
AFX

Client:

LumCAT: EMAF06LAJD1SN

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.133

Lamp flux(lm): 1072.3

Power (W): 15.080

Number of Lamps: 1

PF: 0.945

Length(mm): -140

Width(mm): -140

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 1072.26, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 71.10

Central intensity(cd): 344.291, Maximum intensity(cd): 344.291

Angle of maximum intensity: C=75.0 γ =0.0

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

[C90/270]Total=107.8

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

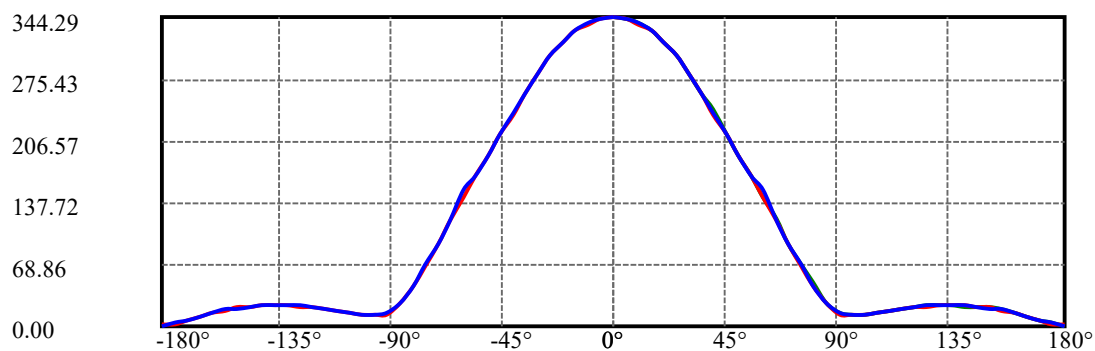
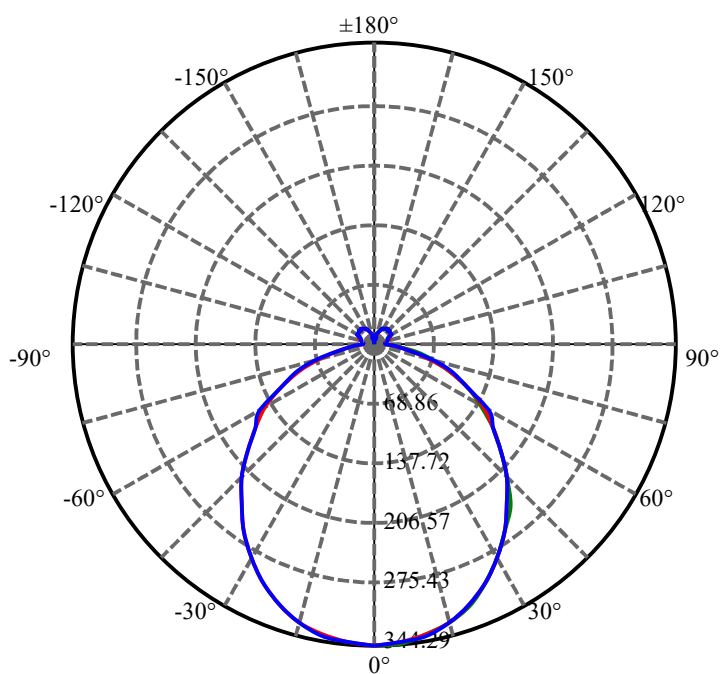
Output flux ratio in π solid angle : 69.077%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	344.291	0.000	0	0.00%	0.00%
5.0	342.345	8.209	8.209	0.77%	0.77%
10.0	337.195	24.309	32.518	2.27%	3.03%
15.0	328.800	39.506	72.024	3.68%	6.72%
20.0	317.050	53.227	125.251	4.96%	11.68%
25.0	300.756	64.796	190.048	6.04%	17.72%
30.0	281.720	73.713	263.761	6.87%	24.60%
35.0	259.513	79.700	343.461	7.43%	32.03%
40.0	237.390	82.905	426.366	7.73%	39.76%
45.0	213.157	83.423	509.788	7.78%	47.54%
50.0	189.999	81.464	591.252	7.60%	55.14%
55.0	166.953	77.613	668.865	7.24%	62.38%
60.0	143.756	71.819	740.684	6.70%	69.08%
65.0	117.887	63.606	804.29	5.93%	75.01%
70.0	91.602	53.044	857.335	4.95%	79.96%
75.0	67.186	41.505	898.839	3.87%	83.83%
80.0	45.516	30.156	928.995	2.81%	86.64%
