
AFX

Client:

LumCAT: PTHW0636LAJUDBK-2700K

Luminaire: LED Lamp

Report No:

Ballast type:

Test No: LCZP25080182

Voltage(V): 120.020

LampCAT:

Current(A): 0.254

Lamp flux(lm): 2248.0

Power (W): 30.250

Number of Lamps: 1

PF: 0.992

Length(mm): 60

Width(mm): 40

Phm Type: C

Height(mm): 870

Photometric Results

Lumens(lm): 2247.95, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 74.31

Central intensity(cd): 3.499, Maximum intensity(cd): 433.698

Angle of maximum intensity: C=90.0 γ =90.0

Beam Angle(50%Imax): [C0/180]Total=293.8

[C90/270]Total=111.1

Field angle(10%Imax): [C0/180]Total=343.8

[C90/270]Total=163.3

Maximum s/h(1/2): C0_180=10.50 C90_270=19.39

Maximum s/h(1/4): C0_180=9.90 C90_270=15.92

Up flux rate of lamp(%): 50.60%

Down flux rate of lamp(%): 49.40%

Up flux rate of LUM(%): 50.60%

Down flux rate of LUM(%): 49.40%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 18.277%

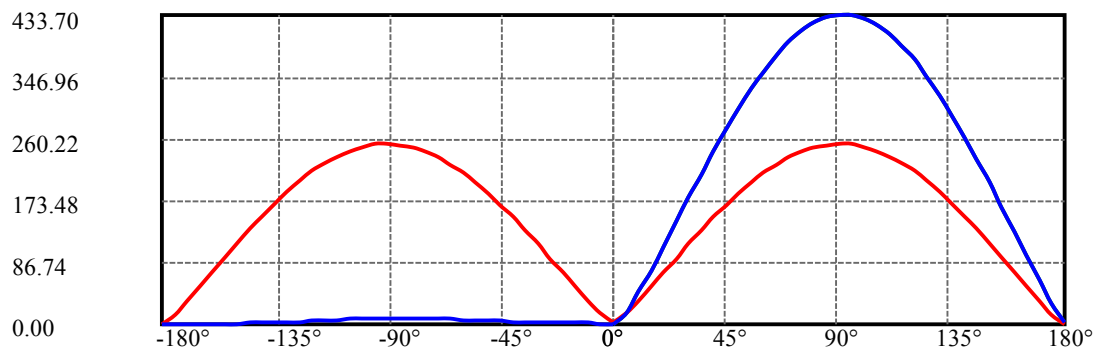
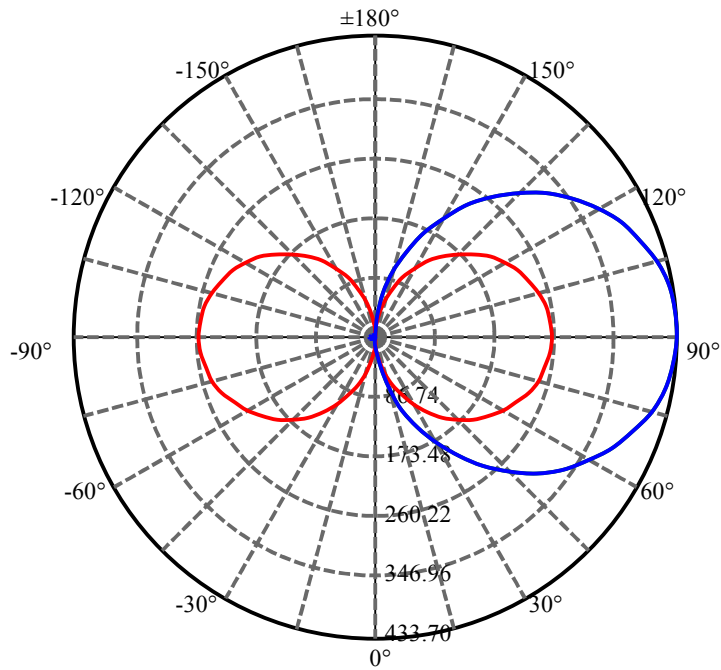
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2.288	0.000	0	0.00%	0.00%
5.0	11.166	0.161	0.161	0.01%	0.01%
10.0	28.467	1.418	1.579	0.06%	0.07%
15.0	45.360	4.379	5.958	0.19%	0.27%
20.0	63.599	8.980	14.938	0.40%	0.66%
25.0	82.481	15.321	30.259	0.68%	1.35%
30.0	101.468	23.279	53.538	1.04%	2.38%
35.0	118.604	32.407	85.945	1.44%	3.82%
40.0	135.979	42.475	128.42	1.89%	5.71%
45.0	152.585	53.430	181.85	2.38%	8.09%
50.0	168.876	64.956	246.806	2.89%	10.98%
55.0	182.906	76.489	323.295	3.40%	14.38%
60.0	195.918	87.564	410.859	3.90%	18.28%
65.0	207.492	98.070	508.929	4.36%	22.64%
