Test report of

IES LM-79-08

Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Rendered to:

Imminent Teknologies Limited

Suite 5, Valley Towers, Valley Road, Birkirkara BKR9022, Malta

For products:

LED Wall Light

Models No.:

BLU-DOUP-SD10L-10W-827

Complied by:	Reviewed by:
Kargel Yuan	**Lin Qiu**
May. 10, 2023	**May. 10, 2023**

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1. General

1.1 Product Information

Brand Name	BLUi Lighting
Product Type	LED Wall Light
Model Number	BLU-DOUP-SD10L-10W-827
Rated Inputs	220-240VAC, 50/60Hz
Rated Power	10W
Rated Light output	810Lm
Declared CCT	2700K
Power Supply	Intergral
LED Package, Array or Module	CREE
Receipt Samples	1 unit
Sample Code of lab.	210408107075
Date of Receipt Samples	May. 3, 2023
Note	-

1.2 Standards or methods

The following standards are partly or totally used or referenced for test:

No.	Name
ANSI/NEMA/ ANSLG C78.377- 2017	Specifications for the Chromaticity of Solid State Lighting Products
ANSI C82.77-2002	Harmonic Emission Limits—Related Power Quality Requirements for Lighting Equipment
CIE Pub. No. 13.3-1995	Method of Measuring and Specifying Color Rendering of Light Sources
CIE Pub. No. 15:2004	Colorimetry
IES LM-79-08	Electrical and Photometric Measurements of Solid-State Lighting Products

1.3 Equipment list

Instrument	ID	Model name	Cal. date	Next cal. Date
AC Power supply	LC-I-987	APW-120N	2020-12-23	2021-12-22
AC Power supply	LC-I-989	APW-120N	2020-12-23	2021-12-22
Power analyzer	LC-I-928	WT210	2020-12-25	2021-12-24
Power analyzer	LC-I-954	WT210	2020-12-25	2021-12-24
Multimeter	LC-I-972	Fluke 17B	2020-07-20	2021-07-19
Photometric colorimetric electric system* (2 meter sphere)	LC-I-956	HAAS-2000	Before use	Before use
Standard lamp**	LC-PL-I-011	D204C	2020-07-14	2021-07-13
Luminous Flux Standard Lamp***	LC-PL-I-003	24V100W	2020-07-14	2021-07-13
Goniophotometer(with mirror)	LC-I-902	GMS2000	2021-04-22	2022-04-21
Wireless temperature transmitter	LC-I-PL-009	DWLR-DLR	2020-12-24	2021-12-23
Wireless temperature transmitter	LC-I-PL-008	DWLR-DLR	2020-12-24	2021-12-23

Note:

* Bandwidth of spectroradiometer is 1 nm.

** halogen lamp, 100W, omni-directional type, and its traceability to NIM.

*** halogen lamp, 100W, omni-directional type, and its traceability to NIM.

2. Test conducted and method

The luminaire was operated at least 2 hours to reach stabilization and temperature equilibrium before test.

2.1 Ambient Condition

The ambient temperature in which measurements are being taken was maintained at 25°C ± 1°C; the air flow around the sample(s) being tested did not affect the performance.

2.2 Power Supply Characteristics

The AC power supply had a sinusoidal voltage wave shape at the prescribed frequency (50 Hz) such that the RMS summation of the harmonic components does not exceed 3 percent of the fundamental during operation of the test item.

The voltage of AC power supply (RMS voltage) applied to the device under test was regulated to within±0.2 percent under load.

2.3 Seasoning and Stabilization

No seasoning was performed in accordance with IESNA LM-79-08. And before the measurement, the sample was stabilized until the light output and power variations were less than 0.5% in 30 minutes intervals (3 readings, 15 minutes apart).

2.4 Electrical Instrumentation

The calibration uncertainties of the instruments for AC voltage and current were less than 0.2 percent, and the calibration uncertainty of the AC power meter was less than 0.5 percent(95 % confidence interval, k=2).

2.5 Color Measurement Method

Spectral radiant flux was measured by a sphere (2 meter)-spectroradiometer system, and the color characteristics (Color rendering index, correlated color temperature, chromaticity coordinate) were calculated from these by software automatically.

2.6 Total Luminous Flux Measurement Method

Total luminous flux was measured by type C goniophotometer system.

Light intensity distribution was measured by a type C goniophotometer (with mirror) which can keep the sample in burn position when the tests conduct, and the total luminous flux was calculated from the intensity data by software automatically.

2.7 Luminous Intensity Distribution Measurement Method

Luminous intensity distribution was measured by a mirror-type goniophotometer (Type C) which can keep the sample in burn position when the tests conduct, and the kinds of graph were generated by software automatically.

2.8 Spatial Non-uniformity of Chromaticity

The customer did not require this measurement.

