



NATA LIGHTING CO.,LTD.  
www.nata.cn  
Email:info@nata.com  
Tel:+86-750-3770000 Fax:+86-750-3771111  
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

---

Nata

---

LumCAT: NA01D0202050CA

Luminaire:

Report No: 200402-B004

Voltage(V): 6.6100

Test No: 200402-C004

Current(A): 0.1510

LampCAT: BRIDGELUX 3030

Power (W): 0.9980

Lamp flux(lm): 110.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

---

Photometric Results

---

Lumens(lm): 88.44

Efficiency(%): 80.40%

Lumens(lm)/Power(W): 88.62

Central intensity(cd): 83.250

Maximum intensity(cd): 166.613

Angle of maximum intensity: C=0.0  $\gamma$ =10.0

Beam Angle(50%Imax): [C0/180]Total=20.1

[C90/270]Total=47.8

Field angle(10%Imax): [C0/180]Total=51.8

[C90/270]Total=85.6

Maximum s/h(1/2): C0\_180=0.20 C90\_270=0.73

Maximum s/h(1/4): C0\_180=0.31 C90\_270=0.75

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 80.40%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 84.442%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	84.206	0.000	0	.000%	.000%
1.0	84.466	0.081	0.081	.073%	.091%
2.0	85.177	0.243	0.324	.221%	.367%
3.0	85.873	0.409	0.733	.372%	.829%
4.0	86.906	0.578	1.312	.526%	1.483%
5.0	87.926	0.752	2.064	.684%	2.333%
6.0	88.995	0.930	2.994	.845%	3.385%
7.0	89.852	1.110	4.104	1.009%	4.640%
8.0	90.415	1.290	5.394	1.173%	6.098%
9.0	90.689	1.468	6.862	1.334%	7.758%
10.0	90.436	1.639	8.501	1.490%	9.611%
11.0	89.648	1.799	10.3	1.636%	11.646%
12.0	88.348	1.946	12.246	1.769%	13.846%
13.0	86.330	2.073	14.319	1.885%	16.189%
14.0	83.805	2.178	16.496	1.980%	18.652%
15.0	81.134	2.264	18.761	2.059%	21.212%
16.0	78.033	2.332	21.093	2.120%	23.849%
17.0	74.145	2.370	23.463	2.154%	26.528%
18.0	70.516	2.385	25.848	2.168%	29.225%
19.0	66.727	2.388	28.236	2.171%	31.925%
20.0	62.592	2.367	30.603	2.152%	34.601%
21.0	58.662	2.328	32.931	2.117%	37.233%
22.0	54.837	2.281	35.212	2.073%	39.812%
23.0	51.012	2.221	37.433	2.019%	42.323%
24.0	47.123	2.146	39.578	1.951%	44.749%
25.0	43.713	2.065	41.644	1.878%	47.084%
26.0	40.479	1.987	43.631	1.807%	49.331%
27.0	37.294	1.903	45.534	1.730%	51.483%
28.0	34.158	1.809	47.343	1.645%	53.528%
29.0	31.465	1.717	49.06	1.561%	55.469%
30.0	28.898	1.630	50.69	1.482%	57.312%
31.0	26.367	1.538	52.228	1.398%	59.051%
32.0	24.195	1.449	53.676	1.317%	60.689%
33.0	22.212	1.367	55.043	1.243%	62.234%
34.0	20.327	1.287	56.331	1.170%	63.690%
35.0	18.605	1.209	57.54	1.099%	65.057%
36.0	17.107	1.137	58.677	1.034%	66.343%
37.0	15.792	1.073	59.75	.975%	67.556%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	14.555	1.013	60.763	.921%	68.701%
39.0	13.388	0.954	61.716	.867%	69.780%
40.0	12.382	0.899	62.615	.817%	70.796%
41.0	11.559	0.853	63.468	.775%	71.760%
42.0	10.765	0.811	64.279	.737%	72.677%
43.0	10.020	0.770	65.049	.700%	73.547%
44.0	9.422	0.734	65.782	.667%	74.377%
45.0	8.859	0.703	66.485	.639%	75.171%
46.0	8.304	0.671	67.156	.610%	75.930%
47.0	7.847	0.642	67.799	.584%	76.656%
48.0	7.467	0.619	68.418	.563%	77.356%
49.0	7.109	0.599	69.016	.544%	78.033%
50.0	6.778	0.579	69.595	.526%	78.688%
51.0	6.511	0.562	70.157	.511%	79.323%
52.0	6.265	0.548	70.706	.498%	79.943%
53.0	6.012	0.534	71.24	.485%	80.547%
54.0	5.801	0.521	71.76	.473%	81.136%
55.0	5.618	0.510	72.27	.463%	81.712%
56.0	5.435	0.499	72.77	.454%	82.277%
57.0	5.288	0.490	73.26	.446%	82.831%
58.0	5.140	0.482	73.742	.438%	83.376%
59.0	5.013	0.475	74.217	.432%	83.913%
60.0	4.887	0.468	74.684	.425%	84.442%
61.0	4.774	0.461	75.145	.419%	84.963%
62.0	4.704	0.457	75.602	.415%	85.479%
63.0	4.648	0.455	76.057	.413%	85.994%
64.0	4.598	0.454	76.511	.412%	86.507%
65.0	4.570	0.454	76.964	.413%	87.020%
66.0	4.521	0.454	77.418	.412%	87.533%
67.0	4.486	0.453	77.871	.412%	88.045%
68.0	4.437	0.452	78.323	.411%	88.556%
69.0	4.402	0.451	78.774	.410%	89.065%
70.0	4.380	0.451	79.225	.410%	89.575%
71.0	4.373	0.452	79.677	.411%	90.087%
72.0	4.359	0.454	80.131	.413%	90.600%
73.0	4.345	0.455	80.586	.414%	91.115%
74.0	4.310	0.455	81.042	.414%	91.629%
75.0	4.282	0.454	81.496	.413%	92.143%

