



Report No.: BLC1803017E-I

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): 1130SF-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: 1130SF-382
1130SF-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

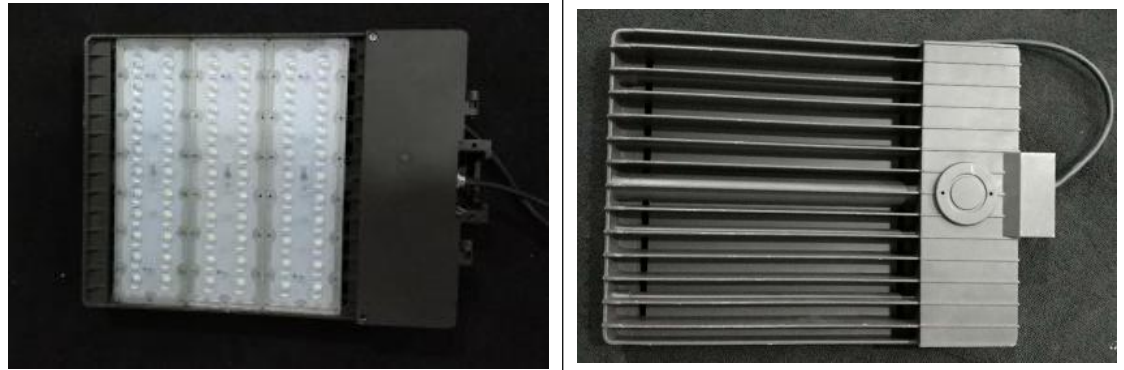


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1.1 Product Information:

Organization Name	Revolution Lighting Technologies, Inc.	
Brand Name		
Model Number	1130SF-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	166W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,5000K	
LED Manufacturer	Lumileds	
LED Model	LUXEON 3030 2D	
Sample Number	BLC1803017E-I1(4000K),I2(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	1130SF-382		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC180301	120.0	60	1.3595	162.49	0.996	4.29
7E-II	277.0	60	0.6221	161.47	0.9371	13.41
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

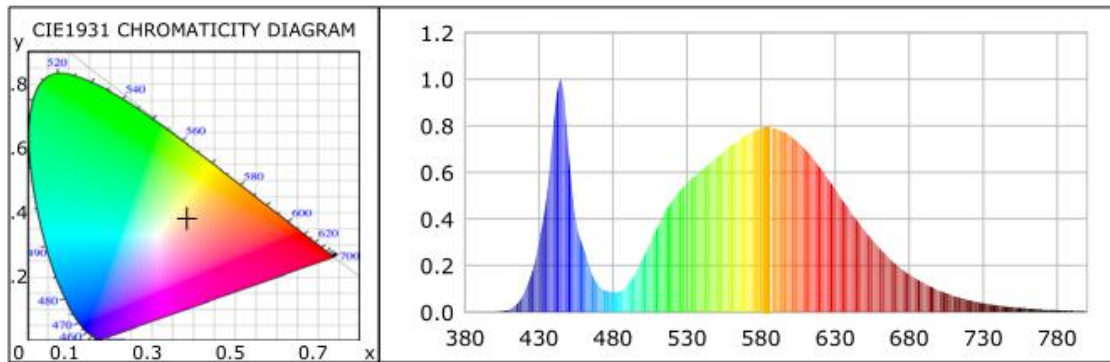
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	70	R9	0
Frequency (Hz)	60	R2	78	R10	48
CCT (K)	3910	R3	84	R11	69
Duv	-0.00037	R4	73	R12	45
Chromaticity (x, y)	x=0.3842 y=0.3783	R5	70	R13	71
Chromaticity (u', v')	u(u')=0.2270 v'(v')=0.5028	R6	69	R14	91
Color Rendering Index (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)	22555.60	22533.30	>=10000(-10%)
Luminous Efficacy (lm/W)	138.81	139.55	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	138.81		
Zonal lumens in the 0-90° zone (%)	99.8	--	>=100(-1)
Zonal lumens in the 80-90° zone (%)	0.4	--	<=10(+3)
Beam Angle (°)	43.7	--	--
Center Beam Candle Power (cd)	20194	--	--



