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Nata

LumCAT: 1-0927-M	
Luminaire: 92.70.124.00	
Report No: 210719-B014	Voltage(V): 36.2400
Test No: 210719-C014	Current(A): 0.5110
LampCAT: Fortimo LED SLM 1204 G7N	Power (W): 18.5180
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): 1806.80
Efficiency(%): 76.24%
Lumens(lm)/Power(W): 97.57
Central intensity(cd): 8604.141
Maximum intensity(cd): 8604.141
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=26.3
 [C90/270]Total=26.3
Field angle(10%Imax): [C0/180]Total=42.9
 [C90/270]Total=42.9
Maximum s/h(1/2): C0_180=0.45 C90_270=0.45
Maximum s/h(1/4): C0_180=0.43 C90_270=0.43
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 76.24%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.545%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8604.141	0.000	0	.000%	.000%
1.0	8580.867	8.223	8.223	.347%	.455%
2.0	8495.367	24.509	32.732	1.034%	1.812%
3.0	8339.063	40.262	72.995	1.699%	4.040%
4.0	8154.352	55.209	128.203	2.329%	7.096%
5.0	7902.281	69.075	197.278	2.915%	10.919%
6.0	7551.563	81.214	278.492	3.427%	15.414%
7.0	7218.492	91.677	370.17	3.868%	20.488%
8.0	6820.945	100.478	470.647	4.240%	26.049%
9.0	6361.594	106.837	577.485	4.508%	31.962%
10.0	5896.758	110.934	688.418	4.681%	38.101%
11.0	5411.461	112.992	801.41	4.768%	44.355%
12.0	4913.156	112.863	914.273	4.762%	50.602%
13.0	4386.516	110.364	1024.637	4.657%	56.710%
14.0	3877.102	105.774	1130.411	4.463%	62.564%
15.0	3393.563	99.815	1230.225	4.212%	68.089%
16.0	2969.438	93.236	1323.461	3.934%	73.249%
17.0	2442.656	84.281	1407.742	3.556%	77.914%
18.0	2046.220	74.012	1481.754	3.123%	82.010%
19.0	1674.471	64.732	1546.486	2.731%	85.593%
20.0	1313.072	54.680	1601.167	2.307%	88.619%
21.0	961.193	43.670	1644.837	1.843%	91.036%
22.0	737.494	34.136	1678.973	1.440%	92.925%
23.0	517.465	26.332	1705.305	1.111%	94.383%
24.0	312.954	18.156	1723.461	.766%	95.387%
25.0	208.934	11.867	1735.328	.501%	96.044%
26.0	109.723	7.522	1742.85	.317%	96.461%
27.0	75.509	4.532	1747.382	.191%	96.711%
28.0	39.790	2.919	1750.301	.123%	96.873%
29.0	29.566	1.815	1752.115	.077%	96.973%
30.0	24.532	1.461	1753.576	.062%	97.054%
31.0	21.860	1.291	1754.867	.054%	97.126%
32.0	19.807	1.194	1756.061	.050%	97.192%
33.0	18.239	1.121	1757.181	.047%	97.254%
34.0	16.973	1.066	1758.247	.045%	97.313%
35.0	15.736	1.016	1759.263	.043%	97.369%
36.0	14.780	0.972	1760.235	.041%	97.423%
37.0	14.063	0.941	1761.175	.040%	97.475%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	13.380	0.916	1762.091	.039%	97.525%
39.0	12.734	0.891	1762.983	.038%	97.575%
40.0	12.277	0.872	1763.855	.037%	97.623%
41.0	11.862	0.860	1764.714	.036%	97.671%
42.0	11.475	0.848	1765.562	.036%	97.718%
43.0	11.173	0.839	1766.401	.035%	97.764%
44.0	10.898	0.833	1767.234	.035%	97.810%
45.0	10.666	0.829	1768.063	.035%	97.856%
46.0	10.455	0.826	1768.889	.035%	97.902%
47.0	10.259	0.824	1769.713	.035%	97.947%
48.0	10.104	0.823	1770.536	.035%	97.993%
49.0	9.956	0.824	1771.36	.035%	98.038%
50.0	9.809	0.824	1772.184	.035%	98.084%
51.0	9.675	0.824	1773.008	.035%	98.130%
52.0	9.555	0.825	1773.833	.035%	98.175%
53.0	9.443	0.826	1774.66	.035%	98.221%
54.0	9.345	0.828	1775.488	.035%	98.267%
55.0	9.274	0.831	1776.319	.035%	98.313%
56.0	9.190	0.834	1777.153	.035%	98.359%
57.0	9.077	0.835	1777.989	.035%	98.405%
58.0	9.021	0.837	1778.826	.035%	98.452%
59.0	8.972	0.841	1779.667	.035%	98.498%
60.0	8.888	0.844	1780.51	.036%	98.545%
61.0	8.831	0.846	1781.356	.036%	98.592%
62.0	8.775	0.848	1782.204	.036%	98.639%
63.0	8.712	0.850	1783.055	.036%	98.686%
64.0	8.655	0.852	1783.907	.036%	98.733%
65.0	8.606	0.854	1784.761	.036%	98.780%
66.0	8.585	0.858	1785.619	.036%	98.828%
67.0	8.536	0.861	1786.48	.036%	98.875%
68.0	8.494	0.863	1787.343	.036%	98.923%
69.0	8.459	0.865	1788.207	.036%	98.971%
70.0	8.416	0.867	1789.074	.037%	99.019%
71.0	8.381	0.868	1789.942	.037%	99.067%
72.0	8.367	0.871	1790.813	.037%	99.115%
73.0	8.332	0.873	1791.686	.037%	99.163%
74.0	8.325	0.876	1792.562	.037%	99.212%
75.0	8.290	0.878	1793.44	.037%	99.261%

