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Nata

LumCAT: 2-1122-A4
Luminaire: TE 2213407-1+92.76.365.00
Report No: NT2017050603
Test No: GC2017050603
LampCAT: V18B
Lamp flux(lm): 2960.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 34.0000
Current(A): 0.6000
Power (W): 20.4000
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 2721.04
Efficiency(%): 91.93%
Lumens(lm)/Power(W): 133.38
Central intensity(cd): 5380.387
Maximum intensity(cd): 5380.387
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=38.8
 [C90/270]Total=38.8
Field angle(10%Imax): [C0/180]Total=72.3
 [C90/270]Total=72.3
Maximum s/h(1/2): C0_180=0.63 C90_270=0.63
Maximum s/h(1/4): C0_180=0.63 C90_270=0.63
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.93%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.613%

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/5/6
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5380.387	0.000	0	.000%	.000%
1.0	5373.229	5.145	5.145	.174%	.189%
2.0	5343.499	15.382	20.527	.520%	.754%
3.0	5299.729	25.455	45.982	.860%	1.690%
4.0	5243.847	35.293	81.275	1.192%	2.987%
5.0	5169.934	44.800	126.074	1.513%	4.633%
6.0	5092.579	53.932	180.007	1.822%	6.615%
7.0	4994.717	62.612	242.618	2.115%	8.916%
8.0	4885.843	70.713	313.332	2.389%	11.515%
9.0	4754.120	78.127	391.458	2.639%	14.386%
10.0	4608.358	84.727	476.185	2.862%	17.500%
11.0	4452.962	90.541	566.726	3.059%	20.828%
12.0	4278.983	95.453	662.179	3.225%	24.335%
13.0	4084.910	99.258	761.437	3.353%	27.983%
14.0	3881.614	101.971	863.408	3.445%	31.731%
15.0	3677.492	103.775	967.183	3.506%	35.545%
16.0	3458.368	104.560	1071.743	3.532%	39.387%
17.0	3244.198	104.377	1176.12	3.526%	43.223%
18.0	3008.557	103.094	1279.215	3.483%	47.012%
19.0	2783.789	100.775	1379.99	3.405%	50.715%
20.0	2557.920	97.768	1477.758	3.303%	54.308%
21.0	2323.518	93.733	1571.491	3.167%	57.753%
22.0	2111.551	89.125	1660.616	3.011%	61.029%
23.0	1919.266	84.577	1745.193	2.857%	64.137%
24.0	1745.150	80.117	1825.311	2.707%	67.081%
25.0	1587.827	75.785	1901.095	2.560%	69.866%
26.0	1471.520	72.216	1973.311	2.440%	72.520%
27.0	1355.351	69.160	2042.471	2.336%	75.062%
28.0	1249.615	65.952	2108.424	2.228%	77.486%
29.0	1183.355	63.653	2172.077	2.150%	79.825%
30.0	1088.424	61.338	2233.415	2.072%	82.079%
31.0	1018.612	58.636	2292.05	1.981%	84.234%
32.0	926.131	55.715	2347.765	1.882%	86.282%
33.0	831.214	51.772	2399.537	1.749%	88.184%
34.0	739.765	47.542	2447.079	1.606%	89.932%
35.0	647.147	43.072	2490.152	1.455%	91.515%
36.0	549.367	38.097	2528.249	1.287%	92.915%
37.0	465.557	33.101	2561.35	1.118%	94.131%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	372.140	27.961	2589.311	.945%	95.159%
39.0	295.515	22.789	2612.1	.770%	95.996%
40.0	221.120	18.018	2630.119	.609%	96.658%
41.0	157.943	13.498	2643.617	.456%	97.154%
42.0	98.510	9.317	2652.934	.315%	97.497%
43.0	62.159	5.952	2658.886	.201%	97.716%
44.0	40.893	3.889	2662.775	.131%	97.859%
45.0	27.996	2.647	2665.423	.089%	97.956%
46.0	22.463	1.973	2667.396	.067%	98.028%
47.0	18.348	1.623	2669.019	.055%	98.088%
48.0	15.237	1.358	2670.377	.046%	98.138%
49.0	13.337	1.173	2671.55	.040%	98.181%
50.0	12.567	1.080	2672.631	.036%	98.221%
51.0	12.429	1.058	2673.688	.036%	98.260%
52.0	12.223	1.058	2674.746	.036%	98.298%
53.0	12.044	1.056	2675.801	.036%	98.337%
54.0	11.920	1.056	2676.858	.036%	98.376%
55.0	11.837	1.060	2677.918	.036%	98.415%
56.0	11.741	1.065	2678.984	.036%	98.454%
57.0	11.658	1.070	2680.053	.036%	98.494%
58.0	11.617	1.076	2681.13	.036%	98.533%
59.0	11.548	1.083	2682.213	.037%	98.573%
60.0	11.507	1.089	2683.302	.037%	98.613%
61.0	11.438	1.095	2684.397	.037%	98.653%
62.0	11.383	1.100	2685.496	.037%	98.694%
63.0	11.479	1.112	2686.608	.038%	98.734%
64.0	11.589	1.132	2687.74	.038%	98.776%
65.0	12.181	1.176	2688.917	.040%	98.819%
66.0	12.498	1.231	2690.148	.042%	98.865%
67.0	12.691	1.267	2691.415	.043%	98.911%
68.0	12.924	1.298	2692.712	.044%	98.959%
69.0	13.200	1.333	2694.045	.045%	99.008%
70.0	13.227	1.357	2695.402	.046%	99.058%
71.0	13.103	1.361	2696.763	.046%	99.108%
72.0	13.186	1.367	2698.13	.046%	99.158%
73.0	13.158	1.378	2699.508	.047%	99.208%
74.0	13.062	1.378	2700.886	.047%	99.259%
75.0	13.103	1.382	2702.269	.047%	99.310%

