



Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.
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LumCAT: LL4R-40K

Luminaire:

Report No:

Voltage(V): 120.02

Test No:

Current(A): 0.1119

LampCAT:

Power (W): 13.2650

Lamp flux(lm): 806.1

PF: 0.9877

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 806.11

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 60.77

Central intensity(cd): 297.611

Maximum intensity(cd): 302.678

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

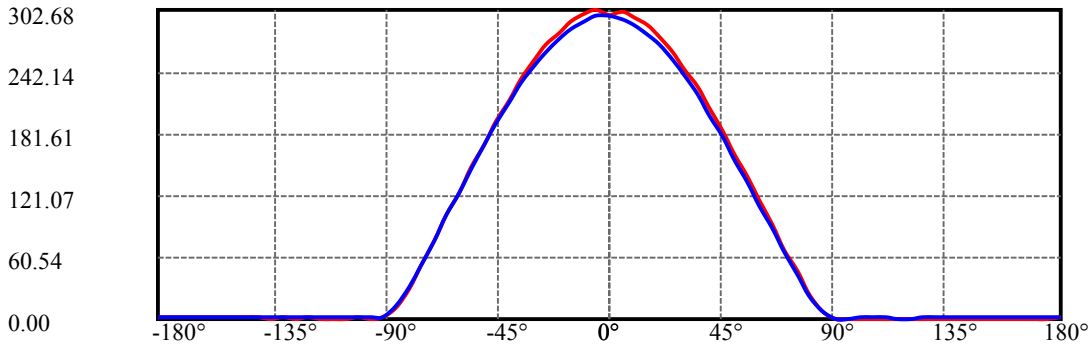
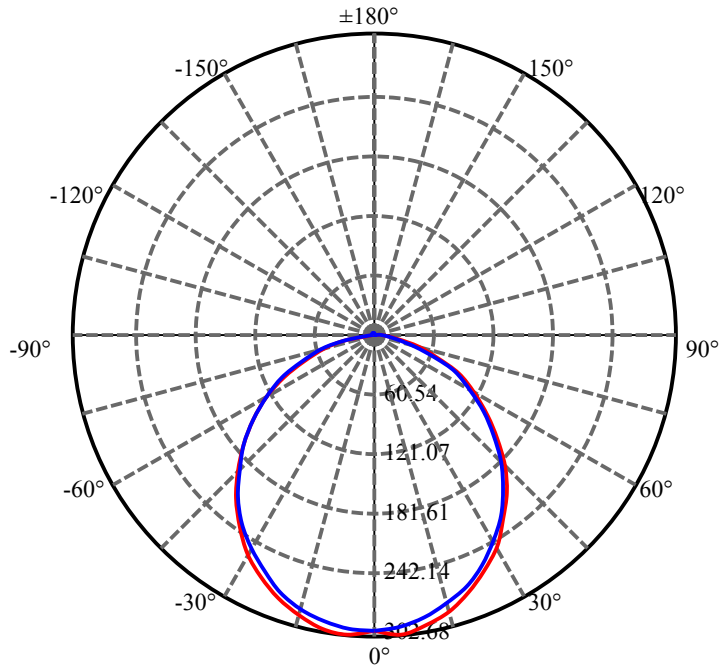
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	297.611	.000	.000	.000%	.000%
5.0	296.051	7.097	7.097	.880%	.880%
10.0	291.296	21.011	28.108	2.606%	3.487%
15.0	283.381	34.089	62.198	4.229%	7.716%
20.0	272.891	45.845	108.042	5.687%	13.403%
25.0	259.825	55.872	163.914	6.931%	20.334%
30.0	244.361	63.805	227.720	7.915%	28.249%
35.0	226.643	69.359	297.078	8.604%	36.853%
40.0	207.097	72.366	369.444	8.977%	45.831%
45.0	185.853	72.758	442.202	9.026%	54.856%
50.0	164.126	70.718	512.921	8.773%	63.629%
55.0	141.522	66.458	579.379	8.244%	71.873%
60.0	118.669	60.142	639.521	7.461%	79.334%
65.0	95.436	52.049	691.571	6.457%	85.791%
70.0	71.734	42.328	733.899	5.251%	91.042%
75.0	48.442	31.412	765.311	3.897%	94.939%
80.0	26.935	20.169	785.480	2.502%	97.441%
85.0	10.271	10.110	795.590	1.254%	98.695%
90.0	1.419	3.201	798.790	.397%	99.092%
95.0	.980	.657	799.447	.081%	99.173%
100.0	1.024	.544	799.992	.068%	99.241%
105.0	1.068	.560	800.551	.069%	99.310%
110.0	1.083	.562	801.114	.070%	99.380%
115.0	1.127	.559	801.673	.069%	99.450%
120.0	1.170	.558	802.231	.069%	99.519%
125.0	1.156	.538	802.769	.067%	99.586%
130.0	1.170	.506	803.275	.063%	99.648%
135.0	1.170	.473	803.748	.059%	99.707%
140.0	1.258	.450	804.197	.056%	99.763%
145.0	1.273	.422	804.620	.052%	99.815%
150.0	1.302	.379	804.999	.047%	99.862%
155.0	1.317	.331	805.330	.041%	99.903%
160.0	1.332	.278	805.608	.034%	99.938%
165.0	1.288	.216	805.824	.027%	99.965%
170.0	1.346	.156	805.980	.019%	99.984%
175.0	1.376	.097	806.078	.012%	99.996%
180.0	1.350	.033	806.110	.004%	100.000%