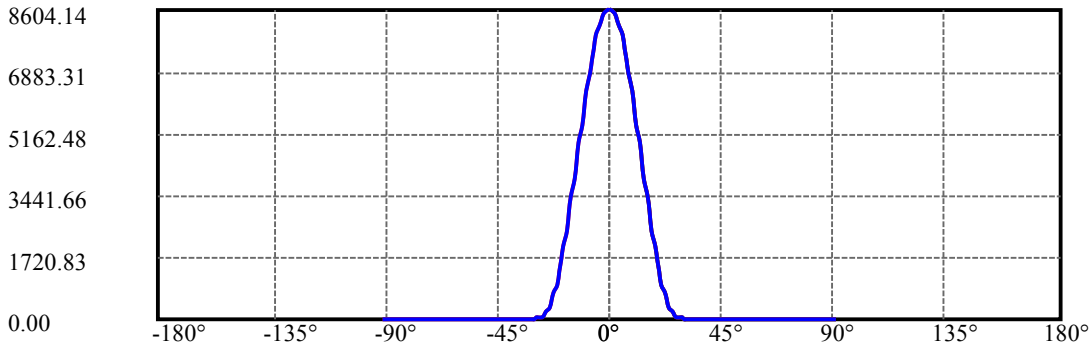
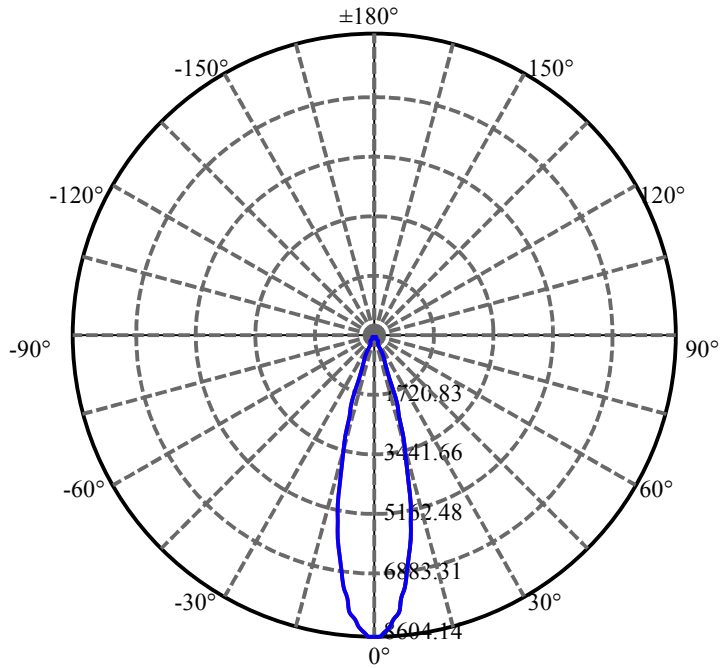
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.283	0.880	1794.32	.037%	99.309%
77.0	8.262	0.882	1795.202	.037%	99.358%
78.0	8.248	0.884	1796.086	.037%	99.407%
79.0	8.255	0.887	1796.972	.037%	99.456%
80.0	8.255	0.890	1797.862	.038%	99.505%
81.0	8.248	0.892	1798.755	.038%	99.555%
82.0	8.276	0.896	1799.651	.038%	99.604%
83.0	8.290	0.901	1800.551	.038%	99.654%
84.0	8.374	0.908	1801.459	.038%	99.704%
85.0	8.325	0.911	1802.371	.038%	99.755%
86.0	8.255	0.906	1803.277	.038%	99.805%
87.0	8.002	0.890	1804.166	.038%	99.854%
88.0	8.016	0.877	1805.044	.037%	99.903%
89.0	8.009	0.878	1805.922	.037%	99.951%
90.0	8.016	0.879	1806.801	.037%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1753.58	73.99%	97.05%
0-40	1763.85	74.42%	97.62%
0-60	1780.51	75.13%	98.54%
0-90	1805.92	76.20%	99.95%
0-120	1805.92	76.20%	99.95%
0-180	1806.80	76.24%	100.00%
60-90	26.26	1.11%	1.45%
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%
0-17.51	1445.44	60.99%	80.00%

ZONAL LUMEN SUMMARY

0-10	688.42
10-20	912.75
20-30	152.41
30-40	10.28
40-50	8.33
50-60	8.33
60-70	8.56
70-80	8.79
80-90	8.06
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: ———

