



Report No.:
BLC1809019E-U-A

LM-79-08 Test Report

For

ASmart LIGHT CO., LTD

(Brand Name: ASmart)

506 N GARFIELD AVE SUITE#210 ALHAMBRA CA 91801

Architectural Flood and Spot Luminaires

Model name(s): AST-SP01-400WMBT3B1-acd

Remark: "a" can be any two letters to represent lamp colors,
"c" can be "S" for Surge-Protective Device provided or blank for no Surge-Protective
Device provided,

"d" can be any two digits to represent CCT

Representative (Tested) Model: AST-SP01-400WMBT3B1-ac40
AST-SP01-400WMBT3B1-ac57

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

Test & Report By:

Grace Li

Engineer: Grace Li

Date: Sept 26, 2018

Review By:

Tommy Liang

Manager: Tommy Liang



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1.1 Product Information:

Organization Name	ASmart LIGHT CO., LTD	
Brand Name	ASmart	
Model Number	AST-SP01-400WMBT3B1-acd	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Architectural Flood and Spot Luminaires	
Rated Voltage / Frequency	100-277Vac, 50/60 Hz	
Nominal Power	400W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,5000K,5700K	
LED Manufacturer	Lumileds	
LED Model	L130-AABBxx30xxxxx	
Sample Number	BLC1809019E-U-A1(4000K),A2(5700K)	
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	Sept 14,2018
Date of Test	Sept 19,2018
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	2018-09-19	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	AST-SP01-400WMBT3B1-ac40		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC180901	120.0	60	3.3876	404.48	0.995	4.81
9E-U-A1	277.0	60	1.5272	390.05	0.922	10.63
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

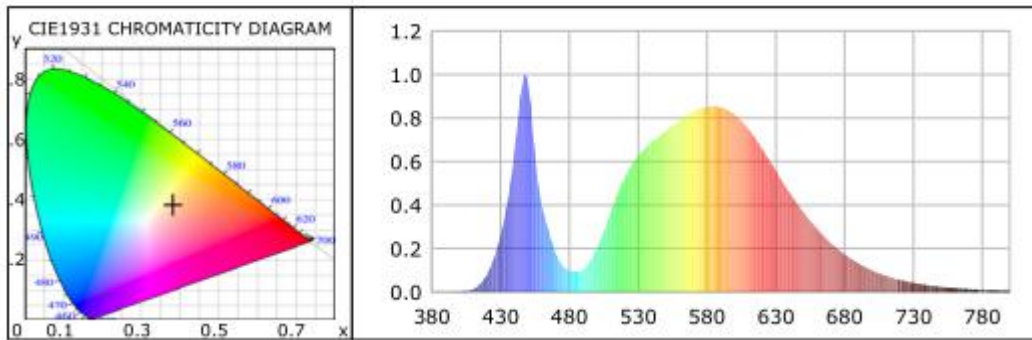
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	69	R9	0
Frequency (Hz)	60	R2	77	R10	46
CCT (K)	3974	R3	83	R11	66
Duv	0.00079	R4	71	R12	40
Chromaticity (x, y)	x=0.3822 y=0.3795	R5	68	R13	70
Chromaticity (u', v')	u(u')=0.2251 v'(v')=0.5031	R6	68	R14	90
Color Rendering Index (CRI)	71.5	R7	81	R15	64
R9	0	R8	54	--	--

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)	53061.5	52922.9	>=30000(-10%)
Luminous Efficacy (lm/W)	131.18	135.68	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	130.84		
Zonal lumens in the 0-90° zone (%)	99.9	--	>=85(-3)
Beam Angle (°)	30.2	--	--
Center Beam Candle Power (cd)	135489	--	--