85.0	25.605	19.325	948.32	1.80%	88.44%
90.0	14.582	11.004	959.324	1.03%	89.47%
95.0	13.009	7.555	966.879	0.70%	90.17%
100.0	13.317	7.153	974.032	0.67%	90.84%
105.0	15.071	7.596	981.628	0.71%	91.55%
110.0	17.397	8.487	990.114	0.79%	92.34%
115.0	19.649	9.380	999.494	0.87%	93.21%
120.0	21.176	9.924	1009.419	0.93%	94.14%
125.0	22.321	10.054	1019.473	0.94%	95.08%
130.0	22.739	9.798	1029.27	0.91%	95.99%
135.0	22.854	9.213	1038.483	0.86%	96.85%
140.0	22.395	8.378	1046.861	0.78%	97.63%
145.0	21.747	7.365	1054.226	0.69%	98.32%
150.0	20.450	6.214	1060.44	0.58%	98.90%
155.0	18.162	4.886	1065.326	0.46%	99.35%
160.0	14.728	3.450	1068.776	0.32%	99.68%
165.0	10.570	2.085	1070.861	0.19%	99.87%
170.0	6.334	1.003	1071.864	0.09%	99.96%
175.0	3.243	0.343	1072.206	0.03%	100.00%
180.0	1.107	0.052	1072.258	0.00%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	263.76	24.60%	24.60%
0-40	426.37	39.76%	39.76%
0-60	740.68	69.08%	69.08%
0-90	959.32	89.47%	89.47%
0-120	1009.42	94.14%	94.14%
0-180	1072.26	100.00%	100.00%
60-90	218.64	20.39%	20.39%
90-120	50.09	4.67%	4.67%
90-130	69.95	6.52%	6.52%
90-150	101.12	9.43%	9.43%
90-180	112.88	10.53%	10.53%
0-70.06	857.81	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	32.52
10-20	92.73
20-30	138.51
30-40	162.60
40-50	164.89
50-60	149.43
60-70	116.65
70-80	71.66
80-90	30.33
90-100	14.71
100-110	16.08
110-120	19.30
120-130	19.85
130-140	17.59
140-150	13.58
150-160	8.34
160-170	3.09
170-180	0.34

