
AFX

Client:

LumCAT: EMAF06LAJD1SB

Luminaire: LED lamp

Report No:

Ballast type:

Test No: LCZP24090188

Voltage(V): 119.990

LampCAT:

Current(A): 0.134

Lamp flux(lm): 1028.9

Power (W): 15.100

Number of Lamps: 1

PF: 0.941

Length(mm): -140

Width(mm): -140

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 1028.89, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 68.14

Central intensity(cd): 330.396, Maximum intensity(cd): 330.396

Angle of maximum intensity: C=15.0 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

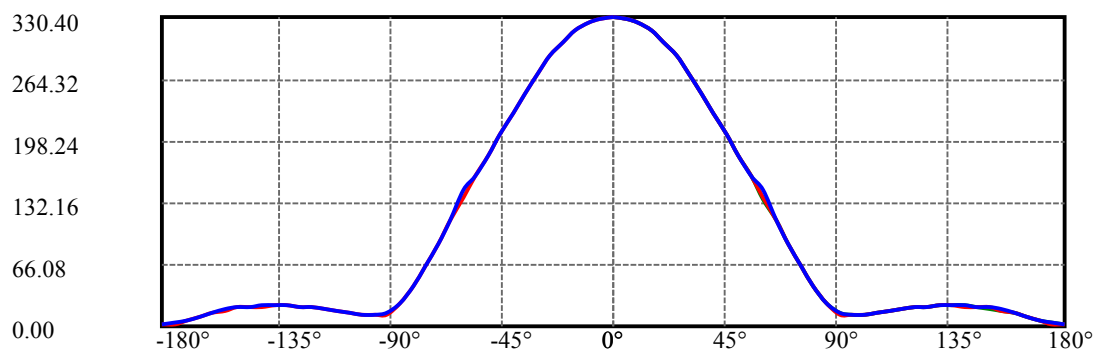
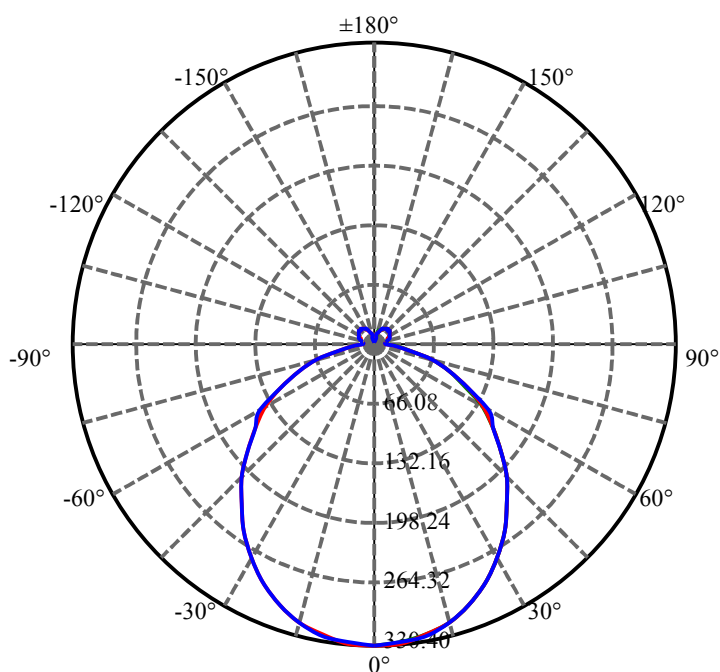
Output flux ratio in π solid angle : 69.084%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	330.396	0.000	0	0.00%	0.00%
5.0	328.644	7.879	7.879	0.77%	0.77%
10.0	323.678	23.336	31.214	2.27%	3.03%
15.0	315.607	37.922	69.136	3.69%	6.72%
20.0	304.199	51.081	120.217	4.96%	11.68%
25.0	288.661	62.180	182.397	6.04%	17.73%
30.0	270.323	70.740	253.137	6.88%	24.60%
35.0	249.048	76.481	329.618	7.43%	32.04%
40.0	227.817	79.561	409.179	7.73%	39.77%
45.0	204.588	80.063	489.243	7.78%	47.55%
50.0	182.254	78.167	567.41	7.60%	55.15%
55.0	160.196	74.460	641.87	7.24%	62.38%
60.0	138.007	68.929	710.799	6.70%	69.08%
65.0	113.126	61.051	771.849	5.93%	75.02%
70.0	87.925	50.907	822.757	4.95%	79.97%
75.0	64.477	39.836	862.592	3.87%	83.84%
80.0	43.733	28.954	891.546	2.81%	86.65%
