
AFX

Client:

LumCAT: EMAF06LAJD1BK

Luminaire: LED lamp

Report No:

Ballast type:

Test No: LCZP24090188

Voltage(V): 119.990

LampCAT:

Current(A): 0.133

Lamp flux(lm): 946.9

Power (W): 15.040

Number of Lamps: 1

PF: 0.942

Length(mm): -140

Width(mm): -140

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 946.88, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 62.96

Central intensity(cd): 314.959, Maximum intensity(cd): 314.959

Angle of maximum intensity: C=30.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=106.2

[C90/270]Total=105.2

Field angle(10%Imax): [C0/180]Total=163.4

[C90/270]Total=162.8

Maximum s/h(1/2): C0_180=1.20 C90_270=1.19

Maximum s/h(1/4): C0_180=1.32 C90_270=1.30

Up flux rate of lamp(%): 10.04%

Down flux rate of lamp(%): 89.96%

Up flux rate of LUM(%): 10.04%

Down flux rate of LUM(%): 89.96%

CIE Type : Semidirect lighting

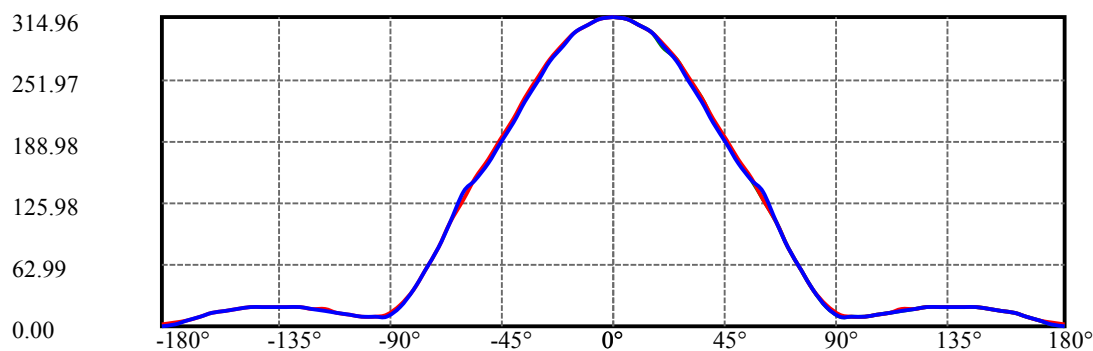
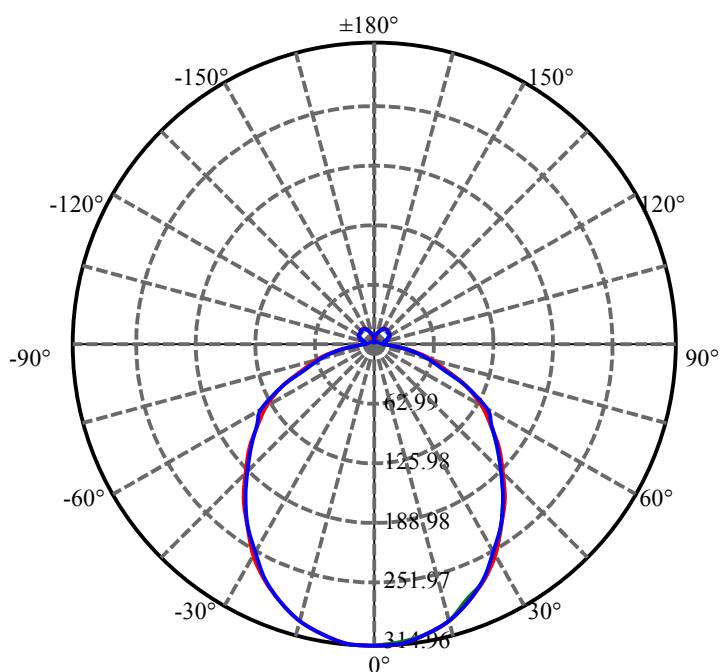
Output flux ratio in π solid angle : 69.981%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	314.959	0.000	0	0.00%	0.00%
5.0	313.516	7.513	7.513	0.79%	0.79%
10.0	308.195	22.241	29.754	2.35%	3.14%
15.0	299.358	36.040	65.793	3.81%	6.95%
20.0	286.959	48.321	114.114	5.10%	12.05%
25.0	271.266	58.548	172.662	6.18%	18.23%
30.0	252.198	66.245	238.907	7.00%	25.23%
35.0	231.176	71.180	310.087	7.52%	32.75%
40.0	209.907	73.591	383.678	7.77%	40.52%
45.0	187.827	73.644	457.322	7.78%	48.30%
50.0	167.992	71.898	529.22	7.59%	55.89%
55.0	149.174	68.962	598.183	7.28%	63.17%
60.0	129.650	64.449	662.632	6.81%	69.98%
