
乐达凯

Client:

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

Luminaire: LED LAMP

Report No:

Ballast type:

Test No:

Voltage(V): 120.090

LampCAT:

Current(A): 0.251

Lamp flux(lm): 2145.4

Power (W): 29.940

Number of Lamps: 1

PF: 0.992

Length(mm): 190

Width(mm): 70

Phm Type: C

Height(mm): 40

Photometric Results

Lumens(lm): 2145.43, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 71.66

Central intensity(cd): 477.751, Maximum intensity(cd): 516.819

Angle of maximum intensity: C=75.0 γ =25.0

Beam Angle(50%Imax): [C0/180]Total=133.8

[C90/270]Total=128.0

Field angle(10%Imax): [C0/180]Total=195.4

[C90/270]Total=177.2

Maximum s/h(1/2): C0_180=1.56 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 : 66.775%

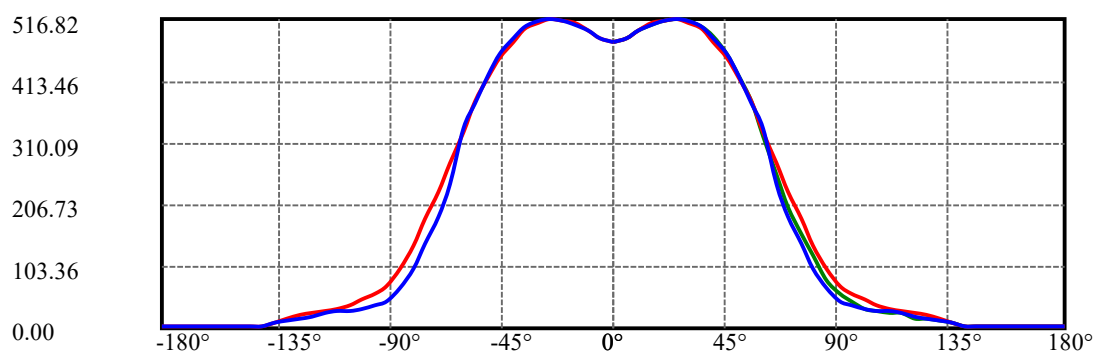
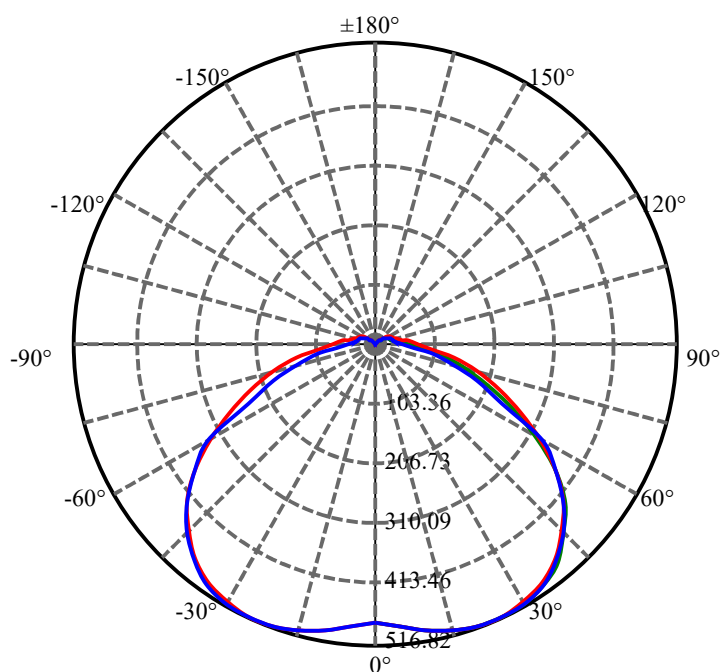
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	477.751	0.000	0	0.00%	0.00%
5.0	484.581	11.504	11.504	0.54%	0.54%
10.0	497.127	35.119	46.623	1.64%	2.17%
15.0	507.663	59.603	106.227	2.78%	4.95%
20.0	514.495	84.240	190.467	3.93%	8.88%
25.0	515.967	108.076	298.543	5.04%	13.92%
30.0	511.839	130.070	428.613	6.06%	19.98%
35.0	501.685	149.249	577.861	6.96%	26.93%
40.0	483.400	164.354	742.215	7.66%	34.60%
45.0	456.714	174.070	916.285	8.11%	42.71%
50.0	422.974	177.754	1094.039	8.29%	50.99%
55.0	380.192	174.635	1268.674	8.14%	59.13%
60.0	328.992	163.926	1432.6	7.64%	66.77%
65.0	271.502	145.981	1578.581	6.80%	73.58%
70.0	219.644	124.361	1702.943	5.80%	79.38%
75.0	173.552	102.775	1805.718	4.79%	84.17%
