



Report No.: BLC1803017E-A

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): 1130SD-33T

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: 1130SD-332
1130SD-334

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

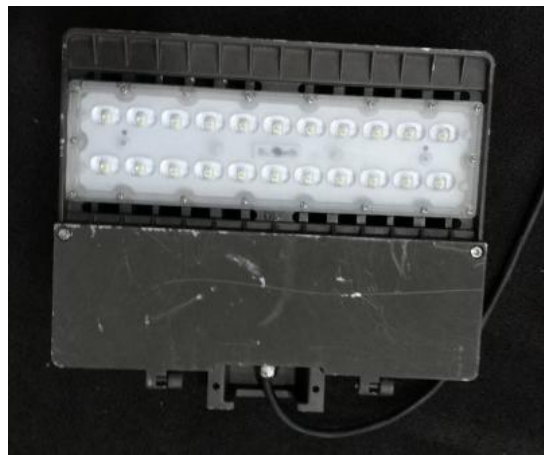


Report No.: BLC1803017E-A

1.1 Product Information:

Organization Name	Revolution Lighting Technologies, Inc.	
Brand Name		
Model Number	1130SD-33T	
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	62W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,5000K	
LED Manufacturer	Lumileds	
LED Model	LUXEON 3030 2D	
Sample Number	BLC1803017E-A1(4000K),A2(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 Flux2. Luminous Distribution Intensity3. Luminous Efficacy4. Correlated Color Temperature5. Color Rendering Index6. Chromaticity Coordinate7. Electrical Parameters
Reference Standard	<ol style="list-style-type: none">1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources4. CIE 15-2004 Technical Report Colorimetry5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	BL-QP-033

1.3 Test Methods

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.

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.

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.

**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	1130SD-332		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC180301	120.0	60	0.5175	61.98	0.998	4.83
7E-A1	277.0	60	0.2273	61.11	0.9705	13.77
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

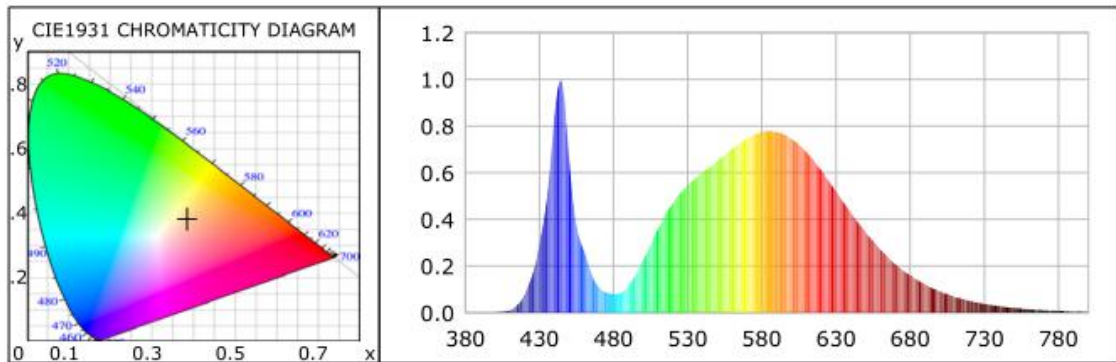
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	70	R9	0
Frequency (Hz)	60	R2	78	R10	48
CCT (K)	3901	R3	84	R11	70
Duv	-0.00033	R4	73	R12	45
Chromaticity (x, y)	x=0.3847 y=0.3786	R5	70	R13	71
Chromaticity (u', v')	u(u')=0.2271 v'(v')=0.5030	R6	69	R14	91
Color Rendering Index (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)	8065.50	8013.4	5000-10000(-10%)
Luminous Efficacy (lm/W)	130.13	131.13	Premium: >= 115(-3%)
Most worst Luminous/Highest Watts	129.29		
Zonal lumens in the 0-90° zone (%)	99.6	--	>=100(-1)
Zonal lumens in the 80-90° zone (%)	1.2	--	<=10(+3)
Beam Angle (°)	140.5	--	--
Center Beam Candle Power (cd)	1974	--	--



