.904	Infinity
9.918	Infinity	9.174	Infinity	8.463	Infinity	7.788	Infinity
8.54	Infinity	7.986	Infinity	7.445	Infinity	6.92	Infinity
7.498	Infinity	7.07	Infinity	6.645	Infinity	6.226	Infinity
6.028	30.453	5.751	40.777	5.47	65.926	5.186	215.608
5.658	22.614	5.414	27.823	5.165	37.559	4.912	61.967
5.255	17.108	5.045	19.915	4.829	24.423	4.608	32.775
4.814	13.03	4.638	14.585	4.456	16.848	4.269	20.413
4.329	9.888	4.188	10.75	4.04	11.919	3.887	13.583
3.795	7.392	3.687	7.858	3.573	8.457	3.454	9.25
3.506	6.328	3.414	6.663	3.318	7.085	3.215	7.628
3.201	5.363	3.126	5.599	3.045	5.89	2.96	6.257
3.075	5.001	3.005	5.205	2.931	5.455	2.852	5.766
2.813	4.317	2.756	4.466	2.694	4.646	2.628	4.868
2.678	3.993	2.626	4.119	2.57	4.271	2.51	4.456
2.54	3.679	2.493	3.785	2.443	3.912	2.39	4.066
2.469	3.527	2.425	3.624	2.378	3.739	2.328	3.878
2.398	3.377	2.357	3.465	2.312	3.57	2.265	3.696
2.326	3.229	2.287	3.309	2.246	3.404	2.201	3.518
2.253	3.084	2.217	3.156	2.178	3.242	2.136	3.345
2.179	2.941	2.146	3.007	2.109	3.084	2.07	3.176
2.104	2.801	2.073	2.86	2.04	2.929	2.003	3.011
2.029	2.662	2	2.715	1.969	2.777	1.935	2.851
1.952	2.526	1.926	2.574	1.897	2.629	1.866	2.694
1.875	2.393	1.851	2.434	1.824	2.483	1.796	2.541
1.796	2.261	1.774	2.298	1.751	2.341	1.725	2.392
1.757	2.196	1.736	2.23	1.713	2.271	1.688	2.318
1.717	2.131	1.697	2.164	1.675	2.201	1.652	2.246
1.677	2.067	1.658	2.097	1.638	2.133	1.615	2.174
1.637	2.003	1.619	2.032	1.599	2.065	1.578	2.103
1.596	1.94	1.579	1.967	1.561	1.997	1.541	2.033
1.555	1.878	1.539	1.902	1.522	1.931	1.503	1.964
1.514	1.816	1.499	1.838	1.483	1.865	1.465	1.895
1.473	1.754	1.459	1.775	1.443	1.799	1.426	1.828
1.431	1.693	1.418	1.712	1.404	1.735	1.388	1.761
1.389	1.632	1.377	1.65	1.364	1.671	1.349	1.695
1.347	1.572	1.336	1.588	1.323	1.607	1.309	1.629
1.305	1.512	1.294	1.527	1.283	1.544	1.27	1.564
1.262	1.453	1.252	1.466	1.242	1.482	1.23	1.5
1.219	1.394	1.21	1.406	1.2	1.42	1.189	1.437
1.176	1.335	1.168	1.346	1.159	1.359	1.148	1.374
1.133	1.277	1.125	1.287	1.117	1.299	1.107	1.312
1.089	1.219	1.082	1.229	1.074	1.239	1.066	1.251
1.045	1.162	1.039	1.17	1.032	1.18	1.024	1.19
1.001	1.105	0.995	1.113	0.989	1.121	0.982	1.13
0.956	1.049	0.951	1.055	0.945	1.063	0.939	1.071
0.934	1.021	0.929	1.027	0.923	1.034	0.918	1.042
0.911	0.993	0.907	0.999	0.902	1.005	0.896	1.012
0.888	0.965	0.884	0.971	0.88	0.976	0.874	0.983
0.866	0.938	0.862	0.942	0.857	0.948	0.853	0.954
0.843	0.91	0.839	0.914	0.835	0.92	0.831	0.925
0.82	0.882	0.817	0.887	0.813	0.891	0.809	0.897
0.797	0.855	0.794	0.859	0.791	0.863	0.787	0.868
0.774	0.828	0.772	0.831	0.768	0.835	0.764	0.84
0.751	0.8	0.749	0.804	0.746	0.807	0.742	0.812
0.728	0.773	0.726	0.776	0.723	0.78	0.72	0.783



Focal Length 100 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	232.637	207.276	184.683	164.554

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	232.483	Infinity	207.133	Infinity	184.549	Infinity	164.427	Infinity
60.00	47.739	80.757	46.574	84.332	45.332	88.741	44.015	94.274
30.00	26.6	34.401	26.236	35.03	25.839	35.765	25.408	36.627
20.00	18.436	21.855	18.261	22.107	18.069	22.396	17.858	22.729
15.00	14.107	16.015	14.005	16.149	13.892	16.302	13.767	16.477
12.00	11.424	12.638	11.357	12.721	11.283	12.815	11.201	12.922
10.00	9.599	10.437	9.552	10.493	9.499	10.557	9.442	10.629
9.00	8.674	9.351	8.636	9.396	8.594	9.447	8.547	9.505
8.00	7.743	8.275	7.712	8.31	7.679	8.35	7.641	8.395
7.50	7.274	7.741	7.247	7.771	7.217	7.806	7.184	7.845
7.00	6.803	7.209	6.78	7.235	6.754	7.265	6.725	7.299
6.50	6.33	6.679	6.31	6.702	6.288	6.727	6.263	6.756
6.00	5.856	6.152	5.839	6.171	5.819	6.192	5.798	6.217
5.50	5.379	5.627	5.365	5.642	5.349	5.66	5.331	5.681
5.00	4.9	5.104	4.888	5.117	4.875	5.132	4.86	5.148
4.50	4.42	4.583	4.41	4.594	4.399	4.606	4.387	4.619
4.00	3.937	4.065	3.929	4.073	3.921	4.083	3.911	4.093
3.80	3.743	3.859	3.736	3.866	3.729	3.874	3.72	3.883
3.60	3.549	3.652	3.543	3.659	3.536	3.666	3.529	3.674
3.50	3.452	3.549	3.446	3.555	3.44	3.562	3.433	3.57
3.40	3.355	3.446	3.349	3.452	3.343	3.459	3.337	3.466
3.30	3.258	3.344	3.252	3.349	3.247	3.355	3.24	3.362
3.20	3.16	3.241	3.155	3.246	3.15	3.252	3.144	3.258
3.10	3.063	3.138	3.058	3.143	3.053	3.148	3.048	3.154
3.00	2.965	3.036	2.961	3.04	2.956	3.045	2.951	3.051
2.90	2.868	2.933	2.864	2.937	2.859	2.942	2.854	2.947
2.80	2.77	2.831	2.766	2.835	2.762	2.839	2.758	2.844
2.70	2.672	2.729	2.669	2.732	2.665	2.736	2.661	2.741
2.60	2.574	2.626	2.571	2.63	2.568	2.633	2.564	2.637
2.50	2.476	2.524	2.473	2.527	2.47	2.531	2.467	2.534
2.40	2.378	2.422	2.376	2.425	2.373	2.428	2.369	2.432
2.30	2.28	2.32	2.278	2.323	2.275	2.326	2.272	2.329
2.20	2.182	2.218	2.18	2.221	2.177	2.223	2.174	2.226
2.10	2.084	2.117	2.082	2.119	2.079	2.121	2.077	2.124
2.00	1.985	2.015	1.983	2.017	1.981	2.019	1.979	2.021
1.95	1.936	1.964	1.934	1.966	1.932	1.968	1.93	1.97
1.90	1.887	1.913	1.885	1.915	1.883	1.917	1.881	1.919
1.85	1.837	1.863	1.836	1.864	1.834	1.866	1.832	1.868
1.80	1.788	1.812	1.787	1.813	1.785	1.815	1.783	1.817
1.75	1.739	1.761	1.738	1.763	1.736	1.764	1.734	1.766
1.70	1.69	1.711	1.688	1.712	1.687	1.713	1.685	1.715
1.65	1.64	1.66	1.639	1.661	1.638	1.662	1.636	1.664
1.60	1.591	1.609	1.59	1.61	1.589	1.612	1.587	1.613
1.55	1.541	1.559	1.54	1.56	1.539	1.561	1.538	1.562
1.50	1.492	1.508	1.491	1.509	1.49	1.51	1.489	1.511
1.45	1.443	1.457	1.442	1.458	1.441	1.459	1.44	1.461
1.40	1.393	1.407	1.392	1.408	1.391	1.409	1.39	1.41
1.35	1.344	1.356	1.343	1.357	1.342	1.358	1.341	1.359
1.30	1.294	1.306	1.294	1.307	1.293	1.307	1.292	1.308
1.25	1.245	1.255	1.244	1.256	1.243	1.257	1.243	1.258
1.20	1.195	1.205	1.195	1.205	1.194	1.206	1.193	1.207



<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
146.622	130.645	116.412	103.732	92.435

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
146.5	Infinity	130.528	Infinity	116.299	Infinity	103.621	Infinity	92.327	Infinity
42.625	101.369	41.166	110.725	39.644	123.523	38.063	141.941	36.434	170.48
24.94	37.646	24.436	38.86	23.894	40.32	23.313	42.094	22.694	44.283
17.627	23.116	17.375	23.565	17.1	24.092	16.802	24.711	16.48	25.446
13.63	16.678	13.48	16.91	13.314	17.178	13.134	17.489	12.937	17.852
11.111	13.045	11.011	13.186	10.901	13.348	10.78	13.534	10.648	13.749
9.378	10.712	9.307	10.806	9.228	10.914	9.142	11.038	9.047	11.18
8.494	9.571	8.436	9.646	8.372	9.731	8.301	9.829	8.223	9.941
7.599	8.446	7.553	8.504	7.502	8.57	7.445	8.646	7.382	8.732
7.147	7.89	7.107	7.94	7.061	7.998	7.011	8.063	6.956	8.138
6.693	7.337	6.657	7.381	6.617	7.43	6.573	7.487	6.525	7.551
6.235	6.789	6.204	6.826	6.17	6.868	6.132	6.916	6.089	6.971
5.774	6.244	5.748	6.276	5.718	6.311	5.686	6.352	5.65	6.398
5.311	5.704	5.288	5.73	5.263	5.759	5.236	5.793	5.205	5.831
4.844	5.167	4.825	5.188	4.805	5.212	4.782	5.239	4.756	5.27
4.374	4.634	4.359	4.651	4.342	4.67	4.324	4.692	4.303	4.716
3.901	4.105	3.889	4.118	3.876	4.133	3.861	4.15	3.845	4.169
3.711	3.894	3.7	3.906	3.688	3.919	3.675	3.934	3.66	3.951
3.52	3.684	3.51	3.694	3.5	3.706	3.488	3.72	3.475	3.735
3.425	3.579	3.416	3.589	3.405	3.6	3.394	3.613	3.382	3.627
3.329	3.474	3.32	3.484	3.311	3.494	3.3	3.506	3.289	3.519
3.233	3.37	3.225	3.378	3.216	3.388	3.206	3.4	3.195	3.412
3.137	3.265	3.13	3.274	3.121	3.283	3.112	3.293	3.102	3.305
3.041	3.161	3.034	3.169	3.026	3.177	3.018	3.187	3.008	3.198
2.945	3.057	2.939	3.064	2.931	3.072	2.923	3.081	2.914	3.092
2.849	2.953	2.843	2.96	2.836	2.967	2.828	2.976	2.82	2.985
2.752	2.849	2.747	2.855	2.74	2.862	2.733	2.87	2.725	2.879
2.656	2.746	2.651	2.751	2.645	2.758	2.638	2.765	2.631	2.773
2.559	2.642	2.554	2.647	2.549	2.653	2.543	2.66	2.536	2.667
2.463	2.539	2.458	2.544	2.453	2.549	2.447	2.555	2.441	2.562
2.366	2.435	2.361	2.44	2.357	2.445	2.352	2.45	2.346	2.457
2.269	2.332	2.265	2.336	2.261	2.341	2.256	2.346	2.25	2.352
2.171	2.229	2.168	2.233	2.164	2.237	2.16	2.242	2.155	2.247
2.074	2.127	2.071	2.13	2.067	2.134	2.064	2.138	2.059	2.143
1.977	2.024	1.974	2.027	1.971	2.03	1.967	2.034	1.963	2.038
1.928	1.973	1.925	1.975	1.922	1.979	1.919	1.982	1.915	1.986
1.879	1.921	1.877	1.924	1.874	1.927	1.871	1.93	1.867	1.934
1.83	1.87	1.828	1.873	1.825	1.876	1.822	1.879	1.819	1.882
1.781	1.819	1.779	1.821	1.777	1.824	1.774	1.827	1.771	1.83
1.732	1.768	1.73	1.77	1.728	1.773	1.725	1.775	1.722	1.779
1.684	1.717	1.682	1.719	1.679	1.721	1.677	1.724	1.674	1.727
1.635	1.666	1.633	1.668	1.631	1.67	1.628	1.672	1.626	1.675
1.586	1.615	1.584	1.617	1.582	1.619	1.58	1.621	1.577	1.624
1.537	1.564	1.535	1.565	1.533	1.567	1.531	1.569	1.529	1.572
1.487	1.513	1.486	1.514	1.484	1.516	1.482	1.518	1.48	1.52
1.438	1.462	1.437	1.463	1.435	1.465	1.434	1.467	1.432	1.469
1.389	1.411	1.388	1.412	1.386	1.414	1.385	1.416	1.383	1.417
1.34	1.36	1.339	1.361	1.338	1.363	1.336	1.364	1.334	1.366
1.291	1.309	1.29	1.31	1.289	1.312	1.287	1.313	1.286	1.315
1.242	1.258	1.241	1.26	1.239	1.261	1.238	1.262	1.237	1.264
1.192	1.208	1.191	1.209	1.19	1.21	1.189	1.211	1.188	1.212



