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Nata

LumCAT: 1-0918-M	
Luminaire: 92.70.124.00	
Report No: 210719-B018	Voltage(V): 36.1800
Test No: 210719-C018	Current(A): 0.5110
LampCAT: Fortimo LED SLM 1204 G7N	Power (W): 18.4870
Lamp flux(lm): 2370.0	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): 1827.78
Efficiency(%): 77.12%
Lumens(lm)/Power(W): 98.87
Central intensity(cd): 11179.710
Maximum intensity(cd): 11179.710
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=20.4
 [C90/270]Total=20.4
Field angle(10%Imax): [C0/180]Total=41.0
 [C90/270]Total=41.0
Maximum s/h(1/2): C0_180=0.35 C90_270=0.35
Maximum s/h(1/4): C0_180=0.37 C90_270=0.37
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 77.12%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.373%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11179.716	0.000	0	.000%	.000%
1.0	11173.528	10.696	10.696	.451%	.585%
2.0	10978.214	31.794	42.49	1.342%	2.325%
3.0	10684.308	51.810	94.3	2.186%	5.159%
4.0	10285.144	70.191	164.491	2.962%	8.999%
5.0	9646.284	85.744	250.235	3.618%	13.691%
6.0	8929.238	97.619	347.854	4.119%	19.031%
7.0	8160.159	106.074	453.928	4.476%	24.835%
8.0	7300.589	110.650	564.577	4.669%	30.889%
9.0	6517.730	111.990	676.567	4.725%	37.016%
10.0	5754.488	111.059	787.627	4.686%	43.092%
11.0	5013.534	107.595	895.221	4.540%	48.979%
12.0	4436.128	103.298	998.52	4.359%	54.630%
13.0	3856.191	98.409	1096.928	4.152%	60.014%
14.0	3308.808	91.711	1188.64	3.870%	65.032%
15.0	2911.388	85.394	1274.033	3.603%	69.704%
16.0	2508.919	79.423	1353.456	3.351%	74.049%
17.0	2173.233	72.914	1426.37	3.077%	78.038%
18.0	1804.711	65.588	1491.957	2.767%	81.627%
19.0	1513.730	57.734	1549.692	2.436%	84.785%
20.0	1253.588	50.650	1600.341	2.137%	87.556%
21.0	986.070	43.006	1643.347	1.815%	89.909%
22.0	789.209	35.675	1679.022	1.505%	91.861%
23.0	585.330	28.842	1707.864	1.217%	93.439%
24.0	408.382	21.726	1729.59	.917%	94.628%
25.0	270.141	15.428	1745.018	.651%	95.472%
26.0	167.913	10.340	1755.358	.436%	96.038%
27.0	103.184	6.632	1761.991	.280%	96.400%
28.0	49.746	3.872	1765.862	.163%	96.612%
29.0	31.085	2.115	1767.977	.089%	96.728%
30.0	23.421	1.472	1769.449	.062%	96.808%
31.0	20.742	1.229	1770.678	.052%	96.876%
32.0	19.062	1.140	1771.818	.048%	96.938%
33.0	17.733	1.084	1772.902	.046%	96.997%
34.0	16.643	1.040	1773.942	.044%	97.054%
35.0	15.722	1.005	1774.948	.042%	97.109%
36.0	14.892	0.975	1775.922	.041%	97.163%
37.0	14.295	0.952	1776.874	.040%	97.215%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	13.781	0.937	1777.811	.040%	97.266%
39.0	13.226	0.922	1778.733	.039%	97.316%
40.0	12.867	0.910	1779.643	.038%	97.366%
41.0	12.544	0.905	1780.548	.038%	97.416%
42.0	12.220	0.900	1781.448	.038%	97.465%
43.0	11.967	0.896	1782.344	.038%	97.514%
44.0	11.770	0.896	1783.24	.038%	97.563%
45.0	11.573	0.897	1784.137	.038%	97.612%
46.0	11.398	0.898	1785.035	.038%	97.661%
47.0	11.264	0.901	1785.937	.038%	97.711%
48.0	11.130	0.905	1786.842	.038%	97.760%
49.0	10.990	0.908	1787.75	.038%	97.810%
50.0	10.884	0.912	1788.662	.038%	97.860%
51.0	10.772	0.916	1789.578	.039%	97.910%
52.0	10.673	0.920	1790.499	.039%	97.960%
53.0	10.603	0.926	1791.424	.039%	98.011%
54.0	10.512	0.931	1792.355	.039%	98.062%
55.0	10.448	0.936	1793.291	.039%	98.113%
56.0	10.392	0.942	1794.232	.040%	98.164%
57.0	10.315	0.947	1795.179	.040%	98.216%
58.0	10.245	0.951	1796.13	.040%	98.268%
59.0	10.181	0.955	1797.085	.040%	98.320%
60.0	10.104	0.958	1798.043	.040%	98.373%
61.0	10.034	0.961	1799.004	.041%	98.425%
62.0	9.970	0.964	1799.968	.041%	98.478%
63.0	9.907	0.967	1800.935	.041%	98.531%
64.0	9.830	0.968	1801.903	.041%	98.584%
65.0	9.795	0.971	1802.874	.041%	98.637%
66.0	9.731	0.974	1803.849	.041%	98.691%
67.0	9.696	0.977	1804.825	.041%	98.744%
68.0	9.647	0.980	1805.805	.041%	98.798%
69.0	9.598	0.982	1806.787	.041%	98.851%
70.0	9.555	0.984	1807.771	.042%	98.905%
71.0	9.506	0.985	1808.756	.042%	98.959%
72.0	9.464	0.986	1809.742	.042%	99.013%
73.0	9.429	0.988	1810.73	.042%	99.067%
74.0	9.387	0.989	1811.719	.042%	99.121%
75.0	9.366	0.991	1812.71	.042%	99.175%

