



SOTEN LIGHTING LTD.
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Address: Jin Ou Road, Jiangmen City, Guangdong, China

SOTEN

LumCAT: D1017

Luminaire:

Report No:

Voltage(V): 220.2000

Test No:

Current(A): 0.0710

LampCAT: ORSAM2823 3000K 80RA

Power (W): 15.3400

Lamp flux(lm): -1.0

PF: 0.9770

Number of Lamps: 1

Ballast type: HTUC1-014W-01-31

Length(mm): 160

Width(mm): 160

Phm Type: C

Height(mm): 87

Photometric Results

Lumens(lm): 1038.98

Efficiency(%): 0.00%

Lumens(lm)/Power(W): 67.73

Central intensity(cd): 563.209

Maximum intensity(cd): 563.209

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

Beam Angle(50%Imax): [C0/180]Total=84.3

[C90/270]Total=84.3

Field angle(10%Imax): [C0/180]Total=126.4

[C90/270]Total=126.4

Maximum s/h(1/2): C0_180=1.18 C90_270=1.18

Maximum s/h(1/4): C0_180=1.68 C90_270=1.19

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 91.012%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	563.209	.000	.000	.000%	.000%
1.0	563.128	.539	.539	.000%	.000%
2.0	562.594	1.616	2.155	.000%	.000%
3.0	561.834	2.689	4.844	.000%	.000%
4.0	560.790	3.758	8.602	.000%	.000%
5.0	559.456	4.819	13.421	.000%	.000%
6.0	557.791	5.871	19.292	.000%	.000%
7.0	555.906	6.913	26.205	.000%	.000%
8.0	553.557	7.940	34.145	.000%	.000%
9.0	551.254	8.954	43.099	.000%	.000%
10.0	548.644	9.954	53.053	.000%	.000%
11.0	545.564	10.933	63.986	.000%	.000%
12.0	542.008	11.889	75.875	.000%	.000%
13.0	538.580	12.824	88.699	.000%	.000%
14.0	534.659	13.737	102.436	.000%	.000%
15.0	530.350	14.621	117.057	.000%	.000%
16.0	525.761	15.475	132.532	.000%	.000%
17.0	521.382	16.307	148.839	.000%	.000%
18.0	516.649	17.115	165.954	.000%	.000%
19.0	511.429	17.886	183.840	.000%	.000%
20.0	506.417	18.629	202.470	.000%	.000%
21.0	501.075	19.346	221.816	.000%	.000%
22.0	495.454	20.026	241.841	.000%	.000%
23.0	489.990	20.677	262.519	.000%	.000%
24.0	483.732	21.289	283.808	.000%	.000%
25.0	477.618	21.859	305.667	.000%	.000%
26.0	470.843	22.389	328.055	.000%	.000%
27.0	462.920	22.845	350.900	.000%	.000%
28.0	454.451	23.226	374.126	.000%	.000%
29.0	445.791	23.553	397.679	.000%	.000%
30.0	435.693	23.800	421.479	.000%	.000%
31.0	425.716	23.972	445.450	.000%	.000%
32.0	415.002	24.086	469.536	.000%	.000%
33.0	403.680	24.119	493.655	.000%	.000%
34.0	392.334	24.090	517.744	.000%	.000%
35.0	379.411	23.968	541.712	.000%	.000%
36.0	366.772	23.759	565.470	.000%	.000%
37.0	354.156	23.513	588.983	.000%	.000%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	340.421	23.184	612.167	.000%	.000%
39.0	327.196	22.788	634.955	.000%	.000%
40.0	312.480	22.310	657.264	.000%	.000%
41.0	298.286	21.749	679.013	.000%	.000%
42.0	283.942	21.153	700.167	.000%	.000%
43.0	269.221	20.491	720.658	.000%	.000%
44.0	254.511	19.767	740.425	.000%	.000%
45.0	239.847	18.999	759.423	.000%	.000%
46.0	225.358	18.193	777.617	.000%	.000%
47.0	212.191	17.402	795.019	.000%	.000%
48.0	197.133	16.547	811.566	.000%	.000%
49.0	184.187	15.659	827.225	.000%	.000%
50.0	171.948	14.848	842.074	.000%	.000%
51.0	158.723	13.990	856.064	.000%	.000%
52.0	147.180	13.127	869.190	.000%	.000%
53.0	135.248	12.286	881.476	.000%	.000%
54.0	123.787	11.417	892.893	.000%	.000%
55.0	113.572	10.595	903.488	.000%	.000%
56.0	103.503	9.809	913.297	.000%	.000%
57.0	94.848	9.069	922.366	.000%	.000%
58.0	86.206	8.373	930.739	.000%	.000%
59.0	78.874	7.718	938.457	.000%	.000%
60.0	72.256	7.140	945.596	.000%	.000%
61.0	66.345	6.614	952.211	.000%	.000%
62.0	61.438	6.157	958.368	.000%	.000%
63.0	57.169	5.768	964.137	.000%	.000%
64.0	53.242	5.418	969.554	.000%	.000%
65.0	49.982	5.108	974.663	.000%	.000%
66.0	46.978	4.838	979.501	.000%	.000%
67.0	44.907	4.620	984.121	.000%	.000%
68.0	43.294	4.468	988.589	.000%	.000%
69.0	41.421	4.322	992.911	.000%	.000%
70.0	39.779	4.170	997.081	.000%	.000%
71.0	37.865	4.013	1001.094	.000%	.000%
72.0	35.928	3.837	1004.931	.000%	.000%
73.0	33.921	3.653	1008.583	.000%	.000%
74.0	31.989	3.465	1012.049	.000%	.000%
75.0	30.029	3.277	1015.325	.000%	.000%

