
AFX

Client:

LumCAT: PTHW0624LAJUDBK-2700K

Luminaire: LED Lamp

Report No:

Ballast type:

Test No: LCZP25080181

Voltage(V): 120.020

LampCAT:

Current(A): 0.199

Lamp flux(lm): 1679.3

Power (W): 23.730

Number of Lamps: 1

PF: 0.993

Length(mm): 60

Width(mm): 40

Phm Type: C

Height(mm): 570

Photometric Results

Lumens(lm): 1679.26, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 70.77

Central intensity(cd): 3.768, Maximum intensity(cd): 332.406

Angle of maximum intensity: C=90.0 γ =95.0

Beam Angle(50%Imax): [C0/180]Total=294.6

[C90/270]Total=111.5

Field angle(10%Imax): [C0/180]Total=345.4

[C90/270]Total=163.6

Maximum s/h(1/2): C0_180=9.30 C90_270=20.28

Maximum s/h(1/4): C0_180=8.13 C90_270=17.42

Up flux rate of lamp(%): 51.22%

Down flux rate of lamp(%): 48.78%

Up flux rate of LUM(%): 51.22%

Down flux rate of LUM(%): 48.78%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 17.801%

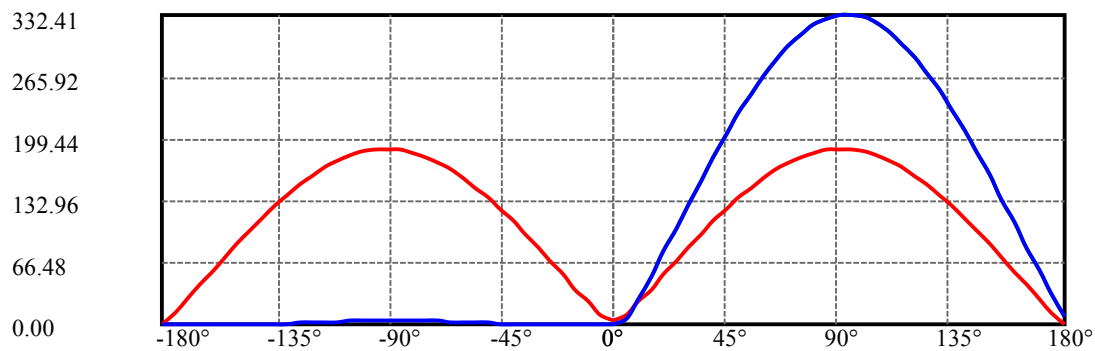
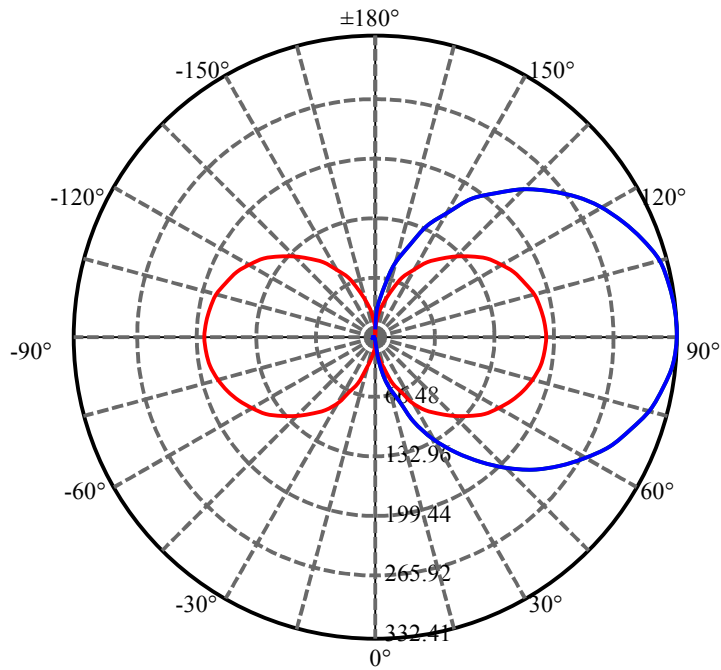
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2.004	0.000	0	0.00%	0.00%
5.0	6.015	0.096	0.096	0.01%	0.01%
10.0	17.895	0.855	0.951	0.05%	0.06%
15.0	31.121	2.908	3.859	0.17%	0.23%
20.0	45.498	6.315	10.173	0.38%	0.61%
25.0	58.627	10.921	21.094	0.65%	1.26%
30.0	72.347	16.575	37.669	0.99%	2.24%
35.0	85.801	23.288	60.957	1.39%	3.63%
40.0	99.008	30.834	91.791	1.84%	5.47%
45.0	111.561	38.988	130.78	2.32%	7.79%
50.0	123.501	47.498	178.277	2.83%	10.62%
55.0	134.540	56.107	234.384	3.34%	13.96%
60.0	144.659	64.536	298.92	3.84%	17.80%
65.0	153.616	72.511	371.431	4.32%	22.12%
