
乐达凯

Client:

LumCAT: MIAP24LAJUDBK

Luminaire: LED LAMP

Report No:

Ballast type:

Test No: LCZP26010195

Voltage(V): 120.040

LampCAT:

Current(A): 0.171

Lamp flux(lm): 2199.8

Power (W): 20.340

Number of Lamps: 1

PF: 0.991

Length(mm): -45

Width(mm): -45

Phm Type: C

Height(mm): 600

Photometric Results

Lumens(lm): 2199.83, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 108.15

Central intensity(cd): 23.314, Maximum intensity(cd): 228.179

Angle of maximum intensity: C=0.0 γ =85.0

Beam Angle(50%Imax): [C0/180]Total=291.2

[C90/270]Total=291.2

Field angle(10%Imax): [C0/180]Total=336.0

[C90/270]Total=341.8

Maximum s/h(1/2): C0_180=4.93 C90_270=4.95

Maximum s/h(1/4): C0_180=4.61 C90_270=4.63

Up flux rate of lamp(%): 48.55%

Down flux rate of lamp(%): 51.45%

Up flux rate of LUM(%): 48.55%

Down flux rate of LUM(%): 51.45%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 20.166%

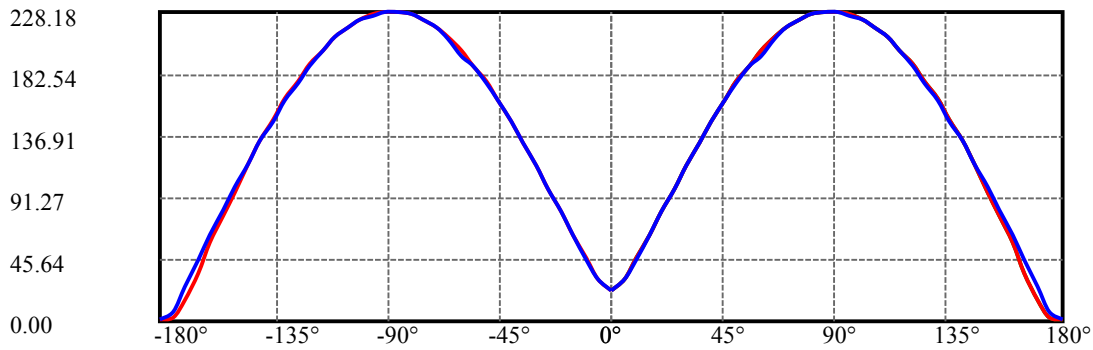
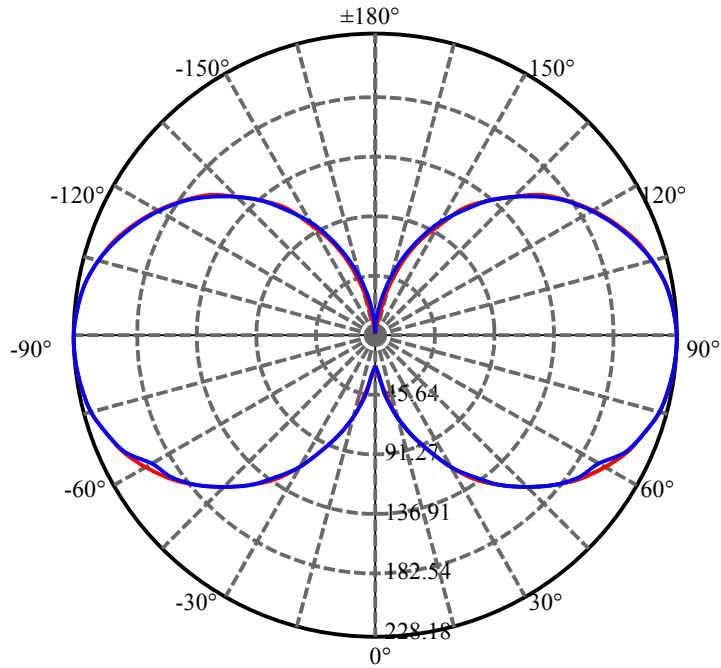
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	22.722	0.000	0	0.00%	0.00%
5.0	30.452	0.636	0.636	0.03%	0.03%
10.0	46.059	2.737	3.373	0.12%	0.15%
15.0	62.854	6.461	9.833	0.29%	0.45%
20.0	80.162	11.787	21.62	0.54%	0.98%
25.0	97.678	18.652	40.272	0.85%	1.83%
30.0	114.575	26.861	67.133	1.22%	3.05%
35.0	131.287	36.205	103.338	1.65%	4.70%
40.0	146.735	46.386	149.723	2.11%	6.81%
45.0	161.932	57.152	206.876	2.60%	9.40%
50.0	175.654	68.214	275.09	3.10%	12.51%
55.0	188.119	79.096	354.186	3.60%	16.10%
60.0	198.797	89.435	443.62	4.07%	20.17%
65.0	208.413	98.993	542.614	4.50%	24.67%
