

---

LumCAT: 4-2202-L  
Luminaire: 92.70.131.00  
Report No: NATA0100  
Test No: GC2019120401  
LampCAT: TRIDONIC SLE G7 13MM  
Lamp flux(lm): 1765.0  
Number of Lamps: 1  
Length(mm): 0  
Phm Type: C

Voltage(V): 35.1400  
Current(A): 0.3970  
Power (W): 13.9500  
PF: 1.0000  
Ballast type: DC  
Width(mm): 0  
Height(mm): 0

---

### Photometric Results

Lumens(lm): 1692.79  
Efficiency(%): 95.91%  
Lumens(lm)/Power(W): 121.35  
Central intensity(cd): 8472.938  
Maximum intensity(cd): 8472.938  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=22.1  
                                  [C90/270]Total=22.1  
Field angle(10%Imax): [C0/180]Total=38.1  
                                  [C90/270]Total=38.1  
Maximum s/h(1/2): C0\_180=0.38 C90\_270=0.38  
Maximum s/h(1/4): C0\_180=0.35 C90\_270=0.35  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 95.91%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.388%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8472.938	0.000	0	.000%	.000%
1.0	8414.578	8.080	8.08	.458%	.477%
2.0	8163.492	23.794	31.875	1.348%	1.883%
3.0	7828.594	38.248	70.123	2.167%	4.142%
4.0	7504.383	51.324	121.447	2.908%	7.174%
5.0	7144.242	63.018	184.465	3.570%	10.897%
6.0	6832.336	73.451	257.915	4.162%	15.236%
7.0	6463.406	82.526	340.442	4.676%	20.111%
8.0	5994.492	89.159	429.6	5.051%	25.378%
9.0	5503.148	93.182	522.783	5.279%	30.883%
10.0	4949.227	94.590	617.373	5.359%	36.471%
11.0	4266.000	92.079	709.452	5.217%	41.910%
12.0	3617.859	86.182	795.634	4.883%	47.001%
13.0	2947.570	77.915	873.549	4.414%	51.604%
14.0	2271.305	66.801	940.35	3.785%	55.550%
15.0	1764.070	55.399	995.749	3.139%	58.823%
16.0	1399.732	46.359	1042.108	2.627%	61.562%
17.0	1116.921	39.191	1081.299	2.220%	63.877%
18.0	950.639	34.090	1115.389	1.931%	65.891%
19.0	849.523	31.319	1146.708	1.774%	67.741%
20.0	774.506	29.724	1176.432	1.684%	69.497%
21.0	730.470	28.899	1205.331	1.637%	71.204%
22.0	698.231	28.710	1234.041	1.627%	72.900%
23.0	669.375	28.696	1262.737	1.626%	74.595%
24.0	648.780	28.820	1291.557	1.633%	76.298%
25.0	628.291	29.038	1320.594	1.645%	78.013%
26.0	611.430	29.264	1349.858	1.658%	79.742%
27.0	597.002	29.565	1379.423	1.675%	81.488%
28.0	582.405	29.860	1409.283	1.692%	83.252%
29.0	566.156	30.050	1439.332	1.703%	85.027%
30.0	552.621	30.207	1469.539	1.711%	86.812%
31.0	535.205	30.273	1499.812	1.715%	88.600%
32.0	501.694	29.706	1529.518	1.683%	90.355%
33.0	452.102	28.099	1557.617	1.592%	92.015%
34.0	381.677	25.233	1582.85	1.430%	93.505%
35.0	298.245	21.116	1603.965	1.196%	94.753%
36.0	199.132	15.837	1619.802	.897%	95.688%
37.0	136.041	10.931	1630.733	.619%	96.334%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	67.542	6.795	1637.529	.385%	96.736%
39.0	34.777	3.492	1641.021	.198%	96.942%
40.0	23.815	2.043	1643.065	.116%	97.063%
41.0	20.918	1.593	1644.658	.090%	97.157%
42.0	18.696	1.439	1646.097	.082%	97.242%
43.0	17.473	1.340	1647.437	.076%	97.321%
44.0	16.460	1.281	1648.717	.073%	97.396%
45.0	15.609	1.232	1649.95	.070%	97.469%
46.0	14.766	1.188	1651.138	.067%	97.539%
47.0	14.027	1.145	1652.283	.065%	97.607%
48.0	13.423	1.110	1653.393	.063%	97.673%
49.0	12.980	1.084	1654.477	.061%	97.737%
50.0	12.600	1.067	1655.543	.060%	97.800%
51.0	12.234	1.051	1656.594	.060%	97.862%
52.0	11.883	1.035	1657.629	.059%	97.923%
53.0	11.538	1.019	1658.648	.058%	97.983%
54.0	11.229	1.003	1659.651	.057%	98.042%
55.0	10.997	0.992	1660.643	.056%	98.101%
56.0	10.779	0.984	1661.627	.056%	98.159%
57.0	10.561	0.976	1662.603	.055%	98.217%
58.0	10.399	0.969	1663.572	.055%	98.274%
59.0	10.266	0.966	1664.538	.055%	98.331%
60.0	10.090	0.962	1665.5	.054%	98.388%
61.0	9.942	0.956	1666.456	.054%	98.444%
62.0	9.830	0.953	1667.409	.054%	98.501%
63.0	9.696	0.950	1668.358	.054%	98.557%
64.0	9.577	0.946	1669.304	.054%	98.613%
65.0	9.450	0.942	1670.246	.053%	98.668%
66.0	9.345	0.938	1671.183	.053%	98.724%
67.0	9.260	0.935	1672.119	.053%	98.779%
68.0	9.141	0.932	1673.051	.053%	98.834%
69.0	9.035	0.927	1673.978	.053%	98.889%
70.0	8.944	0.923	1674.902	.052%	98.943%
71.0	8.852	0.920	1675.821	.052%	98.998%
72.0	8.747	0.915	1676.737	.052%	99.052%
73.0	8.663	0.910	1677.647	.052%	99.105%
74.0	8.592	0.907	1678.554	.051%	99.159%
75.0	8.543	0.905	1679.459	.051%	99.213%