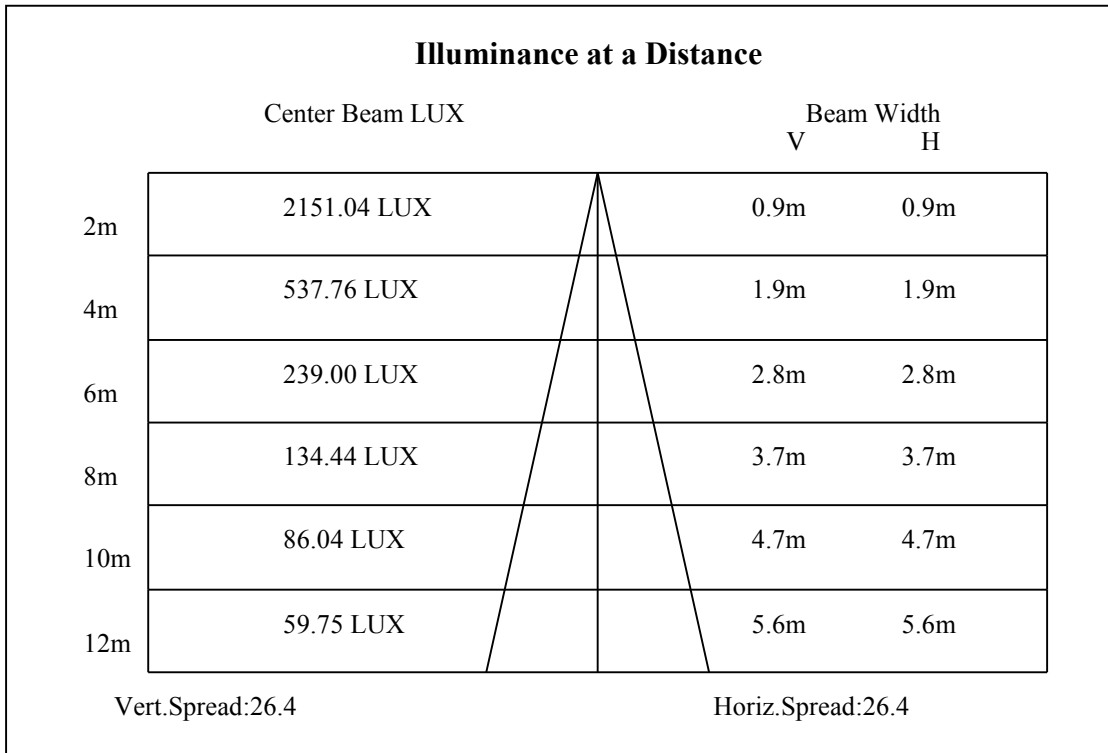
C90/C270: ———

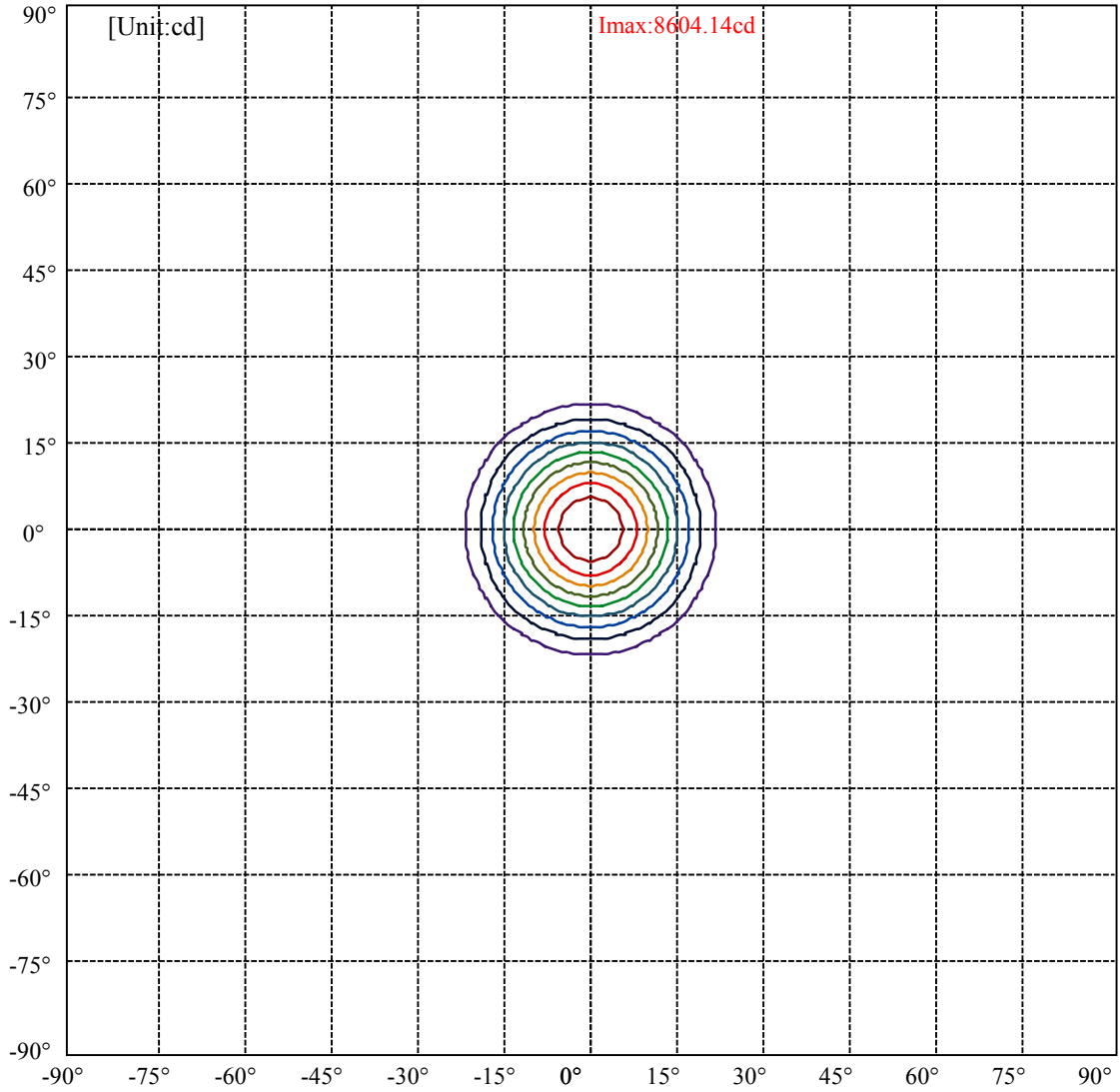
Field angle(10%Imax):C0/180Left:21.5 Right:21.5

