



Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.  
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LumCAT: LL4R-30K

Luminaire:

Report No:

Voltage(V): 120.01

Test No:

Current(A): 0.1113

LampCAT:

Power (W): 13.1680

Lamp flux(lm): 762.6

PF: 0.9858

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): 762.62

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 57.91

Central intensity(cd): 282.369

Maximum intensity(cd): 282.897

Angle of maximum intensity:  $C=337.5 \gamma=5.0$

Beam Angle(50%Imax): [C0/180]Total=106.6

[C90/270]Total=106.3

Field angle(10%Imax): [C0/180]Total=158.8

[C90/270]Total=158.7

Maximum s/h(1/2): C0\_180=1.26 C90\_270=1.20

Maximum s/h(1/4): C0\_180=1.80 C90\_270=1.33

Up flux rate of lamp(%): 0.97%

Down flux rate of lamp(%): 99.03%

Up flux rate of LUM(%): 0.97%

Down flux rate of LUM(%): 99.03%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 79.374%

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

Date:  
Humidity(%): 58%

Operator: Zac

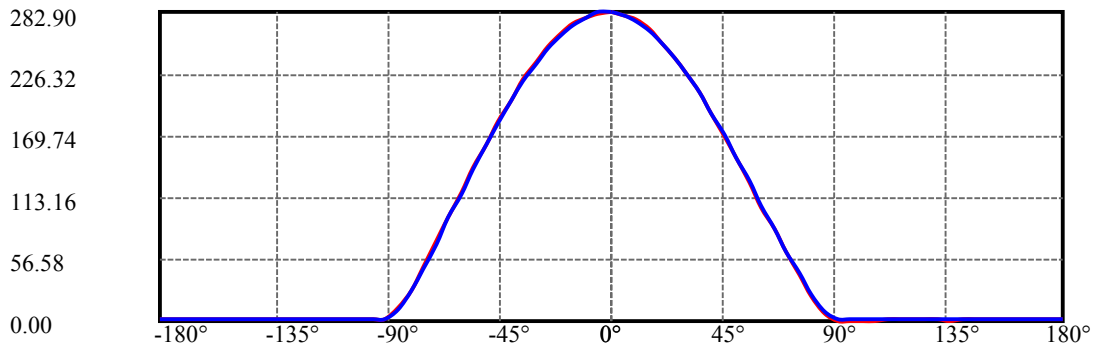
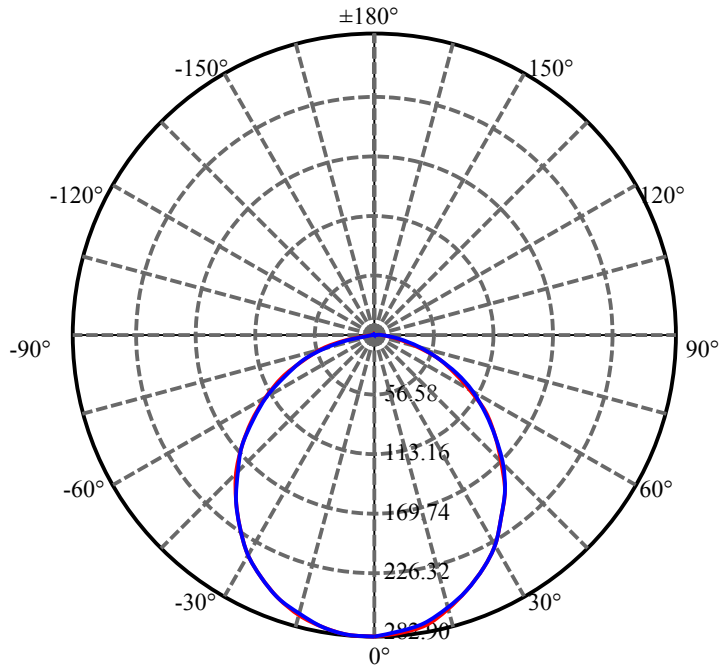
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	282.369	.000	.000	.000%	.000%
5.0	280.903	6.734	6.734	.883%	.883%
10.0	276.255	19.931	26.665	2.614%	3.497%
15.0	269.050	32.347	59.012	4.242%	7.738%
20.0	258.812	43.503	102.515	5.704%	13.443%
25.0	246.201	52.967	155.482	6.945%	20.388%
30.0	231.343	60.434	215.916	7.925%	28.313%
35.0	214.392	65.638	281.553	8.607%	36.919%
40.0	195.868	68.449	350.002	8.976%	45.895%
45.0	176.221	68.895	418.898	9.034%	54.929%
50.0	155.268	66.982	485.880	8.783%	63.712%
55.0	133.542	62.797	548.677	8.234%	71.947%
60.0	111.507	56.643	605.319	7.427%	79.374%
65.0	89.262	48.807	654.127	6.400%	85.774%
70.0	67.228	39.624	693.751	5.196%	90.970%
75.0	45.797	29.543	723.294	3.874%	94.844%
80.0	25.869	19.176	742.469	2.514%	97.358%
85.0	9.873	9.712	752.181	1.273%	98.632%
90.0	1.138	3.015	755.196	.395%	99.027%
95.0	1.026	.592	755.788	.078%	99.105%
100.0	1.096	.576	756.364	.076%	99.180%
105.0	1.054	.575	756.939	.075%	99.256%
110.0	1.124	.569	757.509	.075%	99.330%
115.0	1.152	.576	758.085	.076%	99.406%
120.0	1.222	.577	758.662	.076%	99.481%
125.0	1.166	.552	759.214	.072%	99.554%
130.0	1.236	.522	759.736	.068%	99.622%
135.0	1.194	.491	760.227	.064%	99.687%
140.0	1.250	.453	760.679	.059%	99.746%
145.0	1.264	.419	761.099	.055%	99.801%
150.0	1.334	.383	761.482	.050%	99.851%
155.0	1.362	.341	761.823	.045%	99.896%
160.0	1.334	.283	762.106	.037%	99.933%
165.0	1.334	.220	762.326	.029%	99.962%
170.0	1.362	.160	762.486	.021%	99.983%
175.0	1.390	.098	762.584	.013%	99.996%
180.0	1.282	.032	762.616	.004%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	215.92	28.31%	28.31%
0-40	350.00	45.89%	45.89%
0-60	605.32	79.37%	79.37%
0-90	755.20	99.03%	99.03%
0-120	758.66	99.48%	99.48%
0-180	762.62	100.00%	100.00%
60-90	206.52	27.08%	27.08%
90-120	6.48	0.85%	0.85%
90-130	7.55	0.99%	0.99%
90-150	9.30	1.22%	1.22%
90-180	10.40	1.36%	1.36%
0-60.49	610.09	80.00%	80.00%