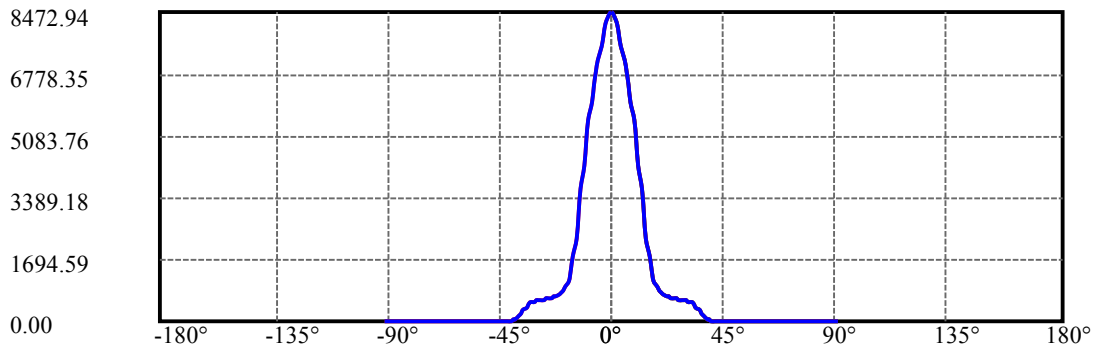
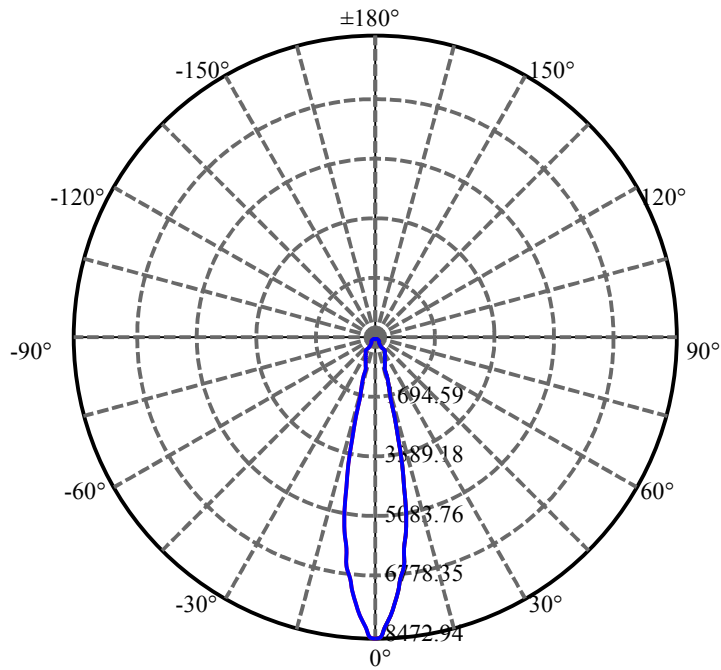
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.494	0.904	1680.364	.051%	99.266%
77.0	8.452	0.903	1681.267	.051%	99.319%
78.0	8.409	0.903	1682.17	.051%	99.373%
79.0	8.346	0.900	1683.07	.051%	99.426%
80.0	8.297	0.897	1683.967	.051%	99.479%
81.0	8.262	0.895	1684.863	.051%	99.532%
82.0	8.227	0.894	1685.757	.051%	99.585%
83.0	8.177	0.892	1686.649	.051%	99.637%
84.0	8.142	0.889	1687.538	.050%	99.690%
85.0	8.086	0.886	1688.423	.050%	99.742%
86.0	8.037	0.881	1689.305	.050%	99.794%
87.0	7.988	0.877	1690.182	.050%	99.846%
88.0	7.952	0.873	1691.055	.049%	99.898%
89.0	7.903	0.869	1691.924	.049%	99.949%
90.0	7.882	0.865	1692.789	.049%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1469.54	83.26%	86.81%
0-40	1643.06	93.09%	97.06%
0-60	1665.50	94.36%	98.39%
0-90	1691.92	95.86%	99.95%
0-120	1691.92	95.86%	99.95%
0-180	1692.79	95.91%	100.00%
60-90	27.39	1.55%	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%
0-26.15	1354.23	76.73%	80.00%

## ZONAL LUMEN SUMMARY

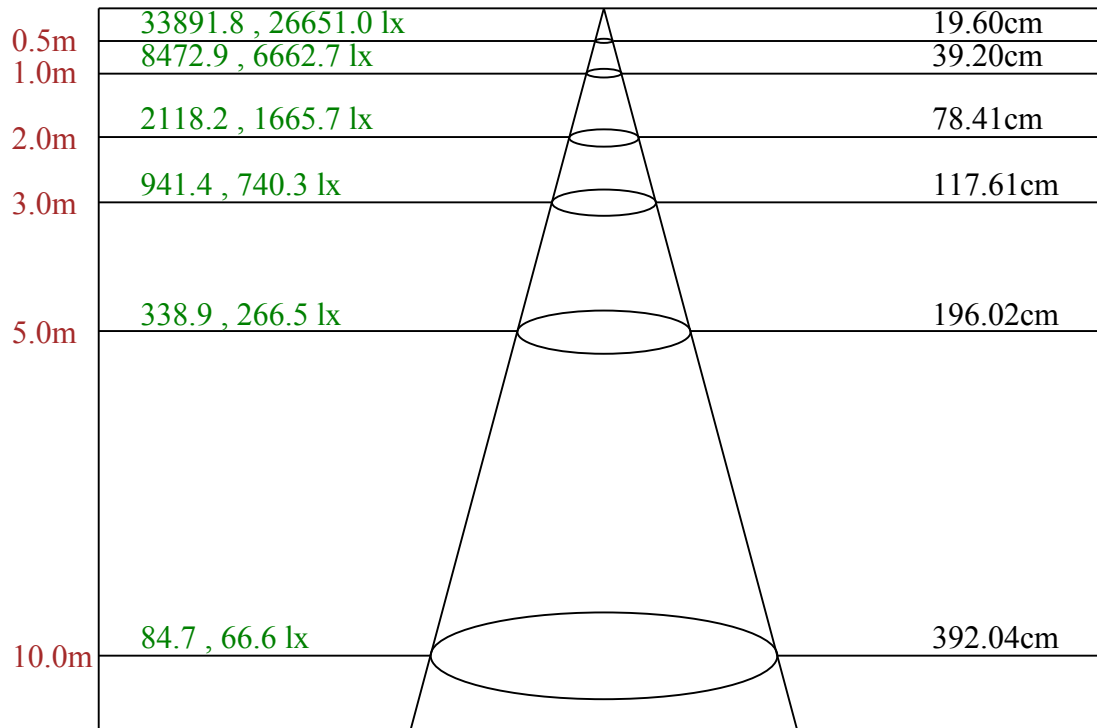
0-10	617.37
10-20	559.06
20-30	293.11
30-40	173.53
40-50	12.48
50-60	9.96
60-70	9.40
70-80	9.07
80-90	7.96
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