Spectral Power Distribution & Chromaticity Diagram

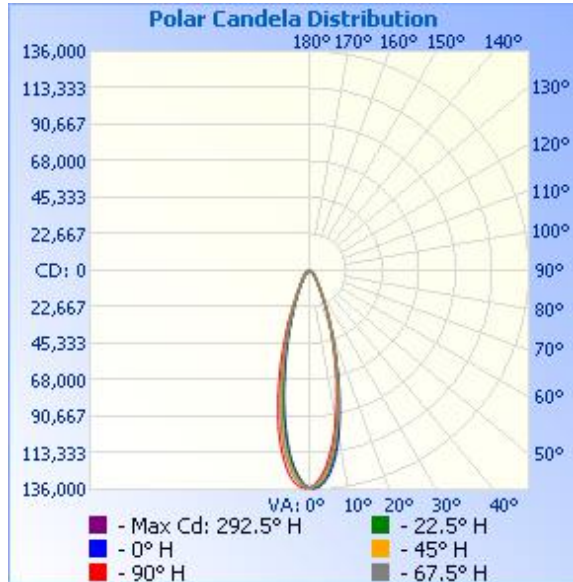


Zonal Lumen Tabulation

Zonal Lumen Summary				Lumens Per Zone					
Zone	Lumens	% Lamp	% Luminaire	Zone	Lumens	% Total	Zone	Lumens	% Total
0-30	39,488.0	74.4%	74.5%	0-10	11,046.1	20.8%	90-100	7.7	0%
0-40	44,768.3	84.4%	84.4%	10-20	17,949.1	33.8%	100-110	0	0%
0-60	50,298.3	94.8%	94.8%	20-30	10,492.9	19.8%	110-120	0	0%
60-90	2,724.9	5.1%	5.1%	30-40	5,280.3	10.0%	120-130	0	0%
70-100	1,248.6	2.4%	2.4%	40-50	3,305.4	6.2%	130-140	0	0%
90-120	7.7	0%	0%	50-60	2,224.5	4.2%	140-150	0	0%
0-90	53,023.2	99.9%	100%	60-70	1,484.0	2.8%	150-160	0	0%
90-180	7.7	0%	0%	70-80	903.3	1.7%	160-170	0	0%
0-180	53,031.0	99.9%	100%	80-90	337.6	0.6%	170-180	0	0%



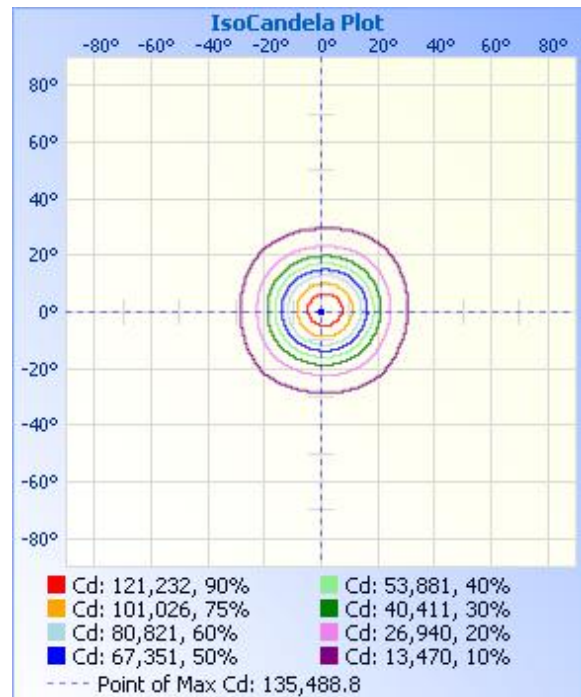
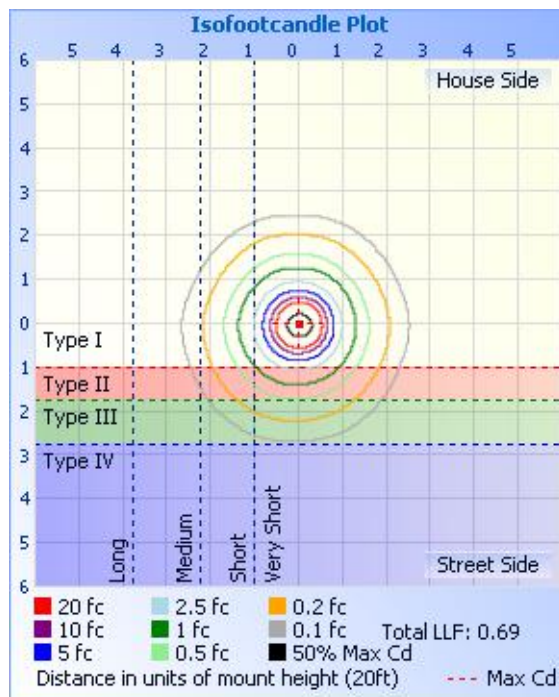
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width	
17.0ft	466 fc	8.7 ft	9.2 ft
34.0ft	117 fc	17.3 ft	18.3 ft
51.0ft	51.8 fc	26.0 ft	27.5 ft
68.0ft	29.1 fc	34.6 ft	36.7 ft
85.0ft	18.6 fc	43.3 ft	45.8 ft
102.0ft	12.9 fc	51.9 ft	55.0 ft