70.0	216.040	107.474	650.088	4.89%	29.55%
75.0	221.736	114.427	764.515	5.20%	34.75%
80.0	225.534	119.677	884.192	5.44%	40.19%
85.0	227.359	123.062	1007.254	5.59%	45.79%
90.0	227.302	124.490	1131.744	5.66%	51.45%
95.0	225.678	124.030	1255.773	5.64%	57.09%
100.0	222.331	121.735	1377.508	5.53%	62.62%
105.0	216.628	117.453	1494.962	5.34%	67.96%
110.0	209.160	111.294	1606.256	5.06%	73.02%
115.0	199.784	103.547	1709.803	4.71%	77.72%
120.0	189.128	94.545	1804.348	4.30%	82.02%
125.0	176.261	84.459	1888.807	3.84%	85.86%
130.0	162.676	73.696	1962.503	3.35%	89.21%
135.0	147.835	62.743	2025.246	2.85%	92.06%
140.0	132.550	51.916	2077.162	2.36%	94.42%
145.0	115.103	41.319	2118.481	1.88%	96.30%
150.0	96.854	31.212	2149.693	1.42%	97.72%
155.0	78.678	22.214	2171.907	1.01%	98.73%
160.0	60.467	14.594	2186.5	0.66%	99.39%
165.0	41.066	8.368	2194.868	0.38%	99.77%
170.0	22.832	3.790	2198.659	0.17%	99.95%
175.0	7.176	1.073	2199.732	0.05%	100.00%
180.0	0.907	0.097	2199.829	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	67.13	3.05%	3.05%
0-40	149.72	6.81%	6.81%
0-60	443.62	20.17%	20.17%
0-90	1131.74	51.45%	51.45%
0-120	1804.35	82.02%	82.02%
0-180	2199.83	100.00%	100.00%
60-90	688.12	31.28%	31.28%
90-120	672.60	30.58%	30.58%
90-130	830.76	37.76%	37.76%
90-150	1017.95	46.27%	46.27%
90-180	1067.99	48.55%	48.55%
0-117.65	1759.86	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	3.37
10-20	18.25
20-30	45.51
30-40	82.59
40-50	125.37
50-60	168.53
60-70	206.47
70-80	234.10
80-90	247.55
90-100	245.76
100-110	228.75
110-120	198.09
120-130	158.15
130-140	114.66
140-150	72.53
150-160	36.81
160-170	12.16
170-180	1.07



