
乐达凯

Client:

LumCAT: MIAP24LAJUDLB

Luminaire: LED LAMP

Report No:

Ballast type:

Test No: LCZP26010195

Voltage(V): 120.030

LampCAT:

Current(A): 0.169

Lamp flux(lm): 2188.7

Power (W): 20.130

Number of Lamps: 1

PF: 0.991

Length(mm): -50

Width(mm): -50

Phm Type: C

Height(mm): 600

Photometric Results

Lumens(lm): 2188.69, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 108.73

Central intensity(cd): 18.579, Maximum intensity(cd): 233.507

Angle of maximum intensity: C=0.0 γ =90.0

Beam Angle(50%Imax): [C0/180]Total=289.6

[C90/270]Total=289.4

Field angle(10%Imax): [C0/180]Total=336.4

[C90/270]Total=341.0

Maximum s/h(1/2): C0_180=5.39 C90_270=5.48

Maximum s/h(1/4): C0_180=5.02 C90_270=5.10

Up flux rate of lamp(%): 48.90%

Down flux rate of lamp(%): 51.10%

Up flux rate of LUM(%): 48.90%

Down flux rate of LUM(%): 51.10%

CIE Type : General diffuse lighting

Output flux ratio in π solid angle : 19.622%

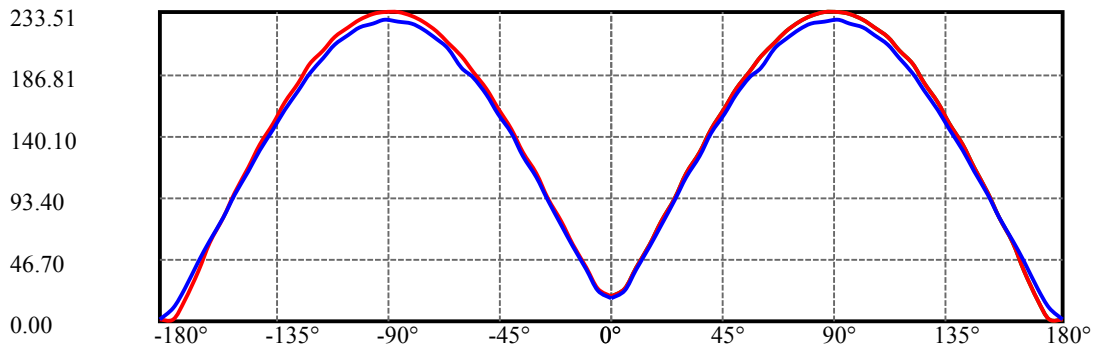
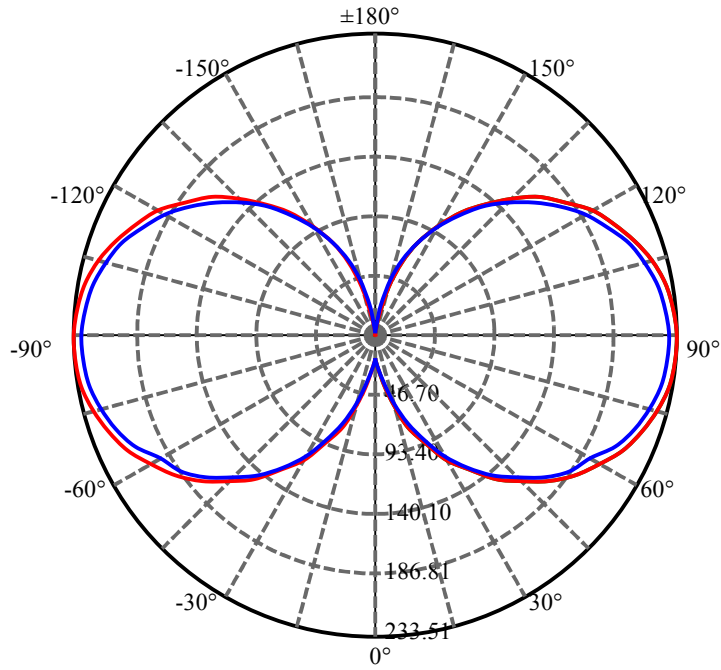
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	16.651	0.000	0	0.00%	0.00%
5.0	23.409	0.479	0.479	0.02%	0.02%
10.0	39.255	2.242	2.721	0.10%	0.12%
15.0	56.240	5.665	8.385	0.26%	0.38%
20.0	73.680	10.707	19.093	0.49%	0.87%
25.0	91.515	17.326	36.419	0.79%	1.66%
30.0	108.955	25.370	61.788	1.16%	2.82%
35.0	125.887	34.582	96.37	1.58%	4.40%
40.0	141.915	44.681	141.051	2.04%	6.44%
45.0	157.838	55.502	196.553	2.54%	8.98%
50.0	172.337	66.717	263.27	3.05%	12.03%
55.0	185.531	77.812	341.082	3.56%	15.58%
60.0	196.816	88.378	429.46	4.04%	19.62%
65.0	207.244	98.228	527.688	4.49%	24.11%
