
乐达凯

Client:

LumCAT: RYNW0648LAJUDBK

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.030

LampCAT:

Current(A): 0.326

Lamp flux(lm): 725.1

Power (W): 38.730

Number of Lamps: 1

PF: 0.991

Length(mm): 30

Width(mm): 20

Phm Type: C

Height(mm): 1160

Photometric Results

Lumens(lm): 725.14, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 18.72

Central intensity(cd): 2.747, Maximum intensity(cd): 179.929

Angle of maximum intensity: C=30.0 γ =85.0

Beam Angle(50%Imax): [C0/180]Total=291.6

[C90/270]Total=114.4

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

[C90/270]Total=308.7

Maximum s/h(1/2): C0_180=7.01 C90_270=6.28

Maximum s/h(1/4): C0_180=6.54 C90_270=5.77

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 : 19.565%

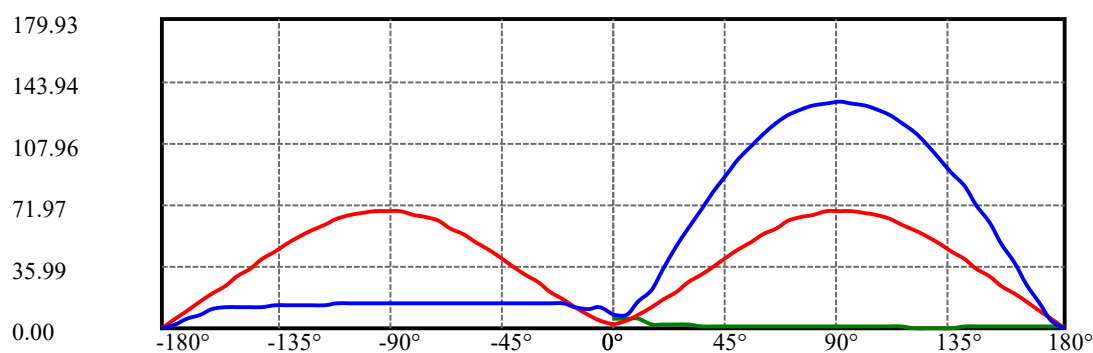
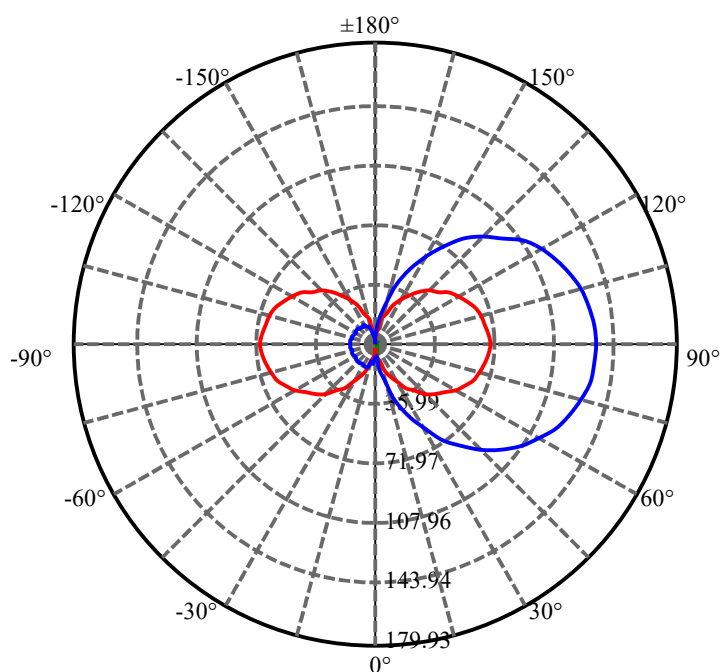
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6.181	0.000	0	0.00%	0.00%
5.0	9.347	0.186	0.186	0.03%	0.03%
10.0	13.392	0.813	0.999	0.11%	0.14%
15.0	17.665	1.842	2.841	0.25%	0.39%
20.0	23.502	3.393	6.234	0.47%	0.86%
25.0	29.759	5.586	11.82	0.77%	1.63%
30.0	35.749	8.290	20.11	1.14%	2.77%
35.0	41.510	11.377	31.487	1.57%	4.34%
40.0	46.890	14.749	46.236	2.03%	6.38%
45.0	52.269	18.360	64.596	2.53%	8.91%
50.0	57.115	22.103	86.699	3.05%	11.96%
55.0	61.540	25.800	112.499	3.56%	15.51%
60.0	65.547	29.376	141.874	4.05%	19.57%
65.0	68.866	32.676	174.55	4.51%	24.07%
70.0	71.765	35.609	210.159	4.91%	28.98%
75.0	73.864	38.065	248.224	5.25%	34.23%