C0(Max): —————

C0/C180: —————

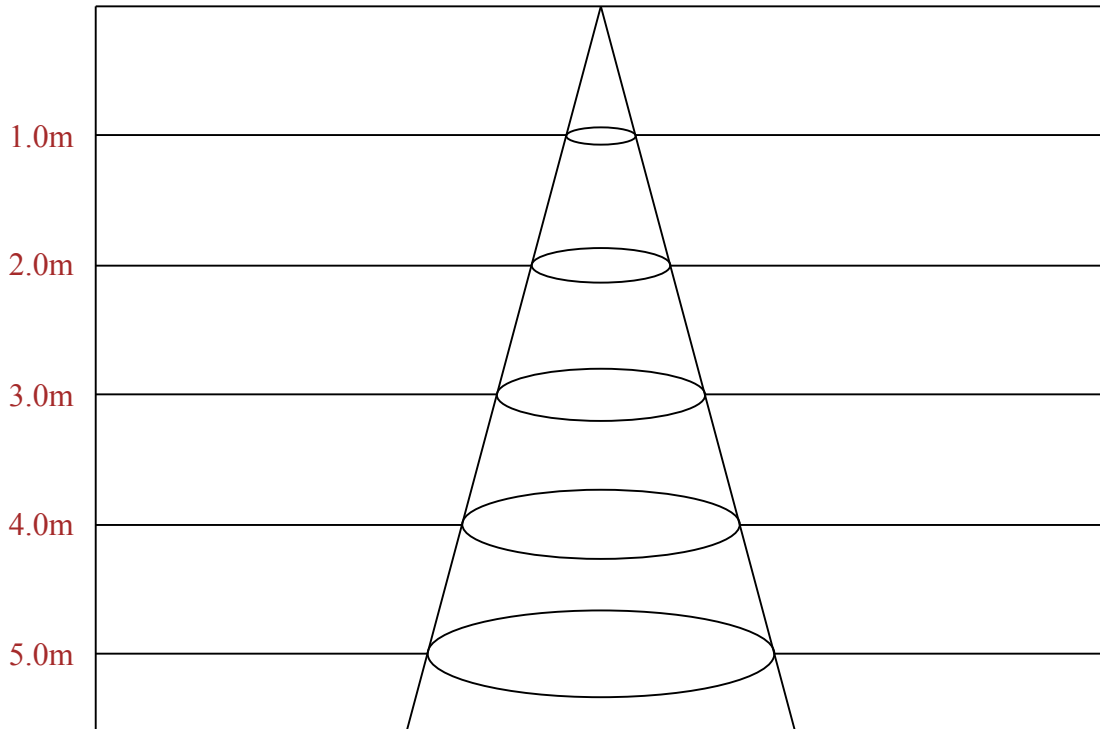
C90/C270: —————

Field angle(10%Imax):C0/180Left:253.0 Right:83.0

