
LumCAT: 4-2200-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): 35.1500
Current(A): 0.3970
Power (W): 13.9500
PF: 1.0000
Ballast type: DC
Width(mm): 0
Height(mm): 0

Photometric Results

Lumens(lm): 1719.43
Efficiency(%): 97.42%
Lumens(lm)/Power(W): 123.26
Central intensity(cd): 12789.840
Maximum intensity(cd): 12789.840
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=14.9
 [C90/270]Total=14.9
Field angle(10%Imax): [C0/180]Total=32.8
 [C90/270]Total=32.8
Maximum s/h(1/2): C0_180=0.26 C90_270=0.26
Maximum s/h(1/4): C0_180=0.27 C90_270=0.27
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 97.42%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.366%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	12789.844	0.000	0	.000%	.000%
1.0	12628.828	12.162	12.162	.689%	.707%
2.0	12092.063	35.482	47.644	2.010%	2.771%
3.0	11259.633	55.850	103.494	3.164%	6.019%
4.0	10350.984	72.338	175.831	4.098%	10.226%
5.0	9283.570	84.467	260.298	4.786%	15.139%
6.0	8068.008	91.187	351.485	5.166%	20.442%
7.0	6850.266	92.597	444.083	5.246%	25.827%
8.0	5834.813	90.785	534.868	5.144%	31.107%
9.0	4854.797	86.633	621.501	4.908%	36.146%
10.0	3924.281	79.447	700.948	4.501%	40.766%
11.0	3255.117	71.737	772.685	4.064%	44.939%
12.0	2810.953	66.311	838.996	3.757%	48.795%
13.0	2203.383	59.508	898.504	3.372%	52.256%
14.0	1831.570	51.647	950.151	2.926%	55.260%
15.0	1566.218	46.646	996.797	2.643%	57.973%
16.0	1342.153	42.616	1039.413	2.414%	60.451%
17.0	1176.630	39.224	1078.637	2.222%	62.732%
18.0	1047.537	36.672	1115.309	2.078%	64.865%
19.0	955.821	34.854	1150.163	1.975%	66.892%
20.0	882.155	33.640	1183.803	1.906%	68.849%
21.0	822.059	32.724	1216.528	1.854%	70.752%
22.0	766.603	31.925	1248.452	1.809%	72.609%
23.0	727.024	31.340	1279.793	1.776%	74.431%
24.0	689.871	30.978	1310.771	1.755%	76.233%
25.0	658.652	30.662	1341.434	1.737%	78.016%
26.0	635.597	30.551	1371.985	1.731%	79.793%
27.0	615.825	30.616	1402.601	1.735%	81.574%
28.0	593.719	30.623	1433.224	1.735%	83.355%
29.0	575.248	30.583	1463.807	1.733%	85.133%
30.0	559.948	30.650	1494.457	1.737%	86.916%
31.0	544.170	30.726	1525.183	1.741%	88.703%
32.0	523.069	30.575	1555.759	1.732%	90.481%
33.0	473.815	29.369	1585.127	1.664%	92.189%
34.0	387.330	26.061	1611.188	1.477%	93.705%
35.0	297.570	21.270	1632.458	1.205%	94.942%
36.0	225.000	16.639	1649.097	.943%	95.910%
37.0	116.487	11.137	1660.234	.631%	96.557%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	55.041	5.725	1665.96	.324%	96.890%
39.0	26.817	2.794	1668.754	.158%	97.053%
40.0	21.635	1.690	1670.444	.096%	97.151%
41.0	18.422	1.426	1671.87	.081%	97.234%
42.0	16.355	1.263	1673.134	.072%	97.308%
43.0	15.152	1.167	1674.301	.066%	97.376%
44.0	14.295	1.111	1675.412	.063%	97.440%
45.0	13.584	1.071	1676.484	.061%	97.503%
46.0	12.938	1.037	1677.521	.059%	97.563%
47.0	12.523	1.013	1678.533	.057%	97.622%
48.0	12.185	0.999	1679.532	.057%	97.680%
49.0	11.862	0.987	1680.52	.056%	97.737%
50.0	11.573	0.977	1681.497	.055%	97.794%
51.0	11.348	0.970	1682.467	.055%	97.850%
52.0	11.152	0.965	1683.432	.055%	97.907%
53.0	11.004	0.964	1684.396	.055%	97.963%
54.0	10.920	0.966	1685.362	.055%	98.019%
55.0	10.863	0.972	1686.334	.055%	98.075%
56.0	10.849	0.981	1687.316	.056%	98.132%
57.0	10.828	0.991	1688.307	.056%	98.190%
58.0	10.807	1.000	1689.307	.057%	98.248%
59.0	10.779	1.009	1690.316	.057%	98.307%
60.0	10.730	1.016	1691.332	.058%	98.366%
61.0	10.666	1.021	1692.354	.058%	98.425%
62.0	10.610	1.025	1693.379	.058%	98.485%
63.0	10.505	1.027	1694.406	.058%	98.545%
64.0	10.371	1.024	1695.43	.058%	98.604%
65.0	10.238	1.020	1696.45	.058%	98.664%
66.0	10.083	1.014	1697.464	.057%	98.723%
67.0	9.907	1.005	1698.469	.057%	98.781%
68.0	9.654	0.991	1699.46	.056%	98.839%
69.0	9.457	0.975	1700.435	.055%	98.895%
70.0	9.281	0.962	1701.397	.055%	98.951%
71.0	9.098	0.950	1702.347	.054%	99.007%
72.0	8.880	0.935	1703.282	.053%	99.061%
73.0	8.663	0.917	1704.199	.052%	99.114%
74.0	8.585	0.907	1705.106	.051%	99.167%
75.0	8.522	0.904	1706.01	.051%	99.220%