80.0	75.237	39.895	288.12	5.50%	39.73%
85.0	75.924	41.074	329.194	5.66%	45.40%
90.0	76.000	41.598	370.792	5.74%	51.13%
95.0	75.390	41.452	412.244	5.72%	56.85%
100.0	73.978	40.587	452.831	5.60%	62.45%
105.0	71.994	39.058	491.889	5.39%	67.83%
110.0	69.400	36.958	528.847	5.10%	72.93%
115.0	66.195	34.334	563.181	4.73%	77.67%
120.0	62.647	31.322	594.502	4.32%	81.98%
125.0	58.221	27.938	622.441	3.85%	85.84%
130.0	53.567	24.306	646.747	3.35%	89.19%
135.0	48.645	20.653	667.4	2.85%	92.04%
140.0	43.761	17.110	684.51	2.36%	94.40%
145.0	37.848	13.616	698.126	1.88%	96.27%
150.0	32.010	10.287	708.413	1.42%	97.69%
155.0	26.020	7.344	715.757	1.01%	98.71%
160.0	20.259	4.854	720.611	0.67%	99.38%
165.0	13.849	2.811	723.422	0.39%	99.76%
170.0	8.012	1.297	724.719	0.18%	99.94%
175.0	2.709	0.384	725.102	0.05%	100.00%
180.0	0.267	0.036	725.138	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	20.11	2.77%	2.77%
0-40	46.24	6.38%	6.38%
0-60	141.87	19.57%	19.57%
0-90	370.79	51.13%	51.13%
0-120	594.50	81.98%	81.98%
0-180	725.14	100.00%	100.00%
60-90	228.92	31.57%	31.57%
90-120	223.71	30.85%	30.85%
90-130	275.96	38.06%	38.06%
90-150	337.62	46.56%	46.56%
90-180	354.31	48.86%	48.86%
0-117.70	580.11	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	1.00
10-20	5.23
20-30	13.88
30-40	26.13
40-50	40.46
50-60	55.18
60-70	68.28
70-80	77.96
80-90	82.67
90-100	82.04
100-110	76.02
110-120	65.66
120-130	52.24
130-140	37.76
140-150	23.90
150-160	12.20
160-170	4.11
170-180	0.38