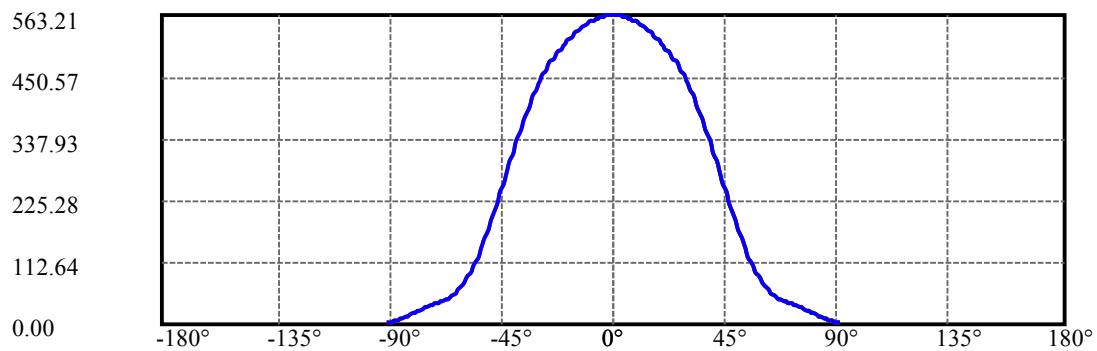
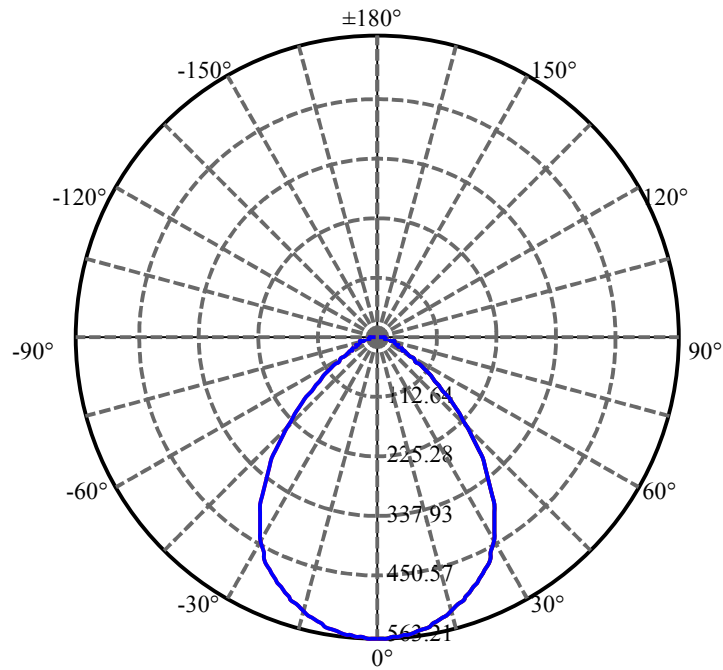
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	27.981	3.079	1018.405	.000%	.000%
77.0	25.852	2.870	1021.275	.000%	.000%
78.0	23.735	2.654	1023.929	.000%	.000%
79.0	21.630	2.437	1026.367	.000%	.000%
80.0	19.449	2.215	1028.581	.000%	.000%
81.0	17.471	1.997	1030.578	.000%	.000%
82.0	15.226	1.773	1032.351	.000%	.000%
83.0	13.306	1.551	1033.902	.000%	.000%
84.0	11.183	1.334	1035.236	.000%	.000%
85.0	9.223	1.114	1036.350	.000%	.000%
86.0	7.146	.895	1037.245	.000%	.000%
87.0	5.325	.683	1037.927	.000%	.000%
88.0	3.608	.489	1038.417	.000%	.000%
89.0	2.361	.327	1038.744	.000%	.000%
90.0	1.903	.234	1038.977	.000%	.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	421.48	N.A.	40.57%
0-40	657.26	N.A.	63.26%
0-60	945.60	N.A.	91.01%
0-90	1038.74	N.A.	99.98%
0-120	1038.74	N.A.	99.98%
0-180	1038.98	N.A.	100.00%
60-90	100.29	N.A.	9.65%
90-120	0.00	N.A.	0.00%
90-130	0.00	N.A.	0.00%
90-150	0.00	N.A.	0.00%
90-180	0.00	N.A.	0.00%
0-49.27	831.18	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	53.05
10-20	149.42
20-30	219.01
30-40	235.79
40-50	184.81
50-60	103.52
60-70	51.48
70-80	31.50
80-90	10.16
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:

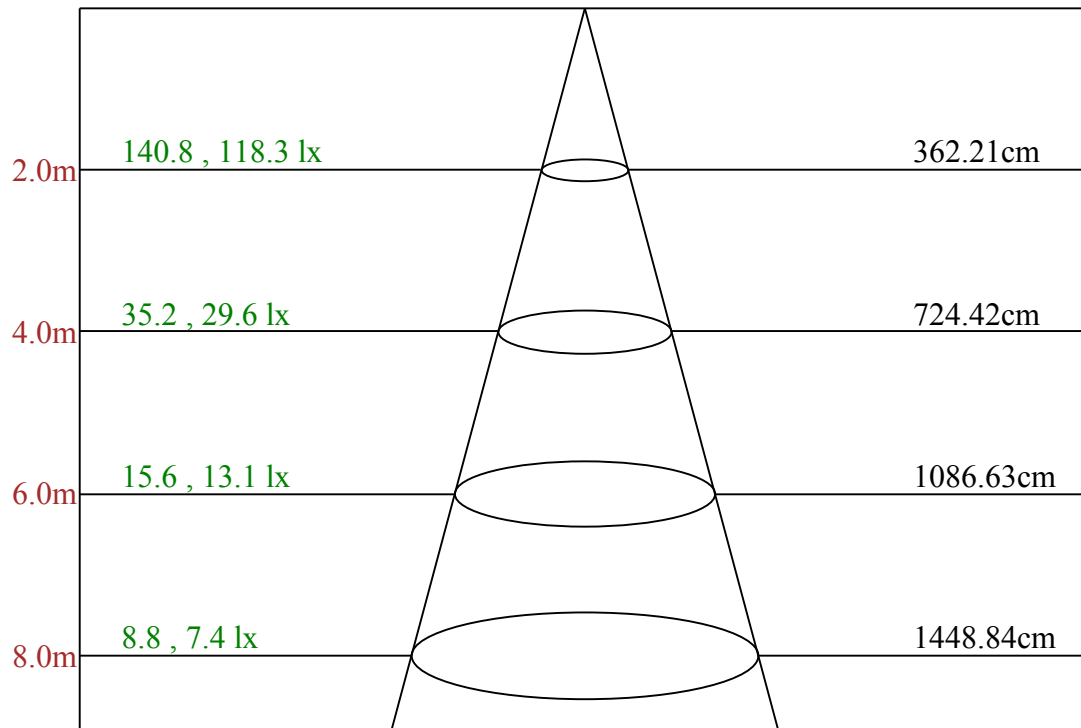
C90/C270:

Field angle(10%Imax):C0/180Left:63.2 Right:63.2

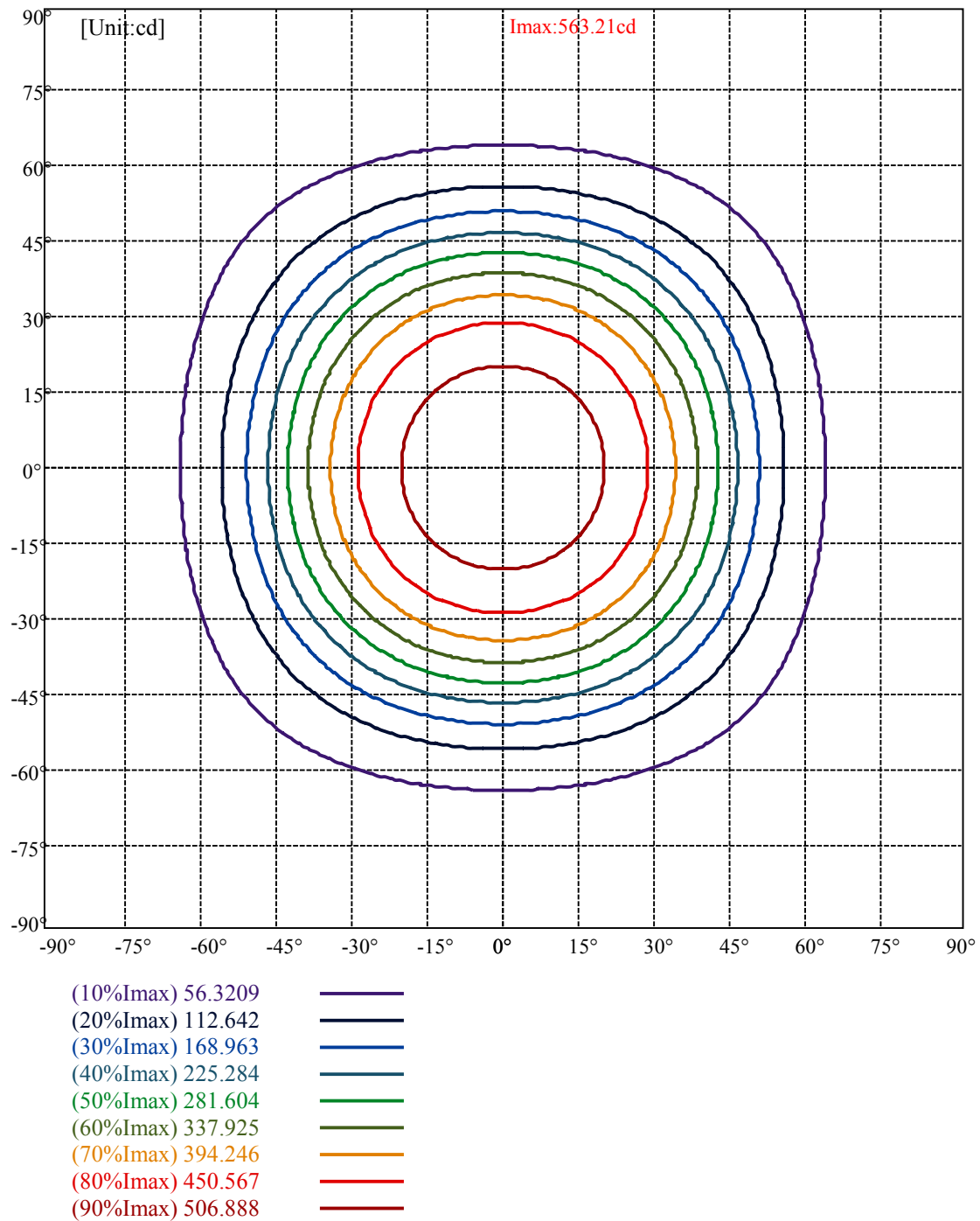
:C90/270Left:63.2 Right:63.2

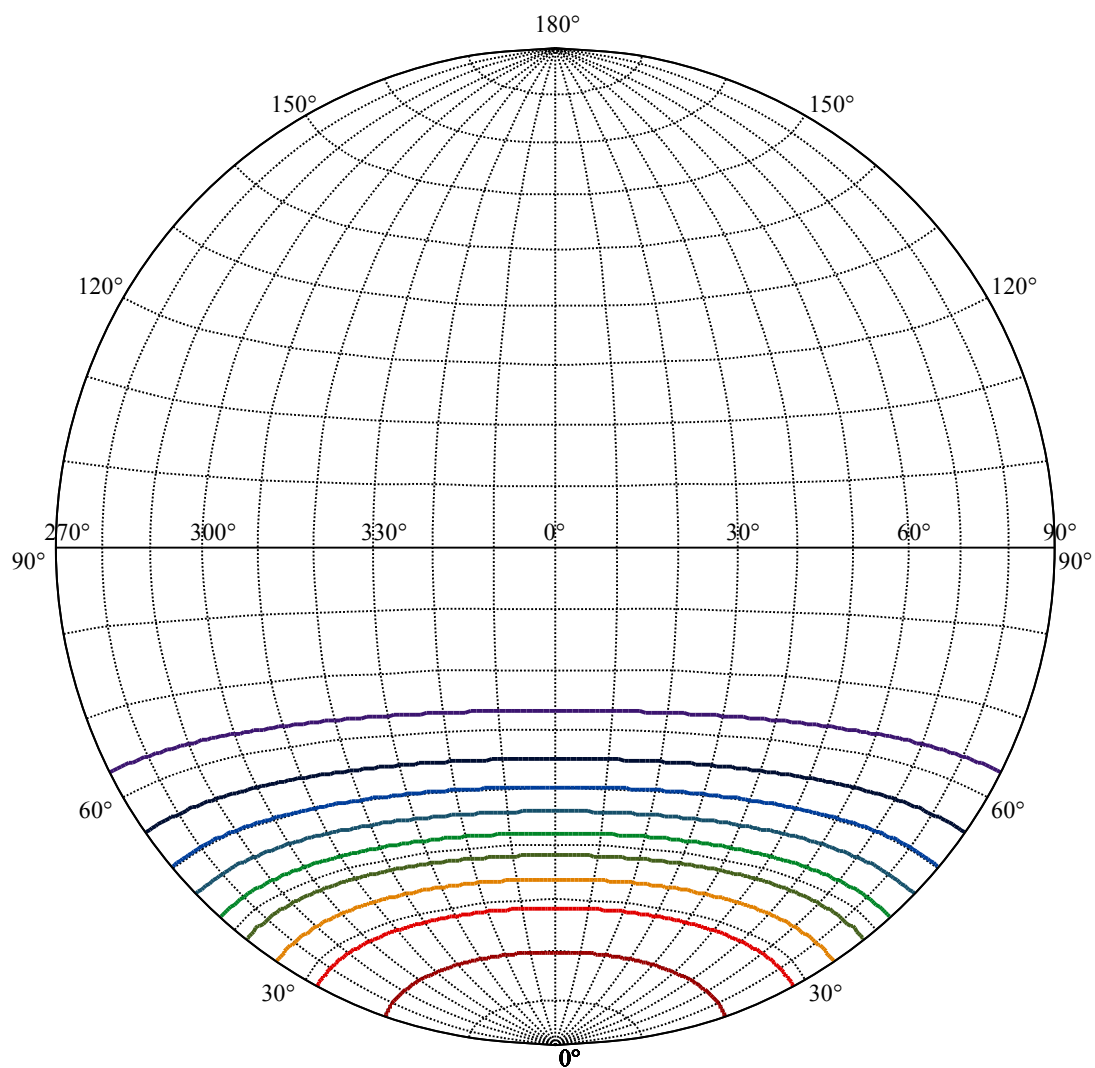
Beam Angle(50%Imax):C0/180Left:42.2 Right:42.2

:C90/270Left:42.2 Right:42.2



Max , Ave Beam angle of C0plane84.32





House

[Unit:cd]

