



Report No.: BLC1803017E-L

LM-79-08 Test Report

For

Revolution Lighting Technologies, Inc.

(Brand Name:  Revolution Lighting)

2280 Ward Ave. Simi Valley, CA. 93065

Outdoor Pole/Arm-Mounted Area and Roadway Luminaires

Model name(s): 1130SG-38T

Remark: S represents Sensor Options, can be 1 =N/A, 2 = 7-Pin Photocell, 9 = 3-Pin Photocell
T represents CCT, can be 2=4000K, 4=5000K

Representative (Tested) Model: 1130SG-382
1130SG-384

Model Different: All construction and rating are the same, except CCT

Test & Report By:

Grace Li

Engineer: Grace Li

Date: April.09, 2018

Review By:


Tommy Liang

Manager: Tommy Liang

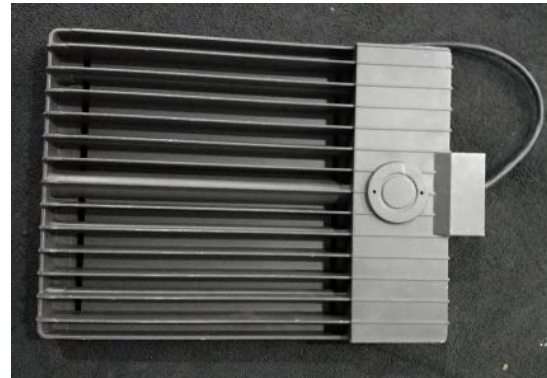
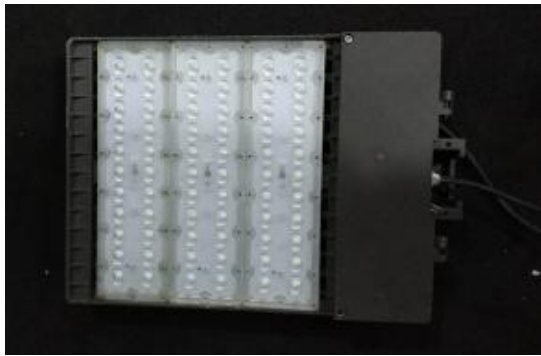


Report No.: BLC1803017E-L

1.1 Product Information:

Organization Name	Revolution Lighting Technologies, Inc.	
Brand Name		
Model Number	1130SG-38T	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires	
Rated Voltage / Frequency	100-277Vac, 50/60 Hz	
Nominal Power	215W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,5000K	
LED Manufacturer	Lumileds	
LED Model	LUXEON 3030 2D	
Sample Number	BLC1803017E-L1(4000K),L2(5000K)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Photo



**1.2 Test Specifications:**

Date of Receipt	April.04,2018
Date of Test	April.08,2018
Test item	<ol style="list-style-type: none"> 1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Electrical Parameters
Reference Standard	<ol style="list-style-type: none"> 1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products 2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products 3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources 4. CIE 15-2004 Technical Report Colorimetry 5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source 6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	BL-QP-033

1.3 Test Methods

<p>1) Photometric and Light Distribution Measurement – Goniophotometer Method: Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals.</p>
<p>2) Chromaticity Measurement – Sphere-Spectroradiometer Method: Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.</p>
<p>3) Electrical Measurements: Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.</p>

**2.1 Electrical, Photometric and Chromaticity Measurements***(Refer to Work Instruction BL-QP-033)*

Test date	2018-4-8	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	1130SG-382		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC180301	120.0	60	1.7928	213.8	0.9938	5.39
7E-L1	277.0	60	0.8525	213.88	0.9057	14.43
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

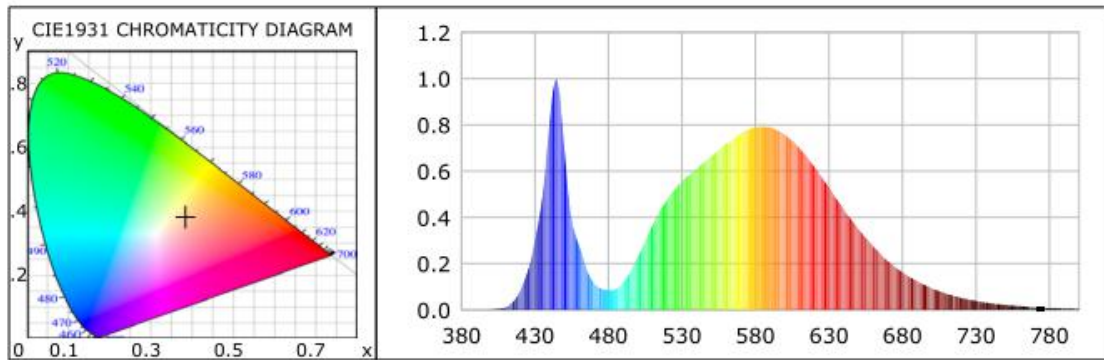
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	70	R9	0
Frequency (Hz)	60	R2	78	R10	48
CCT (K)	3910	R3	84	R11	69
Duv	-0.00037	R4	73	R12	45
Chromaticity (x, y)	x=0.3842 y=0.3783	R5	70	R13	71
Chromaticity (u', v')	u(u')=0.2270 v'(v')=0.5028	R6	69	R14	91
Color Rendering Index (CRI)	72.2	R7	80	R15	64
R9	0	R8	55	--	--