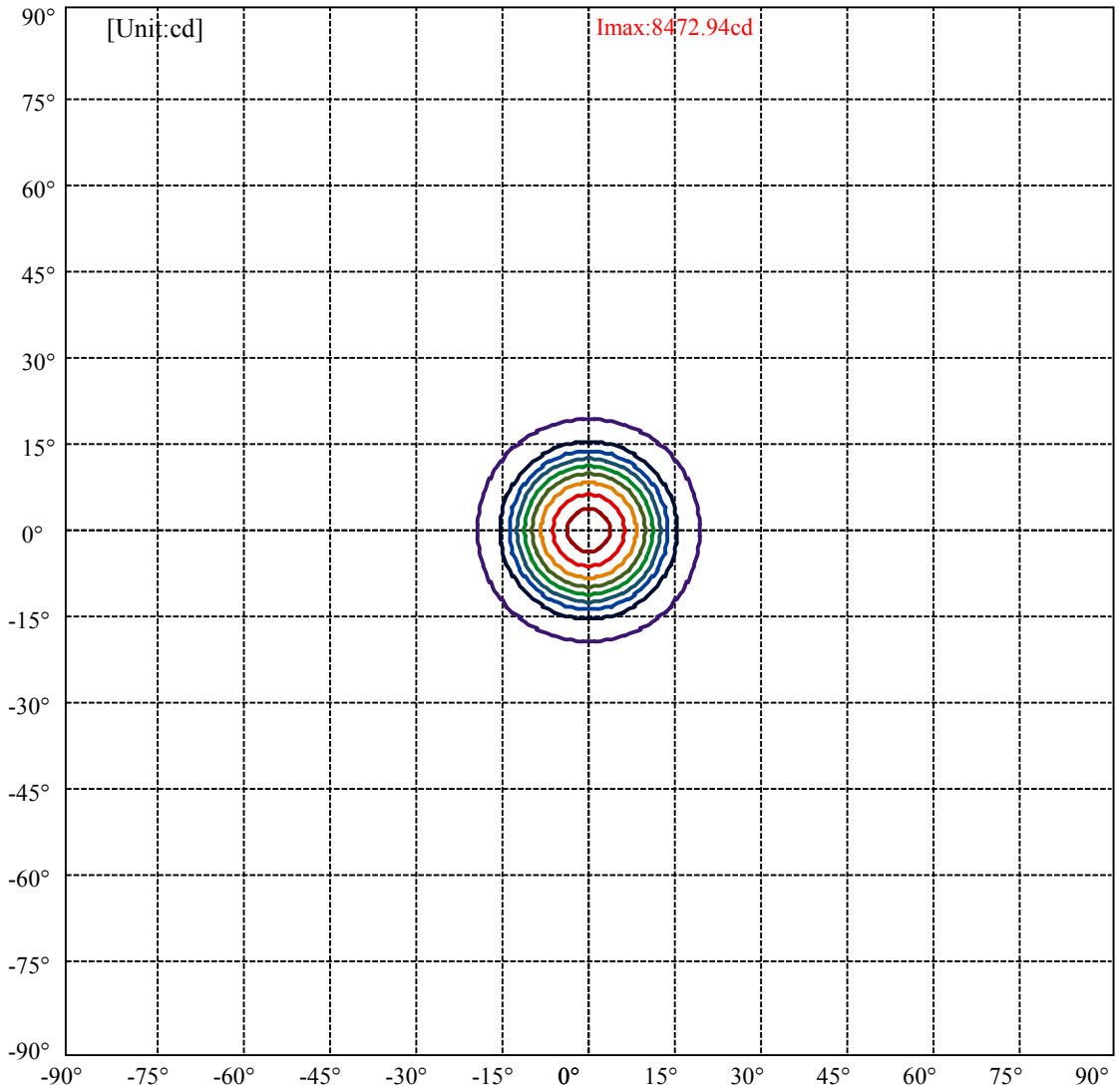
C0(Max): —————  
 C0/C180: —————  
 C90/C270: —————