70.0	161.321	79.744	451.176	4.75%	26.87%
75.0	167.612	85.978	537.153	5.12%	31.99%
80.0	172.319	90.956	628.109	5.42%	37.40%
85.0	175.534	94.520	722.629	5.63%	43.03%
90.0	177.055	96.542	819.171	5.75%	48.78%
95.0	176.752	96.875	916.046	5.77%	54.55%
100.0	174.876	95.546	1011.592	5.69%	60.24%
105.0	171.216	92.605	1104.196	5.51%	65.76%
110.0	166.057	88.158	1192.354	5.25%	71.00%
115.0	159.388	82.405	1274.759	4.91%	75.91%
120.0	151.471	75.570	1350.329	4.50%	80.41%
125.0	142.271	67.897	1418.227	4.04%	84.46%
130.0	132.076	59.652	1477.879	3.55%	88.01%
135.0	120.978	51.133	1529.012	3.04%	91.05%
140.0	109.254	42.629	1571.642	2.54%	93.59%
145.0	96.443	34.319	1605.961	2.04%	95.64%
150.0	83.434	26.488	1632.449	1.58%	97.21%
155.0	70.003	19.418	1651.867	1.16%	98.37%
160.0	56.459	13.263	1665.13	0.79%	99.16%
165.0	42.426	8.149	1673.279	0.49%	99.64%
170.0	28.471	4.206	1677.485	0.25%	99.89%
175.0	14.856	1.550	1679.035	0.09%	99.99%
180.0	3.686	0.222	1679.257	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	37.67	2.24%	2.24%
0-40	91.79	5.47%	5.47%
0-60	298.92	17.80%	17.80%
0-90	819.17	48.78%	48.78%
0-120	1350.33	80.41%	80.41%
0-180	1679.26	100.00%	100.00%
60-90	520.25	30.98%	30.98%
90-120	531.16	31.63%	31.63%
90-130	658.71	39.23%	39.23%
90-150	813.28	48.43%	48.43%
90-180	859.86	51.20%	51.21%
0-119.54	1343.41	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	0.95
10-20	9.22
20-30	27.50
30-40	54.12
40-50	86.49
50-60	120.64
60-70	152.26
70-80	176.93
80-90	191.06
90-100	192.42
100-110	180.76
110-120	157.98
120-130	127.55
130-140	93.76
140-150	60.81
150-160	32.68
160-170	12.35
170-180	1.55



