
AFX

Client:

LumCAT: ELZV2402LAJD4BK

Luminaire: LED Lamp

Report No:

Ballast type:

Test No: LCZP25070005

Voltage(V): 119.980

LampCAT:

Current(A): 0.139

Lamp flux(lm): 1170.3

Power (W): 16.480

Number of Lamps: 1

PF: 0.987

Length(mm): 600

Width(mm): 15

Phm Type: C

Height(mm): 10

Photometric Results

Lumens(lm): 1170.33, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 71.01

Central intensity(cd): 346.447, Maximum intensity(cd): 350.253

Angle of maximum intensity: C=90.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=108.8

[C90/270]Total=123.5

Field angle(10%Imax): [C0/180]Total=159.0

[C90/270]Total=233.2

Maximum s/h(1/2): C0_180=1.23 C90_270=1.35

Maximum s/h(1/4): C0_180=1.35 C90_270=1.49

Up flux rate of lamp(%): 9.83%

Down flux rate of lamp(%): 90.17%

Up flux rate of LUM(%): 9.83%

Down flux rate of LUM(%): 90.17%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 63.897%

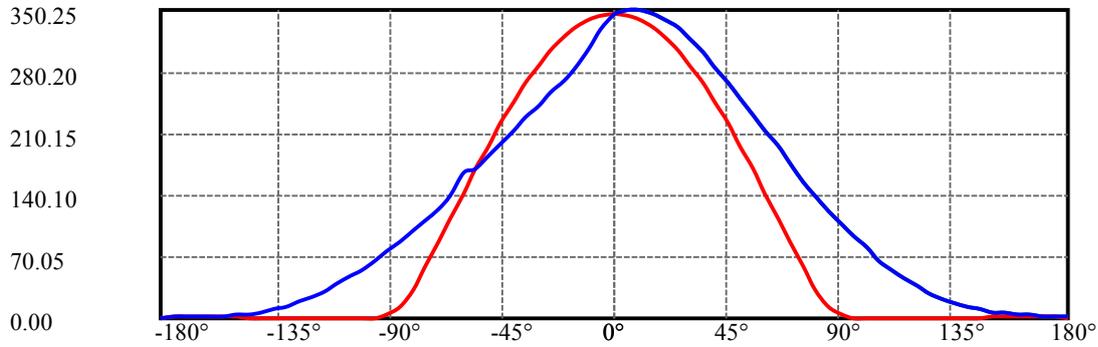
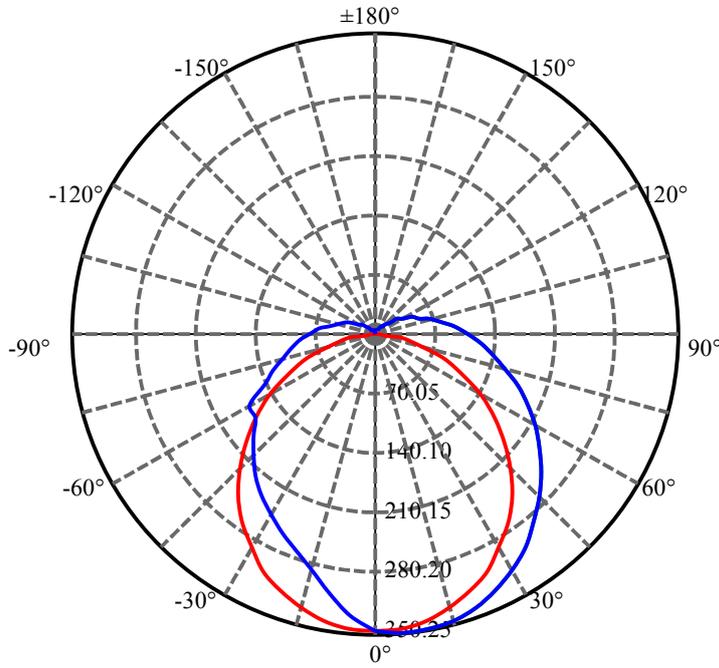
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	346.447	0.000	0	0.00%	0.00%
5.0	341.843	8.228	8.228	0.70%	0.70%
10.0	332.629	24.128	32.356	2.06%	2.76%
15.0	320.471	38.741	71.098	3.31%	6.08%
20.0	306.985	51.711	122.809	4.42%	10.49%
25.0	292.061	62.829	185.638	5.37%	15.86%
30.0	275.998	71.888	257.526	6.14%	22.00%
35.0	258.640	78.729	336.255	6.73%	28.73%
40.0	240.034	83.200	419.455	7.11%	35.84%
45.0	219.437	85.075	504.53	7.27%	43.11%
50.0	198.432	84.436	588.966	7.21%	50.33%
55.0	177.252	81.686	670.652	6.98%	57.30%
60.0	156.518	77.150	747.802	6.59%	63.90%
65.0	135.157	70.907	818.709	6.06%	69.96%
70.0	114.966	63.333	882.042	5.41%	75.37%
75.0	96.028	55.150	937.192	4.71%	80.08%
80.0	79.580	46.988	984.18	4.01%	84.09%
85.0	64.449	39.136	1023.316	3.34%	87.44%
90.0	52.239	31.950	1055.267	2.73%	90.17%
95.0	42.726	26.002	1081.269	2.22%	92.39%
100.0	35.079	21.141	1102.41	1.81%	94.20%
105.0	28.276	16.952	1119.362	1.45%	95.65%
110.0	22.692	13.322	1132.684	1.14%	96.78%
115.0	17.926	10.285	1142.969	0.88%	97.66%
120.0	14.221	7.815	1150.784	0.67%	98.33%
125.0	10.977	5.824	1156.608	0.50%	98.83%
130.0	8.398	4.213	1160.821	0.36%	99.19%
135.0	6.295	2.969	1163.79	0.25%	99.44%
140.0	4.772	2.049	1165.839	0.18%	99.62%
145.0	3.817	1.433	1167.272	0.12%	99.74%
150.0	3.143	1.025	1168.297	0.09%	99.83%
155.0	2.704	0.740	1169.037	0.06%	99.89%
160.0	2.341	0.529	1169.566	0.05%	99.94%
165.0	2.079	0.364	1169.93	0.03%	99.97%
170.0	1.847	0.233	1170.163	0.02%	99.99%
175.0	1.802	0.131	1170.294	0.01%	100.00%
180.0	0.890	0.032	1170.326	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	257.53	22.00%	22.00%
0-40	419.46	35.84%	35.84%
0-60	747.80	63.90%	63.90%
0-90	1055.27	90.17%	90.17%
0-120	1150.78	98.33%	98.33%
0-180	1170.33	100.00%	100.00%
60-90	307.46	26.27%	26.27%
90-120	95.52	8.16%	8.16%
90-130	105.55	9.02%	9.02%
90-150	113.03	9.66%	9.66%
90-180	115.03	9.83%	9.83%
0-74.92	936.26	80.00%	80.00%