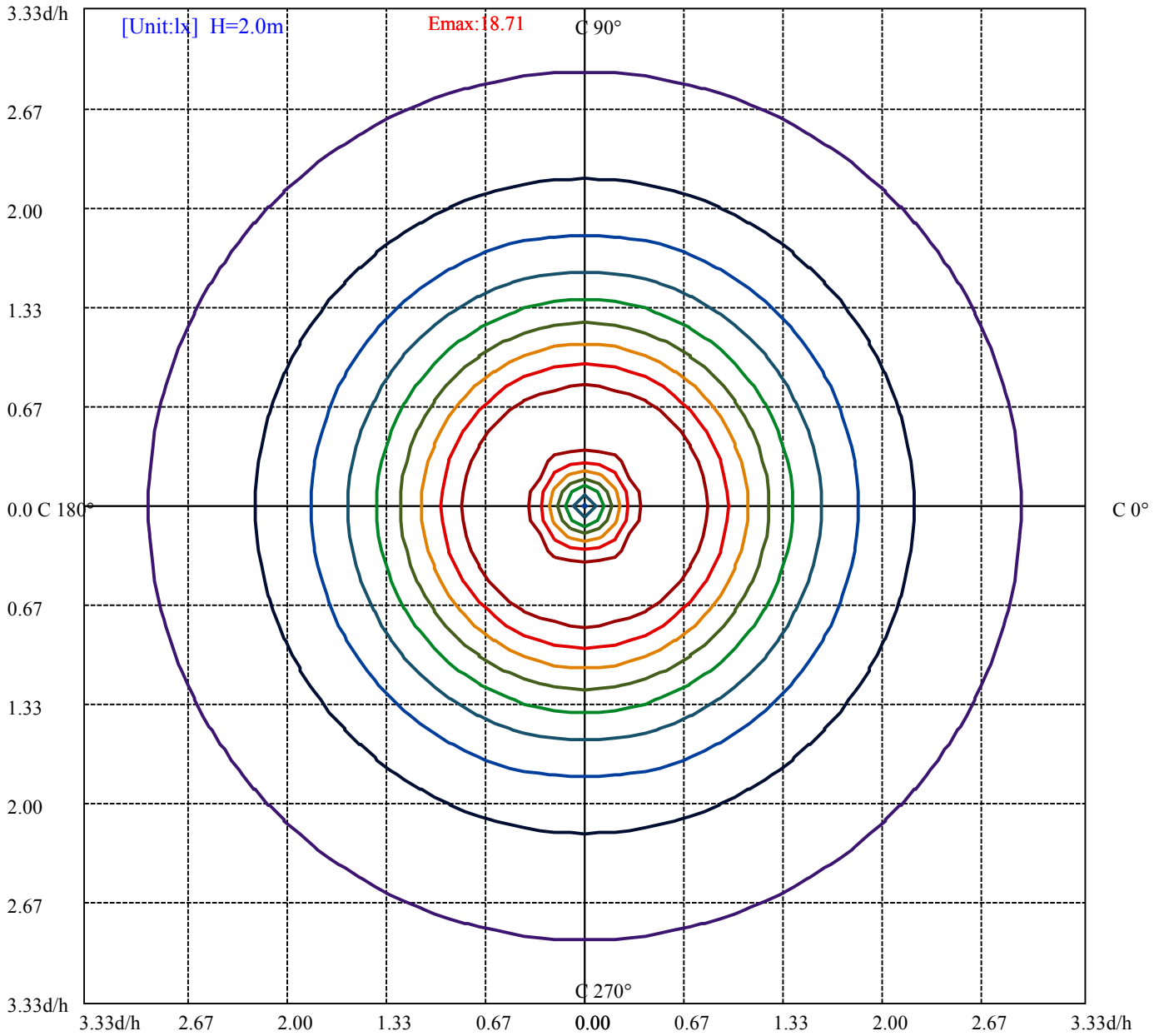
:C90/270Left:255.9 Right:85.9

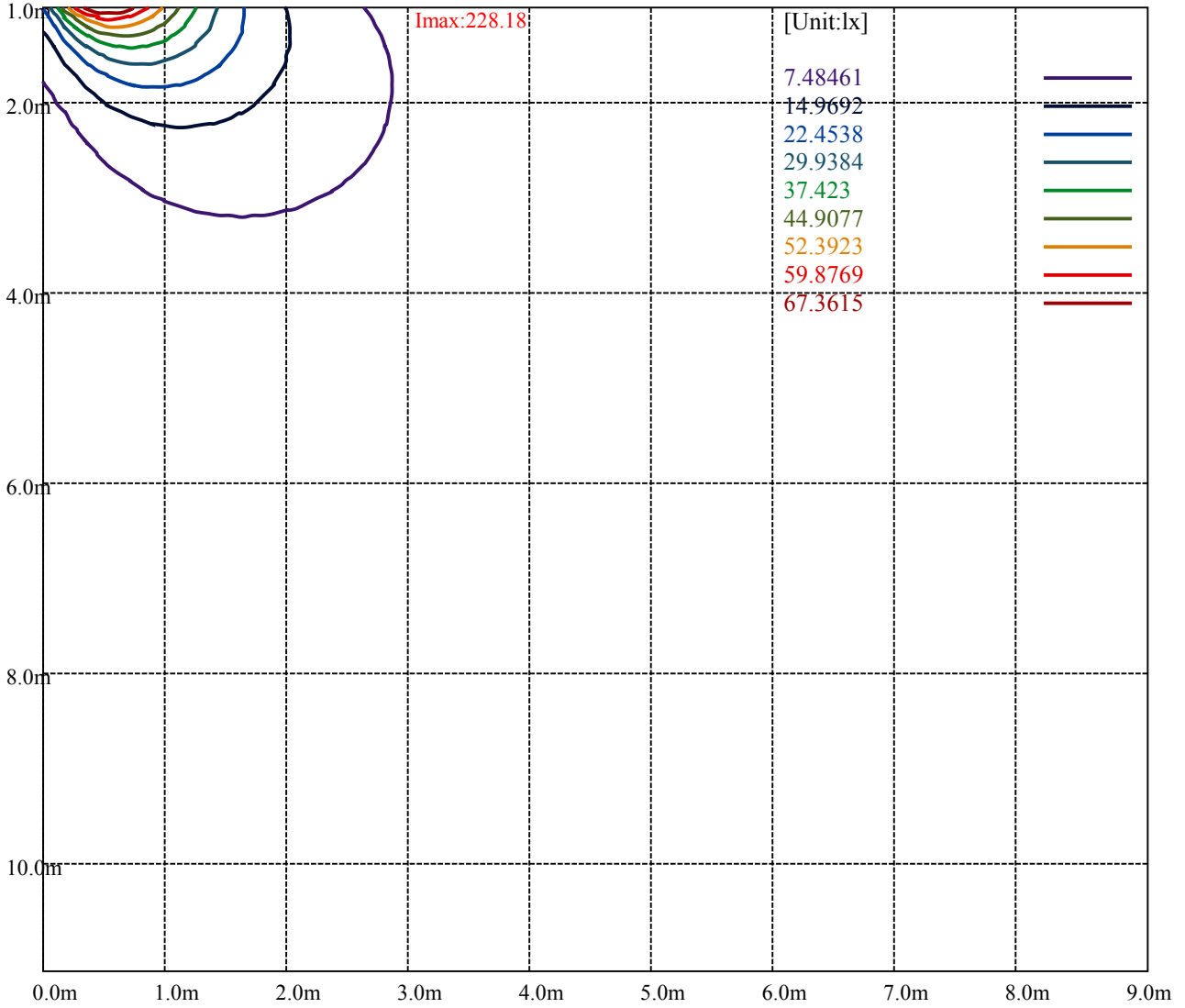
Beam Angle(50%Imax):C0/180Left:230.6 Right:60.6

