



Report No.: BLC1803017E-F

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): 1130SE-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: 1130SE-382
1130SE-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	1130SE-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	93W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,5000K	
LED Manufacturer	Lumileds	
LED Model	LUXEON 3030 2D	
Sample Number	BLC1803017E-F1(4000K),F2(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	1130SE-382		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC180301	120.0	60	0.7781	92.6	0.9917	8.31
7E-F1	277.0	60	0.3541	91.8	0.9358	14.66
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

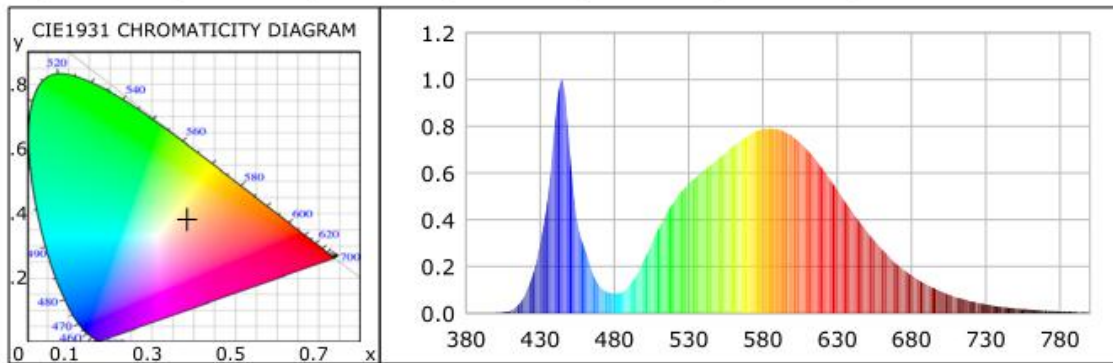
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	70	R9	0
Frequency (Hz)	60	R2	78	R10	48
CCT (K)	3908	R3	84	R11	69
Duv	-0.00037	R4	73	R12	45
Chromaticity (x, y)	x=0.3843 y=0.3783	R5	70	R13	71
Chromaticity (u', v')	u(u')=0.2270 v'(v')=0.5029	R6	69	R14	91
Color Rendering Index (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)	12701.4	12591.3	>=10000(-10%)
Luminous Efficacy (lm/W)	137.16	137.16	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	135.98		
Zonal lumens in the 0-90° zone (%)	99.8	--	>=100(-1)
Zonal lumens in the 80-90° zone (%)	0.4	--	<=10(+3)
Beam Angle (°)	43.8	--	--
Center Beam Candle Power (cd)	11367	--	--