80.0	132.113	81.787	1887.505	3.81%	87.98%
85.0	94.170	61.487	1948.992	2.87%	90.84%
90.0	67.774	44.342	1993.333	2.07%	92.91%
95.0	53.109	33.099	2026.432	1.54%	94.45%
100.0	42.575	26.000	2052.432	1.21%	95.67%
105.0	34.480	20.618	2073.05	0.96%	96.63%
110.0	30.746	17.049	2090.099	0.79%	97.42%
115.0	27.857	14.838	2104.937	0.69%	98.11%
120.0	22.667	12.282	2117.219	0.57%	98.69%
125.0	19.199	9.677	2126.897	0.45%	99.14%
130.0	14.309	7.286	2134.182	0.34%	99.48%
135.0	8.722	4.654	2138.836	0.22%	99.69%
140.0	4.593	2.465	2141.302	0.11%	99.81%
145.0	1.891	1.082	2142.383	0.05%	99.86%
150.0	2.316	0.620	2143.003	0.03%	99.89%
155.0	2.780	0.645	2143.648	0.03%	99.92%
160.0	2.780	0.583	2144.231	0.03%	99.94%
165.0	3.243	0.496	2144.727	0.02%	99.97%
170.0	3.243	0.385	2145.112	0.02%	99.99%
175.0	3.706	0.249	2145.361	0.01%	100.00%
180.0	1.853	0.066	2145.427	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	428.61	19.98%	19.98%
0-40	742.22	34.60%	34.60%
0-60	1432.60	66.77%	66.77%
0-90	1993.33	92.91%	92.91%
0-120	2117.22	98.69%	98.69%
0-180	2145.43	100.00%	100.00%
60-90	560.73	26.14%	26.14%
90-120	123.89	5.77%	5.77%
90-130	140.85	6.57%	6.57%
90-150	149.67	6.98%	6.98%
90-180	152.03	7.09%	7.09%
0-70.65	1716.34	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	46.62
10-20	143.84
20-30	238.15
30-40	313.60
40-50	351.82
50-60	338.56
60-70	270.34
70-80	184.56
80-90	105.83
90-100	59.10
100-110	37.67
110-120	27.12
120-130	16.96
130-140	7.12
140-150	1.70
150-160	1.23
160-170	0.88
170-180	0.25



