



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	:	120.06 V
Test No	:	Current	:	0.1731 A
LumCAT	:	Power	:	20.676 W
Luminaire	:	PF	:	0.9949
LampCAT	:	Ballast type	:	
Lamp flux	:	Width	:	0 mm
Number of Lamps	:	Length	:	0 mm
Phm Type	:	Height	:	0 mm

Photometric Results

Lumens(lm)	:	2171.23	Central intensity(cd)	:	799.651
Efficiency(%)	:	100.00%	Maximum intensity(cd)	:	812.760
Luminous Efficacy(lm/W)	:	105.01	Angle of maximum intensity	:	C=67.5 γ =0.0
Beam Angle(50%Imax)	:	[C0/180]Total=105.2 [C90/270]Total=105.9			
Field angle(10%Imax)	:	[C0/180]Total=163.1 [C90/270]Total=158.2			
Maximum s/h(1/2)	:	C0_180=1.22 C90_270=1.23			
Maximum s/h(1/4)	:	C0_180=1.34 C90_270=1.34			
Up flux rate of lamp(%)	:	1.06%			
Down flux rate of lamp(%)	:	98.94%			
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	:	78.378%			

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

Date:
Humidity(%): 59%

Operator: Zac

Zonal flux distribution table

Appendix Page: 2 Total:8

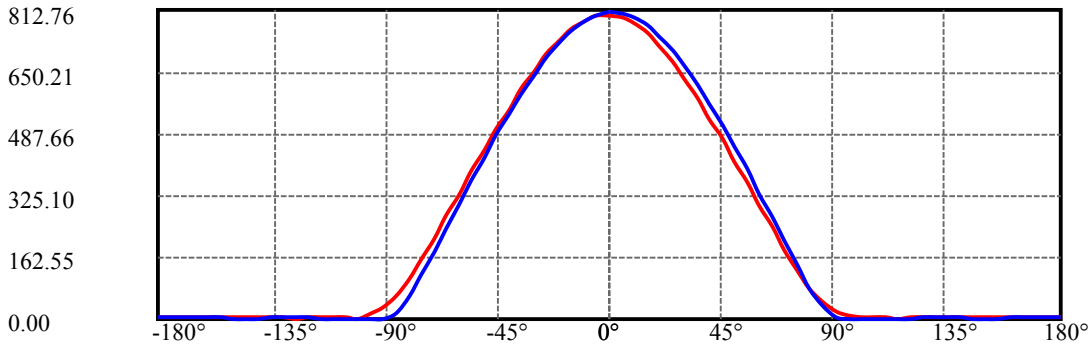
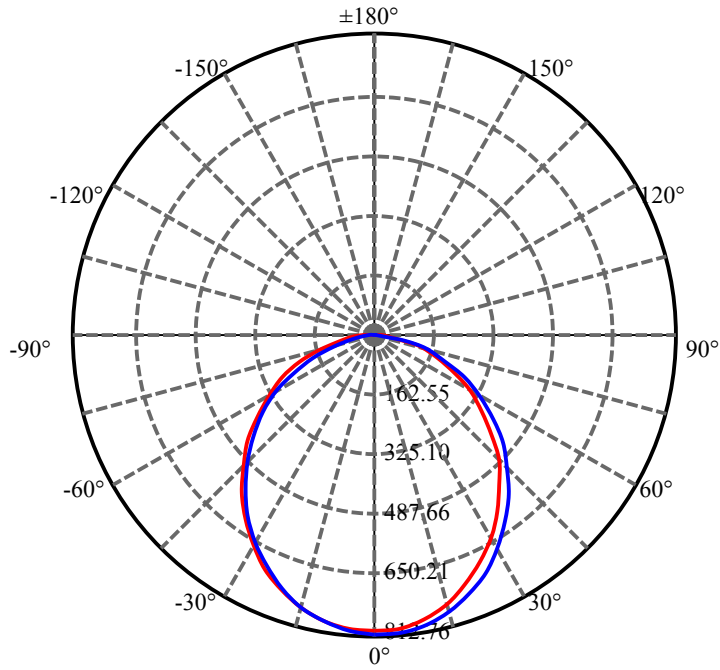
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	807.347	0.000	0	0.00%	0.00%
5.0	802.329	19.243	19.243	0.89%	0.89%
10.0	788.035	56.892	76.136	2.62%	3.51%
15.0	764.465	92.093	168.229	4.24%	7.75%
20.0	732.833	123.398	291.627	5.68%	13.43%
25.0	693.872	149.635	441.262	6.89%	20.32%
30.0	649.688	170.029	611.291	7.83%	28.15%
35.0	600.163	184.049	795.34	8.48%	36.63%
40.0	547.025	191.400	986.74	8.82%	45.45%
45.0	491.706	192.329	1179.069	8.86%	54.30%
50.0	433.827	187.018	1366.087	8.61%	62.92%
55.0	375.422	175.958	1542.044	8.10%	71.02%
60.0	315.524	159.710	1701.754	7.36%	78.38%
65.0	255.407	138.794	1840.549	6.39%	84.77%
70.0	195.055	114.060	1954.609	5.25%	90.02%
75.0	136.504	86.664	2041.273	3.99%	94.01%
80.0	82.780	58.674	2099.947	2.70%	96.72%
85.0	39.810	33.311	2133.258	1.53%	98.25%
90.0	14.675	14.918	2148.176	0.69%	98.94%
95.0	5.633	5.560	2153.737	0.26%	99.19%
100.0	2.516	2.214	2155.951	0.10%	99.30%
105.0	2.677	1.390	2157.341	0.06%	99.36%
110.0	2.473	1.346	2158.687	0.06%	99.42%
115.0	2.502	1.260	2159.946	0.06%	99.48%
120.0	2.575	1.234	2161.181	0.06%	99.54%
125.0	2.502	1.174	2162.354	0.05%	99.59%
130.0	2.634	1.117	2163.471	0.05%	99.64%
135.0	2.941	1.126	2164.597	0.05%	99.69%
140.0	3.087	1.116	2165.713	0.05%	99.75%
145.0	3.248	1.057	2166.77	0.05%	99.79%
150.0	3.614	1.010	2167.78	0.05%	99.84%
155.0	4.111	0.978	2168.758	0.05%	99.89%
160.0	4.506	0.904	2169.662	0.04%	99.93%
165.0	4.375	0.732	2170.394	0.03%	99.96%
170.0	3.760	0.483	2170.876	0.02%	99.98%
175.0	3.526	0.261	2171.137	0.01%	100.00%
180.0	3.892	0.089	2171.226	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	611.29	28.15%	28.15%
0-40	986.74	45.45%	45.45%
0-60	1701.75	78.38%	78.38%
0-90	2148.18	98.94%	98.94%
0-120	2161.18	99.54%	99.54%
0-180	2171.23	100.00%	100.00%
60-90	446.42	20.56%	20.56%
90-120	13.00	0.60%	0.60%
90-130	15.29	0.70%	0.70%
90-150	19.60	0.90%	0.90%
90-180	22.96	1.06%	1.06%
0-61.27	1736.98	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	76.14
10-20	215.49
20-30	319.66
30-40	375.45
40-50	379.35
50-60	335.67
60-70	252.85
70-80	145.34
80-90	48.23
90-100	7.77
100-110	2.74
110-120	2.49
120-130	2.29
130-140	2.24
140-150	2.07
150-160	1.88
160-170	1.21
170-180	0.26

