
乐达凯

Client:

LumCAT: FTNW0424LAJUDBK-3000K

Luminaire: LED LAMP

Report No:

Ballast type:

Test No: LCZP25100178

Voltage(V): 120.070

LampCAT:

Current(A): 0.197

Lamp flux(lm): 1213.9

Power (W): 23.490

Number of Lamps: 1

PF: 0.993

Length(mm): 70

Width(mm): 45

Phm Type: C

Height(mm): 530

Photometric Results

Lumens(lm): 1213.94, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 51.68

Central intensity(cd): 0.987, Maximum intensity(cd): 215.997

Angle of maximum intensity: C=15.0 γ =95.0

Beam Angle(50%Imax): [C0/180]Total=295.2

[C90/270]Total=114.0

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

[C90/270]Total=162.7

Maximum s/h(1/2): C0_180=16.30 C90_270=16.49

Maximum s/h(1/4): C0_180=14.35 C90_270=14.46

Up flux rate of lamp(%): 51.46%

Down flux rate of lamp(%): 48.54%

Up flux rate of LUM(%): 51.46%

Down flux rate of LUM(%): 48.54%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 17.765%

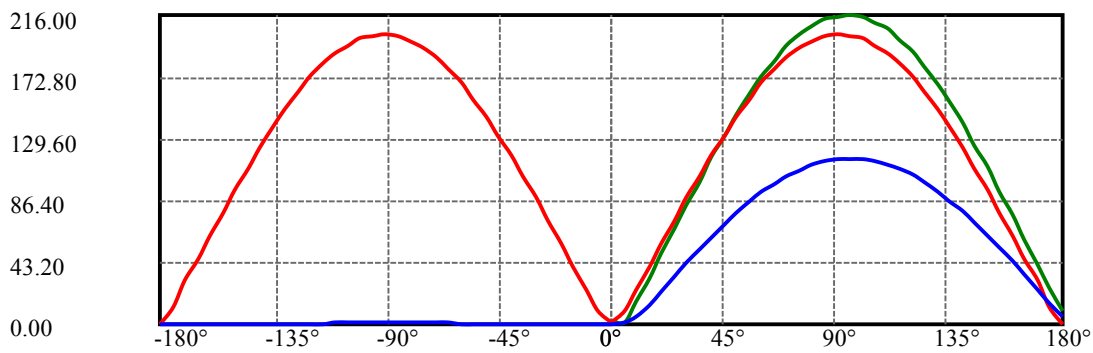
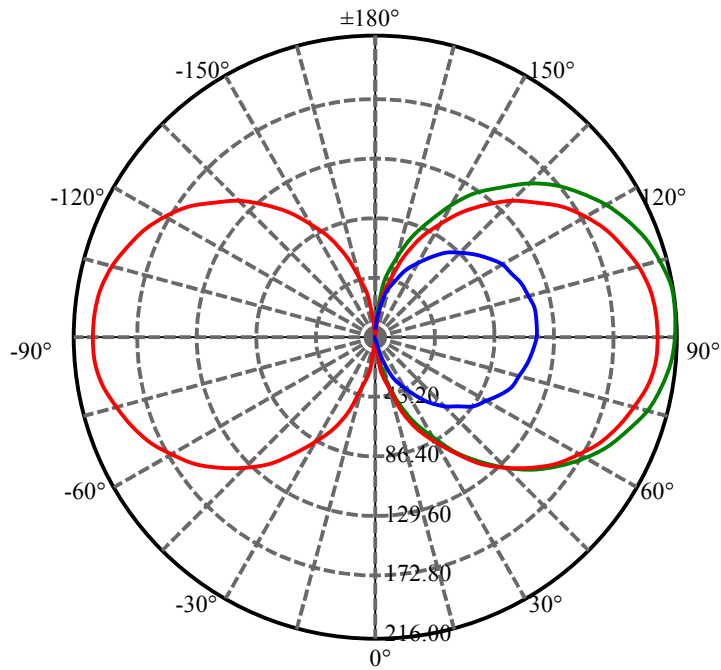
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1.219	0.000	0	0.00%	0.00%
5.0	4.105	0.064	0.064	0.01%	0.01%
10.0	12.632	0.599	0.662	0.05%	0.05%
15.0	22.445	2.081	2.743	0.17%	0.23%
20.0	32.975	4.567	7.31	0.38%	0.60%
25.0	42.403	7.906	15.216	0.65%	1.25%
30.0	52.238	11.977	27.193	0.99%	2.24%
35.0	61.980	16.820	44.013	1.39%	3.63%
40.0	71.476	22.266	66.279	1.83%	5.46%
45.0	80.541	28.147	94.426	2.32%	7.78%
50.0	89.086	34.276	128.701	2.82%	10.60%
55.0	96.963	40.453	169.155	3.33%	13.93%
60.0	104.196	46.497	215.652	3.83%	17.76%
65.0	110.518	52.197	267.85	4.30%	22.06%
70.0	115.897	57.330	325.179	4.72%	26.79%
75.0	120.278	61.733	386.912	5.09%	31.87%
80.0	123.643	65.267	452.179	5.38%	37.25%
85.0	125.912	67.810	519.989	5.59%	42.83%
90.0	127.030	69.257	589.246	5.71%	48.54%
95.0	127.030	69.563	658.81	5.73%	54.27%
100.0	125.826	68.707	727.517	5.66%	59.93%
105.0	123.512	66.716	794.233	5.50%	65.43%
110.0	120.080	63.671	857.904	5.24%	70.67%
115.0	115.594	59.674	917.578	4.92%	75.59%
120.0	110.238	54.900	972.478	4.52%	80.11%
125.0	103.740	49.460	1021.939	4.07%	84.18%
130.0	96.623	43.566	1065.504	3.59%	87.77%
135.0	88.728	37.453	1102.957	3.09%	90.86%
140.0	80.481	31.330	1134.287	2.58%	93.44%
145.0	71.150	25.299	1159.586	2.08%	95.52%
150.0	61.681	19.560	1179.146	1.61%	97.13%
155.0	51.973	14.383	1193.529	1.18%	98.32%
160.0	42.366	9.894	1203.424	0.82%	99.13%
165.0	31.674	6.102	1209.526	0.50%	99.64%
170.0	20.826	3.114	1212.64	0.26%	99.89%
175.0	10.781	1.131	1213.771	0.09%	99.99%
180.0	3.492	0.171	1213.941	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	27.19	2.24%	2.24%
0-40	66.28	5.46%	5.46%
0-60	215.65	17.76%	17.76%
0-90	589.25	48.54%	48.54%
0-120	972.48	80.11%	80.11%
0-180	1213.94	100.00%	100.00%
60-90	373.59	30.78%	30.78%
90-120	383.23	31.57%	31.57%
90-130	476.26	39.23%	39.23%
90-150	589.90	48.59%	48.59%
90-180	624.52	51.45%	51.45%
0-119.88	971.15	80.00%	80.00%

