
亮明

Client:

LumCAT: CES1112LAJUDPC

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 119.980

LampCAT:

Current(A): 0.160

Lamp flux(lm): 1538.0

Power (W): 18.920

Number of Lamps: 1

PF: 0.985

Length(mm): 270

Width(mm): 70

Phm Type: C

Height(mm): 280

Photometric Results

Lumens(lm): 1538.03, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 81.29

Central intensity(cd): 12.044, Maximum intensity(cd): 318.706

Angle of maximum intensity: C=90.0 γ =90.0

Beam Angle(50%Imax): [C0/180]Total=332.4

[C90/270]Total=153.9

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

[C90/270]Total=341.8

Maximum s/h(1/2): C0_180=3.78 C90_270=139.12

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

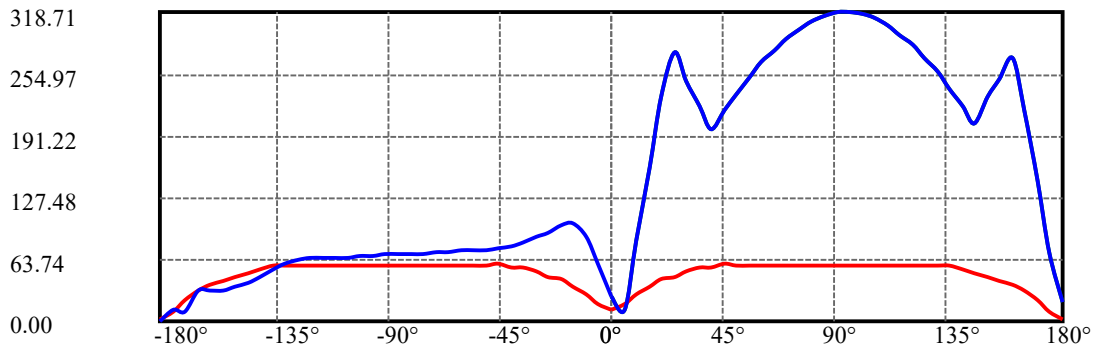
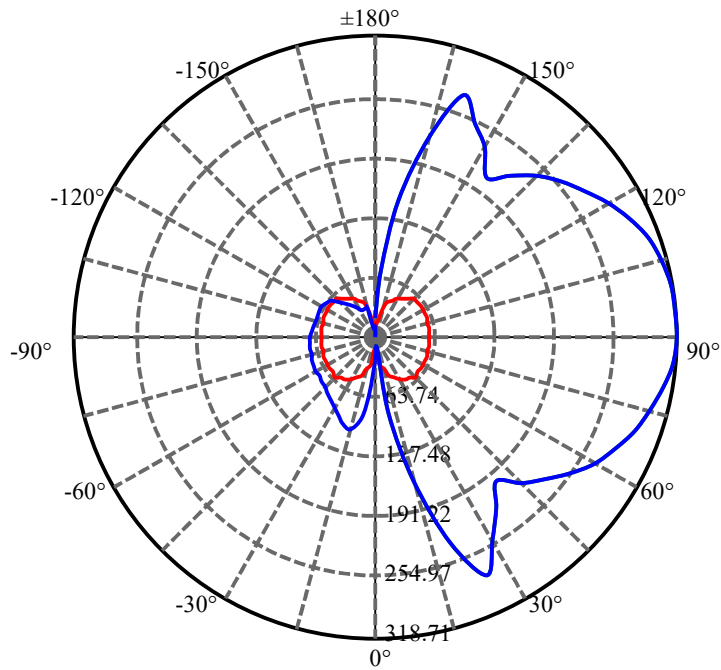
Output flux ratio in π solid angle : 23.526%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	18.298	0.000	0	0.00%	0.00%
5.0	27.447	0.547	0.547	0.04%	0.04%
10.0	57.634	3.044	3.59	0.20%	0.23%
15.0	86.162	8.530	12.12	0.55%	0.79%
20.0	111.678	16.305	28.425	1.06%	1.85%
25.0	127.930	25.131	53.556	1.63%	3.48%
30.0	129.860	32.624	86.179	2.12%	5.60%
35.0	125.151	37.552	123.732	2.44%	8.04%
40.0	118.009	40.569	164.301	2.64%	10.68%
45.0	115.886	43.308	207.609	2.82%	13.50%
50.0	116.504	46.958	254.566	3.05%	16.55%
55.0	119.283	51.268	305.834	3.33%	19.88%
60.0	123.028	56.009	361.844	3.64%	23.53%
65.0	126.849	60.746	422.59	3.95%	27.48%
70.0	130.247	65.098	487.688	4.23%	31.71%
75.0	133.026	68.815	556.503	4.47%	36.18%