C75(Max): —————

C0/C180: —————

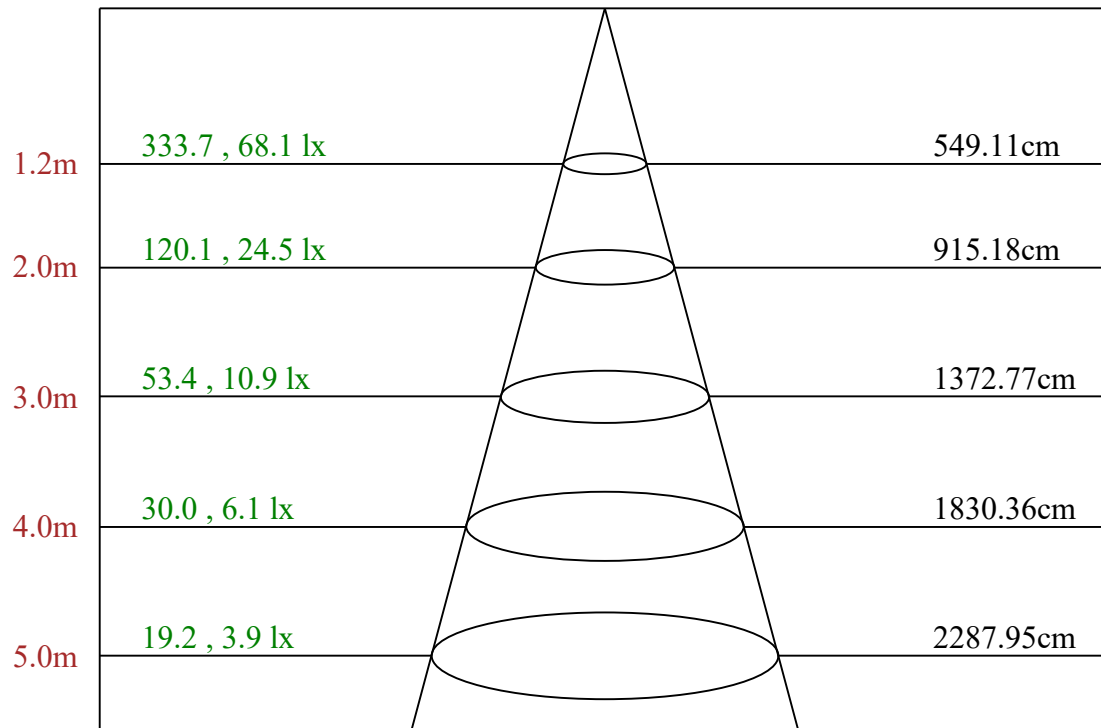
C90/C270: —————

Field angle(10%Imax):C0/180Left:122.7 Right:72.7

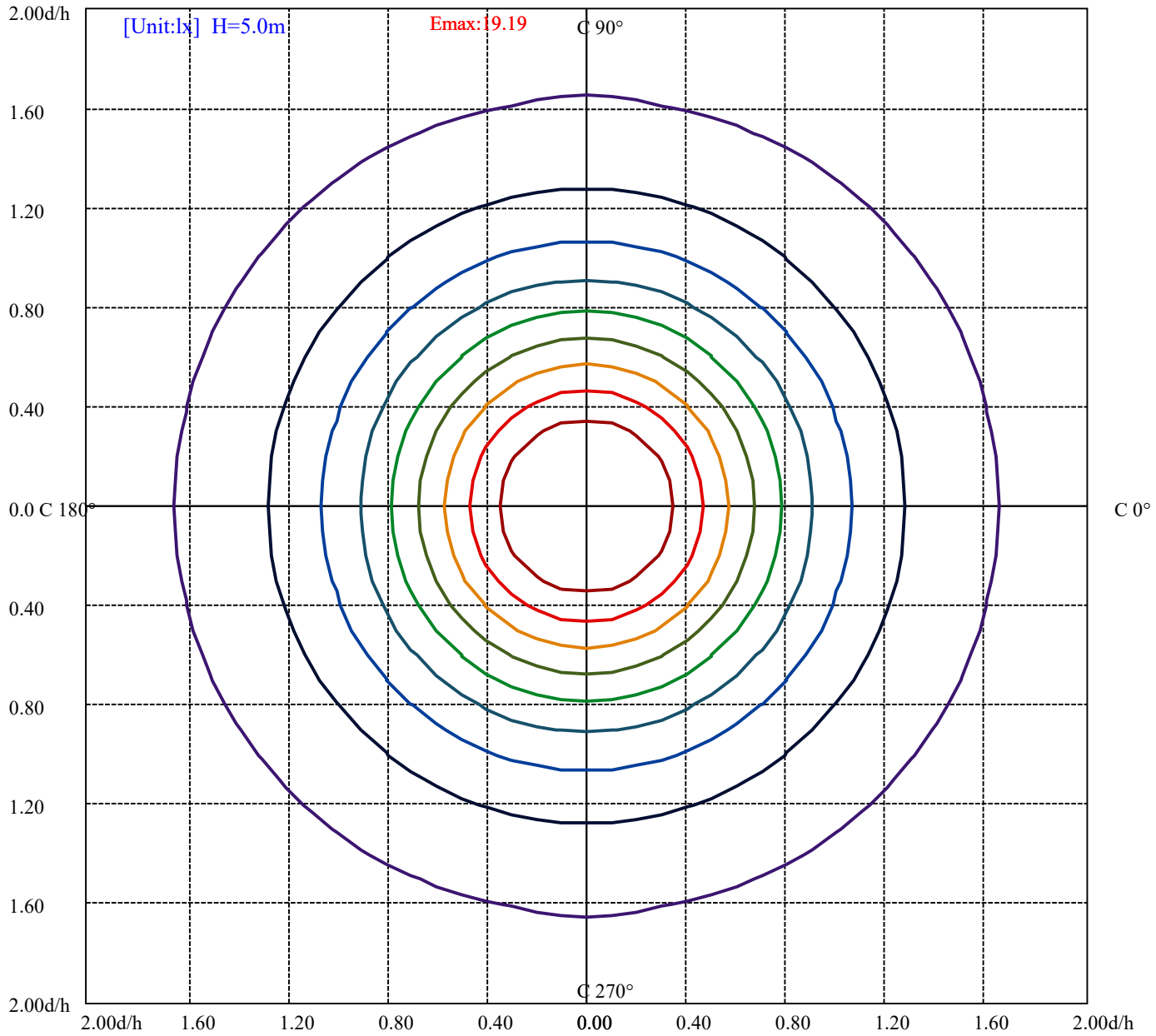
:C90/270Left:113.6 Right:63.6