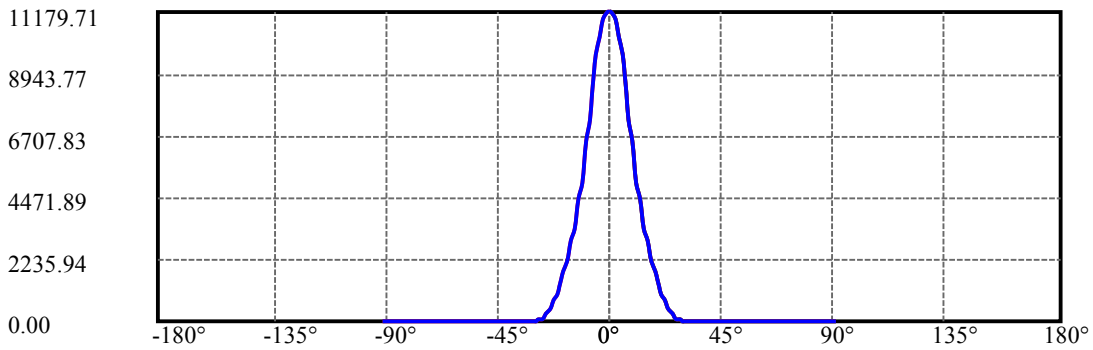
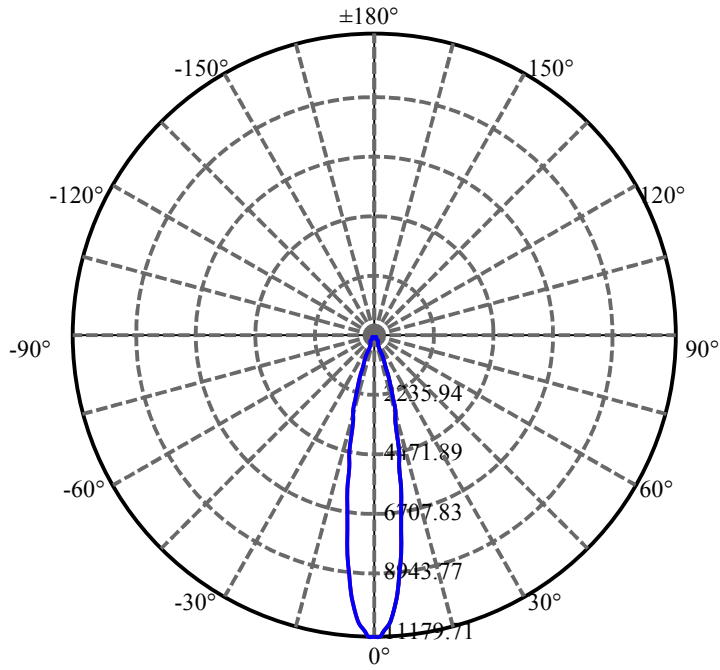
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	9.352	0.994	1813.704	.042%	99.230%
77.0	9.309	0.995	1814.699	.042%	99.284%
78.0	9.295	0.996	1815.695	.042%	99.339%
79.0	9.274	0.998	1816.692	.042%	99.393%
80.0	9.274	1.000	1817.692	.042%	99.448%
81.0	9.281	1.003	1818.696	.042%	99.503%
82.0	9.267	1.006	1819.702	.042%	99.558%
83.0	9.281	1.008	1820.71	.043%	99.613%
84.0	9.345	1.015	1821.725	.043%	99.669%
85.0	9.338	1.020	1822.744	.043%	99.724%
86.0	9.274	1.017	1823.762	.043%	99.780%
87.0	9.155	1.009	1824.77	.043%	99.835%
88.0	9.162	1.003	1825.774	.042%	99.890%
89.0	9.162	1.004	1826.778	.042%	99.945%
90.0	9.162	1.005	1827.783	.042%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1769.45	74.66%	96.81%
0-40	1779.64	75.09%	97.37%
0-60	1798.04	75.87%	98.37%
0-90	1826.78	77.08%	99.95%
0-120	1826.78	77.08%	99.95%
0-180	1827.78	77.12%	100.00%
60-90	29.69	1.25%	1.62%
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%
0-17.55	1462.23	61.70%	80.00%

ZONAL LUMEN SUMMARY

0-10	787.63
10-20	812.71
20-30	169.11
30-40	10.19
40-50	9.02
50-60	9.38
60-70	9.73
70-80	9.92
80-90	9.09
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: —————