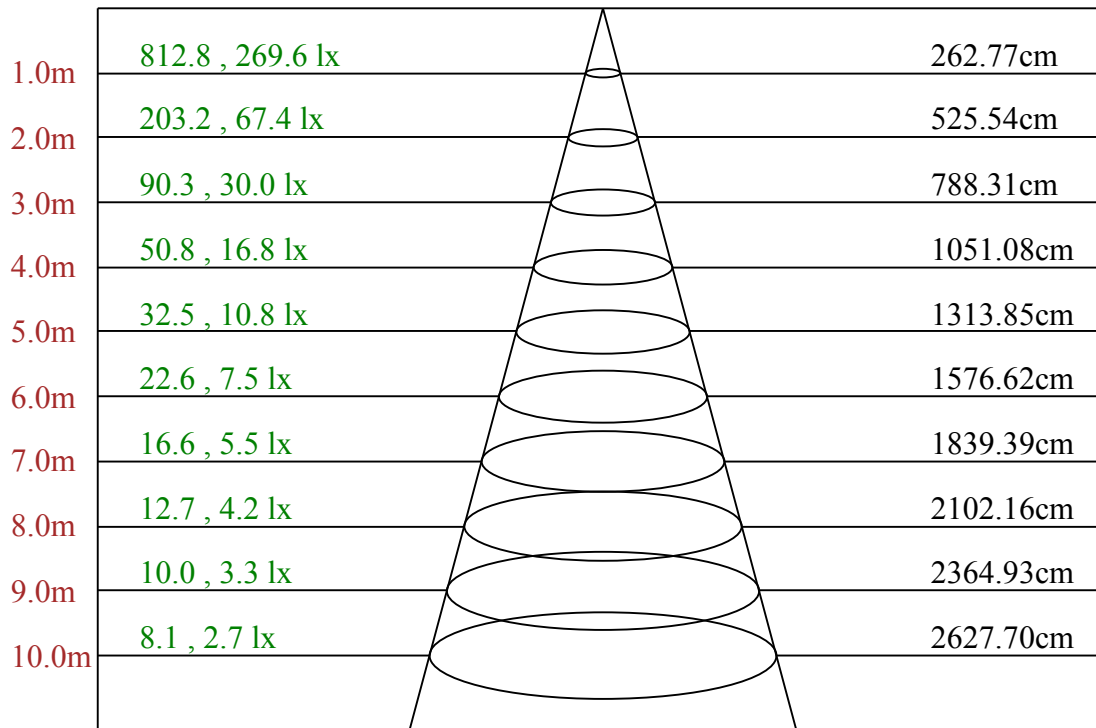


C0/C180: —

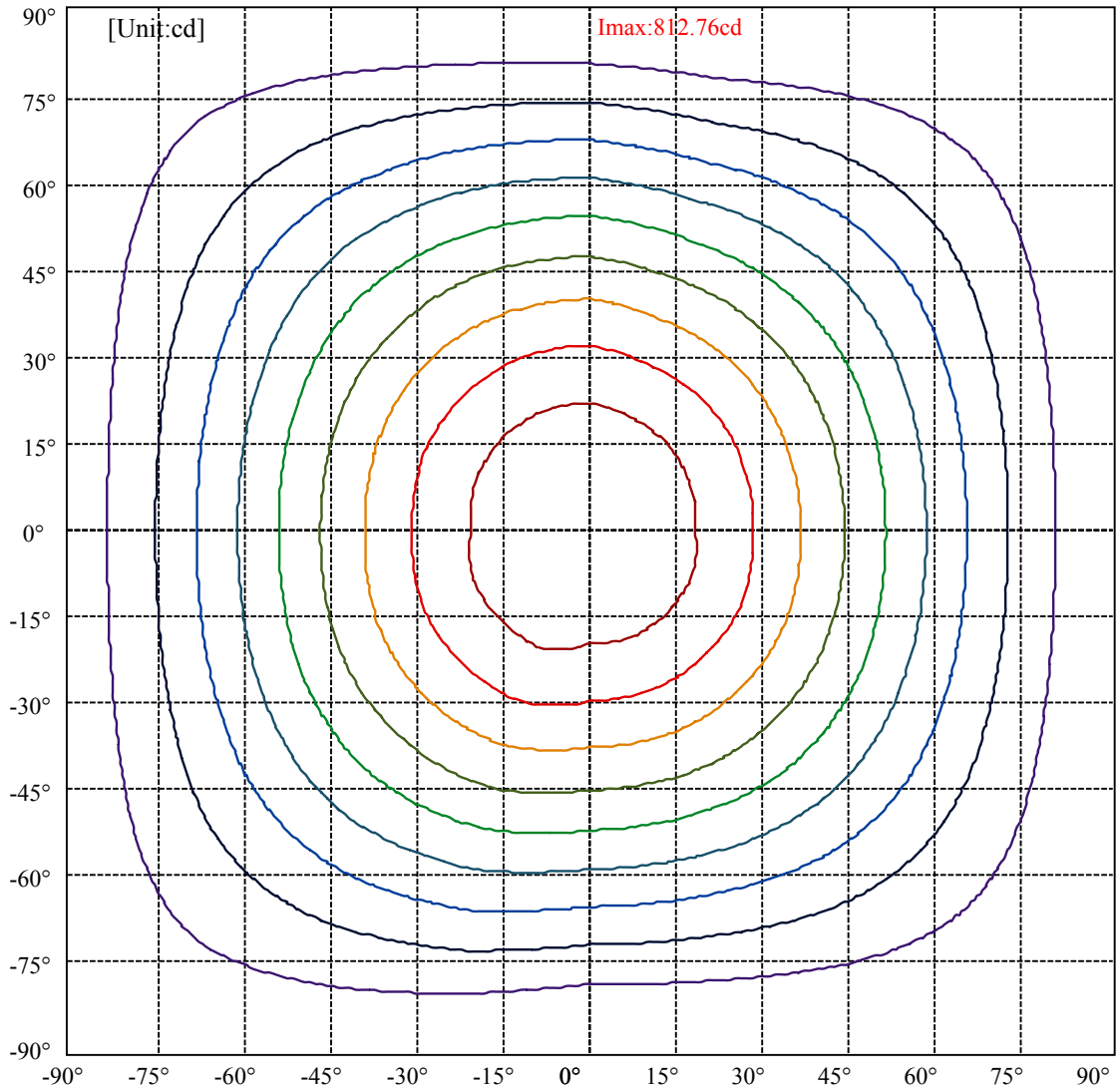
C90/C270: —

Field angle(10%Imax):C0/180Left:83.0 Right:80.1
:C90/270Left:78.0 Right:80.2

Beam Angle(50%Imax):C0/180Left:53.9 Right:51.3
:C90/270Left:51.7 Right:54.2



Max , Ave Beam angle of C67.5 plane 105.45



(10%Imax) 81.0323	—
(20%Imax) 162.065	—
(30%Imax) 243.097	—
(40%Imax) 324.129	—
(50%Imax) 405.161	—
(60%Imax) 486.194	—
(70%Imax) 567.226	—
(80%Imax) 648.258	—
(90%Imax) 729.29	—

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

Date:
Humidity(%): 59%

Operator: Zac

Intensity data(cd)

Appendix Page: 7 Total:8

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	799.65	792.63	775.54	750.73	716.55	675.82	630.17	581.01	527.17
22.5	807.61	799.89	783.03	756.58	721.70	680.97	634.15	582.65	528.58
45.0	808.55	801.99	786.07	759.62	726.85	685.65	640.24	589.44	534.43
67.5	812.76	806.21	790.05	765.24	733.40	693.38	647.49	596.93	543.56
90.0	806.21	804.10	792.63	772.03	742.77	706.02	664.35	616.13	563.92
112.5	809.72	807.61	795.44	774.37	743.94	706.02	664.35	614.95	562.28
135.0	806.44	803.16	791.46	769.45	740.66	703.68	659.90	611.44	560.41
157.5	807.85	804.80	791.69	770.16	739.49	701.57	658.96	610.04	557.13
180.0	799.65	796.37	784.44	762.43	732.23	694.78	652.64	604.42	552.69
