
乐达凯

Client:

LumCAT: VRNP2X4LAJUDSN

Luminaire: LED lamp

Report No:

Ballast type:

Test No: LCZP25010163

Voltage(V): 119.990

LampCAT:

Current(A): 0.332

Lamp flux(lm): 3138.4

Power (W): 39.390

Number of Lamps: 1

PF: 0.990

Length(mm): 740

Width(mm): 180

Phm Type: C

Height(mm): 180

Photometric Results

Lumens(lm): 3138.44, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 79.68

Central intensity(cd): 242.598, Maximum intensity(cd): 348.869

Angle of maximum intensity: C=0.0 γ =90.0

Beam Angle(50%Imax): [C0/180]Total=352.8

[C90/270]Total=359.6

Field angle(10%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Maximum s/h(1/2): C0_180=1.74 C90_270=1.28

Maximum s/h(1/4): C0_180=1.98 C90_270=1.58

Up flux rate of lamp(%): 48.79%

Down flux rate of lamp(%): 51.21%

Up flux rate of LUM(%): 48.79%

Down flux rate of LUM(%): 51.21%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 24.435%

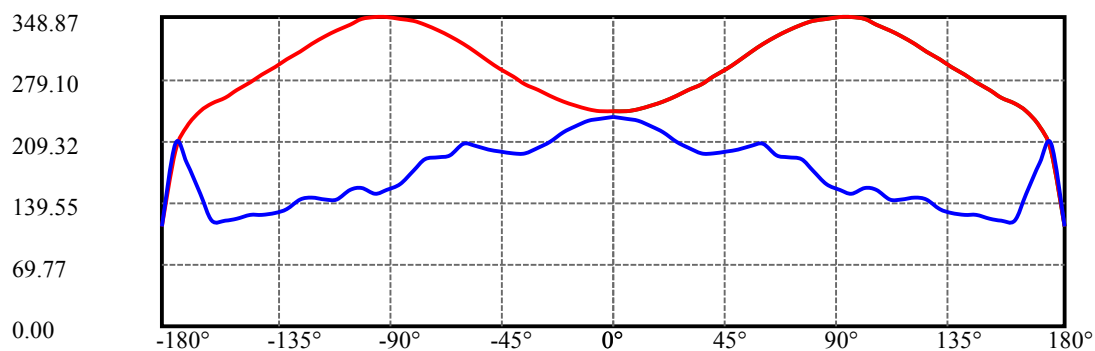
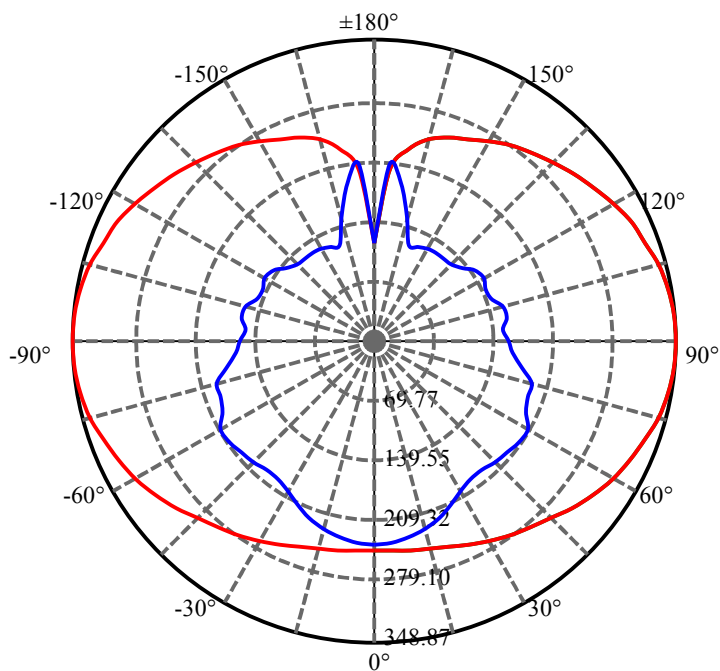
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	237.940	0.000	0	0.00%	0.00%
5.0	237.679	5.686	5.686	0.18%	0.18%
10.0	237.144	16.986	22.672	0.54%	0.72%
15.0	236.482	28.095	50.767	0.90%	1.62%
20.0	236.000	38.939	89.706	1.24%	2.86%
25.0	235.297	49.430	139.137	1.57%	4.43%
30.0	235.630	59.596	198.733	1.90%	6.33%
35.0	237.376	69.653	268.386	2.22%	8.55%
40.0	240.150	79.671	348.058	2.54%	11.09%
45.0	244.460	89.729	437.787	2.86%	13.95%
50.0	249.996	99.912	537.699	3.18%	17.13%
55.0	255.510	109.914	647.613	3.50%	20.63%
60.0	260.407	119.253	766.866	3.80%	24.43%
65.0	263.390	127.336	894.202	4.06%	28.49%
70.0	266.422	134.152	1028.354	4.27%	32.77%