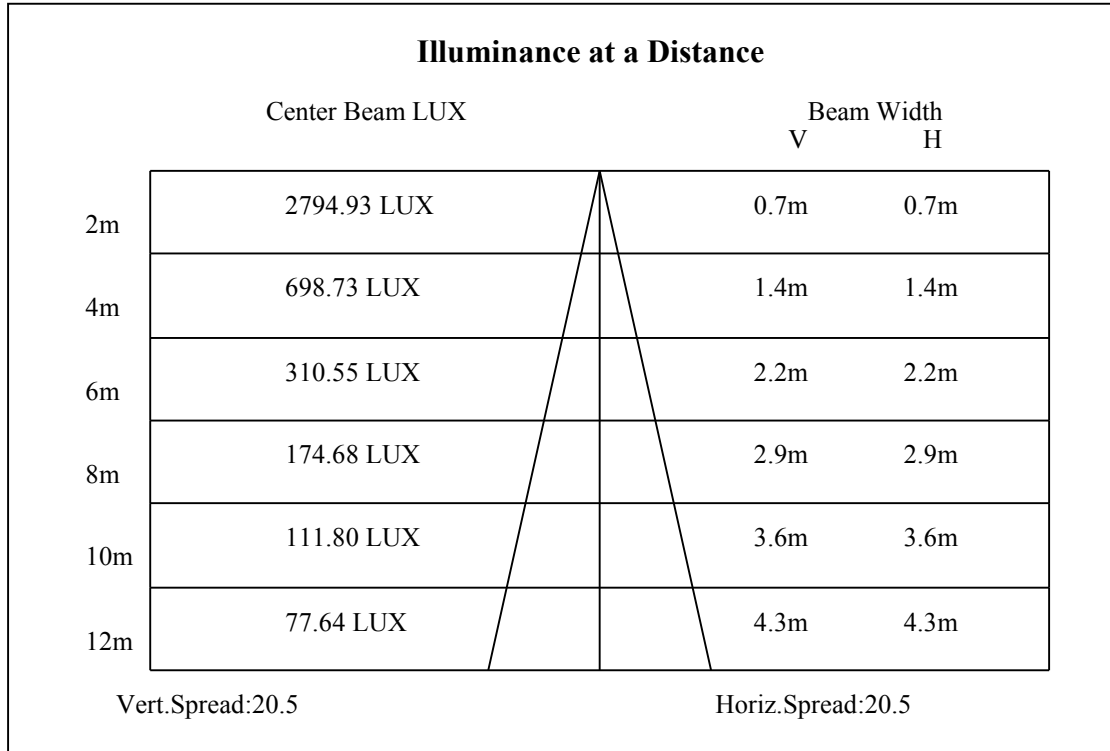
C90/C270: —————

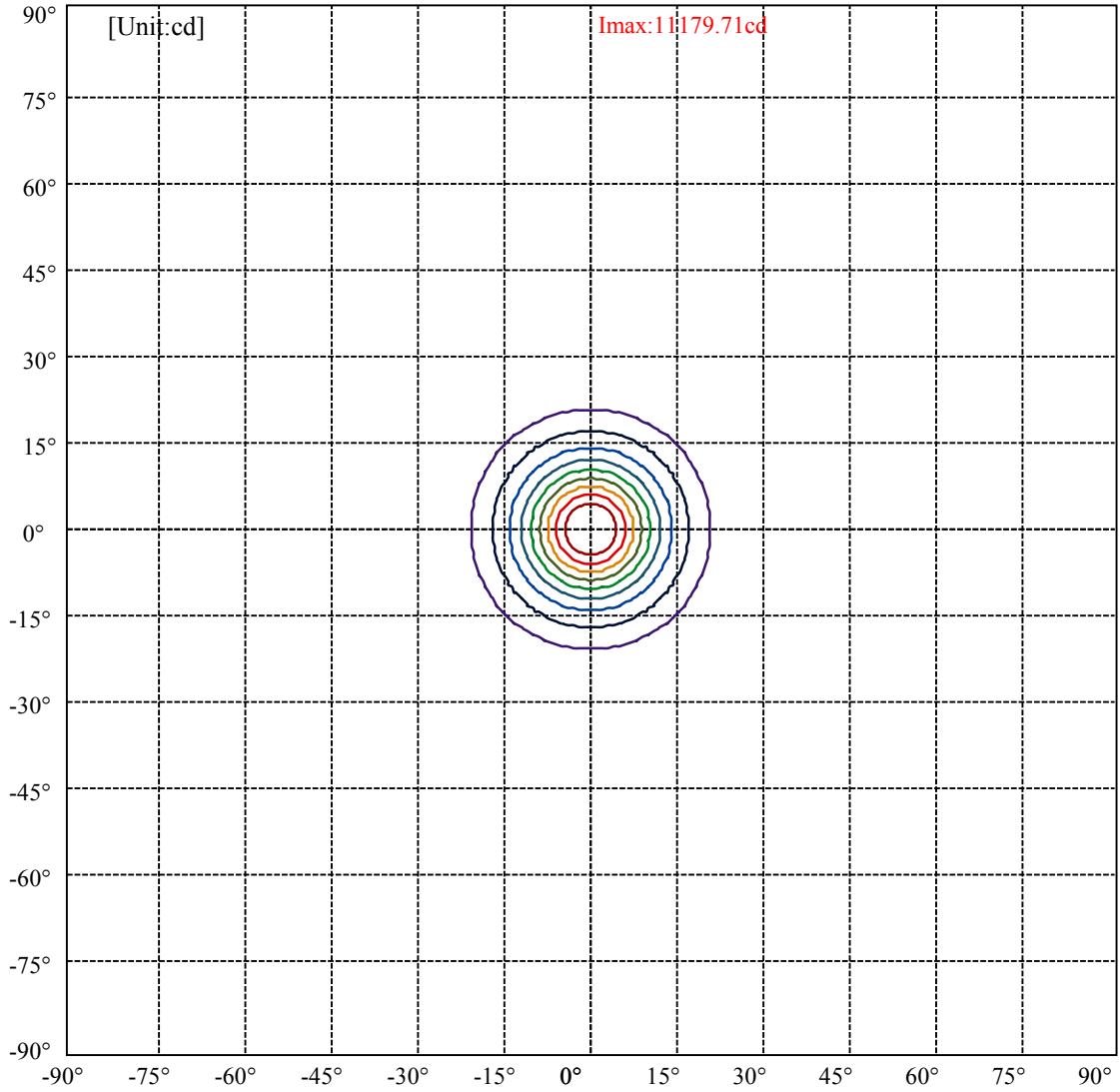
Field angle(10%Imax):C0/180Left:20.5 Right:20.5