Beam Angle(50%Imax):C0/180Left:91.9 Right:41.9

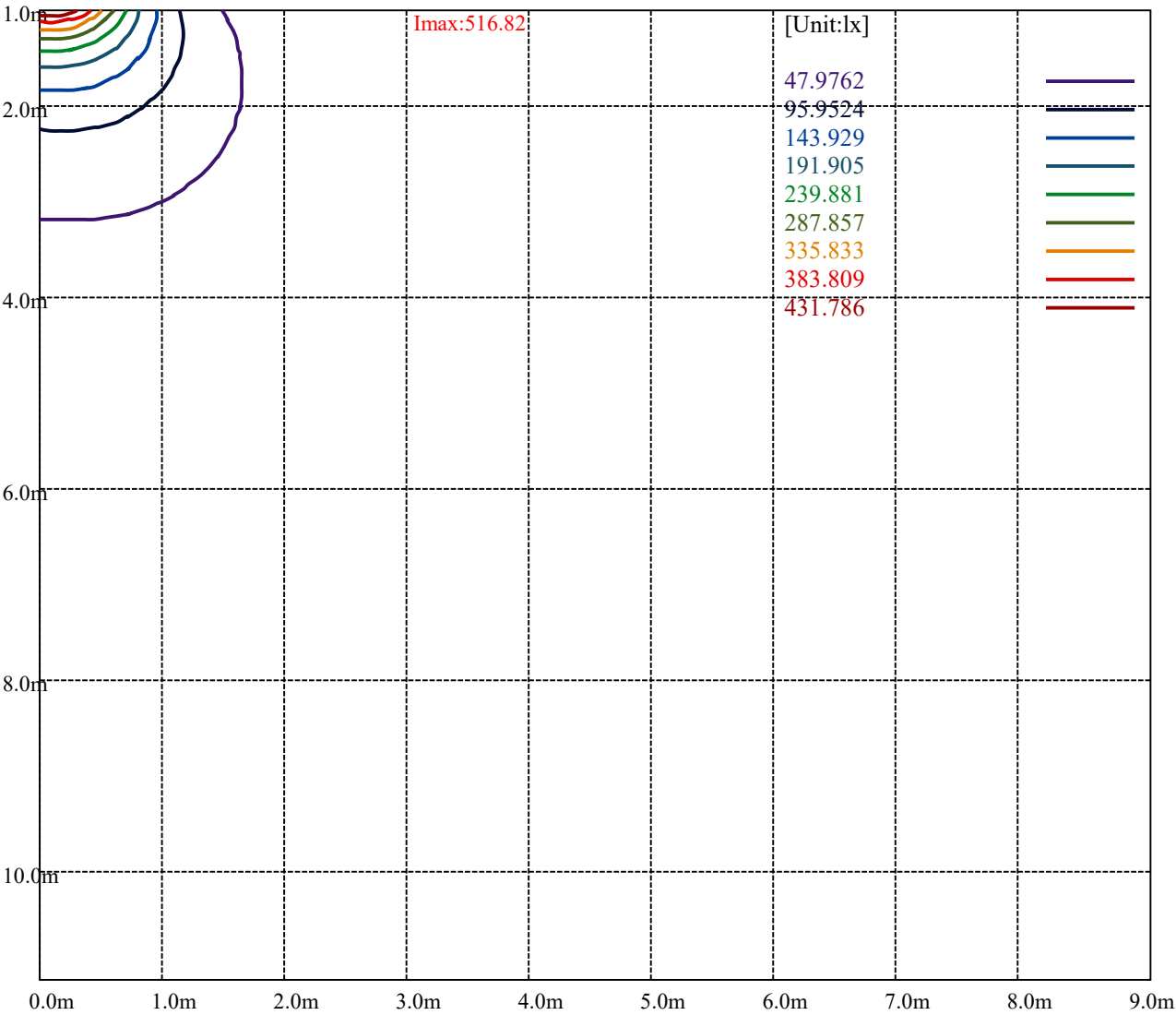
:C90/270Left:89.0 Right:39.0



Max , Ave Beam angle of C75 plane 132.78



(10%Emax) 1.919048	—
(20%Emax) 3.838092	—
