Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.
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Client:
LumCAT: LD4S-32K-HO
Luminaire:
Report No:
Ballast type:

Test No:	Voltage(V): 120.01
LampCAT:	Current(A): 0.1550
Lamp flux(lm): -1.0	Power (W): 18.34
Number of Lamps: 1	PF: 0.9889
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 1151.71, Efficiency(%): 0.00% , Luminous Efficacy(lm/W): 62.81
Central intensity(cd): 3685.612, Maximum intensity(cd): 3708.732
Angle of maximum intensity: C=90.0 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=32.1
[C90/270]Total=32.8
Field angle(10%Imax): [C0/180]Total=47.9
[C90/270]Total=49.0
Maximum s/h(1/2): C0_180=0.59 C90_270=0.62
Maximum s/h(1/4): C0_180=0.54 C90_270=0.56
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 0.00%
Up flux rate of LUM(%): 0.14%
Down flux rate of LUM(%): 99.86%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.506%

Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3685.612	0.000	0	0.00%	0.00%
5.0	3465.962	85.495	85.495	0.00%	7.42%
10.0	2939.262	229.135	314.63	0.00%	27.32%
15.0	2123.628	300.327	614.957	0.00%	53.39%
20.0	1072.174	263.379	878.336	0.00%	76.26%
25.0	317.263	145.726	1024.062	0.00%	88.92%
30.0	79.875	50.258	1074.32	0.00%	93.28%
35.0	41.500	17.873	1092.194	0.00%	94.83%
40.0	28.239	11.636	1103.829	0.00%	95.84%
45.0	21.938	9.291	1113.12	0.00%	96.65%
50.0	17.874	8.045	1121.165	0.00%	97.35%
55.0	14.889	7.124	1128.288	0.00%	97.97%
60.0	11.993	6.214	1134.502	0.00%	98.51%
65.0	9.277	5.171	1139.673	0.00%	98.95%
70.0	6.790	4.068	1143.741	0.00%	99.31%
75.0	4.663	2.994	1146.735	0.00%	99.57%
80.0	2.786	1.993	1148.728	0.00%	99.74%
85.0	1.079	1.050	1149.778	0.00%	99.83%
90.0	0.020	0.301	1150.079	0.00%	99.86%
95.0	0.040	0.016	1150.095	0.00%	99.86%
100.0	0.020	0.016	1150.111	0.00%	99.86%
105.0	0.020	0.011	1150.122	0.00%	99.86%
110.0	0.010	0.008	1150.13	0.00%	99.86%
115.0	0.030	0.010	1150.14	0.00%	99.86%
120.0	0.070	0.024	1150.164	0.00%	99.87%
125.0	0.010	0.018	1150.183	0.00%	99.87%
130.0	0.050	0.013	1150.196	0.00%	99.87%
135.0	0.100	0.030	1150.226	0.00%	99.87%
140.0	0.170	0.050	1150.276	0.00%	99.88%
145.0	0.390	0.093	1150.37	0.00%	99.88%
150.0	0.729	0.165	1150.534	0.00%	99.90%
155.0	1.098	0.231	1150.766	0.00%	99.92%
160.0	1.408	0.263	1151.028	0.00%	99.94%
165.0	1.797	0.264	1151.293	0.00%	99.96%
170.0	1.977	0.224	1151.516	0.00%	99.98%
175.0	2.087	0.145	1151.662	0.00%	100.00%
180.0	2.228	0.052	1151.713	0.00%	100.00%