<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
82.371	73.405	65.417	58.3	51.96

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
82.264	Infinity	73.299	Infinity	65.312	Infinity	58.197	Infinity	51.857	Infinity
34.763	220.183	33.062	327.326	31.342	721.548	29.612	Infinity	27.886	Infinity
22.038	47.027	21.345	50.545	20.617	55.178	19.858	61.51	19.07	70.607
16.132	26.325	15.759	27.387	15.361	28.686	14.937	30.3	14.489	32.343
12.723	18.279	12.491	18.782	12.24	19.381	11.971	20.101	11.683	20.976
10.503	13.999	10.345	14.291	10.174	14.634	9.988	15.039	9.787	15.521
8.943	11.344	8.829	11.534	8.704	11.755	8.568	12.014	8.421	12.318
8.137	10.07	8.043	10.219	7.939	10.392	7.827	10.593	7.704	10.828
7.313	8.831	7.237	8.945	7.154	9.076	7.062	9.229	6.963	9.406
6.894	8.224	6.827	8.322	6.753	8.436	6.672	8.567	6.583	8.719
6.471	7.625	6.412	7.709	6.346	7.806	6.275	7.918	6.196	8.047
6.043	7.033	5.991	7.105	5.934	7.187	5.872	7.281	5.803	7.39
5.61	6.45	5.565	6.51	5.516	6.578	5.462	6.657	5.403	6.748
5.171	5.874	5.134	5.923	5.092	5.98	5.047	6.044	4.996	6.119
4.728	5.305	4.697	5.346	4.663	5.391	4.624	5.443	4.582	5.503
4.28	4.744	4.255	4.776	4.226	4.812	4.195	4.854	4.161	4.901
3.827	4.19	3.806	4.215	3.784	4.243	3.759	4.275	3.732	4.311
3.644	3.971	3.625	3.993	3.605	4.018	3.583	4.046	3.558	4.078
3.46	3.752	3.444	3.772	3.425	3.794	3.405	3.819	3.383	3.848
3.368	3.643	3.352	3.662	3.335	3.683	3.316	3.706	3.295	3.733
3.275	3.535	3.261	3.552	3.245	3.572	3.227	3.594	3.207	3.619
3.183	3.426	3.169	3.443	3.154	3.461	3.137	3.482	3.118	3.505
3.09	3.318	3.077	3.334	3.063	3.351	3.047	3.37	3.029	3.392
2.997	3.211	2.985	3.225	2.971	3.241	2.956	3.259	2.94	3.28
2.904	3.103	2.892	3.116	2.88	3.131	2.866	3.148	2.85	3.167
2.81	2.996	2.8	3.008	2.788	3.022	2.775	3.038	2.76	3.055
2.716	2.889	2.707	2.9	2.696	2.913	2.683	2.928	2.67	2.944
2.623	2.782	2.613	2.793	2.603	2.805	2.592	2.818	2.579	2.833
2.528	2.676	2.52	2.686	2.51	2.696	2.5	2.709	2.488	2.723
2.434	2.57	2.426	2.579	2.417	2.589	2.408	2.6	2.397	2.613
2.339	2.464	2.332	2.472	2.324	2.481	2.315	2.491	2.305	2.503
2.245	2.358	2.238	2.366	2.231	2.374	2.222	2.383	2.213	2.394
2.15	2.253	2.144	2.26	2.137	2.267	2.129	2.276	2.121	2.285
2.054	2.148	2.049	2.154	2.043	2.161	2.036	2.168	2.028	2.177
1.959	2.043	1.954	2.049	1.948	2.055	1.942	2.062	1.935	2.069
1.911	1.991	1.906	1.996	1.901	2.002	1.895	2.008	1.889	2.016
1.863	1.939	1.859	1.943	1.854	1.949	1.848	1.955	1.842	1.962
1.815	1.886	1.811	1.891	1.806	1.896	1.801	1.902	1.795	1.908
1.767	1.834	1.763	1.839	1.759	1.843	1.754	1.849	1.748	1.855
1.719	1.782	1.715	1.786	1.711	1.791	1.706	1.796	1.701	1.802
1.671	1.73	1.667	1.734	1.663	1.738	1.659	1.743	1.654	1.748
1.623	1.678	1.619	1.682	1.616	1.686	1.612	1.69	1.607	1.695
1.574	1.626	1.571	1.63	1.568	1.633	1.564	1.638	1.56	1.642
1.526	1.575	1.523	1.578	1.52	1.581	1.517	1.585	1.513	1.59
1.478	1.523	1.475	1.526	1.472	1.529	1.469	1.533	1.465	1.537
1.429	1.471	1.427	1.474	1.424	1.477	1.421	1.48	1.418	1.484
1.381	1.42	1.379	1.422	1.376	1.425	1.373	1.428	1.37	1.431
1.332	1.368	1.33	1.37	1.328	1.373	1.325	1.376	1.322	1.379
1.284	1.317	1.282	1.319	1.28	1.321	1.277	1.324	1.275	1.327
1.235	1.265	1.233	1.267	1.231	1.269	1.229	1.272	1.227	1.274
1.186	1.214	1.185	1.216	1.183	1.218	1.181	1.22	1.179	1.222





<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
46.312	41.28	36.796	32.802	29.244

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
46.209	Infinity	41.178	Infinity	36.695	Infinity	32.701	Infinity	29.143	Infinity
26.173	Infinity	24.486	Infinity	22.835	Infinity	21.229	Infinity	19.677	Infinity
18.257	84.669	17.423	109.058	16.574	161.207	15.715	348.203	14.852	Infinity
14.017	34.993	13.523	38.539	13.008	43.487	12.475	50.814	11.927	62.675
11.375	22.054	11.049	23.405	10.704	25.134	10.343	27.407	9.965	30.507
9.571	16.101	9.34	16.806	9.094	17.674	8.833	18.764	8.557	20.16
8.261	12.678	8.089	13.109	7.905	13.629	7.708	14.265	7.498	15.054
7.57	11.105	7.426	11.433	7.271	11.825	7.104	12.299	6.926	12.879
6.854	9.613	6.736	9.857	6.609	10.146	6.471	10.492	6.324	10.909
6.486	8.896	6.38	9.104	6.266	9.35	6.143	9.642	6.01	9.992
6.111	8.198	6.017	8.374	5.916	8.58	5.806	8.825	5.687	9.117
5.728	7.517	5.646	7.664	5.557	7.836	5.46	8.039	5.356	8.279
5.338	6.852	5.267	6.974	5.19	7.116	5.106	7.282	5.015	7.478
4.941	6.204	4.88	6.303	4.814	6.419	4.742	6.553	4.663	6.711
4.536	5.572	4.485	5.652	4.429	5.743	4.368	5.85	4.302	5.975
4.123	4.955	4.081	5.017	4.035	5.089	3.985	5.172	3.93	5.269
3.701	4.352	3.668	4.4	3.631	4.455	3.591	4.518	3.546	4.591
3.53	4.115	3.5	4.158	3.467	4.206	3.43	4.262	3.39	4.327
3.358	3.881	3.331	3.918	3.301	3.961	3.267	4.01	3.231	4.067
3.271	3.764	3.245	3.799	3.217	3.839	3.185	3.886	3.151	3.939
3.184	3.648	3.16	3.681	3.133	3.719	3.103	3.762	3.07	3.812
3.097	3.532	3.074	3.563	3.048	3.598	3.02	3.639	2.989	3.685
3.009	3.417	2.987	3.446	2.963	3.479	2.937	3.517	2.908	3.56
2.921	3.303	2.901	3.33	2.878	3.36	2.853	3.395	2.826	3.435
2.833	3.189	2.813	3.214	2.792	3.242	2.769	3.275	2.743	3.312
2.744	3.076	2.726	3.099	2.706	3.125	2.684	3.155	2.66	3.189
2.655	2.963	2.638	2.984	2.619	3.008	2.599	3.036	2.576	3.068
2.565	2.85	2.55	2.87	2.532	2.892	2.513	2.918	2.492	2.947
2.475	2.739	2.461	2.757	2.445	2.777	2.427	2.801	2.407	2.827
2.385	2.627	2.372	2.644	2.357	2.663	2.34	2.684	2.322	2.709
2.294	2.516	2.282	2.532	2.268	2.549	2.253	2.568	2.236	2.591
2.203	2.406	2.192	2.42	2.179	2.435	2.165	2.453	2.15	2.473
2.112	2.296	2.101	2.309	2.09	2.323	2.077	2.339	2.063	2.357
2.02	2.187	2.011	2.198	2	2.211	1.989	2.225	1.976	2.242
1.928	2.078	1.919	2.088	1.91	2.1	1.899	2.112	1.888	2.127
1.881	2.024	1.873	2.033	1.864	2.044	1.855	2.056	1.844	2.07
1.835	1.97	1.828	1.979	1.819	1.989	1.81	2	1.799	2.013
1.789	1.916	1.782	1.924	1.773	1.934	1.765	1.945	1.755	1.957
1.742	1.862	1.735	1.87	1.728	1.879	1.719	1.889	1.71	1.901
1.696	1.808	1.689	1.816	1.682	1.824	1.674	1.834	1.665	1.844
1.649	1.755	1.643	1.762	1.636	1.769	1.629	1.778	1.62	1.788
1.602	1.701	1.596	1.708	1.59	1.715	1.583	1.723	1.575	1.733
1.555	1.648	1.55	1.654	1.544	1.661	1.537	1.668	1.53	1.677
1.508	1.594	1.503	1.6	1.498	1.606	1.491	1.614	1.485	1.622
1.461	1.541	1.456	1.547	1.451	1.552	1.445	1.559	1.439	1.567
1.414	1.488	1.409	1.493	1.405	1.499	1.399	1.505	1.393	1.512
1.366	1.435	1.362	1.44	1.358	1.445	1.353	1.451	1.347	1.457
1.319	1.383	1.315	1.387	1.311	1.391	1.307	1.397	1.301	1.403
1.271	1.33	1.268	1.334	1.264	1.338	1.26	1.343	1.255	1.348
1.224	1.277	1.221	1.281	1.217	1.285	1.213	1.289	1.209	1.294
1.176	1.225	1.173	1.228	1.17	1.232	1.167	1.236	1.163	1.24



<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
26.074	23.25	20.734	18.492