3. Test Result Summary

3.1 Electrical data

Criteria Item	Result(Sphere)	Result(Goniophotometer)
Input Voltage & Frequency	229.98 V~50Hz	230.05 V~50Hz
Input Current(A)	0.048	0.047
Total Power(W)	10.69	10.54
Power Factor	0.974	0.972
I-THD	14.43	14.43
Off-state Power(W)	-	-

3.2 Photometric data

Criteria Item	Result(Sphere)	Result(Goniophotometer)
Total Lumens(lm)	-	867.50
Luminaire Efficacy(Lm/W)	-	82.30
Correlated Color Temperature (CCT)(K)	2720	-
Color Rendering Index (CRI)	84.2	-
R9	14	-
Chromaticity Coordinate (x,y)	x = 0.4249 y = 0.3917	-
Chromaticity Coordinate (u,v)	u = 0.2481 v = 0.3431	-
Chromaticity Coordinate (u',v')	u' = 0.2481 v' = 0.5146	-
Duv	-0.0033	-
Zone Lumens between 0-60 º	-	76.60%

3.3 Color Rendering Details

R1	R2	R3	R4	R5	R6	R7	R8
83	92	96	83	84	90	83	62
R9	R10	R11	R12	R13	R14	R15	-
14	81	83	77	85	98	77	-

Note: N/A

4. Test Data

4.1 Spectral Distribution
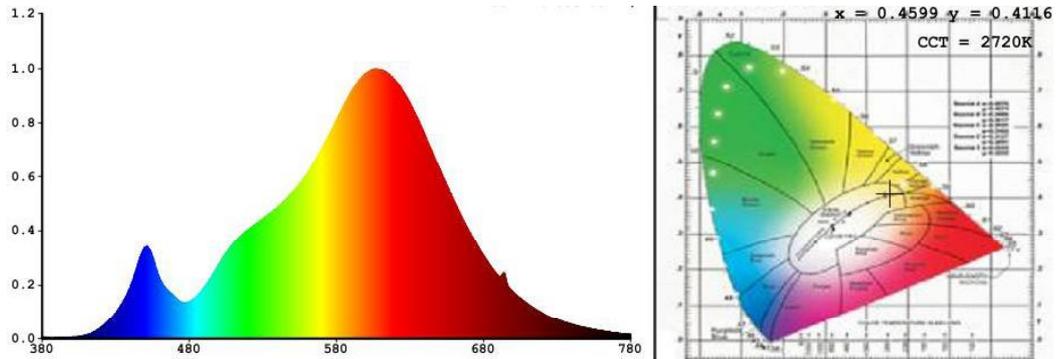
4.2 ANSI Chromaticity Quadrangles Diagram

Graphical representations of 7-step quadrangle specification of SSL products
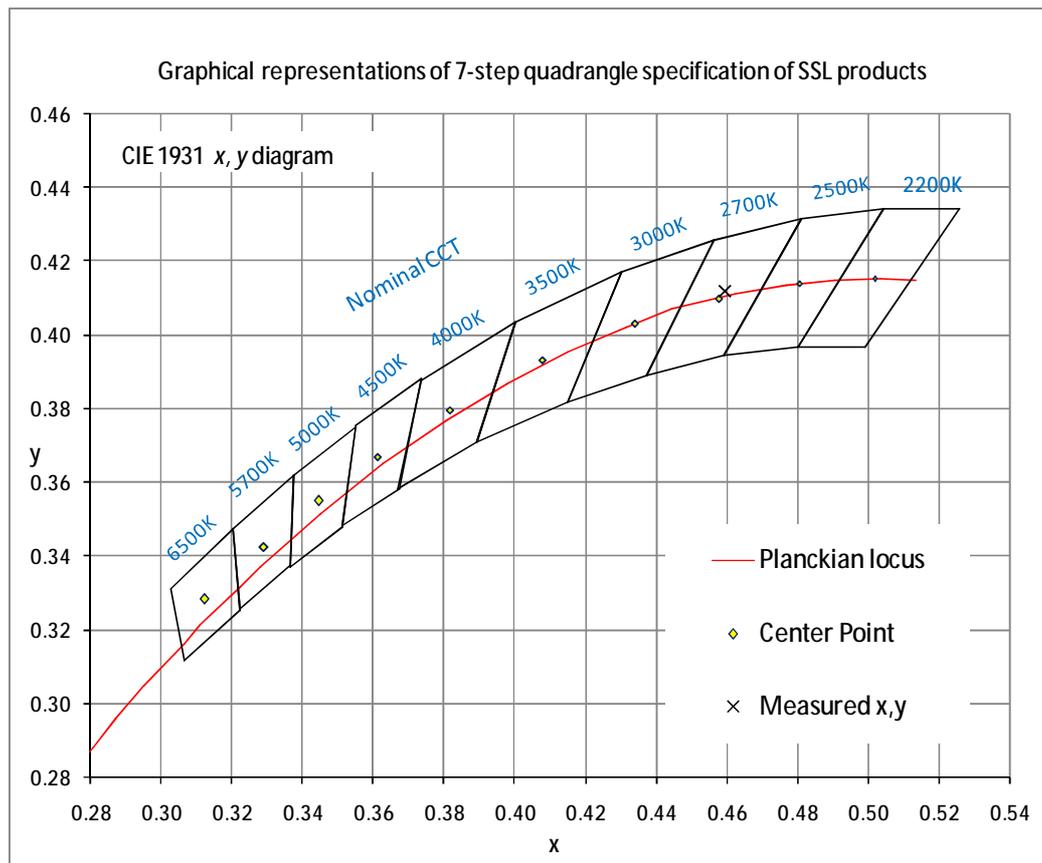
4.3 Goniometry Test Data

CIE Type	Semi-Direct	Basic Luminous Shape	Rectangular
Spacing Criteria (0-180)	0.64	Luminous Length	0.07 m
Spacing Criteria (90-270)	1.20	Luminous Width	0.06 m
Spacing Criteria (Diagonal)	1.02	Luminous Height	0.00 m
Test Distance	30.13 m		