ZONAL LUMEN SUMMARY

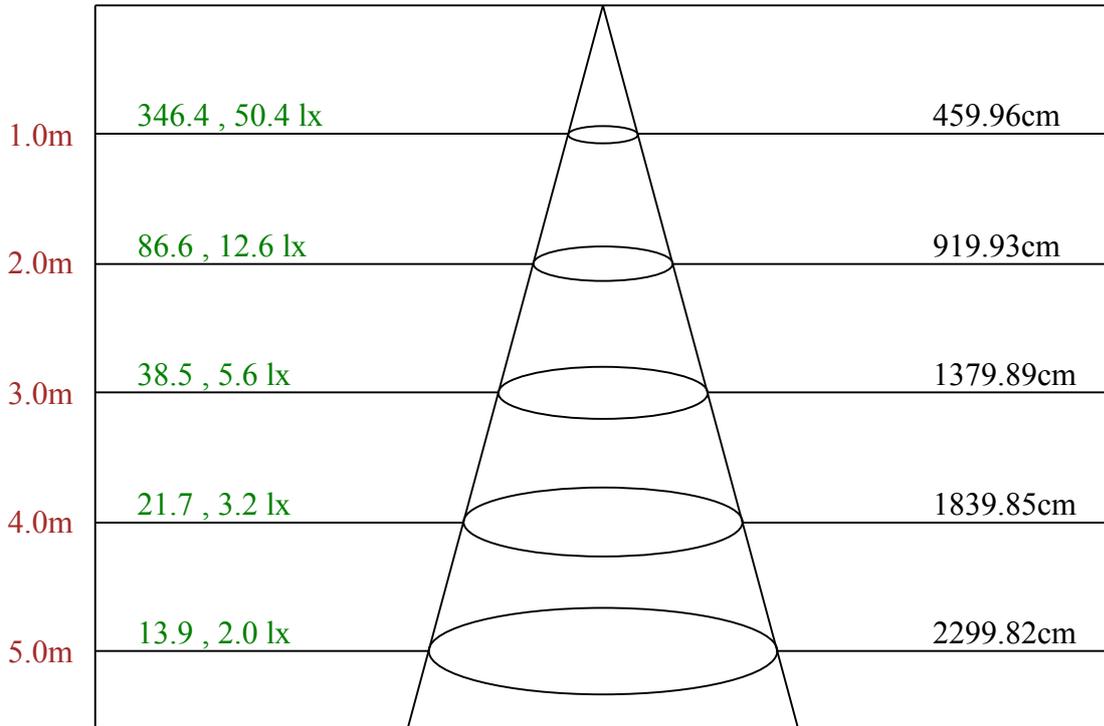
0-10	32.36
10-20	90.45
20-30	134.72
30-40	161.93
40-50	169.51
50-60	158.84
60-70	134.24
70-80	102.14
80-90	71.09
90-100	47.14