202.5	807.61	805.27	793.33	771.80	742.07	704.38	660.60	611.68	560.65
225.0	808.55	804.80	792.86	770.62	740.19	702.74	659.67	612.61	560.65
247.5	812.76	809.02	796.61	774.60	743.70	707.65	663.41	614.25	560.65
270.0	806.21	799.65	783.03	758.45	725.91	686.59	643.51	592.95	537.71
292.5	809.72	802.70	785.61	760.32	727.79	687.29	641.41	592.01	537.24
315.0	806.44	799.18	782.56	756.81	724.28	683.08	637.43	586.40	533.96
337.5	807.85	799.89	784.20	758.22	723.81	682.37	636.73	585.69	531.38
360.0	799.65	792.63	775.54	750.73	716.55	675.82	630.17	581.01	527.17
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	472.63	415.04	356.52	299.17	240.65	183.29	126.18	80.76	43.31
22.5	473.56	415.98	357.46	298.47	241.82	183.53	127.35	77.48	41.20
45.0	477.31	417.62	359.80	299.17	238.30	180.25	122.90	71.16	32.54
67.5	486.44	426.75	367.52	304.79	241.58	178.38	119.39	65.08	22.71
90.0	508.68	452.73	393.04	330.54	269.44	205.77	142.33	82.40	33.24
112.5	508.21	450.39	391.16	331.47	271.31	206.94	147.01	88.72	39.33
135.0	505.17	447.35	390.70	330.77	269.91	208.81	151.92	96.21	49.39
157.5	502.12	446.18	388.59	329.83	271.08	213.96	156.37	102.77	57.82
180.0	500.02	444.30	387.42	329.37	272.72	214.43	157.54	106.28	62.50
202.5	505.63	448.05	391.63	332.41	273.18	214.19	158.01	103.94	59.23
225.0	505.40	448.28	391.63	332.17	271.54	212.09	152.39	96.68	50.80