Spectral Power Distribution & Chromaticity Diagram

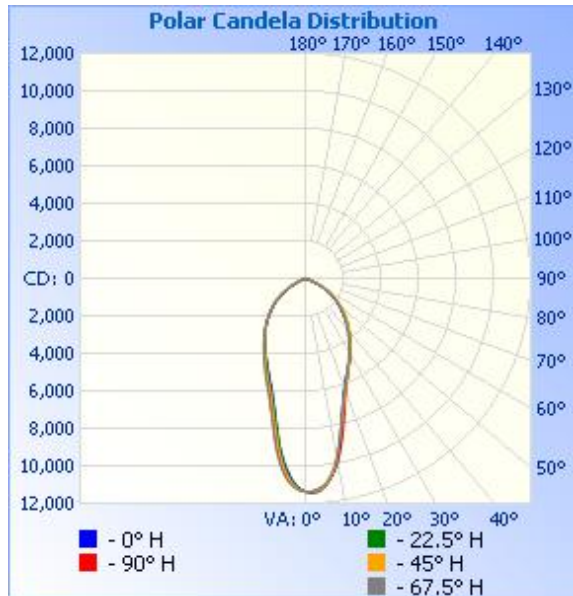


Zonal Lumen Tabulation

Zonal Lumen Summary				Lumens Per Zone					
Zone	Lumens	% Lamp	% Luminaire	Zone	Lumens	% Total	Zone	Lumens	% Total
0-30	5,410.9	42.6%	42.6%	0-10	985.9	7.8%	90-100	2.1	0%
0-40	7,880.5	62%	62.1%	10-20	2,039.4	16.1%	100-110	2.0	0%
0-60	11,728.3	92.3%	92.4%	20-30	2,385.6	18.8%	110-120	2.6	0%
60-90	945.0	7.4%	7.4%	30-40	2,469.5	19.4%	120-130	2.8	0%
70-100	222.6	1.8%	1.8%	40-50	2,215.9	17.5%	130-140	2.5	0%
90-120	6.7	0.1%	0.1%	50-60	1,631.9	12.9%	140-150	4.0	0%
0-90	12,673.3	99.8%	99.8%	60-70	724.5	5.7%	150-160	4.3	0%
90-180	25.0	0.2%	0.2%	70-80	174.8	1.4%	160-170	3.5	0%
0-180	12,698.3	100%	100%	80-90	45.7	0.4%	170-180	1.2	0%



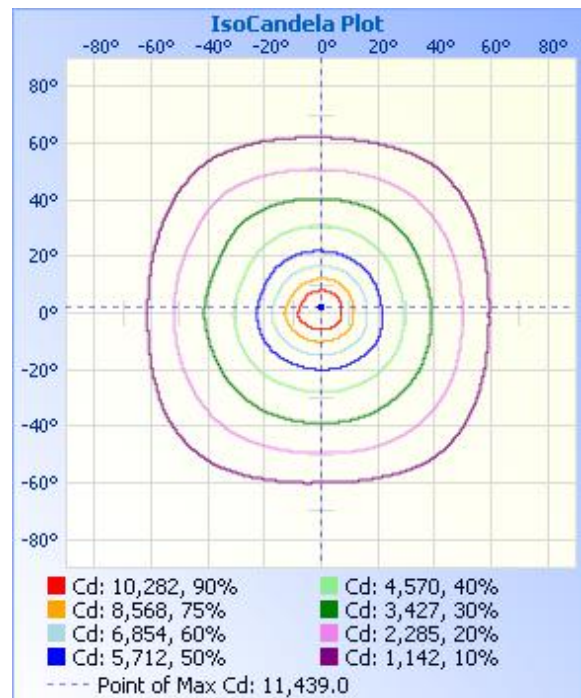
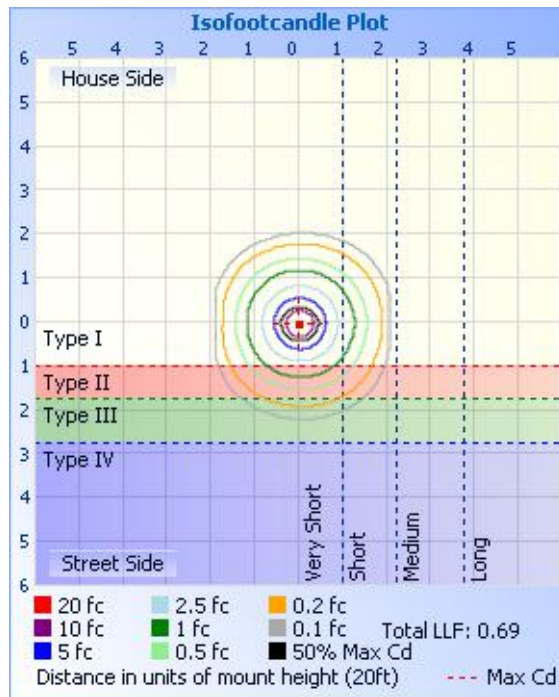
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width	
17.0ft	39.3 fc	12.9 ft	13.7 ft
34.0ft	9.83 fc	25.9 ft	27.3 ft
51.0ft	4.37 fc	38.8 ft	41.0 ft
68.0ft	2.46 fc	51.7 ft	54.7 ft
85.0ft	1.57 fc	64.6 ft	68.3 ft
102.0ft	1.09 fc	77.6 ft	82.0 ft