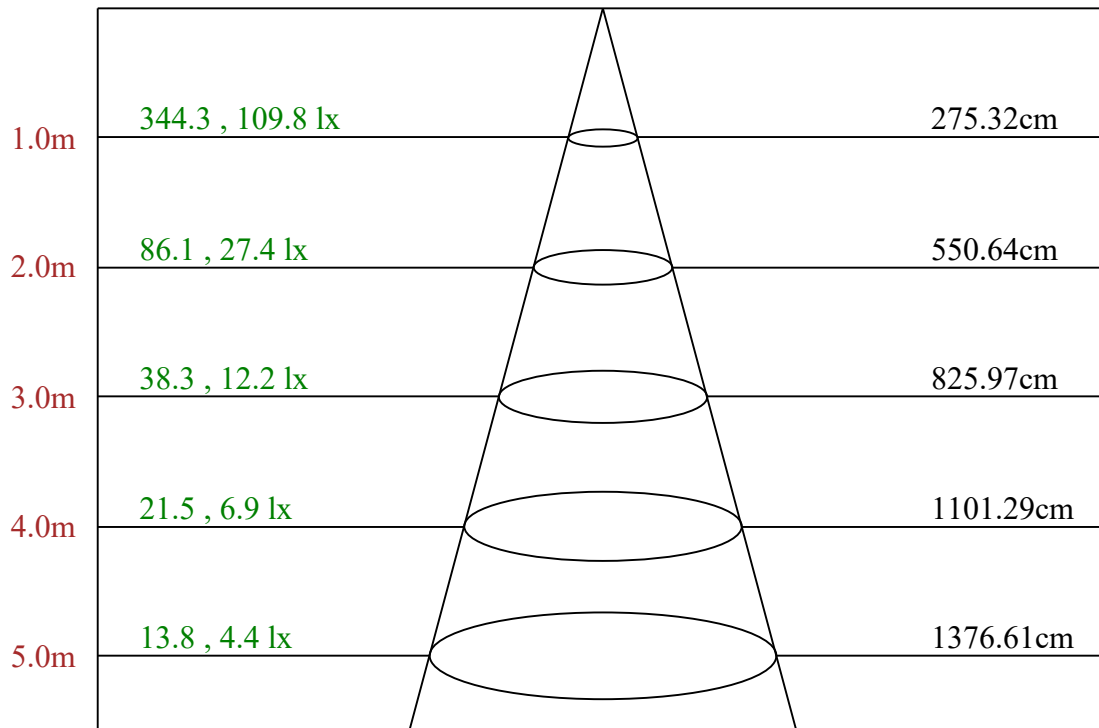
C75(Max): —————C0/C180: —————C90/C270: —————