:C90/270Left:20.5 Right:20.5

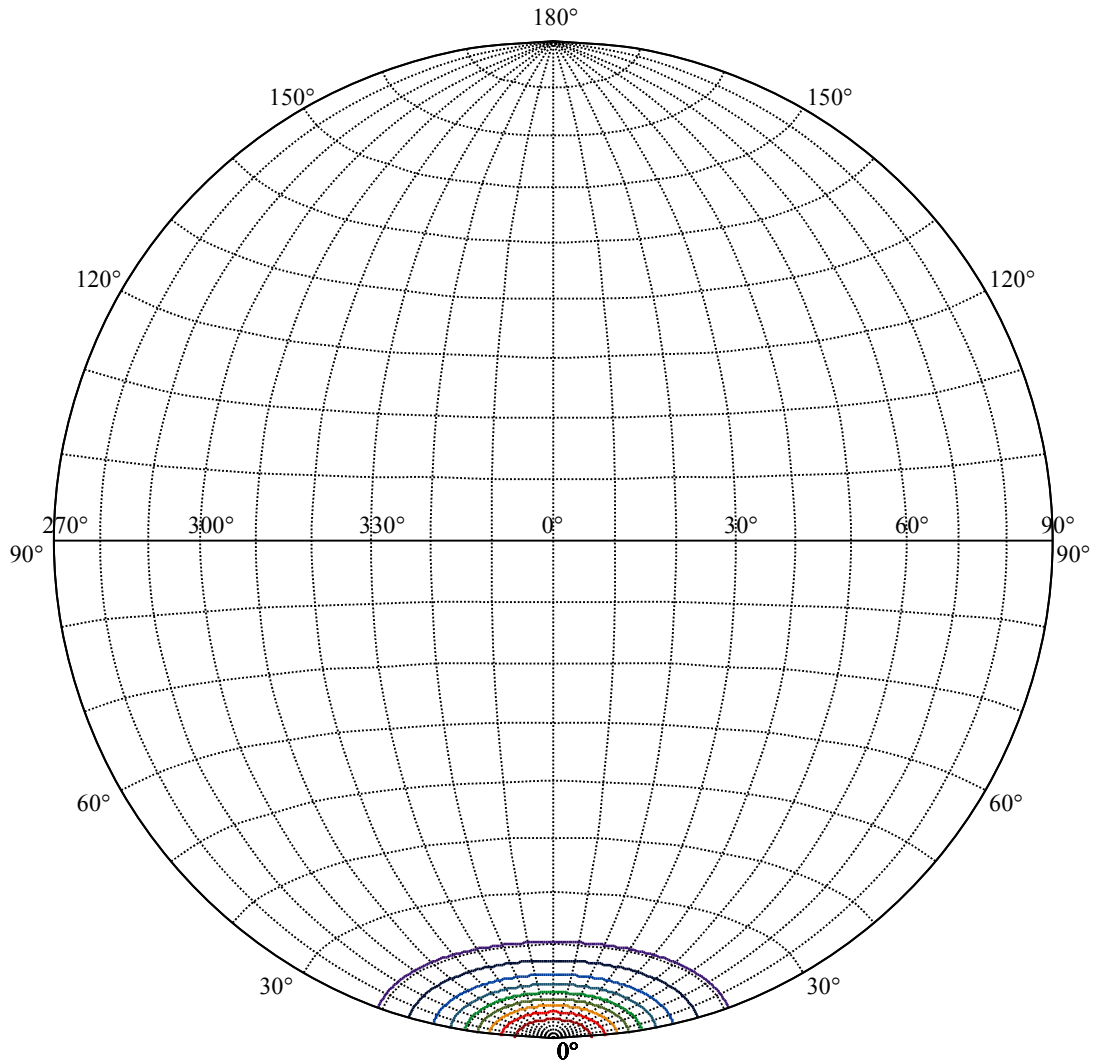
Beam Angle(50%Imax):C0/180Left:10.2 Right:10.2

:C90/270Left:10.2 Right:10.2





(10%Imax) 1117.97	—
(20%Imax) 2235.94	—
(30%Imax) 3353.91	—
(40%Imax) 4471.89	—
(50%Imax) 5589.86	—
(60%Imax) 6707.83	—
(70%Imax) 7825.8	—
(80%Imax) 8943.77	—
(90%Imax) 10061.7	—



