



Shenzhen Belling Efficiency Testing Lab Co.,Ltd  
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Report No	:	Voltage	:	120.05 V
Test No	:	Current	:	0.3102 A
LumCAT	:	Power	:	36.714 W
Luminaire	:	PF	:	0.986
LampCAT	:	Ballast type	:	
Lamp flux	:	Width	:	0 mm
Number of Lamps	:	Length	:	0 mm
Phm Type	:	Height	:	0 mm

### Photometric Results

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Lumens(lm)	:	1720.64	Central intensity(cd)	:	442.879
Efficiency(%)	:	100.00%	Maximum intensity(cd)	:	446.941
Luminous Efficacy(lm/W)	:	46.87	Angle of maximum intensity	:	C=90.0 $\gamma$ =0.0
Beam Angle(50%Imax)	:	[C0/180]Total=135.1 [C90/270]Total=113.2			
Field angle(10%Imax)	:	[C0/180]Total=287.8 [C90/270]Total=163.5			
Maximum s/h(1/2)	:	C0_180=1.39 C90_270=1.27			
Maximum s/h(1/4)	:	C0_180=1.52 C90_270=1.39			
Up flux rate of lamp(%)	:	11.50%			
Down flux rate of lamp(%)	:	88.50%			
Up flux rate of LUM(%)	:	11.50%			
Down flux rate of LUM(%)	:	88.50%			
CIE Type	:	Semidirect lighting			
Output flux ratio in $\pi$ solid angle	:	63.206%			

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

Date:  
Humidity(%): 59%

Operator: Zac

## Zonal flux distribution table

Appendix Page: 2 Total:7

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	444.047	0.000	0	0.00%	0.00%
5.0	443.641	10.612	10.612	0.62%	0.62%
10.0	440.722	31.636	42.248	1.84%	2.46%
15.0	434.402	51.912	94.16	3.02%	5.47%
20.0	424.985	70.825	164.986	4.12%	9.59%
25.0	412.014	87.786	252.771	5.10%	14.69%
30.0	395.921	102.245	355.016	5.94%	20.63%
35.0	376.833	113.793	468.81	6.61%	27.25%
40.0	354.471	122.013	590.822	7.09%	34.34%
45.0	329.317	126.609	717.431	7.36%	41.70%
50.0	301.472	127.460	844.891	7.41%	49.10%
55.0	271.317	124.543	969.434	7.24%	56.34%
60.0	239.690	118.118	1087.552	6.86%	63.21%
65.0	205.956	108.337	1195.89	6.30%	69.50%
70.0	171.461	95.564	1291.454	5.55%	75.06%
75.0	137.296	80.704	1372.158	4.69%	79.75%
80.0	104.831	64.786	1436.944	3.77%	83.51%
85.0	77.240	49.473	1486.417	2.88%	86.39%
90.0	55.563	36.362	1522.78	2.11%	88.50%
95.0	52.060	29.468	1552.248	1.71%	90.21%
100.0	37.465	24.326	1576.574	1.41%	91.63%
105.0	18.885	15.078	1591.652	0.88%	92.50%
110.0	24.266	11.279	1602.931	0.66%	93.16%
115.0	35.790	15.207	1618.137	0.88%	94.04%
120.0	41.983	18.907	1637.044	1.10%	95.14%
125.0	40.003	18.951	1655.995	1.10%	96.24%
130.0	36.653	16.668	1672.662	0.97%	97.21%
135.0	32.668	14.007	1686.67	0.81%	98.03%
140.0	27.921	11.218	1697.888	0.65%	98.68%
145.0	22.565	8.423	1706.311	0.49%	99.17%
150.0	16.753	5.790	1712.101	0.34%	99.50%
155.0	11.067	3.521	1715.622	0.20%	99.71%
160.0	7.818	1.981	1717.602	0.12%	99.82%
165.0	7.412	1.255	1718.858	0.07%	99.90%
170.0	8.427	0.940	1719.797	0.05%	99.95%
175.0	8.732	0.614	1720.411	0.04%	99.99%
180.0	10.458	0.229	1720.64	0.01%	100.00%

