



Report No.:  
BLC2005011E-C-CP

## LM-79-08 Test Report

For

# ASmart LIGHT CO., LTD

(Brand Name: ASmart)

506 N GARFIELD AVE SUITE#210 ALHAMBRA CA 91801

### Outdoor Full-Cutoff Wall-Mounted Area Luminaires

Model name(s): AST-RWP01B-60WH1CYT1SA1-ab[A;SA]ef

The letter "a" can be 2 letters represent lamp colors, "BH = Black, WH=White, BR=Bronze or Customized". The letter "b" can be "P" for Photocontrol or blank for no control function, or "M" for motion sensor, "R" for 12V PIR control, "PM" for photocontrol+motion sensor, "PR" for photocontrol+PIR sensor. The letter c can be A=represents power adjustable or SA=surge protector and power adjustable are equipped. The letter e can be two digits to represent CCT, 30=3000K, 40=4000K, 50=5000K, 57=5700K. The letter f can be "F" for Auxiliary output 12V or empty for no Auxiliary output 12V.

Representative (Tested) Model:

AST-RWP01B-60WH1CYT1SA1-ab[A;SA]40f

AST-RWP01B-60WH1CYT1SA1-ab[A;SA]57f

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

Test & Report By:

*Grace Li*

Engineer: Grace Li

Date: June 18, 2020

Review By:

*Jason Luo*

Manager: Jason Luo

This report is multiple listed report of BLC2005011E-C, all construction are the same except wattage adjustable.

Laboratory: Belling Test Laboratory Co., LTD A2LA Certificate# 4810.01  
Unit 401, No. 309 Xinxin Seven Road, Zengcheng District,  
Guangzhou, People's Republic of China. [info@bellingtest.com](mailto:info@bellingtest.com)

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Certificate#4810.01

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### 1.1 Product Information:

Organization Name	ASmart LIGHT CO., LTD	
Brand Name	ASmart	
Model Number	AST-RWP01B-60WH1CYT1SA1-ab[A;SA]ef	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Full-Cutoff Wall-Mounted Area Luminaires	
Rated Voltage / Frequency	120-277Vac, 50/60 Hz	
Nominal Power	60W (Wattage adjustable)	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K,4500K,5000K,5700K	
LED Manufacturer	Seoul Semiconductor Co., LTD	
LED Model	SAW7C22B-NZ	
Sample Number	BLC2005011E-C1(4000K),C2(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	May 12, 2020
Date of Test	May 13, 2020
Test item	<ol style="list-style-type: none"><li>1. Total Luminous Flux</li><li>2. Luminous Distribution Intensity</li><li>3. Luminous Efficacy</li><li>4. Correlated Color Temperature</li><li>5. Color Rendering Index</li><li>6. Chromaticity Coordinate</li><li>7. Electrical Parameters</li></ol>
Reference Standard	<ol style="list-style-type: none"><li>1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products</li><li>2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products</li><li>3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources</li><li>4. CIE 15-2004 Technical Report Colorimetry</li><li>5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source</li><li>6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems</li></ol>
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  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  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)

<b>Test date</b>	2020-05-13	<b>Test Ambient:</b>	25.2 ° C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	AST-RWP01B-60WH1CYT1SA1-ab[ A;SA]40f		

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %	
BLC200501	120.0	60	0.4997	59.24	0.988	15.03	
1E-C1	277.0	60	0.2289	57.58	0.908	15.24	
<b>DLC Pass Criteria</b>						>= 0.9(-3%)	<= 20(+5)

### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	69	R9	-35
Frequency (Hz)	60	R2	81	R10	56
CCT (K)	3899	R3	91	R11	67
Duv	0.00051	R4	71	R12	47
Chromaticity (x, y)	x=0.3854 y=0.3809	R5	70	R13	71
Chromaticity (u', v')	u(u')=0.2267 v'(v')=0.5041	R6	74	R14	95
Color Rendering Index (CRI)	73	R7	80	R15	62
R9	-35	R8	49	--	--
Rf	76				
Rg	93				
Rcs,h1(%)	-18				