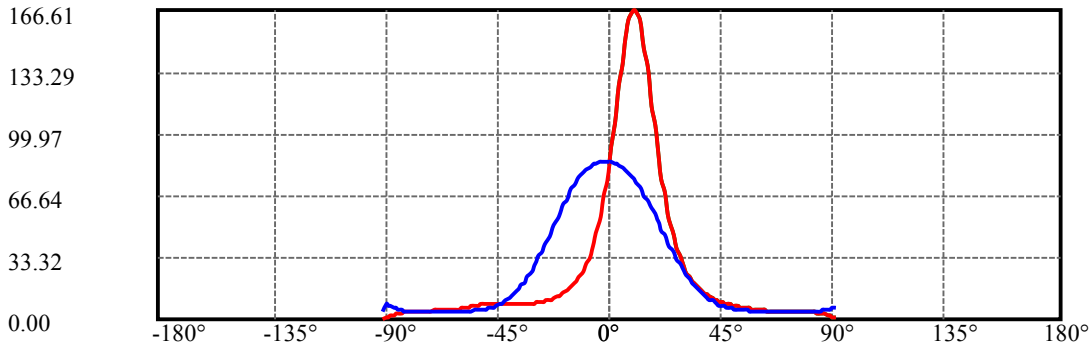
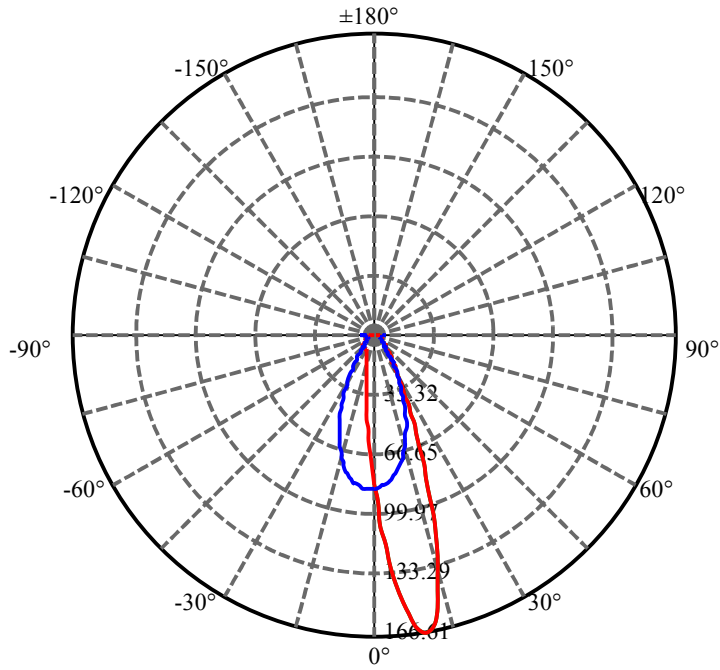
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.282	0.455	81.95	.413%	92.657%
77.0	4.268	0.456	82.406	.414%	93.172%
78.0	4.275	0.457	82.863	.416%	93.689%
79.0	4.289	0.460	83.323	.418%	94.210%
80.0	4.296	0.463	83.786	.421%	94.733%
81.0	4.331	0.467	84.253	.424%	95.260%
82.0	4.409	0.474	84.727	.431%	95.796%
83.0	4.493	0.484	85.211	.440%	96.343%
84.0	4.584	0.495	85.705	.450%	96.902%
85.0	4.613	0.502	86.207	.456%	97.470%
86.0	4.486	0.497	86.704	.452%	98.032%
87.0	4.106	0.470	87.175	.427%	98.564%
88.0	3.881	0.438	87.612	.398%	99.059%
89.0	3.938	0.429	88.041	.390%	99.543%
90.0	3.431	0.404	88.445	.367%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	50.69	46.08%	57.31%
0-40	62.62	56.92%	70.80%
0-60	74.68	67.89%	84.44%
0-90	88.04	80.04%	99.54%
0-120	88.04	80.04%	99.54%
0-180	88.44	80.40%	100.00%
60-90	13.82	12.57%	15.63%
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%
0-52.09	70.76	64.32%	80.00%

ZONAL LUMEN SUMMARY

0-10	8.50
10-20	22.10
20-30	20.09
30-40	11.93
40-50	6.98
50-60	5.09
60-70	4.54
70-80	4.56
80-90	4.25
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: —————

