
AFX

Client:

LumCAT: EMAF06LAJD1SB

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.135

Lamp flux(lm): 1121.1

Power (W): 15.210

Number of Lamps: 1

PF: 0.942

Length(mm): -140

Width(mm): -140

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 1121.05, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 73.70

Central intensity(cd): 359.857, Maximum intensity(cd): 359.857

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=107.8

[C90/270]Total=107.6

Field angle(10%Imax): [C0/180]Total=165.4

[C90/270]Total=165.4

Maximum s/h(1/2): C0_180=1.22 C90_270=1.22

Maximum s/h(1/4): C0_180=1.33 C90_270=1.33

Up flux rate of lamp(%): 10.53%

Down flux rate of lamp(%): 89.47%

Up flux rate of LUM(%): 10.53%

Down flux rate of LUM(%): 89.47%

CIE Type : Semidirect lighting

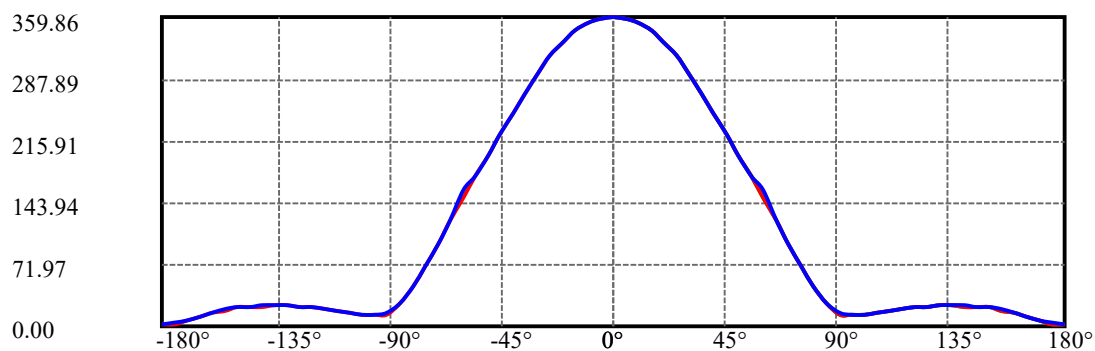
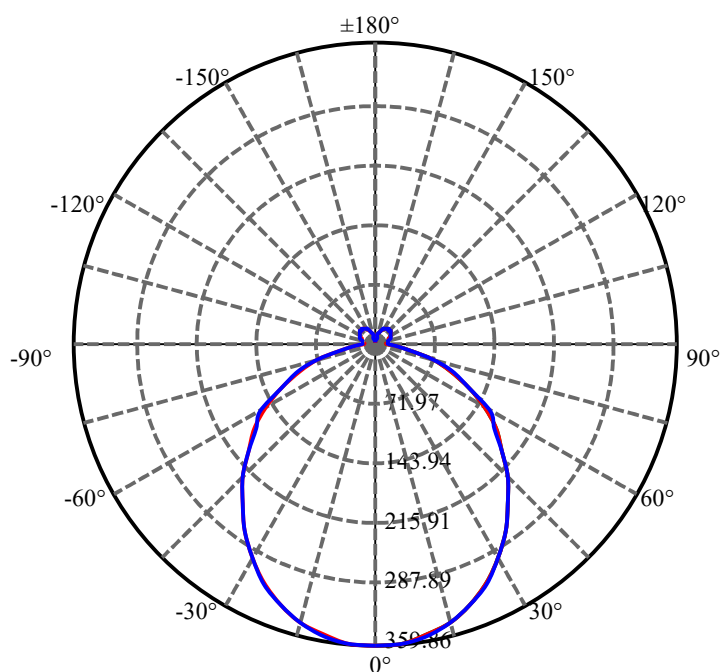
Output flux ratio in π solid angle : 69.076%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	359.857	0.000	0	0.00%	0.00%
5.0	358.063	8.583	8.583	0.77%	0.77%
10.0	352.647	25.424	34.007	2.27%	3.03%
15.0	343.832	41.315	75.321	3.69%	6.72%
20.0	331.470	55.654	130.976	4.96%	11.68%
25.0	314.490	67.749	198.725	6.04%	17.73%
30.0	294.424	77.059	275.784	6.87%	24.60%
35.0	271.340	83.313	359.096	7.43%	32.03%
40.0	248.187	86.679	445.775	7.73%	39.76%
45.0	222.847	87.216	532.991	7.78%	47.54%
50.0	198.507	85.141	618.132	7.59%	55.14%
55.0	174.544	81.114	699.246	7.24%	62.37%
60.0	150.471	75.126	774.372	6.70%	69.08%
65.0	123.190	66.528	840.9	5.93%	75.01%
70.0	95.763	55.440	896.34	4.95%	79.96%