85.0	24.534	18.550	910.096	1.80%	88.45%
90.0	13.903	10.524	920.62	1.02%	89.48%
95.0	12.472	7.222	927.842	0.70%	90.18%
100.0	12.760	6.856	934.698	0.67%	90.85%
105.0	14.357	7.256	941.954	0.71%	91.55%
110.0	16.753	8.132	950.085	0.79%	92.34%
115.0	18.874	9.021	959.106	0.88%	93.22%
120.0	20.355	9.537	968.643	0.93%	94.14%
125.0	21.347	9.639	978.282	0.94%	95.08%
130.0	21.767	9.374	987.656	0.91%	95.99%
135.0	21.827	8.809	996.465	0.86%	96.85%
140.0	21.568	8.035	1004.5	0.78%	97.63%
145.0	20.859	7.079	1011.579	0.69%	98.32%
150.0	19.649	5.965	1017.544	0.58%	98.90%
155.0	17.429	4.692	1022.236	0.46%	99.35%
160.0	14.167	3.314	1025.55	0.32%	99.68%
165.0	10.135	2.003	1027.552	0.19%	99.87%
170.0	6.064	0.961	1028.513	0.09%	99.96%
175.0	3.081	0.327	1028.84	0.03%	100.00%
180.0	1.046	0.049	1028.89	0.00%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	253.14	24.60%	24.60%
0-40	409.18	39.77%	39.77%
0-60	710.80	69.08%	69.08%
0-90	920.62	89.48%	89.48%
0-120	968.64	94.14%	94.14%
0-180	1028.89	100.00%	100.00%
60-90	209.82	20.39%	20.39%
90-120	48.02	4.67%	4.67%
90-130	67.04	6.52%	6.52%
90-150	96.92	9.42%	9.42%
90-180	108.22	10.52%	10.52%
0-70.04	823.11	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	31.21
10-20	89.00
20-30	132.92
30-40	156.04
40-50	158.23
50-60	143.39
60-70	111.96
70-80	68.79
80-90	29.07
90-100	14.08
100-110	15.39
110-120	18.56
120-130	19.01
130-140	16.84
140-150	13.04
150-160	8.01
160-170	2.96
170-180	0.33