75.0	269.057	139.966	1168.319	4.46%	37.23%
80.0	270.011	144.240	1312.559	4.60%	41.82%
85.0	270.183	146.783	1459.342	4.68%	46.50%
90.0	269.902	147.879	1607.222	4.71%	51.21%
95.0	268.340	147.375	1754.597	4.70%	55.91%
100.0	266.743	145.395	1899.992	4.63%	60.54%
105.0	263.783	141.954	2041.946	4.52%	65.06%
110.0	259.259	136.715	2178.661	4.36%	69.42%
115.0	255.596	130.365	2309.025	4.15%	73.57%
120.0	250.822	123.111	2432.137	3.92%	77.50%
125.0	245.077	114.626	2546.762	3.65%	81.15%
130.0	238.209	105.082	2651.845	3.35%	84.50%
135.0	231.869	94.986	2746.831	3.03%	87.52%
140.0	226.632	84.895	2831.726	2.71%	90.23%
145.0	220.912	74.669	2906.395	2.38%	92.61%
150.0	213.230	63.931	2970.326	2.04%	94.64%
155.0	204.251	52.833	3023.159	1.68%	96.33%
160.0	195.604	41.937	3065.096	1.34%	97.66%
165.0	194.831	32.177	3097.273	1.03%	98.69%
170.0	197.739	23.287	3120.56	0.74%	99.43%
175.0	200.367	14.241	3134.802	0.45%	99.88%
180.0	103.677	3.635	3138.437	0.12%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	198.73	6.33%	6.33%
0-40	348.06	11.09%	11.09%
0-60	766.87	24.43%	24.43%
0-90	1607.22	51.21%	51.21%
0-120	2432.14	77.50%	77.50%
0-180	3138.44	100.00%	100.00%
60-90	840.36	26.78%	26.78%
90-120	824.91	26.28%	26.28%
90-130	1044.62	33.28%	33.28%
90-150	1363.10	43.43%	43.43%
90-180	1527.58	48.67%	48.67%
0-123.43	2510.75	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	22.67
10-20	67.03
20-30	109.03
30-40	149.32
40-50	189.64
50-60	229.17
60-70	261.49
70-80	284.21
80-90	294.66
90-100	292.77
100-110	278.67
110-120	253.48
120-130	219.71
130-140	179.88
140-150	138.60
150-160	94.77
160-170	55.46
170-180	14.24

