
乐达凯

Client:

LumCAT: RYNW0648LAJUDBK

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.030

LampCAT:

Current(A): 0.320

Lamp flux(lm): 814.0

Power (W): 38.030

Number of Lamps: 1

PF: 0.990

Length(mm): 30

Width(mm): 20

Phm Type: C

Height(mm): 1160

Photometric Results

Lumens(lm): 814.01, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 21.40

Central intensity(cd): 2.747, Maximum intensity(cd): 201.905

Angle of maximum intensity: C=30.0 γ =85.0

Beam Angle(50%Imax): [C0/180]Total=292.0

[C90/270]Total=114.0

Field angle(10%Imax): [C0/180]Total=346.4

[C90/270]Total=304.8

Maximum s/h(1/2): C0_180=7.28 C90_270=6.28

Maximum s/h(1/4): C0_180=6.83 C90_270=5.76

Up flux rate of lamp(%): 48.87%

Down flux rate of lamp(%): 51.13%

Up flux rate of LUM(%): 48.87%

Down flux rate of LUM(%): 51.13%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 19.552%

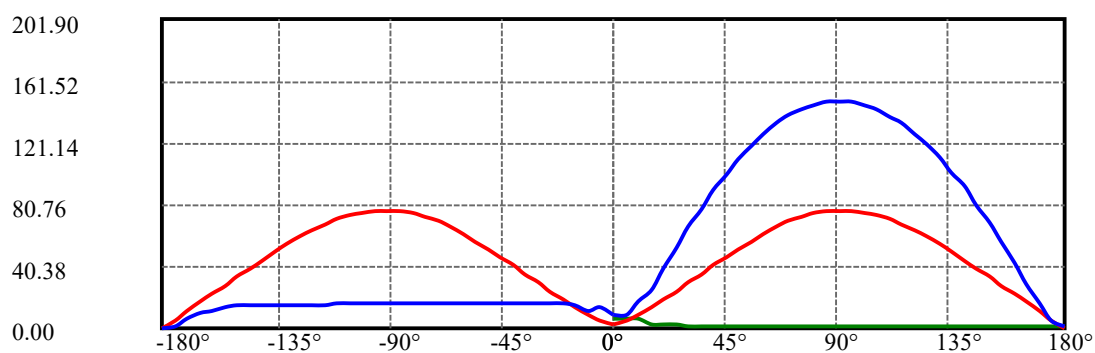
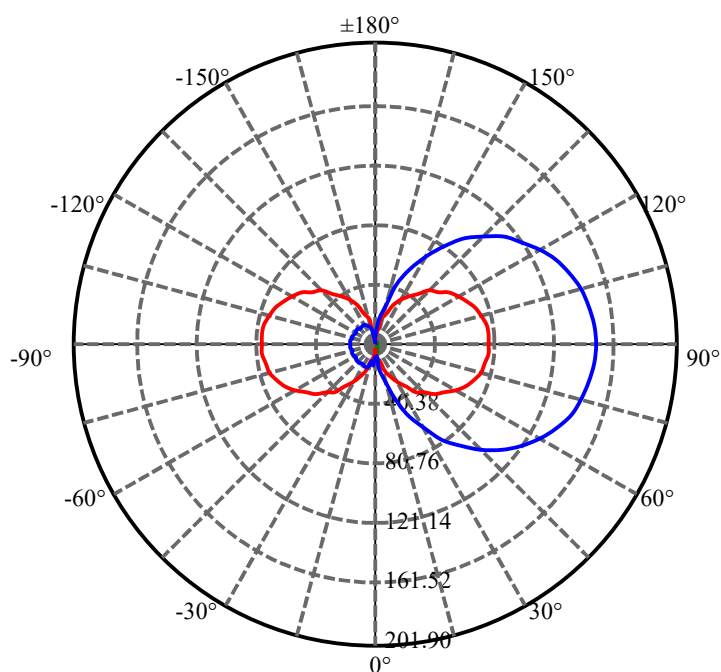
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6.868	0.000	0	0.00%	0.00%
5.0	10.645	0.209	0.209	0.03%	0.03%
10.0	15.032	0.919	1.128	0.11%	0.14%
15.0	19.878	2.071	3.199	0.25%	0.39%
20.0	26.478	3.820	7.019	0.47%	0.86%
25.0	33.498	6.290	13.309	0.77%	1.64%
30.0	40.060	9.309	22.618	1.14%	2.78%
35.0	46.546	12.753	35.372	1.57%	4.35%
40.0	52.613	16.544	51.916	2.03%	6.38%
45.0	58.488	20.571	72.487	2.53%	8.90%
50.0	64.097	24.770	97.257	3.04%	11.95%
55.0	68.980	28.935	126.193	3.55%	15.50%
60.0	73.635	32.965	159.158	4.05%	19.55%
65.0	77.298	36.692	195.85	4.51%	24.06%