65.0	105.880	57.258	719.89	6.05%	76.03%
70.0	80.600	47.218	767.108	4.99%	81.01%
75.0	56.731	35.896	803.004	3.79%	84.81%
80.0	37.018	25.085	828.089	2.65%	87.45%
85.0	19.749	15.425	843.514	1.63%	89.08%
90.0	10.459	8.271	851.785	0.87%	89.96%
95.0	9.789	5.544	857.33	0.59%	90.54%
100.0	10.110	5.407	862.737	0.57%	91.11%
105.0	11.819	5.868	868.605	0.62%	91.73%
110.0	14.379	6.848	875.452	0.72%	92.46%
115.0	16.557	7.833	883.286	0.83%	93.28%
120.0	18.068	8.418	891.703	0.89%	94.17%
125.0	19.099	8.591	900.295	0.91%	95.08%
130.0	19.648	8.425	908.719	0.89%	95.97%
135.0	19.870	7.985	916.704	0.84%	96.81%
140.0	19.862	7.357	924.061	0.78%	97.59%
145.0	19.424	6.555	930.616	0.69%	98.28%
150.0	18.286	5.553	936.169	0.59%	98.87%
155.0	16.282	4.375	940.543	0.46%	99.33%
160.0	13.488	3.122	943.666	0.33%	99.66%
165.0	9.799	1.919	945.585	0.20%	99.86%
170.0	5.892	0.931	946.516	0.10%	99.96%
175.0	2.917	0.315	946.831	0.03%	100.00%
180.0	0.938	0.046	946.877	0.00%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	238.91	25.23%	25.23%
0-40	383.68	40.52%	40.52%
0-60	662.63	69.98%	69.98%
0-90	851.79	89.96%	89.96%
0-120	891.70	94.17%	94.17%
0-180	946.88	100.00%	100.00%
60-90	189.15	19.98%	19.98%
90-120	39.92	4.22%	4.22%
90-130	56.93	6.01%	6.01%
90-150	84.38	8.91%	8.91%
90-180	95.05	10.04%	10.04%
0-68.98	757.50	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	29.75
10-20	84.36
20-30	124.79
30-40	144.77
40-50	145.54
50-60	133.41
60-70	104.48
70-80	60.98
80-90	23.70
90-100	10.95
100-110	12.72
110-120	16.25
120-130	17.02
130-140	15.34
140-150	12.11
150-160	7.50
160-170	2.85
170-180	0.32