80.0	135.072	71.735	628.239	4.66%	40.85%
85.0	136.655	73.835	702.073	4.80%	45.65%
90.0	137.465	75.056	777.129	4.88%	50.53%
95.0	137.388	75.257	852.386	4.89%	55.42%
100.0	136.539	74.432	926.819	4.84%	60.26%
105.0	135.072	72.675	999.494	4.73%	64.99%
110.0	132.949	70.056	1069.551	4.55%	69.54%
115.0	130.015	66.584	1136.135	4.33%	73.87%
120.0	126.656	62.397	1198.532	4.06%	77.93%
125.0	122.449	57.580	1256.112	3.74%	81.67%
130.0	117.739	52.225	1308.337	3.40%	85.07%
135.0	112.682	46.560	1354.897	3.03%	88.09%
140.0	109.517	41.142	1396.039	2.67%	90.77%
145.0	107.239	36.164	1432.203	2.35%	93.12%
150.0	108.552	31.777	1463.979	2.07%	95.19%
155.0	106.197	27.177	1491.156	1.77%	96.95%
160.0	99.596	21.584	1512.74	1.40%	98.36%
165.0	78.210	14.654	1527.393	0.95%	99.31%
170.0	48.871	7.538	1534.932	0.49%	99.80%
175.0	26.559	2.698	1537.63	0.18%	99.97%
180.0	7.064	0.402	1538.032	0.03%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	86.18	5.60%	5.60%
0-40	164.30	10.68%	10.68%
0-60	361.84	23.53%	23.53%
0-90	777.13	50.53%	50.53%
0-120	1198.53	77.93%	77.93%
0-180	1538.03	100.00%	100.00%
60-90	415.29	27.00%	27.00%
90-120	421.40	27.40%	27.40%
90-130	531.21	34.54%	34.54%
90-150	686.85	44.66%	44.66%
90-180	760.50	49.45%	49.45%
0-122.77	1230.43	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	3.59
10-20	24.83
20-30	57.75
30-40	78.12
40-50	90.27
50-60	107.28
60-70	125.84
70-80	140.55
80-90	148.89
90-100	149.69
100-110	142.73
110-120	128.98
120-130	109.80
130-140	87.70
140-150	67.94
150-160	48.76
160-170	22.19
170-180	2.70