C15(Max):

C0/C180:

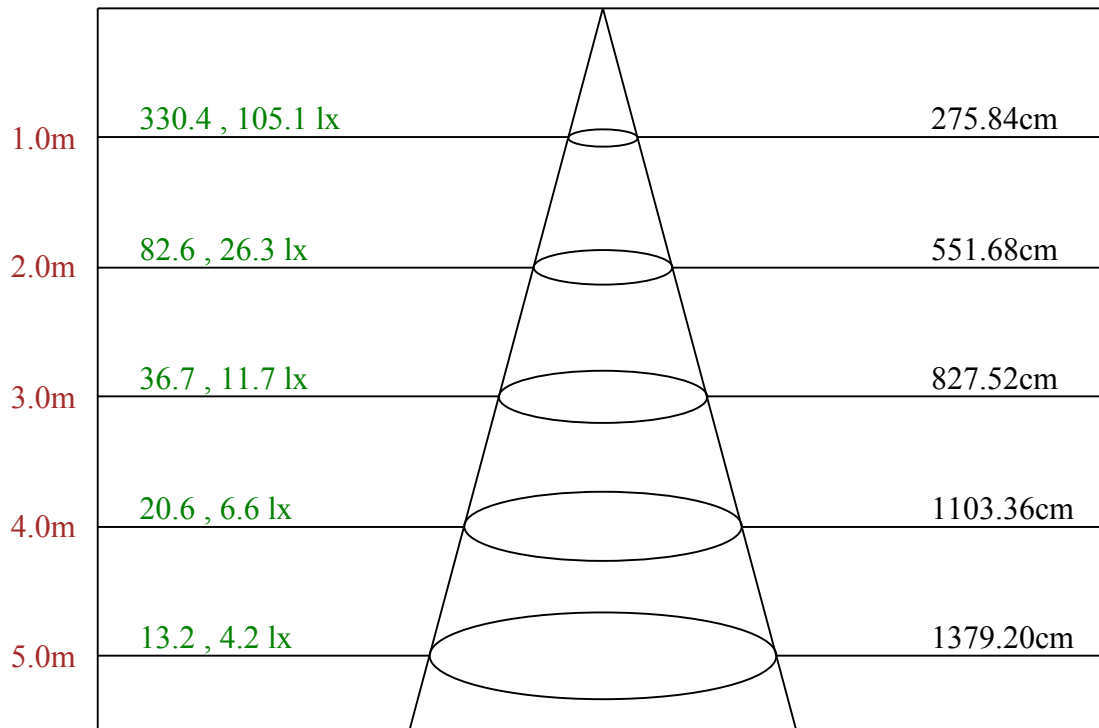
C90/C270:

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