## ZONAL LUMEN SUMMARY

0-10	26.67
10-20	75.85
20-30	113.40
30-40	134.09
40-50	135.88
50-60	119.44
60-70	88.43
70-80	48.72
80-90	12.73
90-100	1.17
100-110	1.14
110-120	1.15
120-130	1.07
130-140	0.94
140-150	0.80
150-160	0.62
160-170	0.38
170-180	0.10

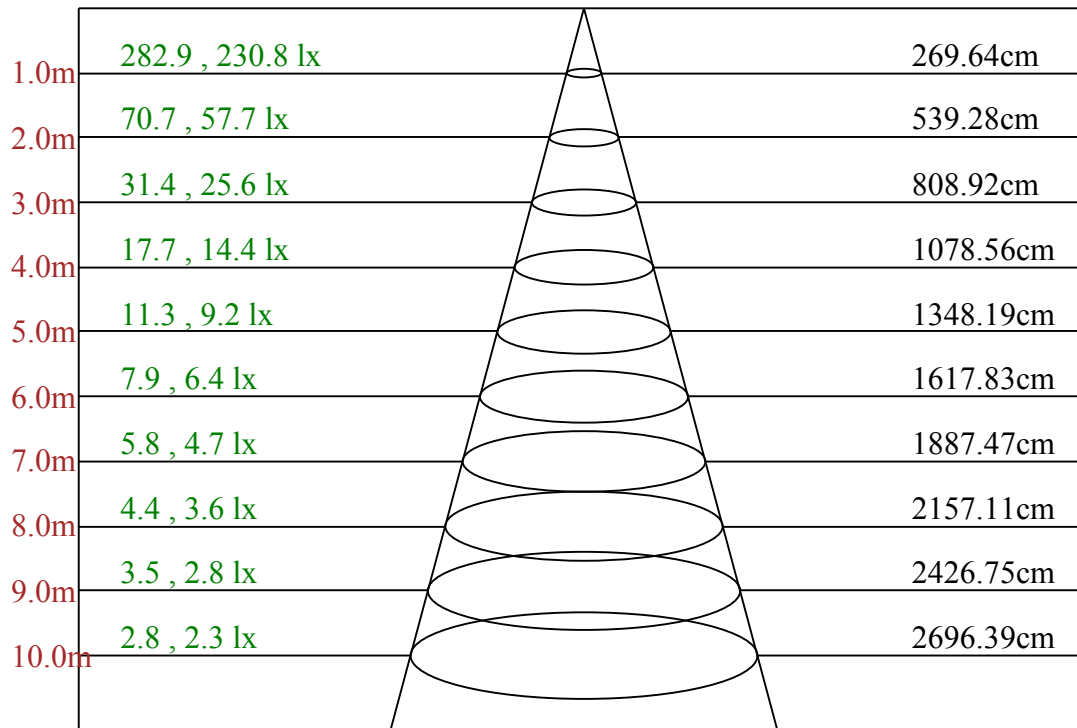


C0/C180: —

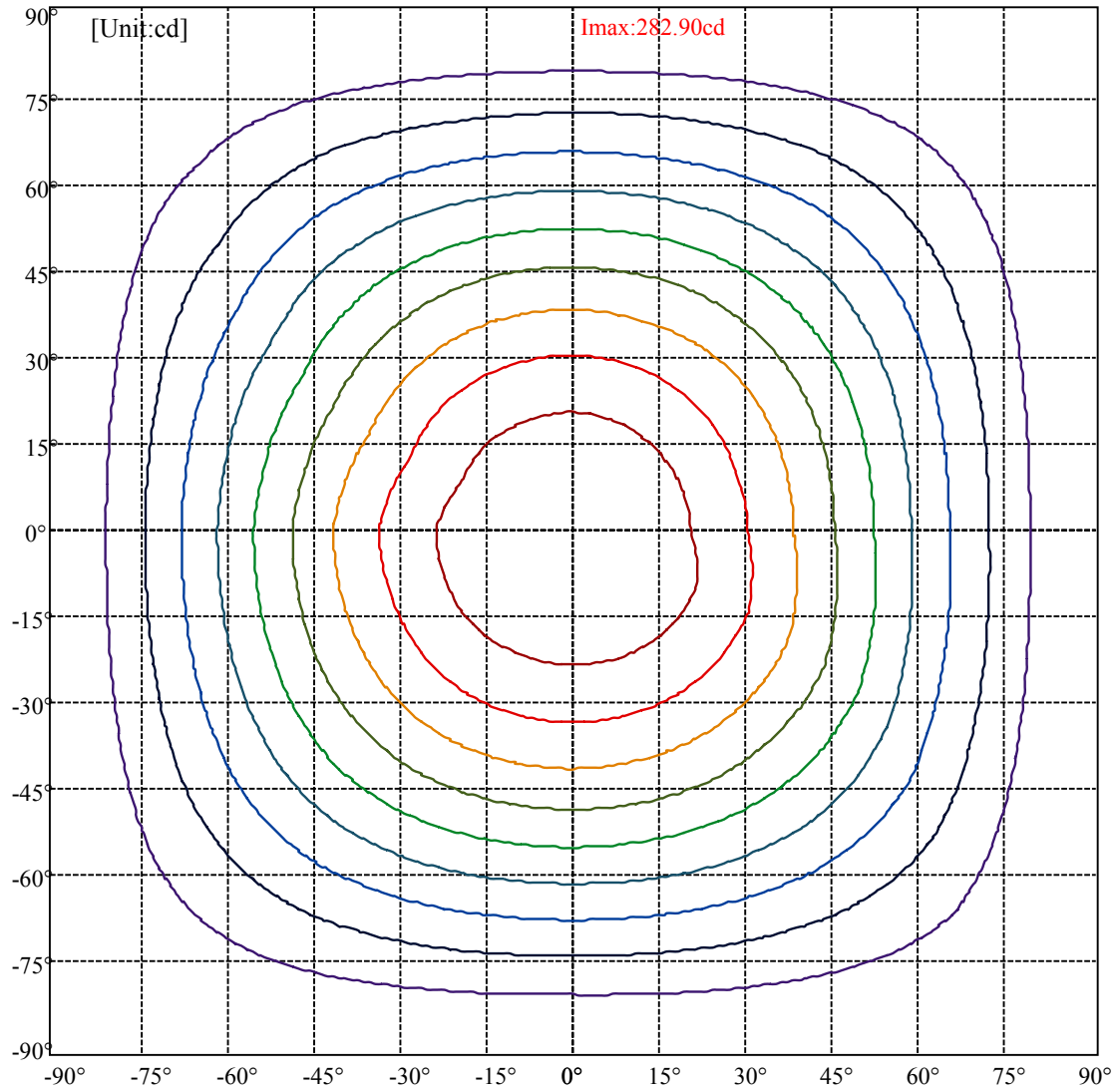
C90/C270: —

Field angle(10%Imax):C0/180Left:80.2 Right:78.5  
:C90/270Left:79.8 Right:78.9

Beam Angle(50%Imax):C0/180Left:54.9 Right:51.8  
:C90/270Left:54.5 Right:51.8



Max , Ave      Beam angle of C337.5plane106.79



(10%Imax)	28.2805	—
(20%Imax)	56.5611	—
(30%Imax)	84.8416	—
(40%Imax)	113.122	—
(50%Imax)	141.403	—
(60%Imax)	169.683	—
(70%Imax)	197.964	—
(80%Imax)	226.244	—
(90%Imax)	254.525	—

## Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	282.37	279.75	275.48	266.49	255.26	241.55	226.50	208.75	189.87
22.5	282.37	279.53	273.24	266.05	254.59	241.33	224.93	208.97	189.87
45.0	282.37	278.85	273.91	265.37	253.91	240.88	225.37	208.30	189.87
67.5	282.37	279.30	273.69	265.60	254.81	241.55	225.82	208.30	188.75
90.0	282.37	279.30	273.91	265.60	255.26	241.33	226.50	208.75	189.87
112.5	282.37	279.98	274.13	266.27	255.26	242.23	226.50	209.42	190.55
135.0	282.37	280.43	274.81	267.17	256.38	242.68	227.85	209.65	190.32
157.5	282.37	281.55	275.48	267.62	256.61	243.80	227.62	210.54	191.00