70.0	215.706	107.094	634.782	4.89%	29.00%
75.0	222.096	114.434	749.216	5.23%	34.23%
80.0	226.452	120.019	869.235	5.48%	39.71%
85.0	228.801	123.703	992.938	5.65%	45.37%
90.0	229.101	125.377	1118.316	5.73%	51.10%
95.0	227.427	125.001	1243.317	5.71%	56.81%
100.0	223.929	122.644	1365.961	5.60%	62.41%
105.0	217.914	118.225	1484.186	5.40%	67.81%
110.0	210.097	111.875	1596.061	5.11%	72.92%
115.0	200.265	103.907	1699.968	4.75%	77.67%
120.0	189.420	94.733	1794.701	4.33%	82.00%
125.0	176.075	84.483	1879.184	3.86%	85.86%
130.0	161.947	73.497	1952.682	3.36%	89.22%
135.0	146.792	62.385	2015.067	2.85%	92.07%
140.0	131.397	51.509	2066.576	2.35%	94.42%
145.0	114.074	40.955	2107.531	1.87%	96.29%
150.0	96.725	31.042	2138.572	1.42%	97.71%
155.0	78.712	22.202	2160.774	1.01%	98.72%
160.0	61.154	14.669	2175.443	0.67%	99.39%
165.0	41.312	8.445	2183.888	0.39%	99.78%
170.0	20.597	3.672	2187.561	0.17%	99.95%
175.0	7.874	1.019	2188.579	0.05%	100.00%
180.0	1.245	0.109	2188.688	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	61.79	2.82%	2.82%
0-40	141.05	6.44%	6.44%
0-60	429.46	19.62%	19.62%
0-90	1118.32	51.10%	51.10%
0-120	1794.70	82.00%	82.00%
0-180	2188.69	100.00%	100.00%
60-90	688.86	31.47%	31.47%
90-120	676.39	30.90%	30.90%
90-130	834.37	38.12%	38.12%
90-150	1020.26	46.61%	46.61%
90-180	1070.26	48.90%	48.90%
0-117.69	1750.95	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	2.72
10-20	16.37
20-30	42.70
30-40	79.26
40-50	122.22
50-60	166.19
60-70	205.32
70-80	234.45
80-90	249.08
90-100	247.65
100-110	230.10
110-120	198.64
120-130	157.98
130-140	113.89
140-150	72.00
150-160	36.87
160-170	12.12
170-180	1.02