70.0	217.398	107.585	616.514	4.79%	27.43%
75.0	225.346	115.726	732.24	5.15%	32.57%
80.0	231.413	122.216	854.456	5.44%	38.01%
85.0	235.234	126.799	981.255	5.64%	43.65%
90.0	236.886	129.270	1110.525	5.75%	49.40%
95.0	236.247	129.547	1240.073	5.76%	55.16%
100.0	233.406	127.616	1367.688	5.68%	60.84%
105.0	228.292	123.537	1491.226	5.50%	66.34%
110.0	221.178	117.484	1608.71	5.23%	71.56%
115.0	211.937	109.667	1718.377	4.88%	76.44%
120.0	201.036	100.394	1818.772	4.47%	80.91%
125.0	188.360	90.008	1908.779	4.00%	84.91%
130.0	174.263	78.846	1987.626	3.51%	88.42%
135.0	159.078	67.356	2054.982	3.00%	91.42%
140.0	142.480	55.836	2110.818	2.48%	93.90%
145.0	125.183	44.658	2155.475	1.99%	95.89%
150.0	106.993	34.190	2189.665	1.52%	97.41%
155.0	88.817	24.780	2214.445	1.10%	98.51%
160.0	70.156	16.673	2231.118	0.74%	99.25%
165.0	51.057	9.990	2241.108	0.44%	99.70%
170.0	32.302	4.945	2246.053	0.22%	99.92%
175.0	15.054	1.694	2247.747	0.08%	99.99%
180.0	1.727	0.201	2247.947	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	53.54	2.38%	2.38%
0-40	128.42	5.71%	5.71%
0-60	410.86	18.28%	18.28%
0-90	1110.53	49.40%	49.40%
0-120	1818.77	80.91%	80.91%
0-180	2247.95	100.00%	100.00%
60-90	699.67	31.12%	31.12%
90-120	708.25	31.51%	31.51%
90-130	877.10	39.02%	39.02%
90-150	1079.14	48.01%	48.01%
90-180	1137.22	50.59%	50.59%
0-118.98	1798.36	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	1.58
10-20	13.36
20-30	38.60
30-40	74.88
40-50	118.39
50-60	164.05
60-70	205.65
70-80	237.94
80-90	256.07
90-100	257.16
100-110	241.02
110-120	210.06
120-130	168.85
130-140	123.19
140-150	78.85
150-160	41.45
160-170	14.93
170-180	1.69