Spectral Power Distribution & Chromaticity Diagram

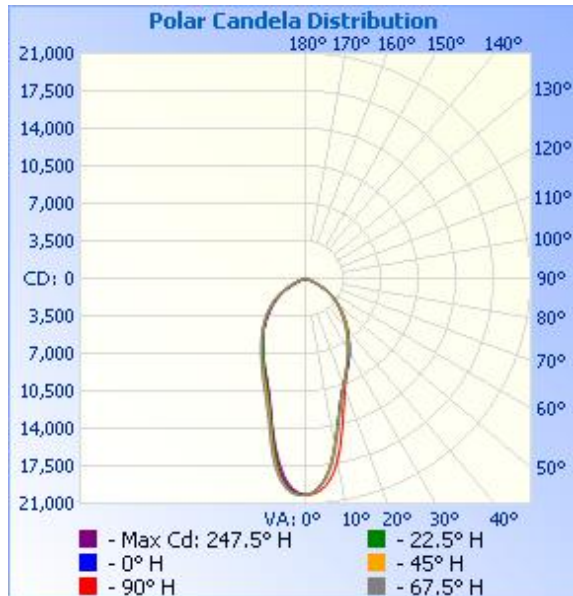


Zonal Lumen Tabulation

Zonal Lumen Summary				Lumens Per Zone					
Zone	Lumens	% Lamp	% Luminaire	Zone	Lumens	% Total	Zone	Lumens	% Total
0-30	9,595.1	42.5%	42.6%	0-10	1,752.6	7.8%	90-100	4.9	0%
0-40	13,959.1	61.9%	61.9%	10-20	3,612.4	16.0%	100-110	2.8	0%
0-60	20,802.5	92.2%	92.2%	20-30	4,230.2	18.8%	110-120	2.5	0%
60-90	1,703.3	7.6%	7.6%	30-40	4,364.0	19.4%	120-130	4.2	0%
70-100	392.8	1.7%	1.7%	40-50	3,916.1	17.4%	130-140	5.9	0%
90-120	10.1	0%	0%	50-60	2,927.3	13.0%	140-150	8.0	0%
0-90	22,505.7	99.8%	99.8%	60-70	1,315.3	5.8%	150-160	7.8	0%
90-180	44.4	0.2%	0.2%	70-80	308.0	1.4%	160-170	6.1	0%
0-180	22,550.2	100%	100%	80-90	79.9	0.4%	170-180	2.2	0%



