



Shenzhen Belling Efficiency Testing Lab Co.,Ltd
www.bellingeel.com

Tel:0755-21038430

Address:1Floor, No.1 Building,Meibaohe Industrial Park,Dalang Street,Longhua District,Shenzhen,Guangdong Prov.518101 China

ASD Lighting Corp.

Report No	:	Voltage	:	120.010 V
Test No	:	Current	:	0.173 A
LumCAT	:	Power	:	20.693 W
Luminaire	:	PF	:	0.995
LampCAT	:	Ballast type	:	
Lamp flux	:	Width	:	0 mm
Number of Lamps	:	Length	:	0 mm
Phm Type	:	Height	:	0 mm

Photometric Results

Lumens(lm)	:	2291.11	Central intensity(cd)	:	848.912
Efficiency(%)	:	0.00%	Maximum intensity(cd)	:	855.813
Luminous Efficacy(lm/W)	:	110.72	Angle of maximum intensity	:	C=157.5 γ =0.0
Beam Angle(50%Imax)	:	[C0/180]Total=105.9 [C90/270]Total=105.2			
Field angle(10%Imax)	:	[C0/180]Total=158.2 [C90/270]Total=163.1			
Maximum s/h(1/2)	:	C0_180=1.23 C90_270=1.18			
Maximum s/h(1/4)	:	C0_180=1.34 C90_270=1.30			
Up flux rate of lamp(%)	:	0.00%			
Down flux rate of lamp(%)	:	0.00%			
Up flux rate of LUM(%)	:	1.06%			
Down flux rate of LUM(%)	:	98.94%			
CIE Type	:	Direct lighting			
Output flux ratio in π solid angle	:	78.318%			

Equipment:
Temperature(°C): 25.0

Date:
Humidity(%): 59.0%

Operator:
Distance(m): 15.70

Zonal flux distribution table

Appendix Page: 2 Total:8

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	850.113	0.000	0	0.00%	0.00%
5.0	844.829	20.264	20.264	0.00%	0.88%
10.0	829.778	59.922	80.187	0.00%	3.50%
15.0	804.959	97.017	177.204	0.00%	7.73%
20.0	771.652	130.017	307.221	0.00%	13.41%
25.0	730.627	157.687	464.908	0.00%	20.29%
30.0	684.102	179.203	644.11	0.00%	28.11%
35.0	631.954	194.012	838.122	0.00%	36.58%
40.0	576.001	201.809	1039.932	0.00%	45.39%
45.0	517.752	202.837	1242.768	0.00%	54.24%
50.0	456.808	197.293	1440.061	0.00%	62.85%
55.0	395.308	185.692	1625.753	0.00%	70.96%
60.0	332.238	168.601	1794.354	0.00%	78.32%
65.0	268.936	146.615	1940.969	0.00%	84.72%
70.0	205.388	120.595	2061.564	0.00%	89.98%
75.0	143.734	91.738	2153.302	0.00%	93.99%
80.0	87.165	62.234	2215.536	0.00%	96.70%
85.0	41.919	35.450	2250.986	0.00%	98.25%
90.0	15.452	15.890	2266.876	0.00%	98.94%
95.0	5.931	5.872	2272.747	0.00%	99.20%
100.0	2.650	2.323	2275.071	0.00%	99.30%
105.0	2.819	1.455	2276.526	0.00%	99.36%
110.0	2.604	1.409	2277.935	0.00%	99.43%
115.0	2.634	1.315	2279.25	0.00%	99.48%
120.0	2.711	1.290	2280.54	0.00%	99.54%
125.0	2.634	1.232	2281.772	0.00%	99.59%
130.0	2.773	1.174	2282.946	0.00%	99.64%
135.0	3.097	1.181	2284.127	0.00%	99.70%
140.0	3.251	1.177	2285.304	0.00%	99.75%
145.0	3.420	1.117	2286.421	0.00%	99.80%
150.0	3.805	1.063	2287.484	0.00%	99.84%
155.0	4.329	1.027	2288.511	0.00%	99.89%
160.0	4.745	0.952	2289.463	0.00%	99.93%
165.0	4.606	0.771	2290.234	0.00%	99.96%
170.0	3.959	0.508	2290.742	0.00%	99.98%
175.0	3.713	0.273	2291.015	0.00%	100.00%
180.0	4.098	0.093	2291.108	0.00%	100.00%