C90(Max): ———

C0/C180: ———

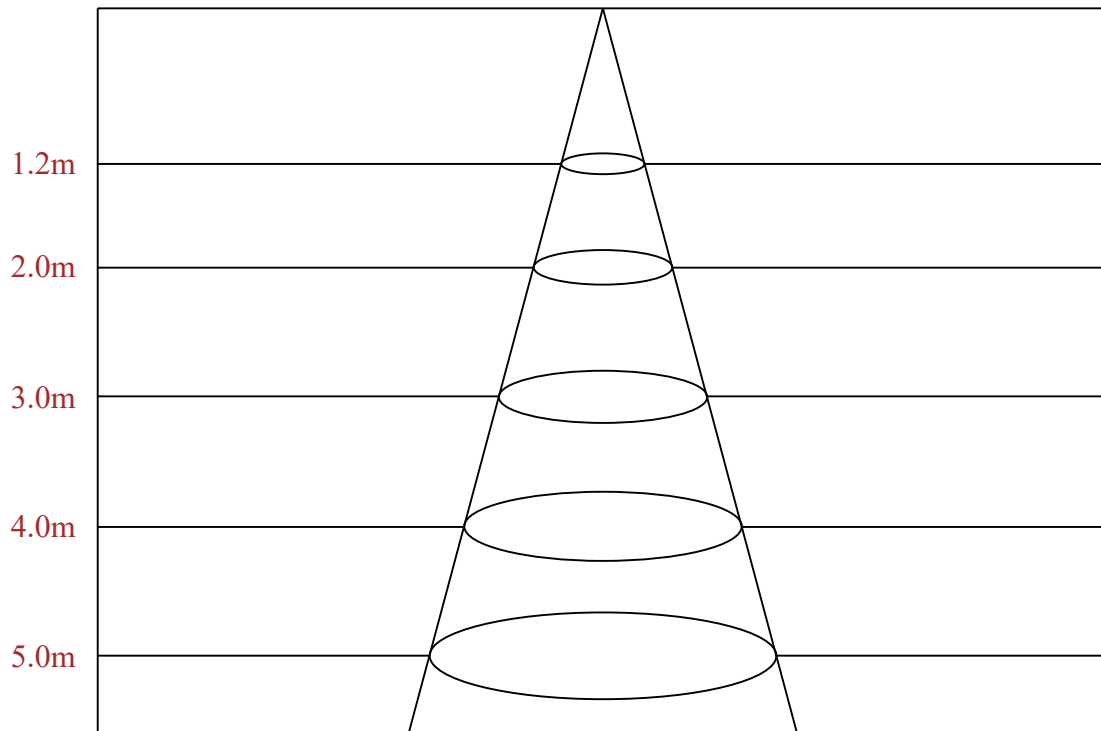
C90/C270: ———

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