Photometric Measurement – Goniophotometer Method:

Parameter	Result		DLC V4.3 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	28548.3	29001.6	>=10000(-10%)
Luminous Efficacy (lm/W)	133.53	135.60	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	133.48		
Zonal lumens in the 0-90° zone (%)	99.8	--	>=100(-1)
Zonal lumens in the 80-90° zone (%)	0.3	--	<=10(+3)
Beam Angle (°)	43.6	--	--
Center Beam Candle Power (cd)	25684	--	--



Spectral Power Distribution & Chromaticity Diagram

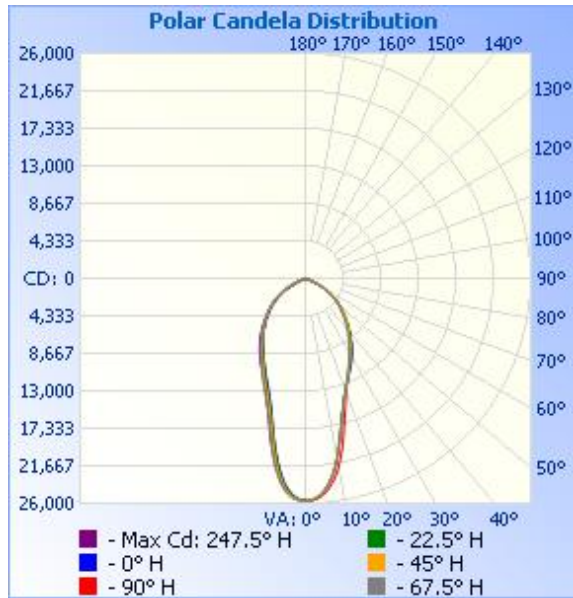


Zonal Lumen Tabulation

Zonal Lumen Summary				Lumens Per Zone					
Zone	Lumens	% Lamp	% Luminaire	Zone	Lumens	% Total	Zone	Lumens	% Total
0-30	12,170.2	42.6%	42.6%	0-10	2,227.2	7.8%	90-100	3.8	0%
0-40	17,706.4	62%	62%	10-20	4,580.9	16.0%	100-110	1.8	0%
0-60	26,378.0	92.4%	92.4%	20-30	5,362.1	18.8%	110-120	2.0	0%
60-90	2,117.8	7.4%	7.4%	30-40	5,536.1	19.4%	120-130	4.2	0%
70-100	481.1	1.7%	1.7%	40-50	4,969.2	17.4%	130-140	6.1	0%
90-120	7.6	0%	0%	50-60	3,702.4	13.0%	140-150	8.5	0%
0-90	28,495.8	99.8%	99.8%	60-70	1,640.4	5.7%	150-160	9.5	0%
90-180	45.6	0.2%	0.2%	70-80	380.3	1.3%	160-170	7.2	0%
0-180	28,541.4	100%	100%	80-90	97.0	0.3%	170-180	2.6	0%



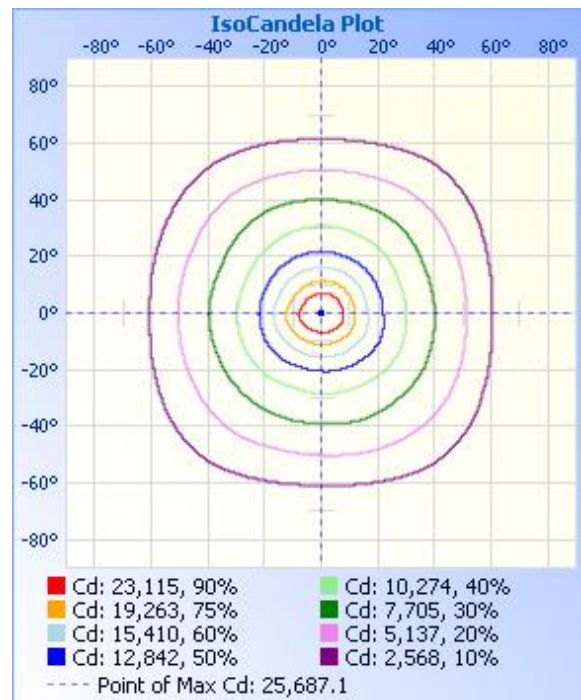
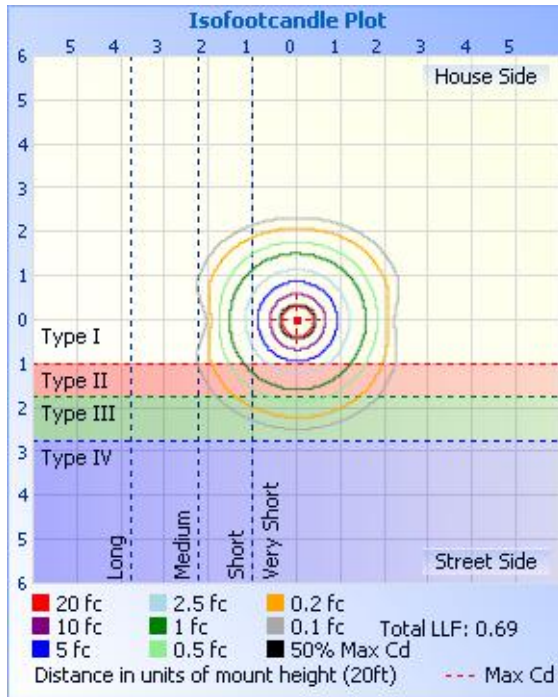
Photometric Data



