



Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.  
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LumCAT: LB4R 30K

Luminaire:

Report No:

Voltage(V): 120.07

Test No:

Current(A): 0.0874

LampCAT:

Power (W): 10.2660

Lamp flux(lm): 702.8

PF: 0.9781

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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### Photometric Results

Lumens(lm): 702.80

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 68.46

Central intensity(cd): 261.857

Maximum intensity(cd): 270.344

Angle of maximum intensity: C=90.0  $\gamma$ =5.0

Beam Angle(50%Imax): [C0/180]Total=107.3

[C90/270]Total=108.0

Field angle(10%Imax): [C0/180]Total=151.8

[C90/270]Total=151.4

Maximum s/h(1/2): C0\_180=1.32 C90\_270=1.39

Maximum s/h(1/4): C0\_180=1.44 C90\_270=1.48

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 100.00%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 83.139%

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Equipment: GMS-3000  
Temperature(°C): 25

Date:  
Humidity(%): 58%

Operator: Sam

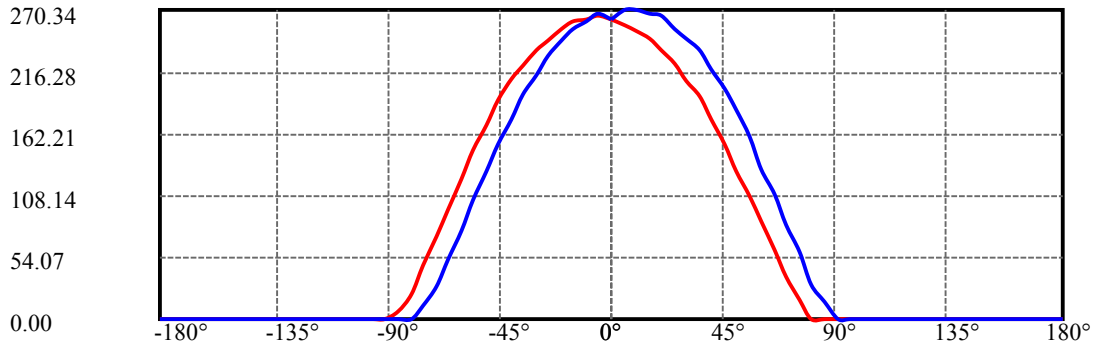
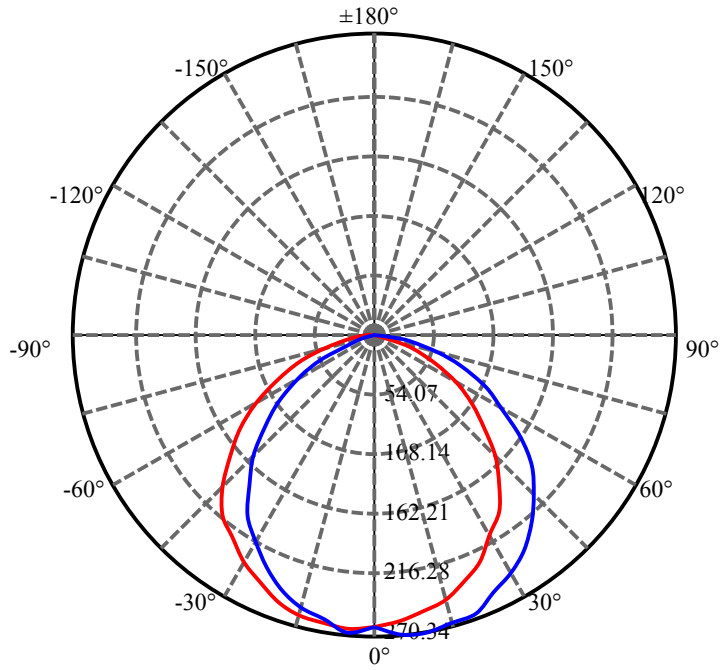
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	261.857	0.000	0	.000%	.000%
5.0	261.666	6.259	6.259	.891%	.891%
10.0	258.093	18.593	24.852	2.646%	3.536%
15.0	253.669	30.357	55.209	4.319%	7.856%
20.0	246.012	41.181	96.39	5.860%	13.715%
25.0	236.313	50.587	146.977	7.198%	20.913%
30.0	224.572	58.325	205.303	8.299%	29.212%
35.0	209.598	63.935	269.237	9.097%	38.309%