4.4 Zonal Lumen Summary

Zone	Lumens	% Lamp	%Fixt
0-20	196.06	22.60	13.20
0-30	376.50	43.40	28.10
0-40	517.03	59.60	45.90
0-60	664.51	76.60	80.50
0-80	707.88	81.60	98.40
0-90	708.75	81.70	99.70
10-90	655.83	75.60	96.20
20-40	320.98	37.00	32.70
20-50	408.59	47.10	51.00
40-70	179.57	20.70	46.50
60-80	43.38	5.00	17.90
70-80	11.28	1.30	6.10
80-90	0.87	0.10	1.20
90-110	1.74	0.20	0.10
90-120	3.47	0.40	0.20
90-130	6.07	0.70	0.30
90-150	17.35	2.00	0.40
90-180	158.75	18.30	0.70
110-180	157.02	18.10	0.80
0-180	867.50	100.00	100.00

Total Luminaire Efficiency = 100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	15.06
10-20	40.91
20-30	51.41
30-40	40.10
40-50	25.10
50-60	17.10
60-70	9.16
70-80	3.15
80-90	0.32
90-100	0.00
100-110	0.44
110-120	0.51
120-130	0.89
130-140	1.45
140-150	1.63
150-160	3.10
160-170	17.34
170-180	19.82

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4.5   Polar Curves
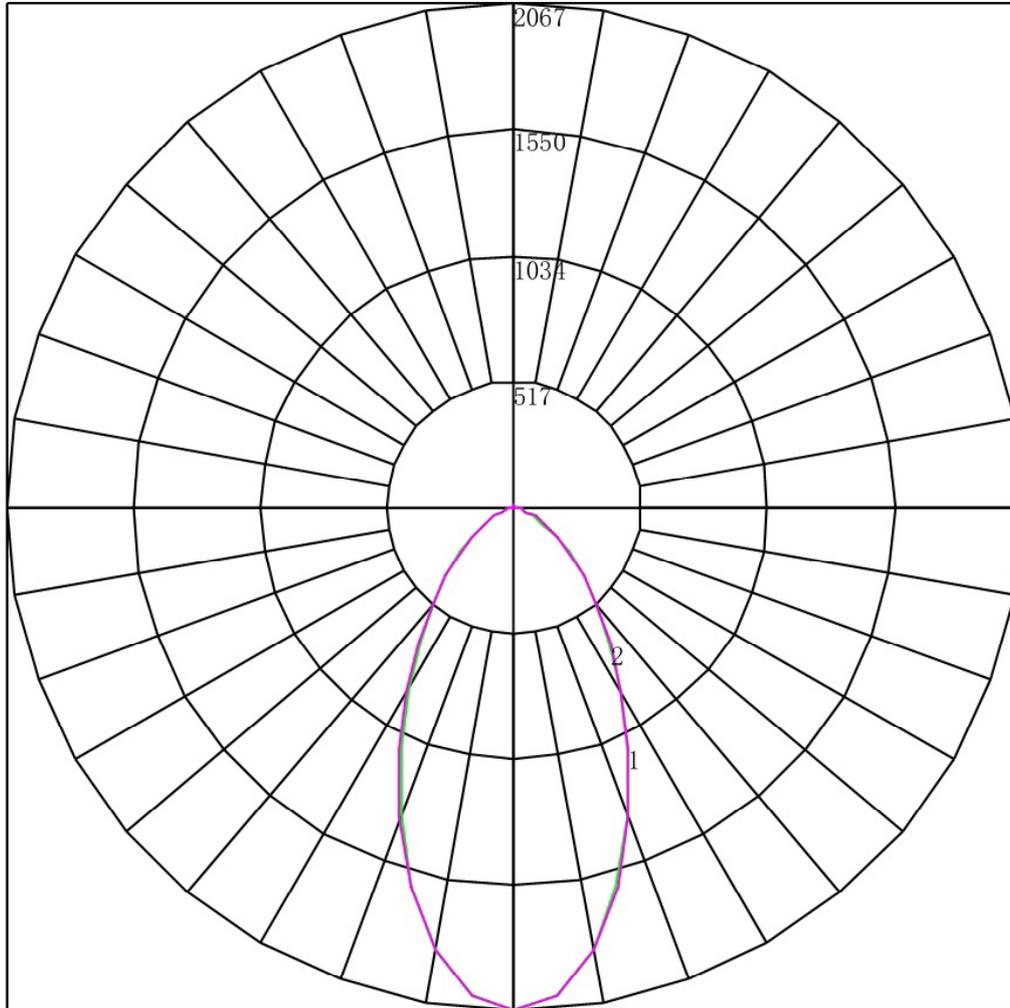
Maximum Candela = 2067.073   Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180)
2 - Vertical Plane Through Horizontal Angles (90 - 270)