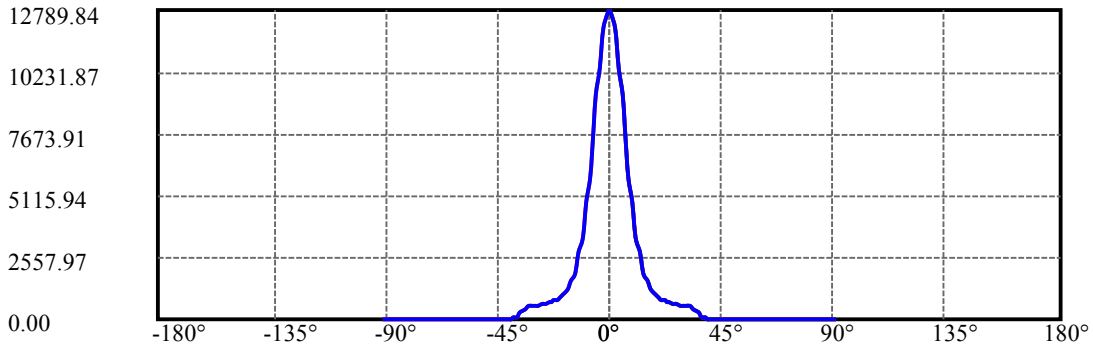
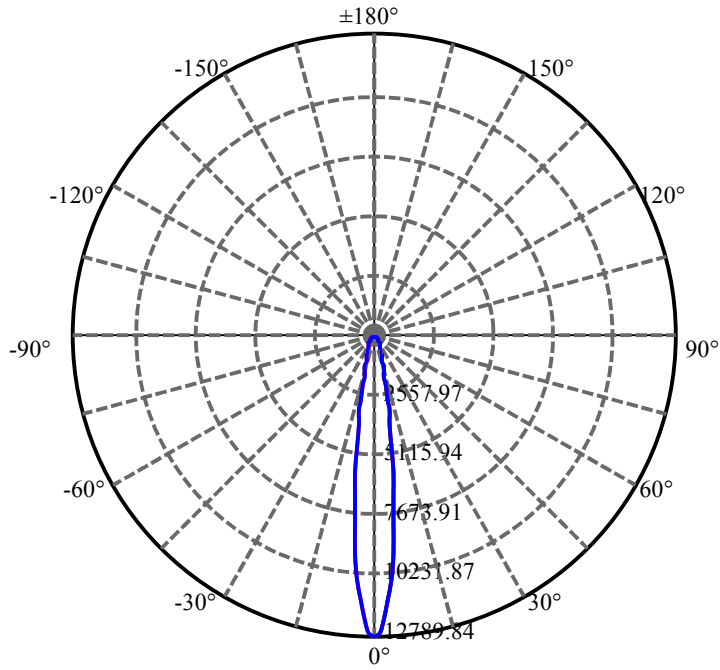
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	8.480	0.903	1706.913	.051%	99.272%
77.0	8.430	0.902	1707.814	.051%	99.325%
78.0	8.402	0.901	1708.715	.051%	99.377%
79.0	8.367	0.901	1709.616	.051%	99.429%
80.0	8.346	0.901	1710.517	.051%	99.482%
81.0	8.290	0.900	1711.417	.051%	99.534%
82.0	8.262	0.898	1712.314	.051%	99.586%
83.0	8.227	0.896	1713.211	.051%	99.639%
84.0	8.205	0.895	1714.106	.051%	99.691%
85.0	8.170	0.894	1715	.051%	99.743%
86.0	8.128	0.891	1715.891	.050%	99.794%
87.0	8.107	0.889	1716.779	.050%	99.846%
88.0	8.065	0.886	1717.665	.050%	99.898%
89.0	8.030	0.882	1718.547	.050%	99.949%
90.0	8.002	0.879	1719.426	.050%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1494.46	84.67%	86.92%
0-40	1670.44	94.64%	97.15%
0-60	1691.33	95.83%	98.37%
0-90	1718.55	97.37%	99.95%
0-120	1718.55	97.37%	99.95%
0-180	1719.43	97.42%	100.00%
60-90	28.23	1.60%	1.64%
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%
0-26.12	1375.54	77.93%	80.00%

ZONAL LUMEN SUMMARY

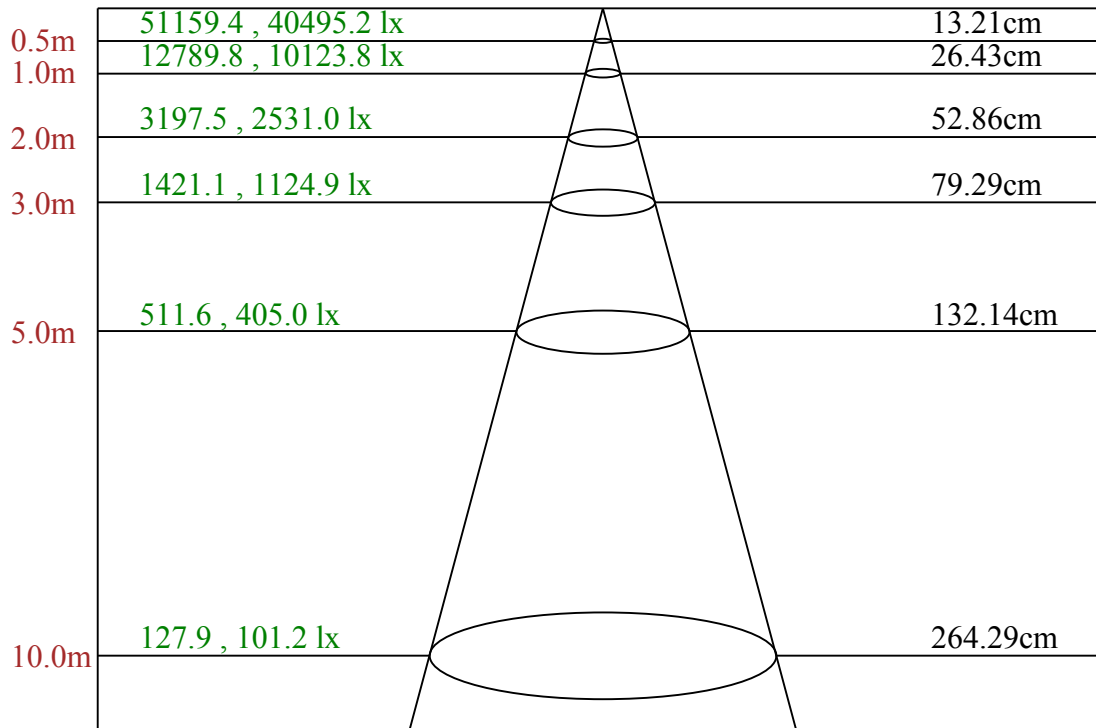
0-10	700.95
10-20	482.85
20-30	310.65
30-40	175.99
40-50	11.05
50-60	9.84
60-70	10.06
70-80	9.12
80-90	8.03
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



