
乐达凯

Client:

LumCAT: LCD-RDD-DP-15-CCT-UNV-WT

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.247

Lamp flux(lm): 2312.7

Power (W): 29.370

Number of Lamps: 1

PF: 0.992

Length(mm): 190

Width(mm): 70

Phm Type: C

Height(mm): 40

Photometric Results

Lumens(lm): 2312.69, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 78.74

Central intensity(cd): 514.887, Maximum intensity(cd): 557.014

Angle of maximum intensity: C=90.0 γ =25.0

Beam Angle(50%Imax): [C0/180]Total=134.0

[C90/270]Total=128.0

Field angle(10%Imax): [C0/180]Total=195.6

[C90/270]Total=177.6

Maximum s/h(1/2): C0_180=1.57 C90_270=1.57

Maximum s/h(1/4): C0_180=1.64 C90_270=1.64

Up flux rate of lamp(%): 7.09%

Down flux rate of lamp(%): 92.91%

Up flux rate of LUM(%): 7.09%

Down flux rate of LUM(%): 92.91%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 66.772%

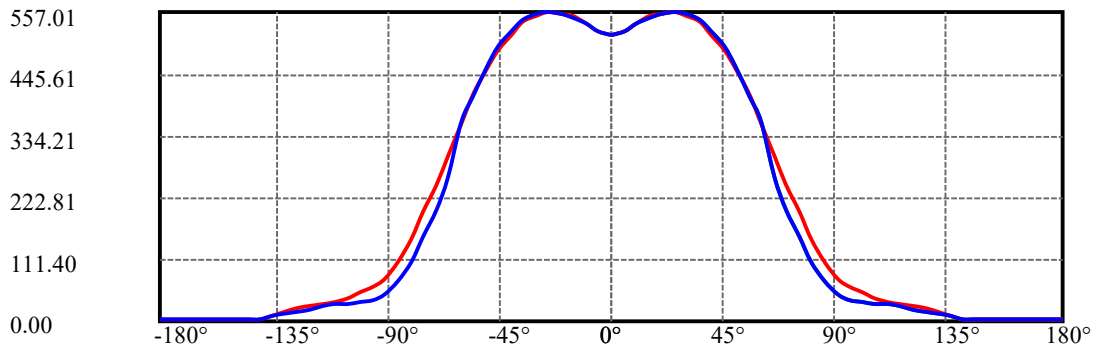
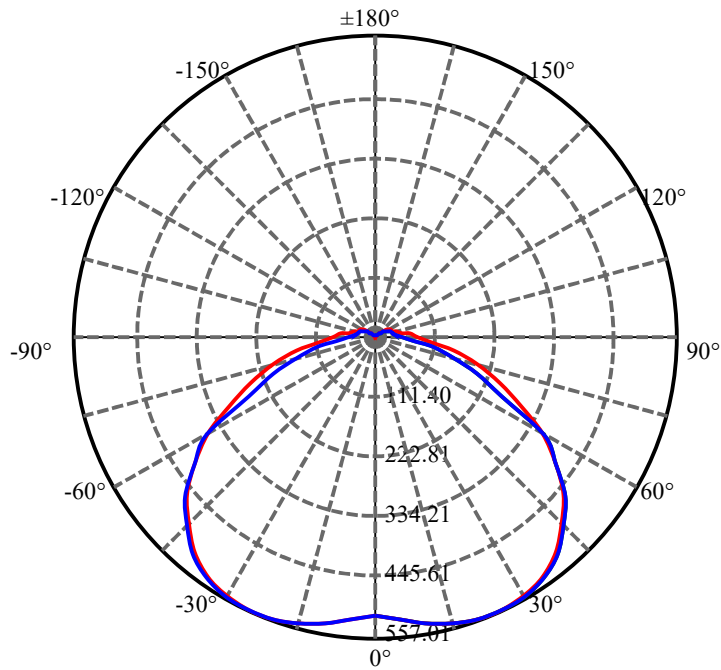
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	514.887	0.000	0	0.00%	0.00%
5.0	522.296	12.399	12.399	0.54%	0.54%
10.0	535.846	37.853	50.252	1.64%	2.17%
15.0	547.308	64.252	114.504	2.78%	4.95%
20.0	554.526	90.807	205.311	3.93%	8.88%
25.0	556.230	116.498	321.809	5.04%	13.91%
30.0	551.718	140.212	462.02	6.06%	19.98%
35.0	540.712	160.868	622.888	6.96%	26.93%
40.0	521.116	177.158	800.046	7.66%	34.59%
45.0	492.075	187.601	987.647	8.11%	42.71%
50.0	456.057	191.584	1179.231	8.28%	50.99%
55.0	409.837	188.274	1367.505	8.14%	59.13%
60.0	354.701	176.721	1544.226	7.64%	66.77%
65.0	292.765	157.400	1701.627	6.81%	73.58%