Vert. Spread: 28.6°
Horiz. Spread: 30.2°





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Candela Table - Type C

	0	22.5	45	67.5	90	112.	135	157.	180	202.	225	247.	270	292.5	315	337.	360
						5	5	5	5	5	5	5	5	5	5	5	5
0	1347 02	1347 02	1347 02	1347 02	1347 02	1347 02	1347 02	1347 02	1347 02	1347 02	1347 02	1347 02	1347 02	13470 2	1347 02	1347 02	1347 02
1	1352 13	1349 33	1344 70	1340 14	1334 39	1332 44	1329 22	1332 57	1332 48	1336 66	1340 90	1344 58	1352 23	1354 89	1354 26	1354 37	1352 13
2	1349 37	1342 00	1333 57	1325 30	1314 08	1310 02	1305 54	1309 55	1310 40	1317 94	1326 80	1334 71	1348 86	13541 1	1354 45	1354 15	1349 37
3	1338 37	1326 74	1314 44	1303 14	1287 44	1280 42	1274 84	1279 03	1280 92	1291 73	1304 60	1316 61	1337 85	13457 7	1346 14	1344 20	1338 37
4	1317 32	1303 53	1287 38	1273 48	1253 07	1245 04	1237 62	1237 52	1243 83	1257 26	1274 15	1290 76	1318 98	13300 3	1330 53	1327 19	1317 32
5	1289 32	1273 14	1253 14	1237 16	1213 01	1202 83	1193 80	1192 02	1199 91	1215 95	1236 53	1257 26	1293 09	13073 7	1307 11	1303 01	1289 32
6	1254 29	1230 80	1208 24	1194 57	1163 07	1151 59	1145 42	1141 97	1150 60	1163 69	1193 26	1213 79	1259 87	12768 6	1277 28	1271 02	1254 29
7	1211 69	1185 69	1160 99	1142 28	1112 73	1100 70	1085 89	1086 59	1089 46	1110 69	1138 89	1168 28	1216 16	12358 0	1240 11	1231 39	1211 69
8	1161 44	1132 96	1108 25	1088 99	1058 82	1044 34	1027 30	1019 12	1028 09	1052 19	1084 43	1111 49	1169 12	11911 2	1195 89	1185 14	1161 44
9	1105 43	1075 74	1051 47	1032 02	9999 0	9842 3	9649 3	9541 6	9621 2	9884 8	1023 94	1060 39	1117 12	11409 1	1144 11	1126 24	1105 43
10	1043 94	1014 59	9914 0	9728 2	9337 4	9159 1	9005 0	8871 1	8948 3	9223 7	9609 8	9945 4	1060 98	10851 2	1088 08	1066 73	1043 94
11	9716 7	9495 4	9282 2	9116 9	8705 1	8513 8	8330 7	8181 1	8241 3	8526 4	8936 6	9291 9	1000 52	10242 0	1019 96	1002 42	9716 7
12	9040 1	8765 7	8585 2	8501 8	8087 5	7882 7	7703 3	7525 0	7580 3	7777 0	8211 1	8646 2	9320 6	96156	9551 9	9359 0	9040 1
13	8339 0	8087 4	7937 1	7804 9	7476 1	7272 3	6995 3	6875 4	6855 1	7128 4	7560 8	7982 4	8662 7	88884	8864 2	8657 5	8339 0
14	7647 0	7414 1	7298 7	7193 3	6877 2	6673 1	6393 7	6205 4	6239 5	6505 6	6924 9	7346 7	7994 5	82074	8169 3	7951 9	7647 0
15	6955 3	6751 5	6668 2	6586 0	6279 2	6088 3	5806 9	5616 8	5639 6	5893 8	6299 4	6691 3	7332 9	75389	7490 9	7196 6	6955 3
16	6243	6130	6076	6004	5678	5499	5277	5086	5098	5343	5723	6030	6691	68823	6826	6540	6243