C90(Max): —————

C0/C180: —————

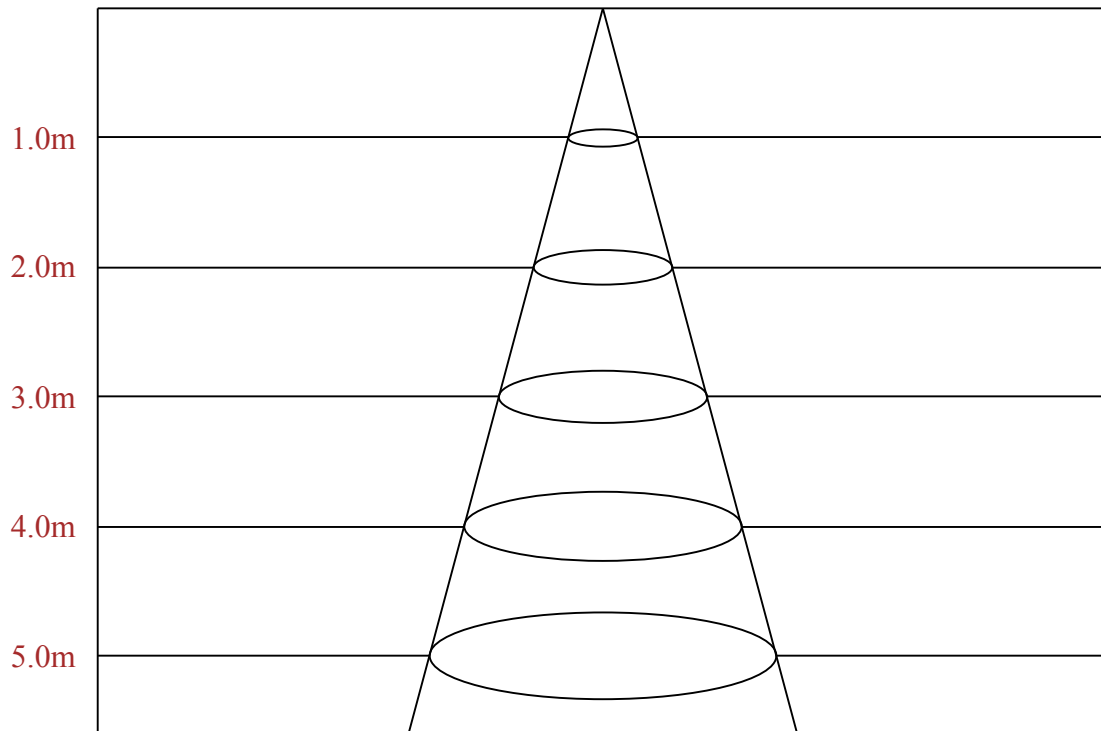
C90/C270: —————

Field angle(10%Imax):C0/180Left:262.7 Right:82.7