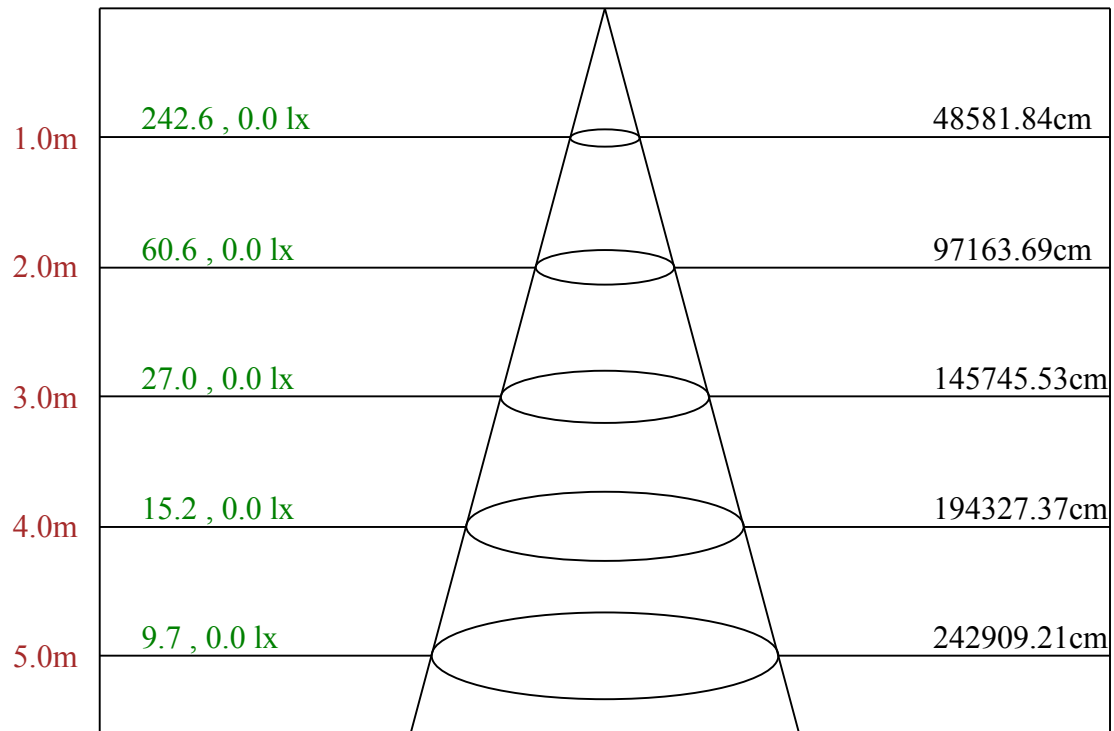
C0(Max): C0/C180: C90/C270: 

