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乐达凯

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Client:

LumCAT: CRNW0616LAJUDBK

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.000

LampCAT:

Current(A): 0.180

Lamp flux(lm): 1531.9

Power (W): 21.380

Number of Lamps: 1

PF: 0.991

Length(mm): 570

Width(mm): 100

Phm Type: C

Height(mm): 120

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Photometric Results

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Lumens(lm): 1531.89, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 71.65

Central intensity(cd): 196.874, Maximum intensity(cd): 258.511

Angle of maximum intensity: C=90.0  $\gamma$ =125.0

Beam Angle(50%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Field angle(10%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Maximum s/h(1/2): C0\_180=1.28 C90\_270=1.85

Maximum s/h(1/4): C0\_180=1.40 C90\_270=2.00

Up flux rate of lamp(%): 49.77%

Down flux rate of lamp(%): 50.23%

Up flux rate of LUM(%): 49.77%

Down flux rate of LUM(%): 50.23%

CIE Type : General diffuse lighting

Output flux ratio in  $\pi$  solid angle : 31.459%

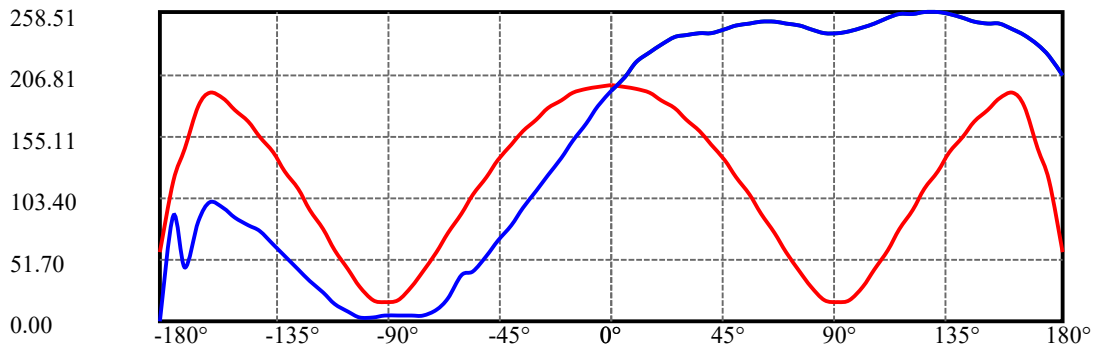
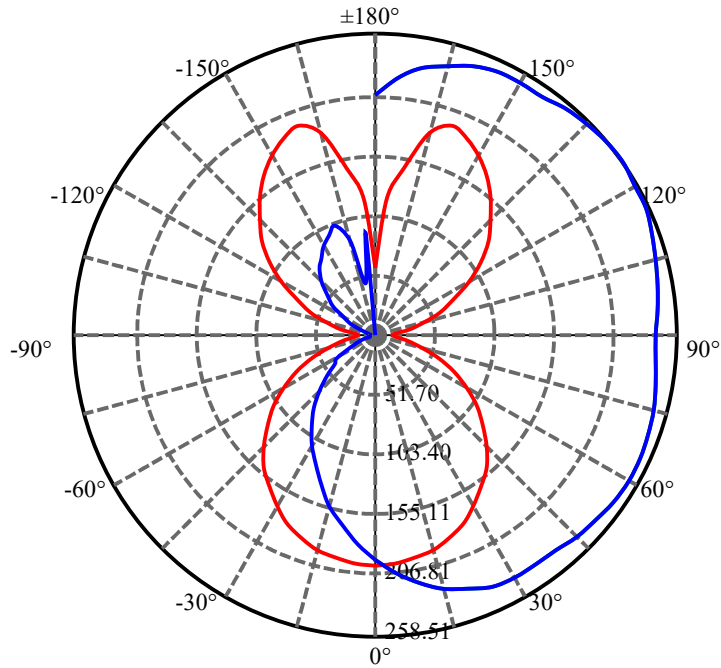
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	194.880	0.000	0	0.00%	0.00%
5.0	193.692	4.645	4.645	0.30%	0.30%
10.0	191.967	13.796	18.442	0.90%	1.20%
15.0	188.939	22.595	41.037	1.47%	2.68%
20.0	184.837	30.804	71.841	2.01%	4.69%
25.0	178.627	38.121	109.962	2.49%	7.18%
30.0	171.498	44.309	154.27	2.89%	10.07%
35.0	163.180	49.284	203.554	3.22%	13.29%