70.0	80.541	39.966	235.815	4.91%	28.97%
75.0	82.830	42.702	278.518	5.25%	34.22%
80.0	84.547	44.785	323.303	5.50%	39.72%
85.0	85.348	46.164	369.467	5.67%	45.39%
90.0	85.348	46.738	416.205	5.74%	51.13%
95.0	84.699	46.560	462.765	5.72%	56.85%
100.0	83.135	45.605	508.37	5.60%	62.45%
105.0	80.884	43.887	552.257	5.39%	67.84%
110.0	77.870	41.496	593.753	5.10%	72.94%
115.0	74.284	38.526	632.279	4.73%	77.67%
120.0	70.316	35.152	667.431	4.32%	81.99%
125.0	65.394	31.369	698.8	3.85%	85.85%
130.0	60.167	27.301	726.101	3.35%	89.20%
135.0	54.597	23.190	749.291	2.85%	92.05%
140.0	49.026	19.187	768.477	2.36%	94.41%
145.0	42.388	15.252	783.729	1.87%	96.28%
150.0	35.864	11.523	795.252	1.42%	97.70%
155.0	29.225	8.237	803.489	1.01%	98.71%
160.0	22.663	5.442	808.931	0.67%	99.38%
165.0	15.605	3.154	812.085	0.39%	99.76%
170.0	8.890	1.453	813.538	0.18%	99.94%
175.0	3.052	0.427	813.965	0.05%	99.99%
180.0	0.496	0.042	814.008	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	22.62	2.78%	2.78%
0-40	51.92	6.38%	6.38%
0-60	159.16	19.55%	19.55%
0-90	416.21	51.13%	51.13%
0-120	667.43	81.99%	81.99%
0-180	814.01	100.00%	100.00%
60-90	257.05	31.58%	31.58%
90-120	251.23	30.86%	30.86%
90-130	309.90	38.07%	38.07%
90-150	379.05	46.57%	46.57%
90-180	397.76	48.86%	48.86%
0-117.69	651.21	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	1.13
10-20	5.89
20-30	15.60
30-40	29.30
40-50	45.34
50-60	61.90
60-70	76.66
70-80	87.49
80-90	92.90
90-100	92.16
100-110	85.38
110-120	73.68
120-130	58.67
130-140	42.38
140-150	26.77
150-160	13.68
160-170	4.61
170-180	0.43