Vert. Spread: 41.6°
Horiz. Spread: 43.8°





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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	
0	1136	1136	1136	1136	1136	1136	1136	1136	1136	1136	1136	1136	1136	1136	1136	1136	1136
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
1	1142	1140	1139	1137	1137	1133	1130	1128	1127	1127	1131	1133	1132	1137	1138	1140	1142
	2	7	5	0	0	4	1	0	2	8	2	9	8	0	7	8	2
2	1143	1141	1139	1134	1133	1126	1119	1115	1112	1114	1121	1128	1125	1133	1137	1141	1143
	9	4	3	0	9	1	6	4	6	7	3	0	6	4	0	2	9
3	1140	1137	1135	1128	1128	1116	1105	1097	1094	1096	1107	1117	1113	1125	1131	1137	1140
	9	8	4	1	8	9	4	7	1	6	5	5	7	6	4	0	9
4	1133	1129	1127	1119	1121	1104	1085	1073	1070	1074	1088	1102	1098	1113	1121	1128	1133
	4	6	3	1	2	2	6	4	0	5	7	9	1	2	6	6	4
5	1120	1115	1114	1106	1110	1086	1064	1048	1039	1048	1063	1083	1076	1096	1107	1115	1120
	4	7	9	1	7	7	8	4	4	0	3	9	9	0	3	2	4
6	1103	1098	1098	1089	1094	1068	1040	1019	1008	1016	1034	1057	1049	1074	1088	1097	1103
	2	3	4	0	4	0	4	5	2	6	4	4	4	6	7	8	2
7	1079	1074	1075	1064	1076	1045	1011	9868	9724	9762	9999	1026	1017	1045	1063	1074	1079
	9	9	4	8	2	4	9					9	8	1	1	7	9
8	1051	1046	1046	1036	1053	1017	9780	9501	9343	9360	9607	9926	9813	1011	1029	1042	1051
	1	9	8	3	4	6								3	8	5	1
9	1017	1013	1012	1001	1026	9811	9358	9058	8933	8923	9138	9538	9414	9715	9915	1006	1017
	6	6	7	2	0											0	6
10	9755	9712	9710	9619	9928	9422	8941	8636	8469	8478	8693	9114	8995	9269	9454	9664	9755
11	9333	9262	9222	9185	9526	9014	8515	8219	8047	8058	8271	8686	8576	8837	9032	9252	9333
12	8898	8777	8776	8739	9130	8609	8095	7813	7650	7660	7875	8230	8139	8399	8581	8822	8898
13	8409	8320	8359	8277	8717	8198	7704	7440	7277	7287	7499	7821	7761	7976	8141	8385	8409
14	7951	7907	7953	7874	8301	7799	7351	7098	6945	6986	7161	7453	7414	7550	7675	7912	7951
15	7520	7540	7585	7507	7901	7441	7005	6773	6664	6721	6873	7147	7094	7194	7298	7502	7520
16	7139	7208	7281	7175	7520	7083	6726	6504	6382	6471	6585	6880	6805	6878	6966	7141	7139
17	6812	6914	6982	6869	7139	6787	6480	6274	6155	6250	6359	6641	6523	6601	6670	6820	6812
18	6546	6621	6708	6606	6841	6538	6269	6062	5960	6033	6155	6403	6296	6355	6415	6534	6546
19	6314	6394	6468	6372	6566	6330	6059	5851	5783	5847	5976	6204	6080	6136	6199	6280	6314
20	6086	6181	6247	6163	6318	6136	5889	5669	5619	5672	5801	6015	5881	5936	5999	6057	6086
21	5899	5988	6050	5966	6105	5942	5725	5502	5448	5508	5621	5838	5690	5745	5821	5858	5899