75.0	70.314	43.410	939.75	3.87%	83.83%
80.0	47.728	31.585	971.335	2.82%	86.65%
85.0	26.712	20.227	991.562	1.80%	88.45%
90.0	15.116	11.453	1003.015	1.02%	89.47%
95.0	13.581	7.858	1010.873	0.70%	90.17%
100.0	13.889	7.464	1018.337	0.67%	90.84%
105.0	15.719	7.922	1026.259	0.71%	91.54%
110.0	18.237	8.875	1035.135	0.79%	92.34%
115.0	20.526	9.815	1044.95	0.88%	93.21%
120.0	22.243	10.397	1055.347	0.93%	94.14%
125.0	23.274	10.521	1065.868	0.94%	95.08%
130.0	23.731	10.221	1076.089	0.91%	95.99%
135.0	23.808	9.606	1085.695	0.86%	96.85%
140.0	23.579	8.774	1094.469	0.78%	97.63%
145.0	22.701	7.722	1102.191	0.69%	98.32%
150.0	21.404	6.495	1108.685	0.58%	98.90%
155.0	19.001	5.113	1113.798	0.46%	99.35%
160.0	15.453	3.613	1117.412	0.32%	99.68%
165.0	11.027	2.182	1119.594	0.19%	99.87%
170.0	6.563	1.043	1120.638	0.09%	99.96%
175.0	3.436	0.358	1120.995	0.03%	100.00%
180.0	1.145	0.055	1121.05	0.00%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	275.78	24.60%	24.60%
0-40	445.78	39.76%	39.76%
0-60	774.37	69.08%	69.08%
0-90	1003.02	89.47%	89.47%
0-120	1055.35	94.14%	94.14%
0-180	1121.05	100.00%	100.00%
60-90	228.64	20.40%	20.40%
90-120	52.33	4.67%	4.67%
90-130	73.07	6.52%	6.52%
90-150	105.67	9.43%	9.43%
90-180	117.98	10.52%	10.52%
0-70.06	896.84	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	34.01
10-20	96.97
20-30	144.81
30-40	169.99
40-50	172.36
50-60	156.24
60-70	121.97
70-80	74.99
80-90	31.68
90-100	15.32
100-110	16.80
110-120	20.21
120-130	20.74
130-140	18.38
140-150	14.22
150-160	8.73
160-170	3.23
170-180	0.36