ZONAL LUMEN SUMMARY

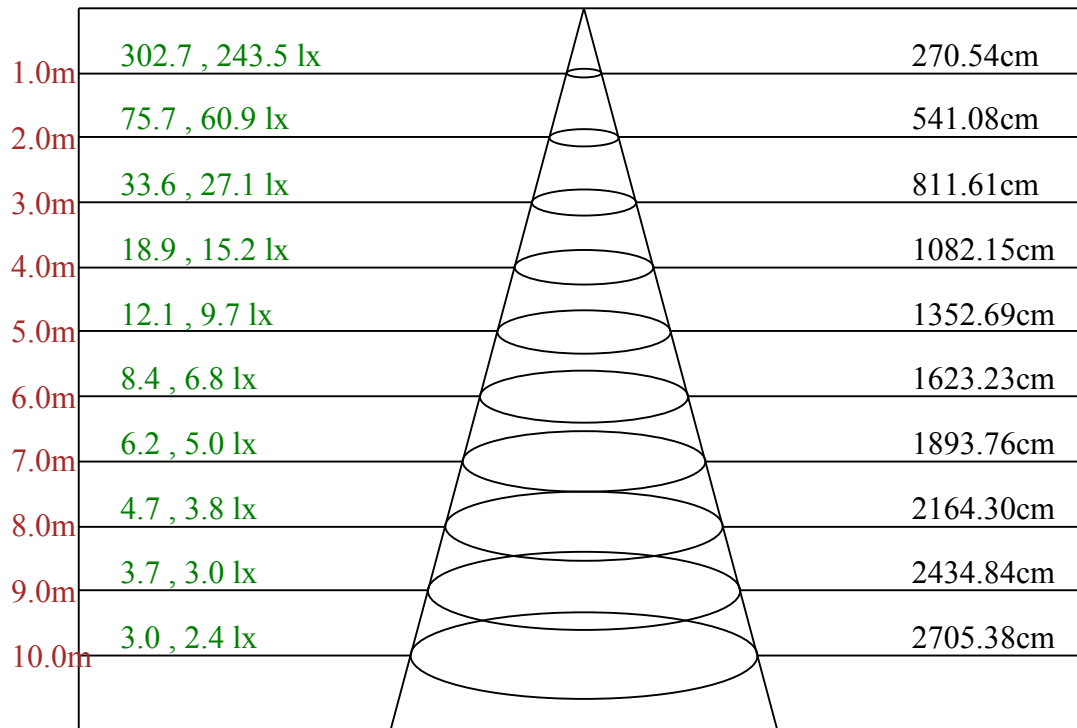
Zone	Lumens	%Lamp	%Fixt
0-30	227.72	28.25%	28.25%
0-40	369.44	45.83%	45.83%
0-60	639.52	79.33%	79.33%
0-90	798.79	99.09%	99.09%
0-120	802.23	99.52%	99.52%
0-180	806.11	100.00%	100.00%
60-90	219.41	27.22%	27.22%
90-120	6.64	0.82%	0.82%
90-130	7.68	0.95%	0.95%
90-150	9.41	1.17%	1.17%
90-180	10.49	1.30%	1.30%
0-60.52	644.89	80.00%	80.00%