40.0	192.923	67.158	336.395	9.556%	47.865%
45.0	173.015	67.756	404.151	9.641%	57.506%
50.0	151.405	65.554	469.705	9.328%	66.834%
55.0	128.604	60.883	530.588	8.663%	75.497%
60.0	103.761	53.711	584.299	7.642%	83.139%
65.0	79.259	44.493	628.791	6.331%	89.470%
70.0	53.565	33.632	662.423	4.785%	94.255%
75.0	32.636	22.532	684.955	3.206%	97.461%
80.0	12.864	12.174	697.129	1.732%	99.194%
85.0	3.982	4.577	701.707	.651%	99.845%
90.0	0.000	1.090	702.797	.155%	100.000%
95.0	0.000	0.000	702.797	.000%	100.000%
100.0	0.000	0.000	702.797	.000%	100.000%
105.0	0.000	0.000	702.797	.000%	100.000%
110.0	0.000	0.000	702.797	.000%	100.000%
115.0	0.000	0.000	702.797	.000%	100.000%
120.0	0.000	0.000	702.797	.000%	100.000%
125.0	0.000	0.000	702.797	.000%	100.000%
130.0	0.000	0.000	702.797	.000%	100.000%
135.0	0.000	0.000	702.797	.000%	100.000%
140.0	0.000	0.000	702.797	.000%	100.000%
145.0	0.000	0.000	702.797	.000%	100.000%
150.0	0.000	0.000	702.797	.000%	100.000%
155.0	0.000	0.000	702.797	.000%	100.000%
160.0	0.000	0.000	702.797	.000%	100.000%
165.0	0.000	0.000	702.797	.000%	100.000%
170.0	0.000	0.000	702.797	.000%	100.000%
175.0	0.000	0.000	702.797	.000%	100.000%
180.0	0.000	0.000	702.797	.000%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	205.30	29.21%	29.21%
0-40	336.39	47.86%	47.87%
0-60	584.30	83.14%	83.14%
0-90	702.80	100.00%	100.00%
0-120	702.80	100.00%	100.00%
0-180	702.80	100.00%	100.00%
60-90	172.21	24.50%	24.50%
90-120	1.09	0.16%	0.16%
90-130	1.09	0.16%	0.16%
90-150	1.09	0.16%	0.16%
90-180	1.09	0.16%	0.16%
0-57.95	562.24	80.00%	80.00%