70.0	236.621	134.044	1835.67	5.80%	79.37%
75.0	187.133	110.762	1946.433	4.79%	84.16%
80.0	142.452	88.188	2034.62	3.81%	87.98%
85.0	101.460	66.277	2100.897	2.87%	90.84%
90.0	73.058	47.784	2148.681	2.07%	92.91%
95.0	57.351	35.707	2184.388	1.54%	94.45%
100.0	45.853	28.043	2212.432	1.21%	95.67%
105.0	37.296	22.248	2234.68	0.96%	96.63%
110.0	32.984	18.370	2253.05	0.79%	97.42%
115.0	30.095	15.972	2269.022	0.69%	98.11%
120.0	24.557	13.286	2282.308	0.57%	98.69%
125.0	20.586	10.435	2292.743	0.45%	99.14%
130.0	15.582	7.864	2300.607	0.34%	99.48%
135.0	9.532	5.075	2305.682	0.22%	99.70%
140.0	4.861	2.665	2308.347	0.12%	99.81%
145.0	2.394	1.210	2309.557	0.05%	99.86%
150.0	2.316	0.694	2310.251	0.03%	99.89%
155.0	2.780	0.645	2310.896	0.03%	99.92%
160.0	2.780	0.583	2311.479	0.03%	99.95%
165.0	3.243	0.496	2311.975	0.02%	99.97%
170.0	3.358	0.392	2312.367	0.02%	99.99%
175.0	3.706	0.253	2312.62	0.01%	100.00%
180.0	1.853	0.066	2312.686	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	462.02	19.98%	19.98%
0-40	800.05	34.59%	34.59%
0-60	1544.23	66.77%	66.77%
0-90	2148.68	92.91%	92.91%
0-120	2282.31	98.69%	98.69%
0-180	2312.69	100.00%	100.00%
60-90	604.45	26.14%	26.14%
90-120	133.63	5.78%	5.78%
90-130	151.93	6.57%	6.57%
90-150	161.57	6.99%	6.99%
90-180	163.94	7.09%	7.09%
0-70.65	1850.15	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	50.25
10-20	155.06
20-30	256.71
30-40	338.03
40-50	379.18
50-60	365.00
60-70	291.44
70-80	198.95
80-90	114.06
90-100	63.75
100-110	40.62
110-120	29.26
120-130	18.30
130-140	7.74
140-150	1.90
150-160	1.23
160-170	0.89
170-180	0.25



