
AFX

Client:

LumCAT: EMAF06LAJD1SN

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.010

LampCAT:

Current(A): 0.135

Lamp flux(lm): 1128.9

Power (W): 15.440

Number of Lamps: 1

PF: 0.951

Length(mm): -140

Width(mm): -140

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 1128.90, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 73.12

Central intensity(cd): 362.604, Maximum intensity(cd): 362.604

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(%): 10.52%

Down flux rate of lamp(%): 89.48%

Up flux rate of LUM(%): 10.52%

Down flux rate of LUM(%): 89.48%

CIE Type : Semidirect lighting

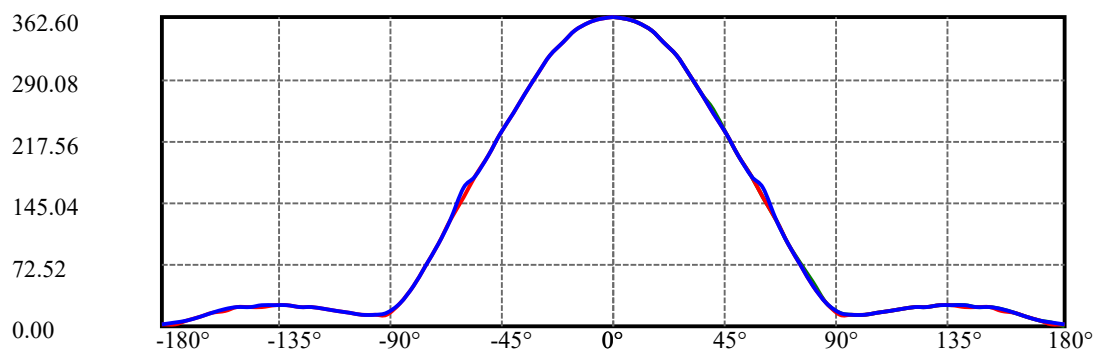
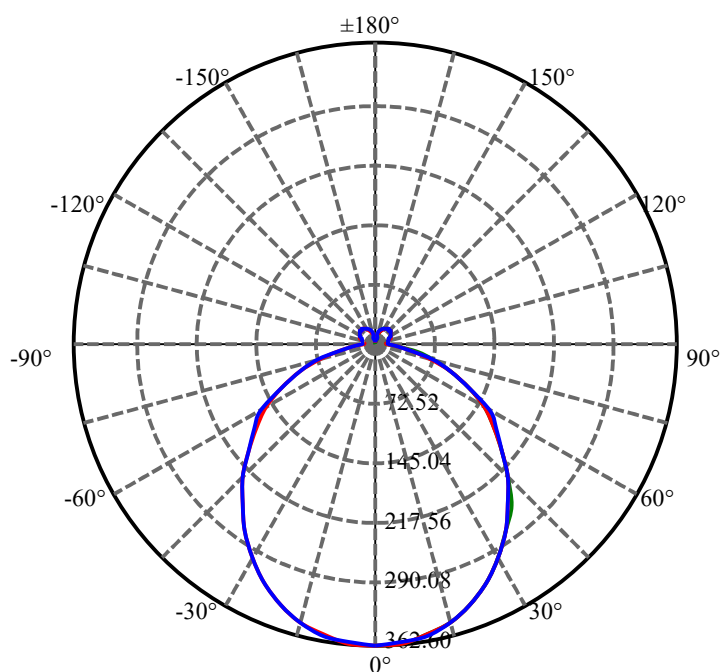
Output flux ratio in π solid angle : 69.089%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	362.604	0.000	0	0.00%	0.00%
5.0	360.581	8.645	8.645	0.77%	0.77%
10.0	355.279	25.609	34.254	2.27%	3.03%
15.0	346.388	41.622	75.876	3.69%	6.72%
20.0	333.759	56.054	131.93	4.97%	11.69%
25.0	316.702	68.221	200.152	6.04%	17.73%
30.0	296.598	77.614	277.765	6.88%	24.60%
35.0	273.247	83.914	361.679	7.43%	32.04%
40.0	249.903	87.284	448.962	7.73%	39.77%
45.0	224.526	87.844	536.807	7.78%	47.55%
50.0	199.918	85.765	622.572	7.60%	55.15%
55.0	175.842	81.703	704.275	7.24%	62.39%
60.0	151.501	75.664	779.939	6.70%	69.09%
65.0	124.105	67.000	846.94	5.94%	75.02%
70.0	96.487	55.855	902.795	4.95%	79.97%
75.0	70.772	43.719	946.514	3.87%	83.84%
80.0	48.033	31.789	978.303	2.82%	86.66%
85.0	26.865	20.352	998.655	1.80%	88.46%
90.0	15.232	11.526	1010.181	1.02%	89.48%
95.0	13.658	7.910	1018.091	0.70%	90.18%
100.0	13.965	7.506	1025.597	0.66%	90.85%
105.0	15.795	7.963	1033.56	0.71%	91.55%
110.0	18.427	8.945	1042.505	0.79%	92.35%
115.0	20.679	9.902	1052.407	0.88%	93.22%
120.0	22.319	10.453	1062.86	0.93%	94.15%
125.0	23.388	10.565	1073.425	0.94%	95.09%
130.0	23.808	10.262	1083.687	0.91%	96.00%
135.0	23.960	9.652	1093.34	0.86%	96.85%
140.0	23.655	8.816	1102.156	0.78%	97.63%
145.0	22.892	7.766	1109.922	0.69%	98.32%
150.0	21.519	6.540	1116.462	0.58%	98.90%
155.0	19.115	5.142	1121.604	0.46%	99.35%
160.0	15.567	3.638	1125.242	0.32%	99.68%
165.0	11.066	2.195	1127.436	0.19%	99.87%
170.0	6.602	1.048	1128.485	0.09%	99.96%
175.0	3.435	0.359	1128.844	0.03%	100.00%
180.0	1.145	0.055	1128.898	0.00%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	277.77	24.60%	24.60%
0-40	448.96	39.77%	39.77%
0-60	779.94	69.09%	69.09%
0-90	1010.18	89.48%	89.48%
0-120	1062.86	94.15%	94.15%
0-180	1128.90	100.00%	100.00%
60-90	230.24	20.40%	20.40%
90-120	52.68	4.67%	4.67%
90-130	73.51	6.51%	6.51%
90-150	106.28	9.41%	9.41%
90-180	118.66	10.51%	10.51%
0-70.04	903.12	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	34.25
10-20	97.68
20-30	145.84
30-40	171.20
40-50	173.61
50-60	157.37
60-70	122.86
70-80	75.51
80-90	31.88
90-100	15.42
100-110	16.91
110-120	20.35
120-130	20.83
130-140	18.47
140-150	14.31
150-160	8.78
160-170	3.24
170-180	0.36