Spectral Power Distribution & Chromaticity Diagram

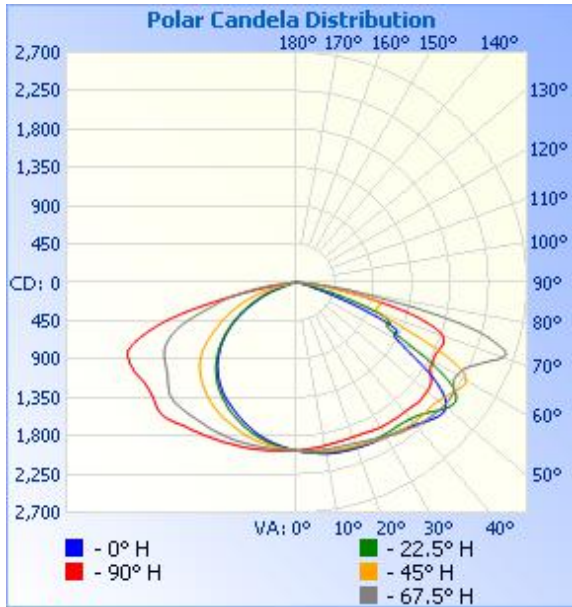


Zonal Lumen Tabulation

Zonal Lumen Summary				Lumens Per Zone					
Zone	Lumens	% Lamp	% Luminaire	Zone	Lumens	% Total	Zone	Lumens	% Total
0-30	1,641.8	20.4%	20.4%	0-10	188.1	2.3%	90-100	6.4	0.1%
0-40	2,847.1	35.3%	35.3%	10-20	555.4	6.9%	100-110	5.0	0.1%
0-60	5,882.3	72.9%	72.9%	20-30	898.3	11.1%	110-120	4.4	0.1%
60-90	2,153.8	26.7%	26.7%	30-40	1,205.3	14.9%	120-130	3.7	0%
70-100	837.2	10.4%	10.4%	40-50	1,467.6	18.2%	130-140	3.1	0%
90-120	15.8	0.2%	0.2%	50-60	1,567.6	19.4%	140-150	2.6	0%
0-90	8,036.1	99.6%	99.6%	60-70	1,323.0	16.4%	150-160	2.0	0%
90-180	28.9	0.4%	0.4%	70-80	731.3	9.1%	160-170	1.2	0%
0-180	8,065.0	100%	100%	80-90	99.5	1.2%	170-180	0.4	0%