40.0	154.708	53.037	256.591	3.46%	16.75%
45.0	145.087	55.509	312.101	3.62%	20.37%
50.0	135.772	56.752	368.852	3.70%	24.08%
55.0	126.151	56.951	425.803	3.72%	27.80%
60.0	116.606	56.113	481.916	3.66%	31.46%
65.0	106.525	54.244	536.159	3.54%	35.00%
70.0	97.095	51.558	587.717	3.37%	38.37%
75.0	88.892	48.614	636.331	3.17%	41.54%
80.0	82.836	45.950	682.281	3.00%	44.54%
85.0	79.194	44.027	726.308	2.87%	47.41%
90.0	78.159	43.085	769.392	2.81%	50.23%
95.0	79.194	43.085	812.477	2.81%	53.04%
100.0	83.411	44.184	856.661	2.88%	55.92%
105.0	90.579	46.555	903.215	3.04%	58.96%
110.0	99.702	49.736	952.951	3.25%	62.21%
115.0	109.476	52.965	1005.917	3.46%	65.67%
120.0	119.021	55.548	1061.465	3.63%	69.29%
125.0	129.026	57.335	1118.8	3.74%	73.03%
130.0	138.379	58.143	1176.943	3.80%	76.83%
135.0	147.157	57.697	1234.639	3.77%	80.60%
140.0	154.478	55.850	1290.49	3.65%	84.24%
145.0	161.071	52.647	1343.137	3.44%	87.68%
150.0	167.089	48.324	1391.461	3.15%	90.83%
155.0	171.996	42.912	1434.372	2.80%	93.63%
160.0	174.564	36.348	1470.72	2.37%	96.01%
165.0	168.354	28.261	1498.981	1.84%	97.85%
170.0	152.907	19.057	1518.038	1.24%	99.10%
175.0	154.133	10.984	1529.022	0.72%	99.81%
180.0	85.557	2.865	1531.887	0.19%	100.00%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	154.27	10.07%	10.07%
0-40	256.59	16.75%	16.75%
0-60	481.92	31.46%	31.46%
0-90	769.39	50.23%	50.23%
0-120	1061.46	69.29%	69.29%
0-180	1531.89	100.00%	100.00%
60-90	287.48	18.77%	18.77%
90-120	292.07	19.07%	19.07%
90-130	407.55	26.60%	26.60%
90-150	622.07	40.61%	40.61%
90-180	759.63	49.59%	49.59%
0-134.21	1225.51	80.00%	80.00%