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4.6 Candela Tabulation

	0	15	30	45	60	75	90	105	120	135
0	157.960	157.960	157.960	157.960	157.960	157.960	157.960	157.960	157.960	157.960
5	154.329	153.421	154.329	155.237	157.052	158.868	157.052	159.776	163.407	164.315
10	152.513	152.513	149.790	151.605	153.421	156.145	155.237	157.052	158.868	159.776
15	128.002	140.712	145.251	149.790	150.698	151.605	147.974	147.974	148.882	153.421
20	54.469	55.377	56.285	129.818	139.804	144.343	144.343	146.159	144.343	147.066
25	49.930	49.930	49.930	51.746	137.080	143.435	137.988	144.343	142.527	138.896
30	47.206	47.206	46.299	45.391	59.916	130.726	141.619	139.804	132.541	137.080
35	42.667	42.667	42.667	41.760	41.760	78.980	39.036	41.760	72.625	109.846
40	37.220	37.220	37.220	37.220	34.497	35.405	32.681	34.497	37.220	41.760
45	38.128	39.036	30.866	30.866	29.050	30.866	28.142	28.142	29.050	30.866
50	29.050	29.958	31.774	24.511	23.603	24.511	22.695	22.695	23.603	22.695
55	21.788	22.695	23.603	19.064	18.156	18.156	17.249	17.249	16.341	15.433
60	17.249	16.341	19.064	13.617	12.709	13.617	12.709	11.802	9.986	9.986
65	13.617	12.709	14.525	9.986	9.078	9.078	8.170	7.263	6.355	5.447
70	8.170	8.170	8.170	6.355	5.447	5.447	7.263	6.355	2.723	2.723
75	4.539	4.539	3.631	3.631	3.631	3.631	2.723	1.816	0.908	0.908
80	1.816	1.816	1.816	0.908	0.908	0.908	0.908	0.908	0.000	0.000
85	0.908	0.908	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
91	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
93	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
99	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
101	0.908	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	4.539	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
103	9.078	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	11.802	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105	13.617	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
106	14.525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107	14.525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
108	13.617	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
109	10.894	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110	9.078	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
111	7.263	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
112	7.263	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
113	6.355	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
114	6.355	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115	5.447	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
116	4.539	0.000	0.000	0.000	0.000	0.000	0.000	0.908	0.000	0.000
117	3.631	0.000	0.000	0.000	0.000	0.000	0.000	0.908	0.000	0.000
118	3.631	0.000	0.000	0.000	0.000	0.000	0.000	0.908	0.000	0.000
119	3.631	0.000	0.000	0.000	0.000	0.000	0.000	0.908	0.000	0.000
120	4.539	0.908	0.000	0.000	0.000	0.908	0.908	0.908	0.000	0.000
121	4.539	0.908	0.000	0.000	0.000	0.908	0.908	0.908	0.000	0.000
122	4.539	0.908	0.000	0.000	0.000	0.908	0.908	0.908	0.000	0.908
123	4.539	0.908	0.000	0.000	0.000	0.908	0.908	0.908	0.000	0.000
124	4.539	0.908	0.000	0.000	0.000	0.908	0.908	0.908	0.000	0.908
125	4.539	0.908	0.000	0.000	0.000	0.908	0.908	0.908	0.908	0.908
126	5.447	0.908	0.000	0.000	0.000	0.908	0.908	0.908	0.908	0.908
127	5.447	0.908	0.000	0.000	0.000	0.908	0.908	1.816	0.908	0.908
128	5.447	0.908	0.000	0.000	0.000	0.908	0.908	1.816	0.908	0.908
129	5.447	0.908	0.000	0.000	0.908	0.908	0.908	1.816	0.908	0.908

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CANDELA TABULATION - (Cont.)