(30%Emax) 5.75716	—
(40%Emax) 7.6762	—
(50%Emax) 9.59524	—
(60%Emax) 11.51428	—
(70%Emax) 13.43332	—
(80%Emax) 15.35236	—
(90%Emax) 17.27144	—



Luminance Table

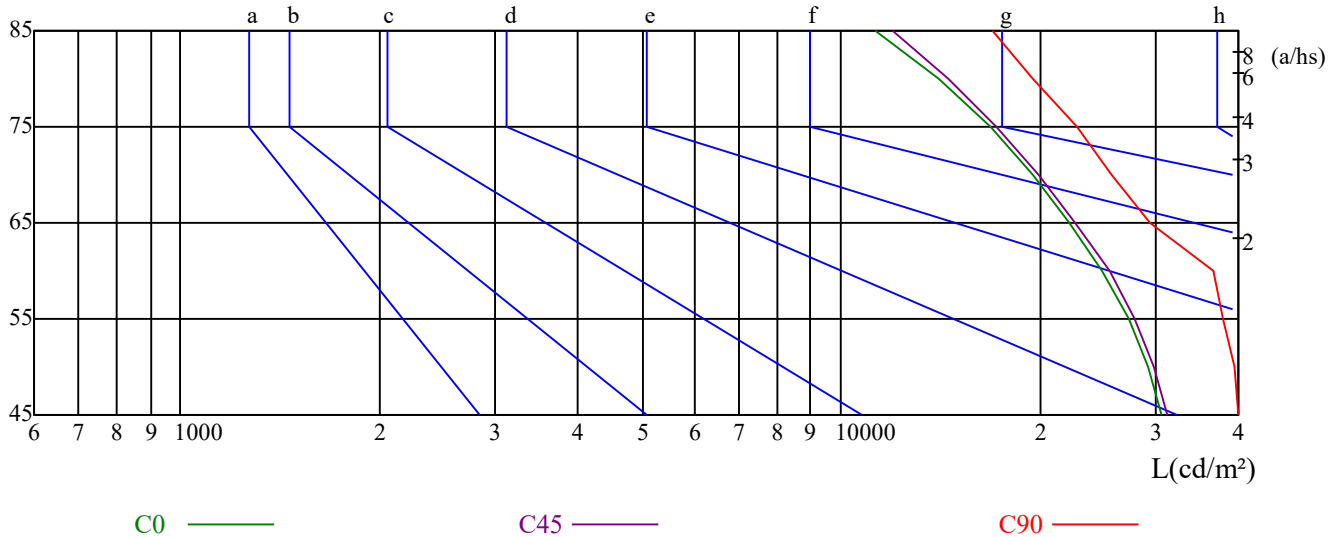
γ	45	50	55	60	65	70	75	80	85
C0	30652	29192	27336	24810	22139	19492	16837	14044	11291
C45	31302	29869	27929	25471	22680	19958	17235	14526	11964
C90	40200	39560	37973	36625	29337	25782	22739	19559	16930

