
乐达凯

Client:

LumCAT: KRNP08L30D1

Luminaire: LED lamp

Report No:

Ballast type:

Test No: LCZP24090192

Voltage(V): 119.990

LampCAT:

Current(A): 0.117

Lamp flux(lm): 704.5

Power (W): 13.860

Number of Lamps: 1

PF: 0.985

Length(mm): -200

Width(mm): -200

Phm Type: C

Height(mm): 320

Photometric Results

Lumens(lm): 704.48, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 50.83

Central intensity(cd): 144.873, Maximum intensity(cd): 144.873

Angle of maximum intensity: C=45.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=86.2

[C90/270]Total=89.2

Field angle(10%Imax): [C0/180]Total=349.8

[C90/270]Total=349.2

Maximum s/h(1/2): C0_180=1.01 C90_270=1.02

Maximum s/h(1/4): C0_180=1.15 C90_270=1.16

Up flux rate of lamp(%): 36.56%

Down flux rate of lamp(%): 63.44%

Up flux rate of LUM(%): 36.56%

Down flux rate of LUM(%): 63.44%

CIE Type : Semidirect lighting

Output flux ratio in π solid angle : 38.049%

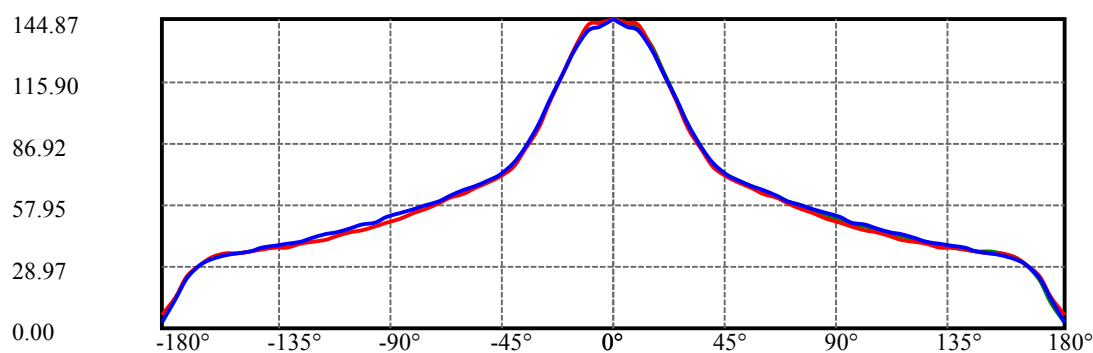
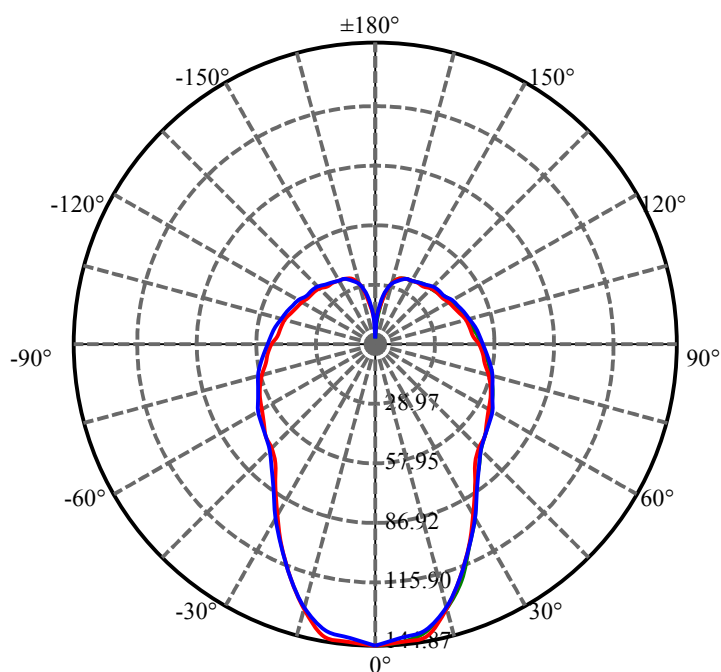
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	144.872	0.000	0	0.00%	0.00%
5.0	142.711	3.438	3.438	0.49%	0.49%
10.0	140.168	10.119	13.557	1.44%	1.92%
15.0	131.374	16.108	29.665	2.29%	4.21%
20.0	119.695	20.692	50.357	2.94%	7.15%
25.0	106.901	23.766	74.122	3.37%	10.52%
30.0	94.872	25.534	99.657	3.62%	14.15%
35.0	84.197	26.369	126.026	3.74%	17.89%
40.0	76.633	26.833	152.859	3.81%	21.70%
45.0	71.482	27.425	180.284	3.89%	25.59%
50.0	68.716	28.329	208.613	4.02%	29.61%
55.0	66.263	29.349	237.962	4.17%	33.78%
60.0	63.890	30.085	268.046	4.27%	38.05%