Field angle(10%Imax):C0/180Left:0.0 Right:0.0

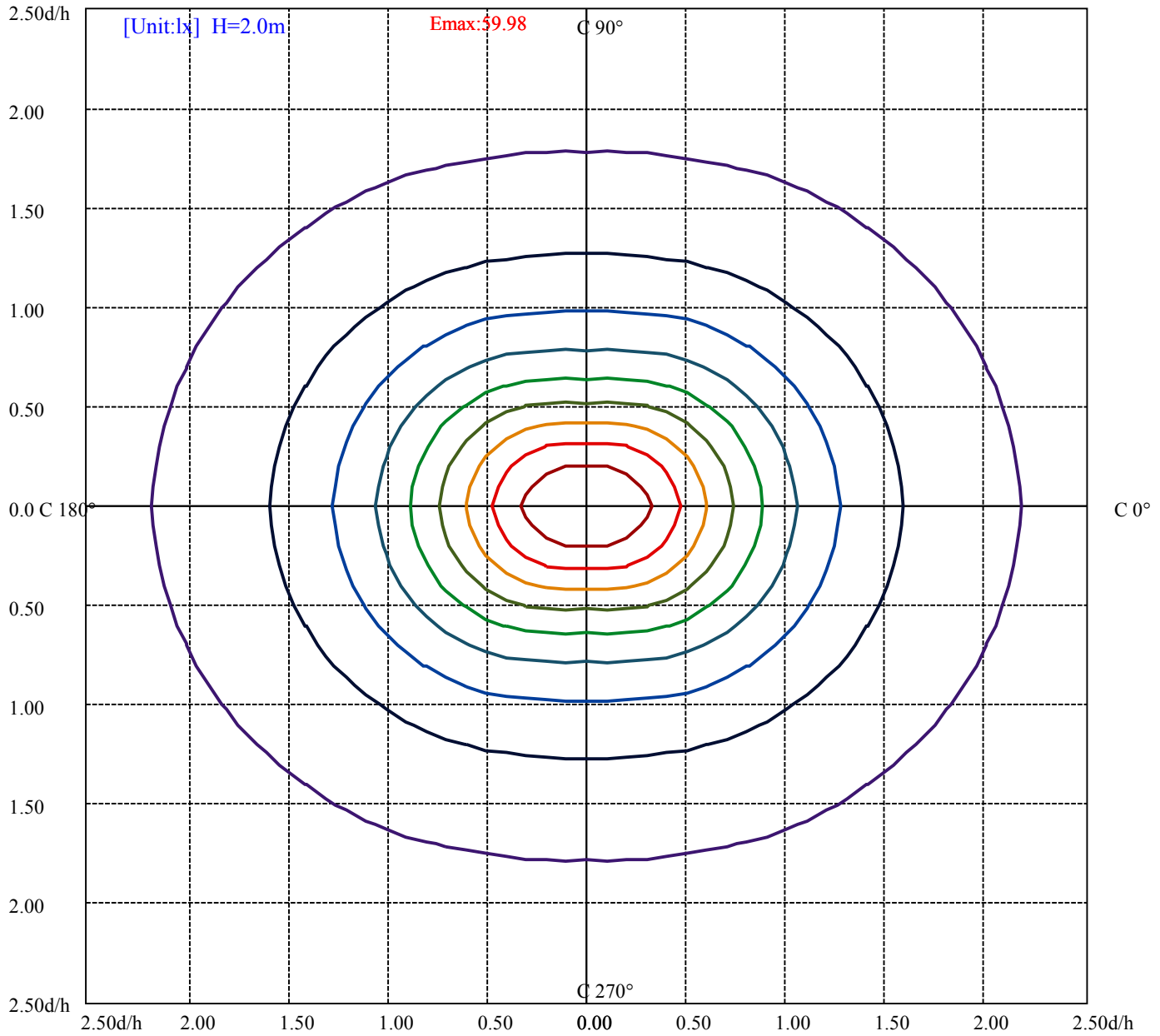
:C90/270Left:0.0 Right:0.0

Beam Angle(50%Imax):C0/180Left:266.4 Right:86.4

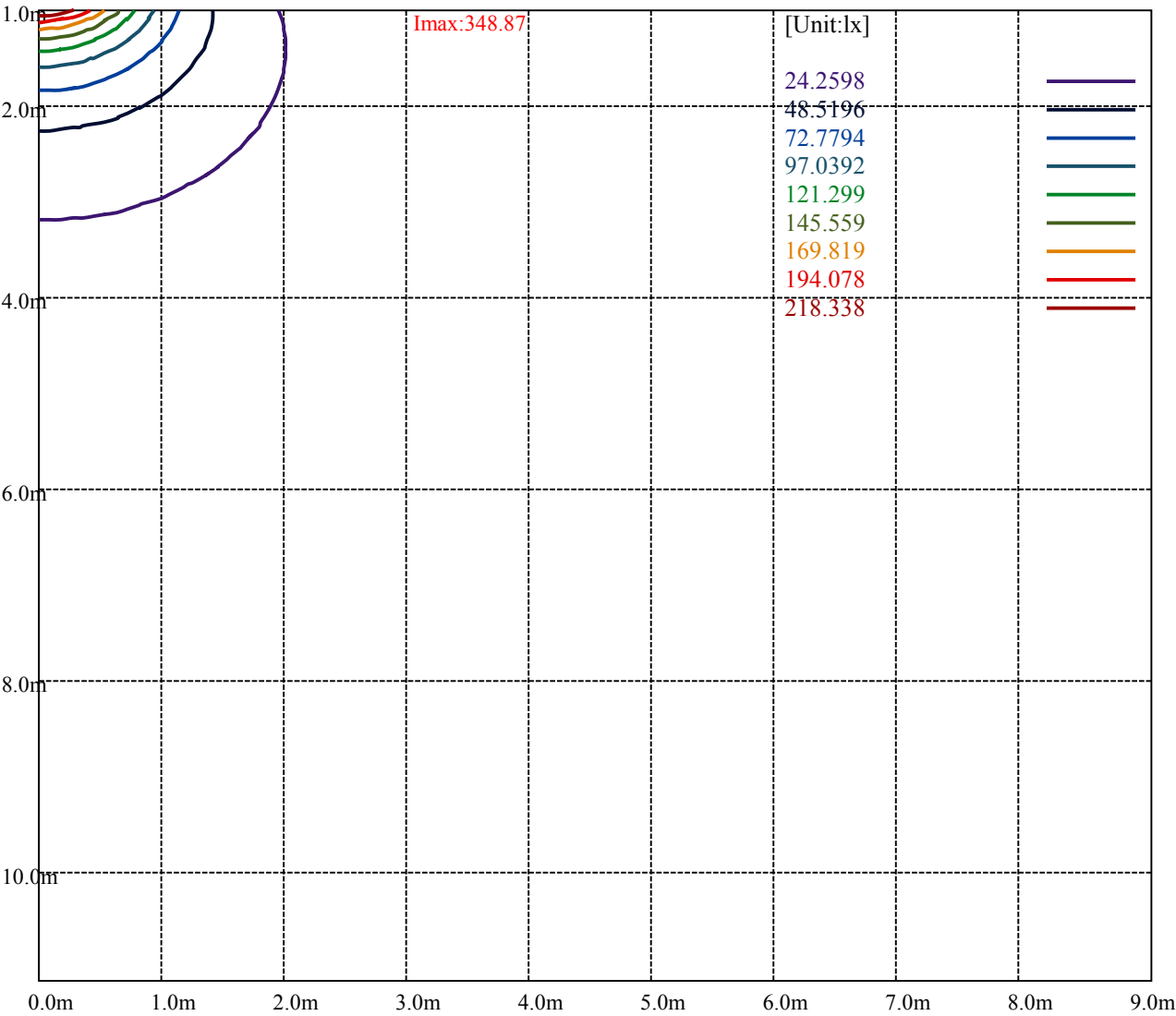
:C90/270Left:179.8 Right:179.8



Max , Ave Beam angle of C0 plane 179.53



(10%Emax) 5.99825	—
(20%Emax) 11.9965	—
(30%Emax) 17.99475	—