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
25.973	Infinity	23.149	Infinity	20.633	Infinity	18.392	Infinity
18.185	Infinity	16.76	Infinity	15.406	Infinity	14.126	Infinity
13.99	Infinity	13.135	Infinity	12.292	Infinity	11.467	Infinity
11.367	84.948	10.799	141.388	10.225	557.591	9.65	Infinity
9.573	34.945	9.168	41.773	8.753	53.522	8.33	78.248
8.268	21.997	7.965	24.507	7.652	28.11	7.328	33.673
7.276	16.051	7.041	17.34	6.796	19.061	6.541	21.452
6.737	13.6	6.536	14.511	6.325	15.693	6.104	17.273
6.166	11.42	5.998	12.053	5.82	12.854	5.633	13.891
5.867	10.418	5.716	10.941	5.555	11.595	5.384	12.43
5.56	9.469	5.424	9.898	5.279	10.428	5.125	11.097
5.243	8.568	5.122	8.916	4.993	9.343	4.856	9.875
4.916	7.712	4.81	7.992	4.696	8.332	4.575	8.751
4.579	6.897	4.487	7.12	4.388	7.387	4.283	7.713
4.23	6.122	4.152	6.295	4.068	6.502	3.977	6.752
3.87	5.382	3.805	5.515	3.735	5.672	3.659	5.86
3.498	4.676	3.445	4.775	3.388	4.891	3.326	5.029
3.345	4.402	3.297	4.489	3.245	4.592	3.188	4.713
3.191	4.133	3.147	4.21	3.1	4.299	3.048	4.405
3.113	4.001	3.072	4.072	3.026	4.156	2.977	4.254
3.034	3.869	2.995	3.936	2.952	4.014	2.906	4.105
2.955	3.739	2.918	3.801	2.877	3.873	2.833	3.958
2.876	3.61	2.84	3.668	2.802	3.735	2.76	3.813
2.795	3.482	2.762	3.535	2.726	3.597	2.687	3.67
2.715	3.355	2.684	3.404	2.649	3.462	2.612	3.529
2.633	3.229	2.604	3.275	2.572	3.328	2.537	3.389
2.551	3.104	2.524	3.146	2.494	3.195	2.461	3.251
2.469	2.981	2.443	3.019	2.415	3.064	2.385	3.115
2.386	2.858	2.362	2.893	2.336	2.934	2.308	2.981
2.302	2.737	2.28	2.769	2.256	2.806	2.229	2.849
2.218	2.616	2.198	2.645	2.175	2.679	2.151	2.718
2.133	2.497	2.114	2.523	2.094	2.553	2.071	2.589
2.048	2.378	2.031	2.402	2.012	2.429	1.991	2.461
1.962	2.26	1.946	2.282	1.929	2.306	1.91	2.335
1.875	2.144	1.861	2.163	1.845	2.185	1.828	2.21
1.831	2.086	1.818	2.104	1.803	2.125	1.786	2.148
1.788	2.028	1.775	2.045	1.761	2.065	1.745	2.087
1.744	1.971	1.732	1.987	1.718	2.005	1.703	2.026
1.7	1.914	1.688	1.929	1.675	1.946	1.661	1.965
1.655	1.857	1.645	1.871	1.633	1.887	1.619	1.905
1.611	1.8	1.601	1.813	1.589	1.828	1.577	1.845
1.566	1.744	1.557	1.756	1.546	1.77	1.534	1.786
1.522	1.687	1.513	1.699	1.503	1.712	1.492	1.726
1.477	1.631	1.468	1.642	1.459	1.654	1.449	1.668
1.432	1.575	1.424	1.585	1.415	1.596	1.406	1.609
1.387	1.52	1.379	1.529	1.371	1.539	1.362	1.551
1.341	1.464	1.334	1.473	1.327	1.482	1.319	1.493
1.296	1.409	1.289	1.417	1.282	1.426	1.275	1.436
1.25	1.354	1.244	1.361	1.238	1.369	1.231	1.378
1.204	1.3	1.199	1.306	1.193	1.313	1.186	1.322
1.158	1.245	1.153	1.251	1.148	1.258	1.142	1.265



Focal Length 135 mm

Circle of Confusion 0.025 mm

T/No	1.8	2	2.2	2.5
Hyperfocal Distance (m)	416.349	370.948	330.5	294.464

T/No	1.8		2		2.2		2.5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	416.042	Infinity	370.676	Infinity	330.257	Infinity	294.244	Infinity
100.00	80.672	131.521	78.807	136.803	76.814	143.262	74.694	151.278
50.00	44.665	56.786	44.089	57.745	43.46	58.862	42.775	60.169
30.00	28.001	32.308	27.774	32.615	27.524	32.967	27.249	33.371
20.00	19.095	20.995	18.99	21.124	18.874	21.27	18.744	21.437
15.00	14.488	15.55	14.427	15.62	14.36	15.7	14.286	15.79
12.00	11.671	12.348	11.632	12.392	11.589	12.442	11.541	12.498
10.00	9.772	10.239	9.745	10.269	9.714	10.303	9.68	10.342
9.00	8.815	9.193	8.793	9.217	8.769	9.244	8.741	9.275
8.00	7.854	8.151	7.837	8.17	7.817	8.191	7.796	8.216
7.50	7.372	7.632	7.357	7.649	7.34	7.668	7.32	7.689
7.00	6.889	7.115	6.875	7.129	6.86	7.145	6.844	7.164
6.50	6.404	6.599	6.393	6.611	6.38	6.625	6.365	6.64
6.00	5.919	6.084	5.909	6.094	5.898	6.106	5.886	6.119
5.50	5.432	5.57	5.424	5.579	5.414	5.588	5.404	5.599
5.00	4.944	5.057	4.937	5.065	4.93	5.073	4.921	5.082
4.75	4.7	4.802	4.693	4.808	4.687	4.815	4.679	4.823
4.50	4.455	4.546	4.449	4.552	4.443	4.558	4.436	4.566
4.25	4.21	4.291	4.205	4.296	4.2	4.302	4.193	4.308
4.00	3.965	4.036	3.96	4.041	3.955	4.046	3.95	4.051
3.90	3.866	3.934	3.862	3.938	3.858	3.943	3.853	3.949
3.80	3.768	3.832	3.764	3.836	3.76	3.841	3.755	3.846
3.70	3.67	3.731	3.666	3.734	3.662	3.739	3.657	3.744
3.60	3.571	3.629	3.568	3.633	3.564	3.637	3.56	3.641
3.50	3.473	3.527	3.47	3.531	3.466	3.534	3.462	3.539
3.40	3.375	3.426	3.372	3.429	3.368	3.432	3.364	3.436
3.30	3.276	3.324	3.273	3.327	3.27	3.33	3.266	3.334
3.20	3.178	3.223	3.175	3.225	3.172	3.229	3.169	3.232
3.10	3.079	3.121	3.077	3.124	3.074	3.127	3.071	3.13
3.00	2.981	3.02	2.978	3.022	2.975	3.025	2.973	3.028
2.90	2.882	2.918	2.88	2.921	2.877	2.923	2.874	2.926
2.80	2.783	2.817	2.781	2.819	2.779	2.822	2.776	2.824
2.70	2.684	2.716	2.682	2.718	2.68	2.72	2.678	2.722
2.60	2.586	2.615	2.584	2.616	2.582	2.618	2.58	2.621
2.50	2.487	2.513	2.485	2.515	2.483	2.517	2.481	2.519
2.40	2.388	2.412	2.386	2.414	2.385	2.416	2.383	2.417
2.30	2.289	2.311	2.288	2.313	2.286	2.314	2.284	2.316
2.20	2.19	2.21	2.189	2.211	2.187	2.213	2.186	2.214
2.10	2.091	2.109	2.09	2.11	2.088	2.112	2.087	2.113
2.00	1.992	2.008	1.991	2.009	1.99	2.011	1.988	2.012
1.95	1.942	1.958	1.941	1.959	1.94	1.96	1.939	1.961
1.90	1.893	1.907	1.892	1.908	1.891	1.909	1.89	1.911
1.85	1.843	1.857	1.842	1.858	1.841	1.859	1.84	1.86
1.80	1.793	1.807	1.793	1.807	1.792	1.808	1.791	1.809
1.75	1.744	1.756	1.743	1.757	1.742	1.758	1.741	1.759
1.70	1.694	1.706	1.693	1.707	1.693	1.707	1.692	1.708
1.65	1.645	1.655	1.644	1.656	1.643	1.657	1.642	1.658
1.60	1.595	1.605	1.594	1.606	1.594	1.606	1.593	1.607
1.55	1.545	1.555	1.545	1.555	1.544	1.556	1.543	1.557
1.50	1.496	1.504	1.495	1.505	1.494	1.506	1.494	1.506
1.45	1.446	1.454	1.445	1.455	1.445	1.455	1.444	1.456
1.40	1.396	1.404	1.396	1.404	1.395	1.405	1.395	1.405
1.35	1.347	1.354	1.346	1.354	1.346	1.354	1.345	1.355
1.30	1.297	1.303	1.296	1.304	1.296	1.304	1.295	1.305
1.25	1.247	1.253	1.247	1.253	1.246	1.254	1.246	1.254
1.20	1.197	1.203	1.197	1.203	1.197	1.203	1.196	1.204



<b>2.8</b>	<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>
262.361	233.759	208.279	185.578	165.354

<b>2.8</b>		<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
262.158	Infinity	233.571	Infinity	208.101	Infinity	185.41	Infinity	165.193	Infinity
72.449	161.417	70.086	174.55	67.61	192.094	65.031	216.523	62.362	252.581
42.031	61.706	41.227	63.528	40.36	65.706	39.429	68.336	38.434	71.55
26.946	33.837	26.615	34.375	26.252	35.001	25.856	35.731	25.427	36.587
18.601	21.627	18.443	21.845	18.269	22.095	18.078	22.382	17.868	22.713
14.203	15.893	14.111	16.009	14.009	16.142	13.897	16.294	13.773	16.468
11.487	12.562	11.427	12.634	11.36	12.716	11.287	12.81	11.205	12.917
9.643	10.385	9.601	10.434	9.554	10.49	9.502	10.554	9.444	10.626
8.71	9.31	8.676	9.349	8.638	9.394	8.596	9.444	8.549	9.502
7.771	8.243	7.744	8.274	7.714	8.308	7.68	8.348	7.643	8.392
7.299	7.712	7.275	7.739	7.249	7.77	7.219	7.804	7.186	7.843
6.825	7.184	6.804	7.207	6.781	7.234	6.755	7.263	6.726	7.297
6.349	6.658	6.331	6.678	6.311	6.7	6.289	6.726	6.264	6.755
5.872	6.134	5.857	6.151	5.84	6.17	5.82	6.191	5.799	6.215
5.393	5.612	5.38	5.626	5.365	5.642	5.349	5.659	5.332	5.68
4.912	5.092	4.901	5.103	4.889	5.116	4.876	5.131	4.861	5.147
4.67	4.832	4.661	4.843	4.65	4.854	4.638	4.867	4.625	4.882
4.429	4.574	4.42	4.583	4.411	4.593	4.4	4.605	4.388	4.618
4.187	4.315	4.179	4.324	4.17	4.333	4.161	4.343	4.15	4.355
3.944	4.058	3.937	4.065	3.93	4.073	3.921	4.082	3.912	4.092
3.847	3.955	3.84	3.961	3.833	3.969	3.825	3.978	3.816	3.987
3.75	3.852	3.744	3.858	3.737	3.865	3.729	3.874	3.721	3.883
3.652	3.749	3.647	3.755	3.64	3.762	3.633	3.77	3.625	3.778
3.555	3.646	3.55	3.652	3.543	3.658	3.537	3.666	3.529	3.674
3.458	3.544	3.452	3.549	3.447	3.555	3.44	3.562	3.433	3.57
3.36	3.441	3.355	3.446	3.35	3.452	3.344	3.458	3.337	3.466
3.262	3.338	3.258	3.343	3.253	3.349	3.247	3.355	3.241	3.362
3.165	3.236	3.16	3.241	3.156	3.246	3.15	3.251	3.144	3.258
3.067	3.134	3.063	3.138	3.059	3.143	3.054	3.148	3.048	3.154
2.969	3.031	2.965	3.035	2.961	3.04	2.957	3.045	2.951	3.05
2.871	2.929	2.868	2.933	2.864	2.937	2.86	2.942	2.855	2.947
2.773	2.827	2.77	2.831	2.766	2.834	2.762	2.839	2.758	2.843
2.675	2.725	2.672	2.728	2.669	2.732	2.665	2.736	2.661	2.74
2.577	2.623	2.574	2.626	2.571	2.629	2.568	2.633	2.564	2.637
2.479	2.521	2.476	2.524	2.474	2.527	2.47	2.53	2.467	2.534
2.381	2.42	2.378	2.422	2.376	2.425	2.373	2.428	2.37	2.431
2.282	2.318	2.28	2.32	2.278	2.323	2.275	2.325	2.272	2.329
2.184	2.216	2.182	2.218	2.18	2.221	2.177	2.223	2.175	2.226
2.085	2.115	2.084	2.117	2.082	2.119	2.08	2.121	2.077	2.123
1.987	2.013	1.985	2.015	1.984	2.017	1.982	2.019	1.979	2.021
1.938	1.963	1.936	1.964	1.934	1.966	1.933	1.968	1.93	1.97
1.888	1.912	1.887	1.913	1.885	1.915	1.883	1.917	1.881	1.919
1.839	1.861	1.838	1.863	1.836	1.864	1.834	1.866	1.833	1.868
1.79	1.811	1.788	1.812	1.787	1.813	1.785	1.815	1.784	1.817
1.74	1.76	1.739	1.761	1.738	1.763	1.736	1.764	1.734	1.766
1.691	1.709	1.69	1.71	1.688	1.712	1.687	1.713	1.685	1.715
1.641	1.659	1.64	1.66	1.639	1.661	1.638	1.662	1.636	1.664
1.592	1.608	1.591	1.609	1.59	1.61	1.589	1.612	1.587	1.613
1.542	1.558	1.542	1.559	1.541	1.56	1.539	1.561	1.538	1.562
1.493	1.507	1.492	1.508	1.491	1.509	1.49	1.51	1.489	1.511
1.444	1.457	1.443	1.457	1.442	1.458	1.441	1.459	1.44	1.46
1.394	1.406	1.393	1.407	1.392	1.408	1.392	1.409	1.391	1.41
1.344	1.356	1.344	1.356	1.343	1.357	1.342	1.358	1.341	1.359
1.295	1.305	1.294	1.306	1.294	1.306	1.293	1.307	1.292	1.308
1.245	1.255	1.245	1.255	1.244	1.256	1.243	1.257	1.243	1.257
1.196	1.204	1.195	1.205	1.195	1.205	1.194	1.206	1.193	1.207



