
AFX

Client:

LumCAT: PTHW0636LAJUDBK-3000K

Luminaire: LED Lamp

Report No:

Ballast type:

Test No: LCZP25080182

Voltage(V): 120.010

LampCAT:

Current(A): 0.252

Lamp flux(lm): 2407.9

Power (W): 29.980

Number of Lamps: 1

PF: 0.992

Length(mm): 60

Width(mm): 40

Phm Type: C

Height(mm): 870

Photometric Results

Lumens(lm): 2407.93, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 80.32

Central intensity(cd): 4.217, Maximum intensity(cd): 463.395

Angle of maximum intensity: C=90.0 γ =95.0

Beam Angle(50%Imax): [C0/180]Total=294.0

[C90/270]Total=111.1

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

[C90/270]Total=163.2

Maximum s/h(1/2): C0_180=10.12 C90_270=18.67

Maximum s/h(1/4): C0_180=9.30 C90_270=15.58

Up flux rate of lamp(%): 50.71%

Down flux rate of lamp(%): 49.29%

Up flux rate of LUM(%): 50.71%

Down flux rate of LUM(%): 49.29%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 18.188%

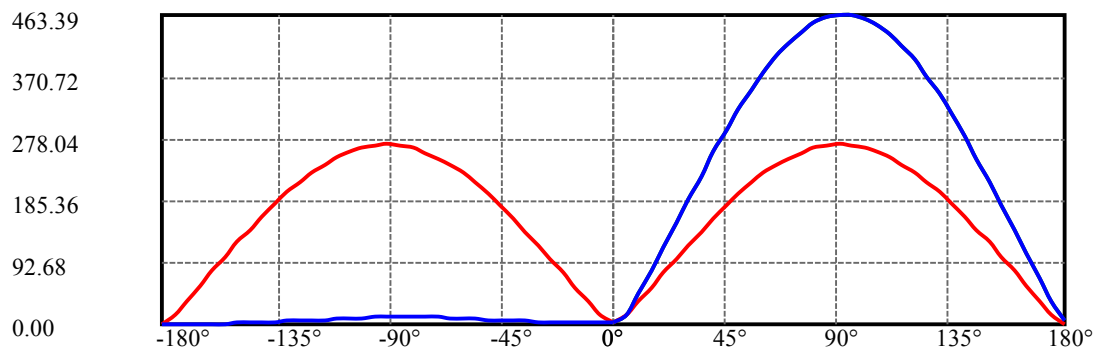
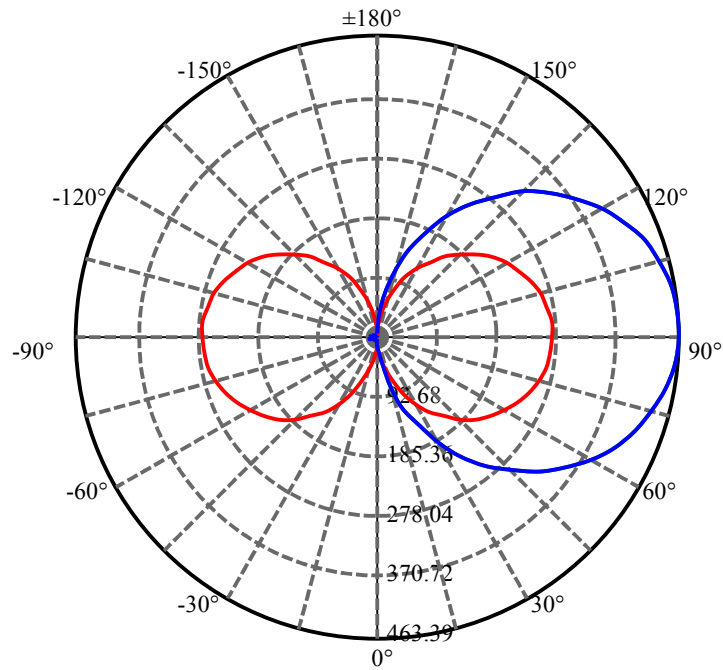
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3.050	0.000	0	0.00%	0.00%
5.0	11.480	0.174	0.174	0.01%	0.01%
10.0	29.001	1.448	1.622	0.06%	0.07%
15.0	47.969	4.566	6.188	0.19%	0.26%
20.0	68.421	9.592	15.78	0.40%	0.66%
25.0	87.524	16.356	32.136	0.68%	1.33%
30.0	107.086	24.628	56.764	1.02%	2.36%
35.0	126.551	34.405	91.169	1.43%	3.79%
40.0	145.115	45.326	136.494	1.88%	5.67%
45.0	162.921	57.035	193.529	2.37%	8.04%
50.0	179.762	69.244	262.773	2.88%	10.91%
55.0	195.432	81.580	344.353	3.39%	14.30%
60.0	209.477	93.594	437.947	3.89%	18.19%
65.0	221.978	104.887	542.834	4.36%	22.54%