C0(Max):

C0/C180:

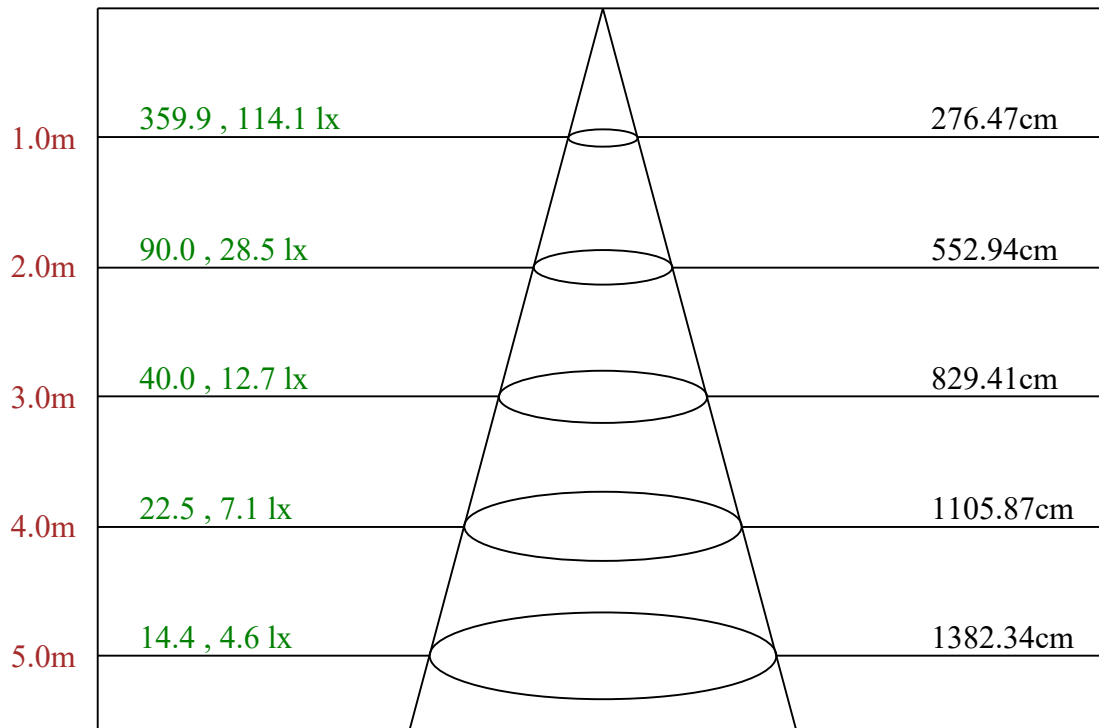
C90/C270:

Field angle(10%Imax):C0/180Left:82.7 Right:82.7

:C90/270Left:82.7 Right:82.7

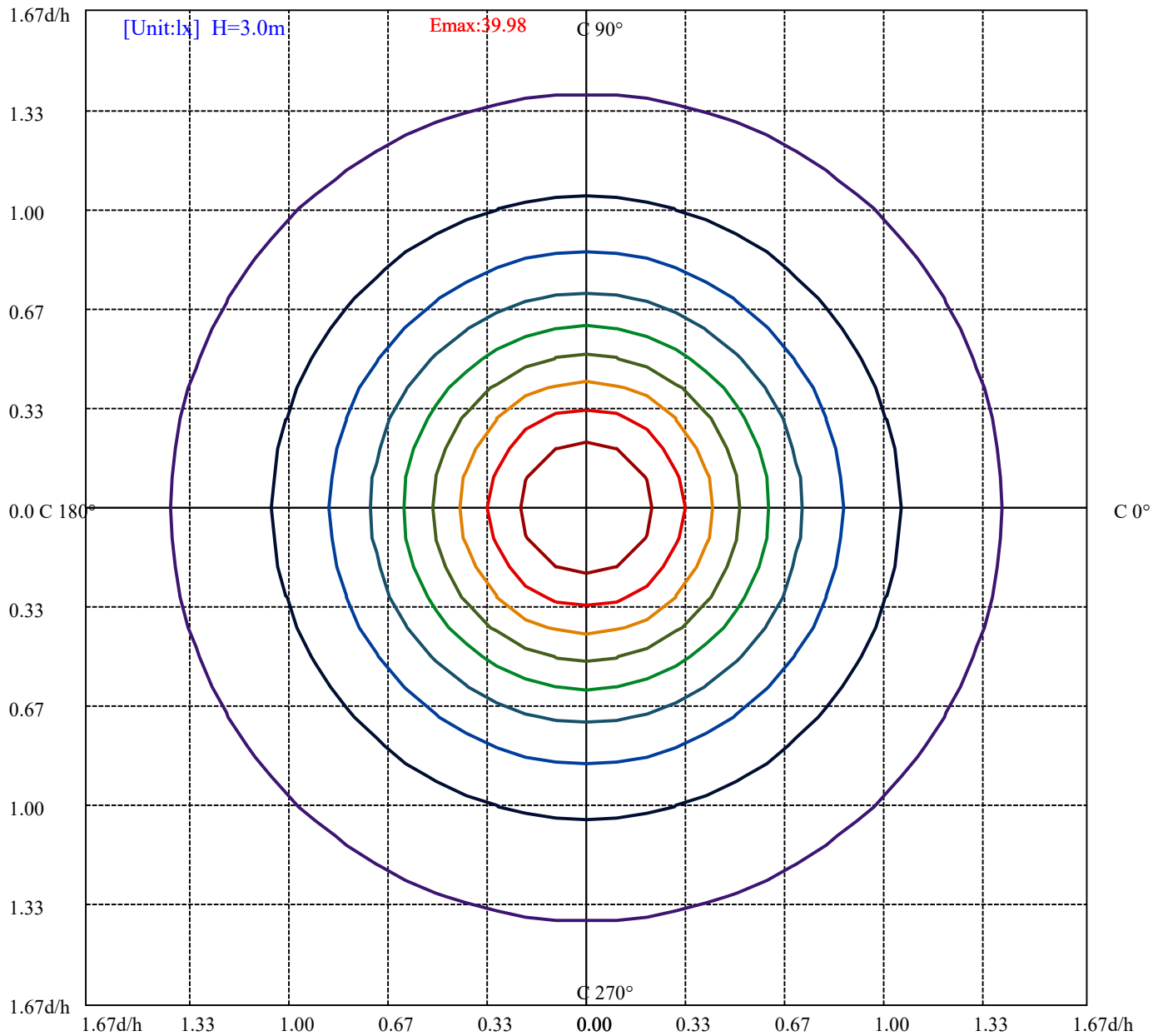
Beam Angle(50%Imax):C0/180Left:53.9 Right:53.9