Illuminance at a Distance

Distance (ft)	Center Beam fc	Beam Width	Beam Width (ft)
17.0ft	88.9 fc	13.1 ft	13.6 ft
34.0ft	22.2 fc	26.2 ft	27.2 ft
51.0ft	9.87 fc	39.3 ft	40.8 ft
68.0ft	5.55 fc	52.3 ft	54.4 ft
85.0ft	3.55 fc	65.4 ft	68.0 ft
102.0ft	2.47 fc	78.5 ft	81.6 ft

■ Vert. Spread: 42.1°
■ Horiz. Spread: 43.6°





Report No.: BLC1803017E-L

Candela Table - Type C

	0	22.5	45	67.5	90	112.	135	157.	180	202.	225	247.	270	292.	315	337.	360
						5	5	5	5	5	5	5	5	5	5	5	5
0	2568	2568	2568	2568	2568	2568	2568	2568	2568	2568	2568	2568	2568	2568	2568	2568	2568
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
1	2565	2566	2564	2561	2567	2563	2560	2559	2561	2562	2564	2568	2563	2565	2567	2567	2565
	4	3	3	6	5	0	3	6	9	9	8	7	8	8	9	8	4
2	2554	2554	2552	2549	2560	2550	2544	2541	2544	2548	2553	2561	2550	2555	2558	2557	2554
	5	7	5	1	4	2	0	0	0	0	9	5	0	7	5	3	5
3	2534	2534	2532	2528	2546	2531	2519	2512	2516	2523	2533	2546	2529	2536	2538	2537	2534
	0	1	5	8	7	5	0	6	4	8	3	2	2	0	9	7	0
4	2503	2504	2503	2499	2523	2504	2485	2473	2477	2483	2502	2521	2492	2506	2510	2507	2503
	9	6	6	3	8	8	2	7	1	5	7	5	3	1	2	6	9
5	2463	2465	2465	2461	2495	2470	2443	2419	2428	2434	2460	2486	2447	2465	2471	2468	2463
	3	3	4	7	4	4	2	4	1	3	5	4	8	6	7	3	3
6	2409	2417	2411	2409	2457	2424	2389	2360	2365	2375	2400	2440	2395	2410	2423	2420	2409
	3	7	7	2	9	9	1	2	2	7	0	0	2	3	6	5	3
7	2349	2355	2351	2350	2408	2372	2327	2289	2283	2302	2331	2374	2327	2347	2357	2355	2349
	6	2	0	6	5	5	6	8	4	3	0	4	2	6	1	5	6
8	2280	2280	2274	2277	2351	2310	2254	2209	2197	2215	2248	2300	2247	2270	2283	2282	2280
	5	1	4	2	7	0	1	5	6	8	7	8	8	3	1	3	5
9	2197	2194	2184	2193	2284	2236	2167	2118	2103	2108	2155	2217	2159	2182	2194	2197	2197
	6	3	3	1	5	0	8	8	6	8	1	3	2	7	0	6	6
10	2104	2097	2088	2099	2204	2148	2067	2008	2003	2004	2052	2122	2054	2086	2098	2107	2104
	4	9	8	1	7	2	9	4	1	8	7	0	2	3	6	4	4
11	2006	1986	1992	2002	2116	2053	1954	1906	1902	1902	1949	2022	1955	1985	1999	2014	2006
	3	9	1	6	2	6	5	2	3	0	9	0	8	2	6	4	3
12	1907	1889	1900	1897	2023	1955	1853	1806	1804	1802	1842	1921	1861	1888	1903	1921	1907
	9	3	0	2	6	7	8	1	4	8	1	6	6	2	2	0	9
13	1812	1789	1809	1808	1927	1849	1758	1713	1701	1711	1749	1815	1774	1787	1810	1831	1812
	3	9	0	2	8	6	1	1	8	7	3	3	1	6	6	6	3
14	1722	1708	1730	1724	1821	1755	1672	1627	1615	1630	1664	1726	1682	1703	1714	1736	1722
	8	1	4	4	7	8	4	8	2	8	9	1	4	8	1	5	8
15	1632	1633	1652	1643	1731	1670	1596	1554	1542	1557	1592	1650	1607	1627	1634	1652	1632
	1	0	5	2	3	6	2	6	0	9	2	0	6	7	4	3	1
16	1561	1572	1581	1571	1644	1592	1525	1482	1476	1497	1527	1583	1539	1553	1561	1574	1561