70.0	232.594	115.101	657.935	4.78%	27.32%
75.0	241.185	123.838	781.773	5.14%	32.47%
80.0	247.776	130.832	912.606	5.43%	37.90%
85.0	251.974	135.794	1048.399	5.64%	43.54%
90.0	253.734	138.467	1186.866	5.75%	49.29%
95.0	253.125	138.782	1325.648	5.76%	55.05%
100.0	250.142	136.750	1462.398	5.68%	60.73%
105.0	244.766	132.424	1594.822	5.50%	66.23%
110.0	237.133	125.961	1720.782	5.23%	71.46%
115.0	227.353	117.611	1838.393	4.88%	76.35%
120.0	215.828	107.738	1946.131	4.47%	80.82%
125.0	202.236	96.634	2042.766	4.01%	84.84%
130.0	187.354	84.710	2127.476	3.52%	88.35%
135.0	170.988	72.408	2199.884	3.01%	91.36%
140.0	153.579	60.096	2259.98	2.50%	93.86%
145.0	134.701	48.097	2308.077	2.00%	95.85%
150.0	115.553	36.852	2344.929	1.53%	97.38%
155.0	95.643	26.727	2371.656	1.11%	98.49%
160.0	75.980	18.000	2389.656	0.75%	99.24%
165.0	55.195	10.811	2400.467	0.45%	99.69%
170.0	35.300	5.368	2405.835	0.22%	99.91%
175.0	16.789	1.863	2407.698	0.08%	99.99%
180.0	2.307	0.228	2407.927	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	56.76	2.36%	2.36%
0-40	136.49	5.67%	5.67%
0-60	437.95	18.19%	18.19%
0-90	1186.87	49.29%	49.29%
0-120	1946.13	80.82%	80.82%
0-180	2407.93	100.00%	100.00%
60-90	748.92	31.10%	31.10%
90-120	759.27	31.53%	31.53%
90-130	940.61	39.06%	39.06%
90-150	1158.06	48.09%	48.09%
90-180	1220.83	50.70%	50.70%
0-119.08	1926.34	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	1.62
10-20	14.16
20-30	40.98
30-40	79.73
40-50	126.28
50-60	175.17
60-70	219.99
70-80	254.67
80-90	274.26
90-100	275.53
100-110	258.38
110-120	225.35
120-130	181.34
130-140	132.50
140-150	84.95
150-160	44.73
160-170	16.18
170-180	1.86