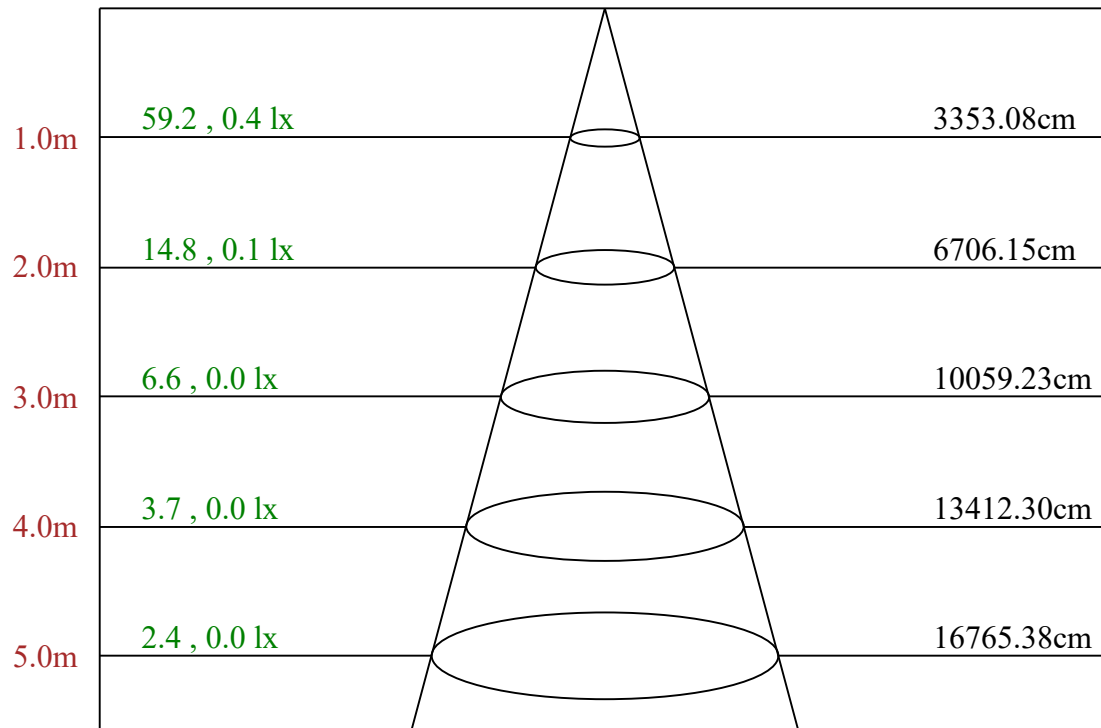
C30(Max): C0/C180: C90/C270: 

