
乐达凯

Client:

LumCAT: VRNP2X4LAJUDBK

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.020

LampCAT:

Current(A): 0.330

Lamp flux(lm): 3117.0

Power (W): 39.250

Number of Lamps: 1

PF: 0.991

Length(mm): 740

Width(mm): 180

Phm Type: C

Height(mm): 180

Photometric Results

Lumens(lm): 3116.99, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 79.41

Central intensity(cd): 388.480, Maximum intensity(cd): 390.274

Angle of maximum intensity: C=0.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

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

[C90/270]Total=N.A.

Maximum s/h(1/2): C0_180=1.26 C90_270=1.23

Maximum s/h(1/4): C0_180=1.45 C90_270=1.36

Up flux rate of lamp(%): 48.84%

Down flux rate of lamp(%): 51.16%

Up flux rate of LUM(%): 48.84%

Down flux rate of LUM(%): 51.16%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 29.200%

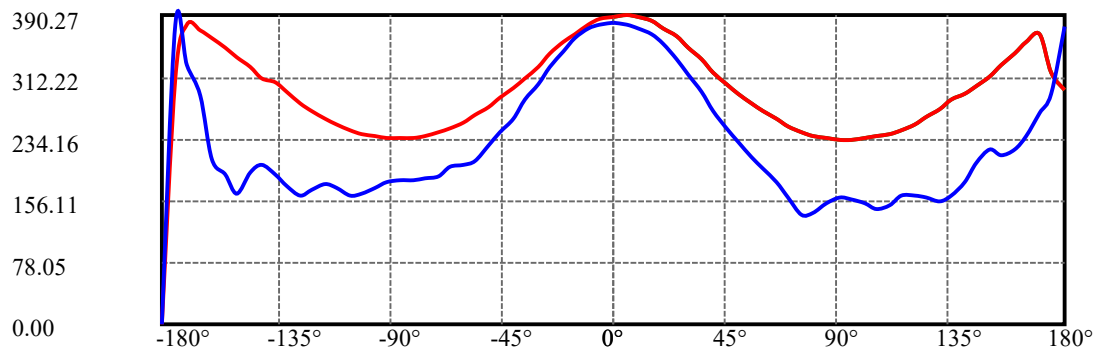
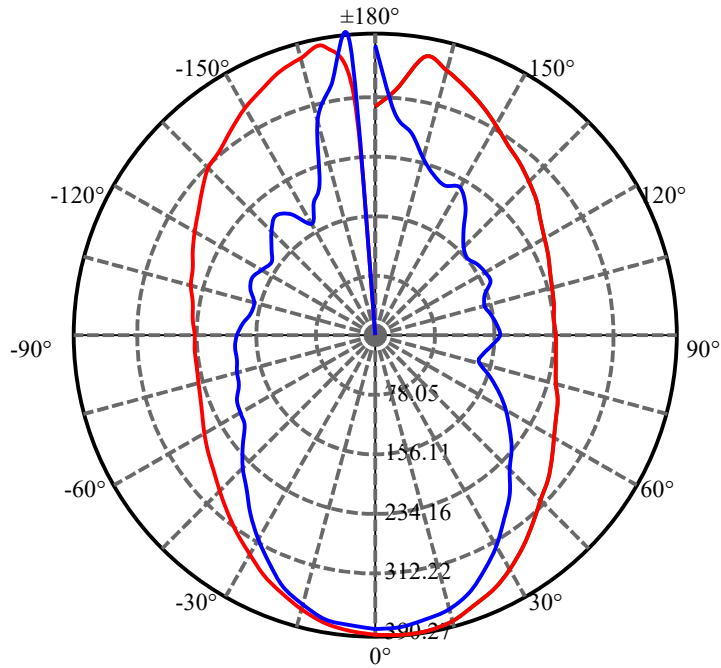
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	381.975	0.000	0	0.00%	0.00%
5.0	380.742	9.118	9.118	0.29%	0.29%
10.0	376.069	27.073	36.192	0.87%	1.16%
15.0	367.508	44.108	80.3	1.42%	2.58%
20.0	355.284	59.568	139.868	1.91%	4.49%
25.0	339.284	72.847	212.716	2.34%	6.82%
30.0	321.528	83.626	296.342	2.68%	9.51%
35.0	301.864	91.799	388.141	2.95%	12.45%
40.0	283.883	97.728	485.868	3.14%	15.59%
45.0	267.061	102.012	587.88	3.27%	18.86%
50.0	253.491	105.185	693.066	3.37%	22.24%
55.0	241.305	107.585	800.651	3.45%	25.69%
60.0	232.520	109.523	910.174	3.51%	29.20%
65.0	225.978	111.462	1021.635	3.58%	32.78%
70.0	219.997	112.924	1134.559	3.62%	36.40%
75.0	215.511	113.835	1248.394	3.65%	40.05%
80.0	212.595	114.549	1362.943	3.67%	43.73%
85.0	212.333	115.463	1478.406	3.70%	47.43%
90.0	212.520	116.328	1594.734	3.73%	51.16%
95.0	213.941	116.768	1711.502	3.75%	54.91%
100.0	216.445	116.946	1828.448	3.75%	58.66%
105.0	220.183	116.830	1945.278	3.75%	62.41%
110.0	224.146	116.141	2061.418	3.73%	66.13%
115.0	228.034	114.495	2175.913	3.67%	69.81%
120.0	230.576	111.489	2287.402	3.58%	73.38%
125.0	234.950	107.605	2395.007	3.45%	76.84%
130.0	241.305	103.554	2498.561	3.32%	80.16%
135.0	250.164	99.308	2597.869	3.19%	83.35%
140.0	261.566	94.751	2692.62	3.04%	86.39%
145.0	275.472	89.601	2782.221	2.87%	89.26%
150.0	286.388	82.738	2864.959	2.65%	91.91%
155.0	294.313	73.488	2938.447	2.36%	94.27%
160.0	298.350	62.159	3000.606	1.99%	96.27%
165.0	309.603	50.104	3050.71	1.61%	97.87%
170.0	317.752	37.214	3087.924	1.19%	99.07%
175.0	328.032	23.102	3111.026	0.74%	99.81%
180.0	171.100	5.967	3116.993	0.19%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	296.34	9.51%	9.51%
0-40	485.87	15.59%	15.59%
0-60	910.17	29.20%	29.20%
0-90	1594.73	51.16%	51.16%
0-120	2287.40	73.38%	73.38%
0-180	3116.99	100.00%	100.00%
60-90	684.56	21.96%	21.96%
90-120	692.67	22.22%	22.22%
90-130	903.83	29.00%	29.00%
90-150	1270.22	40.75%	40.75%
90-180	1516.29	48.65%	48.65%
0-129.76	2493.59	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	36.19
10-20	103.68
20-30	156.47
30-40	189.53
40-50	207.20
50-60	217.11
60-70	224.39
70-80	228.38
80-90	231.79
90-100	233.71
100-110	232.97
110-120	225.98
120-130	211.16
130-140	194.06
140-150	172.34
150-160	135.65
160-170	87.32
170-180	23.10