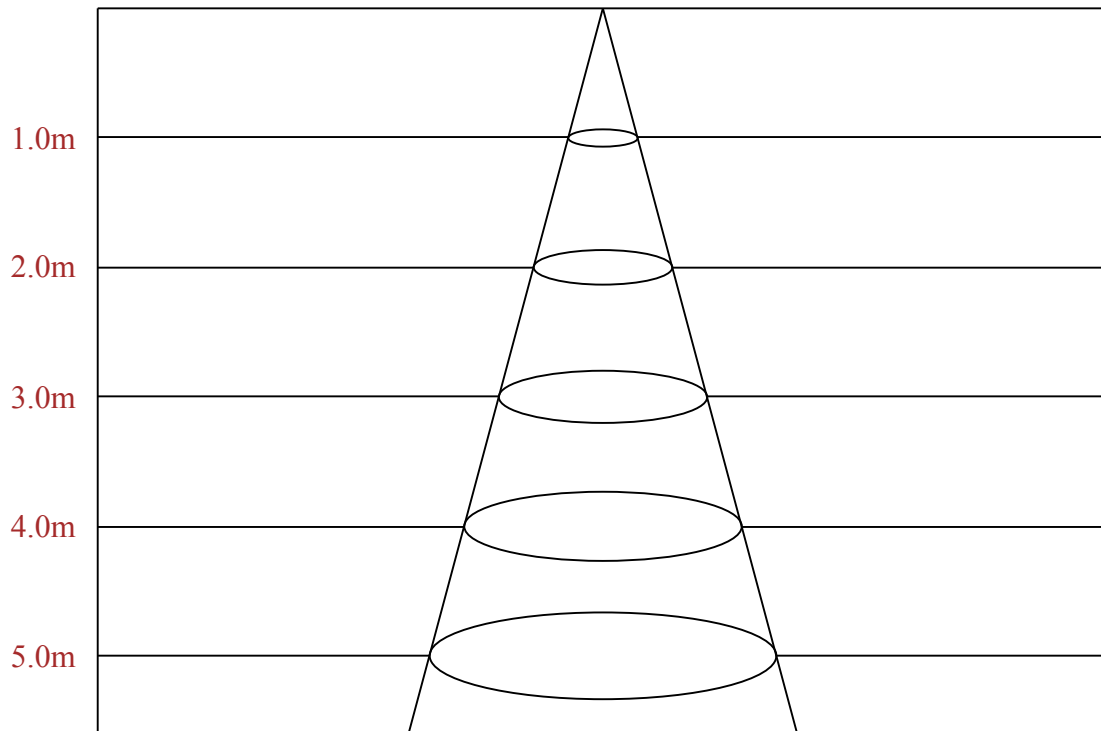
C90(Max): —————C0/C180: —————C90/C270: —————

Field angle(10%Imax):C0/180Left:261.8 Right:81.8