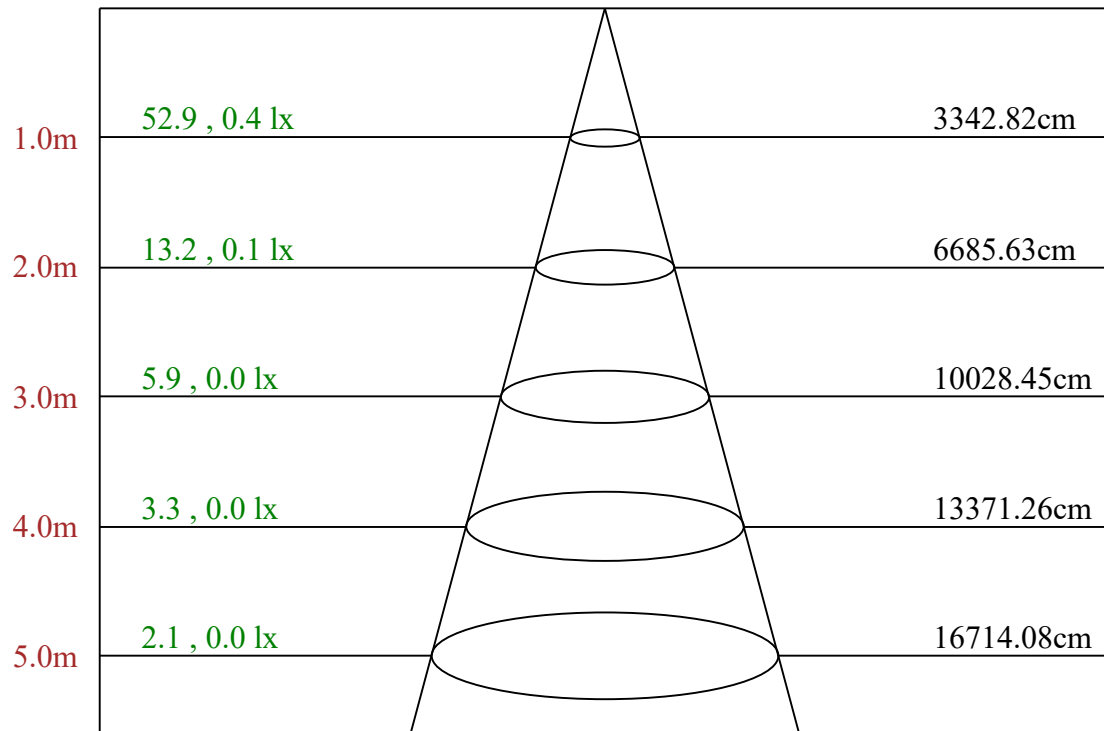
C30(Max): C0/C180: C90/C270: 

