
亮明

Client:

LumCAT: CES1112LAJUDPC

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 120.020

LampCAT:

Current(A): 0.163

Lamp flux(lm): 1425.8

Power (W): 19.290

Number of Lamps: 1

PF: 0.985

Length(mm): 270

Width(mm): 70

Phm Type: C

Height(mm): 280

Photometric Results

Lumens(lm): 1425.81, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 73.91

Central intensity(cd): 11.118, Maximum intensity(cd): 295.545

Angle of maximum intensity: C=90.0 γ =90.0

Beam Angle(50%Imax): [C0/180]Total=332.8

[C90/270]Total=153.8

Field angle(10%Imax): [C0/180]Total=355.6

[C90/270]Total=339.2

Maximum s/h(1/2): C0_180=3.78 C90_270=139.14

Maximum s/h(1/4): C0_180=3.55 C90_270=5.00

Up flux rate of lamp(%): 49.47%

Down flux rate of lamp(%): 50.53%

Up flux rate of LUM(%): 49.47%

Down flux rate of LUM(%): 50.53%

CIE Type : General diffuse lighting

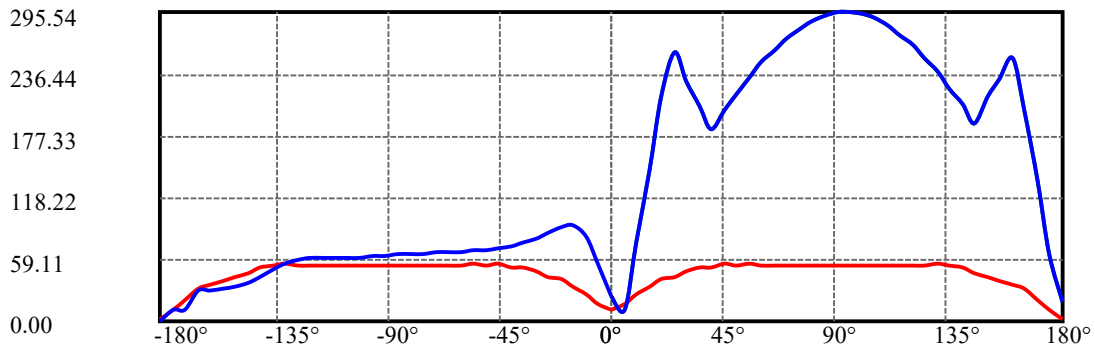
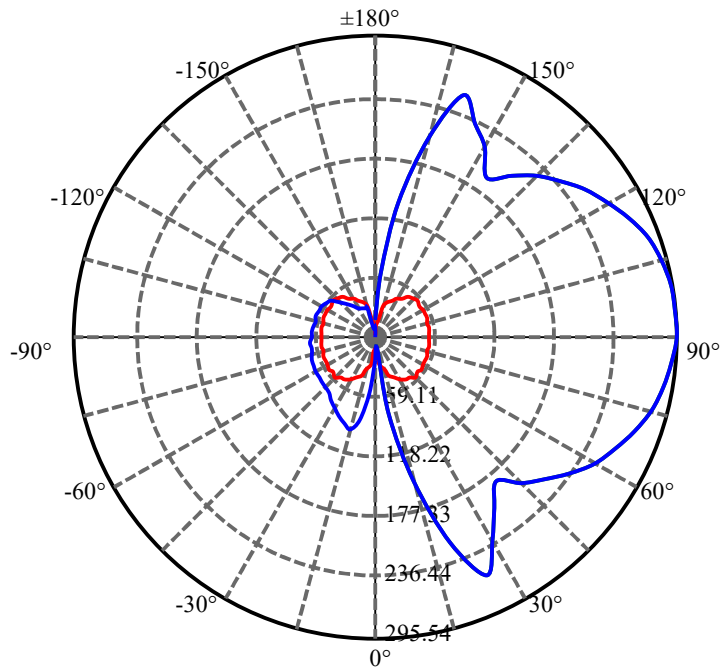
Output flux ratio in π solid angle : 23.530%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	16.985	0.000	0	0.00%	0.00%
5.0	25.478	0.508	0.508	0.04%	0.04%
10.0	53.620	2.830	3.337	0.20%	0.23%
15.0	79.754	7.912	11.249	0.55%	0.79%
20.0	103.456	15.099	26.348	1.06%	1.85%
25.0	118.627	23.292	49.64	1.63%	3.48%
30.0	120.364	30.245	79.885	2.12%	5.60%
35.0	116.079	34.818	114.703	2.44%	8.04%
40.0	109.324	37.607	152.31	2.64%	10.68%
45.0	107.471	40.141	192.451	2.82%	13.50%
50.0	108.011	43.541	235.992	3.05%	16.55%
55.0	110.636	47.541	283.533	3.33%	19.89%
60.0	114.149	51.958	335.492	3.64%	23.53%
65.0	117.623	56.344	391.836	3.95%	27.48%