:C90/270Left:53.8 Right:53.8

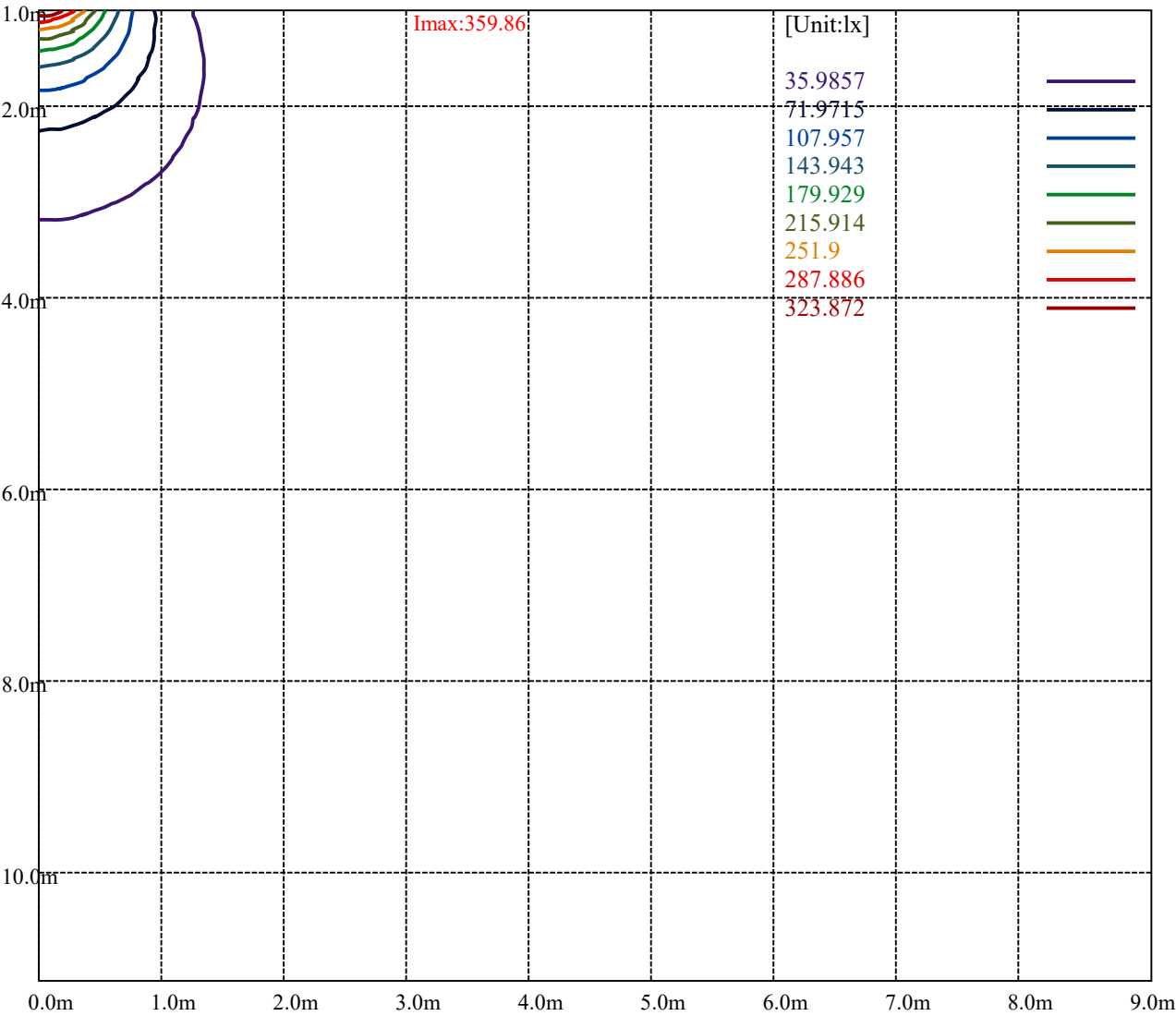


Max , Ave

Beam angle of C0 plane 108.24



(10%Emax) 3.998411	—
(20%Emax) 7.996833	—
(30%Emax) 11.99522	—
(40%Emax) 15.99367	—
(50%Emax) 19.99211	—
(60%Emax) 23.99044	—
(70%Emax) 27.98889	—
(80%Emax) 31.98733	—