:C90/270Left:82.7 Right:82.7

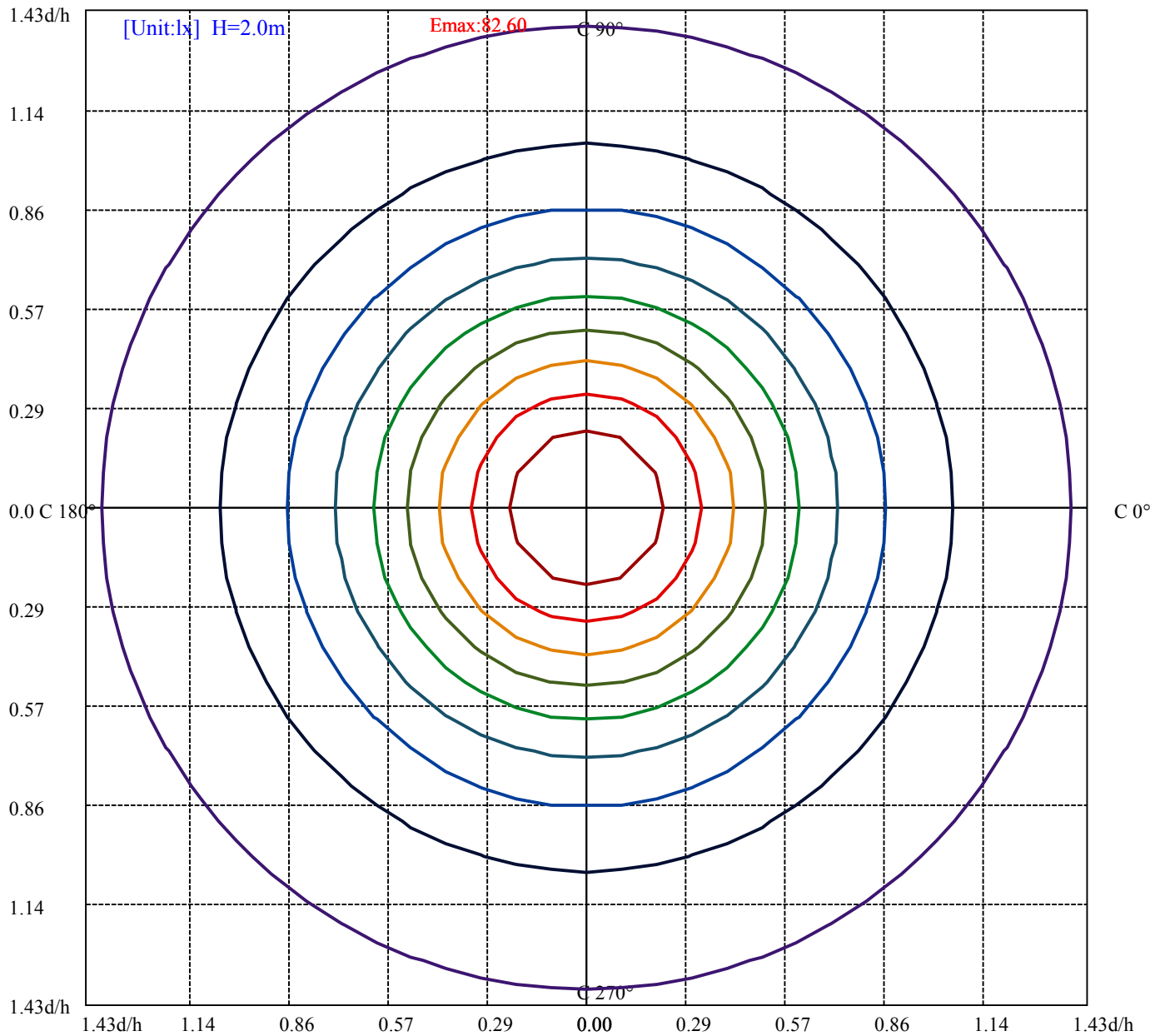
Beam Angle(50%Imax):C0/180Left:53.9 Right:53.9