:C90/270Left:83.8 Right:79.8

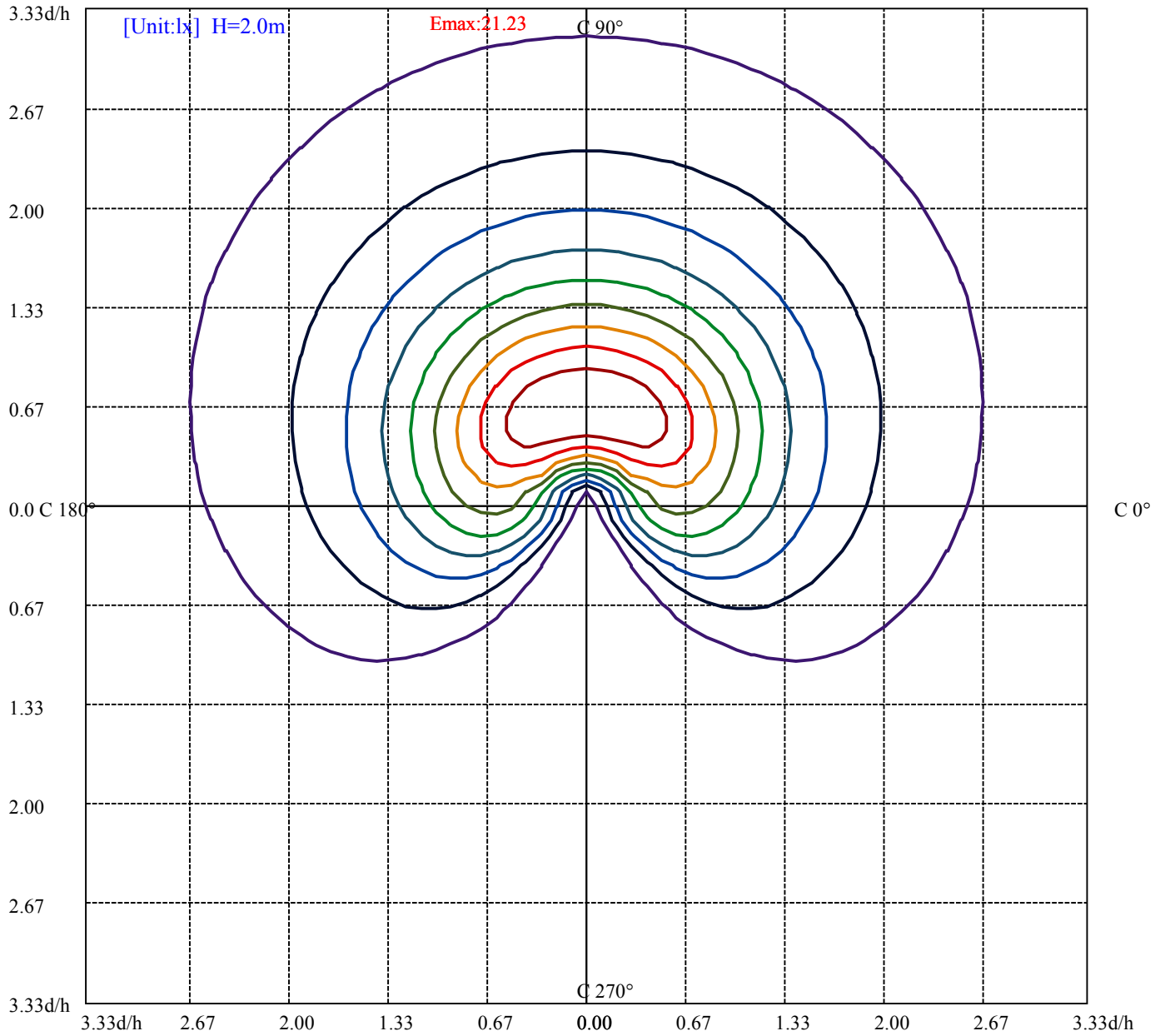
Beam Angle(50%Imax):C0/180Left:237.3 Right:57.3