### Photometric Measurement – Goniophotometer Method:

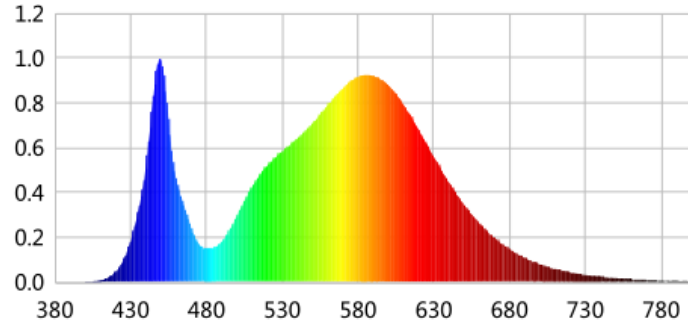
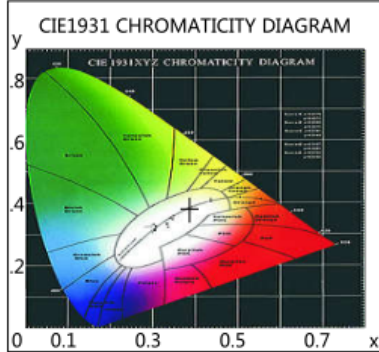
Parameter	Result		DLC V5.1 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	8016.3	7928.4	5000-10000(-10%)
Luminous Efficacy (lm/W)	135.32	137.69	Premium: >= 120(-3%)
Most worst Luminous/Highest	133.84		
Zonal lumens in the 0-90° zone (%)	98.3	--	>=100(-3)
Zonal lumens in the 80-90°zone (%)	0.4		<=10(+3)
Beam Angle (°)	65.9	--	--
Center Beam Candle Power (cd)	6422	--	--



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### Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0005	0.0715	525	0.5555	80.1755	670	0.1983	28.6290
385	0.0007	0.1052	530	0.5846	84.3872	675	0.1716	24.7649
390	0.0007	0.1035	535	0.6134	88.5406	680	0.1478	21.3325
395	0.0009	0.1370	540	0.6434	92.8649	685	0.1264	18.2372
400	0.0014	0.1992	545	0.6736	97.2237	690	0.1100	15.8817
405	0.0034	0.4890	550	0.7093	102.3770	695	0.0941	13.5807
410	0.0084	1.2110	555	0.7487	108.0719	700	0.0804	11.6089
415	0.0202	2.9113	560	0.7900	114.0302	705	0.0697	10.0624
420	0.0453	6.5429	565	0.8313	119.9870	710	0.0585	8.4457
425	0.0949	13.6957	570	0.8656	124.9456	715	0.0502	7.2513
430	0.1824	26.3247	575	0.8983	129.6577	720	0.0438	6.3189
435	0.3152	45.4957	580	0.9185	132.5792	725	0.0377	5.4433
440	0.5113	73.7934	585	0.9257	133.6101	730	0.0314	4.5271
445	0.8302	119.8239	590	0.9218	133.0522	735	0.0261	3.7612
450	0.9960	143.7655	595	0.9072	130.9399	740	0.0242	3.4969
455	0.7289	105.2134	600	0.8801	127.0392	745	0.0213	3.0741
460	0.4628	66.7987	605	0.8406	121.3336	750	0.0178	2.5717
465	0.3488	50.3510	610	0.7925	114.3867	755	0.0157	2.2598
470	0.2433	35.1136	615	0.7410	106.9593	760	0.0140	2.0141
475	0.1720	24.8196	620	0.6828	98.5559	765	0.0110	1.5812
480	0.1519	21.9237	625	0.6212	89.6560	770	0.0103	1.4837
485	0.1555	22.4484	630	0.5600	80.8296	775	0.0081	1.1680
490	0.1792	25.8676	635	0.5017	72.4203	780	0.0060	0.8630
495	0.2290	33.0590	640	0.4453	64.2730	785	0.0050	0.7240
500	0.2940	42.4424	645	0.3933	56.7616	790	0.0064	0.9247
505	0.3614	52.1676	650	0.3467	50.0459	795	0.0057	0.8266
510	0.4249	61.3345	655	0.3027	43.6840	800	0.0039	0.5599
515	0.4775	68.9211	660	0.2619	37.8063			
520	0.5199	75.0479	665	0.2283	32.9504			