C75(Max):

C0/C180:

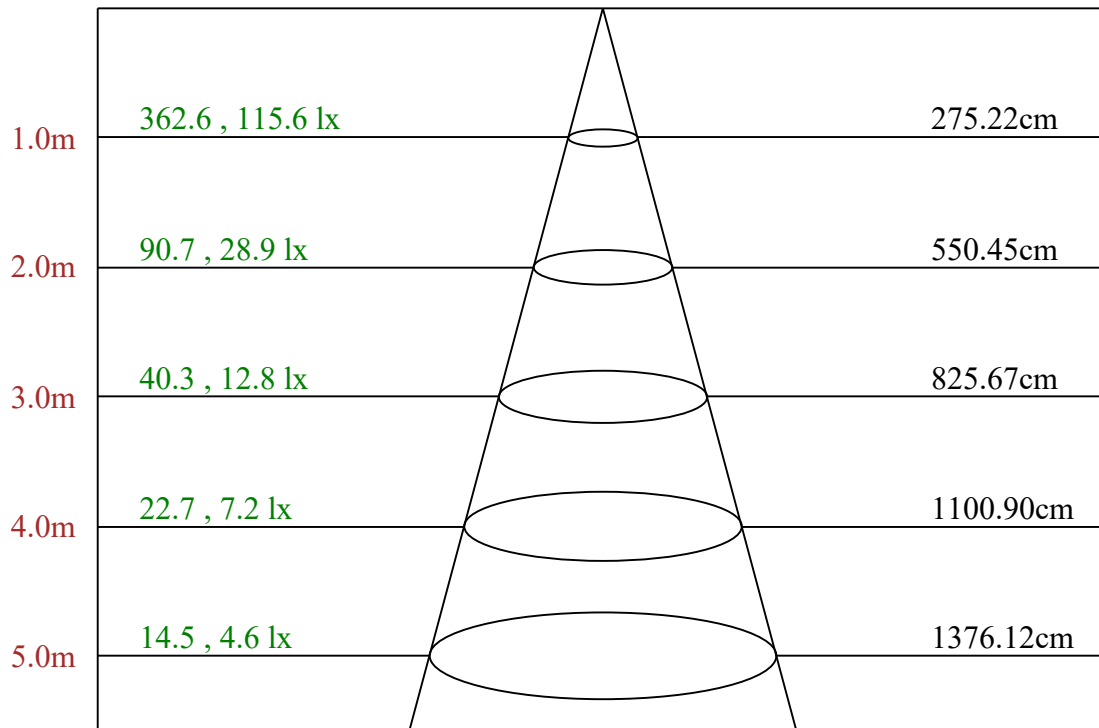
C90/C270:

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

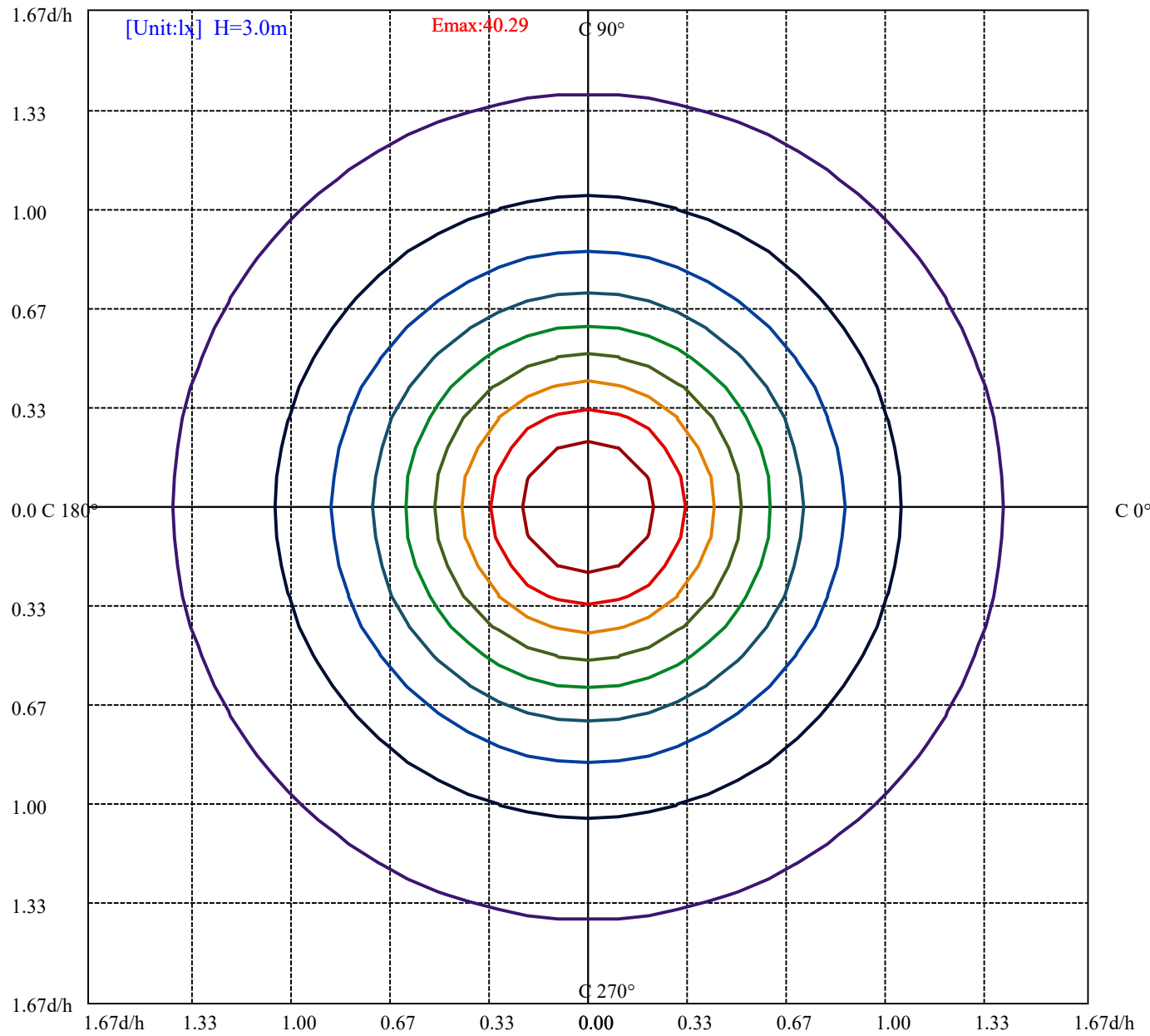
:C90/270Left:82.7 Right:82.7

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

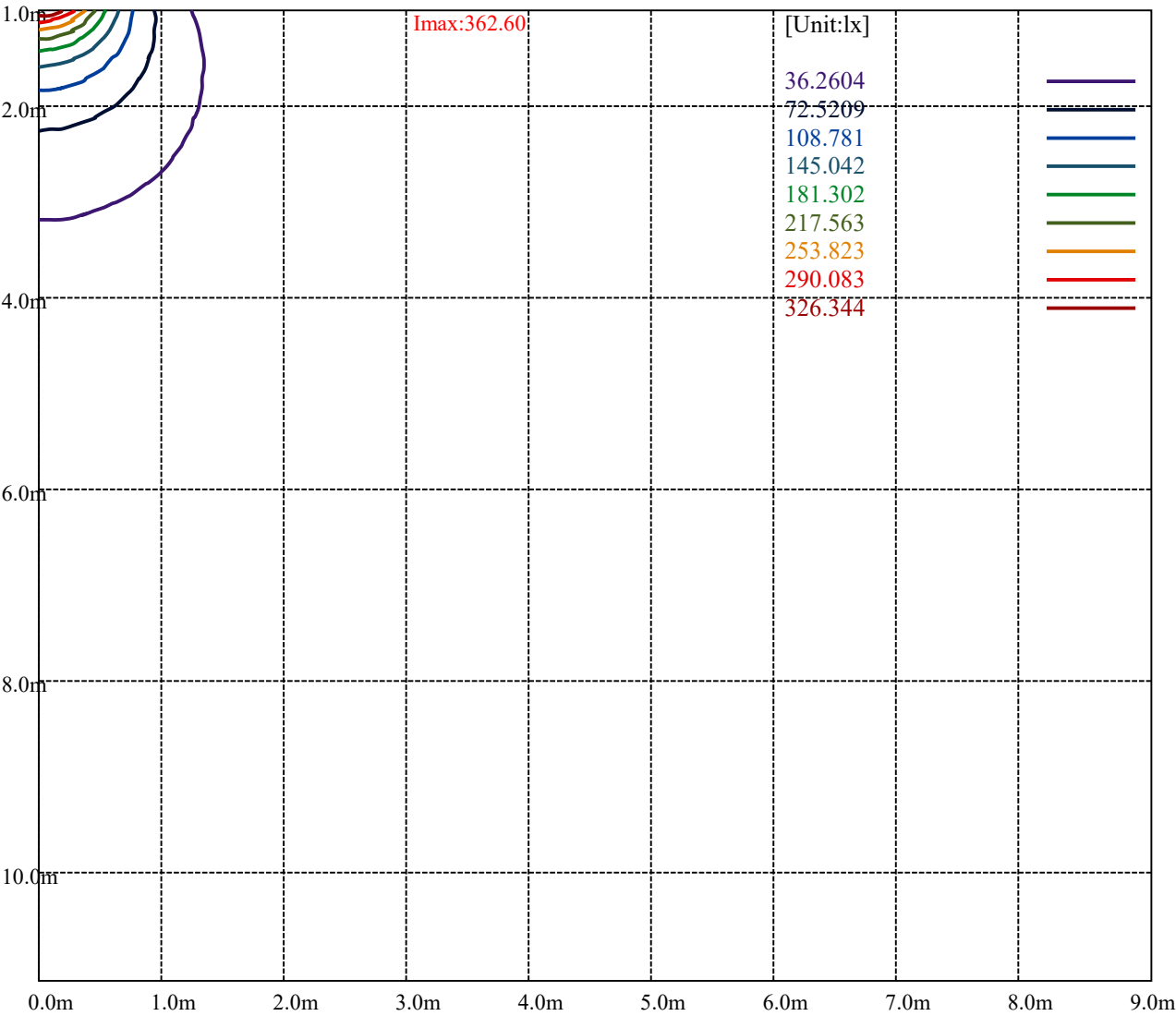
:C90/270Left:53.9 Right:53.9



Max , Ave Beam angle of C75 plane 107.99