C90(Max): —————

C0/C180: —————

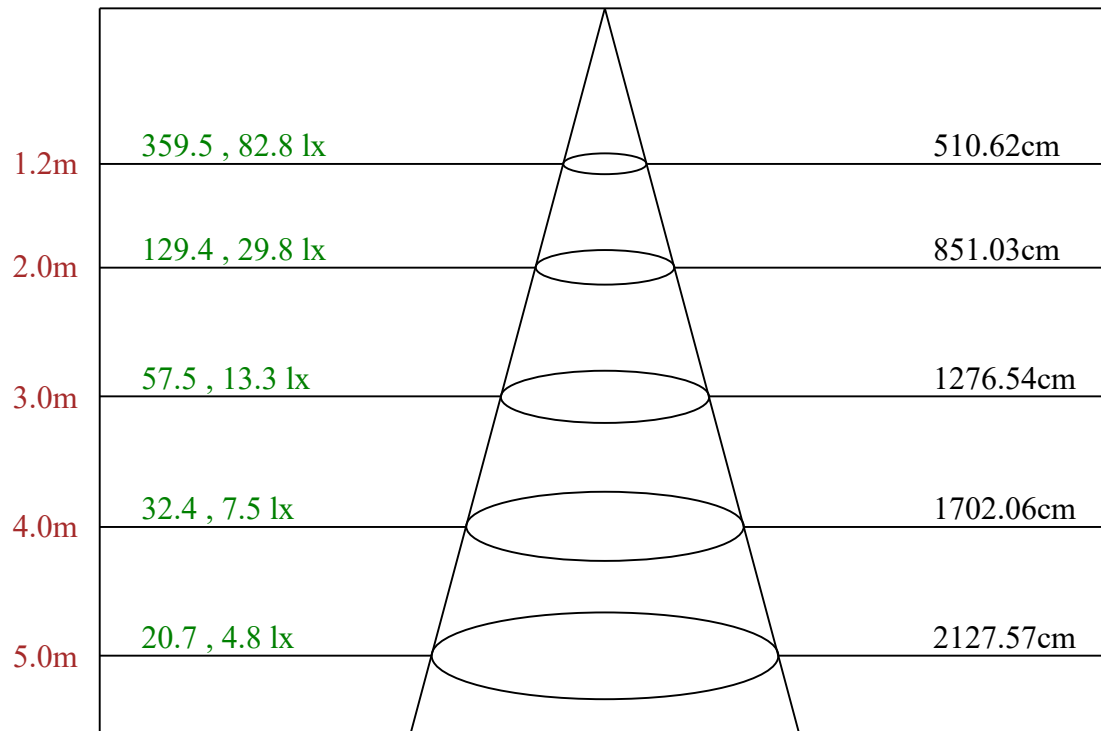
C90/C270: —————

Field angle(10%Imax):C0/180Left:122.8 Right:72.8

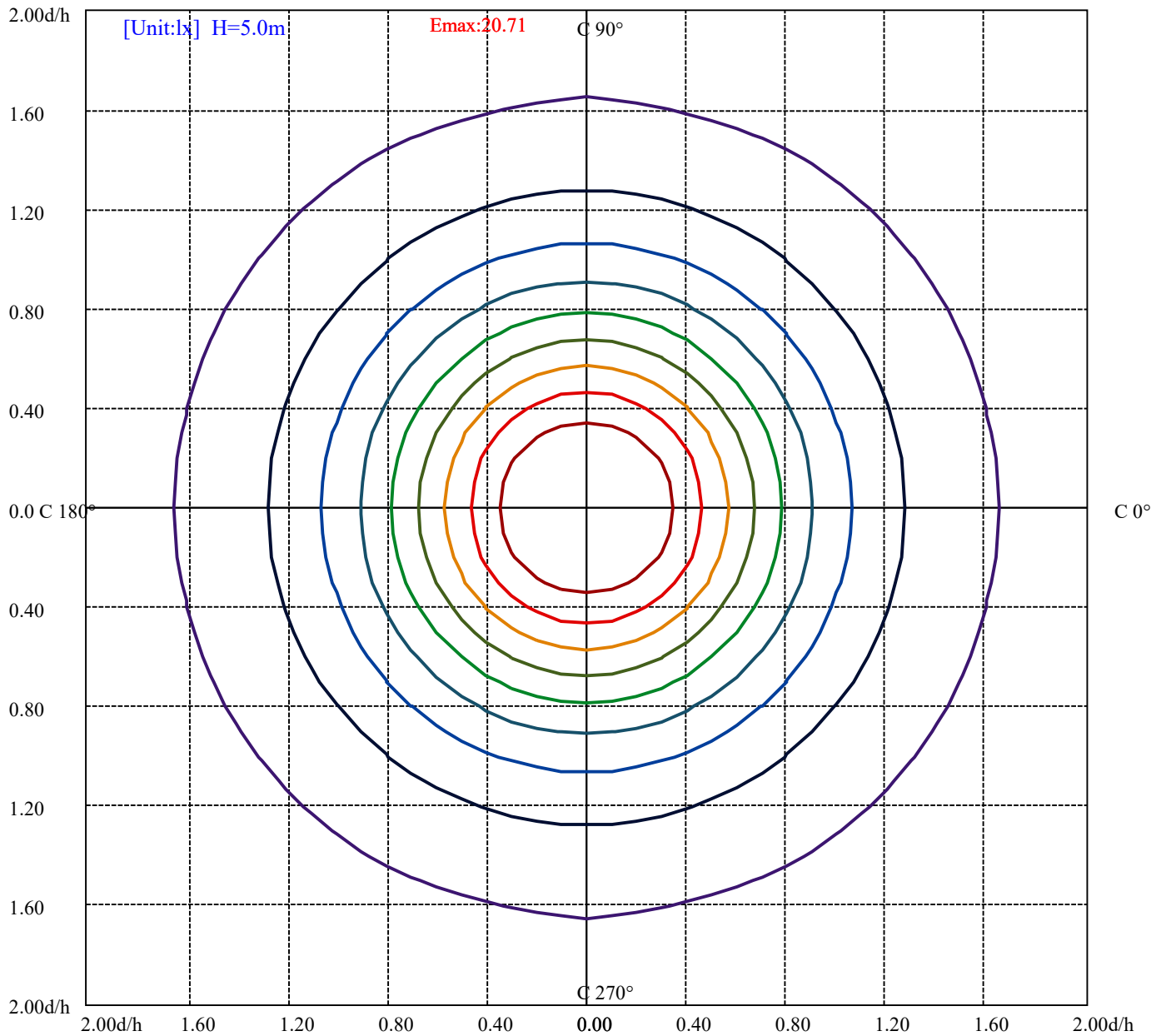
:C90/270Left:113.8 Right:63.8

Beam Angle(50%Imax):C0/180Left:92.0 Right:42.0