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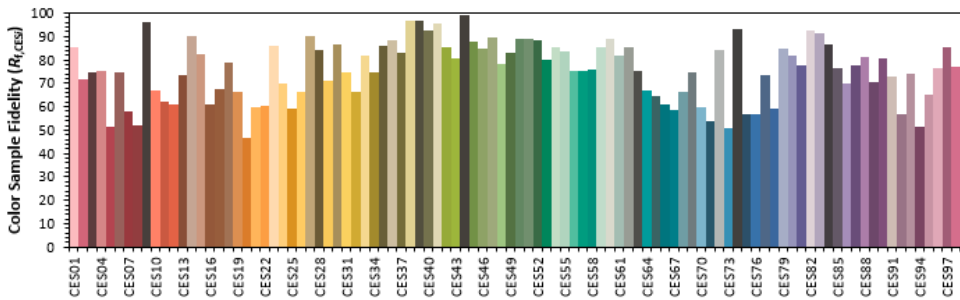
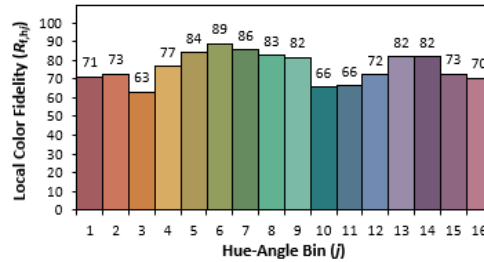
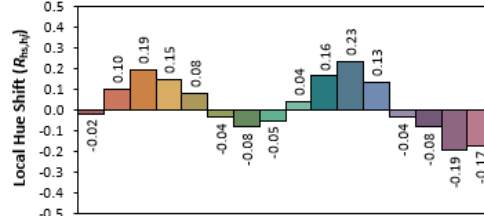
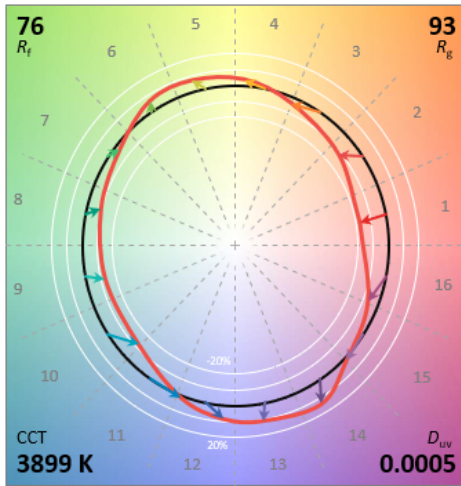
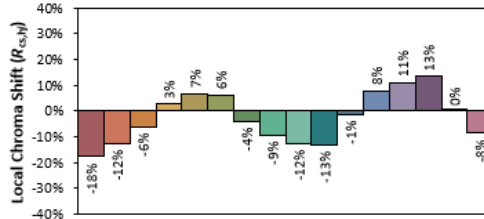
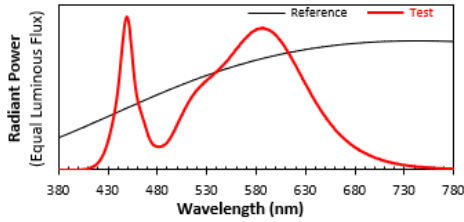


# TM30

## ANSI/IES TM-30-18 Color Rendition Report

Source: SAW7C22B-NZ  
Date: 2020/5/13

Manufacturer: ASmart LIGHT CO., LTD  
Model: AST-RWP01B-60WH1CYT1SA1-ab[A,SA]57f



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3854  
y 0.3809  
u' 0.2267  
v' 0.5041

CIE 13.3-1995 (CRI)  
Ra 73  
Rg -35

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.



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### Zonal Lumen Tabulation

#### Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	4,225.0	52.7%	52.7%
0-40	6,012.8	75%	75%
0-60	7,623.0	95.1%	95.1%
60-90	257.8	3.2%	3.2%
70-100	128.1	1.6%	1.6%
90-120	60.5	0.8%	0.8%
0-90	7,880.8	98.3%	98.3%
90-180	133.9	1.7%	1.7%
0-180	8,014.7	100%	100%

#### Lumens Per Zone

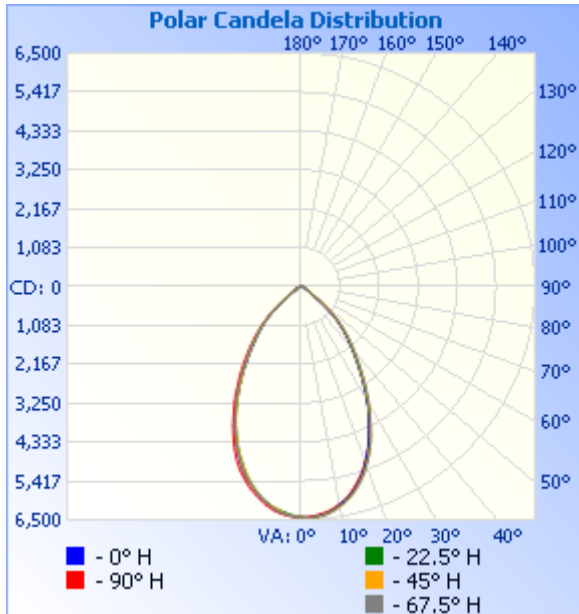
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	598.2	7.5%	90-100	21.4	0.3%
10-20	1,598.3	19.9%	100-110	20.3	0.3%
20-30	2,028.6	25.3%	110-120	18.7	0.2%
30-40	1,787.8	22.3%	120-130	17.3	0.2%
40-50	1,206.9	15.1%	130-140	17.0	0.2%
50-60	403.3	5.0%	140-150	15.3	0.2%
60-70	151.2	1.9%	150-160	12.5	0.2%
70-80	75.6	0.9%	160-170	8.4	0.1%
80-90	31.1	0.4%	170-180	2.9	0%



