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Nata

LumCAT: 1-0936-N	
Luminaire: 92.70.246.00	
Report No: 210630-B013	Voltage(V): 36.8500
Test No: 210630-C013	Current(A): 0.3050
LampCAT: Fortimo LED SLM 1202 G7N	Power (W): 11.2390
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

Photometric Results

Lumens(lm): 1172.76
Efficiency(%): 78.60%
Lumens(lm)/Power(W): 104.35
Central intensity(cd): 4773.797
Maximum intensity(cd): 4773.797
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=24.5
 [C90/270]Total=24.5
Field angle(10%Imax): [C0/180]Total=50.4
 [C90/270]Total=50.4
Maximum s/h(1/2): C0_180=0.41 C90_270=0.41
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 78.60%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.111%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4773.797	0.000	0	.000%	.000%
1.0	4748.555	4.556	4.556	.305%	.389%
2.0	4678.875	13.531	18.087	.907%	1.542%
3.0	4548.656	22.069	40.157	1.479%	3.424%
4.0	4387.852	29.913	70.07	2.005%	5.975%
5.0	4204.336	36.963	107.033	2.477%	9.127%
6.0	3981.375	43.018	150.051	2.883%	12.795%
7.0	3740.977	47.933	197.984	3.213%	16.882%
8.0	3511.195	51.902	249.886	3.479%	21.308%
9.0	3244.992	54.755	304.641	3.670%	25.976%
10.0	2962.406	56.175	360.816	3.765%	30.766%
11.0	2716.594	56.745	417.561	3.803%	35.605%
12.0	2458.406	56.570	474.131	3.791%	40.429%
13.0	2190.867	55.175	529.306	3.698%	45.133%
14.0	1965.586	53.202	582.508	3.566%	49.670%
15.0	1754.508	51.071	633.58	3.423%	54.025%
16.0	1556.930	48.522	682.101	3.252%	58.162%
17.0	1384.214	45.802	727.903	3.070%	62.068%
18.0	1221.314	42.960	770.862	2.879%	65.731%
19.0	1097.213	40.338	811.2	2.704%	69.170%
20.0	980.627	38.030	849.23	2.549%	72.413%
21.0	868.359	35.504	884.735	2.380%	75.440%
22.0	766.420	32.852	917.586	2.202%	78.242%
23.0	675.492	30.255	947.841	2.028%	80.821%
24.0	583.826	27.533	975.375	1.845%	83.169%
25.0	491.161	24.443	999.817	1.638%	85.253%
26.0	415.505	21.402	1021.219	1.434%	87.078%
27.0	338.829	18.455	1039.674	1.237%	88.652%
28.0	275.098	15.543	1055.218	1.042%	89.977%
29.0	214.256	12.803	1068.021	.858%	91.069%
30.0	162.541	10.173	1078.194	.682%	91.937%
31.0	115.896	7.749	1085.942	.519%	92.597%
32.0	85.563	5.772	1091.714	.387%	93.089%
33.0	67.845	4.519	1096.234	.303%	93.475%
34.0	57.502	3.793	1100.027	.254%	93.798%
35.0	52.552	3.418	1103.445	.229%	94.090%
36.0	49.331	3.244	1106.689	.217%	94.366%
37.0	46.245	3.117	1109.806	.209%	94.632%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	43.446	2.994	1112.8	.201%	94.887%
39.0	40.718	2.873	1115.672	.193%	95.132%
40.0	37.927	2.743	1118.415	.184%	95.366%
41.0	35.318	2.608	1121.023	.175%	95.589%
42.0	32.906	2.479	1123.502	.166%	95.800%
43.0	30.396	2.345	1125.847	.157%	96.000%
44.0	28.280	2.215	1128.062	.148%	96.189%
45.0	26.332	2.099	1130.16	.141%	96.368%
46.0	24.237	1.978	1132.138	.133%	96.536%
47.0	22.324	1.852	1133.99	.124%	96.694%
48.0	20.813	1.744	1135.734	.117%	96.843%
49.0	19.209	1.644	1137.377	.110%	96.983%
50.0	17.677	1.538	1138.915	.103%	97.114%
51.0	16.509	1.446	1140.361	.097%	97.237%
52.0	15.300	1.365	1141.726	.091%	97.354%
53.0	14.196	1.283	1143.009	.086%	97.463%
54.0	13.338	1.214	1144.223	.081%	97.567%
55.0	12.649	1.160	1145.383	.078%	97.666%
56.0	12.023	1.115	1146.498	.075%	97.761%
57.0	11.489	1.075	1147.573	.072%	97.852%
58.0	11.004	1.040	1148.613	.070%	97.941%
59.0	10.596	1.010	1149.623	.068%	98.027%
60.0	10.245	0.985	1150.608	.066%	98.111%
61.0	9.900	0.961	1151.569	.064%	98.193%
62.0	9.626	0.941	1152.51	.063%	98.273%
63.0	9.380	0.924	1153.434	.062%	98.352%
64.0	9.134	0.908	1154.343	.061%	98.430%
65.0	8.880	0.892	1155.234	.060%	98.506%
66.0	8.655	0.875	1156.109	.059%	98.580%
67.0	8.388	0.857	1156.966	.057%	98.653%
68.0	8.170	0.839	1157.805	.056%	98.725%
69.0	7.966	0.823	1158.628	.055%	98.795%
70.0	7.777	0.809	1159.437	.054%	98.864%
71.0	7.552	0.792	1160.229	.053%	98.932%
72.0	7.348	0.775	1161.004	.052%	98.998%
73.0	7.137	0.757	1161.761	.051%	99.062%
74.0	6.961	0.741	1162.502	.050%	99.125%
75.0	6.806	0.727	1163.23	.049%	99.187%