65.0	61.510	30.485	298.531	4.33%	42.38%
70.0	59.231	30.573	329.104	4.34%	46.72%
75.0	57.074	30.400	359.504	4.32%	51.03%
80.0	54.865	29.952	389.456	4.25%	55.28%
85.0	52.627	29.208	418.664	4.15%	59.43%
90.0	50.600	28.264	446.928	4.01%	63.44%
95.0	48.724	27.196	474.124	3.86%	67.30%
100.0	47.120	26.043	500.167	3.70%	71.00%
105.0	45.532	24.791	524.958	3.52%	74.52%
110.0	44.014	23.406	548.364	3.32%	77.84%
115.0	42.602	21.932	570.296	3.11%	80.95%
120.0	41.312	20.400	590.695	2.90%	83.85%
125.0	40.027	18.801	609.497	2.67%	86.52%
130.0	38.910	17.163	626.66	2.44%	88.95%
135.0	37.870	15.514	642.175	2.20%	91.16%
140.0	36.946	13.853	656.028	1.97%	93.12%
145.0	36.175	12.200	668.227	1.73%	94.85%
150.0	35.444	10.546	678.774	1.50%	96.35%
155.0	34.737	8.881	687.655	1.26%	97.61%
160.0	33.019	7.106	694.761	1.01%	98.62%
165.0	29.351	5.140	699.902	0.73%	99.35%
170.0	23.090	3.111	703.012	0.44%	99.79%
175.0	12.596	1.277	704.289	0.18%	99.97%
180.0	3.170	0.188	704.477	0.03%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	99.66	14.15%	14.15%
0-40	152.86	21.70%	21.70%
0-60	268.05	38.05%	38.05%
0-90	446.93	63.44%	63.44%
0-120	590.70	83.85%	83.85%
0-180	704.48	100.00%	100.00%
60-90	178.88	25.39%	25.39%
90-120	143.77	20.41%	20.41%
90-130	179.73	25.51%	25.51%
90-150	231.85	32.91%	32.91%
90-180	257.36	36.53%	36.53%
0-113.47	563.58	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	13.56
10-20	36.80
20-30	49.30
30-40	53.20
40-50	55.75
50-60	59.43
60-70	61.06
70-80	60.35
80-90	57.47
90-100	53.24
100-110	48.20
110-120	42.33
120-130	35.96
130-140	29.37
140-150	22.75
150-160	15.99
160-170	8.25
170-180	1.28