100-110	30.27
110-120	18.10
120-130	10.04
130-140	5.02
140-150	2.46
150-160	1.27
160-170	0.60
170-180	0.13



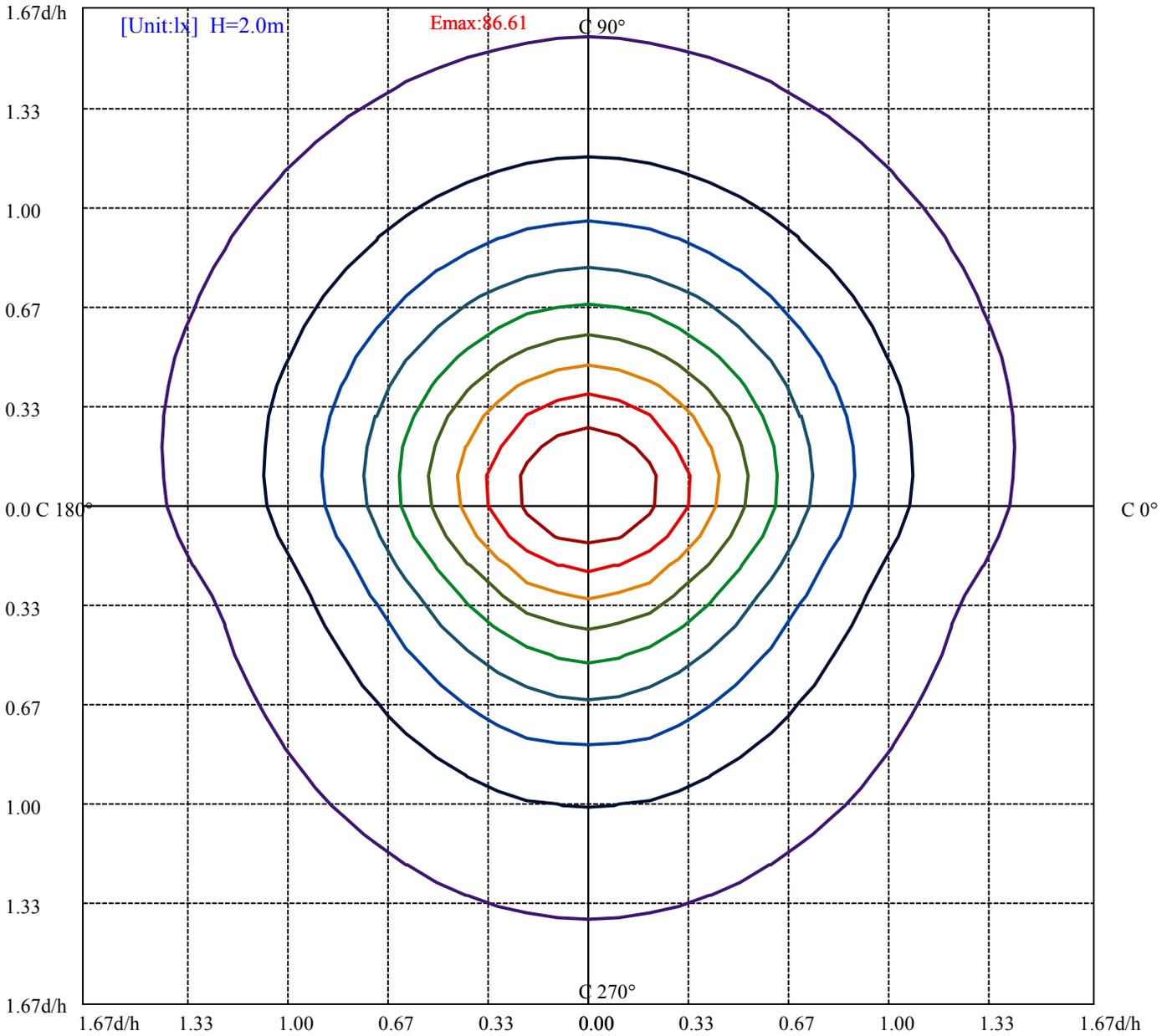
C90(Max): ———
 C0/C180: ———
 C90/C270: ———