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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22	5732	5806	5859	5789	5915	5780	5570	5344	5298	5352	5466	5660	5518	5568	5659	5682	5732
23	5588	5640	5698	5626	5744	5621	5424	5192	5155	5201	5317	5496	5361	5401	5501	5523	5588
24	5454	5490	5538	5466	5566	5474	5285	5059	5026	5053	5172	5321	5214	5248	5340	5385	5454
25	5323	5353	5401	5306	5420	5311	5137	4911	4888	4918	5016	5166	5072	5098	5198	5251	5323
26	5203	5222	5249	5168	5257	5169	4995	4785	4767	4781	4876	5021	4938	4958	5065	5126	5203
27	5092	5090	5106	5022	5134	5031	4859	4663	4644	4656	4745	4876	4800	4816	4938	5005	5092
28	4966	4970	4980	4880	4984	4892	4718	4548	4536	4539	4610	4733	4663	4672	4801	4877	4966
29	4850	4843	4844	4752	4851	4761	4581	4436	4426	4406	4484	4586	4540	4543	4675	4767	4850
30	4726	4724	4719	4604	4728	4628	4458	4324	4313	4299	4363	4463	4411	4398	4542	4643	4726
31	4618	4625	4591	4487	4608	4489	4325	4218	4201	4195	4234	4343	4291	4277	4425	4541	4618
32	4500	4508	4476	4355	4486	4362	4208	4124	4096	4090	4121	4220	4174	4145	4309	4427	4500
33	4384	4387	4343	4241	4356	4235	4102	4029	4001	3992	4011	4107	4053	4029	4190	4312	4384
34	4265	4279	4242	4123	4251	4115	3992	3931	3893	3896	3905	3975	3939	3908	4067	4202	4265
35	4156	4156	4129	4023	4154	4003	3887	3823	3789	3785	3798	3863	3834	3802	3950	4084	4156
36	4027	4052	4025	3901	4047	3880	3778	3726	3685	3686	3678	3758	3717	3692	3842	3968	4027
37	3893	3938	3931	3793	3939	3772	3678	3620	3579	3584	3576	3648	3594	3574	3733	3842	3893
38	3775	3824	3826	3671	3815	3667	3581	3517	3469	3488	3482	3524	3488	3465	3624	3731	3775
39	3641	3710	3720	3569	3709	3552	3480	3415	3368	3388	3379	3419	3374	3355	3516	3608	3641
40	3516	3602	3623	3473	3607	3447	3386	3295	3255	3278	3282	3315	3261	3251	3411	3488	3516
41	3383	3484	3524	3363	3494	3341	3292	3194	3149	3175	3182	3208	3160	3148	3313	3369	3383
42	3270	3369	3426	3267	3406	3225	3184	3089	3026	3085	3077	3103	3052	3046	3204	3259	3270
43	3155	3255	3314	3159	3293	3131	3086	2991	2926	2979	2983	2997	2944	2943	3093	3132	3155
44	3047	3134	3221	3048	3191	3031	2982	2869	2824	2872	2887	2896	2839	2846	2979	3034	3047
45	2934	3016	3122	2940	3091	2933	2869	2767	2707	2769	2772	2803	2732	2747	2870	2919	2934
46	2822	2909	3027	2842	2987	2820	2769	2658	2603	2661	2667	2701	2625	2655	2761	2814	2822
47	2719	2802	2930	2737	2874	2723	2666	2553	2505	2558	2565	2603	2526	2561	2651	2701	2719
48	2597	2696	2806	2636	2766	2626	2561	2458	2394	2447	2464	2496	2431	2461	2546	2594	2597
49	2504	2582	2703	2524	2662	2522	2457	2353	2301	2358	2372	2392	2327	2361	2436	2493	2504
50	2398	2483	2580	2438	2547	2419	2360	2253	2189	2254	2262	2286	2227	2262	2334	2386	2398
51	2296	2377	2469	2346	2449	2319	2253	2160	2087	2145	2173	2176	2123	2170	2234	2283	2296
52	2209	2277	2359	2245	2331	2233	2156	2052	1984	2039	2076	2072	1996	2074	2133	2181	2209
53	2109	2173	2245	2155	2228	2142	2063	1947	1868	1938	1974	1968	1864	1980	2029	2082	2109

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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Certificate#4810.01