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

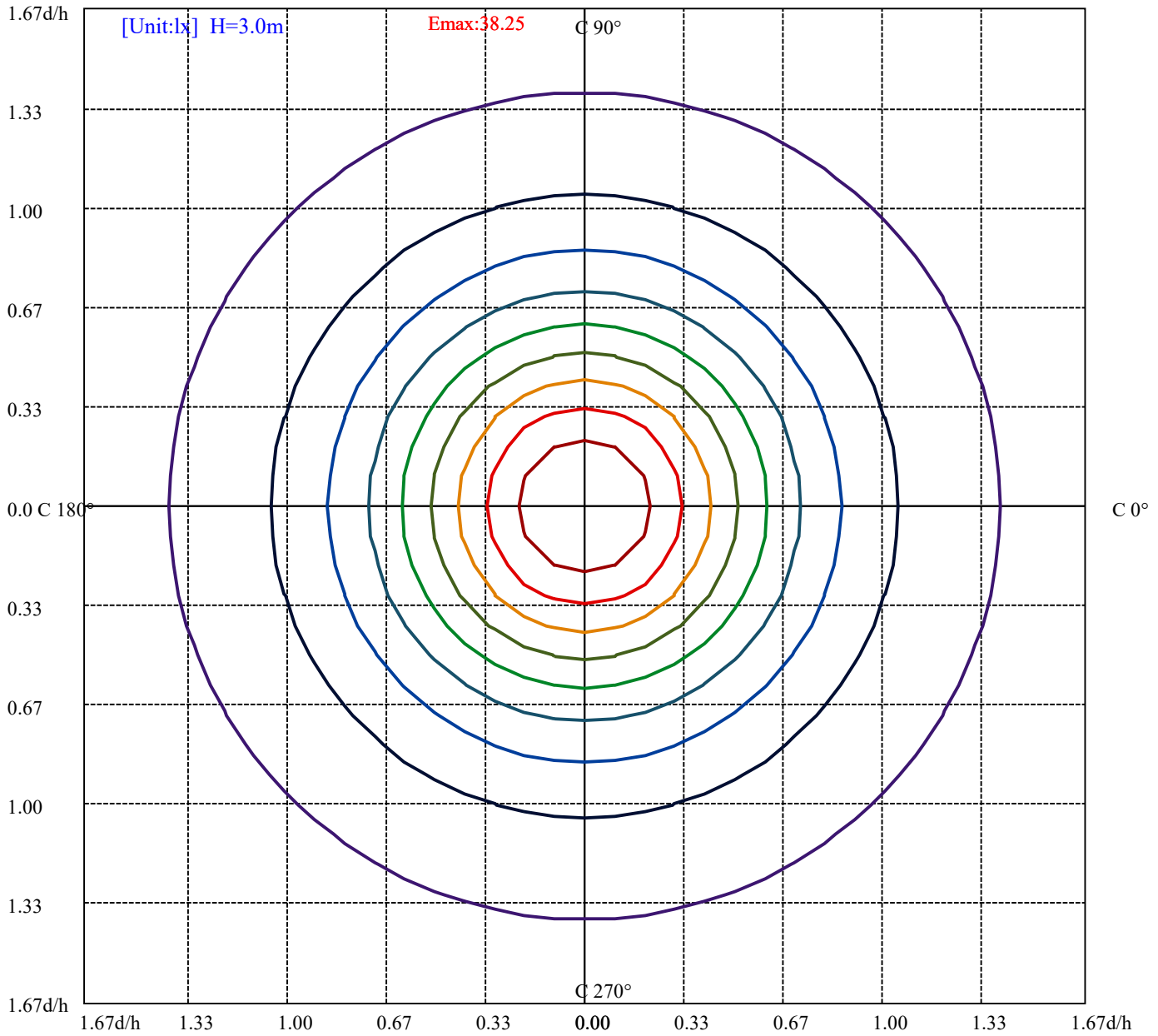
:C90/270Left:82.7 Right:82.7

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

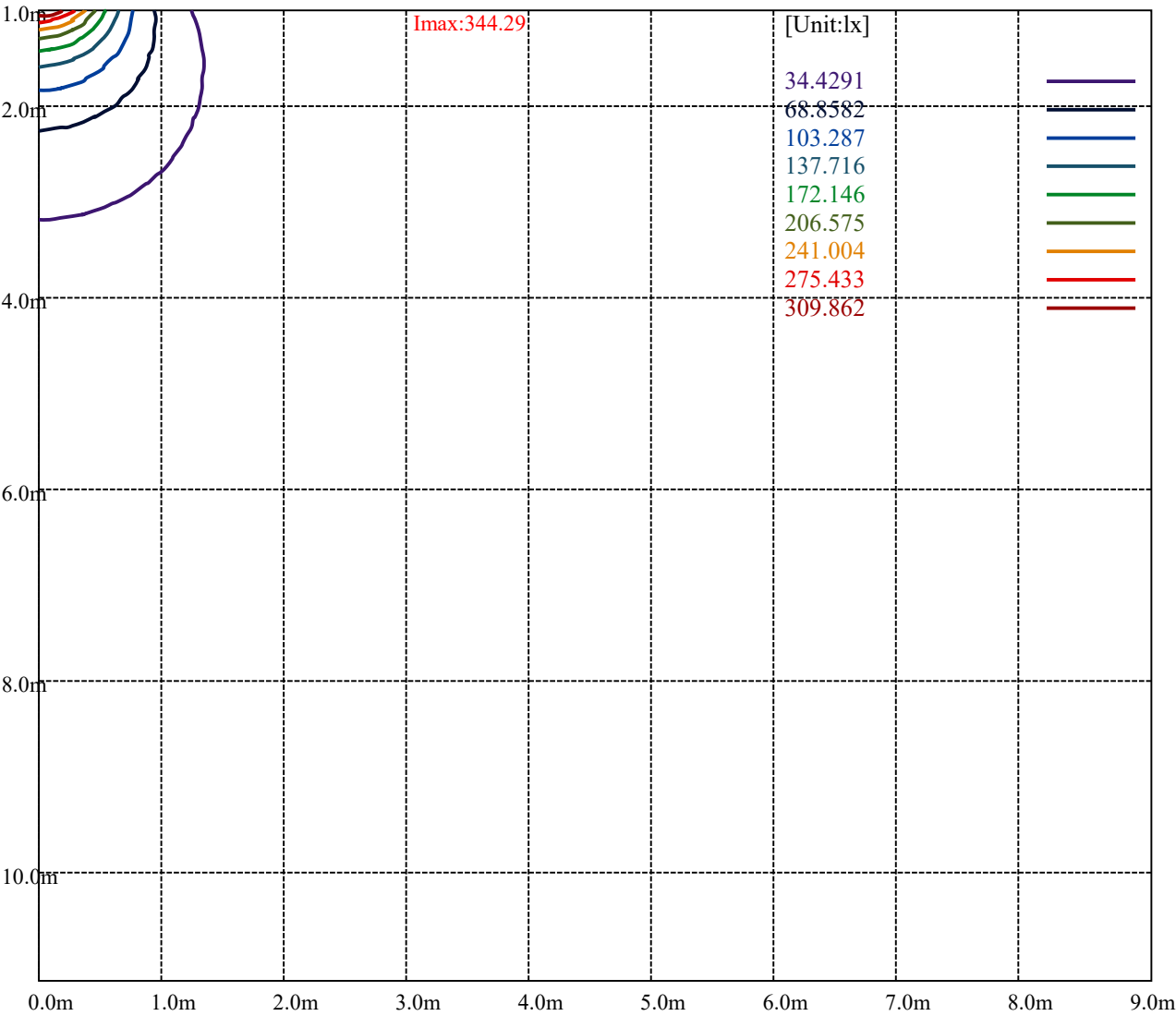
:C90/270Left:53.9 Right:53.9