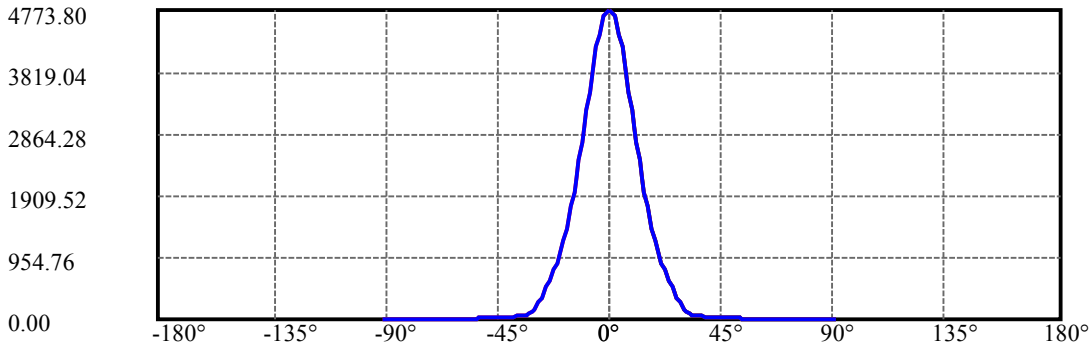
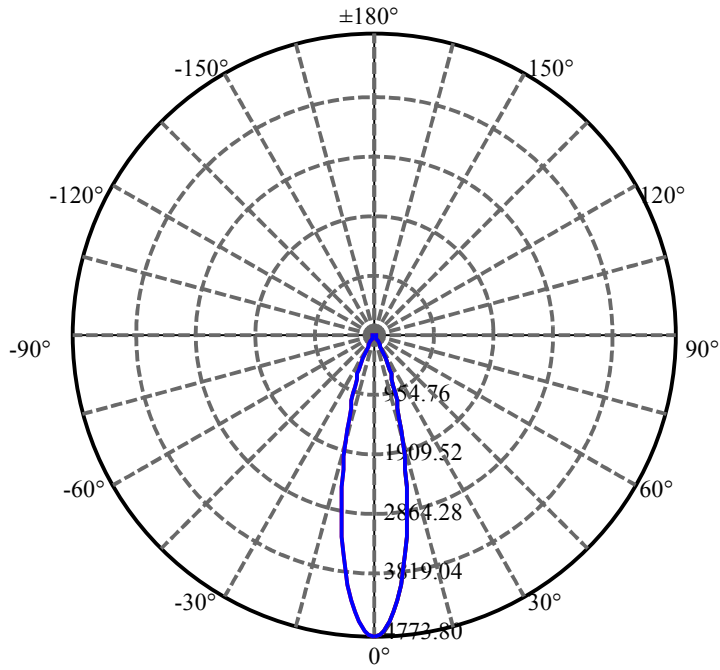
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.638	0.714	1163.943	.048%	99.248%
77.0	6.483	0.700	1164.643	.047%	99.308%
78.0	6.349	0.687	1165.33	.046%	99.366%
79.0	6.230	0.676	1166.005	.045%	99.424%
80.0	6.159	0.668	1166.673	.045%	99.481%
81.0	6.166	0.667	1167.34	.045%	99.538%
82.0	6.202	0.671	1168.011	.045%	99.595%
83.0	6.173	0.673	1168.683	.045%	99.652%
84.0	6.061	0.667	1169.35	.045%	99.709%
85.0	5.435	0.627	1169.977	.042%	99.763%
86.0	5.259	0.585	1170.562	.039%	99.813%
87.0	5.084	0.566	1171.128	.038%	99.861%
88.0	4.992	0.552	1171.68	.037%	99.908%
89.0	4.915	0.543	1172.223	.036%	99.954%
90.0	4.866	0.536	1172.759	.036%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1078.19	72.26%	91.94%
0-40	1118.42	74.96%	95.37%
0-60	1150.61	77.12%	98.11%
0-90	1172.22	78.57%	99.95%
0-120	1172.22	78.57%	99.95%
0-180	1172.76	78.60%	100.00%
60-90	22.60	1.51%	1.93%
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%
0-22.68	938.21	62.88%	80.00%

ZONAL LUMEN SUMMARY

0-10	360.82
10-20	488.41
20-30	228.96
30-40	40.22
40-50	20.50
50-60	11.69
60-70	8.83
70-80	7.24
80-90	5.55
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: —————