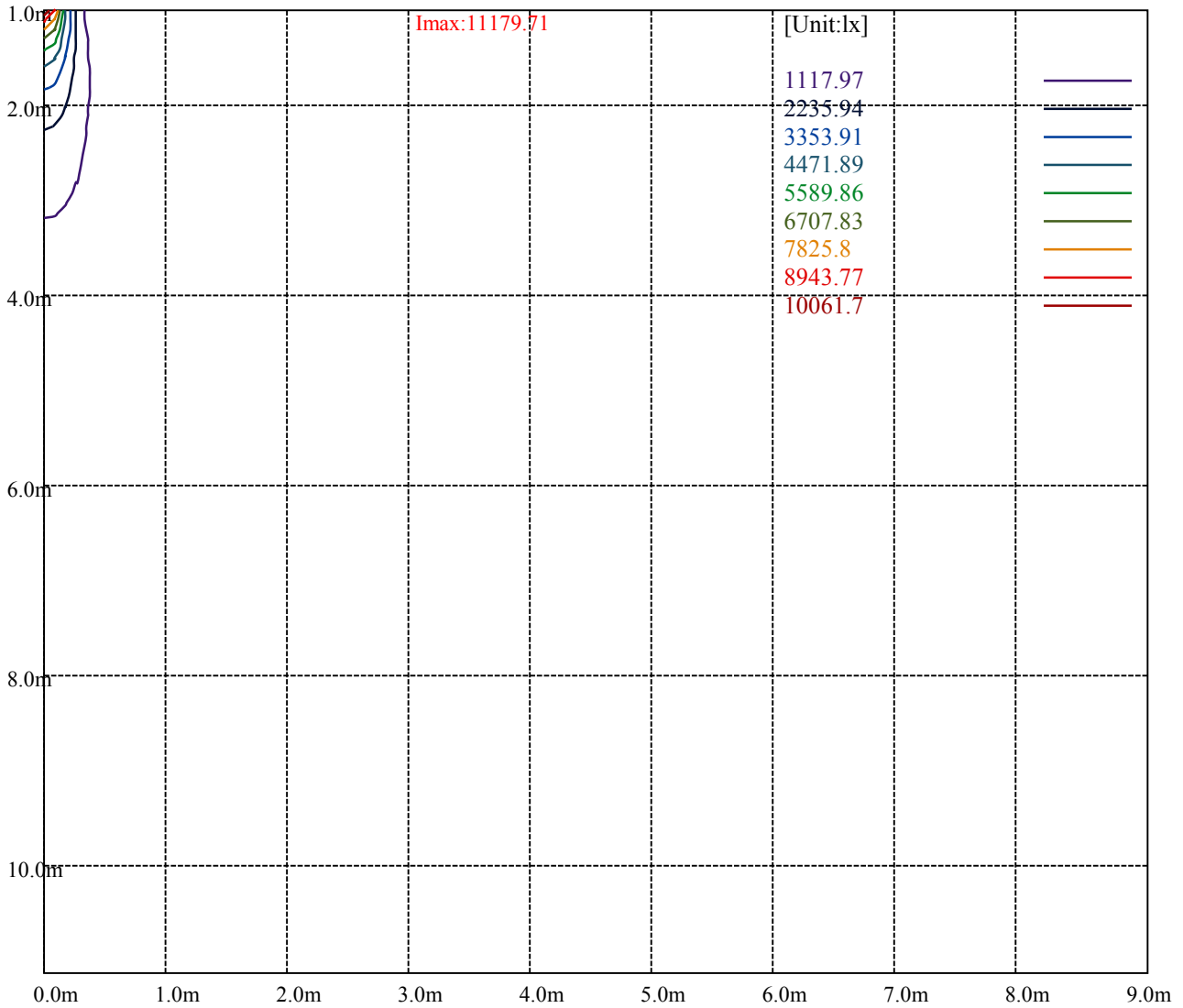
House

[Unit:cd]

Road

Imax:11179.71

(10%Imax)	1117.97	—
(20%Imax)	2235.94	—
(30%Imax)	3353.91	—
(40%Imax)	4471.89	—
(50%Imax)	5589.86	—
(60%Imax)	6707.83	—
(70%Imax)	7825.8	—
(80%Imax)	8943.77	—
(90%Imax)	10061.7	—



Luminance Table

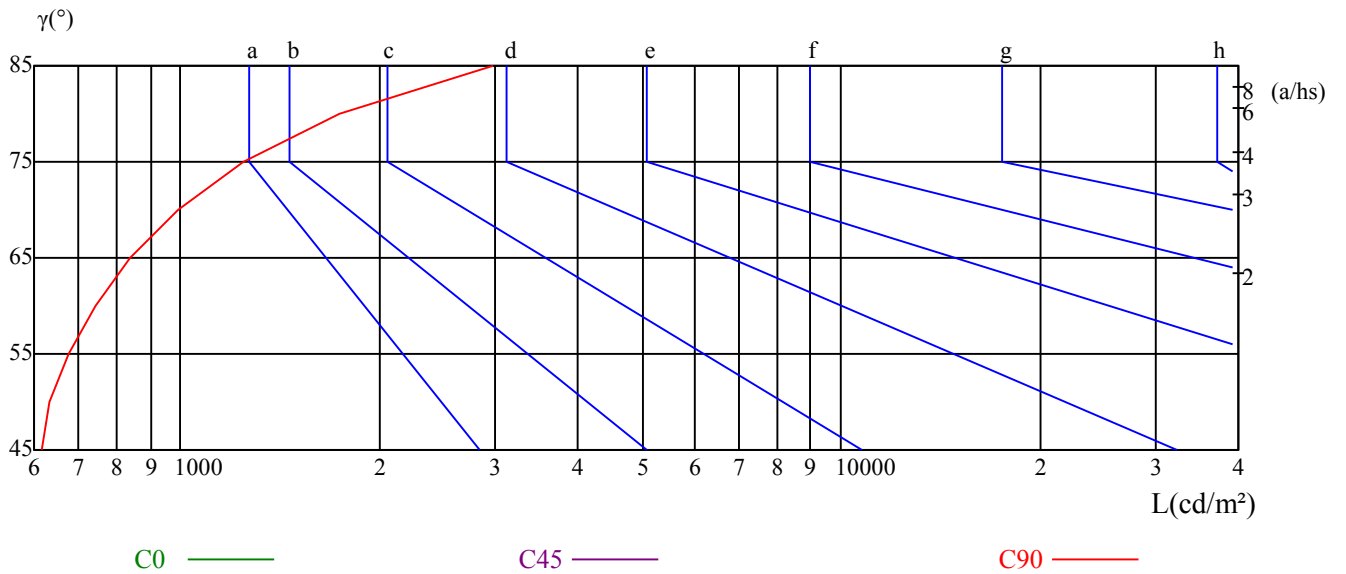
γ	45	50	55	60	65	70	75	80	85
C0	442	432	434	445	463	490	531	591	687
C45	477	470	478	496	523	564	623	712	857
C90	616	634	676	743	840	993	1247	1737	2981

