
乐达凯

Client:

LumCAT: FTNW0448LAJUDBK-3000K

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 119.990

LampCAT:

Current(A): 0.337

Lamp flux(lm): 2103.7

Power (W): 40.010

Number of Lamps: 1

PF: 0.991

Length(mm): 70

Width(mm): 45

Phm Type: C

Height(mm): 1130

Photometric Results

Lumens(lm): 2103.67, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 52.58

Central intensity(cd): 14.624, Maximum intensity(cd): 373.587

Angle of maximum intensity: C=15.0 γ =90.0

Beam Angle(50%Imax): [C0/180]Total=291.6

[C90/270]Total=114.5

Field angle(10%Imax): [C0/180]Total=343.6

[C90/270]Total=172.0

Maximum s/h(1/2): C0_180=6.99 C90_270=5.59

Maximum s/h(1/4): C0_180=6.51 C90_270=5.16

Up flux rate of lamp(%): 49.60%

Down flux rate of lamp(%): 50.40%

Up flux rate of LUM(%): 49.60%

Down flux rate of LUM(%): 50.40%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 19.124%

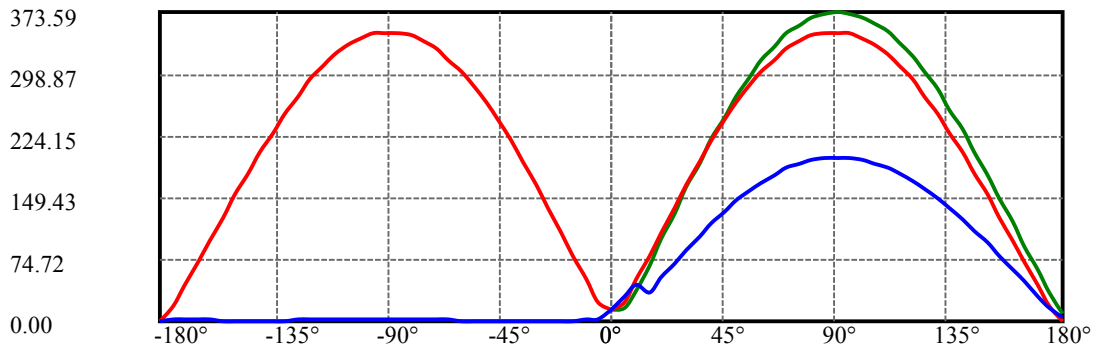
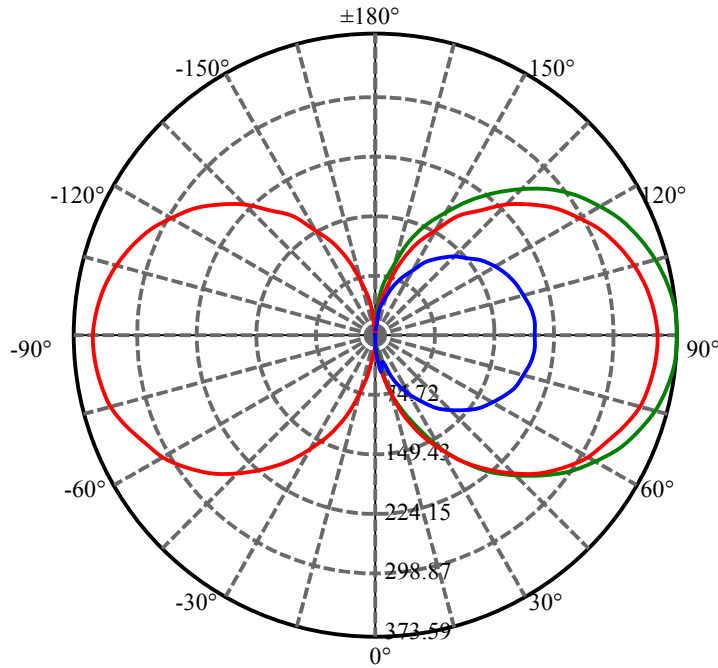
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	14.751	0.000	0	0.00%	0.00%
5.0	18.590	0.399	0.399	0.02%	0.02%
10.0	33.345	1.858	2.256	0.09%	0.11%
15.0	46.033	4.709	6.965	0.22%	0.33%
20.0	65.042	9.154	16.119	0.44%	0.77%
25.0	82.253	15.449	31.568	0.73%	1.50%
30.0	100.066	23.073	54.64	1.10%	2.60%
35.0	117.363	32.018	86.658	1.52%	4.12%
40.0	133.755	41.897	128.555	1.99%	6.11%
45.0	149.239	52.399	180.954	2.49%	8.60%
50.0	163.575	63.209	244.162	3.00%	11.61%
55.0	176.509	73.946	318.108	3.52%	15.12%
60.0	187.776	84.204	402.312	4.00%	19.12%
65.0	197.522	93.667	495.979	4.45%	23.58%
70.0	205.918	102.154	598.132	4.86%	28.43%
75.0	212.356	109.330	707.462	5.20%	33.63%
80.0	216.389	114.720	822.182	5.45%	39.08%
85.0	218.681	118.219	940.401	5.62%	44.70%
90.0	219.084	119.864	1060.265	5.70%	50.40%
95.0	216.991	119.401	1179.666	5.68%	56.08%
100.0	213.309	116.923	1296.588	5.56%	61.63%
105.0	208.184	112.780	1409.368	5.36%	67.00%
110.0	201.634	107.120	1516.488	5.09%	72.09%
115.0	193.642	100.086	1616.574	4.76%	76.85%
120.0	184.483	91.923	1708.497	4.37%	81.22%
125.0	172.943	82.618	1791.115	3.93%	85.14%
130.0	160.069	72.408	1863.523	3.44%	88.58%
135.0	145.908	61.827	1925.35	2.94%	91.52%
140.0	131.243	51.317	1976.667	2.44%	93.96%
145.0	115.120	41.104	2017.771	1.95%	95.92%
150.0	98.739	31.492	2049.263	1.50%	97.41%
155.0	82.044	22.878	2072.141	1.09%	98.50%
160.0	65.827	15.509	2087.65	0.74%	99.24%
165.0	48.190	9.397	2097.046	0.45%	99.69%
170.0	31.226	4.711	2101.757	0.22%	99.91%
175.0	15.828	1.683	2103.44	0.08%	99.99%
180.0	3.458	0.231	2103.671	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	54.64	2.60%	2.60%
0-40	128.56	6.11%	6.11%
0-60	402.31	19.12%	19.12%
0-90	1060.26	50.40%	50.40%
0-120	1708.50	81.22%	81.22%
0-180	2103.67	100.00%	100.00%
60-90	657.95	31.28%	31.28%
90-120	648.23	30.81%	30.81%
90-130	803.26	38.18%	38.18%
90-150	989.00	47.01%	47.01%
90-180	1043.18	49.59%	49.59%
0-118.61	1682.94	80.00%	80.00%