(90%Emax) 35.98578	—



Luminance Table

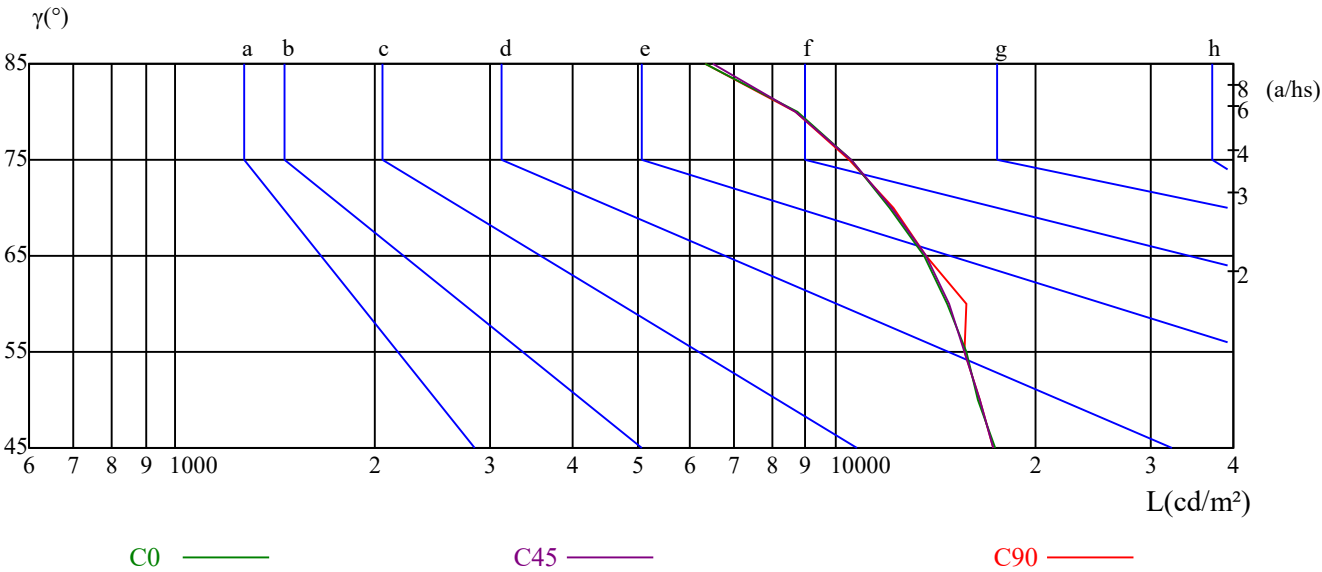
γ	45	50	55	60	65	70	75	80	85
C0	17386	16443	15730	14791	13613	12050	10517	8719	6331
C45	17339	16507	15701	14805	13652	12149	10533	8664	6502
C90	17304	16469	15681	15781	13653	12207	10499	8706	6333