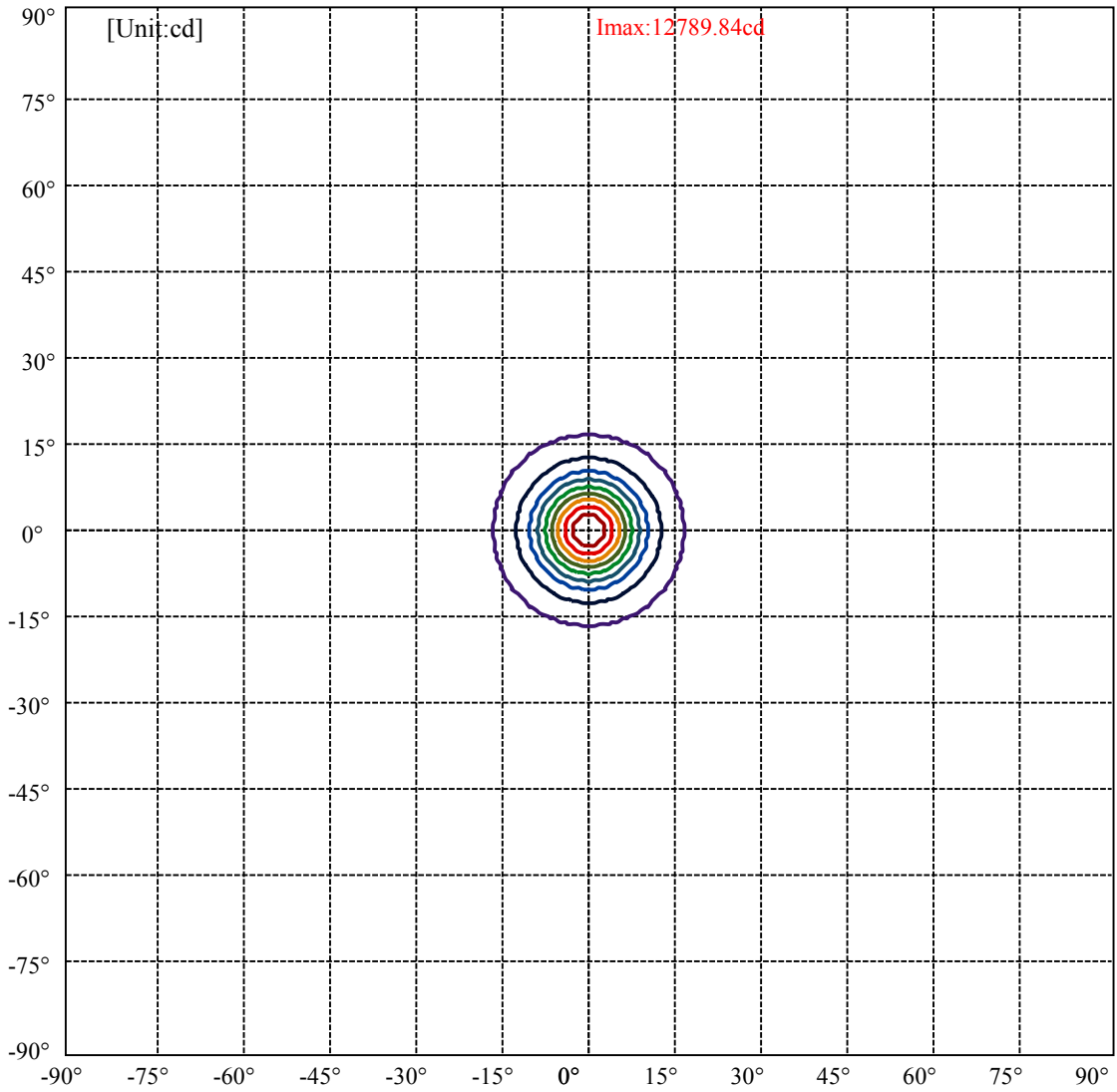
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:16.4 Right:16.4
:C90/270Left:16.4 Right:16.4