(40%Emax) 23.99298	—
(50%Emax) 29.99125	—
(60%Emax) 35.9895	—
(70%Emax) 41.98775	—
(80%Emax) 47.986	—
(90%Emax) 53.98425	—



Luminance Table

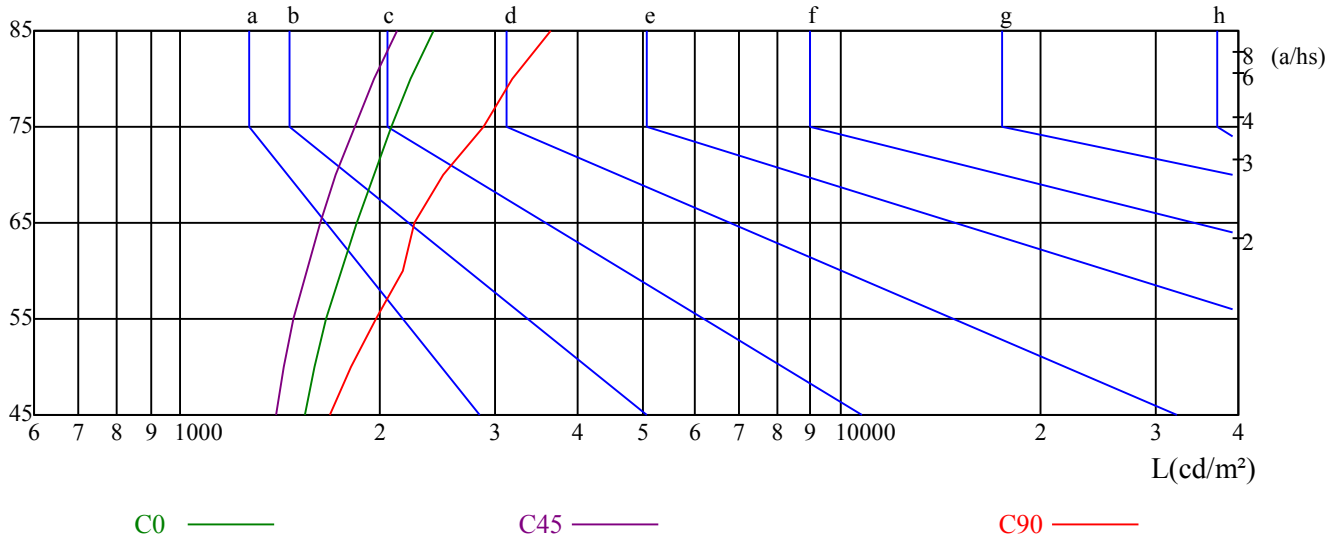
γ	45	50	55	60	65	70	75	80	85
C0	1542	1597	1665	1749	1844	1957	2085	2235	2410
C45	1394	1434	1483	1548	1625	1719	1830	1961	2124
C90	1680	1811	1978	2173	2261	2501	2870	3174	3648

