



Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.
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LumCAT: LL4R-27K

Luminaire:

Report No:

Voltage(V): 120.02

Test No:

Current(A): 0.1112

LampCAT:

Power (W): 13.1460

Lamp flux(lm): 754.3

PF: 0.9854

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 754.28

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 57.38

Central intensity(cd): 278.477

Maximum intensity(cd): 283.219

Angle of maximum intensity: C=180.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=106.7

[C90/270]Total=106.3

Field angle(10%Imax): [C0/180]Total=158.6

[C90/270]Total=158.6

Maximum s/h(1/2): C0_180=1.28 C90_270=1.20

Maximum s/h(1/4): C0_180=1.82 C90_270=1.32

Up flux rate of lamp(%): 0.91%

Down flux rate of lamp(%): 99.09%

Up flux rate of LUM(%): 0.91%

Down flux rate of LUM(%): 99.09%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 79.334%

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

Date:
Humidity(%): 58%

Operator: Zac

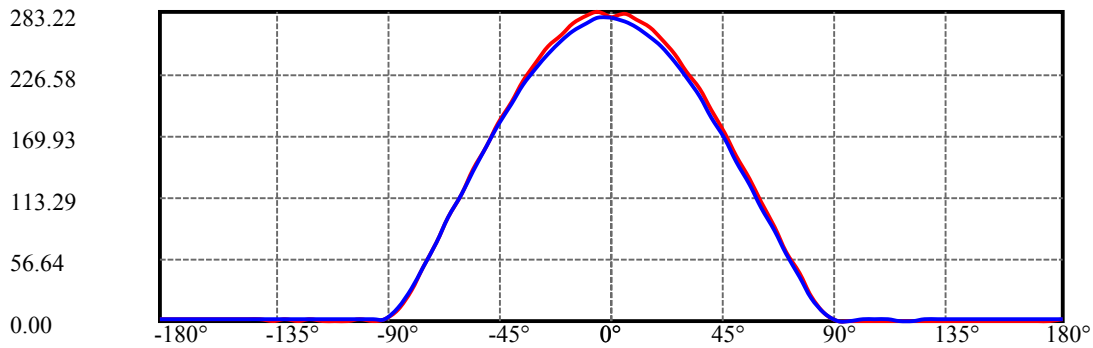
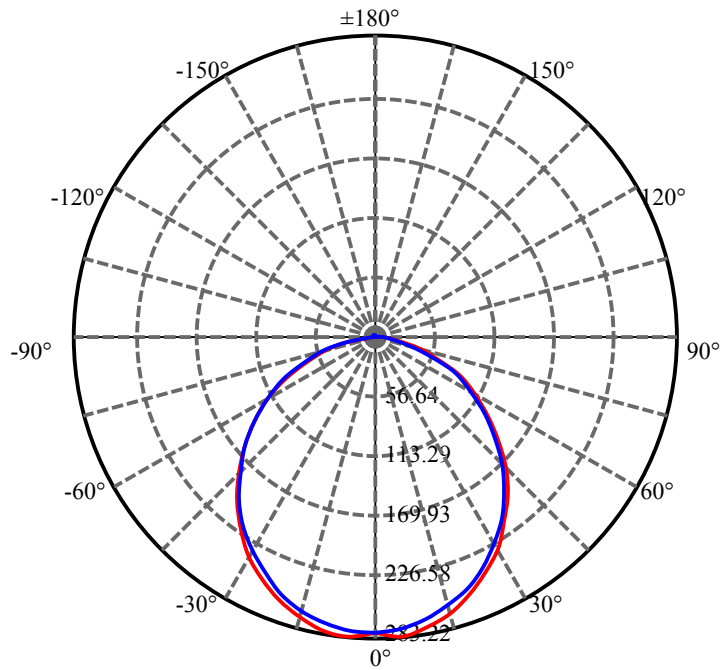
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	278.477	.000	.000	.000%	.000%
5.0	277.017	6.641	6.641	.880%	.880%
10.0	272.568	19.660	26.301	2.607%	3.487%
15.0	265.162	31.898	58.199	4.229%	7.716%
20.0	255.346	42.897	101.096	5.687%	13.403%
25.0	243.121	52.280	153.376	6.931%	20.334%
30.0	228.651	59.703	213.079	7.915%	28.249%
35.0	212.072	64.899	277.979	8.604%	36.853%
40.0	193.782	67.714	345.692	8.977%	45.831%
45.0	173.904	68.080	413.772	9.026%	54.856%
50.0	153.574	66.172	479.944	8.773%	63.629%
55.0	132.423	62.185	542.130	8.244%	71.874%
60.0	111.039	56.276	598.405	7.461%	79.334%
65.0	89.300	48.703	647.108	6.457%	85.791%
70.0	67.122	39.607	686.715	5.251%	91.042%
75.0	45.327	29.392	716.108	3.897%	94.939%
80.0	25.203	18.872	734.980	2.502%	97.441%
85.0	9.610	9.460	744.439	1.254%	98.695%
90.0	1.328	2.995	747.434	.397%	99.092%
95.0	.917	.615	748.049	.081%	99.174%
100.0	.958	.510	748.558	.068%	99.241%
105.0	.999	.524	749.082	.069%	99.311%
110.0	1.013	.526	749.608	.070%	99.380%
115.0	1.054	.523	750.131	.069%	99.450%
120.0	1.095	.522	750.654	.069%	99.519%
125.0	1.081	.503	751.157	.067%	99.586%
130.0	1.095	.473	751.630	.063%	99.648%
135.0	1.095	.443	752.072	.059%	99.707%
140.0	1.177	.421	752.493	.056%	99.763%
145.0	1.191	.395	752.888	.052%	99.815%
150.0	1.218	.355	753.243	.047%	99.862%
155.0	1.232	.310	753.553	.041%	99.903%
160.0	1.246	.260	753.813	.034%	99.938%
165.0	1.205	.202	754.015	.027%	99.965%
170.0	1.259	.146	754.161	.019%	99.984%
175.0	1.287	.091	754.252	.012%	99.996%
180.0	1.262	.030	754.282	.004%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	213.08	28.25%	28.25%
0-40	345.69	45.83%	45.83%
0-60	598.41	79.33%	79.33%
0-90	747.43	99.09%	99.09%
0-120	750.65	99.52%	99.52%
0-180	754.28	100.00%	100.00%
60-90	205.30	27.22%	27.22%
90-120	6.21	0.82%	0.82%
90-130	7.19	0.95%	0.95%
90-150	8.80	1.17%	1.17%
90-180	9.81	1.30%	1.30%
0-60.52	603.43	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	26.30
10-20	74.79
20-30	111.98
30-40	132.61
40-50	134.25
50-60	118.46
60-70	88.31
70-80	48.26
80-90	12.45
90-100	1.12
100-110	1.05
110-120	1.05
120-130	0.98
130-140	0.86
140-150	0.75
150-160	0.57
160-170	0.35
170-180	0.09