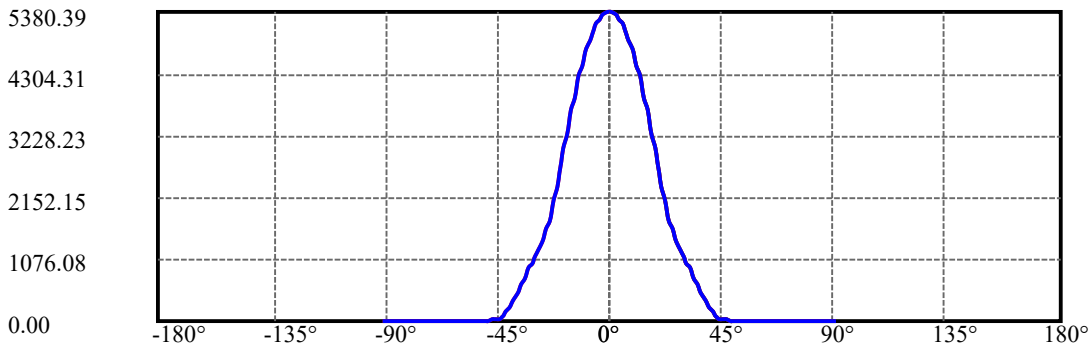
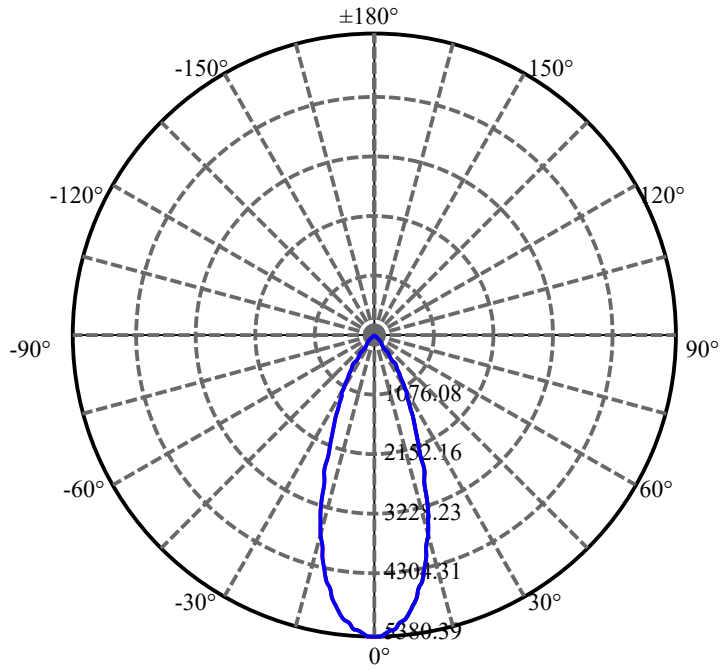
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	12.801	1.375	2703.644	.046%	99.361%
77.0	12.814	1.366	2705.009	.046%	99.411%
78.0	12.580	1.359	2706.369	.046%	99.461%
79.0	12.374	1.341	2707.71	.045%	99.510%
80.0	11.961	1.312	2709.022	.044%	99.558%
81.0	11.672	1.278	2710.3	.043%	99.605%
82.0	11.465	1.255	2711.554	.042%	99.651%
83.0	11.190	1.232	2712.786	.042%	99.696%
84.0	11.094	1.214	2714	.041%	99.741%
85.0	10.901	1.200	2715.2	.041%	99.785%
86.0	10.791	1.186	2716.386	.040%	99.829%
87.0	10.708	1.177	2717.563	.040%	99.872%
88.0	10.585	1.166	2718.729	.039%	99.915%
89.0	10.543	1.158	2719.887	.039%	99.957%
90.0	10.571	1.158	2721.045	.039%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2233.41	75.45%	82.08%
0-40	2630.12	88.86%	96.66%
0-60	2683.30	90.65%	98.61%
0-90	2719.89	91.89%	99.96%
0-120	2719.89	91.89%	99.96%
0-180	2721.04	91.93%	100.00%
60-90	37.67	1.27%	1.38%
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%
0-29.08	2176.84	73.54%	80.00%