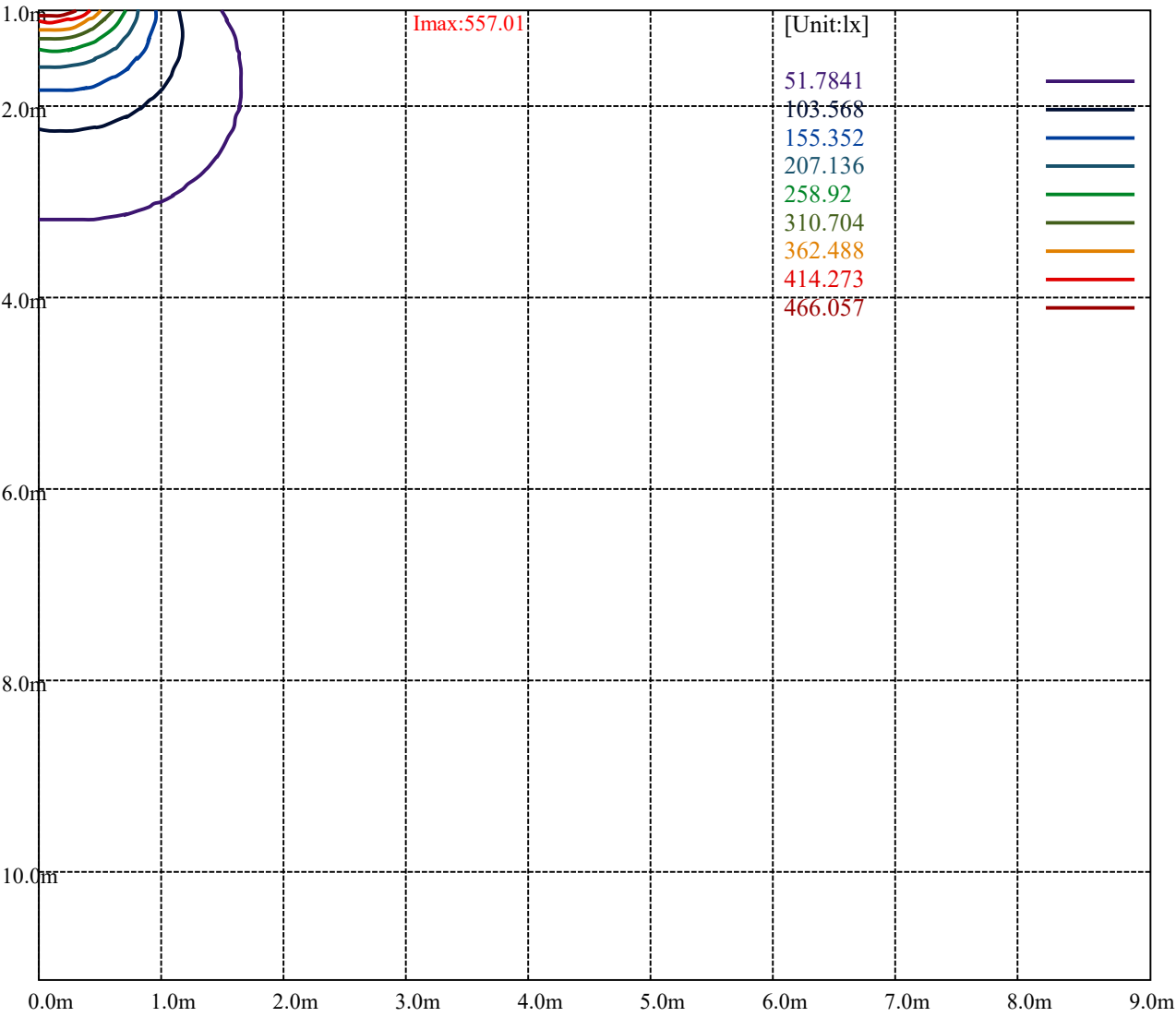
:C90/270Left:89.0 Right:39.0



Max , Ave Beam angle of C90 plane 129.65



(10%Emax) 2.07136	—
(20%Emax) 4.14272	—
(30%Emax) 6.21408	—
(40%Emax) 8.28544	—
(50%Emax) 10.3568	—
(60%Emax) 12.42816	—
(70%Emax) 14.49952	—
(80%Emax) 16.57088	—