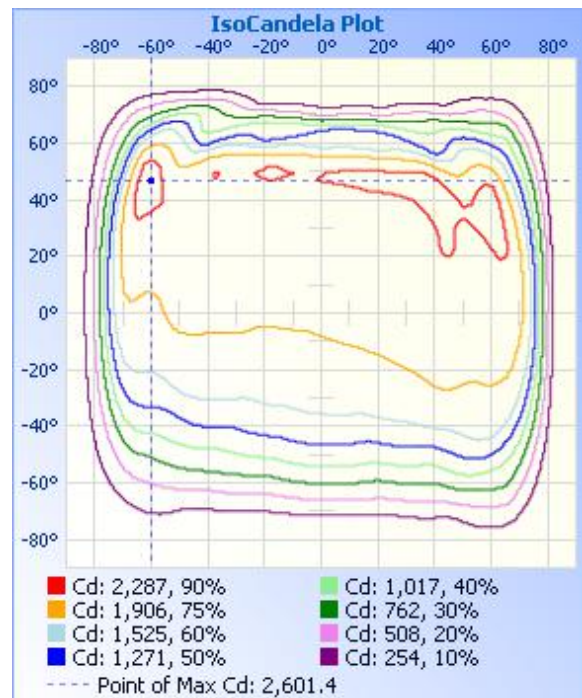
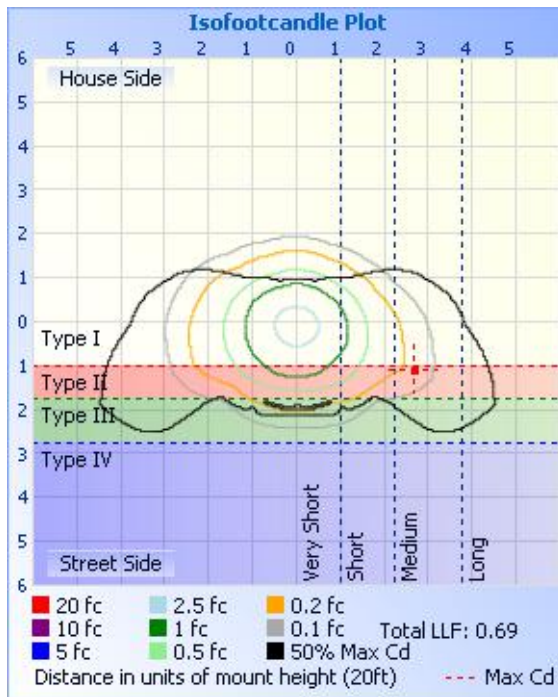
Photometric Data



Illuminance at a Distance

Distance (ft)	Center Beam fc	Beam Width
17.0ft	6.83 fc	39.3 ft 94.7 ft
34.0ft	1.71 fc	78.5 ft 189.5 ft
51.0ft	0.76 fc	117.8 ft 284.2 ft
68.0ft	0.43 fc	157.1 ft 379.0 ft
85.0ft	0.27 fc	196.3 ft 473.7 ft
102.0ft	0.19 fc	235.6 ft 568.4 ft

■ Vert. Spread: 98.2°
■ Horiz. Spread: 140.5°





Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	1974	1974	1974	1974	1974	1974	1974	1974	1974	1974	1974	1974	1974	1974	1974	1974	1974
1	1982	1978	1978	1975	1970	1969	1964	1965	1966	1968	1970	1972	1977	1979	1982	1983	1982
2	1988	1983	1981	1977	1966	1963	1956	1957	1958	1963	1966	1971	1979	1983	1991	1991	1988
3	1995	1987	1985	1977	1962	1958	1948	1949	1950	1958	1963	1971	1981	1987	1999	1999	1995
4	2001	1991	1989	1979	1959	1954	1940	1940	1941	1952	1959	1970	1983	1992	2006	2007	2001
5	2008	1995	1992	1981	1956	1949	1931	1930	1933	1945	1955	1970	1984	1996	2014	2014	2008
6	2014	1999	1996	1982	1954	1944	1922	1921	1923	1938	1951	1969	1986	2002	2019	2022	2014
7	2020	2004	2000	1984	1951	1939	1913	1911	1915	1931	1948	1970	1989	2006	2025	2030	2020
8	2026	2008	2003	1985	1949	1934	1906	1901	1906	1923	1944	1970	1992	2011	2031	2036	2026
9	2033	2013	2007	1986	1946	1930	1897	1890	1896	1915	1940	1971	1996	2014	2036	2043	2033
10	2038	2018	2010	1987	1943	1925	1889	1879	1885	1905	1936	1972	1999	2019	2040	2048	2038
11	2043	2022	2014	1989	1939	1920	1881	1868	1875	1896	1931	1973	2003	2023	2044	2054	2043