ZONAL LUMEN SUMMARY

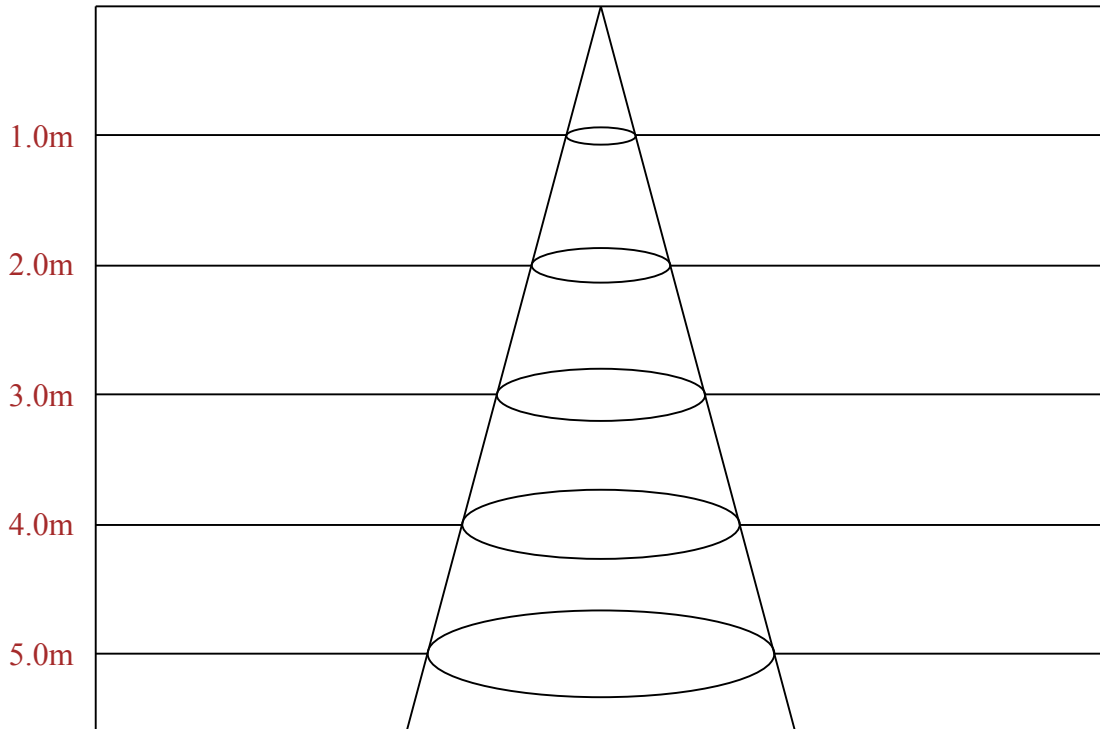
0-10	2.26
10-20	13.86
20-30	38.52
30-40	73.91
40-50	115.61
50-60	158.15
60-70	195.82
70-80	224.05
80-90	238.08
90-100	236.32
100-110	219.90
110-120	192.01
120-130	155.03
130-140	113.14
140-150	72.60
150-160	38.39
160-170	14.11
170-180	1.68