## ZONAL LUMEN SUMMARY

0-10	24.85
10-20	71.54
20-30	108.91
30-40	131.09
40-50	133.31
50-60	114.59
60-70	78.12
70-80	34.71
80-90	5.67
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

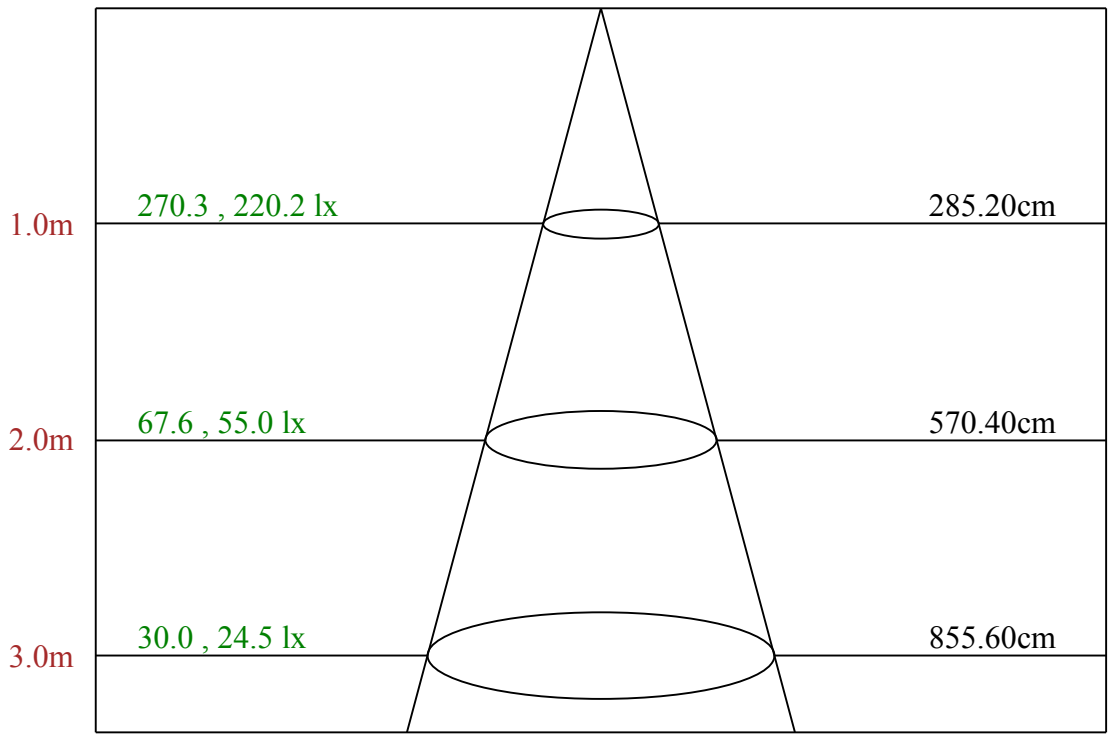


C0/C180: ————

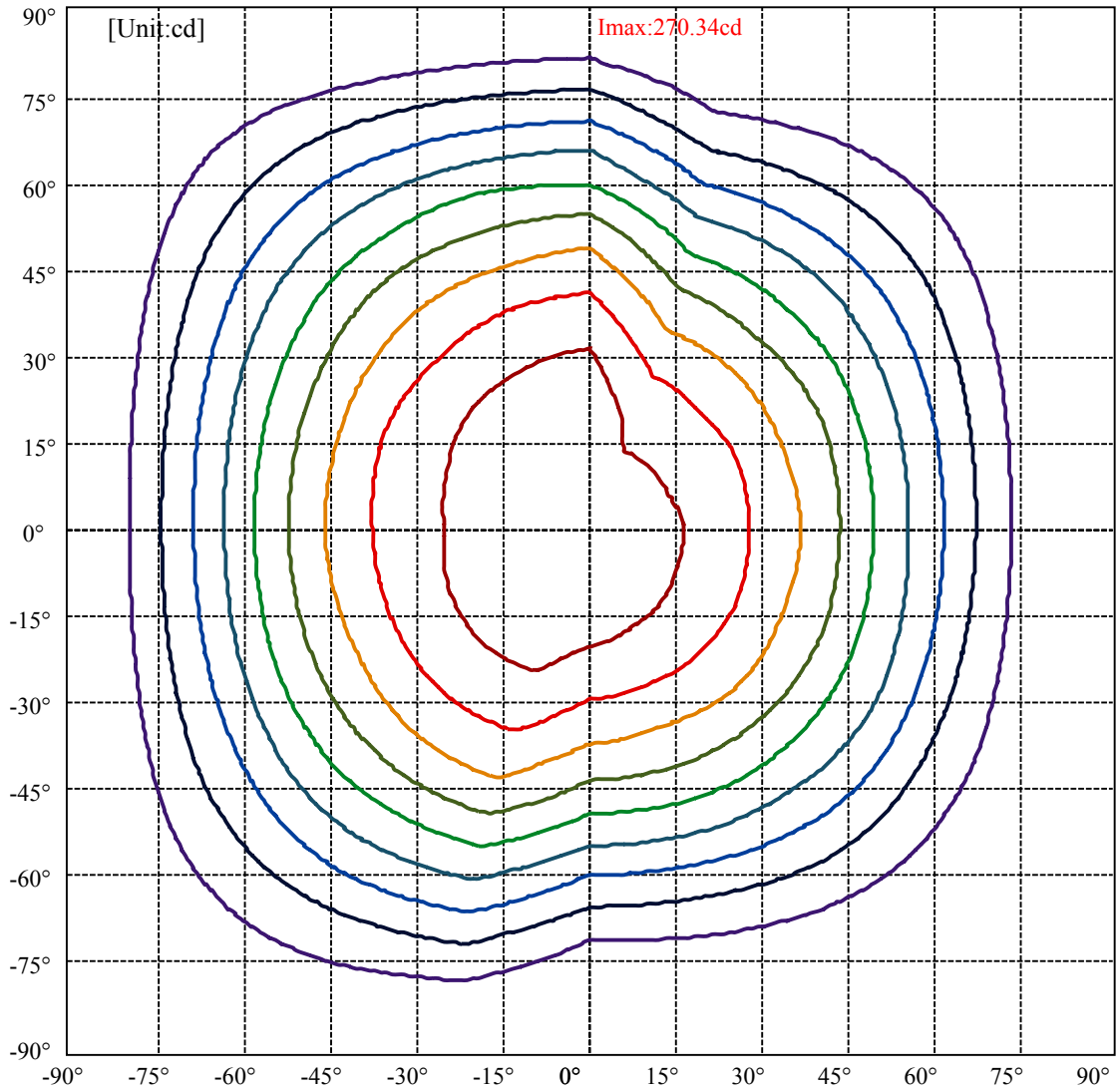
C90/C270: ————