12	2047	2027	2018	1991	1937	1916	1872	1855	1864	1888	1927	1973	2006	2028	2047	2060	2047
13	2050	2030	2020	1992	1935	1911	1863	1843	1852	1877	1923	1974	2011	2033	2049	2064	2050
14	2053	2033	2023	1992	1933	1907	1855	1832	1840	1868	1917	1975	2014	2038	2052	2069	2053
15	2056	2036	2026	1993	1932	1903	1846	1820	1827	1858	1911	1977	2018	2041	2054	2073	2056
16	2058	2040	2028	1995	1931	1899	1836	1807	1813	1845	1905	1978	2023	2047	2056	2076	2058
17	2060	2043	2031	1997	1931	1895	1827	1793	1799	1834	1899	1980	2027	2052	2058	2080	2060
18	2063	2046	2034	2000	1931	1891	1818	1780	1786	1821	1891	1981	2030	2057	2060	2084	2063
19	2064	2048	2037	2004	1932	1888	1809	1767	1772	1809	1883	1984	2034	2062	2063	2088	2064
20	2067	2050	2041	2008	1931	1883	1800	1753	1758	1797	1875	1985	2036	2067	2067	2091	2067
21	2069	2052	2046	2013	1931	1880	1790	1740	1744	1784	1866	1986	2040	2074	2071	2093	2069
22	2072	2053	2051	2019	1933	1876	1781	1727	1728	1770	1857	1987	2045	2081	2075	2094	2072
23	2074	2054	2055	2026	1934	1873	1769	1714	1714	1757	1847	1988	2050	2088	2078	2095	2074
24	2077	2057	2060	2032	1937	1871	1758	1699	1700	1744	1838	1987	2056	2095	2082	2094	2077
25	2079	2057	2064	2040	1942	1869	1747	1686	1685	1729	1830	1987	2061	2103	2086	2094	2079
26	2082	2059	2068	2048	1946	1868	1735	1672	1668	1715	1822	1987	2065	2109	2090	2093	2082
27	2084	2059	2075	2057	1951	1865	1722	1655	1654	1700	1815	1988	2067	2119	2093	2093	2084
28	2087	2060	2081	2065	1957	1861	1709	1642	1638	1685	1808	1989	2074	2128	2096	2094	2087
29	2090	2061	2086	2074	1962	1855	1695	1625	1624	1668	1799	1990	2082	2135	2098	2096	2090