C45(Max): —————

C0/C180: —————

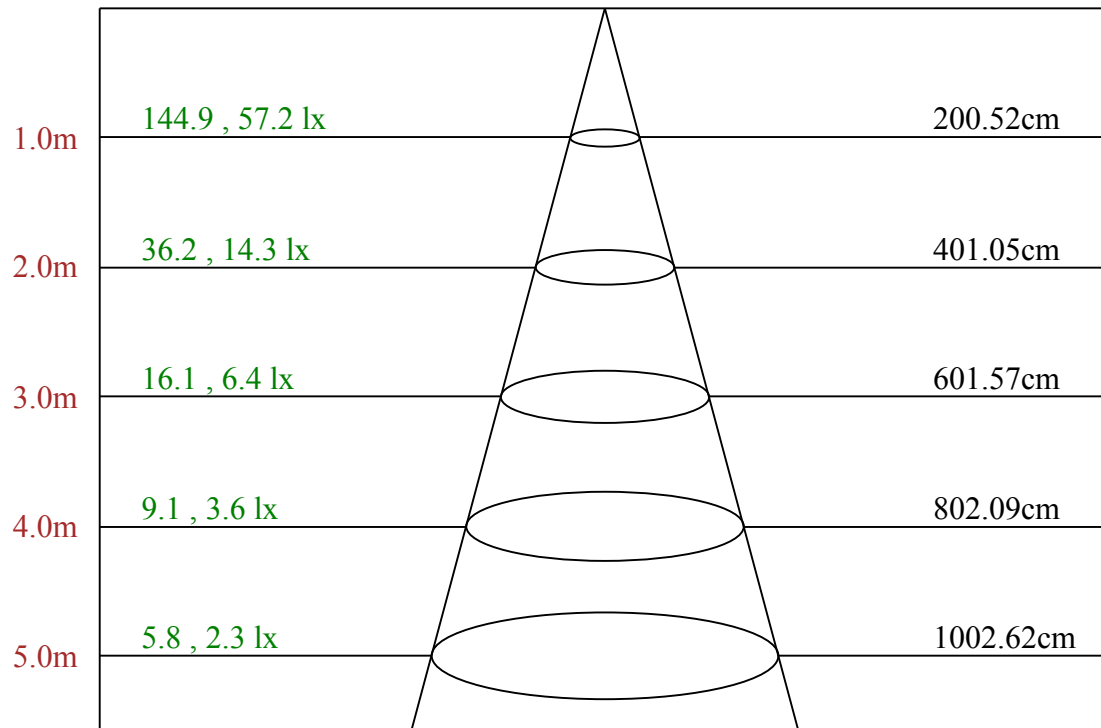
C90/C270: —————

Field angle(10%Imax):C0/180Left:174.9 Right:174.9

:C90/270Left:174.6 Right:174.6

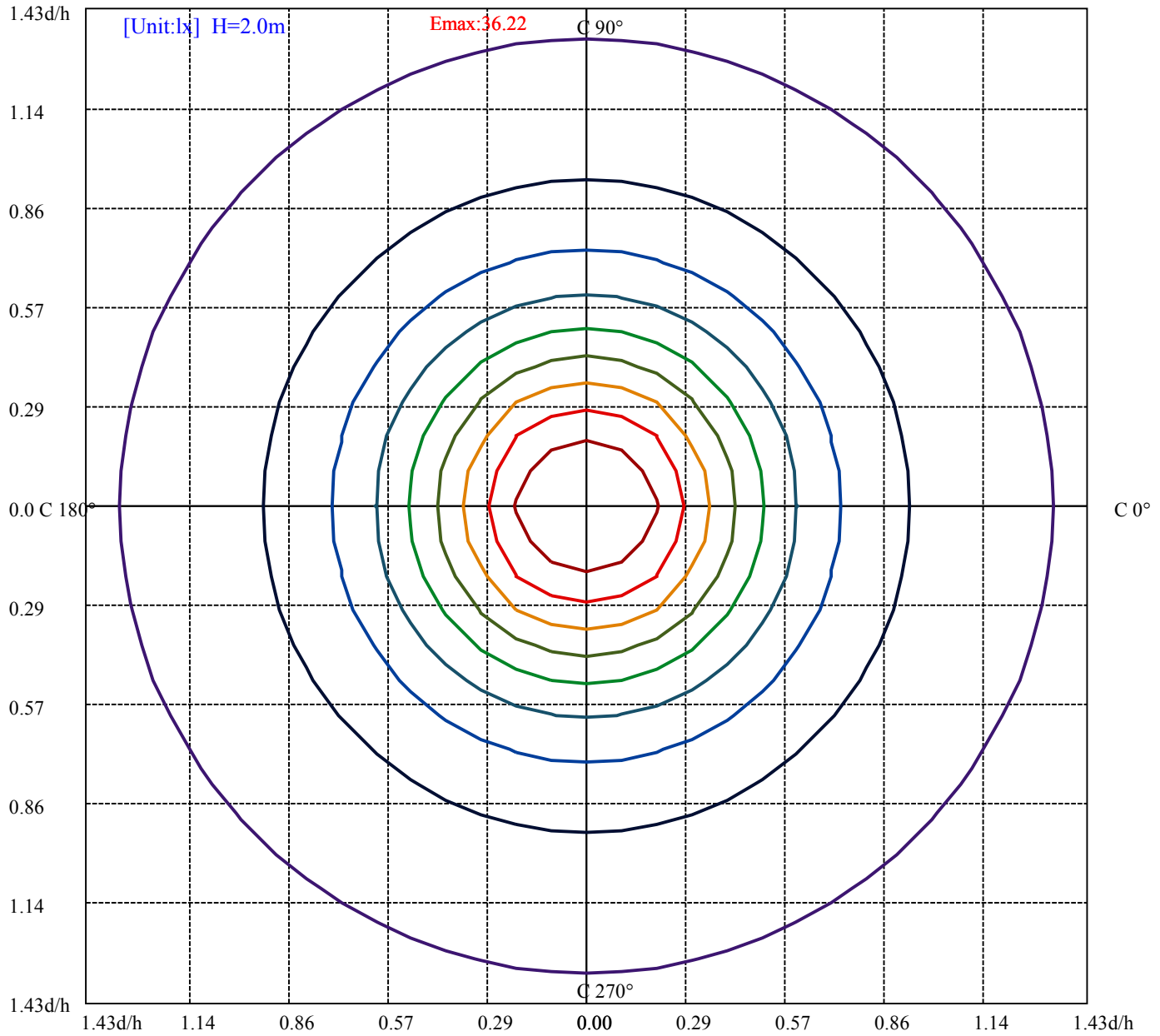
Beam Angle(50%Imax):C0/180Left:43.1 Right:43.1