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	9	0	2	4	4	1	8	7	6	2	8	6	3		0	1	9
17	5632	5535	5503	5451	5138	4973	4762	4571	4575	4808	5165	5443	6061	62454	6130	5915	5632
	4	6	3	5	8	3	8	6	5	7	6	4	8		5	2	4
18	5073	5001	4931	4941	4652	4501	4264	4113	4063	4288	4616	4910	5485	56627	5548	5344	5073
	6	2	7	5	8	5	4	7	9	6	0	2	0		0	4	6
19	4552	4450	4450	4411	4191	4062	3848	3655	3639	3848	4153	4411	4881	50501	5002	4807	4552
	9	2	8	4	1	2	0	2	5	1	2	7	4		1	4	9
20	4083	3999	4013	3979	3773	3624	3468	3285	3258	3457	3736	3911	4373	45330	4508	4322	4083
	3	7	7	2	8	1	3	5	8	5	8	4	3		6	9	3
21	3644	3580	3610	3571	3373	3286	3121	2944	2909	3093	3348	3531	3897	40556	4048	3831	3644
	5	1	2	6	9	0	3	0	9	7	0	6	9		2	0	5
22	3224	3211	3249	3210	3016	2921	2816	2645	2604	2777	3004	3118	3477	36304	3600	3434	3224
	1	9	0	0	1	6	8	9	8	0	7	1	4		4	4	1
23	2872	2876	2887	2868	2648	2610	2534	2370	2325	2483	2690	2769	3082	32332	3227	3072	2872
	3	2	7	1	9	3	4	1	3	1	2	4	8		5	5	3
24	2565	2545	2599	2536	2359	2339	2287	2129	2063	2210	2388	2469	2705	28829	2900	2751	2565
	6	8	0	2	1	0	1	9	1	5	9	0	7		2	3	6
25	2286	2281	2330	2266	2096	2093	2050	1895	1849	1988	2152	2204	2395	25413	2608	2469	2286
	5	6	9	2	8	5	7	9	8	6	8	6	0		8	2	5
26	2043	2047	2097	2019	1840	1860	1851	1708	1663	1794	1941	1949	2127	22675	2350	2191	2043
	4	6	3	0	4	0	1	3	4	6	5	3	4		2	2	4
27	1824	1832	1886	1797	1628	1657	1671	1538	1492	1603	1753	1743	1886	20214	2089	1967	1824
	4	6	6	1	0	7	2	5	4	9	0	6	6		7	2	4
28	1620	1650	1681	1607	1446	1482	1511	1390	1344	1448	1571	1565	1688	18153	1892	1776	1620
	5	1	5	4	1	8	6	2	5	3	2	2	2		6	2	5
29	1464	1472	1517	1419	1284	1321	1359	1249	1212	1309	1424	1409	1513	16308	1711	1605	1464
	2	6	9	8	5	4	2	2	0	4	1	2	8		2	1	2
30	1322	1332	1373	1272	1153	1186	1217	1118	1085	1192	1298	1276	1355	14600	1551	1453	1322
	9	8	3	0	8	5	4	1	4	7	1	7	7		3	4	9
31	1207	1208	1247	1144	1036	1063	1098	1014	9855	1080	1182	1166	1232	13251	1412	1320	1207
	0	7	0	8	2	8	4	9		4	1	1	8		0	8	0
32	1097	1100	1125	1029	9342	9523	9969	9230	9000	9931	1083	1059	1130	12105	1276	1198	1097
	7	7	6	5							0	2	1		4	8	7
33	9987	9912	1017	9285	8506	8590	8979	8470	8223	8951	9814	9770	1042	11091	1164	1100	9987
			8										8		3	3	
34	9207	9138	9265	8454	7826	7806	8155	7750	7600	8290	9055	9032	9589	10173	1065	1015	9207