C30(Max): —————

C0/C180: —————

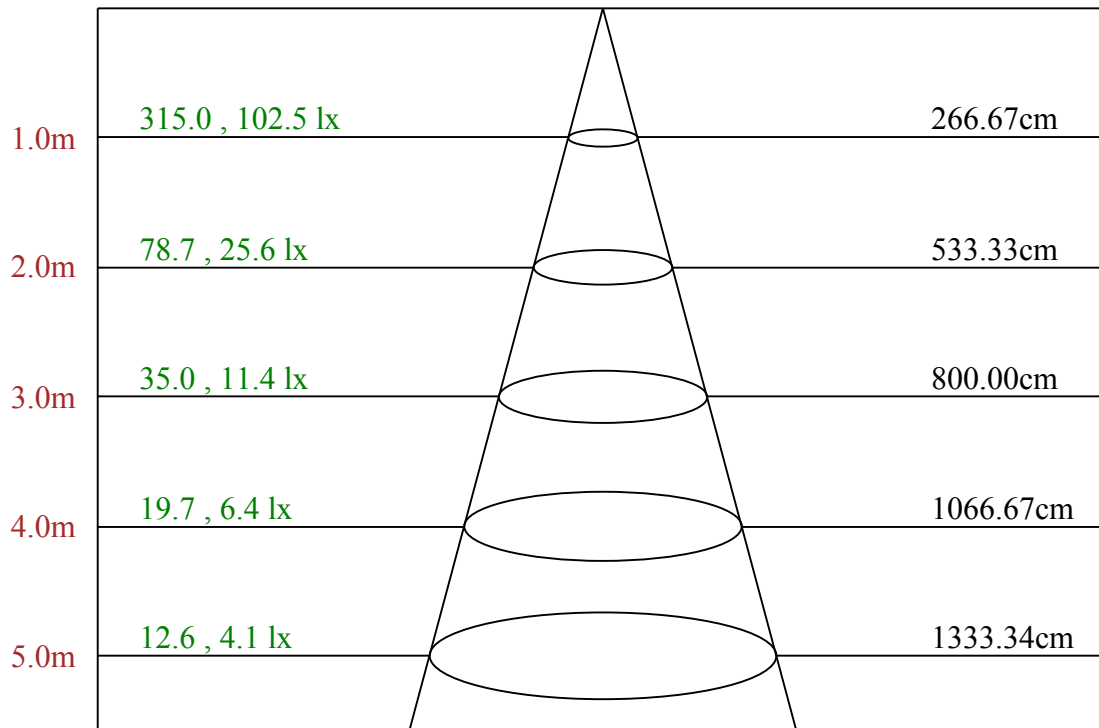
C90/C270: —————

Field angle(10%Imax):C0/180Left:81.7 Right:81.7

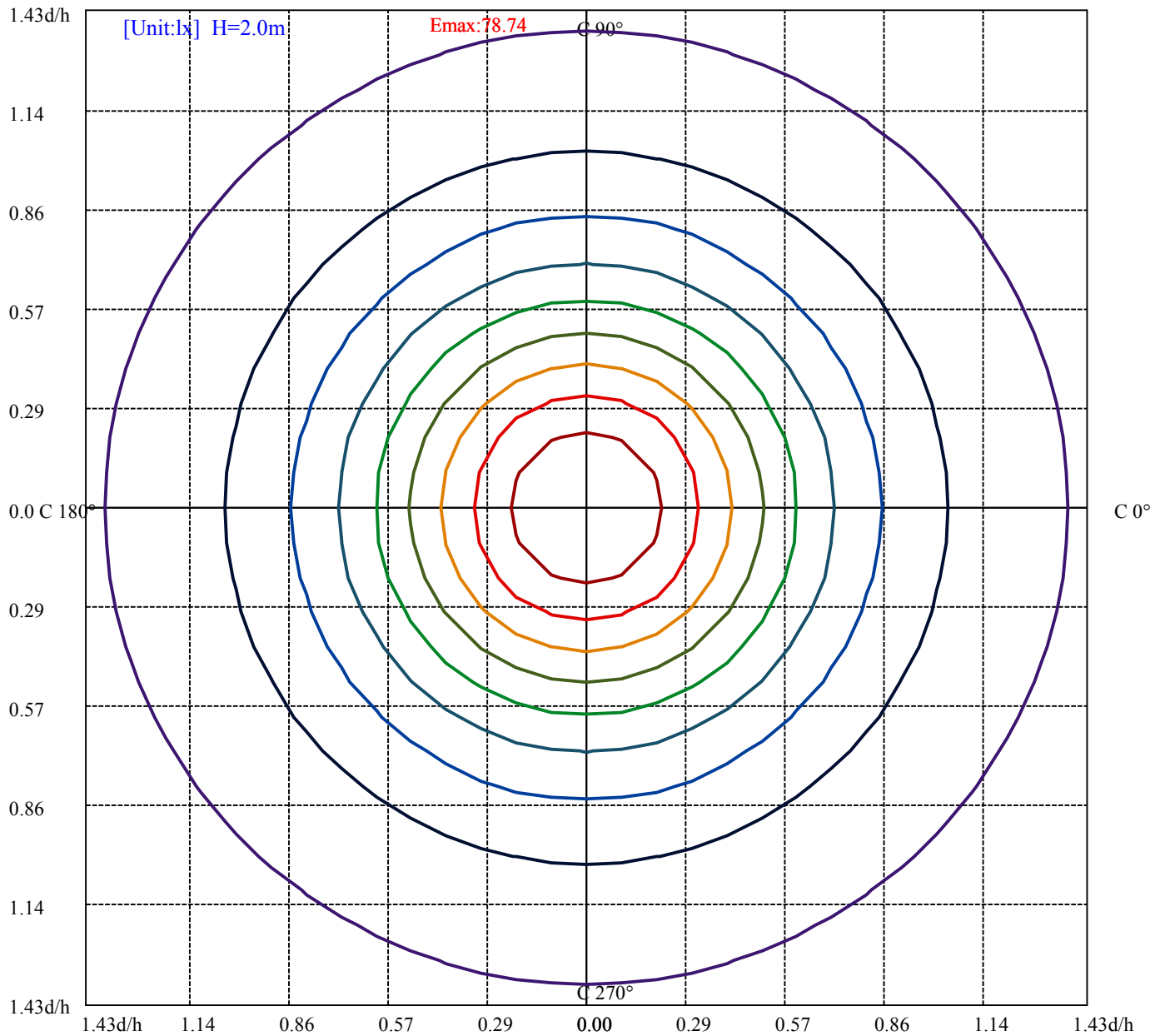
:C90/270Left:81.4 Right:81.4

Beam Angle(50%Imax):C0/180Left:53.1 Right:53.1