ZONAL LUMEN SUMMARY

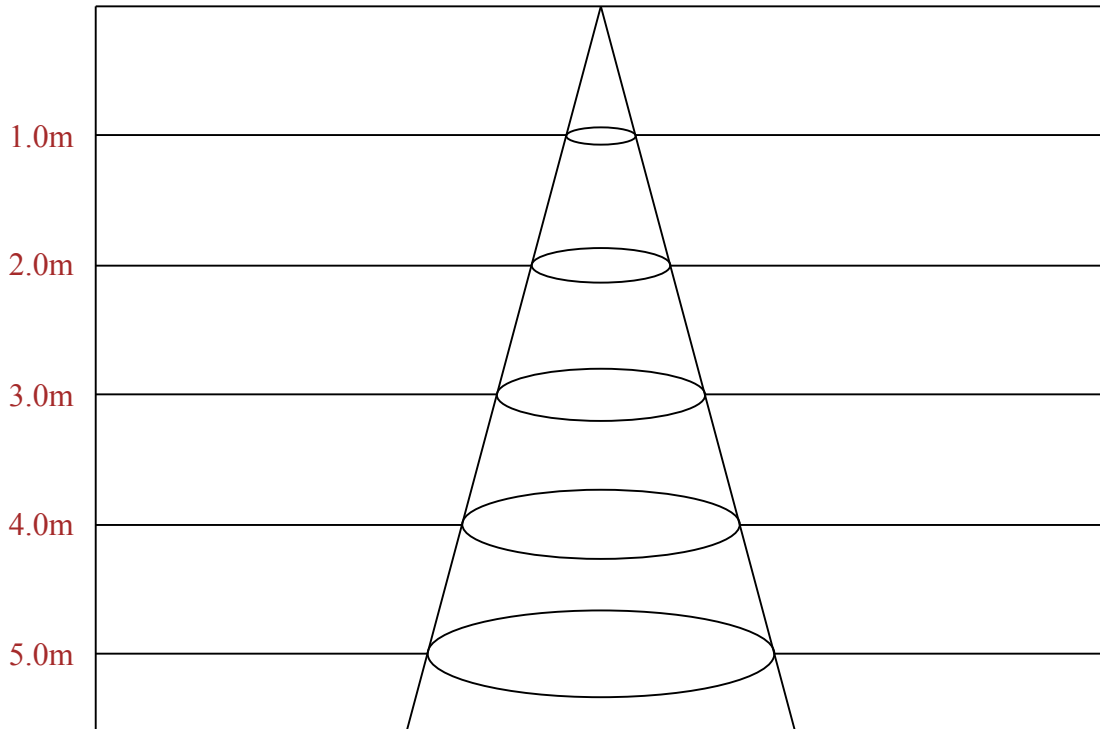
0-10	0.66
10-20	6.65
20-30	19.88
30-40	39.09
40-50	62.42
50-60	86.95
60-70	109.53
70-80	127.00
80-90	137.07
90-100	138.27
100-110	130.39
110-120	114.57
120-130	93.03
130-140	68.78
140-150	44.86
150-160	24.28
160-170	9.22
170-180	1.13