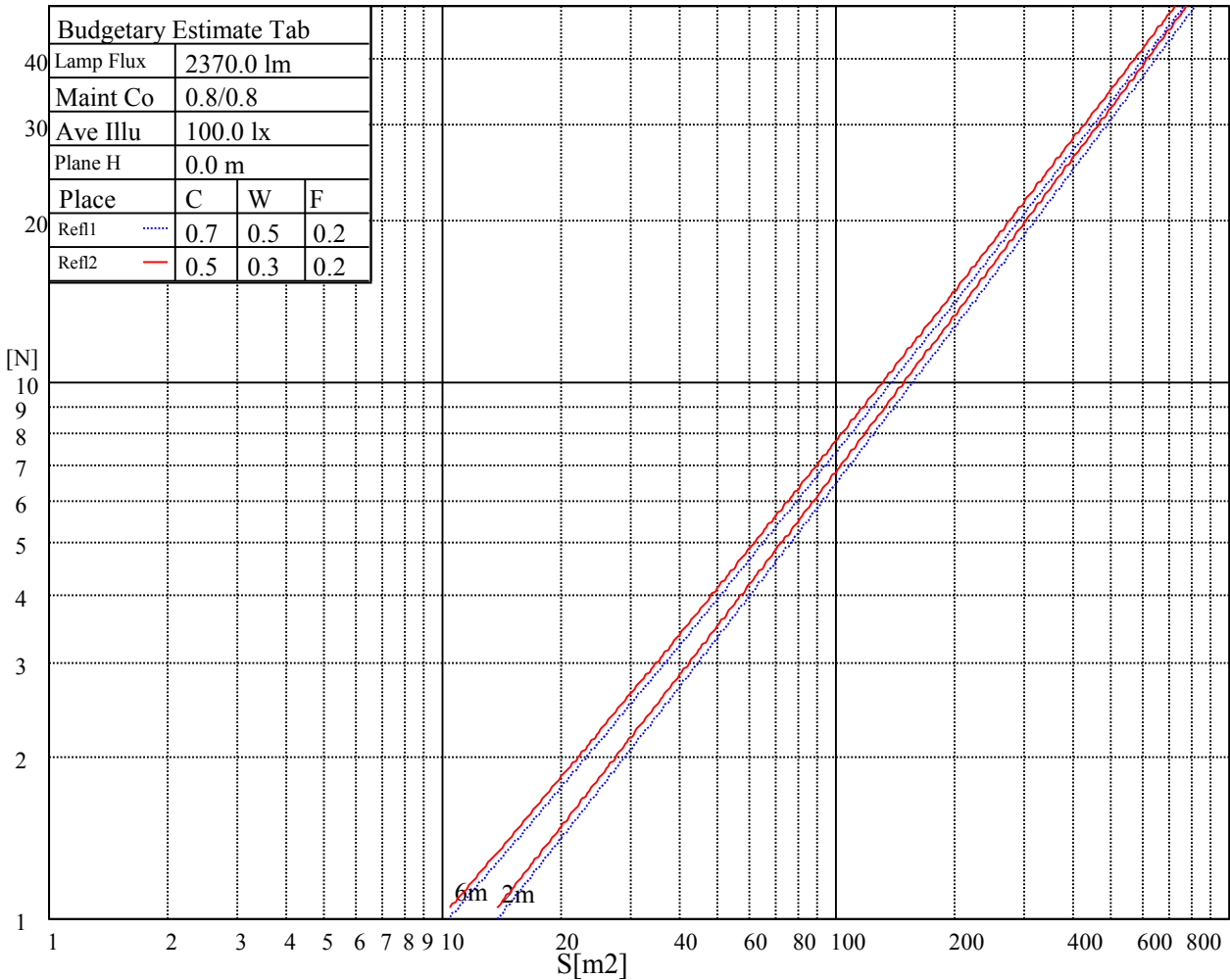
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
904	904	904	1411	1411	1411	4177	4177	4177

Glare Table

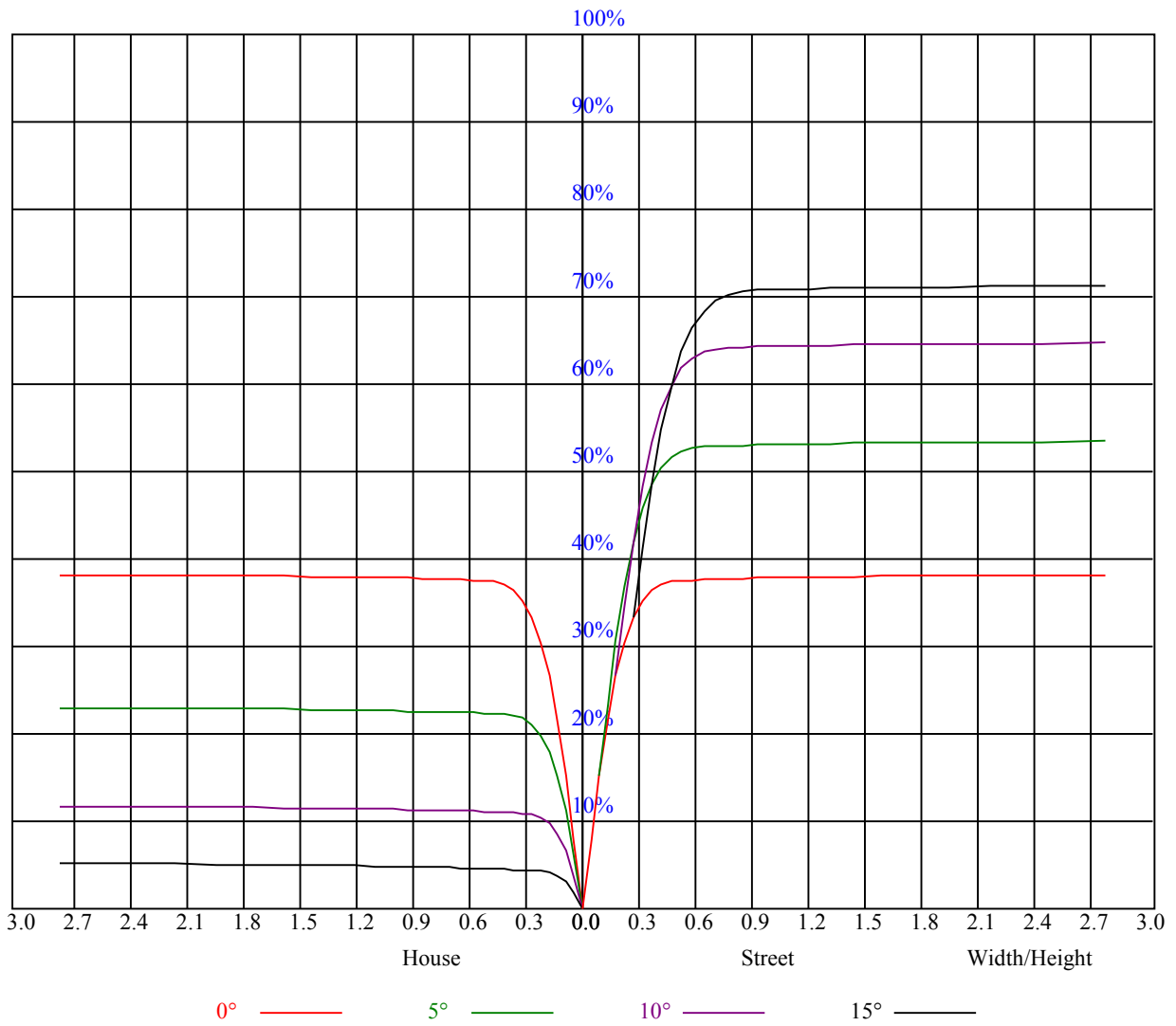
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.92	0.92	0.92	0.90	0.90	0.90	0.86	0.86	0.86	0.82	0.82	0.82	0.79	0.79	0.79	0.77
1	0.87	0.86	0.84	0.85	0.84	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.77	0.76	0.76	0.74
2	0.83	0.81	0.79	0.82	0.80	0.78	0.80	0.78	0.76	0.77	0.76	0.75	0.75	0.74	0.73	0.72
3	0.80	0.77	0.75	0.79	0.77	0.75	0.77	0.75	0.73	0.75	0.74	0.72	0.74	0.72	0.71	0.70
4	0.77	0.74	0.72	0.76	0.74	0.72	0.75	0.73	0.71	0.73	0.72	0.70	0.72	0.71	0.69	0.68
5	0.75	0.72	0.70	0.74	0.71	0.69	0.73	0.71	0.69	0.72	0.70	0.68	0.71	0.69	0.68	0.67
6	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.69	0.67	0.70	0.68	0.66	0.69	0.67	0.66	0.65
7	0.71	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.65	0.69	0.66	0.65	0.68	0.66	0.64	0.64
8	0.69	0.66	0.64	0.68	0.66	0.64	0.68	0.65	0.64	0.67	0.65	0.63	0.67	0.65	0.63	0.62
9	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.64	0.62	0.65	0.63	0.62	0.61
10	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.61	0.64	0.62	0.61	0.64	0.62	0.60	0.60



