
亮明

Client:

LumCAT: CES1112LAJUDPC

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.163

Lamp flux(lm): 1475.9

Power (W): 19.200

Number of Lamps: 1

PF: 0.985

Length(mm): 270

Width(mm): 70

Phm Type: C

Height(mm): 280

Photometric Results

Lumens(lm): 1475.86, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 76.87

Central intensity(cd): 11.118, Maximum intensity(cd): 305.736

Angle of maximum intensity: C=90.0 γ =90.0

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

[C90/270]Total=153.9

Field angle(10%Imax): [C0/180]Total=355.4

[C90/270]Total=338.8

Maximum s/h(1/2): C0_180=3.84 C90_270=139.06

Maximum s/h(1/4): C0_180=3.60 C90_270=4.99

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

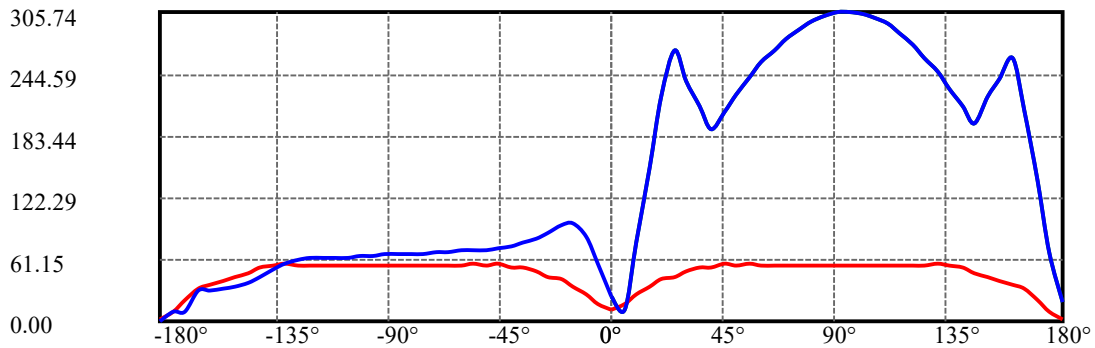
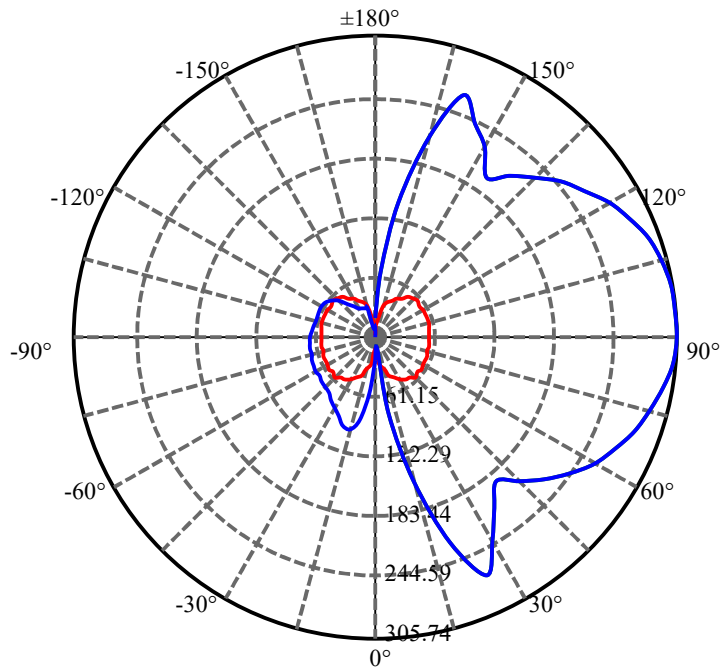
Output flux ratio in π solid angle : 23.525%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	17.449	0.000	0	0.00%	0.00%
5.0	26.482	0.525	0.525	0.04%	0.04%
10.0	55.473	2.932	3.457	0.20%	0.23%
15.0	82.572	8.189	11.646	0.55%	0.79%
20.0	107.085	15.630	27.276	1.06%	1.85%
25.0	122.719	24.102	51.378	1.63%	3.48%
30.0	124.572	31.295	82.673	2.12%	5.60%
35.0	120.133	36.034	118.707	2.44%	8.04%
40.0	113.107	38.914	157.622	2.64%	10.68%
45.0	111.254	41.542	199.164	2.81%	13.49%
50.0	111.756	45.062	244.226	3.05%	16.55%
55.0	114.458	49.186	293.412	3.33%	19.88%
60.0	118.202	53.779	347.191	3.64%	23.52%
65.0	121.831	58.353	405.544	3.95%	27.48%
70.0	125.035	62.508	468.052	4.24%	31.71%
75.0	127.544	66.020	534.072	4.47%	36.19%