Laboratory: Shenzhen Belling Test Laboratory A2LA Certificate# 4810.01
Building No3 3rd floor, room 303, No 2-10 south Jinlong avenue, Sand Lake community, Biling street, Pingshan district, Shenzhen, Guangdong,CN. Website: <http://www.blst.com>

Report Format Number BL-FM-SA-012



	8	5	8	0	9	4	2	2	1	6	1	5	4	7	2	9	8
17	1500	1511	1522	1506	1567	1523	1458	1421	1420	1443	1465	1526	1479	1493	1489	1513	1500
	5	2	2	7	7	4	8	0	9	5	0	9	3	9	5	1	5
18	1442	1450	1462	1450	1499	1463	1411	1375	1373	1398	1415	1475	1432	1435	1436	1451	1442
	2	8	7	9	0	1	7	6	0	0	1	5	5	8	0	6	2
19	1398	1409	1408	1399	1433	1410	1366	1329	1326	1347	1374	1423	1383	1393	1394	1402	1398
	5	3	4	3	2	2	2	5	1	9	4	6	0	4	6	0	5
20	1354	1363	1365	1358	1380	1363	1325	1286	1286	1305	1331	1384	1340	1347	1350	1352	1354
	3	1	9	5	4	1	9	3	8	4	8	5	2	8	0	7	3
21	1315	1320	1320	1315	1332	1322	1289	1247	1250	1266	1293	1339	1299	1305	1313	1311	1315
	5	0	2	9	8	3	8	2	7	7	7	5	2	7	4	0	5
22	1283	1282	1281	1276	1289	1283	1255	1206	1215	1228	1257	1299	1261	1266	1282	1271	1283
	4	8	8	6	1	5	5	0	7	3	4	2	3	2	2	6	4
23	1252	1248	1243	1236	1249	1247	1222	1172	1182	1193	1219	1261	1226	1232	1248	1240	1252
	2	8	7	9	9	4	9	1	5	1	7	1	0	1	8	8	2
24	1223	1217	1210	1199	1211	1210	1187	1139	1147	1159	1186	1222	1194	1193	1217	1209	1223
	2	4	8	6	2	1	1	4	4	4	4	1	2	5	9	8	2
25	1196	1187	1176	1166	1177	1175	1155	1107	1116	1123	1154	1187	1161	1161	1184	1181	1196
	2	4	7	8	2	8	7	6	4	7	6	2	6	0	8	1	2
26	1169	1158	1146	1134	1143	1143	1120	1073	1085	1093	1119	1153	1132	1129	1155	1153	1169
	1	5	0	7	6	9	2	7	9	8	6	9	3	3	7	1	1
27	1145	1128	1115	1101	1112	1112	1092	1044	1058	1063	1088	1121	1101	1094	1126	1127	1145
	4	6	1	7	2	5	8	9	7	6	1	9	8	4	2	9	4
28	1117	1103	1083	1068	1083	1081	1055	1015	1030	1034	1057	1089	1072	1063	1095	1099	1117
	6	2	7	6	2	0	8	8	7	2	2	5	2	4	8	5	6
29	1092	1076	1053	1039	1055	1047	1024	9895	1004	1007	1027	1059	1044	1035	1067	1073	1092
	6	2	9	9	7	8	9		2	8	5	3	2	6	4	5	6
30	1065	1049	1026	1009	1028	1017	9945	9647	9760	9834	9994	1027	1015	1004	1036	1047	1065
	4	2	7	0	0	5						5	8	4	8	1	4
31	1037	1022	9961	9798	9989	9896	9655	9384	9522	9572	9732	1000	9883	9746	1010	1020	1037
	9	7										0			9	5	9
32	1012	9970	9703	9533	9727	9605	9377	9160	9275	9338	9468	9724	9629	9483	9828	9960	1012
	4																4
33	9834	9684	9438	9236	9471	9333	9113	8939	9039	9124	9188	9461	9391	9221	9570	9701	9834
34	9550	9434	9179	8964	9229	9050	8829	8723	8813	8913	8937	9201	9136	8954	9309	9462	9550
35	9272	9188	8920	8699	8999	8758	8591	8515	8554	8685	8700	8923	8887	8699	9056	9196	9272

Laboratory: Shenzhen Belling Test Laboratory A2LA Certificate# 4810.01
 Building No3 3rd floor, room 303, No 2-10 south Jinlong avenue, Sand Lake community, Biling street, Pingshan district, Shenzhen, Guangdong,CN. Website: <http://www.blst.com>