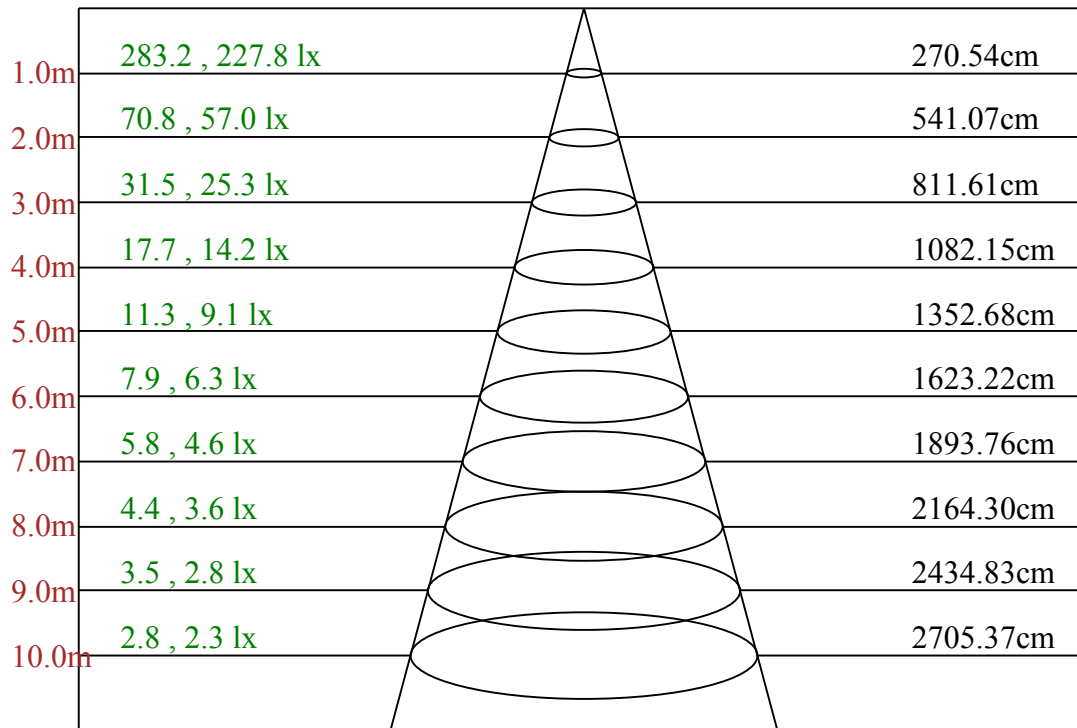


C0/C180: —

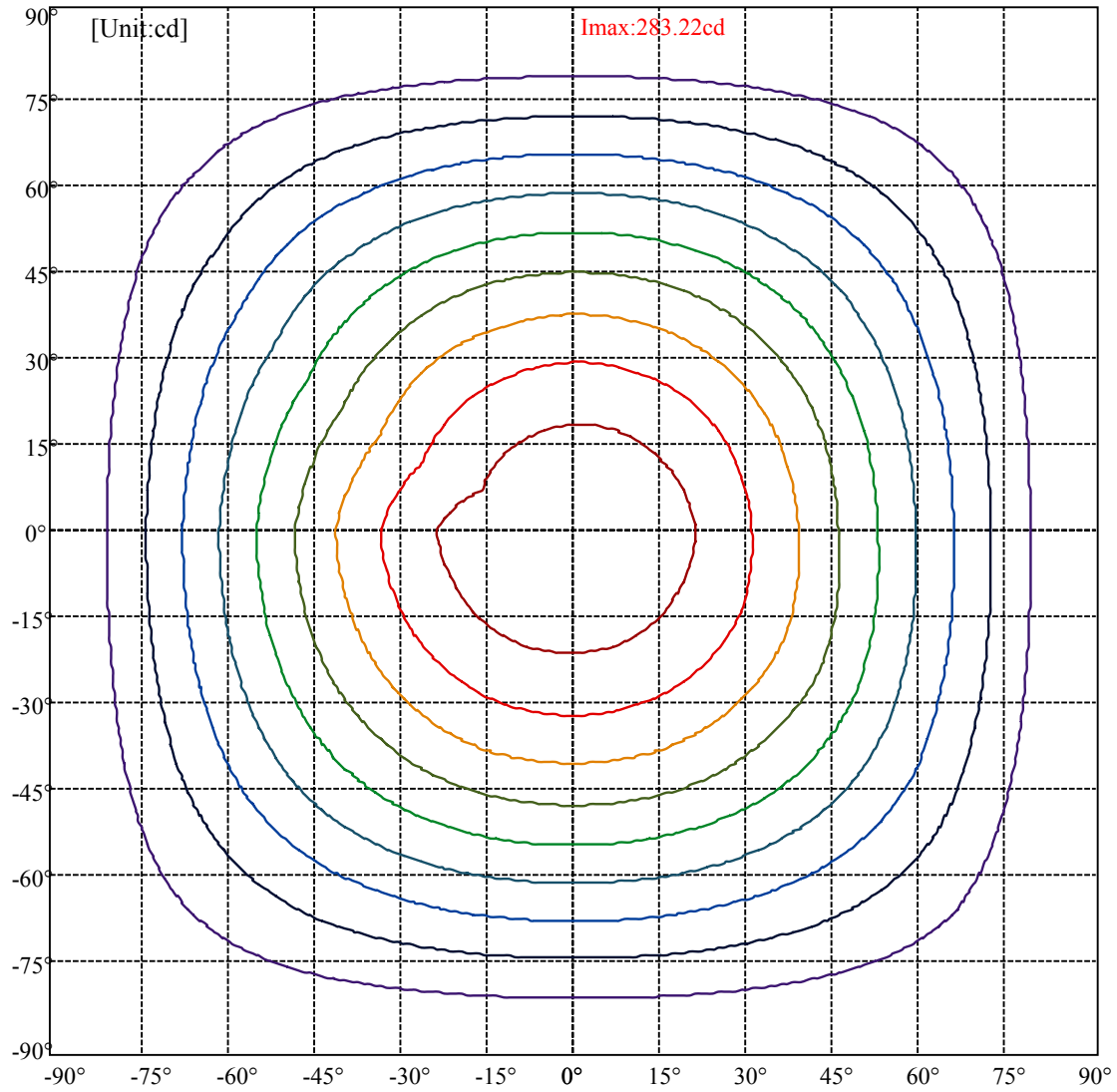
C90/C270: —

Field angle(10%Imax):C0/180Left:75.0 Right:83.6
 :C90/270Left:80.5 Right:78.1

Beam Angle(50%Imax):C0/180Left:49.3 Right:57.4
 :C90/270Left:54.7 Right:51.7



Max , Ave Beam angle of C180plane107.01



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	278.48	281.91	276.21	268.54	257.81	244.89	229.12	212.25	193.41
22.5	278.48	279.06	273.58	265.70	254.96	242.26	226.93	209.62	191.22
45.0	278.48	277.31	271.83	263.94	252.55	240.51	225.39	207.65	189.25
67.5	278.48	275.55	270.30	262.85	251.90	239.19	223.64	206.56	188.16
90.0	278.48	274.46	268.98	260.88	251.02	238.10	222.98	206.12	187.28
112.5	278.48	273.80	268.76	260.44	249.93	237.00	221.89	204.80	186.18
135.0	278.48	272.92	268.32	260.00	249.71	236.34	221.45	205.02	186.40
157.5	278.48	272.49	267.45	259.12	248.83	235.91	221.01	203.71	185.53
180.0	278.48	283.22	279.71	272.05	262.85	251.02	236.78	219.92	201.08
202.5	278.48	280.37	276.43	269.42	260.00	248.83	234.59	217.51	199.11
225.0	278.48	279.28	274.68	268.32	258.91	247.30	232.84	216.63	198.45
247.5	278.48	277.52	273.80	267.23	258.47	246.20	232.84	216.41	199.11