Max , Ave Beam angle of C75 plane 108.01



(10%Emax)	3.825456	
(20%Emax)	7.650911	
(30%Emax)	11.47633	
(40%Emax)	15.30178	
(50%Emax)	19.12722	
(60%Emax)	22.95278	
(70%Emax)	26.77822	
(80%Emax)	30.60367	
(90%Emax)	34.42911	



Luminance Table

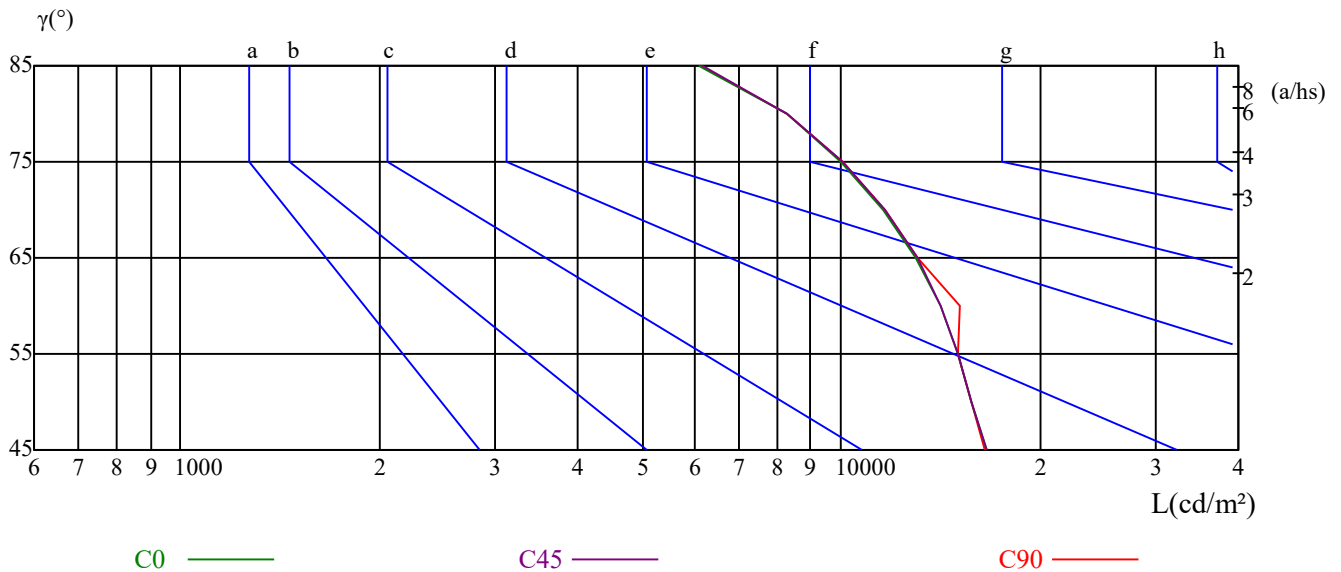
γ	45	50	55	60	65	70	75	80	85
C0	16604	15758	15031	14158	13006	11585	9971	8298	6109
C45	16592	15785	15001	14126	13070	11656	10088	8284	6169
C90	16557	15785	15022	15103	13096	11685	10089	8284	6112