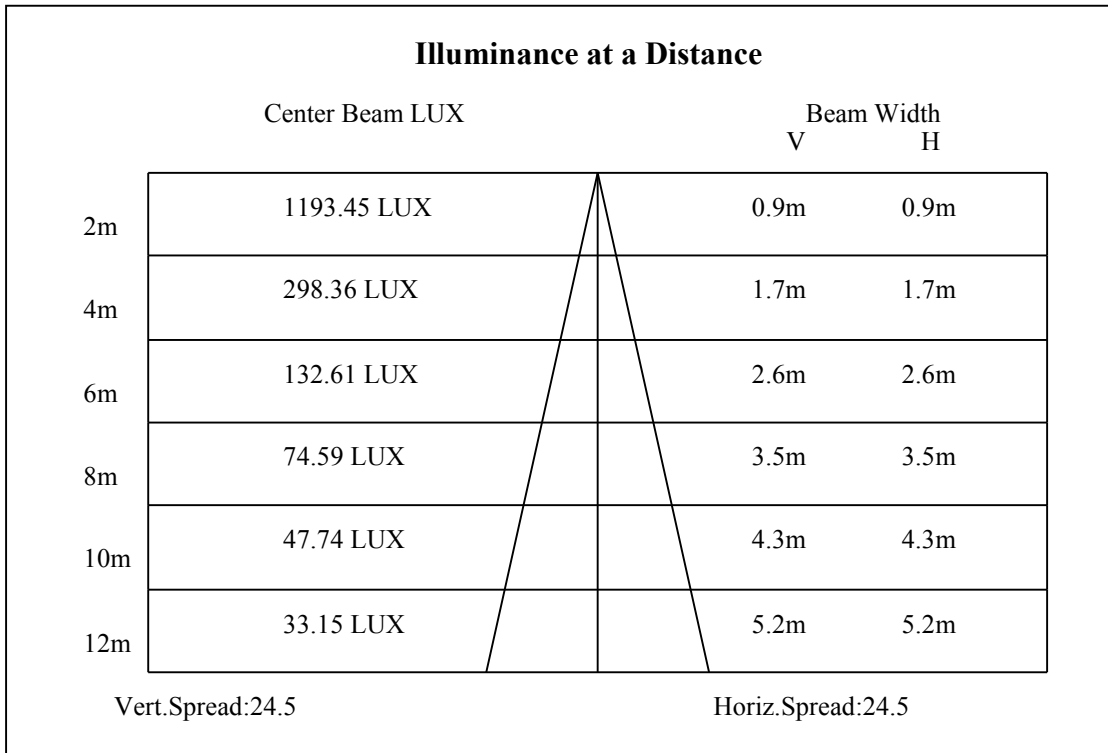
C90/C270: —————

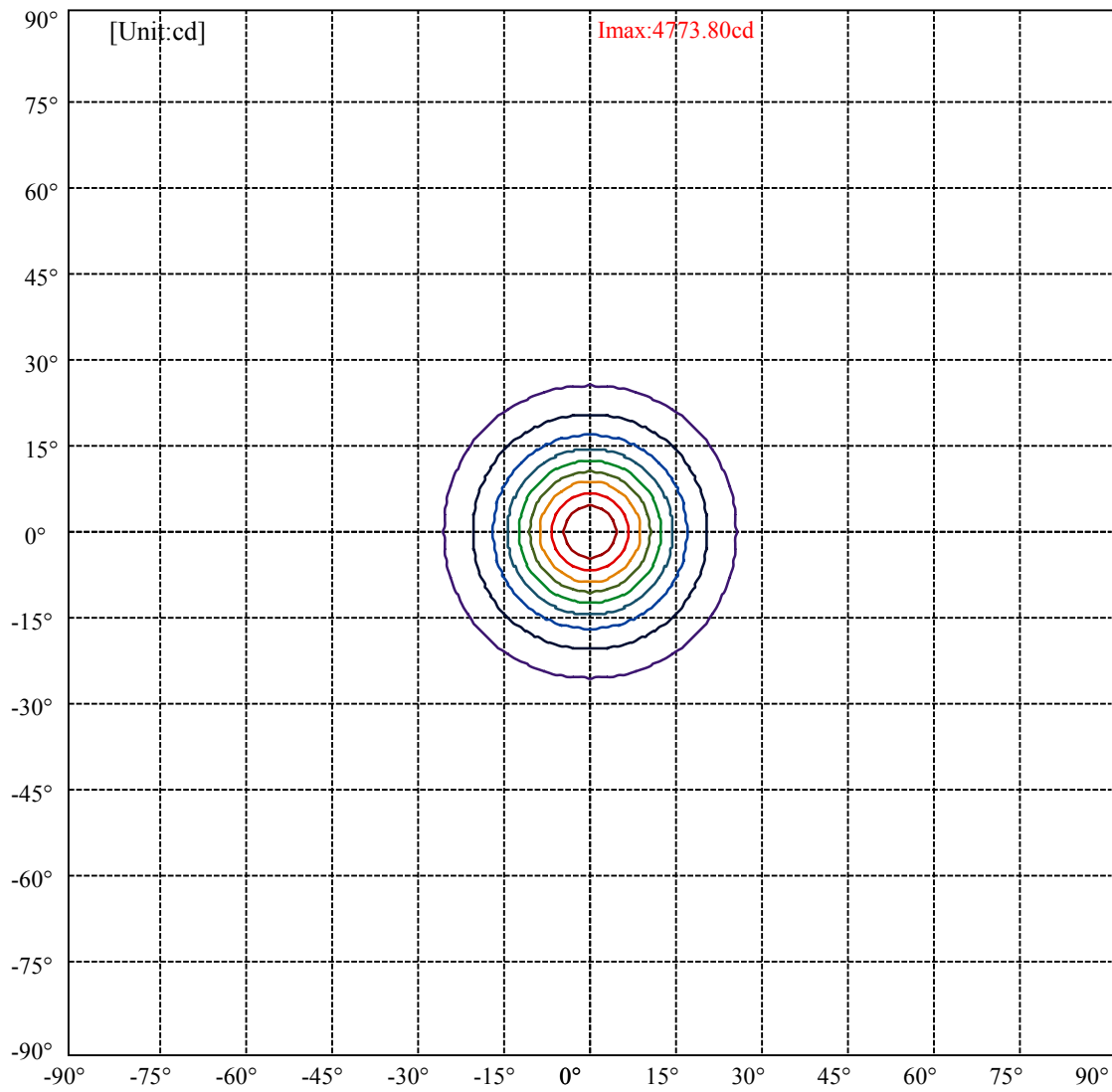
Field angle(10%Imax):C0/180Left:25.2 Right:25.2