247.5	506.10	447.81	387.19	328.43	267.57	205.53	143.97	85.68	38.16
270.0	482.46	423.47	364.48	302.44	239.01	176.97	114.94	58.52	15.22
292.5	479.42	419.72	360.73	298.93	236.90	174.87	116.58	62.03	20.60
315.0	477.31	419.26	359.56	300.57	239.71	179.55	121.26	70.23	31.37
337.5	476.84	418.32	359.33	299.87	241.82	182.36	125.94	76.55	39.56
360.0	472.63	415.04	356.52	299.17	240.65	183.29	126.18	80.76	43.31
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	19.66	7.72	4.68	3.51	3.04	2.34	2.58	3.04	2.81
22.5	17.79	6.32	3.51	3.28	2.81	2.34	2.58	2.58	2.58
45.0	11.71	3.75	2.58	2.58	2.34	2.58	2.34	2.58	2.81
67.5	4.92	2.11	1.87	2.34	2.34	2.58	2.81	2.58	3.04
90.0	3.51	1.17	1.17	1.41	1.41	1.64	2.34	2.58	2.58
112.5	9.13	2.57	1.64	1.64	1.41	2.11	2.34	2.34	2.58
135.0	19.19	7.26	2.58	2.34	2.34	2.34	2.11	2.11	2.58
157.5	27.62	11.47	3.51	3.51	3.28	3.28	2.58	2.34	2.34
180.0	30.43	13.34	1.17	4.68	3.75	3.28	3.04	2.34	2.58
202.5	27.86	11.47	3.28	3.75	3.04	3.04	2.81	2.34	2.58
225.0	20.13	7.02	2.81	2.34	2.58	2.58	2.58	2.34	2.34
247.5	9.36	3.04	2.11	2.11	2.11	2.11	2.34	2.11	2.58
270.0	1.41	1.41	1.87	1.64	2.11	2.34	2.81	2.58	2.81
292.5	4.21	2.34	1.64	2.34	2.11	2.58	2.34	3.04	2.58
315.0	11.00	3.51	2.58	2.34	2.34	2.58	2.81	2.81	2.58
337.5	16.85	5.62	3.28	3.04	2.58	2.34	2.81	2.34	2.81
360.0	19.66	7.72	4.68	3.51	3.04	2.34	2.58	3.04	2.81