:C90/270Left:44.6 Right:44.6

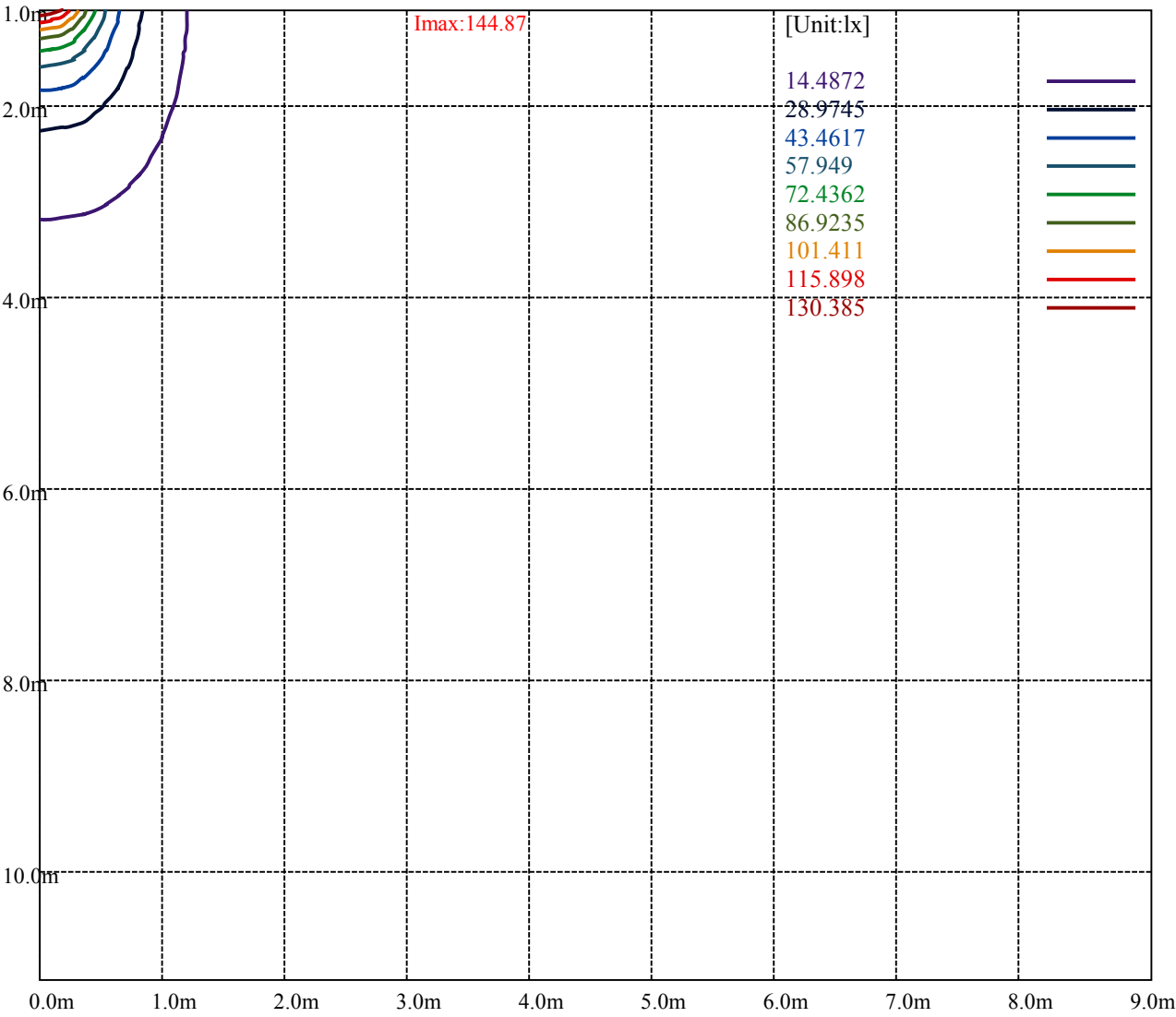


Max , Ave

Beam angle of C45 plane 90.15



(10%Emax)	3.6218	—
(20%Emax)	7.243625	—
(30%Emax)	10.86543	—
(40%Emax)	14.48725	—
(50%Emax)	18.10905	—
(60%Emax)	21.73088	—
(70%Emax)	25.35275	—
(80%Emax)	28.9745	—
(90%Emax)	32.59625	—