:C90/270Left:25.2 Right:25.2

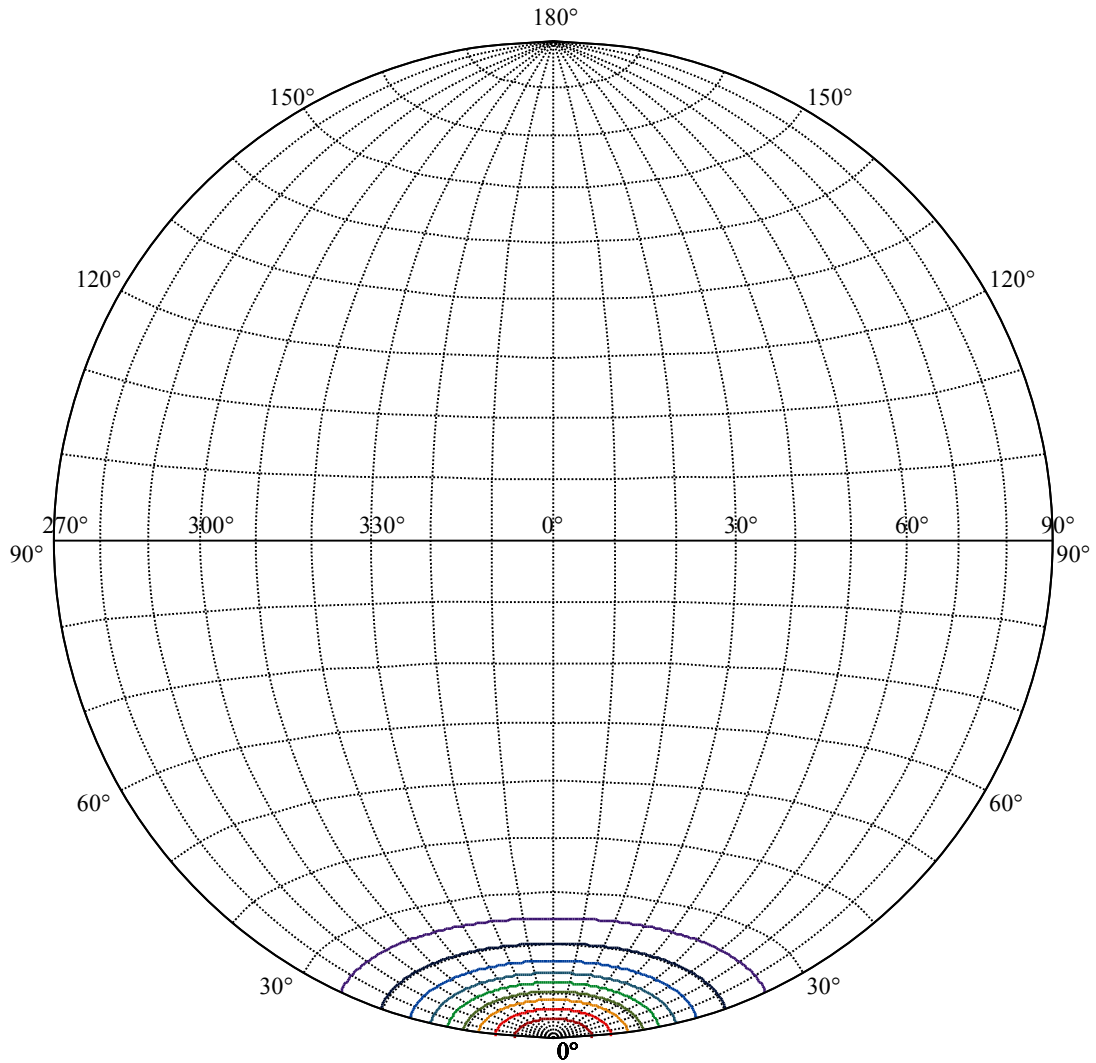
Beam Angle(50%Imax):C0/180Left:12.3 Right:12.3

:C90/270Left:12.3 Right:12.3





(10%Imax) 477.38	—
(20%Imax) 954.759	—
(30%Imax) 1432.14	—
(40%Imax) 1909.52	—
(50%Imax) 2386.9	—
(60%Imax) 2864.28	—
(70%Imax) 3341.66	—
(80%Imax) 3819.04	—
(90%Imax) 4296.42	—