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

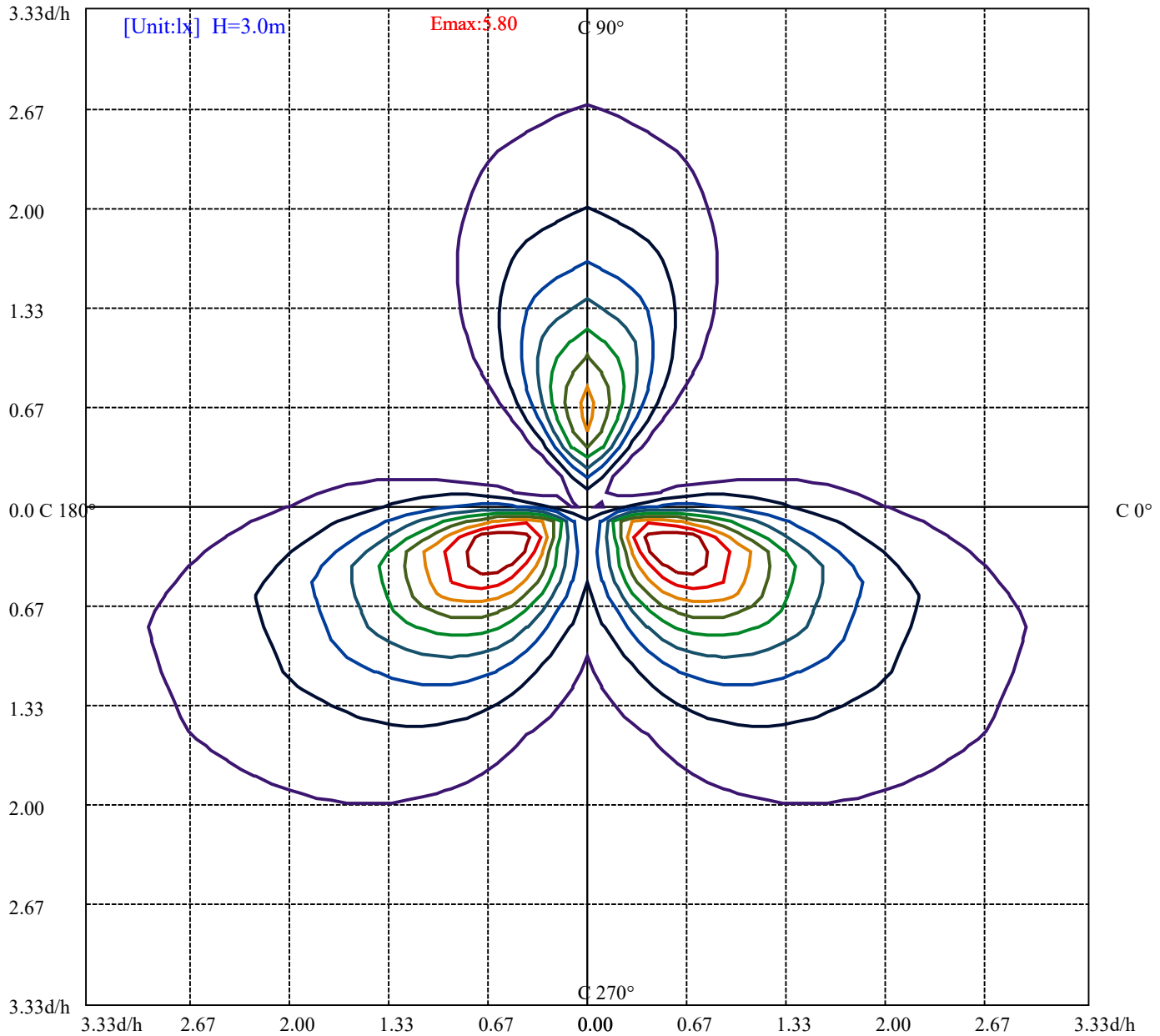
:C90/270Left:228.0 Right:80.7

Beam Angle(50%Imax):C0/180Left:240.8 Right:50.8

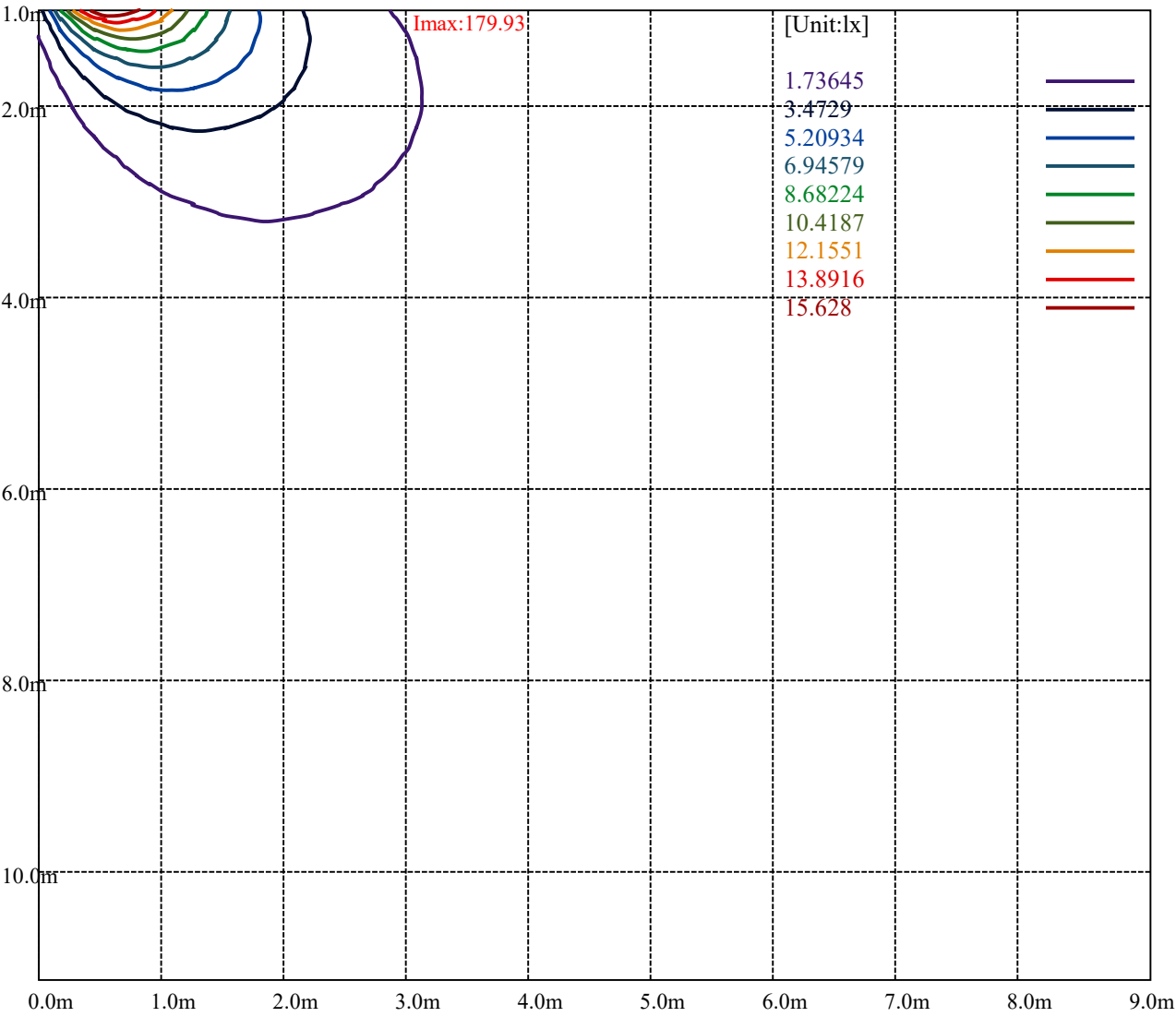
:C90/270Left:56.7 Right:57.7



Max , Ave Beam angle of C30 plane 173.15



(10%Emax) 0.5800933	—
(20%Emax) 1.160189	—
(30%Emax) 1.740278	—
(40%Emax) 2.320378	—
(50%Emax) 2.900467	—
(60%Emax) 3.480567	—