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	11169.56	11226.94	11193.86	11081.36	10890.11	10434.49	9810.11	9129.49	8386.99
45.0	11214.56	11162.25	10977.75	10633.50	10144.13	9394.88	8677.13	7891.31	6995.81
90.0	11157.75	11031.75	10664.44	10115.44	9528.19	8754.19	7884.00	7067.81	6213.94
135.0	11176.99	11092.61	10766.36	10333.24	9793.24	8983.24	8229.49	7419.49	6547.61
180.0	11169.56	11053.13	10670.63	10211.06	9631.13	8868.38	7991.44	7193.25	6322.50
225.0	11214.56	11205.56	11127.38	10903.50	10529.44	9930.94	9271.13	8463.94	7506.00
270.0	11157.75	11225.25	11205.11	11103.86	10912.61	10468.24	9832.61	9157.61	8341.99
315.0	11176.99	11390.74	11220.19	11092.50	10852.31	10335.94	9738.00	8958.38	8089.88
360.0	11169.56	11226.94	11193.86	11081.36	10890.11	10434.49	9810.11	9129.49	8386.99
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	7492.61	6626.36	5810.74	5158.24	4460.74	3903.86	3352.61	2913.86	2649.38
45.0	6159.94	5459.06	4727.25	4146.75	3567.38	3052.13	2648.81	2255.63	1902.38
90.0	5521.50	4795.88	4150.13	3638.81	3130.31	2683.69	2325.38	2007.56	1652.06
135.0	5760.11	5113.24	4426.99	3886.99	3346.99	2874.49	2666.25	2142.56	1854.00
180.0	5625.00	4913.44	4276.69	3765.38	3258.00	2811.94	2454.19	2127.38	1765.69
225.0	6834.38	6020.44	5206.50	4677.75	4125.94	3455.44	3089.81	2705.63	2310.75
270.0	7464.49	6693.86	5889.49	5242.61	4584.49	3976.99	3498.86	3076.99	2868.86
315.0	7283.81	6413.63	5620.50	4972.50	4375.69	3711.94	3255.19	2841.75	2382.75
360.0	7492.61	6626.36	5810.74	5158.24	4460.74	3903.86	3352.61	2913.86	2649.38
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2103.75	1806.75	1539.56	1229.63	999.56	789.75	552.38	387.56	299.25
45.0	1612.69	1359.00	1065.38	849.38	650.81	434.25	292.50	220.22	99.79
90.0	1388.25	1111.67	917.83	670.05	493.03	339.92	192.54	110.64	63.11
135.0	1544.63	1294.31	1035.00	795.38	597.94	423.56	294.19	140.18	75.04
180.0	1500.75	1098.17	981.06	745.26	547.71	361.35	219.99	129.49	63.06
225.0	1970.44	1701.00	1411.31	1107.39	912.83	704.59	497.19	317.93	195.58
270.0	2259.00	1959.75	1629.56	1375.31	1134.56	886.50	663.19	482.06	307.69
315.0	2058.19	1779.19	1449.00	1116.17	977.23	742.73	555.08	373.05	239.79
360.0	2103.75	1806.75	1539.56	1229.63	999.56	789.75	552.38	387.56	299.25
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	140.06	73.97	44.55	28.07	23.74	21.66	19.80	18.51	17.27
45.0	52.88	32.29	23.29	20.93	19.13	17.89	16.82	15.75	15.02
90.0	35.94	24.02	20.93	19.13	17.83	16.65	15.69	14.96	14.29
135.0	38.03	25.37	21.94	19.80	18.23	17.10	16.20	15.24	14.63
180.0	36.51	24.98	21.38	19.63	18.23	16.88	16.03	15.24	14.51
225.0	100.35	52.65	30.83	24.24	21.94	19.97	18.34	17.16	16.20
270.0	290.81	93.54	48.99	29.42	23.79	21.66	19.80	18.39	17.10
315.0	130.89	71.16	36.79	26.16	23.06	20.70	19.18	17.89	16.76
360.0	140.06	73.97	44.55	28.07	23.74	21.66	19.80	18.51	17.27
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	16.20	15.41	14.74	14.01	13.56	13.11	12.71	12.38	12.15
45.0	14.40	13.89	13.39	12.94	12.60	12.32	12.04	11.81	11.64
90.0	13.73	13.33	12.94	12.54	12.32	12.04	11.81	11.64	11.48
135.0	14.01	13.61	13.16	12.77	12.49	12.21	11.98	11.76	11.59
180.0	14.01	13.56	13.22	12.77	12.49	12.21	12.04	11.81	11.64
225.0	15.13	14.46	13.89	13.25	12.88	12.54	12.15	11.93	11.70
270.0	16.03	15.19	14.63	13.84	13.39	13.05	12.54	12.26	12.04
315.0	15.64	14.91	14.29	13.67	13.22	12.88	12.49	12.15	11.93
360.0	16.20	15.41	14.74	14.01	13.56	13.11	12.71	12.38	12.15