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															9	5	
35	8483	8414	8488	7751	7199	7147	7343	7150	6973	7631	8331	8367	8903	9326	9785	9342	8483
36	7875	7772	7779	7141	6722	6551	6765	6562	6459	7082	7732	7801	8301	8655	9042	8629	7875
37	7324	7210	7168	6641	6217	6039	6256	6127	6030	6583	7146	7198	7780	7990	8354	7928	7324
38	6804	6720	6625	6154	5811	5605	5784	5742	5664	6118	6644	6760	7249	7428	7724	7466	6804
39	6325	6259	6136	5735	5453	5239	5331	5367	5325	5762	6186	6363	6847	6938	7158	6931	6325
40	5955	5834	5697	5357	5131	4924	5025	5070	5015	5441	5826	6001	6445	6498	6699	6537	5955
41	5642	5519	5368	5060	4810	4634	4669	4773	4752	5135	5496	5679	6055	6129	6303	6149	5642
42	5325	5223	5039	4766	4514	4365	4401	4469	4464	4870	5199	5410	5771	5792	5893	5811	5325
43	5015	4970	4719	4504	4261	4062	4091	4200	4235	4577	4913	5097	5449	5486	5584	5470	5015
44	4821	4630	4402	4194	4005	3834	3823	3922	3985	4309	4637	4854	5219	5214	5294	5201	4821
45	4558	4405	4142	3907	3765	3581	3626	3675	3722	4034	4321	4569	4919	4961	5003	4957	4558
46	4314	4109	3879	3675	3522	3353	3420	3497	3537	3797	4035	4222	4623	4649	4713	4648	4314
47	4047	3912	3643	3419	3300	3135	3214	3306	3364	3538	3744	3919	4342	4374	4410	4385	4047
48	3759	3660	3421	3222	3144	2957	3048	3153	3142	3357	3531	3694	4080	4034	4091	4094	3759
49	3549	3457	3277	3025	2960	2819	2858	2962	2945	3201	3320	3463	3793	3809	3870	3878	3549
50	3361	3310	3054	2844	2792	2651	2692	2815	2782	3039	3164	3316	3587	3531	3642	3650	3361
51	3170	3136	2888	2710	2680	2514	2558	2649	2660	2880	2991	3144	3422	3391	3467	3475	3170
52	2988	2955	2712	2591	2558	2385	2455	2540	2534	2752	2844	2988	3275	3219	3273	3296	2988
53	2873	2786	2643	2457	2417	2286	2336	2452	2400	2624	2696	2847	3182	3082	3139	3146	2873
54	2772	2655	2493	2344	2305	2136	2227	2333	2265	2524	2574	2694	3044	2929	3004	3018	2772
55	2588	2580	2358	2235	2208	2051	2124	2258	2143	2458	2464	2550	2854	2782	2870	2899	2588
56	2500	2468	2267	2116	2130	1945	2033	2105	2133	2306	2323	2447	2742	2682	2761	2765	2500
57	2396	2371	2179	2028	2049	1845	1921	2014	1992	2190	2251	2369	2645	2563	2620	2712	2396
58	2284	2274	2035	1910	1890	1720	1771	1927	1927	2134	2163	2238	2508	2460	2511	2608	2284
59	2193	2165	1957	1788	1809	1670	1702	1792	1789	2012	1985	2113	2439	2332	2402	2483	2193
60	2121	2068	1872	1728	1678	1574	1605	1698	1698	1903	1913	2016	2305	2217	2308	2364	2121
61	2021	1956	1731	1610	1616	1514	1518	1629	1613	1806	1750	1847	2162	2139	2192	2283	2021
62	1867	1888	1637	1522	1494	1405	1455	1517	1544	1710	1671	1760	2046	1973	2089	2092	1867
63	1770	1738	1583	1422	1444	1358	1384	1423	1450	1579	1630	1656	1940	1883	1977	2052	1770
64	1685	1669	1486	1375	1376	1252	1287	1379	1366	1507	1521	1591	1831	1780	1855	1911	1685
65	1638	1576	1398	1253	1285	1196	1215	1317	1284	1485	1452	1463	1713	1708	1774	1789	1638