Field angle(10%Imax):C0/180Left:268.2 Right:78.2

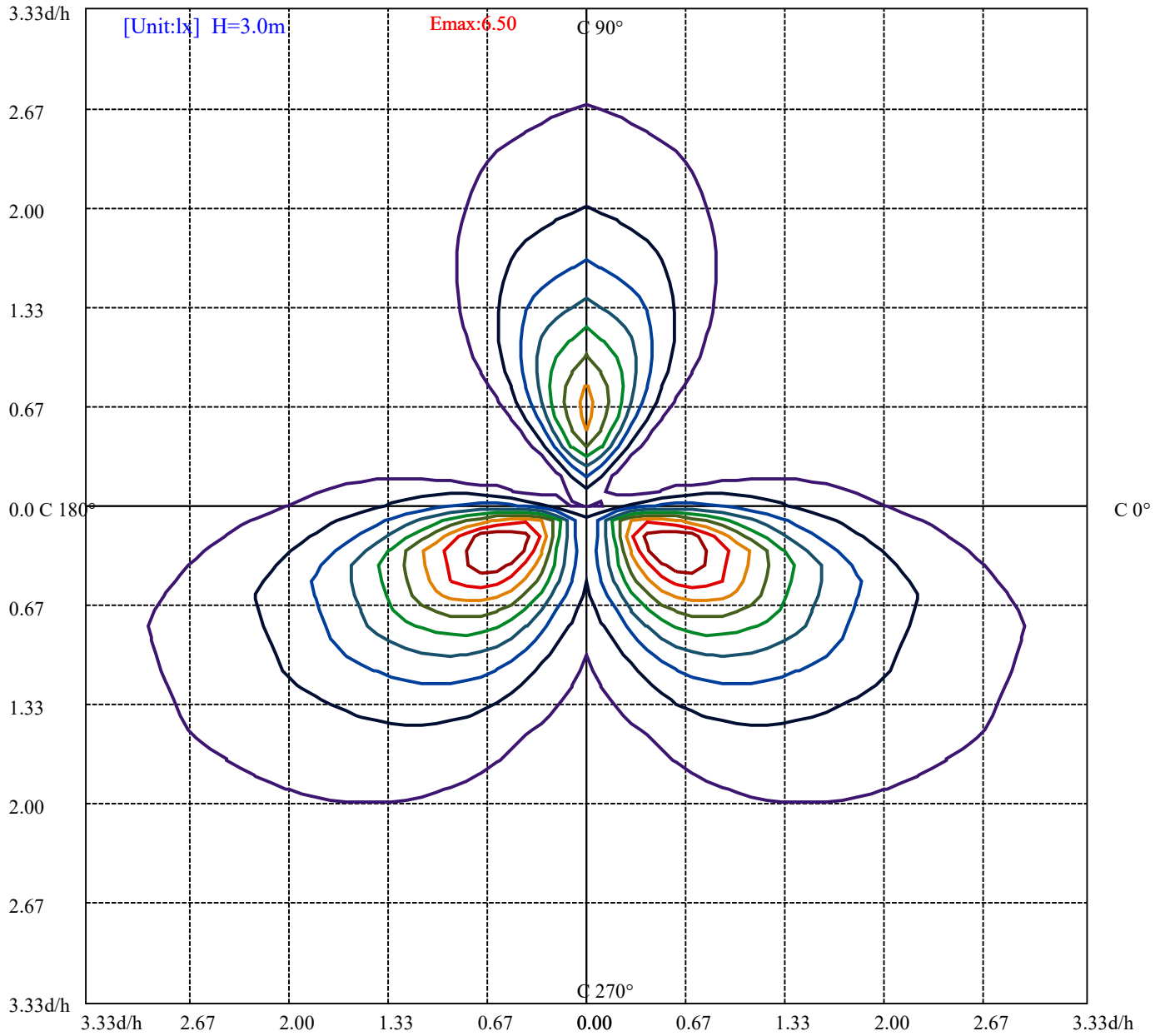
:C90/270Left:224.0 Right:80.8

Beam Angle(50%Imax):C0/180Left:241.0 Right:51.0

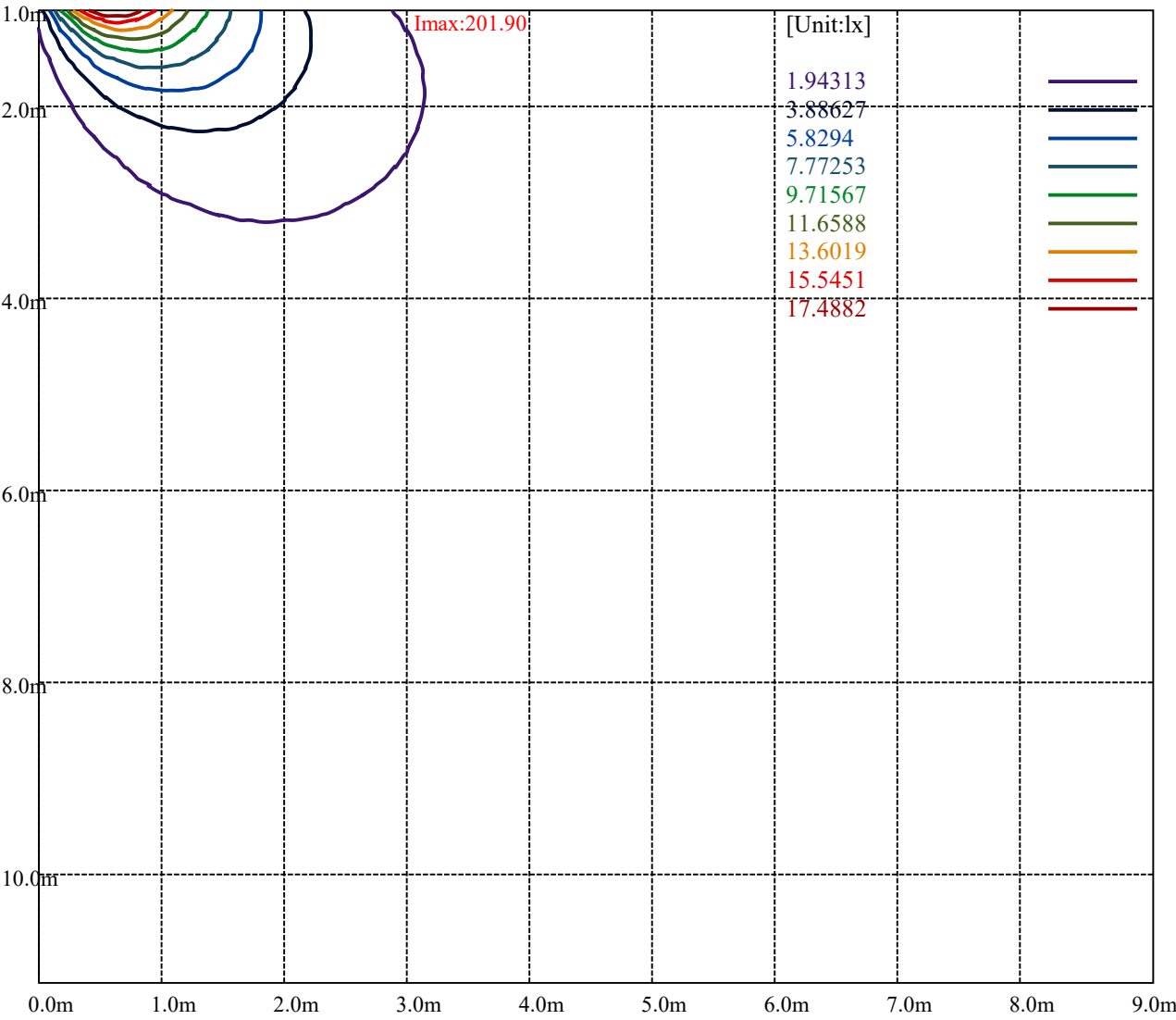
:C90/270Left:56.5 Right:57.5



Max , Ave Beam angle of C30 plane 173.17



(10%Emax) 0.6502722	—
(20%Emax) 1.300544	—
(30%Emax) 1.950822	—
(40%Emax) 2.601089	—
(50%Emax) 3.251367	—
(60%Emax) 3.901633	—