C0(Max): ———C0/C180: ———C90/C270: ———

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

:C90/270Left:0.0 Right:0.0

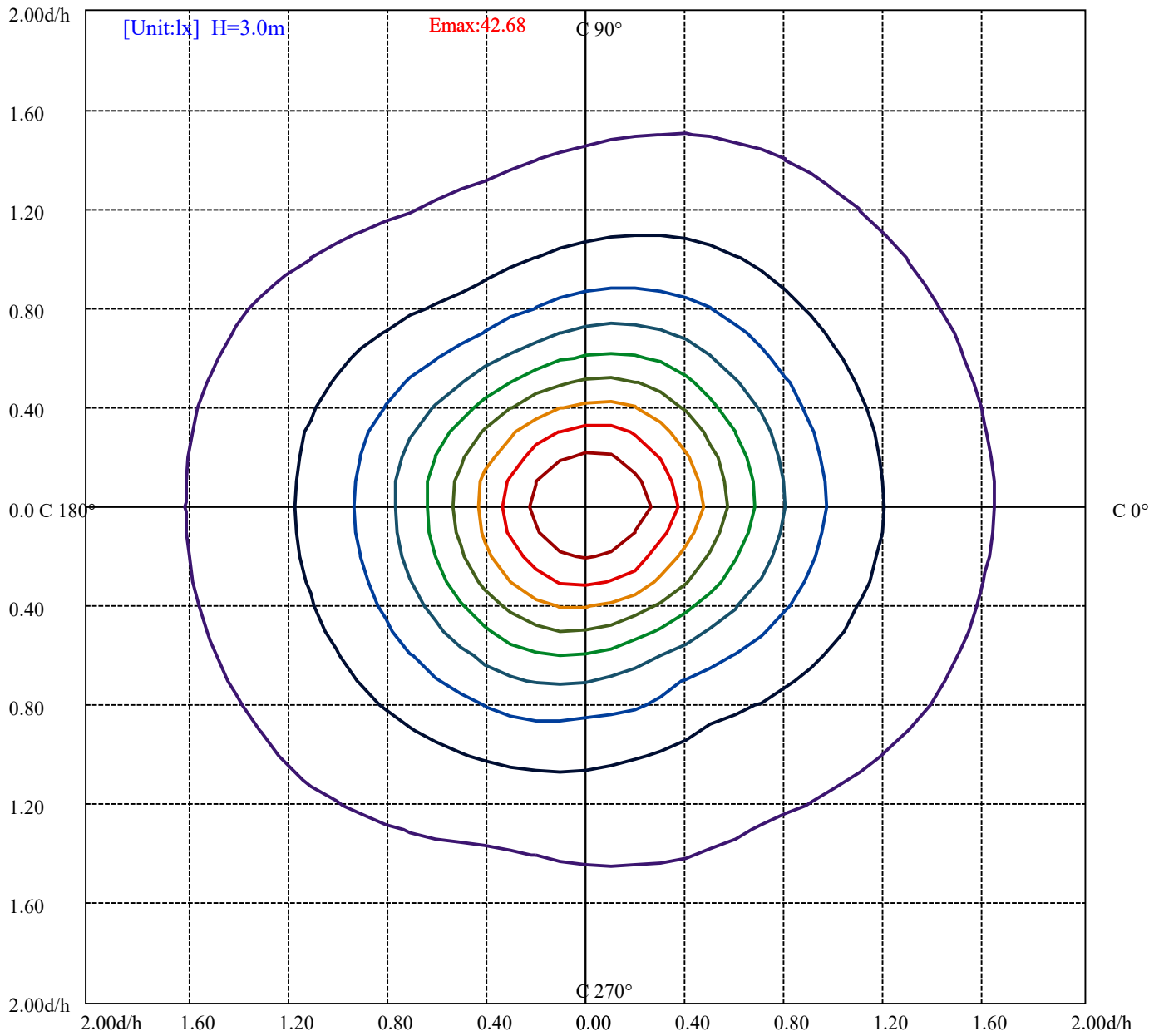
Beam Angle(50%Imax):C0/180Left:0.0 Right:0.0