:C90/270Left:230.6 Right:60.6



Max , Ave Beam angle of C0 plane 339.58





Luminance Table

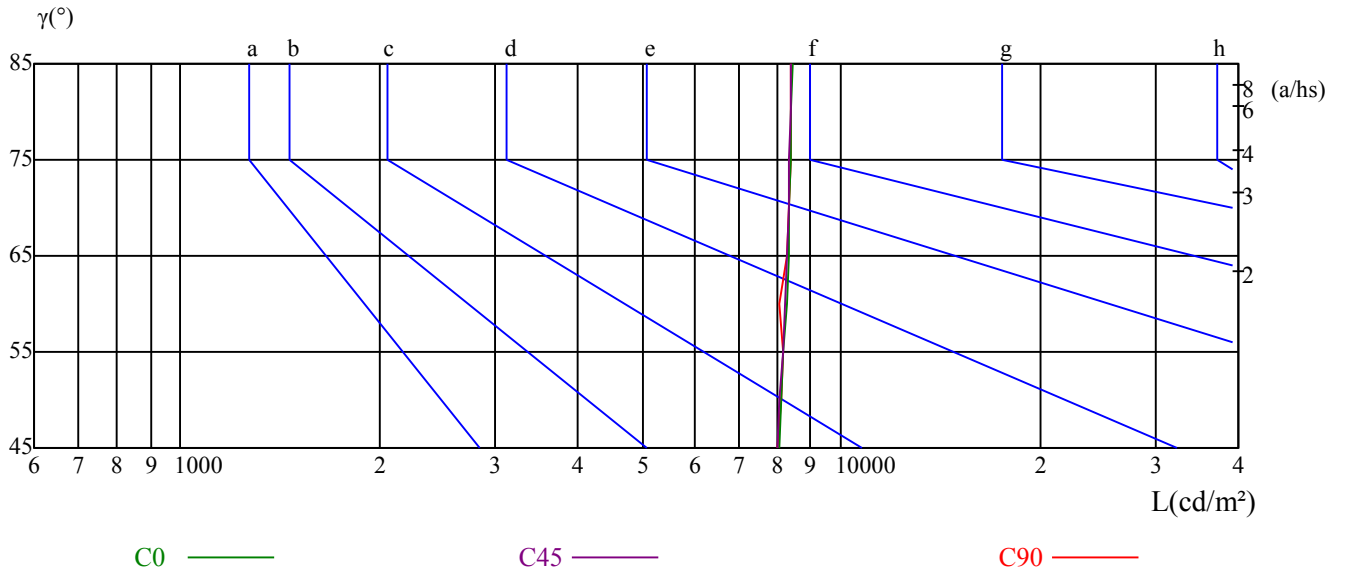
γ	45	50	55	60	65	70	75	80	85
C0	8066	8131	8198	8270	8324	8362	8400	8424	8440
C45	8001	8089	8155	8239	8273	8332	8361	8392	8404
C90	8032	8113	8182	8080	8304	8353	8392	8419	8423