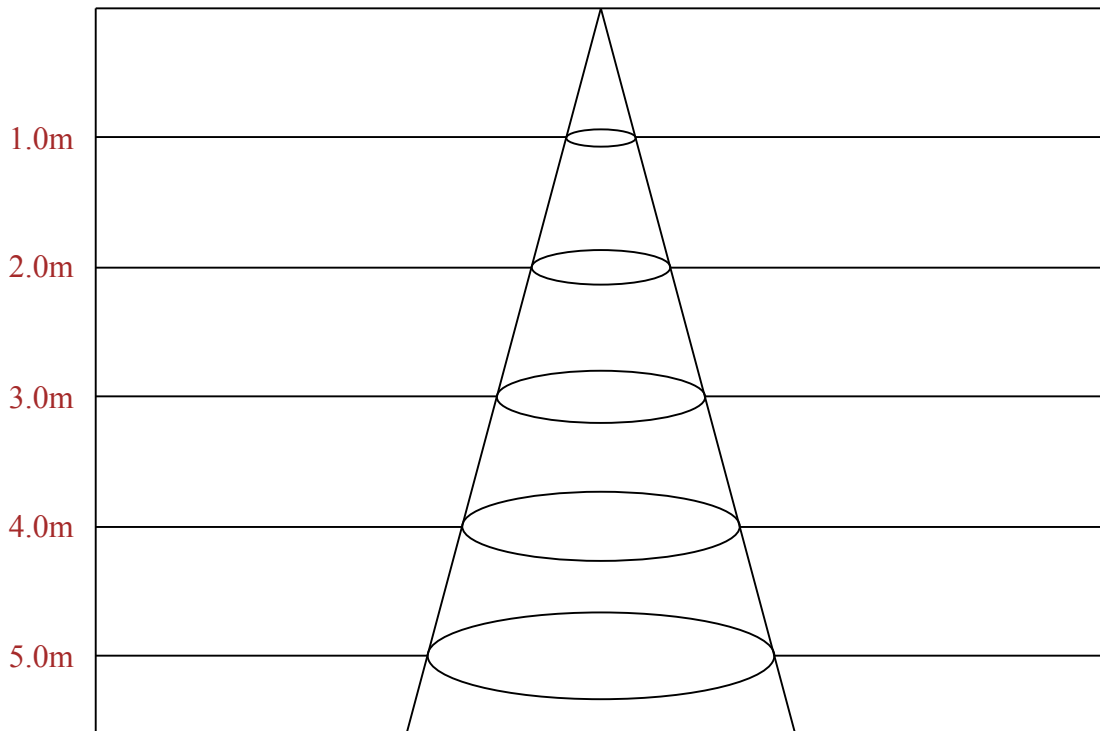
C0(Max): —————

C0/C180: —————

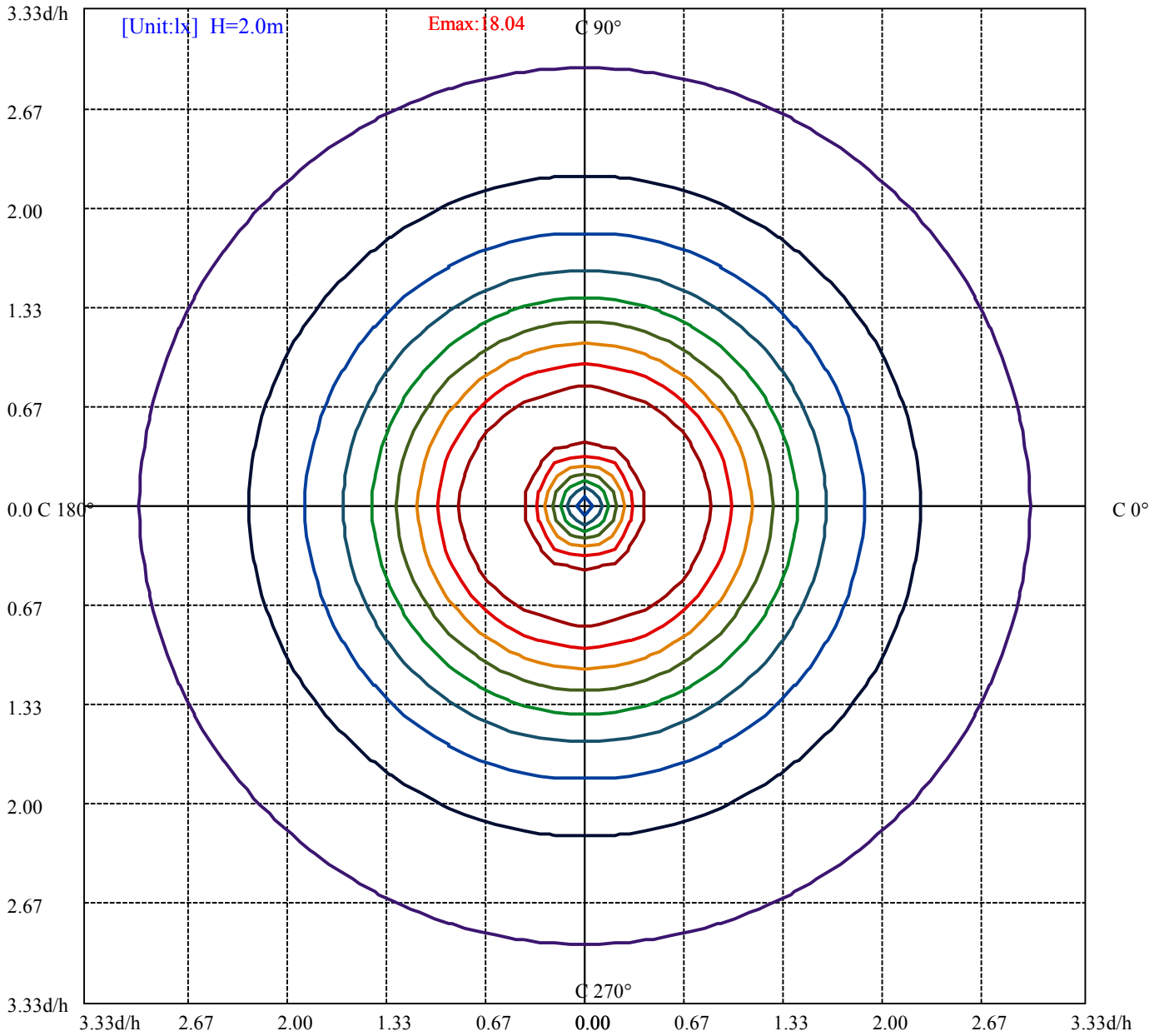
C90/C270: —————

Field angle(10%Imax):C0/180Left:258.2 Right:78.2