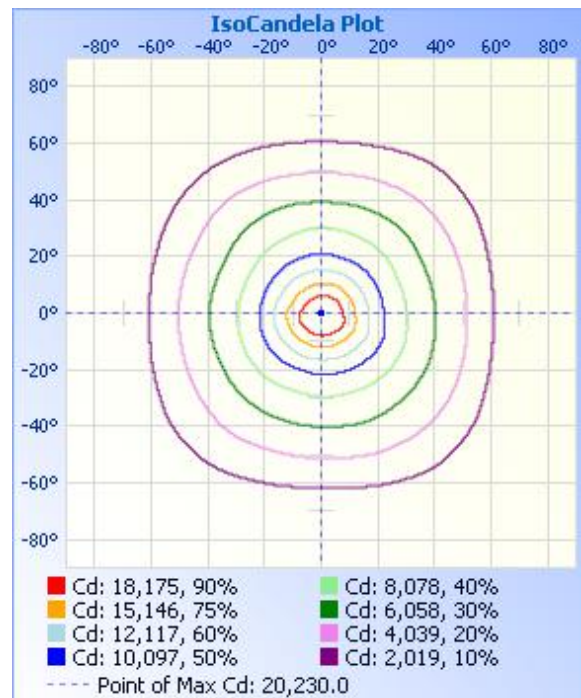
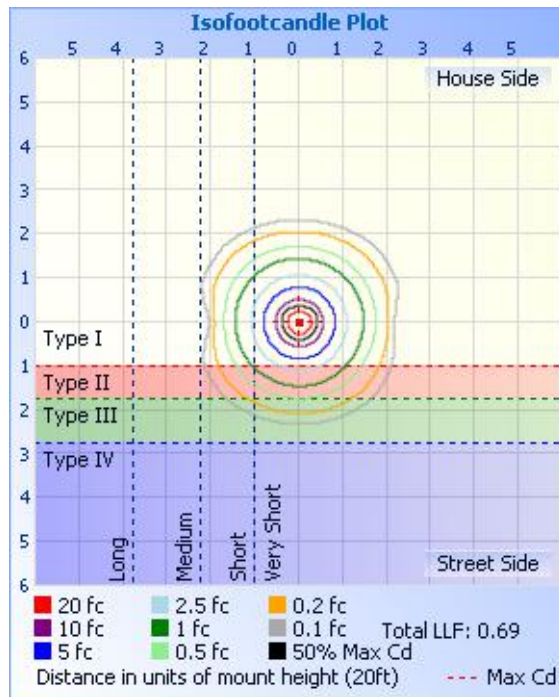
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width	
17.0ft	69.9 fc	13.2 ft	13.6 ft
34.0ft	17.5 fc	26.4 ft	27.2 ft
51.0ft	7.76 fc	39.5 ft	40.9 ft
68.0ft	4.37 fc	52.7 ft	54.5 ft
85.0ft	2.80 fc	65.9 ft	68.1 ft
102.0ft	1.94 fc	79.1 ft	81.7 ft

■ Vert. Spread: 42.4°
■ Horiz. Spread: 43.7°





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	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4	2019 4
1	2012 1	2011 7	2010 7	2010 7	2017 3	2017 5	2018 3	2019 0	2020 8	2021 6	2022 1	2023 0	2016 1	2015 2	2015 3	2013 1	2012 1
2	1995 5	1995 5	1996 4	1997 5	2011 5	2010 9	2011 0	2011 6	2015 3	2016 8	2019 2	2021 9	2008 1	2005 5	2002 9	1998 4	1995 5
3	1972 1	1972 3	1975 3	1977 2	1998 4	1995 9	1996 5	1996 5	2001 3	2004 9	2010 2	2014 1	1991 6	1987 6	1983 6	1976 2	1972 1
4	1940 5	1940 8	1946 1	1950 6	1981 0	1977 9	1973 1	1972 9	1979 5	1982 4	1993 0	1999 4	1965 3	1963 4	1956 5	1946 8	1940 5
5	1902 3	1900 9	1909 9	1915 7	1957 2	1952 8	1944 3	1938 5	1945 5	1952 7	1967 8	1977 3	1933 2	1931 2	1922 4	1908 8	1902 3
6	1856 1	1854 4	1859 9	1873 9	1928 1	1921 1	1909 4	1898 9	1905 7	1914 2	1929 3	1942 4	1892 7	1885 8	1879 3	1863 2	1856 1
7	1799 6	1796 8	1801 6	1817 4	1886 2	1877 3	1865 6	1851 2	1856 7	1864 6	1883 2	1900 8	1841 5	1834 8	1823 7	1803 9	1799 6
8	1735 9	1728 0	1731 4	1755 2	1839 9	1829 5	1811 4	1793 9	1798 0	1804 8	1825 3	1849 3	1781 7	1773 2	1759 8	1741 7	1735 9
9	1657 7	1651 5	1655 2	1682 7	1785 4	1772 2	1741 1	1721 5	1731 3	1728 3	1757 6	1788 6	1714 2	1702 7	1681 8	1670 9	1657 7
10	1583 1	1570 0	1577 7	1606 3	1721 4	1705 3	1665 6	1646 3	1648 9	1648 9	1681 1	1718 5	1641 4	1626 0	1607 0	1603 5	1583 1
11	1508 0	1490 2	1503 2	1529 7	1651 6	1631 6	1586 6	1566 5	1570 5	1568 8	1600 5	1642 5	1559 1	1548 5	1530 2	1528 0	1508 0
12	1433 9	1408 8	1428 1	1455 7	1577 8	1555 3	1506 0	1487 2	1492 2	1489 4	1513 9	1556 2	1484 9	1472 1	1455 1	1453 1	1433 9
13	1364 3	1348 9	1369 4	1387 5	1494 1	1470 9	1427 3	1405 6	1411 7	1409 7	1436 9	1477 6	1411 5	1400 6	1385 3	1387 6	1364 3
14	1291 5	1287 4	1309 9	1322 0	1425 8	1401 4	1357 8	1337 3	1341 6	1343 2	1367 2	1402 8	1347 0	1332 8	1312 8	1312 4	1291 5
15	1234 8	1239 3	1256 1	1264 1	1351 4	1329 9	1288 9	1273 9	1275 4	1277 2	1304 3	1342 1	1278 1	1269 0	1251 1	1252 1	1234 8
16	1185	1189	1206	1210	1285	1268	1230	1211	1209	1224	1248	1285	1223	1221	1201	1199	1185