<b>5</b>	<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>
147.336	131.284	116.984	104.243	92.893

<b>5</b>		<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
147.181	Infinity	131.133	Infinity	116.836	Infinity	104.099	Infinity	92.751	Infinity
59.615	310.658	56.807	418.746	53.955	687.135	51.077	2449.934	48.192	Infinity
37.376	75.539	36.256	80.583	35.076	87.112	33.84	95.829	32.552	107.956
24.961	37.598	24.458	38.802	23.917	40.25	23.338	42.008	22.721	44.176
17.637	23.097	17.386	23.544	17.112	24.066	16.815	24.681	16.494	25.41
13.636	16.668	13.486	16.899	13.322	17.165	13.142	17.474	12.946	17.834
11.115	13.039	11.016	13.179	10.906	13.34	10.786	13.525	10.654	13.738
9.381	10.708	9.31	10.801	9.232	10.908	9.146	11.031	9.052	11.172
8.497	9.567	8.439	9.642	8.375	9.727	8.304	9.824	8.227	9.935
7.601	8.443	7.555	8.501	7.504	8.567	7.448	8.642	7.385	8.727
7.149	7.887	7.109	7.937	7.064	7.995	7.014	8.06	6.958	8.134
6.694	7.335	6.659	7.378	6.619	7.428	6.576	7.484	6.527	7.548
6.236	6.787	6.206	6.824	6.171	6.866	6.134	6.914	6.092	6.968
5.776	6.243	5.749	6.274	5.72	6.309	5.687	6.349	5.651	6.395
5.312	5.702	5.289	5.728	5.265	5.758	5.237	5.791	5.207	5.829
4.845	5.166	4.826	5.187	4.806	5.211	4.783	5.238	4.758	5.269
4.61	4.899	4.593	4.918	4.575	4.939	4.554	4.963	4.532	4.991
4.375	4.633	4.36	4.65	4.343	4.669	4.325	4.69	4.304	4.715
4.138	4.368	4.125	4.383	4.11	4.4	4.094	4.419	4.076	4.44
3.901	4.104	3.89	4.117	3.877	4.132	3.862	4.148	3.846	4.167
3.806	3.998	3.795	4.011	3.783	4.025	3.769	4.041	3.753	4.059
3.711	3.893	3.701	3.905	3.689	3.918	3.676	3.933	3.661	3.95
3.616	3.788	3.606	3.799	3.595	3.812	3.582	3.826	3.568	3.842
3.521	3.683	3.511	3.694	3.5	3.705	3.489	3.719	3.476	3.734
3.425	3.578	3.416	3.588	3.406	3.599	3.395	3.612	3.383	3.626
3.329	3.474	3.321	3.483	3.312	3.493	3.301	3.505	3.289	3.519
3.234	3.369	3.226	3.378	3.217	3.388	3.207	3.399	3.196	3.411
3.138	3.265	3.13	3.273	3.122	3.282	3.113	3.293	3.102	3.304
3.042	3.161	3.035	3.168	3.027	3.177	3.018	3.187	3.008	3.197
2.946	3.057	2.939	3.064	2.932	3.072	2.924	3.081	2.914	3.091
2.849	2.953	2.843	2.959	2.836	2.967	2.829	2.975	2.82	2.985
2.753	2.849	2.747	2.855	2.741	2.862	2.734	2.87	2.726	2.878
2.656	2.745	2.651	2.751	2.645	2.757	2.639	2.764	2.631	2.773
2.56	2.642	2.555	2.647	2.549	2.653	2.543	2.659	2.536	2.667
2.463	2.538	2.458	2.543	2.453	2.549	2.448	2.555	2.441	2.562
2.366	2.435	2.362	2.44	2.357	2.444	2.352	2.45	2.346	2.456
2.269	2.332	2.265	2.336	2.261	2.341	2.256	2.346	2.251	2.351
2.172	2.229	2.168	2.233	2.164	2.237	2.16	2.241	2.155	2.247
2.074	2.126	2.071	2.13	2.068	2.133	2.064	2.138	2.059	2.142
1.977	2.024	1.974	2.027	1.971	2.03	1.967	2.034	1.963	2.038
1.928	1.972	1.925	1.975	1.922	1.978	1.919	1.982	1.915	1.986
1.879	1.921	1.877	1.924	1.874	1.927	1.871	1.93	1.867	1.934
1.83	1.87	1.828	1.873	1.825	1.875	1.822	1.878	1.819	1.882
1.782	1.819	1.779	1.821	1.777	1.824	1.774	1.827	1.771	1.83
1.733	1.768	1.731	1.77	1.728	1.772	1.726	1.775	1.723	1.778
1.684	1.717	1.682	1.719	1.679	1.721	1.677	1.724	1.674	1.727
1.635	1.666	1.633	1.668	1.631	1.67	1.628	1.672	1.626	1.675
1.586	1.615	1.584	1.616	1.582	1.618	1.58	1.621	1.577	1.623
1.537	1.564	1.535	1.565	1.533	1.567	1.531	1.569	1.529	1.572
1.488	1.513	1.486	1.514	1.484	1.516	1.483	1.518	1.48	1.52
1.438	1.462	1.437	1.463	1.436	1.465	1.434	1.467	1.432	1.469
1.389	1.411	1.388	1.412	1.387	1.414	1.385	1.415	1.383	1.417
1.34	1.36	1.339	1.361	1.338	1.363	1.336	1.364	1.334	1.366
1.291	1.309	1.29	1.31	1.289	1.312	1.287	1.313	1.286	1.315
1.242	1.258	1.241	1.259	1.24	1.261	1.238	1.262	1.237	1.263
1.192	1.208	1.192	1.209	1.191	1.21	1.189	1.211	1.188	1.212



<b>9</b>	<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>
82.781	73.772	65.746	58.596	52.226

<b>9</b>		<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
82.64	Infinity	73.633	Infinity	65.608	Infinity	58.459	Infinity	52.089	Infinity
45.32	Infinity	42.478	Infinity	39.686	Infinity	36.959	Infinity	34.314	Infinity
31.219	125.833	29.848	154.572	28.445	207.872	27.021	339.193	25.583	1166.86
22.066	46.891	21.374	50.368	20.648	54.941	19.889	61.177	19.102	70.113
16.147	26.282	15.776	27.334	15.378	28.621	14.956	30.218	14.508	32.238
12.732	18.257	12.501	18.757	12.252	19.351	11.983	20.064	11.695	20.931
10.51	13.987	10.352	14.277	10.181	14.617	9.996	15.018	9.796	15.496
8.948	11.335	8.834	11.524	8.71	11.743	8.574	12	8.428	12.302
8.141	10.064	8.047	10.212	7.944	10.383	7.832	10.582	7.71	10.815
7.317	8.826	7.241	8.939	7.158	9.069	7.067	9.221	6.967	9.396
6.897	8.219	6.83	8.317	6.757	8.43	6.676	8.56	6.587	8.711
6.474	7.621	6.415	7.704	6.35	7.801	6.278	7.912	6.2	8.04
6.045	7.03	5.994	7.101	5.937	7.182	5.875	7.276	5.807	7.384
5.612	6.447	5.568	6.506	5.519	6.574	5.465	6.653	5.406	6.742
5.173	5.872	5.136	5.921	5.095	5.977	5.049	6.041	4.999	6.114
4.73	5.303	4.699	5.343	4.664	5.389	4.626	5.44	4.585	5.5
4.506	5.022	4.478	5.058	4.447	5.098	4.413	5.144	4.375	5.197
4.281	4.743	4.256	4.774	4.228	4.81	4.197	4.851	4.163	4.898
4.055	4.465	4.033	4.493	4.007	4.524	3.98	4.561	3.949	4.602
3.828	4.189	3.808	4.213	3.785	4.241	3.761	4.273	3.733	4.309
3.736	4.079	3.717	4.102	3.696	4.128	3.672	4.158	3.646	4.192
3.645	3.969	3.627	3.991	3.606	4.016	3.584	4.044	3.559	4.076
3.553	3.86	3.536	3.881	3.517	3.904	3.495	3.931	3.472	3.961
3.461	3.751	3.445	3.77	3.427	3.792	3.406	3.817	3.384	3.846
3.369	3.642	3.353	3.66	3.336	3.681	3.317	3.705	3.296	3.731
3.276	3.534	3.262	3.551	3.246	3.57	3.228	3.592	3.208	3.617
3.184	3.425	3.17	3.442	3.155	3.46	3.138	3.48	3.119	3.504
3.091	3.318	3.078	3.333	3.064	3.35	3.048	3.369	3.03	3.391
2.998	3.21	2.986	3.224	2.972	3.24	2.957	3.258	2.941	3.278
2.904	3.102	2.893	3.115	2.88	3.13	2.866	3.147	2.851	3.166
2.811	2.995	2.8	3.007	2.789	3.021	2.775	3.037	2.761	3.054
2.717	2.888	2.707	2.9	2.696	2.912	2.684	2.927	2.671	2.943
2.623	2.782	2.614	2.792	2.604	2.804	2.593	2.817	2.58	2.832
2.529	2.675	2.52	2.685	2.511	2.696	2.501	2.708	2.489	2.722
2.434	2.569	2.427	2.578	2.418	2.588	2.408	2.599	2.398	2.612
2.34	2.463	2.333	2.471	2.325	2.48	2.316	2.491	2.306	2.502
2.245	2.358	2.238	2.365	2.231	2.373	2.223	2.383	2.214	2.393
2.15	2.253	2.144	2.259	2.137	2.267	2.13	2.275	2.122	2.285
2.055	2.148	2.049	2.153	2.043	2.16	2.036	2.168	2.029	2.176
1.959	2.043	1.954	2.048	1.949	2.054	1.943	2.061	1.936	2.069
1.911	1.99	1.907	1.995	1.901	2.001	1.896	2.008	1.889	2.015
1.863	1.938	1.859	1.943	1.854	1.948	1.849	1.954	1.842	1.961
1.815	1.886	1.811	1.891	1.807	1.896	1.801	1.901	1.796	1.908
1.767	1.834	1.763	1.838	1.759	1.843	1.754	1.848	1.749	1.854
1.719	1.782	1.716	1.786	1.711	1.79	1.707	1.795	1.702	1.801
1.671	1.73	1.668	1.734	1.664	1.738	1.659	1.743	1.655	1.748
1.623	1.678	1.62	1.682	1.616	1.685	1.612	1.69	1.607	1.695
1.575	1.626	1.572	1.629	1.568	1.633	1.564	1.637	1.56	1.642
1.526	1.574	1.524	1.577	1.52	1.581	1.517	1.585	1.513	1.589
1.478	1.523	1.475	1.525	1.472	1.529	1.469	1.532	1.465	1.536
1.43	1.471	1.427	1.474	1.424	1.477	1.421	1.48	1.418	1.484
1.381	1.419	1.379	1.422	1.376	1.425	1.373	1.428	1.37	1.431
1.333	1.368	1.33	1.37	1.328	1.373	1.326	1.375	1.323	1.379
1.284	1.316	1.282	1.318	1.28	1.321	1.277	1.323	1.275	1.326
1.235	1.265	1.234	1.267	1.232	1.269	1.229	1.271	1.227	1.274
1.187	1.214	1.185	1.215	1.183	1.217	1.181	1.219	1.179	1.222