Luminance Table

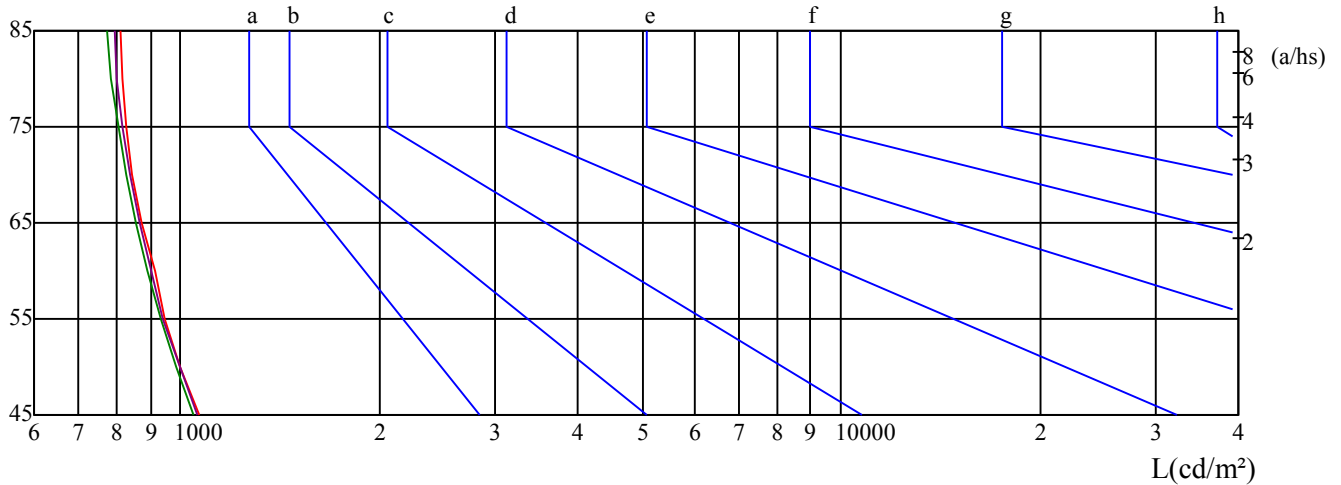
γ	45	50	55	60	65	70	75	80	85
C0	1048	987	933	889	854	826	803	786	774
C45	1062	996	943	900	866	838	819	802	796
C90	1068	998	948	916	873	844	830	817	809

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4583	4687	4650	6909	7138	7046	18808	19652	19324