Road

Imax:563.21

(10%Imax) 56.3209

(20%Imax) 112.642

(30%Imax) 168.963

(40%Imax) 225.284

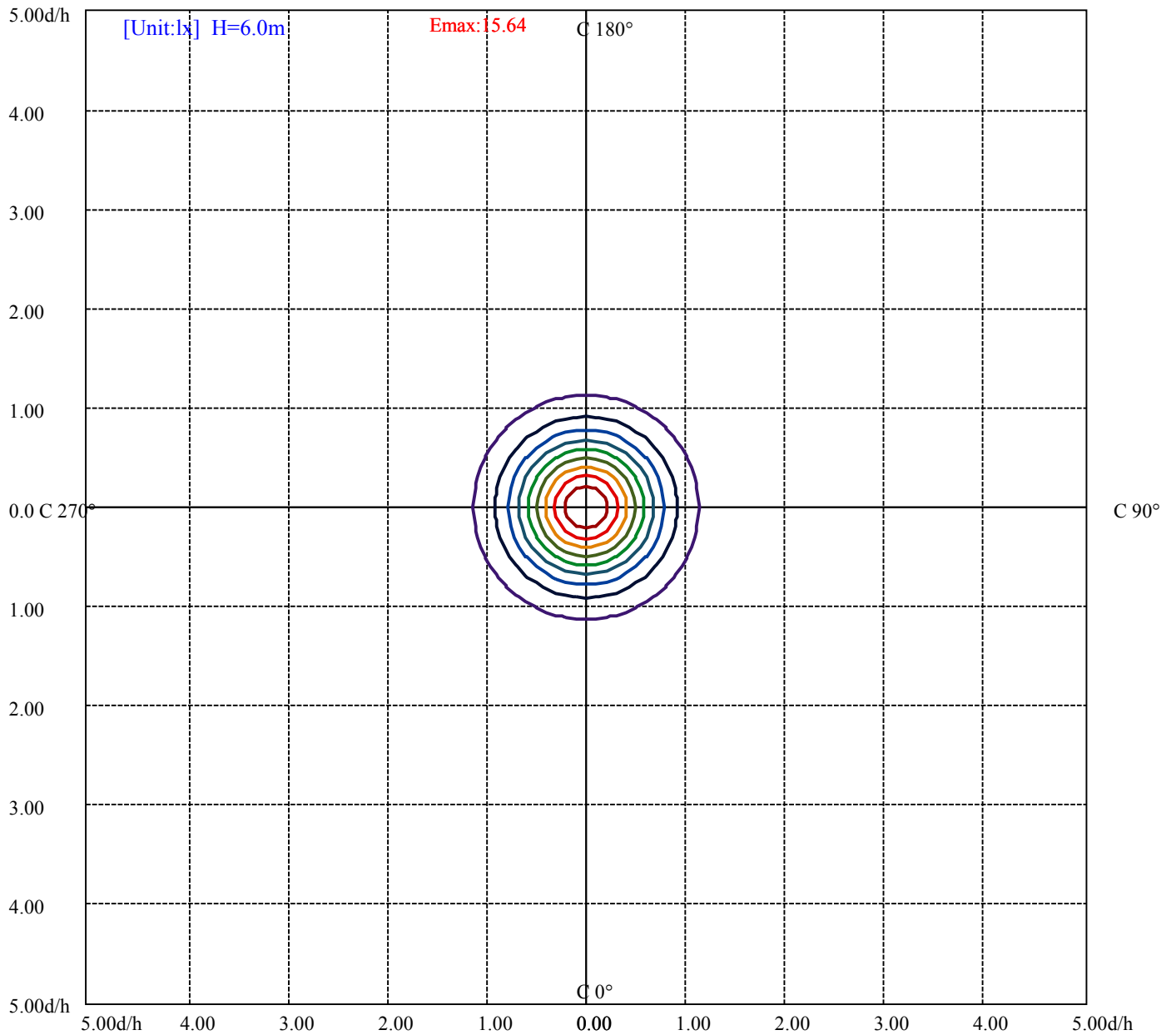
(50%Imax) 281.604

(60%Imax) 337.925

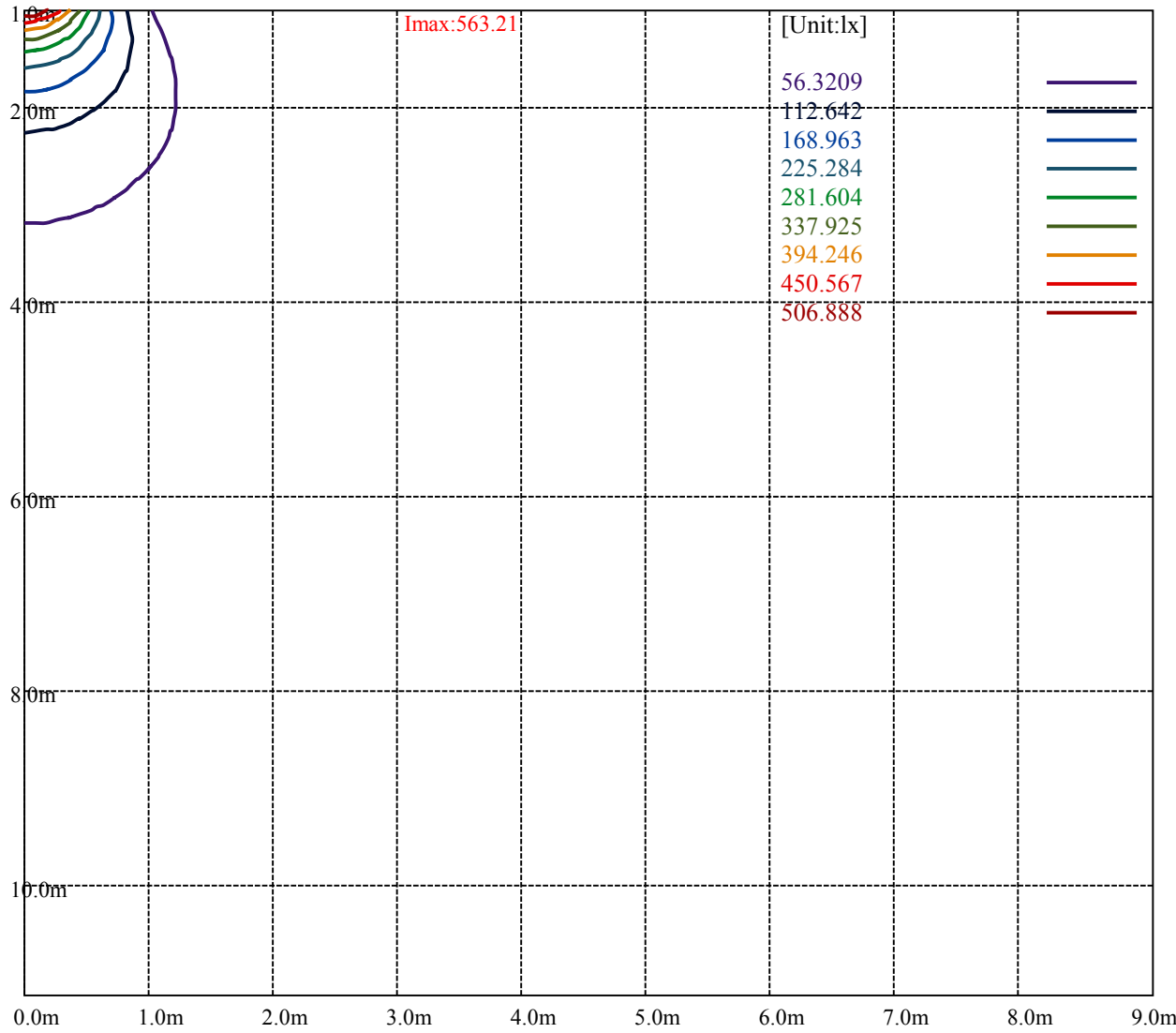
(70%Imax) 394.246

(80%Imax) 450.567

(90%Imax) 506.888



(10%Emax)	1.564469	—
(20%Emax)	3.128944	—
(30%Emax)	4.693417	—