ZONAL LUMEN SUMMARY

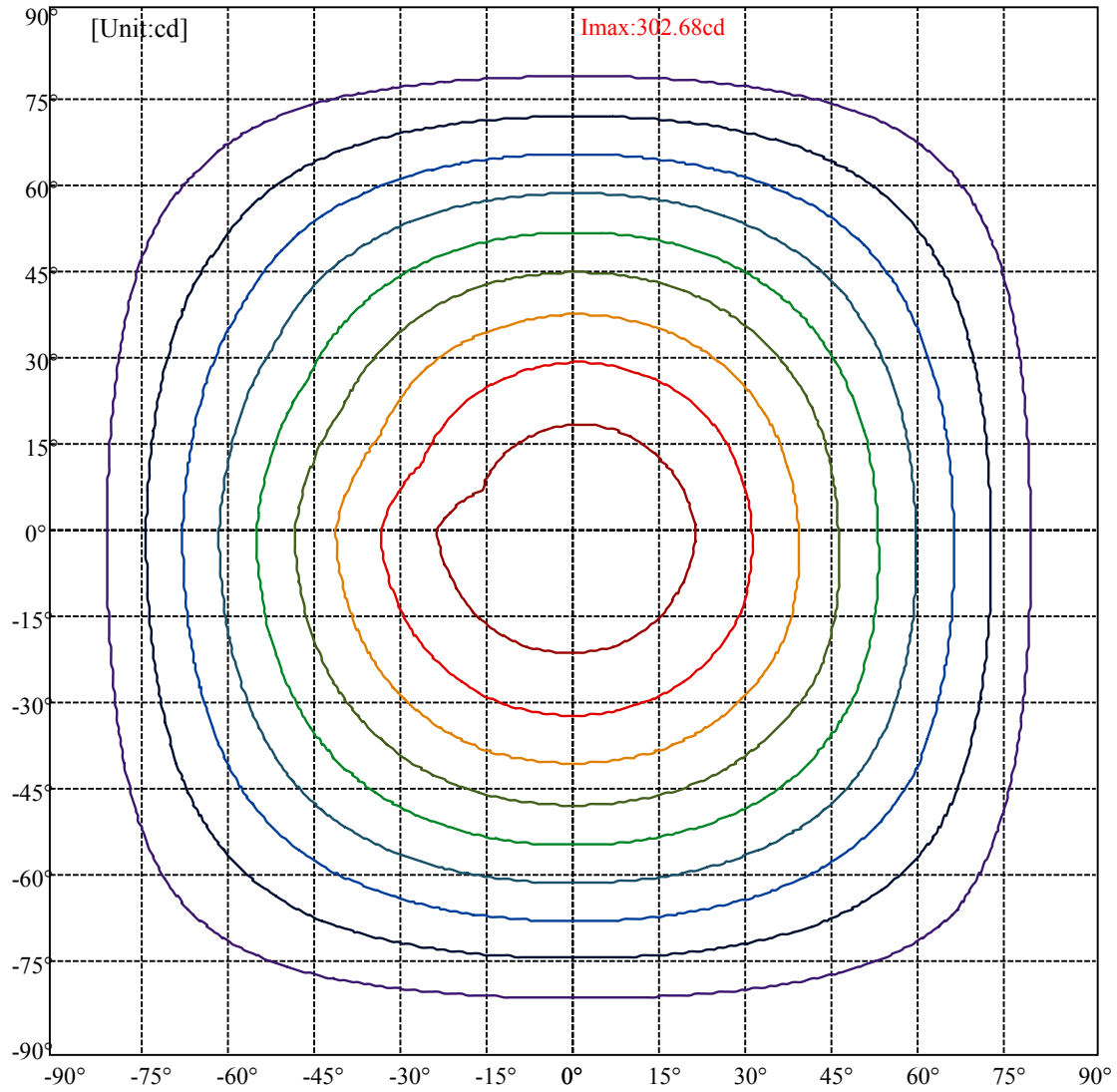
0-10	28.11
10-20	79.93
20-30	119.68
30-40	141.72
40-50	143.48
50-60	126.60
60-70	94.38
70-80	51.58
80-90	13.31
90-100	1.20
100-110	1.12
110-120	1.12
120-130	1.04
130-140	0.92
140-150	0.80
150-160	0.61
160-170	0.37
170-180	0.10