:C90/270Left:260.5 Right:80.5

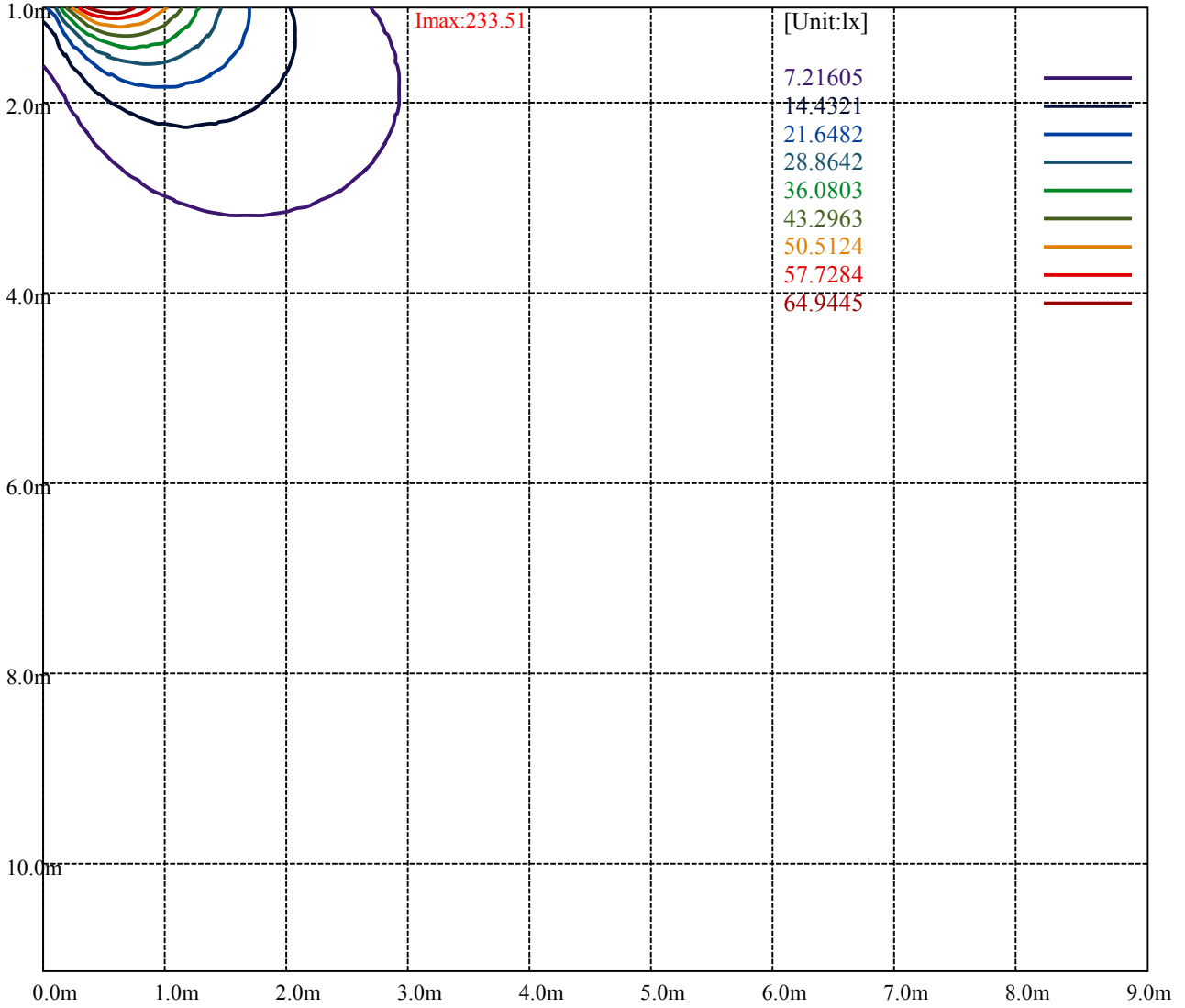
Beam Angle(50%Imax):C0/180Left:234.8 Right:54.8
:C90/270Left:234.7 Right:54.7