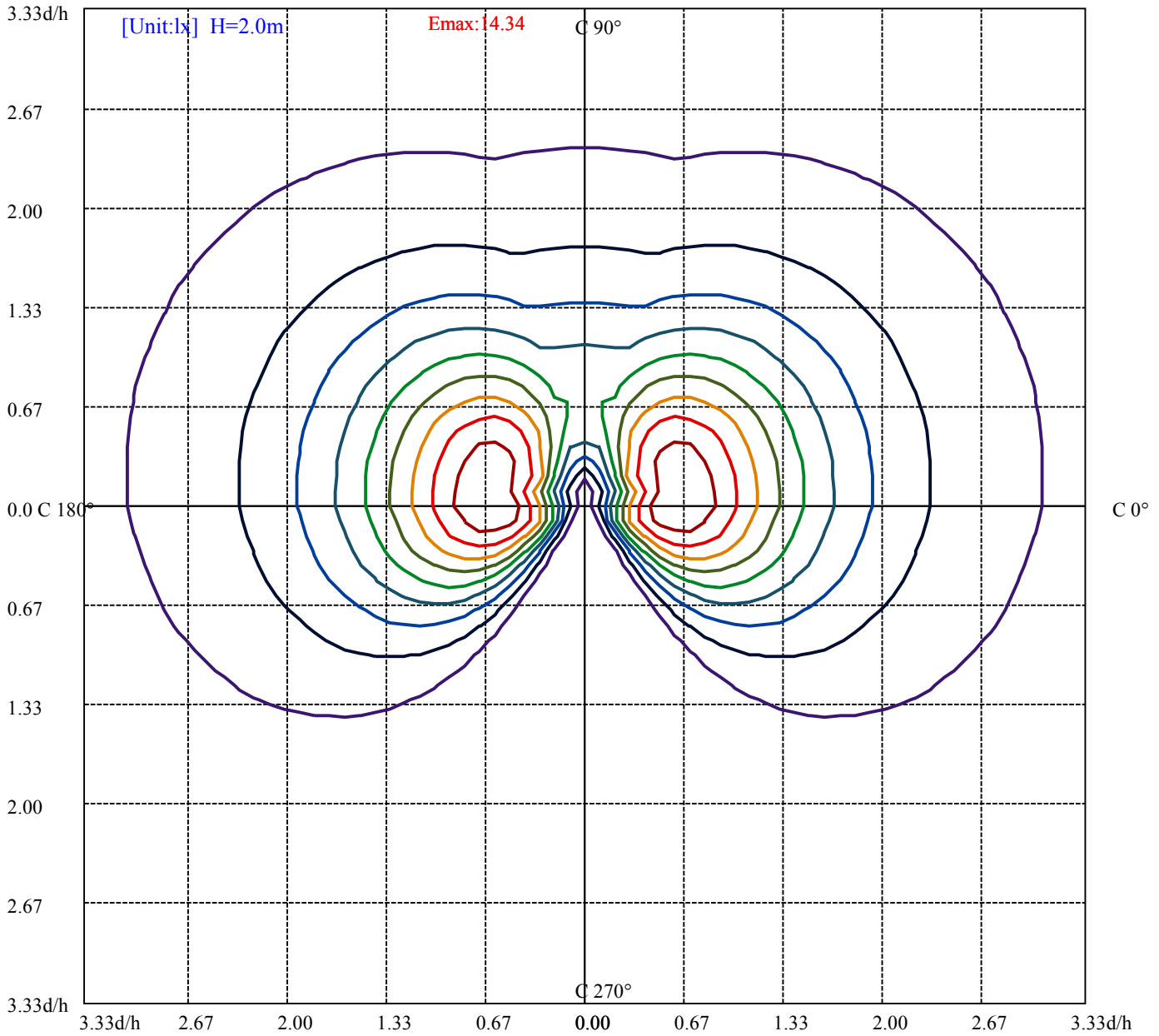
C15(Max): ——
 C0/C180: ——
 C90/C270: ——

Field angle(10%Imax):C0/180Left:262.7 Right:82.7
 :C90/270Left:81.2 Right:81.5

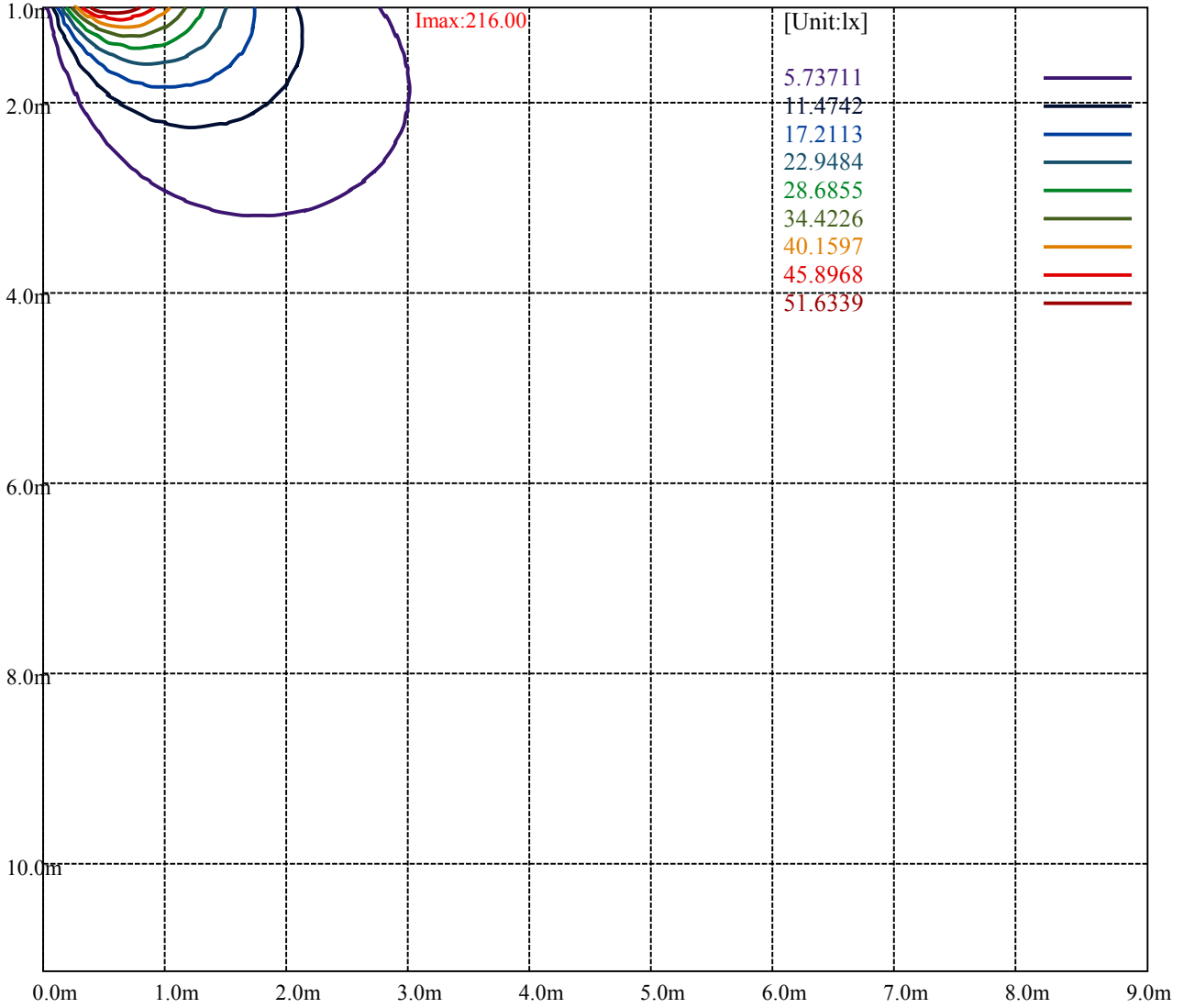
Beam Angle(50%Imax):C0/180Left:237.6 Right:57.6
 :C90/270Left:56.6 Right:57.4



Max , Ave Beam angle of C15 plane 352.73



(10%Emax) 1.434275	—
(20%Emax) 2.86855	—
(30%Emax) 4.302825	—
(40%Emax) 5.7371	—
(50%Emax) 7.171375	—
(60%Emax) 8.60565	—
(70%Emax) 10.03992	—
(80%Emax) 11.4742	—
(90%Emax) 12.90847	—