Field angle(10%Imax):C0/180Left:19.0 Right:19.0  
 :C90/270Left:19.0 Right:19.0

Beam Angle(50%Imax):C0/180Left:11.0 Right:11.0  
 :C90/270Left:11.0 Right:11.0

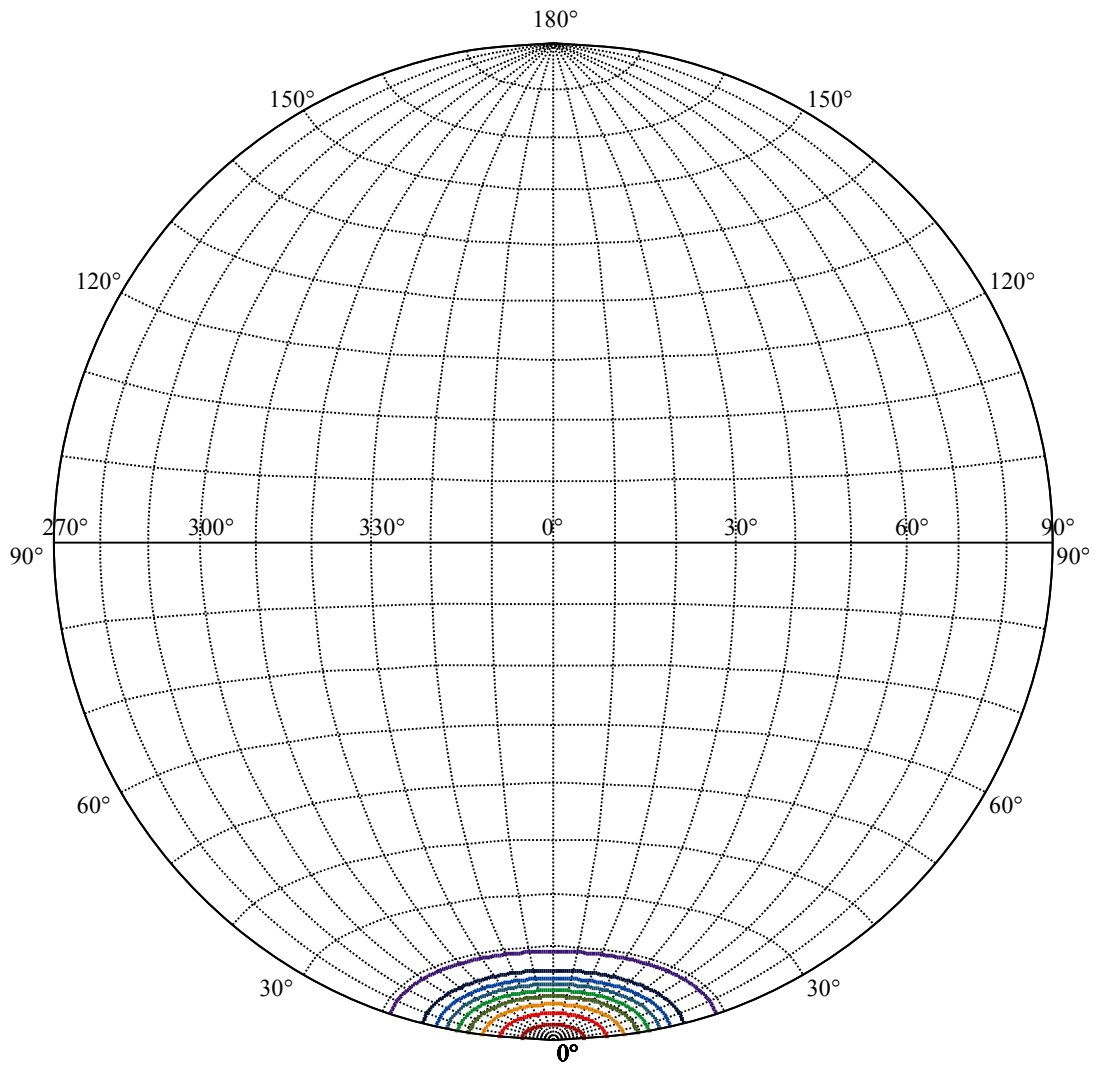


Max , Ave      Beam angle of C0 plane 22.18



(10%I <sub>max</sub> ) 847.294	—
(20%I <sub>max</sub> ) 1694.59	—
(30%I <sub>max</sub> ) 2541.88	—
(40%I <sub>max</sub> ) 3389.18	—
(50%I <sub>max</sub> ) 4236.47	—
(60%I <sub>max</sub> ) 5083.76	—
(70%I <sub>max</sub> ) 5931.06	—
(80%I <sub>max</sub> ) 6778.35	—
(90%I <sub>max</sub> ) 7625.64	—





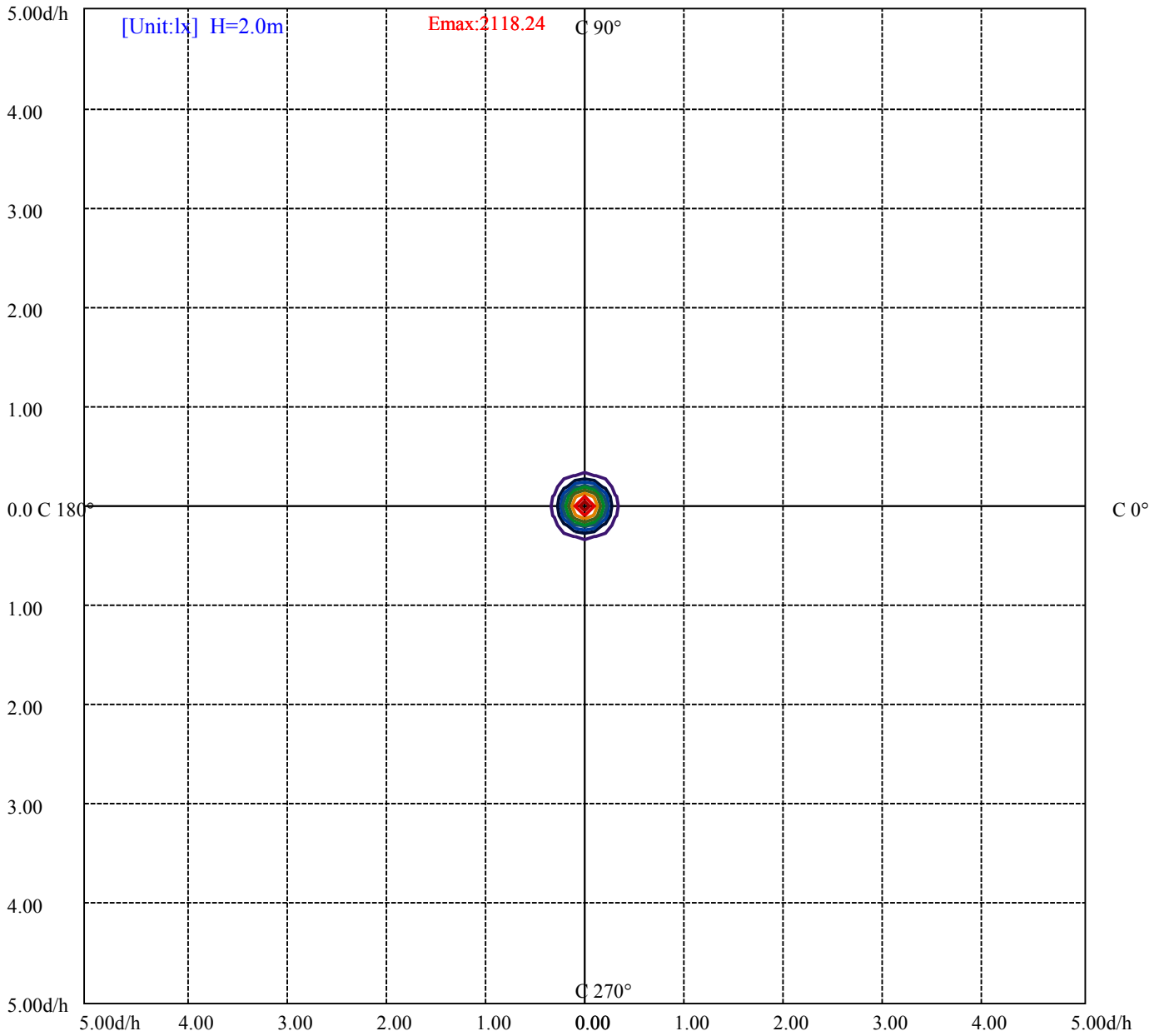
House

[Unit:cd]