Zonal flux distribution table

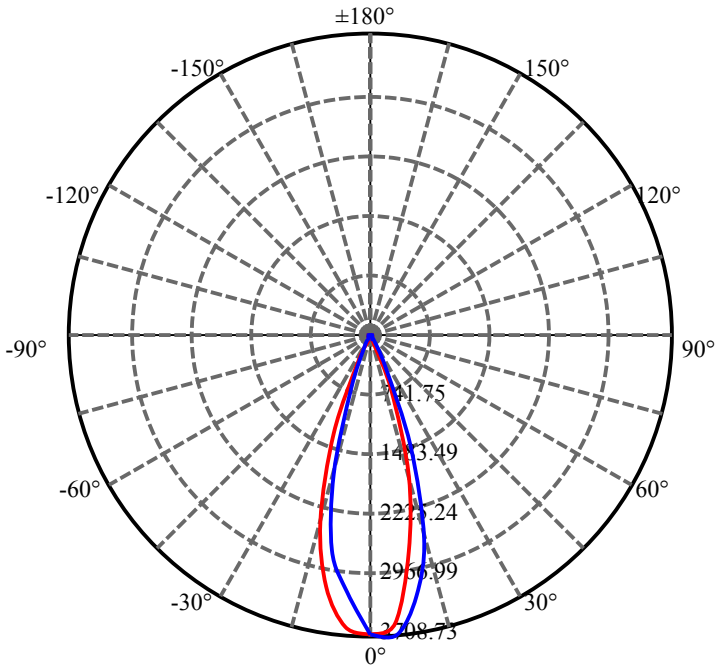
ZONAL LUMEN SUMMARY

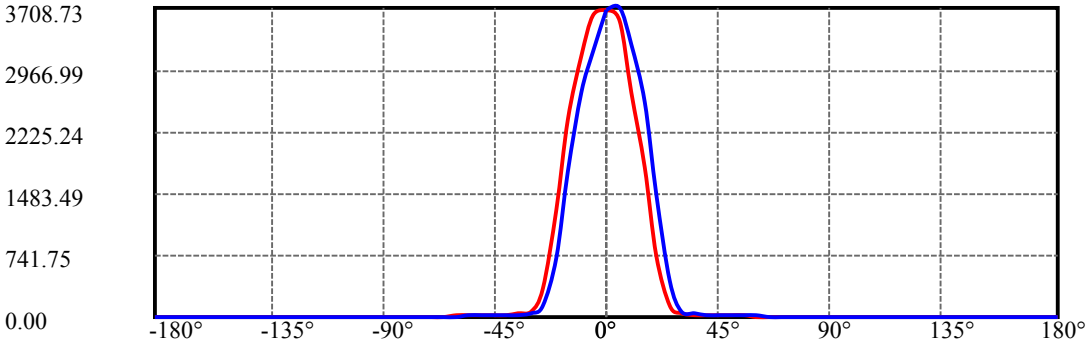
Zone	Lumens	%Lamp	%Fixt
0-30	1074.32	N.A.	93.28%
0-40	1103.83	N.A.	95.84%
0-60	1134.50	N.A.	98.51%
0-90	1150.08	N.A.	99.86%
0-120	1150.16	N.A.	99.87%
0-180	1151.71	N.A.	100.00%
60-90	15.58	N.A.	1.35%
90-120	0.09	N.A.	0.01%
90-130	0.12	N.A.	0.01%
90-150	0.46	N.A.	0.04%
90-180	1.58	N.A.	0.14%
0-21.48	921.37	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	314.63
10-20	563.71
20-30	195.98
30-40	29.51
40-50	17.34
50-60	13.34
60-70	9.24
70-80	4.99
80-90	1.35
90-100	0.03
100-110	0.02
110-120	0.03
120-130	0.03
130-140	0.08
140-150	0.26
150-160	0.49
160-170	0.49
170-180	0.15