(70%Emax) 4.060656	—
(80%Emax) 4.640745	—
(90%Emax) 5.220844	—



Luminance Table

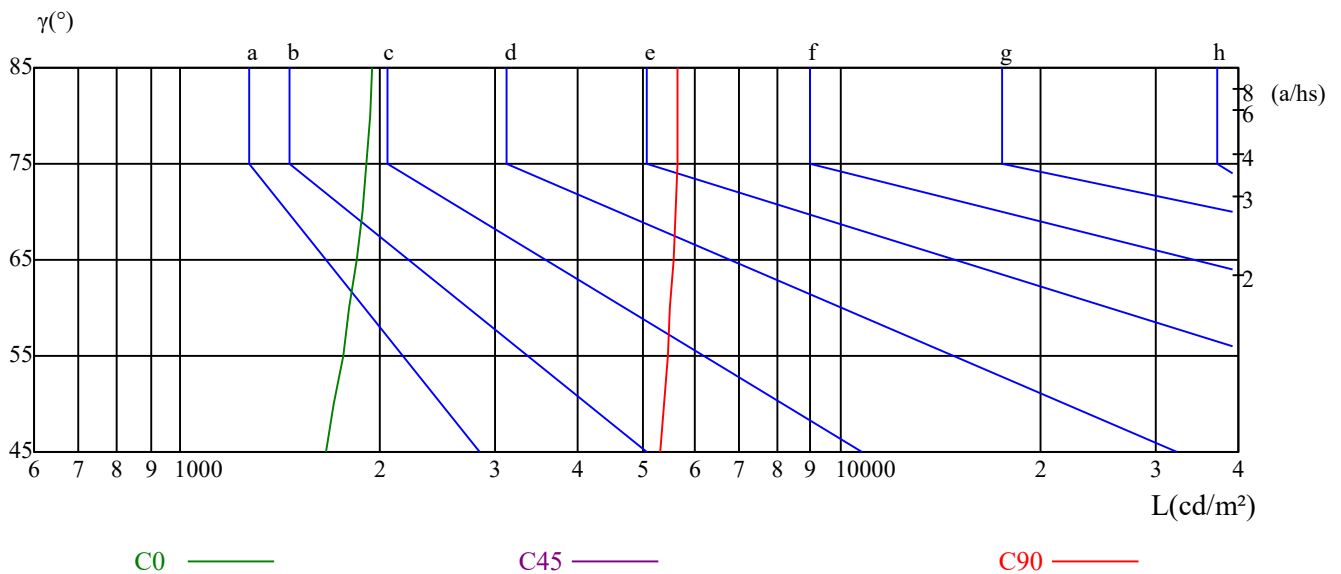
γ	45	50	55	60	65	70	75	80	85
C0	1664	1710	1761	1805	1843	1892	1912	1931	1952
C45	140	130	121	128	122	118	115	113	112
C90	5332	5396	5490	5523	5594	5617	5641	5665	5653

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
231110	263610	248263	415700	456975	431915	1295753	1392059	1313263