(40%Emax)	6.257889	—
(50%Emax)	7.822333	—
(60%Emax)	9.386806	—
(70%Emax)	10.95128	—
(80%Emax)	12.51575	—
(90%Emax)	14.08022	—



Luminance Table

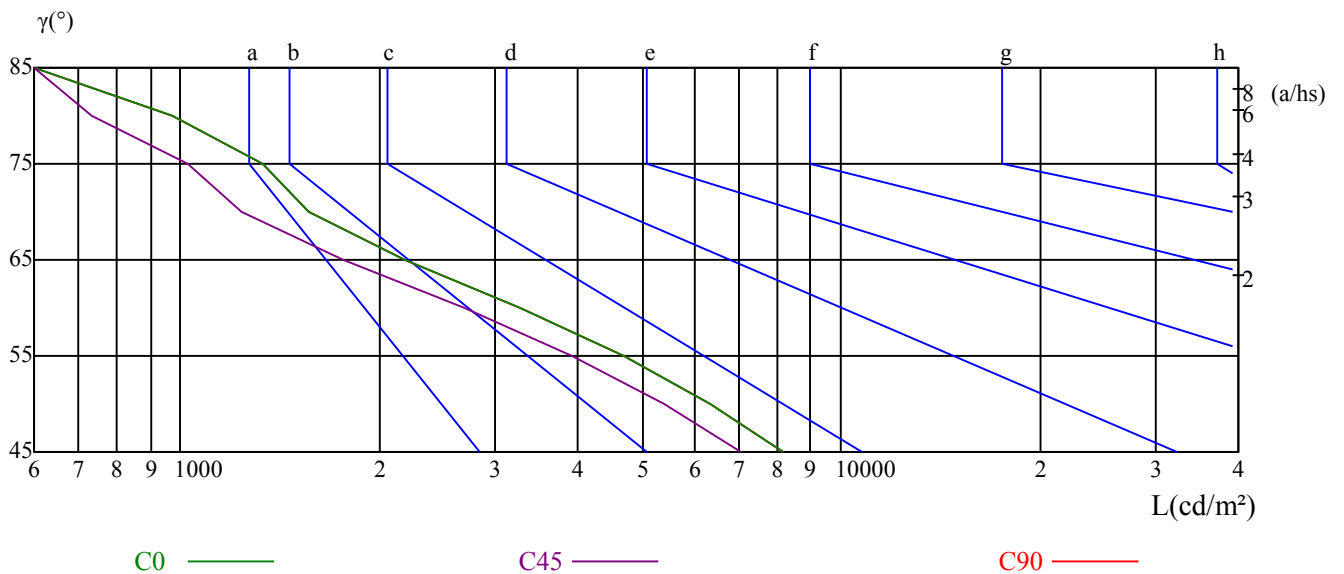
γ	45	50	55	60	65	70	75	80	85
C0	8196	6357	4695	3275	2181	1563	1328	974	521
C45	7062	5396	3923	2692	1761	1238	1029	736	382
C90	8196	6357	4695	3275	2181	1563	1328	974	521