C90(Max): —————

C0/C180: —————

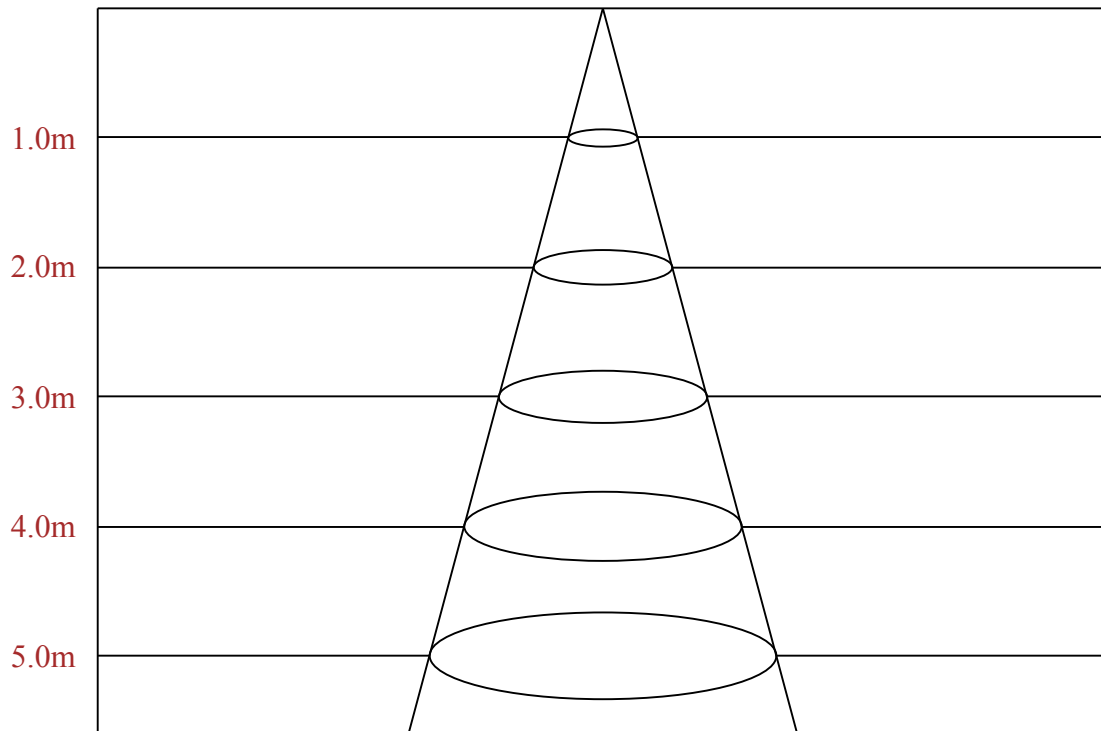
C90/C270: —————

Field angle(10%Imax):C0/180Left:261.9 Right:81.9