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
311364	310618	309467	540607	540054	538063	1646131	1642846	1639068

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	0.99	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	0.86	0.79	0.74	0.78	0.73	0.68	0.65	0.61	0.57	0.53	0.50	0.47	0.42	0.39	0.37	0.31
2	0.71	0.63	0.56	0.65	0.58	0.51	0.54	0.48	0.43	0.43	0.39	0.35	0.33	0.30	0.27	0.22
3	0.61	0.51	0.44	0.56	0.47	0.40	0.46	0.39	0.33	0.36	0.31	0.27	0.28	0.24	0.20	0.16
4	0.53	0.43	0.35	0.48	0.39	0.33	0.39	0.32	0.27	0.31	0.26	0.21	0.24	0.20	0.16	0.12
5	0.46	0.36	0.29	0.42	0.33	0.27	0.35	0.28	0.22	0.27	0.22	0.18	0.21	0.16	0.13	0.09
6	0.41	0.31	0.25	0.37	0.29	0.23	0.31	0.24	0.19	0.24	0.19	0.15	0.18	0.14	0.11	0.08
7	0.37	0.27	0.21	0.33	0.25	0.19	0.27	0.21	0.16	0.22	0.16	0.12	0.17	0.12	0.09	0.06
8	0.33	0.24	0.18	0.30	0.22	0.17	0.25	0.18	0.14	0.20	0.14	0.11	0.15	0.11	0.08	0.05
9	0.30	0.21	0.16	0.27	0.20	0.14	0.22	0.16	0.12	0.18	0.13	0.09	0.14	0.10	0.07	0.04
10	0.27	0.19	0.14	0.25	0.18	0.13	0.21	0.14	0.10	0.16	0.12	0.08	0.13	0.09	0.06	0.04