:C90/270Left:53.9 Right:53.9

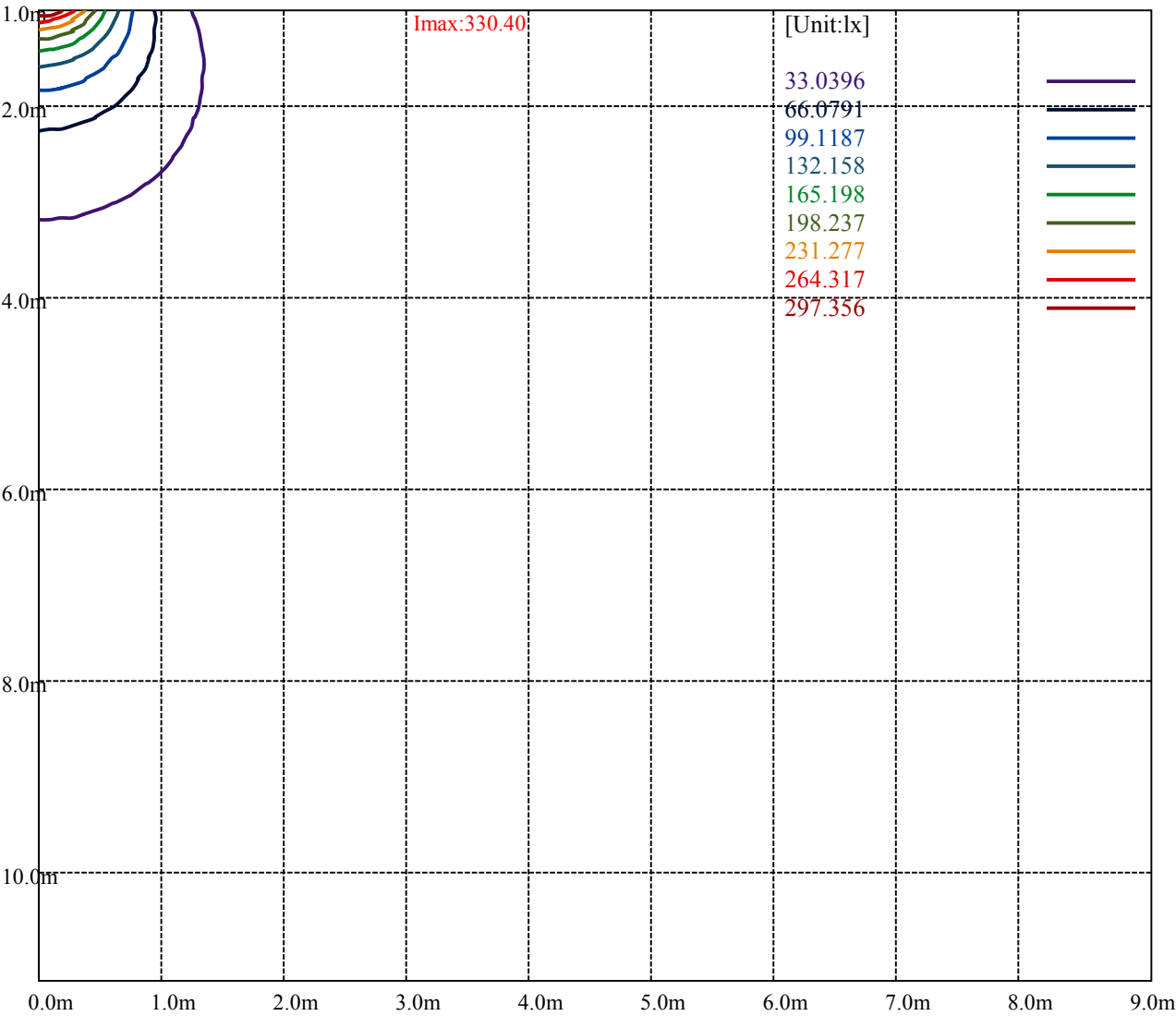


Max , Ave

Beam angle of C15 plane 108.11



(10%Emax) 8.2599	—
(20%Emax) 16.51978	—
(30%Emax) 24.77967	—
(40%Emax) 33.0395	—
(50%Emax) 41.2995	—
(60%Emax) 49.55925	—
(70%Emax) 57.81925	—
(80%Emax) 66.07925	—
(90%Emax) 74.339	—



Luminance Limiting Curve(no luminous side)