(70%Emax) 4.551911	—
(80%Emax) 5.202178	—
(90%Emax) 5.852456	—



Luminance Table

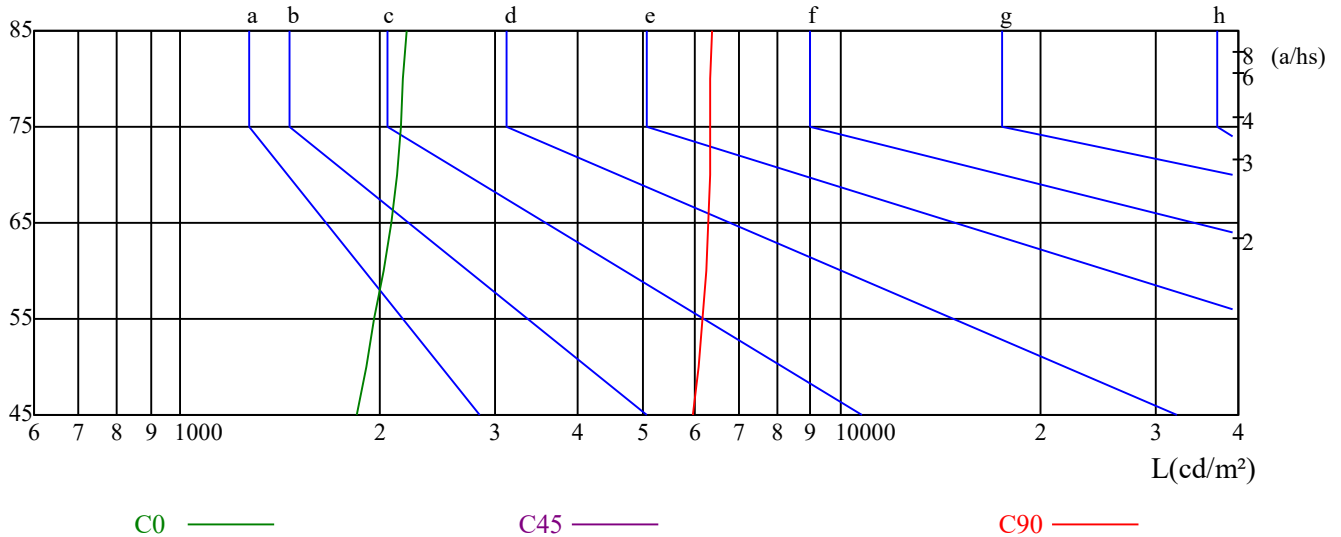
γ	45	50	55	60	65	70	75	80	85
C0	1847	1913	1968	2031	2088	2129	2156	2171	2202
C45	156	144	135	141	135	130	127	136	134
C90	5985	6102	6152	6242	6282	6325	6330	6343	6364

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
261804	296109	278957	468768	512991	484983	1462100	1567161	1479610