Max , Ave Beam angle of C0 plane 342.42



- (10%Emax) 1.804013
- (20%Emax) 3.608025
- (30%Emax) 5.41205
- (40%Emax) 7.21605
- (50%Emax) 9.020075
- (60%Emax) 10.82407
- (70%Emax) 12.6281
- (80%Emax) 14.4321
- (90%Emax) 16.23613



Luminance Table

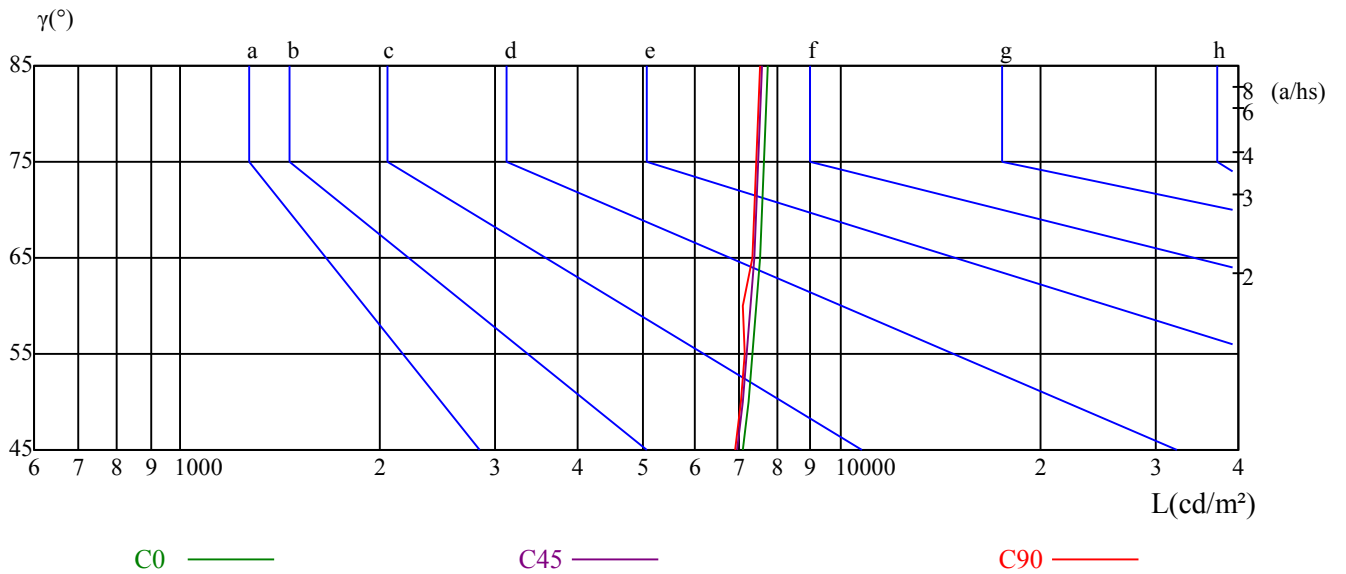
γ	45	50	55	60	65	70	75	80	85
C0	7118	7226	7360	7444	7531	7601	7666	7722	7754
C45	6962	7103	7204	7303	7378	7461	7518	7565	7602
C90	6910	7070	7153	7113	7334	7410	7470	7516	7548