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-A

30	2092	2062	2091	2084	1963	1850	1681	1609	1611	1651	1789	1991	2088	2142	2100	2099	2092
31	2096	2061	2095	2098	1967	1844	1666	1593	1596	1633	1779	1990	2094	2151	2102	2102	2096
32	2101	2060	2101	2112	1968	1837	1651	1576	1580	1617	1769	1989	2099	2160	2105	2105	2101
33	2106	2060	2107	2125	1970	1831	1635	1556	1564	1600	1760	1986	2104	2168	2107	2109	2106
34	2112	2060	2113	2136	1971	1825	1617	1537	1547	1583	1748	1986	2108	2177	2110	2114	2112
35	2120	2060	2119	2146	1971	1819	1599	1518	1529	1565	1736	1986	2119	2188	2113	2119	2120
36	2129	2063	2126	2154	1975	1811	1580	1498	1509	1545	1723	1989	2126	2196	2118	2127	2129
37	2139	2066	2132	2161	1976	1803	1560	1477	1491	1526	1709	1990	2130	2205	2125	2136	2139
38	2151	2072	2135	2171	1977	1793	1541	1456	1472	1506	1694	1993	2138	2212	2133	2144	2151
39	2164	2078	2140	2183	1979	1784	1522	1434	1451	1484	1680	1994	2149	2222	2143	2156	2164
40	2178	2088	2145	2196	1979	1774	1498	1411	1430	1462	1667	1996	2162	2232	2150	2169	2178
41	2193	2097	2147	2204	1982	1763	1476	1388	1402	1439	1652	1998	2175	2243	2157	2184	2193
42	2211	2110	2148	2211	1985	1751	1455	1367	1385	1413	1636	2000	2186	2257	2165	2202	2211
43	2228	2124	2147	2213	1990	1742	1431	1339	1361	1389	1619	2002	2200	2268	2176	2221	2228
44	2246	2143	2149	2219	1995	1732	1408	1312	1335	1364	1602	2003	2206	2275	2187	2242	2246
45	2263	2164	2149	2226	2003	1720	1384	1284	1309	1334	1585	2004	2212	2282	2201	2266	2263
46	2280	2188	2148	2234	2004	1704	1367	1255	1278	1301	1567	2003	2213	2288	2215	2294	2280
47	2292	2214	2147	2242	2002	1690	1338	1226	1250	1272	1549	1998	2211	2294	2231	2317	2292
48	2299	2243	2150	2245	1999	1674	1312	1192	1220	1242	1527	1991	2202	2302	2246	2340	2299
49	2296	2270	2154	2248	1997	1657	1283	1161	1191	1212	1505	1978	2187	2308	2269	2357	2296
50	2282	2294	2162	2252	1995	1638	1254	1129	1156	1176	1481	1958	2173	2308	2295	2368	2282
51	2253	2313	2176	2256	1992	1618	1225	1095	1123	1142	1456	1936	2160	2302	2320	2367	2253
52	2212	2326	2193	2260	1983	1596	1193	1056	1089	1106	1427	1914	2150	2292	2354	2353	2212
53	2146	2330	2210	2260	1974	1572	1159	1019	1053	1069	1394	1892	2145	2281	2384	2317	2146
54	2062	2317	2228	2256	1950	1546	1124	981	1016	1033	1364	1871	2141	2268	2410	2261	2062
55	1966	2284	2246	2245	1924	1515	1090	941	973	992	1321	1852	2138	2263	2429	2177	1966
56	1842	2225	2264	2224	1896	1481	1057	897	935	954	1275	1837	2138	2262	2437	2074	1842
57	1712	2136	2280	2198	1870	1439	1021	854	894	913	1235	1824	2138	2267	2427	1944	1712
58	1582	2011	2297	2176	1854	1391	984	813	852	874	1188	1814	2144	2276	2383	1793	1582
59	1472	1869	2307	2168	1849	1349	948	769	808	832	1144	1802	2153	2291	2306	1636	1472
60	1382	1706	2298	2171	1844	1303	915	726	760	787	1103	1788	2163	2310	2183	1491	1382
61	1322	1532	2265	2181	1842	1263	880	678	716	746	1055	1776	2169	2333	2032	1386	1322