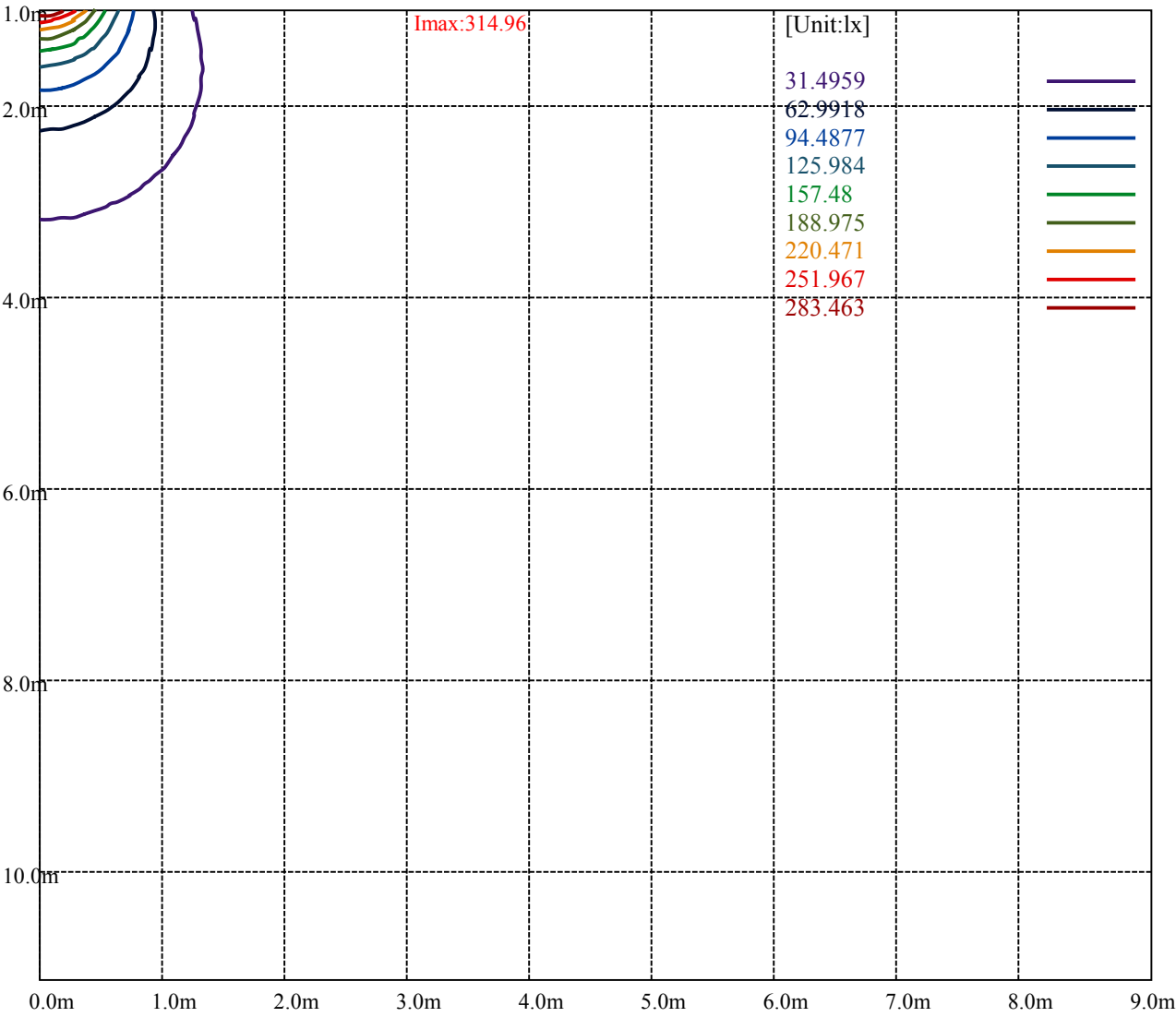
:C90/270Left:52.6 Right:52.6



Max , Ave Beam angle of C30 plane 106.26



(10%Emax) 7.873975	—
(20%Emax) 15.74795	—
(30%Emax) 23.62193	—
(40%Emax) 31.496	—
(50%Emax) 39.37	—
(60%Emax) 47.24375	—
(70%Emax) 55.11775	—
(80%Emax) 62.99175	—