Equipment: GMS-3000  
Temperature( $^{\circ}$ C): 25

Date:  
Humidity(%): 59%

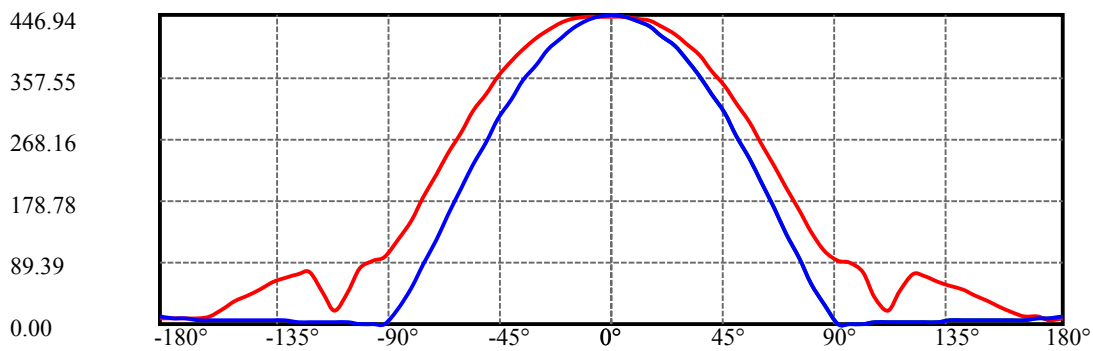
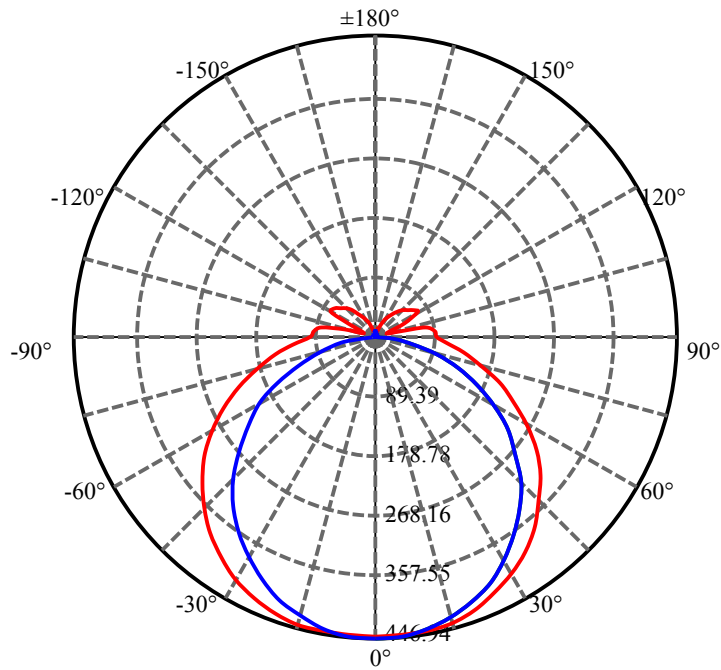
Operator: Zac

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	355.02	20.63%	20.63%
0-40	590.82	34.34%	34.34%
0-60	1087.55	63.21%	63.21%
0-90	1522.78	88.50%	88.50%
0-120	1637.04	95.14%	95.14%
0-180	1720.64	100.00%	100.00%
60-90	435.23	25.29%	25.29%
90-120	114.26	6.64%	6.64%
90-130	149.88	8.71%	8.71%
90-150	189.32	11.00%	11.00%
90-180	197.63	11.49%	11.49%
0-75.34	1376.51	80.00%	80.00%