Equipment:
Temperature($^{\circ}$ C): 25.0

Date:
Humidity(%): 59.0%

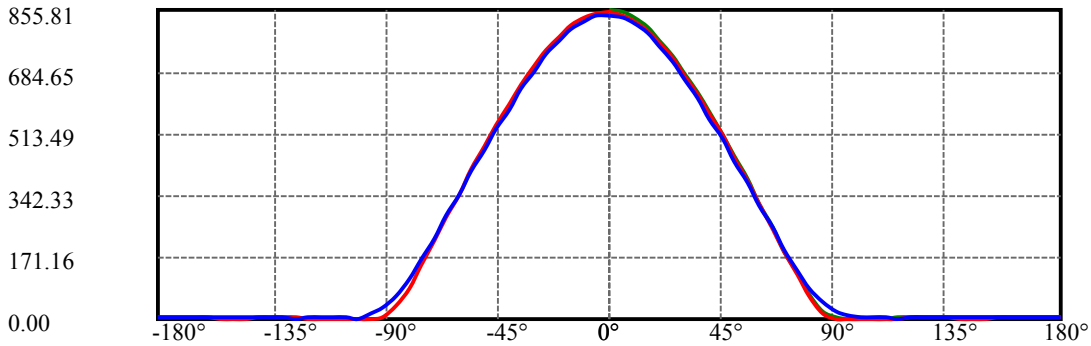
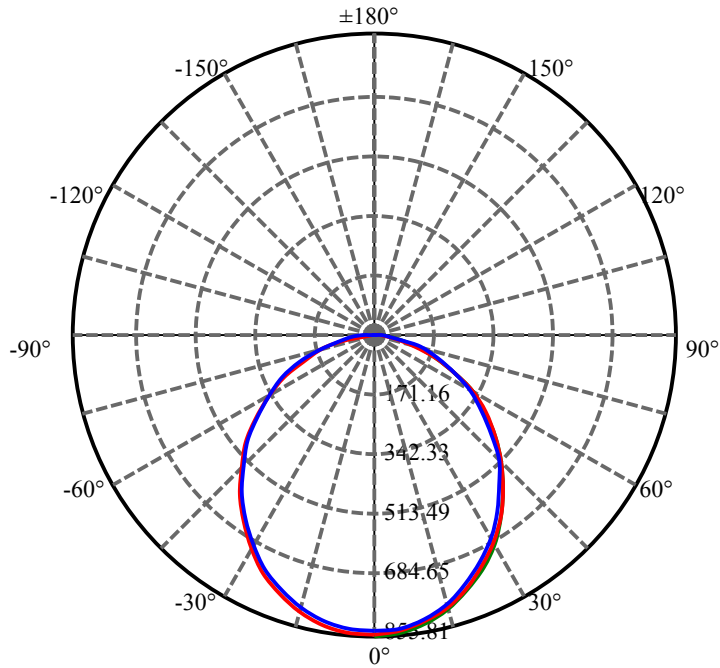
Operator:
Distance(m): 15.70

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	644.11	N.A.	28.11%
0-40	1039.93	N.A.	45.39%
0-60	1794.35	N.A.	78.32%
0-90	2266.88	N.A.	98.94%
0-120	2280.54	N.A.	99.54%
0-180	2291.11	N.A.	100.00%
60-90	472.52	N.A.	20.62%
90-120	13.66	N.A.	0.60%
90-130	16.07	N.A.	0.70%
90-150	20.61	N.A.	0.90%
90-180	24.14	N.A.	1.05%
0-61.31	1832.89	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	80.19
10-20	227.03
20-30	336.89
30-40	395.82
40-50	400.13
50-60	354.29
60-70	267.21
70-80	153.97
80-90	51.34
90-100	8.19
100-110	2.86
110-120	2.60
120-130	2.41
130-140	2.36
140-150	2.18
150-160	1.98
160-170	1.28
170-180	0.27