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>



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	9	6	9	6	1	2	8	6	6	2	7	8	0	5	1	6	9
17	1142	1146	1162	1163	1226	1213	1180	1162	1159	1178	1200	1237	1174	1174	1152	1147	1142
	5	1	4	6	0	9	0	4	1	0	8	5	4	6	2	6	5
18	1104	1107	1118	1122	1172	1165	1137	1118	1115	1136	1154	1189	1130	1133	1111	1106	1104
	8	6	4	5	1	4	2	2	7	5	3	2	2	0	9	7	8
19	1071	1073	1083	1088	1121	1119	1096	1079	1078	1095	1116	1150	1091	1092	1078	1070	1071
	5	4	5	8	3	0	2	2	1	5	2	5	9	5	7	4	5
20	1041	1043	1050	1051	1080	1080	1063	1042	1044	1059	1080	1113	1058	1057	1047	1038	1041
	5	4	2	4	4	8	3	3	7	8	9	3	2	2	2	3	5
21	1013	1014	1018	1019	1044	1047	1033	1006	1014	1027	1049	1079	1025	1024	1020	1006	1013
	9	3	8	4	1	4	6	2	0	9	2	3	7	4	7	0	9
22	9884	9868	9882	9901	1010	1015	1005	9752	9818	9963	1018	1045	9963	9937	9948	9797	9884
					3	5	0				3	9					
23	9658	9595	9601	9601	9794	9866	9778	9467	9558	9674	9896	1014	9682	9647	9705	9558	9658
												7					
24	9446	9338	9343	9329	9509	9572	9525	9200	9299	9404	9603	9824	9427	9360	9468	9329	9446
25	9244	9122	9087	9055	9218	9310	9240	8919	9031	9117	9337	9549	9190	9095	9213	9109	9244
26	9046	8889	8831	8804	8969	9057	8987	8672	8790	8860	9086	9280	8962	8837	8986	8912	9046
27	8818	8681	8590	8556	8733	8801	8738	8431	8554	8610	8838	9013	8727	8594	8755	8688	8818
28	8613	8470	8356	8300	8494	8553	8480	8195	8324	8370	8592	8726	8489	8331	8527	8496	8613
29	8419	8259	8114	8079	8266	8305	8233	7979	8106	8145	8330	8482	8262	8103	8295	8300	8419
30	8211	8064	7919	7833	8030	8043	7982	7770	7899	7936	8098	8252	8042	7881	8082	8087	8211
31	7979	7853	7699	7629	7831	7822	7724	7561	7688	7723	7879	8034	7818	7653	7859	7891	7979
32	7754	7651	7497	7400	7632	7598	7497	7371	7481	7530	7668	7807	7629	7444	7652	7669	7754
33	7552	7431	7290	7187	7429	7388	7284	7188	7291	7347	7468	7603	7431	7214	7447	7464	7552
34	7314	7238	7095	6969	7242	7170	7079	7014	7110	7168	7247	7376	7238	7034	7246	7260	7314
35	7083	7044	6906	6764	7043	6941	6892	6841	6929	7001	7053	7173	7032	6834	7062	7069	7083
36	6857	6857	6715	6558	6866	6729	6695	6666	6731	6811	6863	6979	6831	6637	6865	6873	6857
37	6626	6651	6528	6361	6670	6527	6514	6501	6553	6648	6682	6789	6621	6453	6666	6653	6626
38	6405	6456	6347	6169	6469	6325	6337	6332	6369	6480	6479	6577	6432	6272	6477	6447	6405
39	6187	6252	6158	5989	6279	6130	6156	6151	6178	6309	6302	6386	6235	6091	6279	6234	6187
40	5952	6044	5987	5794	6070	5918	5986	5973	5995	6139	6126	6196	6055	5898	6097	6019	5952
41	5741	5832	5804	5595	5891	5726	5809	5780	5798	5963	5951	6015	5868	5728	5903	5799	5741
42	5522	5629	5622	5415	5713	5548	5619	5579	5599	5774	5785	5835	5681	5541	5706	5608	5522