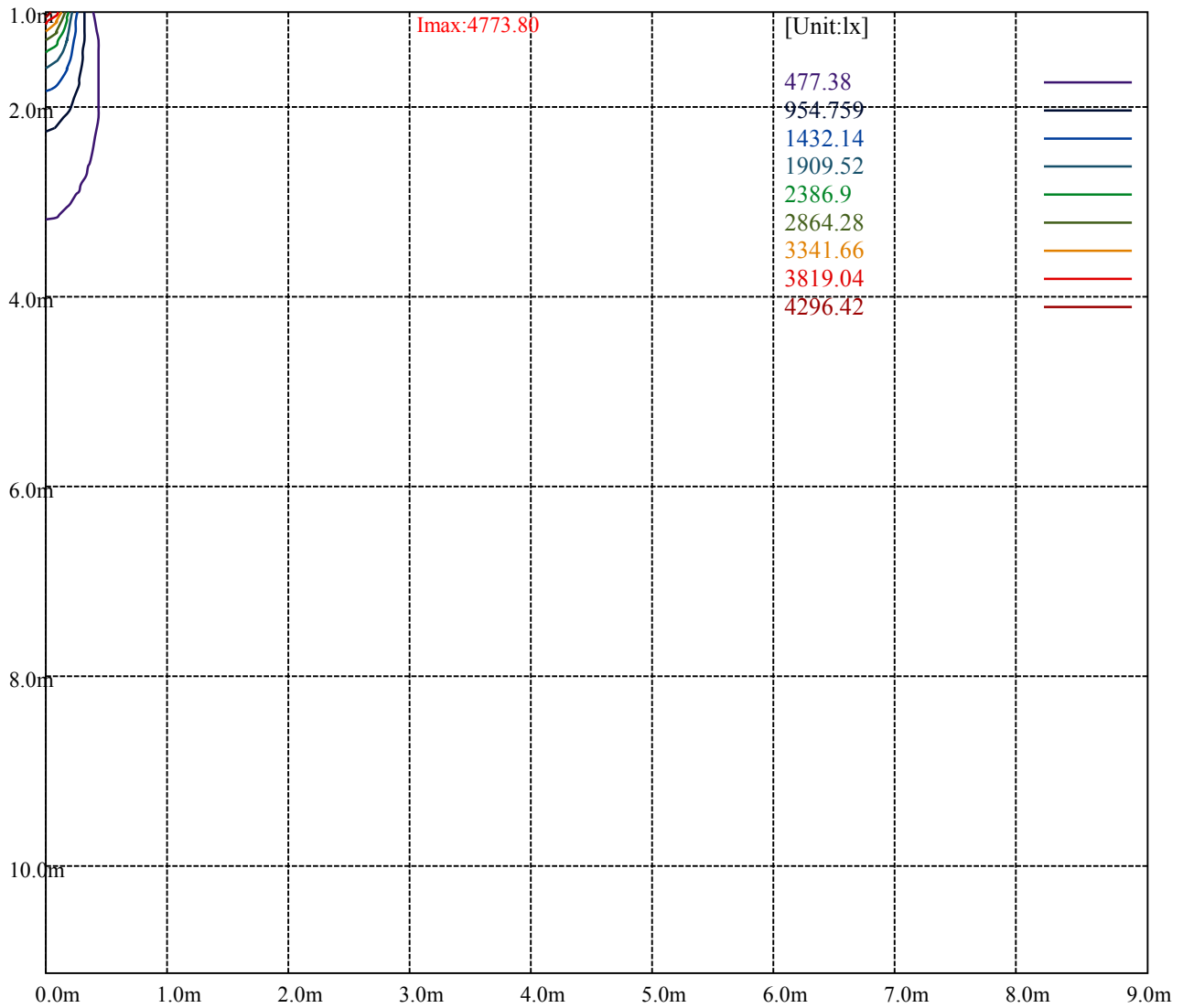
House

[Unit:cd]

Road

Imax:4773.80

(10%Imax) 477.38	—
(20%Imax) 954.759	—
(30%Imax) 1432.14	—
(40%Imax) 1909.52	—
(50%Imax) 2386.9	—
(60%Imax) 2864.28	—
(70%Imax) 3341.66	—
(80%Imax) 3819.04	—
(90%Imax) 4296.42	—



Luminance Table

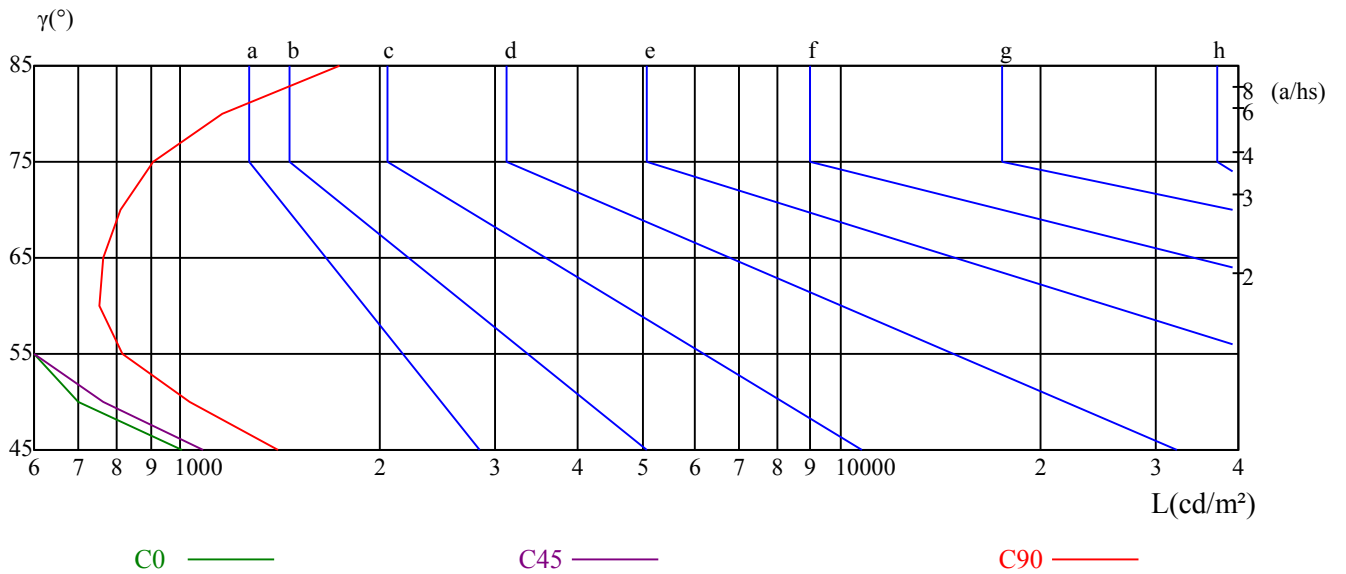
γ	45	50	55	60	65	70	75	80	85
C0	1005	701	526	451	419	399	386	393	400
C45	1084	764	579	503	474	459	453	473	499
C90	1403	1029	819	753	762	808	907	1153	1735