130	5.447	0.908	0.908	0.000	0.908	0.908	0.908	1.816	0.908	0.908
131	6.355	0.908	0.908	0.000	0.908	0.908	0.908	1.816	0.908	0.908
132	6.355	1.816	0.908	0.000	0.908	0.908	1.816	1.816	0.908	0.908
133	7.263	1.816	0.908	0.908	0.908	1.816	1.816	1.816	0.908	0.908
134	8.170	1.816	0.908	0.000	0.908	1.816	1.816	2.723	0.908	0.908
135	9.078	1.816	0.908	0.908	0.908	1.816	1.816	2.723	0.908	0.908
136	9.078	1.816	0.908	0.908	0.908	1.816	1.816	2.723	0.908	0.908
137	9.078	1.816	0.908	0.908	0.908	1.816	1.816	2.723	0.908	0.908
138	8.170	1.816	0.908	0.908	0.908	1.816	2.723	2.723	0.908	0.908
139	9.078	2.723	0.908	0.908	0.908	1.816	2.723	2.723	0.908	0.908
140	9.078	2.723	0.908	0.908	0.908	2.723	2.723	2.723	1.816	0.908
141	9.986	2.723	0.908	0.908	0.908	2.723	2.723	2.723	1.816	0.908
142	9.986	2.723	0.908	0.908	0.908	2.723	2.723	2.723	1.816	0.908
143	9.986	2.723	0.908	0.908	0.908	2.723	2.723	2.723	1.816	0.908
144	9.986	2.723	0.908	0.908	0.908	2.723	2.723	2.723	1.816	0.908
145	9.986	2.723	0.908	0.908	0.908	2.723	2.723	2.723	1.816	0.908
146	10.894	2.723	0.908	0.908	0.908	2.723	2.723	2.723	1.816	0.908
147	11.802	2.723	0.908	0.908	1.816	2.723	3.631	2.723	1.816	0.908
148	12.709	3.631	0.908	0.908	1.816	2.723	2.723	1.816	1.816	1.816
149	14.525	3.631	0.908	0.908	1.816	2.723	2.723	1.816	1.816	1.816
150	14.525	3.631	0.908	0.908	0.908	2.723	2.723	1.816	1.816	1.816
151	16.341	3.631	0.908	0.908	0.908	1.816	2.723	1.816	1.816	1.816
152	17.249	3.631	1.816	0.908	0.908	1.816	2.723	1.816	1.816	1.816
153	14.525	4.539	1.816	0.908	0.908	1.816	2.723	1.816	1.816	1.816
154	15.433	4.539	1.816	0.908	0.908	1.816	1.816	1.816	1.816	1.816
155	18.156	4.539	1.816	0.908	0.908	1.816	1.816	1.816	1.816	2.723
156	19.972	5.447	1.816	1.816	0.908	1.816	1.816	1.816	1.816	2.723
157	19.972	5.447	1.816	1.816	0.908	1.816	1.816	1.816	1.816	2.723
158	23.603	6.355	2.723	1.816	1.816	1.816	1.816	1.816	1.816	2.723
159	30.866	7.263	2.723	1.816	1.816	1.816	1.816	2.723	2.723	2.723
160	45.391	9.078	2.723	1.816	1.816	1.816	1.816	2.723	2.723	3.631
161	92.597	14.525	3.631	2.723	1.816	1.816	1.816	2.723	2.723	3.631
162	192.457	24.511	3.631	2.723	2.723	1.816	2.723	3.631	3.631	3.631
163	380.375	43.575	4.539	2.723	2.723	2.723	2.723	3.631	3.631	4.539
164	521.995	59.008	4.539	2.723	2.723	2.723	2.723	3.631	3.631	4.539
165	590.989	68.086	5.447	3.631	2.723	2.723	2.723	3.631	4.539	5.447
166	597.343	85.335	6.355	3.631	3.631	2.723	3.631	4.539	4.539	6.355
167	621.855	107.122	7.263	4.539	3.631	3.631	3.631	4.539	5.447	7.263
168	659.983	132.541	8.170	4.539	3.631	3.631	3.631	5.447	6.355	7.263
169	670.877	155.237	9.078	5.447	4.539	3.631	3.631	6.355	7.263	8.170
170	676.324	186.102	9.986	6.355	4.539	4.539	4.539	7.263	8.170	8.170
171	671.784	214.245	11.802	7.263	5.447	4.539	4.539	7.263	8.170	10.894
172	668.153	258.728	17.249	8.170	6.355	5.447	5.447	8.170	9.986	29.050
173	684.494	315.920	30.866	9.078	7.263	6.355	6.355	9.986	17.249	73.533
174	709.005	404.886	59.916	9.986	8.170	7.263	7.263	29.958	59.916	147.066
175	733.516	499.299	112.569	19.064	9.078	8.170	8.170	128.002	176.116	316.828
176	741.686	580.095	187.010	43.575	12.709	9.078	9.078	322.275	423.950	549.229
177	738.963	629.117	294.133	123.463	46.299	26.327	22.695	649.997	670.877	704.466
178	737.147	672.692	497.484	234.217	141.619	100.768	94.413	766.197	765.290	761.658
179	735.332	707.189	617.315	482.051	339.524	250.557	239.664	679.955	693.572	716.267
180	622.762	622.762	622.762	622.762	622.762	622.762	622.762	622.762	622.762	622.762

Vert. Angles	Horizontal Angles									
	150	**165**	**180**	**195**	**210**	**225**	**240**	**255**	**270**	**285**
0	157.960	157.960	157.960	157.960	157.960	157.960	157.960	157.960	157.960	157.960
5	166.130	164.315	165.223	163.407	161.591	158.868	160.684	160.684	160.684	157.052
10	159.776	159.776	159.776	158.868	158.868	161.591	159.776	156.145	157.052	157.960
15	156.145	153.421	154.329	153.421	149.790	153.421	156.145	152.513	154.329	153.421
20	148.882	150.698	152.513	154.329	147.974	146.159	149.790	149.790	147.974	143.435

CANDELA TABULATION - (Cont.)