70.0	120.789	60.367	452.203	4.23%	31.72%
75.0	123.259	63.790	515.994	4.47%	36.19%
80.0	125.151	66.468	582.461	4.66%	40.85%
85.0	126.656	68.422	650.883	4.80%	45.65%
90.0	127.313	69.539	720.422	4.88%	50.53%
95.0	127.274	69.708	790.13	4.89%	55.42%
100.0	126.579	68.978	859.108	4.84%	60.25%
105.0	125.267	67.387	926.495	4.73%	64.98%
110.0	123.337	64.981	991.476	4.56%	69.54%
115.0	120.519	61.746	1053.222	4.33%	73.87%
120.0	117.392	57.836	1111.058	4.06%	77.92%
125.0	113.493	53.368	1164.426	3.74%	81.67%
130.0	109.169	48.414	1212.84	3.40%	85.06%
135.0	104.498	43.175	1256.015	3.03%	88.09%
140.0	101.410	38.126	1294.141	2.67%	90.77%
145.0	99.480	33.517	1327.658	2.35%	93.12%
150.0	100.638	29.469	1357.126	2.07%	95.18%
155.0	98.476	25.198	1382.325	1.77%	96.95%
160.0	92.338	20.013	1402.337	1.40%	98.35%
165.0	72.612	13.594	1415.932	0.95%	99.31%
170.0	45.513	7.007	1422.939	0.49%	99.80%
175.0	24.474	2.504	1425.442	0.18%	99.97%
180.0	6.563	0.371	1425.814	0.03%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	79.88	5.60%	5.60%
0-40	152.31	10.68%	10.68%
0-60	335.49	23.53%	23.53%
0-90	720.42	50.53%	50.53%
0-120	1111.06	77.92%	77.92%
0-180	1425.81	100.00%	100.00%
60-90	384.93	27.00%	27.00%
90-120	390.64	27.40%	27.40%
90-130	492.42	34.54%	34.54%
90-150	636.70	44.66%	44.66%
90-180	705.02	49.45%	49.45%
0-122.77	1140.65	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	3.34
10-20	23.01
20-30	53.54
30-40	72.42
40-50	83.68
50-60	99.50
60-70	116.71
70-80	130.26
80-90	137.96
90-100	138.69
100-110	132.37
110-120	119.58
120-130	101.78
130-140	81.30
140-150	62.99
150-160	45.21
160-170	20.60
170-180	2.50