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5800	3441	4689	9868	5476	7835	29955	13791	23471

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

 $\gamma(^{\circ})$ 

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	1.07	1.07	1.07	0.99	0.99	0.99	0.84	0.84	0.84	0.70	0.70	0.70	0.57	0.57	0.57	0.51
1	0.87	0.81	0.76	0.80	0.75	0.71	0.67	0.63	0.59	0.55	0.52	0.49	0.43	0.41	0.39	0.34
2	0.74	0.66	0.59	0.68	0.60	0.54	0.56	0.51	0.46	0.45	0.41	0.38	0.36	0.32	0.30	0.25
3	0.63	0.54	0.47	0.58	0.50	0.44	0.48	0.42	0.37	0.39	0.34	0.30	0.30	0.27	0.23	0.19
4	0.55	0.46	0.39	0.51	0.42	0.36	0.42	0.35	0.30	0.34	0.29	0.25	0.26	0.22	0.19	0.15
5	0.49	0.39	0.32	0.45	0.36	0.30	0.37	0.30	0.25	0.30	0.25	0.21	0.23	0.19	0.16	0.13
6	0.43	0.34	0.28	0.40	0.32	0.26	0.33	0.26	0.22	0.27	0.22	0.18	0.21	0.17	0.14	0.11
7	0.39	0.30	0.24	0.36	0.28	0.22	0.30	0.23	0.19	0.24	0.19	0.15	0.19	0.15	0.12	0.09
8	0.35	0.27	0.21	0.32	0.25	0.19	0.27	0.21	0.16	0.22	0.17	0.13	0.17	0.13	0.10	0.08
9	0.32	0.24	0.18	0.29	0.22	0.17	0.25	0.19	0.14	0.20	0.15	0.12	0.16	0.12	0.09	0.07
10	0.29	0.21	0.16	0.27	0.20	0.15	0.23	0.17	0.13	0.19	0.14	0.10	0.15	0.11	0.08	0.06

