



Report No.: BLC2011031E-A

LM-79-08 Test Report

For

Beyond LED Technology

(Brand Name: Beyond LED Technology)

Outdoor Pole/Arm-Mounted Area and Roadway Luminaires

Architectural Flood and Spot Luminaires

Model name(s): BLT-S-G07-450WJT3B3-BR50

Remark: "a" can be any two letters to represent lamp colors. "b" represent photocontrol, which can be "3RP", "3NP", "5RP", "5NP", "7RP", "7NP" for Photocontrol type provided or blank for no Photocontrol provided. "c" represent surge protector, can be "10SP", "20SP" for Surge-Protective Device type provided or blank for no Surge-Protective Device provided. "d" can be "M" or blank for Motion Sensor provided or not. "e" represent bracket, can be "AM", "DM", "YM", "A&DM" or "FM". "f" can be any two digits to represent CCT.

Representative (Tested) Model:
BLT-S-G07-450WJT3B3-BR50

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

Test & Report By:

Sophie Yang

Engineer: Sophie Yang

Date: 2020-12-04

Review By:

Jason Luo

Manager: Jason Luo



1.1 Product Information:

Model Number	BLT-S-G07-450WJT3B3-BR50	
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	450W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K, 4500K, 5000K, 5700K	
LED Manufacturer	Bridgelux Inc.	
LED Model	BXEM-27E-12H-6C	
Sample Number	BLC2011031E-A1(4000K),A2(5700K)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s
Photo		



AM	YM
	
DM	A&D
	
FM	
	



1.2 Test Specifications:

Date of Receipt	2020-11-29
Date of Test	2020-11-30
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	2020-11-30	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	BLT-S-G07-450WJT3B3-BR50		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201103	120.0	60	3.772	450.33	0.995	8.36
1E-A1	277.0	60	1.716	438.17	0.922	13.21
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

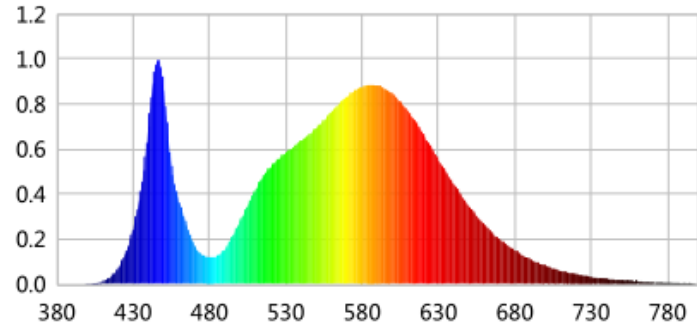
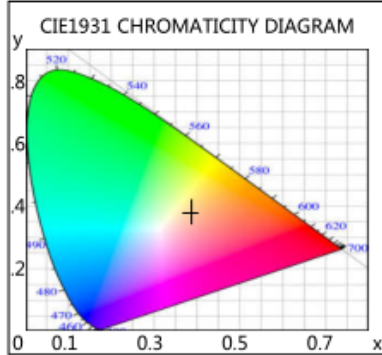
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	70	R9	-31
Frequency (Hz)	60	R2	79	R10	52
CCT (K)	3907	R3	88	R11	69
Duv	0.0000	R4	72	R12	48
Chromaticity (x, y)	x=0.3847 y=0.3794	R5	70	R13	71
Chromaticity (u', v')	u(u')=0.2268 v'=0.5034	R6	72	R14	93
Color Rendering Index (CRI)	73	R7	80	R15	63
R9	-31	R8	51	--	--
Rf	75	--	--	--	--
Rg	95	--	--	--	--
Rcs,h1(%)	-17				

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)	56033.6	56051.5	>=10000(-10%)
Luminous Efficacy (lm/W)	124.4	127.9	Premium: >= 120(-3%)
Most worst Luminous/Highest	124.42		
Zonal lumens in the 0-90° zone (%)	100	--	Category 1: >=100(-1) Category 2: >=85(-3)
Zonal lumens in the 80-90°zone (%)	1.8	--	<=10(+3)
Beam Angle (°)	148.6	--	--
Center Beam Candle Power (cd)	14177	--	--



Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0006	0.7545	525	0.5548	644.7063	670	0.1998	232.2144
385	0.0009	0.9996	530	0.5833	677.8773	675	0.1746	202.9331
390	0.0008	0.9340	535	0.6097	708.5333	680	0.1501	174.4672
395	0.0008	0.9154	540	0.6382	741.6693	685	0.1301	151.1584
400	0.0014	1.6075	545	0.6639	771.4975	690	0.1111	129.1588
405	0.0045	5.1992	550	0.6936	806.0076	695	0.0963	111.8951
410	0.0131	15.2460	555	0.7288	846.8501	700	0.0820	95.2522
415	0.0327	37.9973	560	0.7647	888.6114	705	0.0700	81.3246
420	0.0702	81.5763	565	0.8007	930.4869	710	0.0607	70.5673
425	0.1382	160.6410	570	0.8333	968.2965	715	0.0520	60.4518
430	0.2470	287.0726	575	0.8607	1000.1560	720	0.0445	51.6791
435	0.4153	482.5778	580	0.8757	1017.6309	725	0.0385	44.7754
440	0.6975	810.5387	585	0.8847	1028.0576	730	0.0331	38.4226
445	0.9816	1140.7108	590	0.8838	1026.9767	735	0.0278	32.3100
450	0.8653	1005.4792	595	0.8690	1009.8149	740	0.0243	28.2886
455	0.5315	617.5704	600	0.8457	982.7954	745	0.0211	24.4791
460	0.3688	428.6059	605	0.8107	942.0523	750	0.0182	21.1288
465	0.2630	305.6160	610	0.7705	895.3840	755	0.0148	17.2311
470	0.1724	200.3610	615	0.7202	836.8596	760	0.0140	16.2543
475	0.1331	154.6346	620	0.6675	775.6798	765	0.0105	12.1663
480	0.1209	140.5048	625	0.6105	709.3744	770	0.0102	11.8697
485	0.1265	147.0248	630	0.5527	642.3119	775	0.0085	9.8814
490	0.1561	181.4251	635	0.4980	578.6507	780	0.0078	9.1135
495	0.2113	245.5394	640	0.4431	514.8644	785	0.0067	7.7995
500	0.2789	324.1255	645	0.3936	457.3405	790	0.0051	5.8730
505	0.3494	406.0194	650	0.3456	401.6522	795	0.0053	6.1629
510	0.4176	485.2951	655	0.3048	354.1777	800	0.0026	3.0327
515	0.4740	550.7623	660	0.2658	308.8616			
520	0.5193	603.4907	665	0.2312	268.6716			