:C90/270Left:21.5 Right:21.5

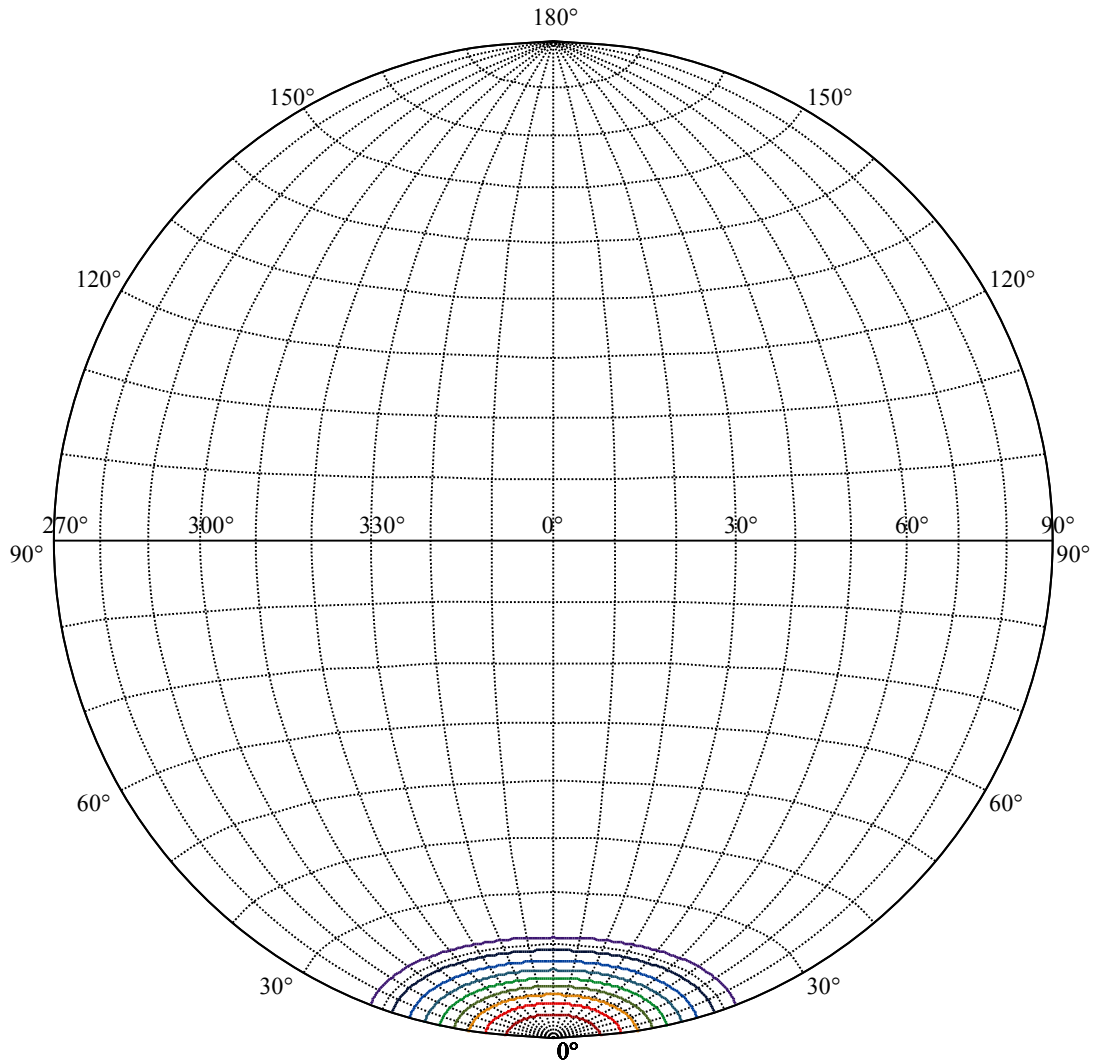
Beam Angle(50%Imax):C0/180Left:13.2 Right:13.2

:C90/270Left:13.2 Right:13.2





(10%Imax) 860.414	—
(20%Imax) 1720.83	—
(30%Imax) 2581.24	—
(40%Imax) 3441.66	—
(50%Imax) 4302.07	—
(60%Imax) 5162.48	—
(70%Imax) 6022.9	—
(80%Imax) 6883.31	—
(90%Imax) 7743.73	—