80.0	129.667	68.823	602.895	4.66%	40.85%
85.0	131.134	70.866	673.761	4.80%	45.65%
90.0	131.868	72.012	745.773	4.88%	50.53%
95.0	131.791	72.192	817.965	4.89%	55.42%
100.0	130.941	71.391	889.355	4.84%	60.26%
105.0	129.667	69.732	959.087	4.72%	64.98%
110.0	127.583	67.241	1026.328	4.56%	69.54%
115.0	124.765	63.896	1090.224	4.33%	73.87%
120.0	121.484	59.863	1150.088	4.06%	77.93%
125.0	117.430	55.224	1205.312	3.74%	81.67%
130.0	113.030	50.110	1255.422	3.40%	85.06%
135.0	108.050	44.672	1300.094	3.03%	88.09%
140.0	105.000	39.448	1339.542	2.67%	90.76%
145.0	102.993	34.702	1374.244	2.35%	93.11%
150.0	104.267	30.520	1404.764	2.07%	95.18%
155.0	101.835	26.082	1430.847	1.77%	96.95%
160.0	95.697	20.717	1451.564	1.40%	98.35%
165.0	75.160	14.081	1465.645	0.95%	99.31%
170.0	47.018	7.248	1472.892	0.49%	99.80%
175.0	25.324	2.588	1475.48	0.18%	99.97%
180.0	6.756	0.383	1475.864	0.03%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	82.67	5.60%	5.60%
0-40	157.62	10.68%	10.68%
0-60	347.19	23.52%	23.52%
0-90	745.77	50.53%	50.53%
0-120	1150.09	77.93%	77.93%
0-180	1475.86	100.00%	100.00%
60-90	398.58	27.01%	27.01%
90-120	404.31	27.40%	27.40%
90-130	509.65	34.53%	34.53%
90-150	658.99	44.65%	44.65%
90-180	729.71	49.44%	49.44%
0-122.77	1180.69	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	3.46
10-20	23.82
20-30	55.40
30-40	74.95
40-50	86.60
50-60	102.97
60-70	120.86
70-80	134.84
80-90	142.88
90-100	143.58
100-110	136.97
110-120	123.76
120-130	105.33
130-140	84.12
140-150	65.22
150-160	46.80
160-170	21.33
170-180	2.59