TM30

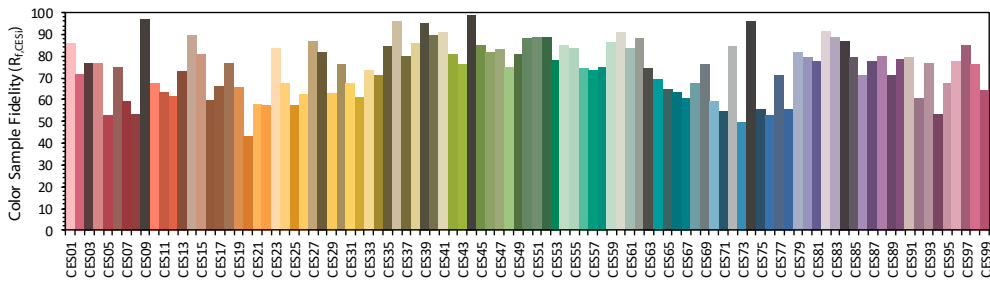
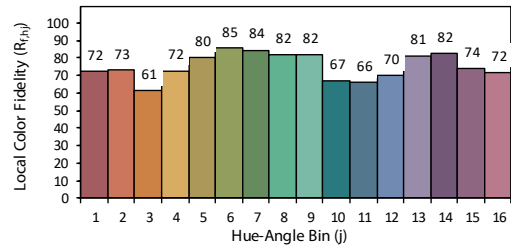
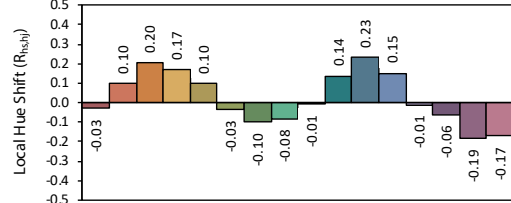
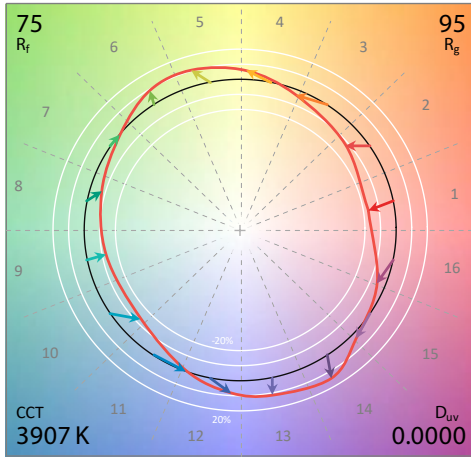
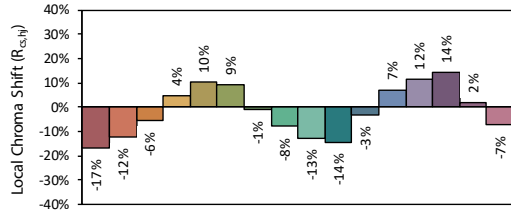
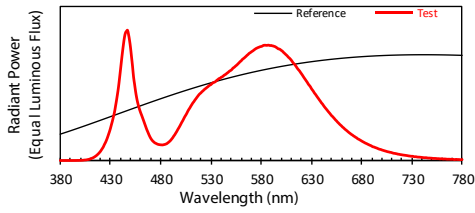
ANSI / IES TM-30-18 Color Rendition Report