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
18079	18205	18168	16740	16937	16936	18810	18819	18995

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	1.17	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)

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	344.29	342.49	337.08	328.97	317.25	301.93	283.00	261.37	237.94
15.0	344.29	342.48	337.04	328.89	317.11	301.71	281.78	260.94	238.29
30.0	344.29	341.57	336.12	327.94	316.13	299.78	281.61	259.81	236.19
45.0	344.29	342.47	337.00	327.90	316.06	299.66	281.44	259.58	236.81
60.0	344.29	342.46	336.07	327.85	315.98	300.46	281.28	259.36	236.53
75.0	344.29	342.46	336.97	327.81	316.82	301.25	282.03	260.05	238.07
90.0	344.29	341.54	337.86	328.68	317.67	302.06	283.70	262.58	239.63
105.0	344.29	343.37	337.85	329.56	319.44	302.87	286.30	264.20	242.11
120.0	344.29	344.29	338.75	331.37	321.22	306.45	287.99	266.76	243.68
135.0	344.29	344.29	340.59	333.18	323.00	308.20	290.61	269.32	247.11
150.0	344.29	342.44	339.68	333.21	312.91	309.22	292.60	271.37	248.30
165.0	344.29	343.37	341.52	334.14	324.91	310.14	294.45	272.29	249.22
180.0	344.29	341.59	336.18	328.07	315.45	300.13	280.30	257.77	234.33
195.0	344.29	343.39	337.95	329.79	318.02	301.71	281.78	260.03	236.47
210.0	344.29	342.47	337.93	329.76	317.95	301.60	281.61	260.72	237.10
225.0	344.29	342.47	337.92	330.63	318.79	302.39	282.36	260.50	236.81
240.0	344.29	343.38	337.90	330.59	317.81	301.37	282.19	259.36	236.53
255.0	344.29	342.46	337.88	329.64	318.65	301.25	281.11	258.22	235.33
270.0	344.29	342.45	337.86	328.68	316.75	299.30	280.02	256.15	234.12
285.0	344.29	342.45	336.01	327.72	314.83	297.34	278.01	254.08	251.31
300.0	344.29	341.52	335.98	326.75	323.98	295.37	275.06	251.99	227.99
315.0	344.29	341.51	335.96	325.78	312.82	293.39	273.95	249.89	226.75
330.0	344.29	340.60	332.29	323.06	309.22	290.76	270.45	246.45	224.30
345.0	344.29	338.75	332.29	321.22	306.45	289.83	267.68	245.53	222.45
360.0	344.29	342.49	337.08	328.97	317.25	301.93	283.00	261.37	237.94
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	216.31	191.97	170.34	146.01	119.87	92.83	67.60	45.06	25.24
15.0	214.73	192.08	169.43	145.87	120.50	92.41	67.05	44.40	24.46
30.0	213.48	192.58	169.87	147.16	120.82	93.57	68.13	45.42	25.44
45.0	214.04	192.18	169.41	146.64	122.96	94.73	70.13	46.45	25.50
60.0	214.61	191.78	170.78	147.94	123.29	96.80	71.23	48.40	26.48
75.0	215.18	193.21	171.23	148.34	125.45	97.98	73.25	50.36	28.39
90.0	215.76	193.72	172.60	149.65	125.78	100.07	75.28	52.33	31.22
105.0	219.09	195.16	173.07	150.05	127.96	101.26	77.33	54.31	33.14
120.0	221.53	196.61	175.38	152.30	129.22	103.38	78.46	55.38	35.08
135.0	223.05	199.91	176.77	153.64	130.50	106.43	81.45	58.31	37.02
150.0	224.30	201.22	179.07	155.99	131.99	107.07	82.15	59.07	38.77
165.0	227.07	203.99	179.99	156.92	132.92	108.92	84.00	60.92	39.69
180.0	210.90	187.47	164.03	140.60	115.36	90.13	65.79	45.06	25.24
195.0	212.01	187.55	165.80	140.43	116.88	91.51	67.05	44.40	25.37
210.0	212.57	188.95	165.33	140.81	115.37	89.93	67.22	43.60	25.44
225.0	214.04	188.54	165.77	142.09	115.67	90.17	65.58	43.72	23.68
240.0	212.78	189.04	165.30	140.64	114.15	87.67	64.84	42.01	22.83
255.0	211.52	188.63	162.99	139.18	113.54	86.99	62.27	56.77	21.06
270.0	210.25	186.38	161.59	156.08	111.09	84.47	59.68	37.64	19.28
285.0	207.13	184.11	159.26	134.40	108.63	80.09	57.07	35.90	18.41
300.0	204.91	181.84	157.84	132.92	105.23	78.46	54.46	33.23	16.61
315.0	202.69	179.55	155.49	129.57	103.66	76.82	52.75	31.47	15.73
330.0	199.37	178.15	154.15	127.38	100.61	73.84	49.84	29.54	15.69
345.0	198.45	175.38	151.38	125.53	97.84	72.92	49.84	28.61	14.77
360.0	216.31	191.97	170.34	146.01	119.87	92.83	67.60	45.06	25.24