:C90/270Left:0.0 Right:0.0

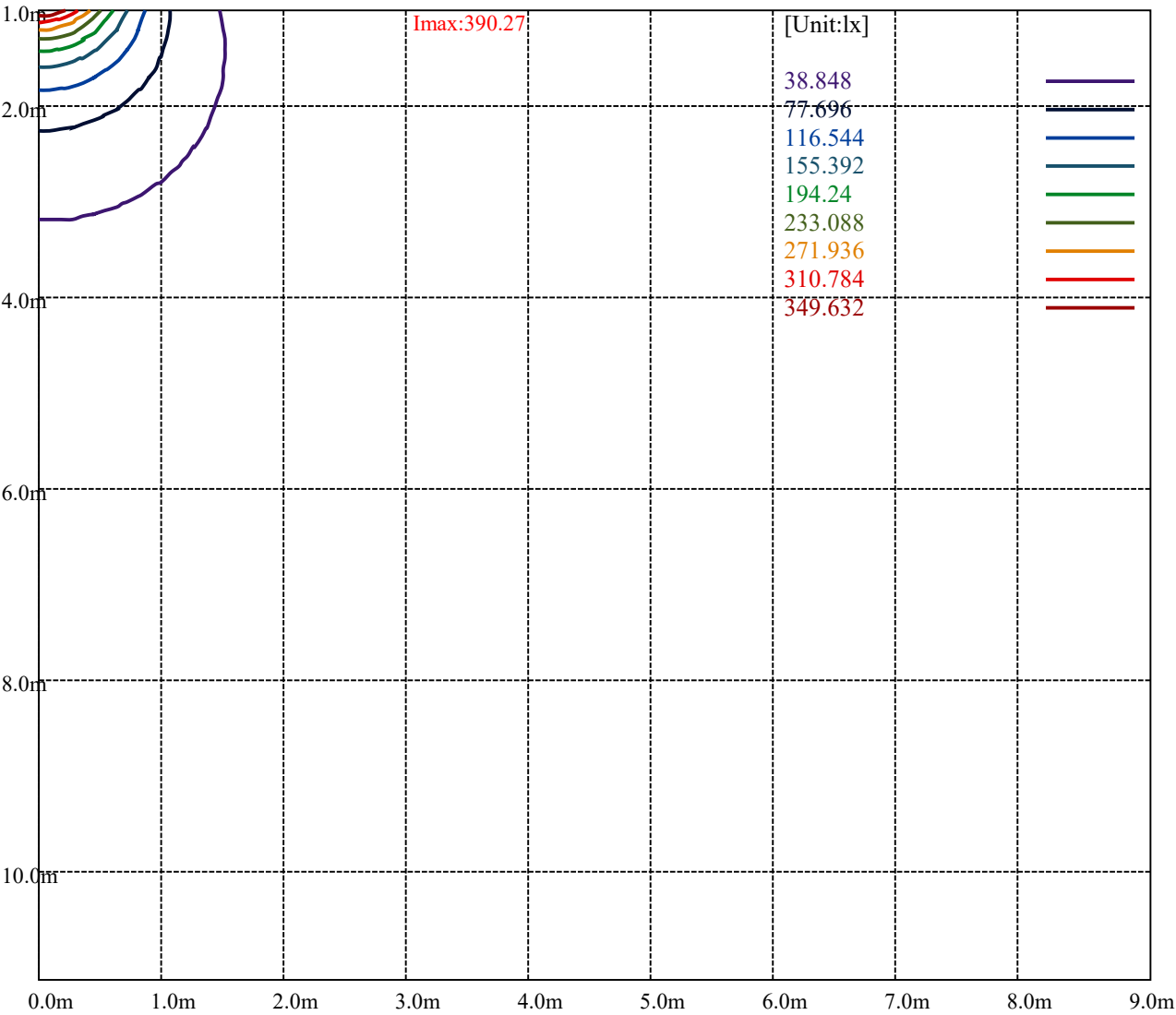


Max , Ave

Beam angle of C0 plane 180.00



(10%Emax) 4.267933	—
(20%Emax) 8.535867	—
(30%Emax) 12.80378	—
(40%Emax) 17.07178	—
(50%Emax) 21.33967	—
(60%Emax) 25.60756	—
(70%Emax) 29.87556	—
