



Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.
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Client:

LumCAT: LD4R-40K-HO

Luminaire:

Report No:

Ballast type:

Test No:

Voltage(V): 120.06

LampCAT:

Current(A): 0.1470

Lamp flux(lm): -1.0

Power (W): 17.38

Number of Lamps: 1

PF: 0.9880

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1654.85, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 95.22

Central intensity(cd): 4879.686, Maximum intensity(cd): 5024.486

Angle of maximum intensity: C=90.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=34.0

[C90/270]Total=33.4

Field angle(10%Imax): [C0/180]Total=51.2

[C90/270]Total=52.0

Maximum s/h(1/2): C0_180=0.59 C90_270=0.64

Maximum s/h(1/4): C0_180=0.54 C90_270=0.59

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 0.15%

Down flux rate of LUM(%): 99.85%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.872%

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

Date:
Humidity(%): 59%

Operator: jarvis

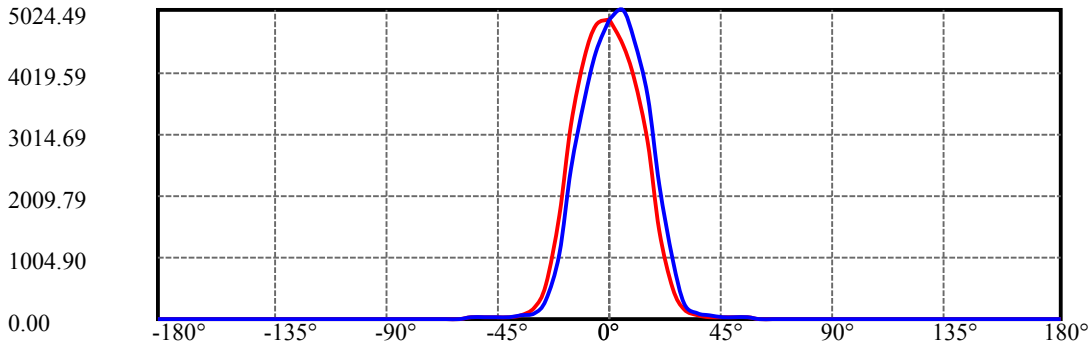
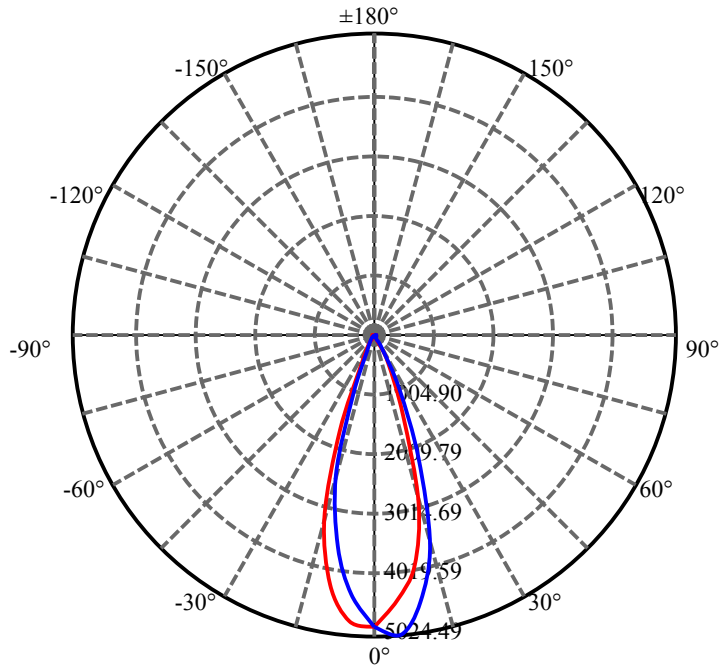
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4879.686	0.000	0	0.00%	0.00%
5.0	4629.805	113.683	113.683	0.00%	6.87%
10.0	4029.935	309.786	423.469	0.00%	25.59%
15.0	3005.305	417.326	840.795	0.00%	50.81%
20.0	1589.991	378.717	1219.512	0.00%	73.69%
25.0	587.408	228.369	1447.881	0.00%	87.49%
30.0	169.581	95.798	1543.679	0.00%	93.28%
35.0	68.659	35.083	1578.761	0.00%	95.40%
40.0	41.245	18.337	1597.098	0.00%	96.51%
45.0	29.808	13.156	1610.254	0.00%	97.31%
50.0	21.788	10.426	1620.679	0.00%	97.94%
55.0	17.174	8.472	1629.151	0.00%	98.45%
60.0	13.275	7.038	1636.189	0.00%	98.87%
65.0	9.883	5.630	1641.819	0.00%	99.21%
70.0	7.032	4.283	1646.102	0.00%	99.47%
75.0	4.639	3.051	1649.153	0.00%	99.66%
80.0	2.640	1.948	1651.1	0.00%	99.77%
85.0	1.110	1.019	1652.12	0.00%	99.83%
90.0	0.049	0.318	1652.437	0.00%	99.85%
95.0	0.025	0.020	1652.457	0.00%	99.86%
100.0	0.025	0.013	1652.471	0.00%	99.86%
105.0	0.037	0.016	1652.487	0.00%	99.86%
110.0	0.049	0.023	1652.51	0.00%	99.86%
115.0	0.062	0.028	1652.538	0.00%	99.86%
120.0	0.062	0.030	1652.568	0.00%	99.86%
125.0	0.086	0.034	1652.602	0.00%	99.86%
130.0	0.074	0.035	1652.637	0.00%	99.87%
135.0	0.160	0.047	1652.684	0.00%	99.87%
140.0	0.345	0.094	1652.778	0.00%	99.87%
145.0	0.629	0.163	1652.94	0.00%	99.88%
150.0	1.061	0.249	1653.189	0.00%	99.90%
155.0	1.517	0.326	1653.516	0.00%	99.92%
160.0	2.023	0.371	1653.887	0.00%	99.94%
165.0	2.517	0.374	1654.261	0.00%	99.96%
170.0	2.764	0.313	1654.574	0.00%	99.98%
175.0	2.949	0.204	1654.779	0.00%	100.00%
180.0	3.077	0.072	1654.851	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1543.68	N.A.	93.28%
0-40	1597.10	N.A.	96.51%
0-60	1636.19	N.A.	98.87%
0-90	1652.44	N.A.	99.85%
0-120	1652.57	N.A.	99.86%
0-180	1654.85	N.A.	100.00%
60-90	16.25	N.A.	0.98%
90-120	0.13	N.A.	0.01%
90-130	0.20	N.A.	0.01%
90-150	0.75	N.A.	0.05%
90-180	2.34	N.A.	0.14%
0-22.29	1323.88	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	423.47
10-20	796.04
20-30	324.17
30-40	53.42
40-50	23.58
50-60	15.51
60-70	9.91
70-80	5.00
80-90	1.34
90-100	0.03
100-110	0.04
110-120	0.06
120-130	0.07
130-140	0.14
140-150	0.41
150-160	0.70
160-170	0.69
170-180	0.20