ZONAL LUMEN SUMMARY

0-10	476.19
10-20	1001.57
20-30	755.66
30-40	396.70
40-50	42.51
50-60	10.67
60-70	12.10
70-80	13.62
80-90	10.87
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: —————

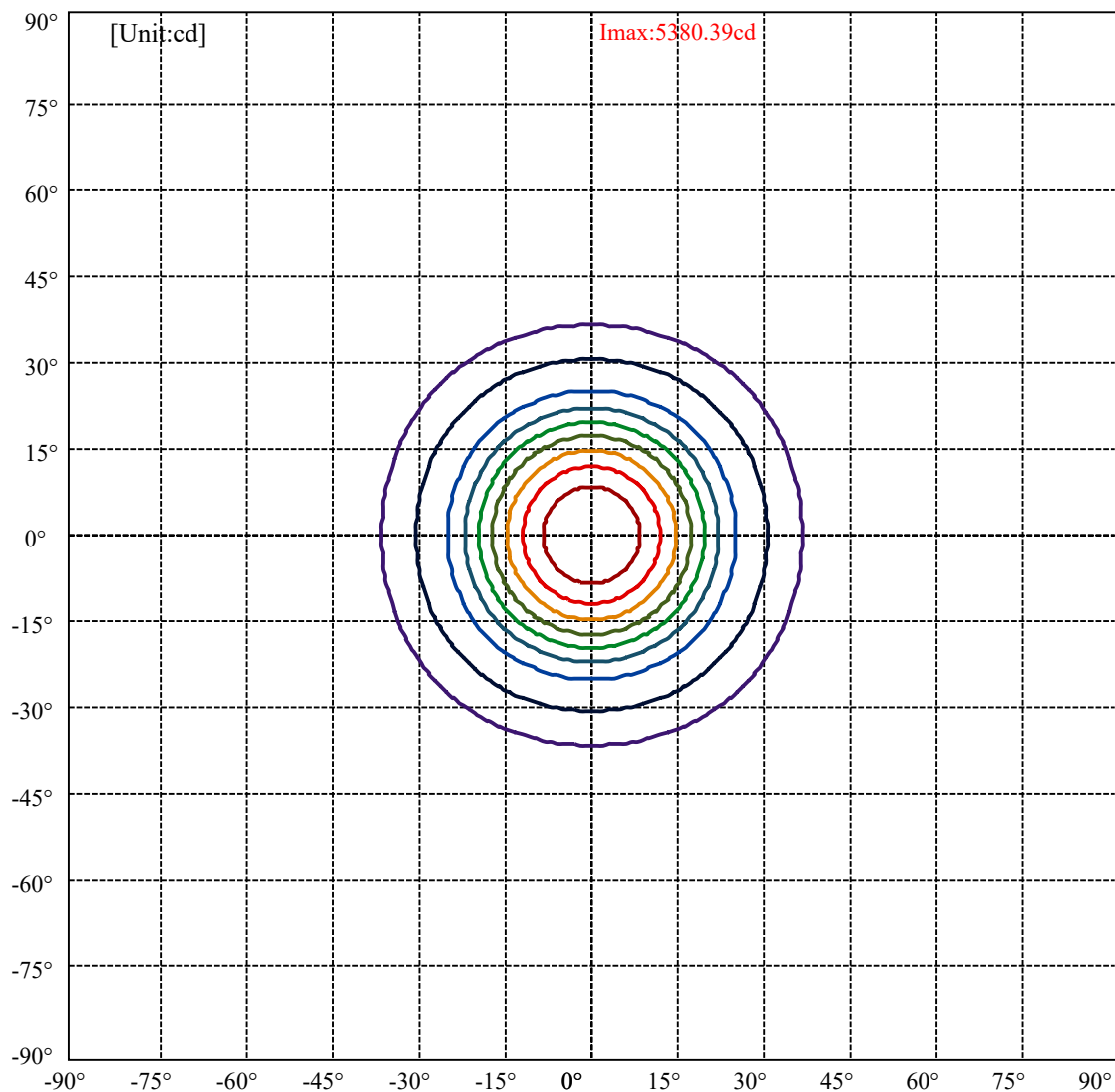
C90/C270: —————

Field angle(10%Imax):C0/180Left:36.1 Right:36.1