<b>16</b>	<b>18</b>	<b>20</b>	<b>22</b>
46.551	41.495	36.99	32.977

<b>16</b>		<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
46.414	Infinity	41.359	Infinity	36.855	Infinity	32.842	Infinity
31.763	Infinity	29.317	Infinity	26.986	Infinity	24.776	Infinity
24.141	Infinity	22.706	Infinity	21.286	Infinity	19.89	Infinity
18.29	83.868	17.457	107.562	16.608	157.543	15.749	329.456
14.037	34.853	13.543	38.347	13.029	43.212	12.497	50.389
11.389	21.998	11.063	23.333	10.719	25.04	10.358	27.281
9.581	16.07	9.351	16.768	9.105	17.627	8.844	18.704
8.269	12.659	8.097	13.086	7.913	13.601	7.716	14.23
7.577	11.09	7.433	11.415	7.278	11.804	7.112	12.273
6.859	9.602	6.742	9.844	6.615	10.13	6.477	10.473
6.49	8.887	6.385	9.093	6.271	9.336	6.148	9.625
6.115	8.189	6.022	8.364	5.92	8.568	5.811	8.811
5.732	7.509	5.65	7.655	5.561	7.826	5.465	8.027
5.342	6.846	5.271	6.967	5.194	7.107	5.11	7.272
4.944	6.199	4.884	6.298	4.818	6.412	4.746	6.545
4.538	5.568	4.488	5.647	4.432	5.738	4.372	5.844
4.333	5.258	4.287	5.328	4.236	5.409	4.181	5.502
4.125	4.952	4.083	5.013	4.038	5.085	3.987	5.167
3.915	4.649	3.878	4.703	3.837	4.766	3.791	4.838
3.703	4.35	3.67	4.397	3.633	4.451	3.593	4.514
3.618	4.231	3.586	4.276	3.551	4.327	3.513	4.386
3.532	4.113	3.502	4.155	3.469	4.203	3.432	4.259
3.446	3.995	3.417	4.035	3.386	4.08	3.351	4.132
3.36	3.878	3.332	3.916	3.302	3.958	3.269	4.007
3.273	3.762	3.247	3.797	3.219	3.837	3.187	3.883
3.186	3.646	3.161	3.679	3.134	3.716	3.105	3.759
3.098	3.531	3.075	3.561	3.05	3.596	3.022	3.636
3.01	3.416	2.989	3.444	2.965	3.477	2.938	3.514
2.922	3.301	2.902	3.328	2.879	3.358	2.855	3.393
2.834	3.188	2.815	3.212	2.794	3.24	2.77	3.272
2.745	3.074	2.727	3.097	2.707	3.123	2.685	3.153
2.656	2.961	2.639	2.983	2.621	3.007	2.6	3.034
2.566	2.849	2.551	2.869	2.533	2.891	2.514	2.916
2.476	2.737	2.462	2.755	2.446	2.776	2.428	2.799
2.386	2.626	2.372	2.643	2.358	2.661	2.341	2.682
2.295	2.515	2.283	2.53	2.269	2.547	2.254	2.567
2.204	2.405	2.193	2.419	2.18	2.434	2.166	2.452
2.112	2.295	2.102	2.308	2.091	2.322	2.078	2.338
2.021	2.186	2.011	2.197	2.001	2.21	1.989	2.224
1.928	2.077	1.92	2.087	1.911	2.099	1.9	2.111
1.882	2.023	1.874	2.033	1.865	2.043	1.855	2.055
1.836	1.969	1.828	1.978	1.82	1.988	1.81	1.999
1.789	1.915	1.782	1.924	1.774	1.933	1.765	1.944
1.743	1.861	1.736	1.869	1.728	1.878	1.72	1.888
1.696	1.808	1.69	1.815	1.683	1.823	1.675	1.833
1.649	1.754	1.643	1.761	1.637	1.769	1.629	1.778
1.602	1.701	1.597	1.707	1.591	1.714	1.584	1.723
1.556	1.647	1.55	1.653	1.544	1.66	1.538	1.668
1.508	1.594	1.504	1.6	1.498	1.606	1.492	1.613
1.461	1.541	1.457	1.546	1.452	1.552	1.446	1.559
1.414	1.488	1.41	1.493	1.405	1.498	1.4	1.504
1.367	1.435	1.363	1.439	1.358	1.444	1.353	1.45
1.319	1.382	1.316	1.386	1.312	1.391	1.307	1.396
1.272	1.33	1.268	1.333	1.265	1.338	1.26	1.342
1.224	1.277	1.221	1.28	1.218	1.284	1.214	1.289
1.176	1.225	1.174	1.228	1.17	1.231	1.167	1.235



Focal Length 180 mm

Circle of Confusion 0.025 mm

T/No	2	2.2	2.5	2.8
Hyperfocal Distance (m)	632.984	563.96	502.466	447.682

T/No	2		2.2		2.5		2.8	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	632.408	Infinity	563.466	Infinity	502.038	Infinity	447.305	Infinity
100.00	86.409	118.675	84.995	121.453	83.461	124.731	81.805	128.628
50.00	46.37	54.248	45.962	54.819	45.512	55.474	45.017	56.228
30.00	28.662	31.469	28.507	31.659	28.334	31.875	28.143	32.121
20.00	19.401	20.637	19.33	20.718	19.251	20.81	19.163	20.914
15.00	14.663	15.353	14.623	15.397	14.578	15.447	14.528	15.504
12.00	11.785	12.223	11.759	12.251	11.731	12.282	11.698	12.318
11.00	10.82	11.186	10.798	11.21	10.774	11.236	10.747	11.265
10.00	9.852	10.153	9.834	10.172	9.814	10.194	9.791	10.218
9.00	8.88	9.123	8.866	9.138	8.85	9.156	8.831	9.175
8.50	8.393	8.609	8.381	8.623	8.366	8.638	8.35	8.656
8.00	7.906	8.097	7.894	8.108	7.882	8.122	7.867	8.137
7.50	7.417	7.584	7.408	7.595	7.396	7.607	7.384	7.62
7.00	6.928	7.073	6.92	7.082	6.91	7.092	6.899	7.104
6.50	6.439	6.563	6.431	6.57	6.423	6.579	6.413	6.589
6.00	5.948	6.053	5.942	6.06	5.935	6.067	5.927	6.075
5.75	5.702	5.799	5.697	5.805	5.69	5.811	5.683	5.819
5.50	5.457	5.544	5.451	5.55	5.445	5.556	5.439	5.563
5.25	5.211	5.29	5.206	5.295	5.2	5.301	5.194	5.307
5.00	4.964	5.036	4.96	5.041	4.955	5.046	4.95	5.051
4.80	4.767	4.833	4.763	4.837	4.759	4.842	4.754	4.847
4.60	4.57	4.63	4.566	4.634	4.562	4.638	4.558	4.643
4.40	4.373	4.428	4.369	4.431	4.366	4.435	4.362	4.439
4.20	4.175	4.225	4.172	4.228	4.169	4.232	4.165	4.235
4.00	3.978	4.023	3.975	4.025	3.972	4.028	3.969	4.032
3.90	3.879	3.921	3.876	3.924	3.873	3.927	3.87	3.93
3.80	3.78	3.82	3.778	3.823	3.775	3.825	3.772	3.829
3.70	3.681	3.719	3.679	3.721	3.676	3.724	3.673	3.727
3.60	3.582	3.618	3.58	3.62	3.578	3.623	3.575	3.626
3.50	3.483	3.517	3.481	3.519	3.479	3.521	3.476	3.524
3.40	3.384	3.416	3.382	3.418	3.38	3.42	3.378	3.423
3.30	3.285	3.315	3.283	3.317	3.281	3.319	3.279	3.321
3.20	3.186	3.214	3.184	3.216	3.183	3.218	3.18	3.22
3.10	3.087	3.113	3.086	3.115	3.084	3.116	3.082	3.118
3.00	2.988	3.012	2.986	3.014	2.985	3.015	2.983	3.017
2.90	2.889	2.911	2.887	2.913	2.886	2.914	2.884	2.916
2.80	2.79	2.81	2.788	2.812	2.787	2.813	2.785	2.815
2.70	2.69	2.71	2.689	2.711	2.688	2.712	2.686	2.714
2.60	2.591	2.609	2.59	2.61	2.589	2.611	2.588	2.613
2.50	2.492	2.508	2.491	2.509	2.49	2.51	2.489	2.512
2.45	2.442	2.458	2.441	2.459	2.44	2.46	2.439	2.461
2.40	2.393	2.407	2.392	2.408	2.391	2.409	2.39	2.411
2.35	2.343	2.357	2.342	2.358	2.341	2.359	2.34	2.36
2.30	2.293	2.307	2.292	2.308	2.292	2.309	2.291	2.31
2.25	2.244	2.256	2.243	2.257	2.242	2.258	2.241	2.259
2.20	2.194	2.206	2.193	2.207	2.192	2.208	2.191	2.209
2.15	2.144	2.156	2.144	2.157	2.143	2.157	2.142	2.158
2.10	2.095	2.106	2.094	2.106	2.093	2.107	2.092	2.108
2.05	2.045	2.055	2.044	2.056	2.043	2.057	2.043	2.057
2.00	1.995	2.005	1.994	2.006	1.994	2.006	1.993	2.007
1.95	1.945	1.955	1.945	1.955	1.944	1.956	1.943	1.957
1.90	1.896	1.904	1.895	1.905	1.895	1.906	1.894	1.906
1.85	1.846	1.854	1.845	1.855	1.845	1.855	1.844	1.856
1.80	1.796	1.804	1.796	1.804	1.795	1.805	1.795	1.805
1.75	1.746	1.754	1.746	1.754	1.745	1.755	1.745	1.755
1.70	1.697	1.703	1.696	1.704	1.696	1.704	1.695	1.705
1.65	1.647	1.653	1.646	1.654	1.646	1.654	1.646	1.654
1.60	1.597	1.603	1.597	1.603	1.596	1.604	1.596	1.604
1.55	1.547	1.553	1.547	1.553	1.547	1.553	1.546	1.554
1.50	1.497	1.503	1.497	1.503	1.497	1.503	1.496	1.504





<b>3.2</b>	<b>3.5</b>	<b>4</b>	<b>4.5</b>	<b>5</b>
398.874	355.391	316.653	282.141	251.394

<b>3.2</b>		<b>3.5</b>		<b>4</b>		<b>4.5</b>		<b>5</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
398.539	Infinity	355.089	Infinity	316.376	Infinity	281.885	Infinity	251.154	Infinity
80.023	133.303	78.112	138.973	76.074	145.942	73.91	154.647	71.623	165.745
44.474	57.099	43.881	58.11	43.233	59.288	42.529	60.669	41.765	62.298
27.931	32.402	27.697	32.723	27.439	33.091	27.156	33.514	26.844	34.002
19.066	21.031	18.957	21.165	18.837	21.317	18.704	21.49	18.557	21.689
14.472	15.568	14.41	15.641	14.341	15.723	14.265	15.816	14.18	15.922
11.663	12.358	11.622	12.403	11.578	12.454	11.528	12.513	11.473	12.578
10.717	11.299	10.683	11.337	10.646	11.379	10.604	11.428	10.557	11.482
9.766	10.245	9.739	10.276	9.707	10.311	9.673	10.35	9.634	10.395
8.811	9.197	8.789	9.222	8.764	9.25	8.735	9.281	8.704	9.317
8.332	8.675	8.312	8.697	8.289	8.722	8.264	8.75	8.236	8.781
7.852	8.154	7.834	8.174	7.814	8.195	7.792	8.22	7.767	8.248
7.37	7.635	7.354	7.652	7.337	7.671	7.317	7.692	7.296	7.716
6.887	7.117	6.873	7.131	6.858	7.148	6.841	7.166	6.822	7.187
6.403	6.6	6.391	6.613	6.378	6.627	6.364	6.642	6.347	6.66
5.918	6.085	5.908	6.095	5.897	6.107	5.884	6.12	5.871	6.135
5.675	5.827	5.666	5.837	5.655	5.848	5.644	5.86	5.631	5.874
5.431	5.57	5.423	5.579	5.414	5.589	5.403	5.6	5.392	5.613
5.188	5.314	5.18	5.322	5.172	5.331	5.162	5.341	5.152	5.352
4.944	5.058	4.937	5.065	4.929	5.073	4.921	5.082	4.911	5.092
4.748	4.853	4.742	4.859	4.735	4.867	4.727	4.875	4.718	4.885
4.553	4.648	4.547	4.654	4.541	4.661	4.533	4.669	4.525	4.677
4.357	4.444	4.352	4.449	4.346	4.456	4.339	4.462	4.332	4.47
4.161	4.24	4.156	4.245	4.151	4.25	4.145	4.257	4.138	4.264
3.965	4.036	3.96	4.04	3.956	4.045	3.95	4.051	3.944	4.057
3.867	3.934	3.863	3.938	3.858	3.943	3.853	3.948	3.847	3.954
3.768	3.832	3.765	3.836	3.76	3.841	3.755	3.846	3.75	3.851
3.67	3.73	3.666	3.734	3.662	3.738	3.658	3.743	3.653	3.748
3.572	3.629	3.568	3.632	3.565	3.636	3.56	3.641	3.555	3.646
3.473	3.527	3.47	3.53	3.467	3.534	3.463	3.538	3.458	3.543
3.375	3.425	3.372	3.428	3.369	3.432	3.365	3.436	3.361	3.44
3.277	3.324	3.274	3.327	3.271	3.33	3.267	3.334	3.263	3.338
3.178	3.222	3.175	3.225	3.172	3.228	3.169	3.232	3.165	3.235
3.08	3.121	3.077	3.123	3.074	3.126	3.071	3.129	3.068	3.133
2.981	3.019	2.979	3.022	2.976	3.024	2.973	3.027	2.97	3.031
2.882	2.918	2.88	2.92	2.878	2.923	2.875	2.925	2.872	2.929
2.784	2.817	2.782	2.819	2.779	2.821	2.777	2.824	2.774	2.826
2.685	2.715	2.683	2.717	2.681	2.719	2.679	2.722	2.676	2.724
2.586	2.614	2.584	2.616	2.582	2.618	2.58	2.62	2.578	2.622
2.487	2.513	2.486	2.515	2.484	2.516	2.482	2.518	2.48	2.521
2.438	2.462	2.436	2.464	2.435	2.466	2.433	2.468	2.431	2.47
2.388	2.412	2.387	2.413	2.385	2.415	2.383	2.417	2.381	2.419
2.339	2.361	2.337	2.363	2.336	2.364	2.334	2.366	2.332	2.368
2.289	2.311	2.288	2.312	2.287	2.314	2.285	2.315	2.283	2.317
2.24	2.26	2.239	2.261	2.237	2.263	2.236	2.265	2.234	2.266
2.19	2.21	2.189	2.211	2.188	2.212	2.186	2.214	2.185	2.215
2.141	2.159	2.14	2.16	2.138	2.162	2.137	2.163	2.136	2.165
2.091	2.109	2.09	2.11	2.089	2.111	2.088	2.112	2.086	2.114
2.042	2.058	2.041	2.059	2.04	2.06	2.038	2.062	2.037	2.063
1.992	2.008	1.991	2.009	1.99	2.01	1.989	2.011	1.988	2.012
1.943	1.957	1.942	1.958	1.941	1.959	1.94	1.96	1.938	1.962
1.893	1.907	1.892	1.908	1.891	1.909	1.89	1.91	1.889	1.911
1.843	1.857	1.843	1.857	1.842	1.858	1.841	1.859	1.84	1.86
1.794	1.806	1.793	1.807	1.792	1.808	1.791	1.809	1.79	1.81
1.744	1.756	1.744	1.756	1.743	1.757	1.742	1.758	1.741	1.759
1.695	1.705	1.694	1.706	1.693	1.707	1.692	1.708	1.692	1.709
1.645	1.655	1.644	1.656	1.644	1.656	1.643	1.657	1.642	1.658
1.595	1.605	1.595	1.605	1.594	1.606	1.593	1.607	1.593	1.607
1.546	1.554	1.545	1.555	1.545	1.555	1.544	1.556	1.543	1.557
1.496	1.504	1.496	1.505	1.495	1.505	1.494	1.506	1.494	1.506