C90(Max): ———

C0/C180: ———

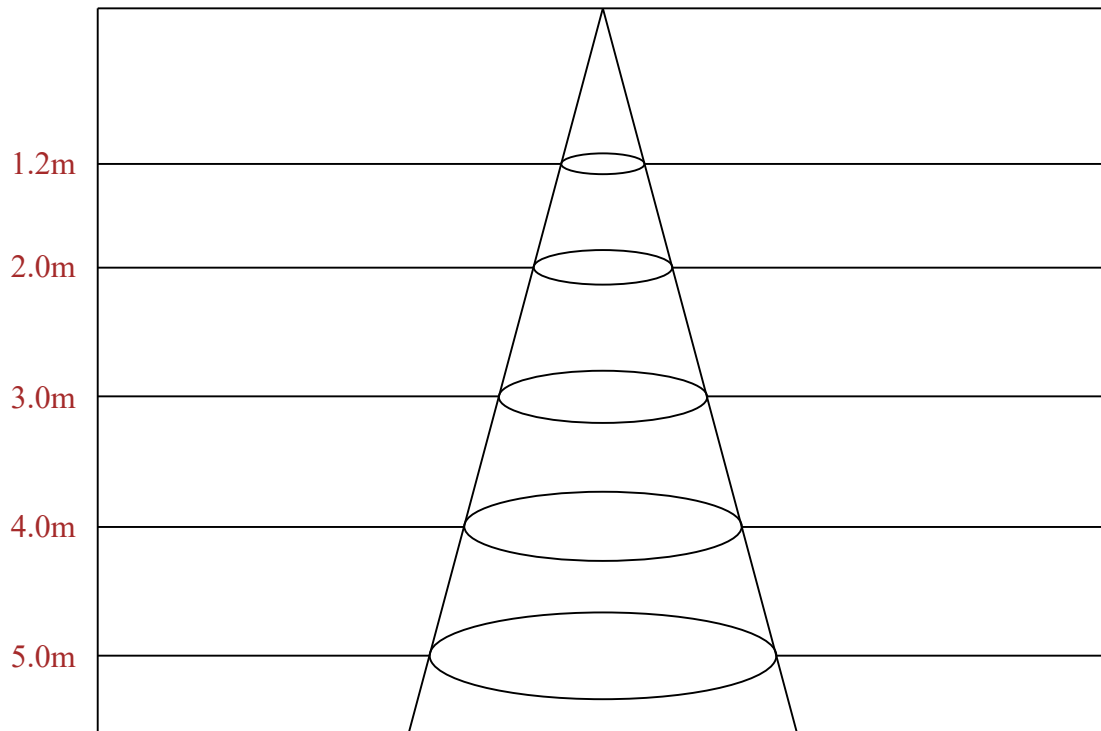
C90/C270: ———

Field angle(10%Imax):C0/180Left:222.8 Right:132.8

:C90/270Left:255.5 Right:83.7

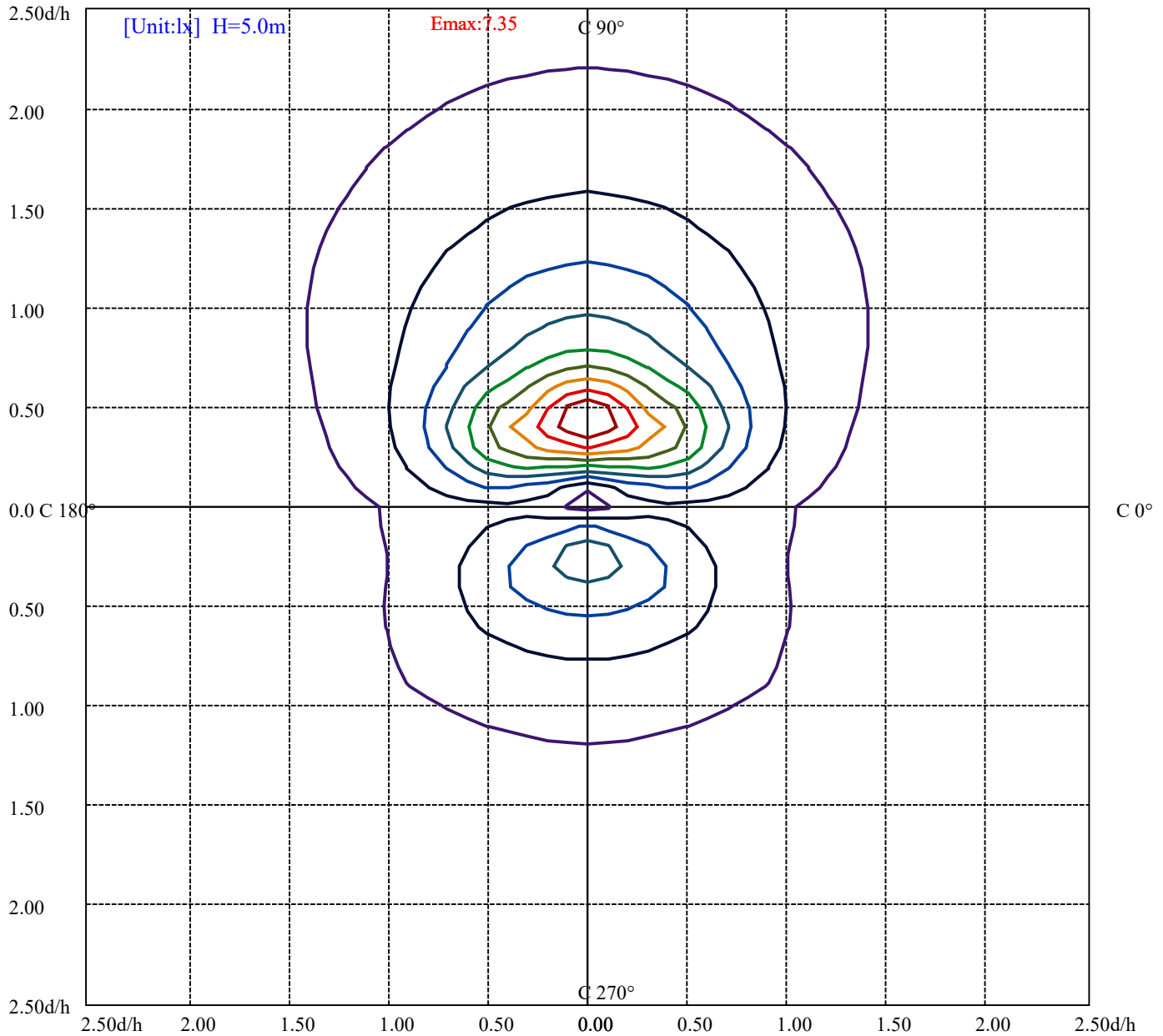
Beam Angle(50%Imax):C0/180Left:211.4 Right:121.4