(10%Emax)	4.028933	
(20%Emax)	8.057878	
(30%Emax)	12.08678	
(40%Emax)	16.11578	
(50%Emax)	20.14467	
(60%Emax)	24.17367	
(70%Emax)	28.20255	
(80%Emax)	32.23145	
(90%Emax)	36.26044	



Luminance Table

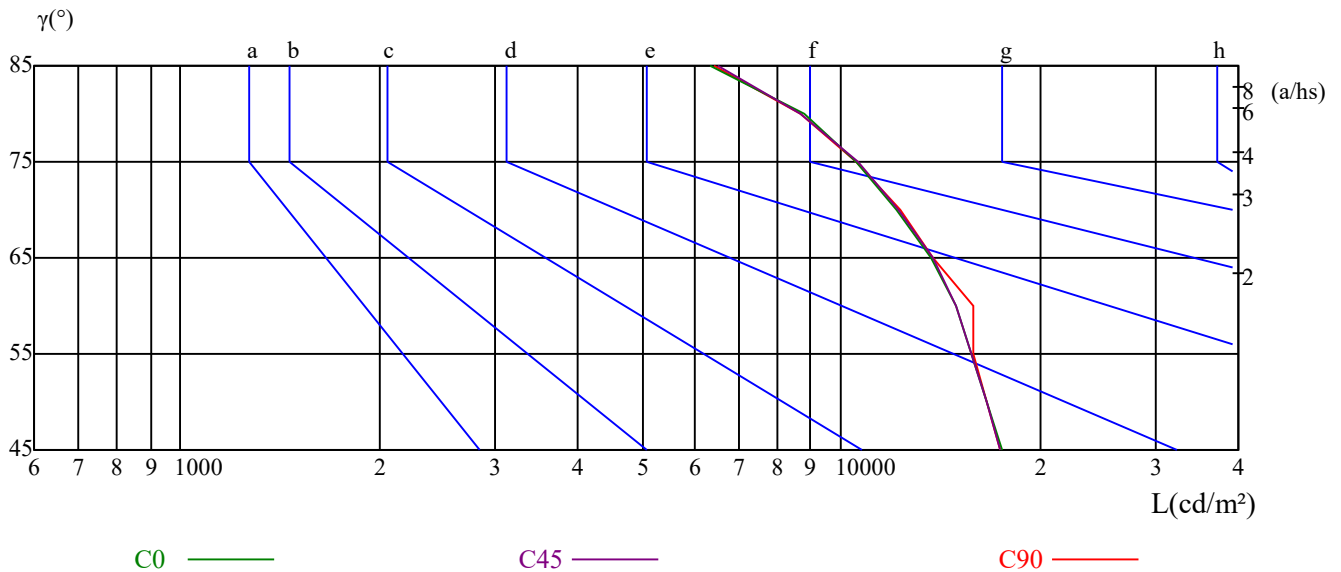
γ	45	50	55	60	65	70	75	80	85
C0	17493	16594	15813	14927	13714	12166	10518	8803	6332
C45	17482	16621	15804	14895	13753	12236	10636	8705	6502
C90	17446	16583	15846	15917	13755	12265	10568	8706	6444

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
19064	19120	19118	17659	17741	17856	19497	19842	20018