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

 $\gamma(^{\circ})$ 

C0 ———

C45 ———

C90 ———

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	1.10	1.10	1.10	1.04	1.04	1.04	0.91	0.91	0.91	0.79	0.79	0.79	0.68	0.68	0.68	0.63
1	0.91	0.86	0.81	0.85	0.81	0.76	0.74	0.71	0.67	0.64	0.61	0.59	0.55	0.53	0.51	0.46
2	0.78	0.70	0.64	0.73	0.66	0.60	0.63	0.58	0.53	0.55	0.51	0.47	0.47	0.43	0.40	0.36
3	0.68	0.59	0.52	0.63	0.56	0.49	0.55	0.49	0.44	0.48	0.43	0.39	0.41	0.37	0.33	0.30
4	0.60	0.51	0.44	0.56	0.48	0.41	0.49	0.42	0.37	0.42	0.37	0.33	0.36	0.32	0.28	0.25
5	0.53	0.44	0.37	0.50	0.42	0.35	0.44	0.37	0.32	0.38	0.32	0.28	0.32	0.28	0.24	0.21
6	0.48	0.39	0.32	0.45	0.37	0.31	0.39	0.33	0.27	0.34	0.29	0.24	0.29	0.25	0.21	0.19
7	0.43	0.34	0.28	0.40	0.33	0.27	0.36	0.29	0.24	0.31	0.26	0.22	0.27	0.22	0.19	0.16
8	0.39	0.31	0.25	0.37	0.29	0.24	0.33	0.26	0.22	0.29	0.23	0.19	0.25	0.20	0.17	0.15
9	0.36	0.28	0.22	0.34	0.26	0.21	0.30	0.24	0.19	0.26	0.21	0.17	0.23	0.19	0.15	0.13
10	0.33	0.25	0.20	0.31	0.24	0.19	0.28	0.22	0.17	0.24	0.19	0.16	0.21	0.17	0.14	0.12