:C90/270Left:79.8 Right:74.0

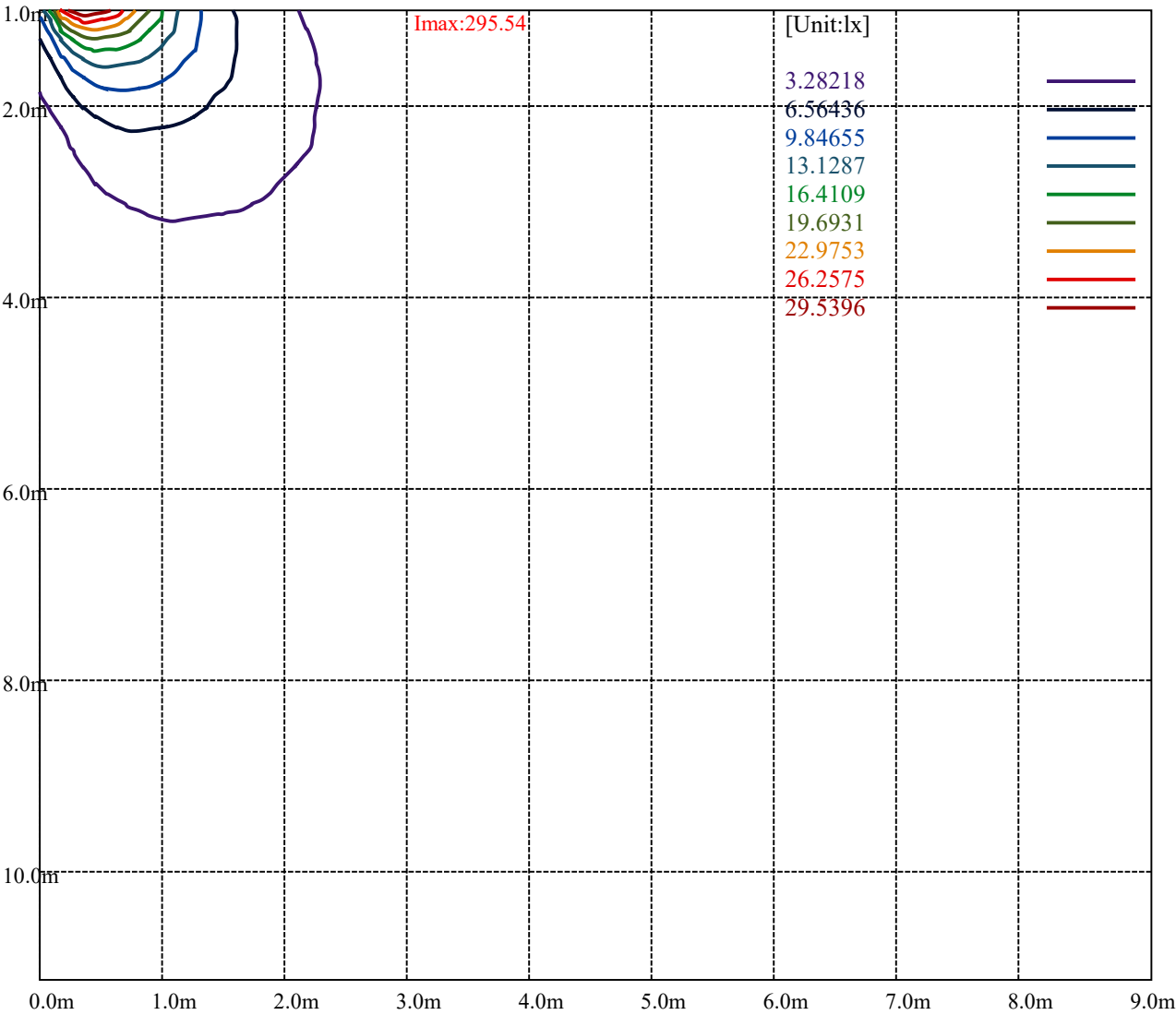


Max , Ave

Beam angle of C90 plane 344.35



(10%Emax) 0.735428	—
(20%Emax) 1.470852	—
(30%Emax) 2.20628	—
(40%Emax) 2.941704	—
(50%Emax) 3.677132	—
(60%Emax) 4.41256	—
(70%Emax) 5.148	—