270.0	278.48	277.31	272.71	266.35	257.37	245.33	232.18	216.63	198.23
292.5	278.48	276.21	273.14	265.92	257.37	246.20	232.62	216.41	199.11
315.0	278.48	275.55	272.92	266.13	256.93	245.33	231.96	217.07	198.89
337.5	278.48	275.33	272.27	265.70	256.93	245.54	232.18	216.85	199.11
360.0	278.48	281.91	276.21	268.54	257.81	244.89	229.12	212.25	193.41
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	172.39	151.58	130.55	108.43	86.74	64.18	43.15	22.56	7.67
22.5	170.85	149.60	128.36	107.33	85.43	63.52	40.74	22.12	7.67
45.0	168.88	148.51	127.04	105.58	84.55	62.43	40.52	21.03	7.45
67.5	167.79	147.20	126.17	104.92	83.45	62.21	40.52	20.59	6.35
90.0	167.13	146.32	125.29	104.48	83.24	61.33	39.65	20.59	6.35
112.5	166.69	146.54	125.29	104.04	83.45	61.33	39.87	20.37	6.57
135.0	165.81	145.88	125.07	104.48	82.80	61.77	40.30	20.81	7.01
157.5	165.81	145.66	125.51	104.70	83.24	61.77	40.96	21.25	7.23
180.0	181.15	160.78	138.65	116.75	94.41	71.41	49.07	28.48	11.39
202.5	179.83	159.46	137.56	116.75	94.19	71.41	49.28	28.91	12.05
225.0	178.96	158.80	138.00	116.75	93.75	71.41	49.94	29.13	12.27
247.5	178.96	158.80	138.00	116.31	94.19	72.06	50.16	29.35	12.05
270.0	178.74	159.24	137.78	115.87	95.06	72.50	49.94	29.79	11.83