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



Certificate#4810.01

62	1293	1372	2198	2194	1836	1225	841	634	672	705	1012	1758	2168	2355	1839	1310	1293
63	1301	1243	2083	2214	1837	1186	805	590	627	662	969	1740	2173	2394	1613	1292	1301
64	1316	1184	1922	2256	1843	1143	766	547	579	617	926	1713	2173	2437	1398	1322	1316
65	1274	1173	1728	2300	1851	1104	721	504	536	574	881	1682	2168	2469	1233	1349	1274
66	1169	1187	1549	2349	1859	1064	672	459	493	530	838	1645	2163	2483	1133	1312	1169
67	1007	1187	1367	2395	1864	1022	620	418	452	486	787	1600	2156	2471	1090	1211	1007
68	841	1151	1216	2455	1860	970	572	381	409	436	740	1543	2130	2423	1072	1054	841
69	672	1069	1100	2521	1848	921	521	345	369	390	689	1482	2073	2345	1068	892	672
70	535	960	1036	2573	1824	871	474	307	312	348	637	1409	2000	2233	1062	748	535
71	409	825	998	2601	1774	819	419	257	233	307	585	1323	1909	2088	1043	599	409
72	314	681	987	2564	1693	764	372	196	190	258	533	1219	1802	1921	998	475	314
73	231	551	992	2453	1587	715	327	163	160	184	481	1122	1686	1748	923	359	231
74	180	420	1005	2344	1471	665	285	139	138	153	418	1041	1538	1586	824	252	180
75	149	298	1015	2191	1334	599	220	120	119	130	356	969	1353	1443	691	198	149
76	124	198	1010	1961	1149	545	165	105	104	112	301	907	1149	1317	501	163	124
77	101	158	961	1694	982	496	134	92	90	95	240	839	944	1199	346	135	101
78	80	131	849	1410	828	451	112	81	79	83	168	762	757	1080	263	105	80
79	60	106	629	1127	686	405	93	69	69	71	124	668	615	951	208	79	60
80	40	79	504	903	560	342	76	60	59	62	99	576	443	821	160	50	40
81	33	44	410	727	471	283	64	46	38	52	76	500	298	666	111	35	33
82	25	31	286	613	398	205	55	30	25	36	62	400	185	452	60	27	25
83	19	21	117	457	320	126	45	19	17	24	51	319	116	352	44	20	19
84	16	16	48	316	247	87	27	12	12	16	35	227	78	277	27	16	16
85	10	13	29	164	176	63	14	9	9	12	24	107	50	117	18	10	10
86	10	10	19	78	122	42	10	6	7	10	16	59	30	61	11	10	10
87	8	8	13	31	74	20	6	6	8	8	13	32	12	17	8	10	8
88	9	7	11	13	27	10	7	6	5	7	11	15	10	10	9	9	9
89	8	6	9	11	11	8	6	6	5	8	11	13	8	9	8	8	8
90	8	7	9	10	8	6	6	5	6	6	10	12	7	9	8	8	8
91	8	7	8	9	6	6	5	5	7	8	8	11	6	7	7	7	8
92	8	5	8	7	6	5	4	4	4	6	7	10	5	7	6	8	8
93	8	4	5	7	6	5	4	4	5	7	7	9	4	8	6	6	8

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-A

94	7	6	7	7	5	5	3	4	6	5	9	9	4	7	5	6	7
95	7	6	5	6	5	5	4	4	5	6	8	9	3	7	6	7	7
96	7	5	7	6	5	4	4	4	5	5	8	9	4	6	6	6	7
97	6	6	5	7	4	5	4	4	5	5	8	8	4	8	5	5	6
98	6	5	6	5	4	5	3	4	5	4	7	8	3	7	4	6	6
99	6	6	6	6	5	5	4	3	5	6	8	8	3	7	6	6	6
100	6	5	6	5	4	5	3	4	5	5	6	8	3	5	5	5	6
101	6	4	5	5	5	5	4	3	5	5	7	8	2	6	4	5	6
102	5	5	6	6	4	6	4	4	4	5	8	8	3	6	4	5	5
103	6	5	5	5	4	4	4	4	5	6	7	7	3	6	5	5	6
104	5	5	6	5	4	5	5	3	4	6	7	7	1	5	4	5	5
105	5	5	5	5	4	5	4	3	4	5	7	8	2	4	4	4	5
106	6	5	5	5	4	6	4	4	4	5	7	7	2	5	4	4	6
107	5	4	5	5	5	4	4	3	5	6	7	7	2	3	4	5	5
108	4	5	6	4	5	6	5	4	5	5	7	7	1	4	4	4	4
109	4	4	4	5	3	4	5	3	4	5	7	7	1	3	3	4	4
110	5	4	4	5	4	6	6	3	5	5	7	6	1	3	4	4	5
111	5	4	5	4	4	6	4	3	4	6	7	7	2	3	3	4	5
112	5	5	4	4	4	6	5	4	4	5	7	6	2	3	3	4	5
113	5	4	4	4	4	5	6	5	5	5	7	6	1	3	3	4	5
114	5	4	3	4	4	6	6	4	5	5	7	6	2	3	3	4	5
115	4	4	4	4	4	5	6	4	4	6	6	6	1	2	4	4	4
116	4	4	4	4	4	6	5	5	5	5	6	6	1	2	3	4	4
117	4	4	6	4	4	6	6	4	5	5	7	6	2	3	3	4	4
118	5	4	5	3	4	6	5	4	5	5	6	6	2	2	3	4	5
119	5	4	6	4	4	5	5	5	6	5	6	7	2	3	3	4	5
120	3	4	5	4	3	5	5	5	5	6	6	6	2	2	3	3	3
121	3	4	5	4	3	6	5	5	3	5	6	5	2	3	2	3	3
122	4	4	5	4	4	5	6	5	6	6	6	5	2	2	2	3	4
123	4	3	5	4	4	5	5	5	6	6	6	5	2	2	3	4	4
124	4	3	5	4	3	5	6	5	5	5	7	4	2	2	3	4	4
125	3	4	4	4	4	4	5	5	5	5	6	6	1	3	3	3	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-A