C90(Max): —————

C0/C180: —————

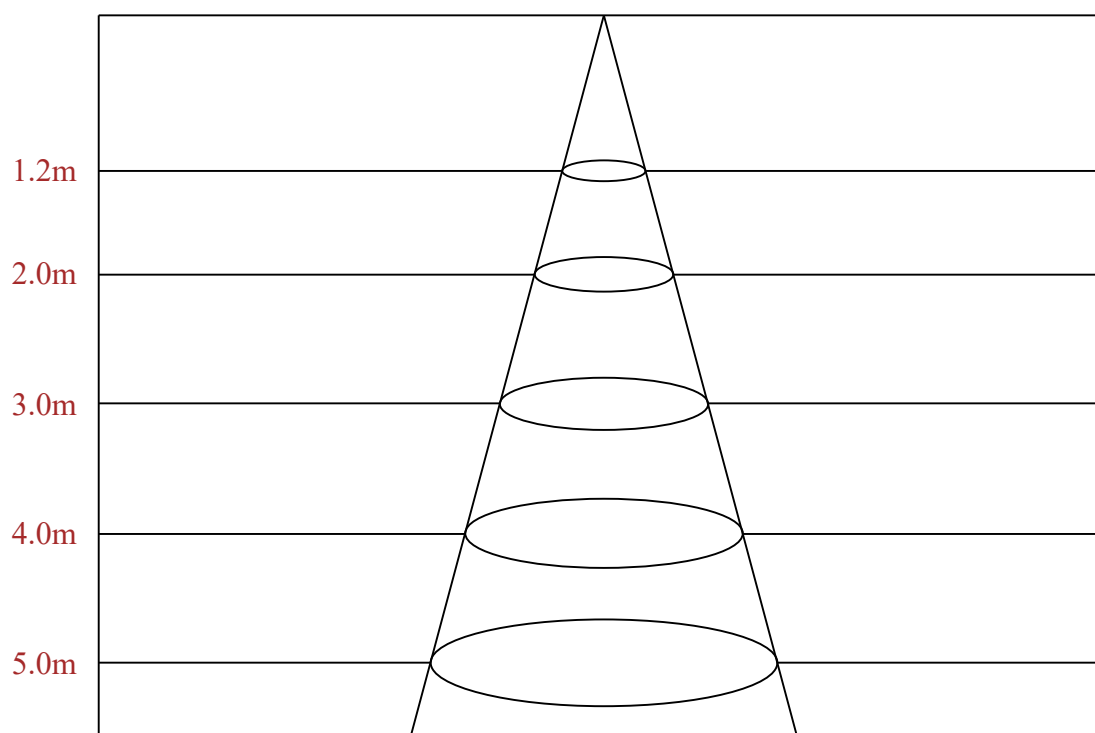
C90/C270: —————

Field angle(10%Imax):C0/180Left:222.7 Right:132.7