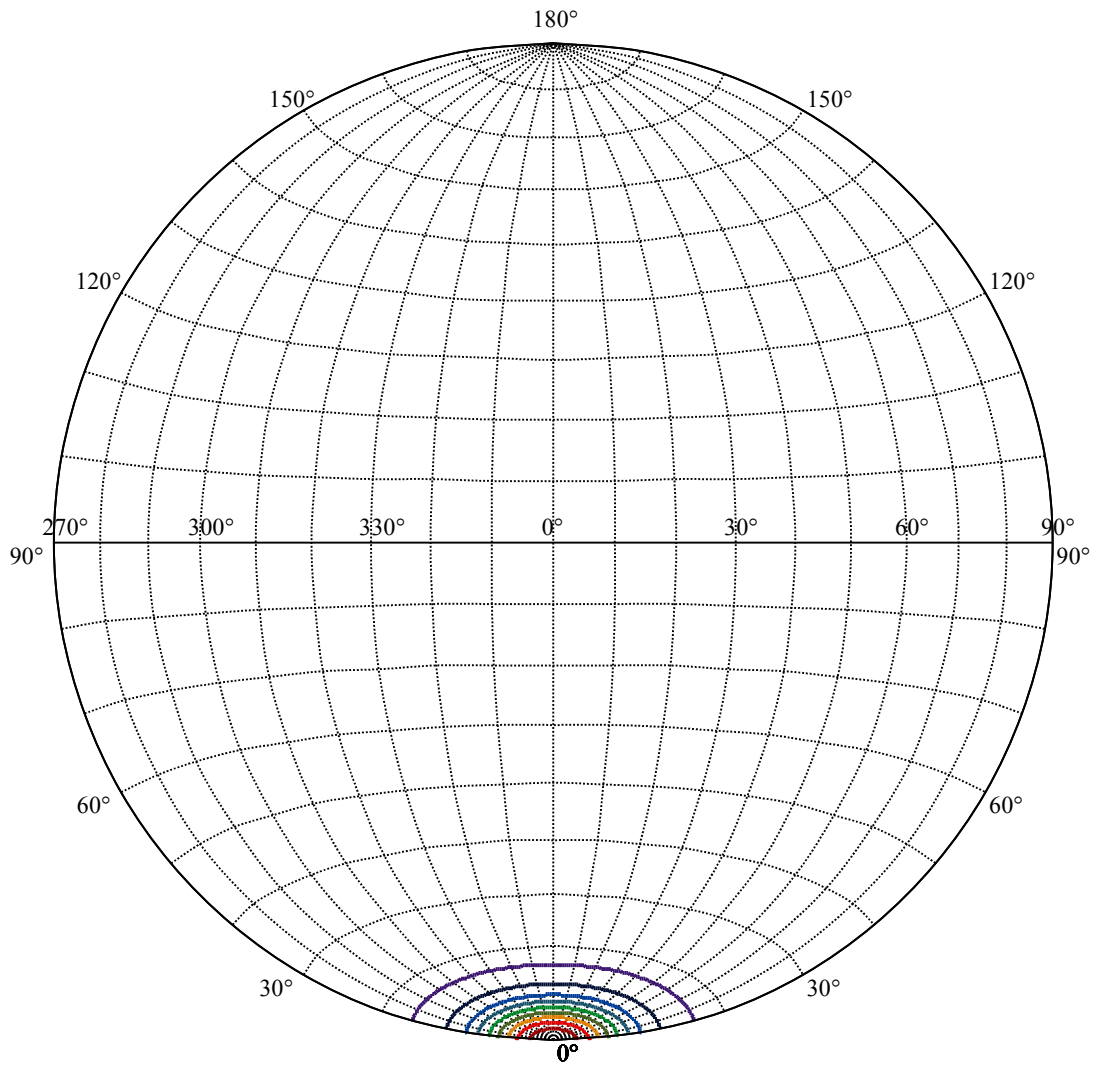
Beam Angle(50%Imax):C0/180Left:7.4 Right:7.4
:C90/270Left:7.4 Right:7.4



Max , Ave Beam angle of C0 plane 15.06



(10%I _{max}) 1278.98	—
(20%I _{max}) 2557.97	—
(30%I _{max}) 3836.95	—
(40%I _{max}) 5115.94	—
(50%I _{max}) 6394.92	—
(60%I _{max}) 7673.91	—
(70%I _{max}) 8952.89	—
(80%I _{max}) 10231.9	—
(90%I _{max}) 11510.9	—



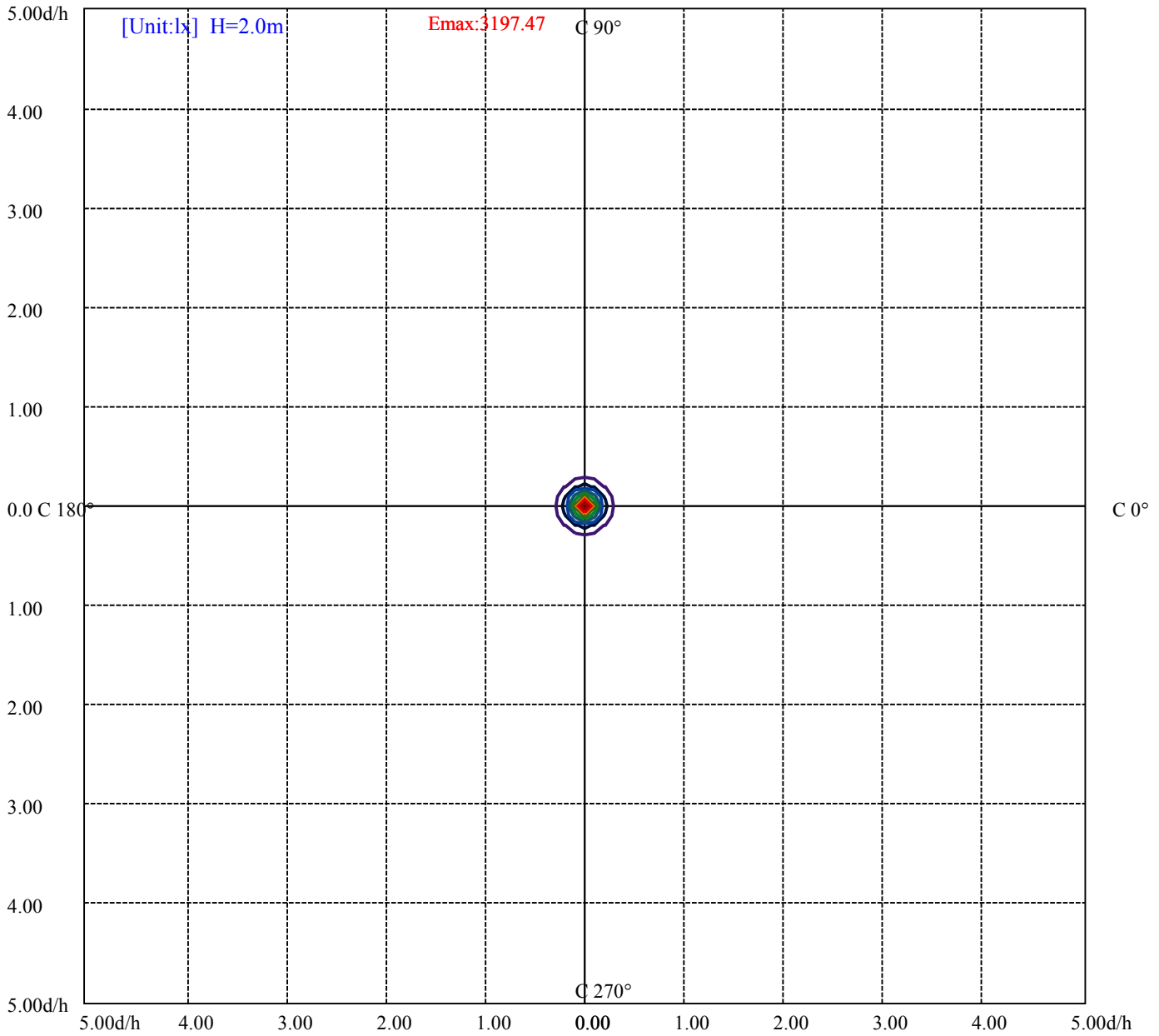
House

[Unit:cd]

