
乐达凯

Client:

LumCAT: RYNW0618LAJUDBK

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 119.960

LampCAT:

Current(A): 0.170

Lamp flux(lm): 340.5

Power (W): 20.190

Number of Lamps: 1

PF: 0.991

Length(mm): 30

Width(mm): 20

Phm Type: C

Height(mm): 420

Photometric Results

Lumens(lm): 340.54, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 16.87

Central intensity(cd): 0.916, Maximum intensity(cd): 82.410

Angle of maximum intensity: C=30.0 γ =85.0

Beam Angle(50%Imax): [C0/180]Total=288.0

[C90/270]Total=111.4

Field angle(10%Imax): [C0/180]Total=343.6

[C90/270]Total=286.6

Maximum s/h(1/2): C0_180=8.08 C90_270=8.08

Maximum s/h(1/4): C0_180=7.40 C90_270=7.38

Up flux rate of lamp(%): 48.94%

Down flux rate of lamp(%): 51.06%

Up flux rate of LUM(%): 48.94%

Down flux rate of LUM(%): 51.06%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 19.511%

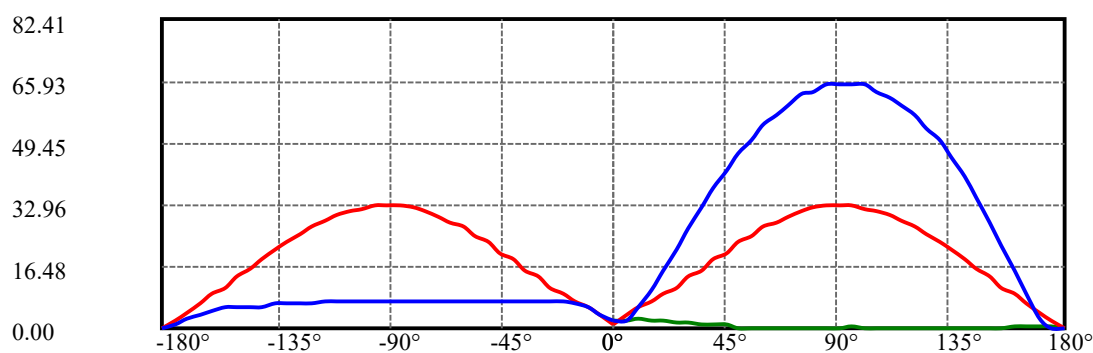
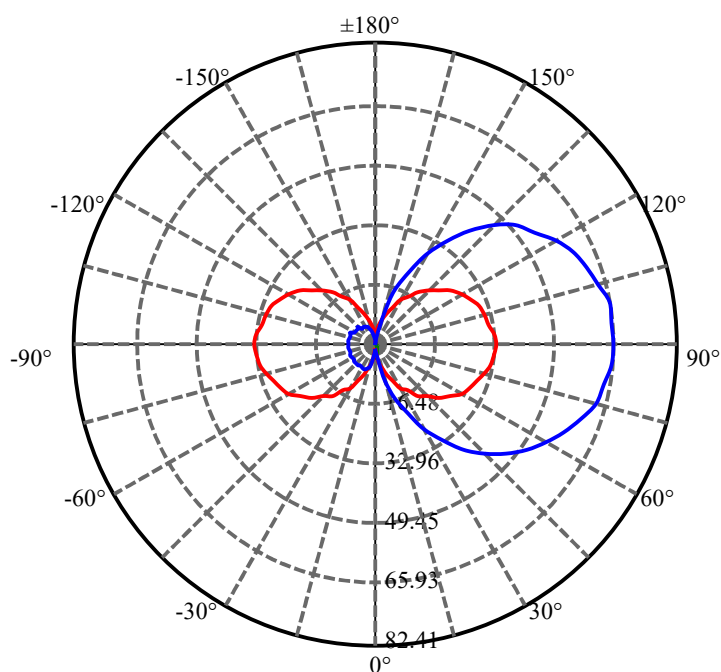
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1.679	0.000	0	0.00%	0.00%
5.0	3.510	0.062	0.062	0.02%	0.02%
10.0	6.295	0.351	0.413	0.10%	0.12%
15.0	8.966	0.905	1.318	0.27%	0.39%
20.0	11.522	1.689	3.007	0.50%	0.88%
25.0	14.193	2.697	5.704	0.79%	1.67%
30.0	16.864	3.930	9.634	1.15%	2.83%
35.0	19.458	5.349	14.982	1.57%	4.40%
40.0	21.976	6.913	21.895	2.03%	6.43%
45.0	24.380	8.583	30.478	2.52%	8.95%
50.0	26.554	10.292	40.77	3.02%	11.97%
55.0	28.653	12.004	52.774	3.52%	15.50%
60.0	30.484	13.669	66.444	4.01%	19.51%
65.0	32.163	15.230	81.673	4.47%	23.98%