Source: BXEM-27E-12H-6C

Date: 2020/11/30

Manufacturer: Beyond LED Technology

Model: BLT-S-G07-450WJT3B3-BR50



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

x 0.3847
 y 0.3794
 u' 0.2268
 v' 0.5034

CIE 13.3-1995 (CRI)
 R_a 73
 R_9 -31

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

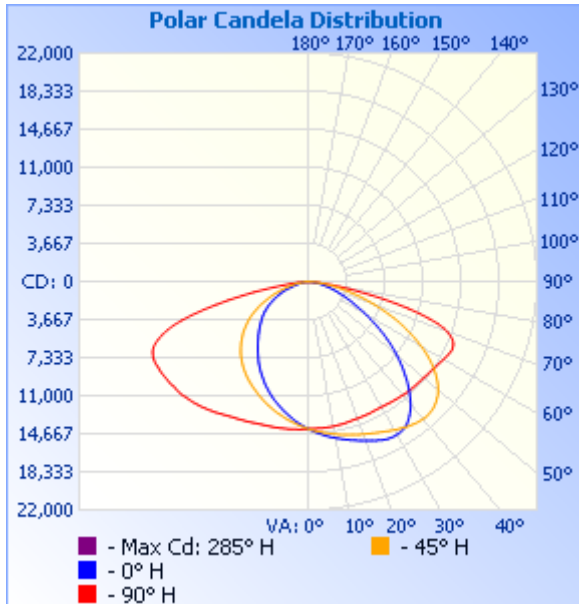
Zone	Lumens	% Lamp	% Luminaire
0-30	11,787.4	21%	21%
0-40	20,403.6	36.4%	36.4%
0-60	40,592.5	72.4%	72.4%
60-90	15,437.4	27.6%	27.6%
70-100	6,474.5	11.6%	11.6%
90-120	0	0%	0%
0-90	56,029.9	100%	100%
90-180	0	0%	0%
0-180	56,029.9	100%	100%

Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	1,350.7	2.4%	90-100	0	0%
10-20	3,983.1	7.1%	100-110	0	0%
20-30	6,453.6	11.5%	110-120	0	0%
30-40	8,616.2	15.4%	120-130	0	0%
40-50	9,997.9	17.8%	130-140	0	0%
50-60	10,190.9	18.2%	140-150	0	0%
60-70	8,962.9	16.0%	150-160	0	0%
70-80	5,450.6	9.7%	160-170	0	0%
80-90	1,023.9	1.8%	170-180	0	0%



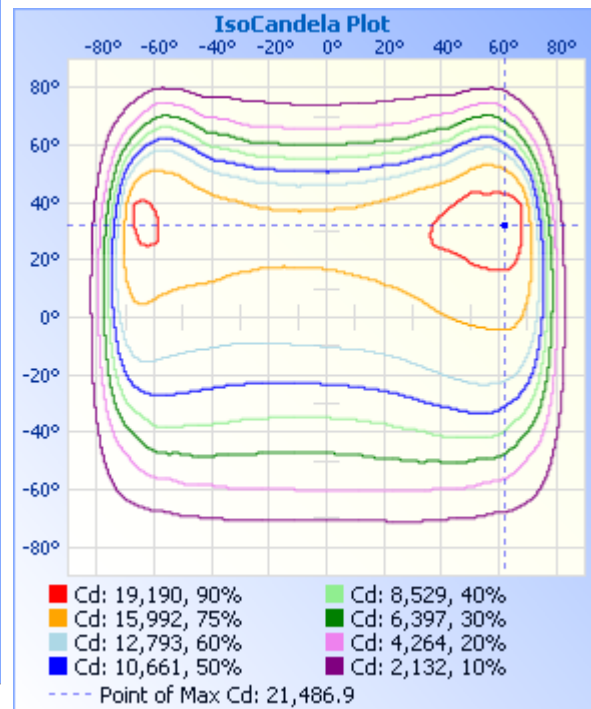
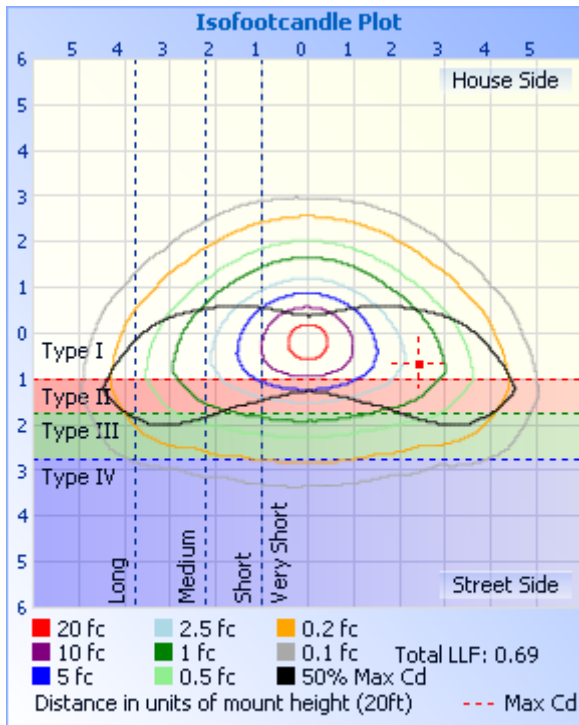
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width	
17.0ft	49.1 fc	34.4 ft	121.0 ft
34.0ft	12.3 fc	68.7 ft	242.0 ft
51.0ft	5.45 fc	103.1 ft	363.0 ft
68.0ft	3.07 fc	137.4 ft	484.1 ft
85.0ft	1.96 fc	171.8 ft	605.1 ft
102.0ft	1.36 fc	206.1 ft	726.1 ft