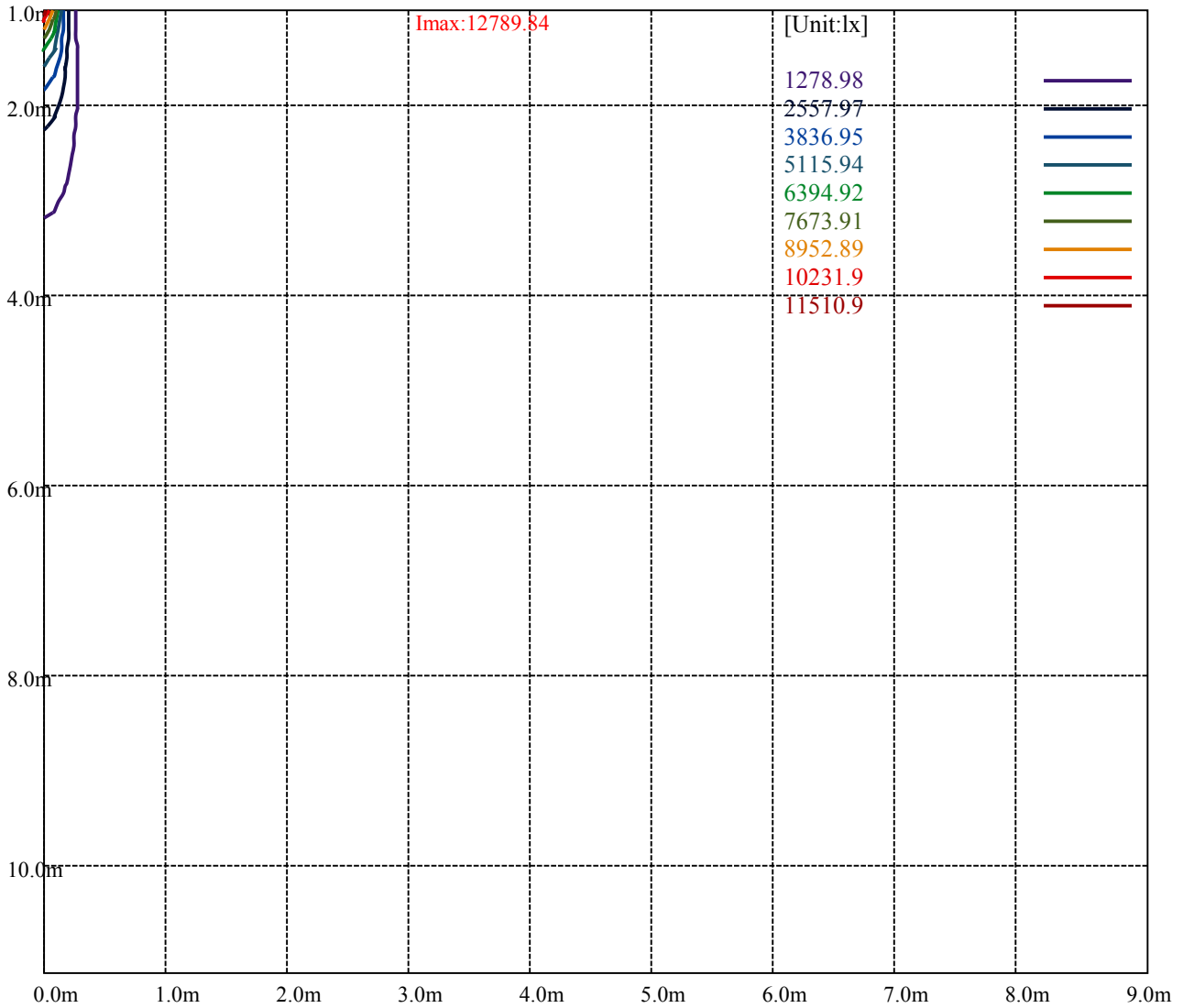
Road

Imax:12789.84

(10%Imax) 1278.98	—
(20%Imax) 2557.97	—
(30%Imax) 3836.95	—
(40%Imax) 5115.94	—
(50%Imax) 6394.92	—
(60%Imax) 7673.91	—
(70%Imax) 8952.89	—
(80%Imax) 10231.9	—
(90%Imax) 11510.9	—



- (10%Emax) 319.745
- (20%Emax) 639.49
- (30%Emax) 959.2375
- (40%Emax) 1278.983
- (50%Emax) 1598.728
- (60%Emax) 1918.473
- (70%Emax) 2238.218
- (80%Emax) 2557.975
- (90%Emax) 2877.7



