



Report No.:UTC2403042E-A

LM-79-08 Test Report

For

Beyond LED Technology

(Brand Name: Beyond)

1939 Parker Court, Stone Mountain, GA 30087

Outdoor Pole/Arm-Mounted Area and Roadway Luminaires

Architectural Flood and Spot Luminaires

Model name(s): BLT-S-G12C-300WBT3DA2-BH10SP40/50/57W

Remark“a” can be any two letters for lamp colors; “b” can be “3RP”, “3NP”, “5RP”, “5NP”, “7RP”, “7NP” for Photocontrol type provided or blank for no Photocontrol provided; “c” can be “10SP”, “20SP” for Surge-Protective Device type provided or blank for no Surge-Protective Device provided; “d” can be “DM”, “DM1”, “DP”, “DP1” or blank for DC Motion Sensor, DC PIR Sensor provided or not; “e” can be “AM”, “DM”, “DM1”, “DM2”, “YM”, “A&D”, “FM” for mounting bracket type; “f” can be any digits for CCT; “W” for wattage adjustable.

Representative (Tested) Model:

AST-S-G12C-300WBHT3DA1-abcde40W

AST-S-G12C-300WBHT3DA1-abcde50W

AST-S-G12C-300WBHT3DA1-abcde57W

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

Test & Report By:

Winnie Wu

Engineer: Winnie Wu

Date: 2024-04-18

Review By:

Jason Luo

Manager: Jason Luo

1.1 Product Information:

Organization Name	Beyond LED Technology	
Brand Name	Beyond LED Technology	
Model Number	BLT-S-G12C-300WBT3DA2-BH10SP40/50/57W	
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 Architectural Flood and Spot Luminaires	
Rated Voltage / Frequency	120-277Vac, 50/60 Hz	
Nominal Power	300W(Power adjustable)	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K, 5000K,5700K (Color tunable)	
LED Manufacturer	Lumileds Holding B.V.	
LED Model	L128-4080RC35005A1, L128-5780RC35005A1	
Sample Number	UTC2403042E-A1	
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	2024-03-27
Date of Test	2024-03-29
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-79-2019 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

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. Goniophotometer far field detector $f1' = 1.42\%$, Test distance: 14.14m

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. Use 2m diameter integrated sphere (94-98% coating reflectance) and 4π geometry.

Self-absorption:

AST-S-G12C-300WBHT3DA1-abcdefW:1.2431

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.

Laboratory: UTEST TECHNICAL LABORATORY CO.LTD A2LA Certificate# 4810.01

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Report Format Number BL-FM-SA-012

2.1 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction BL-QP-033)

Test date	2024-03-29	Test Ambient:	25.2 ° C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	BLT-S-G12C-300WBT3DA2-BH10SP40/50/57W	Operation time(min)	110

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
UTC240304	120.0	60	2.553	304.57	0.994	3.71
2E-A1	277.0	60	1.120	294.38	0.949	4.65
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

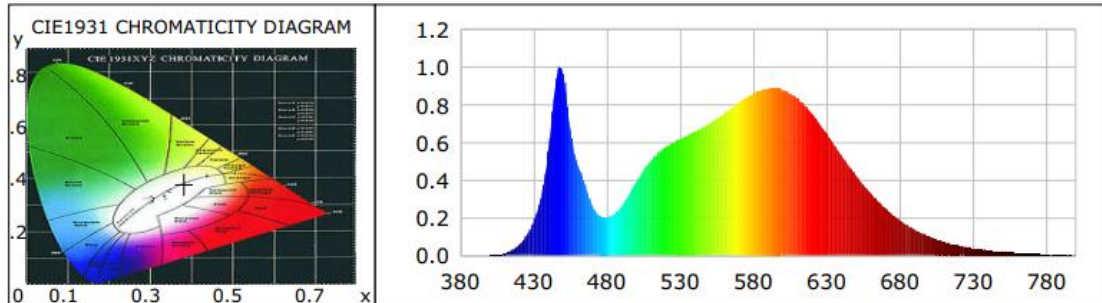
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	79	R9	-1
Frequency (Hz)	60	R2	86	R10	68
CCT (K)	3946	R3	93	R11	79
Duv	-0.0002	R4	80	R12	61
Chromaticity (x, y)	x=0.3827 y=0.3776	R5	79	R13	80
Chromaticity (u', v')	u(u')=0.2262v'=-0.5023	R6	82	R14	96
Color Rendering Index (CRI)	81	R7	84	R15	72
R9	-1	R8	61	--	--
Rf	82	--	--	--	--
Rg	97	--	--	--	--
Rcs,h1(%)	-13				

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)	46524.3	46236.5	>=10000(-10%)
Luminous Efficacy (lm/W)	152.75	157.06	Premium: >= 120(-3%)
Most worst Luminous/Highest	151.81		
Zonal lumens in the 0-90° zone (%)	100	--	Category 1: >=100(-1) Category 2: >=85(-3)
Zonal lumens in the 80-90°zone (%)	2.9	--	<=10(+3)
Beam Angle (°)	119.5	--	--
Center Beam Candle Power (cd)	10988	--	--

Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0007	0.6260	535	0.5998	539.1759	690	0.2484	223.3247
385	0.0007	0.6051	540	0.6181	555.6194	695	0.2150	193.2434
390	0.0009	0.8224	545	0.6369	572.5164	700	0.1856	166.8748
395	0.0006	0.5352	550	0.6582	591.6650	705	0.1607	144.4732
400	0.0020	1.7965	555	0.6765	608.1382	710	0.1371	123.2444
405	0.0049	4.3906	560	0.7002	629.4341	715	0.1176	105.7430
410	0.0119	10.7267	565	0.7267	653.2232	720	0.1008	90.6417
415	0.0269	24.1588	570	0.7549	678.5989	725	0.0852	76.6103
420	0.0539	48.4310	575	0.7857	706.2894	730	0.0725	65.1764
425	0.1009	90.7253	580	0.8114	729.3734	735	0.0624	56.0948
430	0.1794	161.3108	585	0.8407	755.7333	740	0.0533	47.9479
435	0.3069	275.8978	590	0.8625	775.3609	745	0.0456	41.0009
440	0.5501	494.5079	595	0.8781	789.3635	750	0.0376	33.8122
445	0.9058	814.2261	600	0.8870	797.3976	755	0.0323	29.0356
450	0.9710	872.8520	605	0.8893	799.4420	760	0.0275	24.7288
455	0.6739	605.8349	610	0.8806	791.6543	765	0.0234	21.0100
460	0.4862	437.0403	615	0.8624	775.2358	770	0.0207	18.6297
465	0.3796	341.2314	620	0.8346	750.2550	775	0.0163	14.6769
470	0.2677	240.6743	625	0.7969	716.3546	780	0.0153	13.7623
475	0.2116	190.2291	630	0.7523	676.2822	785	0.0122	10.9630
480	0.2047	184.0165	635	0.7002	629.4137	790	0.0095	8.5394
485	0.2194	197.2592	640	0.6463	581.0135	795	0.0091	8.1880
490	0.2598	233.5902	645	0.5886	529.0958	800	0.0073	6.5217
495	0.3224	289.8008	650	0.5317	477.9740			
500	0.3907	351.2230	655	0.4755	427.4840			
505	0.4499	404.4181	660	0.4236	380.7701			
510	0.5040	453.1108	665	0.3731	335.4201			
515	0.5442	489.1721	670	0.3280	294.8972			
520	0.5735	515.5405	675	0.2868	257.8363			
525	0.5998	539.1759	680	0.2484	223.3247			
530	0.6181	555.6194	685	0.2150	193.2434			

TM30

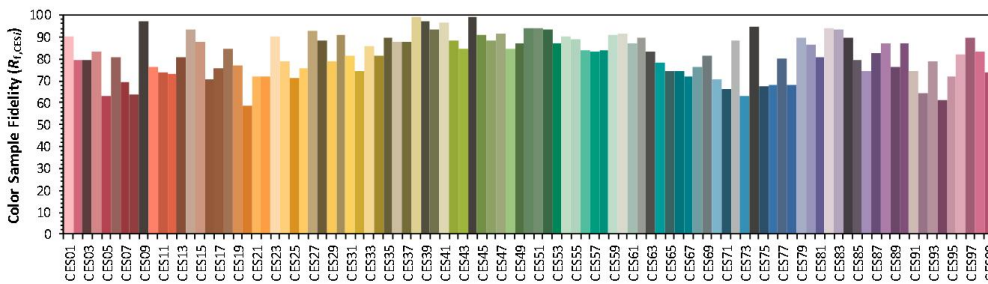
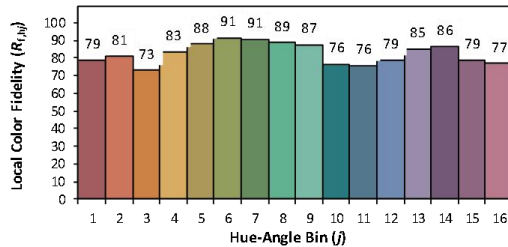
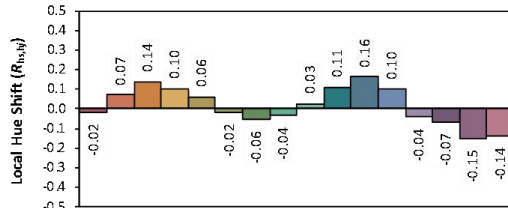
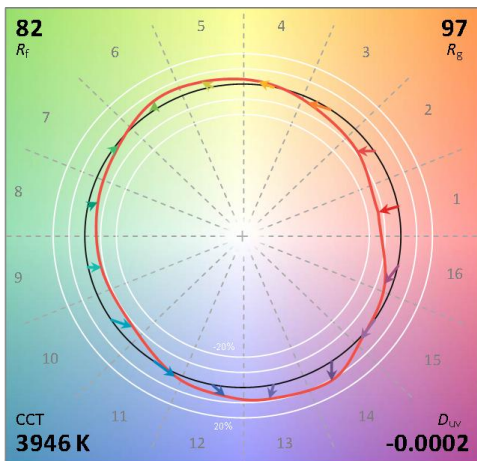
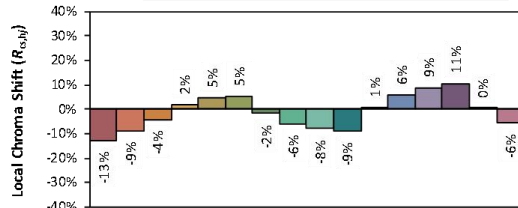
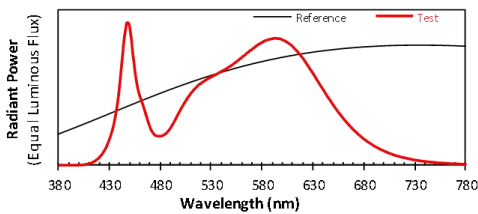
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-4080RC35005A1