70.0	33.574	16.645	98.318	4.89%	28.87%
75.0	34.605	17.821	116.139	5.23%	34.10%
80.0	35.368	18.723	134.862	5.50%	39.60%
85.0	35.864	19.355	154.217	5.68%	45.29%
90.0	35.902	19.650	173.867	5.77%	51.06%
95.0	35.635	19.587	193.454	5.75%	56.81%
100.0	35.024	19.200	212.654	5.64%	62.45%
105.0	34.109	18.498	231.152	5.43%	67.88%
110.0	32.811	17.492	248.644	5.14%	73.01%
115.0	31.400	16.259	264.903	4.77%	77.79%
120.0	29.721	14.859	279.761	4.36%	82.15%
125.0	27.508	13.228	292.99	3.88%	86.04%
130.0	25.372	11.498	304.487	3.38%	89.41%
135.0	22.892	9.752	314.24	2.86%	92.28%
140.0	20.412	8.018	322.258	2.35%	94.63%
145.0	17.398	6.308	328.566	1.85%	96.48%
150.0	14.651	4.719	333.285	1.39%	97.87%
155.0	11.598	3.322	336.607	0.98%	98.85%
160.0	8.699	2.129	338.736	0.63%	99.47%
165.0	5.570	1.176	339.912	0.35%	99.82%
170.0	2.785	0.496	340.408	0.15%	99.96%
175.0	0.687	0.124	340.532	0.04%	100.00%
180.0	0.000	0.008	340.54	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	9.63	2.83%	2.83%
0-40	21.90	6.43%	6.43%
0-60	66.44	19.51%	19.51%
0-90	173.87	51.06%	51.06%
0-120	279.76	82.15%	82.15%
0-180	340.54	100.00%	100.00%
60-90	107.42	31.55%	31.55%
90-120	105.89	31.10%	31.10%
90-130	130.62	38.36%	38.36%
90-150	159.42	46.81%	46.81%
90-180	166.66	48.94%	48.94%
0-117.53	272.43	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	0.41
10-20	2.59
20-30	6.63
30-40	12.26
40-50	18.88
50-60	25.67
60-70	31.87
70-80	36.54
80-90	39.01
90-100	38.79
100-110	35.99
110-120	31.12
120-130	24.73
130-140	17.77
140-150	11.03
150-160	5.45
160-170	1.67
170-180	0.12



C30(Max):

C0/C180:

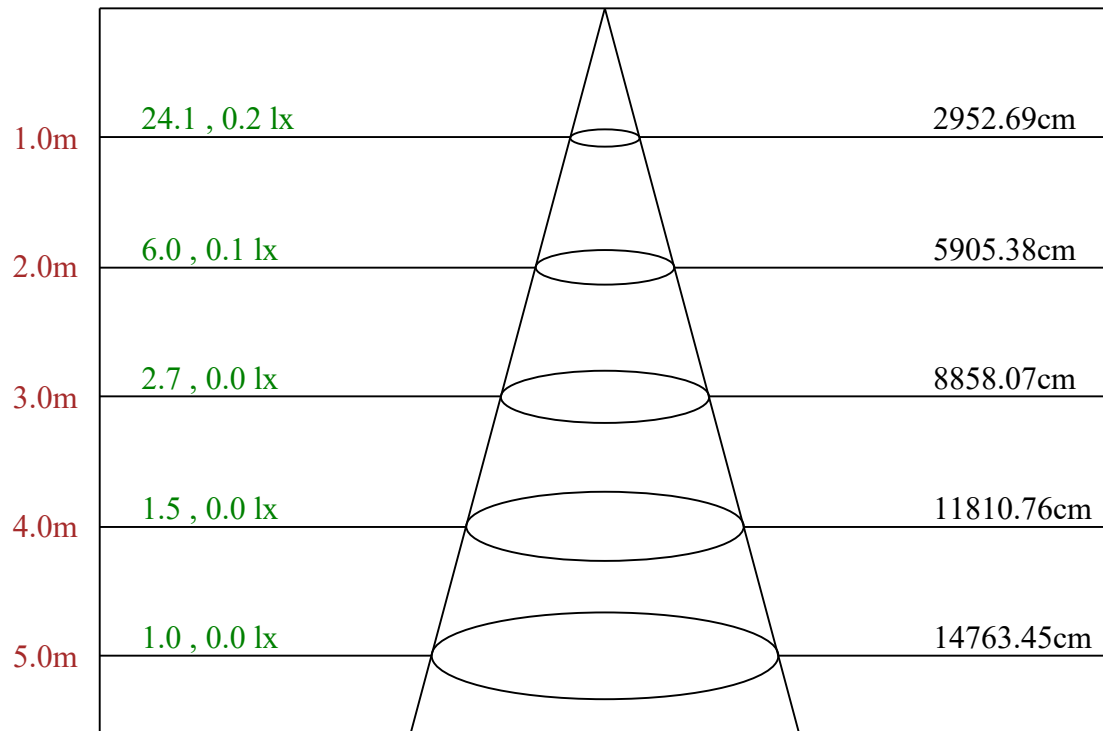
C90/C270:

Field angle(10%Imax):C0/180Left:261.8 Right:81.8

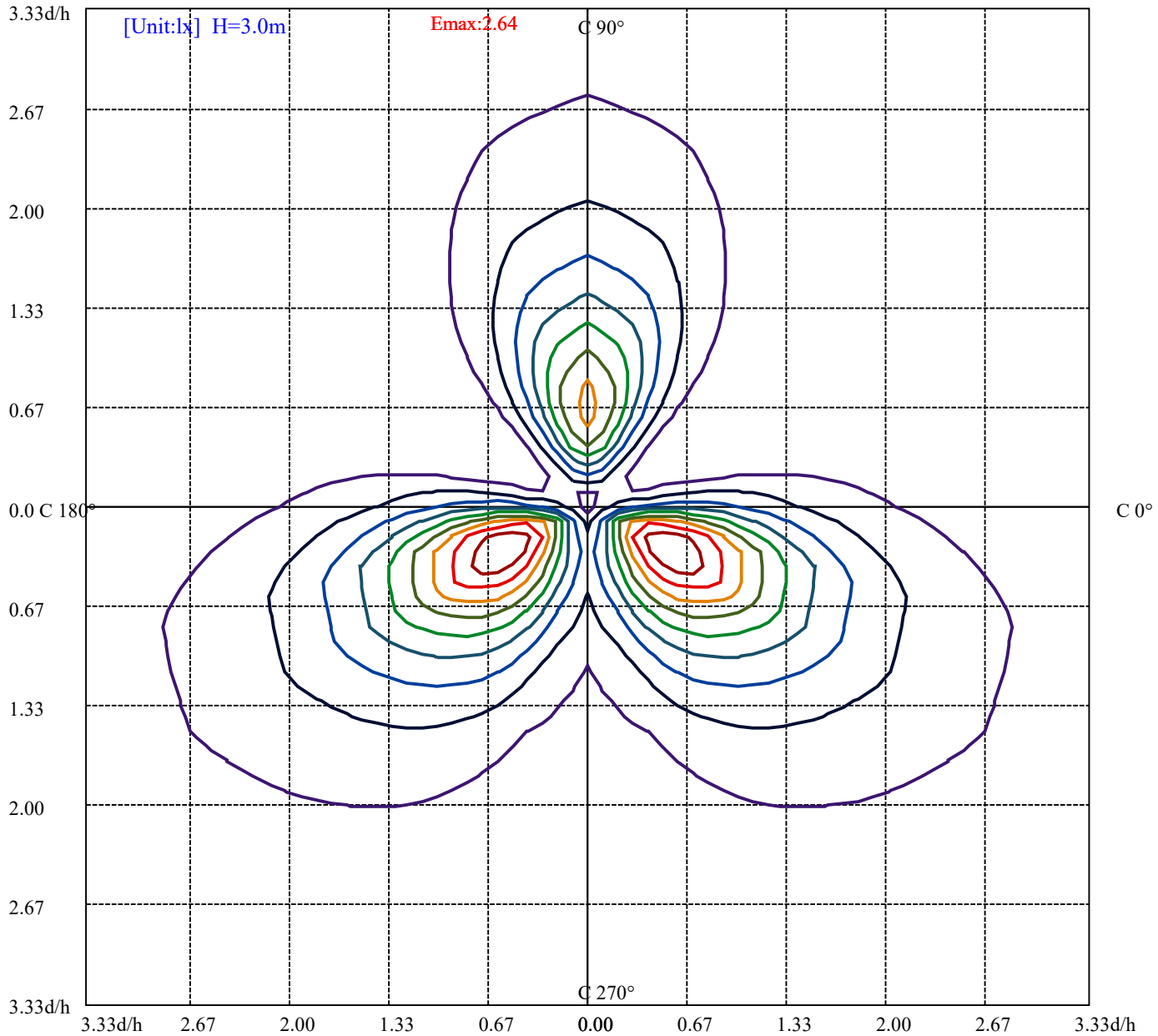
:C90/270Left:219.5 Right:67.1

Beam Angle(50%Imax):C0/180Left:234.0 Right:54.0

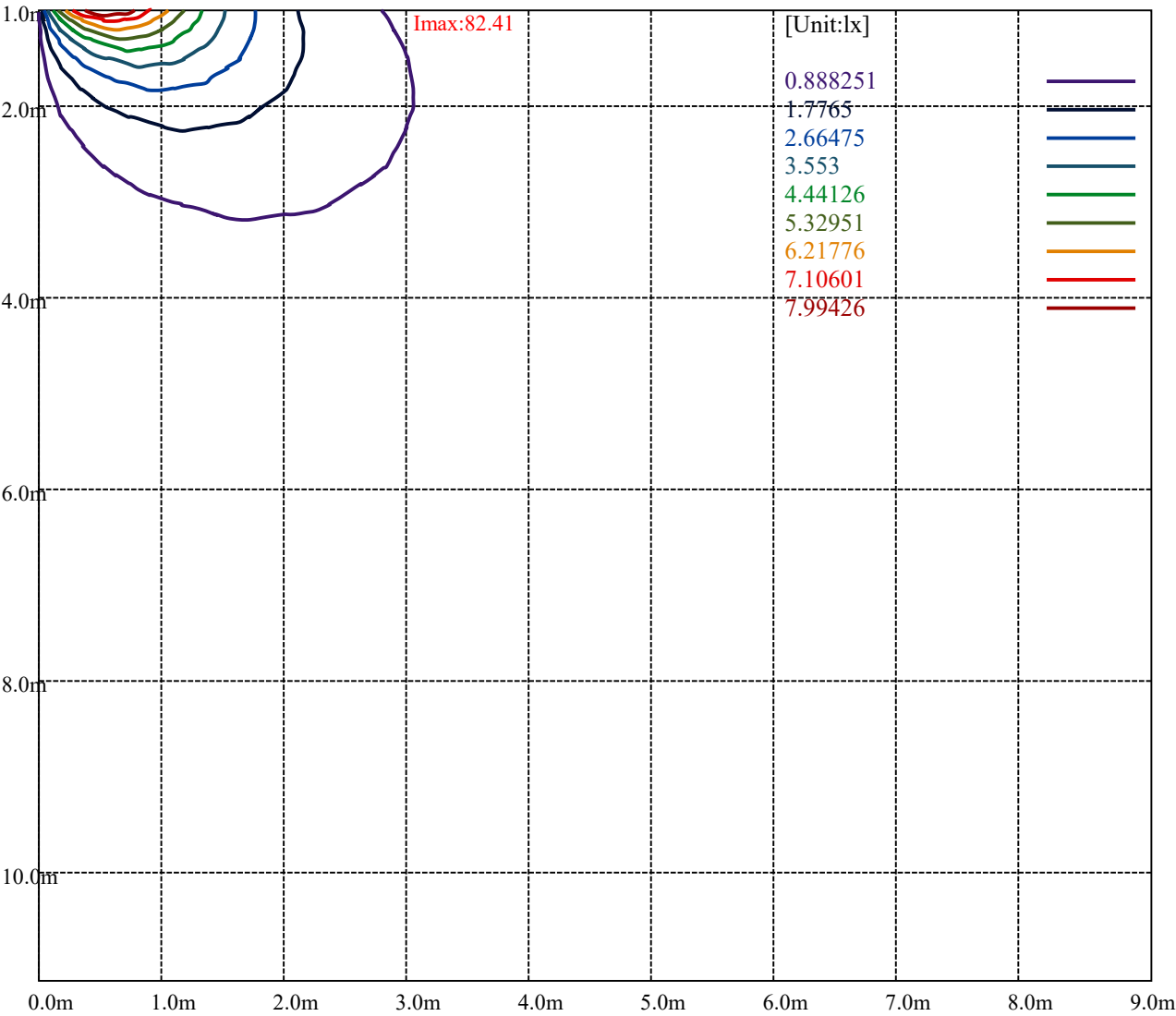
:C90/270Left:64.6 Right:46.8



Max , Ave Beam angle of C30 plane 172.25



(10%Emax) 0.2642967	—
(20%Emax) 0.5285933	—
(30%Emax) 0.7928911	—