:C90/270Left:84.8 Right:78.4

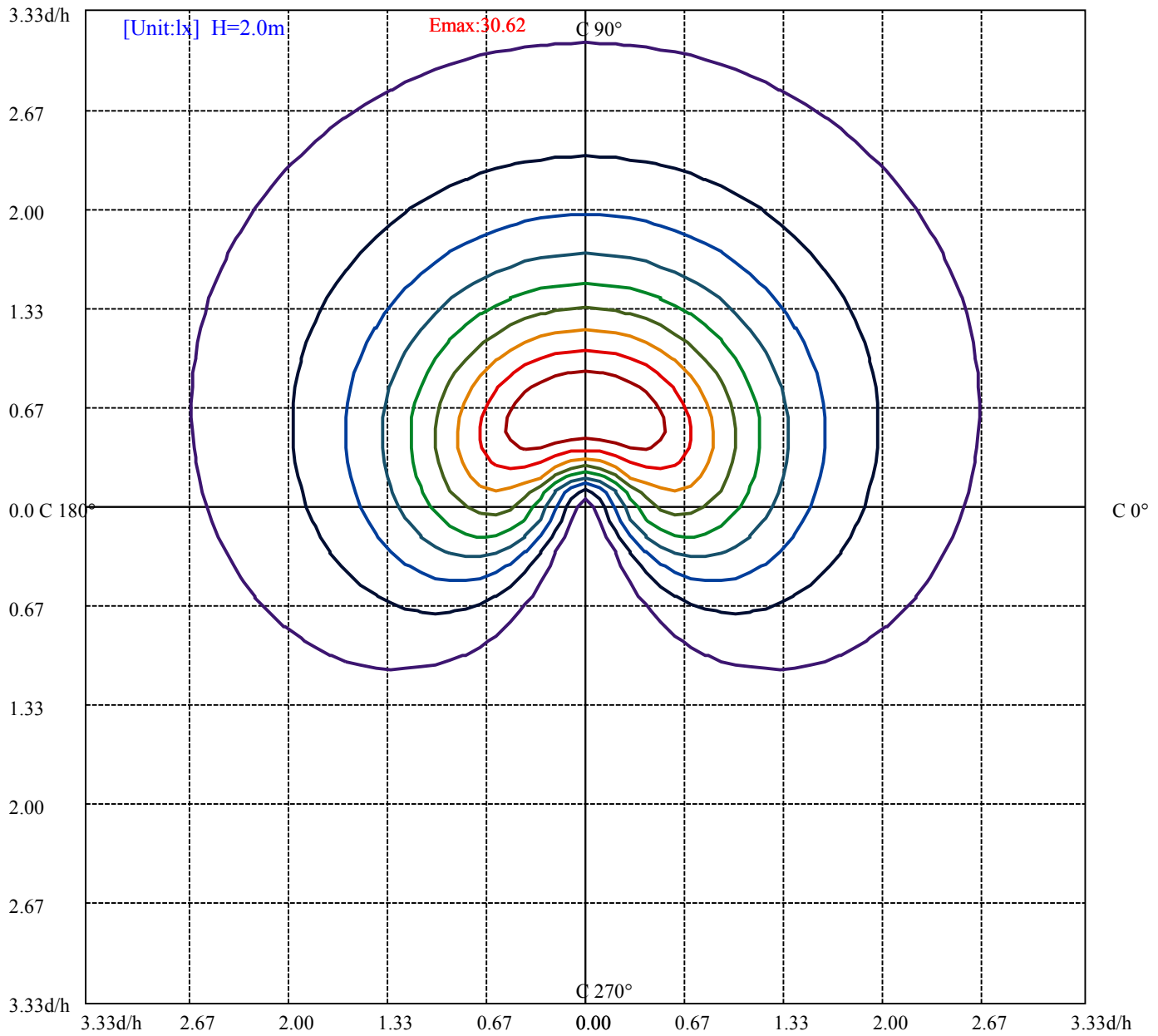
Beam Angle(50%Imax):C0/180Left:237.0 Right:57.0