Manufacturer: ASmart LIGHT CO., LTD

Date: 2024/3/29

Model: AST-S-G12C-300WBHT3DA1-abcde40W



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

x 0.3827
 y 0.3776
 u' 0.2262
 v' 0.5023

CIE 13.3-1995
(CRI)
 R_a 81
 R_g -1

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

Zonal Lumen Tabulation

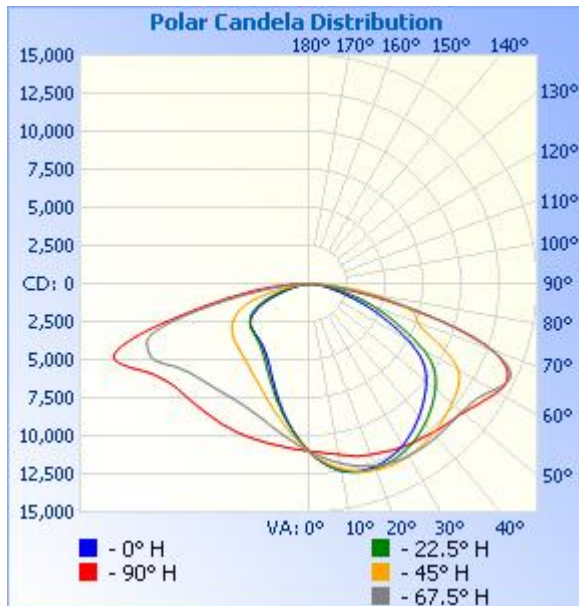
Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	8,877.3	19.1%	19.1%
0-40	15,182.2	32.6%	32.6%
0-60	31,245.7	67.2%	67.2%
60-90	15,276.3	32.8%	32.8%
70-100	6,704.7	14.4%	14.4%
90-120	0	0%	0%
0-90	46,522.0	100%	100%
90-180	0	0%	0%
0-180	46,522.0	100%	100%

Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	1,043.4	2.2%	90-100	0	0%
10-20	3,036.3	6.5%	100-110	0	0%
20-30	4,797.6	10.3%	110-120	0	0%
30-40	6,304.8	13.6%	120-130	0	0%
40-50	7,554.5	16.2%	130-140	0	0%
50-60	8,509.0	18.3%	140-150	0	0%
60-70	8,571.6	18.4%	150-160	0	0%
70-80	5,522.9	11.9%	160-170	0	0%
80-90	1,181.8	2.5%	170-180	0	0%

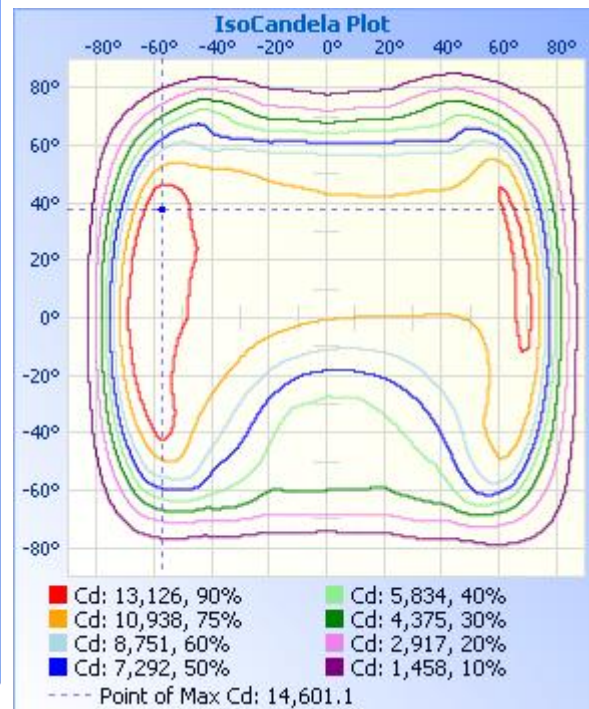
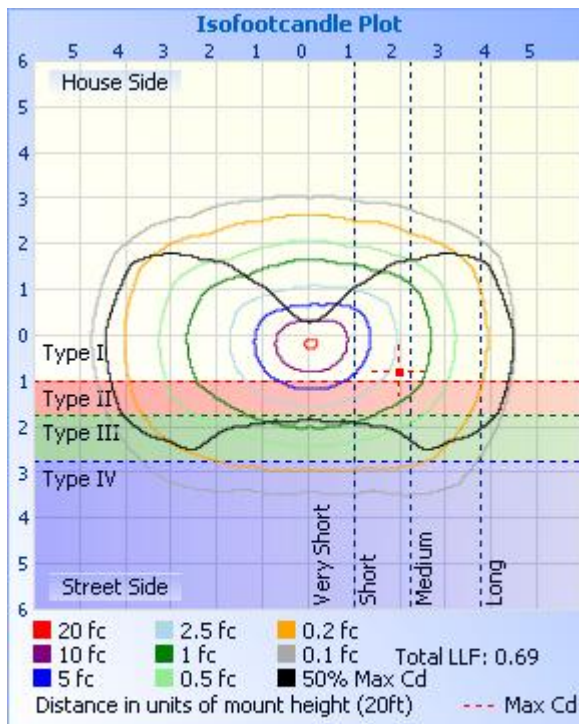
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width	
17.0ft	38.0 fc	61.0 ft	111.9 ft
34.0ft	9.51 fc	122.0 ft	223.9 ft
51.0ft	4.22 fc	183.0 ft	335.8 ft
68.0ft	2.38 fc	243.9 ft	447.7 ft
85.0ft	1.52 fc	304.9 ft	559.7 ft
102.0ft	1.06 fc	365.9 ft	671.6 ft