(90%Emax) 18.64224	—



Luminance Table

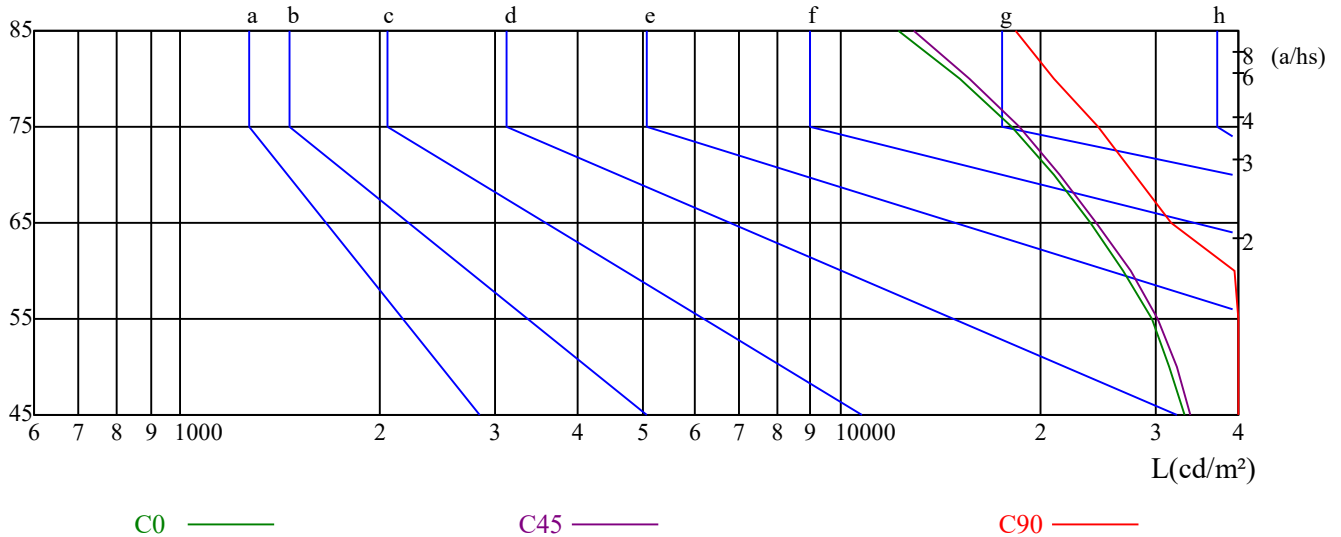
γ	45	50	55	60	65	70	75	80	85
C0	33070	31485	29513	26809	23920	21040	18129	15134	12195
C45	33734	32209	30105	27467	24437	21518	18600	15668	12895
C90	43336	42720	40948	39510	31613	27772	24596	21062	18375