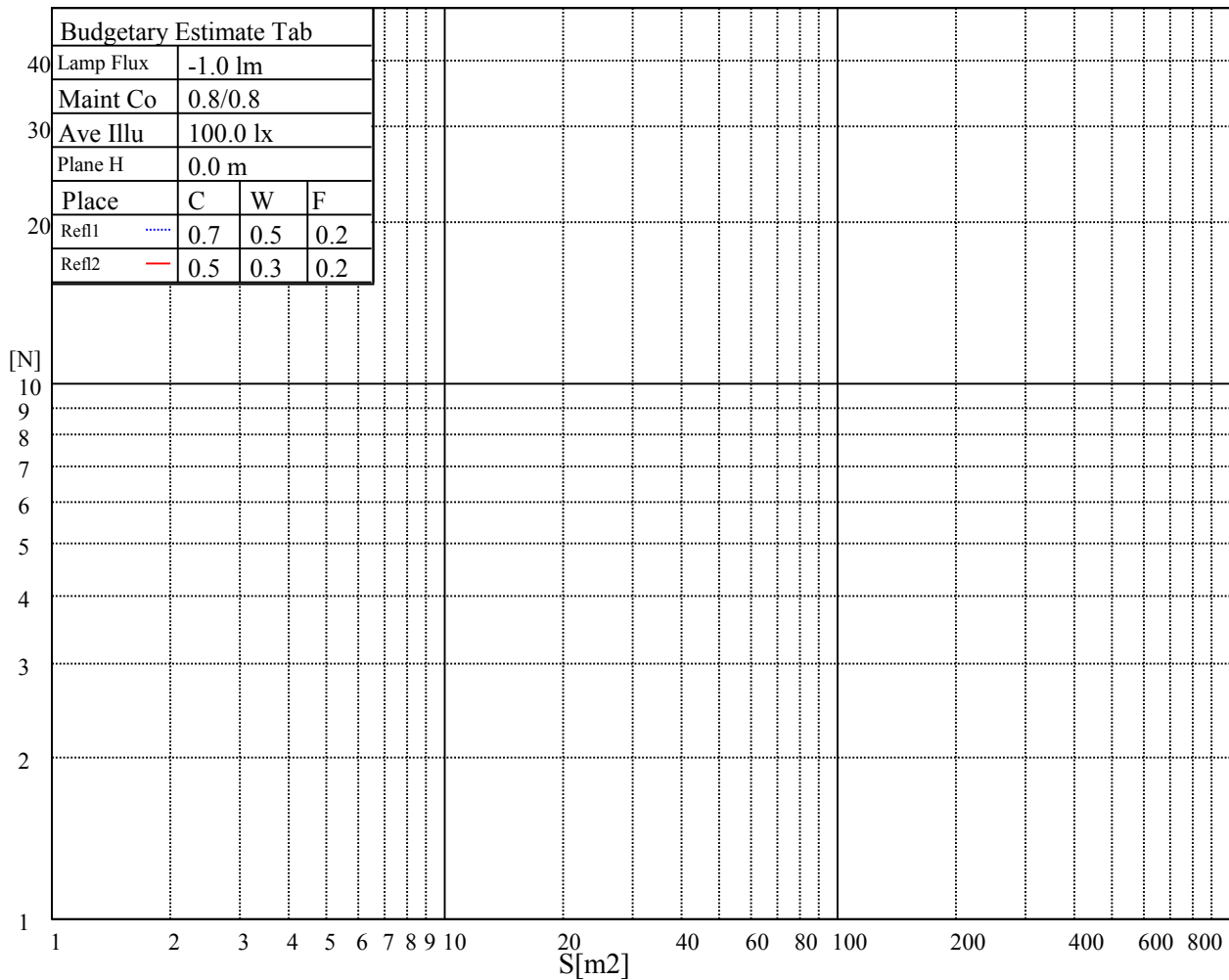
L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
5140	5140	5140	4465	4465	4465	4290	4290	4290