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Luminance Table

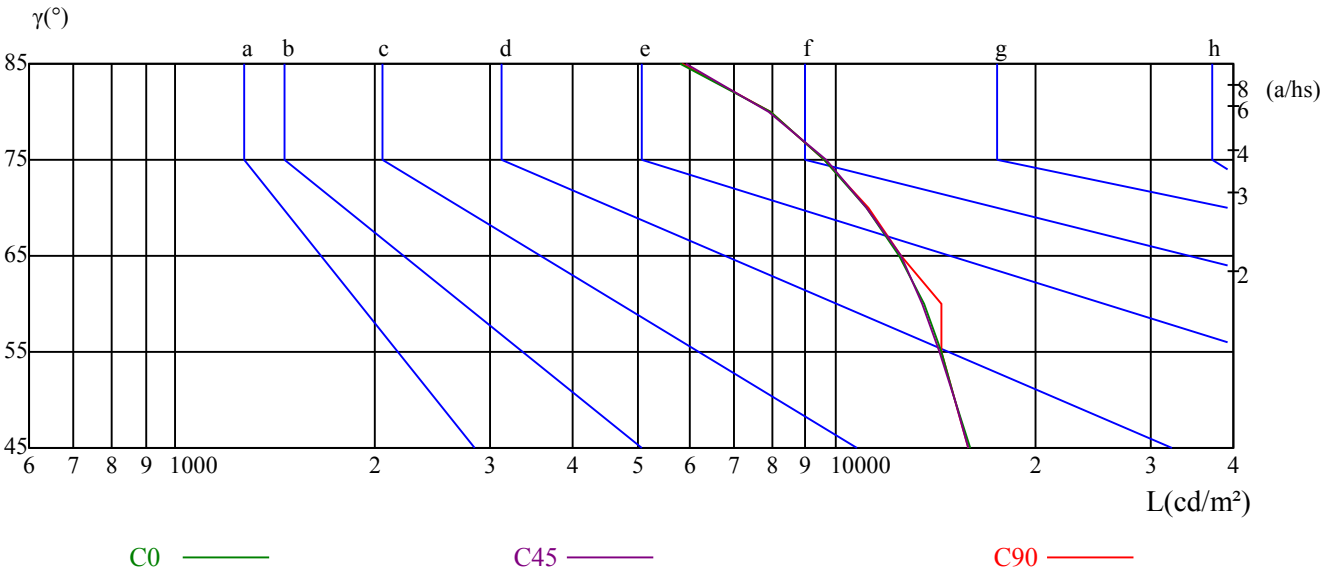
γ	45	50	55	60	65	70	75	80	85
C0	15943	15111	14426	13581	12472	11098	9635	7981	5819
C45	15912	15140	14391	13554	12522	11165	9652	7914	5931
C90	15899	15128	14410	14489	12547	11196	9628	7962	5867