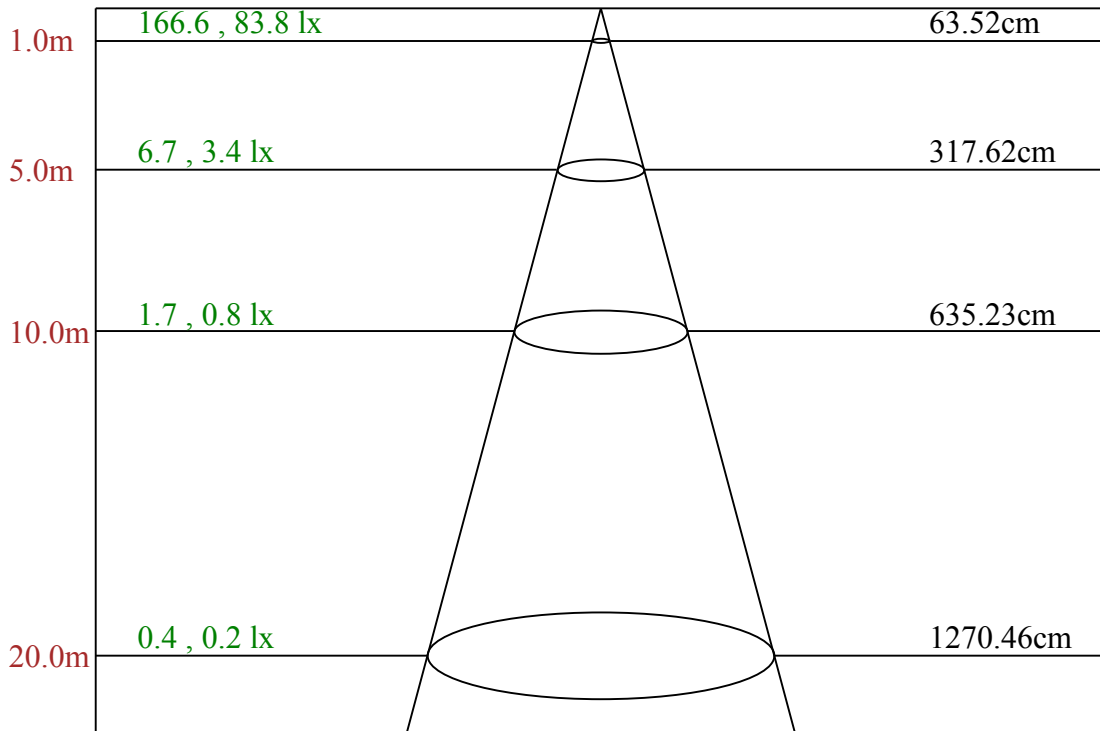
C90/C270: —————

Field angle(10%Imax):C0/180Left:26.1 Right:25.7

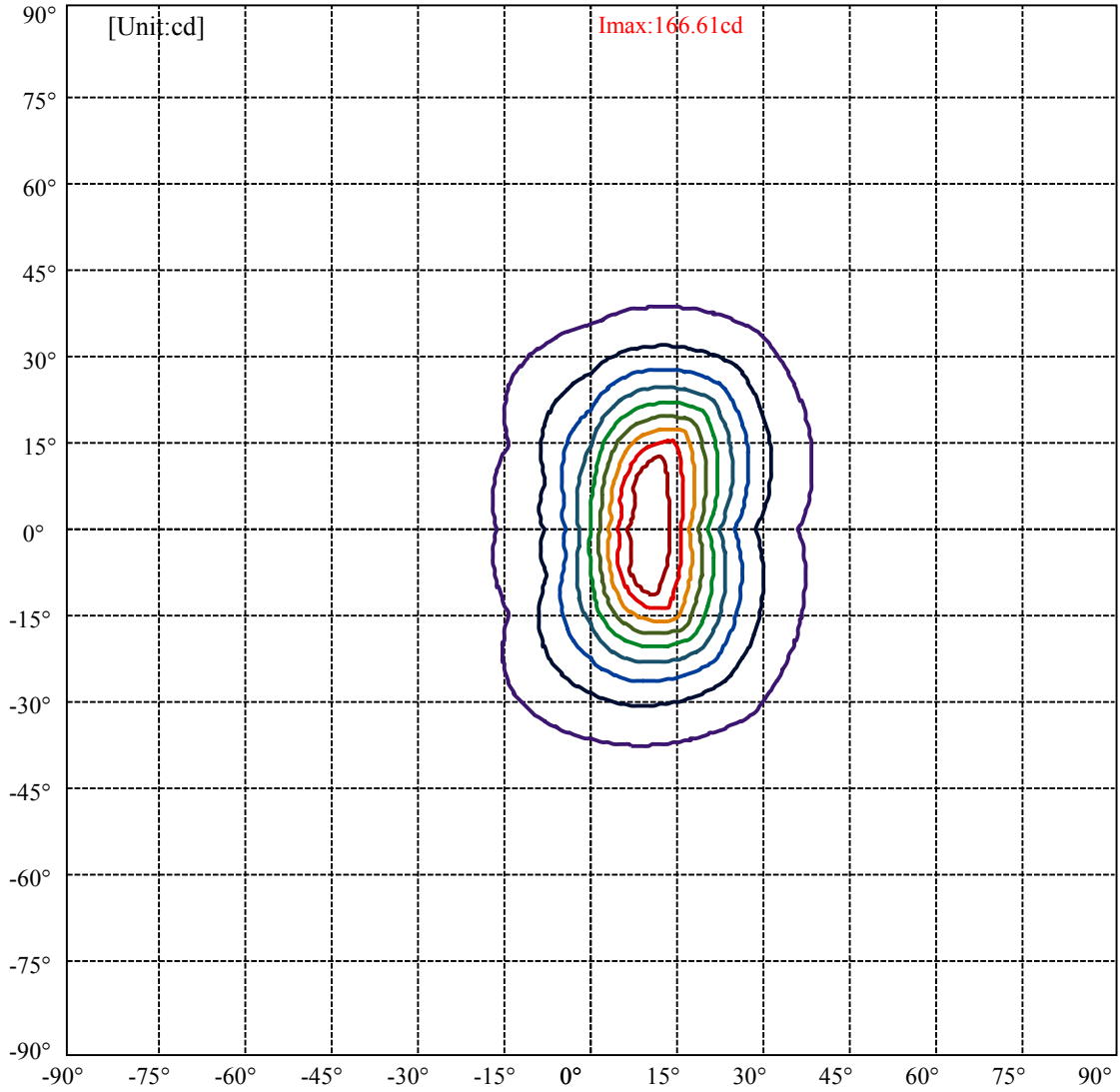
:C90/270Left:40.9 Right:44.7

Beam Angle(50%Imax):C0/180Left:10.0 Right:10.1

:C90/270Left:22.7 Right:25.1



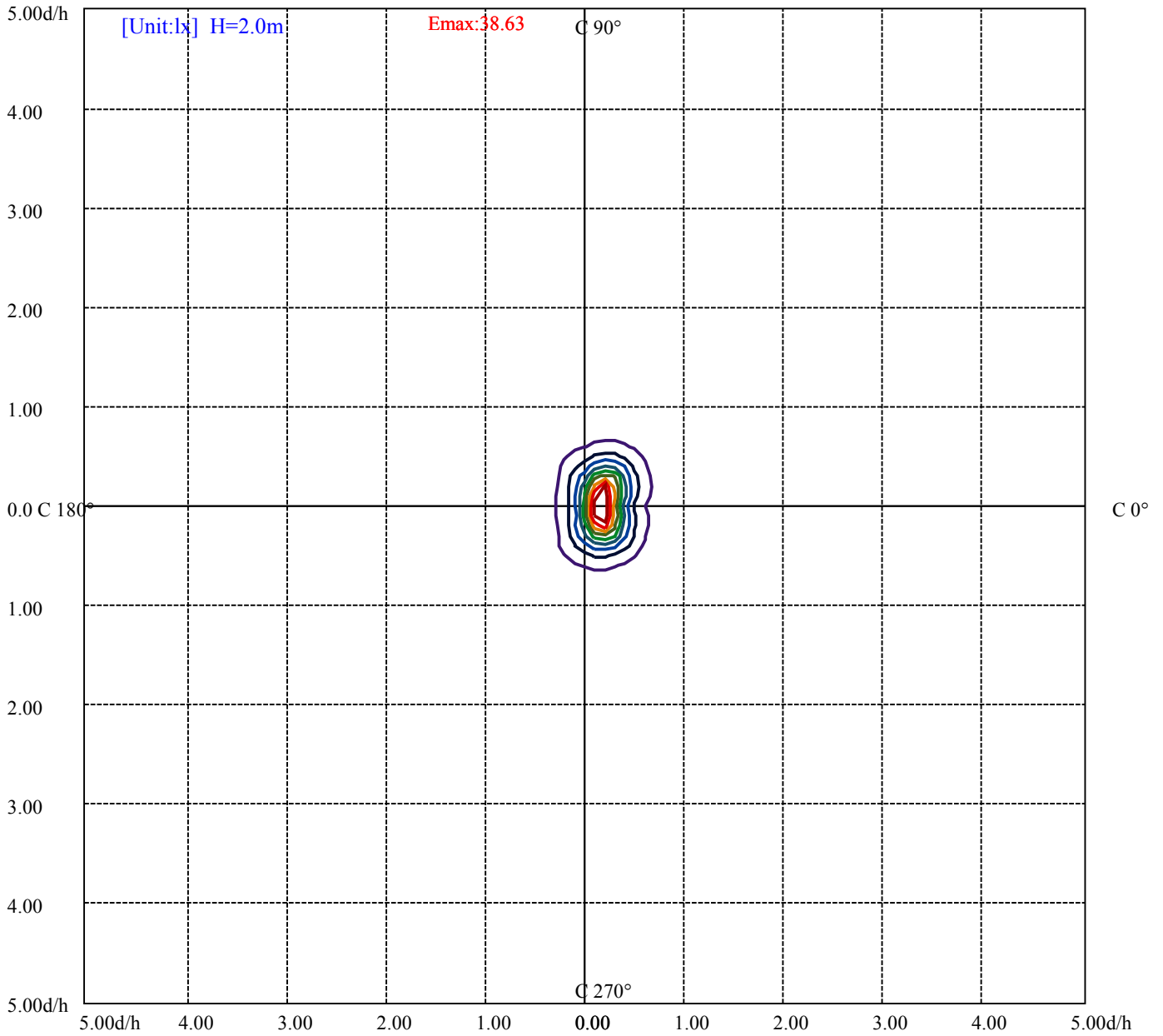