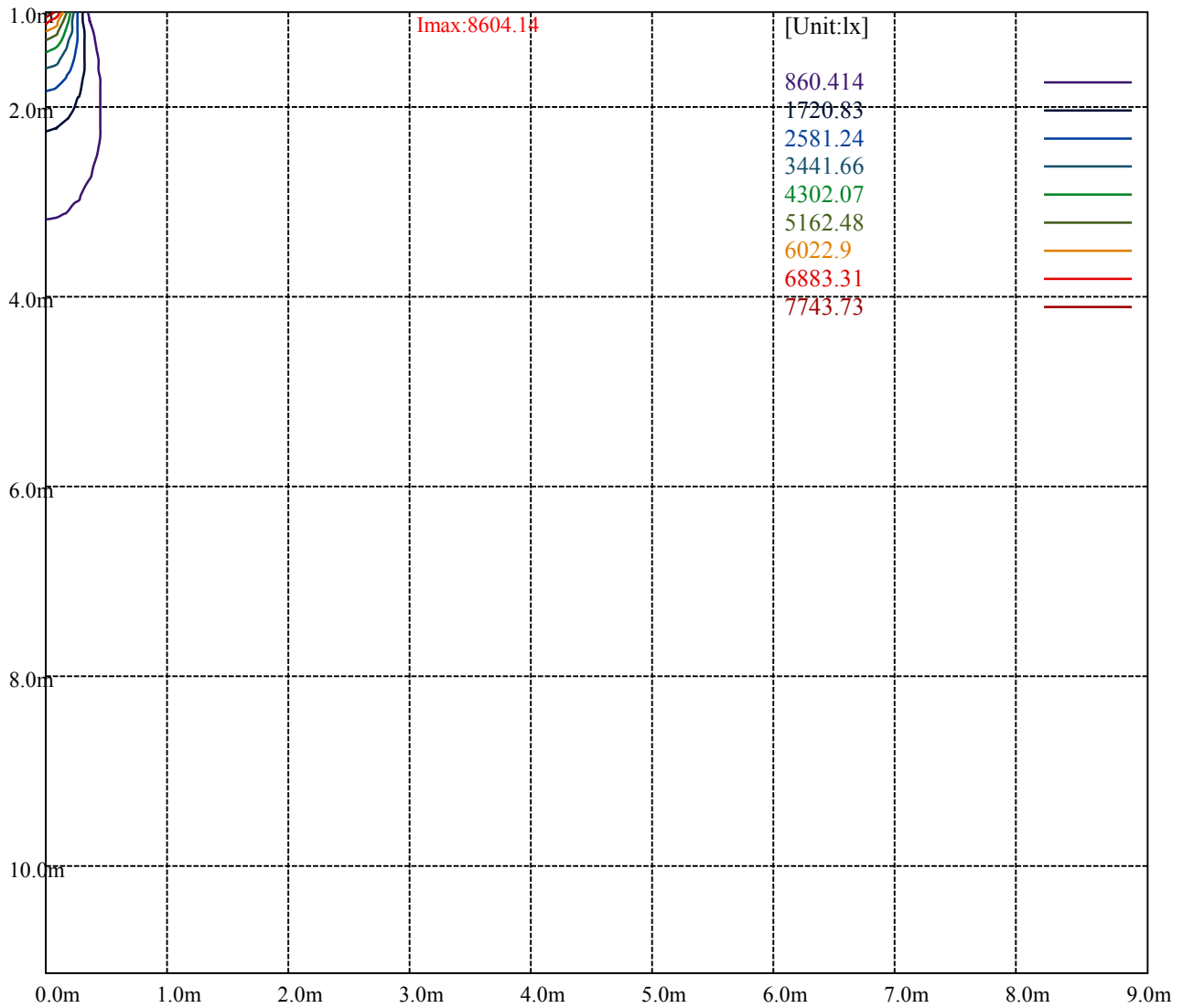
House

[Unit:cd]

Road

Imax:8604.14

(10%Imax) 860.414	—
(20%Imax) 1720.83	—
(30%Imax) 2581.24	—
(40%Imax) 3441.66	—
(50%Imax) 4302.07	—
(60%Imax) 5162.48	—
(70%Imax) 6022.9	—
(80%Imax) 6883.31	—
(90%Imax) 7743.73	—



Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	407	389	386	392	406	432	470	526	612
C45	439	424	425	437	460	497	551	634	764
C90	568	571	600	653	738	875	1104	1546	2658

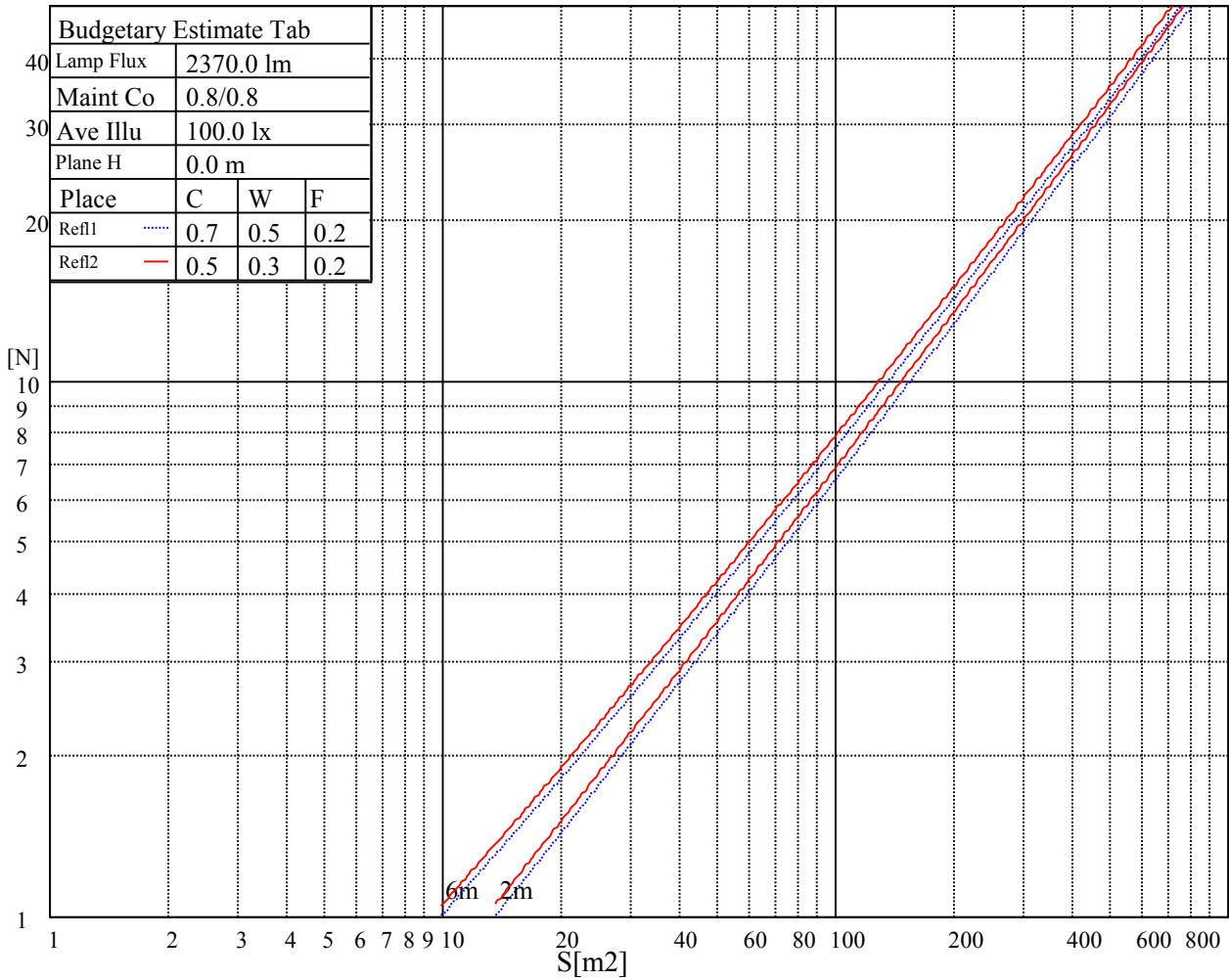
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
794	794	794	1249	1249	1249	3724	3724	3724