(80%Emax) 34.14344	—
(90%Emax) 38.41145	—



Luminance Table

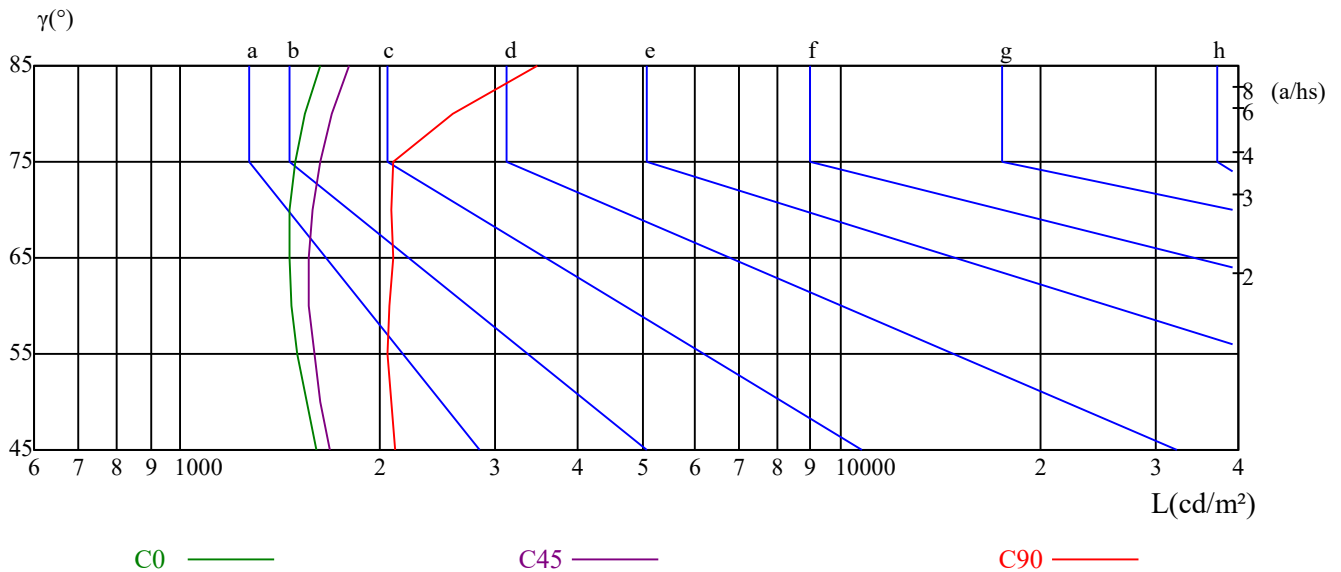
γ	45	50	55	60	65	70	75	80	85
C0	1610	1554	1499	1474	1460	1466	1490	1541	1629
C45	1688	1632	1593	1565	1563	1586	1623	1698	1805
C90	2107	2080	2057	2066	2095	2089	2101	2576	3475