:C90/270Left:80.2 Right:83.1

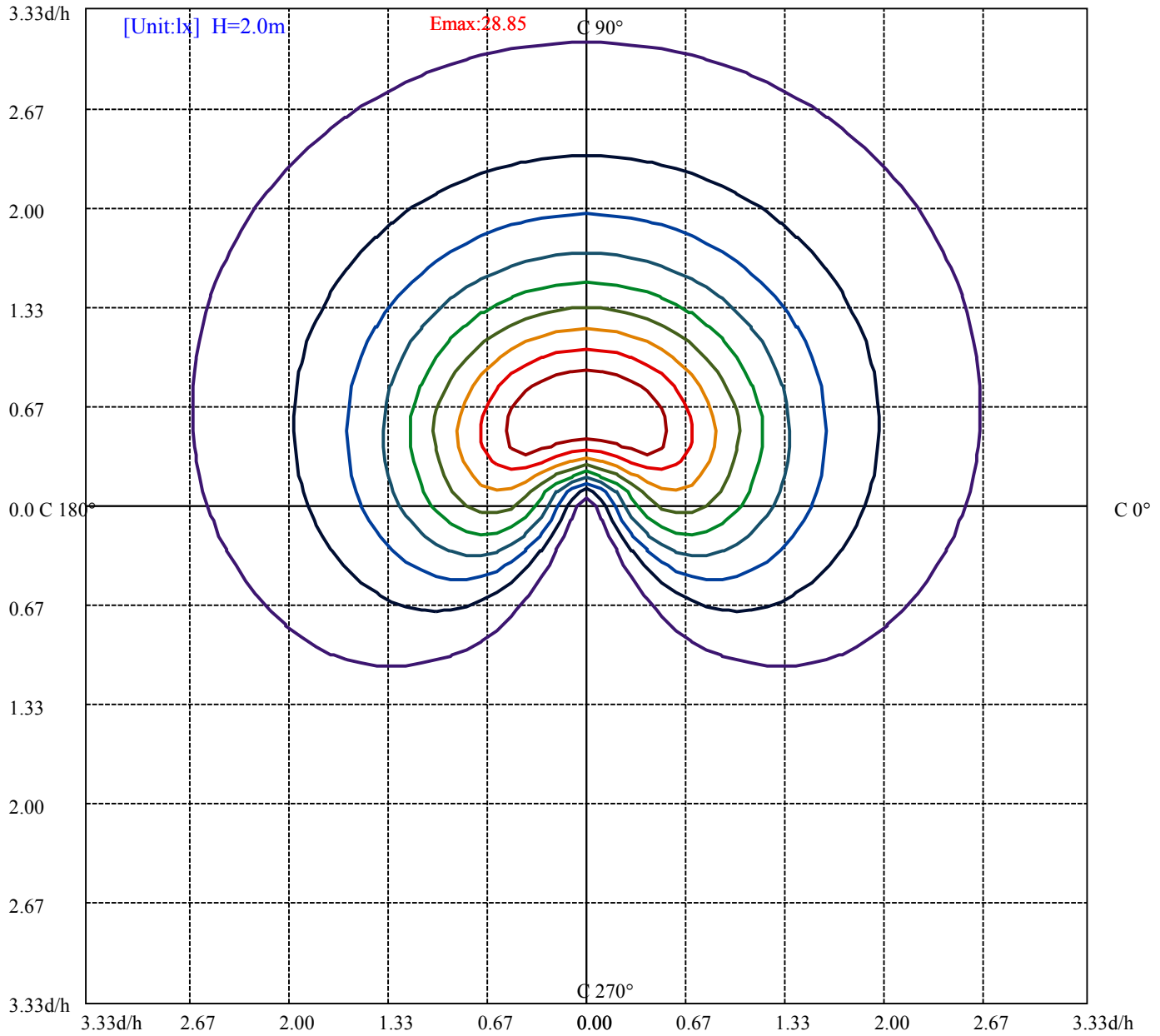
Beam Angle(50%Imax):C0/180Left:236.9 Right:56.9