:C90/270Left:58.7 Right:52.4

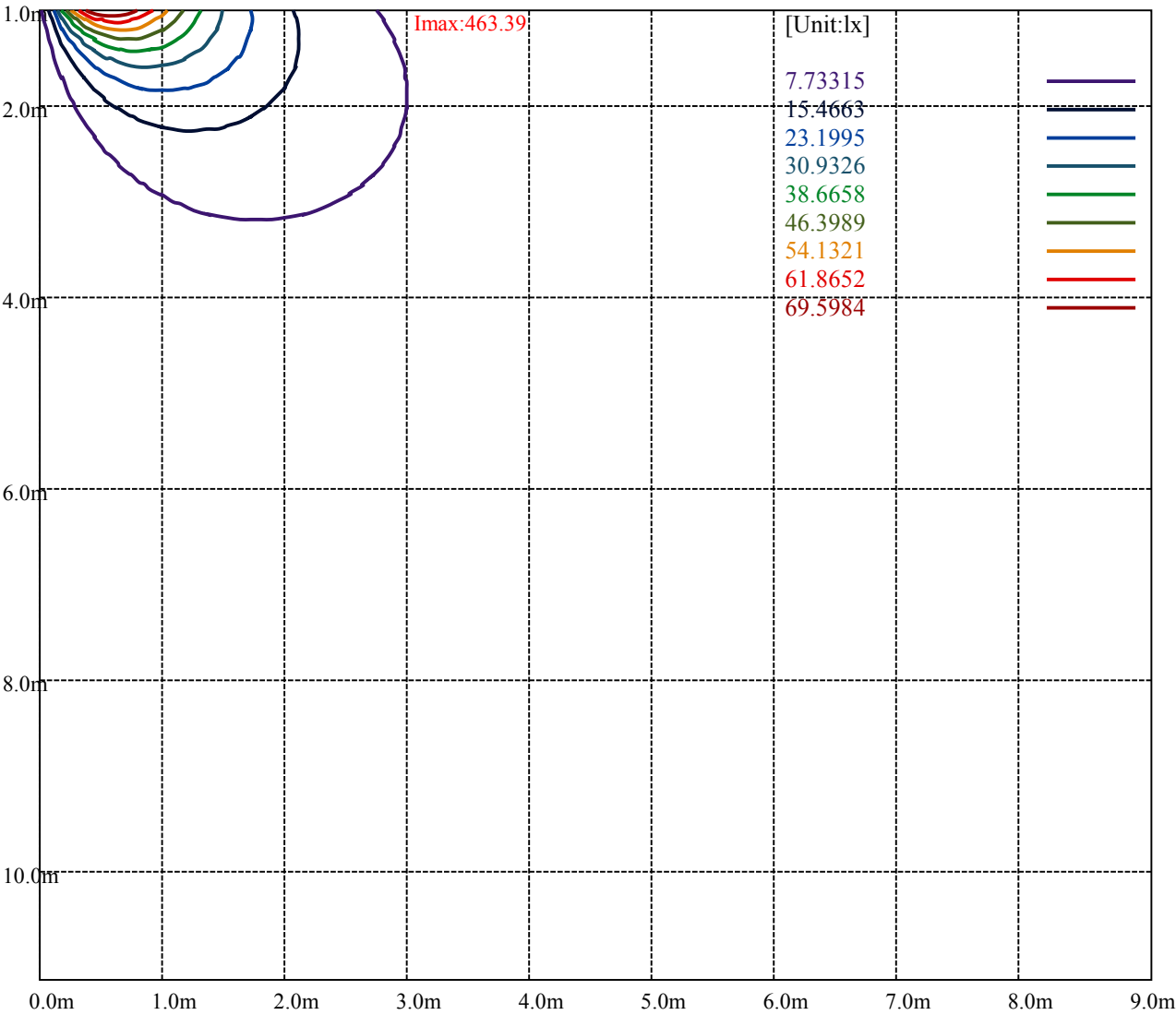


Max , Ave

Beam angle of C90 plane 339.00



(10%Emax)	3.061525	—
(20%Emax)	6.12305	—
(30%Emax)	9.184575	—
(40%Emax)	12.2461	—
(50%Emax)	15.30762	—
(60%Emax)	18.36915	—
(70%Emax)	21.43068	—
(80%Emax)	24.4922	—