292.5	179.18	159.90	137.78	116.75	94.84	72.28	50.82	30.01	12.27
315.0	179.61	159.24	139.31	117.19	94.41	72.28	50.38	29.35	12.49
337.5	180.71	159.68	138.43	116.31	95.06	72.06	49.94	28.91	13.14
360.0	172.39	151.58	130.55	108.43	86.74	64.18	43.15	22.56	7.67
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.22	0.22	0.22	0.00	0.22	0.44	0.44	0.00	0.22
22.5	0.66	0.66	0.66	0.66	0.88	0.88	1.10	0.88	0.88
45.0	0.88	0.88	0.66	1.10	1.10	0.88	1.10	0.88	1.10
67.5	0.88	0.66	1.10	1.10	0.88	1.31	1.31	1.10	1.10
90.0	0.88	0.88	1.10	1.10	1.10	0.88	0.88	1.31	1.31
112.5	0.88	0.88	0.88	1.10	0.88	0.88	1.10	1.10	1.10
135.0	1.10	0.88	0.88	0.88	0.88	1.10	1.10	1.10	1.10
157.5	0.88	0.88	0.88	0.88	0.88	0.88	1.10	1.10	1.10
180.0	1.31	0.66	1.10	0.88	0.88	0.88	1.10	0.88	1.10
202.5	1.53	1.10	1.10	1.10	1.10	1.31	1.31	1.31	1.10
225.0	1.75	1.31	1.10	1.31	1.31	1.10	1.10	1.31	0.88
247.5	2.41	1.10	1.10	1.10	1.10	1.31	1.10	1.31	1.10
270.0	1.97	1.10	1.10	1.10	1.31	1.31	1.53	1.31	1.31
292.5	2.19	1.10	1.10	1.31	1.31	1.10	1.10	1.10	1.31
315.0	1.97	1.10	1.31	1.31	1.10	1.31	1.10	1.31	1.31
337.5	1.75	1.31	1.10	1.10	1.31	1.31	1.10	1.31	1.53
360.0	0.22	0.22	0.22	0.00	0.22	0.44	0.44	0.00	0.22