:C90/270Left:57.7 Right:53.8

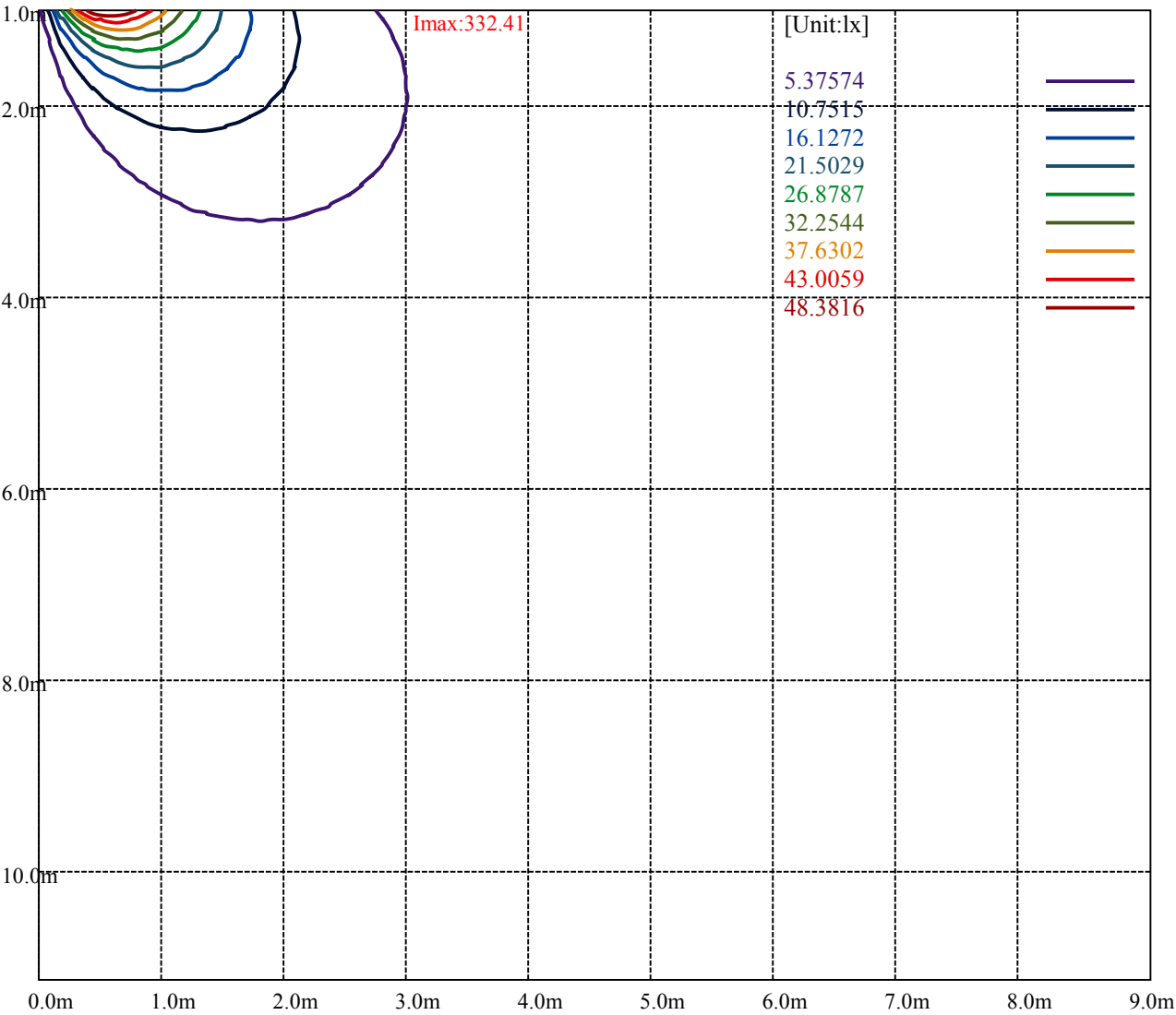


Max , Ave

Beam angle of C90 plane 180.00



(10%Emax) 2.12302	—
(20%Emax) 4.24605	—
(30%Emax) 6.36905	—
(40%Emax) 8.492075	—
(50%Emax) 10.6151	—
(60%Emax) 12.73812	—
(70%Emax) 14.86112	—
(80%Emax) 16.98415	—