■ Vert. Spread: 121.7°
■ Horiz. Spread: 146.2°



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	10988	10988	10988	10988	10988	10988	10988	10988	10988	10988	10988	10988	10988	10988	10988	10988	10988
1	11176	11169	11153	11083	11011	10935	10869	10817	10774	10785	10832	10892	10969	11035	11116	11147	11176
2	11359	11353	11308	11181	11038	10892	10754	10639	10573	10586	10674	10796	10951	11083	11233	11298	11359
3	11536	11524	11449	11290	11073	10849	10638	10460	10363	10388	10515	10701	10928	11133	11339	11470	11536
4	11716	11685	11588	11389	11110	10808	10505	10260	10153	10184	10352	10587	10915	11181	11449	11614	11716
5	11873	11840	11725	11487	11153	10766	10382	10074	9940	9977	10168	10487	10898	11231	11556	11754	11873
6	12013	11994	11858	11586	11199	10724	10260	9895	9728	9774	10012	10394	10882	11281	11650	11881	12013
7	12135	12128	11996	11684	11243	10688	10147	9710	9499	9555	9856	10309	10864	11332	11756	12005	12135
8	12261	12253	12115	11780	11282	10657	10027	9510	9284	9355	9695	10216	10848	11389	11844	12108	12261
9	12378	12367	12228	11886	11335	10623	9915	9322	9065	9150	9538	10132	10825	11439	11931	12222	12378
10	12471	12462	12334	11974	11389	10597	9789	9133	8848	8951	9372	10043	10810	11489	12009	12308	12471
11	12556	12554	12430	12066	11455	10576	9675	8944	8626	8747	9221	9954	10809	11537	12076	12383	12556
12	12618	12641	12519	12149	11513	10557	9562	8754	8408	8547	9072	9869	10806	11588	12144	12453	12618
13	12671	12710	12609	12224	11585	10536	9452	8569	8174	8334	8934	9793	10808	11629	12209	12509	12671
14	12717	12767	12684	12305	11649	10516	9332	8364	8005	8139	8796	9713	10810	11670	12257	12551	12717
15	12751	12813	12757	12386	11715	10505	9229	8190	7771	7978	8657	9646	10811	11714	12305	12585	12751
16	12771	12850	12816	12464	11772	10502	9113	8031	7573	7785	8521	9565	10810	11754	12341	12615	12771
17	12785	12880	12868	12530	11819	10497	9006	7826	7377	7606	8378	9501	10798	11791	12376	12629	12785
18	12786	12899	12913	12604	11861	10492	8905	7650	7188	7410	8251	9442	10803	11825	12407	12635	12786
19	12781	12912	12960	12658	11899	10493	8803	7484	6992	7244	8127	9386	10807	11858	12430	12640	12781
20	12773	12920	13001	12719	11941	10498	8694	7309	6820	7080	8057	9331	10807	11890	12448	12634	12773
21	12753	12915	13040	12776	11981	10507	8604	7152	6654	6919	7924	9283	10812	11916	12455	12623	12753
22	12724	12909	13060	12830	12018	10522	8519	7007	6493	6770	7799	9244	10819	11939	12463	12609	12724
23	12693	12901	13075	12865	12060	10535	8438	6866	6342	6622	7692	9206	10830	11960	12464	12584	12693
24	12658	12887	13091	12904	12097	10559	8365	6733	6194	6468	7596	9170	10820	11977	12457	12550	12658
25	12609	12865	13111	12940	12137	10586	8298	6610	6050	6341	7503	9140	10821	11991	12452	12517	12609
26	12556	12833	13115	12969	12199	10610	8233	6476	5925	6215	7408	9110	10827	12006	12445	12475	12556

27	12502	12797	13117	13001	12253	10648	8174	6361	5809	6095	7324	9091	10824	12017	12436	12429	12502
28	12442	12751	13111	13028	12290	10692	8113	6249	5702	5977	7250	9071	10818	12029	12420	12383	12442
29	12371	12707	13104	13049	12331	10735	8049	6149	5599	5860	7171	9054	10821	12035	12405	12336	12371
30	12296	12664	13090	13061	12365	10783	8049	6050	5499	5753	7095	9044	10829	12041	12380	12270	12296
31	12214	12611	13072	13069	12401	10831	8050	5949	5418	5663	7024	9043	10832	12042	12350	12202	12214
32	12124	12551	13056	13080	12443	10879	7994	5863	5341	5575	6951	9037	10837	12039	12316	12132	12124
33	12035	12489	13030	13085	12485	10942	7966	5778	5273	5490	6887	9039	10827	12032	12287	12055	12035
34	11940	12417	13008	13094	12512	10995	7948	5711	5213	5403	6825	9048	10821	12028	12253	11978	11940
35	11848	12342	12977	13099	12545	11047	7928	5635	5152	5332	6767	9057	10822	12018	12210	11899	11848
36	11751	12272	12935	13101	12564	11107	7918	5565	5102	5273	6708	9072	10816	11999	12170	11813	11751
37	11635	12184	12896	13096	12589	11164	7914	5505	5056	5216	6647	9093	10813	11984	12127	11719	11635
38	11526	12100	12860	13098	12639	11224	7911	5456	5019	5156	6597	9110	10816	11968	12078	11623	11526
39	11419	12021	12817	13101	12691	11285	7911	5406	4985	5110	6549	9130	10817	11947	12026	11528	11419
40	11303	11935	12777	13097	12744	11349	7913	5362	4948	5066	6503	9151	10828	11929	11973	11432	11303
41	11196	11839	12731	13100	12793	11416	7916	5325	4921	5029	6456	9178	10845	11906	11914	11330	11196
42	11084	11736	12684	13092	12835	11483	7920	5288	4900	4994	6414	9211	10864	11877	11846	11218	11084
43	10955	11633	12640	13090	12868	11554	7927	5261	4878	4963	6380	9239	10872	11850	11784	11103	10955
44	10847	11529	12590	13088	12916	11623	7930	5234	4858	4937	6348	9271	10880	11819	11723	10989	10847
45	10713	11423	12534	13082	12953	11698	7930	5209	4840	4914	6317	9311	10888	11800	11651	10876	10713
46	10598	11318	12478	13076	12982	11768	7927	5190	4827	4888	6289	9353	10907	11764	11591	10754	10598
47	10480	11208	12425	13078	13024	11831	7924	5166	4814	4870	6259	9397	10926	11733	11510	10628	10480
48	10358	11097	12376	13082	13069	11908	7916	5142	4799	4853	6235	9441	10947	11714	11436	10509	10358
49	10224	10981	12323	13095	13129	11984	7904	5121	4788	4833	6213	9495	10973	11692	11367	10383	10224
50	10086	10856	12273	13113	13206	12051	7888	5094	4775	4816	6192	9557	10991	11665	11303	10259	10086
51	9934	10722	12208	13140	13289	12115	7857	5064	4765	4795	6170	9617	11020	11636	11224	10136	9934
52	9788	10594	12157	13173	13372	12198	7825	5033	4748	4778	6143	9680	11067	11615	11139	9996	9788
53	9629	10450	12101	13216	13478	12290	7782	4996	4722	4748	6117	9756	11122	11599	11065	9861	9629
54	9453	10293	12037	13274	13595	12377	7733	4952	4693	4719	6088	9839	11190	11600	10992	9719	9453
55	9223	10117	11970	13341	13701	12472	7675	4892	4657	4684	6054	9943	11265	11600	10914	9559	9223
56	8991	9905	11892	13423	13797	12589	7601	4830	4612	4646	6018	10046	11358	11613	10843	9383	8991
57	8721	9675	11794	13536	13908	12716	7517	4764	4555	4592	5979	10163	11462	11645	10748	9192	8721