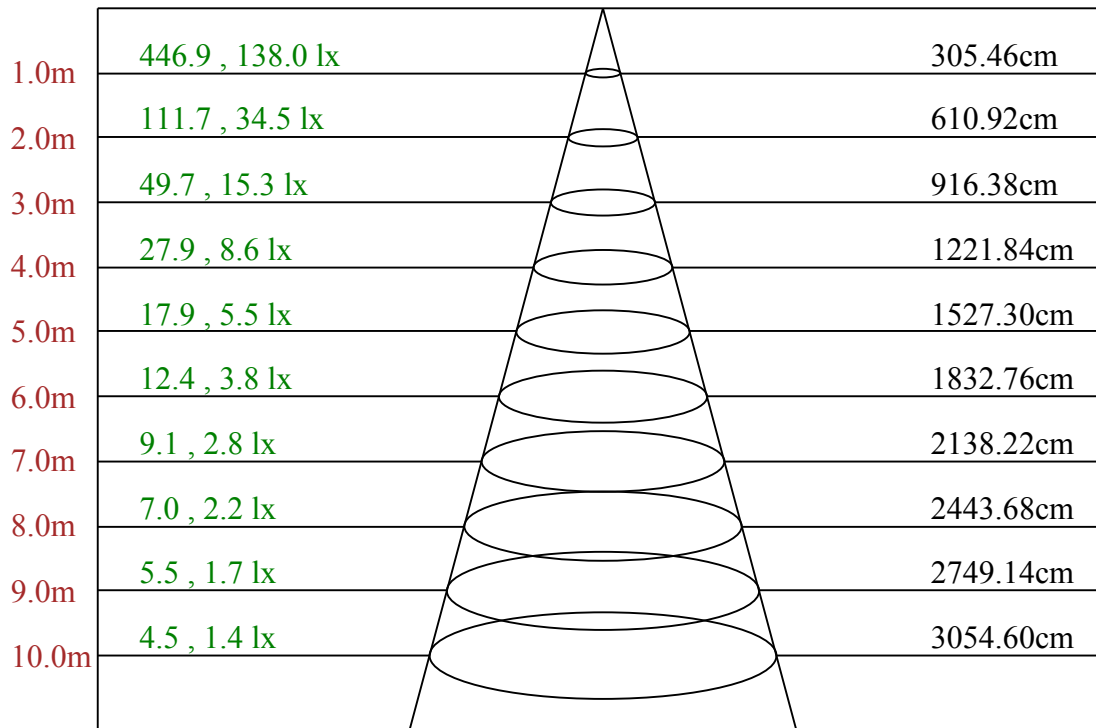
ZONAL LUMEN SUMMARY

0-10	42.25
10-20	122.74
20-30	190.03
30-40	235.81
40-50	254.07
50-60	242.66
60-70	203.90
70-80	145.49
80-90	85.84
90-100	53.79
100-110	26.36
110-120	34.11
120-130	35.62
130-140	25.23
140-150	14.21
150-160	5.50
160-170	2.19
170-180	0.61