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43	5321	5417	5446	5217	5539	5372	5446	5409	5416	5605	5595	5638	5492	5375	5499	5404	5321
44	5122	5216	5282	5029	5337	5176	5276	5220	5240	5428	5427	5476	5312	5203	5312	5207	5122
45	4921	5017	5092	4841	5152	4999	5086	5020	5065	5239	5254	5305	5115	5029	5127	5010	4921
46	4731	4833	4892	4674	4964	4819	4912	4829	4880	5060	5074	5126	4929	4847	4926	4802	4731
47	4550	4627	4708	4485	4768	4647	4739	4653	4704	4877	4894	4948	4750	4682	4736	4631	4550
48	4368	4447	4512	4322	4582	4476	4571	4486	4536	4700	4694	4757	4588	4507	4543	4437	4368
49	4194	4257	4311	4146	4384	4290	4383	4315	4379	4530	4521	4583	4403	4349	4344	4259	4194
50	4036	4088	4115	3986	4204	4117	4211	4133	4198	4331	4345	4409	4239	4161	4141	4089	4036
51	3867	3913	3923	3817	4022	3951	4047	3968	4028	4162	4180	4233	4040	4009	3974	3912	3867
52	3699	3733	3723	3640	3852	3793	3877	3799	3843	3992	3996	4034	3854	3829	3784	3730	3699
53	3516	3556	3518	3465	3671	3641	3701	3614	3654	3822	3832	3859	3668	3650	3592	3545	3516
54	3344	3384	3331	3308	3481	3475	3519	3420	3475	3635	3672	3679	3484	3471	3434	3373	3344
55	3154	3198	3135	3130	3308	3323	3351	3239	3275	3464	3510	3504	3296	3304	3256	3184	3154
56	2973	3021	2964	2956	3138	3154	3183	3066	3089	3284	3324	3305	3068	3116	3100	2999	2973
57	2804	2842	2778	2770	2952	2990	3007	2887	2903	3093	3164	3130	2845	2936	2936	2824	2804
58	2615	2648	2596	2577	2743	2806	2837	2709	2724	2908	2986	2914	2635	2757	2756	2628	2615
59	2427	2460	2415	2389	2552	2620	2660	2522	2524	2712	2809	2688	2432	2543	2599	2440	2427
60	2238	2284	2238	2195	2370	2442	2466	2328	2312	2495	2629	2481	2184	2320	2409	2267	2238
61	2002	2076	2076	2011	2157	2271	2289	2151	2098	2297	2428	2261	1831	2105	2222	2060	2002
62	1807	1870	1911	1796	1825	2063	2101	1958	1884	2096	2243	2063	1409	1907	2038	1849	1807
63	1603	1648	1733	1602	1438	1865	1936	1757	1678	1869	2055	1830	1078	1672	1832	1653	1603
64	1385	1467	1548	1365	1132	1668	1728	1550	1463	1634	1859	1625	676	1469	1656	1439	1385
65	1189	1271	1377	1173	760	1467	1549	1363	1265	1428	1630	1445	424	1283	1461	1249	1189
66	1003	1079	1199	973	476	1280	1371	1170	1092	1242	1422	1279	283	1132	1283	1066	1003
67	840	899	1040	818	311	1090	1194	997	934	1055	1225	1090	202	1007	1096	905	840
68	665	747	895	688	221	928	1023	819	729	883	1055	930	168	863	922	772	665
69	496	628	767	569	186	805	876	659	559	738	910	781	156	739	777	631	496
70	351	494	656	459	159	688	749	518	435	601	785	631	153	616	653	482	351
71	245	406	571	393	150	582	623	412	303	463	684	524	149	526	564	362	245
72	216	318	508	347	155	507	528	308	249	377	613	445	154	455	502	269	216
73	169	278	475	305	141	437	462	252	168	304	553	387	150	404	441	244	169
74	155	258	447	290	152	399	399	226	143	269	505	338	140	381	401	231	155