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



(10%I _{max})	30.2678	—
(20%I _{max})	60.5356	—
(30%I _{max})	90.8034	—
(40%I _{max})	121.071	—
(50%I _{max})	151.339	—
(60%I _{max})	181.607	—
(70%I _{max})	211.875	—
(80%I _{max})	242.142	—
(90%I _{max})	272.41	—

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	297.61	301.27	295.19	286.99	275.52	261.71	244.86	226.83	206.70
22.5	297.61	298.23	292.38	283.95	272.48	258.90	242.52	224.02	204.36
45.0	297.61	296.36	290.51	282.08	269.91	257.03	240.88	221.92	202.25
67.5	297.61	294.49	288.87	280.91	269.20	255.63	239.01	220.75	201.08
90.0	297.61	293.32	287.46	278.80	268.27	254.46	238.30	220.28	200.15
112.5	297.61	292.61	287.23	278.33	267.10	253.29	237.13	218.87	198.98
135.0	297.61	291.68	286.76	277.87	266.86	252.58	236.67	219.11	199.21
157.5	297.61	291.21	285.82	276.93	265.93	252.12	236.20	217.70	198.27
180.0	297.61	302.68	298.93	290.74	280.91	268.27	253.05	235.03	214.90
202.5	297.61	299.64	295.42	287.93	277.87	265.93	250.71	232.45	212.79
225.0	297.61	298.47	293.55	286.76	276.69	264.29	248.84	231.52	212.09
247.5	297.61	296.59	292.61	285.59	276.23	263.12	248.84	231.28	212.79
270.0	297.61	296.36	291.44	284.65	275.06	262.18	248.14	231.52	211.85
292.5	297.61	295.19	291.91	284.19	275.06	263.12	248.60	231.28	212.79
315.0	297.61	294.49	291.68	284.42	274.59	262.18	247.90	231.98	212.55
337.5	297.61	294.25	290.97	283.95	274.59	262.42	248.14	231.75	212.79
360.0	297.61	301.27	295.19	286.99	275.52	261.71	244.86	226.83	206.70
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	184.23	161.99	139.52	115.88	92.70	68.59	46.12	24.11	8.19
22.5	182.59	159.88	137.18	114.70	91.30	67.89	43.54	23.64	8.19
45.0	180.48	158.71	135.77	112.83	90.36	66.72	43.31	22.47	7.96
67.5	179.31	157.31	134.84	112.13	89.19	66.48	43.31	22.00	6.79
90.0	178.61	156.37	133.90	111.66	88.95	65.55	42.37	22.00	6.79
112.5	178.14	156.61	133.90	111.19	89.19	65.55	42.60	21.77	7.02
135.0	177.21	155.90	133.67	111.66	88.49	66.01	43.07	22.24	7.49
157.5	177.21	155.67	134.13	111.90	88.95	66.01	43.78	22.71	7.73
180.0	193.59	171.82	148.18	124.77	100.89	76.31	52.44	30.43	12.17
202.5	192.19	170.42	147.01	124.77	100.66	76.31	52.67	30.90	12.88
225.0	191.25	169.72	147.48	124.77	100.19	76.31	53.37	31.13	13.11
247.5	191.25	169.72	147.48	124.30	100.66	77.02	53.61	31.37	12.88
270.0	191.02	170.18	147.24	123.83	101.60	77.48	53.37	31.84	12.64
292.5	191.49	170.89	147.24	124.77	101.36	77.25	54.31	32.07	13.11
315.0	191.95	170.18	148.88	125.24	100.89	77.25	53.84	31.37	13.34
337.5	193.12	170.65	147.95	124.30	101.60	77.02	53.37	30.90	14.05
360.0	184.23	161.99	139.52	115.88	92.70	68.59	46.12	24.11	8.19
C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.23	0.23	0.23	0.00	0.23	0.47	0.47	0.00	0.23
22.5	0.70	0.70	0.70	0.70	0.94	0.94	1.17	0.94	0.94
45.0	0.94	0.94	0.70	1.17	1.17	0.94	1.17	0.94	1.17
67.5	0.94	0.70	1.17	1.17	0.94	1.41	1.41	1.17	1.17
90.0	0.94	0.94	1.17	1.17	1.17	0.94	0.94	1.41	1.41
112.5	0.94	0.94	0.94	1.17	0.94	0.94	1.17	1.17	1.17
135.0	1.17	0.94	0.94	0.94	0.94	1.17	1.17	1.17	1.17
157.5	0.94	0.94	0.94	0.94	0.94	0.94	1.17	1.17	1.17
180.0	1.41	0.70	1.17	0.94	0.94	0.94	1.17	0.94	1.17
202.5	1.64	1.17	1.17	1.17	1.17	1.41	1.41	1.41	1.17
225.0	1.87	1.41	1.17	1.41	1.41	1.17	1.17	1.41	0.94
247.5	2.58	1.17	1.17	1.17	1.17	1.41	1.17	1.41	1.17
270.0	2.11	1.17	1.17	1.17	1.41	1.41	1.64	1.41	1.41
292.5	2.34	1.17	1.17	1.41	1.41	1.17	1.17	1.17	1.41
315.0	2.11	1.17	1.41	1.41	1.17	1.41	1.17	1.41	1.41
337.5	1.87	1.41	1.17	1.17	1.41	1.41	1.17	1.41	1.64
360.0	0.23	0.23	0.23	0.00	0.23	0.47	0.47	0.00	0.23