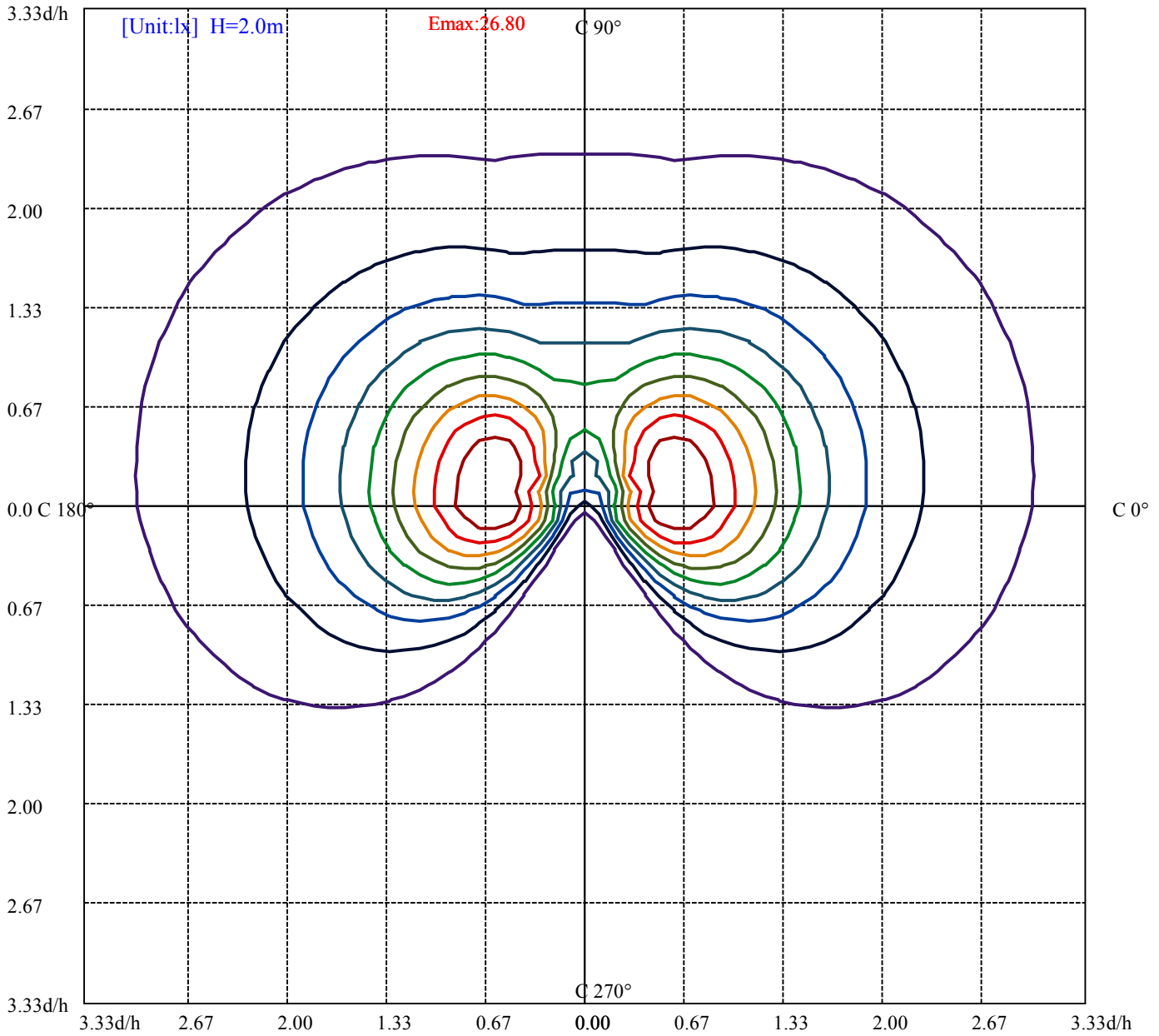
C15(Max): —
 C0/C180: —
 C90/C270: —

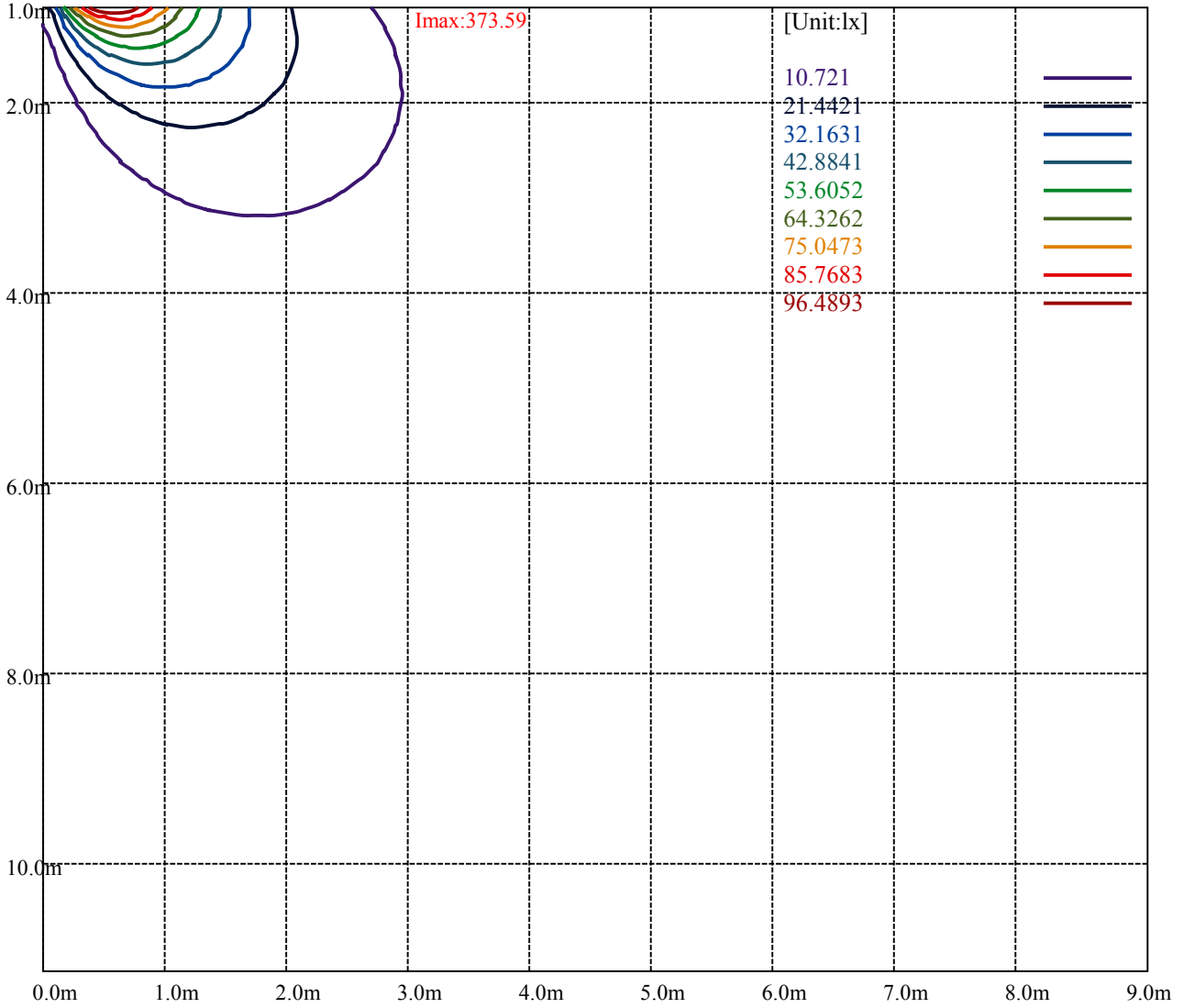
Field angle(10%Imax):C0/180Left:261.8 Right:81.8
 :C90/270Left:88.2 Right:83.8