Luminance Table

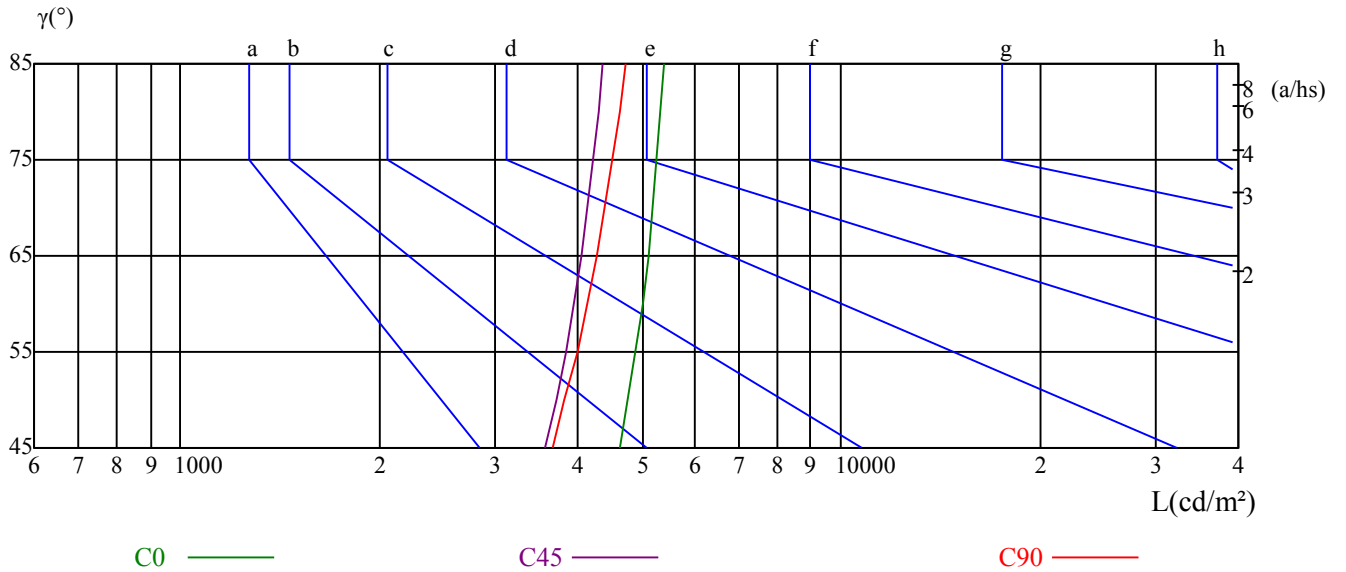
γ	45	50	55	60	65	70	75	80	85
C0	4634	4768	4892	5004	5100	5187	5263	5335	5398
C45	3572	3710	3835	3943	4047	4135	4219	4295	4367
C90	3651	3820	3993	4141	4270	4400	4506	4618	4730

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
133912	37168	84664	236599	66688	150873	732018	209475	469848