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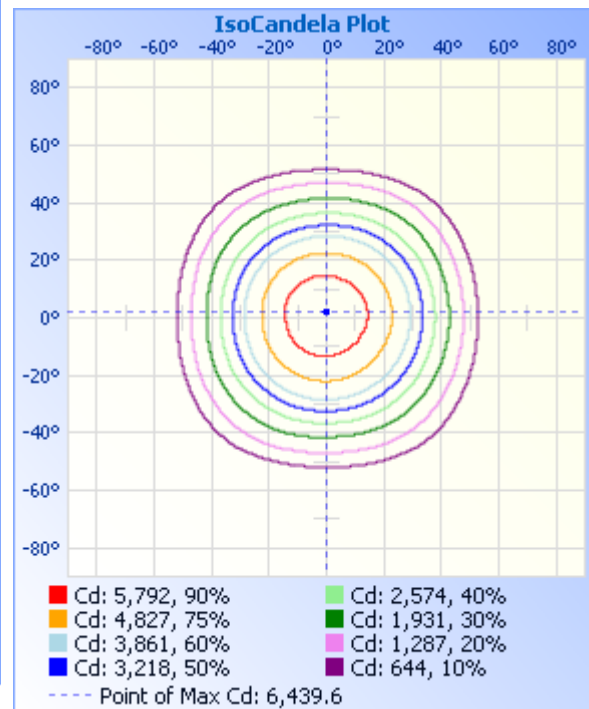
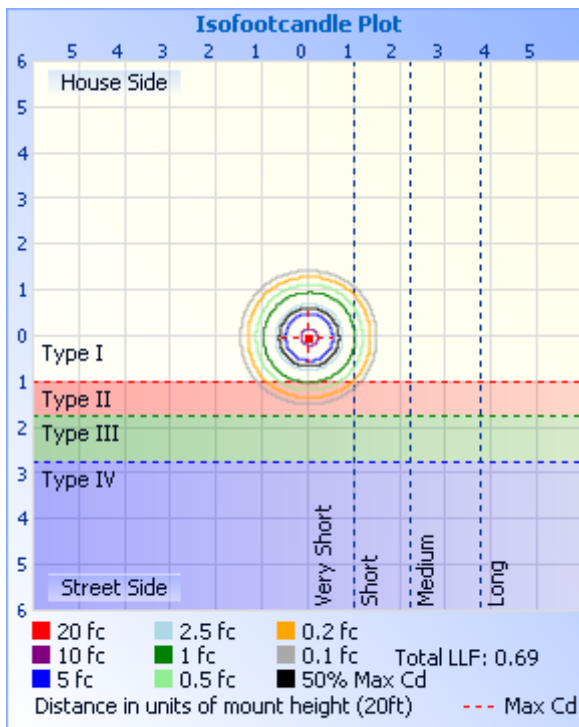
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**Photometric Data**



	Illuminance at a Distance	
	Center Beam fc	Beam Width
17.0ft	22.2 fc	21.5 ft 22.0 ft
34.0ft	5.56 fc	43.0 ft 44.1 ft
51.0ft	2.47 fc	64.5 ft 66.1 ft
68.0ft	1.39 fc	86.0 ft 88.2 ft
85.0ft	0.89 fc	107.5 ft 110.2 ft
102.0ft	0.62 fc	129.0 ft 132.3 ft

