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## Nata

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LumCAT: 1-1061-N	
Luminaire: 92.70.246.00	
Report No: 210630-B017	Voltage(V): 36.9500
Test No: 210630-C017	Current(A): 0.3050
LampCAT: Fortimo LED SLM 1202 G7N	Power (W): 11.2690
Lamp flux(lm): 1492.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 570	Width(mm): 45
Phm Type: C	Height(mm): 20

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## Photometric Results

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Lumens(lm): 1202.69  
Efficiency(%): 80.61%  
Lumens(lm)/Power(W): 106.73  
Central intensity(cd): 4990.922  
Maximum intensity(cd): 4990.922  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=23.8  
                                  [C90/270]Total=23.8  
Field angle(10%Imax): [C0/180]Total=51.0  
                                  [C90/270]Total=51.0  
Maximum s/h(1/2): C0\_180=0.40 C90\_270=0.40  
Maximum s/h(1/4): C0\_180=0.42 C90\_270=0.42  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 80.61%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.198%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2021/6/30  
Humidity(%): 65.0%

Operator: NT07  
Distance(m): 7.50

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4990.922	0.000	0	.000%	.000%
1.0	4965.398	4.764	4.764	.319%	.396%
2.0	4891.500	14.148	18.911	.948%	1.572%
3.0	4775.977	23.121	42.033	1.550%	3.495%
4.0	4627.969	31.478	73.511	2.110%	6.112%
5.0	4433.063	38.980	112.491	2.613%	9.353%
6.0	4194.492	45.340	157.831	3.039%	13.123%
7.0	3922.102	50.380	208.211	3.377%	17.312%
8.0	3652.523	54.210	262.421	3.633%	21.820%
9.0	3345.680	56.717	319.137	3.801%	26.535%
10.0	3036.938	57.760	376.898	3.871%	31.338%
11.0	2758.289	57.906	434.804	3.881%	36.153%
12.0	2469.656	57.149	491.953	3.830%	40.904%
13.0	2186.508	55.257	547.21	3.703%	45.499%
14.0	1940.414	52.824	600.034	3.540%	49.891%
15.0	1716.680	50.206	650.24	3.365%	54.066%
16.0	1516.430	47.374	697.614	3.175%	58.005%
17.0	1350.352	44.643	742.258	2.992%	61.717%
18.0	1178.719	41.699	783.957	2.795%	65.184%
19.0	1081.793	39.328	823.285	2.636%	68.454%
20.0	972.492	37.599	860.884	2.520%	71.580%
21.0	865.238	35.288	896.172	2.365%	74.514%
22.0	773.888	32.939	929.111	2.208%	77.253%
23.0	693.471	30.789	959.9	2.064%	79.813%
24.0	612.049	28.543	988.444	1.913%	82.186%
25.0	533.721	26.052	1014.496	1.746%	84.352%
26.0	463.303	23.535	1038.031	1.577%	86.309%
27.0	392.196	20.930	1058.961	1.403%	88.050%
28.0	328.486	18.246	1077.207	1.223%	89.567%
29.0	272.890	15.734	1092.941	1.055%	90.875%
30.0	221.400	13.346	1106.286	.894%	91.985%
31.0	164.545	10.740	1117.027	.720%	92.878%
32.0	121.191	8.186	1125.213	.549%	93.558%
33.0	87.820	6.158	1131.37	.413%	94.070%
34.0	67.317	4.695	1136.065	.315%	94.461%
35.0	57.368	3.872	1139.937	.260%	94.783%
36.0	51.103	3.454	1143.391	.231%	95.070%
37.0	45.872	3.163	1146.554	.212%	95.333%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	40.950	2.898	1149.452	.194%	95.574%
39.0	36.809	2.654	1152.106	.178%	95.794%
40.0	33.272	2.444	1154.55	.164%	95.998%
41.0	30.143	2.258	1156.808	.151%	96.185%
42.0	27.288	2.087	1158.895	.140%	96.359%
43.0	24.743	1.927	1160.822	.129%	96.519%
44.0	22.620	1.788	1162.61	.120%	96.668%
45.0	20.665	1.663	1164.273	.111%	96.806%
46.0	18.956	1.549	1165.823	.104%	96.935%
47.0	17.438	1.447	1167.27	.097%	97.055%
48.0	16.193	1.360	1168.63	.091%	97.168%
49.0	15.005	1.281	1169.911	.086%	97.275%
50.0	13.915	1.206	1171.117	.081%	97.375%
51.0	13.120	1.144	1172.261	.077%	97.470%
52.0	12.389	1.095	1173.355	.073%	97.561%
53.0	11.721	1.049	1174.404	.070%	97.648%
54.0	11.180	1.009	1175.413	.068%	97.732%
55.0	10.737	0.978	1176.392	.066%	97.814%
56.0	10.371	0.954	1177.346	.064%	97.893%
57.0	10.069	0.935	1178.28	.063%	97.971%
58.0	9.844	0.921	1179.201	.062%	98.047%
59.0	9.612	0.910	1180.111	.061%	98.123%
60.0	9.429	0.900	1181.01	.060%	98.198%
61.0	9.267	0.892	1181.902	.060%	98.272%
62.0	9.028	0.882	1182.784	.059%	98.345%
63.0	8.880	0.871	1183.655	.058%	98.417%
64.0	8.698	0.863	1184.517	.058%	98.489%
65.0	8.445	0.848	1185.366	.057%	98.560%
66.0	8.241	0.832	1186.198	.056%	98.629%
67.0	8.058	0.820	1187.018	.055%	98.697%
68.0	7.826	0.805	1187.822	.054%	98.764%
69.0	7.643	0.789	1188.612	.053%	98.830%
70.0	7.446	0.775	1189.386	.052%	98.894%
71.0	7.263	0.760	1190.147	.051%	98.957%
72.0	7.109	0.747	1190.894	.050%	99.019%
73.0	6.968	0.736	1191.63	.049%	99.081%
74.0	6.813	0.725	1192.355	.049%	99.141%
75.0	6.694	0.714	1193.068	.048%	99.200%