:C90/270Left:258.0 Right:83.8

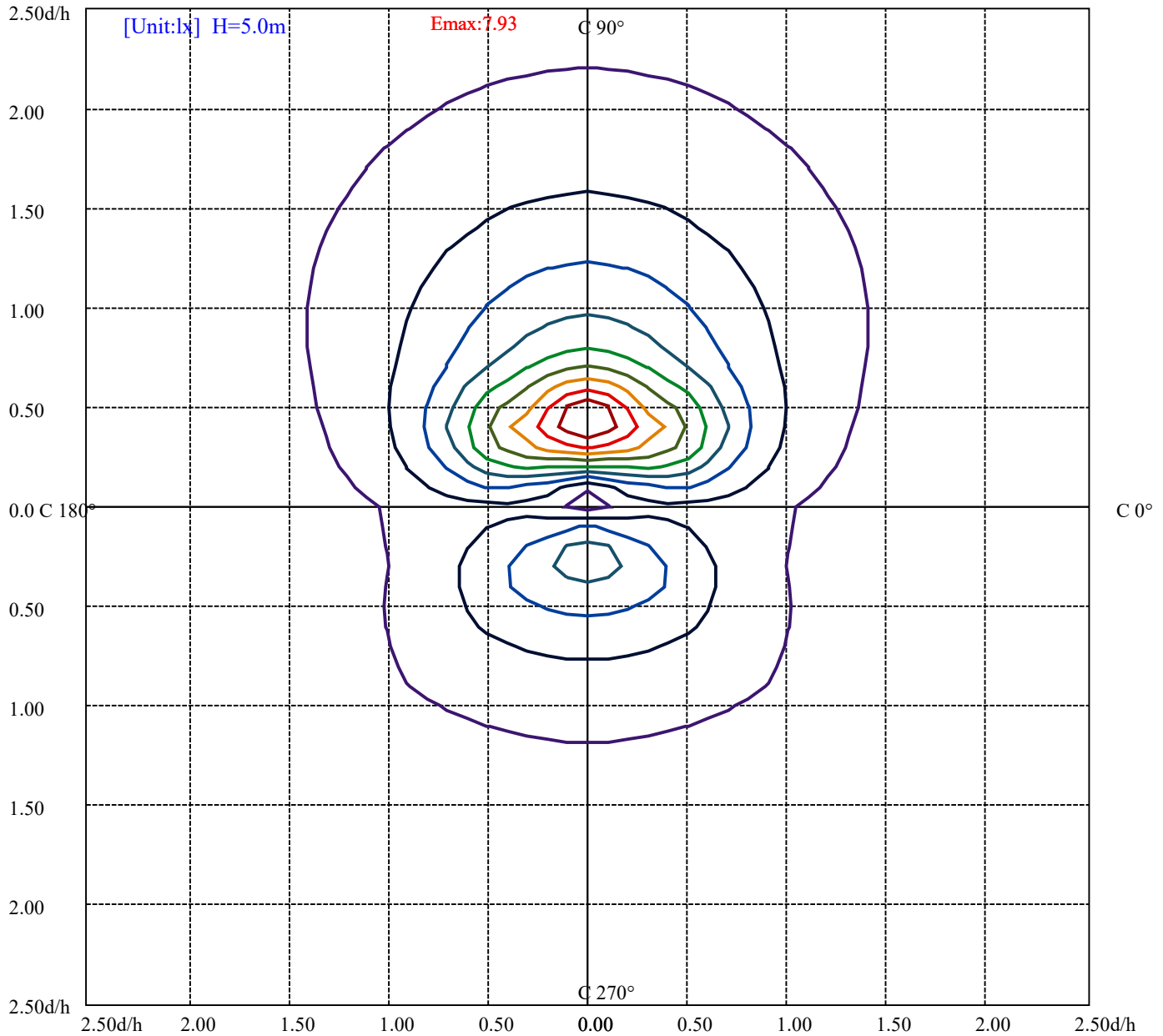
Beam Angle(50%Imax):C0/180Left:211.3 Right:121.3