乐达凯 KRNP08L30D1

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	144.87	144.96	147.32	138.05	126.42	113.31	100.98	89.70	80.35		
15.0	144.87	144.61	147.95	139.77	128.07	114.97	101.95	90.42	81.19		
30.0	144.87	144.25	147.79	140.81	129.23	116.15	103.95	92.19	82.73		
45.0	144.87	144.34	147.99	142.11	131.43	118.52	105.43	93.67	84.06		
60.0	144.87	143.89	147.64	142.73	131.91	119.03	106.06	94.79	84.96		
75.0	144.87	144.15	147.48	142.45	132.57	119.90	106.79	94.94	84.97		
90.0	144.87	143.61	146.67	141.72	131.82	119.32	106.81	94.39	84.67		
105.0	144.87	144.06	146.68	141.17	130.97	118.97	105.97	93.87	83.67		
120.0	144.87	143.61	146.14	140.08	130.13	117.38	104.45	92.33	82.29		
135.0	144.87	145.42	146.06	140.48	130.32	116.59	103.87	91.52	80.90		
150.0	144.87	144.23	143.78	138.22	117.70	114.79	101.66	89.35	79.14		
165.0	144.87	144.60	142.86	137.29	126.68	113.43	100.09	87.84	77.05		
180.0	144.87	142.07	136.74	125.20	112.61	99.41	87.08	76.94	70.12		
195.0	144.87	141.00	134.84	123.85	110.74	97.73	86.38	75.82	70.11		
210.0	144.87	139.92	133.38	122.69	109.87	96.96	85.12	75.40	69.92		
225.0	144.87	139.62	133.03	121.72	109.79	96.08	85.21	75.06	70.08		
240.0	144.87	138.88	132.17	121.08	108.30	95.87	84.42	74.85	70.11		
255.0	144.87	139.21	131.76	120.26	108.32	95.11	84.52	75.09	70.42		
270.0	144.87	138.93	132.09	120.13	107.71	95.38	84.04	75.32	70.19		
285.0	144.87	139.82	131.87	120.14	108.32	95.41	84.85	75.73	73.75		
300.0	144.87	140.89	132.94	121.36	117.56	96.31	85.19	76.23	70.90		
315.0	144.87	143.41	135.08	123.09	110.00	97.47	86.94	77.52	72.21		
330.0	144.87	143.69	135.03	123.26	110.14	98.28	87.16	78.23	72.30		
345.0	144.87	145.88	136.74	125.31	112.06	99.26	88.02	79.52	73.12		
360.0	144.87	144.96	147.32	138.05	126.42	113.31	100.98	89.70	80.35		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	74.14	72.22	69.94	67.93	65.22	62.95	60.41	57.97	55.34		
15.0	75.29	72.92	70.98	68.79	66.41	63.95	61.57	59.29	56.65		
30.0	76.10	73.45	71.60	69.39	67.35	64.70	62.67	60.37	57.98		
45.0	77.38	74.35	72.39	70.43	68.21	65.89	63.67	61.44	59.30		
60.0	78.07	74.58	72.62	70.65	68.77	66.44	64.39	62.15	59.92		
75.0	78.23	74.55	72.75	70.77	68.53	66.19	64.31	62.42	60.00		
90.0	76.94	73.70	71.63	69.56	67.40	65.15	63.53	61.73	59.48		
105.0	75.82	72.48	70.41	68.06	66.07	64.00	62.19	60.12	58.22		
120.0	74.24	70.99	68.64	66.47	64.21	62.40	60.41	58.42	56.34		
135.0	72.67	70.10	67.63	65.25	62.78	60.68	58.66	56.47	54.73		
150.0	70.93	68.38	65.64	63.09	60.26	58.26	56.16	53.97	52.06		
165.0	70.01	67.36	64.62	61.88	58.77	56.76	54.48	52.28	50.09		
180.0	67.32	64.44	61.55	58.58	56.48	54.21	51.93	49.66	47.65		
195.0	66.94	64.04	60.96	58.14	55.77	53.48	51.46	48.99	47.06		
210.0	66.56	63.73	60.90	57.98	55.86	53.56	51.27	48.97	46.85		
225.0	66.96	63.84	60.91	58.41	56.19	53.87	51.91	49.51	47.55		
240.0	67.07	63.94	61.44	58.66	56.61	54.37	52.14	49.90	47.84		
255.0	67.09	64.58	61.70	59.10	56.94	54.70	52.63	51.82	47.87		
270.0	67.13	64.43	62.00	60.83	57.05	54.53	52.55	50.12	48.14		
285.0	67.43	65.08	62.19	59.66	57.41	55.15	52.80	50.46	48.47		
300.0	68.10	65.74	62.94	60.41	58.33	55.80	53.36	51.09	48.83		
315.0	69.55	67.36	64.70	62.05	59.76	57.29	54.91	52.26	50.06		
330.0	70.20	67.83	65.37	63.09	60.36	57.99	55.71	53.15	50.60		
345.0	71.39	69.10	66.82	64.16	61.51	59.23	56.67	54.20	52.01		
360.0	74.14	72.22	69.94	67.93	65.22	62.95	60.41	57.97	55.34		