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
17338	17441	17407	16175	16164	16204	17916	18064	18261

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	COEFFCIENTS 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	0.21

Intensity data(cd)

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C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	330.40	328.77	323.99	315.69	305.05	289.90	271.77	250.84	228.38
15.0	330.40	328.49	323.24	315.27	303.86	289.64	270.17	250.33	228.51
30.0	330.40	327.94	322.68	314.78	302.97	288.07	270.00	248.93	227.04
45.0	330.40	328.12	322.93	314.28	303.17	287.51	269.85	249.09	227.24
60.0	330.40	328.66	322.99	314.77	303.25	288.35	270.17	249.33	227.30
75.0	330.40	328.75	323.08	314.66	303.59	288.76	270.65	249.15	228.74
90.0	330.40	328.19	324.06	315.16	304.60	290.28	272.01	251.81	229.78
105.0	330.40	329.29	324.69	316.68	306.55	291.09	274.61	253.62	232.17
120.0	330.40	330.21	325.69	318.58	308.51	293.92	276.38	256.43	234.36
135.0	330.40	330.49	326.51	319.30	309.87	295.27	278.26	257.83	236.75
150.0	330.40	329.10	326.24	320.24	300.38	296.69	280.72	260.49	238.05
165.0	330.40	329.75	327.72	321.25	311.92	297.88	282.37	261.95	239.14
180.0	330.40	328.50	322.91	315.51	303.43	288.00	269.33	247.32	225.31
195.0	330.40	329.22	324.06	316.81	304.95	289.46	270.71	249.06	226.51
210.0	330.40	328.94	324.04	316.68	305.06	289.62	270.46	250.11	227.59
225.0	330.40	328.67	324.20	317.01	305.91	289.97	270.94	250.19	227.06
240.0	330.40	329.76	324.91	317.33	305.54	289.63	271.26	248.96	227.58
255.0	330.40	328.84	323.99	315.94	303.33	288.86	269.64	247.59	225.45
270.0	330.40	328.65	324.24	315.62	303.68	287.07	268.70	245.94	224.46
285.0	330.40	328.92	322.94	314.65	302.04	285.56	266.42	244.14	241.10
300.0	330.40	328.27	322.92	313.50	310.91	283.95	264.19	241.93	219.12
315.0	330.40	327.81	321.80	311.91	299.52	281.22	262.36	239.62	217.34
330.0	330.40	326.70	319.50	310.27	296.51	279.15	259.57	236.85	215.25
345.0	330.40	325.41	318.94	308.69	294.19	278.02	257.24	235.63	213.37
360.0	330.40	328.77	323.99	315.69	305.05	289.90	271.77	250.84	228.38
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	207.64	184.18	163.53	140.26	114.91	88.75	65.30	43.20	23.90
15.0	206.32	184.13	162.66	139.66	115.93	88.40	64.76	42.84	23.46
30.0	204.98	184.91	163.11	141.04	116.07	90.00	65.03	43.96	24.25
45.0	205.39	184.18	162.69	140.84	117.72	90.59	66.92	44.52	24.67
60.0	206.28	183.80	163.96	142.39	118.54	93.04	68.09	46.70	25.50
75.0	206.51	184.92	163.87	142.46	120.04	93.60	70.36	47.94	27.45
90.0	207.38	185.72	165.24	143.76	120.72	96.12	71.88	50.49	29.84
105.0	209.89	187.43	165.89	144.25	122.71	97.21	74.47	52.01	31.39
120.0	212.75	188.65	167.97	146.36	123.74	99.64	75.63	53.56	33.98
135.0	214.01	191.73	169.45	147.54	124.71	101.97	78.02	55.74	35.31
150.0	215.52	192.90	172.12	149.68	126.88	103.14	79.32	56.88	37.31
165.0	218.08	195.63	172.73	150.56	127.93	104.93	81.01	58.75	37.96
180.0	202.58	179.67	157.40	134.67	110.67	86.50	63.59	43.48	24.17
195.0	203.06	180.32	158.68	134.86	112.03	87.40	64.21	43.02	23.91
210.0	204.25	181.64	158.66	135.50	111.07	86.37	64.21	42.05	23.98
225.0	205.12	181.27	159.14	135.93	111.16	86.40	62.73	41.52	22.67
240.0	204.00	181.60	158.48	134.90	109.58	84.54	61.87	40.67	21.93
255.0	202.57	180.89	156.73	133.86	108.61	83.08	59.38	54.35	20.50
270.0	201.69	178.56	155.33	149.55	106.22	80.69	56.92	35.99	18.64
285.0	199.21	176.29	152.82	128.88	104.30	77.24	55.05	34.25	17.58
300.0	196.59	174.99	151.90	127.34	101.21	75.63	52.17	31.58	16.07
315.0	194.32	171.95	149.02	124.43	99.38	73.68	50.57	30.14	15.35
330.0	191.42	170.65	147.65	122.72	96.50	71.01	48.20	28.16	14.77
345.0	190.55	168.11	145.66	120.72	94.40	70.29	47.75	27.80	14.22
360.0	207.64	184.18	163.53	140.26	114.91	88.75	65.30	43.20	23.90