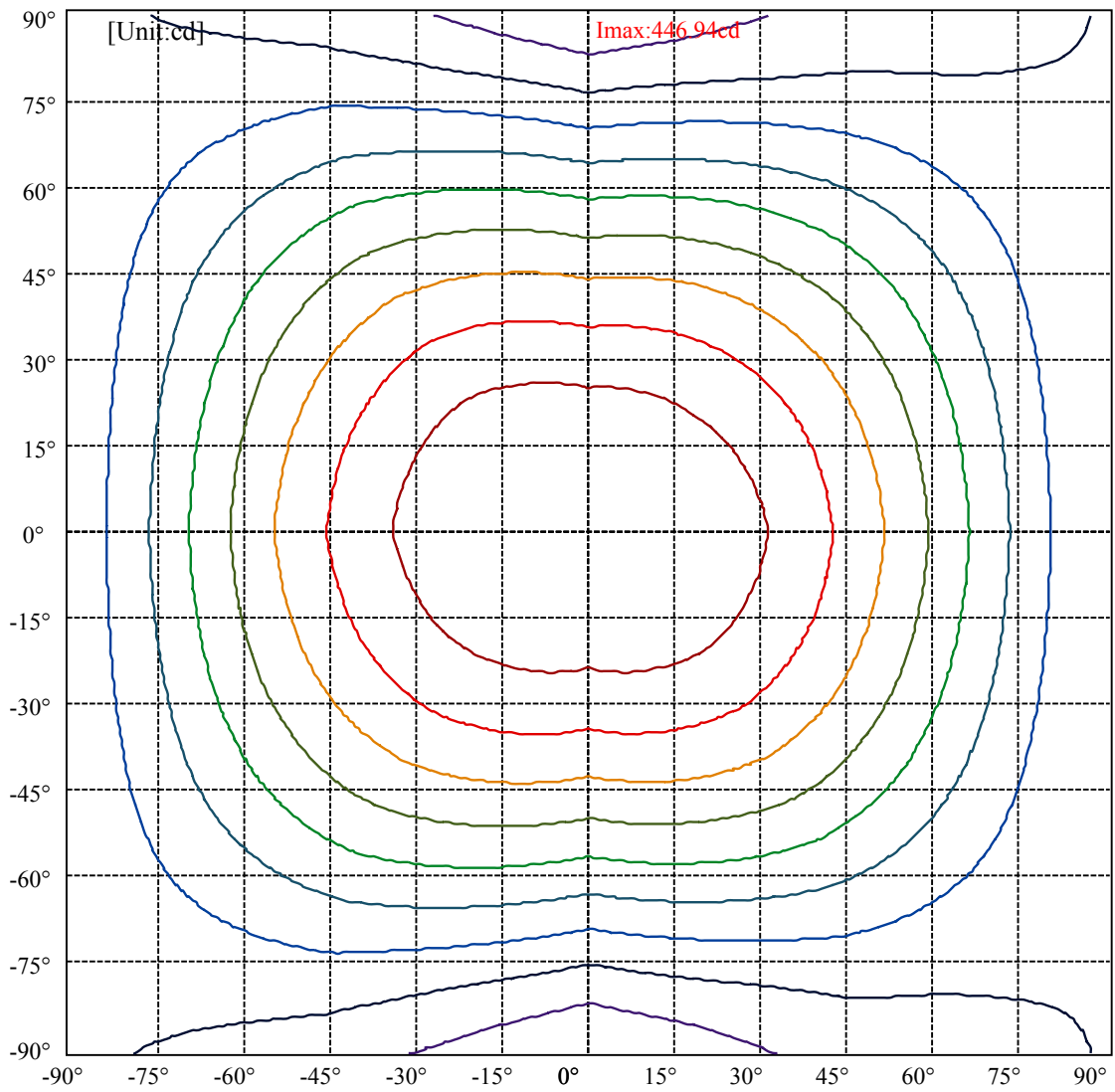


C90(Max): ———  
 C0/C180: ———  
 C90/C270: ———

Field angle(10%Imax):C0/180Left:144.1 Right:143.7  
                                   :C90/270Left:81.2 Right:82.3  
 Beam Angle(50%Imax):C0/180Left:69.1 Right:66.0  
                                   :C90/270Left:55.9 Right:57.3



Max , Ave      Beam angle of C90 plane 113.57



(10%Imax) 44.6941	—
(20%Imax) 89.3882	—
(30%Imax) 134.082	—
(40%Imax) 178.776	—
(50%Imax) 223.471	—
(60%Imax) 268.165	—
(70%Imax) 312.859	—
(80%Imax) 357.553	—
(90%Imax) 402.247	—