## ZONAL LUMEN SUMMARY

0-10	18.44
10-20	53.40
20-30	82.43
30-40	102.32
40-50	112.26
50-60	113.06
60-70	105.80
70-80	94.56
80-90	87.11
90-100	87.27
100-110	96.29
110-120	108.51
120-130	115.48
130-140	113.55
140-150	100.97
150-160	79.26
160-170	47.32
170-180	10.98



C90(Max): —————

C0/C180: —————

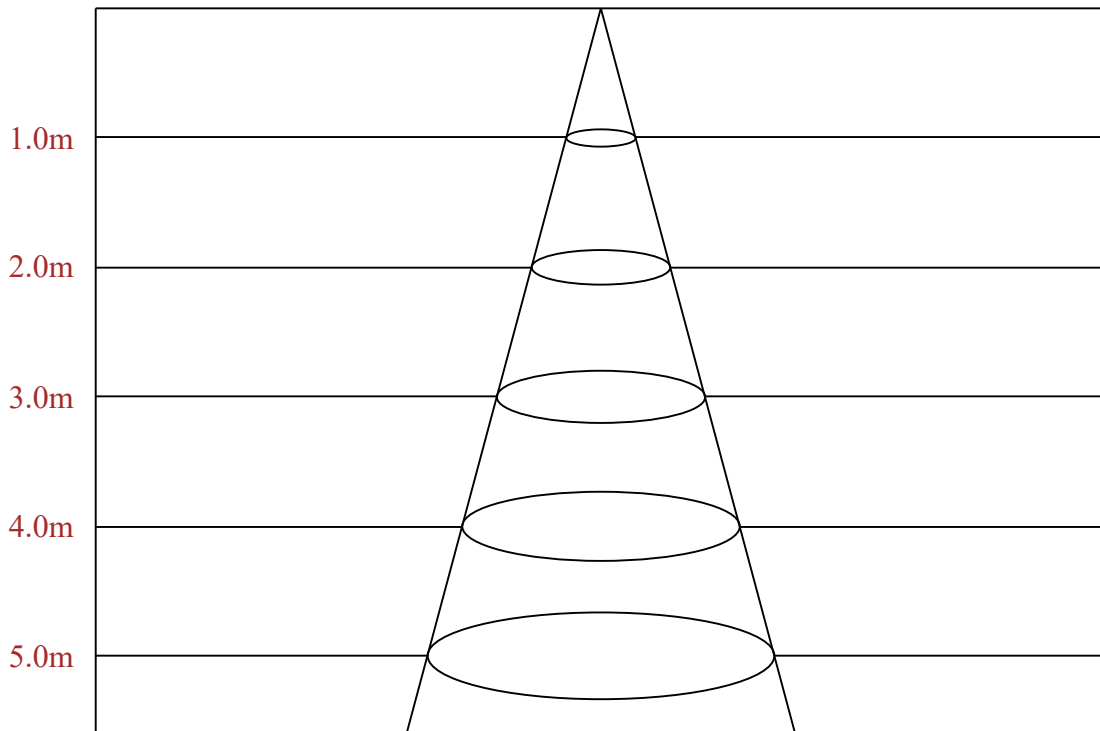
C90/C270: —————