Luminance Table

γ	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

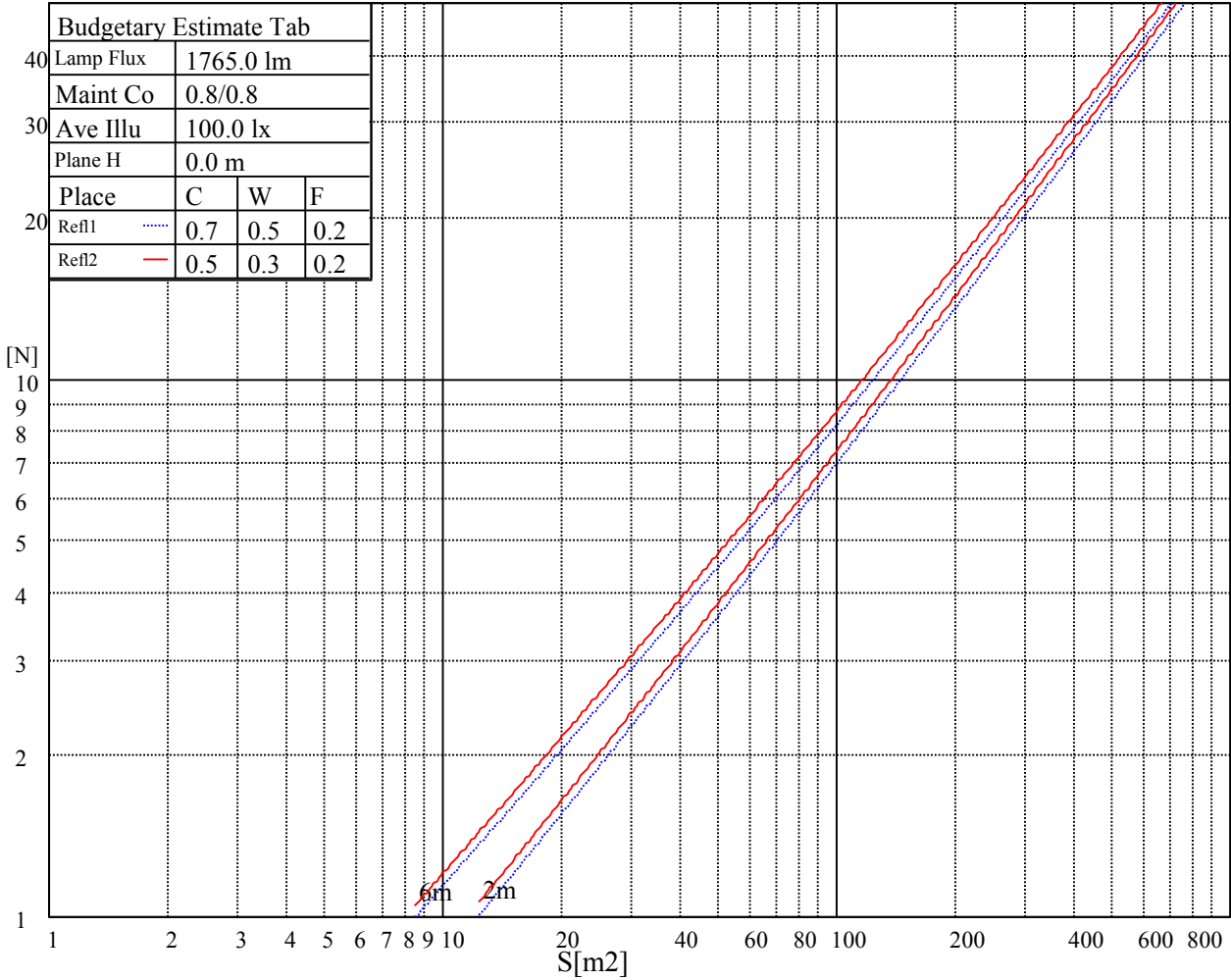
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

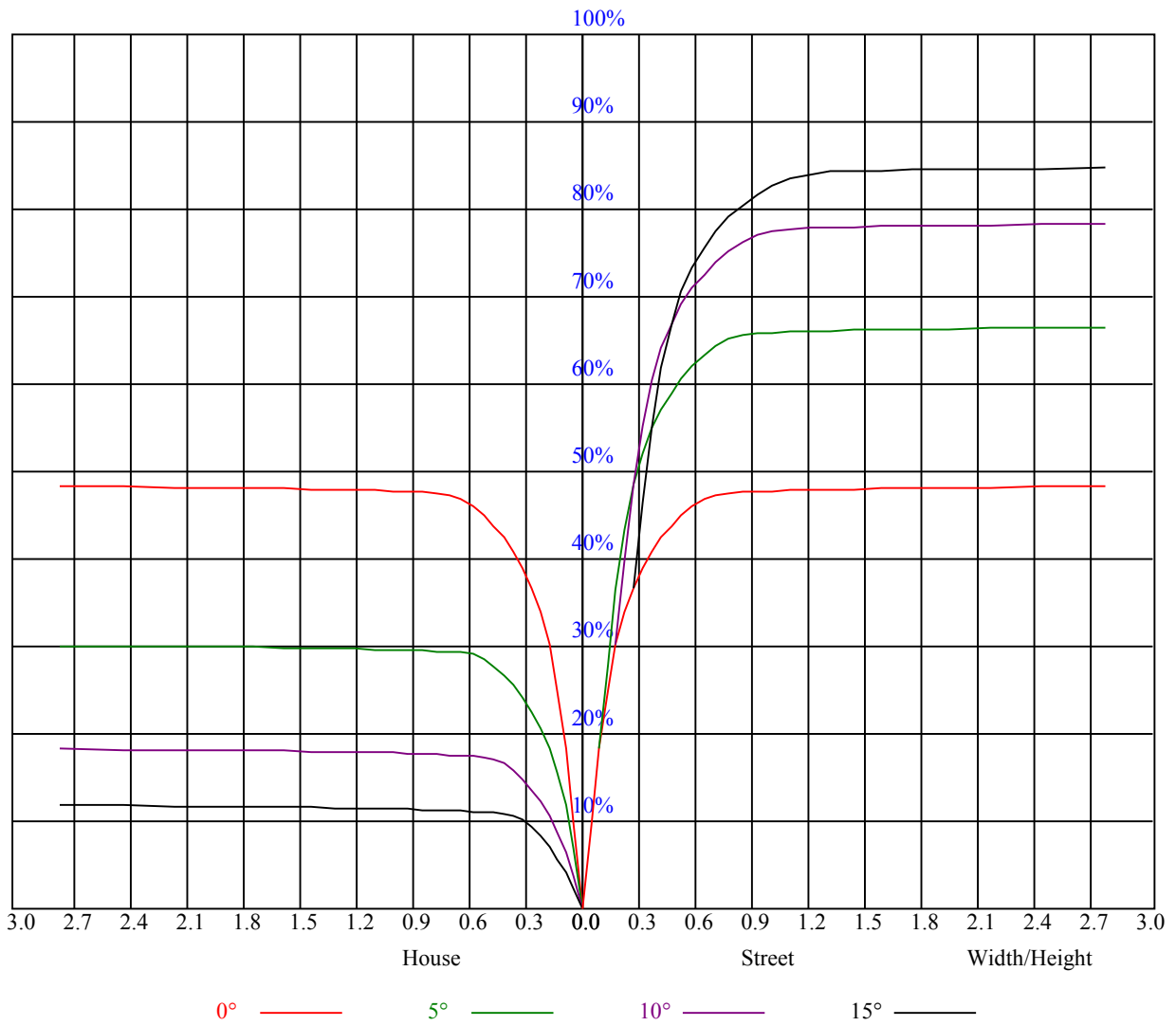
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.16	1.16	1.16	1.13	1.13	1.13	1.08	1.08	1.08	1.04	1.04	1.04	0.99	0.99	0.99	0.97
1	1.09	1.07	1.05	1.07	1.05	1.04	1.03	1.02	1.01	1.00	0.99	0.98	0.96	0.96	0.95	0.93
2	1.04	1.01	0.98	1.02	0.99	0.97	0.99	0.97	0.95	0.96	0.94	0.93	0.94	0.92	0.91	0.89
3	0.99	0.95	0.92	0.98	0.94	0.91	0.95	0.92	0.90	0.93	0.91	0.89	0.91	0.89	0.87	0.86
4	0.95	0.91	0.88	0.94	0.90	0.87	0.92	0.89	0.86	0.90	0.87	0.85	0.88	0.86	0.84	0.83
5	0.91	0.87	0.84	0.90	0.86	0.83	0.89	0.85	0.83	0.87	0.84	0.82	0.86	0.83	0.81	0.80
6	0.88	0.83	0.80	0.87	0.83	0.80	0.86	0.82	0.80	0.85	0.81	0.79	0.83	0.81	0.79	0.77
7	0.85	0.80	0.77	0.84	0.80	0.77	0.83	0.79	0.77	0.82	0.79	0.76	0.81	0.78	0.76	0.75
8	0.82	0.78	0.75	0.82	0.78	0.75	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.74	0.73
9	0.80	0.75	0.73	0.79	0.75	0.72	0.78	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.72	0.71
10	0.77	0.73	0.71	0.77	0.73	0.70	0.76	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.69