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

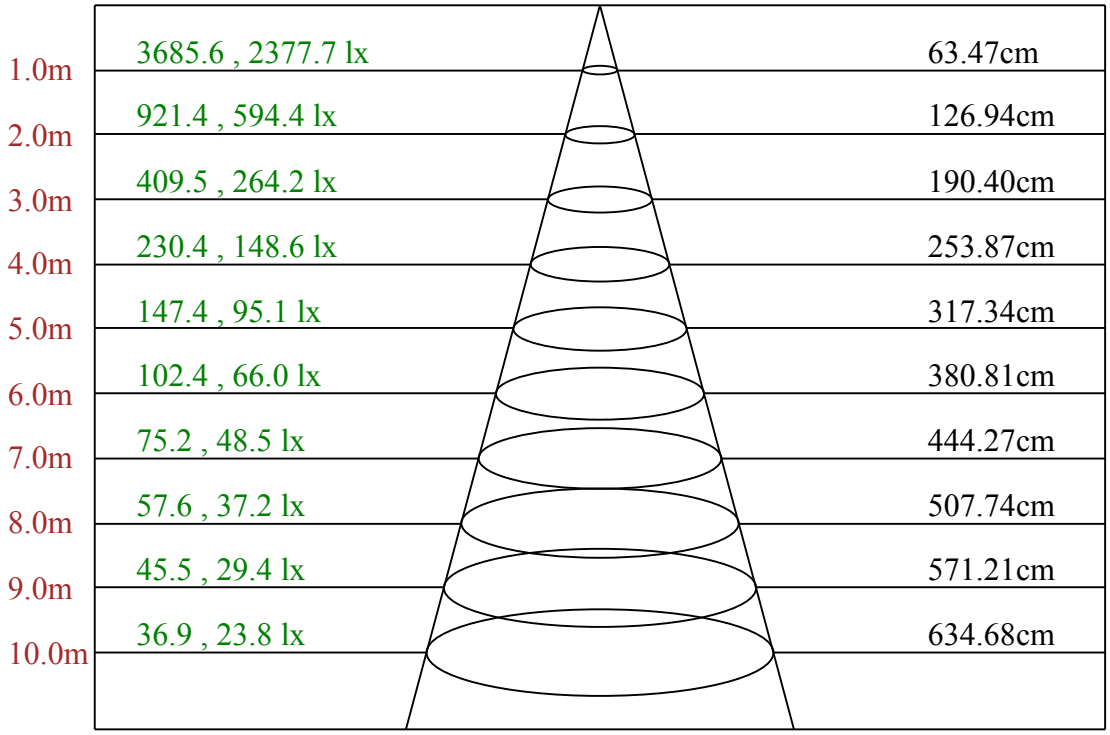
Field angle(10%Imax):C0/180Left:24.9 Right:23.0

:C90/270Left:23.0 Right:26.0

Beam Angle(50%Imax):C0/180Left:17.4 Right:14.7

:C90/270Left:14.5 Right:18.3

Lux distance Curve



Max , Ave

Beam angle of C90 plane 35.21

Equipment: GMS-3000 Date: Operator: jarvis
Temperature(°C): 25 Humidity(%): 59%

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	3685.61	3547.36	2701.39	1795.01	729.35	134.85	52.72	32.11	24.45
22.5	3685.61	3430.73	2714.65	1807.15	763.38	173.83	54.96	33.39	25.88
45.0	3685.61	3414.76	2728.39	1850.29	841.51	238.22	72.38	40.10	26.68
67.5	3685.61	3416.35	2752.67	1861.80	789.74	205.30	63.59	36.27	26.20
90.0	3685.61	3708.73	3269.37	2587.15	1467.16	446.72	80.36	45.69	29.56
112.5	3685.61	3681.57	3262.98	2582.36	1486.34	507.11	98.26	48.73	30.52
135.0	3685.61	3662.40	3232.62	2545.61	1503.91	534.59	133.25	54.00	35.63
157.5	3685.61	3633.64	3191.08	2454.54	1396.87	445.28	99.22	47.45	30.84
180.0	3685.61	3608.08	3141.55	2365.07	1289.82	340.31	68.22	40.74	28.28
202.5	3685.61	3572.93	3108.00	2336.31	1251.48	382.33	75.25	41.86	28.92
225.0	3685.61	3537.78	3077.64	2318.74	1288.22	403.58	114.56	51.77	33.07
247.5	3685.61	3521.80	3060.07	2318.74	1297.81	411.25	107.84	45.22	29.40
270.0	3685.61	3185.97	2686.37	1755.39	706.50	143.47	53.04	31.95	24.45
292.5	3685.61	3177.82	2693.56	1776.16	770.25	211.54	58.64	32.91	25.24
315.0	3685.61	3172.39	2713.21	1809.87	814.83	284.07	83.72	46.17	26.52
337.5	3685.61	3183.09	2694.67	1813.86	757.63	213.77	61.99	35.63	26.20
360.0	3685.61	3547.36	2701.39	1795.01	729.35	134.85	52.72	32.11	24.45