:C90/270Left:255.0 Right:83.8

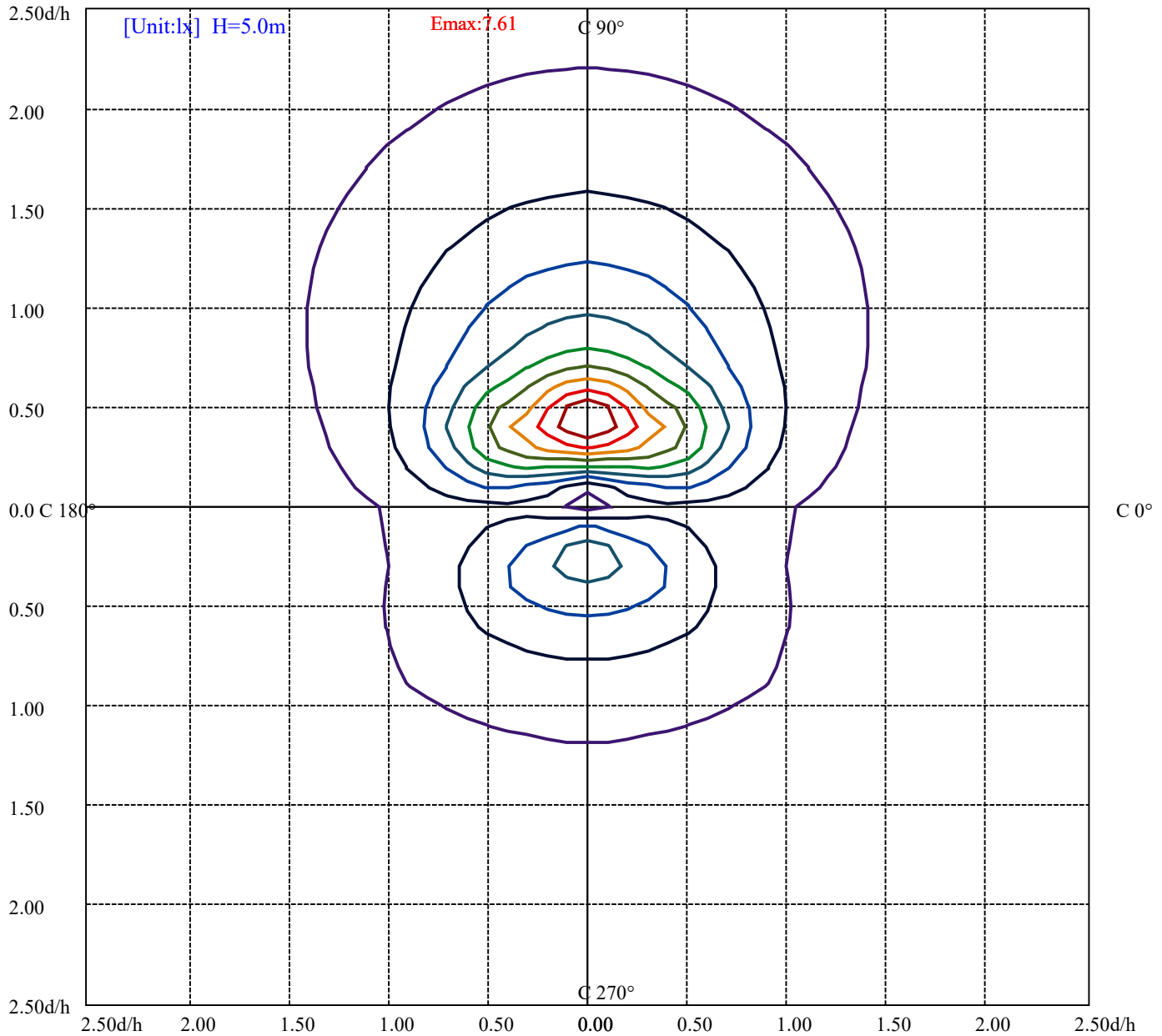
Beam Angle(50%Imax):C0/180Left:211.4 Right:121.4