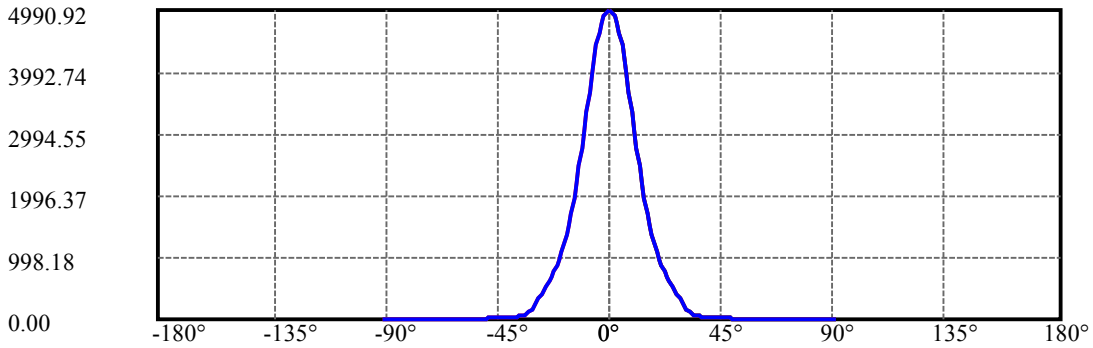
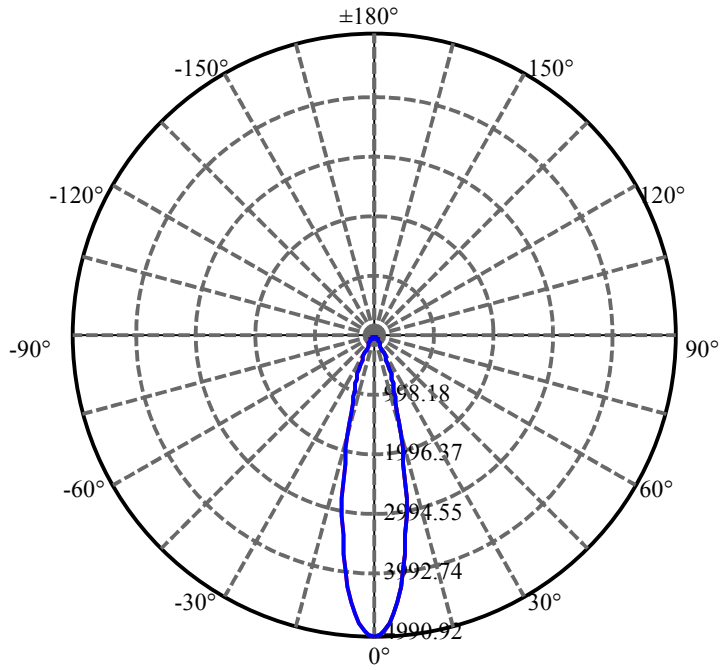
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.581	0.705	1193.773	.047%	99.259%
77.0	6.448	0.695	1194.468	.047%	99.317%
78.0	6.363	0.686	1195.153	.046%	99.374%
79.0	6.286	0.680	1195.833	.046%	99.430%
80.0	6.195	0.673	1196.506	.045%	99.486%
81.0	6.152	0.668	1197.174	.045%	99.542%
82.0	6.103	0.665	1197.838	.045%	99.597%
83.0	6.054	0.661	1198.499	.044%	99.652%
84.0	5.955	0.654	1199.153	.044%	99.706%
85.0	5.639	0.633	1199.786	.042%	99.759%
86.0	5.484	0.608	1200.394	.041%	99.809%
87.0	5.337	0.592	1200.986	.040%	99.859%
88.0	5.217	0.578	1201.564	.039%	99.907%
89.0	5.112	0.566	1202.131	.038%	99.954%
90.0	5.048	0.557	1202.688	.037%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1106.29	74.15%	91.98%
0-40	1154.55	77.38%	96.00%
0-60	1181.01	79.15%	98.20%
0-90	1202.13	80.57%	99.95%
0-120	1202.13	80.57%	99.95%
0-180	1202.69	80.61%	100.00%
60-90	22.02	1.48%	1.83%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-23.08	962.15	64.49%	80.00%

## ZONAL LUMEN SUMMARY

0-10	376.90
10-20	483.99
20-30	245.40
30-40	48.26
40-50	16.57
50-60	9.89
60-70	8.38
70-80	7.12
80-90	5.62
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