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	242.60	243.76	246.10	250.04	254.89	260.36	265.92	272.12	278.84
15.0	241.61	242.78	245.11	249.15	253.72	259.20	264.94	270.95	277.41
30.0	240.18	241.79	243.76	246.99	250.94	255.07	259.38	264.40	269.33
45.0	239.01	240.27	240.98	243.67	245.92	248.79	251.84	254.89	257.85
60.0	237.30	238.56	239.82	240.89	242.06	242.87	243.76	244.03	244.57
75.0	236.41	237.39	237.93	237.21	236.32	233.99	231.47	228.87	226.45
90.0	235.96	236.23	235.87	233.90	230.13	224.12	217.57	209.58	203.03
105.0	235.06	235.60	235.15	233.36	228.06	219.72	209.13	197.29	184.91
120.0	236.32	236.50	236.14	233.90	229.41	222.59	214.07	207.16	201.42
135.0	237.39	237.48	237.48	237.30	234.70	232.01	229.05	227.44	227.44
150.0	236.95	237.21	238.02	238.92	241.16	241.43	243.50	247.08	251.75
165.0	236.50	236.32	237.66	240.18	243.76	248.52	254.26	260.18	269.15
180.0	242.60	242.69	244.75	247.98	252.20	258.39	265.57	274.18	284.05
195.0	241.61	241.97	243.67	246.73	251.21	257.13	263.41	271.04	278.66
210.0	240.18	240.18	240.62	241.79	244.66	249.42	255.16	262.16	268.44
225.0	239.01	237.57	236.05	235.24	234.97	236.14	239.28	243.32	248.61
240.0	237.30	234.61	230.84	227.08	224.47	223.04	223.40	224.56	227.17
255.0	236.41	233.18	227.35	220.35	212.81	206.98	204.29	205.63	207.97
270.0	235.96	232.28	226.09	216.58	206.08	194.06	183.56	181.68	187.33
285.0	235.06	232.10	226.18	217.48	206.98	196.48	187.33	186.79	187.24
300.0	236.32	234.52	230.31	224.03	222.41	212.81	212.00	213.98	217.21
315.0	237.39	236.59	234.97	232.10	230.31	229.77	231.47	233.99	237.21
330.0	236.95	237.13	237.13	238.20	240.00	242.24	246.37	250.22	255.70
345.0	236.50	237.57	239.46	242.51	246.81	252.02	258.39	265.48	271.85
360.0	242.60	243.76	246.10	250.04	254.89	260.36	265.92	272.12	278.84
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	286.11	293.83	301.72	310.25	318.23	326.22	333.03	338.69	342.90
15.0	284.05	291.05	298.31	305.85	313.12	319.67	325.95	330.43	334.38
30.0	274.63	279.92	285.21	290.33	294.37	299.12	302.89	306.30	309.26
45.0	260.27	264.13	266.55	269.42	271.67	273.73	275.35	276.51	277.68
60.0	245.29	246.19	247.35	248.34	249.24	249.95	249.69	249.42	249.06
75.0	224.83	224.65	226.09	227.44	227.62	226.27	223.22	219.27	217.57
90.0	197.74	196.12	197.20	201.06	205.28	206.89	200.52	185.63	178.00
105.0	174.77	182.58	187.87	188.50	190.74	193.79	197.56	201.96	205.72
120.0	200.52	202.31	205.99	211.65	219.36	228.60	237.13	243.58	245.38
135.0	229.32	233.18	237.93	246.10	254.98	263.32	269.24	271.22	271.67
150.0	258.12	266.19	275.70	284.86	292.12	297.06	300.38	303.25	304.06
165.0	278.49	287.82	296.79	305.40	313.48	320.47	326.22	329.98	331.42
180.0	294.81	305.67	316.08	326.13	334.74	342.01	347.39	350.98	352.59
195.0	289.25	298.04	307.73	317.15	325.41	332.41	336.98	341.11	342.01
210.0	274.81	280.73	288.89	294.72	300.83	306.30	310.51	313.30	314.10
225.0	255.52	262.25	266.10	269.51	272.74	275.61	278.13	279.65	280.64
240.0	231.38	236.32	241.43	245.38	247.62	248.79	250.04	250.94	251.75
255.0	212.36	216.49	219.18	220.44	219.81	218.02	217.93	217.57	218.10
270.0	195.77	203.93	209.94	210.39	182.13	173.25	177.01	163.74	142.20
285.0	196.48	202.49	207.79	209.58	205.63	199.08	194.06	193.97	193.79
300.0	221.33	226.27	231.02	234.70	236.95	237.13	237.48	237.84	238.65
315.0	241.43	246.19	251.84	255.43	256.50	257.31	257.76	258.66	259.91
330.0	261.89	268.80	273.37	277.59	281.98	285.66	289.61	292.93	296.07
345.0	277.86	284.77	292.12	299.57	306.84	313.48	319.31	323.34	327.47
360.0	286.11	293.83	301.72	310.25	318.23	326.22	333.03	338.69	342.90