■ Vert. Spread: 90.6°
■ Horiz. Spread: 148.6°





Certificate#4810.01

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Candel a Table - Type C

	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270	285	300	315	330	345	360
0	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177	14177
1	14298	14306	14273	14254	14232	14210	14169	14139	14104	14083	14066	14056	14045	14063	14076	14083	14140	14154	14213	14222	14252	14276	14282	14296	14298
2	14420	14421	14368	14336	14285	14234	14162	14077	14035	13989	13953	13899	13920	13944	13956	13998	14091	14137	14229	14265	14325	14377	14393	14416	14420
3	14539	14524	14473	14409	14337	14259	14159	14032	13957	13893	13831	13766	13782	13825	13847	13917	14039	14117	14253	14304	14387	14475	14516	14521	14539
4	14651	14635	14571	14483	14393	14281	14151	13992	13882	13782	13702	13631	13644	13702	13739	13829	13988	14101	14267	14350	14461	14564	14617	14633	14651
5	14759	14735	14657	14550	14444	14301	14163	13953	13806	13671	13575	13495	13508	13564	13631	13742	13940	14085	14284	14393	14538	14660	14719	14748	14759
6	14886	14836	14752	14624	14521	14328	14160	13913	13727	13564	13447	13354	13366	13431	13518	13652	13870	14066	14299	14436	14616	14767	14822	14856	14886
7	14990	14945	14837	14691	14574	14345	14154	13884	13636	13461	13321	13213	13206	13296	13410	13551	13814	14045	14294	14482	14681	14855	14924	14958	14990
8	15094	15043	14930	14765	14626	14368	14156	13845	13569	13353	13189	13072	13066	13166	13294	13462	13758	14022	14313	14529	14758	14951	15027	15066	15094
9	15201	15142	15019	14832	14678	14393	14144	13803	13487	13256	13053	12932	12920	13019	13168	13368	13700	14006	14324	14585	14829	15041	15116	15173	15201
10	15294	15237	15093	14901	14730	14418	14133	13760	13399	13135	12927	12789	12772	12856	13045	13275	13644	13991	14338	14635	14906	15136	15210	15298	15294
11	15392	15330	15181	14991	14780	14444	14126	13710	13317	13006	12784	12635	12618	12721	12929	13174	13578	13980	14355	14684	14978	15221	15316	15398	15392
12	15498	15424	15265	15061	14812	14463	14115	13670	13246	12891	12643	12474	12465	12579	12805	13073	13518	13958	14373	14728	15076	15300	15414	15499	15498
13	15593	15509	15349	15128	14865	14494	14104	13629	13177	12776	12510	12330	12300	12433	12681	13005	13456	13941	14395	14786	15146	15394	15536	15596	15593
14	15690	15603	15430	15202	14922	14517	14089	13564	13092	12662	12347	12161	12154	12281	12536	12906	13402	13925	14407	14840	15238	15491	15645	15699	15690
15	15792	15699	15516	15274	14968	14536	14071	13512	12992	12552	12220	12002	11999	12135	12403	12804	13338	13905	14413	14888	15321	15581	15719	15805	15792
16	15896	15797	15605	15333	15017	14554	14050	13463	12901	12428	12056	11838	11836	11972	12279	12694	13277	13887	14425	14948	15398	15675	15824	15904	15896



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17	15988	15890	15728	15412	15083	14572	14028	13415	12806	12309	11917	11675	11671	11813	12140	12588	13219	13859	14447	14996	15473	15760	15949	16007	15988
18	16083	15999	15815	15489	15130	14595	14011	13365	12700	12187	11776	11518	11497	11656	12021	12493	13165	13838	14462	15048	15537	15855	16051	16115	16083
19	16194	16100	15911	15558	15156	14618	13999	13312	12618	12059	11623	11326	11338	11499	11877	12384	13104	13820	14492	15107	15616	15952	16167	16226	16194
20	16298	16188	16004	15623	15232	14653	14000	13258	12534	11931	11461	11157	11166	11341	11716	12283	13044	13811	14529	15166	15705	16064	16290	16332	16298
21	16403	16336	16086	15686	15283	14671	13994	13217	12447	11802	11312	10991	10999	11176	11586	12172	12987	13799	14572	15222	15795	16171	16405	16439	16403
22	16506	16446	16186	15776	15339	14694	13995	13170	12363	11683	11158	10825	10831	11008	11455	12065	12923	13809	14610	15296	15891	16277	16524	16557	16506
23	16636	16535	16269	15855	15405	14720	13998	13123	12278	11546	11019	10656	10658	10848	11303	11959	12850	13801	14653	15374	16026	16392	16629	16666	16636
24	16705	16629	16353	15939	15473	14757	13995	13072	12174	11421	10871	10478	10451	10682	11169	11844	12806	13799	14698	15446	16137	16503	16759	16783	16705
25	16832	16743	16457	16027	15535	14779	13987	13021	12091	11300	10723	10296	10283	10512	11018	11735	12751	13802	14741	15536	16253	16646	16880	16881	16832
26	16911	16818	16559	16116	15593	14824	13969	12980	11999	11184	10537	10120	10107	10305	10875	11632	12695	13788	14779	15618	16335	16774	17003	16977	16911
27	16975	16874	16643	16203	15657	14862	13964	12938	11918	11037	10386	9954	9925	10138	10729	11523	12625	13789	14827	15732	16462	16914	17116	17062	16975
28	17016	16948	16740	16302	15744	14906	13964	12892	11834	10916	10221	9769	9749	9958	10577	11408	12578	13784	14880	15829	16594	17041	17226	17143	17016
29	17036	16956	16794	16398	15826	14957	13967	12849	11738	10789	10074	9588	9560	9779	10422	11311	12525	13796	14927	15934	16769	17190	17329	17186	17036
30	17031	16971	16874	16499	15911	15027	13971	12800	11655	10658	9916	9389	9374	9609	10253	11190	12464	13802	14999	16042	16906	17335	17425	17223	17031
31	17006	16969	16927	16592	16001	15079	13995	12754	11570	10528	9756	9211	9191	9433	10087	11089	12409	13814	15068	16155	17041	17481	17516	17218	17006
32	16946	16929	16969	16677	16110	15144	14008	12711	11483	10395	9570	9031	9002	9251	9932	10973	12362	13827	15147	16282	17195	17637	17598	17195	16946
33	16884	16871	16997	16780	16213	15211	14025	12675	11392	10265	9401	8846	8811	9062	9765	10855	12310	13833	15213	16400	17356	17780	17638	17142	16884
34	16766	16784	16987	16879	16321	15289	14055	12650	11299	10132	9230	8675	8606	8882	9605	10738	12252	13838	15308	16534	17522	17916	17652	17059	16766
35	16622	16659	16959	16958	16448	15376	14078	12616	11202	9999	9068	8490	8423	8702	9440	10611	12178	13857	15390	16666	17689	18039	17664	16943	16622