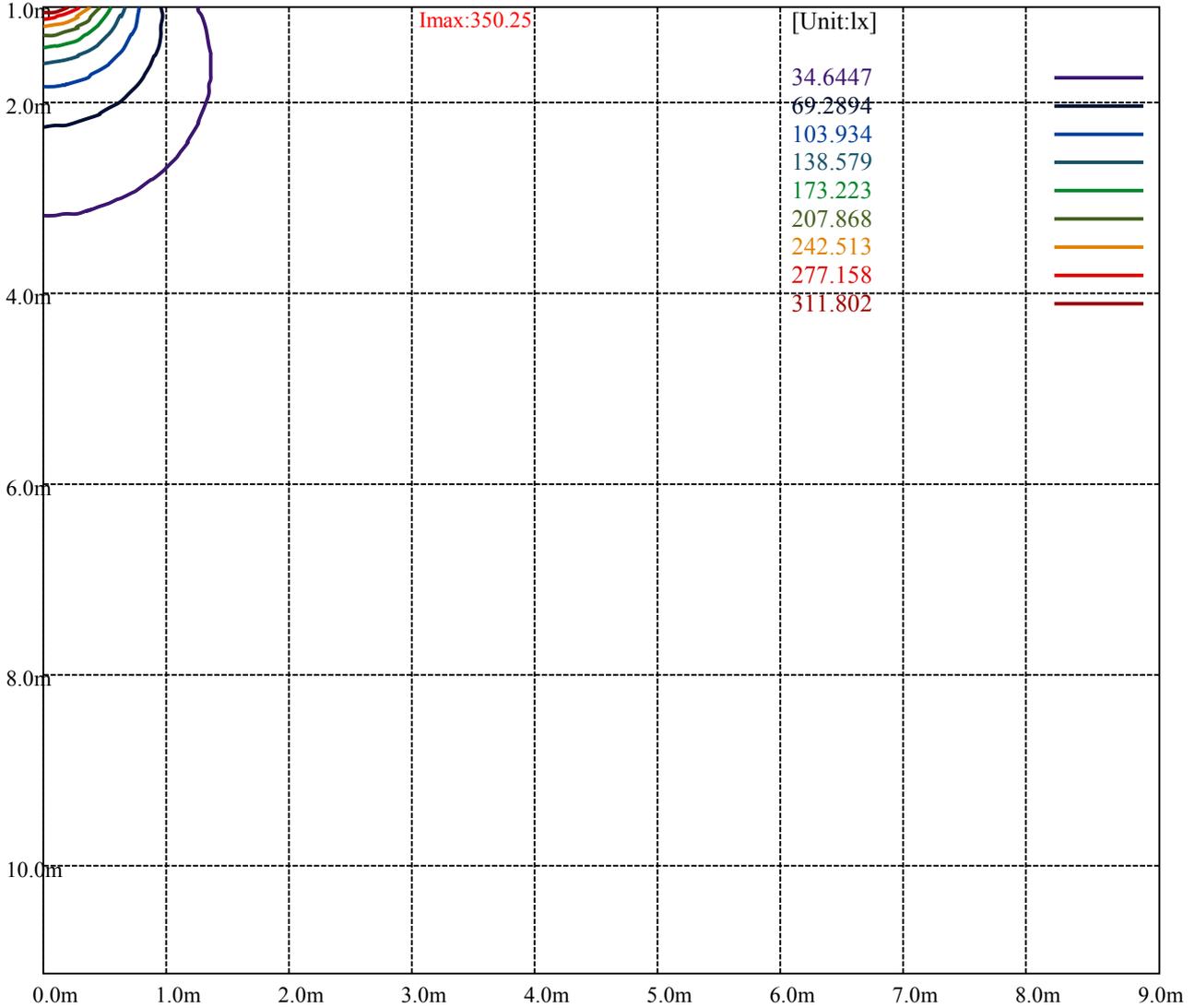
Field angle(10%Imax):C0/180Left:79.5 Right:79.5
 :C90/270Left:117.2 Right:116.0