58	8413	9399	11682	13685	14037	12854	7425	4684	4489	4538	5935	10304	11585	11691	10661	8945	8413
59	8013	9092	11532	13833	14163	12994	7331	4593	4415	4473	5888	10462	11704	11757	10558	8689	8013
60	7701	8741	11333	14003	14280	13165	7219	4490	4336	4399	5830	10659	11856	11846	10424	8397	7701
61	7252	8304	11086	14175	14378	13341	7085	4391	4227	4319	5762	10846	12033	11956	10259	8043	7252
62	6838	7903	10777	14327	14468	13510	6958	4281	4037	4225	5693	11026	12243	12089	10035	7686	6838
63	6423	7467	10367	14478	14502	13624	6823	4089	3900	4127	5608	11206	12494	12250	9782	7311	6423
64	5979	7045	9945	14565	14494	13702	6680	3933	3756	3943	5510	11331	12735	12432	9477	6938	5979
65	5586	6603	9493	14601	14434	13681	6525	3756	3569	3805	5385	11399	12992	12636	9082	6575	5586
66	5211	6221	9021	14525	14311	13542	6374	3608	3366	3656	5265	11427	13222	12811	8669	6187	5211
67	4835	5847	8574	14327	14103	13204	6212	3386	3124	3455	5135	11421	13443	12969	8209	5837	4835
68	4459	5482	8147	13984	13788	12733	6027	3175	2887	3281	5011	11397	13622	13108	7736	5473	4459
69	4080	5124	7878	13516	13408	12101	5686	2992	2639	3095	4867	11365	13705	13210	7315	5133	4080
70	3703	4793	7671	12842	12908	11390	5303	2759	2395	2866	4661	11309	13590	13190	6930	4770	3703
71	3358	4422	7529	12076	12212	10629	4941	2529	2107	2623	4459	11170	13251	13020	6626	4427	3358
72	3020	4079	7458	11124	11418	9989	4495	2251	1851	2369	4241	10899	12638	12629	6431	4038	3020
73	2701	3726	7380	10174	10462	9374	3978	1999	1605	2105	3941	10378	11847	11962	6279	3670	2701
74	2395	3365	7269	9268	9383	8612	3545	1753	1414	1850	3565	9703	10852	11021	6156	3290	2395
75	2121	3013	7041	8253	8148	7825	3118	1545	1220	1594	3216	8879	9730	9892	6016	2921	2121
76	1875	2694	6719	7299	7029	6948	2701	1339	1053	1379	2858	7955	8618	8749	5841	2592	1875
77	1652	2408	6300	6390	5986	6088	2318	1125	892	1194	2517	6908	7666	7637	5602	2288	1652
78	1467	2160	5797	5496	5016	5229	1933	948	739	1017	2143	5990	6836	6663	5278	2029	1467
79	1282	1918	5178	4751	4171	4303	1605	782	604	851	1816	5143	5979	5692	4891	1790	1282
80	1113	1698	4594	3933	3354	3607	1302	669	506	698	1518	4344	5304	4843	4484	1565	1113
81	944	1465	4025	3242	2716	2958	999	531	366	599	1215	3545	4578	4021	3985	1342	944
82	801	1271	3472	2525	2153	2341	810	364	205	454	941	2943	3956	3359	3496	1166	801
83	669	1088	2880	1943	1655	1795	647	213	70	318	740	2422	3416	2770	3014	988	669
84	550	897	2352	1443	1244	1294	488	140	33	187	602	1937	2844	2221	2536	833	550
85	444	735	1809	1053	902	1011	350	114	28	143	479	1519	2303	1786	2164	675	444
86	332	577	1271	708	547	674	235	96	28	109	383	1121	1792	1312	1801	526	332
87	239	381	822	384	280	351	124	72	28	80	266	765	1212	871	1376	391	239
88	148	197	307	153	81	84	58	38	29	62	159	554	803	595	822	263	148

89	74	55	64	60	43	38	32	23	22	36	84	266	383	328	398	132	74
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91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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95	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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Report No.:UTC2403042E-A

120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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Report No.:UTC2403042E-A

151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

BUG Rating

Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	5192.8	11.2	11.2
FM (30-60)	13376.5	28.8	28.8
FH (60-80)	7957.9	17.1	17.1
FVH (80-90)	756.5	1.6	1.6
BL (0-30)	3684.5	7.9	7.9
BM (30-60)	8995.5	19.3	19.3
BH (60-80)	6135.5	13.2	13.2
BVH (80-90)	425.1	0.9	0.9
UL (90-100)	0.0	0.0	0.0
UH (100-180)	0.0	0.0	0.0
Total	46524.3	100.0	100.0
BUG Rating	B5-U0-G5		

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

Test date	2024-03-29	Test Ambient:	25.2 ° C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	AST-S-G12C-300WBHT3DA1-abcde5 0W	Operation time(min)	110

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
UTC240304	120.0	60	2.457	292.8	0.993	3.73
2E-A1	277.0	60	1.075	282.88	0.95	4.78
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