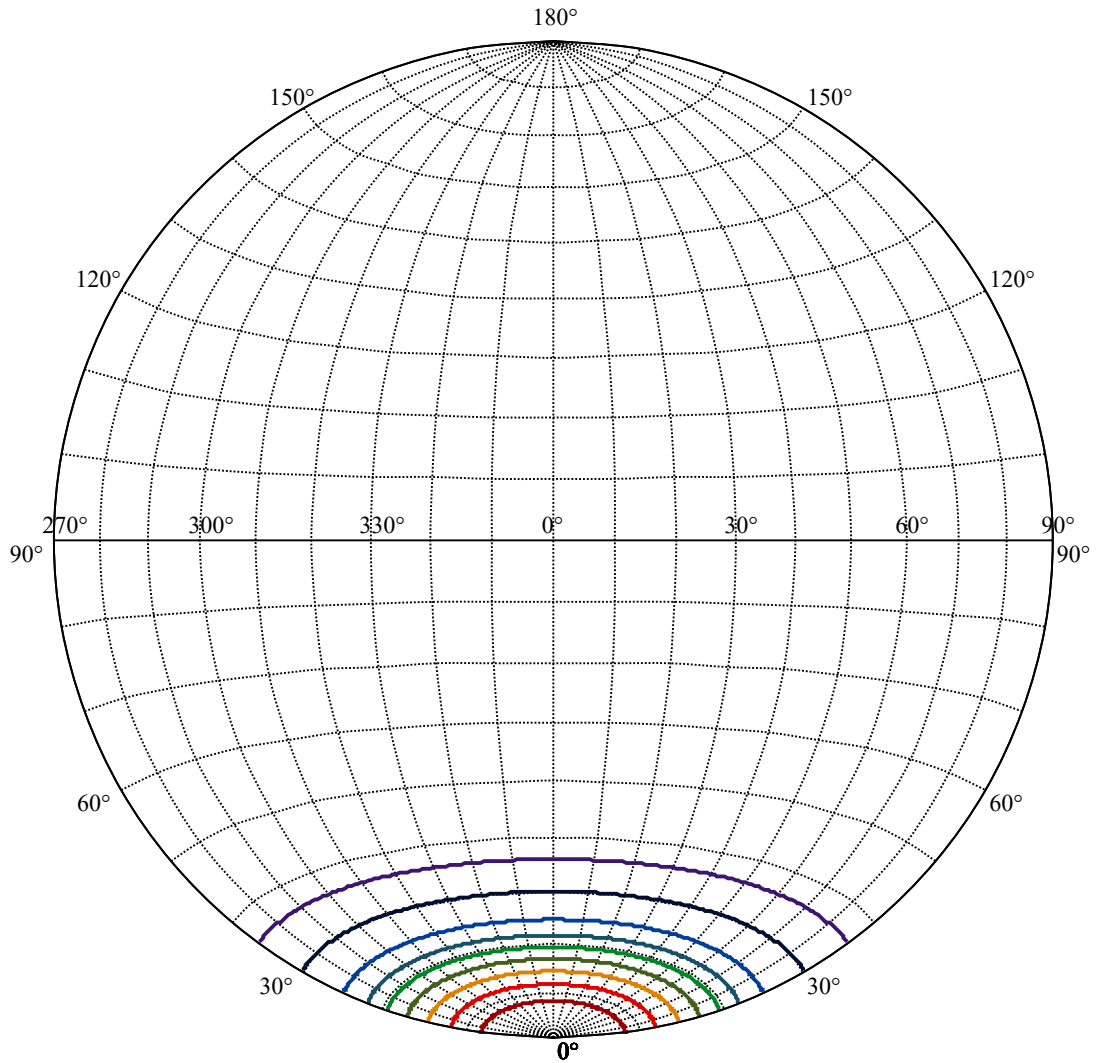
:C90/270Left:36.1 Right:36.1

Beam Angle(50%Imax):C0/180Left:19.4 Right:19.4

:C90/270Left:19.4 Right:19.4



(10%Imax) 538.039	—
(20%Imax) 1076.08	—
(30%Imax) 1614.12	—
(40%Imax) 2152.15	—
(50%Imax) 2690.19	—
(60%Imax) 3228.23	—
(70%Imax) 3766.27	—
(80%Imax) 4304.31	—
(90%Imax) 4842.35	—