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4494	3355	4124	6975	4684	6389	20209	14413	18606

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



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	0.89	0.84	0.79	0.82	0.77	0.73	0.69	0.65	0.62	0.56	0.54	0.51	0.45	0.43	0.42	0.36
2	0.76	0.69	0.62	0.70	0.63	0.58	0.58	0.53	0.49	0.48	0.44	0.41	0.38	0.35	0.33	0.28
3	0.66	0.57	0.51	0.61	0.53	0.47	0.51	0.45	0.40	0.42	0.37	0.33	0.33	0.30	0.27	0.23
4	0.58	0.49	0.42	0.53	0.45	0.39	0.45	0.38	0.33	0.37	0.32	0.28	0.29	0.25	0.22	0.19
5	0.51	0.42	0.36	0.47	0.39	0.33	0.40	0.33	0.28	0.33	0.28	0.24	0.26	0.22	0.19	0.16
6	0.46	0.37	0.31	0.42	0.34	0.29	0.36	0.29	0.25	0.29	0.24	0.21	0.23	0.20	0.17	0.14
7	0.41	0.33	0.27	0.38	0.30	0.25	0.32	0.26	0.21	0.27	0.22	0.18	0.21	0.18	0.15	0.12
8	0.37	0.29	0.23	0.35	0.27	0.22	0.29	0.23	0.19	0.24	0.19	0.16	0.20	0.16	0.13	0.11
9	0.34	0.26	0.21	0.32	0.24	0.19	0.27	0.21	0.17	0.22	0.18	0.14	0.18	0.14	0.12	0.09
10	0.31	0.24	0.18	0.29	0.22	0.17	0.25	0.19	0.15	0.21	0.16	0.13	0.17	0.13	0.11	0.09

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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	388.48	390.27	387.58	382.20	374.12	363.36	349.90	334.65	318.50
15.0	386.69	386.69	383.99	378.61	370.54	359.77	349.00	333.75	317.60
30.0	383.10	383.99	382.20	375.92	367.84	357.08	345.42	331.06	315.81
45.0	382.20	382.20	379.51	374.12	365.15	354.39	342.72	327.47	313.12
60.0	382.20	382.20	380.41	373.23	365.15	354.39	340.93	325.68	309.53
75.0	379.51	379.51	375.92	369.64	359.77	346.31	330.16	312.22	293.38
90.0	379.51	378.61	374.12	366.95	353.49	335.55	314.91	292.48	270.05
105.0	378.61	377.71	373.23	364.26	349.00	327.47	305.04	274.54	247.62
120.0	380.41	378.61	373.23	363.36	348.11	326.57	299.66	270.95	239.55
135.0	379.51	379.51	374.12	365.15	349.90	330.16	306.84	281.72	258.39
150.0	381.30	380.41	375.02	366.95	342.72	338.24	319.40	300.56	282.61
165.0	382.20	380.41	375.92	367.84	357.08	343.62	329.27	313.12	296.97
180.0	388.48	384.89	377.71	366.95	355.28	341.83	325.68	311.32	297.86
195.0	386.69	382.20	375.92	366.05	354.39	340.93	326.57	310.43	297.07
210.0	383.10	379.51	373.23	363.36	352.59	339.13	324.78	308.63	295.17
225.0	382.20	378.61	373.23	362.46	352.59	339.13	323.88	307.73	293.38
240.0	382.20	378.61	372.33	363.36	352.59	338.24	322.99	305.04	288.00
255.0	379.51	377.71	371.43	364.26	349.90	335.55	318.50	299.66	281.72
270.0	379.51	377.71	372.33	361.56	345.42	325.68	304.14	282.61	258.39
285.0	378.61	377.71	372.33	360.67	341.83	318.50	292.48	265.57	260.18
300.0	380.41	378.61	374.12	361.56	357.98	318.50	290.69	261.08	233.27
315.0	379.51	380.41	375.02	364.26	348.11	324.78	302.35	276.33	257.49
330.0	381.30	380.41	375.92	366.95	353.49	336.44	318.50	299.66	284.41
345.0	382.20	381.30	376.82	370.54	359.77	347.21	332.85	318.50	304.14
360.0	388.48	390.27	387.58	382.20	374.12	363.36	349.90	334.65	318.50