Glare Table

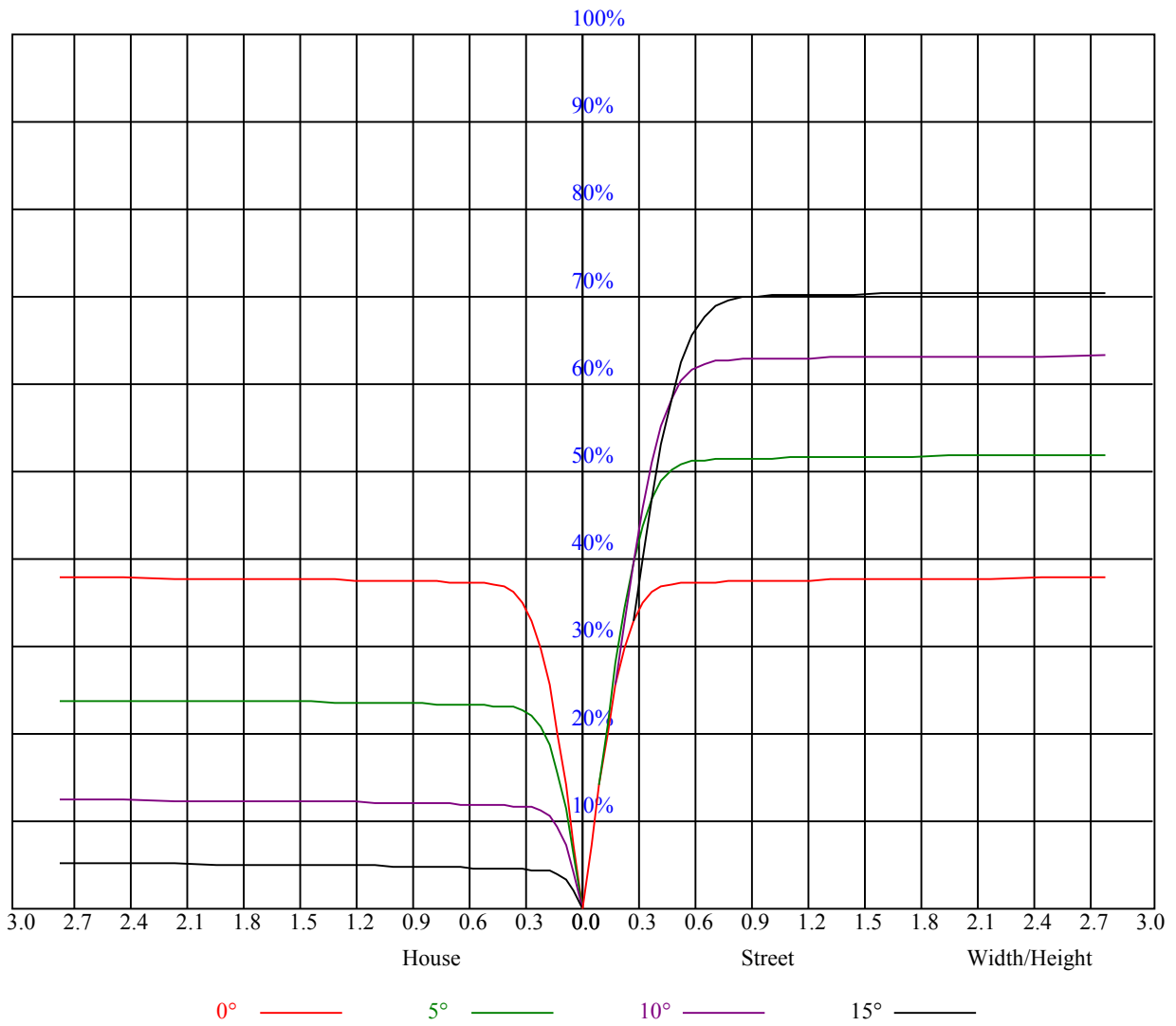
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.91	0.91	0.91	0.89	0.89	0.89	0.85	0.85	0.85	0.81	0.81	0.81	0.78	0.78	0.78	0.76
1	0.86	0.84	0.83	0.84	0.83	0.82	0.81	0.80	0.79	0.79	0.78	0.77	0.76	0.75	0.75	0.74
2	0.82	0.80	0.78	0.81	0.79	0.77	0.78	0.77	0.75	0.76	0.75	0.74	0.74	0.73	0.72	0.71
3	0.79	0.76	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.74	0.73	0.71	0.73	0.71	0.70	0.69
4	0.76	0.73	0.71	0.75	0.73	0.70	0.74	0.71	0.70	0.72	0.70	0.69	0.71	0.69	0.68	0.67
5	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.71	0.69	0.67	0.69	0.68	0.66	0.66
6	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.65	0.68	0.66	0.65	0.64
7	0.69	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.64	0.67	0.65	0.63	0.67	0.65	0.63	0.62
8	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.64	0.62	0.66	0.63	0.62	0.65	0.63	0.62	0.61
9	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.61	0.64	0.62	0.60	0.64	0.62	0.60	0.60
10	0.64	0.61	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.61	0.59	0.62	0.60	0.59	0.58