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	0.33	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	0.22

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	362.60	360.80	355.39	346.37	334.64	318.41	298.56	275.11	250.76
15.0	362.60	360.79	355.35	346.29	333.60	318.19	296.43	274.67	251.10
30.0	362.60	359.88	354.43	345.34	332.61	316.26	296.26	273.54	249.01
45.0	362.60	359.87	354.40	345.29	332.54	316.14	296.10	273.32	249.63
60.0	362.60	360.78	354.38	345.25	332.46	316.02	295.93	273.09	249.35
75.0	362.60	360.77	354.36	345.21	333.30	316.82	297.59	273.78	250.89
90.0	362.60	359.85	355.26	346.08	334.15	318.54	298.35	276.31	252.45
105.0	362.60	361.68	356.16	346.96	335.92	319.35	300.94	277.94	254.93
120.0	362.60	361.68	357.07	349.69	338.62	322.01	302.63	281.41	256.50
135.0	362.60	362.60	358.90	350.58	340.40	323.75	305.25	283.05	259.93
150.0	362.60	360.76	357.99	351.53	329.39	325.70	308.17	286.02	261.11
165.0	362.60	361.68	358.91	352.46	342.31	326.62	309.09	286.95	262.03
180.0	362.60	360.80	354.49	346.37	332.84	315.70	295.86	271.50	247.15
195.0	362.60	361.70	356.26	348.10	334.50	318.19	297.34	273.77	248.38
210.0	362.60	360.79	356.24	348.06	335.34	318.07	297.17	274.45	249.92
225.0	362.60	360.78	356.23	348.03	336.18	317.96	297.92	275.14	249.63
240.0	362.60	361.69	356.21	347.99	335.20	317.85	297.76	273.09	249.35
255.0	362.60	360.77	356.19	347.04	335.13	316.82	295.76	271.95	247.23
270.0	362.60	360.77	356.18	346.08	333.23	314.87	294.67	269.89	246.02
285.0	362.60	360.76	354.32	345.12	331.31	312.91	292.66	267.81	264.13
300.0	362.60	359.84	354.30	344.15	340.46	310.94	289.71	264.80	239.89
315.0	362.60	359.83	353.35	342.25	329.30	308.95	287.68	262.70	238.65
330.0	362.60	357.99	350.61	340.46	324.78	306.32	284.18	259.27	236.20
345.0	362.60	357.07	349.69	338.62	322.01	304.48	282.33	258.34	233.43
360.0	362.60	360.80	355.39	346.37	334.64	318.41	298.56	275.11	250.76
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	228.21	202.05	179.50	154.24	126.28	97.42	71.26	47.81	26.16
15.0	226.63	202.15	178.58	153.20	126.91	97.00	70.71	47.14	25.38
30.0	225.38	202.66	179.03	154.49	127.23	99.06	71.79	48.17	26.35
45.0	225.94	202.26	178.57	154.88	129.37	99.31	73.80	49.20	27.33
60.0	226.51	201.85	179.93	156.18	129.70	102.30	74.90	51.15	28.31
75.0	227.09	203.28	180.39	156.58	131.86	102.55	76.92	52.19	30.22
90.0	227.66	203.79	181.76	157.89	132.19	105.57	78.95	55.08	33.05
105.0	230.08	205.23	182.22	158.29	134.37	106.76	81.91	57.06	34.05
120.0	233.43	206.68	184.53	160.54	135.63	108.87	83.04	59.05	36.91
135.0	234.95	210.90	185.93	161.88	136.90	111.93	86.03	61.05	38.85
150.0	236.20	211.29	189.14	164.23	139.32	113.49	86.73	62.74	40.60
165.0	238.97	214.06	189.14	165.16	140.24	115.33	88.58	64.59	41.52
180.0	221.89	197.54	172.28	147.93	121.77	94.71	69.45	47.81	26.16
195.0	223.00	197.62	174.05	147.76	123.29	96.09	70.71	47.14	26.29
210.0	224.47	199.02	174.49	149.04	121.78	94.51	70.89	46.35	26.35
225.0	225.03	198.61	174.92	149.41	122.08	94.75	69.24	45.55	24.60
240.0	223.77	199.11	173.54	147.96	120.56	93.16	67.59	44.75	23.75