■ Vert. Spread: 64.6°  
■ Horiz. Spread: 65.9°



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**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	6422	6422	6422	6422	6422	6422	6422	6422	6422	6422	6422	6422	6422	6422	6422	6422	6422
1	6433	6430	6437	6423	6421	6407	6414	6398	6421	6397	6408	6414	6417	6412	6411	6421	6433
2	6439	6439	6434	6420	6408	6394	6408	6378	6397	6374	6395	6395	6408	6405	6410	6415	6439
3	6433	6434	6440	6438	6396	6387	6391	6366	6368	6351	6376	6380	6397	6393	6384	6409	6433
4	6414	6427	6431	6424	6378	6368	6366	6347	6326	6316	6343	6355	6375	6370	6371	6381	6414
5	6385	6397	6407	6414	6347	6337	6337	6308	6292	6276	6282	6325	6347	6338	6350	6373	6385
6	6361	6373	6379	6394	6329	6307	6294	6274	6252	6234	6238	6282	6314	6297	6320	6311	6361
7	6328	6333	6352	6356	6293	6269	6258	6228	6209	6191	6193	6230	6276	6257	6281	6300	6328
8	6287	6297	6317	6318	6251	6227	6194	6181	6148	6139	6143	6161	6219	6207	6238	6248	6287
9	6244	6251	6270	6268	6194	6171	6150	6125	6096	6073	6083	6102	6170	6159	6186	6195	6244
10	6170	6192	6220	6203	6144	6116	6085	6068	6025	6007	6022	6038	6089	6106	6131	6136	6170
11	6104	6140	6167	6159	6089	6057	6008	5979	5956	5937	5938	5953	6022	6036	6074	6072	6104
12	6048	6071	6086	6090	6019	5986	5935	5914	5875	5848	5862	5882	5950	5979	6003	6007	6048
13	5981	6002	6028	6026	5948	5902	5865	5821	5784	5763	5772	5800	5877	5910	5921	5930	5981
14	5902	5916	5941	5945	5851	5832	5776	5743	5697	5663	5674	5714	5797	5833	5839	5857	5902
15	5813	5832	5854	5853	5760	5744	5685	5649	5605	5563	5574	5624	5713	5749	5752	5758	5813
16	5711	5741	5755	5766	5661	5648	5579	5544	5518	5458	5459	5517	5617	5658	5651	5653	5711
17	5601	5634	5652	5665	5555	5545	5478	5429	5414	5349	5341	5407	5521	5559	5553	5554	5601
18	5480	5528	5540	5555	5447	5419	5356	5326	5301	5215	5236	5295	5421	5442	5450	5445	5480
19	5364	5405	5421	5435	5331	5292	5238	5211	5168	5096	5109	5174	5309	5324	5337	5325	5364
20	5228	5263	5298	5303	5191	5176	5114	5073	5037	4981	4977	5041	5187	5196	5204	5210	5228
21	5080	5132	5162	5178	5065	5042	4983	4935	4916	4851	4856	4913	5061	5065	5082	5060	5080
22	4927	5003	5035	5035	4936	4906	4827	4807	4760	4721	4709	4776	4916	4935	4939	4938	4927
23	4787	4858	4881	4892	4786	4758	4687	4665	4632	4583	4577	4636	4775	4781	4796	4788	4787
24	4638	4681	4735	4747	4646	4604	4550	4519	4489	4433	4430	4500	4627	4637	4651	4655	4638
25	4480	4529	4567	4591	4483	4464	4401	4395	4328	4294	4287	4362	4470	4494	4489	4505	4480
26	4327	4369	4398	4409	4326	4311	4242	4228	4176	4149	4131	4193	4324	4346	4334	4346	4327
27	4161	4208	4232	4249	4166	4144	4091	4082	4025	4001	3971	4044	4156	4192	4175	4188	4161
28	4001	4040	4070	4089	4013	3987	3939	3925	3870	3847	3823	3892	4001	4033	4024	4027	4001
29	3837	3862	3908	3924	3856	3809	3776	3770	3713	3673	3671	3737	3853	3879	3848	3871	3837

**Laboratory: Belling Test Laboratory Co., LTD A2LA Certificate# 4810.01**  
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30	3679	3693	3747	3765	3674	3653	3611	3616	3532	3519	3519	3585	3701	3715	3702	3703	3679
31	3500	3525	3563	3605	3518	3492	3452	3431	3375	3368	3365	3430	3551	3554	3546	3529	3500
32	3322	3362	3400	3429	3363	3345	3278	3279	3214	3214	3197	3274	3378	3420	3392	3365	3322
33	3164	3192	3232	3267	3209	3179	3128	3126	3052	3061	3033	3120	3219	3255	3233	3207	3164
34	3003	3029	3073	3109	3056	3018	2977	2971	2897	2897	2894	2972	3077	3100	3078	3049	3003
35	2841	2858	2922	2954	2894	2867	2833	2820	2743	2753	2757	2824	2933	2936	2909	2896	2841
36	2689	2708	2765	2806	2744	2726	2699	2655	2579	2613	2623	2673	2782	2795	2772	2742	2689
37	2547	2575	2629	2661	2604	2586	2544	2523	2436	2473	2485	2528	2640	2647	2620	2593	2547
38	2403	2433	2485	2513	2464	2445	2419	2385	2295	2334	2359	2396	2498	2505	2490	2452	2403
39	2274	2296	2351	2382	2337	2317	2299	2255	2168	2202	2232	2271	2358	2372	2363	2314	2274
40	2145	2168	2232	2264	2197	2195	2173	2138	2033	2066	2113	2145	2231	2236	2233	2194	2145
41	2025	2048	2119	2140	2068	2078	2049	2023	1912	1943	1989	2024	2094	2110	2123	2078	2025
42	1913	1945	2006	2015	1953	1962	1947	1894	1804	1823	1869	1897	1979	1991	1997	1963	1913
43	1805	1823	1888	1901	1834	1833	1828	1787	1698	1719	1753	1778	1859	1863	1883	1858	1805
44	1698	1715	1776	1792	1710	1721	1719	1675	1579	1604	1641	1666	1726	1743	1768	1734	1698
45	1576	1602	1659	1662	1596	1599	1608	1531	1476	1489	1532	1529	1612	1612	1652	1618	1576
46	1466	1491	1546	1548	1474	1482	1472	1420	1365	1375	1421	1404	1469	1492	1528	1493	1466
47	1335	1374	1434	1426	1357	1365	1367	1308	1238	1261	1285	1279	1339	1361	1396	1378	1335
48	1201	1258	1309	1302	1233	1225	1237	1200	1097	1143	1158	1151	1216	1222	1272	1248	1201
49	1033	1124	1190	1175	1086	1107	1115	1068	927	1014	1040	1025	1082	1083	1136	1118	1033
50	886	991	1051	1034	958	980	979	911	790	890	924	888	950	954	996	957	886
51	737	834	918	899	811	844	849	766	665	760	795	765	802	819	861	822	737
52	623	687	780	760	675	717	727	632	560	628	675	645	671	691	722	679	623
53	523	564	646	625	551	578	599	516	483	508	574	551	557	571	607	549	523
54	441	451	527	506	439	468	486	426	408	414	484	468	468	480	502	448	441
55	375	368	420	408	362	379	393	341	334	350	406	395	406	404	409	376	375
56	307	311	345	328	304	315	320	288	285	303	349	345	338	349	356	321	307
57	272	272	290	281	267	263	272	252	246	265	308	312	296	310	313	281	272
58	248	243	259	249	242	238	242	226	220	236	275	278	272	284	283	257	248
59	232	225	237	231	227	216	221	201	200	215	251	255	251	261	261	247	232
60	216	212	220	214	217	204	204	186	183	200	230	235	237	243	241	224	216
61	201	194	205	199	207	194	191	176	159	183	207	218	223	228	225	214	201