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
53231	45885	53414	56791	43921	56981	91846	62590	94389

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

 $\gamma(^{\circ})$ 

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	1.17	1.17	1.17	1.14	1.14	1.14	1.07	1.07	1.07	1.01	1.01	1.01	0.96	0.96	0.96	0.93
1	1.00	0.95	0.90	0.97	0.92	0.88	0.91	0.87	0.84	0.86	0.83	0.80	0.81	0.79	0.77	0.74
2	0.86	0.78	0.72	0.83	0.76	0.70	0.78	0.73	0.68	0.74	0.69	0.65	0.70	0.66	0.62	0.60
3	0.74	0.66	0.59	0.72	0.64	0.58	0.68	0.61	0.56	0.64	0.59	0.54	0.61	0.56	0.52	0.49
4	0.65	0.56	0.49	0.64	0.55	0.48	0.60	0.53	0.47	0.57	0.50	0.45	0.54	0.48	0.44	0.41
5	0.58	0.48	0.41	0.56	0.47	0.41	0.53	0.46	0.40	0.51	0.44	0.39	0.48	0.42	0.38	0.35
6	0.52	0.42	0.36	0.50	0.42	0.35	0.48	0.40	0.34	0.45	0.39	0.33	0.43	0.37	0.33	0.30
7	0.47	0.38	0.31	0.46	0.37	0.31	0.43	0.36	0.30	0.41	0.34	0.29	0.39	0.33	0.29	0.26
8	0.42	0.34	0.27	0.41	0.33	0.27	0.39	0.32	0.27	0.38	0.31	0.26	0.36	0.30	0.25	0.23
9	0.39	0.30	0.24	0.38	0.30	0.24	0.36	0.29	0.24	0.34	0.28	0.23	0.33	0.27	0.23	0.21
10	0.36	0.27	0.22	0.35	0.27	0.22	0.33	0.26	0.21	0.32	0.25	0.21	0.30	0.25	0.20	0.19

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Intensity data(cd)