(40%Emax) 1.057188	—
(50%Emax) 1.321489	—
(60%Emax) 1.585778	—
(70%Emax) 1.850078	—
(80%Emax) 2.114378	—
(90%Emax) 2.378667	—



Luminance Table

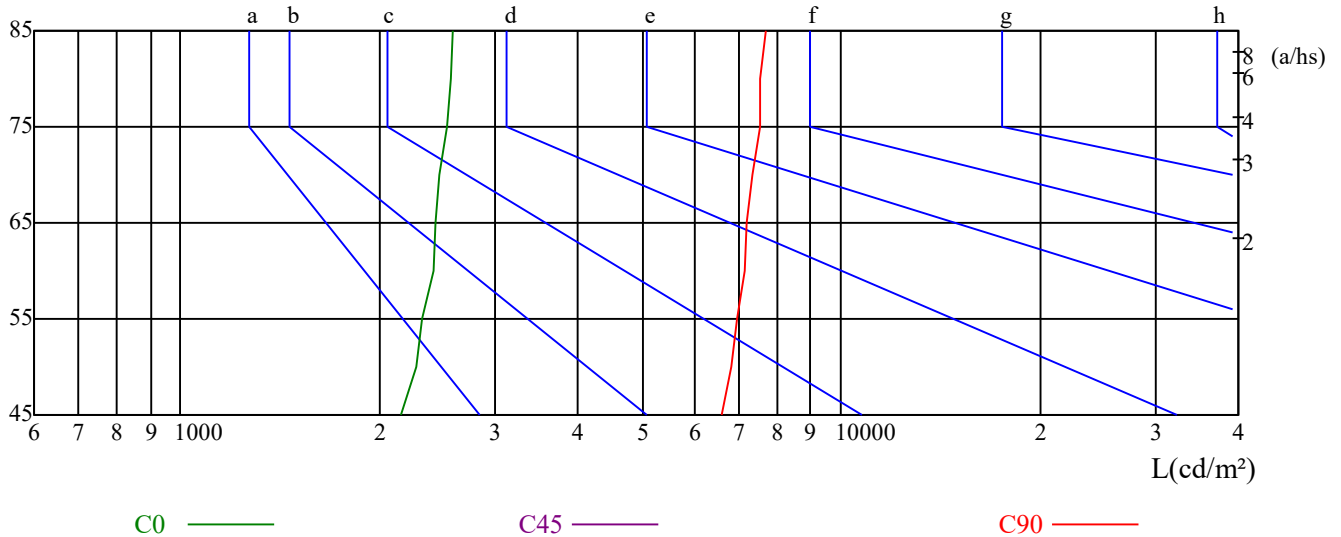
γ	45	50	55	60	65	70	75	80	85
C0	2158	2281	2318	2409	2432	2471	2526	2561	2579
C45	293	311	293	313	301	323	316	311	308
C90	6619	6847	6970	7132	7217	7349	7530	7543	7721