255.0	222.51	198.70	172.15	147.42	119.04	91.57	65.01	59.52	22.89
270.0	221.23	195.53	170.75	164.32	116.58	88.13	62.42	39.47	20.20
285.0	218.11	193.27	167.50	141.73	114.12	84.67	60.74	37.73	19.33
300.0	215.90	191.91	167.00	139.32	110.72	83.04	57.20	35.06	17.53
315.0	213.68	188.70	163.73	136.90	109.15	80.48	55.50	33.30	16.65
330.0	209.44	187.30	161.47	134.71	106.11	77.50	52.59	30.45	16.61
345.0	208.52	184.53	159.62	131.94	103.34	77.50	52.59	30.45	15.69
360.0	228.21	202.05	179.50	154.24	126.28	97.42	71.26	47.81	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	18.04	19.84	21.65	22.55	23.45
15.0	13.60	13.60	13.60	15.41	18.13	19.94	21.76	22.66	23.57
30.0	13.63	13.63	13.63	15.45	18.18	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	24.66
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	15.61	18.36	21.11	22.95	23.87	24.79
105.0	17.49	13.80	13.80	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	22.14	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	14.76	16.61	20.30	22.14	23.99	24.91
165.0	21.22	13.84	13.84	13.84	16.61	19.38	22.14	23.07	23.99
180.0	14.43	14.43	14.43	16.24	18.94	21.65	23.45	24.35	24.35
195.0	14.50	13.60	14.50	16.32	19.04	20.85	22.66	23.57	23.57
210.0	14.54	13.63	13.63	16.36	19.08	20.90	22.72	23.63	23.63
225.0	14.58	13.67	13.67	15.49	19.13	20.95	20.95	22.78	23.69
240.0	13.70	13.70	13.70	15.53	18.27	21.01	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	13.80	13.80	13.80	16.57	19.33	21.17	22.09	23.01	23.01
300.0	13.84	13.84	14.76	16.61	19.38	21.22	22.14	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	22.14	23.07	23.07
345.0	13.84	13.84	14.76	17.53	20.30	21.22	23.07	23.07	23.07
360.0	13.53	13.53	13.53	15.33	18.04	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	16.24	11.73	7.22	3.61
15.0	23.57	23.57	22.66	20.85	19.04	16.32	11.78	7.25	3.63
30.0	23.63	23.63	22.72	20.90	19.08	15.45	11.81	7.27	3.64
45.0	24.60	23.69	22.78	21.87	19.13	15.49	11.84	7.29	3.64
60.0	24.66	23.75	23.75	21.92	20.09	16.44	11.87	7.31	3.65
75.0	24.72	24.72	23.81	21.98	20.14	16.48	12.82	8.24	3.66
90.0	24.79	24.79	23.87	22.95	20.20	17.44	12.85	8.26	4.59
105.0	24.85	24.85	23.93	23.01	21.17	17.49	13.80	9.20	4.60
120.0	24.91	24.91	23.99	23.07	21.22	18.45	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	22.14	17.53	13.84	9.23	5.54
165.0	24.91	24.91	23.99	23.07	21.22	18.45	12.92	9.23	5.54
180.0	24.35	23.45	23.45	21.65	18.94	13.53	9.92	5.41	2.71
195.0	24.48	23.57	22.66	21.76	19.04	17.22	9.07	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	23.69	22.78	21.87	18.22	14.58	10.02	5.47	2.73
240.0	23.75	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	21.11	18.36	14.69	10.10	5.51	2.75
285.0	23.01	23.01	22.09	20.25	17.49	13.80	9.20	4.60	2.76
300.0	23.07	23.07	22.14	20.30	17.53	13.84	9.23	4.61	1.85
315.0	23.13	22.20	22.20	20.35	17.58	12.95	9.25	4.63	1.85
330.0	23.07	22.14	21.22	19.38	16.61	12.92	8.30	3.69	1.85
345.0	23.07	22.14	21.22	19.38	15.69	11.99	7.38	3.69	1.85
360.0	23.45	23.45	22.55	21.65	18.94	16.24	11.73	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