Report No.: BLC1803017E-L

Certificate#4810.01

36	8985	8932	8691	8439	8737	8493	8352	8282	8321	8453	8459	8679	8616	8462	8806	8955	8985
37	8701	8685	8445	8188	8489	8237	8132	8068	8085	8239	8208	8440	8357	8229	8559	8694	8701
38	8400	8452	8220	7958	8246	7990	7881	7837	7853	8021	7981	8195	8114	7969	8326	8423	8400
39	8113	8191	7981	7707	7992	7750	7658	7615	7621	7798	7766	7958	7893	7759	8098	8154	8113
40	7806	7920	7743	7452	7754	7484	7436	7384	7353	7572	7550	7699	7642	7509	7832	7873	7806
41	7532	7665	7507	7228	7526	7244	7216	7151	7122	7357	7338	7469	7404	7293	7606	7619	7532
42	7262	7379	7283	6982	7283	7014	7005	6896	6898	7110	7109	7250	7161	7066	7364	7345	7262
43	6984	7103	7072	6752	7063	6763	6770	6662	6672	6895	6899	7034	6926	6860	7110	7071	6984
44	6733	6846	6832	6525	6835	6536	6553	6430	6426	6675	6679	6799	6699	6619	6861	6820	6733
45	6481	6588	6598	6282	6569	6317	6336	6198	6212	6421	6455	6583	6481	6402	6616	6573	6481
46	6229	6325	6387	6033	6330	6092	6121	5947	5992	6198	6227	6357	6243	6197	6388	6326	6229
47	6001	6105	6135	5800	6092	5862	5907	5728	5782	5979	5987	6137	6021	5971	6123	6064	6001
48	5773	5873	5908	5569	5854	5621	5668	5504	5566	5758	5763	5915	5802	5764	5896	5842	5773
49	5559	5624	5656	5366	5601	5408	5449	5295	5331	5514	5540	5683	5578	5549	5643	5600	5559
50	5327	5404	5413	5146	5380	5201	5228	5060	5109	5288	5323	5461	5351	5342	5411	5374	5327
51	5126	5164	5153	4927	5144	4997	5011	4844	4880	5076	5120	5234	5110	5116	5169	5139	5126
52	4902	4936	4884	4727	4921	4797	4769	4633	4658	4857	4895	5008	4879	4889	4926	4910	4902
53	4686	4712	4635	4508	4689	4593	4556	4407	4422	4625	4682	4779	4611	4670	4690	4705	4686
54	4455	4491	4408	4303	4444	4381	4353	4180	4169	4380	4481	4529	4348	4446	4480	4466	4455
55	4241	4267	4159	4073	4215	4179	4136	3926	3926	4154	4263	4292	4070	4229	4247	4227	4241
56	3994	4053	3928	3826	3983	3975	3906	3708	3698	3918	4025	4044	3812	3973	4044	4004	3994
57	3785	3810	3690	3587	3741	3753	3678	3472	3463	3673	3806	3773	3545	3739	3835	3766	3785
58	3543	3581	3456	3366	3477	3492	3467	3249	3207	3431	3582	3485	3271	3469	3611	3512	3543
59	3321	3345	3241	3107	3200	3248	3245	3015	2950	3184	3356	3221	2964	3211	3401	3275	3321
60	3072	3111	3012	2837	2949	3020	3016	2761	2670	2905	3129	2977	2644	2947	3165	3063	3072
61	2789	2884	2791	2592	2691	2762	2772	2529	2398	2633	2861	2704	2238	2691	2948	2816	2789
62	2516	2606	2563	2322	2312	2479	2553	2277	2094	2337	2610	2412	1698	2389	2700	2577	2516
63	2277	2332	2323	2059	1843	2224	2312	2022	1815	2061	2341	2160	1266	2140	2466	2312	2277
64	2014	2061	2090	1828	1448	1980	2076	1757	1572	1781	2079	1929	753	1869	2196	2046	2014
65	1733	1818	1854	1558	997	1731	1828	1515	1349	1515	1820	1706	397	1649	1931	1792	1733
66	1476	1573	1645	1327	632	1512	1576	1284	1154	1277	1552	1494	266	1441	1716	1538	1476
67	1261	1340	1425	1132	393	1301	1354	1080	930	1079	1332	1270	239	1281	1488	1307	1261

Laboratory: Shenzhen Belling Test Laboratory A2LA Certificate# 4810.01
Building No3 3rd floor, room 303, No 2-10 south Jinlong avenue, Sand Lake community, Biling street, Pingshan district, Shenzhen, Guangdong,CN. Website: <http://www.blst.com>