:C90/270Left:79.9 Right:74.0

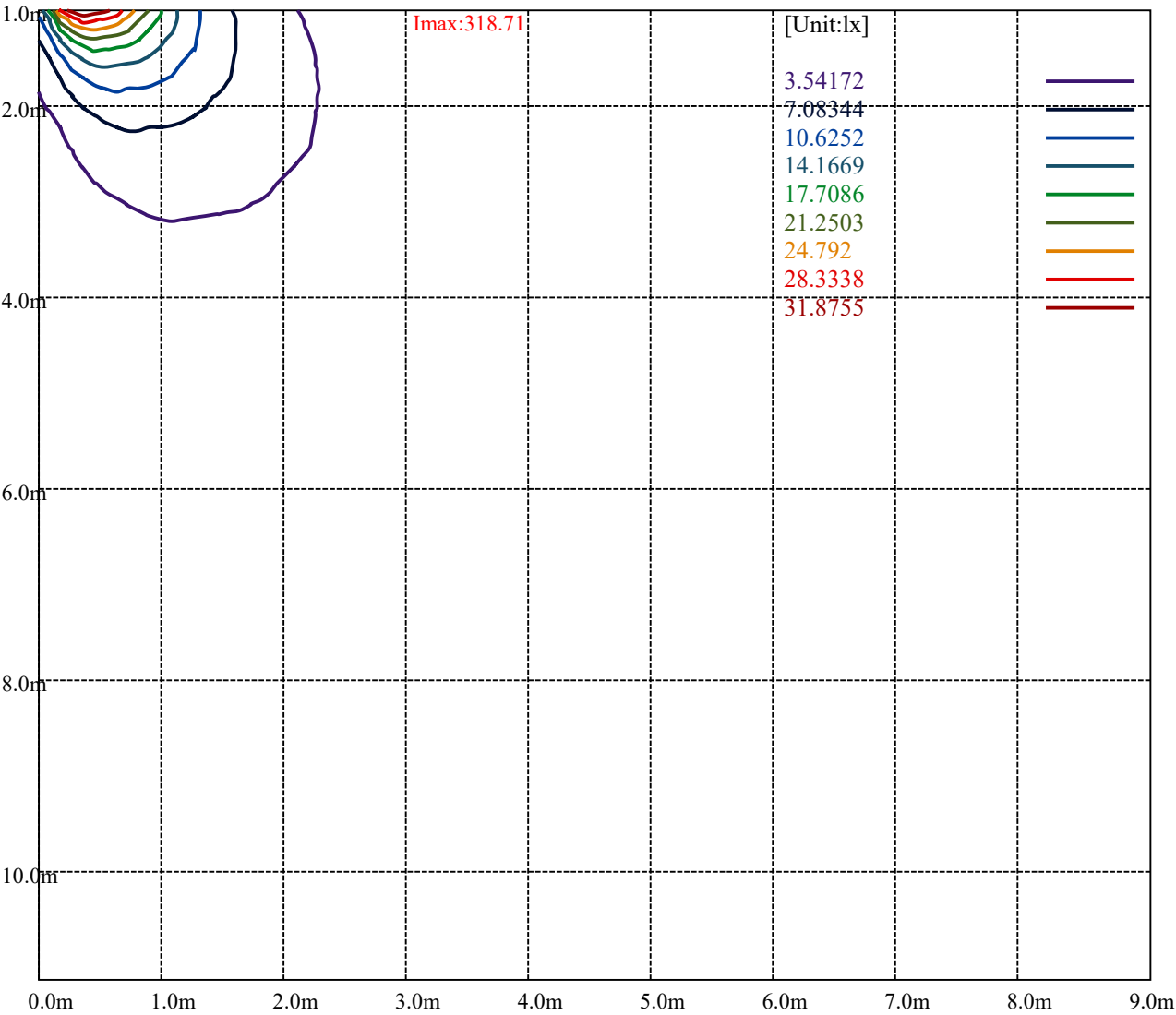


Max , Ave

Beam angle of C90 plane 344.43



(10%Emax) 0.793096	—
(20%Emax) 1.586188	—
(30%Emax) 2.379284	—
(40%Emax) 3.17238	—
(50%Emax) 3.965472	—
(60%Emax) 4.75856	—
(70%Emax) 5.55168	—