C0(Max): —————

C0/C180: —————

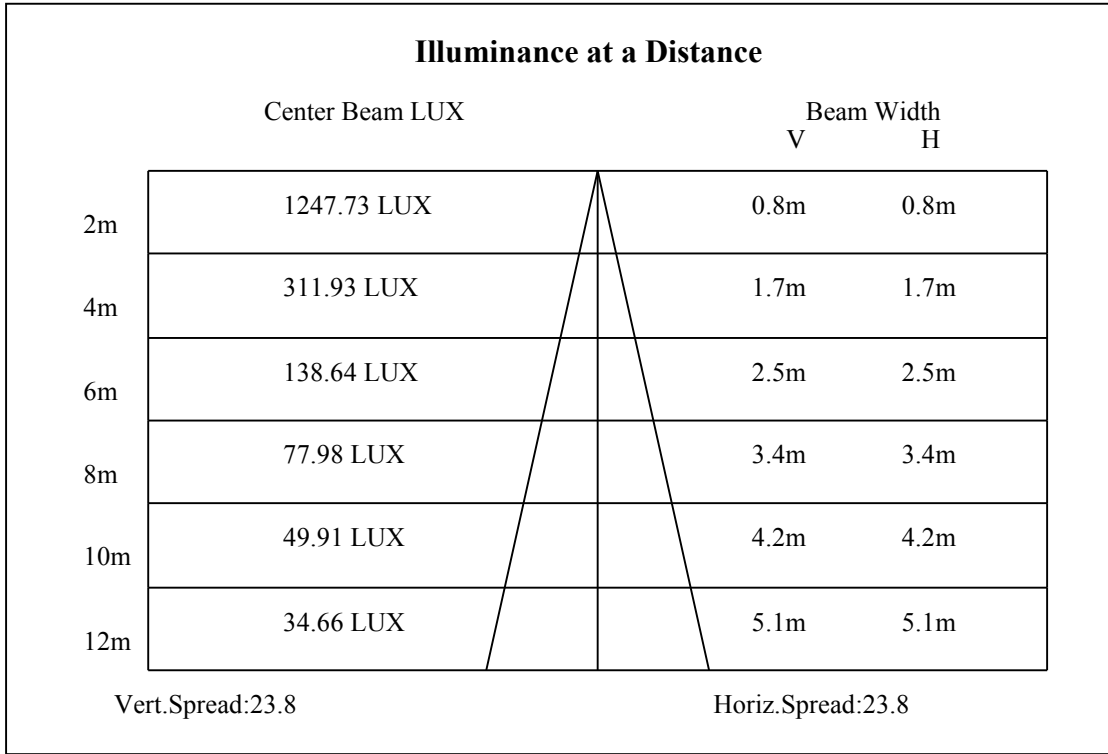
C90/C270: —————

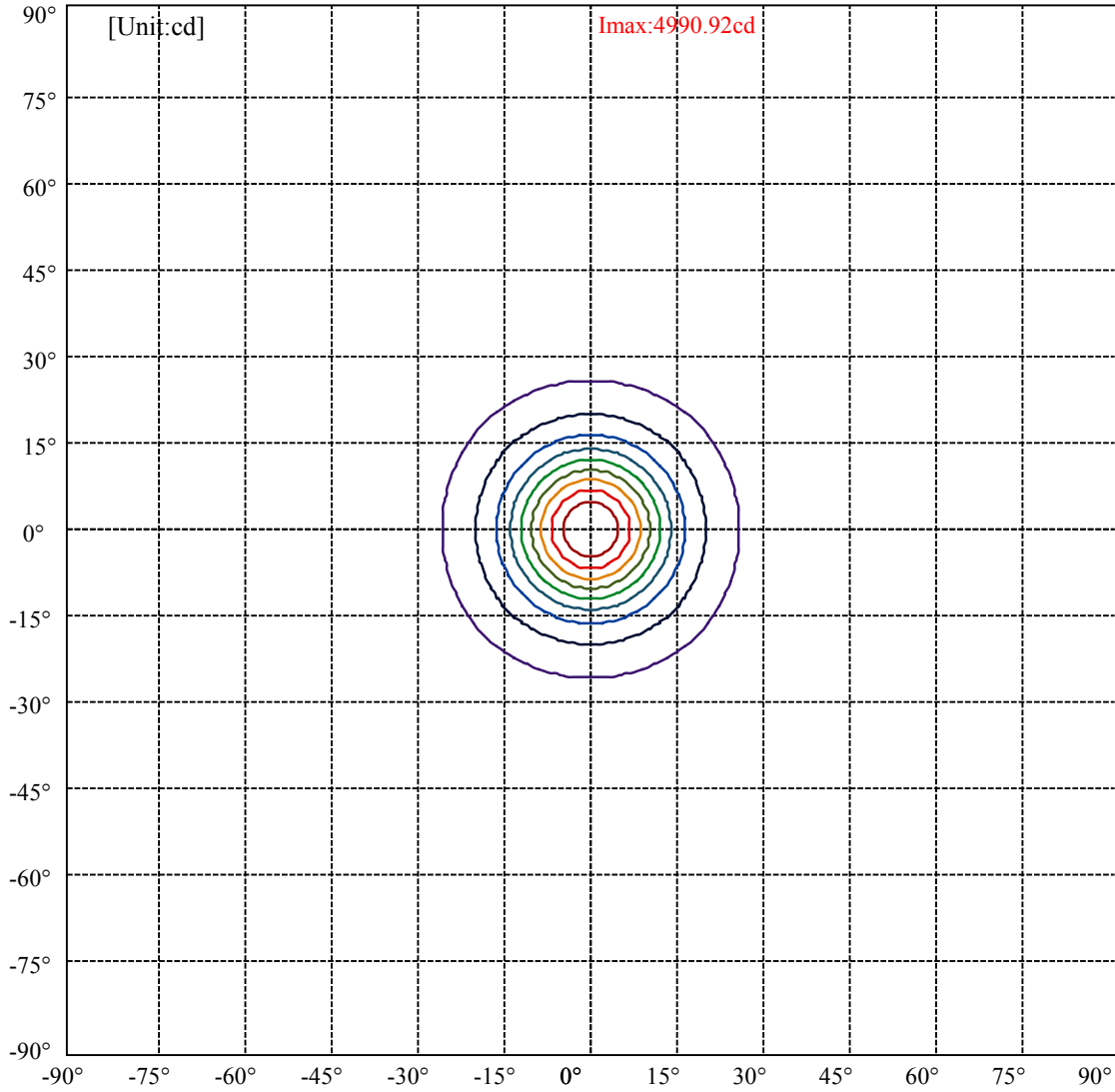
Field angle(10%Imax):C0/180Left:25.5 Right:25.5