Report Format Number BL-FM-SA-012



Report No.: BLC1803017E-L

68	1065	1117	1226	968	267	1128	1164	875	715	881	1163	1096	216	1108	1273	1125	1065
69	814	942	1059	788	223	969	988	688	560	721	1012	923	211	953	1059	947	814
70	615	760	903	642	206	838	837	543	381	586	872	750	196	797	895	753	615
71	415	598	764	541	198	695	698	423	307	462	747	613	191	659	764	593	415
72	307	478	666	474	182	605	610	345	218	378	653	531	189	577	655	430	307
73	257	372	597	417	187	533	532	297	180	331	599	464	192	511	582	349	257
74	205	325	558	383	183	475	475	269	149	299	542	425	175	472	528	310	205
75	165	313	523	359	179	449	418	248	130	277	496	382	146	438	485	285	165
76	156	291	504	335	158	422	380	229	119	252	457	357	131	412	451	270	156
77	139	267	483	309	134	398	345	203	107	218	422	326	101	389	419	250	139
78	121	247	467	287	121	376	316	179	101	186	384	291	85	361	395	234	121
79	125	227	430	258	93	343	284	156	96	167	340	256	90	322	364	225	125
80	116	213	381	223	85	321	248	140	90	140	288	217	75	292	303	204	116
81	112	183	312	196	77	275	195	126	73	125	235	188	55	269	239	175	112
82	98	170	247	170	67	231	142	104	72	94	177	172	37	229	194	164	98
83	71	155	209	137	59	193	121	90	56	96	142	141	40	191	151	150	71
84	68	132	170	126	46	145	89	78	43	76	117	116	44	128	126	132	68
85	67	121	142	108	35	84	78	61	29	57	86	89	27	81	110	115	67
86	54	93	112	59	32	68	67	42	22	40	66	69	12	50	85	94	54
87	43	68	69	71	16	43	39	24	19	22	30	44	15	57	48	75	43
88	34	49	57	48	0	34	28	14	17	16	34	38	0	37	39	43	34
89	23	30	35	29	0	13	11	0	16	23	24	29	0	0	22	30	23
90	13	19	17	0	0	0	0	14	0	11	0	0	0	0	14	19	13
91	15	19	15	12	0	0	0	13	15	0	0	0	0	0	0	0	15
92	15	0	11	0	0	0	0	11	0	0	12	0	0	0	0	12	15
93	14	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13	14
94	17	13	11	0	0	0	0	12	0	0	0	0	0	0	0	18	17
95	11	16	0	0	0	0	0	0	12	13	0	0	0	0	0	12	11
96	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	11
97	0	0	14	0	0	0	0	15	0	12	0	0	0	0	0	0	0
98	13	14	13	0	0	0	0	0	13	0	0	0	0	0	0	12	13
99	12	0	11	0	0	0	0	0	0	12	0	0	0	0	0	0	12

Laboratory: Shenzhen Belling Test Laboratory A2LA Certificate# 4810.01
Building No3 3rd floor, room 303, No 2-10 south Jinlong avenue, Sand Lake community, Biling street, Pingshan district, Shenzhen, Guangdong,CN. Website: <http://www.blst.com>

Report Format Number BL-FM-SA-012



Report No.: BLC1803017E-L

10	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0
0																	
10	12	12	0	0	0	0	0	14	0	0	0	0	0	0	0	0	12
1																	
10	0	0	0	0	0	0	0	11	14	0	0	0	0	0	0	0	0
2																	
10	0	0	0	0	0	0	14	11	0	0	0	0	0	0	0	0	0
3																	
10	15	0	0	0	0	0	0	13	12	0	0	0	0	0	0	0	15
4																	
10	0	0	0	0	0	0	0	14	0	0	0	0	0	0	12	0	0
5																	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6																	
10	0	13	0	0	0	0	12	12	11	0	0	0	0	0	0	0	0
7																	
10	12	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	12
8																	
10	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0
9																	
11	0	0	0	0	0	0	11	0	0	0	11	0	0	0	0	0	0
0																	
11	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0
1																	
11	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0
2																	
11	0	15	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0
3																	
11	0	18	0	0	0	0	12	0	15	0	0	0	0	0	0	0	0
4																	
11	13	0	0	0	0	0	14	0	11	0	0	0	0	0	13	13	0
5																	
11	0	11	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0
6																	
11	0	12	11	0	0	0	0	12	0	0	0	0	0	0	0	0	0
7																	

Laboratory: Shenzhen Belling Test Laboratory A2LA Certificate# 4810.01
Building No3 3rd floor, room 303, No 2-10 south Jinlong avenue, Sand Lake community, Biling street, Pingshan district, Shenzhen, Guangdong,CN. Website: <http://www.blst.com>