(90%Emax)	27.55375	—



Luminance Table

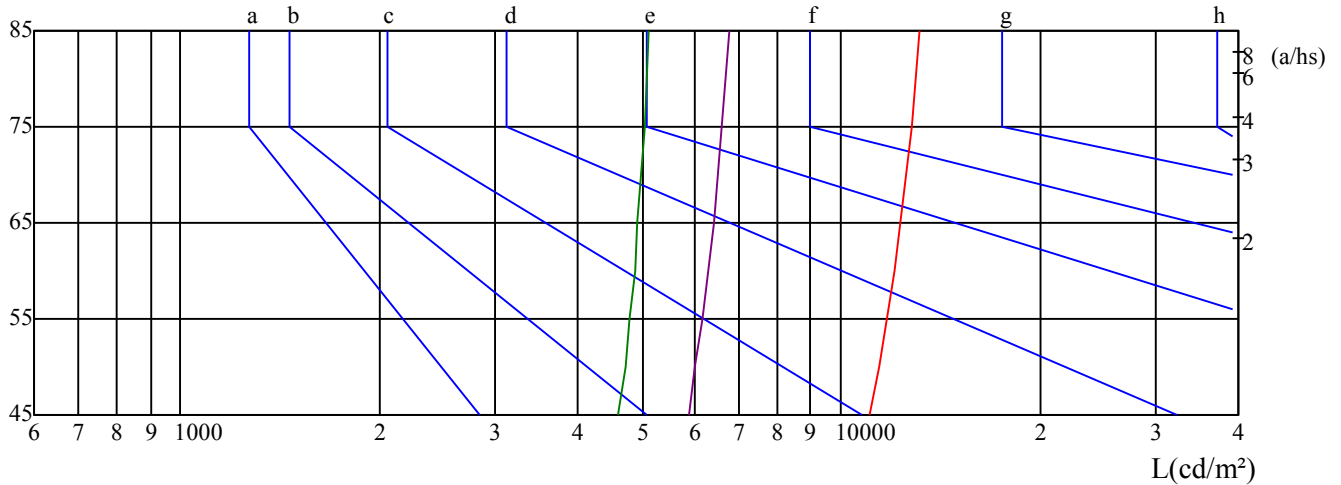
γ	45	50	55	60	65	70	75	80	85
C0	4608	4706	4794	4869	4918	4981	5038	5087	5122
C45	5880	6024	6175	6285	6411	6518	6610	6696	6765
C90	11024	11418	11754	12062	12344	12563	12789	12999	13184