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	23.31	25.04	38.80	55.28	72.04	88.98	106.01	121.76	138.06
15.0	22.59	23.86	38.34	54.92	71.76	88.52	105.10	121.40	137.15
30.0	22.13	23.59	37.70	54.82	70.94	87.88	105.01	121.49	137.15
45.0	22.49	22.77	37.61	54.01	70.94	88.07	104.64	121.12	137.06
60.0	22.40	22.86	37.70	53.37	70.40	87.61	104.82	121.40	137.43
75.0	22.31	22.22	37.25	53.46	70.40	87.88	104.00	121.58	137.15
90.0	23.04	22.49	36.52	53.82	69.85	88.07	104.64	121.40	137.61
105.0	23.77	22.31	36.88	53.00	70.12	87.88	104.82	121.03	138.06
120.0	23.50	22.13	36.79	51.73	70.49	87.25	104.64	121.40	137.97
135.0	20.04	21.58	36.61	52.55	70.03	88.07	103.82	122.13	137.70
150.0	23.31	21.49	36.97	52.82	83.51	88.25	105.19	121.76	138.70
165.0	23.77	21.67	36.52	53.46	69.67	88.70	105.46	122.58	140.98
180.0	23.31	37.89	54.46	72.22	90.16	108.01	124.95	142.71	157.83
195.0	22.59	37.89	54.73	71.58	90.62	107.56	125.22	142.34	158.37
210.0	22.13	37.61	54.28	72.40	90.43	108.56	126.22	142.44	159.47
225.0	22.49	38.16	54.01	73.13	90.25	108.10	125.95	143.16	159.28
240.0	22.40	37.89	54.55	72.77	90.71	108.74	125.40	143.53	158.65
255.0	22.31	38.34	55.46	72.04	90.07	108.10	125.40	142.62	158.74
270.0	23.04	38.52	54.92	72.67	90.52	108.01	125.77	141.16	157.10
285.0	23.77	37.89	55.74	71.86	89.61	107.46	124.04	140.98	144.35
300.0	23.50	38.80	54.64	72.31	76.04	106.55	123.49	139.79	155.09
315.0	20.04	38.43	54.92	71.76	88.34	106.01	122.04	138.25	153.45
330.0	23.31	38.16	55.28	71.13	88.34	105.28	121.94	137.70	152.18
345.0	23.77	39.25	54.73	71.40	88.61	104.73	121.22	137.15	152.09
360.0	23.31	25.04	38.80	55.28	72.04	88.98	106.01	121.76	138.06
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	152.45	166.11	178.59	189.97	199.54	207.55	214.02	218.48	221.12
15.0	152.00	165.75	178.14	189.25	199.08	207.19	213.65	218.12	220.67
30.0	151.63	165.84	178.14	189.43	199.26	207.37	213.56	218.39	220.94
45.0	152.00	165.84	177.95	189.88	199.26	207.82	214.29	219.03	221.67
60.0	152.27	166.11	178.41	189.88	199.81	208.19	214.75	219.03	222.12
75.0	151.91	166.02	178.86	190.16	200.27	208.01	214.75	219.75	222.49
90.0	152.54	166.66	178.68	190.25	200.36	208.92	215.57	220.39	222.76
105.0	152.27	166.57	179.50	191.07	201.18	208.92	215.66	220.67	223.49
120.0	153.09	166.20	180.32	190.98	201.09	209.92	216.66	221.76	224.22
135.0	152.82	167.21	180.32	191.98	201.63	210.92	217.11	222.21	225.13
150.0	154.27	168.30	180.87	192.80	203.00	211.83	218.75	223.85	226.86
165.0	154.46	169.21	182.32	194.35	204.82	213.29	220.48	225.49	228.50
180.0	173.67	186.88	198.99	209.92	219.03	225.86	231.05	234.14	235.24
195.0	173.49	186.97	199.99	210.47	220.12	226.59	231.87	234.78	235.69
210.0	173.76	187.79	200.45	211.38	220.48	228.41	232.69	235.87	236.79
225.0	174.49	188.61	200.45	212.38	220.76	227.86	232.87	236.15	236.97
240.0	173.85	187.70	200.45	211.65	219.94	227.68	232.23	235.78	236.24
255.0	173.40	186.60	199.99	209.92	219.03	225.86	230.87	231.50	234.51
270.0	172.22	185.51	198.17	200.45	217.20	224.04	229.04	231.96	232.69
285.0	170.67	184.24	196.26	206.91	215.38	222.03	226.40	229.50	230.05
300.0	168.75	182.69	193.89	204.36	212.83	219.48	224.22	226.95	227.59
315.0	167.66	180.69	192.52	202.54	210.37	217.11	221.67	224.40	225.04
330.0	166.66	179.32	191.07	200.99	209.19	215.47	220.21	222.76	223.40
345.0	166.02	178.86	190.52	200.17	208.28	214.65	219.30	221.85	222.49
360.0	152.45	166.11	178.59	189.97	199.54	207.55	214.02	218.48	221.12