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



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	0.98	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	0.59	0.56	0.51	0.48	0.45	0.39	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	0.41	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	0.43	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	0.41	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	0.06
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	0.99	3.68	18.48	34.45	50.69	66.75	82.90	98.69	113.67
15.0	0.54	3.68	19.74	36.52	52.75	70.79	87.03	103.89	120.31
30.0	0.54	3.86	18.84	35.26	51.86	68.37	84.96	100.57	117.17
45.0	0.54	3.23	17.41	31.94	46.92	61.55	75.63	90.26	104.43
60.0	0.54	2.78	13.82	25.66	37.59	49.52	61.46	73.21	84.16
75.0	0.45	1.61	9.60	17.94	26.38	34.63	43.96	52.66	61.64
90.0	0.54	0.81	5.29	13.55	23.42	33.11	42.71	52.04	60.74
105.0	0.45	0.45	4.76	14.27	23.78	33.11	42.17	51.50	60.38
120.0	0.45	0.36	8.61	20.46	32.84	45.31	57.78	70.25	82.45
135.0	0.36	0.36	11.13	26.02	41.18	56.25	71.68	86.85	101.02
150.0	3.77	0.27	12.56	28.89	57.96	62.71	78.86	95.55	111.97
165.0	5.47	0.18	13.01	28.44	46.12	62.09	79.13	96.00	113.31
180.0	0.99	16.24	30.68	46.38	62.09	77.88	93.31	107.48	122.47
195.0	0.54	12.20	25.48	38.67	51.41	64.42	77.34	89.81	101.74
210.0	0.54	5.92	16.51	27.09	36.96	46.74	55.80	65.58	74.02
225.0	0.54	0.54	3.77	8.34	13.46	18.39	23.33	28.35	33.20
240.0	0.54	0.45	0.45	0.45	0.45	0.36	0.45	0.45	0.54
255.0	0.45	0.45	0.36	0.27	0.27	0.09	0.09	0.09	0.18
270.0	0.54	0.36	0.18	0.18	0.09	0.00	0.00	0.09	0.00
285.0	0.45	0.36	0.18	0.09	0.09	0.00	0.00	0.00	0.00
300.0	0.45	0.54	0.90	1.44	1.61	2.60	3.05	3.68	4.13
315.0	0.36	6.91	13.46	19.83	26.29	32.57	38.22	43.96	49.43
330.0	3.77	14.18	25.03	35.80	46.56	57.06	67.20	77.07	86.49
345.0	5.47	19.11	32.93	46.74	60.65	73.39	86.67	99.50	111.97
360.0	0.99	3.68	18.48	34.45	50.69	66.75	82.90	98.69	113.67
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	128.39	142.38	155.39	167.23	177.64	186.61	193.70	199.53	203.48
15.0	136.01	150.82	164.09	177.10	187.87	197.38	205.37	211.29	215.32
30.0	131.80	146.33	159.70	171.99	182.94	192.00	199.53	205.28	209.31
45.0	118.07	130.90	142.83	153.24	163.11	171.18	178.00	182.94	186.70
60.0	95.46	105.33	114.75	123.36	130.90	137.36	142.47	146.69	149.47
75.0	70.43	78.68	86.31	92.95	99.41	104.61	109.19	112.78	115.38
90.0	69.71	77.52	85.23	92.05	97.97	103.36	107.48	110.98	113.67
105.0	69.17	77.25	84.87	91.87	97.88	103.45	108.02	111.79	114.48
120.0	94.29	105.42	115.47	125.16	133.59	141.13	147.23	152.07	155.93
135.0	115.56	129.10	141.84	153.51	163.83	172.62	180.15	186.34	190.65