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	0.37	0.31
2	0.71	0.63	0.56	0.65	0.57	0.51	0.54	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	0.24	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	0.06	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	0.08	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	2.75	4.58	10.07	15.57	22.89	30.22	38.46	45.78	54.02
15.0	4.58	4.58	4.58	3.66	3.66	2.75	2.75	2.75	2.75
30.0	7.33	7.33	8.24	2.75	2.75	1.83	1.83	0.92	0.92
45.0	10.07	9.16	10.99	2.75	2.75	1.83	1.83	0.92	0.92
60.0	12.82	12.82	15.57	8.24	11.90	14.65	17.40	20.14	22.89
75.0	14.65	14.65	21.06	18.31	28.39	37.54	46.70	54.94	63.18
90.0	8.24	9.16	17.40	25.64	38.46	53.11	65.93	77.83	89.74
105.0	2.75	3.66	11.90	22.89	34.80	46.70	57.69	68.68	77.83
120.0	2.75	3.66	8.24	14.65	20.14	26.55	32.05	37.54	42.12
135.0	1.83	2.75	3.66	5.49	6.41	6.41	7.33	7.33	7.33
150.0	5.49	4.58	4.58	2.75	2.75	2.75	1.83	1.83	0.92
165.0	9.16	8.24	8.24	3.66	2.75	2.75	2.75	1.83	1.83
180.0	2.75	5.49	8.24	10.99	14.65	17.40	21.06	24.72	28.39
195.0	4.58	12.82	22.89	34.80	47.61	61.35	76.00	89.74	103.47
210.0	7.33	17.40	29.30	44.87	61.35	77.83	93.40	111.71	126.36
225.0	10.07	17.40	22.89	35.71	48.53	61.35	73.25	86.99	99.81
240.0	12.82	18.31	18.31	27.47	35.71	44.87	52.19	60.43	67.76
255.0	14.65	18.31	14.65	20.14	24.72	29.30	32.96	35.71	38.46
270.0	8.24	13.74	11.90	14.65	16.48	16.48	16.48	16.48	16.48
285.0	2.75	9.16	13.74	18.31	21.06	23.81	24.72	26.55	26.55
300.0	2.75	10.07	17.40	24.72	26.55	39.37	45.78	52.19	56.77
315.0	1.83	11.90	21.98	32.96	43.95	55.86	66.84	77.83	87.90
330.0	5.49	16.48	27.47	42.12	57.69	73.25	88.82	103.47	119.04
345.0	9.16	19.23	27.47	43.95	59.52	76.00	93.40	110.80	127.28
360.0	2.75	4.58	10.07	15.57	22.89	30.22	38.46	45.78	54.02
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	61.35	68.68	76.00	83.33	89.74	95.23	98.89	101.64	104.39
15.0	2.75	3.66	3.66	3.66	3.66	3.66	3.66	4.58	4.58
30.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
45.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
60.0	25.64	28.39	30.22	32.05	32.96	34.80	35.71	35.71	36.63
75.0	70.51	77.83	84.24	89.74	94.31	97.06	100.72	102.55	103.47
90.0	100.72	110.80	119.04	127.28	133.69	139.18	142.84	145.59	147.42
105.0	86.99	95.23	103.47	109.88	115.37	119.95	123.62	125.45	127.28
120.0	46.70	51.28	54.94	58.60	61.35	64.10	65.93	66.84	67.76
135.0	8.24	8.24	8.24	9.16	9.16	9.16	9.16	10.07	10.07
150.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
165.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
180.0	31.13	34.80	37.54	40.29	43.04	44.87	46.70	47.61	48.53
195.0	117.21	130.02	141.01	152.92	162.07	170.31	176.72	181.30	183.13
210.0	141.93	155.66	169.40	180.39	189.54	199.62	204.19	209.69	210.60
225.0	109.88	120.87	130.02	138.27	145.59	151.09	155.66	158.41	159.33
240.0	75.08	81.49	86.99	92.48	96.15	99.81	101.64	103.47	104.39
255.0	41.21	43.95	45.78	47.61	49.45	50.36	51.28	52.19	52.19
270.0	16.48	16.48	16.48	16.48	16.48	16.48	16.48	16.48	16.48
285.0	28.39	29.30	30.22	31.13	31.13	32.05	32.05	32.96	32.96
300.0	62.27	66.84	71.42	75.08	77.83	80.58	82.41	83.33	84.24
315.0	97.98	107.13	114.46	121.78	127.28	132.77	135.52	138.27	139.18
330.0	131.86	144.68	156.58	167.57	175.81	183.13	188.63	192.29	193.21
345.0	143.76	159.33	172.15	185.88	196.87	205.11	212.43	217.01	218.84
360.0	61.35	68.68	76.00	83.33	89.74	95.23	98.89	101.64	104.39

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Intensity data(cd)