Field angle(10%Imax):C0/180Left:74.2 Right:77.6  
:C90/270Left:80.3 Right:71.1

Beam Angle(50%Imax):C0/180Left:53.1 Right:54.2  
:C90/270Left:58.7 Right:49.3



Max , Ave      Beam angle of C90 plane 108.55

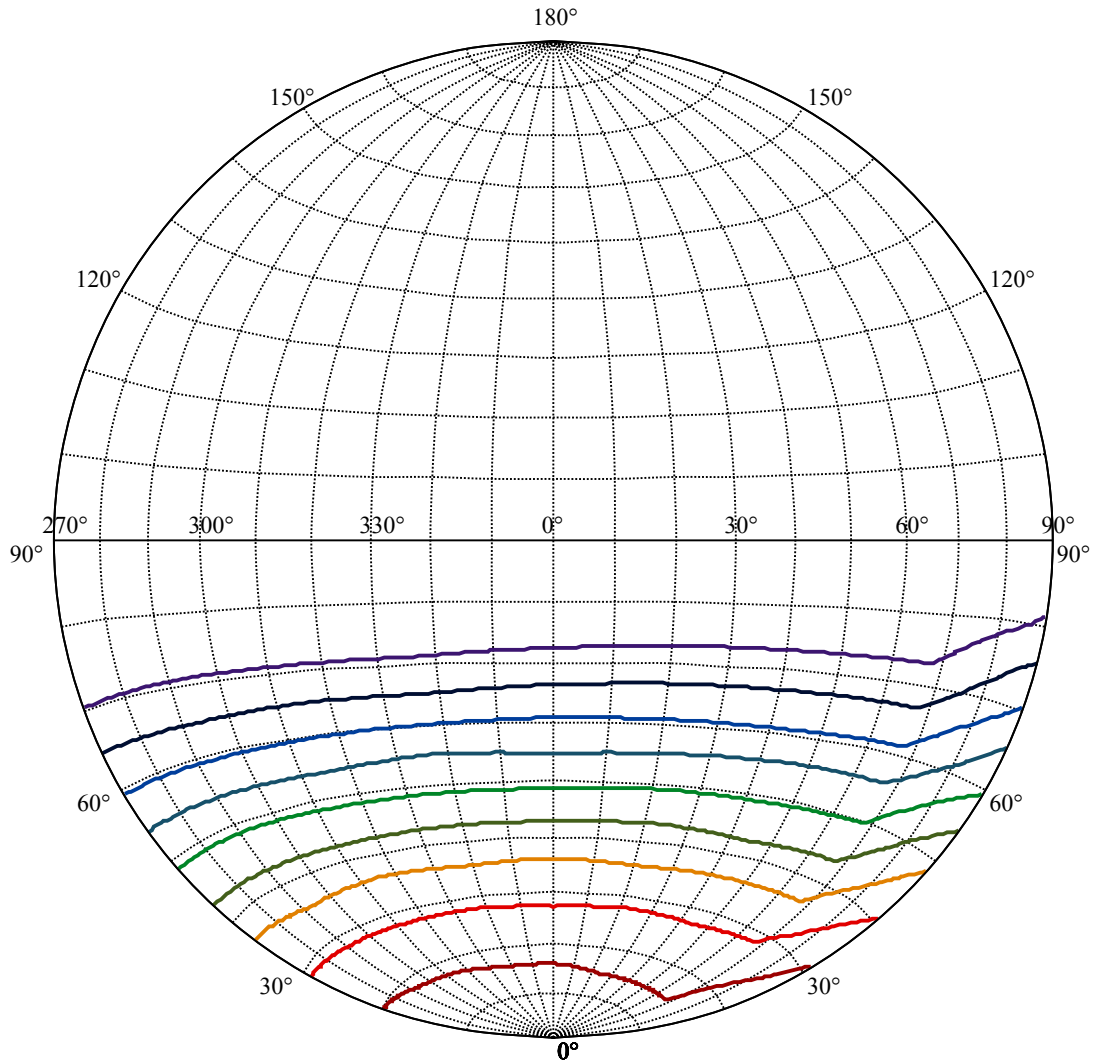


(10%I <sub>max</sub> )	27.0344	—
(20%I <sub>max</sub> )	54.0688	—
(30%I <sub>max</sub> )	81.1032	—
(40%I <sub>max</sub> )	108.138	—
(50%I <sub>max</sub> )	135.172	—
(60%I <sub>max</sub> )	162.206	—
(70%I <sub>max</sub> )	189.241	—
(80%I <sub>max</sub> )	216.275	—
(90%I <sub>max</sub> )	243.31	—

Equipment: GMS-3000  
Temperature(°C): 25

Date:  
Humidity(%): 58%

Operator: Sam



House

[Unit:cd]