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C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	514.89	526.82	540.59	551.60	558.94	560.78	554.35	544.26	521.31
15.0	514.89	526.84	541.55	555.34	564.54	565.46	561.78	552.58	529.60
30.0	514.89	526.86	543.44	556.34	567.39	571.07	566.47	557.26	536.99
45.0	514.89	525.00	541.55	558.10	567.29	570.97	568.21	559.94	541.55
60.0	514.89	523.22	541.74	554.71	565.82	572.30	571.38	563.97	545.45
75.0	514.89	523.28	541.00	555.00	565.26	570.85	569.92	562.46	543.80
90.0	514.89	524.25	539.23	553.27	563.57	569.18	568.25	557.95	541.10
105.0	514.89	521.45	538.33	551.46	560.84	564.59	563.66	552.40	535.52
120.0	514.89	518.63	534.55	546.72	557.95	561.69	560.76	550.46	532.67
135.0	514.89	518.61	531.65	545.61	555.85	558.65	555.85	548.41	530.72
150.0	514.89	519.51	531.53	544.47	555.56	555.56	551.86	544.47	525.98
165.0	514.89	515.80	526.80	540.54	547.87	549.70	547.87	536.87	519.47
180.0	514.89	520.39	535.08	546.09	550.68	551.60	546.09	535.08	513.05
195.0	514.89	520.40	532.36	545.23	550.74	551.66	545.23	533.28	512.13
210.0	514.89	520.41	532.39	541.60	548.97	548.05	543.44	532.39	513.04
225.0	514.89	518.56	529.60	538.79	545.23	545.23	539.71	528.68	507.53
240.0	514.89	519.52	530.63	538.96	544.52	545.45	538.96	527.85	505.63
255.0	514.89	520.48	531.68	541.00	545.67	545.67	540.07	527.01	505.56
270.0	514.89	521.44	532.67	541.10	544.84	544.84	539.23	525.18	503.65
285.0	514.89	523.33	533.64	542.08	546.77	545.84	539.27	525.20	522.39
300.0	514.89	521.44	534.55	542.97	542.97	546.72	539.23	525.18	501.78
315.0	514.89	525.13	537.23	546.54	550.27	550.27	541.89	527.92	504.64
330.0	514.89	527.83	538.92	549.09	553.71	551.86	544.47	528.75	506.57
345.0	514.89	525.88	539.62	548.79	553.37	551.53	543.29	529.55	506.64
360.0	514.89	526.82	540.59	551.60	558.94	560.78	554.35	544.26	521.31
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	492.86	456.15	413.01	357.94	302.87	247.81	196.41	147.77	107.38
15.0	502.93	467.08	420.18	365.02	306.17	251.01	199.52	150.79	107.57
30.0	510.28	472.52	426.46	372.12	310.41	251.46	199.88	153.82	111.45
45.0	512.13	476.27	429.38	372.37	310.77	253.77	202.28	153.55	111.25
60.0	518.59	482.47	438.95	381.53	318.56	258.37	205.58	159.28	114.83
75.0	516.75	481.31	433.74	375.90	305.95	245.32	191.22	142.71	101.67
90.0	512.08	477.44	431.57	354.80	277.10	214.38	163.83	117.02	79.57
105.0	508.32	473.62	427.67	360.14	288.86	222.27	170.69	128.49	89.10
120.0	506.46	471.82	427.82	376.34	315.49	254.63	202.21	157.27	114.21
135.0	504.64	470.19	427.37	375.22	317.50	263.50	212.29	163.87	121.04
150.0	500.10	467.74	427.99	374.38	317.99	261.60	212.61	161.77	121.10
165.0	493.81	460.83	418.69	368.30	312.41	260.19	208.89	161.25	117.27
180.0	484.60	448.81	404.75	351.52	295.53	244.14	194.57	148.68	105.55
195.0	485.46	447.77	404.55	349.39	296.98	242.73	194.00	147.11	104.82
210.0	483.57	446.73	400.67	347.25	293.83	239.48	194.35	147.37	105.92
225.0	479.03	445.93	399.04	346.63	291.46	238.14	190.32	144.35	105.74
240.0	476.92	440.80	392.65	338.01	285.23	229.66	185.21	140.76	102.79
255.0	475.71	440.27	389.90	331.13	268.64	213.60	166.03	154.84	87.68
270.0	474.63	436.25	381.02	362.29	238.72	184.42	138.55	96.42	65.53
285.0	473.62	434.23	382.65	309.49	248.53	192.26	148.18	106.92	73.15
300.0	471.82	436.25	386.63	334.21	277.10	221.87	174.13	130.13	92.68
315.0	474.85	434.81	388.26	336.12	281.19	230.91	179.70	136.87	99.63
330.0	475.14	438.16	392.87	336.48	284.71	230.17	180.26	134.96	97.99
345.0	475.49	437.93	390.29	336.23	280.35	227.21	180.49	132.84	97.11
360.0	492.86	456.15	413.01	357.94	302.87	247.81	196.41	147.77	107.38