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C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	104.39	104.39	103.47	100.72	97.98	93.40	87.90	82.41	75.08
15.0	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58	4.58
30.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
45.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
60.0	36.63	36.63	35.71	34.80	33.88	32.96	31.13	29.30	27.47
75.0	103.47	103.47	102.55	99.81	97.06	93.40	88.82	84.24	77.83
90.0	148.34	147.42	145.59	142.84	138.27	133.69	127.28	119.95	111.71
105.0	127.28	127.28	125.45	122.70	119.04	114.46	108.96	102.55	95.23
120.0	67.76	66.84	65.93	65.01	62.27	60.43	57.69	54.02	49.45
135.0	9.16	9.16	9.16	9.16	9.16	8.24	7.33	7.33	6.41
150.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
165.0	1.83	0.92	0.92	1.83	0.92	0.92	0.92	0.92	0.92
180.0	48.53	48.53	47.61	46.70	44.87	43.04	40.29	37.54	34.80
195.0	183.13	181.30	176.72	171.23	162.99	153.83	143.76	132.77	119.95
210.0	210.60	208.77	204.19	196.87	189.54	178.56	167.57	154.75	141.93
225.0	159.33	157.49	153.83	150.17	143.76	137.35	134.60	119.04	108.96
240.0	104.39	103.47	102.55	98.89	95.23	90.65	86.07	80.58	74.17
255.0	52.19	52.19	51.28	50.36	48.53	46.70	44.87	43.04	40.29
270.0	16.48	16.48	16.48	16.48	16.48	15.57	15.57	15.57	15.57
285.0	32.96	32.96	32.05	31.13	30.22	30.22	29.30	27.47	26.55
300.0	83.33	83.33	81.49	79.66	76.92	74.17	69.59	65.93	60.43
315.0	139.18	137.35	134.60	130.94	125.45	119.95	112.63	105.30	96.15
330.0	193.21	191.37	186.80	180.39	173.98	163.90	154.75	142.84	130.02
345.0	218.84	216.10	211.52	204.19	195.04	184.05	171.23	156.58	143.76
360.0	104.39	104.39	103.47	100.72	97.98	93.40	87.90	82.41	75.08
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	68.68	60.43	54.02	45.78	38.46	31.13	23.81	16.48	9.16
15.0	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	2.75
30.0	0.92	0.92	0.92	0.92	0.92	0.92	1.83	1.83	1.83
45.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
60.0	24.72	21.98	19.23	16.48	12.82	10.07	7.33	3.66	1.83
75.0	71.42	64.10	55.86	47.61	38.46	29.30	20.14	10.99	3.66
90.0	101.64	92.48	79.66	68.68	55.86	42.12	28.39	16.48	5.49
105.0	86.99	77.83	68.68	57.69	47.61	35.71	24.72	13.74	4.58
120.0	45.78	40.29	35.71	30.22	23.81	18.31	12.82	6.41	2.75
135.0	6.41	5.49	4.58	3.66	2.75	2.75	1.83	0.92	0.92
150.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
165.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
180.0	32.05	28.39	24.72	21.06	17.40	13.74	10.07	6.41	1.83
195.0	107.13	93.40	80.58	67.76	54.02	49.45	26.55	14.65	3.66
210.0	126.36	122.70	96.15	78.75	63.18	46.70	31.13	16.48	4.58
225.0	98.89	86.99	75.08	62.27	49.45	35.71	24.72	12.82	3.66
240.0	67.76	60.43	52.19	44.87	35.71	27.47	18.31	10.07	2.75
255.0	37.54	34.80	31.13	27.47	23.81	19.23	13.74	7.33	1.83
270.0	14.65	14.65	14.65	14.65	13.74	11.90	10.07	6.41	1.83
285.0	25.64	23.81	22.89	21.06	19.23	15.57	11.90	7.33	2.75
300.0	55.86	50.36	44.87	38.46	32.05	24.72	17.40	10.07	2.75
315.0	86.99	76.92	65.93	54.94	44.87	32.96	22.89	11.90	3.66
330.0	116.29	102.55	87.90	73.25	57.69	43.04	29.30	15.57	3.66
345.0	128.19	111.71	96.15	78.75	63.18	46.70	31.13	17.40	4.58
360.0	68.68	60.43	54.02	45.78	38.46	31.13	23.81	16.48	9.16

Intensity data(cd)

Appendix Page: 12 Total:12

C/ $\gamma(^{\circ})$	180.0
0.0	0.92
15.0	1.83
30.0	0.92
45.0	0.92
60.0	0.92
75.0	0.92
90.0	0.92
105.0	0.92
120.0	0.92
135.0	0.92
150.0	0.92
165.0	0.92
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	0.92