:C90/270Left:53.9 Right:57.2

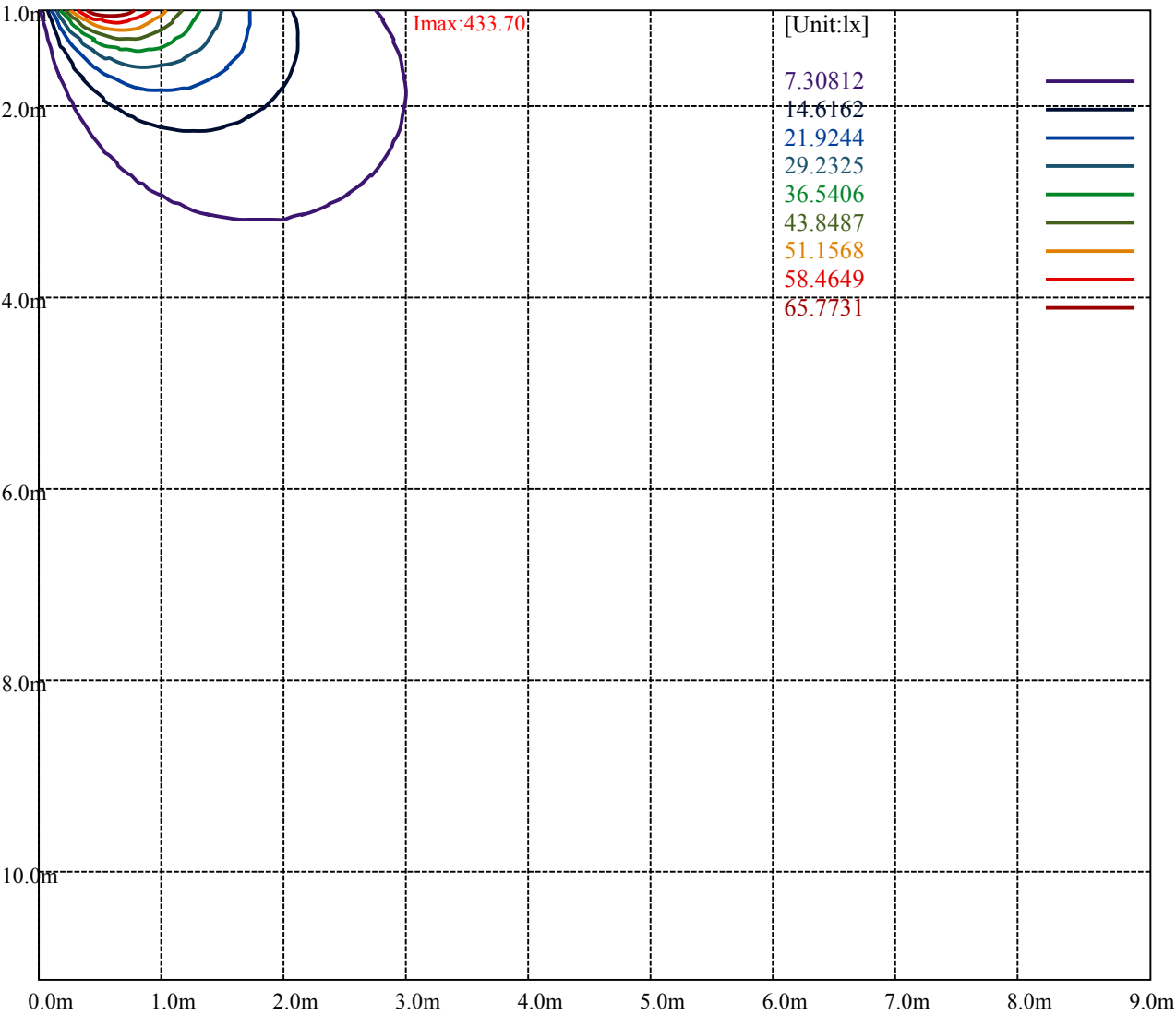


Max , Ave

Beam angle of C90 plane 340.00



(10%Emax) 2.88545	—
(20%Emax) 5.7709	—
(30%Emax) 8.656375	—
(40%Emax) 11.54183	—
(50%Emax) 14.42727	—
(60%Emax) 17.31273	—
(70%Emax) 20.1982	—
(80%Emax) 23.08365	—
(90%Emax) 25.969	—