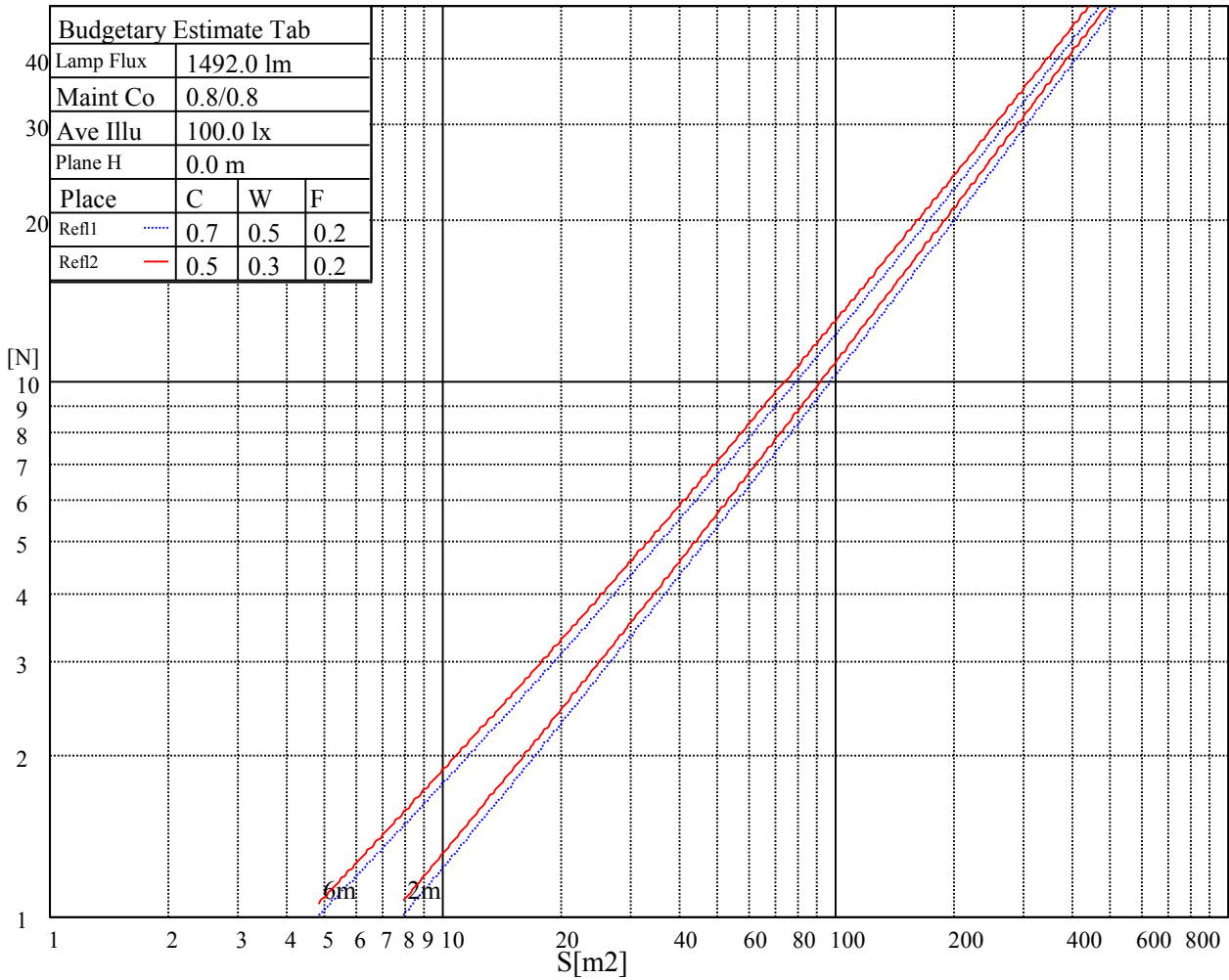
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
819	819	819	1025	1025	1025	2431	2431	2431

Glare Table

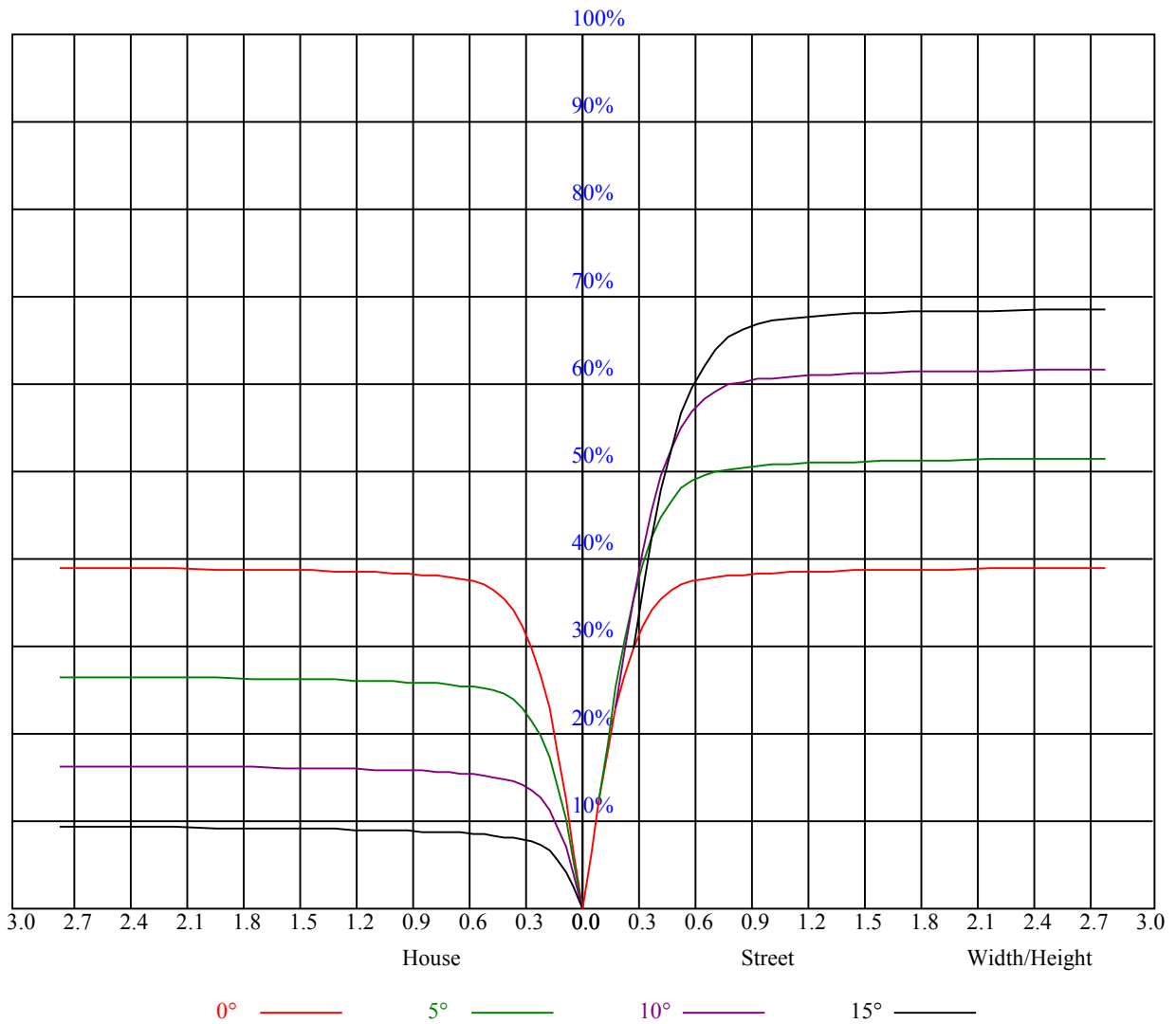
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.94	0.94	0.94	0.91	0.91	0.91	0.87	0.87	0.87	0.84	0.84	0.84	0.80	0.80	0.80	0.79
1	0.88	0.86	0.85	0.86	0.85	0.84	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.77	0.76	0.75
2	0.83	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.76	0.77	0.76	0.74	0.75	0.74	0.73	0.72
3	0.79	0.76	0.74	0.78	0.76	0.73	0.76	0.74	0.72	0.75	0.73	0.71	0.73	0.71	0.70	0.69
4	0.76	0.73	0.70	0.75	0.72	0.70	0.74	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.67	0.66
5	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.69	0.66	0.65	0.64
6	0.70	0.66	0.64	0.70	0.66	0.64	0.68	0.65	0.63	0.67	0.65	0.63	0.67	0.64	0.63	0.62
7	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.60	0.60
8	0.65	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.60	0.58	0.58
9	0.63	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.62	0.59	0.57	0.61	0.58	0.57	0.56
10	0.61	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.54