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	13.52	12.62	12.62	14.42	17.12	18.93	20.73	21.63	22.53
15.0	13.59	12.68	12.68	14.50	17.21	19.03	20.84	21.74	22.65
30.0	13.63	12.72	12.72	14.53	17.26	19.08	20.89	21.80	22.71
45.0	13.66	12.75	12.75	14.57	17.31	20.04	20.95	22.77	22.77
60.0	13.70	12.79	12.79	14.61	17.35	20.09	21.00	22.83	22.83
75.0	14.65	12.82	12.82	14.65	17.40	20.14	21.98	22.89	23.81
90.0	15.61	12.85	12.85	14.69	17.44	19.28	22.03	22.95	23.87
105.0	16.57	12.89	12.89	14.73	16.57	19.33	21.17	23.01	23.93
120.0	17.54	12.92	12.92	13.85	16.61	19.38	21.23	23.08	24.00
135.0	18.51	12.96	12.96	13.88	16.66	19.44	21.29	23.14	23.14
150.0	20.31	12.92	12.92	13.85	15.69	19.38	21.23	22.15	23.08
165.0	20.31	12.92	12.92	13.85	15.69	18.46	20.31	22.15	23.08
180.0	13.52	13.52	13.52	15.32	18.03	20.73	21.63	22.53	23.43
195.0	13.59	13.59	13.59	15.40	18.12	19.93	21.74	22.65	22.65
210.0	13.63	13.63	13.63	15.44	18.17	19.99	20.89	21.80	22.71
225.0	13.66	13.66	13.66	15.48	17.31	20.04	20.04	21.86	21.86
240.0	13.70	13.70	13.70	15.53	17.35	19.18	21.00	21.92	21.92
255.0	12.82	12.82	13.74	15.57	17.40	19.23	21.06	21.98	21.98
270.0	12.85	12.85	13.77	15.61	17.44	19.28	21.12	22.03	22.03
285.0	12.89	12.89	13.81	15.65	17.49	19.33	21.17	22.09	22.09
300.0	12.92	12.92	13.85	15.69	18.46	20.31	21.23	22.15	22.15
315.0	12.96	12.96	13.88	16.66	18.51	20.36	21.29	22.21	22.21
330.0	12.92	12.92	13.85	16.61	18.46	20.31	21.23	22.15	22.15
345.0	12.92	12.92	14.77	16.61	18.46	20.31	22.15	22.15	22.15
360.0	13.52	12.62	12.62	14.42	17.12	18.93	20.73	21.63	22.53
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	22.53	22.53	21.63	20.73	18.03	15.32	10.82	7.21	3.61
15.0	22.65	22.65	21.74	19.93	18.12	15.40	10.87	6.34	3.62
30.0	22.71	22.71	21.80	19.99	18.17	14.53	10.90	7.27	3.63
45.0	22.77	22.77	21.86	20.95	18.22	14.57	10.93	7.29	3.64
60.0	22.83	22.83	21.92	21.00	19.18	15.53	11.87	7.31	3.65
75.0	23.81	22.89	21.98	21.06	19.23	15.57	11.90	7.33	3.66
90.0	23.87	22.95	22.95	21.12	19.28	16.53	12.85	8.26	4.59
105.0	23.93	23.01	23.01	22.09	20.25	16.57	12.89	8.29	4.60
120.0	24.00	24.00	23.08	22.15	20.31	17.54	12.92	8.31	4.62
135.0	24.06	23.14	23.14	22.21	20.36	17.58	13.88	8.33	4.63
150.0	24.00	23.08	23.08	22.15	20.31	16.61	12.92	8.31	4.62
165.0	23.08	23.08	23.08	22.15	20.31	17.54	12.92	8.31	4.62
180.0	23.43	22.53	21.63	20.73	18.03	12.62	9.01	5.41	2.70
195.0	22.65	22.65	21.74	20.84	17.21	16.31	9.06	5.44	2.72
210.0	22.71	22.71	21.80	19.99	18.17	13.63	9.99	5.45	2.73
225.0	22.77	21.86	21.86	20.04	17.31	13.66	10.02	5.46	2.73
240.0	21.92	21.92	21.00	20.09	17.35	13.70	10.05	5.48	2.74
255.0	21.98	21.98	21.06	20.14	17.40	13.74	10.07	5.49	2.75
270.0	22.03	22.03	21.12	19.28	17.44	13.77	9.18	5.51	2.75
285.0	22.09	21.17	21.17	19.33	16.57	13.81	9.21	4.60	1.84
300.0	22.15	21.23	20.31	19.38	16.61	12.92	8.31	4.62	1.85
315.0	22.21	21.29	20.36	18.51	16.66	12.03	8.33	4.63	1.85
330.0	22.15	21.23	20.31	18.46	15.69	12.00	7.38	3.69	1.85
345.0	22.15	21.23	20.31	18.46	15.69	12.00	7.38	3.69	1.85
360.0	22.53	22.53	21.63	20.73	18.03	15.32	10.82	7.21	3.61

Intensity data(cd)

C/ γ (°)	180.0
0.0	2.70
15.0	1.81
30.0	1.82
45.0	1.82
60.0	1.83
75.0	1.83
90.0	1.84
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	2.70