(90%Emax) 19.10718	—



Luminance Table

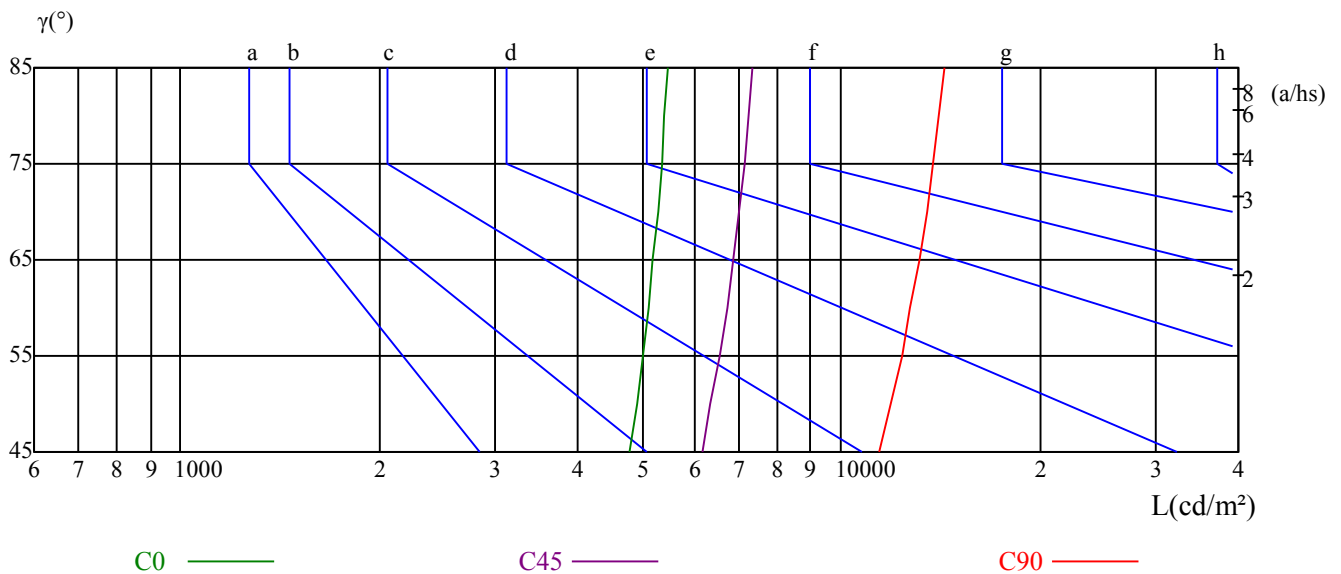
γ	45	50	55	60	65	70	75	80	85
C0	4787	4904	5009	5112	5194	5281	5349	5405	5468
C45	6161	6360	6550	6729	6887	7029	7155	7267	7363
C90	11455	11932	12375	12760	13140	13486	13808	14099	14329