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	11.93	11.76	11.64	11.42	11.31	11.19	11.03	10.91	10.80
45.0	11.48	11.31	11.14	11.03	10.86	10.80	10.69	10.58	10.52
90.0	11.31	11.14	11.03	10.91	10.80	10.69	10.63	10.52	10.46
135.0	11.42	11.31	11.19	11.08	10.91	10.86	10.74	10.63	10.58
180.0	11.48	11.31	11.19	11.08	10.97	10.86	10.74	10.69	10.63
225.0	11.48	11.31	11.14	11.03	10.86	10.74	10.63	10.58	10.46
270.0	11.76	11.53	11.42	11.25	11.14	10.97	10.86	10.74	10.69
315.0	11.76	11.53	11.36	11.25	11.08	10.97	10.86	10.74	10.69
360.0	11.93	11.76	11.64	11.42	11.31	11.19	11.03	10.91	10.80
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.74	10.63	10.58	10.52	10.46	10.41	10.35	10.29	10.24
45.0	10.41	10.35	10.29	10.24	10.13	10.07	9.96	9.84	9.73
90.0	10.41	10.35	10.29	10.24	10.13	10.07	9.96	9.84	9.79
135.0	10.52	10.46	10.41	10.29	10.24	10.13	10.07	10.01	9.90
180.0	10.52	10.46	10.41	10.29	10.24	10.18	10.07	9.96	9.90
225.0	10.35	10.29	10.24	10.18	10.13	10.07	10.01	9.96	9.96
270.0	10.58	10.52	10.46	10.35	10.35	10.29	10.24	10.18	10.13
315.0	10.58	10.52	10.46	10.41	10.29	10.24	10.18	10.18	10.13
360.0	10.74	10.63	10.58	10.52	10.46	10.41	10.35	10.29	10.24
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	10.24	10.13	10.13	10.01	10.01	9.90	9.84	9.79	9.73
45.0	9.68	9.56	9.56	9.51	9.45	9.39	9.39	9.34	9.34
90.0	9.68	9.62	9.62	9.56	9.51	9.51	9.45	9.39	9.34
135.0	9.79	9.73	9.68	9.62	9.56	9.56	9.51	9.51	9.39
180.0	9.84	9.73	9.68	9.62	9.56	9.56	9.51	9.51	9.51
225.0	9.90	9.84	9.79	9.73	9.68	9.62	9.56	9.51	9.51
270.0	10.07	10.01	9.96	9.90	9.90	9.84	9.79	9.73	9.62
315.0	10.07	10.01	9.96	9.90	9.84	9.79	9.73	9.68	9.62
360.0	10.24	10.13	10.13	10.01	10.01	9.90	9.84	9.79	9.73
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	9.68	9.62	9.56	9.56	9.56	9.51	9.51	9.45	9.45
45.0	9.23	9.23	9.17	9.17	9.11	9.11	9.06	9.06	9.06
90.0	9.34	9.34	9.28	9.28	9.23	9.17	9.17	9.11	9.11
135.0	9.39	9.34	9.28	9.28	9.28	9.23	9.23	9.17	9.17
180.0	9.45	9.39	9.39	9.34	9.34	9.28	9.28	9.28	9.28
225.0	9.45	9.39	9.34	9.34	9.34	9.28	9.28	9.28	9.28
270.0	9.62	9.56	9.56	9.51	9.51	9.45	9.45	9.45	9.45
315.0	9.56	9.56	9.51	9.45	9.45	9.45	9.39	9.39	9.39
360.0	9.68	9.62	9.56	9.56	9.56	9.51	9.51	9.45	9.45
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	9.45	9.45	9.51	9.51	9.51	9.45	9.45	9.45	9.45
45.0	9.00	8.94	8.94	8.94	8.89	8.89	8.89	8.89	8.89
90.0	9.11	9.11	9.06	9.00	8.94	8.94	8.94	8.94	8.94
135.0	9.17	9.11	9.11	9.11	9.06	9.06	9.00	9.00	9.00
180.0	9.28	9.34	9.45	9.90	9.73	9.06	9.06	9.06	9.06
225.0	9.34	9.34	9.34	9.45	9.62	10.07	9.23	9.23	9.23
270.0	9.45	9.45	9.45	9.45	9.51	9.34	9.28	9.34	9.34
315.0	9.45	9.39	9.39	9.39	9.45	9.39	9.39	9.39	9.39
360.0	9.45	9.45	9.51	9.51	9.51	9.45	9.45	9.45	9.45

Intensity data(cd)

C/γ(°)	90.0
0.0	9.45
45.0	8.89
90.0	8.94
135.0	9.00
180.0	9.06
225.0	9.28
270.0	9.34
315.0	9.34
360.0	9.45