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
18923	18979	18977	17657	17626	17684	19495	19501	20019

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



RHOCC	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	1.17	1.17	1.17	1.13	1.13	1.13	1.05	1.05	1.05	0.99	0.99	0.99	0.92	0.92	0.92	0.89
1	1.01	0.97	0.93	0.98	0.94	0.90	0.91	0.88	0.85	0.86	0.83	0.81	0.81	0.79	0.77	0.74
2	0.88	0.81	0.75	0.85	0.79	0.73	0.80	0.75	0.70	0.75	0.71	0.67	0.70	0.67	0.64	0.61
3	0.77	0.69	0.62	0.75	0.67	0.61	0.70	0.64	0.59	0.66	0.61	0.56	0.62	0.58	0.54	0.52
4	0.68	0.60	0.53	0.66	0.58	0.52	0.62	0.55	0.50	0.59	0.53	0.48	0.56	0.51	0.47	0.44
5	0.61	0.52	0.45	0.59	0.51	0.45	0.56	0.49	0.43	0.53	0.47	0.42	0.50	0.45	0.40	0.38
6	0.55	0.46	0.40	0.53	0.45	0.39	0.50	0.43	0.38	0.48	0.42	0.37	0.45	0.40	0.36	0.33
7	0.50	0.41	0.35	0.48	0.40	0.34	0.46	0.39	0.34	0.44	0.37	0.33	0.41	0.36	0.32	0.29
8	0.45	0.37	0.31	0.44	0.36	0.31	0.42	0.35	0.30	0.40	0.34	0.29	0.38	0.32	0.28	0.26
9	0.42	0.33	0.28	0.41	0.33	0.28	0.39	0.32	0.27	0.37	0.31	0.26	0.35	0.30	0.26	0.24
10	0.38	0.31	0.25	0.37	0.30	0.25	0.36	0.29	0.24	0.34	0.28	0.24	0.33	0.27	0.23	0.21