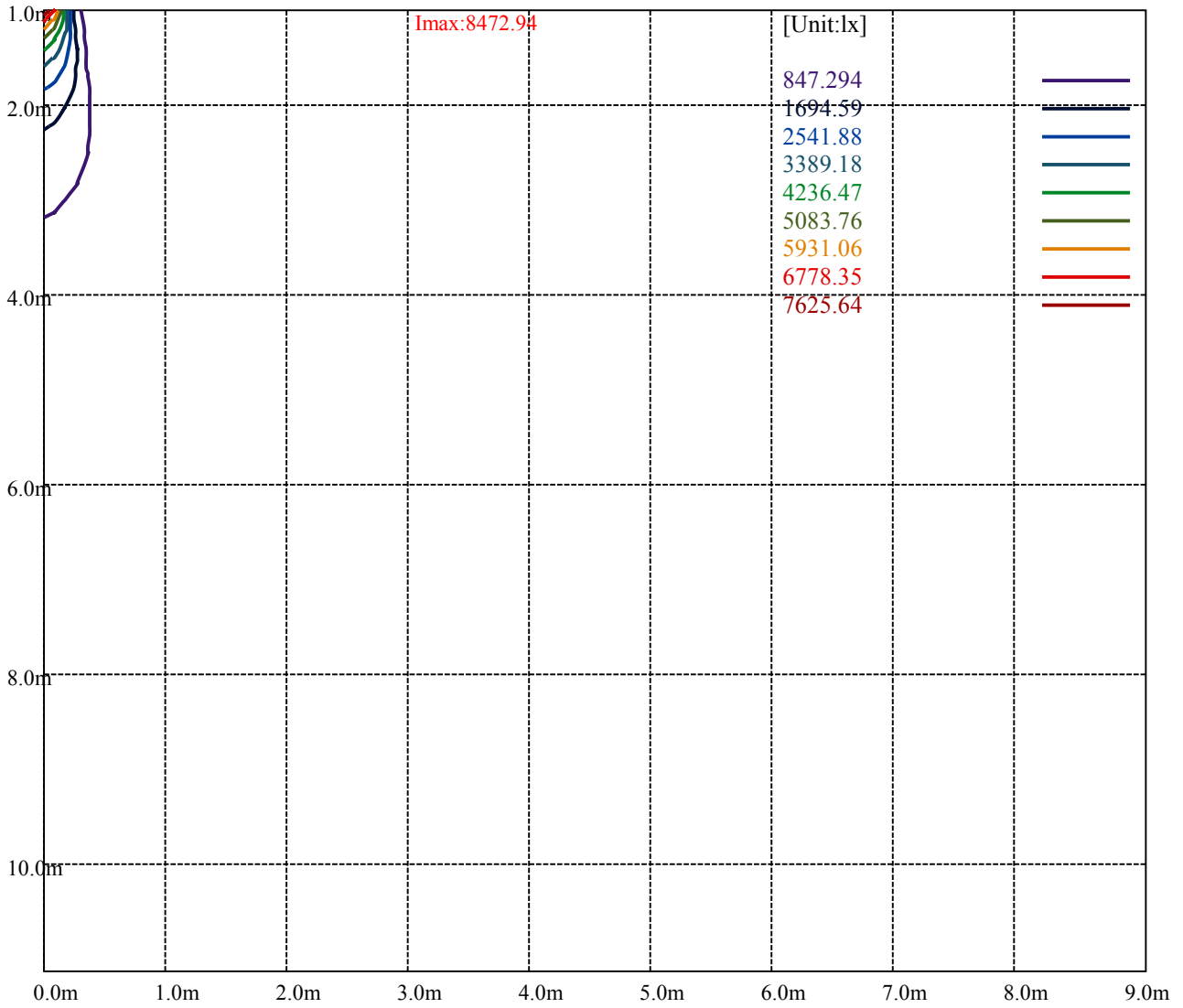
Road

**Imax:8472.94**

(10%Imax) 847.294	—
(20%Imax) 1694.59	—
(30%Imax) 2541.88	—
(40%Imax) 3389.18	—
(50%Imax) 4236.47	—
(60%Imax) 5083.76	—
(70%Imax) 5931.06	—
(80%Imax) 6778.35	—
(90%Imax) 7625.64	—



- (10%Emax) 211.8233
- (20%Emax) 423.6475
- (30%Emax) 635.47
- (40%Emax) 847.2925
- (50%Emax) 1059.115
- (60%Emax) 1270.94
- (70%Emax) 1482.762
- (80%Emax) 1694.585
- (90%Emax) 1906.41



Luminance Table

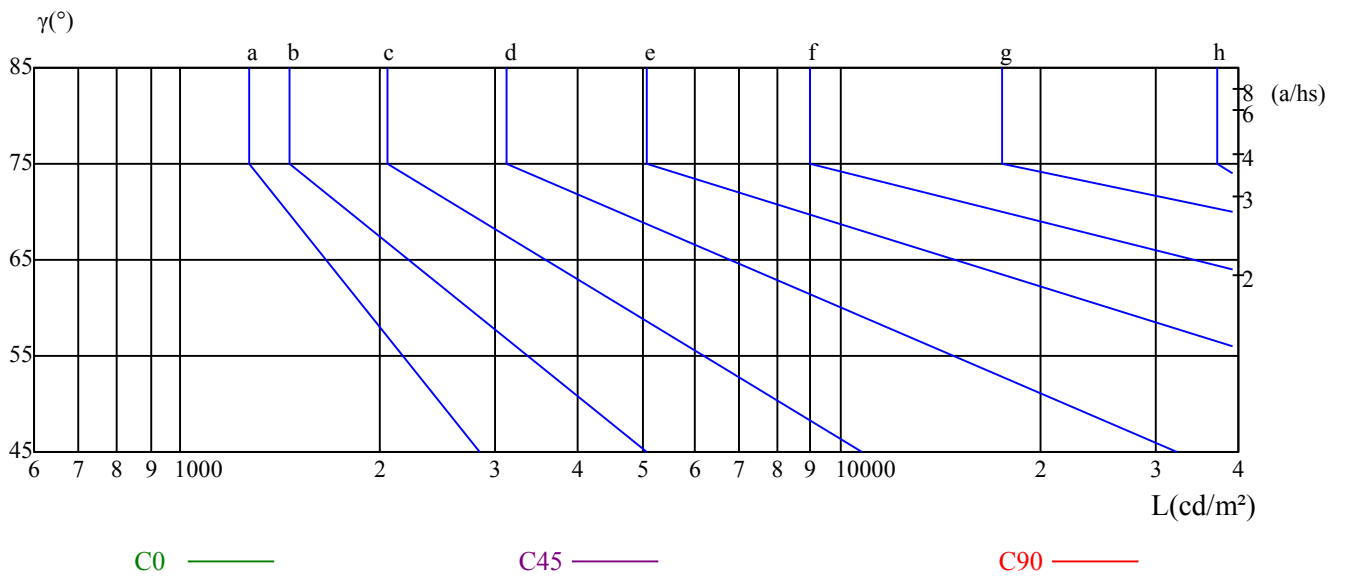
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