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



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	0.58	0.51	0.54	0.48	0.42	0.43	0.38	0.34	0.33	0.30	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	9.16	13.74	20.14	26.55	33.88	41.21	47.61
15.0	3.66	3.66	4.58	3.66	2.75	2.75	2.75	2.75	2.75
30.0	6.41	6.41	7.33	2.75	1.83	1.83	1.83	0.92	0.92
45.0	9.16	8.24	9.16	2.75	1.83	1.83	1.83	0.92	0.92
60.0	11.90	10.99	13.74	7.33	10.07	12.82	15.57	18.31	21.06
75.0	12.82	12.82	18.31	16.48	25.64	33.88	41.21	48.53	55.86
90.0	7.33	8.24	15.57	22.89	34.80	47.61	58.60	69.59	79.66
105.0	2.75	2.75	10.99	20.14	31.13	41.21	51.28	60.43	69.59
120.0	2.75	2.75	7.33	12.82	18.31	23.81	28.39	33.88	37.54
135.0	1.83	1.83	3.66	4.58	5.49	5.49	6.41	6.41	6.41
150.0	4.58	3.66	4.58	2.75	2.75	1.83	1.83	1.83	0.92
165.0	8.24	7.33	7.33	2.75	2.75	2.75	1.83	1.83	1.83
180.0	2.75	4.58	7.33	10.07	12.82	15.57	19.23	21.98	24.72
195.0	3.66	11.90	20.14	31.13	42.12	54.94	67.76	79.66	92.48
210.0	6.41	15.57	25.64	39.37	54.02	69.59	83.33	98.89	112.63
225.0	9.16	15.57	20.14	32.05	43.04	54.02	65.93	77.83	88.82
240.0	11.90	15.57	16.48	23.81	31.13	39.37	46.70	54.02	60.43
255.0	12.82	16.48	12.82	18.31	21.98	25.64	29.30	32.05	33.88
270.0	7.33	11.90	10.99	12.82	14.65	14.65	14.65	14.65	14.65
285.0	2.75	8.24	11.90	16.48	19.23	21.06	21.98	23.81	23.81
300.0	2.75	8.24	15.57	21.98	23.81	34.80	41.21	45.78	50.36
315.0	1.83	10.99	19.23	29.30	39.37	49.45	59.52	69.59	78.75
330.0	4.58	14.65	24.72	37.54	51.28	65.01	79.66	92.48	106.22
345.0	8.24	17.40	24.72	38.46	53.11	67.76	83.33	98.89	113.54
360.0	2.75	4.58	9.16	13.74	20.14	26.55	33.88	41.21	47.61
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	54.94	61.35	67.76	74.17	79.66	84.24	87.90	90.65	92.48
15.0	2.75	2.75	2.75	2.75	3.66	3.66	3.66	3.66	3.66
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	22.89	24.72	26.55	28.39	29.30	31.13	32.05	32.05	32.05
75.0	63.18	69.59	75.08	79.66	84.24	86.99	89.74	91.57	92.48
90.0	89.74	97.98	106.22	112.63	119.04	123.62	127.28	130.02	130.94
105.0	77.83	85.16	92.48	97.98	102.55	107.13	109.88	111.71	113.54
120.0	42.12	45.78	49.45	52.19	54.94	56.77	58.60	59.52	60.43
135.0	7.33	7.33	7.33	8.24	8.24	8.24	8.24	8.24	8.24
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	28.39	31.13	33.88	35.71	37.54	40.29	41.21	42.12	43.04
195.0	104.39	116.29	125.45	136.43	144.68	152.00	157.49	161.16	162.99
210.0	126.36	139.18	151.09	161.16	169.40	177.64	182.22	186.80	187.71
225.0	97.98	108.05	115.37	123.62	129.11	134.60	138.27	141.01	141.93
240.0	66.84	72.34	77.83	82.41	85.16	88.82	90.65	92.48	92.48
255.0	36.63	38.46	41.21	42.12	43.95	44.87	45.78	45.78	46.70
270.0	14.65	14.65	14.65	14.65	14.65	14.65	14.65	14.65	14.65
285.0	25.64	26.55	26.55	27.47	28.39	28.39	29.30	29.30	29.30
300.0	55.86	59.52	63.18	66.84	69.59	71.42	73.25	74.17	75.08
315.0	86.99	95.23	102.55	108.05	113.54	118.12	120.87	122.70	123.62
330.0	118.12	129.11	140.10	149.25	156.58	162.99	168.48	171.23	172.15
345.0	128.19	141.93	153.83	165.74	174.89	183.13	189.54	193.21	195.04
360.0	54.94	61.35	67.76	74.17	79.66	84.24	87.90	90.65	92.48

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Intensity data(cd)