Field angle(10%Imax):C0/180Left:0.0 Right:0.0

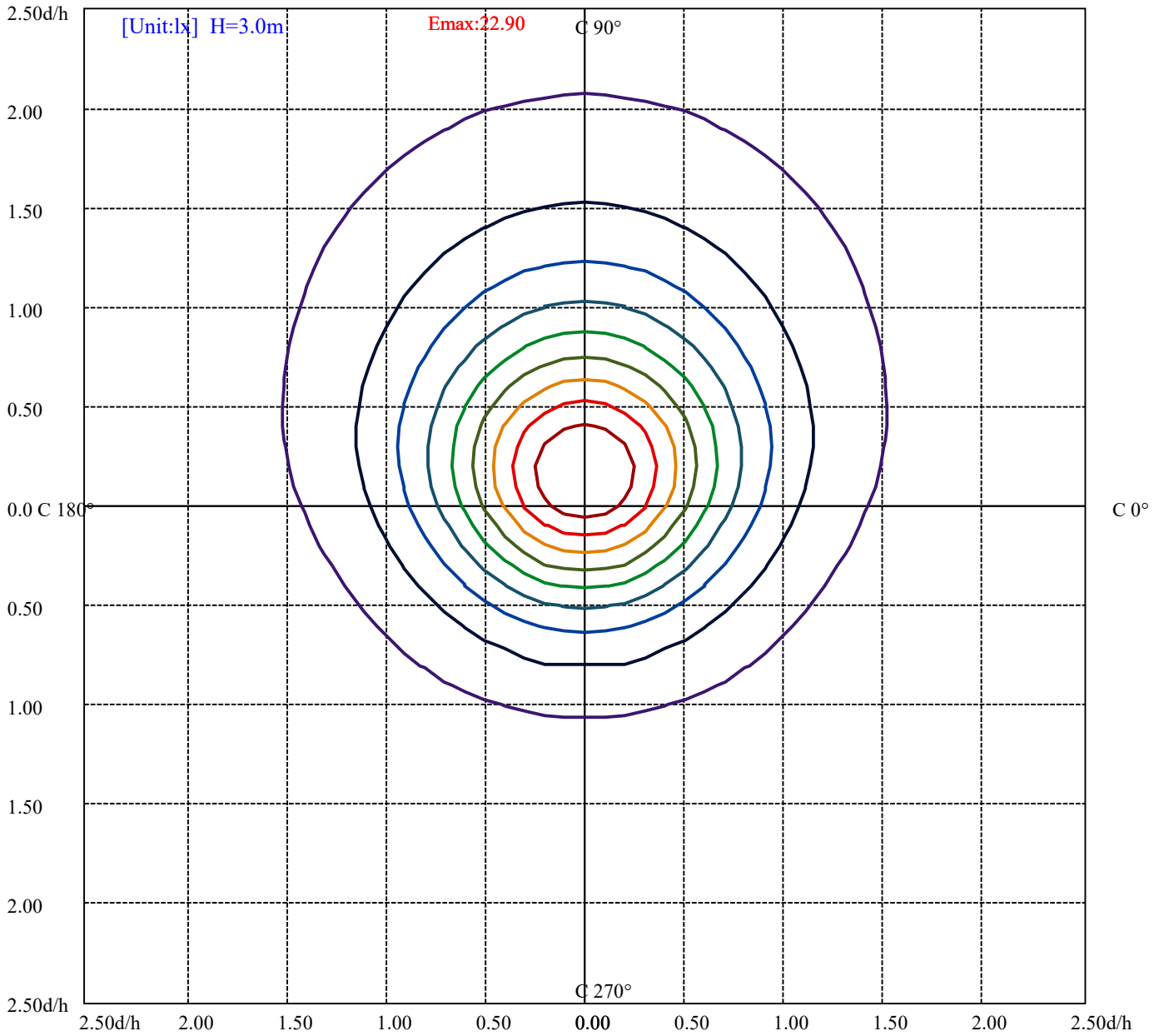
:C90/270Left:0.0 Right:0.0

Beam Angle(50%Imax):C0/180Left:176.6 Right:176.6

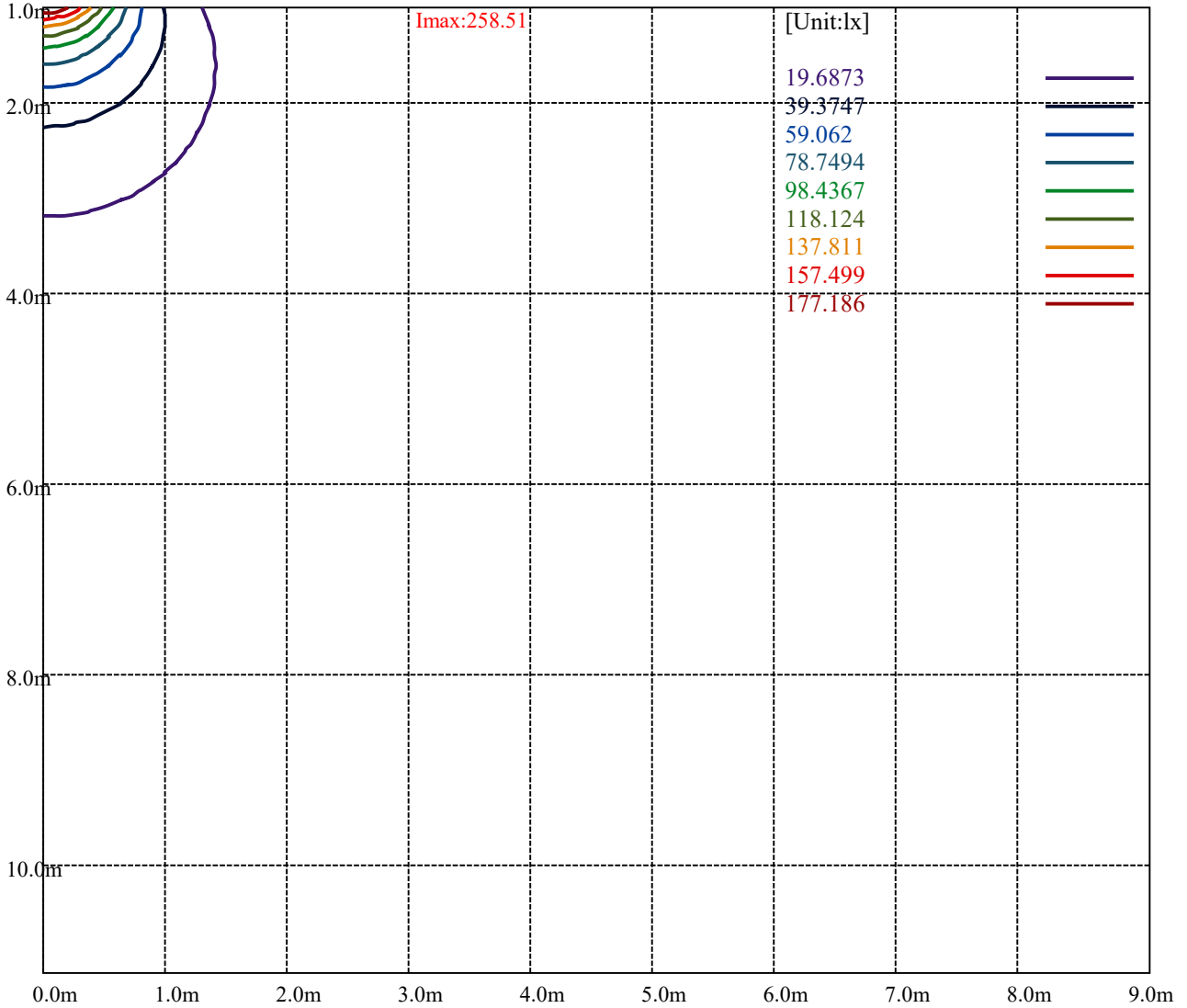
:C90/270Left:0.0 Right:0.0



Max , Ave      Beam angle of C90 plane 216.83



(10%Emax) 2.290144	—
(20%Emax) 4.580289	—
(30%Emax) 6.870422	—