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75	126	239	427	260	146	375	358	207	126	241	470	301	121	357	383	219	126
76	115	233	403	250	128	350	324	189	111	217	425	277	106	337	351	195	115
77	111	212	393	227	108	332	282	167	87	192	391	252	90	319	319	183	111
78	106	195	368	212	87	312	255	149	84	177	351	233	78	295	287	179	106
79	92	180	341	193	62	290	227	133	77	155	311	206	75	266	250	158	92
80	92	159	286	162	70	259	208	111	60	131	282	174	51	247	213	152	92
81	85	135	238	137	56	224	161	89	70	111	244	156	55	213	174	137	85
82	75	132	195	121	52	190	129	89	47	97	197	138	42	185	131	122	75
83	58	116	156	116	43	161	95	82	51	67	153	117	40	154	104	110	58
84	44	116	129	101	37	117	77	72	36	77	107	109	30	98	94	100	44
85	44	84	111	76	32	79	74	61	39	67	98	85	18	59	79	79	44
86	33	56	93	57	22	41	58	40	22	51	77	62	20	51	60	64	33
87	29	51	69	55	17	44	38	33	18	35	57	50	0	44	50	46	29
88	25	32	40	36	0	29	29	16	12	22	43	47	0	28	27	35	25
89	11	22	32	24	0	17	16	0	0	0	36	33	0	0	15	14	11
90	0	21	22	11	0	0	0	0	13	12	19	20	0	0	0	0	0
91	0	0	16	11	0	0	0	17	11	14	21	11	0	0	14	0	0
92	0	15	19	0	0	0	11	0	0	0	16	0	0	0	11	0	0
93	0	18	16	14	0	0	16	0	0	12	21	12	0	0	0	11	0
94	0	12	21	0	0	0	0	0	0	0	19	0	0	0	0	0	0
95	0	12	17	0	0	0	0	0	0	0	18	0	0	0	0	12	0
96	0	11	17	0	0	0	0	0	0	13	18	13	0	0	0	0	0
97	0	0	22	0	0	0	0	0	0	11	18	0	0	0	0	0	0
98	0	0	19	12	0	0	0	0	0	11	22	0	0	0	0	0	0
99	0	0	17	0	0	0	0	0	0	0	21	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	16	11	0	0	0	0	0
101	0	13	13	0	0	0	0	0	0	0	11	0	0	0	0	0	0
102	0	0	13	0	0	0	14	0	0	0	15	0	0	0	0	0	0
103	0	0	12	11	0	0	0	0	0	0	12	0	0	0	0	0	0