Beam Angle(50%Imax):C0/180Left:235.8 Right:55.8
 :C90/270Left:56.0 Right:58.5



Max , Ave Beam angle of C15 plane 350.95





Luminance Table

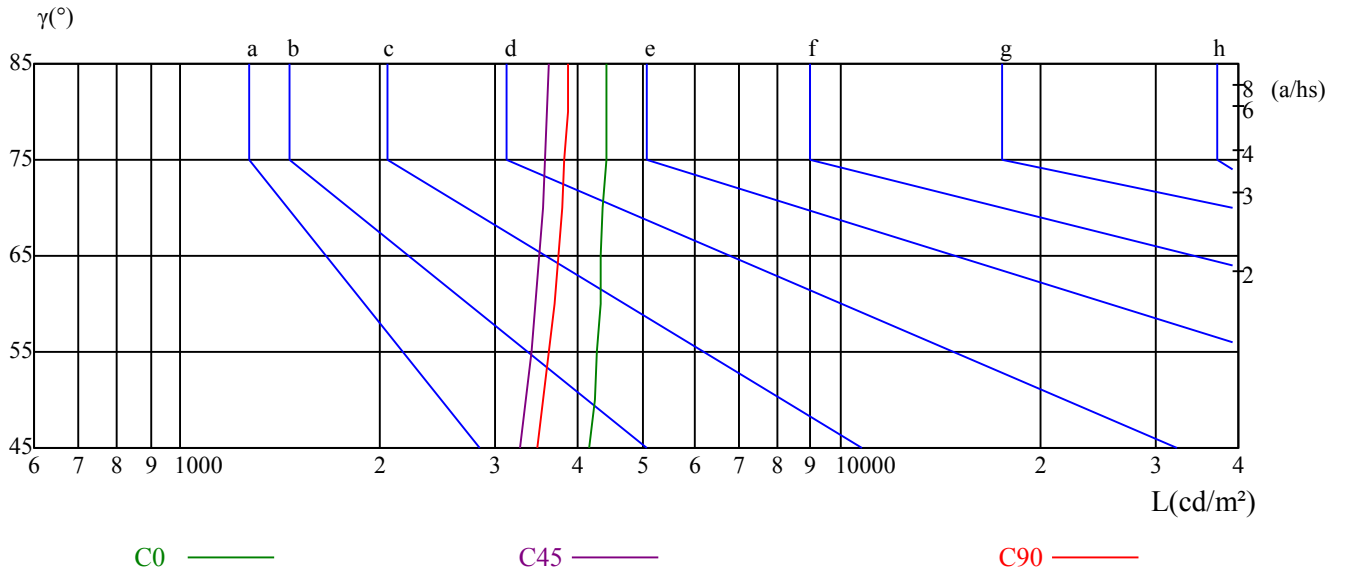
γ	45	50	55	60	65	70	75	80	85
C0	4171	4235	4277	4315	4331	4371	4402	4402	4405
C45	3263	3335	3401	3458	3503	3539	3574	3595	3613
C90	3459	3545	3621	3680	3739	3784	3822	3853	3874