<b>5.6</b>	<b>6.3</b>	<b>7.1</b>	<b>8</b>	<b>9</b>
224.002	199.598	177.857	158.487	141.231

<b>5.6</b>		<b>6.3</b>		<b>7.1</b>		<b>8</b>		<b>9</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
223.775	Infinity	199.382	Infinity	177.648	Infinity	158.286	Infinity	141.035	Infinity
69.219	180.268	66.706	199.936	64.095	227.843	61.398	270.18	58.629	341.404
40.94	64.234	40.052	66.556	39.1	69.371	38.084	72.83	37.005	77.148
26.503	34.567	26.13	35.224	25.724	35.993	25.283	36.896	24.806	37.966
18.394	21.915	18.216	22.175	18.019	22.475	17.803	22.821	17.567	23.223
14.085	16.043	13.981	16.181	13.866	16.339	13.738	16.52	13.599	16.727
11.412	12.653	11.344	12.738	11.268	12.835	11.185	12.945	11.093	13.071
10.505	11.544	10.448	11.615	10.384	11.695	10.313	11.786	10.235	11.89
9.591	10.446	9.544	10.503	9.491	10.568	9.432	10.642	9.367	10.727
8.669	9.357	8.63	9.403	8.587	9.455	8.539	9.514	8.486	9.581
8.205	8.817	8.171	8.858	8.132	8.903	8.089	8.956	8.042	9.015
7.739	8.279	7.709	8.315	7.674	8.355	7.636	8.401	7.594	8.453
7.271	7.744	7.244	7.775	7.214	7.81	7.181	7.85	7.143	7.895
6.801	7.211	6.778	7.238	6.751	7.268	6.722	7.302	6.69	7.341
6.329	6.681	6.309	6.703	6.286	6.729	6.261	6.758	6.233	6.791
5.855	6.153	5.838	6.172	5.819	6.193	5.797	6.218	5.773	6.246
5.617	5.889	5.601	5.907	5.584	5.927	5.564	5.949	5.542	5.975
5.379	5.627	5.364	5.643	5.348	5.661	5.33	5.681	5.31	5.704
5.14	5.365	5.127	5.379	5.112	5.396	5.096	5.414	5.077	5.435
4.901	5.104	4.889	5.117	4.875	5.131	4.861	5.148	4.844	5.167
4.709	4.895	4.698	4.907	4.685	4.92	4.672	4.936	4.657	4.953
4.516	4.687	4.506	4.698	4.495	4.71	4.483	4.724	4.469	4.74
4.324	4.479	4.315	4.489	4.304	4.5	4.293	4.513	4.28	4.527
4.131	4.272	4.123	4.28	4.113	4.291	4.103	4.302	4.091	4.315
3.938	4.064	3.93	4.072	3.922	4.082	3.912	4.092	3.902	4.103
3.841	3.961	3.834	3.969	3.826	3.977	3.817	3.987	3.807	3.998
3.744	3.858	3.737	3.865	3.73	3.873	3.721	3.882	3.712	3.893
3.647	3.755	3.641	3.761	3.634	3.769	3.626	3.778	3.617	3.787
3.55	3.651	3.544	3.658	3.537	3.665	3.53	3.673	3.521	3.682
3.453	3.548	3.447	3.554	3.441	3.561	3.434	3.569	3.426	3.577
3.356	3.445	3.35	3.451	3.345	3.457	3.338	3.465	3.33	3.473
3.259	3.343	3.254	3.348	3.248	3.354	3.242	3.361	3.235	3.368
3.161	3.24	3.157	3.245	3.151	3.25	3.145	3.257	3.139	3.264
3.064	3.137	3.059	3.142	3.054	3.147	3.049	3.153	3.043	3.159
2.966	3.035	2.962	3.039	2.958	3.044	2.952	3.049	2.947	3.055
2.869	2.932	2.865	2.936	2.861	2.941	2.856	2.946	2.85	2.951
2.771	2.83	2.767	2.833	2.763	2.838	2.759	2.842	2.754	2.848
2.673	2.727	2.67	2.731	2.666	2.735	2.662	2.739	2.658	2.744
2.575	2.625	2.572	2.628	2.569	2.632	2.565	2.636	2.561	2.64
2.477	2.523	2.475	2.526	2.471	2.529	2.468	2.533	2.464	2.537
2.428	2.472	2.426	2.475	2.423	2.478	2.419	2.481	2.416	2.485
2.379	2.421	2.377	2.424	2.374	2.427	2.371	2.43	2.367	2.434
2.33	2.37	2.328	2.373	2.325	2.375	2.322	2.379	2.319	2.382
2.281	2.319	2.279	2.322	2.276	2.324	2.273	2.327	2.27	2.331
2.232	2.268	2.23	2.271	2.227	2.273	2.225	2.276	2.222	2.279
2.183	2.217	2.181	2.22	2.178	2.222	2.176	2.225	2.173	2.228
2.134	2.167	2.132	2.169	2.13	2.171	2.127	2.173	2.124	2.176
2.085	2.116	2.083	2.118	2.081	2.12	2.078	2.122	2.076	2.125
2.035	2.065	2.034	2.067	2.032	2.069	2.029	2.071	2.027	2.074
1.986	2.014	1.985	2.016	1.983	2.018	1.981	2.02	1.978	2.022
1.937	1.963	1.935	1.965	1.934	1.967	1.932	1.969	1.929	1.971
1.888	1.912	1.886	1.914	1.885	1.916	1.883	1.918	1.881	1.92
1.838	1.862	1.837	1.863	1.835	1.865	1.834	1.867	1.832	1.869
1.789	1.811	1.788	1.812	1.786	1.814	1.785	1.816	1.783	1.818
1.74	1.76	1.739	1.762	1.737	1.763	1.736	1.765	1.734	1.766
1.69	1.71	1.689	1.711	1.688	1.712	1.687	1.714	1.685	1.715
1.641	1.659	1.64	1.66	1.639	1.661	1.637	1.663	1.636	1.664
1.592	1.608	1.591	1.609	1.59	1.611	1.588	1.612	1.587	1.613
1.542	1.558	1.541	1.559	1.54	1.56	1.539	1.561	1.538	1.562
1.493	1.507	1.492	1.508	1.491	1.509	1.49	1.51	1.489	1.511



<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>	<b>16</b>
125.858	112.162	99.96	89.089	79.404

<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>		<b>16</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
125.665	Infinity	111.972	Infinity	99.773	Infinity	88.905	Infinity	79.222	Infinity
55.805	484.928	52.943	918.426	50.062	Infinity	47.182	Infinity	44.32	Infinity
35.865	82.649	34.666	89.843	33.413	99.574	32.111	113.361	30.765	134.229
24.291	39.243	23.739	40.784	23.148	42.665	22.519	44.995	21.853	47.935
17.309	23.691	17.029	24.239	16.725	24.886	16.397	25.655	16.044	26.577
13.445	16.967	13.277	17.244	13.093	17.566	12.892	17.943	12.674	18.386
10.991	13.216	10.879	13.382	10.756	13.574	10.622	13.796	10.475	14.054
10.149	12.009	10.054	12.146	9.949	12.303	9.834	12.484	9.709	12.695
9.295	10.823	9.215	10.934	9.127	11.06	9.031	11.206	8.925	11.374
8.427	9.658	8.362	9.745	8.291	9.845	8.211	9.96	8.124	10.092
7.989	9.082	7.931	9.159	7.866	9.247	7.795	9.348	7.717	9.464
7.547	8.512	7.495	8.579	7.438	8.656	7.375	8.744	7.305	8.845
7.102	7.946	7.056	8.004	7.006	8.071	6.95	8.147	6.888	8.234
6.654	7.385	6.614	7.435	6.569	7.492	6.52	7.558	6.466	7.632
6.202	6.829	6.167	6.872	6.129	6.92	6.086	6.975	6.039	7.039
5.747	6.277	5.717	6.313	5.684	6.354	5.648	6.4	5.608	6.453
5.518	6.003	5.491	6.036	5.46	6.073	5.427	6.115	5.39	6.163
5.288	5.73	5.263	5.76	5.235	5.794	5.205	5.832	5.171	5.875
5.057	5.459	5.035	5.485	5.009	5.516	4.981	5.55	4.951	5.589
4.826	5.188	4.805	5.212	4.782	5.239	4.757	5.27	4.729	5.305
4.64	4.972	4.621	4.994	4.6	5.019	4.576	5.047	4.551	5.079
4.453	4.757	4.436	4.777	4.417	4.8	4.395	4.826	4.371	4.855
4.266	4.543	4.25	4.561	4.233	4.582	4.213	4.605	4.191	4.631
4.078	4.329	4.064	4.346	4.048	4.364	4.03	4.385	4.01	4.409
3.89	4.116	3.877	4.131	3.863	4.148	3.847	4.167	3.829	4.188
3.796	4.01	3.784	4.024	3.77	4.04	3.754	4.058	3.737	4.078
3.701	3.904	3.69	3.917	3.677	3.932	3.662	3.949	3.646	3.968
3.607	3.798	3.596	3.811	3.583	3.825	3.57	3.841	3.554	3.859
3.512	3.693	3.502	3.704	3.49	3.718	3.477	3.732	3.462	3.749
3.417	3.587	3.407	3.598	3.396	3.611	3.384	3.625	3.37	3.64
3.322	3.482	3.313	3.492	3.302	3.504	3.291	3.517	3.278	3.532
3.227	3.377	3.218	3.386	3.208	3.397	3.198	3.41	3.185	3.423
3.132	3.272	3.123	3.281	3.114	3.291	3.104	3.302	3.093	3.315
3.036	3.167	3.028	3.175	3.02	3.185	3.01	3.195	3	3.208
2.94	3.062	2.933	3.07	2.925	3.079	2.916	3.089	2.906	3.1
2.845	2.958	2.838	2.965	2.831	2.973	2.822	2.982	2.813	2.993
2.749	2.853	2.742	2.86	2.736	2.868	2.728	2.876	2.719	2.886
2.652	2.749	2.647	2.756	2.64	2.762	2.633	2.77	2.625	2.779
2.556	2.645	2.551	2.651	2.545	2.657	2.539	2.665	2.531	2.673
2.46	2.542	2.455	2.547	2.45	2.553	2.444	2.559	2.437	2.567
2.412	2.49	2.407	2.495	2.402	2.5	2.396	2.507	2.39	2.514
2.363	2.438	2.359	2.443	2.354	2.448	2.348	2.454	2.342	2.461
2.315	2.386	2.311	2.391	2.306	2.396	2.301	2.402	2.295	2.408
2.267	2.335	2.263	2.339	2.258	2.344	2.253	2.349	2.247	2.355
2.218	2.283	2.214	2.287	2.21	2.292	2.205	2.297	2.2	2.303
2.17	2.231	2.166	2.235	2.162	2.239	2.157	2.244	2.152	2.25
2.121	2.18	2.118	2.183	2.114	2.187	2.11	2.192	2.105	2.197
2.073	2.128	2.069	2.132	2.066	2.136	2.062	2.14	2.057	2.145
2.024	2.077	2.021	2.08	2.018	2.084	2.014	2.088	2.009	2.093
1.976	2.025	1.973	2.028	1.969	2.032	1.966	2.036	1.961	2.04
1.927	1.974	1.924	1.977	1.921	1.98	1.917	1.984	1.914	1.988
1.878	1.922	1.876	1.925	1.873	1.928	1.869	1.932	1.866	1.936
1.829	1.871	1.827	1.874	1.824	1.877	1.821	1.88	1.818	1.884
1.781	1.82	1.778	1.822	1.776	1.825	1.773	1.828	1.77	1.832
1.732	1.768	1.73	1.771	1.727	1.773	1.725	1.776	1.722	1.78
1.683	1.717	1.681	1.719	1.679	1.722	1.676	1.725	1.673	1.728
1.634	1.666	1.632	1.668	1.63	1.67	1.628	1.673	1.625	1.676
1.585	1.615	1.584	1.617	1.582	1.619	1.579	1.621	1.577	1.624
1.536	1.564	1.535	1.566	1.533	1.568	1.531	1.57	1.529	1.572
1.487	1.513	1.486	1.514	1.484	1.516	1.482	1.518	1.48	1.52