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	12808.13	12656.25	12251.25	11610.00	10558.13	9579.38	8566.88	7290.00	6322.50
45.0	12836.25	12566.25	11936.25	11025.00	10040.63	8825.63	7582.50	6519.38	5546.25
90.0	12718.13	12324.38	11202.75	10585.69	9327.94	8131.50	6793.88	5543.44	4560.75
135.0	12796.88	12667.50	12183.75	11480.63	10456.88	9388.13	8111.25	6823.13	5760.00
180.0	12808.13	12661.88	12211.88	11201.63	10665.56	9711.00	8544.38	7362.56	6359.63
225.0	12836.25	12763.13	12386.25	11146.50	10680.75	9649.69	8576.44	7243.88	6228.00
270.0	12718.13	12791.25	12442.50	11806.88	10777.50	9697.50	8403.75	7098.75	5979.38
315.0	12796.88	12600.00	12121.88	11220.75	10300.50	9285.75	7965.00	6921.00	5922.00
360.0	12808.13	12656.25	12251.25	11610.00	10558.13	9579.38	8566.88	7290.00	6322.50

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5445.00	4455.00	3774.38	3195.00	2874.38	2225.25	1914.19	1632.94	1415.25
45.0	4488.75	3763.13	3150.00	2874.38	2140.31	1830.38	1609.88	1342.13	1199.25
90.0	3714.75	2863.13	2338.88	1933.31	1557.00	1339.31	1113.24	1044.79	946.80
135.0	4702.50	3774.38	3088.13	2857.50	1996.88	1676.25	1427.63	1224.56	1070.44
180.0	5316.75	4399.88	3705.75	3122.44	2522.25	2140.31	1836.00	1563.19	1350.00
225.0	5298.19	4272.75	3565.69	2975.06	2433.38	2017.13	1724.06	1460.81	1281.38
270.0	4865.63	3881.25	3133.13	2885.63	1959.19	1623.94	1370.25	1171.13	1032.75
315.0	5006.81	3984.75	3285.00	2644.31	2143.69	1800.00	1534.50	1297.69	1117.18
360.0	5445.00	4455.00	3774.38	3195.00	2874.38	2225.25	1914.19	1632.94	1415.25

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1262.81	1127.25	1028.81	937.13	862.31	807.19	756.00	714.38	683.44
45.0	1094.06	973.13	892.13	840.38	779.06	735.19	702.56	671.06	646.31
90.0	880.59	823.28	782.83	744.98	712.35	687.32	661.50	635.29	618.58
135.0	959.06	876.94	808.31	760.50	714.94	682.31	643.50	620.44	596.81
180.0	1109.14	1067.74	962.16	885.54	816.58	766.41	721.52	684.56	656.83
225.0	1109.70	993.77	921.32	844.99	777.77	737.89	700.76	661.84	641.53
270.0	942.75	864.00	812.25	774.56	734.06	701.44	670.50	644.63	626.06
315.0	1022.18	920.48	849.43	788.40	735.75	698.46	662.63	637.03	615.21
360.0	1262.81	1127.25	1028.81	937.13	862.31	807.19	756.00	714.38	683.44