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	359.86	358.05	352.64	343.62	331.90	315.66	295.82	273.28	248.92
15.0	359.86	358.04	352.61	343.54	331.76	315.44	294.59	272.84	249.27
30.0	359.86	357.13	351.68	343.50	329.87	314.42	294.43	271.71	247.17
45.0	359.86	358.04	351.66	342.55	330.70	313.39	294.26	271.49	247.80
60.0	359.86	358.03	351.64	342.50	330.63	314.19	294.10	271.26	247.52
75.0	359.86	358.03	352.53	343.38	331.47	314.99	294.84	271.95	249.06
90.0	359.86	358.02	353.43	343.33	332.32	316.71	296.52	274.48	250.61
105.0	359.86	358.94	353.41	345.13	334.09	317.52	299.11	276.11	253.10
120.0	359.86	359.86	354.32	346.94	335.87	320.18	300.80	279.58	255.59
135.0	359.86	360.78	356.16	347.83	337.66	321.93	303.43	281.23	258.10
150.0	359.86	358.01	355.24	348.78	326.64	322.95	305.42	283.27	259.28
165.0	359.86	358.93	357.09	349.71	339.56	323.87	307.26	285.12	260.20
180.0	359.86	358.05	351.74	343.62	331.00	313.86	293.12	269.67	245.32
195.0	359.86	358.95	353.51	345.35	332.66	315.44	295.50	271.93	246.55
210.0	359.86	358.95	353.50	345.32	332.60	315.33	294.43	272.62	248.08
225.0	359.86	358.04	353.48	345.28	333.44	316.13	295.17	272.40	247.80
240.0	359.86	358.94	353.46	345.24	332.46	315.10	295.01	271.26	247.52
255.0	359.86	358.94	353.45	344.29	333.30	314.99	293.93	270.12	245.40
270.0	359.86	358.02	353.43	344.25	330.48	313.04	292.84	268.06	244.19
285.0	359.86	358.02	351.57	342.37	328.57	311.08	289.91	265.98	262.30
300.0	359.86	357.09	351.55	341.40	338.64	309.11	287.89	262.97	238.98
315.0	359.86	357.08	350.61	340.43	326.55	306.20	285.85	260.87	236.82
330.0	359.86	355.24	347.86	337.71	322.95	303.57	282.35	257.44	234.37
345.0	359.86	354.32	346.94	335.87	320.18	302.65	279.58	256.51	232.52
360.0	359.86	358.05	352.64	343.62	331.90	315.66	295.82	273.28	248.92
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	226.38	200.22	178.58	152.42	125.36	96.50	71.25	46.90	26.16
15.0	224.80	200.32	177.66	152.28	126.00	96.08	70.70	47.13	25.38
30.0	223.55	201.74	178.11	153.58	126.31	98.14	70.88	48.16	26.35
45.0	224.11	200.43	177.65	153.96	128.46	98.39	72.88	48.28	27.33
60.0	224.68	200.02	178.10	155.27	128.78	101.38	73.98	51.15	27.40
75.0	225.25	201.45	178.56	155.66	130.94	101.64	76.92	52.19	30.22
90.0	225.83	201.96	179.93	156.98	131.27	104.65	78.03	55.08	32.13
105.0	228.25	204.32	180.39	157.38	133.45	105.84	80.99	57.06	34.05
120.0	231.60	205.76	182.70	159.63	134.72	108.88	82.12	58.13	36.91
135.0	233.12	209.07	185.02	160.96	135.99	111.01	85.11	61.06	38.85
150.0	234.37	210.38	187.31	163.32	138.41	112.57	86.73	61.82	40.60
165.0	237.14	213.15	188.23	164.24	139.33	114.42	88.58	63.67	41.52
180.0	220.97	195.71	171.36	147.01	120.85	93.80	69.45	47.80	26.16
195.0	221.17	196.70	173.13	146.84	122.37	95.18	69.80	47.13	26.29
210.0	222.64	198.10	172.66	148.12	120.86	94.51	69.97	45.44	26.35
225.0	223.20	197.69	173.10	148.50	121.17	93.84	68.33	45.55	24.60
240.0	221.94	197.28	172.62	147.05	119.65	92.25	67.59	43.84	23.75
255.0	220.68	196.87	171.23	145.59	118.12	90.65	65.01	59.52	21.98
270.0	219.40	194.62	168.91	162.49	115.67	88.13	62.42	39.47	20.20
285.0	217.20	192.35	166.58	140.81	113.20	83.75	59.82	37.73	19.33
300.0	214.07	190.08	165.17	138.41	109.80	82.12	57.21	34.14	17.53
315.0	211.84	187.79	162.81	135.99	108.23	80.48	55.50	33.30	16.65
330.0	208.53	185.46	160.55	133.79	105.19	77.51	52.59	30.45	15.69
345.0	207.61	182.70	158.71	131.02	102.42	76.59	51.67	30.45	15.69
360.0	226.38	200.22	178.58	152.42	125.36	96.50	71.25	46.90	26.16