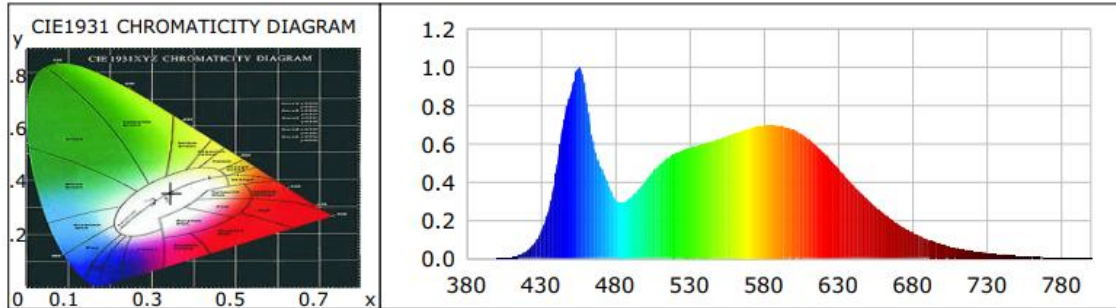
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	6
Frequency (Hz)	60	R2	90	R10	75
CCT (K)	4981	R3	95	R11	79
Duv	0.0017	R4	80	R12	58
Chromaticity (x, y)	x=0.3460 y=0.3557	R5	81	R13	84
Chromaticity (u', v')	u(u')=0.2104 v'=0.4868	R6	85	R14	97
Color Rendering Index (CRI)	83	R7	86	R15	75
R9	6	R8	66	--	--
Rf	83	--	--	--	--
Rg	95	--	--	--	--
Rcs,h1(%)	-13				

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)	48806.8	48429.1	>=10000(-10%)
Luminous Efficacy (lm/W)	166.69	171.20	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	165.40		

Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0010	0.9607	535	0.5647	564.3855	690	0.1809	180.7667
385	0.0007	0.6683	540	0.5782	577.8717	695	0.1563	156.1676
390	0.0007	0.7026	545	0.5894	589.0729	700	0.1364	136.3523
395	0.0009	0.8615	550	0.6040	603.6060	705	0.1164	116.3645
400	0.0009	0.9046	555	0.6124	612.0405	710	0.1004	100.3074
405	0.0028	2.8250	560	0.6253	624.9449	715	0.0868	86.7698
410	0.0068	6.7679	565	0.6408	640.3818	720	0.0743	74.2368
415	0.0172	17.1586	570	0.6543	653.9087	725	0.0630	62.9588
420	0.0365	36.5149	575	0.6688	668.3689	730	0.0538	53.7371
425	0.0737	73.6341	580	0.6781	677.6661	735	0.0459	45.9093
430	0.1383	138.2394	585	0.6897	689.3138	740	0.0386	38.6156
435	0.2481	247.9536	590	0.6959	695.4401	745	0.0336	33.5735
440	0.4473	447.0536	595	0.6962	695.8291	750	0.0290	28.9535
445	0.7048	704.3462	600	0.6959	695.4693	755	0.0250	24.9502
450	0.8625	862.0309	605	0.6873	686.8791	760	0.0209	20.8631
455	0.9960	995.4175	610	0.6739	673.4731	765	0.0179	17.8928
460	0.8766	876.1020	615	0.6528	652.4520	770	0.0155	15.4598
465	0.6131	612.6980	620	0.6253	624.9189	775	0.0138	13.7660
470	0.4863	485.9884	625	0.5934	593.0822	780	0.0122	12.1948
475	0.3915	391.3089	630	0.5553	554.9307	785	0.0087	8.6731
480	0.3096	309.4531	635	0.5135	513.2279	790	0.0063	6.3294
485	0.2934	293.2680	640	0.4704	470.0901	795	0.0060	5.9783
490	0.3152	315.0187	645	0.4271	426.8610	800	0.0059	5.9301
495	0.3536	353.4211	650	0.3844	384.2019			
500	0.4012	400.9257	655	0.3439	343.7337			
505	0.4494	449.1513	660	0.3066	306.3800			
510	0.4924	492.1141	665	0.2699	269.7694			
515	0.5236	523.3205	670	0.2388	238.6285			
520	0.5467	546.3278	675	0.2080	207.8563			
525	0.5647	564.3855	680	0.1809	180.7667			
530	0.5782	577.8717	685	0.1563	156.1676			