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	8530.31	8645.63	8706.94	8722.69	8685.56	8592.19	8417.81	8215.88	7939.69
45.0	8646.75	8689.50	8677.69	8605.69	8496.56	8309.81	8045.44	7766.44	7402.50
90.0	8627.63	8592.19	8480.25	8289.00	8081.44	7812.56	7407.56	7037.44	6643.13
135.0	8611.88	8528.63	8337.94	8132.06	7868.25	7524.00	7117.88	6717.38	6243.19
180.0	8530.31	8356.50	8136.56	7786.69	7458.75	7079.63	6566.63	6122.25	5652.56
225.0	8646.75	8553.38	8415.00	8159.06	7899.19	7590.38	7139.25	6747.75	6332.06
270.0	8627.63	8628.19	8560.13	8447.06	8281.69	8019.00	7702.88	7414.88	6955.88
315.0	8611.88	8652.94	8648.44	8570.25	8463.38	8290.69	8015.06	7725.94	7398.56
360.0	8530.31	8645.63	8706.94	8722.69	8685.56	8592.19	8417.81	8215.88	7939.69
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	7588.13	7180.31	6774.19	6346.69	5773.50	5294.25	4798.13	4303.13	3674.81
45.0	6981.75	6616.13	6061.50	5595.19	5115.94	4497.75	4010.63	3533.63	2962.69
90.0	6156.00	5652.56	5178.38	4638.38	4086.56	3606.75	3099.94	2667.94	2206.13
135.0	5735.81	5247.56	4703.06	4202.44	3655.69	3145.50	2715.75	2363.06	1852.88
180.0	5113.69	4556.25	4060.13	3534.19	3037.50	2620.69	2185.88	1819.69	1309.50
225.0	5828.06	5305.50	4823.44	4265.44	3719.81	3258.56	2776.50	2375.44	1960.88
270.0	6514.31	6100.31	5600.81	5140.13	4659.19	4046.06	3566.81	3171.94	2574.00
315.0	6975.00	6515.44	6090.19	5582.81	5043.94	4547.25	3994.88	3520.69	3000.38
360.0	7588.13	7180.31	6774.19	6346.69	5773.50	5294.25	4798.13	4303.13	3674.81
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	3202.88	2757.38	2236.50	1849.50	1496.25	1136.25	818.44	573.19	350.44
45.0	2527.31	2128.50	1666.69	1329.75	1020.38	728.44	482.06	302.06	149.01
90.0	1780.88	1432.13	1084.84	778.11	545.85	353.93	174.21	88.65	50.91
135.0	1500.19	1220.63	829.69	578.81	393.75	285.19	84.66	46.86	32.23
180.0	1079.33	795.83	548.72	302.34	166.22	80.72	40.39	30.60	25.99
225.0	1573.88	1106.94	965.64	642.04	422.94	249.47	104.06	53.21	36.28
270.0	2184.75	1825.88	1412.44	1109.81	829.69	556.31	336.38	293.63	80.49
315.0	2520.56	2128.50	1760.06	1099.18	1024.88	749.42	463.44	283.28	152.44
360.0	3202.88	2757.38	2236.50	1849.50	1496.25	1136.25	818.44	573.19	350.44
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	288.56	97.65	55.41	36.56	29.64	25.88	23.46	21.38	19.35
45.0	82.41	45.28	31.22	26.33	23.57	21.38	19.74	18.28	16.88
90.0	33.41	27.34	24.53	22.05	20.19	18.51	17.10	15.98	15.02
135.0	27.51	24.30	21.94	19.97	18.28	16.82	15.86	14.91	14.01
180.0	22.95	21.04	19.41	17.72	16.76	15.69	14.68	14.06	13.33
225.0	29.59	25.88	23.40	21.15	19.46	17.89	16.54	15.53	14.57
270.0	46.13	32.63	27.62	24.75	22.22	20.14	18.62	17.27	15.86
315.0	73.52	44.21	33.02	27.73	24.75	22.16	19.91	18.39	16.88
360.0	288.56	97.65	55.41	36.56	29.64	25.88	23.46	21.38	19.35
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	17.94	16.76	15.58	14.63	13.89	13.16	12.66	12.21	11.76
45.0	15.86	15.08	14.23	13.56	13.05	12.54	12.09	11.76	11.42
90.0	14.12	13.50	12.99	12.43	12.04	11.70	11.31	11.08	10.80
135.0	13.33	12.83	12.38	11.93	11.53	11.25	10.97	10.74	10.52
180.0	12.71	12.38	11.98	11.53	11.31	11.08	10.86	10.58	10.41
225.0	13.73	13.16	12.60	12.04	11.64	11.36	11.03	10.80	10.58
270.0	14.91	14.12	13.33	12.71	12.21	11.76	11.36	11.03	10.80
315.0	15.64	14.68	13.95	13.05	12.54	12.04	11.53	11.19	10.91
360.0	17.94	16.76	15.58	14.63	13.89	13.16	12.66	12.21	11.76