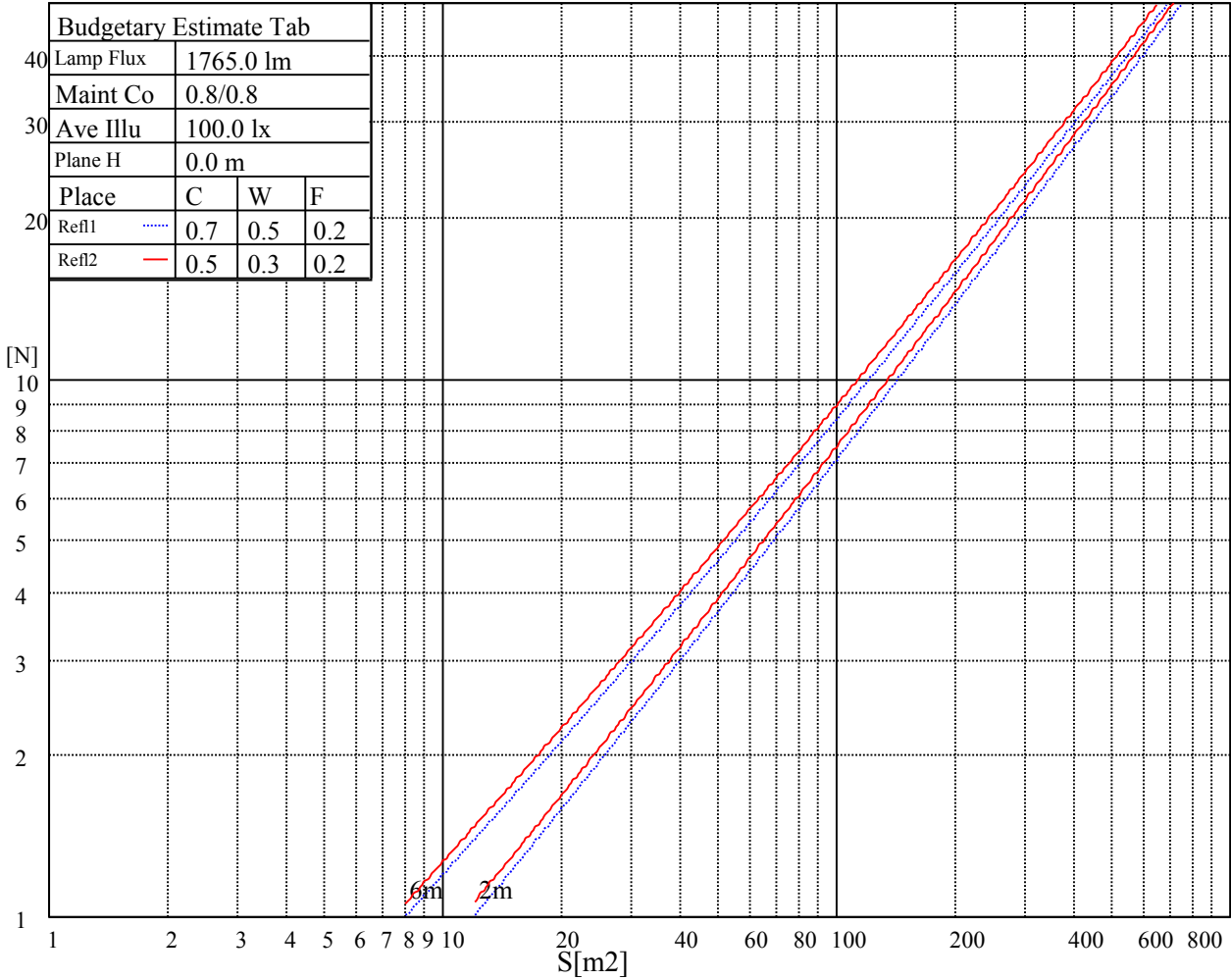
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