(80%Emax) 6.34476	—
(90%Emax) 7.13784	—



Luminance Table

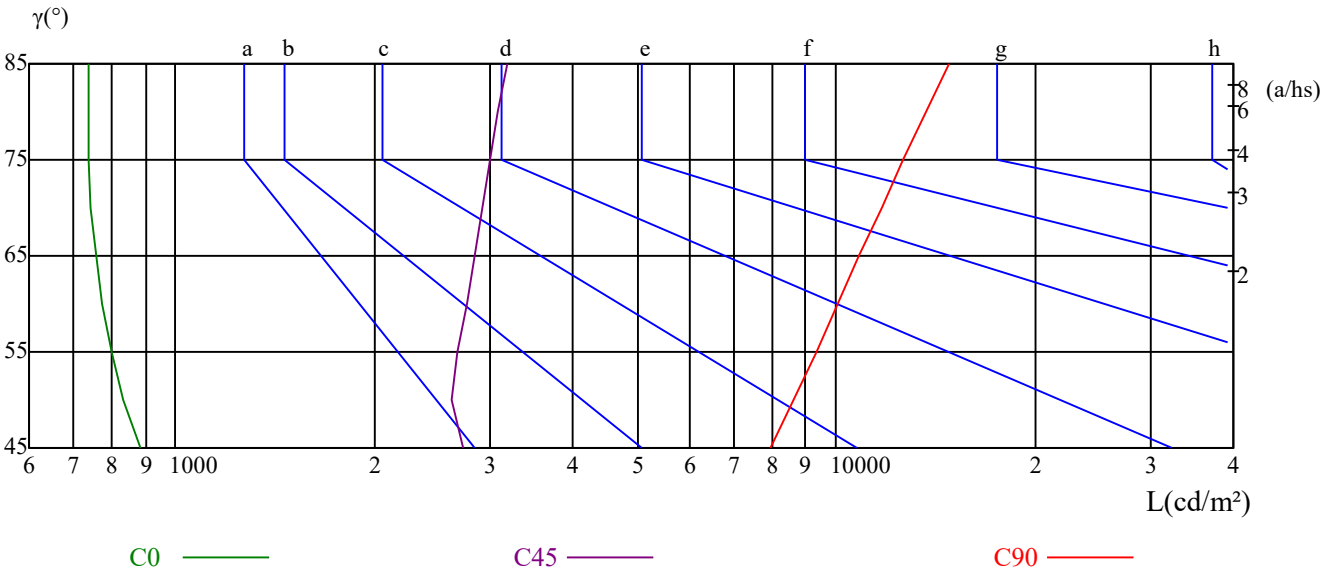
γ	45	50	55	60	65	70	75	80	85
C0	887	833	802	773	757	741	737	739	740
C45	2728	2617	2675	2756	2833	2910	2995	3076	3182
C90	7963	8629	9335	10098	10865	11729	12639	13702	14878