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Certificate#4810.01

36	16403	16501	16911	17024	16558	15456	14110	12596	11109	9861	8903	8291	8235	8518	9273	10477	12113	13863	15483	16814	17876	18207	17676	16810	16403
37	16181	16282	16851	17097	16696	15548	14139	12556	11019	9725	8725	8116	8059	8318	9102	10353	12046	13873	15551	16952	18051	18319	17624	16634	16181
38	15926	16070	16748	17153	16828	15635	14170	12511	10937	9568	8558	7942	7871	8138	8934	10218	11961	13876	15628	17116	18227	18437	17557	16429	15926
39	15643	15798	16594	17207	16945	15734	14199	12481	10831	9420	8386	7766	7686	7967	8773	10073	11878	13875	15702	17271	18419	18475	17467	16148	15643
40	15341	15518	16448	17231	17085	15857	14233	12447	10738	9284	8217	7602	7507	7790	8592	9931	11797	13872	15790	17425	18608	18558	17325	15870	15341
41	14957	15241	16269	17254	17225	15951	14262	12417	10645	9140	8048	7420	7335	7615	8428	9788	11715	13865	15860	17583	18771	18634	17167	15572	14957
42	14596	14853	16039	17246	17352	16042	14293	12371	10537	8991	7851	7252	7168	7445	8240	9650	11628	13860	15924	17737	18964	18645	16949	15227	14596
43	14222	14493	15797	17212	17476	16148	14309	12321	10440	8829	7691	7093	7022	7279	8066	9499	11530	13837	15990	17846	19115	18617	16721	14887	14222
44	13820	14119	15528	17169	17596	16236	14321	12282	10319	8685	7526	6922	6840	7111	7906	9324	11438	13822	16054	17987	19270	18600	16475	14491	13820
45	13416	13732	15221	17080	17705	16325	14341	12216	10215	8527	7356	6762	6679	6958	7719	9160	11335	13799	16115	18125	19417	18541	16177	14106	13416
46	12975	13325	14878	16981	17812	16439	14363	12161	10098	8368	7184	6608	6522	6788	7548	8993	11218	13787	16175	18263	19557	18461	15836	13697	12975
47	12536	12888	14546	16848	17930	16523	14379	12106	9972	8210	7016	6457	6367	6631	7380	8831	11113	13759	16221	18380	19683	18397	15510	13276	12536
48	12121	12474	14169	16695	18023	16615	14410	12049	9848	8032	6862	6304	6201	6475	7218	8652	10959	13724	16296	18525	19817	18227	15137	12854	12121
49	11658	12056	13771	16529	18103	16746	14440	11991	9690	7862	6698	6148	6046	6327	7044	8453	10822	13687	16333	18657	19932	18063	14716	12424	11658
50	11223	11613	13364	16305	18186	16865	14465	11951	9555	7693	6523	6001	5899	6180	6867	8270	10682	13637	16360	18804	20038	17867	14294	11980	11223
51	10773	11167	12944	16079	18254	16976	14504	11892	9411	7520	6362	5851	5753	6008	6695	8088	10533	13565	16383	18962	20126	17621	13854	11515	10773
52	10300	10696	12527	15787	18303	17116	14537	11828	9266	7320	6206	5701	5604	5859	6530	7898	10375	13514	16391	19100	20190	17349	13447	11058	10300
53	9834	10265	12058	15494	18338	17247	14572	11754	9099	7141	6043	5550	5440	5704	6354	7699	10194	13447	16466	19255	20243	17045	12988	10566	9834
54	9382	9777	11624	15156	18355	17395	14617	11683	8942	6951	5879	5390	5290	5543	6180	7483	9999	13363	16512	19408	20280	16695	12483	10131	9382