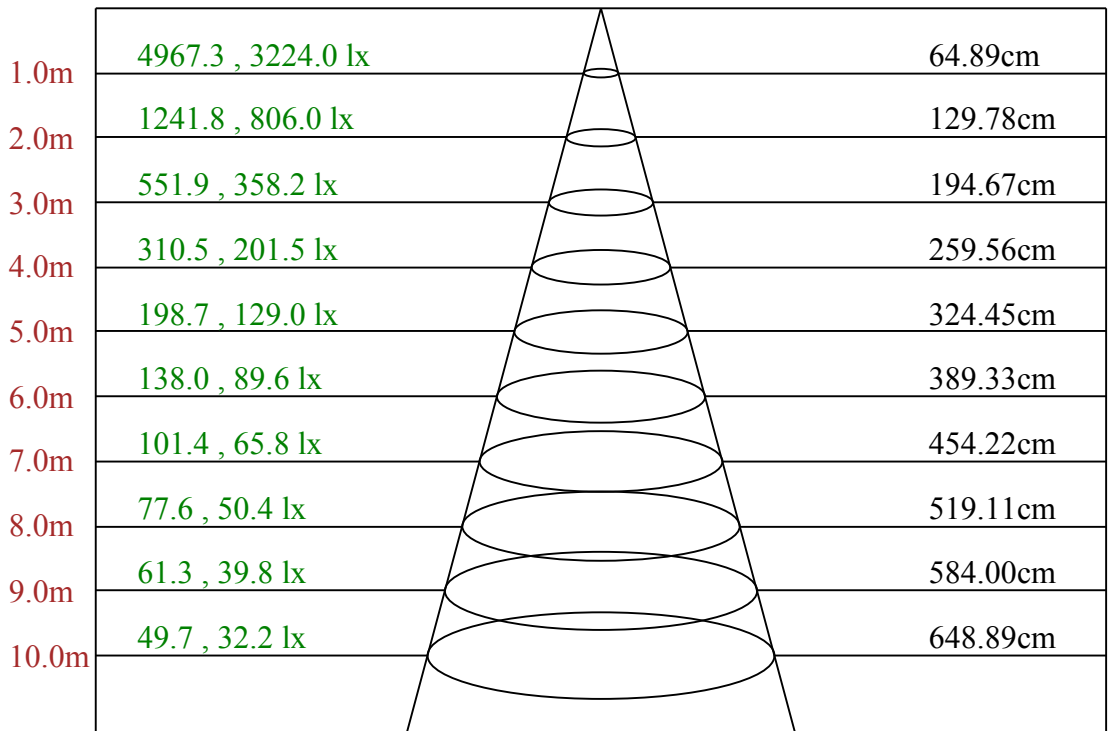


C0/C180: —

C90/C270: —

Field angle(10%Imax):C0/180Left:26.0 Right:25.2
:C90/270Left:23.7 Right:28.3

Beam Angle(50%Imax):C0/180Left:17.5 Right:16.5
:C90/270Left:14.6 Right:18.8



Max , Ave Beam angle of C90 plane 35.95

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	4879.69	4448.07	3911.93	2872.21	1443.01	504.36	145.88	65.54	38.49
22.5	4879.69	4493.47	3923.18	2930.44	1503.22	521.93	155.75	65.54	39.28
45.0	4879.69	4536.90	3918.24	2979.99	1598.76	563.58	164.83	66.13	40.27
67.5	4879.69	4550.72	3916.86	3040.20	1646.73	611.75	186.74	68.70	40.07
90.0	4879.69	5024.49	4511.24	3605.16	2172.02	981.68	263.73	83.50	51.13
112.5	4879.69	4983.03	4463.86	3571.60	2156.23	997.48	267.88	84.09	50.93
135.0	4879.69	4906.05	4408.59	3528.18	2051.60	979.71	274.59	84.09	48.17
157.5	4879.69	4846.82	4317.79	3358.41	1903.55	705.52	215.37	76.20	44.22
180.0	4879.69	4771.81	4232.90	3162.98	1688.38	565.56	175.49	68.89	41.26
202.5	4879.69	4714.56	4073.01	2973.47	1562.05	495.28	136.01	64.55	39.88
225.0	4879.69	4661.27	4025.63	2866.88	1441.63	463.11	130.68	63.37	39.09
247.5	4879.69	4633.63	3980.23	2857.01	1441.63	440.60	130.09	64.16	39.09
270.0	4879.69	4339.50	3566.27	2429.43	1049.98	308.74	96.73	57.25	36.32
292.5	4879.69	4384.90	3636.55	2494.97	1134.08	350.59	104.82	58.23	36.72
315.0	4879.69	4367.14	3742.75	2655.66	1256.86	421.45	126.34	62.97	37.11
337.5	4879.69	4414.51	3849.94	2758.31	1390.11	487.19	138.38	65.34	37.90
360.0	4879.69	4448.07	3911.93	2872.21	1443.01	504.36	145.88	65.54	38.49