Road

I<sub>max</sub>:270.34

(10%I<sub>max</sub>) 27.0344

(20%I<sub>max</sub>) 54.0688

(30%I<sub>max</sub>) 81.1032

(40%I<sub>max</sub>) 108.138

(50%I<sub>max</sub>) 135.172

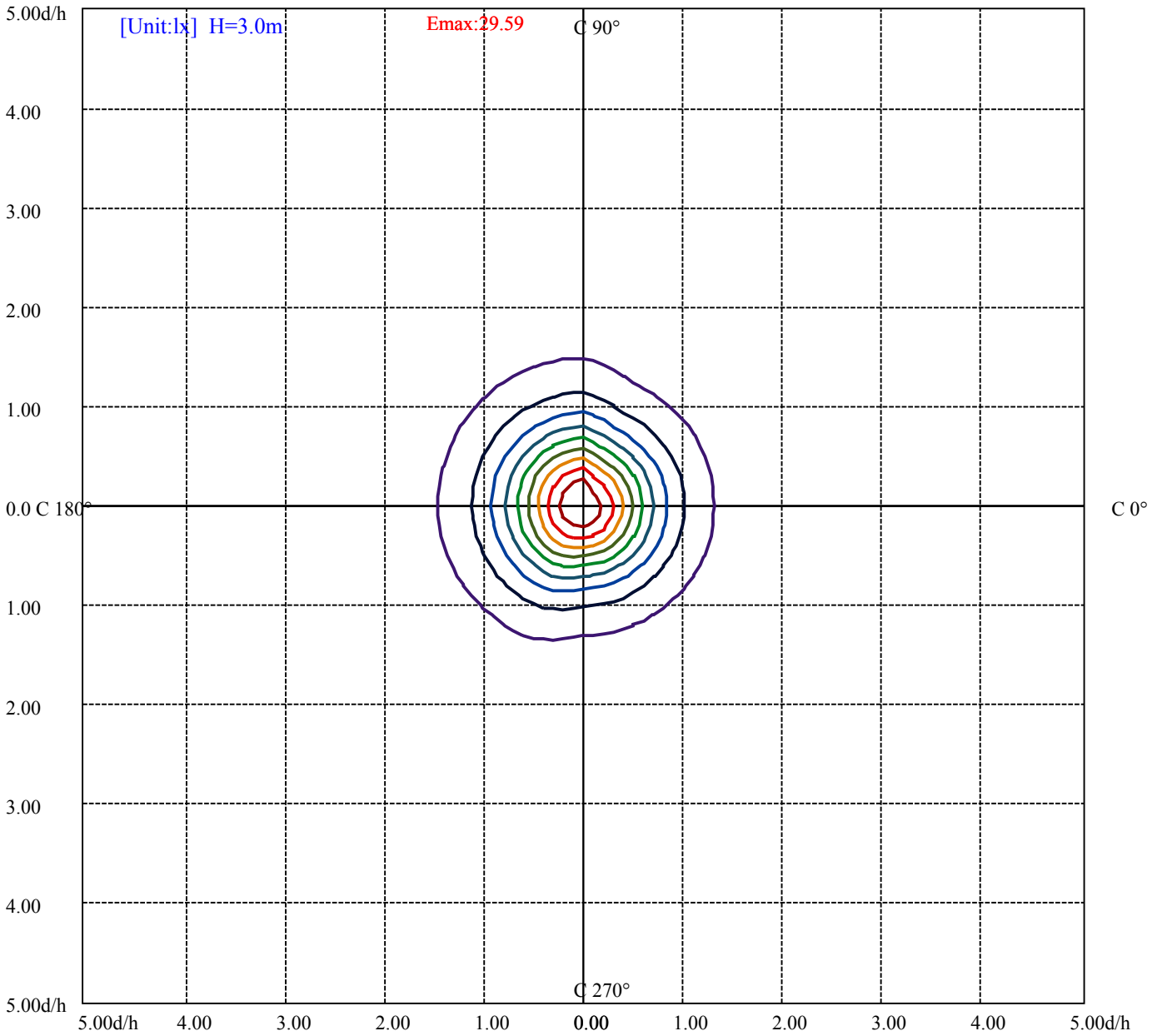
(60%I<sub>max</sub>) 162.206

(70%I<sub>max</sub>) 189.241