(90%Emax) 70.86575	—



Luminance Table

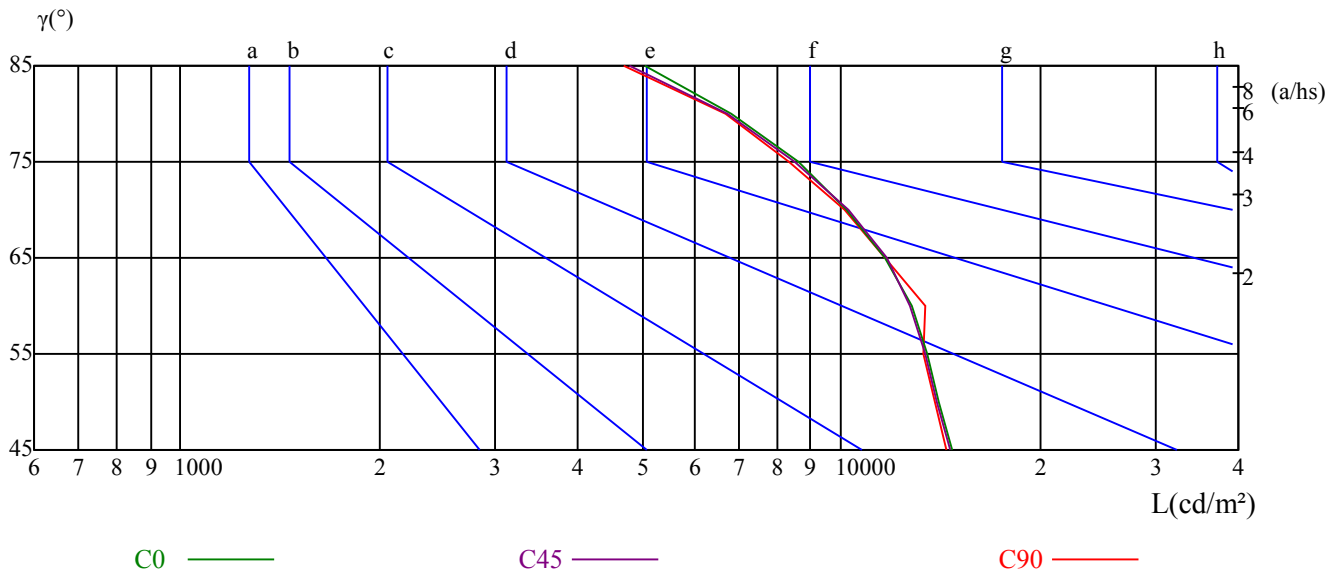
γ	45	50	55	60	65	70	75	80	85
C0	14754	14074	13504	12774	11701	10215	8602	6819	5051
C45	14632	13967	13405	12766	11713	10273	8529	6728	4770
C90	14489	13864	13363	13457	11651	10100	8360	6676	4704