Glare Table

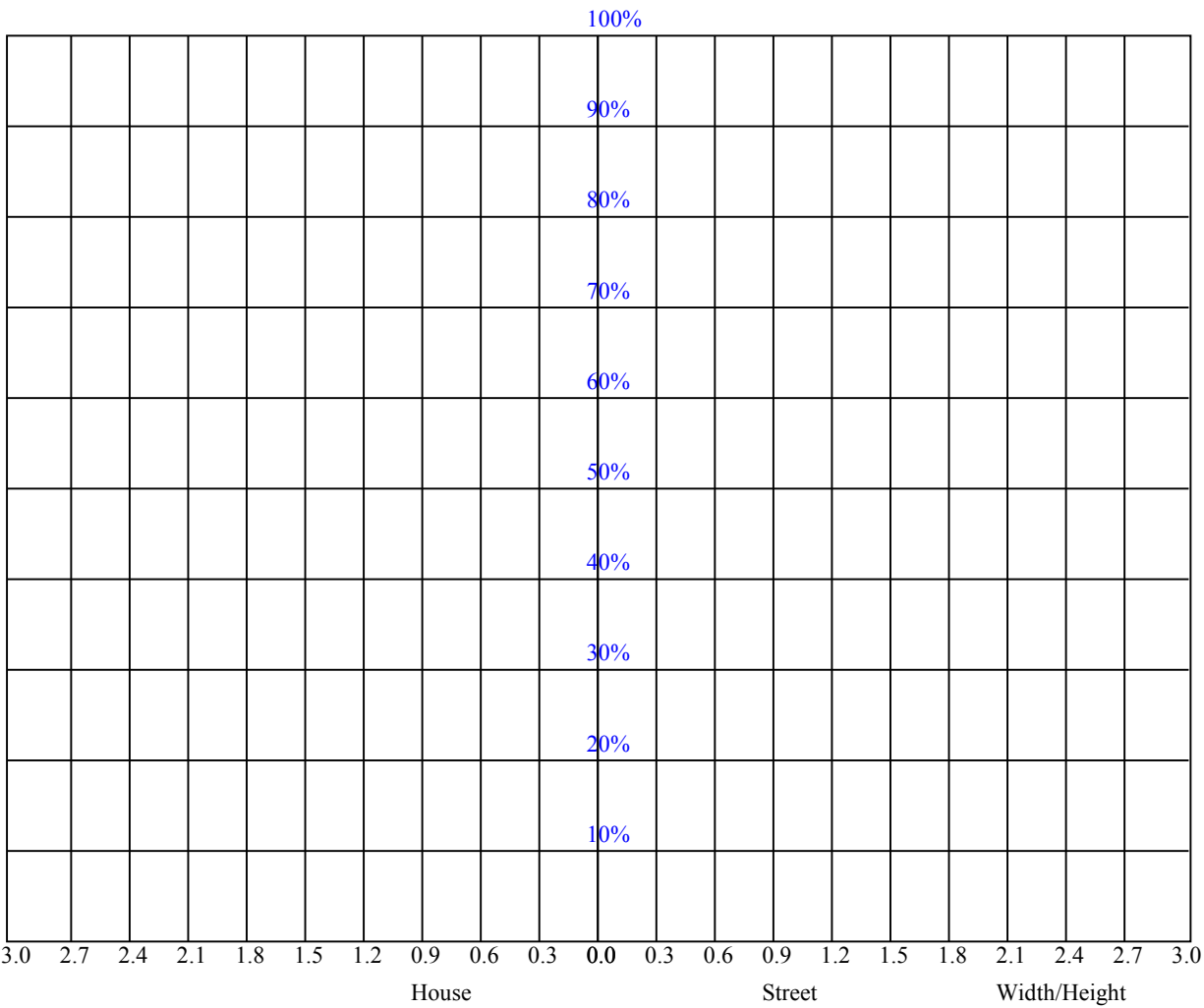
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



Intensity data(cd)

Page: 16 Total:18

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	563.21	563.13	562.59	561.83	560.79	559.46	557.79	555.91	553.56
45.0	563.21	563.13	562.59	561.83	560.79	559.46	557.79	555.91	553.56
90.0	563.21	563.13	562.59	561.83	560.79	559.46	557.79	555.91	553.56
135.0	563.21	563.13	562.59	561.83	560.79	559.46	557.79	555.91	553.56
180.0	563.21	563.13	562.59	561.83	560.79	559.46	557.79	555.91	553.56
225.0	563.21	563.13	562.59	561.83	560.79	559.46	557.79	555.91	553.56
270.0	563.21	563.13	562.59	561.83	560.79	559.46	557.79	555.91	553.56
315.0	563.21	563.13	562.59	561.83	560.79	559.46	557.79	555.91	553.56
360.0	563.21	563.13	562.59	561.83	560.79	559.46	557.79	555.91	553.56
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	551.25	548.64	545.56	542.01	538.58	534.66	530.35	525.76	521.38
45.0	551.25	548.64	545.56	542.01	538.58	534.66	530.35	525.76	521.38
90.0	551.25	548.64	545.56	542.01	538.58	534.66	530.35	525.76	521.38
135.0	551.25	548.64	545.56	542.01	538.58	534.66	530.35	525.76	521.38
180.0	551.25	548.64	545.56	542.01	538.58	534.66	530.35	525.76	521.38
225.0	551.25	548.64	545.56	542.01	538.58	534.66	530.35	525.76	521.38
270.0	551.25	548.64	545.56	542.01	538.58	534.66	530.35	525.76	521.38
315.0	551.25	548.64	545.56	542.01	538.58	534.66	530.35	525.76	521.38
360.0	551.25	548.64	545.56	542.01	538.58	534.66	530.35	525.76	521.38
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	516.65	511.43	506.42	501.07	495.45	489.99	483.73	477.62	470.84
45.0	516.65	511.43	506.42	501.07	495.45	489.99	483.73	477.62	470.84
90.0	516.65	511.43	506.42	501.07	495.45	489.99	483.73	477.62	470.84
135.0	516.65	511.43	506.42	501.07	495.45	489.99	483.73	477.62	470.84
180.0	516.65	511.43	506.42	501.07	495.45	489.99	483.73	477.62	470.84
225.0	516.65	511.43	506.42	501.07	495.45	489.99	483.73	477.62	470.84
270.0	516.65	511.43	506.42	501.07	495.45	489.99	483.73	477.62	470.84
315.0	516.65	511.43	506.42	501.07	495.45	489.99	483.73	477.62	470.84
360.0	516.65	511.43	506.42	501.07	495.45	489.99	483.73	477.62	470.84
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	462.92	454.45	445.79	435.69	425.72	415.00	403.68	392.33	379.41
45.0	462.92	454.45	445.79	435.69	425.72	415.00	403.68	392.33	379.41
90.0	462.92	454.45	445.79	435.69	425.72	415.00	403.68	392.33	379.41
135.0	462.92	454.45	445.79	435.69	425.72	415.00	403.68	392.33	379.41
180.0	462.92	454.45	445.79	435.69	425.72	415.00	403.68	392.33	379.41
225.0	462.92	454.45	445.79	435.69	425.72	415.00	403.68	392.33	379.41
270.0	462.92	454.45	445.79	435.69	425.72	415.00	403.68	392.33	379.41
315.0	462.92	454.45	445.79	435.69	425.72	415.00	403.68	392.33	379.41
360.0	462.92	454.45	445.79	435.69	425.72	415.00	403.68	392.33	379.41
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	366.77	354.16	340.42	327.20	312.48	298.29	283.94	269.22	254.51
45.0	366.77	354.16	340.42	327.20	312.48	298.29	283.94	269.22	254.51
90.0	366.77	354.16	340.42	327.20	312.48	298.29	283.94	269.22	254.51
135.0	366.77	354.16	340.42	327.20	312.48	298.29	283.94	269.22	254.51
180.0	366.77	354.16	340.42	327.20	312.48	298.29	283.94	269.22	254.51
225.0	366.77	354.16	340.42	327.20	312.48	298.29	283.94	269.22	254.51
270.0	366.77	354.16	340.42	327.20	312.48	298.29	283.94	269.22	254.51
315.0	366.77	354.16	340.42	327.20	312.48	298.29	283.94	269.22	254.51
360.0	366.77	354.16	340.42	327.20	312.48	298.29	283.94	269.22	254.51