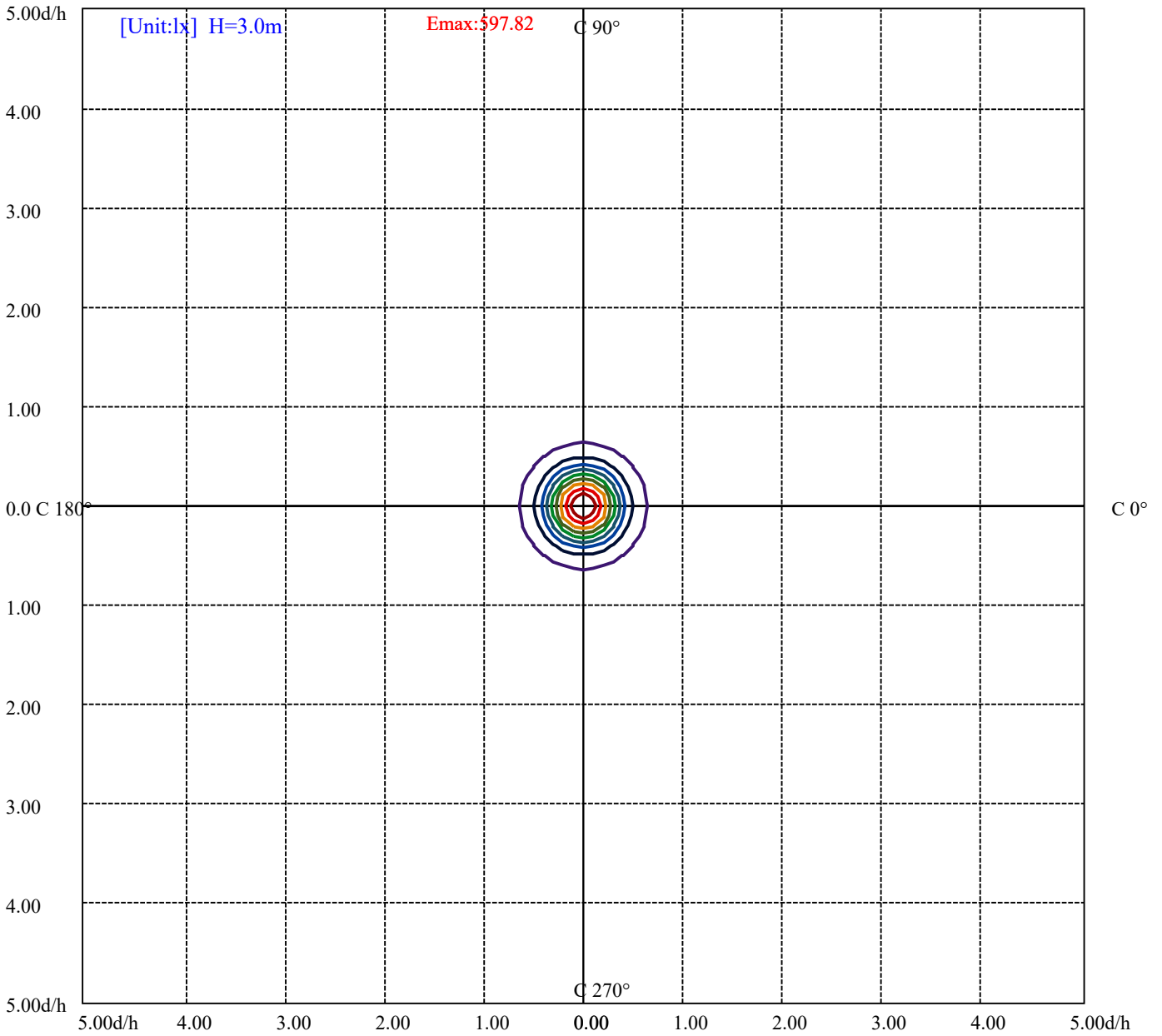
House

[Unit:cd]