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
16265	16196	16282	14441	14034	14318	15551	14484	14686

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	1.06	1.06	1.06	0.99	0.99	0.99	0.93	0.93	0.93	0.90
1	1.01	0.97	0.93	0.98	0.94	0.91	0.92	0.89	0.86	0.86	0.84	0.82	0.81	0.79	0.77	0.75
2	0.88	0.81	0.76	0.86	0.79	0.74	0.80	0.75	0.71	0.76	0.71	0.68	0.71	0.68	0.65	0.62
3	0.77	0.69	0.63	0.75	0.68	0.62	0.71	0.64	0.59	0.67	0.61	0.57	0.63	0.59	0.55	0.52
4	0.69	0.60	0.53	0.67	0.59	0.52	0.63	0.56	0.51	0.59	0.54	0.49	0.56	0.51	0.47	0.45
5	0.61	0.52	0.46	0.60	0.51	0.45	0.56	0.49	0.44	0.53	0.47	0.42	0.51	0.45	0.41	0.39
6	0.55	0.46	0.40	0.54	0.45	0.39	0.51	0.44	0.38	0.48	0.42	0.37	0.46	0.40	0.36	0.34
7	0.50	0.41	0.35	0.49	0.41	0.35	0.46	0.39	0.34	0.44	0.38	0.33	0.42	0.36	0.32	0.30
8	0.46	0.37	0.32	0.45	0.37	0.31	0.42	0.35	0.30	0.40	0.34	0.30	0.39	0.33	0.29	0.27
9	0.42	0.34	0.28	0.41	0.33	0.28	0.39	0.32	0.27	0.37	0.31	0.27	0.36	0.30	0.26	0.24
10	0.39	0.31	0.26	0.38	0.30	0.25	0.36	0.29	0.25	0.35	0.29	0.24	0.33	0.28	0.24	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	314.96	315.68	313.06	306.74	297.53	284.79	267.09	246.49	224.36
15.0	314.96	316.05	312.87	305.78	295.88	282.25	265.53	245.35	223.36
30.0	314.96	314.87	310.86	304.03	292.74	279.81	261.87	241.20	219.35
45.0	314.96	313.77	310.13	301.20	290.54	275.86	257.54	237.68	215.53
60.0	314.96	312.86	307.75	299.26	287.85	272.23	253.98	232.52	210.61
75.0	314.96	313.22	307.45	298.47	285.64	269.15	250.10	229.49	206.58
90.0	314.96	312.67	306.34	296.81	282.78	266.47	246.76	225.49	203.77
105.0	314.96	311.56	305.13	295.22	281.63	264.36	243.61	222.58	201.83
120.0	314.96	311.01	304.76	294.38	280.97	262.33	243.31	221.73	200.70
135.0	314.96	314.68	307.44	297.41	283.40	265.67	245.62	225.20	202.36
150.0	314.96	311.09	305.10	294.69	268.81	265.12	244.12	224.31	202.94
165.0	314.96	311.91	306.28	296.04	283.31	266.79	248.05	227.11	203.94
180.0	314.96	310.62	302.13	291.38	276.66	259.14	240.44	218.22	198.62
195.0	314.96	312.05	304.51	292.79	279.61	262.44	242.99	221.91	200.83
210.0	314.96	311.59	304.85	294.93	281.27	263.79	245.21	224.54	203.05
225.0	314.96	312.77	304.93	296.55	283.52	266.75	246.97	225.92	204.78
240.0	314.96	312.40	307.02	297.98	285.11	269.22	249.23	228.96	207.33