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	4755.94	4781.25	4772.81	4717.69	4614.19	4446.56	4248.56	4060.69	3853.13
45.0	4781.81	4777.31	4732.31	4634.44	4474.69	4296.38	4104.56	3849.19	3617.44
90.0	4777.31	4738.50	4654.69	4467.94	4322.81	4137.75	3843.00	3642.75	3403.13
135.0	4780.13	4746.94	4639.50	4496.06	4329.00	4123.13	3886.31	3662.44	3417.19
180.0	4755.94	4664.25	4534.88	4356.00	4142.25	3932.44	3708.00	3403.13	3151.69
225.0	4781.81	4747.50	4662.56	4490.44	4333.50	4151.25	3911.06	3651.19	3418.88
270.0	4777.31	4766.63	4716.00	4631.63	4451.63	4283.44	4069.13	3834.56	3614.06
315.0	4780.13	4766.06	4718.25	4595.06	4434.75	4263.75	4080.38	3823.88	3614.06
360.0	4755.94	4781.25	4772.81	4717.69	4614.19	4446.56	4248.56	4060.69	3853.13
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3583.69	3350.25	3105.56	2824.31	2547.00	2308.50	2051.44	1816.88	1627.31
45.0	3351.94	3078.56	2822.06	2575.69	2282.63	2054.25	1846.13	1618.31	1455.19
90.0	3119.06	2834.44	2586.94	2321.44	2073.38	1864.13	1653.19	1486.13	1319.63
135.0	3116.25	2856.38	2603.81	2327.63	2068.88	1860.75	1651.50	1461.38	1320.19
180.0	2894.06	2547.56	2341.69	2113.31	1847.81	1656.00	1487.25	1319.06	1116.90
225.0	3151.69	2868.75	2620.69	2346.75	2117.81	1874.81	1654.88	1483.88	1328.06
270.0	3356.44	3083.63	2831.06	2585.25	2288.25	2059.31	1850.06	1635.75	1443.38
315.0	3386.81	3079.69	2820.94	2572.88	2301.19	2046.94	1841.63	1634.06	1463.06
360.0	3583.69	3350.25	3105.56	2824.31	2547.00	2308.50	2051.44	1816.88	1627.31
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1441.69	1297.69	1153.13	1022.06	916.88	809.44	711.00	618.19	536.06
45.0	1304.44	1155.94	1024.31	919.69	808.88	720.56	621.00	528.19	447.75
90.0	1103.23	1045.46	940.22	831.43	732.94	644.51	548.94	464.12	385.71
135.0	1167.75	1050.75	930.94	821.81	730.13	633.94	540.00	461.81	387.56
180.0	1043.78	935.38	826.31	728.61	640.29	550.01	470.14	387.90	311.46
225.0	1121.57	1033.82	925.43	804.21	714.71	626.74	538.09	447.81	377.55
270.0	1293.19	1144.69	1015.88	909.56	799.31	710.44	619.88	515.25	441.00
315.0	1294.88	1113.98	1028.81	909.51	788.23	708.30	621.56	506.03	436.95
360.0	1441.69	1297.69	1153.13	1022.06	916.88	809.44	711.00	618.19	536.06
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	433.13	360.00	293.63	251.10	169.14	130.39	93.49	71.04	60.92
45.0	367.31	293.63	285.19	176.12	127.97	91.74	69.08	56.70	50.96
90.0	319.16	238.44	187.26	139.05	97.54	67.89	55.91	49.56	46.74
135.0	302.06	286.88	181.63	139.16	92.19	68.51	58.28	49.84	47.25
180.0	254.03	198.39	142.48	105.47	77.68	60.47	53.94	50.34	47.31
225.0	308.81	244.52	182.31	140.29	104.12	76.67	64.18	57.15	53.44
270.0	363.38	291.94	220.44	175.11	129.88	93.32	73.58	62.10	56.93
315.0	362.76	286.99	221.12	174.04	128.64	95.51	74.31	63.28	56.87
360.0	433.13	360.00	293.63	251.10	169.14	130.39	93.49	71.04	60.92
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	55.35	52.20	48.77	45.39	42.92	40.22	36.84	34.43	31.95
45.0	48.43	45.90	42.75	40.44	38.19	35.10	32.57	30.49	28.07
90.0	44.44	41.57	39.71	37.18	34.37	32.34	30.32	27.90	26.33
135.0	45.11	41.79	39.60	37.46	34.43	32.51	30.38	27.96	26.27
180.0	44.38	41.91	39.26	36.39	33.92	31.50	29.31	27.39	25.20
225.0	50.34	46.97	44.38	41.63	38.36	35.78	33.41	30.49	28.46
270.0	53.33	49.89	46.58	43.65	40.78	37.52	35.38	32.34	30.09
315.0	53.27	49.73	46.52	43.59	40.44	37.58	35.04	32.18	29.87
360.0	55.35	52.20	48.77	45.39	42.92	40.22	36.84	34.43	31.95