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
163907	141881	149732	289809	254639	266989	896008	794998	831241

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	0.98	0.98	0.98	0.83	0.83	0.83	0.68	0.68	0.68	0.55	0.55	0.55	0.49
1	0.85	0.79	0.73	0.77	0.72	0.67	0.64	0.60	0.56	0.51	0.48	0.45	0.39	0.37	0.35	0.29
2	0.71	0.62	0.55	0.64	0.57	0.51	0.53	0.47	0.42	0.42	0.37	0.33	0.31	0.28	0.25	0.20
3	0.60	0.51	0.43	0.55	0.46	0.40	0.44	0.38	0.32	0.35	0.30	0.25	0.26	0.22	0.19	0.14
4	0.52	0.42	0.35	0.47	0.39	0.32	0.38	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	0.21	0.26	0.21	0.17	0.19	0.15	0.12	0.08
6	0.40	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	0.06
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	0.15	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	3.77	4.93	18.48	32.93	48.63	64.60	80.30	95.82	110.80
15.0	3.05	5.11	21.17	39.57	58.68	77.88	96.90	114.48	132.78
30.0	2.60	5.56	24.40	45.58	66.48	89.45	110.44	132.07	153.06
45.0	2.06	6.10	25.57	48.81	72.76	97.08	121.57	144.36	168.58
60.0	1.53	5.38	25.93	51.68	76.80	101.29	127.04	152.52	177.28
75.0	1.08	4.76	26.65	51.32	76.89	103.27	129.46	154.14	180.87
90.0	0.81	5.20	27.18	51.77	77.52	102.28	128.66	154.49	179.80
105.0	0.90	5.83	26.56	50.96	76.08	102.01	127.76	153.51	176.92
120.0	1.17	5.56	26.56	50.33	75.00	98.87	123.90	148.30	172.08
135.0	2.24	5.92	25.75	45.67	69.89	93.13	116.19	138.88	159.97
150.0	2.24	5.65	22.52	42.26	78.41	84.07	103.53	123.72	143.10
165.0	2.60	4.84	19.92	36.87	54.28	70.97	88.91	105.33	123.36
180.0	3.77	15.70	29.34	43.33	57.51	71.60	84.51	98.60	110.80
195.0	3.05	12.56	22.97	33.02	43.69	54.37	64.69	74.74	84.25
210.0	2.60	8.97	16.06	23.42	30.86	38.13	44.95	51.86	58.41
225.0	2.06	5.29	6.91	8.97	11.04	13.10	15.25	17.76	20.28
240.0	1.53	2.60	3.23	3.68	4.13	4.49	4.76	5.20	5.92
255.0	1.08	1.17	1.26	1.35	1.44	1.53	1.70	1.97	2.15
270.0	0.81	0.63	0.63	0.54	0.36	0.54	0.54	0.54	0.72
285.0	0.90	1.35	1.61	1.97	2.06	2.24	2.33	2.60	2.60
300.0	1.17	3.05	4.04	4.67	4.76	5.83	6.28	7.36	8.43
315.0	2.24	6.01	10.23	15.16	20.01	25.03	30.06	34.99	39.75
330.0	2.24	9.33	17.94	26.74	35.62	44.50	53.20	61.46	68.81
345.0	2.60	12.83	24.58	36.34	49.08	60.83	73.39	84.51	95.46
360.0	3.77	4.93	18.48	32.93	48.63	64.60	80.30	95.82	110.80
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	125.07	138.44	150.37	162.03	172.08	180.96	188.14	193.25	197.47
15.0	150.28	166.97	182.40	196.30	208.95	219.00	228.15	234.88	239.55
30.0	173.25	192.36	209.13	225.64	240.00	253.01	262.87	271.49	276.78
45.0	190.02	211.20	230.76	248.88	265.03	278.66	290.06	299.21	305.04
60.0	200.97	223.49	243.41	262.69	279.83	294.72	307.11	316.26	322.81
75.0	203.57	225.91	248.16	267.54	285.21	299.84	312.58	322.27	329.18
90.0	204.11	226.81	248.16	267.27	284.86	300.02	312.67	322.45	328.46
105.0	200.70	223.67	244.93	264.22	280.73	296.25	308.36	317.69	324.24
120.0	195.14	216.85	236.95	255.07	271.58	285.75	297.86	306.03	312.76
135.0	182.04	201.15	219.81	237.04	252.11	265.30	275.97	283.78	289.34
150.0	161.67	179.53	195.68	210.75	223.49	234.88	244.30	251.39	256.06
165.0	137.09	152.43	165.62	178.27	189.22	198.64	205.81	211.91	216.31
180.0	122.73	133.68	144.09	153.06	160.42	167.15	171.90	175.31	177.37
195.0	93.22	101.20	109.28	115.65	121.66	126.23	130.00	132.60	133.77
210.0	64.69	70.79	75.81	80.66	84.60	87.83	90.17	91.87	92.77
225.0	22.79	25.12	27.18	29.34	31.13	32.48	33.55	34.36	35.08
240.0	6.73	7.63	8.43	9.33	10.14	10.86	11.39	11.84	12.02
255.0	2.60	3.23	3.68	4.40	4.93	5.38	5.83	5.92	6.28
270.0	0.99	1.44	1.97	2.06	2.96	3.32	3.68	3.95	4.13
285.0	3.32	3.86	4.40	5.02	5.47	6.01	6.37	6.64	6.73
300.0	9.60	10.50	11.66	12.65	13.55	14.44	15.16	15.52	15.70
315.0	44.41	48.63	52.57	55.89	59.21	61.64	63.79	65.23	66.03
330.0	76.35	83.35	89.72	95.37	100.39	104.43	107.57	109.46	110.80
345.0	106.14	115.83	124.80	132.69	139.24	144.89	149.38	152.34	154.14
360.0	125.07	138.44	150.37	162.03	172.08	180.96	188.14	193.25	197.47