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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	221.58	220.67	217.93	213.29	206.91	198.35	188.15	176.68	163.84
15.0	221.21	220.21	217.75	213.20	206.64	197.90	187.61	176.22	163.11
30.0	221.58	220.85	218.39	213.84	207.28	198.26	187.70	175.59	162.65
45.0	222.49	221.76	219.21	214.65	208.01	198.81	188.34	175.22	161.65
60.0	222.67	222.21	219.85	215.38	208.74	199.72	188.79	176.13	162.38
75.0	223.22	222.49	220.48	215.84	209.28	200.54	190.07	178.41	165.11
90.0	223.67	223.12	220.85	216.57	210.19	201.09	191.16	179.50	166.48
105.0	224.40	223.94	221.76	217.48	211.01	202.63	192.62	181.14	169.39
120.0	225.04	224.67	222.40	218.21	211.74	204.36	194.35	183.05	170.30
135.0	226.04	225.58	223.31	219.48	213.11	204.82	195.17	183.87	171.85
150.0	227.77	227.13	224.95	220.57	214.93	205.82	196.99	185.97	173.31
165.0	229.32	228.86	226.49	222.67	216.29	207.82	197.90	186.51	172.67
180.0	234.69	232.14	227.68	221.03	213.02	202.54	190.43	177.59	164.20
195.0	235.05	232.41	227.86	221.67	213.02	202.72	190.70	177.41	163.84
210.0	235.97	233.42	228.59	221.94	213.02	203.36	190.61	177.77	163.02
225.0	236.24	233.60	229.23	221.94	213.29	202.72	200.08	177.13	162.29
240.0	235.51	232.78	231.69	220.94	212.10	201.72	189.61	176.04	162.11
255.0	233.69	231.05	226.22	219.21	210.56	200.36	188.24	174.86	160.19
270.0	231.50	228.95	224.13	217.11	208.46	198.17	186.24	172.85	158.74
285.0	229.14	226.49	221.67	214.75	206.37	196.17	184.24	171.12	157.28
300.0	226.59	223.67	219.12	212.20	203.73	193.80	181.96	169.12	154.73
315.0	224.13	221.49	216.75	210.01	202.00	192.16	180.50	167.39	153.00
330.0	222.30	219.94	215.47	209.10	200.99	191.25	179.68	165.93	151.91
345.0	221.49	218.84	214.20	208.01	199.17	189.70	177.95	164.75	150.18
360.0	221.58	220.67	217.93	213.29	206.91	198.35	188.15	176.68	163.84

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	150.36	134.97	116.94	95.44	76.41	52.82	28.96	6.74	1.73
15.0	148.90	133.60	117.03	98.36	79.51	60.29	40.34	21.49	4.64
30.0	147.54	132.14	115.75	98.54	80.42	63.66	46.08	28.05	7.10
45.0	146.62	130.69	114.20	97.72	79.05	62.02	45.63	27.32	6.83
60.0	147.99	132.51	116.75	98.27	81.33	63.20	47.72	28.41	7.19
75.0	150.54	135.06	118.67	101.36	84.61	66.76	48.91	30.78	10.11
90.0	152.09	137.70	121.40	104.19	86.43	68.30	49.18	32.15	11.38
105.0	155.37	140.16	124.04	107.19	90.71	73.04	53.19	33.51	14.39
120.0	157.10	141.07	126.41	109.74	92.80	75.04	56.65	35.97	16.21
135.0	158.01	143.35	127.50	111.74	93.89	77.14	58.38	38.61	17.58
150.0	159.37	144.44	129.50	112.84	95.81	77.96	59.47	39.25	18.21
165.0	158.83	142.98	127.14	109.29	92.16	74.31	57.47	38.80	19.31
180.0	147.54	130.60	116.48	95.81	79.87	64.21	40.80	23.04	4.46
195.0	147.26	131.96	114.66	97.17	79.41	75.13	43.99	23.31	3.73
210.0	147.81	143.53	114.11	96.72	79.51	60.84	44.72	23.04	4.92
225.0	146.99	130.50	114.39	97.17	78.96	61.11	44.90	22.22	4.28
240.0	146.72	130.32	113.11	96.90	77.96	61.02	43.99	22.31	3.73
255.0	144.80	128.68	112.29	95.17	77.41	59.47	42.53	21.95	3.92
270.0	143.53	127.50	110.29	93.17	76.59	59.01	41.80	19.94	3.64
285.0	141.16	126.13	108.19	92.07	74.13	56.19	38.61	17.12	2.37
300.0	139.52	123.58	105.10	86.34	67.03	46.90	27.32	8.56	1.64
315.0	138.15	121.12	101.27	77.32	57.83	34.06	12.57	2.37	1.55
330.0	136.42	119.94	99.27	76.59	54.55	30.33	7.01	1.55	1.64
345.0	135.42	118.67	97.99	75.41	51.91	28.41	5.37	1.46	1.64
360.0	150.36	134.97	116.94	95.44	76.41	52.82	28.96	6.74	1.73

Intensity data(cd)

C/γ(°)	180.0
0.0	2.00
15.0	1.64
30.0	1.64
45.0	1.64
60.0	1.64
75.0	1.64
90.0	1.64
105.0	1.91
120.0	1.82
135.0	1.91
150.0	2.00
165.0	2.28
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	2.00