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	29.31	27.39	25.37	23.34	21.54	19.69	18.28	16.99	15.58
45.0	26.33	24.36	22.28	20.98	19.29	17.78	16.71	15.64	14.12
90.0	24.64	22.33	20.98	19.52	18.06	16.82	15.69	14.51	13.67
135.0	24.41	22.28	20.93	19.41	17.89	16.76	15.64	14.46	13.61
180.0	23.18	21.71	19.91	18.45	17.27	15.86	14.79	13.89	13.16
225.0	26.61	24.13	22.22	20.81	19.07	17.66	16.43	15.02	14.06
270.0	28.18	25.76	23.63	22.16	20.36	18.56	17.38	16.03	14.85
315.0	28.01	25.93	23.29	21.83	20.19	18.28	17.16	15.86	14.51
360.0	29.31	27.39	25.37	23.34	21.54	19.69	18.28	16.99	15.58
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	14.46	13.56	12.77	12.15	11.59	11.14	10.69	10.24	9.96
45.0	13.28	12.71	11.93	11.36	10.97	10.52	10.07	9.84	9.51
90.0	12.94	12.26	11.76	11.25	10.80	10.41	10.13	9.79	9.56
135.0	12.94	12.26	11.76	11.25	10.80	10.46	10.13	9.79	9.56
180.0	12.43	11.87	11.31	10.91	10.52	10.18	9.90	9.62	9.34
225.0	13.28	12.60	11.98	11.48	10.91	10.52	10.18	9.84	9.56
270.0	13.84	13.11	12.49	11.87	11.36	10.91	10.58	10.18	9.90
315.0	13.56	12.83	12.21	11.64	11.08	10.63	10.29	9.90	9.62
360.0	14.46	13.56	12.77	12.15	11.59	11.14	10.69	10.24	9.96
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.68	9.39	9.17	8.94	8.61	8.38	8.21	7.99	7.76
45.0	9.28	9.00	8.78	8.55	8.33	8.10	7.88	7.71	7.54
90.0	9.34	9.17	8.94	8.72	8.44	8.21	8.04	7.88	7.65
135.0	9.34	9.11	8.83	8.61	8.33	8.16	7.93	7.76	7.48
180.0	9.11	8.89	8.61	8.38	8.16	7.93	7.71	7.48	7.26
225.0	9.28	9.00	8.78	8.55	8.27	8.04	7.82	7.65	7.37
270.0	9.62	9.34	9.11	8.83	8.61	8.38	8.16	7.99	7.82
315.0	9.39	9.17	8.83	8.66	8.38	8.16	7.99	7.76	7.54
360.0	9.68	9.39	9.17	8.94	8.61	8.38	8.21	7.99	7.76
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.65	7.31	7.09	6.98	6.81	6.64	6.53	6.24	6.08
45.0	7.26	7.14	6.98	6.75	6.58	6.41	6.19	6.02	5.96
90.0	7.43	7.20	7.09	6.92	6.81	6.75	6.69	6.75	6.98
135.0	7.31	7.09	6.92	6.75	6.53	6.30	6.19	6.08	5.91
180.0	7.09	6.86	6.69	6.47	6.30	6.13	5.96	5.85	5.74
225.0	7.14	6.98	6.81	6.69	6.47	6.24	6.08	5.91	5.79
270.0	7.59	7.37	7.20	7.09	6.98	6.92	6.86	6.81	6.86
315.0	7.31	7.14	6.92	6.81	6.64	6.47	6.30	6.19	5.96
360.0	7.65	7.31	7.09	6.98	6.81	6.64	6.53	6.24	6.08
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	5.96	5.85	5.74	5.63	5.57	5.46	5.29	5.18	5.06
45.0	5.85	5.79	5.68	5.63	5.51	5.34	5.18	5.06	4.89
90.0	7.65	8.38	8.78	8.55	5.68	5.29	5.06	4.89	4.84
135.0	5.85	5.74	5.68	5.57	5.46	5.29	5.06	4.95	4.89
180.0	5.63	5.51	5.40	5.34	5.23	5.06	4.95	4.89	4.89
225.0	5.68	5.57	5.46	5.34	5.29	5.18	5.01	4.95	4.84
270.0	6.92	7.09	7.09	6.98	5.40	5.23	5.06	5.01	4.95
315.0	5.79	5.68	5.57	5.46	5.34	5.23	5.06	5.01	4.95
360.0	5.96	5.85	5.74	5.63	5.57	5.46	5.29	5.18	5.06

Intensity data(cd)

C/ γ (°)	90.0
0.0	4.95
45.0	4.84
90.0	4.84
135.0	4.84
180.0	4.89
225.0	4.89
270.0	4.84
315.0	4.84
360.0	4.95