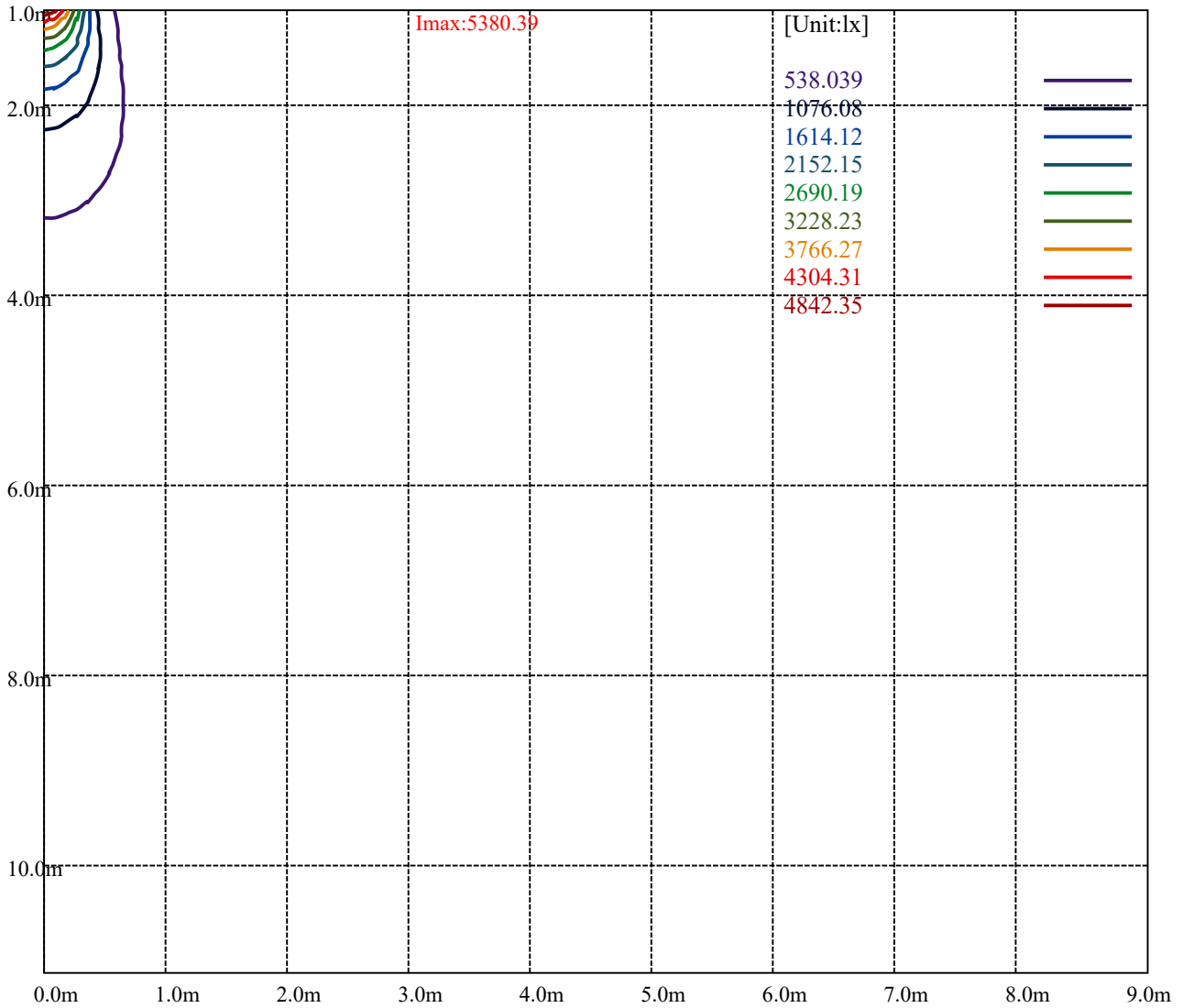
Road

Imax:5380.39

(10%Imax)	538.039	—
(20%Imax)	1076.08	—
(30%Imax)	1614.12	—
(40%Imax)	2152.15	—
(50%Imax)	2690.19	—
(60%Imax)	3228.23	—
(70%Imax)	3766.27	—
(80%Imax)	4304.31	—
(90%Imax)	4842.35	—



- (10%Emax) 59.78211
- (20%Emax) 119.5644
- (30%Emax) 179.3467
- (40%Emax) 239.1278
- (50%Emax) 298.91
- (60%Emax) 358.6922
- (70%Emax) 418.4745
- (80%Emax) 478.2567
- (90%Emax) 538.0389



Luminance Table

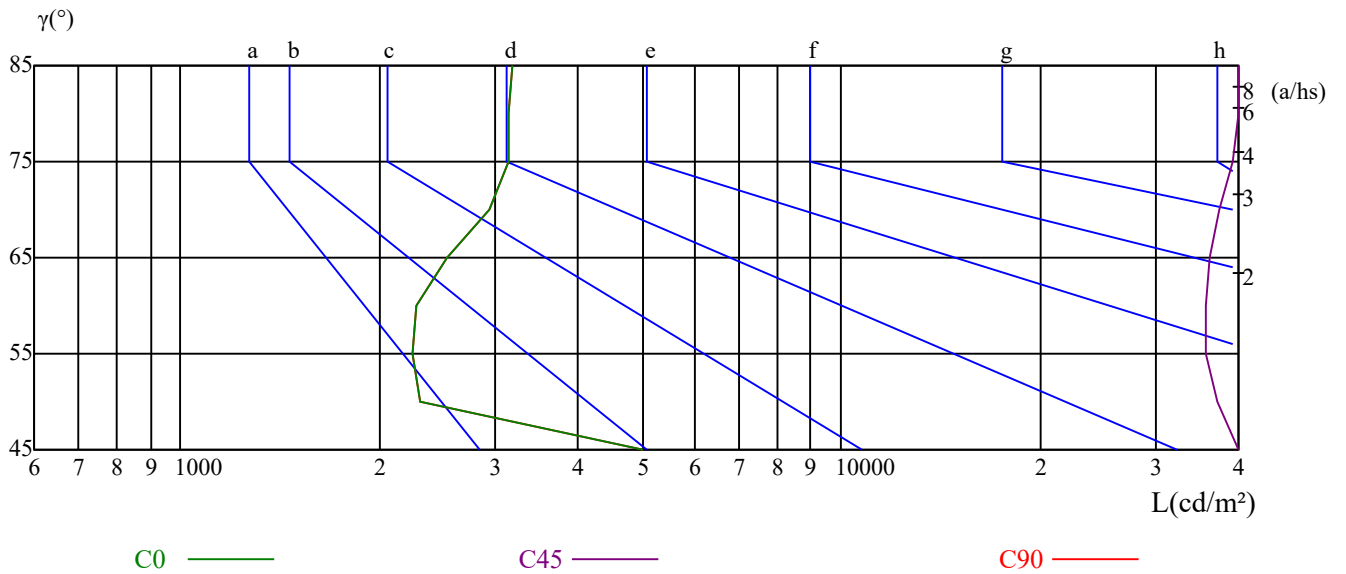
γ	45	50	55	60	65	70	75	80	85
C0	5005	2303	2244	2276	2538	2937	3138	3135	3182
C45	82880	37058	35617	35604	36194	37525	39131	41395	44498
C90	5005	2303	2244	2276	2538	2937	3138	3135	3182