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
237564	67158	149767	416909	118299	263092	1268777	364048	805710

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	1.07	1.07	1.07	0.99	0.99	0.99	0.84	0.84	0.84	0.69	0.69	0.69	0.56	0.56	0.56	0.50
1	0.85	0.79	0.74	0.78	0.73	0.68	0.65	0.60	0.56	0.52	0.49	0.46	0.41	0.38	0.36	0.30
2	0.71	0.63	0.55	0.65	0.57	0.51	0.53	0.47	0.42	0.42	0.38	0.34	0.32	0.29	0.26	0.21
3	0.61	0.51	0.44	0.55	0.47	0.40	0.45	0.38	0.33	0.36	0.31	0.26	0.27	0.23	0.20	0.15
4	0.52	0.43	0.35	0.48	0.39	0.32	0.39	0.32	0.26	0.31	0.25	0.21	0.23	0.19	0.15	0.11
5	0.46	0.36	0.29	0.42	0.33	0.27	0.34	0.27	0.22	0.27	0.21	0.17	0.20	0.16	0.12	0.09
6	0.41	0.31	0.24	0.37	0.29	0.22	0.30	0.23	0.18	0.24	0.18	0.14	0.18	0.14	0.10	0.07
7	0.36	0.27	0.21	0.33	0.25	0.19	0.27	0.20	0.15	0.21	0.16	0.12	0.16	0.12	0.09	0.06
8	0.33	0.24	0.18	0.30	0.22	0.16	0.24	0.18	0.13	0.19	0.14	0.10	0.15	0.10	0.07	0.05
9	0.29	0.21	0.15	0.27	0.19	0.14	0.22	0.16	0.12	0.18	0.13	0.09	0.13	0.09	0.06	0.04
10	0.27	0.19	0.14	0.25	0.17	0.12	0.20	0.14	0.10	0.16	0.11	0.08	0.12	0.08	0.06	0.03