(80%Emax) 5.8834	—
(90%Emax) 6.61884	—



Luminance Table

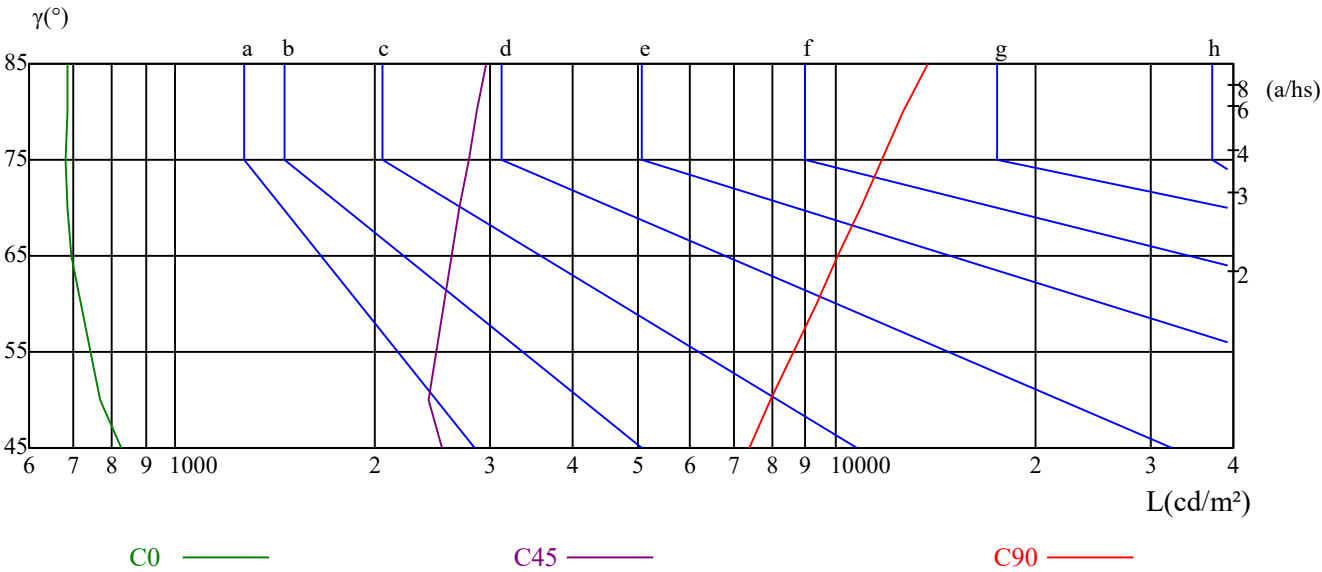
γ	45	50	55	60	65	70	75	80	85
C0	825	767	745	717	696	687	684	685	686
C45	2530	2421	2485	2550	2625	2698	2776	2856	2946
C90	7385	7981	8646	9361	10074	10872	11744	12676	13784