Luminance Table

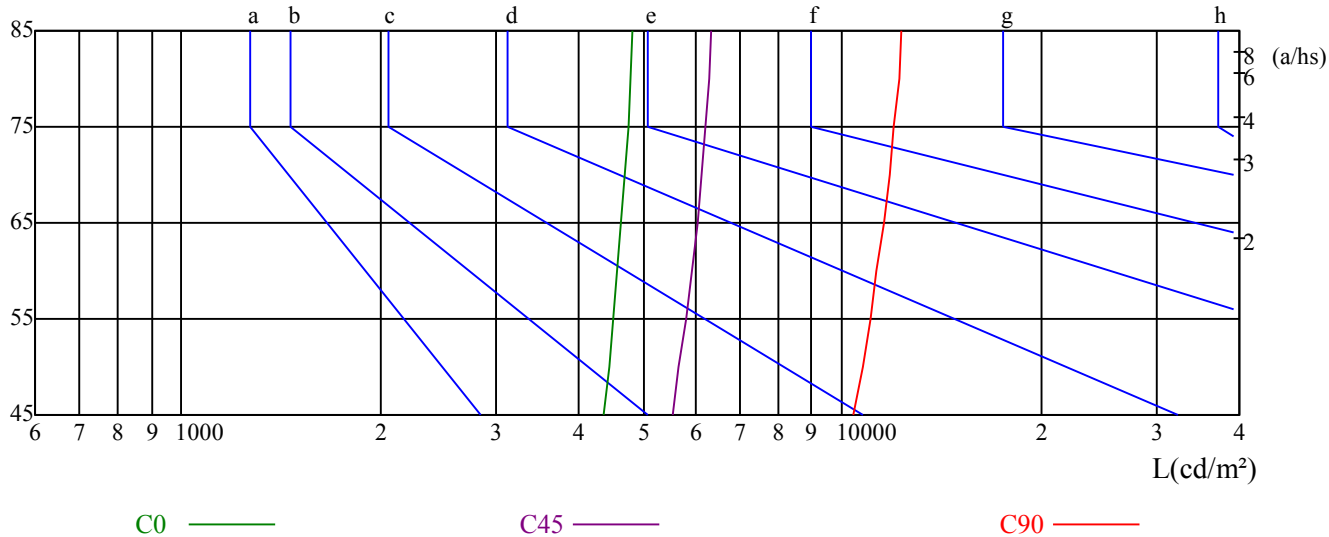
γ	45	50	55	60	65	70	75	80	85
C0	4344	4431	4504	4574	4634	4694	4739	4778	4820
C45	5530	5674	5823	5939	6039	6125	6211	6288	6351
C90	10406	10744	11067	11300	11561	11795	12013	12187	12337

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
220783	189028	204286	389397	337545	362207	1203112	1049131	1123548