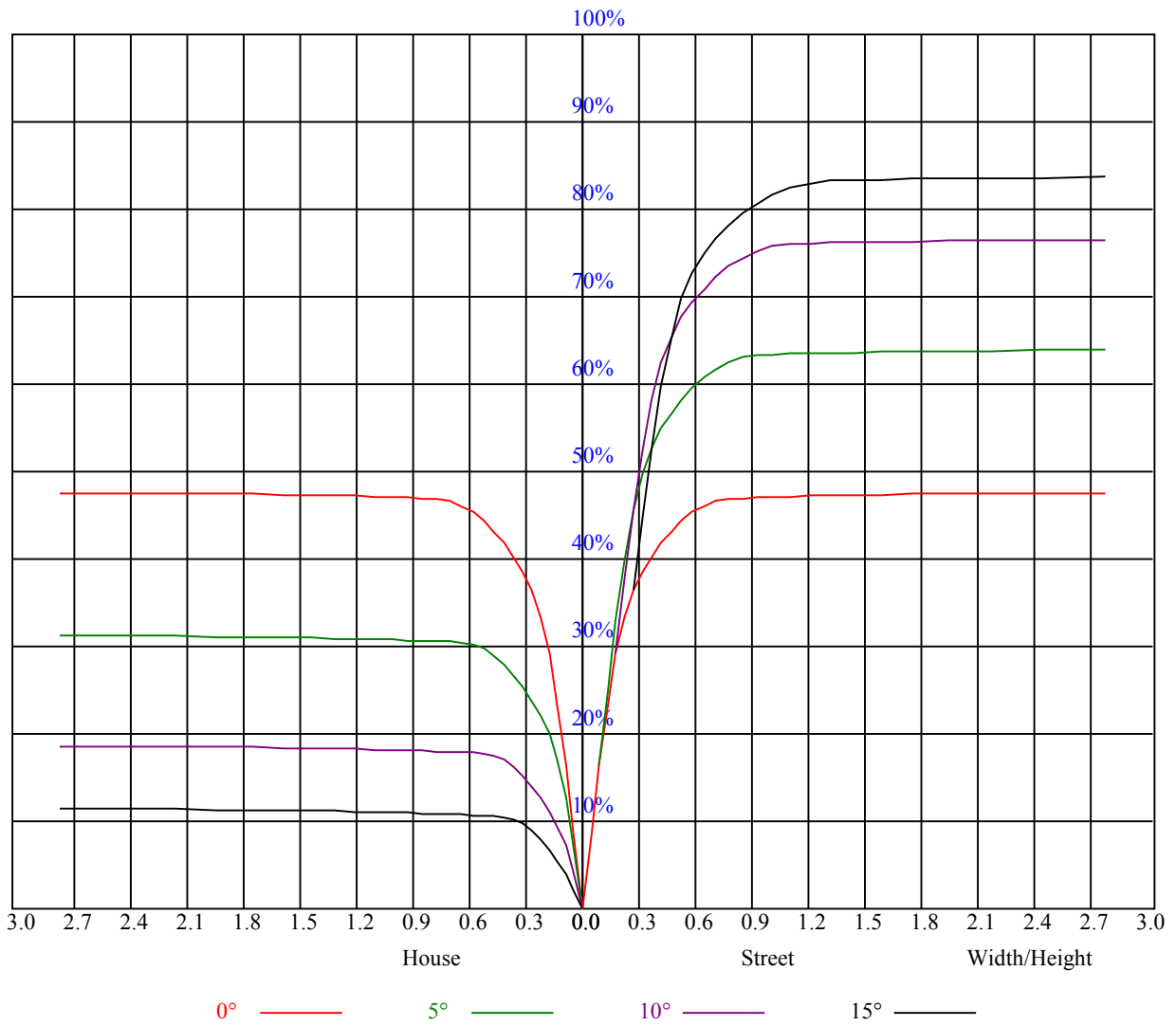
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.14	1.14	1.14	1.12	1.12	1.12	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.96
1	1.08	1.05	1.04	1.05	1.04	1.02	1.02	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92
2	1.02	0.99	0.96	1.00	0.97	0.95	0.97	0.95	0.93	0.95	0.93	0.91	0.92	0.90	0.89	0.88
3	0.97	0.93	0.90	0.96	0.92	0.90	0.93	0.91	0.88	0.91	0.89	0.87	0.89	0.87	0.86	0.84
4	0.93	0.89	0.86	0.92	0.88	0.85	0.90	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.82	0.81
5	0.89	0.85	0.82	0.88	0.84	0.81	0.87	0.83	0.81	0.85	0.82	0.80	0.84	0.81	0.79	0.78
6	0.86	0.81	0.78	0.85	0.81	0.78	0.84	0.80	0.78	0.83	0.79	0.77	0.81	0.79	0.77	0.75
7	0.83	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.73
8	0.80	0.76	0.73	0.79	0.75	0.73	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.72	0.71
9	0.77	0.73	0.70	0.77	0.73	0.70	0.76	0.73	0.70	0.75	0.72	0.70	0.75	0.72	0.70	0.69
10	0.75	0.71	0.68	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.67



## 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	8358.75	8603.44	8650.69	8493.19	8273.81	7842.38	7530.75	7249.50	6773.06
45.0	8468.44	8665.88	8669.81	8453.81	8118.00	7743.38	7454.25	7108.31	6625.69
90.0	8547.19	8494.31	8277.19	7935.19	7646.63	7348.50	7003.13	6549.75	6027.75
135.0	8517.38	8384.06	8048.81	7708.50	7371.56	6996.38	6683.06	6305.63	5844.94
180.0	8358.75	8077.50	7623.56	7200.00	6798.94	6486.75	6112.13	5683.50	5263.88
225.0	8468.44	8151.19	7709.06	7271.44	6892.88	6547.50	6256.69	5872.50	5415.75
270.0	8547.19	8448.19	8066.25	7655.63	7309.69	6943.50	6610.50	6318.00	5923.69
315.0	8517.38	8492.06	8262.56	7911.00	7623.56	7245.56	7008.19	6620.06	6081.19
360.0	8358.75	8603.44	8650.69	8493.19	8273.81	7842.38	7530.75	7249.50	6773.06
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	6280.88	5865.19	5162.06	4497.75	3804.75	2963.25	2359.69	1846.69	1365.19
45.0	6112.69	5573.81	4871.25	4167.56	3441.94	2787.19	2114.44	1625.06	1269.00
90.0	5522.06	4878.56	4193.44	3547.13	2823.19	2183.06	1728.00	1371.38	1098.68
135.0	5331.38	4808.81	4161.38	3475.13	2817.00	2192.06	1688.63	1307.81	1064.25
180.0	4709.25	4101.75	3510.56	2841.19	2270.25	1731.94	1243.13	1111.89	963.90
225.0	4951.13	4346.44	3630.94	3010.50	2409.19	1785.94	1397.25	1116.90	931.50
270.0	5470.31	4956.75	4291.88	3670.31	2948.06	2286.00	1798.88	1432.13	1128.38
315.0	5647.38	5062.50	4306.50	3733.31	3066.19	2241.00	1782.56	1386.00	1114.48
360.0	6280.88	5865.19	5162.06	4497.75	3804.75	2963.25	2359.69	1846.69	1365.19
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1122.19	968.06	852.75	802.13	765.00	727.88	698.06	676.13	653.06
45.0	1035.56	894.38	798.19	746.44	709.31	671.06	654.75	622.13	601.31
90.0	922.28	834.86	781.14	740.93	713.08	689.63	664.20	645.53	629.10
135.0	924.75	839.25	772.88	734.63	702.00	672.75	655.88	641.25	623.81
180.0	847.91	785.31	741.26	697.73	670.56	648.79	628.09	609.92	595.58
225.0	826.20	742.61	679.73	648.73	617.46	591.13	582.92	561.38	550.58
270.0	973.13	871.31	781.88	732.38	698.06	668.25	645.19	629.44	613.69
315.0	953.10	860.40	788.23	740.81	710.38	685.52	661.16	640.58	624.32
360.0	1122.19	968.06	852.75	802.13	765.00	727.88	698.06	676.13	653.06
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	633.38	618.19	602.44	588.38	572.06	559.13	546.75	507.38	425.81
45.0	577.69	566.44	546.19	531.00	516.38	501.75	488.81	447.19	382.50
90.0	612.84	597.09	581.51	564.92	551.42	536.96	501.53	430.31	331.99
135.0	608.06	594.00	577.13	564.75	549.56	530.44	469.69	379.13	289.13
180.0	581.63	566.66	551.64	537.53	509.18	432.96	337.95	252.17	169.99
225.0	553.78	537.75	519.36	512.04	487.07	407.08	342.34	259.03	171.68
270.0	601.31	588.38	573.75	559.69	546.19	511.31	449.44	371.25	293.63
315.0	607.33	590.74	577.24	562.67	549.79	533.93	480.32	406.97	321.24
360.0	633.38	618.19	602.44	588.38	572.06	559.13	546.75	507.38	425.81
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	339.75	294.75	137.25	64.63	25.48	21.66	18.34	16.37	15.24
45.0	290.81	244.52	139.16	66.54	37.35	31.84	26.61	24.13	22.44
90.0	228.21	144.17	74.36	26.21	21.49	18.28	15.75	14.63	13.84
135.0	186.36	109.74	38.53	21.49	19.01	16.20	14.85	14.18	13.61
180.0	81.11	33.02	23.06	20.19	17.10	16.20	15.19	14.23	13.67
225.0	90.23	43.71	34.54	30.71	27.34	25.48	24.47	23.74	22.22
270.0	168.30	89.78	34.43	23.23	20.19	17.44	16.26	15.64	14.74
315.0	208.29	128.64	59.01	25.20	22.56	20.25	18.11	16.88	15.92
360.0	339.75	294.75	137.25	64.63	25.48	21.66	18.34	16.37	15.24