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6669	20356	16210	10890	35228	27841	32059	107988	85069

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	0.87	0.81	0.76	0.80	0.75	0.70	0.66	0.62	0.59	0.54	0.51	0.48	0.43	0.40	0.38	0.33
2	0.73	0.65	0.58	0.67	0.60	0.54	0.55	0.50	0.45	0.45	0.41	0.37	0.35	0.32	0.29	0.24
3	0.63	0.54	0.47	0.58	0.50	0.43	0.48	0.41	0.36	0.38	0.33	0.29	0.30	0.26	0.23	0.18
4	0.55	0.45	0.38	0.50	0.42	0.35	0.41	0.35	0.30	0.33	0.28	0.24	0.26	0.22	0.18	0.15
5	0.48	0.39	0.32	0.44	0.36	0.30	0.37	0.30	0.25	0.29	0.24	0.20	0.23	0.19	0.15	0.12
6	0.43	0.34	0.27	0.39	0.31	0.25	0.33	0.26	0.21	0.26	0.21	0.17	0.20	0.16	0.13	0.10
7	0.38	0.30	0.23	0.35	0.27	0.22	0.29	0.23	0.18	0.24	0.18	0.15	0.18	0.14	0.11	0.08
8	0.35	0.26	0.20	0.32	0.24	0.19	0.26	0.20	0.16	0.21	0.16	0.13	0.17	0.13	0.10	0.07
9	0.31	0.23	0.18	0.29	0.21	0.16	0.24	0.18	0.14	0.20	0.15	0.11	0.15	0.11	0.09	0.06
10	0.29	0.21	0.16	0.26	0.19	0.14	0.22	0.16	0.12	0.18	0.13	0.10	0.14	0.10	0.08	0.05