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62	191	187	195	189	197	178	182	158	133	158	193	199	208	206	209	197	191
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64	170	168	173	170	188	167	158	114	98	124	162	170	186	178	178	172	170
65	159	157	161	161	173	158	150	104	68	100	154	162	180	168	170	158	159
66	152	144	157	157	169	147	143	81	58	87	146	149	173	155	160	151	152
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72	112	94	114	116	128	104	58	24	21	25	65	105	133	108	107	102	112
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77	77	71	74	81	90	67	15	23	22	24	25	73	98	77	75	67	77
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164	31	33	30	25	26	25	28	29	30	30	34	28	21	28	30	29	31
165	34	34	33	29	31	29	24	27	29	33	30	27	25	30	27	32	34
166	36	33	31	30	29	18	31	29	29	33	33	32	28	23	31	30	36
167	31	36	32	32	28	26	35	27	34	30	18	32	26	28	30	33	31
168	30	35	33	29	30	27	31	31	31	33	29	30	32	31	34	32	30
169	33	27	38	28	30	28	33	31	35	30	31	33	30	33	37	31	33
170	33	33	28	30	28	31	32	31	32	32	35	34	31	30	35	24	33
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173	28	31	36	32	27	31	27	33	23	33	35	32	26	30	31	29	28
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175	38	34	34	30	31	33	31	30	33	34	34	30	36	31	30	29	38
176	35	33	31	32	30	31	33	30	24	36	31	31	30	31	18	26	35
177	29	37	32	30	28	32	32	32	32	33	35	36	26	32	33	31	29
178	27	32	26	32	24	32	30	29	32	31	31	29	25	29	33	32	27
179	35	33	36	30	28	27	30	30	24	28	25	31	30	31	32	29	35
180	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32



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## BUG

### Lum. Classification System (LCS)

<u>LCS Zone</u>	<u>Lumens</u>	<u>%Lamp</u>	<u>%Lum</u>
FL (0-30)	2141.3	26.7	26.7
FM (30-60)	1735.1	21.6	21.6
FH (60-80)	131.0	1.6	1.6
FVH (80-90)	18.6	0.2	0.2
BL (0-30)	2084.3	26.0	26.0
BM (30-60)	1663.9	20.8	20.8
BH (60-80)	95.7	1.2	1.2
BVH(80-90)	12.4	0.2	0.2
UL (90-100)	21.4	0.3	0.3
UH (100-180)	112.5	1.4	1.4
Total	8016.2	100.0	100.0
<b>BUG Rating</b>	<b>B3-U3-G1</b>		



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

<b>Test date</b>	2020-05-13	<b>Test Ambient:</b>	25.2 ° C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	AST-RWP01B-60WH1CYT1SA1-ab[A;SA]57f		

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %	
BLC200501	120.0	60	0.5123	60.62	0.986	15.11	
1E-C2	277.0	60	0.2335	58.92	0.911	15.32	
<b>DLC Pass Criteria</b>						>= 0.9(-3%)	<= 20(+5)

**Chromaticity Measurement - Sphere-Spectroradiometer Method:**

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	71	R9	-27
Frequency (Hz)	60	R2	77	R10	45
CCT (K)	5699	R3	80	R11	72
Duv	0.00034	R4	74	R12	43
Chromaticity (x, y)	x=0.3281 y=0.3378	R5	72	R13	72
Chromaticity (u', v')	u(u')=0.2051 v'(v')=0.4752	R6	69	R14	89
Color Rendering Index (CRI)	73	R7	81	R15	67
R9	-27	R8	60	--	--
Rf	73				
Rg	95				
Rcs,h1(%)	-18				