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
49269	42581	49573	52745	40604	52801	85040	57669	87580

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	0.63	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

乐达凯 LCD-RDD-DP-15-CCT-UNV-WT

Intensity data(cd)									Appendix Page: 10 Total:12		
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	477.75	487.84	500.68	511.68	518.10	519.93	513.51	503.43	483.25		
15.0	477.75	487.86	502.56	514.50	523.69	524.61	520.93	512.66	491.53		
30.0	477.75	488.80	503.53	516.41	526.54	529.30	525.62	516.41	498.00		
45.0	477.75	487.88	503.53	518.25	526.54	530.22	527.46	520.09	502.60		
60.0	477.75	486.08	502.75	513.86	524.97	530.53	529.60	523.12	506.45		
75.0	477.75	486.15	502.01	515.07	524.41	530.00	528.14	521.61	504.81		
90.0	477.75	485.23	499.25	512.34	522.63	527.30	526.37	517.95	501.12		
105.0	477.75	484.32	499.34	511.54	520.93	524.68	522.80	513.42	497.46		
120.0	477.75	481.50	496.49	507.73	518.03	520.84	520.84	510.54	494.61		
135.0	477.75	479.61	492.62	505.63	514.93	517.72	514.93	508.42	490.76		
150.0	477.75	482.38	493.49	505.53	516.64	515.71	512.93	505.53	488.86		
165.0	477.75	478.67	489.67	501.59	508.93	510.76	508.93	498.84	482.34		
180.0	477.75	482.34	496.09	506.18	510.76	511.68	506.18	496.09	475.00		
195.0	477.75	482.34	494.29	505.31	509.91	510.83	505.31	494.29	474.08		
210.0	477.75	482.35	493.40	502.60	509.05	508.13	504.45	493.40	475.91		
225.0	477.75	482.35	491.56	499.84	506.29	506.29	501.68	490.64	471.31		
240.0	477.75	482.38	492.56	499.97	505.53	505.53	499.97	488.86	468.49		
255.0	477.75	483.35	493.61	502.01	505.74	505.74	501.08	488.95	469.35		
270.0	477.75	483.36	493.64	501.12	504.86	504.86	499.25	487.10	466.53		
285.0	477.75	486.20	495.58	503.09	507.79	506.85	500.28	488.08	484.32		
300.0	477.75	484.31	495.55	503.98	503.98	507.73	501.17	488.06	466.51		
315.0	477.75	486.12	497.27	506.56	509.35	509.35	501.92	488.90	467.53		
330.0	477.75	490.71	500.90	510.16	514.79	512.93	505.53	491.64	470.34		
345.0	477.75	487.84	500.68	508.93	513.51	511.68	505.26	492.42	470.41		
360.0	477.75	487.84	500.68	511.68	518.10	519.93	513.51	503.43	483.25		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	456.66	422.73	382.38	331.03	280.60	229.25	182.48	137.55	99.95		
15.0	466.73	432.73	389.55	339.02	283.89	232.44	184.67	139.65	100.14		
30.0	473.15	438.17	394.90	344.28	288.12	233.81	185.02	141.76	103.10		
45.0	475.91	442.77	398.59	345.20	289.04	235.65	187.79	142.68	103.10		
60.0	481.45	448.12	406.46	353.68	295.35	239.80	190.73	148.14	107.40		
75.0	479.62	446.96	403.10	348.98	283.66	227.68	177.29	132.50	94.24		
90.0	474.95	442.22	400.15	329.10	257.11	199.14	151.46	108.45	73.86		
105.0	472.12	439.27	397.03	334.14	267.50	206.49	158.62	119.20	82.60		
120.0	470.26	438.41	397.19	348.48	293.21	237.00	187.35	146.14	106.79		
135.0	467.53	435.92	395.96	347.62	294.64	244.45	196.12	151.50	112.47		
150.0	464.79	434.23	397.20	348.13	295.35	243.50	198.14	150.92	112.96		
165.0	458.49	427.32	388.80	342.04	289.77	242.08	194.40	149.47	109.12		
180.0	449.32	416.31	375.05	325.53	273.26	226.50	180.65	137.55	97.20		
195.0	450.19	415.28	374.85	323.40	274.71	225.09	179.16	135.98	96.47		
210.0	448.29	414.23	371.89	322.18	271.55	221.85	179.50	137.16	98.50		
225.0	445.53	413.31	370.97	322.18	270.63	220.93	176.74	134.40	98.50		
240.0	442.57	408.31	363.87	312.95	264.80	212.95	172.21	130.55	95.36		
255.0	441.36	408.70	362.05	306.99	249.14	198.75	153.96	143.70	81.18		
270.0	440.35	403.89	353.40	335.64	221.58	171.09	128.09	89.75	59.84		
285.0	440.21	402.66	355.73	288.15	230.90	178.34	137.98	98.55	68.52		
300.0	438.41	404.68	358.78	310.07	256.67	206.09	161.12	119.91	86.18		
315.0	439.64	402.46	359.71	311.37	260.25	213.78	166.38	126.41	92.02		
330.0	441.64	406.46	364.79	312.95	263.87	213.88	167.58	125.92	90.74		
345.0	441.99	406.23	362.21	312.69	260.42	210.91	167.81	122.88	89.86		
360.0	456.66	422.73	382.38	331.03	280.60	229.25	182.48	137.55	99.95		