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
234317	202738	218837	413951	361016	388567	1278387	1125907	1206222

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

 $\gamma(^{\circ})$ 

C0 ———

C45 ———

C90 ———

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	0.83	0.83	0.83	0.69	0.69	0.69	0.55	0.55	0.55	0.49
1	0.85	0.79	0.73	0.78	0.72	0.67	0.64	0.60	0.56	0.51	0.48	0.45	0.40	0.37	0.35	0.29
2	0.71	0.62	0.55	0.65	0.57	0.51	0.53	0.47	0.42	0.42	0.37	0.33	0.32	0.28	0.25	0.20
3	0.60	0.51	0.43	0.55	0.47	0.40	0.45	0.38	0.33	0.35	0.30	0.26	0.26	0.22	0.19	0.15
4	0.52	0.43	0.35	0.48	0.39	0.32	0.39	0.32	0.26	0.30	0.25	0.20	0.22	0.18	0.15	0.11
5	0.46	0.36	0.29	0.42	0.33	0.26	0.34	0.27	0.22	0.26	0.21	0.17	0.20	0.15	0.12	0.08
6	0.41	0.31	0.24	0.37	0.28	0.22	0.30	0.23	0.18	0.23	0.18	0.14	0.17	0.13	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	0.11	0.08	0.05
8	0.32	0.24	0.18	0.30	0.22	0.16	0.24	0.18	0.13	0.19	0.14	0.10	0.14	0.10	0.07	0.04
9	0.29	0.21	0.15	0.27	0.19	0.14	0.22	0.16	0.11	0.17	0.12	0.09	0.13	0.09	0.06	0.04
10	0.27	0.19	0.13	0.24	0.17	0.12	0.20	0.14	0.10	0.16	0.11	0.08	0.12	0.08	0.05	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	4.22	12.38	35.17	59.48	84.96	110.44	134.67	159.43	183.11
15.0	3.14	14.18	39.39	69.26	97.52	127.40	157.10	186.34	214.61
30.0	2.60	14.62	43.87	75.54	108.56	142.11	175.40	207.97	237.84
45.0	1.97	15.79	46.83	80.66	115.65	149.29	184.82	219.72	254.08
60.0	1.53	14.98	46.65	81.19	117.26	154.23	189.04	226.63	259.82
75.0	1.26	15.16	46.83	79.94	116.19	152.79	189.84	225.91	261.08
90.0	1.53	15.25	44.95	79.22	114.66	151.35	187.60	221.96	258.30
105.0	2.06	13.82	44.50	76.26	112.87	146.96	183.03	217.57	251.21
120.0	2.51	12.02	41.45	73.57	107.48	141.58	173.78	208.15	238.38
135.0	6.28	11.48	38.58	68.19	98.87	128.30	158.89	188.59	217.48
150.0	4.40	9.87	33.64	59.57	106.50	112.60	137.90	165.17	189.04
165.0	5.11	7.81	28.44	48.99	71.24	93.40	115.65	137.18	158.89
180.0	4.22	18.75	35.17	52.40	68.81	85.95	102.73	118.97	134.85
195.0	3.14	13.73	26.11	38.76	51.59	64.24	76.53	88.10	99.77
210.0	2.60	9.24	16.24	24.49	33.11	40.91	48.90	56.70	64.15
225.0	1.97	4.84	6.55	8.70	11.39	14.09	16.87	19.47	21.98
240.0	1.53	2.24	2.96	3.68	4.40	5.29	6.28	7.27	8.34
255.0	1.26	1.08	0.99	1.08	1.08	1.17	1.17	1.53	1.88
270.0	1.53	1.79	2.15	2.60	2.78	3.41	3.95	4.58	5.20
285.0	2.06	4.04	5.11	6.37	8.07	10.05	12.02	13.73	14.27
300.0	2.51	7.98	11.57	15.70	16.96	24.76	28.80	33.38	37.50
315.0	6.28	12.74	23.51	34.54	45.58	56.52	67.11	77.43	86.94
330.0	4.40	18.12	33.11	48.54	63.43	80.03	94.38	108.83	122.82
345.0	5.11	23.60	42.26	62.53	83.17	103.71	123.63	142.65	161.22
360.0	4.22	12.38	35.17	59.48	84.96	110.44	134.67	159.43	183.11
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	206.17	227.44	247.17	264.67	279.29	292.75	303.79	312.22	317.42
15.0	240.09	266.37	288.80	309.89	328.28	344.52	356.54	367.13	373.32
30.0	267.81	296.43	322.90	345.77	368.02	385.16	399.96	411.81	418.80
45.0	286.29	315.18	345.33	368.74	392.52	412.17	427.69	440.34	448.59
60.0	293.29	324.87	354.30	381.03	404.00	424.55	440.70	453.71	461.87
75.0	294.72	326.57	355.19	382.74	406.33	426.88	443.75	455.86	465.10
90.0	289.97	322.00	351.25	377.98	401.85	421.14	437.82	450.92	459.81
105.0	283.42	312.40	342.72	367.04	390.09	410.55	426.61	438.81	447.25
120.0	268.80	297.95	324.60	349.18	371.16	389.47	403.91	415.84	424.01
135.0	245.20	271.22	294.01	315.99	335.37	352.14	366.05	376.64	383.46
150.0	212.81	234.97	255.97	275.26	291.94	306.03	317.78	326.84	332.85
165.0	177.10	195.50	212.00	228.24	241.61	253.27	262.96	270.50	275.17
180.0	149.65	163.47	176.03	187.24	196.03	204.11	210.48	215.05	217.39
195.0	110.80	121.21	130.63	138.97	146.15	151.53	156.83	159.70	161.67
210.0	70.97	78.05	84.25	89.54	94.38	98.33	101.56	103.80	105.06
225.0	24.76	27.36	29.88	32.12	34.18	35.89	37.23	38.22	38.76
240.0	9.33	11.04	12.74	14.27	15.70	17.05	18.21	19.02	19.65
255.0	2.42	3.14	3.86	4.76	5.47	6.10	6.73	6.82	7.36
270.0	5.92	7.00	7.81	8.07	9.42	10.14	10.68	11.13	11.21
285.0	17.85	19.92	21.80	23.60	25.12	26.47	27.45	27.99	28.35
300.0	41.45	45.13	48.54	51.50	54.10	56.16	57.60	58.68	59.03
315.0	96.63	104.88	112.96	119.77	125.78	130.81	134.49	137.00	138.44
330.0	136.01	148.21	159.16	169.30	177.46	184.55	189.93	193.88	195.85
345.0	178.63	193.97	208.51	221.78	233.18	242.51	249.69	254.71	256.95
360.0	206.17	227.44	247.17	264.67	279.29	292.75	303.79	312.22	317.42