**Photometric Measurement – Sphere-Spectroradiometer Method:**

Parameter	Result		DLC V5.1 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	8380.7	8288.8	5000-10000(-10%)
Luminous Efficacy (lm/W)	138.25	140.68	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	136.73		

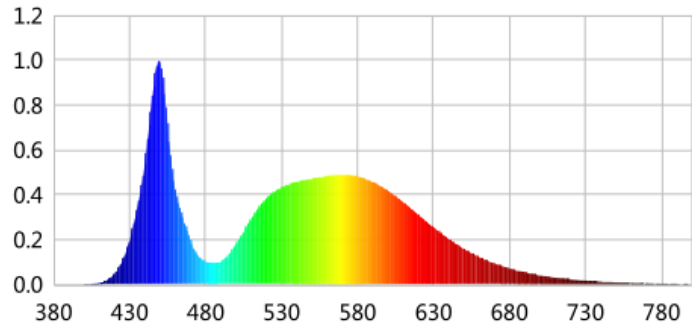
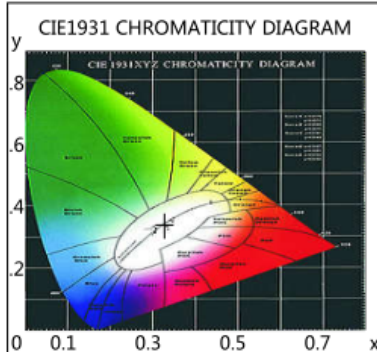




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### Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0002	0.0502	525	0.4130	100.9415	670	0.0951	23.2409
385	0.0008	0.1839	530	0.4336	105.9796	675	0.0828	20.2421
390	0.0001	0.0342	535	0.4476	109.3938	680	0.0717	17.5268
395	0.0005	0.1257	540	0.4583	112.0186	685	0.0621	15.1758
400	0.0013	0.3267	545	0.4660	113.8891	690	0.0544	13.2899
405	0.0031	0.7576	550	0.4718	115.3006	695	0.0466	11.3881
410	0.0072	1.7600	555	0.4778	116.7683	700	0.0402	9.8351
415	0.0192	4.6892	560	0.4826	117.9469	705	0.0352	8.6056
420	0.0464	11.3384	565	0.4873	119.1070	710	0.0304	7.4212
425	0.1001	24.4738	570	0.4882	119.3292	715	0.0266	6.4949
430	0.1964	48.0126	575	0.4882	119.3096	720	0.0221	5.4128
435	0.3398	83.0470	580	0.4829	118.0231	725	0.0195	4.7640
440	0.5369	131.2154	585	0.4715	115.2378	730	0.0164	4.0133
445	0.8416	205.6933	590	0.4575	111.8206	735	0.0147	3.5917
450	0.9955	243.3126	595	0.4405	107.6660	740	0.0133	3.2601
455	0.7173	175.3211	600	0.4179	102.1318	745	0.0111	2.7014
460	0.4279	104.5733	605	0.3942	96.3547	750	0.0093	2.2663
465	0.3004	73.4261	610	0.3679	89.9119	755	0.0082	2.0140
470	0.1979	48.3585	615	0.3396	83.0002	760	0.0071	1.7244
475	0.1297	31.6968	620	0.3108	75.9510	765	0.0059	1.4498
480	0.1033	25.2530	625	0.2823	68.9851	770	0.0053	1.3045
485	0.0954	23.3052	630	0.2547	62.2468	775	0.0050	1.2215
490	0.1038	25.3720	635	0.2284	55.8198	780	0.0035	0.8439
495	0.1337	32.6750	640	0.2030	49.6147	785	0.0023	0.5595
500	0.1814	44.3360	645	0.1808	44.1776	790	0.0031	0.7644
505	0.2369	57.8908	650	0.1599	39.0702	795	0.0026	0.6375
510	0.2944	71.9621	655	0.1408	34.4146	800	0.0024	0.5953
515	0.3441	84.1029	660	0.1234	30.1703			
520	0.3829	93.5778	665	0.1079	26.3828			