:C90/270Left:79.9 Right:74.0

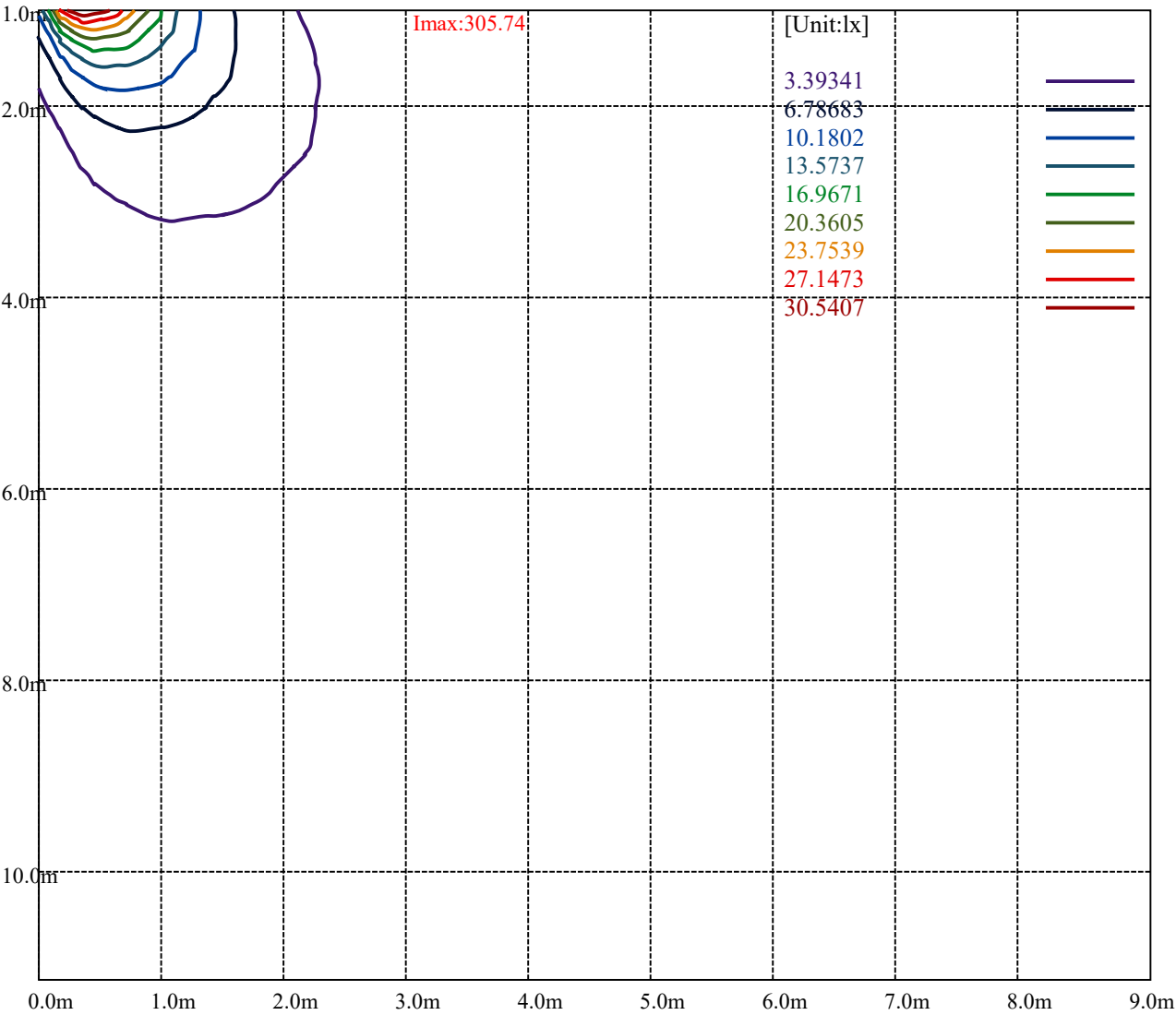


Max , Ave

Beam angle of C90 plane 344.20



(10%Emax) 0.761296	—
(20%Emax) 1.522588	—
(30%Emax) 2.283884	—
(40%Emax) 3.045176	—
(50%Emax) 3.806472	—
(60%Emax) 4.56776	—
(70%Emax) 5.32908	—