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

 $\gamma(^{\circ})$ 

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	0.56	0.56	0.56	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	0.30
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	0.21	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	3.50	12.47	33.29	55.63	77.34	100.75	123.81	146.24	167.68
15.0	3.05	13.37	37.86	64.06	91.06	118.43	145.52	172.44	196.48
30.0	2.24	15.16	42.44	71.77	100.57	133.05	161.85	191.73	221.16
45.0	1.88	16.51	44.14	75.54	107.93	141.22	174.14	205.01	237.39
60.0	1.35	15.88	45.67	76.53	111.88	144.72	178.90	211.91	244.21
75.0	1.17	14.98	44.59	77.25	111.16	145.70	178.27	213.89	244.84
90.0	1.26	15.16	44.50	74.91	108.29	144.36	176.66	209.85	242.60
105.0	1.53	15.16	42.62	74.20	106.85	140.68	173.60	204.74	238.02
120.0	1.97	12.83	63.34	71.86	102.10	135.92	165.98	196.93	226.90
135.0	2.60	12.29	38.22	66.39	94.02	124.98	173.96	181.41	208.59
150.0	2.96	11.30	33.11	57.87	83.35	109.10	134.58	159.16	181.95
165.0	3.95	9.06	28.26	49.26	70.61	92.05	112.33	133.05	152.79
180.0	3.50	17.50	33.82	50.51	67.74	84.78	100.39	117.44	132.24
195.0	3.05	13.01	25.84	37.95	50.78	63.25	75.72	87.92	98.87
210.0	2.24	9.15	17.32	26.02	34.81	43.51	51.95	59.75	67.74
225.0	1.88	5.02	7.09	9.24	12.11	15.16	18.12	20.99	23.87
240.0	1.35	2.51	3.32	4.13	4.84	5.92	7.00	8.16	9.24
255.0	1.17	1.08	1.17	1.35	1.35	1.53	1.88	2.15	2.60
270.0	1.26	1.26	1.53	1.88	2.06	2.33	2.51	3.05	3.59
285.0	1.53	2.96	3.23	4.93	6.19	7.63	9.15	10.77	12.38
300.0	1.97	6.19	8.34	11.04	14.18	17.41	20.81	23.78	26.92
315.0	2.60	10.59	19.74	29.16	38.67	47.46	56.52	65.23	73.75
330.0	2.96	15.16	27.81	42.26	55.18	68.99	82.36	95.28	107.48
345.0	3.95	19.38	35.98	54.91	73.30	90.62	109.19	125.61	142.20
360.0	3.50	12.47	33.29	55.63	77.34	100.75	123.81	146.24	167.68
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	188.50	207.43	224.30	240.18	254.44	266.37	276.06	282.79	288.17
15.0	221.16	243.85	265.21	284.50	301.27	315.63	326.48	335.28	341.02
30.0	248.88	274.72	297.77	319.49	339.13	355.73	368.47	379.15	385.34
45.0	266.37	294.37	320.83	344.52	365.69	382.92	397.27	408.85	415.93
60.0	275.43	303.34	331.33	355.46	377.27	396.20	411.63	423.11	429.84
75.0	276.42	305.76	333.48	358.87	379.42	400.05	414.50	426.34	434.15
90.0	273.73	302.98	330.70	354.12	376.37	395.39	411.27	422.75	430.29
105.0	266.37	295.17	321.73	346.13	367.67	385.25	400.05	411.81	419.34
120.0	255.79	282.88	307.91	329.89	350.17	367.67	381.75	392.52	399.96
135.0	233.54	257.94	282.07	302.53	319.94	335.28	348.65	358.24	365.15
150.0	204.56	242.24	246.46	263.41	279.65	293.20	304.23	313.03	318.32
165.0	171.81	189.40	206.08	220.26	233.54	245.83	254.08	260.81	266.01
180.0	146.96	160.60	173.25	184.37	193.43	201.87	207.70	212.45	215.14
195.0	110.44	120.22	130.09	138.08	145.25	151.09	155.93	159.52	161.13
210.0	75.36	82.54	88.91	94.83	99.86	103.98	107.12	109.73	111.16
225.0	26.83	29.61	32.12	34.72	36.61	38.40	39.92	40.91	41.54
240.0	10.50	12.20	13.82	15.52	17.14	17.41	19.56	20.46	20.90
255.0	3.23	3.32	4.76	5.56	6.37	7.09	7.72	8.16	8.34
270.0	4.22	4.93	5.83	6.46	7.09	7.72	8.07	8.52	8.61
285.0	14.09	15.79	17.50	19.02	20.28	21.35	22.34	22.88	23.06
300.0	29.88	32.66	35.26	37.59	39.66	41.27	42.62	43.33	43.69
315.0	81.64	89.00	95.73	101.74	106.59	110.71	114.12	116.27	117.44
330.0	118.79	129.91	139.42	147.68	155.75	161.85	166.88	170.29	172.08
345.0	157.55	172.17	185.18	197.11	207.25	215.32	221.87	226.72	228.96
360.0	188.50	207.43	224.30	240.18	254.44	266.37	276.06	282.79	288.17