Max , Ave      Beam angle of C0 plane 34.12



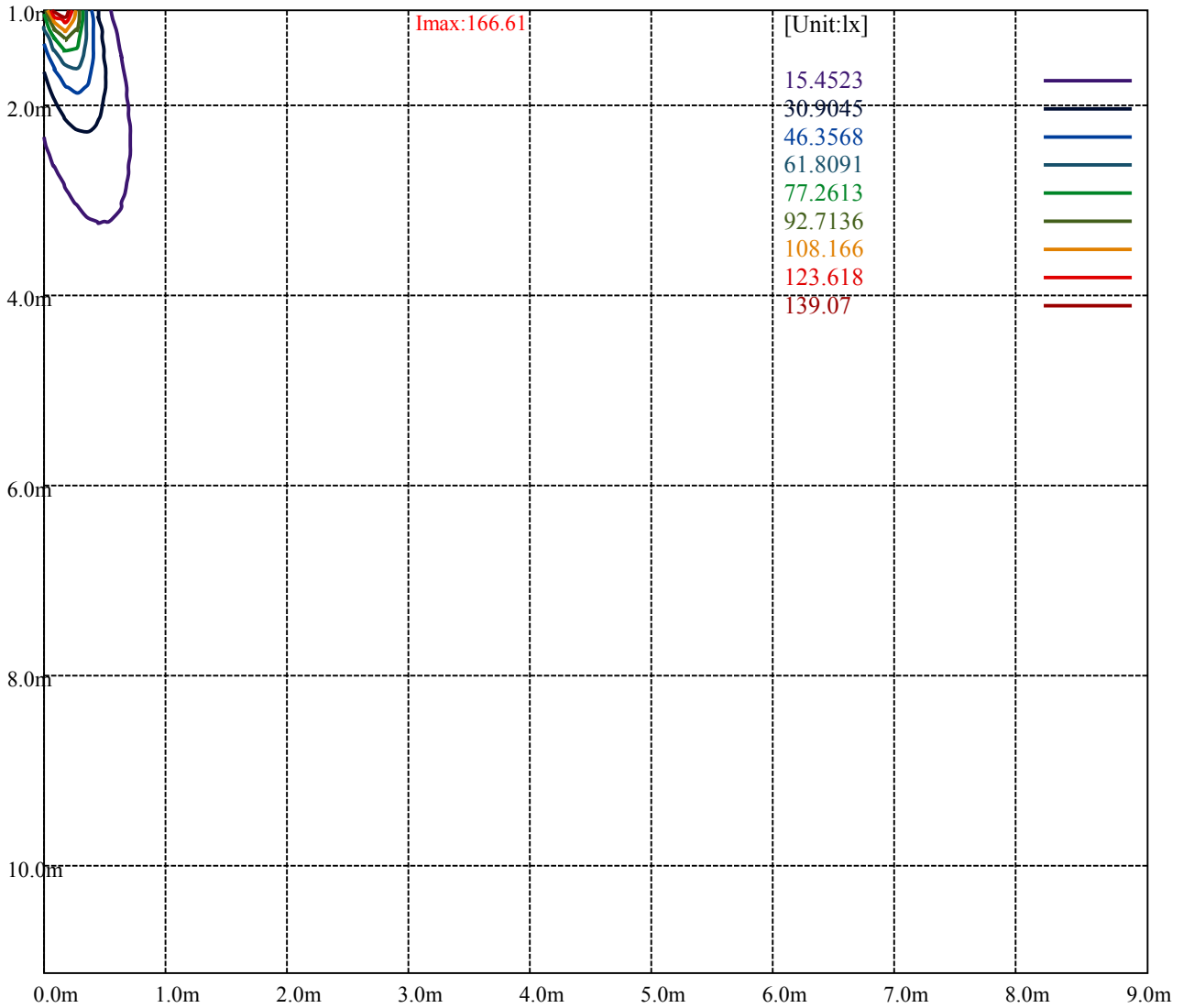
(10%Imax) 16.6612	—
(20%Imax) 33.3225	—
(30%Imax) 49.9837	—
(40%Imax) 66.645	—
(50%Imax) 83.3062	—
(60%Imax) 99.9675	—
(70%Imax) 116.629	—
(80%Imax) 133.29	—
(90%Imax) 149.951	—