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	11.48	11.19	10.86	10.63	10.41	10.24	10.13	9.96	9.79
45.0	11.14	10.86	10.63	10.46	10.29	10.13	9.96	9.84	9.68
90.0	10.52	10.35	10.18	10.01	9.90	9.79	9.56	9.51	9.39
135.0	10.35	10.18	10.01	9.90	9.79	9.62	9.56	9.39	9.34
180.0	10.29	10.13	10.01	9.90	9.73	9.68	9.56	9.45	9.39
225.0	10.35	10.18	10.07	9.90	9.79	9.62	9.51	9.39	9.28
270.0	10.58	10.35	10.13	10.01	9.84	9.68	9.56	9.45	9.34
315.0	10.63	10.41	10.18	10.01	9.90	9.73	9.56	9.45	9.34
360.0	11.48	11.19	10.86	10.63	10.41	10.24	10.13	9.96	9.79
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	9.68	9.62	9.51	9.39	9.34	9.23	9.17	9.06	9.06
45.0	9.56	9.51	9.34	9.23	9.17	9.06	9.00	8.94	8.83
90.0	9.28	9.17	9.17	9.00	8.94	8.94	8.83	8.78	8.72
135.0	9.23	9.17	9.11	9.00	8.94	8.89	8.78	8.78	8.66
180.0	9.28	9.23	9.11	9.06	9.00	9.00	8.89	8.83	8.83
225.0	9.23	9.17	9.06	9.00	8.94	8.89	8.83	8.78	8.72
270.0	9.28	9.17	9.11	9.00	8.94	8.89	8.83	8.78	8.72
315.0	9.23	9.17	9.11	8.94	8.89	8.89	8.78	8.72	8.66
360.0	9.68	9.62	9.51	9.39	9.34	9.23	9.17	9.06	9.06
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.00	8.89	8.83	8.78	8.72	8.72	8.66	8.61	8.55
45.0	8.78	8.66	8.61	8.61	8.55	8.49	8.44	8.38	8.33
90.0	8.61	8.55	8.49	8.49	8.44	8.38	8.33	8.33	8.27
135.0	8.61	8.55	8.49	8.49	8.44	8.38	8.38	8.33	8.27
180.0	8.78	8.72	8.66	8.61	8.61	8.55	8.55	8.49	8.55
225.0	8.66	8.66	8.61	8.61	8.55	8.49	8.49	8.44	8.44
270.0	8.66	8.66	8.61	8.61	8.55	8.49	8.44	8.44	8.38
315.0	8.61	8.55	8.55	8.49	8.44	8.44	8.38	8.33	8.27
360.0	9.00	8.89	8.83	8.78	8.72	8.72	8.66	8.61	8.55
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.55	8.49	8.44	8.44	8.44	8.38	8.38	8.38	8.38
45.0	8.33	8.27	8.27	8.21	8.16	8.16	8.10	8.10	8.10
90.0	8.21	8.21	8.21	8.16	8.10	8.10	8.04	8.04	8.04
135.0	8.27	8.27	8.27	8.21	8.21	8.16	8.16	8.16	8.10
180.0	8.49	8.44	8.49	8.44	8.49	8.44	8.49	8.49	8.49
225.0	8.44	8.38	8.44	8.38	8.38	8.44	8.44	8.44	8.49
270.0	8.38	8.33	8.27	8.27	8.27	8.27	8.21	8.27	8.27
315.0	8.27	8.27	8.21	8.21	8.21	8.16	8.16	8.16	8.16
360.0	8.55	8.49	8.44	8.44	8.44	8.38	8.38	8.38	8.38
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.33	8.38	8.33	8.38	8.38	8.44	8.21	8.21	8.21
45.0	8.10	8.04	8.04	8.04	7.99	7.99	7.99	7.99	7.99
90.0	8.04	8.04	7.99	7.93	7.88	7.88	7.82	7.82	7.82
135.0	8.10	8.10	8.10	8.16	8.21	7.93	7.93	7.93	7.93
180.0	8.55	8.66	8.78	9.17	8.61	8.10	8.10	8.16	8.16
225.0	8.49	8.55	8.61	8.78	8.94	9.34	8.04	8.04	8.04
270.0	8.21	8.27	8.27	8.33	8.38	8.27	7.93	7.99	7.93
315.0	8.16	8.16	8.21	8.21	8.21	8.10	7.99	7.99	7.99
360.0	8.33	8.38	8.33	8.38	8.38	8.44	8.21	8.21	8.21

Intensity data(cd)

C/γ(°)	90.0
0.0	8.21
45.0	7.99
90.0	7.88
135.0	7.93
180.0	8.10
225.0	8.10
270.0	7.93
315.0	7.99
360.0	8.21