:C90/270Left:25.5 Right:25.5

Beam Angle(50%Imax):C0/180Left:11.9 Right:11.9

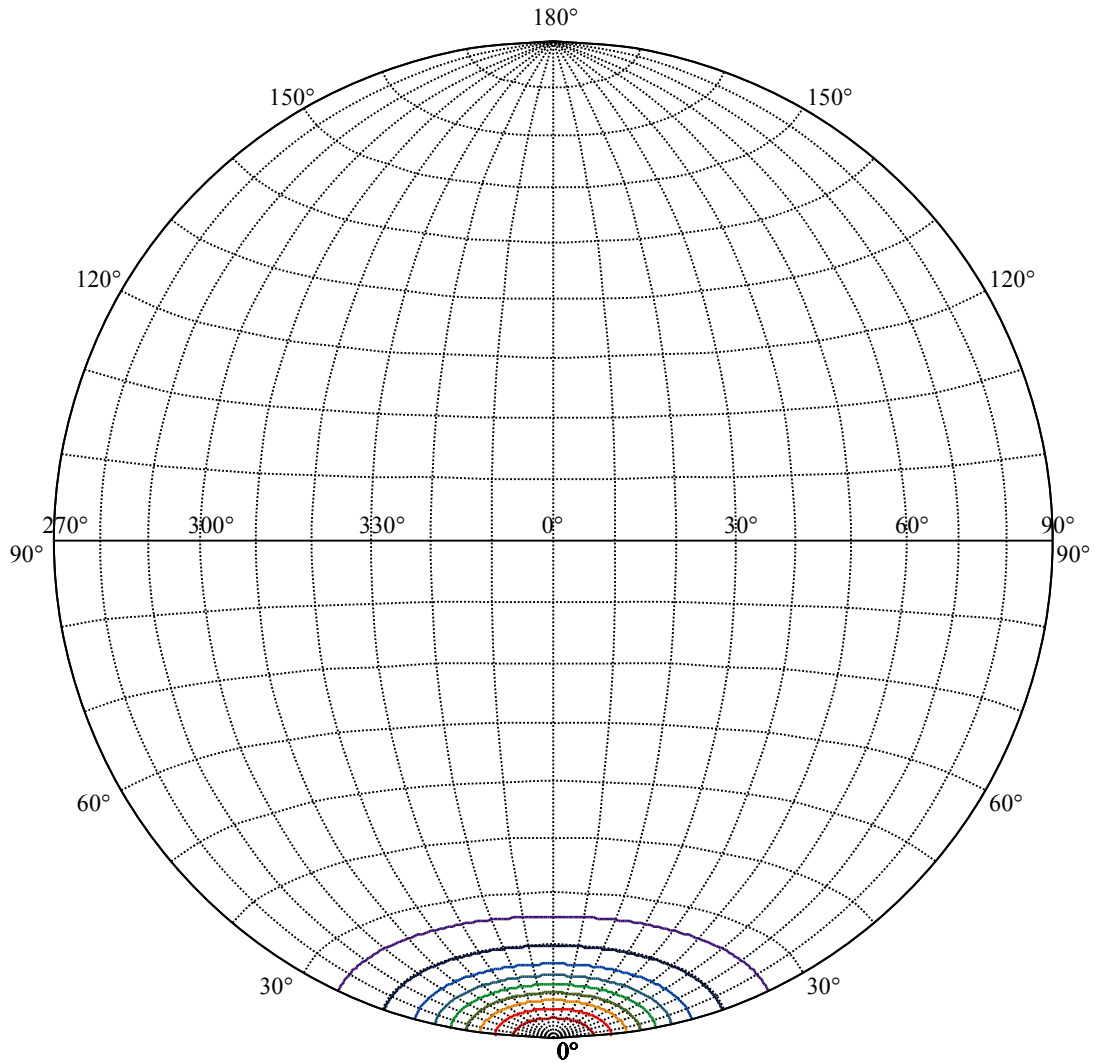
:C90/270Left:11.9 Right:11.9





(10%I <sub>max</sub> ) 499.092	—
(20%I <sub>max</sub> ) 998.184	—
(30%I <sub>max</sub> ) 1497.28	—
(40%I <sub>max</sub> ) 1996.37	—
(50%I <sub>max</sub> ) 2495.46	—
(60%I <sub>max</sub> ) 2994.55	—
(70%I <sub>max</sub> ) 3493.65	—
(80%I <sub>max</sub> ) 3992.74	—
(90%I <sub>max</sub> ) 4491.83	—





House

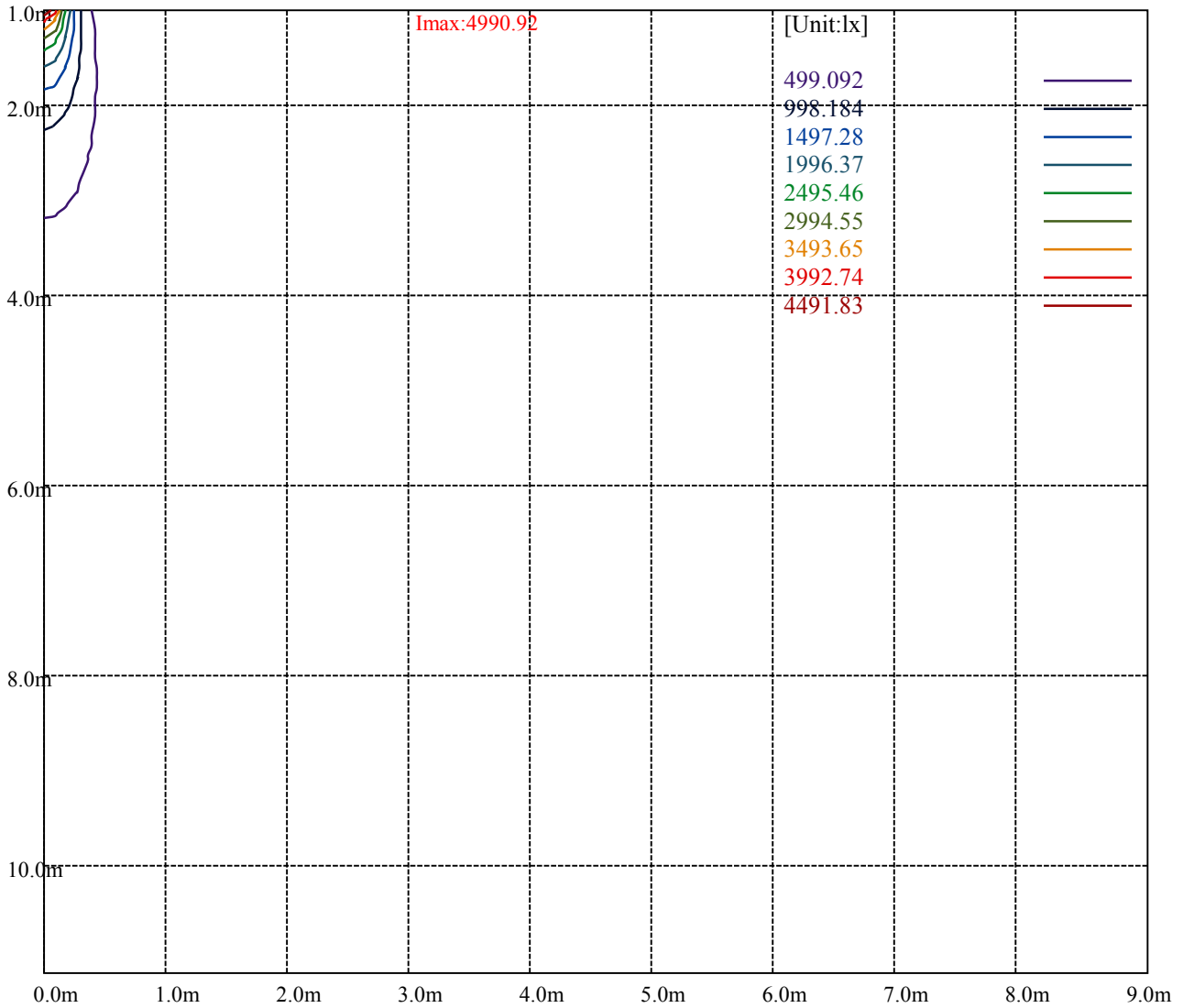
[Unit:cd]