乐达凯 LCD-RDD-DP-15-CCT-UNV-WT

Intensity data(cd)										Appendix Page: 11 Total:12	
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0		
0.0	72.44	58.69	47.68	38.51	33.93	31.18	27.51	23.84	16.51		
15.0	72.58	57.88	47.78	38.59	33.99	31.24	27.56	24.81	17.46		
30.0	74.56	59.83	47.87	38.66	34.06	30.38	27.62	23.01	16.57		
45.0	75.48	59.83	47.87	38.66	34.06	29.46	24.85	20.25	16.57		
60.0	78.70	59.26	44.44	34.26	29.63	26.85	20.37	16.67	12.96		
75.0	66.25	50.39	37.32	28.93	26.13	26.13	17.73	15.86	13.06		
90.0	49.55	38.33	31.79	28.98	28.05	27.11	18.70	15.89	13.09		
105.0	56.32	42.24	32.85	28.16	27.22	27.22	18.77	15.96	13.14		
120.0	75.88	54.33	41.22	29.98	26.23	26.23	18.74	15.93	14.05		
135.0	80.86	62.27	47.40	37.18	30.67	27.88	22.31	19.52	14.87		
150.0	81.48	62.96	50.00	40.74	34.26	30.55	26.85	23.15	18.52		
165.0	77.94	60.52	48.60	39.43	32.09	29.34	26.59	23.84	18.34		
180.0	69.69	55.94	45.85	37.60	33.01	29.34	26.59	22.92	16.51		
195.0	70.74	56.04	45.94	37.67	33.08	29.40	26.64	22.97	15.62		
210.0	70.88	57.07	46.03	37.74	33.14	29.46	26.70	22.09	15.65		
225.0	72.72	58.91	46.95	37.74	33.14	29.46	27.62	20.25	14.73		
240.0	68.51	52.77	50.00	32.41	28.70	25.00	19.44	15.74	12.04		
255.0	56.92	43.86	33.59	27.99	26.13	24.26	16.80	14.93	12.13		
270.0	42.07	35.53	30.85	28.98	28.05	26.18	16.83	14.96	11.22		
285.0	47.87	38.48	30.97	29.10	28.16	25.34	16.89	15.02	11.26		
300.0	60.89	46.84	35.60	29.04	27.17	22.48	16.86	14.99	11.24		
315.0	67.85	52.98	41.83	33.46	30.67	25.10	20.45	16.73	11.15		
330.0	69.44	55.55	45.37	37.03	33.33	29.63	25.00	20.37	13.89		
345.0	66.94	54.10	44.02	36.68	33.01	29.34	26.59	21.09	12.84		
360.0	72.44	58.69	47.68	38.51	33.93	31.18	27.51	23.84	16.51		
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	8.25	3.67	2.75	2.75	3.67	3.67	3.67	3.67	3.67		
15.0	9.19	4.59	2.76	2.76	3.68	3.68	3.68	3.68	3.68		
30.0	11.05	5.52	2.76	2.76	3.68	3.68	3.68	3.68	3.68		
45.0	10.13	5.52	2.76	2.76	3.68	3.68	3.68	3.68	3.68		
60.0	9.26	5.56	2.78	2.78	3.70	3.70	3.70	3.70	3.70		
75.0	9.33	5.60	2.80	2.80	3.73	3.73	3.73	3.73	3.73		
90.0	9.35	5.61	2.80	2.80	3.74	3.74	3.74	3.74	3.74		
105.0	9.39	5.63	2.82	2.82	3.75	3.75	3.75	3.75	3.75		
120.0	9.37	5.62	2.81	2.81	3.75	3.75	3.75	3.75	3.75		
135.0	10.22	5.58	2.79	2.79	3.72	3.72	3.72	3.72	3.72		
150.0	12.04	6.48	2.78	2.78	3.70	3.70	3.70	3.70	3.70		
165.0	11.00	6.42	2.75	2.75	3.67	3.67	3.67	3.67	3.67		
180.0	8.25	3.67	0.92	1.83	1.83	1.83	2.75	2.75	3.67		
195.0	8.27	3.68	0.92	1.84	1.84	1.84	2.76	2.76	3.68		
210.0	9.21	8.28	1.84	1.84	1.84	1.84	2.76	2.76	3.68		
225.0	8.28	3.68	0.92	1.84	1.84	1.84	2.76	2.76	3.68		
240.0	7.41	3.70	0.93	1.85	1.85	1.85	2.78	2.78	3.70		
255.0	7.46	3.73	0.93	1.87	1.87	1.87	2.80	2.80	3.73		
270.0	7.48	3.74	0.93	1.87	1.87	1.87	2.80	2.80	3.74		
285.0	7.51	2.82	0.94	1.88	1.88	1.88	2.82	2.82	3.75		
300.0	6.56	2.81	0.94	1.87	1.87	1.87	2.81	2.81	3.75		
315.0	6.51	2.79	0.93	1.86	1.86	1.86	2.79	2.79	3.72		
330.0	7.41	2.78	0.93	1.85	1.85	1.85	2.78	2.78	3.70		
345.0	6.42	2.75	0.92	1.83	1.83	1.83	2.75	2.75	3.67		
360.0	8.25	3.67	2.75	2.75	3.67	3.67	3.67	3.67	3.67		

Intensity data(cd)

C/γ(°)	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	3.75
135.0	3.72
150.0	3.70
165.0	3.67
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