C157.5(Max): —

C0/C180: —

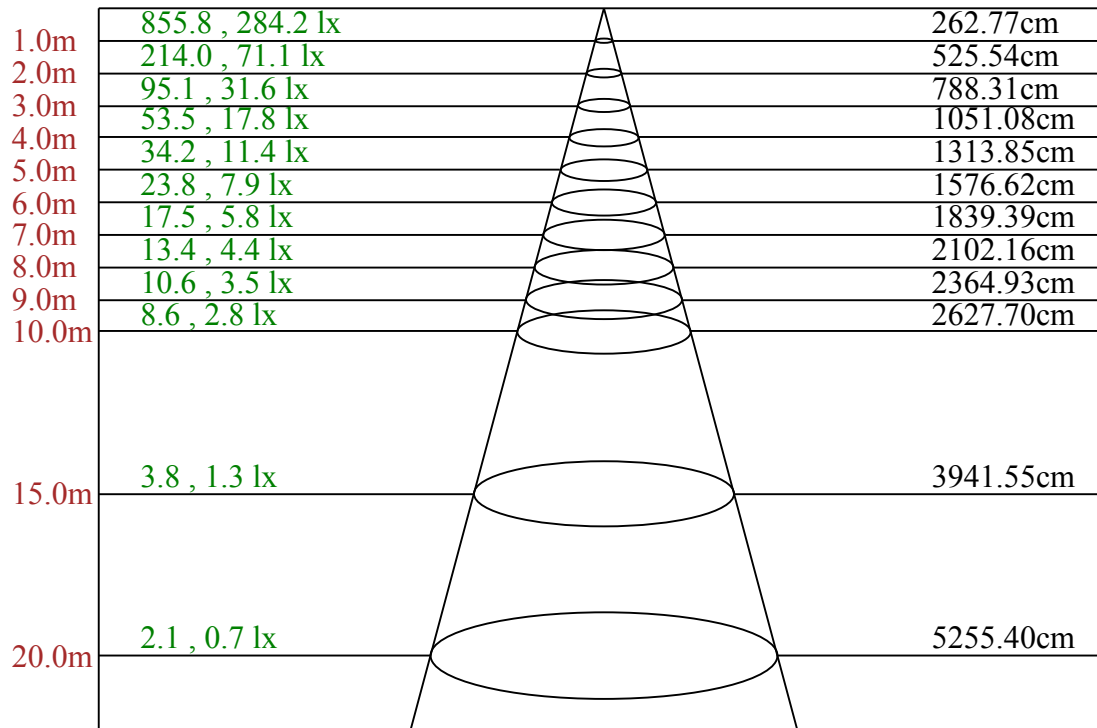
C90/C270: —

Field angle(10%Imax):C0/180Left:80.2 Right:78.0

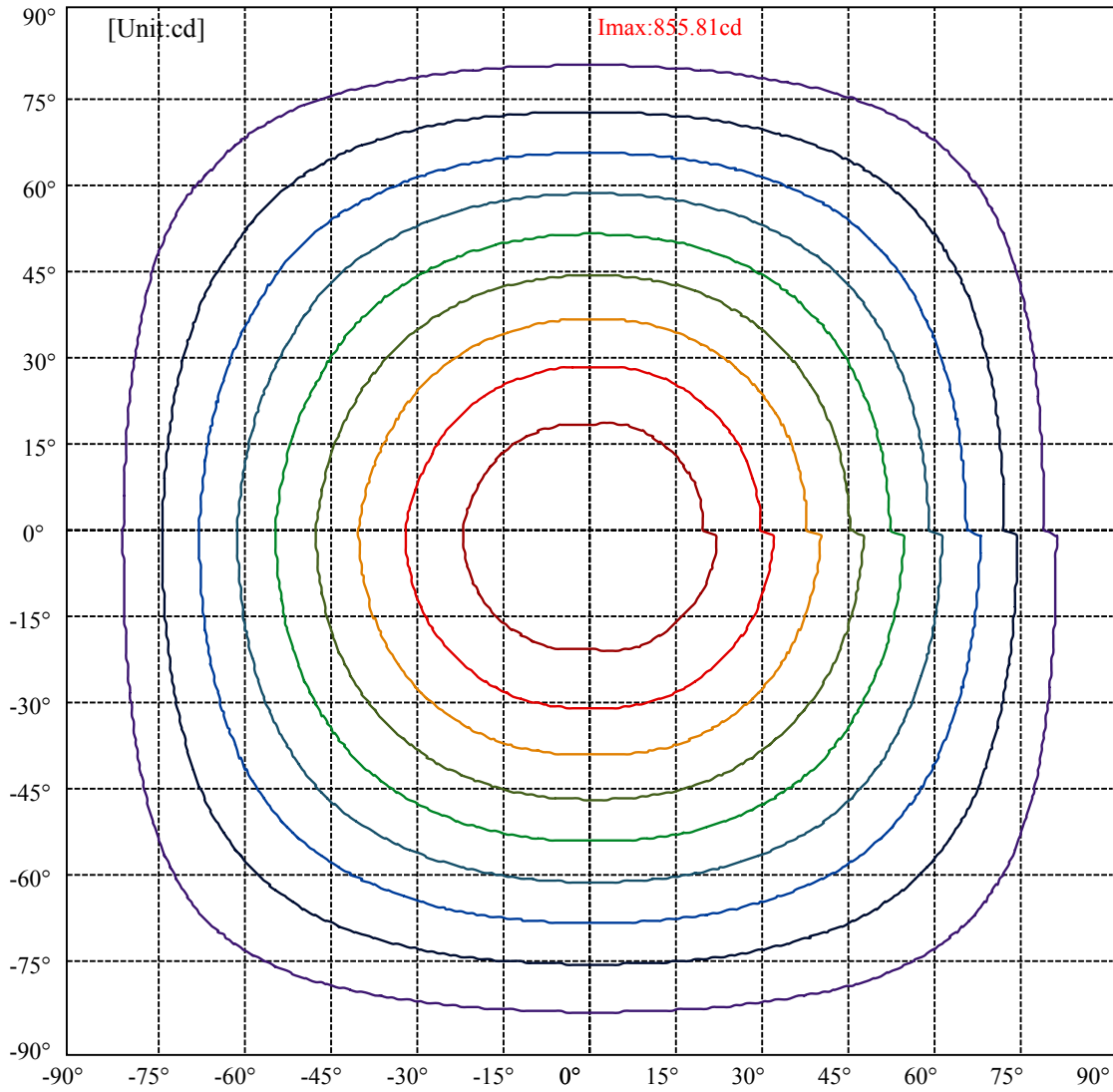
:C90/270Left:83.0 Right:80.1

Beam Angle(50%Imax):C0/180Left:54.2 Right:51.7

:C90/270Left:53.9 Right:51.3



Max , Ave Beam angle of C157.5 plane 105.45



(10%I _{max}) 85.325	—
(20%I _{max}) 170.65	—
(30%I _{max}) 255.975	—
(40%I _{max}) 341.3	—
(50%I _{max}) 426.625	—
(60%I _{max}) 511.95	—
(70%I _{max}) 597.275	—
(80%I _{max}) 682.6	—
(90%I _{max}) 767.925	—

Equipment:
Temperature(°C): 25.0

Date:
Humidity(%): 59.0%

Operator:
Distance(m): 15.70

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	848.91	842.01	824.51	798.63	764.37	722.96	677.60	624.36	566.19
22.5	852.61	845.21	827.22	800.60	766.34	723.69	675.38	623.37	565.69
45.0	849.16	841.52	824.02	796.90	762.64	719.26	671.19	617.46	562.24
67.5	850.64	842.26	825.74	798.38	762.15	718.52	670.45	616.72	559.53
90.0	842.01	834.62	816.62	790.49	754.51	711.62	663.55	611.79	555.10
112.5	850.39	842.26	824.51	796.66	759.93	717.04	667.74	613.51	556.57
135.0	851.38	844.47	827.71	799.86	765.35	721.97	674.15	620.66	562.74
157.5	855.81	848.91	831.90	805.78	772.25	730.10	681.79	628.55	572.35
180.0	848.91	846.69	834.62	812.92	782.11	743.41	699.54	648.76	593.79
202.5	852.61	850.39	837.57	815.39	783.35	743.41	699.54	647.53	592.07
225.0	849.16	845.71	833.38	810.21	779.89	740.95	694.86	643.83	590.10
247.5	850.64	847.43	833.63	810.95	778.66	738.73	693.87	642.35	586.65
270.0	842.01	838.56	825.99	802.82	771.02	731.58	687.21	636.44	581.96
292.5	850.39	847.93	835.35	812.68	781.37	741.69	695.59	644.08	590.34
315.0	851.38	847.43	834.86	811.45	779.40	739.96	694.61	645.06	590.34
337.5	855.81	851.87	838.81	815.64	783.10	745.14	698.55	646.79	590.34
360.0	848.91	842.01	824.51	798.63	764.37	722.96	677.60	624.36	566.19
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	508.02	445.90	383.78	318.47	251.67	186.35	121.03	61.62	16.02