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
254290	247650	249132	444792	433412	436190	1361837	1325649	1335228

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	0.85	0.79	0.74	0.78	0.73	0.68	0.65	0.61	0.57	0.53	0.49	0.46	0.41	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	0.38	0.34	0.33	0.30	0.26	0.21
3	0.61	0.51	0.44	0.55	0.47	0.40	0.45	0.39	0.33	0.36	0.31	0.26	0.27	0.23	0.20	0.16
4	0.53	0.43	0.35	0.48	0.39	0.32	0.39	0.32	0.27	0.31	0.26	0.21	0.23	0.19	0.16	0.12
5	0.46	0.36	0.29	0.42	0.33	0.27	0.34	0.27	0.22	0.27	0.22	0.17	0.20	0.16	0.13	0.09
6	0.41	0.31	0.24	0.37	0.29	0.22	0.30	0.24	0.18	0.24	0.19	0.14	0.18	0.14	0.11	0.07
7	0.36	0.27	0.21	0.33	0.25	0.19	0.27	0.20	0.16	0.22	0.16	0.12	0.16	0.12	0.09	0.06
8	0.33	0.24	0.18	0.30	0.22	0.16	0.25	0.18	0.13	0.20	0.14	0.10	0.15	0.11	0.08	0.05
9	0.30	0.21	0.16	0.27	0.19	0.14	0.22	0.16	0.12	0.18	0.13	0.09	0.14	0.09	0.07	0.04
10	0.27	0.19	0.14	0.25	0.17	0.12	0.20	0.14	0.10	0.16	0.11	0.08	0.12	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	18.58	13.93	28.32	45.44	62.84	81.05	99.18	114.93	133.42
15.0	18.12	13.84	28.32	45.26	61.66	79.87	97.81	115.48	131.87
30.0	18.40	14.02	27.78	44.44	61.84	79.78	97.54	114.39	131.42
45.0	17.76	13.75	28.14	43.99	62.02	78.87	96.63	114.11	130.87
60.0	17.12	13.66	28.05	44.53	61.38	79.60	96.90	114.02	130.32
75.0	17.12	14.30	28.78	45.35	61.29	80.23	96.54	112.93	130.78
90.0	17.21	14.84	28.96	46.08	62.38	80.32	97.26	114.66	131.60
105.0	16.39	15.12	29.96	46.17	63.57	80.32	98.72	114.75	131.78
120.0	15.66	15.39	30.78	46.63	63.75	81.60	99.18	116.12	132.24
135.0	13.66	15.94	31.06	46.90	64.11	83.06	99.63	116.84	133.60
150.0	15.21	16.30	31.69	48.54	79.32	83.42	100.82	118.67	135.06
165.0	14.57	16.94	32.51	47.72	66.03	84.15	101.82	118.94	136.79
180.0	18.58	34.06	52.27	69.21	87.70	105.73	123.40	140.43	156.73
195.0	18.12	34.24	51.64	69.58	87.79	104.82	123.58	139.43	155.64
210.0	18.40	33.70	50.82	69.67	86.79	104.82	122.49	139.43	155.55
225.0	17.76	33.79	50.82	68.58	86.61	104.46	121.03	138.79	154.82
240.0	17.12	33.61	49.72	67.48	85.33	103.18	120.67	137.52	153.55
255.0	17.12	32.69	49.54	67.30	84.97	101.91	120.12	136.15	152.36
270.0	17.21	31.69	48.45	66.03	83.79	101.45	118.94	135.51	151.72
285.0	16.39	31.33	48.18	65.48	83.33	100.91	117.57	134.42	138.52
300.0	15.66	30.33	47.63	64.48	68.39	99.36	116.57	133.42	149.72
315.0	13.66	29.96	46.45	63.84	81.51	99.18	115.93	133.69	149.17
330.0	15.21	29.14	46.54	63.93	80.87	99.45	116.21	133.15	149.45
345.0	14.57	29.23	45.72	63.11	81.05	98.81	116.39	133.51	148.99
360.0	18.58	13.93	28.32	45.44	62.84	81.05	99.18	114.93	133.42