25	142.527	144.343	147.974	148.882	147.066	140.712	138.896	144.343	134.357	125.279
30	110.754	59.008	58.100	62.639	111.661	140.712	133.449	131.633	130.726	128.910
35	49.930	49.930	49.930	49.930	50.838	113.477	137.988	47.206	116.201	147.974
40	43.575	43.575	41.760	43.575	44.483	43.575	38.128	39.944	38.128	39.036
45	34.497	30.866	29.958	31.774	34.497	37.220	47.206	32.681	36.313	32.681
50	22.695	21.788	21.788	21.788	23.603	24.511	29.050	25.419	30.866	26.327
55	15.433	15.433	15.433	15.433	16.341	16.341	18.156	18.156	22.695	20.880
60	9.986	9.986	9.986	9.986	12.709	10.894	10.894	12.709	16.341	14.525
65	5.447	5.447	6.355	6.355	6.355	6.355	7.263	8.170	11.802	9.986
70	2.723	2.723	2.723	2.723	3.631	3.631	3.631	5.447	7.263	6.355
75	0.908	0.908	0.908	1.816	0.908	0.908	1.816	2.723	4.539	3.631
80	0.000	0.000	0.000	0.000	0.000	0.000	0.908	0.908	1.816	1.816
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
91	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
93	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
97	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
99	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
103	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
107	0.000	0.000	0.908	0.000	0.000	0.000	0.000	0.000	0.000	0.000
108	0.000	0.000	0.908	0.000	0.000	0.000	0.000	0.000	0.000	0.000
109	0.000	0.000	0.908	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110	0.000	0.000	0.908	0.000	0.000	0.000	0.000	0.000	0.000	0.000
111	0.000	0.000	0.908	0.908	0.000	0.000	0.000	0.000	0.000	0.000
112	0.000	0.908	0.908	0.908	0.000	0.000	0.000	0.908	0.000	0.000
113	0.000	0.908	2.723	0.908	0.000	0.000	0.000	0.000	0.000	0.000
114	0.000	0.908	4.539	0.908	0.000	0.000	0.000	0.000	0.908	0.000
115	0.000	0.908	5.447	0.908	0.000	0.000	0.000	0.000	0.000	0.000
116	0.908	0.908	5.447	0.908	0.000	0.000	0.000	0.908	0.000	0.000
117	0.000	0.908	3.631	0.908	0.908	0.000	0.000	0.908	0.908	0.000
118	0.908	0.908	2.723	0.908	0.908	0.000	0.000	0.908	0.908	0.000
119	0.908	0.908	2.723	0.908	0.908	0.000	0.000	0.908	0.908	0.000
120	0.908	0.908	2.723	0.908	0.908	0.000	0.000	0.908	0.908	0.000
121	0.908	0.908	2.723	0.908	0.908	0.000	0.000	0.908	0.908	0.908
122	0.908	1.816	2.723	0.908	0.908	0.000	0.000	0.908	0.908	0.908
123	0.908	1.816	2.723	1.816	0.908	0.000	0.000	0.908	0.908	0.908
124	0.908	1.816	2.723	1.816	0.908	0.908	0.908	0.908	0.908	0.908
125	0.908	1.816	2.723	1.816	0.908	0.908	0.000	0.908	0.908	0.908
126	0.908	1.816	2.723	1.816	0.908	0.908	0.908	0.908	0.908	0.908
127	0.908	1.816	3.631	1.816	0.908	0.908	0.908	0.908	0.908	0.908
128	0.908	2.723	3.631	1.816	0.908	0.908	0.908	0.908	0.908	0.908
129	0.908	2.723	3.631	1.816	0.908	0.908	0.908	1.816	1.816	0.908
130	0.908	2.723	4.539	1.816	0.908	0.908	0.908	1.816	1.816	0.908
131	0.908	2.723	4.539	1.816	0.908	0.908	0.908	1.816	1.816	1.816
132	0.908	2.723	4.539	1.816	0.908	0.908	0.908	1.816	1.816	1.816
133	0.908	2.723	5.447	2.723	0.908	0.908	0.908	1.816	1.816	1.816
134	0.908	2.723	5.447	2.723	0.908	0.908	0.908	1.816	1.816	1.816
135	0.908	2.723	5.447	2.723	0.908	0.908	0.908	1.816	1.816	1.816
136	0.908	2.723	5.447	2.723	0.908	0.908	0.908	1.816	2.723	1.816

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CANDELA TABULATION - (Cont.)

137	0.908	2.723	6.355	2.723	0.908	0.908	0.908	2.723	2.723	1.816
138	0.908	2.723	6.355	2.723	0.908	0.908	0.908	2.723	2.723	1.816
139	0.908	3.631	6.355	2.723	0.908	0.908	0.908	2.723	2.723	2.723
140	0.908	3.631	7.263	2.723	0.908	0.908	0.908	2.723	2.723	2.723
141	0.908	3.631	7.263	2.723	0.908	0.908	1.816	2.723	2.723	2.723
142	0.908	3.631	7.263	2.723	0.908	0.908	1.816	2.723	2.723	2.723
143	1.816	3.631	7.263	2.723	1.816	0.908	1.816	2.723	2.723	2.723
144	1.816	3.631	7.263	2.723	1.816	0.908	1.816	2.723	2.723	2.723
145	1.816	3.631	8.170	3.631	1.816	0.908	1.816	2.723	2.723	2.723
146	1.816	3.631	7.263	3.631	1.816	0.908	1.816	2.723	2.723	2.723
147	1.816	3.631	8.170	3.631	1.816	0.908	1.816	2.723	2.723	2.723
148	1.816	4.539	8.170	3.631	1.816	1.816	1.816	2.723	2.723	2.723
149	1.816	4.539	8.170	3.631	1.816	1.816	1.816	1.816	2.723	2.723
150	1.816	4.539	8.170	3.631	1.816	1.816	1.816	1.816	1.816	2.723
151	2.723	4.539	8.170	3.631	2.723	1.816	1.816	1.816	1.816	2.723
152	2.723	4.539	8.170	4.539	2.723	1.816	1.816	1.816	1.816	1.816
153	2.723	4.539	8.170	4.539	2.723	1.816	1.816	1.816	1.816	1.816
154	2.723	4.539	8.170	4.539	2.723	1.816	1.816	1.816	1.816	1.816
155	2.723	5.447	8.170	4.539	2.723	1.816	1.816	1.816	1.816	1.816
156	3.631	5.447	10.894	4.539	2.723	2.723	1.816	1.816	1.816	1.816
157	3.631	8.170	68.994	7.263	3.631	2.723	1.816	1.816	1.816	1.816
158	4.539	28.142	174.301	16.341	3.631	2.723	1.816	2.723	1.816	1.816
159	4.539	57.192	316.828	27.235	3.631	2.723	2.723	2.723	2.723	1.816
160	4.539	84.427	418.504	36.313	4.539	2.723	2.723	2.723	2.723	1.816
161	5.447	108.938	467.526	41.760	5.447	3.631	2.723	2.723	2.723	1.816
162	6.355	123.463	505.654	49.022	5.447	3.631	2.723	2.723	2.723	1.816
163	6.355	145.251	536.520	58.100	5.447	3.631	3.631	3.631	2.723	2.723
164	7.263	168.854	559.215	68.086	6.355	3.631	3.631	3.631	3.631	2.723
165	8.170	183.379	582.818	84.427	6.355	4.539	3.631	3.631	3.631	2.723
166	8.170	200.628	601.883	99.860	6.355	5.447	3.631	3.631	3.631	2.723
167	9.986	226.954	606.422	116.201	7.263	5.447	4.539	4.539	4.539	3.631
168	17.249	275.069	617.315	136.173	8.170	6.355	5.447	4.539	4.539	3.631
169	29.958	327.722	639.103	164.315	11.802	7.263	6.355	5.447	5.447	3.631
170	49.022	392.177	673.600	196.996	22.695	7.263	6.355	6.355	5.447	4.539
171	92.597	475.696	706.281	267.806	45.391	8.170	7.263	7.263	6.355	4.539
172	150.698	557.400	714.452	334.984	75.349	12.709	8.170	7.263	7.263	5.447
173	226.046	621.855	732.608	456.632	129.818	35.405	10.894	9.078	9.078	5.447
174	385.822	667.245	746.225	544.690	191.549	76.257	29.050	13.617	11.802	6.355
175	556.492	707.189	747.133	617.315	338.616	163.407	96.229	61.732	51.746	7.263
176	662.706	746.225	757.119	671.784	531.981	324.091	204.259	163.407	148.882	9.078
177	741.686	779.815	769.829	734.424	669.969	611.869	546.506	498.391	475.696	12.709
178	765.290	773.460	769.829	759.843	745.318	730.793	719.899	713.544	711.728	49.022
179	736.239	752.580	759.843	759.843	755.304	754.396	755.304	753.488	758.935	138.896
180	622.762	622.762	622.762	622.762	622.762	622.762	622.762	622.762	622.762	622.762