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	303.25	291.58	278.13	268.26	258.39	250.31	243.14	237.75	235.06
15.0	303.25	289.79	277.23	266.46	256.59	249.42	242.24	236.86	234.16
30.0	301.45	288.00	275.43	264.67	255.70	246.73	240.44	235.06	232.37
45.0	298.76	286.20	274.54	262.87	253.90	246.73	239.55	235.06	231.47
60.0	295.17	281.72	269.15	258.39	249.42	240.44	231.47	224.30	220.71
75.0	275.43	260.18	248.52	237.75	226.09	213.53	196.48	184.82	181.23
90.0	246.73	229.68	211.74	195.59	179.44	158.80	138.17	141.75	152.52
105.0	219.81	200.97	184.82	169.57	163.29	160.60	170.46	174.05	175.85
120.0	211.74	196.48	184.82	174.05	167.77	168.67	176.74	183.03	188.41
135.0	239.55	225.19	215.32	210.84	209.04	209.04	209.04	208.15	209.94
150.0	269.15	258.39	250.31	245.83	242.24	233.27	227.88	226.99	226.99
165.0	286.20	274.54	263.77	253.90	245.83	239.55	234.16	230.58	229.68
180.0	285.30	273.64	263.77	254.80	247.62	241.34	237.75	235.06	234.16
195.0	283.51	271.85	261.98	253.01	245.83	239.55	235.96	233.27	232.37
210.0	282.61	270.95	260.18	249.42	239.55	230.58	224.30	221.60	220.71
225.0	280.82	267.36	254.80	244.93	227.88	209.94	195.59	183.92	192.00
240.0	270.95	249.42	228.78	208.15	194.69	187.51	181.23	183.03	191.10
255.0	261.98	232.37	194.69	178.54	175.85	177.64	183.03	183.03	173.16
270.0	241.34	225.19	205.45	201.87	198.28	186.61	184.82	181.23	182.13
285.0	226.99	218.91	215.32	217.12	222.50	231.47	232.37	228.78	227.88
300.0	218.91	211.74	211.74	216.22	224.30	231.47	234.16	231.47	229.68
315.0	243.14	235.96	233.27	234.16	237.75	239.55	236.86	233.27	230.58
330.0	271.85	263.77	258.39	254.80	250.31	243.14	237.75	234.16	231.47
345.0	291.58	279.92	269.15	259.29	251.21	244.03	238.65	235.06	232.37
360.0	303.25	291.58	278.13	268.26	258.39	250.31	243.14	237.75	235.06