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	12.63	12.27	12.27	13.89	16.06	18.13	19.75	20.84	21.38
15.0	12.68	12.14	12.23	13.95	16.39	18.39	20.02	21.01	21.56
30.0	12.71	12.26	12.26	13.99	16.53	18.62	20.25	21.34	21.80
45.0	12.84	12.20	12.29	14.11	16.57	18.85	20.48	21.49	21.94
60.0	13.34	12.34	12.43	14.17	16.63	18.92	20.56	21.75	22.21
75.0	13.72	12.26	12.35	13.91	16.65	19.03	20.68	21.87	22.42
90.0	14.78	12.30	12.49	13.86	16.52	18.91	20.75	22.03	22.49
105.0	15.56	12.24	12.61	13.72	16.29	18.87	20.71	22.00	22.65
120.0	16.90	12.00	12.65	13.48	16.07	18.65	20.59	21.88	22.62
135.0	17.66	12.11	12.66	13.22	15.72	18.30	20.43	21.91	22.56
150.0	19.11	12.19	12.65	13.11	15.33	18.19	20.13	21.52	22.35
165.0	19.58	12.28	12.47	13.02	15.24	17.73	19.86	21.34	22.17
180.0	13.26	12.90	13.08	14.79	17.41	19.57	21.02	21.83	22.10
195.0	13.13	12.77	12.86	14.58	17.30	19.38	20.74	21.56	21.83
210.0	13.17	12.81	12.81	14.62	17.07	19.16	20.43	21.25	21.71
225.0	13.02	12.84	12.84	14.48	17.03	18.94	19.30	21.03	21.40
240.0	12.89	12.80	12.89	14.53	16.91	18.83	20.11	20.93	21.20
255.0	12.72	12.72	12.90	14.73	16.93	18.76	20.04	20.77	21.14
270.0	12.58	12.76	12.94	14.87	17.08	18.73	20.10	20.75	21.02
285.0	12.24	12.80	12.98	15.19	17.21	18.96	20.16	20.81	21.08
300.0	12.37	12.65	13.11	15.24	17.45	19.21	20.41	20.96	21.05
315.0	12.39	12.66	13.31	15.53	17.66	19.41	20.43	20.98	21.17
330.0	12.10	12.56	13.39	15.70	17.91	19.67	20.59	21.15	21.24
345.0	12.28	12.47	13.76	15.89	18.10	19.77	20.97	21.34	21.34
360.0	12.63	12.27	12.27	13.89	16.06	18.13	19.75	20.84	21.38
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	21.56	21.29	20.57	19.48	17.50	14.70	10.73	6.58	3.16
15.0	21.74	21.65	20.65	19.29	17.39	14.49	10.78	6.34	3.17
30.0	21.89	21.71	20.52	19.34	17.53	14.26	10.72	6.54	3.09
45.0	22.03	21.67	20.94	19.76	17.66	14.38	10.65	6.56	3.28
60.0	22.30	21.93	21.39	20.20	18.19	14.71	11.06	7.04	3.47
75.0	22.42	22.14	21.41	20.40	18.30	15.10	11.35	7.23	3.66
90.0	22.68	22.40	21.76	20.66	18.64	15.51	12.03	7.80	4.04
105.0	22.65	22.46	21.91	20.81	19.06	16.11	12.43	8.38	4.33
120.0	22.72	22.62	22.07	21.05	19.21	16.44	12.84	8.31	4.71
135.0	22.65	22.56	22.09	21.17	19.14	16.64	13.03	8.32	4.71
150.0	22.62	22.53	22.07	21.42	19.85	15.70	12.84	8.03	4.80
165.0	22.45	22.54	22.08	21.34	19.67	16.81	12.01	8.22	4.80
180.0	22.10	21.65	21.11	19.84	17.32	12.27	8.93	4.87	2.53
195.0	21.92	21.65	20.83	19.74	16.94	15.94	8.42	5.16	2.54
210.0	21.71	21.52	20.71	19.44	17.35	13.08	9.26	5.18	2.36
225.0	21.49	21.21	20.67	19.57	16.66	13.47	9.38	5.28	2.28
240.0	21.30	21.11	20.56	19.38	16.91	13.53	9.23	5.30	2.28
255.0	21.14	20.86	20.31	19.12	16.65	13.45	9.42	5.12	2.29
270.0	21.02	20.84	20.20	18.91	16.62	13.31	9.09	4.87	2.20
285.0	20.90	20.71	19.98	18.60	16.20	12.89	8.65	4.60	2.12
300.0	21.15	20.78	19.85	18.38	15.97	12.37	8.13	4.43	2.03
315.0	21.17	20.62	19.88	18.12	15.62	11.93	8.04	4.16	2.03
330.0	21.15	20.59	19.58	18.01	15.24	11.54	7.39	3.69	2.03
345.0	21.15	20.60	19.49	17.55	14.69	11.36	6.84	3.51	2.03
360.0	21.56	21.29	20.57	19.48	17.50	14.70	10.73	6.58	3.16

Intensity data(cd)

C/ γ (°)	180.0
0.0	2.16
15.0	1.99
30.0	1.91
45.0	1.91
60.0	1.92
75.0	2.01
90.0	2.11
105.0	2.03
120.0	2.22
135.0	2.22
150.0	2.31
165.0	2.31
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	2.16