54	2002	2085	2147	2047	2122	2052	1951	1830	1747	1817	1878	1855	1739	1871	1937	1978	2002
55	1896	1989	2049	1951	2009	1945	1849	1720	1634	1700	1780	1740	1615	1754	1841	1871	1896
56	1794	1877	1949	1852	1900	1849	1757	1618	1521	1586	1678	1605	1480	1635	1745	1768	1794
57	1696	1774	1841	1732	1770	1746	1657	1511	1418	1465	1575	1494	1370	1518	1650	1663	1696
58	1609	1683	1732	1614	1661	1638	1553	1396	1309	1352	1466	1369	1246	1412	1554	1559	1609
59	1505	1580	1625	1506	1542	1525	1453	1286	1200	1233	1357	1250	1124	1288	1457	1461	1505
60	1403	1479	1523	1383	1401	1404	1342	1198	1077	1122	1239	1138	997	1184	1361	1367	1403
61	1294	1378	1423	1266	1284	1292	1235	1080	959	1006	1121	1019	818	1059	1256	1265	1294
62	1184	1274	1319	1149	1134	1178	1118	968	866	880	1002	910	599	949	1156	1159	1184
63	1075	1153	1198	1024	930	1054	1011	860	770	775	880	806	426	834	1039	1048	1075
64	957	1034	1090	909	720	932	906	755	673	674	762	704	240	733	922	939	957
65	849	927	967	797	497	825	803	667	603	584	650	623	124	641	814	827	849
66	719	812	866	678	311	717	694	590	523	499	565	543	105	564	719	712	719
67	616	713	762	598	207	628	612	497	400	425	488	463	97	484	621	620	616
68	527	616	657	503	120	533	510	420	269	366	416	408	81	416	538	527	527
69	433	529	562	429	93	463	435	302	209	281	368	339	86	368	460	456	433
70	298	434	488	342	100	399	370	225	143	209	334	291	80	308	393	374	298
71	222	350	421	286	91	345	310	172	108	168	297	251	81	261	332	294	222
72	127	285	365	243	90	296	260	149	82	139	268	225	81	234	306	221	127
73	116	219	320	218	89	254	227	128	69	132	245	200	81	213	271	182	116
74	82	183	290	196	92	238	197	120	56	115	228	193	86	196	246	163	82
75	69	174	270	179	100	219	163	110	54	107	212	178	62	176	229	149	69
76	63	161	265	168	75	201	160	109	43	88	196	174	51	163	208	140	63
77	48	146	245	152	60	195	125	91	49	81	163	157	45	157	207	124	48
78	35	138	237	133	53	181	125	79	40	72	169	143	35	139	199	115	35
79	54	113	225	124	44	165	116	65	41	63	154	124	32	129	180	110	54
80	48	102	194	105	34	164	106	61	31	55	126	115	30	107	151	92	48
81	37	91	158	87	35	133	88	54	20	52	116	111	29	101	129	84	37
82	38	90	125	83	32	111	66	41	24	33	66	96	25	92	106	75	38
83	35	73	100	68	29	88	48	43	14	41	58	81	14	82	81	76	35
84	27	71	79	71	15	70	32	39	18	35	24	71	14	62	68	67	27
85	28	64	69	39	13	40	30	27	0	25	51	49	11	46	65	57	28

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86	21	52	64	39	12	22	19	19	0	12	35	43	0	44	43	47	21
87	15	40	43	37	0	14	12	15	0	0	17	36	0	27	38	38	15
88	14	29	45	33	0	12	15	0	0	11	19	25	0	14	25	23	14
89	0	25	27	16	0	0	0	0	0	0	0	16	0	0	13	26	0
90	0	15	15	0	0	0	0	0	0	0	0	16	0	0	0	0	0
91	0	12	0	11	0	0	0	16	0	0	15	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0
93	0	0	11	0	0	0	0	13	0	0	0	13	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	15	0
95	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	13	0
96	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	0	13	0	13	0	0	0	0	0	0	14	11	0	0	0	0	0
98	0	0	12	0	0	0	0	0	0	0	0	14	0	0	0	0	0
99	0	0	12	0	0	0	0	0	0	0	12	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0
101	0	0	0	0	0	0	0	0	0	0	14	15	0	0	0	11	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	13	0	0	0	13	0	0	0	0	0	0	0	0	0
104	0	0	0	11	0	0	0	0	0	0	14	14	0	0	0	13	0
105	0	0	16	12	0	0	0	0	0	0	0	11	0	0	0	0	0
106	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0
107	0	0	12	0	0	0	0	13	0	0	0	14	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	15	13	0	0	0	13	0
109	0	0	0	0	0	0	0	12	0	0	0	16	0	0	0	0	0