(80%Emax) 6.09036	—
(90%Emax) 6.85164	—



Luminance Table

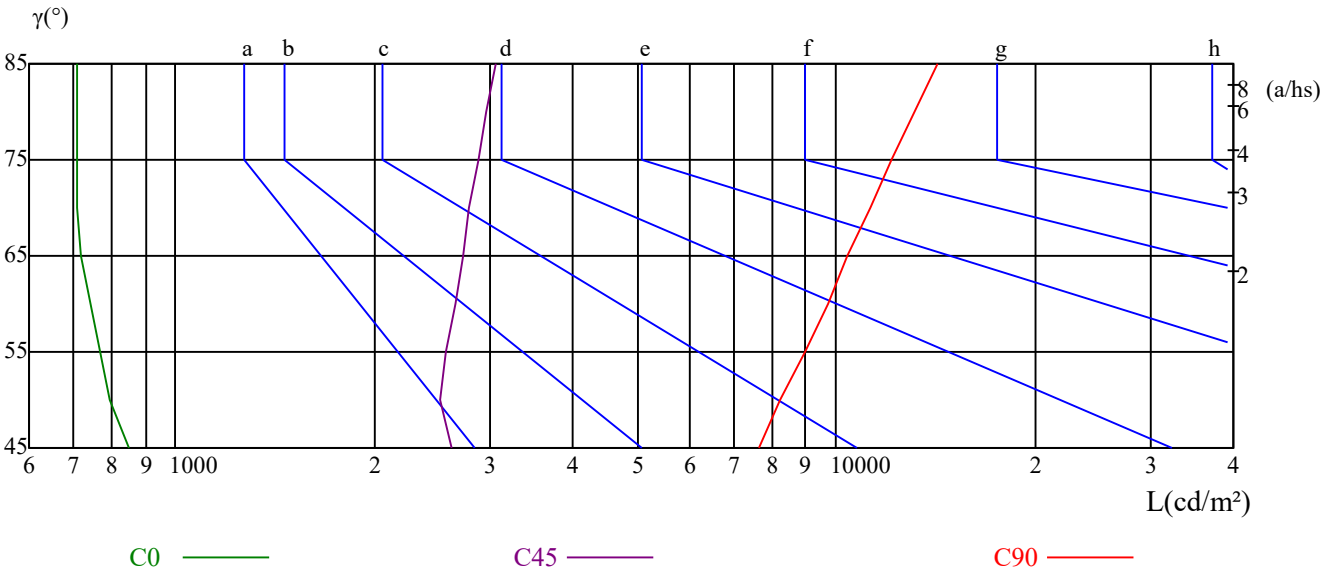
γ	45	50	55	60	65	70	75	80	85
C0	853	793	770	742	721	711	707	709	710
C45	2614	2508	2570	2646	2719	2791	2869	2956	3047
C90	7623	8254	8956	9712	10434	11245	12133	13127	14265