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	655.88	627.75	603.00	583.31	565.88	546.75	493.88	407.25	307.13
45.0	624.94	599.63	578.25	561.94	543.94	524.25	465.75	371.81	285.19
90.0	601.20	580.89	562.28	548.10	532.80	520.31	468.84	376.82	292.22
135.0	578.25	557.44	535.50	523.69	510.19	489.94	434.25	351.56	284.63
180.0	633.77	609.58	590.57	572.91	554.12	541.18	502.93	418.84	321.24
225.0	621.39	602.27	586.35	570.49	555.47	542.59	509.18	426.09	338.40
270.0	610.31	593.44	582.19	568.69	555.19	544.50	516.94	441.00	344.81
315.0	600.86	578.76	563.85	550.46	535.78	475.03	398.76	305.27	206.94
360.0	655.88	627.75	603.00	583.31	565.88	546.75	493.88	407.25	307.13

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	294.75	114.41	48.99	24.81	21.54	17.72	16.03	14.74	13.84
45.0	231.19	104.34	35.89	23.46	20.36	16.76	14.46	12.99	12.04
90.0	207.00	106.99	51.92	21.26	17.94	15.30	13.84	12.88	12.43
135.0	186.75	114.98	54.79	29.36	24.41	20.03	17.83	16.43	15.36
180.0	229.16	136.69	63.23	28.24	21.60	18.23	15.75	14.79	13.89
225.0	234.68	142.20	73.07	30.60	21.77	19.29	17.16	16.26	15.64
270.0	290.25	156.94	81.28	29.19	22.05	19.07	16.20	15.24	14.46
315.0	126.23	55.35	31.16	27.62	23.40	20.98	19.58	17.89	16.71
360.0	294.75	114.41	48.99	24.81	21.54	17.72	16.03	14.74	13.84

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	13.22	12.49	12.04	11.59	11.14	10.80	10.52	10.35	10.13
45.0	11.31	10.86	10.52	10.29	10.07	9.90	9.73	9.56	9.45
90.0	12.04	11.59	11.31	10.97	10.69	10.58	10.46	10.41	10.46
135.0	14.46	13.67	13.11	12.71	12.26	11.81	11.48	11.19	10.91
180.0	13.16	12.71	12.38	12.09	11.81	11.53	11.31	11.14	11.08
225.0	15.19	14.91	14.57	14.34	14.12	13.89	13.78	13.67	13.56
270.0	13.67	12.94	12.60	12.26	11.93	11.53	11.25	10.91	10.69
315.0	15.64	14.34	13.67	13.22	12.88	12.54	12.26	11.98	11.76
360.0	13.22	12.49	12.04	11.59	11.14	10.80	10.52	10.35	10.13
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.07	10.01	10.01	9.96	9.96	9.96	9.96	9.96	9.96
45.0	9.34	9.23	9.23	9.23	9.23	9.23	9.23	9.28	9.34
90.0	10.63	10.80	10.97	11.31	11.53	11.59	11.53	11.59	11.59
135.0	10.74	10.63	10.46	10.35	10.35	10.24	10.18	10.07	9.96
180.0	11.03	11.03	11.03	11.03	11.03	10.97	10.91	10.74	10.69
225.0	13.56	13.50	13.44	13.28	12.99	12.88	12.71	12.49	12.21
270.0	10.52	10.35	10.24	10.13	10.07	10.01	10.01	9.96	9.90
315.0	11.48	11.36	11.42	11.36	11.31	11.36	11.31	11.25	11.25
360.0	10.07	10.01	10.01	9.96	9.96	9.96	9.96	9.96	9.96
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	9.96	9.90	9.84	9.73	9.62	9.39	9.28	9.17	9.00
45.0	9.34	9.39	9.39	9.39	9.39	9.28	9.23	9.17	9.00
90.0	11.59	11.42	11.14	10.86	10.58	10.18	9.84	9.56	9.34
135.0	9.90	9.84	9.79	9.68	9.62	9.39	9.28	9.17	9.00
180.0	10.52	10.29	10.18	10.01	9.73	9.51	9.34	9.11	8.94
225.0	11.81	11.48	11.08	10.80	10.46	10.07	9.68	9.51	9.28
270.0	9.84	9.73	9.68	9.56	9.45	9.34	9.17	9.00	8.89
315.0	11.08	10.91	10.80	10.63	10.41	10.07	9.84	9.56	9.34
360.0	9.96	9.90	9.84	9.73	9.62	9.39	9.28	9.17	9.00
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.83	8.61	8.49	8.49	8.44	8.38	8.38	8.38	8.33
45.0	8.83	8.55	8.49	8.44	8.44	8.38	8.38	8.33	8.27
90.0	9.06	8.72	8.55	8.49	8.44	8.38	8.33	8.33	8.33
135.0	8.89	8.78	8.72	8.66	8.61	8.61	8.55	8.49	8.44
180.0	8.78	8.61	8.55	8.44	8.44	8.38	8.33	8.27	8.27
225.0	8.94	8.72	8.61	8.55	8.49	8.44	8.38	8.38	8.38
270.0	8.78	8.55	8.55	8.44	8.38	8.33	8.38	8.33	8.33
315.0	8.94	8.78	8.72	8.66	8.61	8.55	8.49	8.44	8.44
360.0	8.83	8.61	8.49	8.49	8.44	8.38	8.38	8.38	8.33
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	8.27	8.27	8.21	8.21	8.16	8.10	8.10	8.04	7.99
45.0	8.27	8.21	8.21	8.16	8.16	8.10	8.10	8.04	7.99
90.0	8.27	8.21	8.16	8.21	8.16	8.10	8.10	8.04	7.99
135.0	8.38	8.38	8.27	8.21	8.16	8.10	8.04	8.04	8.04
180.0	8.21	8.21	8.21	8.16	8.16	8.16	8.16	8.04	8.10
225.0	8.33	8.27	8.27	8.27	8.21	8.16	8.16	8.16	8.10
270.0	8.21	8.21	8.21	8.21	8.21	8.16	8.16	8.10	8.04
315.0	8.38	8.33	8.27	8.21	8.16	8.16	8.10	8.04	7.99
360.0	8.27	8.27	8.21	8.21	8.16	8.10	8.10	8.04	7.99

Intensity data(cd)

C/γ(°)	90.0
0.0	7.99
45.0	7.99
90.0	7.99
135.0	7.99
180.0	7.99
225.0	8.04
270.0	8.04
315.0	7.99
360.0	7.99