Beam Angle(50%Imax):C0/180Left:54.4 Right:54.4
 :C90/270Left:58.3 Right:65.2



Max , Ave Beam angle of C90 plane 133.00





Luminance Table

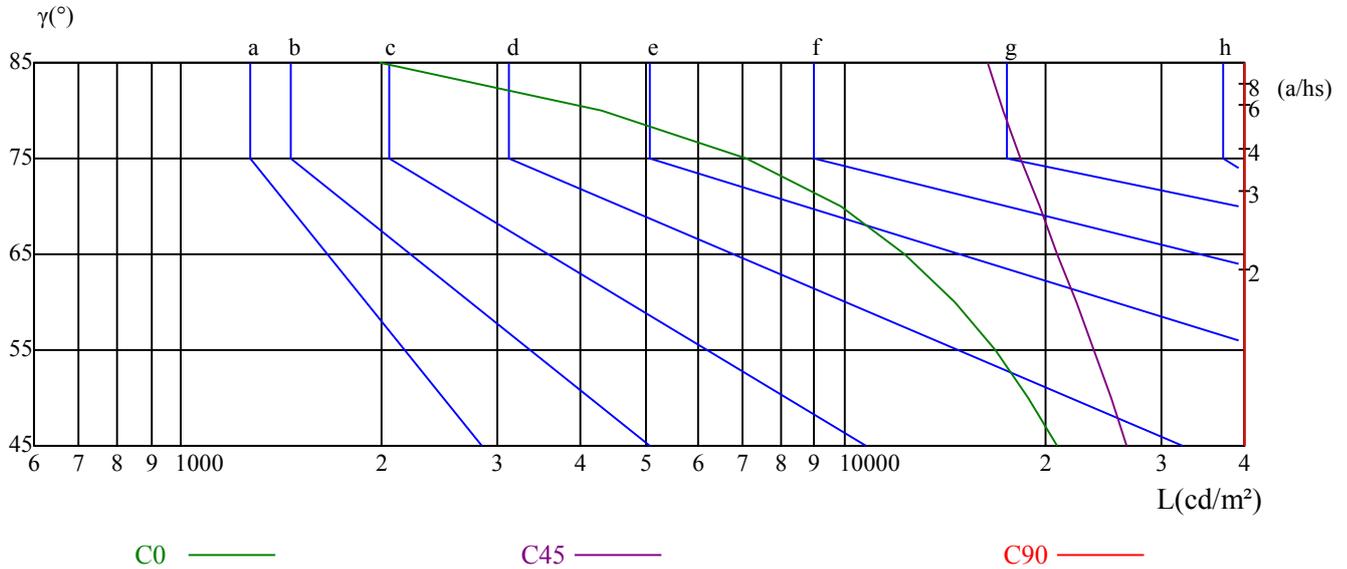
γ	45	50	55	60	65	70	75	80	85
C0	20885	18892	16889	14680	12330	9878	7108	4289	1994
C45	26538	25220	23748	22294	20866	19634	18412	17278	16435
C90	41417	42270	43741	46173	49457	54641	62703	80844	130814