180.0	282.37	282.00	278.40	272.56	263.35	250.77	237.06	220.66	202.46
202.5	282.37	281.77	277.73	271.66	262.45	250.99	236.61	218.63	201.56
225.0	282.37	280.88	278.18	271.44	262.67	250.54	235.94	219.76	202.01
247.5	282.37	281.55	278.18	271.89	262.00	250.09	235.94	219.98	201.78
270.0	282.37	282.22	277.51	271.21	262.00	249.87	236.16	219.98	202.01
292.5	282.37	281.77	278.18	272.11	262.00	250.77	236.16	219.76	201.11
315.0	282.37	282.67	278.40	271.89	262.45	250.54	236.61	219.31	201.33
337.5	282.37	282.90	278.85	271.89	262.00	250.32	235.94	219.53	201.56
360.0	282.37	279.75	275.48	266.49	255.26	241.55	226.50	208.75	189.87
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	169.42	148.75	127.18	104.49	83.59	62.92	41.79	22.70	7.64
22.5	169.65	148.53	127.41	105.83	84.04	62.69	42.47	23.59	8.31
45.0	169.65	148.53	126.96	106.06	84.49	63.59	42.24	23.37	8.76
67.5	170.10	148.75	127.41	105.38	84.04	63.82	42.69	24.04	7.87
90.0	170.10	148.98	127.41	105.38	84.94	63.37	43.59	23.82	8.09
112.5	170.77	149.65	127.63	106.06	84.94	62.47	42.47	23.59	8.09
135.0	170.55	150.32	128.08	106.73	84.49	63.59	42.47	23.14	8.31
157.5	171.22	149.43	128.53	106.73	84.71	62.47	42.24	22.92	8.09
180.0	182.91	162.23	140.66	118.19	94.60	73.25	49.66	28.99	12.13
202.5	182.68	161.78	139.99	117.29	94.82	71.46	49.21	28.54	11.68