(40%Emax) 9.160566	—
(50%Emax) 11.45067	—
(60%Emax) 13.74089	—
(70%Emax) 16.031	—
(80%Emax) 18.32111	—
(90%Emax) 20.61122	—



Luminance Table

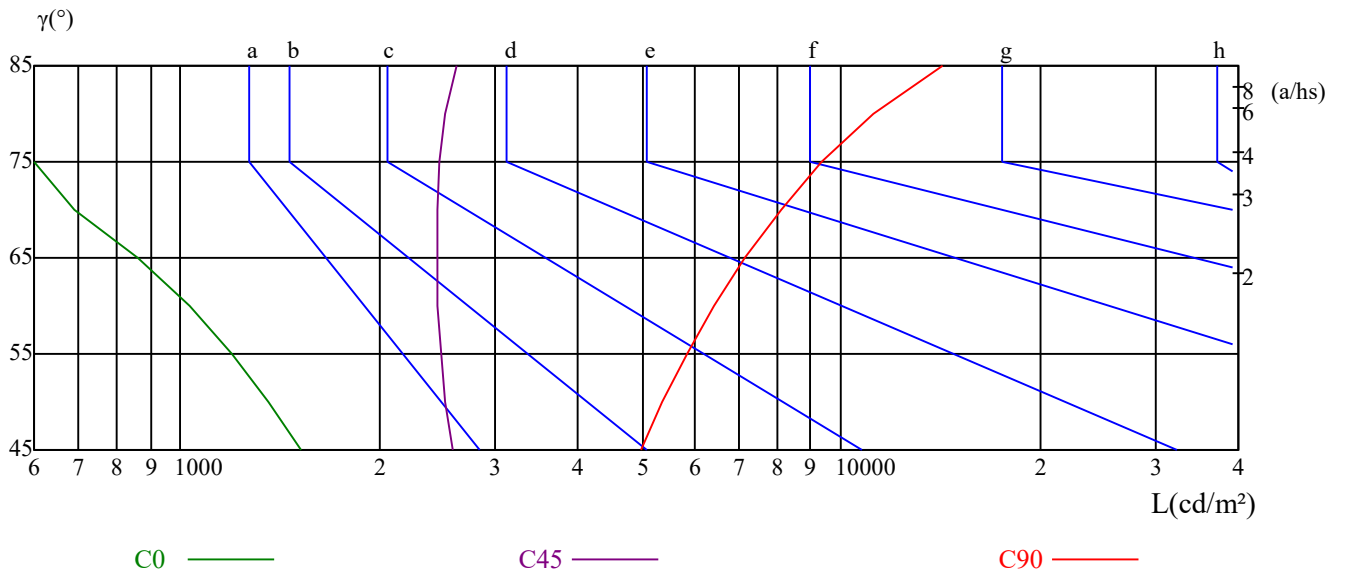
$\gamma$	45	50	55	60	65	70	75	80	85
C0	1525	1359	1192	1033	860	692	524	369	252
C45	2583	2512	2478	2456	2445	2454	2469	2513	2613
C90	4997	5380	5863	6434	7157	8102	9359	11227	14244