150.0	127.85	142.74	156.20	168.94	180.42	190.29	198.19	205.10	209.76
165.0	128.03	142.92	156.74	169.48	180.78	190.47	198.82	205.28	210.21
180.0	135.38	147.95	159.61	170.11	178.90	186.26	192.09	196.12	198.46
195.0	113.13	123.63	133.41	142.11	149.38	155.57	160.42	163.92	165.89
210.0	82.27	90.17	97.34	103.80	109.46	114.21	117.80	120.49	122.02
225.0	37.77	42.08	46.03	49.79	52.93	55.72	58.23	59.93	61.19
240.0	0.72	0.90	1.17	1.44	1.61	1.88	1.97	2.06	2.15
255.0	0.27	0.45	0.63	0.81	0.99	1.17	1.35	1.44	1.44
270.0	0.18	0.36	0.45	0.54	0.99	1.08	1.26	1.26	1.35
285.0	0.18	0.36	0.54	0.72	1.08	1.17	1.35	1.44	1.44
300.0	4.76	5.47	5.92	6.46	6.91	7.27	7.63	7.81	7.90
315.0	54.64	59.39	63.70	67.65	70.97	73.48	75.63	76.98	77.43
330.0	95.37	103.62	110.71	117.71	122.82	127.40	130.72	132.96	133.86
345.0	123.54	134.31	144.18	152.70	160.06	165.89	170.11	172.98	174.41
360.0	128.39	142.38	155.39	167.23	177.64	186.61	193.70	199.53	203.48

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Appendix Page: 11 Total:12

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	205.54	205.81	204.02	200.79	195.50	188.32	179.71	169.57	158.44
15.0	217.66	218.02	216.31	212.54	206.80	199.35	190.47	179.62	167.50
30.0	211.56	211.82	210.03	206.44	201.06	193.79	184.91	174.41	162.93
45.0	188.41	188.68	187.15	184.01	179.17	172.89	164.72	155.57	144.98
60.0	151.00	151.09	149.83	147.23	143.46	138.35	132.07	124.62	116.54
75.0	116.72	117.35	116.90	115.38	112.87	109.28	104.88	99.41	93.31
90.0	115.29	115.92	115.56	114.03	111.61	108.38	104.07	98.96	92.95
105.0	116.19	116.90	116.63	115.20	112.78	109.37	105.06	99.77	93.76
120.0	158.26	159.25	158.53	156.56	153.24	148.48	142.38	135.03	126.59
135.0	193.34	194.33	193.52	191.10	186.79	180.78	173.16	164.18	153.69
150.0	212.81	213.89	212.99	209.94	205.19	198.37	190.02	179.97	168.49
165.0	212.81	213.98	212.90	210.03	205.19	198.64	190.47	180.24	169.03
180.0	199.00	197.83	194.60	189.57	182.94	175.31	165.26	154.85	142.74
195.0	166.34	165.26	162.75	158.98	153.51	146.87	138.79	129.73	119.59
210.0	122.56	121.93	119.95	117.26	113.67	108.47	103.09	96.36	89.18
225.0	62.09	62.09	61.73	60.74	59.30	57.15	56.70	51.59	48.27
240.0	2.06	1.97	2.06	1.70	1.53	1.17	1.17	0.90	0.90
255.0	1.44	1.35	1.17	1.17	0.90	0.72	0.54	0.36	0.18
270.0	1.26	1.26	1.17	0.90	0.72	0.54	0.45	0.18	0.00
285.0	1.44	1.26	1.17	1.08	0.72	0.54	0.36	0.18	0.00
300.0	7.81	7.72	7.45	7.00	6.55	6.10	5.56	4.84	4.40
315.0	77.34	76.53	75.00	73.03	69.89	66.66	62.71	58.32	53.38
330.0	133.68	132.15	129.55	125.70	120.67	114.66	108.20	100.39	91.87
345.0	174.14	172.35	168.85	163.92	157.90	150.10	140.95	130.72	120.22
360.0	205.54	205.81	204.02	200.79	195.50	188.32	179.71	169.57	158.44