225.0	182.46	161.56	140.21	117.29	94.37	70.78	49.21	28.31	11.46
247.5	182.23	161.11	139.31	116.84	93.48	71.01	48.76	27.86	11.46
270.0	181.56	161.56	139.09	116.40	94.15	70.78	48.31	27.41	11.01
292.5	182.23	161.11	138.64	117.07	93.93	70.56	48.76	28.31	11.24
315.0	182.23	160.66	138.64	117.52	93.93	70.78	49.21	28.54	11.46
337.5	181.78	161.34	139.54	116.84	93.70	72.13	49.66	28.76	12.36
360.0	169.42	148.75	127.18	104.49	83.59	62.92	41.79	22.70	7.64
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.67	0.67	0.67	0.67	0.90	0.90	0.90	0.90	1.12
22.5	0.90	0.90	0.67	0.90	1.12	1.12	1.35	1.12	1.35
45.0	1.12	0.90	0.67	0.90	0.90	0.90	1.12	1.12	1.35
67.5	0.90	1.12	1.12	1.12	1.12	0.90	1.12	0.90	1.12
90.0	0.90	0.90	1.12	1.12	1.12	1.35	1.12	0.90	1.35
112.5	0.90	0.67	0.90	0.90	0.90	0.90	1.12	1.35	1.12
135.0	1.12	0.90	1.12	0.90	0.90	0.90	1.12	1.12	0.90
157.5	0.90	1.12	1.12	1.12	0.90	1.12	1.12	0.90	1.12
180.0	1.35	1.12	1.12	1.12	1.35	1.12	1.12	1.35	1.35
202.5	1.35	1.12	1.35	1.12	1.35	1.35	1.57	1.35	1.12
225.0	1.12	1.12	1.35	0.90	1.12	1.12	1.35	1.35	1.35
247.5	1.57	1.12	1.12	1.35	1.12	1.12	1.35	1.57	1.35
270.0	1.12	1.12	1.35	1.12	1.12	1.35	1.35	1.35	1.12
292.5	1.12	1.12	1.35	1.12	1.35	1.35	1.12	1.12	1.35
315.0	1.35	1.12	1.12	1.12	1.35	1.35	1.35	1.12	1.12
337.5	1.80	1.35	1.35	1.35	1.35	1.57	1.35	1.12	1.57
360.0	0.67	0.67	0.67	0.67	0.90	0.90	0.90	0.90	1.12