## Intensity data(cd)

C/ $\gamma$ (°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	14.34	13.95	13.50	13.05	12.71	12.32	11.93	11.59	11.08
45.0	20.64	19.07	17.44	16.26	15.36	14.74	14.46	13.89	13.44
90.0	13.28	12.83	12.49	12.15	11.81	11.53	11.14	10.80	10.52
135.0	13.11	12.77	12.49	12.21	11.98	11.70	11.48	11.31	11.08
180.0	13.16	12.88	12.49	11.93	11.53	11.19	10.86	10.58	10.35
225.0	21.09	18.56	16.71	15.58	14.96	14.63	14.18	13.73	13.44
270.0	14.01	13.39	12.99	12.66	12.38	12.04	11.59	11.19	10.74
315.0	15.24	14.68	14.12	13.56	13.11	12.66	12.26	11.98	11.64
360.0	14.34	13.95	13.50	13.05	12.71	12.32	11.93	11.59	11.08
C/ $\gamma$ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.86	10.52	10.24	9.96	9.84	9.73	9.62	9.39	9.34
45.0	12.94	12.60	12.15	11.81	11.53	11.31	11.03	10.86	10.63
90.0	10.18	10.01	9.84	9.68	9.56	9.45	9.34	9.28	9.23
135.0	10.91	10.80	10.69	10.58	10.46	10.35	10.18	10.07	10.01
180.0	10.13	9.96	9.79	9.68	9.56	9.51	9.39	9.28	9.23
225.0	13.05	12.71	12.49	12.21	11.93	11.76	11.42	11.14	10.91
270.0	10.46	10.24	10.07	9.84	9.73	9.62	9.51	9.45	9.34
315.0	11.31	11.14	10.97	10.74	10.58	10.41	10.24	10.07	9.96
360.0	10.86	10.52	10.24	9.96	9.84	9.73	9.62	9.39	9.34
C/ $\gamma$ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.28	9.23	9.11	9.00	8.94	8.83	8.78	8.78	8.66
45.0	10.46	10.35	10.18	10.13	10.01	9.84	9.73	9.56	9.45
90.0	9.11	9.00	8.94	8.83	8.83	8.72	8.66	8.61	8.61
135.0	9.84	9.73	9.62	9.51	9.34	9.23	9.11	9.00	8.83
180.0	9.11	9.00	8.94	8.83	8.78	8.72	8.66	8.61	8.55
225.0	10.69	10.46	10.18	10.07	9.96	9.73	9.51	9.34	9.23
270.0	9.23	9.11	9.06	8.94	8.89	8.83	8.78	8.72	8.66
315.0	9.84	9.73	9.56	9.45	9.34	9.23	9.06	8.94	8.83
360.0	9.28	9.23	9.11	9.00	8.94	8.83	8.78	8.78	8.66
C/ $\gamma$ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.61	8.61	8.49	8.49	8.44	8.38	8.33	8.27	8.21
45.0	9.28	9.11	8.94	8.83	8.78	8.72	8.66	8.61	8.55
90.0	8.55	8.49	8.49	8.38	8.38	8.33	8.38	8.27	8.21
135.0	8.72	8.55	8.49	8.44	8.38	8.38	8.33	8.21	8.21
180.0	8.49	8.49	8.44	8.38	8.38	8.33	8.27	8.21	8.16
225.0	9.06	8.94	8.89	8.83	8.78	8.72	8.72	8.61	8.55
270.0	8.61	8.55	8.49	8.49	8.44	8.38	8.33	8.33	8.27
315.0	8.66	8.55	8.49	8.49	8.38	8.38	8.27	8.27	8.21
360.0	8.61	8.61	8.49	8.49	8.44	8.38	8.33	8.27	8.21
C/ $\gamma$ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.21	8.16	8.10	8.10	8.10	8.10	8.04	7.99	7.93
45.0	8.49	8.44	8.33	8.27	8.10	8.04	7.99	7.99	7.93
90.0	8.16	8.16	8.16	8.16	8.04	8.04	7.99	7.93	7.88
135.0	8.16	8.16	8.10	8.04	8.04	7.99	7.99	7.93	7.88
180.0	8.16	8.16	8.10	8.10	8.04	7.99	7.99	7.93	7.88
225.0	8.49	8.38	8.33	8.21	8.16	8.04	7.93	7.93	7.93
270.0	8.21	8.21	8.16	8.16	8.10	8.04	7.99	7.93	7.88
315.0	8.21	8.16	8.16	8.10	8.10	8.04	7.99	7.99	7.93
360.0	8.21	8.16	8.10	8.10	8.10	8.10	8.04	7.99	7.93

Intensity data(cd)

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