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	145.70	131.71	116.99	101.65	86.40	70.16	53.56	37.23	20.64
15.0	153.87	139.78	123.54	107.84	90.97	73.57	56.07	39.75	22.43
30.0	149.74	135.47	120.22	104.34	88.73	72.04	55.00	38.22	21.44
45.0	133.32	120.58	107.66	93.67	79.13	63.97	49.61	33.73	19.47
60.0	107.03	96.90	86.31	74.91	63.34	51.95	39.66	27.36	15.07
75.0	86.31	78.68	70.97	61.91	53.20	43.60	34.36	23.78	14.00
90.0	86.49	79.04	70.88	62.35	53.29	44.41	34.54	24.40	14.18
105.0	86.94	79.49	71.51	63.34	54.55	45.40	35.98	26.92	16.78
120.0	117.62	107.21	96.18	84.42	72.22	59.66	47.55	34.72	21.71
135.0	142.20	129.37	115.83	101.29	87.12	71.77	56.16	40.64	26.02
150.0	155.57	142.02	127.22	111.43	95.01	79.04	61.10	44.77	27.90
165.0	156.20	142.02	126.95	111.25	95.46	78.59	61.55	44.59	28.53
180.0	129.64	115.47	100.57	85.95	70.25	54.19	38.22	23.15	2.51
195.0	109.28	97.61	85.23	72.40	59.21	55.98	33.20	17.94	0.72
210.0	81.11	79.22	63.70	54.37	44.59	35.08	24.94	8.97	0.54
225.0	44.59	40.46	36.25	31.49	26.47	21.35	14.62	2.24	0.54
240.0	1.17	1.61	2.15	2.78	3.14	3.32	2.69	0.45	0.72
255.0	0.18	0.09	0.09	0.18	0.27	0.27	0.36	0.36	1.08
270.0	0.00	0.00	0.00	0.09	0.00	0.18	0.18	0.36	0.63
285.0	0.00	0.00	0.00	0.00	0.00	0.09	0.18	0.45	0.54
300.0	3.86	3.50	2.96	2.51	1.97	1.35	0.81	0.45	0.45
315.0	48.18	42.53	37.05	30.86	24.67	18.21	12.02	5.29	0.54
330.0	82.81	73.12	62.89	52.49	42.35	31.49	20.72	9.96	0.99
345.0	107.66	95.64	82.45	68.81	55.00	41.09	27.09	14.09	1.35
360.0	145.70	131.71	116.99	101.65	86.40	70.16	53.56	37.23	20.64

Intensity data(cd)

C/γ(°)	180.0
0.0	0.72
15.0	5.74
30.0	6.10
45.0	4.93
60.0	4.40
75.0	4.49
90.0	5.74
105.0	7.54
120.0	9.15
135.0	10.86
150.0	12.20
165.0	11.93
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	0.72