- (10%Emax) 3.86305
- (20%Emax) 7.7261
- (30%Emax) 11.58915
- (40%Emax) 15.4522
- (50%Emax) 19.31525
- (60%Emax) 23.1783
- (70%Emax) 27.04125
- (80%Emax) 30.9045
- (90%Emax) 34.7675



Luminance Table

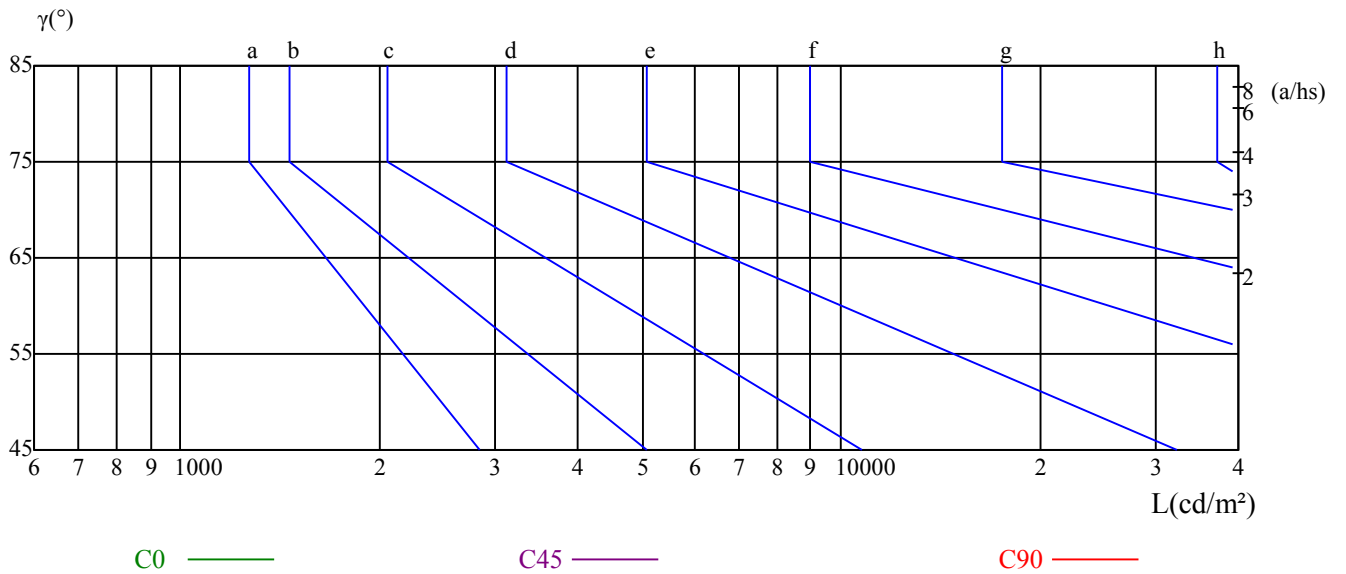
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