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	199.17	199.35	197.47	193.97	188.86	181.86	173.34	163.47	152.16
15.0	241.97	242.15	239.91	235.60	229.05	220.35	209.67	198.37	184.64
30.0	279.56	279.83	277.14	271.76	264.85	254.89	242.78	228.51	212.54
45.0	308.72	308.18	306.03	299.75	291.85	280.82	267.09	251.57	234.61
60.0	326.22	326.39	323.52	316.97	308.18	296.79	282.70	265.84	247.08
75.0	332.50	332.59	329.89	323.70	314.55	302.08	287.46	271.13	252.11
90.0	332.32	332.41	329.62	323.34	313.92	302.08	286.92	270.32	251.30
105.0	327.65	327.65	324.60	318.32	309.26	297.06	282.88	266.19	247.71
120.0	315.63	315.72	312.76	306.84	297.86	286.11	272.65	256.59	238.38
135.0	292.48	292.39	289.52	284.05	276.06	265.30	252.56	238.20	220.98
150.0	258.84	258.57	256.50	251.66	244.30	234.88	223.94	210.93	196.39
165.0	218.37	218.37	216.22	212.27	206.17	198.55	189.04	178.09	166.52
180.0	177.37	176.12	173.07	168.49	162.48	154.76	146.33	136.19	125.43
195.0	134.22	132.87	130.63	127.13	122.47	116.90	110.08	102.55	94.65
210.0	92.77	91.87	90.08	87.65	84.07	80.12	75.27	69.98	64.24
225.0	35.08	34.72	34.00	33.02	31.58	29.97	29.43	25.93	23.69
240.0	11.93	11.66	11.57	10.68	9.87	8.97	8.16	7.00	6.19
255.0	6.19	6.01	5.65	5.20	4.67	4.13	3.59	2.78	2.24
270.0	4.04	3.95	3.68	3.32	2.87	2.42	1.97	1.44	0.99
285.0	6.73	6.46	6.19	5.65	4.93	4.49	3.77	2.96	2.42
300.0	15.79	15.52	15.07	14.35	13.55	12.65	11.93	10.86	9.78
315.0	66.30	65.94	64.78	63.25	61.01	58.23	54.91	51.50	47.37
330.0	110.89	110.08	108.38	105.33	101.56	96.99	91.60	85.50	78.68
345.0	154.58	153.24	150.73	146.87	141.40	134.94	127.22	118.61	109.73
360.0	199.17	199.35	197.47	193.97	188.86	181.86	173.34	163.47	152.16
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	140.59	126.41	113.13	98.24	82.99	67.02	51.86	35.62	20.10
15.0	169.75	153.51	136.10	117.98	100.48	81.19	61.82	42.62	23.60
30.0	195.14	177.10	156.02	136.19	114.93	92.68	70.43	49.26	27.63
45.0	215.14	194.33	172.44	150.46	125.70	102.19	77.79	53.20	29.61
60.0	226.81	204.65	182.13	157.90	132.87	107.03	82.27	55.27	31.67
75.0	231.29	208.77	184.91	160.06	136.91	108.02	82.81	56.79	32.93
90.0	230.67	207.97	184.91	160.06	134.76	108.65	82.27	57.51	32.30
105.0	227.44	205.10	181.77	157.28	132.24	109.01	81.73	55.89	31.04
120.0	219.00	197.56	175.94	152.52	128.21	103.45	79.58	53.38	30.59
135.0	203.57	183.74	162.93	141.04	119.77	96.81	73.66	50.51	27.99
150.0	179.89	163.83	144.27	125.96	106.05	85.77	65.23	45.58	24.58
165.0	152.88	138.26	122.64	106.50	89.63	72.49	56.07	38.58	21.44
180.0	113.49	101.56	88.46	74.82	60.65	46.47	33.02	19.11	2.69
195.0	85.77	76.44	66.48	56.70	46.03	43.06	24.85	14.00	1.08
210.0	58.41	56.43	44.77	37.68	30.59	23.60	16.69	8.34	0.99
225.0	21.35	19.11	16.69	14.62	11.75	8.88	6.01	2.87	0.90
240.0	5.47	4.58	3.68	2.78	2.06	1.17	0.72	0.72	0.90
255.0	1.70	1.35	0.99	0.81	0.45	0.45	0.63	0.63	0.90
270.0	0.72	0.63	0.45	0.54	0.45	0.45	0.54	0.72	0.81
285.0	1.97	1.70	1.53	1.26	0.99	0.72	0.63	0.63	0.81
300.0	8.70	7.98	7.18	6.82	5.92	5.02	4.40	3.86	1.17
315.0	43.42	38.94	34.09	29.25	24.40	19.20	14.18	8.43	2.69
330.0	71.42	63.61	55.89	47.55	39.03	30.15	21.71	12.56	4.40
345.0	98.87	88.55	77.25	65.40	53.20	41.54	29.34	17.23	5.74
360.0	140.59	126.41	113.13	98.24	82.99	67.02	51.86	35.62	20.10

Intensity data(cd)

C/ $\gamma(^{\circ})$	180.0
0.0	1.17
15.0	6.91
30.0	7.54
45.0	8.70
60.0	8.61
75.0	8.43
90.0	8.79
105.0	9.06
120.0	8.25
135.0	8.25
150.0	7.00
165.0	5.74
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	1.17