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
111944	126388	119166	200479	224065	209324	621611	691652	639121

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

 $\gamma(^{\circ})$ 

RHOC	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	1.07	1.07	1.07	0.99	0.99	0.99	0.84	0.84	0.84	0.70	0.70	0.70	0.57	0.57	0.57	0.51
1	0.85	0.79	0.74	0.78	0.73	0.68	0.65	0.61	0.57	0.53	0.49	0.46	0.41	0.39	0.36	0.31
2	0.71	0.63	0.56	0.65	0.57	0.51	0.53	0.48	0.42	0.43	0.38	0.34	0.33	0.29	0.26	0.21
3	0.61	0.51	0.44	0.55	0.47	0.40	0.45	0.39	0.33	0.36	0.31	0.26	0.27	0.23	0.20	0.16
4	0.53	0.43	0.35	0.48	0.39	0.32	0.39	0.32	0.27	0.31	0.26	0.21	0.23	0.19	0.16	0.12
5	0.46	0.36	0.29	0.42	0.33	0.27	0.34	0.27	0.22	0.27	0.22	0.17	0.20	0.16	0.13	0.09
6	0.41	0.31	0.24	0.37	0.29	0.22	0.30	0.23	0.18	0.24	0.19	0.14	0.18	0.14	0.10	0.07
7	0.36	0.27	0.21	0.33	0.25	0.19	0.27	0.20	0.16	0.22	0.16	0.12	0.16	0.12	0.09	0.06
8	0.33	0.24	0.18	0.30	0.22	0.16	0.25	0.18	0.13	0.19	0.14	0.10	0.15	0.11	0.08	0.05
9	0.30	0.21	0.16	0.27	0.19	0.14	0.22	0.16	0.12	0.18	0.13	0.09	0.13	0.09	0.07	0.04
10	0.27	0.19	0.14	0.25	0.17	0.12	0.20	0.14	0.10	0.16	0.11	0.08	0.12	0.09	0.06	0.04