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	28.82	21.12	17.17	13.03	9.67	6.71	4.54	2.76	1.18
22.5	29.81	21.52	17.17	13.03	9.87	7.11	4.54	2.76	1.38
45.0	30.01	21.52	17.17	13.23	9.87	7.11	4.94	2.76	1.38
67.5	29.61	21.91	17.17	13.23	10.07	7.11	4.54	2.57	1.18
90.0	33.36	24.48	18.75	14.61	11.25	8.09	5.13	2.96	1.38
112.5	32.57	23.89	18.36	14.41	10.66	7.70	4.94	2.76	1.18
135.0	32.37	23.69	17.77	14.02	10.27	7.50	4.94	3.16	1.38
157.5	31.58	22.70	17.57	13.42	10.27	7.11	4.74	2.96	1.18
180.0	30.60	21.71	16.98	13.42	10.07	7.30	4.74	2.37	1.18
202.5	30.01	21.32	16.98	13.23	9.67	6.91	4.74	2.57	0.79
225.0	29.41	21.32	16.98	12.83	9.48	6.91	4.54	2.37	0.99
247.5	28.43	21.12	16.78	13.03	9.28	6.71	4.54	2.37	0.79
270.0	27.04	20.33	16.38	12.63	9.48	6.51	4.34	2.57	0.99
292.5	27.24	20.33	16.19	12.63	9.48	6.51	4.15	2.17	0.99
315.0	27.83	20.73	16.58	12.83	9.28	6.71	4.34	2.37	0.99
337.5	28.23	20.93	16.78	12.83	9.48	6.51	4.54	2.76	0.79
360.0	28.82	21.12	17.17	13.03	9.67	6.71	4.54	2.76	1.18
C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.20	0.00	0.00	0.20	0.00	0.00	0.20	0.00	0.20
22.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.5	0.20	0.20	0.20	0.00	0.00	0.00	0.20	0.20	0.00
90.0	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.20	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	0.20
270.0	0.20	0.20	0.20	0.20	0.40	0.40	0.40	0.59	0.40
292.5	0.00	0.00	0.00	0.00	0.20	0.20	0.20	0.20	0.20
315.0	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00
337.5	0.00	0.00	0.00	0.20	0.20	0.00	0.00	0.20	0.00
360.0	0.20	0.00	0.00	0.20	0.00	0.00	0.20	0.00	0.20