126	4	3	4	3	3	4	6	5	6	5	5	5	2	3	3	3	4
127	4	4	4	4	3	4	5	4	5	6	6	5	2	2	2	4	4
128	4	3	3	3	3	5	5	5	6	6	5	6	2	3	3	4	4
129	4	3	4	4	3	4	5	5	5	6	6	5	2	2	3	4	4
130	4	3	4	3	3	4	6	4	6	5	6	6	2	2	3	4	4
131	5	4	4	4	2	5	5	4	5	6	6	5	2	3	3	3	5
132	4	3	4	3	3	4	5	5	6	5	5	6	2	3	3	4	4
133	5	4	4	3	3	4	4	5	6	5	5	5	2	3	3	4	5
134	5	4	4	4	3	4	5	4	5	5	4	5	2	3	3	4	5
135	5	4	5	3	3	4	5	5	5	5	5	3	2	2	3	4	5
136	5	4	4	4	1	4	5	4	6	5	5	5	2	2	3	5	5
137	6	4	3	4	3	4	5	4	6	5	4	4	2	3	3	4	6
138	5	4	4	4	3	4	5	5	5	5	5	5	2	3	3	4	5
139	5	4	5	4	2	3	5	4	5	4	5	4	2	3	3	4	5
140	6	3	4	4	3	3	5	3	5	4	4	5	2	3	4	4	6
141	5	4	5	4	2	4	5	5	5	3	4	3	2	3	3	5	5
142	6	5	5	4	2	4	5	4	6	5	5	3	2	4	4	4	6
143	6	5	5	5	2	4	5	3	5	5	5	5	3	4	4	5	6
144	5	5	5	4	3	2	4	4	4	5	5	4	3	4	3	3	5
145	6	4	4	4	2	4	5	4	5	5	4	4	3	3	3	5	6
146	5	4	4	4	2	4	5	5	4	5	5	5	3	3	3	4	5
147	5	4	5	4	3	4	5	5	5	6	6	4	3	4	3	5	5
148	5	5	5	4	3	3	5	4	4	5	5	4	2	3	4	5	5
149	5	4	6	3	2	4	5	4	4	5	5	5	2	3	4	5	5
150	6	4	5	5	3	4	4	4	5	5	5	5	2	3	4	5	6
151	5	5	5	4	2	3	5	5	5	4	4	4	3	2	4	5	5
152	5	4	4	4	2	5	4	4	5	5	5	5	3	4	4	5	5
153	4	4	5	5	2	4	5	5	6	5	5	4	3	3	4	5	4
154	6	5	6	4	2	3	4	5	5	5	5	4	3	4	4	5	6
155	4	5	5	5	2	3	5	4	5	5	5	4	3	3	4	5	4
156	5	5	5	5	2	4	4	5	5	5	6	5	3	3	4	4	5
157	5	5	5	4	2	4	4	4	5	4	6	5	3	4	4	5	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-A