Report Format Number BL-FM-SA-012



Report No.: BLC1803017E-L

11	15	0	0	0	0	0	0	11	0	0	0	0	0	0	0	13	15
8																	
11	0	14	0	0	0	0	0	13	12	0	0	0	0	0	0	0	0
9																	
12	14	13	0	0	0	0	0	0	0	12	15	0	0	0	0	0	14
0																	
12	16	12	0	0	0	0	0	16	12	14	12	0	0	0	0	12	16
1																	
12	0	18	0	0	0	0	0	0	12	0	12	0	0	0	0	0	0
2																	
12	12	20	0	0	0	0	0	0	14	15	0	0	0	0	0	0	12
3																	
12	14	17	0	0	0	0	0	14	16	17	12	0	0	0	0	16	14
4																	
12	12	12	0	0	0	0	0	16	11	0	0	0	0	0	0	0	12
5																	
12	0	12	0	0	0	0	0	13	13	14	0	0	0	0	0	0	0
6																	
12	13	12	14	0	0	0	0	11	15	15	0	0	0	0	0	0	13
7																	
12	15	20	11	0	0	0	0	14	15	17	0	0	0	0	0	0	15
8																	
12	14	22	0	13	0	0	0	15	0	0	0	12	0	0	0	0	14
9																	
13	15	18	11	0	0	0	11	14	18	15	15	11	0	0	0	14	15
0																	
13	11	19	0	0	0	0	16	13	0	14	0	0	0	0	0	16	11
1																	
13	21	16	12	0	0	0	0	15	15	13	14	0	0	0	0	12	21
2																	
13	17	23	0	0	0	0	13	13	15	0	0	0	0	0	0	13	17
3																	
13	17	21	0	0	0	0	0	18	11	14	0	12	0	0	0	0	17
4																	
13	17	22	0	14	0	0	0	15	17	19	14	11	0	0	0	0	17
5																	

Laboratory: Shenzhen Belling Test Laboratory A2LA Certificate# 4810.01
Building No3 3rd floor, room 303, No 2-10 south Jinlong avenue, Sand Lake community, Biling street, Pingshan district, Shenzhen, Guangdong,CN. Website: <http://www.blst.com>

Report Format Number BL-FM-SA-012



Report No.: BLC1803017E-L

13	19	22	14	0	0	0	0	13	24	19	0	11	0	0	0	20	19
6																	
13	18	17	0	0	0	0	14	22	15	19	17	15	0	0	11	11	18
7																	
13	21	22	19	0	0	0	0	14	17	17	11	13	0	0	0	15	21
8																	
13	17	21	15	0	0	0	0	21	23	18	0	18	0	0	0	15	17
9																	
14	22	16	12	0	0	0	12	19	17	22	18	14	0	0	0	11	22
0																	
14	18	22	17	0	0	0	13	15	16	19	14	14	0	0	0	19	18
1																	
14	22	21	11	14	0	0	12	15	28	23	11	0	0	0	0	21	22
2																	
14	17	18	21	0	0	0	14	17	19	24	11	16	0	12	0	15	17
3																	
14	19	24	18	12	0	0	14	19	25	19	16	22	0	0	0	22	19
4																	
14	24	29	20	16	0	0	14	23	22	21	18	16	0	0	15	24	24
5																	
14	25	22	20	11	0	0	17	25	18	20	17	19	0	0	16	22	25
6																	
14	23	22	20	15	0	0	0	14	22	26	19	15	0	0	13	20	23
7																	
14	22	23	22	15	0	0	19	24	23	25	21	19	0	12	15	24	22
8																	
14	27	20	24	20	0	0	21	29	28	30	14	17	14	13	16	23	27
9																	
15	23	24	25	12	0	0	18	19	26	28	21	19	11	13	16	23	23
0																	
15	27	28	22	22	0	11	22	28	18	27	27	24	0	0	19	30	27
1																	
15	27	25	27	18	0	11	18	28	26	18	18	23	12	18	19	21	27
2																	
15	27	24	28	25	0	0	19	31	26	28	22	23	0	13	18	26	27
3																	

Laboratory: Shenzhen Belling Test Laboratory A2LA Certificate# 4810.01
Building No3 3rd floor, room 303, No 2-10 south Jinlong avenue, Sand Lake community, Biling street, Pingshan district, Shenzhen, Guangdong,CN. Website: <http://www.blst.com>

Report Format Number BL-FM-SA-012



Report No.: BLC1803017E-L

154	26	30	22	14	0	0	13	27	19	26	27	19	14	16	20	31	26
155	31	30	25	14	0	15	19	25	31	27	20	27	16	16	19	27	31
156	30	33	23	25	0	13	19	28	29	28	22	22	12	18	21	22	30
157	29	31	29	18	0	14	23	31	18	30	25	28	12	15	24	34	29
158	24	34	28	23	0	13	21	34	24	35	24	22	0	12	18	29	24
159	35	31	28	21	0	14	21	27	30	32	25	19	13	21	24	30	35
160	35	31	25	17	0	16	21	29	28	33	20	29	0	20	21	29	35
161	29	27	26	25	0	14	26	24	29	33	30	31	0	16	26	25	29
162	35	29	23	28	0	15	29	31	34	31	27	23	0	18	13	24	35
163	35	30	25	21	0	17	32	29	37	28	33	23	0	20	22	30	35
164	36	34	29	25	14	0	28	38	38	31	22	25	22	19	29	27	36
165	34	39	26	19	11	17	24	38	30	38	31	28	13	22	26	27	34
166	35	36	33	26	14	19	26	34	27	34	30	23	14	20	33	32	35
167	37	36	30	23	0	16	26	37	40	35	27	32	21	26	28	33	37
168	35	35	30	31	13	16	15	34	29	39	24	33	13	25	24	32	35
169	42	39	38	36	0	14	23	33	20	40	33	26	12	27	22	35	42
170	37	32	42	23	0	17	24	36	29	35	31	34	11	23	37	34	37
171	38	37	36	32	14	16	26	40	36	35	34	30	14	19	33	30	38