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
29959	43994	35381	24795	57189	42669	17184	133148	88958

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	0.99	0.94	0.89	0.95	0.91	0.87	0.89	0.86	0.82	0.84	0.81	0.78	0.79	0.76	0.74	0.71
2	0.85	0.78	0.71	0.82	0.75	0.70	0.77	0.71	0.66	0.72	0.68	0.63	0.68	0.64	0.61	0.58
3	0.74	0.66	0.59	0.72	0.64	0.57	0.67	0.61	0.55	0.63	0.58	0.53	0.60	0.55	0.51	0.48
4	0.66	0.56	0.49	0.64	0.55	0.48	0.60	0.52	0.47	0.56	0.50	0.45	0.53	0.48	0.43	0.41
5	0.58	0.49	0.42	0.57	0.48	0.41	0.53	0.46	0.40	0.50	0.44	0.39	0.47	0.42	0.37	0.35
6	0.52	0.43	0.37	0.51	0.42	0.36	0.48	0.41	0.35	0.46	0.39	0.34	0.43	0.37	0.33	0.30
7	0.47	0.39	0.32	0.46	0.38	0.32	0.44	0.36	0.31	0.41	0.35	0.30	0.39	0.33	0.29	0.27
8	0.43	0.35	0.29	0.42	0.34	0.28	0.40	0.33	0.28	0.38	0.31	0.27	0.36	0.30	0.26	0.24
9	0.40	0.31	0.26	0.39	0.31	0.25	0.37	0.30	0.25	0.35	0.29	0.24	0.33	0.28	0.23	0.22
10	0.37	0.29	0.23	0.36	0.28	0.23	0.34	0.27	0.22	0.32	0.26	0.22	0.31	0.25	0.21	0.19