Vert. Angles	Horizontal Angles				
	300	315	330	345	360
0	157.960	157.960	157.960	157.960	157.960
5	154.329	151.605	152.513	154.329	154.329
10	156.145	154.329	156.145	154.329	152.513
15	148.882	145.251	150.698	139.804	128.002
20	147.066	128.910	57.192	55.377	54.469
25	135.265	52.653	50.838	49.930	49.930
30	65.363	46.299	47.206	47.206	47.206
35	42.667	41.760	43.575	42.667	42.667
40	36.313	38.128	37.220	37.220	37.220
45	29.958	31.774	30.866	34.497	38.128
50	24.511	25.419	31.774	30.866	29.050
55	19.064	19.972	24.511	23.603	21.788

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CANDELA TABULATION - (Cont.)

60	14.525	15.433	18.156	17.249	17.249
65	9.986	10.894	13.617	13.617	13.617
70	6.355	7.263	9.078	9.078	8.170
75	3.631	3.631	4.539	4.539	4.539
80	1.816	1.816	1.816	1.816	1.816
85	0.000	0.000	0.000	0.908	0.908
90	0.000	0.000	0.000	0.000	0.000
91	0.000	0.000	0.000	0.000	0.000
92	0.000	0.000	0.000	0.000	0.000
93	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000
95	0.000	0.000	0.000	0.000	0.000
96	0.000	0.000	0.000	0.000	0.000
97	0.000	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000	0.000
99	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000
101	0.000	0.000	0.000	0.000	0.908
102	0.000	0.000	0.000	0.000	4.539
103	0.000	0.000	0.000	0.000	9.078
104	0.000	0.000	0.000	0.000	11.802
105	0.000	0.000	0.000	0.000	13.617
106	0.000	0.000	0.000	0.000	14.525
107	0.000	0.000	0.000	0.000	14.525
108	0.000	0.000	0.000	0.000	13.617
109	0.000	0.000	0.000	0.000	10.894
110	0.000	0.000	0.000	0.000	9.078
111	0.000	0.000	0.000	0.000	7.263
112	0.000	0.000	0.000	0.000	7.263
113	0.000	0.000	0.000	0.000	6.355
114	0.000	0.000	0.000	0.000	6.355
115	0.000	0.000	0.000	0.000	5.447
116	0.000	0.000	0.000	0.000	4.539
117	0.000	0.000	0.000	0.000	3.631
118	0.000	0.000	0.000	0.000	3.631
119	0.000	0.000	0.000	0.000	3.631
120	0.000	0.000	0.000	0.908	4.539
121	0.000	0.000	0.000	0.908	4.539
122	0.000	0.000	0.000	0.908	4.539
123	0.000	0.000	0.000	0.908	4.539
124	0.000	0.000	0.000	0.908	4.539
125	0.000	0.000	0.908	0.908	4.539
126	0.000	0.000	0.000	0.908	5.447
127	0.000	0.000	0.908	0.908	5.447
128	0.000	0.000	0.908	0.908	5.447
129	0.000	0.000	0.908	0.908	5.447
130	0.000	0.000	0.908	0.908	5.447
131	0.000	0.000	0.908	1.816	6.355
132	0.000	0.908	0.908	1.816	6.355
133	0.908	0.908	0.908	1.816	7.263
134	0.908	0.908	0.908	1.816	8.170
135	0.908	0.908	0.908	1.816	9.078
136	0.908	0.908	0.908	1.816	9.078
137	0.908	0.908	0.908	2.723	9.078
138	0.908	0.908	0.908	2.723	8.170
139	0.908	0.908	0.908	2.723	9.078
140	0.908	0.908	0.908	2.723	9.078
141	0.908	0.908	0.908	2.723	9.986
142	0.908	0.908	0.908	2.723	9.986
143	0.908	0.908	0.908	2.723	9.986

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CANDELA TABULATION - (Cont.)