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104	0	12	17	0	0	0	0	0	0	0	17	0	0	0	0	0
105	0	0	15	0	0	0	0	0	0	0	18	12	0	0	0	0
106	0	0	16	0	0	0	0	0	0	0	14	0	0	0	0	0
107	0	17	14	0	0	0	0	0	0	0	14	11	0	0	0	0
108	0	14	12	0	0	0	0	0	0	0	17	0	0	0	0	0
109	0	13	22	0	0	0	0	0	0	0	21	0	0	0	0	0
110	0	0	14	0	0	0	0	0	0	0	19	0	0	0	0	0
111	0	0	17	0	0	0	0	0	0	0	14	0	0	0	0	0
112	0	13	12	0	0	0	13	0	0	0	0	0	0	0	0	0
113	0	0	17	0	0	0	0	0	0	12	17	0	0	0	0	0
114	0	13	0	0	0	0	0	0	0	0	18	0	0	0	0	0
115	0	0	17	0	0	0	0	0	0	0	22	12	0	0	0	0
116	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0
117	0	0	17	0	0	0	0	0	0	12	20	0	0	0	0	0
118	0	0	18	0	0	0	0	0	0	0	22	0	0	0	0	0
119	0	0	15	12	0	0	0	0	0	0	23	0	0	0	0	0
120	0	12	16	0	0	0	0	11	0	0	18	0	0	0	0	0
121	0	13	16	11	0	0	0	0	0	13	22	11	0	0	0	0

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

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14	0	15	28	15	0	0	22	15	12	19	28	14	0	0	14	15	0
0																	
14	0	19	22	0	0	0	15	11	15	18	21	16	0	0	0	15	0
1																	
14	14	16	29	17	0	0	16	17	18	16	26	19	0	0	0	12	14
2																	
14	15	14	24	12	0	0	14	12	18	20	31	14	0	0	0	12	15
3																	
14	0	16	23	12	0	0	15	12	15	11	24	16	0	0	15	13	0
4																	
14	14	25	29	17	0	0	19	13	17	16	29	16	0	11	11	11	14
5																	
14	13	17	28	19	0	0	23	15	24	16	30	14	0	0	12	13	13
6																	
14	14	21	26	17	0	0	25	20	17	14	30	18	0	0	13	15	14
7																	
14	14	24	23	15	0	0	20	15	22	22	29	23	0	0	0	16	14
8																	
14	14	17	30	22	0	0	19	11	21	17	29	18	0	13	13	14	14
9																	
14	15	14	31	18	0	0	19	16	19	17	32	0	11	0	13	21	15
0																	
15	17	24	28	20	0	0	25	16	19	18	29	20	0	0	22	21	17
1																	
15	17	21	26	18	0	0	21	17	22	22	31	17	0	0	19	16	17
2																	
15	24	22	31	0	0	0	22	21	22	24	32	23	0	0	20	23	24
3																	
15	15	27	28	18	0	0	21	17	17	21	30	19	0	0	23	15	15
4																	
15	18	25	32	21	0	0	25	17	19	23	28	29	0	19	18	18	18
5																	
15	23	24	25	21	0	0	19	18	21	24	30	23	0	13	22	14	23
6																	
15	20	21	34	19	0	0	18	17	24	20	30	25	11	0	21	17	20
7																	