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
7249	21980	17486	11743	37879	30067	34590	116425	91959

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 Limitting 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	12.04	11.12	25.01	33.35	41.69	46.32	50.96	55.59	54.66		
15.0	12.97	11.12	32.43	47.25	75.04	101.91	116.74	117.66	119.51		
30.0	17.60	11.12	38.91	81.53	113.96	155.65	178.81	181.59	166.76		
45.0	20.38	12.04	54.66	111.18	154.72	195.49	210.31	196.41	179.74		
60.0	24.09	12.04	71.34	138.04	197.34	223.28	202.90	196.41	176.03		
75.0	25.01	12.97	82.46	151.01	219.57	257.56	239.96	207.53	192.71		
90.0	25.01	12.04	82.46	157.50	230.69	277.94	248.29	221.43	198.26		
105.0	23.16	12.97	79.68	139.90	211.24	257.56	239.03	213.09	190.85		
120.0	21.31	12.04	66.71	125.07	177.88	212.16	215.87	204.75	187.15		
135.0	6.49	11.12	49.10	98.21	135.26	180.66	211.24	215.87	189.00		
150.0	16.68	9.26	33.35	65.78	126.00	132.49	166.76	170.47	170.47		
165.0	14.82	8.34	22.24	33.35	56.51	80.60	95.43	103.76	108.40		
180.0	12.04	23.16	31.50	37.99	44.47	46.32	51.88	54.66	57.44		
195.0	12.97	27.79	37.99	49.10	52.81	58.37	63.00	64.85	63.93		
210.0	17.60	37.06	51.88	62.07	71.34	77.82	80.60	80.60	78.75		
225.0	20.38	47.25	65.78	81.53	89.87	92.65	90.79	88.94	87.09		
240.0	24.09	54.66	79.68	94.50	97.28	93.57	88.94	84.31	81.53		
255.0	25.01	58.37	86.16	99.13	98.21	92.65	86.16	81.53	77.82		
270.0	25.01	59.29	87.09	100.06	98.21	91.72	86.16	80.60	77.82		
285.0	23.16	56.51	84.31	97.28	97.28	91.72	86.16	80.60	79.68		
300.0	21.31	51.88	75.04	89.87	92.65	91.72	88.01	84.31	81.53		
315.0	6.49	43.54	61.15	74.12	83.38	87.09	86.16	84.31	82.46		
330.0	16.68	35.21	47.25	56.51	65.78	71.34	75.04	74.12	71.34		
345.0	14.82	27.79	37.06	43.54	49.10	53.74	57.44	60.22	59.29		
360.0	12.04	11.12	25.01	33.35	41.69	46.32	50.96	55.59	54.66		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	60.22	58.37	59.29	58.37	58.37	58.37	58.37	58.37	57.44		
15.0	101.91	97.28	92.65	94.50	97.28	100.06	102.84	103.76	105.62		
30.0	145.46	133.41	135.26	141.75	147.31	153.79	157.50	161.21	163.99		
45.0	162.13	170.47	180.66	190.85	200.12	207.53	214.94	219.57	224.21		
60.0	190.85	205.68	219.57	232.54	243.66	253.85	262.19	268.68	274.24		
75.0	210.31	226.99	242.74	258.49	271.46	283.50	291.84	300.18	305.74		
90.0	216.79	234.40	251.07	266.82	279.79	291.84	301.10	309.44	315.00		
105.0	208.46	224.21	239.96	254.78	267.75	278.87	288.13	294.62	301.10		
120.0	185.29	199.19	213.09	225.13	237.18	245.52	253.85	260.34	264.97		
135.0	170.47	163.06	172.32	182.51	190.85	198.26	203.82	208.46	213.09		
150.0	148.24	134.34	126.93	132.49	138.04	143.60	147.31	150.09	152.87		
165.0	108.40	96.35	89.87	85.24	88.94	91.72	93.57	95.43	96.35		
180.0	58.37	58.37	57.44	57.44	57.44	56.51	56.51	56.51	56.51		
195.0	61.15	57.44	54.66	51.88	50.03	49.10	48.18	47.25	46.32		
210.0	77.82	75.97	75.97	75.97	75.04	75.04	75.04	74.12	73.19		
225.0	86.16	85.24	85.24	85.24	85.24	85.24	85.24	85.24	84.31		
240.0	78.75	77.82	76.90	75.97	75.97	75.04	75.04	74.12	73.19		
255.0	75.04	73.19	72.26	71.34	70.41	70.41	69.49	68.56	67.63		
270.0	75.04	73.19	72.26	72.26	71.34	70.41	69.49	69.49	68.56		
285.0	75.04	74.12	72.26	72.26	72.26	71.34	71.34	70.41	70.41		
300.0	78.75	77.82	77.82	76.90	76.90	77.82	77.82	76.90	76.90		
315.0	81.53	81.53	81.53	81.53	82.46	83.38	84.31	84.31	84.31		
330.0	69.49	66.71	65.78	64.85	64.85	64.85	65.78	65.78	65.78		
345.0	55.59	50.96	47.25	43.54	41.69	39.84	38.91	38.91	37.99		
360.0	60.22	58.37	59.29	58.37	58.37	58.37	58.37	58.37	57.44		