Laboratory: Shenzhen Belling Test Laboratory A2LA Certificate# 4810.01
Building No3 3rd floor, room 303, No 2-10 south Jinlong avenue, Sand Lake community, Biling street, Pingshan district, Shenzhen, Guangdong,CN. Website: <http://www.blst.com>

Report Format Number BL-FM-SA-012



Report No.: BLC1803017E-L

17 2	40	34	24	34	0	19	25	30	35	39	30	33	21	25	34	35	40
17 3	34	34	32	32	0	17	28	33	33	41	22	30	17	23	27	34	34
17 4	43	43	30	28	0	18	30	32	35	31	32	30	19	28	34	36	43
17 5	26	42	29	18	0	0	22	30	28	36	24	24	21	17	26	32	26
17 6	36	38	27	23	14	20	21	35	34	30	28	34	18	21	26	27	36
17 7	36	25	29	32	0	20	21	27	31	28	31	31	13	26	32	35	36
17 8	35	25	34	26	0	19	28	30	25	40	29	23	18	20	30	31	35
17 9	26	36	26	26	0	21	31	26	31	28	35	21	14	18	28	34	26
18 0	36	36	26	26	0	0	28	28	25	39	36	30	22	19	32	38	36

**2.2 Electrical, Photometric and Chromaticity Measurements***(Refer to Work Instruction BL-QP-033)*

Test date	2018-4-8	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	1130SG-384		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC180301	120.0	60	1.7828	212.7	0.9942	6.25
7E-L2	277.0	60	0.8448	213.09	0.9106	14.69
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	72	R9	0
Frequency (Hz)	60	R2	78	R10	48
CCT (K)	4895	R3	83	R11	72
Duv	0.00102	R4	75	R12	44
Chromaticity (x, y)	x=0.3484 y=0.3563	R5	72	R13	72
Chromaticity (u', v')	u(u')=0.2118 v'(v')=0.4874	R6	70	R14	90
Color Rendering Index (CRI)	74	R7	82	R15	67
R9	0	R8	60	--	--

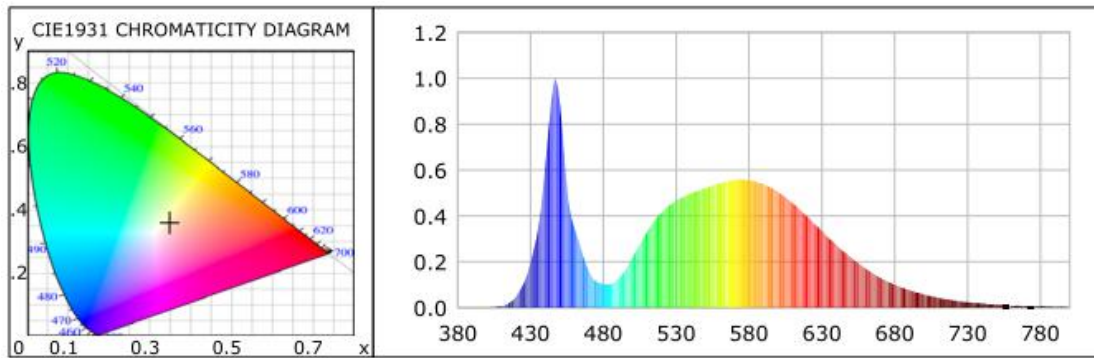
Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.3 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	28865.52	29148.58	>=10000(-10%)
Luminous Efficacy (lm/W)	135.71	136.79	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	135.46		



Report No.: BLC1803017E-L

Spectral Power Distribution & Chromaticity Diagram



Laboratory: Shenzhen Belling Test Laboratory A2LA Certificate# 4810.01
Building No3 3rd floor, room 303, No 2-10 south Jinlong avenue, Sand Lake community, Biling street, Pingshan district, Shenzhen, Guangdong,CN. Website: <http://www.blst.com>

Report Format Number BL-FM-SA-012



Report No.: BLC1803017E-L

3. Test Equipment

Equipment Name	Model No.	Serial No.	Next Calibration Date
Goniophotometric System	GPM-3000	DYHXF120001	2019-01-15
AC Power Source	CHP-500C	N/A	2019-01-14
Total Luminous Flux Standard Lamp	24V/150W	DYJYR040040	2019-01-22
Digital Power Meter	WT500	DYDWQ200006	2019-01-14
Integral Sphere (2M)	2M	DYJCE120067	2019-01-15
Digital Power Meter	WT500	DYDWQ200006	2019-01-14
Optical Color and Electrical Measurement System	CMS-3000S	DYJCE120067	2019-01-15

Expand Uncertainty:
Photometric Measurement (Sphere): 2.04%, k=2
Chromaticity Measurement(Sphere):28.8K, k=2
Photometric Measurement(Goniophotometer):2.7%, k=2

***** END OF REPORT *****