Intensity data(cd)

Page: 17 Total:18

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	239.85	225.36	212.19	197.13	184.19	171.95	158.72	147.18	135.25
45.0	239.85	225.36	212.19	197.13	184.19	171.95	158.72	147.18	135.25
90.0	239.85	225.36	212.19	197.13	184.19	171.95	158.72	147.18	135.25
135.0	239.85	225.36	212.19	197.13	184.19	171.95	158.72	147.18	135.25
180.0	239.85	225.36	212.19	197.13	184.19	171.95	158.72	147.18	135.25
225.0	239.85	225.36	212.19	197.13	184.19	171.95	158.72	147.18	135.25
270.0	239.85	225.36	212.19	197.13	184.19	171.95	158.72	147.18	135.25
315.0	239.85	225.36	212.19	197.13	184.19	171.95	158.72	147.18	135.25
360.0	239.85	225.36	212.19	197.13	184.19	171.95	158.72	147.18	135.25
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	123.79	113.57	103.50	94.85	86.21	78.87	72.26	66.35	61.44
45.0	123.79	113.57	103.50	94.85	86.21	78.87	72.26	66.35	61.44
90.0	123.79	113.57	103.50	94.85	86.21	78.87	72.26	66.35	61.44
135.0	123.79	113.57	103.50	94.85	86.21	78.87	72.26	66.35	61.44
180.0	123.79	113.57	103.50	94.85	86.21	78.87	72.26	66.35	61.44
225.0	123.79	113.57	103.50	94.85	86.21	78.87	72.26	66.35	61.44
270.0	123.79	113.57	103.50	94.85	86.21	78.87	72.26	66.35	61.44
315.0	123.79	113.57	103.50	94.85	86.21	78.87	72.26	66.35	61.44
360.0	123.79	113.57	103.50	94.85	86.21	78.87	72.26	66.35	61.44
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	57.17	53.24	49.98	46.98	44.91	43.29	41.42	39.78	37.87
45.0	57.17	53.24	49.98	46.98	44.91	43.29	41.42	39.78	37.87
90.0	57.17	53.24	49.98	46.98	44.91	43.29	41.42	39.78	37.87
135.0	57.17	53.24	49.98	46.98	44.91	43.29	41.42	39.78	37.87
180.0	57.17	53.24	49.98	46.98	44.91	43.29	41.42	39.78	37.87
225.0	57.17	53.24	49.98	46.98	44.91	43.29	41.42	39.78	37.87
270.0	57.17	53.24	49.98	46.98	44.91	43.29	41.42	39.78	37.87
315.0	57.17	53.24	49.98	46.98	44.91	43.29	41.42	39.78	37.87
360.0	57.17	53.24	49.98	46.98	44.91	43.29	41.42	39.78	37.87
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	35.93	33.92	31.99	30.03	27.98	25.85	23.74	21.63	19.45
45.0	35.93	33.92	31.99	30.03	27.98	25.85	23.74	21.63	19.45
90.0	35.93	33.92	31.99	30.03	27.98	25.85	23.74	21.63	19.45
135.0	35.93	33.92	31.99	30.03	27.98	25.85	23.74	21.63	19.45
180.0	35.93	33.92	31.99	30.03	27.98	25.85	23.74	21.63	19.45
225.0	35.93	33.92	31.99	30.03	27.98	25.85	23.74	21.63	19.45
270.0	35.93	33.92	31.99	30.03	27.98	25.85	23.74	21.63	19.45
315.0	35.93	33.92	31.99	30.03	27.98	25.85	23.74	21.63	19.45
360.0	35.93	33.92	31.99	30.03	27.98	25.85	23.74	21.63	19.45
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	17.47	15.23	13.31	11.18	9.22	7.15	5.32	3.61	2.36
45.0	17.47	15.23	13.31	11.18	9.22	7.15	5.32	3.61	2.36
90.0	17.47	15.23	13.31	11.18	9.22	7.15	5.32	3.61	2.36
135.0	17.47	15.23	13.31	11.18	9.22	7.15	5.32	3.61	2.36
180.0	17.47	15.23	13.31	11.18	9.22	7.15	5.32	3.61	2.36
225.0	17.47	15.23	13.31	11.18	9.22	7.15	5.32	3.61	2.36
270.0	17.47	15.23	13.31	11.18	9.22	7.15	5.32	3.61	2.36
315.0	17.47	15.23	13.31	11.18	9.22	7.15	5.32	3.61	2.36
360.0	17.47	15.23	13.31	11.18	9.22	7.15	5.32	3.61	2.36

Intensity data(cd)

Page: 18 Total:18

C/ γ (°)	90.0
0.0	1.90
45.0	1.90
90.0	1.90
135.0	1.90
180.0	1.90
225.0	1.90
270.0	1.90
315.0	1.90
360.0	1.90