158	6	4	5	5	2	4	5	5	5	5	5	5	3	4	3	4	6
159	5	4	5	4	2	4	5	5	6	5	4	4	2	3	4	4	5
160	5	5	4	4	2	4	5	5	5	5	4	5	2	4	4	5	5
161	4	5	5	4	3	4	4	5	5	5	5	5	3	4	4	5	4
162	5	4	5	4	3	4	5	4	5	4	6	3	2	4	4	4	5
163	4	5	6	3	2	4	5	5	5	5	3	5	3	3	4	5	4
164	4	5	6	4	2	4	5	5	5	4	5	4	3	2	4	5	4
165	5	5	5	4	2	4	4	5	5	5	5	4	3	4	4	4	5
166	5	3	5	3	2	4	4	5	5	5	5	4	3	4	5	5	5
167	5	5	5	4	3	4	5	5	5	5	4	5	3	4	4	4	5
168	4	5	5	5	3	4	5	5	6	5	6	5	4	4	4	5	4
169	5	4	5	4	2	4	4	4	5	6	5	5	3	4	5	4	5
170	5	5	6	5	2	4	5	5	5	5	5	5	3	5	4	3	5
171	5	3	5	4	2	4	5	4	5	4	5	5	3	4	4	5	5
172	5	4	6	5	3	3	5	5	5	5	5	5	3	4	4	4	5
173	5	4	4	4	2	4	5	4	5	5	5	4	3	4	4	4	5
174	4	6	5	4	3	4	5	5	4	5	5	3	3	4	4	5	4
175	5	5	6	4	3	4	4	4	4	4	4	5	4	4	4	4	5
176	4	5	5	5	2	4	5	3	5	4	4	5	3	4	4	4	4
177	5	4	5	4	2	4	4	4	5	5	5	4	3	4	5	4	5
178	4	3	5	4	2	4	4	4	3	3	5	4	3	4	4	4	4
179	4	4	5	4	2	3	4	5	5	5	5	5	3	4	4	4	4
180	5	4	5	5	2	3	4	4	4	4	4	5	4	4	4	4	5

**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	1130SD-334		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC180301	120.0	60	0.5152	61.64	0.997	5.03
7E-A2	277.0	60	0.2278	61.05	0.9676	13.59
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)	4883	R3	83	R11	72
Duv	0.00122	R4	75	R12	44
Chromaticity (x, y)	x=0.3488 y=0.3570	R5	72	R13	72
Chromaticity (u', v')	u(u')=0.2118 v'(v')=0.4878	R6	70	R14	90
Color Rendering Index (CRI)	73.9	R7	82	R15	67
R9	0	R8	60	--	--

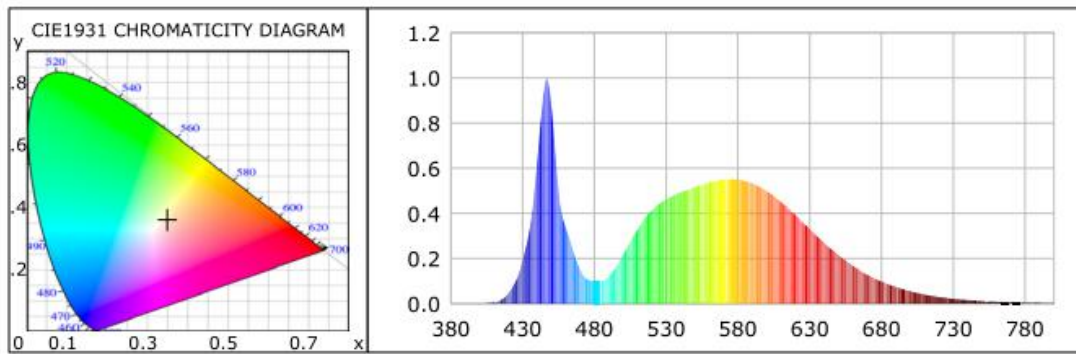
Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.3 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	8162.37	8137.35	5000-10000(-10%)
Luminous Efficacy (lm/W)	132.42	133.29	Premium: >= 115(-3%)
Most worst Luminous/Highest Watts	132.01		



Report No.: BLC1803017E-A

Spectral Power Distribution & Chromaticity Diagram





Report No.: BLC1803017E-A

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 *****