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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	78.01	63.33	51.40	41.30	36.71	33.04	29.37	25.70	18.36
15.0	78.15	62.52	51.49	41.37	36.78	33.10	29.42	26.66	18.39
30.0	81.06	64.48	51.58	41.45	36.84	33.16	29.47	24.87	18.42
45.0	80.91	64.36	51.49	41.37	35.86	32.18	27.58	22.07	18.39
60.0	84.27	64.82	48.15	36.12	31.49	28.71	21.30	18.52	14.82
75.0	70.89	54.10	40.11	30.78	28.92	27.98	19.59	16.79	14.92
90.0	54.30	41.19	33.70	31.83	29.96	29.02	20.60	16.85	14.98
105.0	60.96	45.96	35.64	30.95	29.07	29.07	19.70	16.88	15.01
120.0	81.45	58.98	44.00	32.77	29.02	28.08	20.60	16.85	14.98
135.0	87.52	67.04	51.21	40.04	32.59	30.73	24.21	20.48	16.76
150.0	87.82	68.41	53.61	43.45	36.98	33.28	28.66	24.96	19.41
165.0	84.29	64.13	51.31	42.14	34.81	31.15	28.40	25.65	19.24
180.0	75.26	61.49	49.56	41.30	34.88	32.12	28.45	24.78	18.36
195.0	76.31	60.68	49.65	41.37	34.94	32.18	28.50	24.82	16.55
210.0	76.45	61.71	49.74	40.53	35.00	32.24	28.55	23.95	16.58
225.0	78.15	63.44	50.57	41.37	34.94	31.26	30.34	21.15	15.63
240.0	74.08	57.42	53.71	35.19	31.49	26.86	21.30	16.67	12.96
255.0	61.56	47.57	36.38	30.78	28.92	26.12	18.66	15.86	12.13
270.0	45.87	38.38	33.70	31.83	29.96	29.02	18.72	15.91	12.17
285.0	51.58	41.27	33.76	30.95	30.01	28.14	18.76	15.94	12.19
300.0	65.53	50.55	38.38	31.83	29.02	24.34	18.72	14.98	12.17
315.0	72.62	57.73	45.62	36.31	32.59	27.93	22.35	18.62	12.10
330.0	74.88	59.16	48.07	40.67	36.05	31.43	27.73	22.19	14.79
345.0	71.46	57.72	47.64	39.40	34.81	31.15	28.40	22.90	14.66
360.0	78.01	63.33	51.40	41.30	36.71	33.04	29.37	25.70	18.36
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	9.18	4.59	1.84	2.75	3.67	3.67	3.67	3.67	3.67
15.0	10.11	4.60	2.76	2.76	3.68	3.68	3.68	3.68	3.68
30.0	11.97	5.53	2.76	2.76	3.68	3.68	3.68	3.68	3.68
45.0	11.95	5.52	2.76	2.76	3.68	3.68	3.68	3.68	3.68
60.0	10.19	5.56	2.78	2.78	3.70	3.70	3.70	3.70	3.70
75.0	10.26	5.60	2.80	2.80	3.73	3.73	3.73	3.73	3.73
90.0	10.30	5.62	2.81	2.81	3.74	3.74	3.74	3.74	3.74
105.0	10.32	5.63	2.81	2.81	3.75	3.75	3.75	3.75	3.75
120.0	10.30	5.62	2.81	2.81	3.74	3.74	3.74	3.74	3.74
135.0	11.17	5.59	3.72	2.79	3.72	3.72	3.72	3.72	3.72
150.0	12.94	7.40	3.70	2.77	3.70	3.70	3.70	3.70	3.70
165.0	11.91	7.33	3.66	2.75	3.66	3.66	3.66	3.66	3.66
180.0	9.18	3.67	1.84	1.84	1.84	1.84	2.75	3.67	3.67
195.0	8.27	3.68	1.84	1.84	1.84	1.84	2.76	3.68	3.68
210.0	10.13	9.21	1.84	1.84	1.84	1.84	2.76	2.76	3.68
225.0	8.27	4.60	1.84	1.84	1.84	1.84	2.76	2.76	3.68
240.0	8.33	4.63	1.85	1.85	1.85	1.85	2.78	2.78	3.70
255.0	8.39	3.73	1.87	1.87	1.87	1.87	2.80	2.80	3.73
270.0	8.43	3.74	1.87	1.87	1.87	1.87	2.81	2.81	3.74
285.0	7.50	2.81	1.88	1.88	1.88	1.88	2.81	3.75	3.75
300.0	7.49	2.81	1.87	1.87	1.87	1.87	2.81	2.81	3.74
315.0	6.52	2.79	1.86	1.86	1.86	1.86	2.79	2.79	3.72
330.0	8.32	2.77	1.85	1.85	1.85	1.85	2.77	2.77	3.70
345.0	7.33	3.66	1.83	1.83	1.83	1.83	2.75	2.75	3.66
360.0	9.18	4.59	1.84	2.75	3.67	3.67	3.67	3.67	3.67

Intensity data(cd)

C/ $\gamma(^{\circ})$	180.0
0.0	3.67
15.0	3.68
30.0	3.68
45.0	3.68
60.0	3.70
75.0	3.73
90.0	3.74
105.0	3.75
120.0	3.74
135.0	3.72
150.0	3.70
165.0	3.66
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	3.67