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	14.62	6.01	30.95	59.57	87.65	117.62	147.05	175.67	202.94
15.0	12.11	6.01	32.66	63.07	94.02	125.70	156.74	186.97	214.43
30.0	10.32	7.27	33.73	62.26	92.32	121.39	151.53	180.87	209.13
45.0	7.54	14.89	38.04	54.46	81.19	108.02	134.76	160.95	184.91
60.0	5.92	20.37	39.83	43.60	65.14	85.68	107.21	128.21	148.12
75.0	5.92	25.21	40.28	35.35	52.49	69.53	86.49	102.19	118.43
90.0	14.27	29.52	44.77	35.35	52.84	69.17	86.04	102.19	117.62
105.0	22.34	32.84	51.68	43.42	60.65	77.79	94.65	111.07	125.87
120.0	23.33	33.38	54.82	57.51	80.84	104.34	126.50	149.02	170.37
135.0	26.29	32.84	43.78	67.47	95.82	124.26	152.16	179.53	205.19
150.0	18.30	29.88	42.53	74.38	127.04	135.47	164.81	194.60	222.86
165.0	16.06	25.30	43.06	73.21	104.34	133.77	165.89	193.88	225.10
180.0	14.62	41.27	69.44	98.24	125.78	155.84	182.22	209.67	233.45
195.0	12.11	34.81	58.32	82.54	106.67	130.54	153.60	175.31	195.14
210.0	10.32	27.01	43.78	61.01	77.88	95.28	112.24	128.30	143.10
225.0	7.54	16.06	24.49	33.73	41.99	50.42	58.59	66.12	73.21
240.0	5.92	4.04	3.32	2.60	2.15	2.06	1.70	1.70	1.79
255.0	5.92	1.70	1.35	1.17	0.99	0.90	0.81	0.63	0.72
270.0	14.27	1.61	1.17	0.99	0.81	0.63	0.63	0.45	0.54
285.0	22.34	1.35	1.08	0.81	0.63	0.45	0.36	0.36	0.36
300.0	23.33	1.35	1.26	1.17	1.17	1.35	1.79	2.33	3.05
315.0	26.29	7.09	16.42	25.21	35.44	45.76	56.16	65.31	74.47
330.0	18.30	17.23	34.54	54.19	74.02	93.49	110.98	129.64	145.52
345.0	16.06	29.16	48.99	73.48	99.14	124.62	148.66	171.72	193.79
360.0	14.62	6.01	30.95	59.57	87.65	117.62	147.05	175.67	202.94
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	228.78	253.10	274.00	294.01	311.32	325.86	337.34	345.50	350.80
15.0	241.88	267.72	291.49	312.94	331.69	346.76	359.14	367.84	373.50
30.0	235.87	260.09	283.96	304.32	322.72	337.97	349.90	358.78	363.72
45.0	208.77	231.02	251.48	269.87	285.66	299.57	310.25	318.05	322.81
60.0	167.06	184.82	201.06	215.41	228.42	239.37	247.71	253.45	257.58
75.0	132.33	145.97	158.44	169.57	179.17	187.06	192.98	197.47	200.07
90.0	132.07	145.25	157.37	167.86	177.28	184.91	190.83	195.05	197.29
105.0	140.95	154.05	166.34	177.28	186.52	193.97	199.44	203.21	205.37
120.0	190.56	209.49	225.91	241.70	254.44	265.03	273.28	278.75	281.80
135.0	229.77	251.93	272.83	291.32	307.11	319.31	329.98	336.44	340.57
150.0	249.78	274.81	297.33	317.42	334.11	348.47	359.32	366.95	370.72
165.0	250.13	274.99	296.07	316.17	333.48	347.75	357.80	365.60	370.18
180.0	256.41	277.23	295.71	310.69	321.19	333.39	342.45	345.06	345.86
195.0	214.61	231.38	247.08	257.31	266.91	277.05	284.86	287.10	287.91
210.0	156.92	169.39	179.80	186.88	194.15	201.42	206.80	208.59	209.49
225.0	79.49	85.50	89.63	92.77	95.91	99.59	101.47	102.01	102.10
240.0	1.88	1.97	2.15	2.51	2.69	2.96	3.14	3.41	3.50
255.0	0.81	0.90	1.17	1.44	1.61	2.06	2.24	2.24	2.60
270.0	0.63	0.72	0.99	1.08	1.53	1.97	2.06	2.33	2.60
285.0	0.63	0.72	0.99	1.26	1.61	1.88	2.15	2.42	2.69
300.0	3.95	4.93	5.92	6.91	7.72	8.52	9.24	9.78	10.32
315.0	83.08	91.33	98.15	103.27	108.83	112.87	116.27	118.16	119.33
330.0	161.13	175.49	188.32	199.80	209.31	217.03	222.86	225.64	227.08
345.0	214.25	233.00	250.04	264.85	277.14	287.28	294.99	299.48	300.47
360.0	228.78	253.10	274.00	294.01	311.32	325.86	337.34	345.50	350.80