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	346.45	347.34	345.20	338.95	330.20	316.90	301.63	283.69	262.45
15.0	346.45	348.23	346.45	341.09	332.34	320.28	305.09	288.39	267.85
30.0	346.45	348.86	347.78	343.15	334.49	324.06	310.05	293.11	272.77
45.0	346.45	350.38	349.84	345.82	338.23	326.80	313.22	296.43	278.21
60.0	346.45	349.83	349.30	345.73	338.34	327.82	314.99	299.58	281.49
75.0	346.45	348.96	348.69	344.65	337.47	327.60	315.21	301.03	284.34
90.0	346.45	350.25	349.44	346.54	339.02	329.86	316.72	302.04	284.73
105.0	346.45	348.87	347.71	343.12	335.66	325.32	312.28	296.99	280.90
120.0	346.45	348.60	347.35	342.05	333.60	322.73	308.90	292.28	273.87
135.0	346.45	346.63	344.48	339.01	330.05	318.13	304.06	285.78	267.23
150.0	346.45	346.54	343.82	337.57	318.27	314.47	299.79	281.85	261.74
165.0	346.45	346.54	342.84	335.63	324.19	311.75	294.08	275.61	252.35
180.0	346.45	341.72	334.04	322.43	308.24	291.82	272.18	252.18	228.44
195.0	346.45	341.18	331.17	315.54	297.68	276.87	253.20	229.09	202.83
210.0	346.45	337.71	322.54	302.83	280.53	256.89	233.88	211.31	191.78
225.0	346.45	333.50	315.28	293.93	271.51	250.08	233.38	215.33	195.95
240.0	346.45	331.39	309.29	285.68	265.63	248.16	233.82	218.40	201.92
255.0	346.45	330.38	305.88	284.16	265.40	252.03	238.20	224.56	210.38
270.0	346.45	329.32	306.94	285.01	269.42	255.92	241.51	228.91	214.14
285.0	346.45	328.46	306.79	284.05	266.60	253.20	240.26	227.31	223.98
300.0	346.45	331.72	310.25	288.24	283.48	253.21	238.48	222.94	207.76
315.0	346.45	334.53	316.78	295.82	273.77	253.25	235.77	219.37	201.45
330.0	346.45	339.92	326.06	307.85	287.56	265.45	242.44	220.79	200.22
345.0	346.45	343.38	335.18	322.47	305.98	286.87	264.79	240.37	214.05
360.0	346.45	347.34	345.20	338.95	330.20	316.90	301.63	283.69	262.45
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	239.59	214.96	190.68	163.72	135.51	106.59	78.82	48.92	24.91
15.0	245.08	220.43	195.06	169.16	142.01	112.71	86.54	61.27	39.66
30.0	249.93	226.12	201.68	177.68	152.17	127.46	103.92	83.76	63.87
45.0	256.06	234.63	212.30	189.79	166.66	145.49	124.86	104.94	87.62
60.0	262.15	241.39	221.52	200.40	180.62	160.39	140.79	122.61	106.13
75.0	267.28	248.53	229.23	209.39	189.83	171.34	152.49	134.72	117.76
90.0	267.97	249.39	231.18	213.78	194.84	175.90	155.14	138.29	122.16
105.0	262.73	243.94	224.88	205.19	186.67	167.06	149.62	132.00	114.64
120.0	254.47	234.53	213.78	194.11	173.45	154.05	134.91	118.03	100.24
135.0	244.91	225.20	202.08	178.78	156.56	135.85	115.60	97.05	80.56
150.0	239.99	215.35	190.07	165.07	140.88	117.05	94.13	73.66	56.80
165.0	231.99	206.21	181.33	154.39	126.27	98.60	73.81	50.11	30.46
180.0	203.44	177.29	149.70	120.96	92.39	65.61	36.69	15.18	2.05
195.0	176.75	147.72	123.07	96.73	72.25	49.12	31.88	20.36	12.24
210.0	171.08	148.60	126.48	105.25	86.61	69.40	56.82	43.80	33.54
225.0	176.93	159.16	139.15	121.02	105.30	91.19	77.35	65.11	54.84
240.0	184.81	167.97	151.39	135.89	120.83	107.20	92.85	81.71	70.48
255.0	194.67	178.97	164.07	148.45	134.27	119.01	106.18	102.86	81.59
270.0	198.64	184.69	170.01	166.20	139.83	124.88	111.28	99.14	86.72
285.0	196.83	181.00	165.09	149.89	135.41	120.94	106.46	94.23	82.36
300.0	191.32	175.06	156.65	140.30	124.58	110.03	96.47	82.91	72.31
315.0	183.89	165.16	145.17	127.70	109.78	94.72	79.76	67.75	56.10
330.0	179.11	157.01	136.89	115.42	94.31	76.46	60.61	47.84	36.33
345.0	186.83	159.07	132.58	107.16	82.74	58.13	37.67	23.70	13.43
360.0	239.59	214.96	190.68	163.72	135.51	106.59	78.82	48.92	24.91