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6901	21110	16790	11269	36364	28788	33184	111644	88021

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

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Intensity data(cd)									Appendix Page: 10 Total:12		
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	11.12	11.12	24.09	32.43	39.84	44.47	49.10	52.81	52.81		
15.0	12.97	11.12	31.50	45.40	71.34	98.21	111.18	113.03	113.96		
30.0	16.68	11.12	37.06	77.82	109.32	150.09	171.40	174.18	160.28		
45.0	19.46	12.04	52.81	106.54	148.24	187.15	201.04	189.00	172.32		
60.0	23.16	12.04	68.56	132.49	189.93	214.01	195.49	189.00	168.62		
75.0	23.16	12.04	78.75	144.53	210.31	246.44	230.69	199.19	184.37		
90.0	24.09	12.04	78.75	151.01	221.43	266.82	238.10	212.16	189.93		
105.0	22.24	12.04	75.97	134.34	202.90	246.44	229.77	204.75	183.44		
120.0	20.38	11.12	63.93	119.51	170.47	202.90	207.53	196.41	179.74		
135.0	6.49	10.19	47.25	93.57	129.71	173.25	202.90	206.60	180.66		
150.0	15.75	9.26	32.43	63.00	120.44	126.93	159.35	163.99	163.99		
165.0	13.90	8.34	21.31	31.50	54.66	76.90	91.72	99.13	103.76		
180.0	11.12	22.24	30.57	36.13	42.62	44.47	50.03	52.81	54.66		
195.0	12.97	26.87	37.06	47.25	50.96	56.51	60.22	62.07	61.15		
210.0	16.68	36.13	50.03	59.29	68.56	75.04	76.90	76.90	75.97		
225.0	19.46	45.40	63.00	77.82	86.16	88.94	87.09	85.24	83.38		
240.0	23.16	52.81	75.97	90.79	93.57	89.87	85.24	81.53	77.82		
255.0	23.16	55.59	83.38	95.43	93.57	88.94	82.46	77.82	74.12		
270.0	24.09	57.44	84.31	96.35	94.50	88.01	82.46	77.82	74.12		
285.0	22.24	54.66	81.53	93.57	92.65	88.01	82.46	77.82	76.90		
300.0	20.38	50.03	72.26	86.16	88.94	88.01	84.31	80.60	77.82		
315.0	6.49	41.69	59.29	71.34	79.68	83.38	82.46	81.53	79.68		
330.0	15.75	33.35	45.40	53.74	63.00	68.56	72.26	71.34	68.56		
345.0	13.90	26.87	36.13	41.69	47.25	51.88	55.59	57.44	56.51		
360.0	11.12	11.12	24.09	32.43	39.84	44.47	49.10	52.81	52.81		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	58.37	55.59	56.51	56.51	55.59	55.59	55.59	55.59	55.59		
15.0	98.21	93.57	88.94	90.79	93.57	96.35	98.21	100.06	101.91		
30.0	139.90	128.78	129.71	136.19	141.75	147.31	151.01	154.72	157.50		
45.0	155.65	163.06	173.25	183.44	191.78	199.19	205.68	211.24	214.94		
60.0	183.44	197.34	210.31	223.28	234.40	243.66	252.00	258.49	263.12		
75.0	201.97	217.72	233.47	248.29	261.27	271.46	279.79	288.13	293.69		
90.0	207.53	224.21	240.88	256.63	268.68	279.79	289.06	296.47	302.03		
105.0	200.12	214.94	230.69	244.59	256.63	267.75	276.09	282.57	289.06		
120.0	177.88	191.78	204.75	215.87	227.91	236.25	243.66	249.22	254.78		
135.0	163.06	156.57	165.84	175.10	183.44	189.93	195.49	200.12	203.82		
150.0	141.75	128.78	122.29	127.85	132.49	137.12	140.82	144.53	146.38		
165.0	103.76	92.65	86.16	82.46	85.24	88.01	89.87	91.72	92.65		
180.0	55.59	55.59	55.59	54.66	54.66	54.66	54.66	54.66	53.74		
195.0	58.37	55.59	51.88	50.03	48.18	47.25	46.32	45.40	44.47		
210.0	74.12	73.19	73.19	72.26	72.26	72.26	72.26	71.34	70.41		
225.0	82.46	81.53	81.53	81.53	81.53	82.46	81.53	81.53	80.60		
240.0	75.97	74.12	74.12	73.19	73.19	72.26	71.34	71.34	70.41		
255.0	72.26	70.41	69.49	68.56	67.63	67.63	66.71	65.78	64.85		
270.0	72.26	70.41	69.49	69.49	68.56	67.63	66.71	66.71	65.78		
285.0	72.26	70.41	69.49	69.49	69.49	68.56	68.56	67.63	67.63		
300.0	75.97	75.04	74.12	74.12	74.12	74.12	74.12	74.12	74.12		
315.0	78.75	77.82	77.82	78.75	79.68	80.60	80.60	80.60	80.60		
330.0	66.71	63.93	63.00	62.07	62.07	62.07	63.00	63.00	63.00		
345.0	53.74	49.10	44.47	41.69	39.84	38.91	37.99	37.06	36.13		
360.0	58.37	55.59	56.51	56.51	55.59	55.59	55.59	55.59	55.59		