255.0	314.96	314.13	308.64	300.67	287.93	272.54	252.57	231.50	210.34
270.0	314.96	314.50	309.55	301.30	289.38	274.63	254.28	233.93	211.65
285.0	314.96	314.78	311.10	302.84	291.18	276.12	257.29	235.71	230.11
300.0	314.96	315.14	311.10	303.20	301.37	277.21	258.93	235.60	213.92
315.0	314.96	317.56	313.75	306.70	295.28	281.17	261.21	239.31	215.91
330.0	314.96	314.50	310.91	303.44	292.21	276.82	258.03	237.30	212.71
345.0	314.96	314.96	310.99	302.78	292.44	275.74	258.02	236.15	213.17
360.0	314.96	315.68	313.06	306.74	297.53	284.79	267.09	246.49	224.36
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	201.33	179.20	159.51	139.19	117.15	92.58	68.83	45.79	27.82
15.0	200.73	178.56	158.12	137.67	116.13	90.05	65.79	44.07	25.35
30.0	196.95	176.92	156.98	136.58	113.45	87.96	62.46	41.98	22.76
45.0	193.84	173.25	153.93	133.97	110.64	85.76	60.15	38.91	21.14
60.0	189.52	169.80	151.55	132.47	108.82	81.98	56.78	36.06	19.72
75.0	186.61	167.56	149.69	129.54	105.35	79.79	55.06	34.81	18.14
90.0	183.05	164.35	146.85	126.59	102.48	76.36	52.89	34.01	16.87
105.0	181.90	162.81	144.26	123.69	99.72	75.57	52.34	32.78	16.71
120.0	180.30	161.29	144.02	122.35	99.66	74.68	51.53	32.15	16.99
135.0	182.87	163.84	145.74	125.41	101.27	75.84	53.47	33.42	17.27
150.0	182.67	164.43	146.47	127.40	103.64	77.93	53.89	33.90	17.59
165.0	185.21	167.49	149.50	129.66	105.85	79.82	56.57	34.97	19.10
180.0	178.30	159.69	140.91	119.41	94.48	68.74	46.25	28.27	13.91
195.0	179.74	160.84	142.67	120.68	97.32	72.06	49.25	30.08	14.99
210.0	182.38	162.99	143.59	122.56	99.16	73.85	52.08	31.69	16.75
225.0	183.73	164.59	144.81	124.94	101.80	77.10	53.86	34.18	18.59
240.0	185.96	166.43	147.16	126.81	103.62	79.97	56.51	36.61	19.81
255.0	187.80	169.11	149.78	129.72	106.73	81.63	57.90	52.86	20.98
270.0	189.75	169.49	150.42	145.84	108.26	83.14	58.94	38.50	22.00
285.0	190.44	169.69	151.05	132.69	110.10	85.03	60.42	39.58	22.13
300.0	191.14	170.11	151.28	132.08	110.22	84.78	59.98	39.13	22.50
315.0	192.52	170.99	151.96	132.56	110.00	85.77	60.71	39.64	21.81
330.0	190.78	169.78	150.25	130.99	108.43	82.72	58.40	38.05	21.28
345.0	190.29	168.60	149.68	128.83	106.86	81.30	57.49	37.01	19.75
360.0	201.33	179.20	159.51	139.19	117.15	92.58	68.83	45.79	27.82