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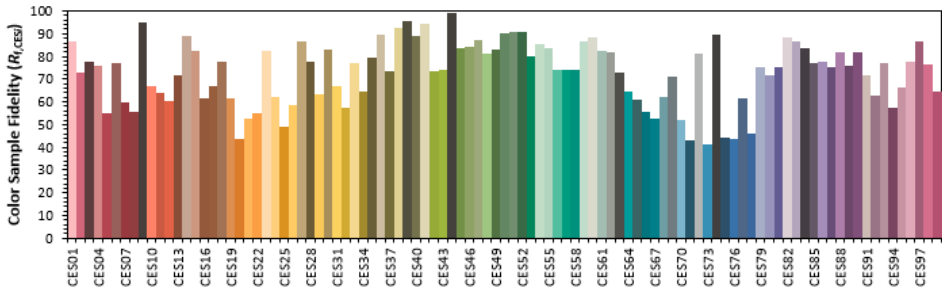
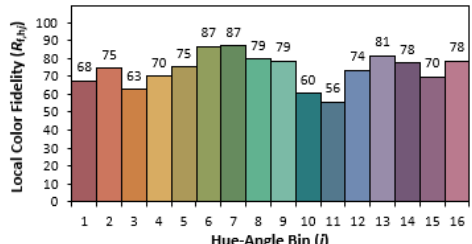
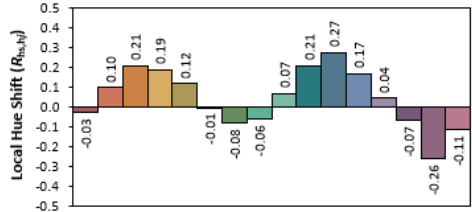
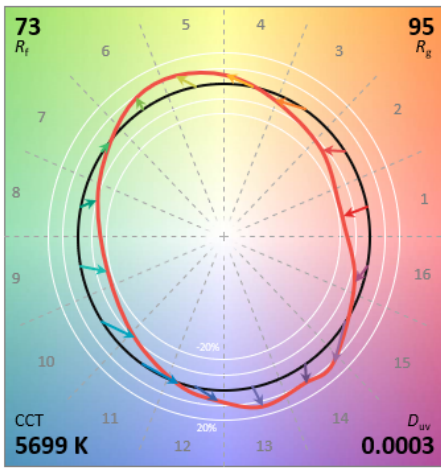
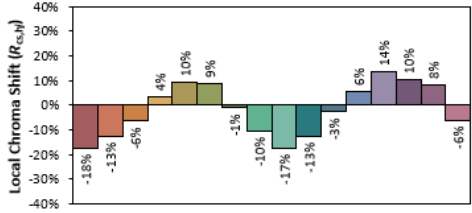
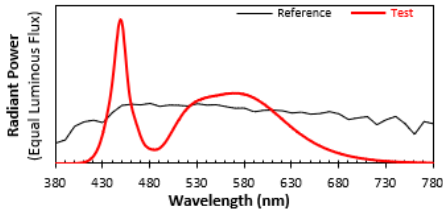
Report No.: BLC2005011E-C-CP

# TM30

## ANSI/IES TM-30-18 Color Rendition Report

Source: SAW7C22B-NZ  
Date: 2020/5/13

Manufacturer: ASmart LIGHT CO., LTD  
Model: AST-RWP01B-60WH1CYT1SA1-ab[A;SA]57f



**Notes:** This is a recommended method for displaying ANSI/IES TM-30-18 information.

$x$	0.3281	CIE 13.3-1995 (CRI)  $R_a$ 73 $R_g$ -27
$y$	0.3378	
$u'$	0.2051	
$v'$	0.4752	

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.



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**Calculated Efficacy Data for family models (4500K, 5000K):**

Model Number	Luminous Flux (lm)	Power (W)	Efficacy (lm/W)
AST-RWP01B-60WH1CYT1SA1-ab[A;SA]40f	8016.3	59.24	135.32
AST-RWP01B-60WH1CYT1SA1-ab[A;SA]45f	8107.4	59.93	135.28
AST-RWP01B-60WH1CYT1SA1-ab[A;SA]50f	8198.5	59.93	136.80
AST-RWP01B-60WH1CYT1SA1-ab[A;SA]57f	8380.7	60.62	138.25

\*1: This value is calculated and the calculation formula is as below:

$$8107.4 = ( 8380.7 - 8016.3 ) / 4 + 8016.3$$

$$8198.5 = ( 8380.7 - 8016.3 ) / 4 + 8107.4$$

\*2: This value is calculated and the calculation formula is as below:

$$59.93 = ( 60.62 + 59.24 ) / 2$$

\*3: This value is calculated and the calculation formula is as below:

$$135.28 = 8107.4 / 59.93$$

$$136.80 = 8198.5 / 59.93$$



Certificate#4810.01

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### 3. Test Equipment

Equipment Name	Model No.	Serial No.	Next Calibration Date
Goniophotometric System	GPM-3000	DYHXF120001	2021-01-13
AC Power Source	CHP-500C	N/A	2021-01-12
Total Luminous Flux Standard Lamp	24V/150W	DYJYR040040	2021-01-20
Digital Power Meter	WT500	DYDWQ200006	2021-01-12
Integral Sphere (2M)	2M	DYJCE120067	2021-01-13
Digital Power Meter	WT500	DYDWQ200006	2021-01-12
Optical Color and Electrical Measurement System	CMS-3000S	DYJCE120067	2021-01-13

Expand Uncertainty:  
Photometric Measurement (Sphere): 2.08%, k=2  
Chromaticity Measurement(Sphere):25.6K, k=2  
Photometric Measurement(Goniophotometer):2.645%, k=2

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