Appendix Page: 11 Total:12

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	93.40	93.40	91.57	89.74	86.99	83.33	78.75	73.25	66.84
15.0	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
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	32.96	32.05	32.05	31.13	30.22	29.30	27.47	26.55	24.72
75.0	92.48	92.48	90.65	88.82	86.07	83.33	79.66	75.08	69.59
90.0	131.86	130.94	129.11	127.28	123.62	119.04	113.54	107.13	98.89
105.0	113.54	112.63	111.71	108.96	106.22	101.64	97.06	91.57	85.16
120.0	60.43	59.52	58.60	57.69	55.86	54.02	51.28	47.61	44.87
135.0	8.24	8.24	8.24	8.24	7.33	7.33	7.33	6.41	5.49
150.0	0.92	0.92	0.92	0.92	0.92	0.92	0.00	0.00	0.00
165.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
180.0	43.04	43.04	42.12	41.21	40.29	38.46	35.71	33.88	31.13
195.0	162.99	161.16	157.49	152.00	145.59	137.35	128.19	118.12	107.13
210.0	187.71	185.88	181.30	175.81	168.48	159.33	149.25	137.35	126.36
225.0	141.93	140.10	137.35	133.69	128.19	121.78	119.95	106.22	97.06
240.0	92.48	92.48	91.57	87.90	85.16	81.49	76.92	71.42	65.93
255.0	46.70	46.70	45.78	44.87	43.95	42.12	40.29	38.46	35.71
270.0	14.65	14.65	14.65	14.65	14.65	13.74	13.74	13.74	13.74
285.0	29.30	29.30	28.39	28.39	27.47	26.55	25.64	24.72	23.81
300.0	74.17	74.17	72.34	70.51	68.68	65.93	62.27	58.60	54.02
315.0	123.62	122.70	119.95	116.29	111.71	107.13	100.72	93.40	86.07
330.0	172.15	170.31	166.65	161.16	154.75	145.59	137.35	127.28	115.37
345.0	195.04	192.29	188.63	182.22	173.06	163.90	152.00	140.10	127.28
360.0	93.40	93.40	91.57	89.74	86.99	83.33	78.75	73.25	66.84
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	61.35	54.02	47.61	41.21	33.88	27.47	21.06	14.65	8.24
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	0.92	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	21.98	20.14	17.40	14.65	11.90	9.16	6.41	3.66	1.83
75.0	64.10	56.77	50.36	42.12	34.80	26.55	17.40	10.07	3.66
90.0	90.65	82.41	71.42	61.35	49.45	37.54	25.64	14.65	4.58
105.0	77.83	69.59	61.35	51.28	42.12	32.05	21.98	11.90	3.66
120.0	40.29	35.71	32.05	26.55	21.98	16.48	10.99	5.49	1.83
135.0	5.49	4.58	4.58	3.66	2.75	1.83	1.83	0.92	0.92
150.0	0.00	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	28.39	25.64	21.98	19.23	15.57	11.90	9.16	5.49	1.83
195.0	95.23	83.33	71.42	60.43	47.61	43.95	23.81	13.74	3.66
210.0	112.63	108.96	86.07	70.51	55.86	41.21	27.47	14.65	3.66
225.0	87.90	77.83	66.84	54.94	43.95	32.05	21.98	11.90	2.75
240.0	60.43	54.02	46.70	40.29	32.05	24.72	16.48	9.16	1.83
255.0	33.88	31.13	27.47	24.72	21.06	16.48	11.90	6.41	1.83
270.0	13.74	12.82	12.82	12.82	11.90	10.99	8.24	5.49	1.83
285.0	22.89	21.06	20.14	18.31	16.48	14.65	10.99	6.41	1.83
300.0	49.45	44.87	40.29	34.80	28.39	21.98	15.57	9.16	2.75
315.0	77.83	68.68	58.60	49.45	40.29	29.30	20.14	10.99	2.75
330.0	103.47	91.57	78.75	65.01	51.28	38.46	25.64	13.74	3.66
345.0	113.54	99.81	85.16	69.59	55.86	42.12	28.39	15.57	4.58
360.0	61.35	54.02	47.61	41.21	33.88	27.47	21.06	14.65	8.24

Intensity data(cd)

Appendix Page: 12 Total:12

C/ γ (°)	180.0
0.0	0.92
15.0	1.83
30.0	0.92
45.0	0.92
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	0.92
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