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	149.99	165.39	179.87	193.07	204.55	214.02	222.03	228.32	232.14
15.0	149.17	164.47	178.32	191.25	202.82	212.83	220.94	226.95	230.41
30.0	147.72	163.11	177.32	190.34	200.90	211.56	218.84	224.85	228.68
45.0	146.26	162.20	176.31	188.43	199.63	209.55	217.30	222.76	226.86
60.0	146.90	161.20	175.22	187.70	199.08	208.55	215.57	221.39	224.95
75.0	146.35	161.47	175.40	186.97	198.08	207.37	214.93	220.67	223.85
90.0	146.26	162.11	174.86	187.33	198.26	207.37	214.56	220.03	223.31
105.0	147.26	162.11	175.95	187.24	198.26	207.19	214.47	219.94	223.12
120.0	148.72	162.38	176.04	188.24	198.90	207.92	214.84	219.75	222.85
135.0	149.27	164.02	176.95	189.61	199.72	208.64	215.75	220.94	224.04
150.0	149.90	164.93	177.59	190.34	200.99	209.83	216.75	221.94	224.95
165.0	151.09	165.57	179.50	190.89	201.54	210.65	217.57	222.58	225.67
180.0	171.76	184.97	198.44	208.37	217.48	224.76	230.05	233.23	233.96
195.0	171.67	184.78	197.44	208.28	217.30	223.94	229.77	232.41	233.32
210.0	169.76	184.51	196.17	207.10	216.29	223.40	228.68	231.96	232.78
225.0	169.21	183.14	195.62	206.46	214.84	222.67	227.50	230.77	231.69
240.0	168.57	181.69	194.89	205.18	214.47	221.85	227.13	230.32	231.14
255.0	167.39	181.32	193.80	204.09	213.93	220.94	226.40	227.31	230.59
270.0	166.11	180.69	192.80	196.26	212.74	220.39	225.95	229.23	230.41
285.0	165.66	179.23	191.89	203.09	212.56	219.94	225.49	228.86	230.23
300.0	164.84	178.95	192.34	202.82	212.20	219.75	225.40	229.04	230.32
315.0	164.66	179.41	191.70	203.09	212.74	220.48	226.13	229.86	231.41
330.0	164.93	179.32	192.25	203.73	213.02	221.30	226.95	230.68	232.05
345.0	164.66	179.14	192.07	203.73	213.56	222.03	227.31	231.05	232.50
360.0	149.99	165.39	179.87	193.07	204.55	214.02	222.03	228.32	232.14