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110	0	0	0	0	0	0	0	11	0	0	12	14	0	0	0	0	0
111	0	0	15	0	0	0	0	0	0	0	13	14	0	0	0	0	0
112	0	0	14	0	0	0	0	0	0	0	11	15	0	0	0	11	0
113	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	12	0
114	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0
115	0	0	19	16	0	0	0	11	0	0	13	0	0	0	0	0	0
116	0	0	0	17	0	0	0	0	0	0	0	12	0	0	0	0	0
117	0	0	12	13	0	0	0	14	0	0	16	15	0	0	0	0	0
118	0	0	11	11	0	0	0	13	0	0	11	0	0	0	0	0	0
119	0	0	0	12	0	0	0	0	0	0	11	19	0	0	0	0	0
120	0	0	15	12	0	0	0	0	0	0	0	0	0	0	0	15	0
121	0	0	0	0	0	0	0	11	0	0	15	17	0	0	0	11	0
122	0	0	12	0	0	0	0	13	0	0	0	11	0	0	0	13	0
123	0	0	0	14	0	0	0	16	0	0	13	17	0	0	0	0	0
124	0	0	13	0	0	0	0	14	0	0	12	17	0	0	0	0	0
125	0	0	13	0	0	0	0	13	0	0	12	14	0	0	0	0	0
126	0	11	0	0	0	0	0	12	0	12	14	14	0	0	0	0	0
127	0	0	14	0	0	0	0	0	0	0	18	13	0	0	0	0	0

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

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

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164	13	17	20	16	0	0	12	21	14	13	22	18	0	0	12	18	13
165	15	0	22	22	0	0	0	15	12	19	22	12	0	12	0	17	15
166	12	16	24	20	0	0	11	23	11	12	19	18	0	15	12	21	12
167	19	12	23	20	0	11	0	18	13	15	19	22	0	0	15	24	19
168	21	14	22	20	0	0	0	23	14	20	17	26	0	11	16	24	21
169	21	19	22	24	0	0	11	18	15	19	22	22	0	11	18	15	21
170	15	24	18	20	0	0	0	18	13	23	25	25	0	11	18	16	15
171	16	17	23	20	0	0	14	18	0	12	24	20	11	15	14	18	16
172	18	14	24	22	0	0	0	19	0	16	21	16	0	11	0	23	18
173	18	22	22	20	0	0	12	21	0	20	17	27	0	0	0	23	18
174	21	21	17	19	0	0	14	20	15	20	19	23	0	11	18	23	21
175	15	12	24	19	0	0	17	0	12	0	20	22	12	14	16	24	15
176	11	14	22	18	0	0	0	22	12	13	18	22	0	0	17	15	11
177	15	15	12	16	0	0	0	0	0	20	22	15	0	0	14	18	15
178	13	14	24	22	0	0	0	18	12	20	25	21	0	12	0	23	13
179	14	15	26	22	0	12	0	23	14	13	20	24	0	0	12	21	14
180	13	22	17	15	0	0	13	24	14	15	22	19	0	0	0	19	13

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**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	1130SE-384		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC180301	120.0	60	0.7736	92.09	0.992	8.76
7E-F2	277.0	60	0.3544	91.5	0.9321	15.01
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)	4893	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	--	--

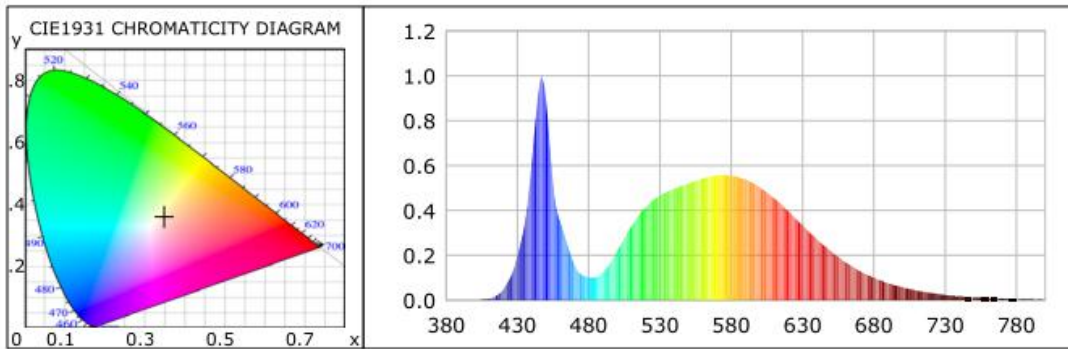
Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.3 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	12861.29	12762.42	>=10000(-10%)
Luminous Efficacy (lm/W)	139.66	139.48	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	138.57		



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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 *****