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	3.28	3.51	3.98	4.45	4.68	6.32	5.62	4.21	3.75
22.5	3.04	3.28	3.98	4.45	4.92	5.38	5.85	3.75	3.04
45.0	3.04	3.75	3.51	3.98	5.15	4.92	3.51	3.04	3.75
67.5	3.51	3.28	3.04	3.28	3.51	3.28	2.58	3.04	3.75
90.0	2.81	2.81	2.11	2.11	2.34	2.81	2.58	2.58	2.81
112.5	2.81	3.28	2.58	2.58	2.81	3.51	2.81	3.04	2.81
135.0	2.81	3.04	3.28	3.51	4.21	4.21	4.92	2.81	2.81
157.5	2.58	3.04	3.28	3.98	4.21	5.15	4.68	3.98	3.04
180.0	2.81	2.81	3.28	4.21	4.45	4.68	5.62	5.85	3.75
202.5	2.81	3.04	3.51	4.21	4.45	5.15	5.15	5.15	3.98
225.0	2.58	3.04	3.51	3.75	4.45	4.92	6.09	4.21	3.98
247.5	2.81	3.28	3.04	3.04	4.45	3.98	3.51	3.51	3.28
270.0	3.28	2.11	2.11	2.34	2.58	2.58	2.58	2.81	3.98
292.5	3.04	2.81	3.04	3.28	3.51	3.51	3.51	3.75	4.21
315.0	2.81	3.28	3.98	3.98	5.15	5.38	4.21	4.21	3.75
337.5	3.04	3.04	3.75	4.68	4.92	6.32	6.79	4.21	3.75
360.0	3.28	3.51	3.98	4.45	4.68	6.32	5.62	4.21	3.75
C/\u03b3(\u00b0)	180.0								
0.0	3.04								
22.5	3.98								
45.0	3.98								
67.5	4.21								
90.0	3.75								
112.5	3.98								
135.0	4.45								
157.5	3.75								
180.0	3.04								
202.5	3.98								
225.0	3.98								
247.5	4.21								
270.0	3.75								
292.5	3.98								
315.0	4.45								
337.5	3.75								
360.0	3.04								