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	57.44	57.44	57.44	57.44	57.44	57.44	57.44	57.44	58.37
15.0	106.54	106.54	106.54	104.69	103.76	100.99	98.21	94.50	95.43
30.0	165.84	165.84	164.91	163.06	160.28	155.65	151.01	145.46	138.97
45.0	226.99	226.99	225.13	222.35	217.72	211.24	203.82	195.49	185.29
60.0	277.02	277.94	275.16	272.38	266.82	258.49	248.29	238.10	224.21
75.0	309.44	309.44	307.59	303.88	296.47	288.13	277.02	263.12	249.22
90.0	318.71	318.71	316.85	312.22	305.74	295.54	284.43	270.53	256.63
105.0	303.88	304.81	302.03	298.32	291.84	282.57	271.46	258.49	244.59
120.0	267.75	268.68	265.90	262.19	257.56	249.22	239.03	228.84	216.79
135.0	214.94	215.87	214.01	211.24	206.60	201.04	193.63	184.37	175.10
150.0	153.79	154.72	153.79	151.94	148.24	144.53	139.90	135.26	128.78
165.0	97.28	97.28	97.28	96.35	94.50	92.65	89.87	87.09	83.38
180.0	56.51	56.51	57.44	57.44	57.44	58.37	59.29	59.29	58.37
195.0	46.32	46.32	46.32	47.25	47.25	49.10	51.88	54.66	57.44
210.0	72.26	71.34	70.41	69.49	68.56	67.63	66.71	66.71	65.78
225.0	83.38	81.53	80.60	79.68	77.82	75.97	75.97	72.26	70.41
240.0	72.26	71.34	70.41	68.56	67.63	66.71	64.85	63.00	61.15
255.0	66.71	65.78	64.85	63.93	63.93	63.00	62.07	61.15	58.37
270.0	68.56	67.63	66.71	65.78	65.78	65.78	65.78	63.00	60.22
285.0	69.49	68.56	67.63	67.63	67.63	66.71	64.85	63.93	62.07
300.0	75.97	75.04	75.04	74.12	74.12	72.26	71.34	70.41	67.63
315.0	84.31	83.38	83.38	82.46	81.53	80.60	80.60	78.75	77.82
330.0	65.78	65.78	66.71	66.71	67.63	68.56	69.49	70.41	71.34
345.0	37.99	39.84	40.76	42.62	44.47	48.18	52.81	56.51	58.37
360.0	57.44	57.44	57.44	57.44	57.44	57.44	57.44	57.44	58.37
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	58.37	55.59	51.88	50.03	44.47	39.84	35.21	30.57	16.68
15.0	97.28	107.47	101.91	89.87	82.46	67.63	50.96	37.06	22.24
30.0	145.46	163.06	179.74	183.44	169.54	128.78	83.38	59.29	30.57
45.0	175.10	181.59	203.82	224.21	224.21	182.51	130.63	85.24	48.18
60.0	211.24	196.41	206.60	229.77	219.57	225.13	174.18	117.66	59.29
75.0	233.47	216.79	201.04	223.28	237.18	248.29	207.53	132.49	64.85
90.0	239.96	222.35	204.75	231.62	249.22	271.46	217.72	145.46	70.41
105.0	229.77	214.01	196.41	212.16	227.91	239.03	207.53	134.34	67.63
120.0	202.90	189.00	189.93	198.26	193.63	212.16	170.47	113.03	58.37
135.0	164.91	167.69	174.18	187.15	198.26	165.84	126.93	86.16	44.47
150.0	127.85	134.34	146.38	144.53	128.78	117.66	86.16	57.44	34.28
165.0	80.60	83.38	87.09	75.97	74.12	64.85	52.81	38.91	25.94
180.0	55.59	52.81	47.25	41.69	39.84	36.13	29.65	12.04	4.63
195.0	58.37	55.59	49.10	42.62	41.69	36.13	25.01	9.26	4.63
210.0	63.00	62.07	56.51	49.10	41.69	31.50	23.16	5.56	6.49
225.0	66.71	64.85	62.07	53.74	44.47	35.21	24.09	3.71	7.41
240.0	60.22	57.44	50.96	46.32	40.76	36.13	28.72	4.63	9.26
255.0	53.74	46.32	40.76	37.06	34.28	33.35	27.79	7.41	9.26
270.0	52.81	45.40	39.84	35.21	32.43	32.43	31.50	10.19	11.12
285.0	58.37	53.74	47.25	41.69	37.06	37.99	31.50	14.82	9.26
300.0	67.63	67.63	63.00	55.59	48.18	40.76	29.65	17.60	10.19
315.0	74.12	72.26	68.56	61.15	49.10	37.06	27.79	16.68	9.26
330.0	69.49	65.78	59.29	50.03	52.81	31.50	28.72	17.60	7.41
345.0	57.44	52.81	45.40	40.76	37.06	38.91	25.94	15.75	5.56
360.0	58.37	55.59	51.88	50.03	44.47	39.84	35.21	30.57	16.68

Intensity data(cd)

C/γ(°)	180.0
0.0	4.63
15.0	9.26
30.0	12.04
45.0	13.90
60.0	16.68
75.0	19.46
90.0	19.46
105.0	17.60
120.0	17.60
135.0	14.82
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	4.63