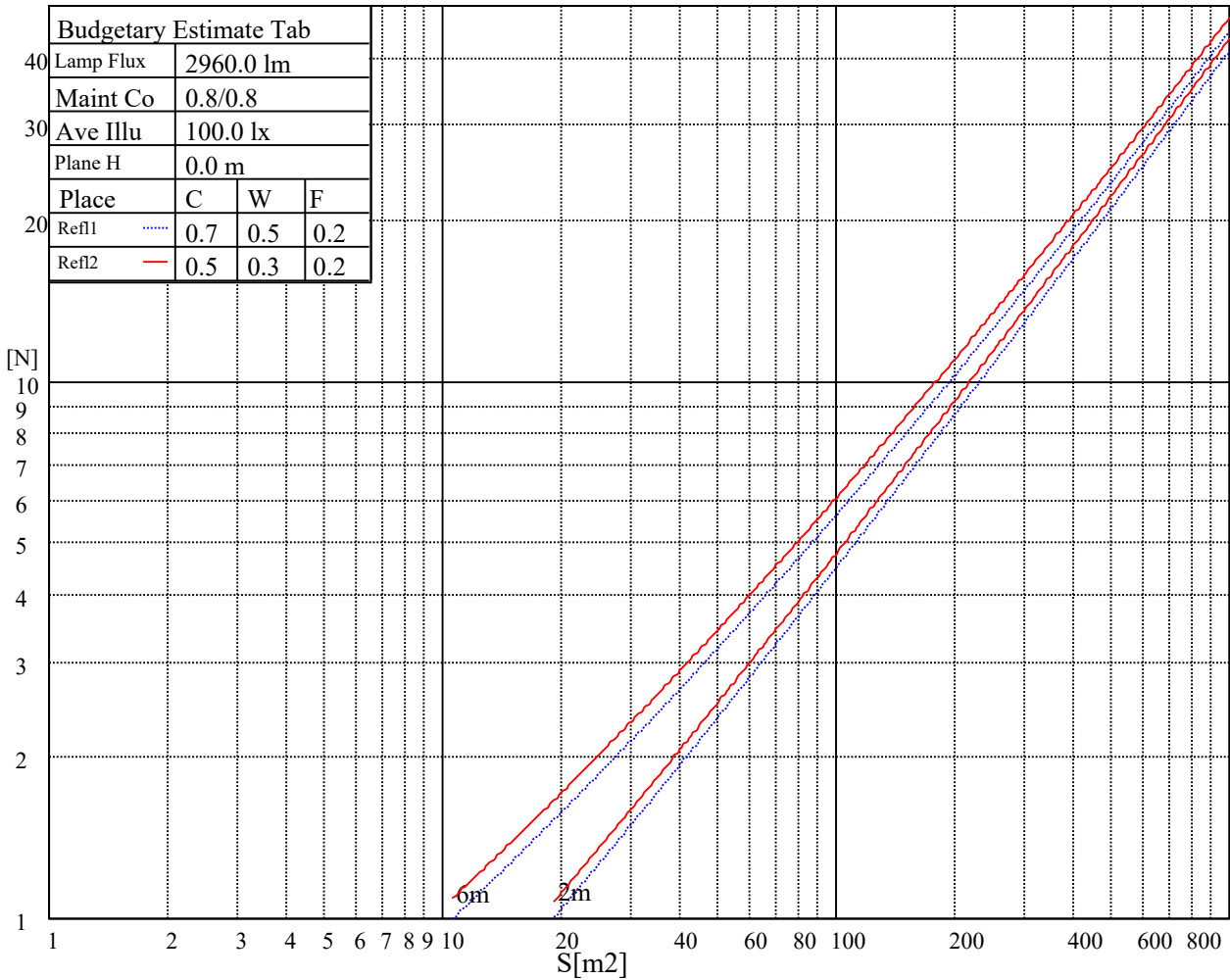
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5882	5882	103625	10332	10332	165999	25526	25526	486345