TM30

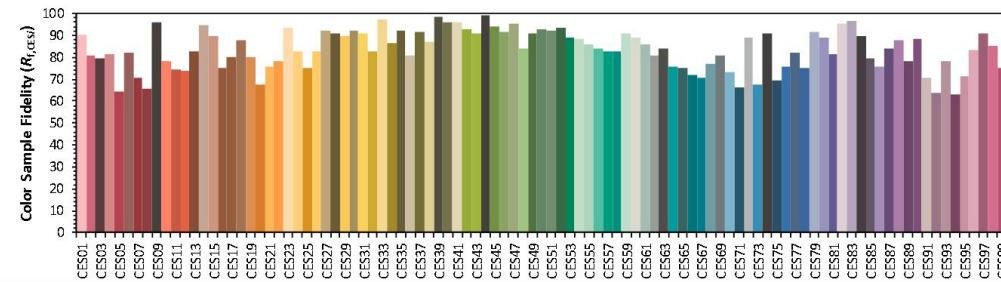
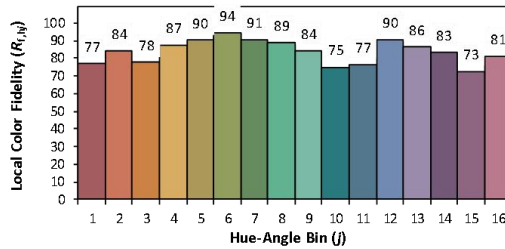
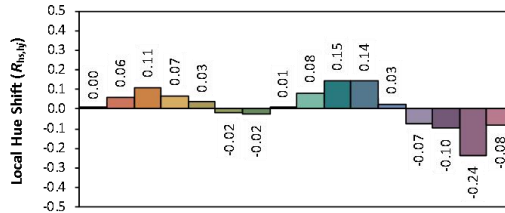
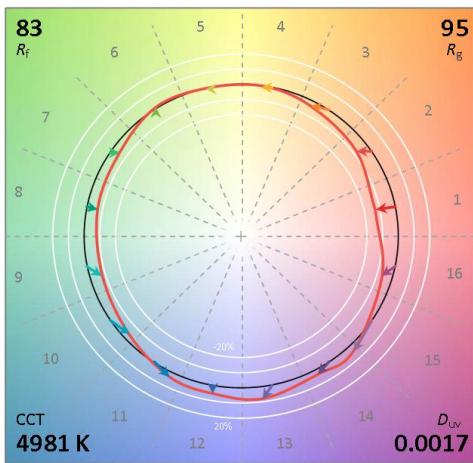
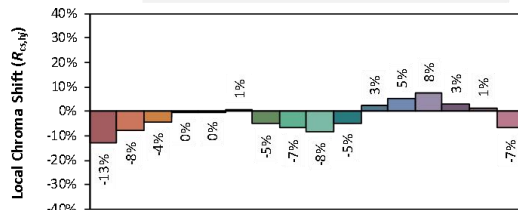
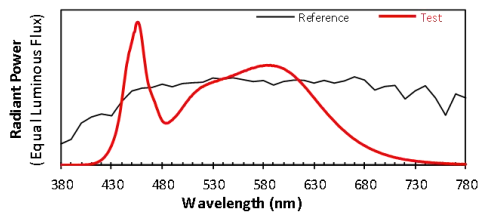
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-4080RC35005A1
L128-5780RC35005A1

Date: 2024/3/29

Manufacturer: ASmart LIGHT CO., LTD

Model: AST-S-G12C-300WBHT3DA1-abcde50W



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

x 0.3460
 y 0.3557
 u' 0.2104
 v' 0.4868

CIE 13.3-1995
(CRI)
 R_a 83
 R_g 6

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

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

Test date	2024-03-29	Test Ambient:	25.2 ° C
Test Orientation	Horizontal	Stabilization Time (min)	90
Model Number	AST-S-G12C-300WBHT3DA1-abcde5 7W	Operation time(min)	110

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
UTC240304	120.0	60	2.542	303.49	0.995	3.58
2E-A1	277.0	60	1.116	293.29	0.949	4.8
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

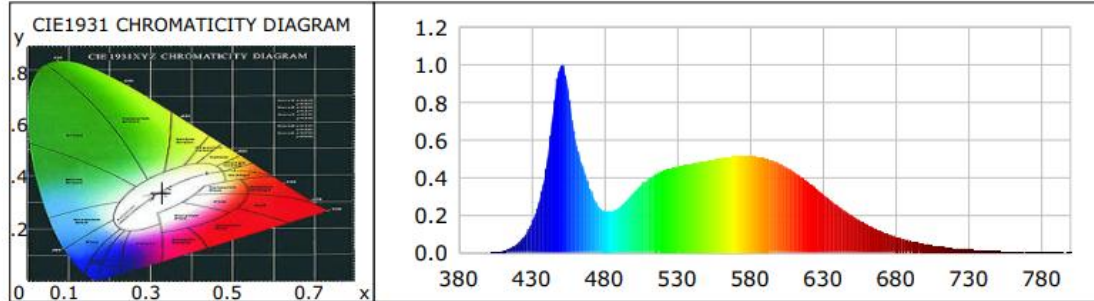
Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	0
Frequency (Hz)	60	R2	87	R10	68
CCT (K)	5809	R3	91	R11	81
Duv	0.0011	R4	82	R12	59
Chromaticity (x, y)	x=0.3257 y=0.3371	R5	81	R13	82
Chromaticity (u', v')	u(u')=0.2038 v'=0.4745	R6	82	R14	95
Color Rendering Index (CRI)	82	R7	86	R15	75
R9	0	R8	67	--	--
Rf	82	--	--	--	--
Rg	95	--	--	--	--
Rcs,h1(%)	-14				

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)	45811.8	45530.3	>=10000(-10%)
Luminous Efficacy (lm/W)	150.95	155.24	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	150.02		

Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0004	0.5874	535	0.4486	609.9869	690	0.1146	155.7955
385	0.0007	0.8845	540	0.4578	622.4814	695	0.0983	133.6625
390	0.0005	0.6435	545	0.4668	634.6938	700	0.0847	115.1295
395	0.0009	1.2219	550	0.4750	645.8285	705	0.0733	99.6050
400	0.0018	2.4821	555	0.4805	653.3331	710	0.0630	85.6744
405	0.0037	5.0393	560	0.4892	665.1721	715	0.0541	73.5562
410	0.0098	13.3554	565	0.4957	674.0142	720	0.0455	61.9285
415	0.0224	30.4312	570	0.5039	685.1278	725	0.0390	53.0518
420	0.0454	61.6756	575	0.5096	692.9807	730	0.0333	45.3349
425	0.0865	117.5842	580	0.5128	697.3594	735	0.0291	39.5475
430	0.1547	210.2900	585	0.5170	703.0501	740	0.0241	32.7162
435	0.2657	361.2981	590	0.5151	700.3638	745	0.0211	28.6245
440	0.4511	613.4104	595	0.5114	695.4249	750	0.0177	24.1064
445	0.7580	1030.6702	600	0.5041	685.4255	755	0.0154	21.0032
450	0.9971	1355.8776	605	0.4914	668.1670	760	0.0125	16.9759
455	0.8766	1191.9834	610	0.4760	647.2359	765	0.0114	15.4474
460	0.6098	829.1967	615	0.4535	616.6444	770	0.0096	13.0924
465	0.4635	630.3072	620	0.4303	585.1743	775	0.0084	11.4862
470	0.3479	473.1240	625	0.4041	549.4616	780	0.0072	9.8127
475	0.2571	349.5457	630	0.3741	508.6559	785	0.0067	9.0457
480	0.2221	302.0297	635	0.3432	466.7274	790	0.0048	6.5867
485	0.2212	300.7928	640	0.3129	425.4362	795	0.0034	4.6089
490	0.2394	325.5933	645	0.2802	381.0657	800	0.0036	4.8708
495	0.2761	375.4174	650	0.2516	342.1517			
500	0.3193	434.1792	655	0.2232	303.5135			
505	0.3581	486.9545	660	0.1965	267.1514			
510	0.3925	533.7720	665	0.1729	235.1202			
515	0.4186	569.2012	670	0.1518	206.4340			
520	0.4342	590.4327	675	0.1316	178.9096			
525	0.4486	609.9869	680	0.1146	155.7955			
530	0.4578	622.4814	685	0.0983	133.6625			