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66	1557	1519	1367	1191	1220	1155	1181	1210	1250	1385	1373	1394	1600	1611	1677	1720	1557
67	1447	1420	1307	1125	1188	1077	1146	1198	1178	1310	1329	1335	1569	1511	1583	1604	1447
68	1413	1345	1245	1091	1139	1024	1056	1142	1115	1226	1267	1275	1485	1427	1512	1545	1413
69	1344	1326	1141	1059	1067	1005	1024	1079	1078	1189	1188	1206	1422	1364	1443	1454	1344
70	1284	1285	1144	1019	1004	949	981	1023	1018	1157	1141	1163	1332	1302	1390	1439	1284
71	1253	1192	1054	928	964	868	918	976	993	1086	1091	1097	1298	1233	1305	1389	1253
72	1147	1157	994	894	873	802	862	907	883	1064	1013	1022	1245	1174	1265	1295	1147
73	1103	1123	959	838	845	799	806	857	855	948	934	963	1120	1112	1212	1210	1103
74	1040	992	912	791	805	781	768	773	752	889	912	875	1114	1034	1106	1179	1040
75	965	977	869	716	714	687	715	694	714	849	862	828	983	999	1059	1085	965
76	918	870	806	678	702	668	640	676	664	743	834	809	911	930	1040	963	918
77	830	746	734	647	608	603	609	547	611	668	753	738	880	868	949	888	830
78	746	683	665	559	574	528	537	569	573	627	658	650	824	787	850	844	746
79	699	562	649	541	527	493	515	497	482	540	574	603	730	774	837	735	699
80	601	527	555	447	455	459	400	419	442	477	533	553	661	718	743	660	601
81	539	558	461	434	371	375	400	378	385	437	445	513	608	631	637	572	539
82	486	340	395	375	324	381	365	375	357	340	473	469	543	528	562	547	486
83	439	393	398	363	343	350	281	275	307	349	389	388	384	537	543	541	439
84	388	362	370	291	281	322	272	272	285	287	345	375	427	409	369	428	388
85	351	290	317	275	243	250	240	206	222	240	257	316	321	450	440	400	351
86	320	228	273	219	190	212	200	222	138	200	169	200	303	381	328	338	320
87	141	234	204	206	212	184	159	163	113	144	144	191	268	325	340	310	141
88	216	184	191	144	181	147	128	156	113	153	157	206	250	290	209	263	216
89	185	162	163	150	143	150	125	122	81	115	166	184	203	259	275	216	185
90	169	140	138	122	131	178	122	122	91	81	103	144	156	165	206	191	169
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97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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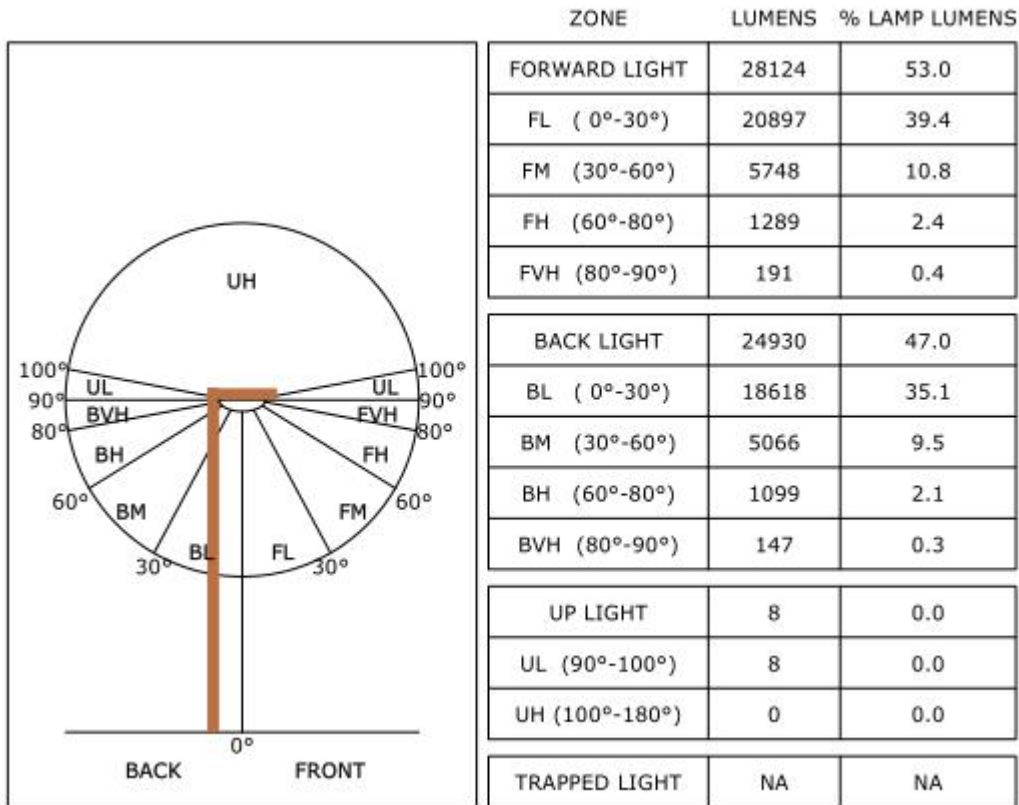
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2.2 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction BL-QP-033)