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	0.92	3.66	7.33	10.99	14.65	18.31	22.89	26.55	31.13
15.0	0.92	2.75	3.66	3.66	3.66	3.66	3.66	4.58	4.58
30.0	0.92	2.75	2.75	1.83	1.83	0.92	0.92	0.92	0.92
45.0	0.92	1.83	2.75	2.75	1.83	1.83	0.92	0.92	0.92
60.0	1.83	1.83	2.75	3.66	3.66	4.58	4.58	5.49	5.49
75.0	1.83	1.83	4.58	7.33	10.07	13.74	16.48	20.14	22.89
90.0	1.83	1.83	5.49	10.07	15.57	21.06	26.55	32.05	37.54
105.0	1.83	0.92	5.49	10.99	16.48	21.98	27.47	32.96	37.54
120.0	1.83	0.92	7.33	8.24	10.99	14.65	18.31	21.06	23.81
135.0	1.83	0.92	3.66	4.58	4.58	5.49	5.49	5.49	6.41
150.0	2.75	1.83	2.75	2.75	1.83	1.83	1.83	0.92	0.92
165.0	2.75	1.83	2.75	2.75	1.83	1.83	0.92	0.92	0.92
180.0	0.92	3.66	3.66	3.66	3.66	3.66	4.58	4.58	5.49
195.0	0.92	5.49	9.16	12.82	16.48	21.06	25.64	29.30	33.88
210.0	0.92	6.41	11.90	18.31	24.72	32.05	39.37	46.70	53.11
225.0	0.92	5.49	9.16	14.65	21.06	26.55	32.96	38.46	43.95
240.0	1.83	4.58	7.33	11.90	15.57	19.23	23.81	27.47	31.13
255.0	1.83	3.66	6.41	9.16	10.99	13.74	14.65	16.48	17.40
270.0	1.83	3.66	5.49	6.41	7.33	7.33	7.33	7.33	7.33
285.0	1.83	3.66	4.58	7.33	8.24	8.24	8.24	9.16	9.16
300.0	1.83	4.58	7.33	10.07	12.82	14.65	16.48	18.31	20.14
315.0	1.83	5.49	9.16	13.74	17.40	21.06	25.64	29.30	32.96
330.0	2.75	7.33	11.90	17.40	23.81	29.30	34.80	40.29	45.78
345.0	2.75	7.33	13.74	20.14	27.47	33.88	41.21	47.61	54.02
360.0	0.92	3.66	7.33	10.99	14.65	18.31	22.89	26.55	31.13
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	34.80	39.37	43.04	46.70	49.45	52.19	54.02	55.86	56.77
15.0	5.49	5.49	6.41	6.41	6.41	7.33	7.33	7.33	7.33
30.0	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.0	6.41	7.33	7.33	8.24	9.16	9.16	10.07	10.07	10.07
75.0	26.55	29.30	31.13	33.88	35.71	37.54	38.46	40.29	40.29
90.0	42.12	46.70	50.36	54.02	56.77	59.52	62.27	63.18	65.01
105.0	43.04	46.70	50.36	54.02	56.77	59.52	61.35	63.18	64.10
120.0	26.55	29.30	32.05	33.88	35.71	37.54	38.46	39.37	40.29
135.0	6.41	7.33	7.33	8.24	8.24	9.16	9.16	9.16	9.16
150.0	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.92	0.00	0.00	0.00	0.92	0.92	0.00	0.92	0.92
180.0	5.49	6.41	6.41	7.33	7.33	7.33	8.24	8.24	8.24
195.0	38.46	42.12	46.70	49.45	53.11	55.86	57.69	59.52	60.43
210.0	60.43	66.84	72.34	77.83	82.41	86.07	88.82	91.57	92.48
225.0	48.53	54.02	58.60	63.18	66.84	69.59	71.42	73.25	74.17
240.0	34.80	37.54	41.21	43.04	45.78	47.61	49.45	50.36	51.28
255.0	18.31	19.23	21.06	21.06	21.98	22.89	22.89	22.89	22.89
270.0	7.33	7.33	7.33	7.33	7.33	7.33	7.33	7.33	7.33
285.0	9.16	9.16	9.16	9.16	9.16	9.16	9.16	9.16	9.16
300.0	21.98	23.81	24.72	25.64	27.47	28.39	28.39	29.30	29.30
315.0	35.71	38.46	41.21	43.95	45.78	47.61	49.45	49.45	50.36
330.0	50.36	54.94	59.52	62.27	65.93	67.76	70.51	71.42	72.34
345.0	60.43	65.93	71.42	76.00	79.66	83.33	86.07	86.99	88.82
360.0	34.80	39.37	43.04	46.70	49.45	52.19	54.02	55.86	56.77

Intensity data(cd)