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	345.59	346.22	345.06	341.56	336.44	329.36	320.38	310.78	300.47
15.0	337.07	337.97	336.89	333.39	328.73	321.64	313.74	304.77	295.44
30.0	311.14	311.14	310.60	307.55	303.52	298.40	292.48	286.74	280.01
45.0	277.95	277.32	276.06	274.18	272.65	270.32	266.19	263.86	260.81
60.0	248.79	247.98	247.98	246.37	245.74	244.21	240.62	240.89	236.32
75.0	215.86	213.08	206.17	202.31	198.28	195.59	192.45	181.77	158.80
90.0	158.71	143.73	156.29	155.93	129.73	130.36	143.28	143.91	127.94
105.0	205.28	202.76	199.89	199.00	198.01	199.00	196.30	193.34	186.34
120.0	244.57	243.50	242.51	241.70	241.16	238.92	233.99	228.15	222.05
135.0	271.40	270.59	269.06	267.36	265.48	263.32	260.99	254.98	247.62
150.0	303.43	301.81	299.12	295.89	292.12	288.17	284.14	279.47	275.08
165.0	332.14	330.52	327.11	322.27	316.08	309.80	303.34	296.61	290.15
180.0	352.14	349.81	346.67	339.94	332.59	325.68	317.78	309.44	301.99
195.0	341.74	339.58	336.08	330.61	324.42	317.96	311.14	303.52	296.16
210.0	314.37	312.94	310.87	307.11	303.43	299.84	294.72	290.15	284.59
225.0	281.27	281.00	280.19	279.02	277.41	275.35	274.54	269.69	266.10
240.0	252.92	253.18	253.10	253.36	253.63	253.27	249.95	243.50	237.93
255.0	218.10	218.02	215.86	212.63	207.70	203.84	202.76	200.16	195.77
270.0	151.00	155.03	153.96	152.79	157.19	155.48	147.59	140.68	138.08
285.0	191.46	183.83	174.14	164.00	151.80	145.07	129.82	120.22	116.19
300.0	236.41	233.45	230.93	227.35	221.60	216.76	207.70	203.12	203.12
315.0	260.72	261.26	261.08	260.45	259.02	257.67	255.70	250.67	246.73
330.0	297.69	297.86	296.61	294.54	290.15	285.84	280.10	274.00	267.45
345.0	327.92	327.56	325.59	321.46	315.36	308.45	300.02	291.40	281.89
360.0	345.59	346.22	345.06	341.56	336.44	329.36	320.38	310.78	300.47
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	290.15	280.10	271.76	261.98	254.98	249.42	243.41	217.93	162.48
15.0	286.56	276.15	267.90	259.20	253.36	248.07	242.96	239.73	219.63
30.0	272.92	266.10	259.64	251.21	246.37	239.37	237.13	232.55	229.23
45.0	254.35	247.35	241.25	235.96	230.84	222.50	217.30	217.75	220.08
60.0	225.91	220.35	216.31	208.77	196.39	184.37	191.28	194.96	203.12
75.0	143.55	131.98	133.77	137.72	122.56	124.17	129.28	172.53	191.91
90.0	111.07	102.55	109.19	126.32	120.58	116.81	125.34	170.20	186.61
105.0	175.85	168.85	163.74	165.44	158.71	127.31	133.59	164.45	182.22
120.0	215.05	211.38	210.12	206.80	206.17	172.71	146.51	159.97	181.41
135.0	241.88	237.93	234.79	231.11	228.42	224.12	179.26	152.25	180.33
150.0	267.81	260.81	255.34	248.97	241.79	237.21	231.47	183.38	144.45
165.0	283.51	277.50	270.86	264.04	252.74	243.76	238.29	231.38	196.21
180.0	294.28	286.92	279.65	273.01	262.25	251.57	240.00	234.07	233.18
195.0	288.71	282.52	274.72	269.15	257.58	253.81	234.97	216.31	165.17
210.0	278.75	276.60	267.18	260.00	248.88	238.92	211.02	151.98	151.98
225.0	262.61	258.12	251.75	243.67	235.15	200.07	152.52	159.79	203.30
240.0	233.09	228.06	225.37	218.37	180.06	150.82	157.90	178.99	222.23
255.0	194.15	194.96	189.75	162.66	131.62	132.87	168.31	190.47	225.28
270.0	142.74	147.50	141.93	118.25	118.70	120.13	172.71	198.19	223.94
285.0	122.56	133.05	120.22	101.38	108.56	119.41	169.66	202.67	222.77
300.0	203.66	196.39	187.06	168.49	164.27	171.81	192.54	210.84	223.49
315.0	241.70	235.33	225.37	215.23	206.80	206.17	210.39	219.81	225.64
330.0	261.26	254.17	247.35	239.82	231.20	223.85	221.25	223.13	214.88
345.0	272.74	264.49	256.86	249.95	244.03	235.24	228.87	222.41	199.26
360.0	290.15	280.10	271.76	261.98	254.98	249.42	243.41	217.93	162.48

Intensity data(cd)

C/ $\gamma(^{\circ})$	180.0
0.0	227.35
15.0	167.68
30.0	220.80
45.0	229.86
60.0	229.32
75.0	227.79
90.0	226.99
105.0	224.30
120.0	213.98
135.0	197.83
150.0	181.68
165.0	140.68
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	227.35