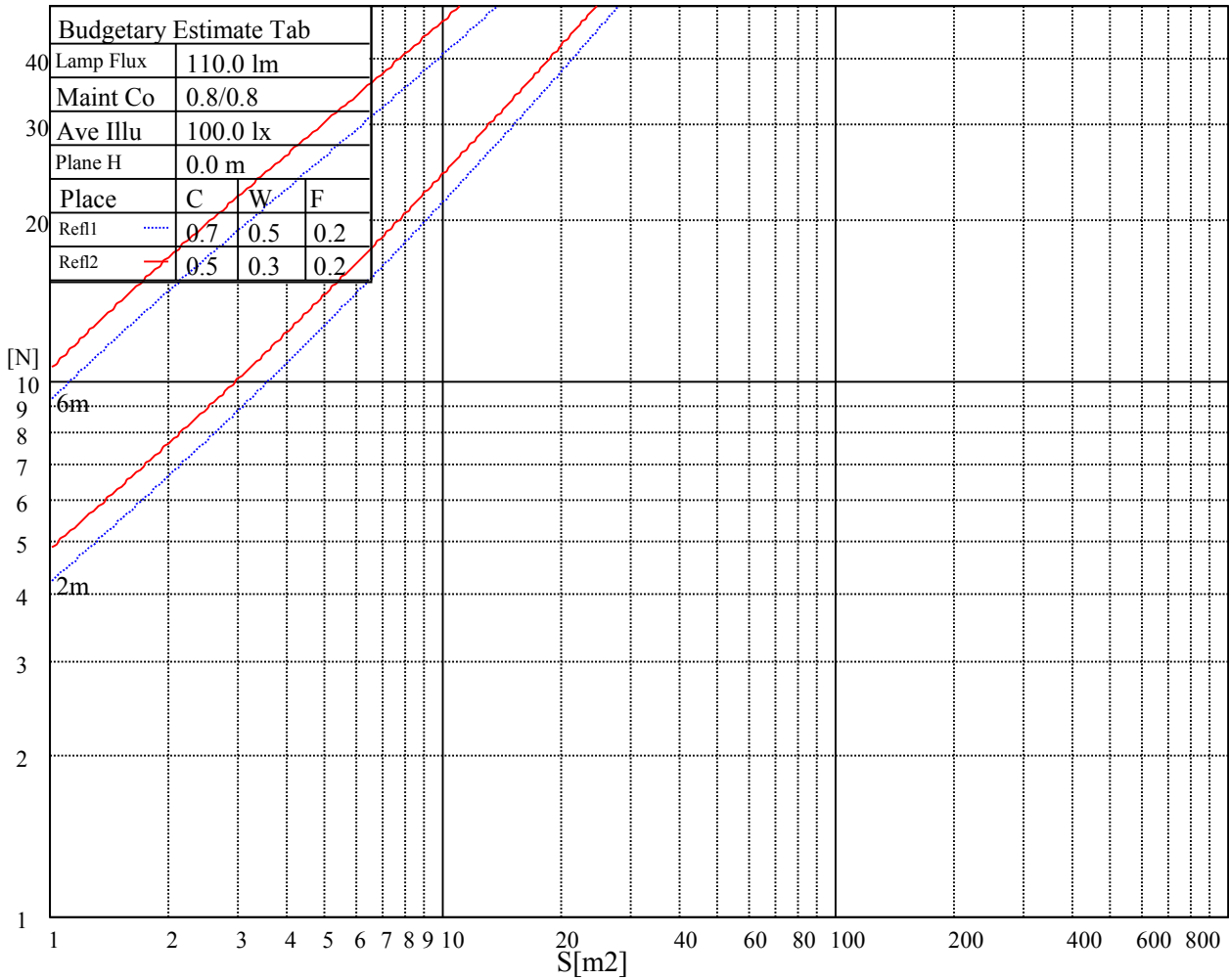
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

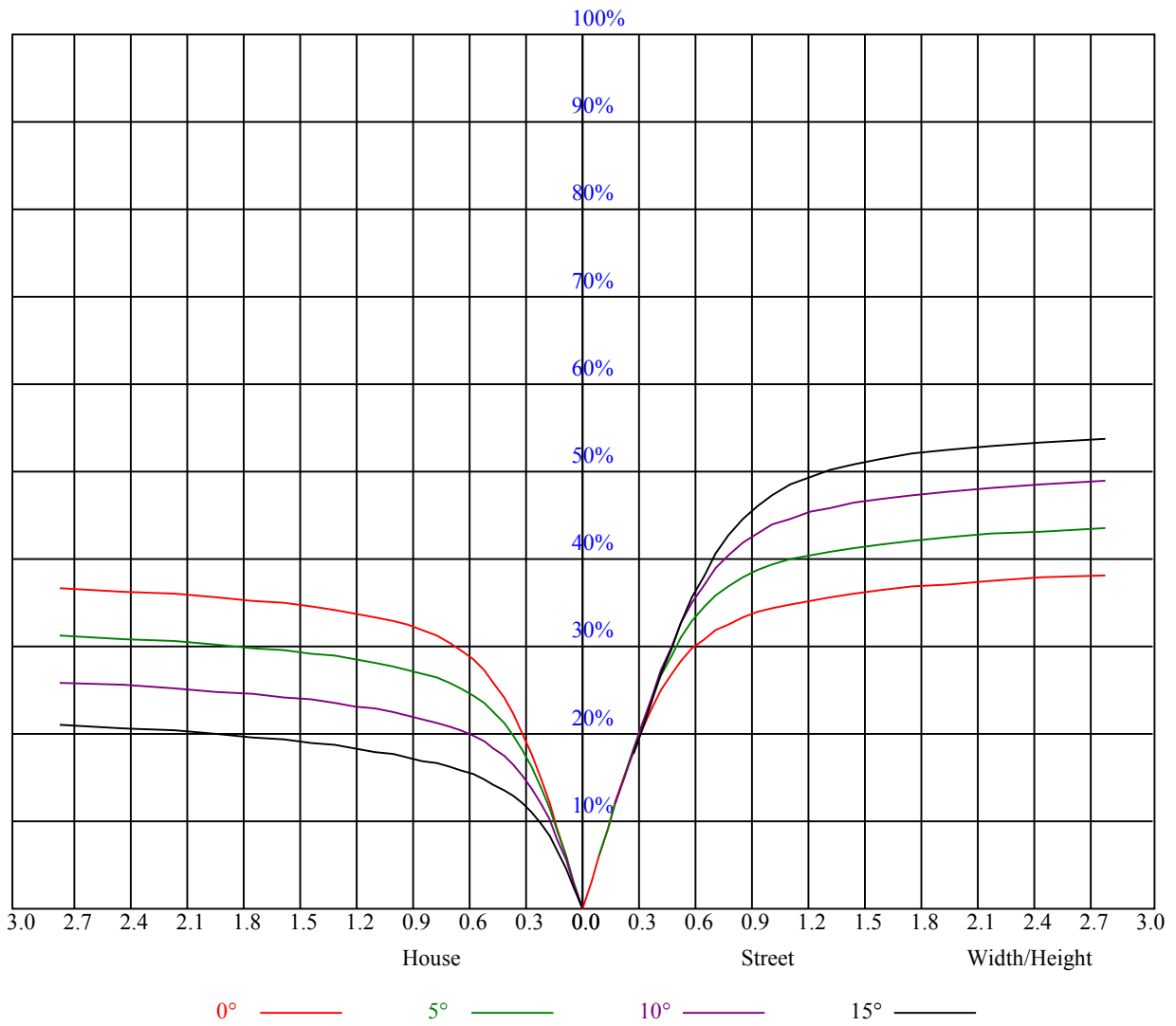
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.96	0.96	0.96	0.93	0.93	0.93	0.89	0.89	0.89	0.86	0.86	0.86	0.82	0.82	0.82	0.80
1	0.85	0.82	0.79	0.83	0.80	0.77	0.80	0.77	0.75	0.76	0.74	0.73	0.74	0.72	0.71	0.69
2	0.77	0.72	0.68	0.75	0.71	0.67	0.72	0.69	0.66	0.70	0.67	0.64	0.68	0.65	0.63	0.61
3	0.70	0.65	0.60	0.69	0.64	0.60	0.67	0.62	0.59	0.65	0.61	0.58	0.63	0.60	0.57	0.56
4	0.65	0.59	0.55	0.64	0.58	0.54	0.62	0.57	0.54	0.60	0.56	0.53	0.58	0.55	0.52	0.51
5	0.60	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.49	0.56	0.52	0.49	0.55	0.51	0.48	0.47
6	0.56	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.45	0.53	0.48	0.45	0.52	0.48	0.45	0.43
7	0.52	0.47	0.43	0.52	0.46	0.43	0.51	0.46	0.42	0.50	0.45	0.42	0.49	0.45	0.42	0.40
8	0.49	0.44	0.40	0.49	0.43	0.40	0.48	0.43	0.40	0.47	0.43	0.39	0.46	0.42	0.39	0.38
9	0.46	0.41	0.37	0.46	0.41	0.37	0.45	0.40	0.37	0.44	0.40	0.37	0.44	0.40	0.37	0.36
10	0.44	0.39	0.35	0.44	0.38	0.35	0.43	0.38	0.35	0.42	0.38	0.35	0.42	0.38	0.35	0.34