<b>18</b>	<b>20</b>	<b>22</b>
70.776	63.09	56.242

<b>18</b>		<b>20</b>		<b>22</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
70.595	Infinity	62.909	Infinity	56.062	Infinity
41.496	Infinity	38.728	Infinity	36.032	Infinity
29.384	169.208	27.974	239.211	26.546	446.807
21.151	51.729	20.416	56.777	19.649	63.765
15.665	27.695	15.261	29.067	14.832	30.781
12.439	18.909	12.185	19.534	11.911	20.287
10.314	14.355	10.14	14.71	9.952	15.129
9.571	12.939	9.422	13.225	9.26	13.562
8.81	11.569	8.683	11.797	8.546	12.063
8.029	10.244	7.924	10.421	7.81	10.627
7.631	9.597	7.537	9.752	7.434	9.931
7.228	8.961	7.144	9.095	7.052	9.25
6.82	8.334	6.745	8.45	6.663	8.583
6.406	7.718	6.341	7.816	6.269	7.93
5.988	7.111	5.931	7.194	5.868	7.289
5.563	6.513	5.514	6.582	5.46	6.662
5.349	6.218	5.304	6.281	5.254	6.353
5.133	5.925	5.092	5.982	5.046	6.047
4.916	5.634	4.878	5.685	4.837	5.743
4.698	5.345	4.663	5.391	4.625	5.443
4.522	5.116	4.49	5.158	4.455	5.205
4.345	4.888	4.316	4.926	4.283	4.969
4.167	4.661	4.14	4.696	4.111	4.735
3.988	4.436	3.964	4.467	3.937	4.502
3.809	4.212	3.787	4.24	3.762	4.271
3.719	4.101	3.697	4.127	3.674	4.157
3.628	3.99	3.608	4.014	3.586	4.042
3.537	3.879	3.518	3.902	3.497	3.929
3.446	3.769	3.429	3.79	3.409	3.815
3.355	3.659	3.338	3.679	3.32	3.702
3.264	3.549	3.248	3.568	3.23	3.59
3.172	3.439	3.157	3.457	3.14	3.477
3.08	3.33	3.066	3.347	3.05	3.366
2.988	3.221	2.975	3.237	2.96	3.254
2.895	3.113	2.883	3.127	2.87	3.144
2.803	3.005	2.791	3.018	2.779	3.033
2.71	2.897	2.699	2.909	2.687	2.923
2.617	2.789	2.607	2.801	2.596	2.813
2.523	2.682	2.514	2.692	2.504	2.704
2.429	2.575	2.421	2.585	2.412	2.595
2.382	2.522	2.374	2.531	2.365	2.541
2.335	2.469	2.328	2.477	2.319	2.487
2.288	2.415	2.281	2.424	2.273	2.433
2.241	2.362	2.234	2.37	2.226	2.379
2.194	2.309	2.187	2.317	2.18	2.325
2.147	2.256	2.14	2.263	2.133	2.271
2.099	2.203	2.093	2.21	2.087	2.218
2.052	2.151	2.046	2.157	2.04	2.164
2.004	2.098	1.999	2.104	1.993	2.111
1.957	2.045	1.952	2.051	1.946	2.057
1.909	1.993	1.904	1.998	1.899	2.004
1.862	1.94	1.857	1.945	1.852	1.951
1.814	1.888	1.809	1.893	1.805	1.898
1.766	1.835	1.762	1.84	1.757	1.845
1.718	1.783	1.714	1.787	1.71	1.792
1.67	1.731	1.667	1.735	1.663	1.739
1.622	1.679	1.619	1.683	1.615	1.687
1.574	1.627	1.571	1.63	1.567	1.634
1.526	1.575	1.523	1.578	1.52	1.582
1.478	1.523	1.475	1.526	1.472	1.529



Focal Length 350 mm

Circle of Confusion 0.025 mm

T/No	3.6	4	4.5	5
Hyperfocal Distance (m)	1386.564	1235.376	1100.683	980.685

T/No	3.6		4		4.5		5	
Focus Distance (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
Infinity	1384.297	Infinity	1233.504	Infinity	1099.125	Infinity	979.377	Infinity
200.00	174.922	233.498	172.278	238.389	169.403	244.13	166.289	250.913
100.00	93.351	107.675	92.597	108.696	91.765	109.867	90.85	111.211
75.00	71.212	79.217	70.774	79.766	70.29	80.392	69.753	81.106
50.00	48.302	51.823	48.102	52.056	47.879	52.32	47.632	52.619
40.00	38.912	41.151	38.783	41.296	38.639	41.461	38.479	41.647
30.00	29.391	30.636	29.318	30.715	29.236	30.805	29.145	30.907
25.00	24.579	25.436	24.528	25.491	24.472	25.552	24.409	25.621
20.00	19.733	20.274	19.701	20.309	19.665	20.347	19.625	20.39
17.00	16.809	17.196	16.786	17.22	16.76	17.247	16.731	17.278
15.00	14.853	15.15	14.835	15.169	14.815	15.19	14.792	15.214
14.00	13.872	14.13	13.857	14.146	13.839	14.164	13.82	14.185
13.00	12.891	13.111	12.877	13.125	12.862	13.141	12.846	13.158
12.00	11.908	12.094	11.896	12.106	11.884	12.119	11.87	12.133
11.00	10.923	11.078	10.914	11.088	10.903	11.099	10.891	11.111
10.00	9.937	10.064	9.929	10.072	9.921	10.08	9.911	10.09
9.50	9.444	9.557	9.437	9.564	9.429	9.572	9.42	9.581
9.00	8.95	9.051	8.944	9.057	8.937	9.064	8.929	9.072
8.50	8.456	8.545	8.45	8.55	8.444	8.557	8.437	8.564
8.00	7.961	8.039	7.956	8.044	7.951	8.05	7.945	8.056
7.75	7.714	7.787	7.709	7.791	7.704	7.796	7.699	7.802
7.50	7.466	7.534	7.462	7.538	7.457	7.543	7.452	7.548
7.25	7.219	7.282	7.215	7.286	7.21	7.29	7.206	7.295
7.00	6.971	7.029	6.967	7.033	6.963	7.037	6.959	7.042
6.75	6.723	6.777	6.72	6.78	6.716	6.784	6.712	6.788
6.50	6.475	6.525	6.472	6.528	6.469	6.531	6.465	6.535
6.25	6.227	6.273	6.225	6.276	6.221	6.279	6.218	6.282
6.00	5.979	6.021	5.977	6.023	5.974	6.026	5.971	6.03
5.75	5.731	5.769	5.729	5.771	5.726	5.774	5.723	5.777
5.50	5.483	5.517	5.481	5.519	5.479	5.522	5.476	5.524
5.25	5.235	5.265	5.233	5.267	5.231	5.269	5.228	5.272
5.00	4.986	5.014	4.985	5.015	4.983	5.017	4.981	5.02
4.90	4.887	4.913	4.885	4.915	4.884	4.917	4.882	4.919
4.80	4.788	4.813	4.786	4.814	4.784	4.816	4.782	4.818
4.70	4.688	4.712	4.687	4.713	4.685	4.715	4.683	4.717
4.60	4.589	4.611	4.587	4.613	4.586	4.614	4.584	4.616
4.50	4.489	4.511	4.488	4.512	4.486	4.514	4.485	4.515
4.40	4.39	4.41	4.389	4.412	4.387	4.413	4.386	4.415
4.30	4.29	4.31	4.289	4.311	4.288	4.312	4.286	4.314
4.20	4.191	4.209	4.19	4.21	4.188	4.212	4.187	4.213
4.10	4.091	4.109	4.09	4.11	4.089	4.111	4.088	4.112
4.00	3.992	4.008	3.991	4.009	3.99	4.01	3.988	4.012
3.90	3.892	3.908	3.891	3.909	3.89	3.91	3.889	3.911
3.80	3.793	3.807	3.792	3.808	3.791	3.809	3.79	3.81
3.70	3.693	3.707	3.692	3.708	3.691	3.709	3.69	3.71
3.60	3.594	3.606	3.593	3.607	3.592	3.608	3.591	3.609
3.50	3.494	3.506	3.493	3.507	3.493	3.507	3.492	3.508
3.45	3.444	3.456	3.444	3.456	3.443	3.457	3.442	3.458
3.40	3.395	3.406	3.394	3.406	3.393	3.407	3.392	3.408
3.35	3.345	3.355	3.344	3.356	3.343	3.357	3.343	3.358
3.30	3.295	3.305	3.294	3.306	3.294	3.306	3.293	3.307
3.25	3.245	3.255	3.244	3.256	3.244	3.256	3.243	3.257
3.20	3.195	3.205	3.195	3.205	3.194	3.206	3.193	3.207
3.15	3.145	3.155	3.145	3.155	3.144	3.156	3.144	3.156
3.10	3.096	3.104	3.095	3.105	3.095	3.106	3.094	3.106
3.05	3.046	3.054	3.045	3.055	3.045	3.055	3.044	3.056
3.00	2.996	3.004	2.995	3.005	2.995	3.005	2.994	3.006