## Intensity data(cd)

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C/\u03b3(\u00b0)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.67	1.12	0.90	1.12	1.12	1.12	0.90	1.12	1.12
22.5	1.12	1.12	1.12	1.35	1.12	1.35	1.12	1.12	1.57
45.0	1.12	0.90	1.35	1.35	1.12	1.35	1.35	1.35	1.35
67.5	0.90	1.35	1.35	1.12	1.12	1.35	1.35	1.35	1.57
90.0	1.12	1.12	1.12	1.12	1.57	1.12	1.12	1.35	1.35
112.5	1.12	1.35	1.12	1.35	1.35	1.35	1.35	1.35	1.12
135.0	0.90	1.12	1.12	1.12	1.35	1.12	1.35	1.35	1.35
157.5	1.12	1.35	1.12	1.57	1.35	1.12	1.35	1.35	1.35
180.0	1.35	1.57	1.12	1.57	1.35	1.35	1.35	1.57	1.35
202.5	1.35	1.35	1.35	1.57	1.35	1.35	1.57	1.35	1.57
225.0	1.57	1.35	1.57	1.35	1.57	1.57	1.57	1.57	1.35
247.5	1.35	1.12	1.35	1.35	1.57	1.57	1.35	1.57	1.35
270.0	1.35	1.12	1.35	1.35	1.57	1.35	1.35	1.35	1.35
292.5	1.35	1.12	1.80	1.35	1.35	1.57	1.57	1.35	1.57
315.0	1.35	1.35	1.35	1.35	1.57	1.35	1.35	1.35	1.57
337.5	1.35	1.57	1.12	1.35	1.35	1.35	1.35	1.35	1.35
360.0	0.67	1.12	0.90	1.12	1.12	1.12	0.90	1.12	1.12
C/\u03b3(\u00b0)	180.0								
0.0	1.28								
22.5	1.28								
45.0	1.28								
67.5	1.28								
90.0	1.28								
112.5	1.28								
135.0	1.28								
157.5	1.28								
180.0	1.28								
202.5	1.28								
225.0	1.28								
247.5	1.28								
270.0	1.28								
292.5	1.28								
315.0	1.28								
337.5	1.28								
360.0	1.28								