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55	8882	9332	11166	14805	18373	17546	14686	11587	8769	6774	5696	5215	5130	5371	5973	7278	9798	13270	16526	19551	20282	16330	12014	9647	8882
56	8400	8857	10689	14431	18354	17717	14734	11501	8582	6571	5522	5054	4971	5205	5790	7066	9564	13159	16548	19731	20261	15869	11507	9172	8400
57	7921	8376	10201	14016	18326	17893	14783	11426	8364	6371	5347	4882	4786	5028	5598	6856	9326	13036	16582	19918	20201	15450	10985	8675	7921
58	7469	7881	9695	13575	18249	18104	14853	11324	8151	6177	5165	4705	4610	4842	5406	6625	9077	12897	16605	20101	20118	14982	10429	8172	7469
59	6981	7393	9230	13120	18174	18322	14927	11214	7935	5973	4977	4507	4422	4651	5207	6362	8815	12730	16623	20265	20011	14493	9933	7685	6981
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61	6130	6476	8210	12128	17917	18789	15098	10946	7468	5519	4569	4128	4036	4226	4765	5863	8247	12316	16634	20628	19646	13388	8859	6751	6130
62	5711	6093	7693	11646	17722	19046	15176	10795	7191	5295	4365	3928	3821	4016	4551	5594	7901	12085	16663	20824	19408	12816	8309	6309	5711
63	5305	5647	7221	11085	17513	19292	15229	10580	6920	5067	4158	3707	3627	3805	4305	5334	7582	11819	16636	20995	19178	12258	7803	5890	5305
64	4935	5286	6717	10544	17252	19577	15288	10358	6642	4825	3941	3502	3430	3587	4076	5062	7246	11514	16594	21149	18873	11666	7253	5459	4935
65	4600	4914	6250	10039	16979	19835	15302	10116	6347	4581	3705	3300	3234	3356	3854	4787	6905	11124	16489	21293	18497	11043	6746	5068	4600
66	4293	4562	5795	9509	16636	20101	15262	9802	6037	4304	3485	3097	3045	3150	3622	4512	6537	10715	16360	21413	18110	10461	6258	4733	4293
67	3992	4226	5385	8933	16290	20343	15164	9435	5697	4052	3273	2908	2850	2954	3399	4242	6141	10267	16146	21487	17663	9898	5821	4368	3992
68	3670	3918	4990	8376	15866	20498	14985	8986	5374	3797	3061	2700	2666	2768	3159	3942	5762	9764	15835	21447	17104	9232	5393	4057	3670
69	3392	3608	4580	7768	15404	20547	14688	8532	5042	3528	2848	2502	2443	2557	2957	3683	5376	9171	15426	21259	16520	8649	4939	3728	3392
70	3136	3325	4225	7215	14884	20455	14298	8036	4698	3284	2651	2295	2182	2343	2753	3422	4986	8585	14935	20981	15910	7996	4553	3444	3136
71	2915	3075	3870	6666	14303	20251	13795	7467	4315	3047	2448	2067	1916	2140	2556	3152	4572	7990	14322	20544	15138	7447	4177	3184	2915
72	2681	2835	3569	6172	13620	19830	13125	6896	3969	2814	2235	1842	1713	1917	2340	2904	4198	7349	13641	19963	14414	6854	3854	2935	2681
73	2462	2614	3250	5619	12945	19136	12190	6329	3646	2592	2029	1638	1541	1692	2128	2674	3849	6649	12704	19006	13501	6297	3505	2717	2462



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74	2211	2387	2980	5103	12075	17964	11136	5740	3317	2346	1861	1457	1394	1499	1949	2455	3479	5994	11641	17727	12616	5728	3203	2477	2211
75	2004	2178	2734	4621	11233	16490	9989	5109	2986	2122	1686	1292	1258	1343	1779	2208	3157	5367	10369	16018	11529	5130	2930	2275	2004
76	1804	1978	2496	4150	10313	14512	8728	4546	2677	1907	1525	1158	1135	1202	1608	1983	2828	4760	9083	14115	10528	4592	2672	2048	1804
77	1615	1783	2270	3704	9381	12690	7474	4042	2380	1715	1374	1030	1025	1069	1442	1782	2523	4210	7836	12087	9484	4128	2426	1852	1615
78	1446	1586	2042	3268	8487	10565	6133	3565	2109	1497	1206	918	922	941	1289	1574	2239	3665	6513	10006	8511	3632	2180	1648	1446
79	1265	1426	1841	2892	7448	8710	5012	3137	1859	1313	1070	820	840	841	1140	1387	1961	3221	5361	8205	7420	3208	1966	1477	1265
80	1108	1250	1631	2508	6495	6830	4014	2723	1557	1132	940	720	744	748	1009	1190	1713	2821	4196	6493	6474	2732	1735	1309	1108
81	947	1091	1431	2107	5549	5281	3071	2380	1236	946	796	627	657	655	865	1000	1398	2420	3254	4882	5517	2292	1528	1143	947
82	794	938	1224	1728	4647	3977	2330	2036	932	754	663	525	554	545	726	820	1063	2069	2445	3666	4595	1875	1335	979	794
83	660	787	1037	1379	3816	3006	1703	1695	702	613	532	433	455	445	591	645	805	1744	1820	2722	3780	1517	1116	821	660
84	529	654	847	1074	2979	2185	1209	1321	499	429	405	346	365	358	452	468	583	1425	1313	2021	2894	1178	907	691	529
85	405	507	663	821	2172	1532	811	936	352	302	288	274	290	284	330	334	426	1096	946	1444	2209	900	721	542	405
86	293	374	463	566	1494	1049	492	538	235	202	188	211	228	224	217	234	296	644	612	997	1548	625	507	392	293
87	188	257	305	357	842	635	281	267	146	117	127	156	162	156	143	152	185	353	392	646	928	400	327	270	188
88	103	137	178	194	386	313	142	111	69	61	62	60	56	74	74	83	112	183	228	367	440	220	197	162	103
89	44	42	60	87	133	132	65	50	41	27	30	18	23	25	28	48	64	94	118	177	173	97	82	64	44
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114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	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	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	0	0	0	0	0	0	0



Report No.: BLC2011031E-A

BUG Rating

Lum. Classification System (LCS)