TM30

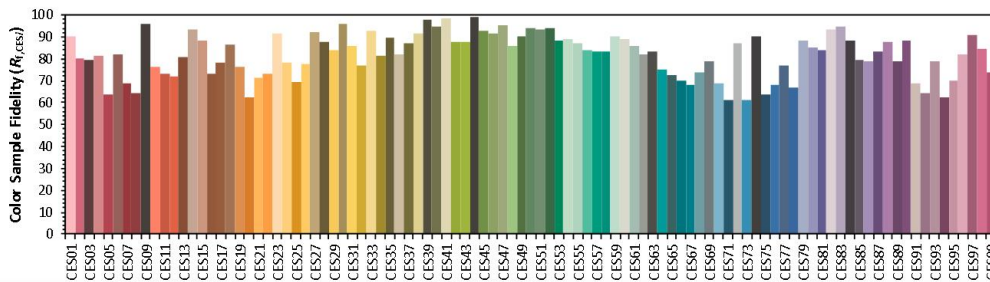
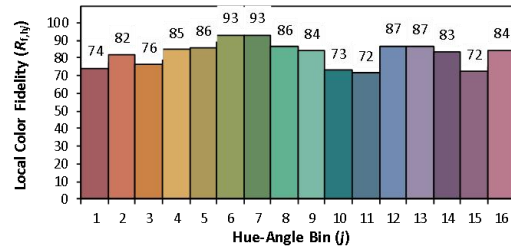
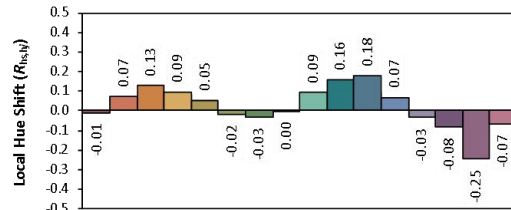
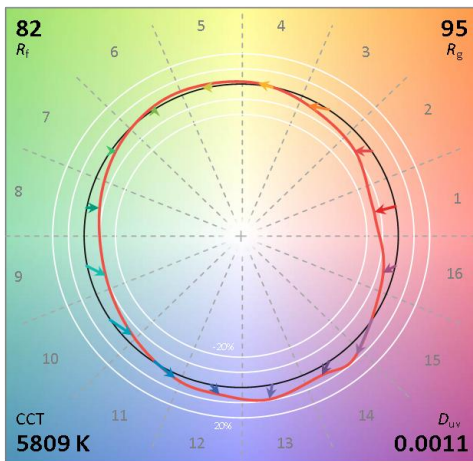
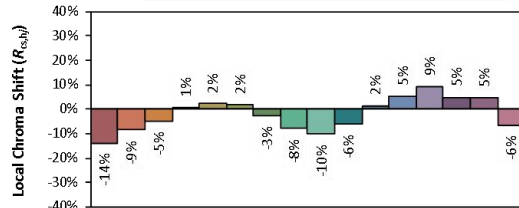
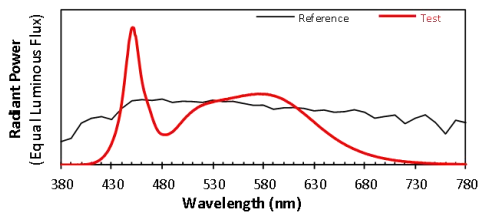
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-5780RC35005A1

Manufacturer: ASmart LIGHT CO., LTD

Date: 2024/3/29

Model: AST-S-G12C-300WBHT3DA1-abcde57W



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

x 0.3257
 y 0.3371
 u' 0.2038
 v' 0.4745

CIE 13.3-1995 (CRI)
 R_a 82
 R_9 0

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

3. Test Equipment

Equipment Name	Model No.	Serial No.	Calibration Date
Goniophotometric System	GPM-3000	DYHXF120001	2024-01-09
AC Power Source	CHP-500C	DYBWD010159	2024-01-08
Standard Lamp*	24V/150W	DYJYR040040	2024-01-17
Standard Lamp**	24V/100W	DYBWR030014	2024-01-17
Digital Power Meter	WT500	DYDWQ20010	2024-01-08
Integral Sphere (2M)	2M	DYJCE120067	2024-01-09
Digital Power Meter	WT500	DYDWQ200006	2024-01-08
Optical Color and Electrical Measurement System	CMS-3000S	DYJCE120067	2024-01-09

* Reference standard lamp (150W incandescent directional lamp) calibrated by Guangzhou Institute of Measurement and Testing Technology.

** Reference standard lamp (100W incandescent omni-directional lamp) calibrated by Guangzhou Institute of Measurement and Testing Technology.

Expand Uncertainty:

Photometric Measurement (Sphere): 2.02%, k=2

Chromaticity Measurement(Sphere):24.8K, k=2

Photometric Measurement(Goniophotometer):2.88%, k=2

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