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	11.12	10.19	23.16	31.50	38.91	42.62	47.25	50.96	50.96
15.0	12.04	10.19	30.57	43.54	69.49	94.50	107.47	109.32	110.25
30.0	15.75	10.19	36.13	75.97	105.62	144.53	165.84	168.62	154.72
45.0	18.53	11.12	50.96	102.84	143.60	181.59	194.56	182.51	166.76
60.0	22.24	11.12	65.78	127.85	183.44	207.53	188.07	182.51	163.06
75.0	23.16	12.04	75.97	139.90	202.90	238.10	223.28	192.71	177.88
90.0	23.16	11.12	75.97	145.46	214.01	257.56	229.77	204.75	183.44
105.0	22.24	12.04	74.12	129.71	195.49	238.10	221.43	197.34	176.96
120.0	19.46	11.12	61.15	115.81	164.91	196.41	200.12	189.93	173.25
135.0	6.49	10.19	46.32	90.79	125.07	167.69	195.49	200.12	175.10
150.0	15.75	9.26	31.50	60.22	116.74	122.29	154.72	158.43	158.43
165.0	13.90	8.34	20.38	30.57	52.81	74.12	88.94	96.35	100.06
180.0	11.12	21.31	29.65	35.21	40.76	43.54	48.18	50.96	52.81
195.0	12.04	25.94	35.21	45.40	49.10	54.66	58.37	60.22	59.29
210.0	15.75	35.21	48.18	57.44	66.71	72.26	75.04	74.12	73.19
225.0	18.53	43.54	61.15	75.04	83.38	86.16	84.31	82.46	80.60
240.0	22.24	50.96	74.12	87.09	89.87	87.09	82.46	78.75	75.97
255.0	23.16	53.74	80.60	91.72	90.79	85.24	79.68	75.04	72.26
270.0	23.16	54.66	81.53	92.65	90.79	85.24	79.68	75.04	71.34
285.0	22.24	52.81	78.75	90.79	89.87	85.24	79.68	75.04	74.12
300.0	19.46	48.18	69.49	83.38	85.24	85.24	81.53	77.82	75.04
315.0	6.49	39.84	57.44	68.56	77.82	80.60	79.68	78.75	76.90
330.0	15.75	32.43	44.47	51.88	60.22	66.71	69.49	68.56	66.71
345.0	13.90	25.94	34.28	40.76	45.40	50.03	53.74	55.59	54.66
360.0	11.12	10.19	23.16	31.50	38.91	42.62	47.25	50.96	50.96
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	56.51	53.74	54.66	54.66	53.74	53.74	53.74	53.74	53.74
15.0	94.50	89.87	86.16	87.09	90.79	92.65	95.43	96.35	98.21
30.0	135.26	124.15	125.07	131.56	137.12	142.68	146.38	149.16	151.94
45.0	151.01	157.50	167.69	176.96	185.29	192.71	199.19	203.82	207.53
60.0	176.96	190.85	203.82	215.87	226.06	235.32	243.66	249.22	254.78
75.0	195.49	210.31	225.13	239.96	252.00	262.19	270.53	277.94	283.50
90.0	201.04	216.79	232.54	247.37	259.41	270.53	279.79	286.28	291.84
105.0	193.63	207.53	222.35	236.25	248.29	258.49	266.82	273.31	278.87
120.0	171.40	185.29	197.34	209.38	219.57	227.91	235.32	240.88	246.44
135.0	157.50	151.01	160.28	168.62	176.96	183.44	189.00	193.63	197.34
150.0	137.12	124.15	117.66	123.22	127.85	132.49	136.19	138.97	141.75
165.0	100.06	89.87	83.38	79.68	82.46	85.24	87.09	88.01	88.94
180.0	53.74	53.74	53.74	52.81	52.81	52.81	52.81	52.81	51.88
195.0	56.51	53.74	50.03	48.18	46.32	45.40	44.47	44.47	43.54
210.0	72.26	70.41	70.41	70.41	69.49	69.49	69.49	68.56	67.63
225.0	79.68	78.75	78.75	78.75	78.75	79.68	78.75	78.75	77.82
240.0	73.19	72.26	71.34	70.41	70.41	70.41	69.49	68.56	67.63
255.0	69.49	68.56	66.71	66.71	65.78	64.85	63.93	63.93	63.00
270.0	69.49	68.56	67.63	66.71	65.78	65.78	64.85	63.93	63.93
285.0	69.49	68.56	67.63	66.71	66.71	66.71	65.78	65.78	64.85
300.0	73.19	72.26	72.26	71.34	71.34	71.34	71.34	71.34	71.34
315.0	75.97	75.04	75.97	75.97	76.90	77.82	77.82	77.82	77.82
330.0	63.93	62.07	61.15	60.22	60.22	60.22	60.22	60.22	60.22
345.0	51.88	47.25	43.54	40.76	38.91	37.06	36.13	36.13	35.21
360.0	56.51	53.74	54.66	54.66	53.74	53.74	53.74	53.74	53.74