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	320.11	319.94	316.17	309.80	300.83	289.07	275.61	258.30	240.80
15.0	376.19	375.74	371.88	364.17	354.30	340.12	324.15	303.70	282.97
30.0	421.94	421.94	417.28	408.94	396.64	381.03	362.19	341.29	314.73
45.0	451.91	451.64	446.71	437.56	424.37	408.58	386.69	364.08	337.25
60.0	466.36	465.73	461.24	452.09	438.54	420.87	399.07	374.39	347.84
75.0	469.05	468.78	463.93	455.05	441.77	422.84	401.67	377.09	348.82
90.0	462.95	463.39	458.55	449.13	435.85	418.27	397.09	372.24	346.13
105.0	451.01	450.48	445.90	437.02	424.19	408.22	387.94	363.90	336.89
120.0	427.60	427.42	423.74	415.84	403.73	387.40	369.64	345.95	322.36
135.0	387.76	387.40	383.81	376.28	365.15	351.25	335.01	314.91	292.48
150.0	336.08	335.91	332.59	326.93	317.60	305.49	290.60	273.82	254.98
165.0	277.77	277.59	275.43	270.32	262.87	253.10	241.52	227.44	211.82
180.0	218.28	216.58	212.99	207.52	200.07	191.01	180.96	168.85	156.20
195.0	162.03	160.86	158.35	154.41	149.02	142.38	134.58	125.87	115.92
210.0	105.42	104.52	102.82	100.13	96.54	92.23	87.12	81.19	75.00
225.0	38.85	38.40	37.59	36.25	34.72	32.84	32.30	28.35	26.11
240.0	19.74	19.20	19.02	17.41	15.88	14.53	12.92	11.21	9.51
255.0	7.27	6.82	6.28	5.65	4.84	4.13	3.41	2.60	2.06
270.0	11.13	10.68	10.05	9.15	8.25	7.18	6.28	5.29	4.40
285.0	28.08	27.63	26.83	25.57	24.13	22.25	20.37	18.39	16.24
300.0	58.68	57.78	56.43	54.46	52.22	49.35	46.03	42.44	38.49
315.0	138.26	137.27	134.67	131.17	125.96	120.04	113.40	105.51	96.90
330.0	195.68	193.97	190.38	185.63	178.72	170.11	160.15	149.02	137.00
345.0	257.49	255.34	250.76	243.94	234.97	224.21	211.20	197.83	181.59
360.0	320.11	319.94	316.17	309.80	300.83	289.07	275.61	258.30	240.80
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	220.35	197.92	174.77	151.53	124.62	100.13	74.20	48.27	23.69
15.0	257.49	233.09	205.37	176.12	146.51	116.27	85.86	57.06	28.17
30.0	288.89	259.47	228.51	195.85	164.18	130.45	96.27	62.71	30.68
45.0	307.91	277.50	242.78	208.15	174.32	139.78	101.92	67.65	33.46
60.0	317.24	284.77	248.88	216.40	179.80	142.83	105.33	68.72	33.73
75.0	320.29	285.48	252.47	216.58	179.71	142.47	107.12	70.16	34.99
90.0	315.90	283.06	248.79	213.35	179.17	142.11	105.42	68.90	35.89
105.0	308.18	275.88	244.30	209.85	174.68	138.79	102.64	68.90	34.90
120.0	294.90	264.94	233.09	200.25	166.52	133.68	99.59	65.76	33.29
135.0	267.72	240.71	213.08	183.29	152.88	121.66	92.14	61.46	31.67
150.0	233.72	210.66	186.17	161.40	133.50	107.66	80.39	53.83	27.81
165.0	194.24	175.49	156.11	134.85	112.69	90.08	68.63	45.04	24.49
180.0	141.75	126.32	109.73	93.85	75.54	59.03	41.09	21.44	2.51
195.0	105.78	95.46	82.36	69.80	56.79	54.19	29.07	12.47	1.26
210.0	68.01	66.48	53.29	45.40	36.87	27.99	16.60	6.19	1.17
225.0	23.60	21.08	18.39	15.70	12.83	8.25	3.77	1.08	1.17
240.0	7.98	6.46	5.38	4.40	3.05	1.53	0.72	0.81	1.08
255.0	1.44	1.26	1.08	0.81	0.54	0.54	0.63	0.81	1.08
270.0	3.32	2.87	2.24	1.70	1.26	0.81	0.54	0.81	1.08
285.0	14.27	12.38	10.59	8.43	6.46	4.40	3.32	2.60	1.88
300.0	34.81	30.59	26.29	21.71	17.14	12.29	8.43	6.10	2.69
315.0	87.74	77.88	67.38	56.88	45.85	34.45	23.15	12.47	4.04
330.0	123.81	110.35	95.46	80.03	64.33	49.08	33.29	18.48	5.20
345.0	164.36	145.79	126.32	106.94	86.22	65.05	44.59	25.48	7.00
360.0	220.35	197.92	174.77	151.53	124.62	100.13	74.20	48.27	23.69

Intensity data(cd)

C/ $\gamma(^{\circ})$	180.0
0.0	1.35
15.0	3.77
30.0	4.67
45.0	4.22
60.0	5.02
75.0	4.76
90.0	4.67
105.0	5.47
120.0	5.29
135.0	5.83
150.0	5.11
165.0	5.20
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	1.35