Road

**Imax:4990.92**

(10%Imax) 499.092	—
(20%Imax) 998.184	—
(30%Imax) 1497.28	—
(40%Imax) 1996.37	—
(50%Imax) 2495.46	—
(60%Imax) 2994.55	—
(70%Imax) 3493.65	—
(80%Imax) 3992.74	—
(90%Imax) 4491.83	—





Luminance Table

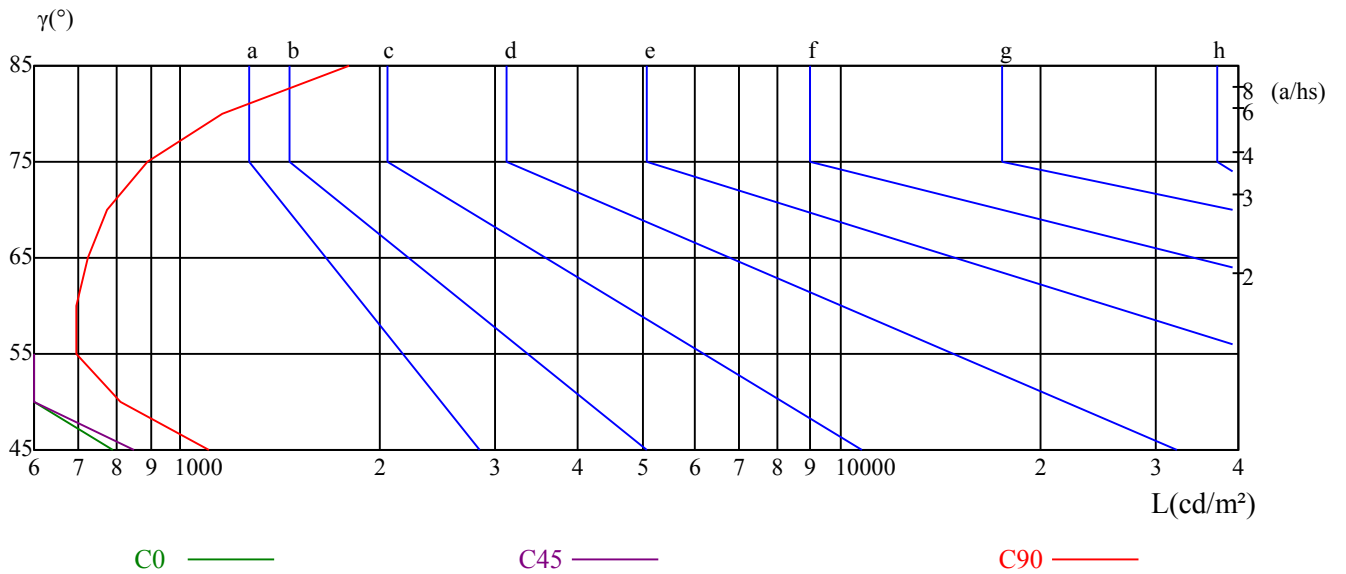
$\gamma$	45	50	55	60	65	70	75	80	85
C0	789	552	446	415	399	382	379	395	415
C45	851	601	492	463	451	439	445	476	517
C90	1101	810	695	693	724	774	892	1160	1800