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

Date:  
Humidity(%): 59%

Operator: Zac

## Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	442.88	443.69	442.27	437.80	430.70	419.12	405.52	388.46	367.75
45.0	441.26	441.05	438.01	430.90	421.56	408.36	392.11	373.03	350.69
90.0	446.94	445.32	439.83	430.49	417.50	401.66	381.76	358.81	332.62
135.0	445.11	444.71	443.08	438.01	430.29	418.92	404.30	387.04	366.53
180.0	442.88	443.90	443.69	441.05	434.96	425.82	413.64	398.21	379.12
225.0	441.26	441.05	439.02	433.54	424.60	412.62	397.60	379.12	358.41
270.0	446.94	444.50	438.01	428.06	414.86	396.99	376.07	352.92	325.92
315.0	445.11	444.91	441.86	435.37	425.42	412.62	396.38	377.09	354.75
360.0	442.88	443.69	442.27	437.80	430.70	419.12	405.52	388.46	367.75
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	343.99	318.81	290.38	259.72	227.63	195.75	163.26	131.99	106.81
45.0	325.51	296.67	265.81	234.54	200.22	165.70	131.99	100.52	76.15
90.0	304.39	272.51	239.01	204.69	167.93	130.37	94.02	58.69	27.82
135.0	341.55	314.54	286.32	255.45	222.15	187.63	153.92	121.23	91.58
180.0	357.80	334.44	307.84	278.60	247.33	215.65	182.55	150.88	123.06
225.0	334.65	308.05	279.41	249.36	217.28	183.37	149.86	118.39	89.96
270.0	296.07	263.98	229.87	196.16	159.61	122.65	86.10	51.58	23.15
315.0	330.59	302.77	271.90	239.01	205.50	170.57	136.66	105.39	79.40
360.0	343.99	318.81	290.38	259.72	227.63	195.75	163.26	131.99	106.81
C/ $\gamma$ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	91.58	89.75	73.92	37.97	18.68	46.70	71.88	68.03	62.34
45.0	59.50	57.26	32.29	15.03	37.57	44.67	42.64	40.00	36.55
90.0	0.81	0.20	0.81	1.42	2.03	2.64	3.25	3.86	4.06
135.0	67.21	61.33	41.83	15.64	37.16	49.75	47.52	44.27	40.00
180.0	98.08	90.36	80.21	48.13	18.68	44.07	74.93	72.90	66.81
225.0	64.98	58.48	37.97	14.01	36.75	47.52	45.89	43.05	38.79
270.0	0.61	0.81	1.22	1.63	2.23	2.84	3.45	4.06	4.67
315.0	61.73	58.28	31.48	17.26	41.02	48.13	46.30	43.86	40.00
360.0	91.58	89.75	73.92	37.97	18.68	46.70	71.88	68.03	62.34
C/ $\gamma$ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	56.45	49.55	42.44	34.32	24.77	15.64	9.95	10.36	6.90
45.0	32.69	28.02	22.13	16.04	9.14	5.89	6.30	8.12	9.34
90.0	4.26	4.87	5.28	5.48	5.08	4.67	6.09	7.31	8.94
135.0	34.52	27.41	19.29	11.17	5.89	5.08	5.28	6.70	8.73
180.0	59.70	51.17	42.85	32.69	20.92	10.36	8.53	9.34	8.33
225.0	33.30	26.80	19.09	11.17	6.30	6.70	7.72	8.94	9.14
270.0	4.87	5.48	5.69	5.89	5.69	5.89	6.50	7.92	9.54
315.0	35.54	30.05	23.76	17.26	10.76	8.33	8.94	8.73	8.94
360.0	56.45	49.55	42.44	34.32	24.77	15.64	9.95	10.36	6.90
C/ $\gamma$ (°)	180.0								
0.0	8.73								
45.0	11.17								
90.0	10.97								
135.0	10.97								
180.0	8.73								
225.0	11.17								
270.0	10.97								
315.0	10.97								
360.0	8.73								