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	289.97	289.61	286.38	280.46	272.92	262.16	248.97	233.99	217.12
15.0	343.71	343.26	340.12	332.41	322.99	310.16	294.54	277.23	257.40
30.0	388.66	388.30	384.17	375.83	364.79	349.45	332.68	312.22	290.33
45.0	418.89	418.80	414.14	405.71	393.23	377.27	359.32	335.73	312.13
60.0	434.06	433.61	428.76	419.97	406.87	390.99	370.98	347.66	321.73
75.0	437.91	437.11	432.89	423.56	411.00	393.32	373.59	351.52	325.41
90.0	433.70	433.07	428.49	419.52	406.51	391.08	370.45	347.57	321.37
105.0	423.20	422.39	418.36	409.65	397.45	381.57	361.92	337.88	313.92
120.0	403.55	403.46	399.07	390.90	379.33	364.88	346.58	325.05	301.27
135.0	368.20	367.75	364.08	356.81	346.49	332.68	315.99	297.95	274.99
150.0	321.10	320.92	317.87	311.77	302.53	291.32	276.87	260.27	241.79
165.0	268.35	267.81	264.94	260.63	252.92	243.32	231.74	218.55	202.40
180.0	215.68	214.34	210.84	205.81	198.46	189.57	179.62	167.86	154.58
195.0	161.76	160.60	158.08	153.87	148.75	142.11	134.76	125.70	116.01
210.0	111.43	110.62	108.83	106.23	104.97	97.61	92.50	86.49	79.58
225.0	41.63	41.27	40.28	39.12	37.50	35.53	33.29	30.77	28.26
240.0	21.08	20.64	19.83	18.75	17.32	15.79	14.09	12.47	10.59
255.0	8.34	7.98	7.54	6.91	6.01	5.29	4.31	3.50	2.69
270.0	8.52	8.25	7.81	7.09	6.19	5.47	4.76	3.86	3.14
285.0	22.97	22.61	21.89	20.81	19.38	18.03	16.42	14.71	12.92
300.0	43.51	42.98	41.99	40.55	38.76	36.69	34.27	31.67	28.80
315.0	117.26	116.10	113.94	111.07	106.76	101.56	95.73	89.18	81.82
330.0	172.44	170.91	167.86	163.47	157.37	149.92	141.84	132.24	121.57
345.0	229.32	227.53	223.58	218.10	209.76	200.70	189.66	176.57	162.48
360.0	289.97	289.61	286.38	280.46	272.92	262.16	248.97	233.99	217.12
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	198.55	178.27	158.26	136.01	112.78	89.45	66.75	43.42	21.08
15.0	235.24	211.38	185.90	159.16	133.41	105.78	77.88	51.68	25.39
30.0	263.77	238.02	208.06	179.62	150.46	117.71	86.40	57.06	27.72
45.0	284.77	254.98	224.21	192.36	160.78	127.22	93.58	60.47	30.41
60.0	295.26	262.69	232.37	199.17	165.08	130.27	97.52	63.07	30.59
75.0	296.34	265.75	233.45	199.53	165.17	132.07	97.08	62.71	30.15
90.0	292.93	261.98	231.74	198.37	164.36	129.91	97.25	63.25	30.86
105.0	287.73	257.49	226.18	193.70	162.12	128.57	94.92	61.46	29.88
120.0	276.06	246.55	218.10	185.54	157.10	123.00	92.23	58.94	30.06
135.0	252.74	227.26	200.07	171.36	143.55	114.03	84.51	55.54	27.54
150.0	221.33	199.17	175.58	151.62	126.32	100.22	74.29	50.15	25.39
165.0	186.26	168.04	148.39	127.67	107.39	85.50	63.79	42.26	21.53
180.0	140.41	124.89	109.55	92.77	75.72	58.05	41.54	22.25	3.86
195.0	105.60	94.20	82.18	70.43	56.88	53.65	31.49	13.28	1.17
210.0	72.22	64.51	56.25	47.82	39.39	29.97	18.30	7.00	1.08
225.0	25.57	22.88	20.01	16.96	14.00	9.42	4.58	1.35	1.08
240.0	9.06	7.63	6.19	4.93	3.50	1.88	0.72	0.81	0.99
255.0	1.97	1.70	1.53	1.26	0.72	0.54	0.54	0.72	0.99
270.0	2.51	1.97	1.61	1.26	0.72	0.63	0.54	0.72	0.90
285.0	11.30	9.69	8.25	6.64	4.76	3.05	2.60	2.15	1.53
300.0	26.02	23.06	19.92	16.78	13.37	9.96	7.00	5.29	2.60
315.0	74.29	65.85	57.15	48.00	38.67	29.52	20.10	11.39	3.86
330.0	109.99	99.95	85.23	70.88	57.78	43.78	30.50	16.87	5.65
345.0	147.95	131.62	114.21	96.00	77.61	59.57	41.27	23.42	7.00
360.0	198.55	178.27	158.26	136.01	112.78	89.45	66.75	43.42	21.08

Intensity data(cd)

C/ γ (°)	180.0
0.0	1.35
15.0	3.32
30.0	3.14
45.0	2.78
60.0	3.23
75.0	3.77
90.0	3.59
105.0	3.32
120.0	4.04
135.0	4.67
150.0	4.04
165.0	4.22
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