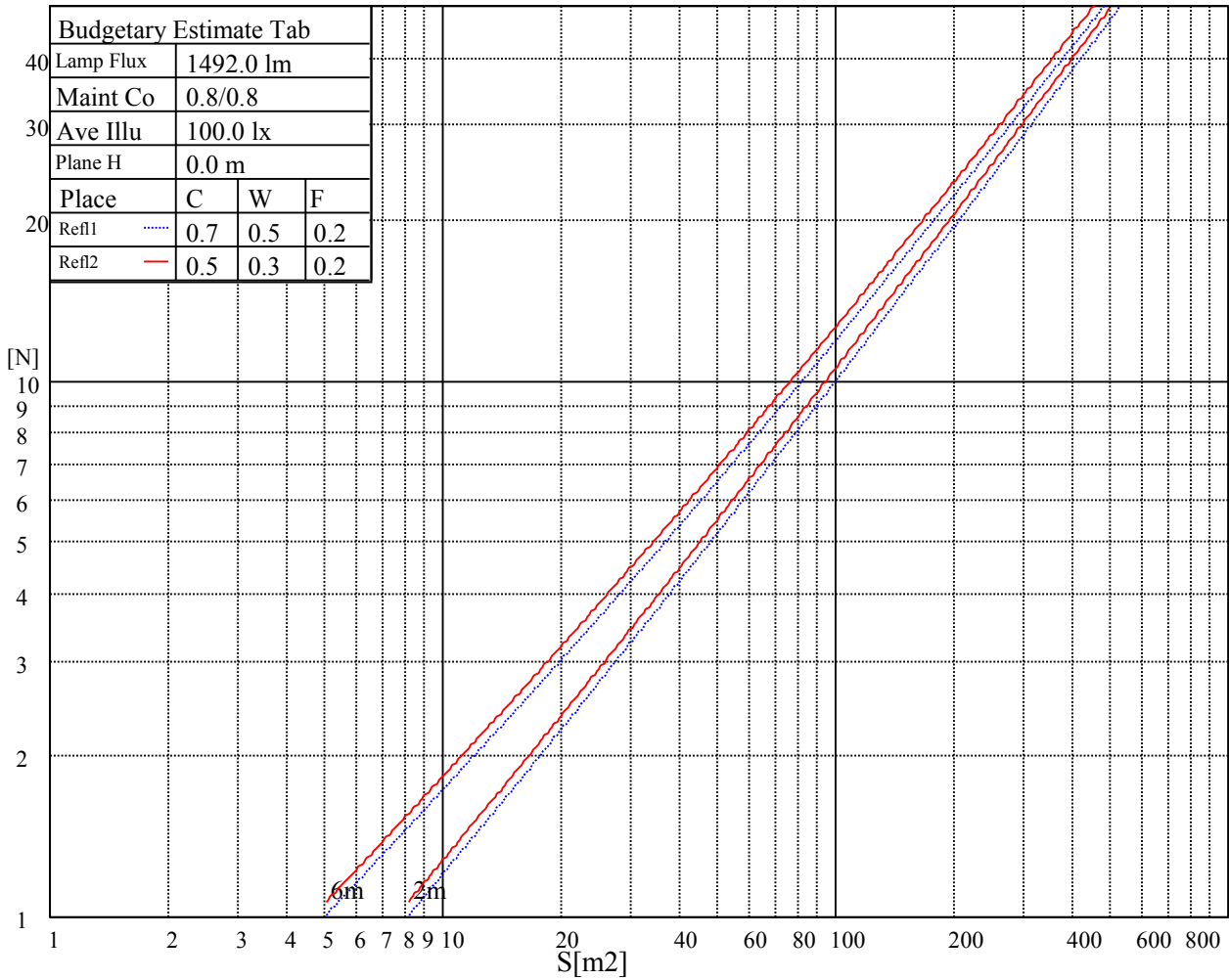
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
779	779	779	1008	1008	1008	2522	2522	2522

Glare Table

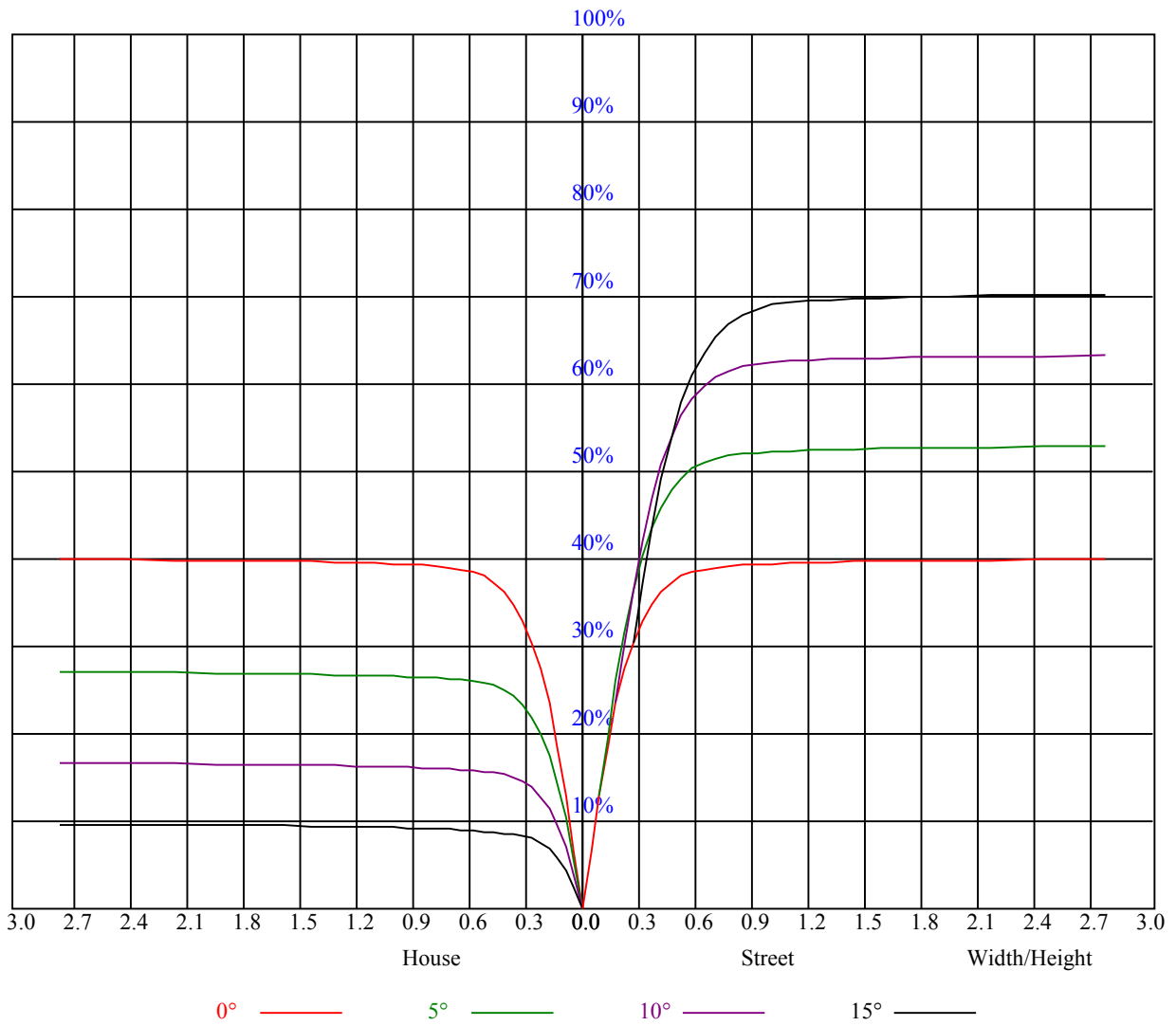
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	0.96	0.96	0.96	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.81
1	0.90	0.89	0.87	0.89	0.87	0.86	0.85	0.84	0.83	0.82	0.81	0.81	0.80	0.79	0.78	0.77
2	0.86	0.83	0.81	0.84	0.82	0.80	0.82	0.80	0.78	0.79	0.78	0.76	0.77	0.76	0.75	0.74
3	0.82	0.78	0.76	0.80	0.78	0.75	0.78	0.76	0.74	0.77	0.75	0.73	0.75	0.73	0.72	0.71
4	0.78	0.74	0.72	0.77	0.74	0.71	0.75	0.73	0.71	0.74	0.72	0.70	0.73	0.71	0.69	0.68
5	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.70	0.68	0.67	0.66
6	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.67	0.65	0.68	0.66	0.64	0.63
7	0.69	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.66	0.64	0.62	0.61
8	0.67	0.63	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.65	0.62	0.60	0.64	0.62	0.60	0.59
9	0.65	0.61	0.59	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.60	0.58	0.63	0.60	0.58	0.57
10	0.63	0.59	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.61	0.58	0.57	0.56



Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	4985.44	4993.31	4951.13	4876.31	4755.38	4560.19	4363.31	4130.44	3846.94
45.0	4986.00	4971.38	4918.50	4803.19	4677.19	4511.25	4251.38	4001.63	3744.56
90.0	4992.75	4964.06	4906.13	4790.81	4624.88	4441.50	4226.63	3916.13	3643.88
135.0	4999.50	4988.81	4922.44	4815.56	4690.13	4505.63	4257.56	4010.06	3787.88
180.0	4985.44	4924.13	4815.00	4664.25	4489.31	4258.69	4015.13	3714.75	3395.81
225.0	4986.00	4951.69	4857.19	4741.88	4577.63	4381.88	4128.19	3858.19	3591.56
270.0	4992.75	4977.56	4892.63	4777.31	4640.06	4436.44	4182.75	3932.44	3670.88
315.0	4999.50	4952.25	4869.00	4738.50	4569.19	4368.94	4131.00	3813.19	3538.69
360.0	4985.44	4993.31	4951.13	4876.31	4755.38	4560.19	4363.31	4130.44	3846.94
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3544.88	3270.38	2991.38	2688.75	2392.88	2116.69	1887.19	1656.00	1479.38
45.0	3417.19	3138.19	2851.88	2543.63	2253.94	2017.13	1771.31	1580.63	1397.81
90.0	3366.00	3016.69	2741.63	2468.81	2158.88	1928.25	1713.38	1486.69	1350.00
135.0	3412.69	3134.25	2885.06	2541.94	2247.19	2038.50	1764.56	1554.75	1411.31
180.0	3115.13	2805.19	2495.25	2245.50	2013.75	1748.81	1561.50	1401.75	1202.63
225.0	3314.81	2957.06	2677.50	2404.69	2094.75	1868.63	1668.94	1467.00	1299.94
270.0	3331.69	3056.06	2779.31	2478.94	2196.56	1959.19	1721.25	1512.00	1354.50
315.0	3263.06	2917.69	2644.31	2385.00	2134.13	1846.13	1645.31	1472.63	1307.25
360.0	3544.88	3270.38	2991.38	2688.75	2392.88	2116.69	1887.19	1656.00	1479.38
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1314.00	1188.56	1065.94	954.00	862.88	767.81	682.31	612.56	534.94
45.0	1238.06	1117.69	997.88	889.31	798.19	717.19	626.63	556.88	487.69
90.0	1112.51	1057.16	951.53	844.93	747.68	674.66	606.26	514.07	445.44
135.0	1236.94	1118.25	1009.69	889.31	796.50	712.69	619.31	550.69	484.31
180.0	1102.84	995.74	887.63	788.23	707.96	628.93	553.39	477.28	404.16
225.0	1110.71	1030.89	943.54	840.83	734.57	669.09	589.50	497.31	437.68
270.0	1204.31	1090.13	976.50	871.31	783.56	705.94	618.75	541.13	469.69
315.0	1110.38	1055.93	947.25	843.98	759.77	671.46	600.24	519.86	442.52
360.0	1314.00	1188.56	1065.94	954.00	862.88	767.81	682.31	612.56	534.94
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	446.63	381.38	322.31	284.63	204.53	161.44	114.41	78.86	63.06
45.0	411.75	345.38	290.25	255.54	170.78	131.12	97.09	68.79	58.28
90.0	386.72	327.49	263.25	212.85	164.03	112.73	81.90	66.21	57.94
135.0	402.75	342.00	286.31	218.03	165.88	126.39	91.41	70.59	60.75
180.0	345.49	288.45	228.04	179.72	135.90	91.41	72.90	62.16	53.55
225.0	372.94	297.68	253.74	204.30	152.49	110.87	80.27	62.72	53.83
270.0	389.81	327.38	284.63	214.93	165.77	125.21	85.16	66.15	57.26
315.0	381.49	318.15	254.59	201.21	156.99	110.36	79.43	63.06	54.28
360.0	446.63	381.38	322.31	284.63	204.53	161.44	114.41	78.86	63.06
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	54.79	49.22	43.88	39.21	35.61	32.46	28.91	26.38	24.13
45.0	53.10	46.69	42.36	38.31	34.09	30.94	28.18	25.20	23.18
90.0	51.69	46.74	41.96	37.74	34.31	30.94	28.18	25.59	23.34
135.0	54.17	48.77	43.48	38.93	35.38	32.18	28.69	26.21	24.13
180.0	48.15	43.26	38.03	34.37	31.16	27.79	25.71	23.23	20.87
225.0	47.98	43.20	38.42	34.37	30.99	28.29	25.93	23.34	21.43
270.0	50.74	45.62	40.56	36.62	32.85	29.87	26.55	24.30	22.33
315.0	48.21	43.48	38.93	34.93	31.78	28.69	26.16	23.68	21.54
360.0	54.79	49.22	43.88	39.21	35.61	32.46	28.91	26.38	24.13



Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	21.66	19.91	18.39	16.93	15.53	14.46	13.44	12.66	11.93
45.0	21.26	19.18	17.83	16.54	15.30	14.23	13.50	12.54	11.87
90.0	21.43	19.80	18.00	16.76	15.58	14.34	13.56	12.83	12.09
135.0	21.66	19.97	18.51	16.99	15.75	14.74	13.78	12.99	12.21
180.0	19.41	18.00	16.26	15.30	14.29	13.16	12.54	11.93	11.31
225.0	19.74	18.00	16.71	15.58	14.57	13.44	12.71	12.04	11.48
270.0	20.36	18.56	17.21	15.98	14.63	13.67	12.88	12.15	11.53
315.0	19.80	18.23	16.59	15.47	14.40	13.28	12.54	11.98	11.36
360.0	21.66	19.91	18.39	16.93	15.53	14.46	13.44	12.66	11.93
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	11.36	10.86	10.46	10.13	9.84	9.68	9.39	9.34	9.23
45.0	11.31	10.86	10.46	10.13	9.90	9.68	9.51	9.34	9.11
90.0	11.48	11.03	10.69	10.35	10.13	9.79	9.62	9.45	9.11
135.0	11.64	11.14	10.69	10.35	10.13	9.84	9.62	9.45	9.17
180.0	10.80	10.41	10.07	9.84	9.62	9.39	9.23	9.00	8.78
225.0	10.97	10.58	10.24	9.90	9.68	9.51	9.34	9.11	8.83
270.0	11.03	10.58	10.24	9.96	9.79	9.62	9.39	9.23	9.06
315.0	10.86	10.46	10.13	9.90	9.68	9.39	9.34	9.23	8.94
360.0	11.36	10.86	10.46	10.13	9.84	9.68	9.39	9.34	9.23
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.00	8.83	8.72	8.38	8.27	8.04	7.82	7.65	7.43
45.0	9.00	8.78	8.49	8.33	8.16	7.93	7.76	7.54	7.37
90.0	9.00	8.83	8.49	8.33	8.16	7.93	7.71	7.54	7.37
135.0	9.00	8.78	8.49	8.27	8.04	7.82	7.59	7.43	7.20
180.0	8.61	8.38	8.10	7.88	7.71	7.54	7.31	7.14	6.98
225.0	8.66	8.55	8.27	8.10	7.93	7.65	7.48	7.31	7.14
270.0	8.89	8.72	8.55	8.38	8.16	7.93	7.82	7.59	7.43
315.0	8.89	8.72	8.44	8.27	8.04	7.76	7.65	7.37	7.20
360.0	9.00	8.83	8.72	8.38	8.27	8.04	7.82	7.65	7.43
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.20	7.09	6.92	6.75	6.64	6.53	6.36	6.30	6.19
45.0	7.20	7.09	6.92	6.75	6.64	6.47	6.36	6.30	6.13
90.0	7.20	7.03	6.92	6.81	6.75	6.64	6.64	6.64	6.53
135.0	7.03	6.92	6.75	6.64	6.53	6.36	6.24	6.13	6.02
180.0	6.86	6.69	6.53	6.47	6.30	6.19	6.08	5.96	5.91
225.0	6.98	6.86	6.69	6.58	6.47	6.36	6.24	6.08	6.02
270.0	7.31	7.14	7.03	6.92	6.86	6.69	6.75	6.75	6.81
315.0	7.09	6.92	6.75	6.64	6.47	6.36	6.24	6.13	5.96
360.0	7.20	7.09	6.92	6.75	6.64	6.53	6.36	6.30	6.19
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.02	5.96	5.91	5.85	5.79	5.68	5.51	5.34	5.18
45.0	6.08	5.96	5.91	5.79	5.74	5.63	5.46	5.29	5.18
90.0	6.53	6.53	6.86	6.92	5.63	5.46	5.34	5.18	5.12
135.0	5.91	5.85	5.74	5.63	5.57	5.40	5.23	5.18	5.06
180.0	5.79	5.68	5.57	5.51	5.46	5.29	5.18	5.12	5.01
225.0	5.96	5.85	5.74	5.63	5.57	5.46	5.29	5.23	5.18
270.0	7.03	7.14	6.92	6.58	5.68	5.46	5.34	5.23	5.12
315.0	5.91	5.85	5.79	5.74	5.68	5.51	5.34	5.18	5.06
360.0	6.02	5.96	5.91	5.85	5.79	5.68	5.51	5.34	5.18

Intensity data(cd)

<b>C/γ(°)</b>	<b>90.0</b>
<b>0.0</b>	<b>5.06</b>
<b>45.0</b>	<b>5.12</b>
<b>90.0</b>	<b>5.06</b>
<b>135.0</b>	<b>5.01</b>
<b>180.0</b>	<b>5.01</b>
<b>225.0</b>	<b>5.12</b>
<b>270.0</b>	<b>5.01</b>
<b>315.0</b>	<b>5.01</b>
<b>360.0</b>	<b>5.06</b>