Test date	2018-09-19	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	AST-SP01-400WMBT3B1-ac57		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC180901	120.0	60	3.3879	404.76	0.9956	4.76
9E-U-A2	277.0	60	1.5270	390.58	0.9234	10.59
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	70	R9	0
Frequency (Hz)	60	R2	75	R10	41
CCT (K)	5578	R3	78	R11	72
Duv	0.00278	R4	74	R12	42
Chromaticity (x, y)	x=0.3307 y=0.3450	R5	71	R13	71
Chromaticity (u', v')	u(u')=0.2042v'=0.4793	R6	67	R14	88
Color Rendering Index (CRI)	72.1	R7	80	R15	66
R9	0	R8	60	--	--

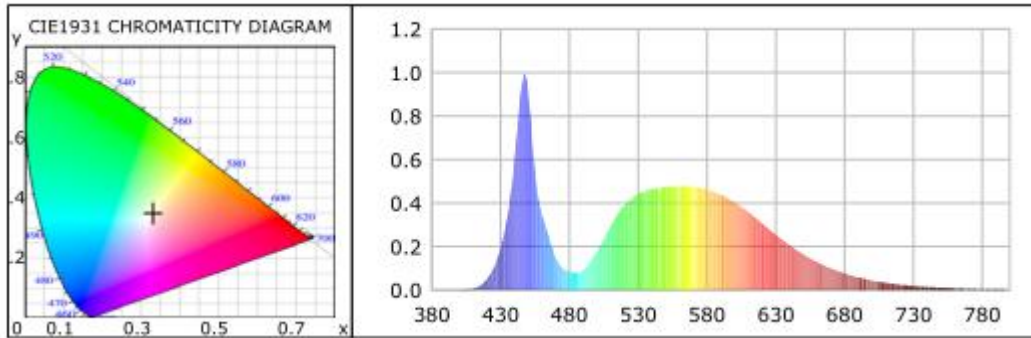
Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result		DLC V4.3 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	54812.60	54212.50	>=30000(-10%)
Luminous Efficacy (lm/W)	135.42	138.80	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	133.94		



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Spectral Power Distribution & Chromaticity Diagram





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Calculated Efficacy Data for family models (5000K):

Model Number	Luminous Flux (lm)	Power (W)	Efficacy (lm/W)
AST-SP01-400WMBT3B1-ac40	53061.5	404.48	131.18
AST-SP01-400WMBT3B1-ac50	53645.20	404.62	132.58
AST-SP01-400WMBT3B1-ac57	54812.60	404.76	135.42



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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 *****