<u>LCS Zone</u>	<u>Lumens</u>	<u>%Lamp</u>	<u>%Lum</u>
FL (0-30)	6597.4	11.8	11.8
FM (30-60)	17963.5	32.1	32.1
FH (60-80)	9550.3	17.0	17.0
FVH (80-90)	703.2	1.3	1.3
BL (0-30)	5189.8	9.3	9.3
BM (30-60)	10846.6	19.4	19.4
BH (60-80)	4862.1	8.7	8.7
BVH(80-90)	320.6	0.6	0.6
UL (90-100)	0.0	0.0	0.0
UH (100-180)	0.0	0.0	0.0
Total	56033.5	100.2	100.0
BUG Rating	B5-U0-G4		

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

Test date	2020-11-30	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	BLT-S-G07-450WJT3B3-BR50		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC201103	120.0	60	3.754	448.26	0.995	8.03
1E-A2	277.0	60	1.706	436.06	0.923	13.54
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

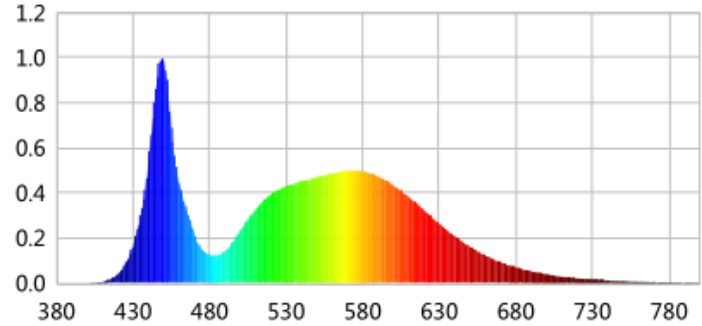
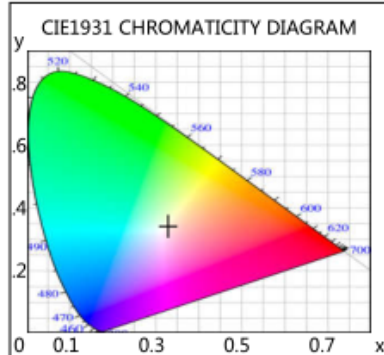
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	73	R9	-25
Frequency (Hz)	60	R2	80	R10	52
CCT (K)	5645	R3	84	R11	74
Duv	0.0009	R4	76	R12	48
Chromaticity (x, y)	x=0.3292 y=0.3399	R5	74	R13	74
Chromaticity (u', v')	u(u')=0.2051 v'=0.4765	R6	72	R14	91
Color Rendering Index (CRI)	75	R7	82	R15	68
R9	-25	R8	60	--	--
Rf	76	--	--	--	--
Rg	95	--	--	--	--
Rcs,h1(%)	-17				

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)	56709.3	56190.2	>=10000(-10%)
Luminous Efficacy (lm/W)	126.5	128.9	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	125.35		