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158	25	24	27	23	0	0	16	12	17	21	35	19	12	0	29	21	25
159	19	20	31	24	0	0	20	15	26	25	34	22	0	13	24	18	19
160	26	19	33	21	0	0	23	21	24	26	35	22	12	16	16	21	26
161	21	26	28	17	0	0	16	20	14	25	30	25	15	15	23	23	21
162	20	24	38	22	0	0	25	23	22	30	35	35	12	13	20	22	20
163	21	22	26	24	0	15	33	26	26	30	36	28	17	11	26	26	21
164	25	26	36	27	0	11	21	27	28	27	39	26	13	0	28	24	25
165	21	32	25	23	0	0	28	20	27	26	36	23	14	15	22	20	21
166	21	29	26	26	0	0	29	19	26	28	37	30	14	15	30	23	21
167	25	28	37	27	0	0	27	20	22	27	30	28	12	22	23	21	25
168	26	22	31	22	0	12	29	20	26	25	32	34	0	13	23	26	26
169	28	30	35	29	0	0	31	28	24	29	37	24	18	21	25	29	28
170	21	32	38	26	0	14	32	23	27	24	36	25	15	18	24	27	21
171	30	22	36	31	0	0	24	24	27	29	36	32	14	18	21	27	30
172	25	30	42	33	0	12	23	20	27	28	31	28	16	20	29	18	25
173	30	30	34	31	0	12	23	20	33	29	40	29	16	25	29	26	30
174	16	27	42	24	0	17	19	30	29	29	33	25	16	25	22	22	16
175	32	29	33	23	0	0	23	30	26	28	31	27	11	16	24	27	32

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17 6	29	26	34	28	11	17	20	21	26	27	34	28	17	17	23	22	29
17 7	32	23	38	22	0	0	24	20	27	27	35	29	19	13	26	28	32
17 8	24	27	37	24	0	16	23	18	22	25	32	29	15	0	23	21	24
17 9	23	27	36	18	0	11	25	22	20	27	35	26	14	15	23	24	23
18 0	22	24	29	23	0	0	19	28	25	29	35	26	14	20	26	26	22

**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	1130SF-384		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC180301	120.0	60	1.3664	163.08	0.9946	5.19
7E-I2	277.0	60	0.6270	162.52	0.9358	14.03
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)	4894	R3	83	R11	72
Duv	0.00106	R4	75	R12	44
Chromaticity (x, y)	x=0.3484 y=0.3564	R5	72	R13	72
Chromaticity (u', v')	u(u')=0.2118 v'(v')=0.4875	R6	70	R14	90
Color Rendering Index (CRI)	74	R7	82	R15	67
R9	0	R8	60	--	--

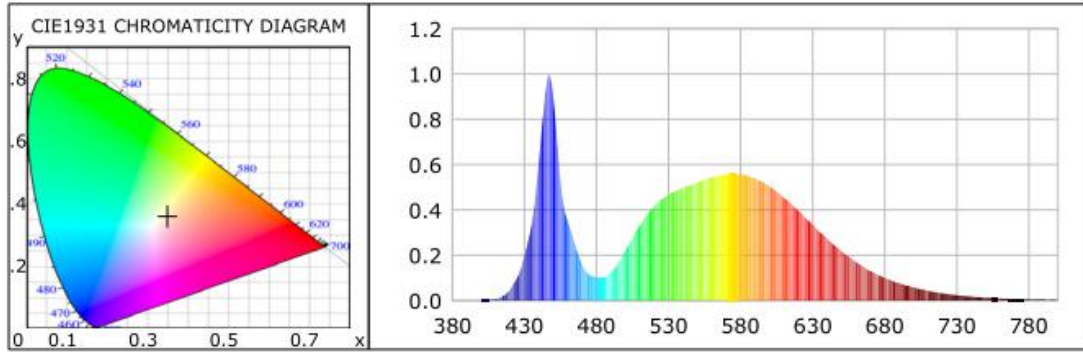
Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.3 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	23000.80	23202.98	5000-10000(-10%)
Luminous Efficacy (lm/W)	141.04	142.77	Premium: >= 115(-3%)
Most worst Luminous/Highest Watts	141.04		



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Spectral Power Distribution & Chromaticity Diagram





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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 *****