(80%I<sub>max</sub>) 216.275

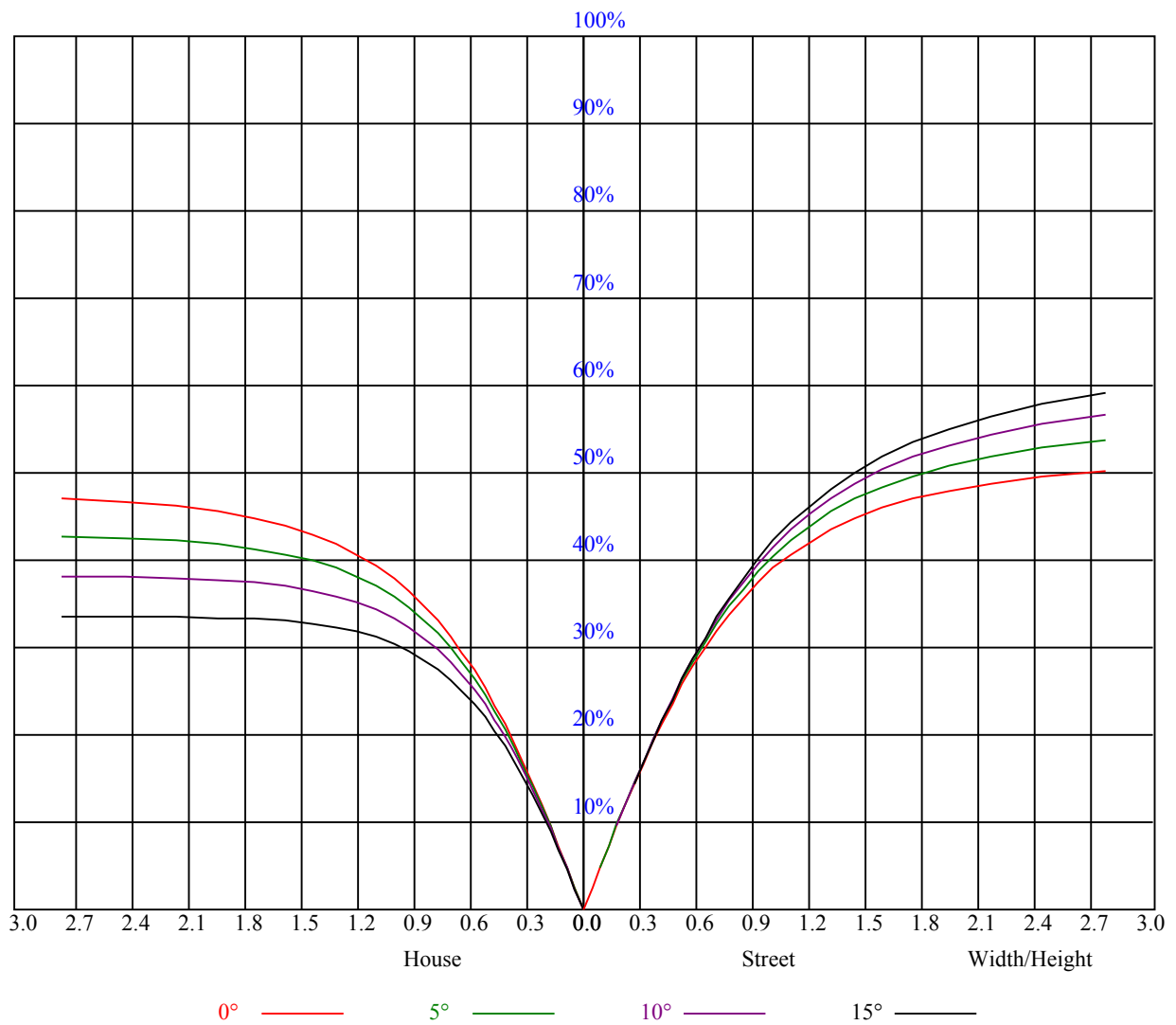
(90%I<sub>max</sub>) 243.31





(10%Emax) 2.959311	—
(20%Emax) 5.918612	—
(30%Emax) 8.877922	—
(40%Emax) 11.83722	—
(50%Emax) 14.79656	—
(60%Emax) 17.75589	—
(70%Emax) 20.71511	—
(80%Emax) 23.67445	—
(90%Emax) 26.63378	—