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	352.95	351.96	348.02	341.20	332.50	318.95	305.22	287.55	267.36
15.0	375.65	374.66	370.27	363.45	353.31	340.21	324.42	306.12	284.32
30.0	365.87	365.51	361.47	354.48	344.52	332.23	317.06	299.21	278.66
45.0	324.78	324.06	320.29	314.10	305.58	294.46	281.63	265.57	248.25
60.0	259.11	258.57	255.97	251.21	244.39	235.87	225.55	213.26	199.08
75.0	200.88	200.07	197.56	193.61	188.05	181.14	172.71	162.75	151.98
90.0	197.92	197.11	194.69	190.74	185.27	178.36	170.11	160.24	149.02
105.0	205.72	204.38	201.42	196.66	190.56	183.11	174.14	163.74	152.34
120.0	282.16	280.64	276.51	270.32	262.16	251.39	239.19	224.56	208.24
135.0	341.65	339.76	335.01	327.47	317.33	304.68	289.61	271.76	251.84
150.0	372.60	370.18	365.24	357.26	346.31	332.50	315.72	297.60	275.70
165.0	371.52	369.64	364.79	356.99	346.94	333.30	316.71	297.06	276.24
180.0	345.15	342.28	335.28	324.87	311.59	295.98	277.86	257.40	234.88
195.0	287.37	284.95	278.75	270.05	258.84	245.56	230.67	212.90	194.78
210.0	209.40	206.89	201.96	196.03	187.78	178.00	166.52	153.60	139.69
225.0	101.83	100.04	97.16	93.49	89.00	84.07	82.36	71.15	64.33
240.0	3.68	3.68	3.68	3.41	3.23	2.87	2.60	2.15	1.79
255.0	2.60	2.60	2.60	2.51	2.24	2.06	1.53	1.26	0.90
270.0	2.60	2.60	2.51	2.33	2.06	1.97	1.53	1.17	0.81
285.0	2.69	2.69	2.69	2.60	2.24	1.97	1.61	1.17	0.72
300.0	10.68	10.41	10.41	10.41	10.32	10.23	9.60	9.06	8.34
315.0	118.61	114.21	110.26	107.12	104.16	101.56	98.15	91.33	84.51
330.0	224.92	215.86	207.97	201.24	195.05	189.31	183.65	172.44	158.26
345.0	297.69	285.03	274.90	264.85	255.79	247.62	239.46	227.62	209.58
360.0	352.95	351.96	348.02	341.20	332.50	318.95	305.22	287.55	267.36
C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	244.93	220.98	197.20	171.36	144.54	117.08	90.26	62.71	35.44
15.0	261.26	235.69	208.86	181.14	154.05	125.16	94.92	65.40	38.31
30.0	255.79	231.92	205.90	179.08	151.62	123.36	95.91	67.02	38.31
45.0	228.15	206.08	183.38	160.60	134.94	111.16	85.32	59.57	34.27
60.0	183.29	165.89	148.39	129.28	109.90	89.72	70.07	49.43	29.07
75.0	139.42	125.70	111.16	96.00	81.55	66.03	50.24	35.08	20.90
90.0	136.55	123.00	109.28	94.38	79.04	63.16	48.00	30.86	16.15
105.0	139.33	125.16	110.26	94.65	78.86	63.79	47.46	31.49	15.88
120.0	190.20	170.64	149.83	129.64	108.02	86.04	63.88	43.24	21.71
135.0	230.84	207.34	182.58	157.01	132.42	104.43	79.04	52.57	27.90
150.0	251.66	226.00	200.88	173.07	144.54	115.47	86.13	58.41	30.41
165.0	251.39	226.99	200.16	172.62	144.09	116.10	86.85	57.87	29.88
180.0	211.91	185.81	160.60	133.50	105.78	78.14	52.75	25.57	1.97
195.0	174.95	153.87	131.98	110.26	87.21	81.91	42.62	20.01	1.88
210.0	125.87	121.48	93.76	77.07	61.19	44.68	28.53	10.50	1.70
225.0	56.25	48.90	40.91	32.75	24.40	16.51	9.06	2.51	1.97
240.0	1.44	1.35	1.26	1.26	1.35	1.44	1.44	1.53	1.88
255.0	0.63	0.72	0.81	0.81	0.99	1.17	1.26	1.44	1.97
270.0	0.54	0.54	0.63	0.72	0.90	1.17	1.17	1.35	1.79
285.0	0.54	0.45	0.63	0.72	0.90	1.17	1.35	1.61	2.06
300.0	7.63	7.18	6.73	6.28	5.47	4.93	4.67	3.95	3.23
315.0	76.62	68.37	60.02	50.96	41.36	32.30	22.25	14.44	5.56
330.0	143.10	127.40	111.43	93.22	76.08	57.96	39.92	22.61	7.98
345.0	189.48	168.40	146.24	123.36	99.86	76.98	53.47	30.24	9.60
360.0	244.93	220.98	197.20	171.36	144.54	117.08	90.26	62.71	35.44

Intensity data(cd)

C/γ(°)	180.0
0.0	1.97
15.0	12.20
30.0	11.66
45.0	11.84
60.0	9.78
75.0	7.90
90.0	5.47
105.0	3.95
120.0	3.41
135.0	4.04
150.0	5.11
165.0	5.65
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	1.97