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	13.53	13.53	13.53	15.33	17.14	19.84	21.65	22.55	23.45
15.0	13.60	13.60	13.60	15.41	18.13	19.94	21.75	22.66	23.57
30.0	13.63	13.63	13.63	15.45	18.17	19.99	21.81	23.63	23.63
45.0	13.67	13.67	13.67	15.49	18.22	20.95	22.78	23.69	23.69
60.0	14.61	13.70	13.70	15.53	18.27	21.01	22.83	23.75	23.75
75.0	14.65	13.74	13.74	15.57	18.31	21.06	22.89	23.81	24.72
90.0	16.52	13.77	13.77	14.69	18.36	20.20	22.95	23.87	24.79
105.0	16.57	12.88	13.81	14.73	17.49	20.25	23.01	23.93	24.85
120.0	18.45	12.92	13.84	14.76	17.53	20.30	22.15	23.99	24.91
135.0	19.43	12.95	13.88	14.80	17.58	20.35	22.20	24.05	24.98
150.0	21.22	12.92	13.84	13.84	16.61	19.38	22.15	23.07	23.99
165.0	21.22	12.92	13.84	13.84	16.61	19.38	21.22	23.07	23.99
180.0	14.43	14.43	14.43	16.23	18.94	21.65	22.55	23.45	24.35
195.0	14.50	13.60	13.60	16.32	19.04	20.85	22.66	23.57	23.57
210.0	14.54	13.63	13.63	16.36	18.17	20.90	22.72	22.72	23.63
225.0	14.58	13.67	13.67	15.49	18.22	20.95	20.95	22.78	23.69
240.0	13.70	13.70	13.70	15.53	18.27	20.09	21.92	22.83	22.83
255.0	13.74	13.74	13.74	16.48	18.31	20.14	21.98	22.89	22.89
270.0	13.77	13.77	13.77	16.52	18.36	20.20	22.03	22.95	22.95
285.0	12.88	13.81	13.81	16.57	18.41	20.25	22.09	23.01	23.01
300.0	13.84	13.84	13.84	16.61	19.38	21.22	22.15	23.07	23.07
315.0	13.88	13.88	14.80	16.65	19.43	21.28	22.20	23.13	23.13
330.0	12.92	13.84	14.76	17.53	19.38	21.22	22.15	23.07	23.07
345.0	12.92	13.84	14.76	17.53	19.38	21.22	23.07	23.07	23.07
360.0	13.53	13.53	13.53	15.33	17.14	19.84	21.65	22.55	23.45
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	23.45	23.45	22.55	21.65	18.94	16.23	11.72	7.22	3.61
15.0	23.57	23.57	22.66	20.85	19.04	15.41	11.78	7.25	3.63
30.0	23.63	23.63	22.72	20.90	19.08	15.45	11.81	7.27	3.63
45.0	23.69	23.69	22.78	21.86	19.13	15.49	11.84	7.29	3.64
60.0	24.66	23.75	22.83	21.92	20.09	16.44	11.87	7.31	3.65
75.0	24.72	23.81	22.89	21.98	20.14	16.48	12.82	8.24	3.66
90.0	24.79	24.79	23.87	22.95	20.20	16.52	12.85	8.26	4.59
105.0	24.85	24.85	23.93	23.01	21.17	17.49	13.81	9.20	4.60
120.0	24.91	24.91	23.99	23.07	21.22	17.53	13.84	9.23	5.54
135.0	24.98	24.98	24.05	23.13	21.28	18.50	13.88	9.25	5.55
150.0	24.91	24.91	23.99	23.07	21.22	17.53	13.84	8.30	5.54
165.0	23.99	24.91	23.99	23.07	21.22	18.45	12.92	9.23	5.54
180.0	24.35	23.45	22.55	21.65	18.94	13.53	9.92	5.41	2.71
195.0	23.57	23.57	22.66	21.75	18.13	17.22	9.06	5.44	2.72
210.0	23.63	23.63	22.72	20.90	19.08	14.54	10.00	5.45	2.73
225.0	23.69	22.78	22.78	20.95	18.22	14.58	10.02	5.47	2.73
240.0	22.83	22.83	22.83	21.01	18.27	14.61	10.05	5.48	2.74
255.0	22.89	22.89	21.98	21.06	18.31	14.65	10.07	5.49	2.75
270.0	22.95	22.95	22.03	20.20	18.36	14.69	10.10	5.51	2.75
285.0	23.01	23.01	22.09	20.25	17.49	13.81	9.20	4.60	2.76
300.0	23.07	23.07	21.22	20.30	17.53	13.84	9.23	4.61	1.85
315.0	23.13	22.20	21.28	19.43	16.65	12.95	8.33	4.63	1.85
330.0	23.07	22.15	21.22	19.38	16.61	12.92	8.30	3.69	1.85
345.0	23.07	22.15	21.22	19.38	15.69	12.00	7.38	3.69	1.85
360.0	23.45	23.45	22.55	21.65	18.94	16.23	11.72	7.22	3.61

Intensity data(cd)

C/ γ (°)	180.0
0.0	2.71
15.0	1.81
30.0	1.82
45.0	1.82
60.0	1.83
75.0	1.83
90.0	2.75
105.0	1.84
120.0	2.77
135.0	2.78
150.0	2.77
165.0	2.77
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	2.71