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	19.81	16.78	14.06	11.18	8.47	6.07	3.99	2.40	0.80
22.5	20.13	17.26	14.06	11.34	8.63	6.23	4.15	2.40	0.96
45.0	21.25	16.46	13.90	11.18	8.47	6.39	4.15	2.56	0.96
67.5	20.77	17.10	14.22	11.66	8.95	6.39	4.31	2.40	0.96
90.0	23.33	19.65	16.62	13.58	10.71	7.99	5.75	3.52	1.60
112.5	23.97	19.33	16.46	13.74	10.55	7.99	5.75	3.52	1.60
135.0	24.13	19.01	15.50	12.78	10.23	7.51	5.43	3.36	1.44
157.5	23.97	18.69	15.98	12.78	10.07	7.35	5.27	3.36	1.44
180.0	22.37	18.53	15.66	12.62	9.59	7.19	4.95	3.04	1.28
202.5	23.01	18.69	15.50	12.46	9.75	7.19	4.79	3.04	1.44
225.0	23.01	18.05	15.02	12.30	9.43	7.03	4.79	2.88	1.12
247.5	22.85	18.37	15.34	12.30	9.75	7.03	4.95	3.04	1.12
270.0	20.45	17.42	14.22	11.02	8.63	6.07	3.99	2.24	0.48
292.5	19.97	17.26	14.06	11.02	8.47	5.91	3.99	2.08	0.64
315.0	21.09	16.46	13.74	10.71	8.47	6.23	3.99	2.40	0.64
337.5	20.93	16.94	13.90	11.18	8.31	6.07	4.31	2.40	0.80
360.0	19.81	16.78	14.06	11.18	8.47	6.07	3.99	2.40	0.80

C/γ(°)	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	0.16	0.00	0.00
22.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
67.5	0.00	0.00	0.00	0.00	0.00	0.16	0.16	0.00	0.00
90.0	0.16	0.00	0.00	0.00	0.00	0.16	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	0.16	0.16	0.32	0.16	0.16	0.16	0.32	0.16	0.32
292.5	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	0.00	0.16	0.00	0.00	0.00	0.00	0.16	0.00	0.16
337.5	0.00	0.00	0.00	0.16	0.00	0.00	0.16	0.00	0.16
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00

Intensity data(cd)

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.16	0.16	0.48	0.80	1.28	1.60	1.92	1.92	1.92
22.5	0.16	0.16	0.32	0.80	1.12	1.76	1.76	2.24	2.08
45.0	0.16	0.32	0.48	0.80	1.12	1.44	1.92	2.08	2.24
67.5	0.00	0.16	0.48	0.80	1.28	1.60	1.92	2.08	2.08
90.0	0.00	0.32	0.32	0.80	0.96	1.12	1.76	2.08	1.92
112.5	0.00	0.00	0.16	0.64	0.96	1.12	1.60	2.08	2.08
135.0	0.00	0.00	0.32	0.48	0.96	1.12	1.76	1.60	2.08
157.5	0.00	0.00	0.16	0.64	0.96	1.28	1.76	1.76	1.92
180.0	0.00	0.00	0.32	0.48	1.12	1.28	1.60	2.08	2.08
202.5	0.00	0.00	0.16	0.64	0.96	1.28	1.44	1.76	2.08
225.0	0.00	0.00	0.16	0.64	0.80	1.28	1.76	1.76	2.08
247.5	0.00	0.16	0.32	0.48	0.96	1.28	1.60	1.76	2.08
270.0	0.48	0.48	0.96	1.12	1.44	1.76	2.24	2.40	2.56
292.5	0.32	0.32	0.48	0.96	1.28	1.60	1.92	1.92	2.08
315.0	0.16	0.16	0.48	0.80	1.12	1.60	1.92	1.92	2.08
337.5	0.16	0.48	0.64	0.80	1.28	1.44	1.92	2.24	2.08
360.0	0.16	0.16	0.48	0.80	1.28	1.60	1.92	1.92	1.92

C/γ(°)	180.0
0.0	2.23
22.5	2.23
45.0	2.23
67.5	2.23
90.0	2.23
112.5	2.23
135.0	2.23
157.5	2.23
180.0	2.23
202.5	2.23
225.0	2.23
247.5	2.23
270.0	2.23
292.5	2.23
315.0	2.23
337.5	2.23
360.0	2.23