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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	53.74	52.81	52.81	52.81	52.81	52.81	52.81	52.81	54.66
15.0	99.13	99.13	98.21	97.28	95.43	93.57	90.79	88.01	88.94
30.0	153.79	153.79	152.87	151.01	148.24	144.53	139.90	134.34	128.78
45.0	210.31	210.31	209.38	206.60	201.97	195.49	189.00	180.66	171.40
60.0	256.63	257.56	255.71	252.93	247.37	239.03	229.77	220.50	208.46
75.0	286.28	287.21	284.43	281.65	275.16	266.82	256.63	244.59	230.69
90.0	295.54	295.54	293.69	289.99	283.50	274.24	264.04	251.07	238.10
105.0	281.65	282.57	280.72	276.09	270.53	262.19	252.00	239.96	226.99
120.0	248.29	248.29	246.44	243.66	238.10	231.62	222.35	212.16	201.04
135.0	199.19	200.12	198.26	195.49	191.78	186.22	178.81	171.40	163.06
150.0	142.68	142.68	142.68	140.82	138.04	134.34	129.71	125.07	119.51
165.0	89.87	89.87	89.87	88.94	88.01	86.16	83.38	80.60	77.82
180.0	51.88	52.81	52.81	53.74	53.74	53.74	54.66	54.66	53.74
195.0	42.62	42.62	43.54	43.54	44.47	45.40	48.18	50.96	53.74
210.0	66.71	65.78	64.85	64.85	63.93	63.00	62.07	62.07	60.22
225.0	76.90	75.97	75.04	73.19	72.26	70.41	70.41	67.63	64.85
240.0	66.71	65.78	65.78	63.93	63.00	62.07	60.22	58.37	56.51
255.0	62.07	61.15	60.22	59.29	59.29	58.37	58.37	56.51	54.66
270.0	63.00	62.07	61.15	61.15	61.15	61.15	60.22	58.37	55.59
285.0	64.85	63.93	63.00	63.00	62.07	61.15	60.22	59.29	57.44
300.0	70.41	69.49	69.49	69.49	68.56	67.63	66.71	64.85	63.00
315.0	77.82	77.82	76.90	75.97	75.97	75.04	74.12	73.19	71.34
330.0	60.22	61.15	62.07	62.07	63.00	63.00	63.93	64.85	65.78
345.0	35.21	36.13	37.99	38.91	41.69	44.47	49.10	51.88	53.74
360.0	53.74	52.81	52.81	52.81	52.81	52.81	52.81	52.81	54.66
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	53.74	51.88	48.18	46.32	41.69	37.06	33.35	28.72	15.75
15.0	89.87	99.13	94.50	83.38	76.90	63.00	47.25	34.28	20.38
30.0	135.26	151.01	166.76	169.54	157.50	119.51	77.82	54.66	28.72
45.0	162.13	167.69	189.00	208.46	208.46	169.54	121.37	78.75	44.47
60.0	195.49	181.59	191.78	213.09	203.82	209.38	161.21	109.32	54.66
75.0	216.79	201.04	186.22	206.60	219.57	229.77	192.71	123.22	59.29
90.0	222.35	206.60	189.93	214.94	230.69	252.00	201.97	134.34	64.85
105.0	213.09	198.26	182.51	196.41	211.24	221.43	192.71	125.07	62.07
120.0	188.07	175.10	176.03	184.37	178.81	196.41	157.50	105.62	53.74
135.0	152.87	155.65	161.21	173.25	183.44	153.79	117.66	80.60	40.76
150.0	118.59	125.07	136.19	133.41	119.51	108.40	79.68	53.74	31.50
165.0	75.04	76.90	80.60	70.41	68.56	60.22	49.10	36.13	24.09
180.0	51.88	49.10	43.54	38.91	37.06	33.35	27.79	11.12	4.63
195.0	53.74	50.96	45.40	39.84	38.91	33.35	23.16	9.26	4.63
210.0	58.37	57.44	52.81	46.32	38.91	29.65	22.24	4.63	5.56
225.0	62.07	60.22	57.44	50.03	40.76	32.43	22.24	3.71	6.49
240.0	55.59	52.81	47.25	42.62	37.99	33.35	25.94	4.63	8.34
255.0	50.03	43.54	37.99	34.28	31.50	30.57	25.94	6.49	8.34
270.0	49.10	41.69	36.13	32.43	30.57	29.65	28.72	10.19	10.19
285.0	53.74	49.10	44.47	38.91	34.28	35.21	29.65	13.90	9.26
300.0	63.00	63.00	58.37	51.88	44.47	37.99	27.79	16.68	9.26
315.0	69.49	66.71	63.93	56.51	45.40	34.28	25.94	15.75	8.34
330.0	64.85	60.22	54.66	46.32	49.10	29.65	26.87	16.68	6.49
345.0	52.81	49.10	42.62	37.06	34.28	36.13	24.09	14.82	5.56
360.0	53.74	51.88	48.18	46.32	41.69	37.06	33.35	28.72	15.75

Intensity data(cd)

C/γ(°)	180.0
0.0	3.71
15.0	8.34
30.0	11.12
45.0	12.97
60.0	15.75
75.0	18.53
90.0	17.60
105.0	16.68
120.0	16.68
135.0	13.90
150.0	12.04
165.0	10.19
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	3.71