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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	55.59	54.66	54.66	55.59	54.66	54.66	54.66	54.66	56.51
15.0	101.91	101.91	101.91	100.99	99.13	96.35	94.50	90.79	91.72
30.0	159.35	159.35	158.43	156.57	153.79	149.16	144.53	138.97	133.41
45.0	217.72	217.72	215.87	214.01	209.38	202.90	195.49	187.15	177.88
60.0	265.90	266.82	264.04	261.27	255.71	248.29	238.10	227.91	215.87
75.0	296.47	297.40	294.62	291.84	284.43	276.09	264.97	252.93	239.03
90.0	305.74	305.74	303.88	300.18	293.69	284.43	273.31	259.41	246.44
105.0	291.84	291.84	289.99	286.28	280.72	271.46	260.34	248.29	234.40
120.0	256.63	257.56	255.71	252.00	246.44	239.03	229.77	219.57	207.53
135.0	206.60	206.60	205.68	202.90	198.26	192.71	185.29	176.96	168.62
150.0	148.24	148.24	147.31	145.46	142.68	138.97	134.34	129.71	123.22
165.0	92.65	93.57	92.65	92.65	90.79	88.94	86.16	83.38	80.60
180.0	53.74	54.66	54.66	55.59	55.59	55.59	56.51	56.51	55.59
195.0	44.47	44.47	44.47	44.47	45.40	47.25	50.03	52.81	55.59
210.0	68.56	68.56	67.63	66.71	65.78	64.85	63.93	63.93	63.00
225.0	79.68	78.75	77.82	75.97	75.04	73.19	72.26	69.49	67.63
240.0	69.49	68.56	67.63	65.78	64.85	63.93	62.07	60.22	59.29
255.0	63.93	63.00	62.07	61.15	61.15	60.22	60.22	58.37	56.51
270.0	65.78	64.85	63.93	63.00	63.00	63.00	63.00	61.15	57.44
285.0	66.71	65.78	64.85	64.85	64.85	63.93	63.00	61.15	59.29
300.0	73.19	72.26	72.26	71.34	70.41	69.49	68.56	67.63	64.85
315.0	80.60	79.68	79.68	78.75	78.75	77.82	76.90	75.97	74.12
330.0	63.00	63.00	63.93	63.93	64.85	65.78	66.71	67.63	68.56
345.0	37.06	37.99	38.91	40.76	42.62	46.32	50.96	53.74	55.59
360.0	55.59	54.66	54.66	55.59	54.66	54.66	54.66	54.66	56.51
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	55.59	53.74	50.03	48.18	42.62	37.99	34.28	29.65	15.75
15.0	93.57	102.84	97.28	86.16	78.75	65.78	49.10	35.21	21.31
30.0	139.90	156.57	173.25	176.03	163.06	124.15	80.60	56.51	29.65
45.0	167.69	174.18	195.49	215.87	215.87	175.10	126.00	81.53	45.40
60.0	201.97	188.07	198.26	220.50	210.31	215.87	166.76	113.03	56.51
75.0	224.21	208.46	192.71	214.01	227.91	238.10	199.19	126.93	62.07
90.0	229.77	213.09	196.41	222.35	239.03	260.34	209.38	138.97	67.63
105.0	220.50	204.75	189.00	203.82	218.65	229.77	199.19	129.71	64.85
120.0	194.56	181.59	182.51	190.85	185.29	203.82	163.06	109.32	55.59
135.0	158.43	161.21	166.76	179.74	189.93	159.35	122.29	83.38	42.62
150.0	122.29	128.78	140.82	138.97	124.15	113.03	82.46	55.59	32.43
165.0	77.82	79.68	83.38	73.19	70.41	62.07	50.96	37.06	25.01
180.0	53.74	50.96	45.40	39.84	37.99	35.21	28.72	12.04	4.63
195.0	55.59	52.81	47.25	40.76	39.84	34.28	24.09	9.26	4.63
210.0	61.15	59.29	54.66	47.25	39.84	30.57	22.24	4.63	5.56
225.0	63.93	63.00	60.22	51.88	42.62	34.28	23.16	3.71	7.41
240.0	57.44	54.66	49.10	44.47	38.91	35.21	26.87	4.63	8.34
255.0	50.96	44.47	39.84	35.21	32.43	32.43	26.87	6.49	9.26
270.0	50.96	43.54	37.99	33.35	31.50	30.57	29.65	10.19	10.19
285.0	55.59	50.96	45.40	40.76	36.13	36.13	30.57	14.82	9.26
300.0	64.85	64.85	60.22	53.74	46.32	39.84	28.72	17.60	9.26
315.0	71.34	69.49	65.78	58.37	47.25	35.21	26.87	15.75	8.34
330.0	66.71	63.00	56.51	48.18	50.03	30.57	27.79	16.68	6.49
345.0	54.66	50.03	43.54	38.91	35.21	37.06	25.01	15.75	5.56
360.0	55.59	53.74	50.03	48.18	42.62	37.99	34.28	29.65	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	16.68
75.0	19.46
90.0	18.53
105.0	16.68
120.0	16.68
135.0	13.90
150.0	12.97
165.0	11.12
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