144	0.908	0.908	0.908	2.723	9.986
145	0.908	0.908	0.908	2.723	9.986
146	0.908	0.908	0.908	2.723	10.894
147	0.908	0.908	0.908	3.631	11.802
148	0.908	0.908	0.908	3.631	12.709
149	0.908	0.908	0.908	3.631	14.525
150	0.908	0.908	1.816	3.631	14.525
151	0.908	0.908	1.816	3.631	16.341
152	0.908	0.908	1.816	3.631	17.249
153	0.908	0.908	1.816	4.539	14.525
154	0.908	0.908	1.816	4.539	15.433
155	0.908	0.908	1.816	4.539	18.156
156	0.908	1.816	1.816	4.539	19.972
157	0.908	1.816	2.723	5.447	19.972
158	1.816	1.816	2.723	5.447	23.603
159	1.816	1.816	2.723	6.355	30.866
160	1.816	1.816	2.723	7.263	45.391
161	1.816	1.816	3.631	11.802	92.597
162	1.816	2.723	3.631	19.972	192.457
163	2.723	2.723	3.631	41.760	380.375
164	2.723	2.723	4.539	58.100	521.995
165	2.723	2.723	4.539	69.902	590.989
166	2.723	3.631	5.447	82.611	597.343
167	3.631	4.539	6.355	96.229	621.855
168	3.631	4.539	6.355	118.016	659.983
169	4.539	5.447	7.263	132.541	670.877
170	4.539	5.447	8.170	147.974	676.324
171	5.447	6.355	9.078	169.762	671.784
172	5.447	7.263	10.894	194.273	668.153
173	6.355	8.170	19.972	241.479	684.494
174	7.263	9.078	37.220	312.289	709.005
175	8.170	12.709	70.810	387.638	733.516
176	9.986	29.958	128.002	482.959	741.686
177	29.050	78.072	188.826	550.137	738.963
178	69.902	147.974	339.524	611.869	737.147
179	178.840	290.501	516.548	662.706	735.332
180	622.762	622.762	622.762	622.762	622.762

Appendix A Product Photo
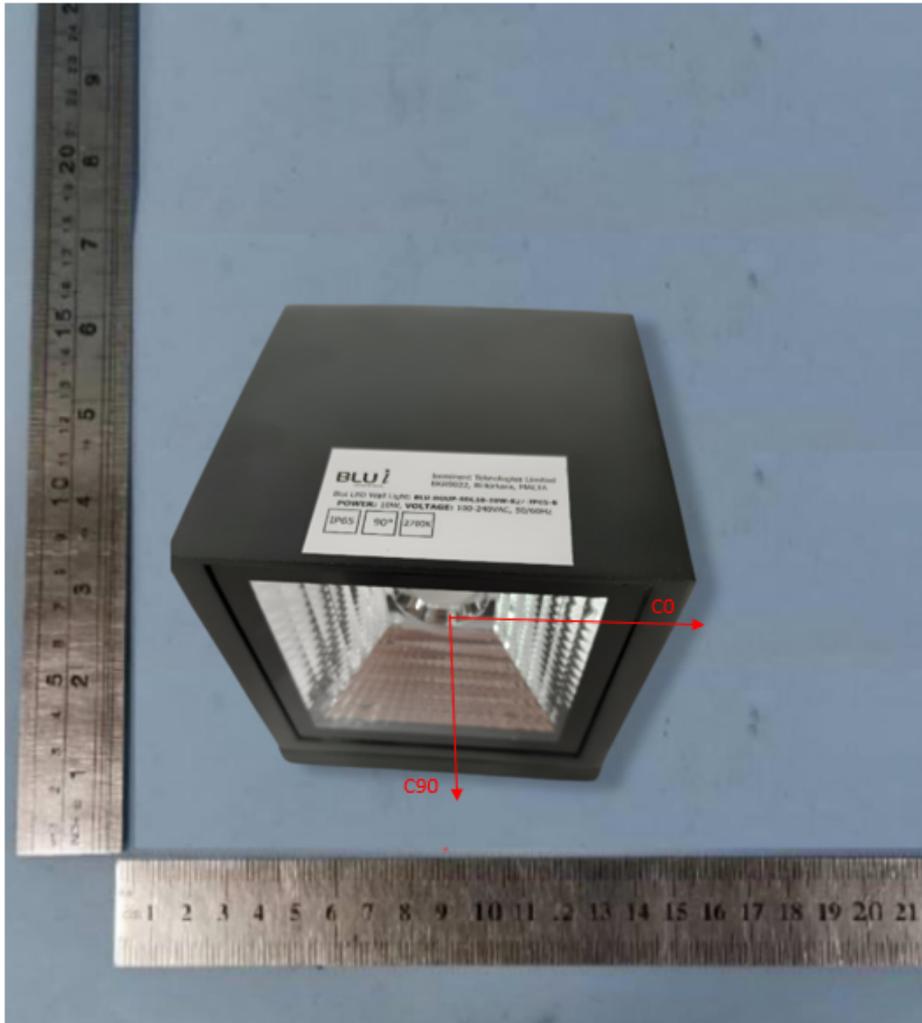
Picture 1

****End of test report****

LCTECH Guangdong Testing Services Co., Ltd.