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	13.28	9.57	9.94	11.02	13.55	16.26	18.16	19.24	19.87
15.0	12.09	9.90	10.00	11.36	14.27	16.63	18.54	19.72	20.17
30.0	11.29	9.92	10.02	11.75	14.48	16.85	18.67	19.76	20.21
45.0	10.39	9.93	10.12	11.85	14.76	17.13	18.77	19.68	20.23
60.0	10.04	9.68	10.13	12.14	14.97	17.07	18.71	19.81	20.18
75.0	9.89	9.71	10.17	12.18	14.93	17.04	18.60	19.60	20.25
90.0	9.72	9.72	10.08	12.19	14.76	16.87	18.33	19.52	20.07
105.0	9.64	9.55	10.01	11.94	14.60	16.62	18.18	19.19	19.93
120.0	9.74	9.64	9.92	11.76	14.24	16.35	18.00	19.11	19.84
135.0	9.84	9.75	9.84	11.79	14.11	16.24	17.92	19.22	19.86
150.0	9.86	9.58	9.76	11.33	13.73	15.75	17.50	18.79	19.62
165.0	10.06	9.60	9.78	11.17	13.38	15.69	17.44	18.64	19.47
180.0	9.85	10.12	10.66	12.74	14.90	17.07	18.52	19.24	19.69
195.0	9.90	10.09	10.54	12.36	14.81	16.90	18.27	19.17	19.45
210.0	10.02	10.02	10.47	12.11	14.48	16.66	18.12	18.85	19.49
225.0	10.12	9.93	10.21	11.85	14.31	16.50	16.77	18.68	19.32
240.0	10.41	9.95	9.95	11.78	14.15	16.25	17.62	18.62	19.17
255.0	10.63	9.71	10.17	11.73	14.02	16.12	17.68	18.51	19.06
270.0	10.72	9.72	9.99	11.46	14.02	16.13	17.51	18.42	19.07
285.0	10.93	9.64	10.10	11.48	14.05	16.16	17.54	18.46	19.01
300.0	10.93	9.74	10.01	11.57	14.24	16.35	17.73	18.65	19.11
315.0	10.86	9.75	10.21	11.79	14.57	16.62	18.19	19.03	19.40
330.0	10.59	9.76	10.23	11.98	14.74	16.86	18.24	19.07	19.44
345.0	10.24	9.97	10.34	12.37	15.04	17.26	18.64	19.38	19.66
360.0	13.28	9.57	9.94	11.02	13.55	16.26	18.16	19.24	19.87
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	20.23	20.32	19.87	19.15	17.70	15.36	12.28	8.31	4.43
15.0	20.26	20.45	20.08	19.17	17.63	15.18	11.81	7.81	4.27
30.0	20.40	20.49	20.12	19.12	17.21	14.66	11.38	7.19	3.73
45.0	20.32	20.32	19.96	18.96	17.22	14.49	10.84	6.74	3.55
60.0	20.27	20.18	19.99	18.99	16.89	14.06	10.22	6.30	3.01
75.0	20.34	20.25	19.88	18.78	16.76	13.74	9.89	5.59	2.75
90.0	20.26	20.17	19.71	18.42	16.41	13.29	9.53	4.95	2.38
105.0	20.02	19.83	19.10	17.72	15.70	12.58	8.82	4.87	2.11
120.0	20.12	20.02	19.38	17.82	15.16	12.03	7.90	4.59	2.11
135.0	20.14	20.24	19.77	18.10	15.41	11.97	8.26	4.36	2.04
150.0	19.90	19.99	19.71	18.15	15.57	12.25	8.94	4.42	2.30
165.0	19.84	19.93	19.56	18.00	15.50	12.64	9.14	5.26	2.77
180.0	19.69	19.42	18.43	16.53	14.27	11.11	7.77	4.25	2.08
195.0	19.54	19.36	18.72	17.45	15.36	14.63	8.72	5.00	2.27
210.0	19.76	19.58	19.03	18.12	16.12	13.11	9.38	5.46	2.55
225.0	19.50	19.50	19.23	18.32	16.40	13.67	9.57	5.83	2.64
240.0	19.45	19.45	19.17	18.26	16.52	13.60	9.95	6.03	3.01
255.0	19.51	19.60	19.15	18.23	16.49	13.83	9.99	6.41	3.21
270.0	19.34	19.52	19.34	18.33	16.41	13.75	10.17	6.60	3.21
285.0	19.38	19.56	19.28	18.46	16.44	13.59	10.38	6.52	3.21
300.0	19.38	19.56	19.20	18.09	16.35	13.69	10.29	6.43	3.31
315.0	19.77	19.77	19.22	18.29	16.52	13.74	10.21	6.31	3.16
330.0	19.62	19.53	19.16	18.24	16.40	13.54	9.95	6.26	3.04
345.0	19.84	19.66	19.10	18.18	16.33	13.20	9.78	5.91	2.86
360.0	20.23	20.32	19.87	19.15	17.70	15.36	12.28	8.31	4.43

Intensity data(cd)

C/ γ (°)	180.0
0.0	2.17
15.0	2.09
30.0	2.09
45.0	2.00
60.0	1.92
75.0	1.92
90.0	1.83
105.0	1.74
120.0	1.65
135.0	1.67
150.0	1.75
165.0	1.66
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	2.17