22.5	504.81	441.96	379.84	314.77	249.45	184.13	122.75	65.32	21.69
45.0	502.59	441.46	378.61	316.49	252.41	189.06	127.68	73.95	33.03
67.5	502.10	440.48	378.36	315.75	254.62	192.02	132.61	80.60	41.66
90.0	497.66	437.03	375.40	315.01	253.39	193.00	132.86	85.04	45.60
112.5	498.65	438.01	376.39	314.27	254.62	193.25	134.09	81.59	43.38
135.0	502.59	439.74	378.86	315.01	250.93	189.80	129.41	74.93	34.26
157.5	512.21	449.35	386.99	320.93	254.38	187.83	125.71	68.52	23.91
180.0	535.62	476.71	413.86	348.04	283.71	216.66	149.87	86.76	35.00
202.5	535.13	474.25	411.88	349.03	285.68	217.90	154.80	93.42	41.41
225.0	531.93	471.04	411.39	348.29	284.20	219.87	159.97	101.31	52.01
247.5	528.72	469.81	409.17	347.30	285.44	225.29	164.66	108.21	60.88
270.0	526.50	467.84	407.94	346.81	287.16	225.78	165.89	111.91	65.81
292.5	532.42	471.78	412.38	350.02	287.65	225.54	166.38	109.44	62.36
315.0	532.17	472.03	412.38	349.77	285.93	223.32	160.46	101.80	53.49
337.5	532.91	471.54	407.69	345.83	281.74	216.42	151.59	90.22	40.18
360.0	508.02	445.90	383.78	318.47	251.67	186.35	121.03	61.62	16.02
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1.48	1.48	1.97	1.73	2.22	2.46	2.96	2.71	2.96
22.5	4.44	2.46	1.73	2.46	2.22	2.71	2.46	3.20	2.71
45.0	11.59	3.70	2.71	2.46	2.46	2.71	2.96	2.96	2.71
67.5	17.75	5.92	3.45	3.20	2.71	2.46	2.96	2.46	2.96
90.0	20.71	8.13	4.93	3.70	3.20	2.46	2.71	3.20	2.96
112.5	18.73	6.66	3.70	3.45	2.96	2.46	2.71	2.71	2.71
135.0	12.32	3.94	2.71	2.71	2.46	2.71	2.46	2.71	2.96
157.5	5.18	2.22	1.97	2.46	2.46	2.71	2.96	2.71	3.20
180.0	3.70	1.23	1.23	1.48	1.48	1.73	2.46	2.71	2.71
202.5	9.61	2.71	1.73	1.73	1.48	2.22	2.46	2.46	2.71
225.0	20.21	7.64	2.71	2.46	2.46	2.46	2.22	2.22	2.71
247.5	29.09	12.08	3.70	3.70	3.45	3.45	2.71	2.46	2.46
270.0	32.04	14.05	1.23	4.93	3.94	3.45	3.20	2.46	2.71
292.5	29.33	12.08	3.45	3.94	3.20	3.20	2.96	2.46	2.71
315.0	21.20	7.39	2.96	2.46	2.71	2.71	2.71	2.46	2.46
337.5	9.86	3.20	2.22	2.22	2.22	2.22	2.46	2.22	2.71
360.0	1.48	1.48	1.97	1.73	2.22	2.46	2.96	2.71	2.96