## 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	261.86	256.73	251.29	245.84	234.95	224.06	207.73	194.11	175.06
22.5	261.86	256.73	251.29	243.12	234.95	224.06	210.45	191.39	175.06
45.0	261.86	254.01	251.29	243.12	234.95	221.34	210.45	194.11	172.33
67.5	261.86	256.73	248.56	243.12	234.95	224.06	213.17	194.11	177.78
90.0	261.86	270.34	270.34	267.62	264.90	254.01	245.84	234.95	218.62
112.5	261.86	267.62	267.62	264.90	259.45	251.29	243.12	232.23	215.89
135.0	261.86	262.18	262.18	262.18	254.01	251.29	240.40	229.51	210.45
157.5	261.86	264.90	262.18	259.45	254.01	245.84	237.67	224.06	213.17
180.0	261.86	264.90	262.18	259.45	254.01	243.12	234.95	221.34	210.45
202.5	261.86	262.18	262.18	259.45	251.29	245.84	234.95	221.34	207.73
225.0	261.86	262.18	259.45	256.73	251.29	245.84	237.67	221.34	207.73
247.5	261.86	262.18	256.73	256.73	251.29	245.84	232.23	221.34	205.00
270.0	261.86	267.62	259.45	254.01	243.12	229.51	213.17	196.84	175.06
292.5	261.86	262.18	256.73	248.56	240.40	226.78	210.45	191.39	172.33
315.0	261.86	259.45	254.01	248.56	237.67	224.06	210.45	194.11	175.06
337.5	261.86	256.73	254.01	245.84	234.95	224.06	210.45	191.39	175.06
360.0	261.86	256.73	251.29	245.84	234.95	224.06	207.73	194.11	175.06
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	153.28	128.77	106.99	85.21	60.71	36.21	17.15	0.82	0.00
22.5	156.00	131.50	109.72	85.21	63.43	38.93	19.87	0.82	0.00
45.0	153.28	131.50	112.44	85.21	63.43	38.93	19.87	6.26	0.00
67.5	156.00	134.22	112.44	87.94	63.43	38.93	19.87	3.54	0.00
90.0	202.28	183.22	158.72	131.50	109.72	82.49	57.99	30.76	14.43
112.5	196.84	177.78	156.00	134.22	106.99	79.77	55.27	28.04	14.43
135.0	194.11	177.78	153.28	128.77	104.27	77.05	52.54	25.32	11.71
157.5	191.39	172.33	147.83	126.05	101.55	74.32	49.82	25.32	6.26
180.0	191.39	169.61	147.83	123.33	96.10	71.60	47.10	22.60	6.26
202.5	185.95	166.89	145.11	120.61	93.38	66.16	44.38	19.87	3.54
225.0	188.67	166.89	142.39	117.88	96.10	66.16	41.65	22.60	3.54
247.5	188.67	166.89	142.39	117.88	93.38	66.16	41.65	19.87	3.54
270.0	153.28	128.77	104.27	77.05	52.54	28.04	11.71	0.00	0.00
292.5	153.28	128.77	104.27	77.05	52.54	30.76	11.71	0.00	0.00
315.0	150.55	128.77	104.27	79.77	55.27	30.76	14.43	0.00	0.00
337.5	153.28	128.77	109.72	82.49	55.27	30.76	17.15	0.00	0.00
360.0	153.28	128.77	106.99	85.21	60.71	36.21	17.15	0.82	0.00
C/ $\gamma$ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
337.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

LB4R 30K

Intensity data(cd)

Appendix Page: 11 Total:11

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
337.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C/γ(°)	180.0
0.0	0.00
22.5	0.00
45.0	0.00
67.5	0.00
90.0	0.00
112.5	0.00
135.0	0.00
157.5	0.00
180.0	0.00
202.5	0.00
225.0	0.00
247.5	0.00
270.0	0.00
292.5	0.00
315.0	0.00
337.5	0.00
360.0	0.00