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	1.09	1.09	1.09	1.07	1.07	1.07	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.92
1	1.02	1.00	0.98	1.00	0.98	0.97	0.97	0.95	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87
2	0.96	0.93	0.90	0.94	0.91	0.89	0.92	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.82
3	0.90	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.80	0.79	0.77
4	0.86	0.81	0.77	0.85	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.74	0.73
5	0.81	0.76	0.73	0.80	0.76	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.69
6	0.77	0.72	0.69	0.76	0.72	0.68	0.75	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.66
7	0.73	0.68	0.65	0.73	0.68	0.65	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.63
8	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.60
9	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.57
10	0.64	0.59	0.56	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	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	5393.32	5371.85	5330.56	5281.56	5224.30	5150.53	5068.49	4979.85	4870.29
90.0	5367.45	5396.08	5397.73	5379.56	5336.62	5272.20	5212.19	5147.77	5075.10
180.0	5393.32	5393.32	5372.40	5329.46	5272.75	5203.93	5131.26	5023.35	4924.24
270.0	5367.45	5331.66	5273.30	5208.34	5141.72	5053.08	4958.38	4827.90	4673.74
360.0	5393.32	5371.85	5330.56	5281.56	5224.30	5150.53	5068.49	4979.85	4870.29
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4716.13	4574.09	4410.57	4217.32	4005.35	3808.80	3579.77	3344.13	3127.20
90.0	4969.94	4869.19	4745.31	4582.34	4400.66	4230.53	4029.03	3819.26	3618.31
180.0	4808.08	4647.31	4505.27	4350.56	4160.61	3961.31	3775.22	3553.89	3349.63
270.0	4522.33	4342.85	4150.70	3965.71	3773.02	3525.81	3325.96	3116.19	2881.65
360.0	4716.13	4574.09	4410.57	4217.32	4005.35	3808.80	3579.77	3344.13	3127.20
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2891.01	2681.80	2441.20	2210.51	2017.27	1821.27	1650.59	1520.11	1410.54
90.0	3382.67	3167.95	2929.55	2684.00	2465.43	2233.09	2015.06	1824.57	1692.98
180.0	3111.79	2849.72	2663.08	2421.93	2163.72	1994.69	1816.86	1627.47	1502.49
270.0	2648.76	2435.70	2197.85	1977.63	1799.79	1628.02	1498.08	1379.16	1280.06
360.0	2891.01	2681.80	2441.20	2210.51	2017.27	1821.27	1650.59	1520.11	1410.54
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1296.03	1221.15	1155.63	1075.25	984.96	901.27	804.37	709.13	622.69
90.0	1520.11	1395.13	1317.50	1223.90	1150.13	1084.06	978.90	879.25	801.62
180.0	1397.88	1288.87	1218.95	1094.03	1063.47	948.90	857.01	769.58	671.52
270.0	1207.39	1093.31	1041.34	960.51	875.89	770.29	684.57	601.11	492.75
360.0	1296.03	1221.15	1155.63	1075.25	984.96	901.27	804.37	709.13	622.69
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	525.24	437.70	341.35	281.89	185.21	128.39	74.88	41.51	29.84
90.0	690.96	605.62	510.92	414.57	343.00	278.03	174.69	119.09	76.42
180.0	573.80	489.29	397.84	311.34	238.12	163.74	108.08	62.38	37.22
270.0	407.47	329.62	238.45	174.25	118.15	61.61	36.39	25.66	20.10
360.0	525.24	437.70	341.35	281.89	185.21	128.39	74.88	41.51	29.84
C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	24.72	19.49	14.48	12.77	12.44	12.22	12.11	11.95	11.89
90.0	39.48	30.61	25.66	20.87	15.09	12.66	12.44	12.22	12.11
180.0	31.00	26.48	20.54	14.76	13.49	13.27	13.16	12.83	12.39
270.0	16.79	13.27	12.72	12.55	12.33	12.11	12.00	11.89	11.78
360.0	24.72	19.49	14.48	12.77	12.44	12.22	12.11	11.95	11.89
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	11.78	11.67	11.56	11.51	11.45	11.40	11.34	11.29	11.23
90.0	11.95	11.89	11.78	11.73	11.67	11.62	11.56	11.51	11.45
180.0	12.28	12.22	12.11	12.00	11.95	11.84	11.84	11.67	11.56
270.0	11.67	11.56	11.51	11.40	11.40	11.34	11.29	11.29	11.29
360.0	11.78	11.67	11.56	11.51	11.45	11.40	11.34	11.29	11.23
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	11.23	11.18	11.23	11.18	11.23	11.18	11.18	11.18	11.18
90.0	11.40	11.29	11.29	11.51	11.89	12.22	12.55	12.72	12.72
180.0	11.51	11.51	13.38	14.15	14.53	15.14	16.02	15.91	15.42
270.0	11.78	12.39	12.83	13.16	13.10	13.16	13.05	13.10	13.10
360.0	11.23	11.18	11.23	11.18	11.23	11.18	11.18	11.18	11.18

Intensity data(cd)

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	11.18	11.07	11.07	10.96	10.96	10.96	10.96	10.90	10.85
90.0	12.44	12.44	12.72	12.55	12.39	12.50	12.22	12.17	12.11
180.0	15.97	16.13	15.53	15.80	14.98	14.98	14.42	13.87	12.61
270.0	13.16	12.99	12.94	13.10	12.88	12.83	12.72	12.55	12.28
360.0	11.18	11.07	11.07	10.96	10.96	10.96	10.96	10.90	10.85
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	10.74	10.74	10.74	10.74	10.68	10.52	10.57	10.52	10.52
90.0	11.89	11.73	11.51	11.34	11.18	11.12	10.96	10.74	10.63
180.0	12.11	11.84	11.51	11.34	11.12	10.96	10.74	10.52	10.46
270.0	11.95	11.56	11.01	10.96	10.63	10.57	10.57	10.57	10.57
360.0	10.74	10.74	10.74	10.74	10.68	10.52	10.57	10.52	10.52
C/γ(°)	90.0								
0.0	10.52								
90.0	10.63								
180.0	10.52								
270.0	10.63								
360.0	10.52								