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3074	5595	4506	2869	8512	6329	3704	24722	17361

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	$\leq 300$				
1.5	B		2000	1000	500	$\leq 300$			
1.85	C			2000	1000	500	$\leq 300$		
2.2	D				2000	1000	500	$\leq 300$	
2.55	E					2000	1000	500	$\leq 300$
		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	0.83	0.83	0.83	0.69	0.69	0.69	0.56	0.56	0.56	0.50
1	0.90	0.85	0.81	0.83	0.79	0.75	0.69	0.66	0.63	0.57	0.55	0.53	0.46	0.44	0.43	0.37
2	0.77	0.70	0.64	0.71	0.65	0.60	0.60	0.55	0.51	0.49	0.45	0.42	0.39	0.36	0.34	0.29
3	0.67	0.59	0.52	0.62	0.55	0.49	0.52	0.46	0.42	0.43	0.38	0.35	0.34	0.31	0.28	0.24
4	0.59	0.50	0.44	0.54	0.47	0.41	0.46	0.40	0.35	0.37	0.33	0.29	0.30	0.27	0.24	0.20
5	0.52	0.44	0.37	0.48	0.40	0.35	0.41	0.34	0.30	0.33	0.29	0.25	0.27	0.23	0.20	0.17
6	0.47	0.38	0.32	0.43	0.35	0.30	0.36	0.30	0.26	0.30	0.25	0.22	0.24	0.20	0.18	0.15
7	0.42	0.34	0.28	0.39	0.31	0.26	0.33	0.27	0.22	0.27	0.22	0.19	0.22	0.18	0.16	0.13
8	0.38	0.30	0.24	0.35	0.28	0.23	0.30	0.24	0.20	0.25	0.20	0.17	0.20	0.16	0.14	0.11
9	0.35	0.27	0.22	0.32	0.25	0.20	0.27	0.22	0.18	0.23	0.18	0.15	0.19	0.15	0.12	0.10
10	0.32	0.24	0.19	0.29	0.23	0.18	0.25	0.20	0.16	0.21	0.17	0.13	0.17	0.14	0.11	0.09

## Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	196.87	196.87	195.03	192.27	186.75	180.31	172.03	161.91	150.88
15.0	195.95	199.63	200.55	200.55	198.71	195.95	190.43	183.07	174.79
30.0	195.95	201.47	206.07	209.75	210.67	209.75	207.91	202.39	196.87
45.0	195.03	203.31	210.67	217.11	220.79	222.63	221.71	218.95	215.27
60.0	194.11	204.23	214.35	221.71	227.23	230.91	231.83	230.91	228.15
75.0	193.19	205.15	216.19	224.47	230.91	235.51	238.27	238.27	237.35
90.0	192.27	204.23	216.19	225.39	231.83	237.35	239.19	240.11	241.03
105.0	192.27	204.23	215.27	224.47	229.99	234.59	237.35	237.35	236.43
120.0	193.19	203.31	212.51	219.87	225.39	229.07	229.99	229.07	226.31
135.0	200.55	202.39	208.83	215.27	218.03	219.87	218.95	217.11	212.51
150.0	194.11	199.63	204.23	206.99	207.91	207.91	205.15	200.55	194.11
165.0	195.03	197.79	198.71	198.71	196.87	193.19	187.67	180.31	171.11
180.0	196.87	195.95	193.19	188.59	183.07	175.71	166.51	156.39	144.44
195.0	195.95	191.35	185.83	178.47	170.19	160.07	149.04	136.16	124.20
210.0	195.95	187.67	179.39	170.19	159.15	147.20	134.32	119.60	104.88
225.0	195.03	184.91	173.87	161.91	149.96	135.24	121.44	107.64	93.84
240.0	194.11	182.15	170.19	156.39	142.60	127.88	114.08	100.28	86.48
255.0	193.19	180.31	166.51	152.71	138.00	123.28	108.56	95.68	82.80
270.0	192.27	179.39	165.59	150.88	137.08	122.36	108.56	94.76	80.96
285.0	192.27	180.31	166.51	152.71	138.92	124.20	111.32	97.52	93.84
300.0	193.19	182.15	169.27	156.39	153.63	129.72	115.92	102.12	89.24
315.0	200.55	183.99	173.87	161.91	149.96	137.08	123.28	109.48	96.60
330.0	194.11	186.75	178.47	169.27	158.23	147.20	134.32	120.52	107.64
345.0	195.03	191.35	185.83	178.47	170.19	160.07	148.12	136.16	123.28
360.0	196.87	196.87	195.03	192.27	186.75	180.31	172.03	161.91	150.88
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	138.92	125.12	109.48	94.76	77.28	61.64	45.08	31.28	19.32
15.0	164.67	153.63	139.84	125.12	109.48	92.92	77.28	64.40	54.28
30.0	188.59	178.47	167.43	156.39	147.20	137.08	126.96	117.76	111.32
45.0	208.83	203.31	198.71	193.19	187.67	182.15	175.71	169.27	165.59
60.0	226.31	226.31	225.39	224.47	221.71	218.03	214.35	209.75	206.99
75.0	240.11	241.95	243.79	243.79	243.79	241.95	239.19	235.51	232.75
90.0	243.79	246.55	249.31	250.23	250.23	249.31	246.55	243.79	241.03
105.0	238.27	240.11	241.03	241.95	241.03	239.19	236.43	232.75	229.99
120.0	224.47	223.55	222.63	219.87	217.11	213.43	208.83	204.23	200.55
135.0	206.99	199.63	194.11	188.59	182.15	175.71	168.35	161.91	156.39
150.0	185.83	176.63	165.59	152.71	142.60	130.64	119.60	110.40	102.12
165.0	161.91	149.96	137.08	123.28	107.64	91.08	73.60	58.88	47.84
180.0	131.56	116.84	102.12	86.48	70.84	54.28	39.56	25.76	17.48
195.0	108.56	94.76	80.04	64.40	50.60	37.72	26.68	18.40	14.72
210.0	90.16	77.28	63.48	51.52	39.56	28.52	20.24	13.80	13.80
225.0	80.96	68.08	55.20	43.24	32.20	22.08	14.72	11.04	11.04
240.0	73.60	61.64	48.76	36.80	25.76	16.56	10.12	8.28	8.28
255.0	69.00	56.12	44.16	32.20	21.16	11.96	6.44	5.52	5.52
270.0	68.08	54.28	42.32	38.64	19.32	10.12	4.60	4.60	4.60
285.0	69.92	57.04	44.16	33.12	21.16	11.96	7.36	6.44	6.44
300.0	75.44	62.56	49.68	36.80	25.76	16.56	11.04	9.20	9.20
315.0	82.80	69.92	57.04	44.16	32.20	22.08	14.72	11.96	11.96
330.0	93.84	80.04	66.24	52.44	40.48	28.52	20.24	14.72	13.80
345.0	109.48	94.76	80.04	64.40	49.68	36.80	25.76	18.40	15.64
360.0	138.92	125.12	109.48	94.76	77.28	61.64	45.08	31.28	19.32