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	83.25	92.70	105.47	116.10	126.45	137.64	147.83	155.25	161.55
45.0	82.41	88.71	97.20	104.29	111.09	118.69	126.11	132.53	139.05
90.0	84.66	84.43	84.09	83.42	82.86	81.96	80.83	79.71	78.53
135.0	86.51	79.82	72.96	66.66	61.43	56.76	51.36	47.36	43.71
180.0	83.25	74.64	65.98	58.28	52.31	46.46	41.23	37.13	33.24
225.0	82.41	76.33	69.30	64.01	59.23	53.61	49.44	45.68	41.46
270.0	84.66	84.88	84.99	84.94	84.71	84.21	83.70	82.86	82.07
315.0	86.51	94.22	101.42	109.29	117.17	124.09	131.46	138.32	143.72
360.0	83.25	92.70	105.47	116.10	126.45	137.64	147.83	155.25	161.55
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	165.43	166.61	165.09	161.21	154.46	145.80	136.97	127.29	114.69
45.0	144.90	149.34	153.56	156.26	158.06	158.51	158.06	156.60	153.23
90.0	77.01	75.21	73.46	71.27	69.19	66.71	64.13	61.99	59.68
135.0	39.66	36.51	33.69	30.83	28.29	26.10	24.02	22.33	20.64
180.0	30.32	27.34	24.81	22.89	20.98	19.29	17.94	16.76	15.47
225.0	38.76	35.38	32.12	30.04	27.56	25.03	23.57	21.88	19.97
270.0	81.00	79.76	78.36	76.61	74.19	72.23	69.98	67.11	64.52
315.0	148.44	153.34	156.09	157.67	157.89	156.77	154.41	150.30	144.96
360.0	165.43	166.61	165.09	161.21	154.46	145.80	136.97	127.29	114.69
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	104.96	95.57	84.38	75.94	68.23	60.36	53.49	47.98	42.98
45.0	149.18	144.45	137.98	131.79	125.33	117.51	109.86	103.11	95.46
90.0	56.53	53.89	51.30	48.09	45.51	42.86	39.77	37.41	35.10
135.0	19.13	17.83	16.65	15.53	14.57	13.78	12.83	12.21	11.59
180.0	14.51	13.56	12.71	11.98	11.36	10.80	10.29	9.84	9.56
225.0	18.73	17.66	16.37	15.30	14.40	13.44	12.66	12.04	11.36
270.0	61.93	58.89	56.03	53.38	50.29	47.76	44.66	41.68	39.09
315.0	139.16	131.96	125.33	117.28	109.01	101.59	93.43	85.44	78.69
360.0	104.96	95.57	84.38	75.94	68.23	60.36	53.49	47.98	42.98
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	38.03	33.92	30.77	27.73	25.03	22.73	20.87	19.18	17.49
45.0	88.59	81.17	74.14	67.61	61.14	55.13	50.01	45.39	40.22
90.0	32.23	30.38	28.07	25.54	23.85	21.83	19.74	18.39	16.93
135.0	11.08	10.58	10.18	9.79	9.39	9.11	8.78	8.55	8.33
180.0	9.28	9.00	8.83	8.72	8.66	8.61	8.55	8.49	8.55
225.0	10.86	10.41	9.90	9.56	9.23	8.89	8.61	8.33	8.04
270.0	36.28	33.64	31.22	28.91	26.33	24.30	22.28	19.97	18.28
315.0	72.00	64.18	58.61	53.33	47.31	42.98	38.87	34.31	30.99
360.0	38.03	33.92	30.77	27.73	25.03	22.73	20.87	19.18	17.49
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	16.26	15.08	13.78	12.94	12.15	11.48	10.69	10.13	9.62
45.0	36.45	33.13	29.64	26.38	23.85	21.26	19.13	17.27	15.47
90.0	15.08	14.01	12.83	11.70	10.69	9.90	9.00	8.27	7.71
135.0	8.10	7.93	7.76	7.59	7.43	7.31	7.26	7.09	7.03
180.0	8.49	8.49	8.49	8.44	8.44	8.38	8.38	8.38	8.38
225.0	7.82	7.65	7.48	7.26	7.09	6.98	6.81	6.69	6.53
270.0	16.65	15.19	13.56	12.32	11.08	10.18	9.23	8.44	7.82
315.0	28.01	24.86	22.89	20.48	18.34	16.99	15.64	13.89	12.83
360.0	16.26	15.08	13.78	12.94	12.15	11.48	10.69	10.13	9.62