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	0.47	0.23	0.23	0.47	0.47	0.47	0.47	0.47	0.70
22.5	0.94	1.17	0.94	1.17	1.17	0.94	1.41	1.41	1.41
45.0	0.94	0.94	1.17	1.41	1.41	1.41	1.17	1.41	1.64
67.5	1.17	1.41	1.41	1.17	1.41	1.41	1.41	1.41	1.41
90.0	1.17	1.17	1.41	1.17	1.17	1.41	1.17	1.64	1.64
112.5	1.17	1.17	1.41	1.17	1.17	1.41	1.17	1.41	1.41
135.0	1.17	1.17	1.41	1.17	1.41	1.41	1.17	1.41	1.64
157.5	1.41	1.41	1.17	1.41	1.41	1.41	1.17	1.17	1.41
180.0	0.94	1.41	1.17	1.17	1.17	1.17	1.17	1.17	1.17
202.5	1.17	1.41	1.41	1.41	1.41	1.64	1.41	1.41	1.41
225.0	1.41	1.41	1.41	1.64	1.41	1.41	1.64	1.41	1.41
247.5	1.41	1.41	1.41	1.64	1.64	1.41	1.64	1.41	1.41
270.0	1.64	1.41	1.17	1.41	1.41	1.64	1.41	1.64	1.41
292.5	1.41	1.41	1.64	1.64	1.41	1.64	1.41	1.17	1.41
315.0	1.17	1.41	1.41	1.41	1.64	1.41	1.41	1.64	1.17
337.5	1.17	1.64	1.64	1.41	1.41	1.17	1.41	1.41	1.41
360.0	0.47	0.23	0.23	0.47	0.47	0.47	0.47	0.47	0.70
C/γ(°)	180.0								
0.0	1.35								
22.5	1.35								
45.0	1.35								
67.5	1.35								
90.0	1.35								
112.5	1.35								
135.0	1.35								
157.5	1.35								
180.0	1.35								
202.5	1.35								
225.0	1.35								
247.5	1.35								
270.0	1.35								
292.5	1.35								
315.0	1.35								
337.5	1.35								
360.0	1.35								