LD4R-40K-HO

Intensity data(cd)

Appendix Page: 7 Total:7

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.20	0.40	0.79	1.18	1.38	1.97	2.76	2.76	2.76
22.5	0.20	0.40	0.59	1.18	1.58	1.97	2.37	2.57	2.96
45.0	0.20	0.40	0.59	0.99	1.38	1.97	2.57	2.76	2.96
67.5	0.20	0.40	0.59	1.18	1.58	1.97	2.57	2.76	3.16
90.0	0.00	0.40	0.40	0.79	1.38	1.97	2.37	2.57	2.96
112.5	0.00	0.00	0.20	0.79	1.18	1.97	2.17	2.57	2.76
135.0	0.00	0.00	0.40	0.79	1.18	1.97	2.17	2.57	2.96
157.5	0.00	0.20	0.40	0.79	1.18	1.78	2.37	2.57	2.76
180.0	0.00	0.20	0.40	0.79	1.58	1.97	2.17	2.57	2.76
202.5	0.00	0.20	0.59	0.99	1.38	1.58	2.57	2.76	2.96
225.0	0.00	0.20	0.40	0.99	1.58	1.97	2.57	2.76	2.96
247.5	0.20	0.20	0.59	0.99	1.38	1.97	2.57	2.96	2.76
270.0	0.59	0.79	1.18	1.78	2.17	2.76	3.16	3.36	3.36
292.5	0.40	0.59	1.18	1.38	1.97	2.17	2.76	2.96	2.76
315.0	0.20	0.59	0.79	1.18	1.58	2.17	2.57	2.76	3.16
337.5	0.40	0.59	0.99	1.18	1.78	2.17	2.57	2.96	3.16
360.0	0.20	0.40	0.79	1.18	1.38	1.97	2.76	2.76	2.76

C/γ(°)	180.0
0.0	3.08
22.5	3.08
45.0	3.08
67.5	3.08
90.0	3.08
112.5	3.08
135.0	3.08
157.5	3.08
180.0	3.08
202.5	3.08
225.0	3.08
247.5	3.08
270.0	3.08
292.5	3.08
315.0	3.08
337.5	3.08
360.0	3.08