乐达凯 KRNP08L30D1

Intensity data(cd)										Appendix Page: 11 Total:12	
C/ $\gamma(^{\circ})$	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0		
0.0	52.98	50.80	48.79	47.13	45.11	43.45	41.88	40.57	39.17		
15.0	54.36	52.07	50.05	48.20	46.44	44.77	43.10	41.61	40.20		
30.0	55.51	53.30	51.27	49.50	47.64	45.70	44.11	42.52	41.19		
45.0	56.90	54.49	52.62	50.75	49.06	47.46	45.86	44.17	42.65		
60.0	57.59	55.36	53.57	51.60	49.99	48.38	46.86	45.34	43.91		
75.0	58.02	55.69	53.89	52.09	50.39	48.77	47.33	45.81	44.37		
90.0	57.32	55.16	53.54	51.92	50.21	48.68	47.15	45.53	44.18		
105.0	55.96	54.16	52.53	50.91	49.28	47.84	46.49	45.13	43.78		
120.0	54.35	52.45	50.82	49.47	47.93	46.57	45.22	44.04	42.86		
135.0	52.53	50.70	49.24	47.86	46.49	45.12	44.11	42.83	41.92		
150.0	49.87	48.14	46.68	45.49	44.13	43.03	41.85	40.94	40.02		
165.0	48.08	46.43	45.06	43.69	42.41	41.31	40.31	39.39	38.57		
180.0	45.99	44.41	43.19	42.05	40.83	39.78	38.73	37.86	37.16		
195.0	45.30	43.80	42.49	41.17	40.02	38.97	38.00	37.03	36.24		
210.0	45.34	43.67	42.34	41.01	39.69	38.54	37.48	36.51	35.62		
225.0	45.86	44.34	42.74	41.32	40.07	38.82	38.20	36.24	35.35		
240.0	46.14	44.71	44.00	41.49	40.06	38.81	37.47	36.22	35.32		
255.0	46.34	44.55	43.20	41.67	40.24	38.62	37.54	36.29	35.30		
270.0	46.34	44.72	43.19	41.57	40.22	38.78	37.43	36.26	35.27		
285.0	46.40	44.86	43.24	41.70	40.26	38.81	37.55	36.47	35.38		
300.0	47.02	45.13	43.50	42.05	40.51	39.16	37.80	36.63	35.54		
315.0	47.86	46.12	44.39	42.65	41.09	39.72	38.44	37.25	36.15		
330.0	48.50	46.50	44.67	43.22	41.57	40.21	38.75	37.56	36.47		
345.0	49.81	47.80	45.88	44.24	42.68	41.13	39.85	38.48	37.20		
360.0	52.98	50.80	48.79	47.13	45.11	43.45	41.88	40.57	39.17		
C/ $\gamma(^{\circ})$	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	38.29	37.25	36.63	35.85	34.97	33.92	30.60	24.66	14.34		
15.0	38.97	37.65	36.94	36.33	36.06	34.39	30.43	24.10	12.93		
30.0	39.86	38.72	37.92	37.39	36.68	35.09	31.03	23.60	11.67		
45.0	41.23	39.98	39.00	38.20	37.40	35.53	31.16	24.31	11.93		
60.0	42.39	40.78	39.62	38.63	37.20	35.23	31.12	24.95	14.04		
75.0	42.84	41.49	40.15	38.35	36.73	34.85	31.26	25.24	15.72		
90.0	42.83	41.48	39.95	38.51	37.25	35.09	31.67	26.19	17.01		
105.0	42.42	41.25	39.99	38.72	37.55	35.65	32.49	27.17	17.60		
120.0	41.69	40.51	39.43	38.16	36.90	34.73	32.37	26.68	17.72		
135.0	40.82	39.90	39.08	37.98	36.70	35.14	32.40	26.63	18.76		
150.0	39.30	38.47	37.75	36.65	35.74	34.55	32.46	27.08	19.42		
165.0	37.84	37.11	36.65	36.10	35.74	34.55	32.45	27.51	21.02		
180.0	36.46	35.93	35.41	35.15	35.06	32.87	29.38	23.87	14.08		
195.0	35.54	35.01	34.74	34.74	34.74	34.39	29.99	24.45	13.72		
210.0	34.91	34.65	33.94	33.94	34.03	32.70	29.17	23.95	12.29		
225.0	34.55	33.93	33.75	33.48	33.48	31.52	27.43	21.55	10.86		
240.0	34.43	33.89	33.54	33.09	33.00	31.12	26.38	19.67	9.93		
255.0	34.40	33.68	33.23	32.69	32.51	31.08	26.94	20.30	10.51		
270.0	34.28	33.65	32.93	32.39	32.03	30.59	27.17	20.88	10.35		
285.0	34.48	33.67	32.86	32.22	31.68	30.24	26.72	20.49	9.39		
300.0	34.55	33.64	32.83	32.28	31.47	29.93	26.04	19.53	7.05		
315.0	35.14	34.32	33.50	32.76	31.85	29.74	25.99	18.21	5.58		
330.0	35.47	34.55	33.82	33.10	32.27	29.72	25.25	17.41	3.56		
345.0	36.20	35.19	34.55	33.91	32.63	29.80	24.50	15.72	2.83		
360.0	38.29	37.25	36.63	35.85	34.97	33.92	30.60	24.66	14.34		

Intensity data(cd)

C/ $\gamma(^{\circ})$	180.0
0.0	11.98
15.0	2.90
30.0	1.77
45.0	1.96
60.0	2.15
75.0	3.41
90.0	5.13
105.0	7.40
120.0	8.86
135.0	9.52
150.0	9.85
165.0	11.15
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	11.98