Intensity data(cd)

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C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.44	0.22	0.22	0.44	0.44	0.44	0.44	0.44	0.66
22.5	0.88	1.10	0.88	1.10	1.10	0.88	1.31	1.31	1.31
45.0	0.88	0.88	1.10	1.31	1.31	1.31	1.10	1.31	1.53
67.5	1.10	1.31	1.31	1.10	1.31	1.31	1.31	1.31	1.31
90.0	1.10	1.10	1.31	1.10	1.10	1.31	1.10	1.53	1.53
112.5	1.10	1.10	1.31	1.10	1.10	1.31	1.10	1.31	1.31
135.0	1.10	1.10	1.31	1.10	1.31	1.31	1.10	1.31	1.53
157.5	1.31	1.31	1.10	1.31	1.31	1.31	1.10	1.10	1.31
180.0	0.88	1.31	1.10	1.10	1.10	1.10	1.10	1.10	1.10
202.5	1.10	1.31	1.31	1.31	1.31	1.53	1.31	1.31	1.31
225.0	1.31	1.31	1.31	1.53	1.31	1.31	1.53	1.31	1.31
247.5	1.31	1.31	1.31	1.53	1.53	1.31	1.53	1.31	1.31
270.0	1.53	1.31	1.10	1.31	1.31	1.53	1.31	1.53	1.31
292.5	1.31	1.31	1.53	1.53	1.31	1.53	1.31	1.10	1.31
315.0	1.10	1.31	1.31	1.31	1.53	1.31	1.31	1.53	1.10
337.5	1.10	1.53	1.53	1.31	1.31	1.10	1.31	1.31	1.31
360.0	0.44	0.22	0.22	0.44	0.44	0.44	0.44	0.44	0.66
C/γ(°)	180.0								
0.0	1.26								
22.5	1.26								
45.0	1.26								
67.5	1.26								
90.0	1.26								
112.5	1.26								
135.0	1.26								
157.5	1.26								
180.0	1.26								
202.5	1.26								
225.0	1.26								
247.5	1.26								
270.0	1.26								
292.5	1.26								
315.0	1.26								
337.5	1.26								
360.0	1.26								