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	9.11	8.72	8.27	7.82	7.48	7.20	6.86	6.64	6.36
45.0	13.89	12.43	11.03	10.01	9.06	8.21	7.65	7.14	6.64
90.0	7.20	6.81	6.41	6.08	5.79	5.51	5.29	5.06	4.95
135.0	6.92	6.81	6.69	6.64	6.53	6.36	6.24	6.08	5.96
180.0	8.38	8.33	8.27	8.21	8.16	7.99	7.82	7.65	7.37
225.0	6.41	6.24	6.08	5.96	5.79	5.68	5.51	5.40	5.23
270.0	7.20	6.69	6.36	6.02	5.68	5.46	5.23	5.01	4.84
315.0	11.76	10.41	9.68	9.00	8.38	7.82	7.48	7.14	6.75
360.0	9.11	8.72	8.27	7.82	7.48	7.20	6.86	6.64	6.36
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	6.13	5.91	5.74	5.51	5.34	5.18	4.95	4.84	4.67
45.0	6.30	6.02	5.68	5.46	5.34	5.18	5.06	4.95	4.95
90.0	4.78	4.67	4.56	4.50	4.39	4.33	4.28	4.16	4.16
135.0	5.79	5.68	5.57	5.46	5.34	5.23	5.12	5.06	5.01
180.0	7.14	6.92	6.58	6.36	6.08	5.91	5.63	5.40	5.18
225.0	5.12	5.01	4.89	4.84	4.73	4.67	4.61	4.50	4.50
270.0	4.67	4.56	4.44	4.39	4.28	4.16	4.11	4.11	4.05
315.0	6.47	6.19	6.02	5.79	5.63	5.46	5.34	5.18	5.12
360.0	6.13	5.91	5.74	5.51	5.34	5.18	4.95	4.84	4.67
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.56	4.39	4.28	4.16	4.05	3.99	3.94	3.88	3.88
45.0	4.95	4.95	4.95	5.01	5.01	5.12	5.12	5.23	5.23
90.0	4.11	4.11	4.05	3.99	3.99	3.99	3.99	3.99	4.05
135.0	4.95	4.84	4.78	4.73	4.67	4.56	4.50	4.44	4.39
180.0	5.06	5.12	5.18	5.06	5.01	4.84	4.73	4.67	4.56
225.0	4.44	4.44	4.39	4.39	4.33	4.28	4.16	4.16	4.16
270.0	3.99	3.94	3.94	3.94	3.94	3.88	3.94	3.88	3.94
315.0	5.12	5.01	5.01	4.89	4.89	4.84	4.84	4.78	4.78
360.0	4.56	4.39	4.28	4.16	4.05	3.99	3.94	3.88	3.88
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.83	3.77	3.77	3.77	3.83	3.77	3.77	3.77	3.77
45.0	5.23	5.18	5.06	4.89	4.78	4.73	4.73	4.73	4.78
90.0	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.11	4.11
135.0	4.33	4.33	4.28	4.22	4.22	4.16	4.16	4.16	4.16
180.0	4.50	4.39	4.28	4.22	4.16	4.11	4.05	3.94	3.83
225.0	4.16	4.22	4.22	4.28	4.33	4.39	4.50	4.56	4.56
270.0	3.99	4.05	4.05	4.05	4.11	4.16	4.16	4.28	4.33
315.0	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.84
360.0	3.83	3.77	3.77	3.77	3.83	3.77	3.77	3.77	3.77
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	3.71	3.71	3.60	3.49	3.38	3.21	2.53	1.74	1.41
45.0	4.89	5.06	5.40	5.85	6.19	6.41	6.64	6.47	6.69
90.0	4.16	4.22	4.39	4.61	4.78	5.12	5.01	5.29	6.13
135.0	4.16	4.16	4.11	4.05	3.88	3.66	2.93	2.31	2.14
180.0	3.71	3.66	3.49	3.32	3.15	2.25	1.63	1.18	0.90
225.0	4.56	4.61	4.50	4.22	3.99	3.09	2.36	1.97	1.74
270.0	4.44	4.61	4.89	5.40	5.79	6.47	6.75	7.26	7.82
315.0	5.01	5.23	5.57	5.74	5.74	5.68	5.01	4.84	4.67
360.0	3.71	3.71	3.60	3.49	3.38	3.21	2.53	1.74	1.41

Intensity data(cd)

C/γ(°)	90.0
0.0	1.01
45.0	6.98
90.0	6.64
135.0	1.86
180.0	0.51
225.0	0.34
270.0	3.83
315.0	6.30
360.0	1.01