Spectral Power Distribution & Chromaticity Diagram



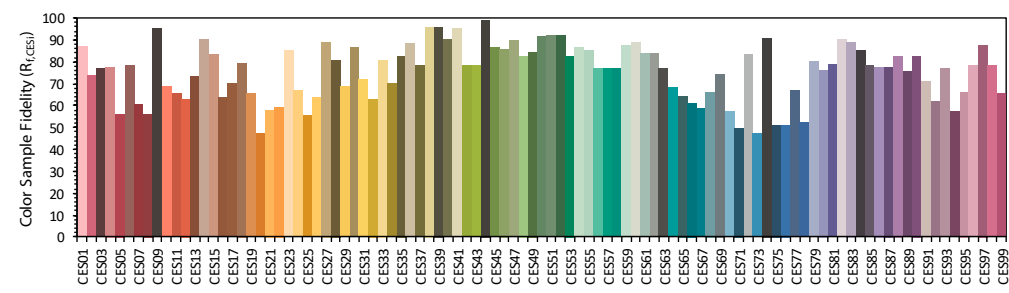
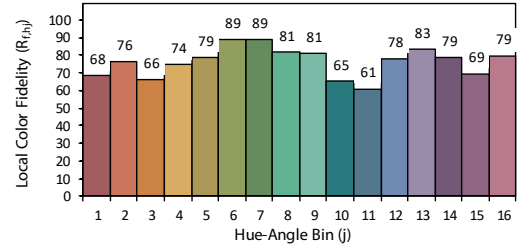
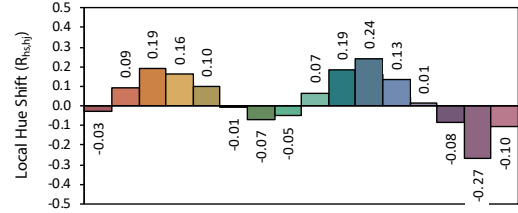
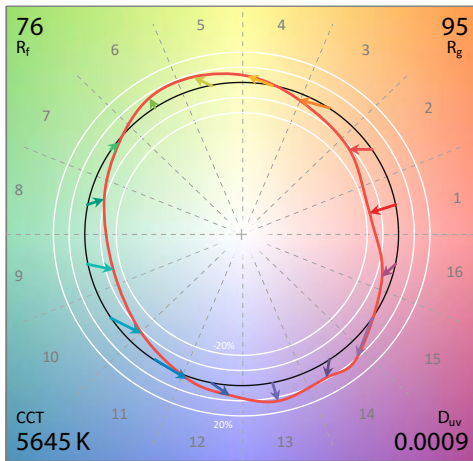
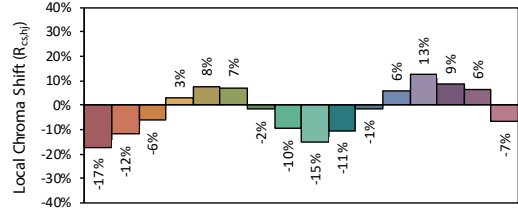
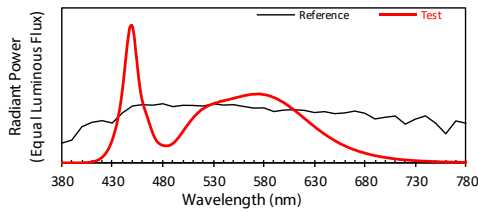
WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0009	1.6065	525	0.4153	782.5103	670	0.0945	177.9682
385	0.0007	1.2406	530	0.4284	807.1961	675	0.0813	153.2107
390	0.0006	1.1827	535	0.4406	830.1000	680	0.0711	133.9210
395	0.0005	0.8679	540	0.4516	850.8718	685	0.0612	115.3636
400	0.0010	1.8614	545	0.4594	865.6007	690	0.0526	99.0143
405	0.0024	4.5855	550	0.4685	882.7773	695	0.0457	86.0436
410	0.0070	13.1326	555	0.4778	900.1870	700	0.0394	74.3258
415	0.0176	33.2276	560	0.4861	915.9534	705	0.0339	63.8641
420	0.0405	76.2835	565	0.4939	930.5159	710	0.0291	54.7631
425	0.0851	160.3928	570	0.4985	939.2858	715	0.0244	45.9546
430	0.1663	313.2526	575	0.5001	942.2840	720	0.0216	40.6440
435	0.3018	568.6600	580	0.4950	932.6816	725	0.0192	36.2324
440	0.5283	995.3405	585	0.4871	917.7105	730	0.0164	30.9176
445	0.8659	1631.5444	590	0.4744	893.9221	735	0.0140	26.3175
450	0.9894	1864.2539	595	0.4571	861.2003	740	0.0131	24.7736
455	0.6927	1305.0979	600	0.4356	820.6757	745	0.0111	20.9898
460	0.4424	833.5397	605	0.4112	774.7268	750	0.0086	16.2802
465	0.3256	613.3981	610	0.3837	722.9099	755	0.0071	13.3249
470	0.2165	408.0116	615	0.3542	667.3068	760	0.0066	12.5285
475	0.1502	283.0202	620	0.3231	608.8654	765	0.0055	10.3587
480	0.1274	240.1333	625	0.2933	552.6063	770	0.0057	10.7486
485	0.1246	234.7407	630	0.2641	497.6852	775	0.0044	8.3324
490	0.1406	264.9092	635	0.2359	444.4139	780	0.0038	7.2271
495	0.1793	337.8406	640	0.2091	393.9034	785	0.0029	5.4890
500	0.2286	430.7428	645	0.1854	349.3979	790	0.0024	4.4530
505	0.2792	526.0101	650	0.1623	305.8661	795	0.0027	5.0404
510	0.3270	616.0639	655	0.1421	267.7986	800	0.0018	3.4093
515	0.3644	686.5404	660	0.1243	234.2227			
520	0.3921	738.8440	665	0.1076	202.7789			



TM30

ANSI / IES TM-30-18 Color Rendition Report

Source: BXEM-27E-12H-6C	Manufacturer: Beyond LED Technology
Date: 2020/11/30	Model: BLT-S-G07-450WJT3B3-BR50



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

x	0.3292	CIE 13.3-1995 (CRI) R_a 75 R_9 -25
y	0.3399	
u'	0.2051	
v'	0.4765	

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



Calculated Efficacy Data for family models:

Model Number	Luminous Flux (lm)	Power (W)	Efficacy (lm/W)
BLT-S-G07-450WJT3B3-BR50	56033.6	450.33	124.43
BLT-S-G07-450WJT3B3-BR51	56202.5	449.30	125.09
BLT-S-G07-450WJT3B3-BR52	56371.5	448.78	125.61
BLT-S-G07-450WJT3B3-BR53	56709.3	448.26	126.51

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

$$56202.5 = (56709.3 - 56033.6) / 4 + 56033.6$$
$$56371.5 = (56709.3 - 56033.6) / 4 + 56202.5$$

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

$$449.30 = (448.26 + 450.33) / 2$$
$$448.78 = (448.26 + 449.30) / 2$$

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

$$125.09 = 56202.5 / 449.30$$
$$125.61 = 56371.5 / 448.78$$



Report No.: BLC2011031E-A

3. Test Equipment

Equipment Name	Model No.	Serial No.	Next Calibration Date
Goniophotometric System	GPM-3000	DYHXF120001	2021-02-26
AC Power Source	CHP-500C	N/A	2021-03-29
Total Luminous Flux Standard Lamp	24V/150W	DYJYR040040	2021-03-01
Digital Power Meter	WT500	DYDWQ200006	2021-03-29
Integral Sphere (2M)	2M	DYJCE120067	2021-02-26
Digital Power Meter	WT500	DYDWQ200006	2021-03-29
Optical Color and Electrical Measurement System	CMS-3000S	DYJCE120067	2021-02-26

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 *****