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	233.27	233.27	234.16	236.86	240.44	245.83	253.01	261.98	271.85
15.0	232.37	231.47	233.27	235.96	240.44	245.83	253.90	261.98	270.95
30.0	230.58	230.58	231.47	234.16	238.65	244.93	252.11	261.98	270.05
45.0	229.68	229.68	230.58	233.27	238.65	244.03	252.11	261.08	269.15
60.0	219.81	218.91	218.02	221.60	228.78	234.16	241.34	247.62	247.62
75.0	170.46	176.74	177.64	178.54	188.41	194.69	202.76	204.56	193.79
90.0	160.60	157.01	152.52	146.24	150.73	163.29	163.29	160.60	156.11
105.0	182.13	185.72	191.10	197.38	198.28	195.59	187.51	183.03	180.33
120.0	194.69	199.17	206.35	214.43	214.43	211.74	205.45	200.97	203.66
135.0	212.63	213.53	221.60	231.47	235.96	235.96	233.27	232.37	235.96
150.0	225.19	226.09	232.37	236.86	243.14	250.31	256.59	261.08	268.26
165.0	228.78	230.58	232.37	236.86	242.24	250.31	259.29	269.15	280.82
180.0	234.16	236.86	240.44	245.83	252.11	259.29	269.15	279.92	292.48
195.0	232.37	235.06	237.75	242.24	249.42	257.49	266.46	276.33	288.89
210.0	222.50	226.99	233.27	240.44	246.73	253.90	263.77	273.64	285.30
225.0	200.97	207.25	218.91	230.58	235.96	244.93	246.73	265.57	272.74
240.0	196.48	204.56	206.35	217.12	219.81	223.40	232.37	242.24	251.21
255.0	170.46	180.33	184.82	196.48	199.17	209.94	218.02	216.22	216.22
270.0	178.54	173.16	164.18	161.49	173.16	176.74	170.46	163.29	174.05
285.0	224.30	217.12	218.02	214.43	209.04	199.17	174.95	169.57	185.72
300.0	228.78	227.88	230.58	225.19	218.02	209.04	200.97	200.07	208.15
315.0	229.68	229.68	231.47	234.16	232.37	227.88	226.09	227.88	233.27
330.0	230.58	231.47	233.27	235.96	241.34	246.73	249.42	253.90	260.18
345.0	231.47	231.47	234.16	236.86	242.24	247.62	254.80	263.77	274.54
360.0	233.27	233.27	234.16	236.86	240.44	245.83	253.01	261.98	271.85
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	282.61	291.58	299.66	312.22	326.57	341.83	355.28	366.05	318.50
15.0	281.72	290.69	296.97	311.32	323.88	337.34	350.80	364.26	376.82
30.0	279.92	287.10	296.07	308.63	312.22	316.71	334.65	340.93	353.49
45.0	268.26	270.05	276.33	279.92	281.72	288.00	305.04	306.84	324.78
60.0	245.83	245.83	250.31	258.39	261.98	270.95	282.61	288.00	313.12
75.0	193.79	207.25	226.09	244.93	235.06	229.68	242.24	272.74	303.25
90.0	162.39	178.54	202.76	219.81	214.43	221.60	236.86	265.57	290.69
105.0	189.31	213.53	246.73	273.64	267.36	241.34	260.18	276.33	283.51
120.0	212.63	230.58	257.49	285.30	309.53	269.15	265.57	289.79	282.61
135.0	243.14	256.59	276.33	297.86	320.29	328.37	278.13	276.33	305.04
150.0	275.43	283.51	297.86	314.91	331.96	347.21	345.42	289.79	292.48
165.0	293.38	300.56	311.32	324.78	338.24	350.80	361.56	358.87	303.25
180.0	305.04	311.32	323.88	337.34	349.90	361.56	371.43	378.61	310.43
195.0	299.66	307.73	320.29	332.85	345.42	347.21	365.15	288.89	212.63
210.0	292.48	294.28	315.81	329.27	340.93	349.00	272.74	204.56	341.83
225.0	283.51	297.86	312.22	326.57	327.47	272.74	209.94	280.82	375.92
240.0	261.98	273.64	288.89	294.28	243.14	225.19	256.59	310.43	381.30
255.0	224.30	233.27	241.34	203.66	195.59	202.76	280.82	321.19	380.41
270.0	190.20	201.87	191.10	165.98	190.20	208.15	288.89	327.47	377.71
285.0	208.15	232.37	235.96	225.19	246.73	278.13	334.65	352.59	376.82
300.0	218.02	242.24	270.05	296.07	317.60	339.13	356.18	368.74	375.02
315.0	242.24	259.29	279.02	301.45	322.09	340.93	356.18	368.74	368.74
330.0	266.46	278.13	293.38	312.22	329.27	345.42	359.77	371.43	332.85
345.0	283.51	289.79	301.45	316.71	331.96	347.21	359.77	357.08	291.58
360.0	282.61	291.58	299.66	312.22	326.57	341.83	355.28	366.05	318.50

Intensity data(cd)

C/ $\gamma(^{\circ})$	180.0
0.0	295.17
15.0	360.67
30.0	382.20
45.0	381.30
60.0	381.30
75.0	379.51
90.0	375.92
105.0	359.77
120.0	329.27
135.0	290.69
150.0	292.48
165.0	278.13
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	295.17