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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	233.69	233.42	230.87	226.40	219.57	210.74	200.90	188.97	174.58
15.0	232.32	231.69	229.41	224.85	218.21	209.74	199.35	187.79	174.77
30.0	230.32	229.86	227.59	223.12	217.20	207.82	198.26	185.97	173.85
45.0	228.04	227.59	225.31	221.03	214.47	206.28	196.08	184.60	171.76
60.0	226.31	226.04	223.58	219.39	212.83	205.00	194.25	183.87	171.03
75.0	225.40	224.95	222.49	218.02	211.56	203.64	193.71	182.32	169.76
90.0	224.58	224.13	222.12	217.20	211.19	202.63	193.34	181.05	169.30
105.0	224.49	223.94	221.58	217.02	210.47	201.81	192.25	180.96	168.30
120.0	223.67	222.76	219.85	215.38	207.55	199.35	188.88	177.04	164.11
135.0	225.13	224.67	222.12	217.30	210.56	202.00	192.71	180.96	168.12
150.0	225.86	225.22	222.40	217.57	211.29	202.63	192.43	180.87	168.57
165.0	226.68	225.67	223.40	218.57	211.56	202.82	193.07	181.50	168.66
180.0	233.32	230.32	224.95	217.84	208.55	197.72	186.42	171.12	156.64
195.0	232.41	229.59	224.31	217.48	208.01	197.35	184.87	170.76	155.28
210.0	231.69	228.86	223.67	216.20	206.82	195.99	183.05	169.39	153.91
225.0	230.96	228.13	222.94	215.66	206.82	195.35	192.43	168.39	153.00
240.0	230.50	227.59	226.22	215.20	205.73	194.80	181.69	167.21	151.72
255.0	229.86	227.04	222.12	215.02	205.64	194.16	180.87	166.57	151.09
270.0	229.68	226.86	222.12	214.65	205.82	194.16	180.87	166.48	151.18
285.0	229.32	226.49	222.12	214.93	205.82	194.35	181.87	167.75	151.91
300.0	229.77	226.95	222.21	215.75	206.91	195.62	183.05	169.57	153.36
315.0	230.87	228.22	223.49	216.48	208.10	196.44	184.78	170.85	155.64
330.0	231.50	228.86	224.58	217.11	208.83	198.08	185.79	171.30	156.73
345.0	232.05	229.41	224.85	217.75	208.83	197.90	185.15	170.49	153.45
360.0	233.69	233.42	230.87	226.40	219.57	210.74	200.90	188.97	174.58

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	158.55	142.25	125.59	105.46	86.15	64.02	41.16	16.39	1.82
15.0	160.01	144.99	128.77	109.74	91.34	71.76	49.27	24.59	3.10
30.0	159.83	144.62	128.41	110.56	92.80	73.04	52.37	29.78	6.65
45.0	158.92	143.35	127.95	111.65	92.44	73.40	54.28	31.24	11.75
60.0	157.37	142.80	126.77	110.47	93.99	75.77	57.74	37.98	17.58
75.0	155.91	141.07	126.50	109.92	92.98	75.86	58.19	41.35	21.04
90.0	154.55	140.52	125.22	108.74	91.89	75.68	58.19	40.25	20.13
105.0	154.64	140.16	125.04	109.19	91.89	75.59	58.38	39.07	20.22
120.0	150.72	135.79	119.58	102.91	86.06	69.67	53.09	35.97	17.76
135.0	154.27	139.79	123.40	107.01	89.80	72.49	54.64	36.88	17.39
150.0	154.00	139.61	123.67	107.19	89.98	74.22	55.74	37.16	17.12
165.0	154.55	139.25	124.04	107.46	90.43	72.95	55.92	35.70	17.49
180.0	141.34	123.49	106.55	89.89	70.76	55.46	34.33	14.12	1.73
195.0	139.52	123.49	105.92	88.70	70.12	66.39	32.97	13.66	1.46
210.0	137.34	133.33	101.73	84.70	66.48	48.81	31.60	11.38	1.46
225.0	136.70	119.58	102.00	84.70	66.48	48.63	30.24	8.56	1.37
240.0	135.24	118.21	101.36	83.15	65.02	48.54	29.69	8.29	1.37
255.0	134.69	117.48	100.63	81.51	64.02	47.17	29.60	7.10	1.37
270.0	134.24	117.76	99.81	82.06	64.11	46.90	30.33	8.01	1.37
285.0	135.79	118.67	100.54	83.97	65.75	47.81	30.14	8.01	1.37
300.0	138.06	121.12	103.46	85.88	68.30	48.18	28.60	3.92	1.37
315.0	138.52	122.86	105.92	88.61	69.67	49.54	26.68	1.73	1.37
330.0	140.16	122.86	104.82	86.15	67.48	46.36	21.95	1.64	1.37
345.0	138.06	120.49	100.09	81.78	61.11	39.43	16.39	1.55	1.37
360.0	158.55	142.25	125.59	105.46	86.15	64.02	41.16	16.39	1.82

Intensity data(cd)

C/γ(°)	180.0
0.0	1.46
15.0	1.46
30.0	1.55
45.0	2.00
60.0	3.01
75.0	3.37
90.0	4.01
105.0	3.46
120.0	3.37
135.0	2.64
150.0	1.91
165.0	1.64
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	1.46