## 乐达凯 CRNW0616LAJUDBK

Appendix Page: 11 Total:12

## Intensity data(cd)

C/ $\gamma$ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	15.64	18.40	29.44	44.16	59.80	77.28	93.84	111.32	126.96
15.0	50.60	53.36	63.48	76.36	91.08	107.64	124.20	139.84	154.55
30.0	109.48	111.32	118.68	126.96	138.00	148.12	159.15	169.27	180.31
45.0	164.67	166.51	171.11	177.55	184.91	192.27	198.71	205.15	209.75
60.0	206.99	208.83	211.59	217.11	222.63	227.23	230.91	234.59	236.43
75.0	232.75	234.59	238.27	241.95	246.55	249.31	252.07	252.99	252.99
90.0	241.03	242.87	245.63	249.31	252.99	256.67	257.59	258.51	258.51
105.0	229.07	230.91	233.67	238.27	241.95	245.63	247.47	249.31	249.31
120.0	200.55	201.47	204.23	208.83	214.35	219.87	223.55	227.23	229.99
135.0	155.47	156.39	160.07	166.51	173.87	181.23	188.59	195.03	201.47
150.0	98.44	99.36	105.80	115.00	125.12	137.08	148.12	160.07	172.03
165.0	41.40	42.32	51.52	64.40	80.96	97.52	115.00	130.64	145.36
180.0	15.64	18.40	29.44	43.24	58.88	76.36	92.92	109.48	125.12
195.0	14.72	15.64	21.16	31.28	43.24	57.04	72.68	88.32	103.04
210.0	12.88	12.88	16.56	23.00	33.12	44.16	56.12	68.08	80.96
225.0	11.04	11.04	11.96	17.48	24.84	34.04	36.80	54.28	65.32
240.0	8.28	8.28	8.28	12.88	21.16	29.44	39.56	49.68	60.72
255.0	5.52	5.52	5.52	9.20	17.48	25.76	34.96	45.08	55.20
270.0	4.60	3.68	3.68	7.36	14.72	23.92	33.12	43.24	54.28
285.0	6.44	6.44	6.44	10.12	17.48	26.68	35.88	45.08	55.20
300.0	9.20	9.20	9.20	13.80	22.08	30.36	39.56	48.76	59.80
315.0	11.96	11.96	12.88	19.32	25.76	34.96	44.16	54.28	63.48
330.0	13.80	13.80	18.40	24.84	34.04	44.16	55.20	67.16	77.28
345.0	15.64	17.48	24.84	34.96	47.84	60.72	76.36	89.24	103.04
360.0	15.64	18.40	29.44	44.16	59.80	77.28	93.84	111.32	126.96
C/ $\gamma$ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	141.68	155.47	167.43	177.55	185.83	192.27	184.91	151.79	122.36
15.0	167.43	179.39	188.59	197.79	204.23	208.83	207.91	183.07	138.92
30.0	191.35	201.47	208.83	215.27	218.95	221.71	221.71	210.67	165.59
45.0	214.35	220.79	226.31	229.99	232.75	231.83	229.99	225.39	199.63
60.0	237.35	237.35	239.19	241.03	241.03	239.19	235.51	229.07	218.95
75.0	252.07	250.23	247.47	247.47	246.55	243.79	238.27	231.83	222.63
90.0	256.67	253.91	250.23	249.31	248.39	244.71	239.19	231.83	221.71
105.0	249.31	246.55	244.71	245.63	245.63	242.87	237.35	230.91	222.63
120.0	231.83	232.75	234.59	237.35	238.27	237.35	233.67	228.15	220.79
135.0	206.99	214.35	219.87	225.39	227.23	228.15	226.31	222.63	217.11
150.0	183.99	194.11	202.39	208.83	213.43	216.19	217.11	216.19	212.51
165.0	159.15	171.11	181.23	191.35	197.79	203.31	206.99	207.91	206.07
180.0	139.84	153.63	165.59	175.71	185.83	189.51	173.87	138.00	113.16
195.0	118.68	131.56	143.52	152.71	161.91	163.75	147.20	115.00	103.04
210.0	93.84	95.68	113.16	119.60	127.88	132.48	124.20	94.76	91.08
225.0	75.44	84.64	93.84	99.36	103.04	108.56	103.96	74.52	70.84
240.0	70.84	79.12	85.56	92.92	97.52	102.12	97.52	58.88	59.80
255.0	66.24	76.36	82.80	90.16	96.60	101.20	93.84	43.24	57.96
270.0	64.40	75.44	80.96	87.40	94.76	100.28	82.80	45.08	88.32
285.0	66.24	74.52	80.04	86.48	92.92	100.28	74.52	59.80	111.32
300.0	68.08	74.52	80.96	87.40	92.92	95.68	80.96	78.20	137.08
315.0	71.76	79.12	85.56	92.92	98.44	100.28	96.60	101.20	150.88
330.0	88.32	97.52	105.80	112.24	120.52	124.20	124.20	127.88	166.51
345.0	115.92	127.88	137.08	146.28	155.47	160.99	161.91	163.75	180.31
360.0	141.68	155.47	167.43	177.55	185.83	192.27	184.91	151.79	122.36

Intensity data(cd)

C/γ(°)	180.0
0.0	114.08
15.0	118.68
30.0	121.44
45.0	131.56
60.0	160.07
75.0	191.35
90.0	206.07
105.0	206.07
120.0	203.31
135.0	202.39
150.0	199.63
165.0	198.71
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	114.08