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	5.98	0.27	0.27	0.18	0.09	0.09	0.09	0.27	0.27
15.0	23.31	12.77	7.32	4.38	2.86	2.23	1.88	1.61	1.52
30.0	48.97	36.30	26.67	19.27	14.27	10.44	7.67	5.89	4.55
45.0	72.43	59.48	47.07	37.96	29.21	22.60	17.33	13.40	10.27
60.0	90.98	77.26	64.16	52.66	43.13	34.04	27.18	21.12	16.40
75.0	102.59	88.41	75.84	63.55	52.06	42.18	33.93	26.75	21.00
90.0	107.57	92.80	79.57	65.70	55.01	45.67	36.43	29.18	22.47
105.0	99.72	86.14	73.82	61.68	51.07	41.36	33.27	26.26	20.95
120.0	86.32	72.49	60.90	50.21	41.05	32.43	26.05	20.39	15.63
135.0	66.05	53.68	43.01	34.41	26.79	20.88	16.04	12.37	9.59
150.0	41.86	31.44	23.01	16.85	12.32	9.06	6.98	5.44	4.26
165.0	16.94	9.19	5.50	3.42	2.43	1.98	1.71	1.53	1.44
180.0	0.98	0.80	0.80	0.80	0.62	0.62	0.54	0.54	0.54
195.0	6.25	3.84	2.59	2.05	1.52	1.34	1.16	0.89	0.54
210.0	23.55	17.75	12.67	8.92	6.69	4.91	3.92	2.59	1.87
225.0	44.30	36.35	27.87	22.42	16.79	12.41	11.88	7.41	5.36
240.0	60.59	50.43	47.85	33.86	27.89	22.10	16.40	12.74	9.45
255.0	70.90	60.31	49.63	42.63	35.27	28.18	22.53	17.23	12.57
270.0	76.03	65.34	55.28	46.94	38.24	30.90	24.11	18.85	14.05
285.0	71.57	60.96	52.42	42.98	35.61	28.59	22.12	16.54	12.32
300.0	60.81	51.83	42.13	35.03	28.02	20.12	15.81	12.13	8.89
315.0	44.90	35.85	28.23	22.58	15.68	12.01	9.50	6.90	5.20
330.0	24.46	17.85	12.68	8.43	6.61	4.71	3.71	2.63	1.81
345.0	6.67	3.88	2.61	1.71	1.35	1.35	1.08	0.81	0.63
360.0	5.98	0.27	0.27	0.18	0.09	0.09	0.09	0.27	0.27
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.36	0.62	1.16	1.52	1.87	1.96	1.96	1.70	1.79
15.0	1.34	1.34	1.70	1.88	1.96	1.96	1.96	1.70	1.70
30.0	3.66	3.21	3.12	3.03	2.85	2.59	2.23	1.78	1.78
45.0	7.68	5.98	5.09	4.29	3.84	3.30	2.77	2.14	1.79
60.0	12.21	9.36	7.40	5.79	4.72	3.92	3.12	2.41	1.87
75.0	15.98	11.94	9.15	7.00	5.56	4.40	3.50	2.60	1.97
90.0	17.22	12.96	9.97	7.61	5.80	4.53	3.62	2.72	1.99
105.0	15.74	11.87	9.08	6.92	5.48	4.41	3.51	2.61	2.07
120.0	11.86	8.98	7.19	5.66	4.76	3.86	3.23	2.52	2.07
135.0	7.35	5.74	4.84	4.21	3.67	3.32	2.78	2.06	1.79
150.0	3.53	3.08	2.99	2.90	2.81	2.54	2.36	1.81	1.72
165.0	1.26	1.26	1.53	1.71	1.80	1.89	1.89	1.71	1.71
180.0	0.36	0.45	0.62	0.71	0.98	1.16	1.43	1.52	1.79
195.0	0.45	0.45	0.54	0.80	0.98	1.07	1.34	1.52	1.79
210.0	1.43	1.34	1.07	1.07	1.07	1.16	1.34	1.52	1.69
225.0	3.48	2.59	1.96	1.70	1.61	1.34	1.34	1.52	1.79
240.0	6.68	4.63	3.30	2.58	2.05	1.60	1.43	1.51	1.78
255.0	9.24	6.55	4.58	3.32	2.51	1.97	1.53	1.53	1.71
270.0	10.24	7.16	5.07	3.62	2.72	1.99	1.54	1.63	1.72
285.0	9.17	6.38	4.50	3.15	2.34	1.89	1.53	1.62	1.71
300.0	6.56	4.58	3.14	2.52	1.98	1.62	1.44	1.53	1.80
315.0	3.32	2.42	1.97	1.61	1.43	1.34	1.34	1.52	1.79
330.0	1.45	1.18	1.00	1.00	1.09	1.18	1.36	1.63	1.72
345.0	0.54	0.45	0.63	0.81	0.99	1.17	1.35	1.53	1.71
360.0	0.36	0.62	1.16	1.52	1.87	1.96	1.96	1.70	1.79

Intensity data(cd)

C/ γ (°)	180.0
0.0	1.70
15.0	1.79
30.0	1.78
45.0	1.88
60.0	1.78
75.0	1.71
90.0	1.81
105.0	1.80
120.0	1.80
135.0	1.70
150.0	1.81
165.0	1.80
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	1.70