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	57.69	56.77	55.86	54.94	53.11	50.36	47.61	43.95	40.29
15.0	7.33	7.33	7.33	7.33	6.41	6.41	6.41	5.49	5.49
30.0	0.00	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.0	10.07	10.07	10.07	10.07	10.07	10.07	9.16	9.16	8.24
75.0	41.21	41.21	41.21	40.29	39.37	37.54	35.71	33.88	32.05
90.0	65.01	65.01	65.01	63.18	61.35	59.52	56.77	53.11	50.36
105.0	64.10	64.10	64.10	62.27	60.43	58.60	55.86	52.19	48.53
120.0	40.29	40.29	39.37	39.37	37.54	36.63	34.80	32.05	30.22
135.0	9.16	9.16	9.16	9.16	9.16	8.24	8.24	7.33	7.33
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.92	0.92	0.92	0.00	0.00	0.00	0.00	0.00	0.00
180.0	8.24	8.24	7.33	7.33	7.33	7.33	6.41	6.41	5.49
195.0	60.43	59.52	57.69	55.86	53.11	50.36	46.70	43.04	38.46
210.0	92.48	91.57	89.74	86.99	83.33	78.75	74.17	67.76	62.27
225.0	74.17	74.17	72.34	70.51	67.76	65.01	64.10	55.86	51.28
240.0	51.28	50.36	50.36	48.53	46.70	44.87	42.12	39.37	36.63
255.0	22.89	22.89	21.98	21.06	20.14	19.23	17.40	16.48	14.65
270.0	7.33	7.33	7.33	7.33	7.33	7.33	6.41	6.41	6.41
285.0	9.16	9.16	9.16	9.16	8.24	8.24	8.24	8.24	7.33
300.0	29.30	28.39	28.39	27.47	26.55	25.64	23.81	22.89	21.06
315.0	50.36	49.45	48.53	47.61	45.78	43.04	41.21	37.54	34.80
330.0	71.42	71.42	69.59	67.76	65.01	61.35	57.69	54.02	49.45
345.0	88.82	86.99	85.16	82.41	78.75	75.08	70.51	65.01	58.60
360.0	57.69	56.77	55.86	54.94	53.11	50.36	47.61	43.95	40.29
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	36.63	32.05	28.39	23.81	19.23	15.57	10.99	7.33	3.66
15.0	4.58	4.58	3.66	3.66	2.75	2.75	2.75	2.75	1.83
30.0	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92	0.92
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92
60.0	7.33	6.41	5.49	4.58	3.66	2.75	1.83	0.92	0.00
75.0	29.30	25.64	21.98	18.31	13.74	10.07	5.49	1.83	0.00
90.0	45.78	40.29	34.80	28.39	21.98	15.57	9.16	2.75	0.00
105.0	43.95	38.46	32.96	27.47	21.06	14.65	8.24	3.66	0.00
120.0	27.47	23.81	20.14	16.48	12.82	8.24	4.58	1.83	0.00
135.0	6.41	5.49	4.58	3.66	2.75	1.83	0.92	0.00	0.00
150.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	5.49	4.58	3.66	3.66	2.75	2.75	1.83	0.92	0.00
195.0	33.88	30.22	25.64	21.06	17.40	13.74	7.33	3.66	0.92
210.0	54.94	54.02	41.21	34.80	27.47	20.14	12.82	5.49	0.92
225.0	46.70	41.21	35.71	29.30	22.89	17.40	10.99	4.58	0.92
240.0	32.96	29.30	25.64	21.06	17.40	12.82	8.24	3.66	0.92
255.0	12.82	11.90	10.07	9.16	7.33	5.49	4.58	2.75	0.92
270.0	6.41	5.49	5.49	5.49	5.49	4.58	3.66	2.75	0.92
285.0	7.33	7.33	6.41	6.41	5.49	4.58	3.66	1.83	0.92
300.0	19.23	17.40	15.57	13.74	10.99	8.24	5.49	2.75	0.00
315.0	31.13	27.47	23.81	20.14	15.57	11.90	7.33	3.66	0.92
330.0	43.95	38.46	32.96	27.47	21.98	15.57	10.07	5.49	0.92
345.0	53.11	45.78	39.37	32.96	25.64	19.23	11.90	6.41	0.92
360.0	36.63	32.05	28.39	23.81	19.23	15.57	10.99	7.33	3.66

Intensity data(cd)

Appendix Page: 12 Total:12

C/ γ (°)	180.0
0.0	0.00
15.0	0.00
30.0	0.00
45.0	0.00
60.0	0.00
75.0	0.00
90.0	0.00
105.0	0.00
120.0	0.00
135.0	0.00
150.0	0.00
165.0	0.00
180.0	0.00
195.0	0.00
210.0	0.00
225.0	0.00
240.0	0.00
255.0	0.00
270.0	0.00
285.0	0.00
300.0	0.00
315.0	0.00
330.0	0.00
345.0	0.00
360.0	0.00