Equipment:
Temperature(°C): 25.0

Date:
Humidity(%): 59.0%

Operator:
Distance(m): 15.70

Intensity data(cd)

Appendix Page: 8 Total:8

C/\u03b3(\u00b0)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	3.45	2.22	2.22	2.46	2.71	2.71	2.71	2.96	4.19
22.5	3.20	2.96	3.20	3.45	3.70	3.70	3.70	3.94	4.44
45.0	2.96	3.45	4.19	4.19	5.42	5.67	4.44	4.44	3.94
67.5	3.20	3.20	3.94	4.93	5.18	6.66	7.15	4.44	3.94
90.0	3.45	3.70	4.19	4.68	4.93	6.66	5.92	4.44	3.94
112.5	3.20	3.45	4.19	4.68	5.18	5.67	6.16	3.94	3.20
135.0	3.20	3.94	3.70	4.19	5.42	5.18	3.70	3.20	3.94
157.5	3.70	3.45	3.20	3.45	3.70	3.45	2.71	3.20	3.94
180.0	2.96	2.96	2.22	2.22	2.46	2.96	2.71	2.71	2.96
202.5	2.96	3.45	2.71	2.71	2.96	3.70	2.96	3.20	2.96
225.0	2.96	3.20	3.45	3.70	4.44	4.44	5.18	2.96	2.96
247.5	2.71	3.20	3.45	4.19	4.44	5.42	4.93	4.19	3.20
270.0	2.96	2.96	3.45	4.44	4.68	4.93	5.92	6.16	3.94
292.5	2.96	3.20	3.70	4.44	4.68	5.42	5.42	5.42	4.19
315.0	2.71	3.20	3.70	3.94	4.68	5.18	6.41	4.44	4.19
337.5	2.96	3.45	3.20	3.20	4.68	4.19	3.70	3.70	3.45
360.0	3.45	2.22	2.22	2.46	2.71	2.71	2.71	2.96	4.19
C/\u03b3(\u00b0)	180.0								
0.0	3.94								
22.5	4.19								
45.0	4.68								
67.5	3.94								
90.0	3.20								
112.5	4.19								
135.0	4.19								
157.5	4.44								
180.0	3.94								
202.5	4.19								
225.0	4.68								
247.5	3.94								
270.0	3.20								
292.5	4.19								
315.0	4.19								
337.5	4.44								
360.0	3.94								