5.6	6.3	7.1	8	9
873.779	778.537	693.686	618.092	550.745

5.6		6.3		7.1		8		9	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
872.668	Infinity	777.583	Infinity	692.856	Infinity	617.361	Infinity	550.093	Infinity
162.928	258.991	159.314	268.703	155.444	280.511	151.319	295.068	146.942	313.322
89.843	112.76	88.74	114.552	87.534	116.631	86.219	119.058	84.789	121.905
69.161	81.924	68.508	82.861	67.79	83.939	67.002	85.183	66.139	86.625
47.357	52.958	47.053	53.345	46.716	53.786	46.343	54.29	45.932	54.867
38.301	41.859	38.103	42.098	37.883	42.371	37.639	42.681	37.369	43.034
29.044	31.022	28.931	31.152	28.806	31.299	28.666	31.466	28.511	31.656
24.338	25.7	24.26	25.788	24.172	25.888	24.074	26.001	23.966	26.129
19.58	20.439	19.529	20.494	19.473	20.557	19.411	20.627	19.341	20.707
16.699	17.313	16.663	17.352	16.622	17.396	16.577	17.446	16.527	17.502
14.767	15.24	14.739	15.27	14.708	15.304	14.673	15.342	14.634	15.385
13.798	14.208	13.774	14.234	13.747	14.263	13.717	14.296	13.683	14.333
12.827	13.178	12.806	13.2	12.783	13.225	12.757	13.253	12.728	13.284
11.854	12.15	11.836	12.169	11.817	12.19	11.794	12.213	11.77	12.24
10.878	11.125	10.864	11.14	10.847	11.157	10.829	11.177	10.808	11.199
9.901	10.102	9.889	10.114	9.875	10.128	9.86	10.144	9.843	10.162
9.411	9.591	9.4	9.602	9.388	9.615	9.374	9.629	9.359	9.645
8.921	9.081	8.911	9.091	8.9	9.102	8.888	9.115	8.875	9.129
8.43	8.571	8.421	8.58	8.412	8.59	8.401	8.601	8.389	8.614
7.938	8.063	7.931	8.07	7.923	8.079	7.913	8.089	7.903	8.1
7.692	7.808	7.685	7.816	7.678	7.824	7.669	7.833	7.659	7.843
7.446	7.554	7.44	7.561	7.433	7.569	7.424	7.577	7.415	7.587
7.2	7.3	7.194	7.307	7.187	7.314	7.18	7.322	7.171	7.331
6.954	7.047	6.948	7.053	6.942	7.059	6.935	7.066	6.927	7.075
6.707	6.793	6.702	6.798	6.696	6.804	6.69	6.811	6.683	6.819
6.461	6.54	6.456	6.545	6.451	6.55	6.445	6.556	6.438	6.563
6.214	6.286	6.21	6.291	6.205	6.296	6.199	6.302	6.193	6.308
5.967	6.033	5.963	6.037	5.959	6.042	5.954	6.047	5.948	6.053
5.72	5.78	5.717	5.784	5.713	5.788	5.708	5.793	5.703	5.798
5.473	5.527	5.47	5.531	5.466	5.534	5.462	5.539	5.457	5.543
5.226	5.275	5.223	5.278	5.219	5.281	5.216	5.285	5.212	5.289
4.978	5.022	4.976	5.025	4.973	5.028	4.969	5.031	4.966	5.035
4.879	4.921	4.877	4.923	4.874	4.926	4.871	4.93	4.867	4.933
4.78	4.82	4.778	4.822	4.775	4.825	4.772	4.828	4.769	4.832
4.681	4.719	4.679	4.721	4.676	4.724	4.673	4.727	4.67	4.73
4.582	4.618	4.58	4.62	4.577	4.623	4.575	4.626	4.572	4.629
4.483	4.517	4.481	4.519	4.479	4.522	4.476	4.524	4.473	4.527
4.384	4.416	4.382	4.418	4.38	4.421	4.377	4.423	4.374	4.426
4.285	4.315	4.283	4.317	4.281	4.319	4.278	4.322	4.276	4.325
4.186	4.215	4.184	4.216	4.182	4.218	4.18	4.221	4.177	4.223
4.086	4.114	4.085	4.115	4.083	4.117	4.081	4.12	4.078	4.122
3.987	4.013	3.986	4.015	3.984	4.016	3.982	4.018	3.98	4.021
3.888	3.912	3.886	3.914	3.885	3.915	3.883	3.917	3.881	3.919
3.789	3.811	3.787	3.813	3.786	3.814	3.784	3.816	3.782	3.818
3.689	3.711	3.688	3.712	3.687	3.714	3.685	3.715	3.683	3.717
3.59	3.61	3.589	3.611	3.587	3.613	3.586	3.614	3.584	3.616
3.491	3.509	3.49	3.511	3.488	3.512	3.487	3.513	3.485	3.515
3.441	3.459	3.44	3.46	3.439	3.461	3.437	3.463	3.436	3.464
3.391	3.409	3.39	3.41	3.389	3.411	3.388	3.412	3.386	3.414
3.342	3.358	3.341	3.359	3.339	3.361	3.338	3.362	3.337	3.363
3.292	3.308	3.291	3.309	3.29	3.31	3.289	3.312	3.287	3.313
3.242	3.258	3.241	3.259	3.24	3.26	3.239	3.261	3.238	3.262
3.193	3.208	3.192	3.208	3.191	3.209	3.189	3.211	3.188	3.212
3.143	3.157	3.142	3.158	3.141	3.159	3.14	3.16	3.139	3.162
3.093	3.107	3.092	3.108	3.091	3.109	3.09	3.11	3.089	3.111
3.043	3.057	3.043	3.057	3.042	3.058	3.041	3.059	3.039	3.061
2.994	3.006	2.993	3.007	2.992	3.008	2.991	3.009	2.99	3.01



<b>10</b>	<b>11</b>	<b>13</b>	<b>14</b>	<b>16</b>
490.747	437.294	389.672	347.247	309.45

<b>10</b>		<b>11</b>		<b>13</b>		<b>14</b>		<b>16</b>	
Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)	Short Focus (m)	Long Focus (m)
490.157	Infinity	436.753	Infinity	389.172	Infinity	346.777	Infinity	309.005	Infinity
142.323	336.707	137.473	367.502	132.409	409.557	127.154	469.936	121.732	563.155
83.24	125.269	81.568	129.274	79.769	134.086	77.843	139.935	75.79	147.142
65.197	88.302	64.17	90.265	63.057	92.575	61.852	95.314	60.554	98.589
45.48	55.529	44.982	56.293	44.437	57.175	43.84	58.199	43.189	59.393
37.071	43.438	36.742	43.901	36.38	44.432	35.981	45.044	35.545	45.752
28.339	31.872	28.148	32.117	27.937	32.398	27.704	32.718	27.447	33.086
23.845	26.275	23.711	26.44	23.563	26.628	23.398	26.842	23.216	27.087
19.263	20.797	19.177	20.899	19.081	21.015	18.974	21.146	18.856	21.296
16.471	17.565	16.408	17.637	16.339	17.719	16.261	17.811	16.175	17.916
14.591	15.434	14.542	15.489	14.488	15.551	14.428	15.621	14.361	15.701
13.645	14.375	13.603	14.422	13.556	14.476	13.503	14.536	13.445	14.605
12.695	13.32	12.659	13.36	12.619	13.406	12.574	13.457	12.523	13.516
11.742	12.27	11.711	12.304	11.677	12.342	11.639	12.385	11.596	12.434
10.785	11.224	10.759	11.252	10.731	11.284	10.699	11.32	10.663	11.36
9.824	10.182	9.803	10.205	9.78	10.231	9.753	10.26	9.724	10.293
9.342	9.663	9.323	9.684	9.302	9.707	9.279	9.733	9.252	9.762
8.86	9.145	8.843	9.163	8.824	9.184	8.803	9.207	8.779	9.233
8.376	8.628	8.361	8.644	8.344	8.662	8.325	8.683	8.304	8.706
7.891	8.112	7.878	8.126	7.863	8.142	7.847	8.16	7.828	8.18
7.648	7.855	7.636	7.868	7.622	7.883	7.607	7.899	7.59	7.918
7.405	7.598	7.394	7.61	7.381	7.623	7.367	7.639	7.351	7.656
7.162	7.34	7.151	7.352	7.139	7.364	7.126	7.379	7.111	7.395
6.918	7.084	6.908	7.094	6.897	7.106	6.885	7.119	6.871	7.134
6.675	6.827	6.665	6.837	6.655	6.848	6.644	6.86	6.631	6.874
6.431	6.571	6.422	6.58	6.413	6.59	6.402	6.601	6.391	6.614
6.186	6.315	6.179	6.323	6.17	6.332	6.16	6.342	6.15	6.354
5.942	6.059	5.935	6.067	5.927	6.075	5.918	6.084	5.908	6.095
5.697	5.804	5.691	5.811	5.684	5.818	5.676	5.827	5.667	5.836
5.452	5.549	5.446	5.555	5.44	5.562	5.433	5.569	5.424	5.578
5.207	5.294	5.202	5.299	5.196	5.305	5.189	5.312	5.182	5.32
4.961	5.039	4.957	5.044	4.952	5.05	4.946	5.056	4.939	5.063
4.863	4.937	4.859	4.942	4.854	4.947	4.848	4.953	4.842	4.96
4.765	4.836	4.761	4.84	4.756	4.845	4.751	4.851	4.745	4.857
4.667	4.734	4.663	4.738	4.658	4.743	4.653	4.748	4.647	4.754
4.568	4.632	4.564	4.636	4.56	4.641	4.555	4.646	4.55	4.652
4.47	4.531	4.466	4.534	4.462	4.539	4.457	4.544	4.452	4.549
4.371	4.429	4.368	4.433	4.364	4.437	4.36	4.441	4.355	4.446
4.273	4.328	4.27	4.331	4.266	4.335	4.262	4.339	4.257	4.344
4.174	4.226	4.171	4.229	4.168	4.233	4.164	4.237	4.159	4.242
4.076	4.125	4.073	4.128	4.069	4.131	4.066	4.135	4.062	4.139
3.977	4.023	3.974	4.026	3.971	4.029	3.968	4.033	3.964	4.037
3.878	3.922	3.876	3.925	3.873	3.928	3.87	3.931	3.866	3.935
3.78	3.821	3.777	3.823	3.774	3.826	3.771	3.829	3.768	3.833
3.681	3.719	3.679	3.722	3.676	3.724	3.673	3.727	3.67	3.731
3.582	3.618	3.58	3.62	3.578	3.623	3.575	3.626	3.572	3.629
3.483	3.517	3.481	3.519	3.479	3.521	3.477	3.524	3.474	3.527
3.434	3.466	3.432	3.468	3.43	3.47	3.427	3.473	3.425	3.476
3.385	3.416	3.383	3.418	3.381	3.42	3.378	3.422	3.375	3.425
3.335	3.365	3.333	3.367	3.331	3.369	3.329	3.371	3.326	3.374
3.286	3.315	3.284	3.316	3.282	3.318	3.28	3.321	3.277	3.323
3.236	3.264	3.234	3.266	3.233	3.268	3.23	3.27	3.228	3.272
3.187	3.213	3.185	3.215	3.183	3.217	3.181	3.219	3.179	3.221
3.137	3.163	3.136	3.165	3.134	3.166	3.132	3.168	3.13	3.171
3.088	3.112	3.086	3.114	3.085	3.116	3.083	3.118	3.081	3.12
3.038	3.062	3.037	3.063	3.035	3.065	3.033	3.067	3.031	3.069
2.989	3.011	2.987	3.013	2.986	3.014	2.984	3.016	2.982	3.018



<b>18</b>	<b>20</b>	<b>22</b>
275.777	245.777	219.051

<b>18</b>		<b>20</b>		<b>22</b>	
<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>	<b>Short Focus (m)</b>	<b>Long Focus (m)</b>
275.351	Infinity	245.367	Infinity	218.653	Infinity
116.174	724.531	110.512	1068.275	104.782	2286.388
73.611	156.172	71.311	167.732	68.895	182.938
59.161	102.545	57.672	107.384	56.088	113.392
42.482	60.794	41.715	62.448	40.887	64.416
35.067	46.573	34.546	47.531	33.98	48.655
27.165	33.509	26.854	33.997	26.515	34.562
23.015	27.368	22.794	27.689	22.551	28.06
18.725	21.466	18.58	21.661	18.42	21.884
16.08	18.035	15.974	18.171	15.857	18.326
14.286	15.791	14.204	15.894	14.112	16.011
13.38	14.682	13.308	14.771	13.228	14.871
12.467	13.582	12.405	13.657	12.336	13.742
11.549	12.49	11.496	12.553	11.437	12.624
10.623	11.406	10.579	11.458	10.53	11.516
9.691	10.33	9.655	10.372	9.614	10.42
9.223	9.795	9.19	9.833	9.154	9.875
8.753	9.262	8.724	9.296	8.691	9.333
8.281	8.731	8.255	8.761	8.226	8.794
7.808	8.203	7.785	8.228	7.759	8.257
7.57	7.939	7.549	7.963	7.525	7.99
7.333	7.676	7.313	7.698	7.29	7.723
7.095	7.413	7.076	7.433	7.055	7.457
6.856	7.151	6.839	7.17	6.82	7.191
6.617	6.889	6.601	6.906	6.583	6.926
6.377	6.628	6.363	6.644	6.346	6.662
6.138	6.367	6.124	6.382	6.109	6.398
5.897	6.107	5.885	6.12	5.871	6.135
5.657	5.847	5.645	5.859	5.633	5.873
5.415	5.588	5.405	5.598	5.394	5.611
5.174	5.329	5.165	5.339	5.154	5.35
4.932	5.07	4.924	5.079	4.914	5.089
4.835	4.967	4.827	4.975	4.818	4.985
4.738	4.864	4.73	4.872	4.722	4.881
4.641	4.761	4.634	4.768	4.626	4.777
4.544	4.658	4.537	4.665	4.529	4.673
4.446	4.555	4.44	4.562	4.433	4.57
4.349	4.452	4.343	4.459	4.336	4.466
4.252	4.349	4.246	4.356	4.239	4.362
4.154	4.247	4.149	4.253	4.143	4.259
4.057	4.144	4.052	4.15	4.046	4.156
3.959	4.042	3.954	4.047	3.949	4.053
3.862	3.939	3.857	3.944	3.852	3.949
3.764	3.837	3.76	3.841	3.755	3.846
3.666	3.734	3.662	3.739	3.658	3.744
3.568	3.632	3.565	3.636	3.56	3.641
3.471	3.53	3.467	3.534	3.463	3.538
3.422	3.479	3.418	3.483	3.414	3.487
3.373	3.428	3.369	3.431	3.365	3.435
3.324	3.377	3.32	3.38	3.317	3.384
3.274	3.326	3.271	3.329	3.268	3.333
3.225	3.275	3.222	3.278	3.219	3.282
3.176	3.224	3.173	3.227	3.17	3.23
3.127	3.173	3.125	3.176	3.121	3.179
3.078	3.122	3.076	3.125	3.073	3.128
3.029	3.071	3.026	3.074	3.024	3.077
2.98	3.02	2.977	3.023	2.975	3.026