



Report No.: BLC2106046E-C

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-GB-300WJ3030T3H2-BR10SP50

Remark: "a" can be any two letters tofor lamp colors; "b" can be "3RP", "3NP", "5RP", "5NP", "7RP", "7NP" or blank for photocell type provided or not;

"c" can be "10SP", "20SP" or blank for Surge-Protective Device type provided or not;

"d" can be "PS", "MS", "DPS", "DMS", "DMS" for Motion Sensor type provided or blank for no Motion Sensor provided;

"e" can be "AM", "DM", "YM", "A&D" or "FM" to represent mounting bracket types;

"f" can be "S" or blank for Socket provided or not;

"h" can be any digits for CCT.

Representative (Tested) Model:

BLT-S-GB-300WJ3030T3H2-BR10SP50

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

Test & Report By:

Sophie Yang

Engineer: Sophie Yang

Date: 2021-08-24

Review By:

Jason Luo

Manager: Jason Luo



1.1 Product Information:

Organization Name		
Brand Name		
Model Number	BLT-S-GB-300WJ3030T3H2-BR10SP50	
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	277-480Vac, 50/60 Hz	
Nominal Power	300W	
Rated Initial Lamp Lumen	--	
Declared CCT	4000K, 4500K, 5000K, 5700K	
LED Manufacturer	Bridgelux Inc.	
LED Model	BXEM-40C-12H-6C	
Sample Number	BLC2106046E-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	2021-06-29
Date of Test	2021-07-01
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	2021-07-01	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	BLT-S-GB-300WJ3030T3H2-BR10SP50		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC210604	277.0	60	1.076	294.69	0.989	3.76
6E-C1	480.0	60	0.662	290.87	0.916	15.03
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

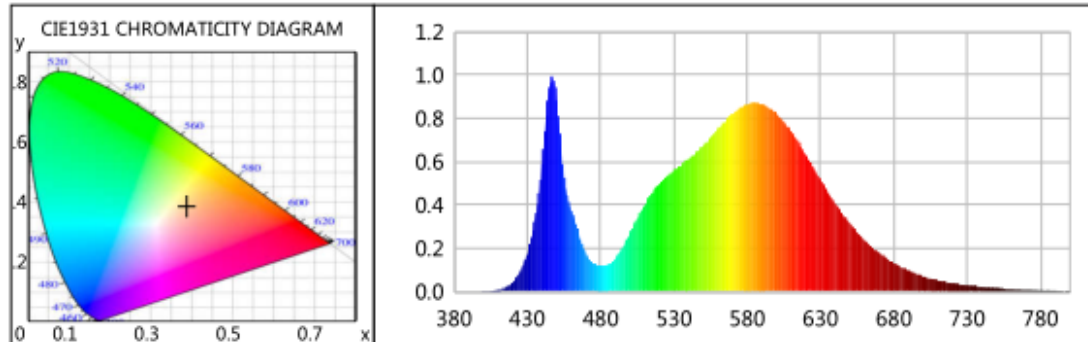
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	277.0	R1	67	R9	-41
Frequency (Hz)	60	R2	79	R10	51
CCT (K)	3898	R3	89	R11	66
Duv	0.0016	R4	70	R12	45
Chromaticity (x, y)	x=0.3862 y=0.3837	R5	68	R13	69
Chromaticity (u', v')	u(u')=0.2261 v'=0.5055	R6	71	R14	94
Color Rendering Index (CRI)	71	R7	79	R15	60
R9	-41	R8	47	--	--
Rf	74	--	--	--	--
Rg	94	--	--	--	--
Rcs,h1(%)	-18				

Photometric Measurement – Goniophotometer Method:

Parameter	Result		DLC V5.1 Pass Criteria
Test Voltage (V)	277.0	480.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	51220.1	50713.2	>=10000(-10%)
Luminous Efficacy (lm/W)	173.81	174.35	Premium: >= 120(-3%)
Most worst Luminous/Highest	172.09		
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 (°)	124.9	--	--
Center Beam Candle Power (cd)	12839	--	--



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	0.3844	525	0.5304	509.2657	670	0.1768	169.7889
385	0.0004	0.3638	530	0.5568	534.5991	675	0.1523	146.2734
390	0.0002	0.1935	535	0.5835	560.2197	680	0.1305	125.3108
395	0.0007	0.6878	540	0.6140	589.5084	685	0.1123	107.8147
400	0.0013	1.2334	545	0.6401	614.5977	690	0.0957	91.9085
405	0.0028	2.7058	550	0.6741	647.1944	695	0.0827	79.3646
410	0.0075	7.2314	555	0.7102	681.8597	700	0.0699	67.1355
415	0.0187	17.9552	560	0.7497	719.8197	705	0.0602	57.8298
420	0.0430	41.3221	565	0.7865	755.1466	710	0.0519	49.8279
425	0.0901	86.5348	570	0.8185	785.8911	715	0.0447	42.9376
430	0.1757	168.6811	575	0.8484	814.6056	720	0.0373	35.7653
435	0.3193	306.5583	580	0.8665	831.9005	725	0.0325	31.2105
440	0.5863	562.8913	585	0.8709	836.1326	730	0.0277	26.5648
445	0.9416	904.0514	590	0.8685	833.8202	735	0.0239	22.9298
450	0.8861	850.7351	595	0.8488	814.9864	740	0.0197	18.9571
455	0.5308	509.6328	600	0.8223	789.5251	745	0.0171	16.4472
460	0.3707	355.9566	605	0.7837	752.4278	750	0.0149	14.3477
465	0.2685	257.7955	610	0.7381	708.6669	755	0.0131	12.5485
470	0.1708	164.0346	615	0.6865	659.1235	760	0.0105	10.1047
475	0.1298	124.5903	620	0.6315	606.3237	765	0.0102	9.8042
480	0.1196	114.8456	625	0.5727	549.8291	770	0.0081	7.7309
485	0.1232	118.3241	630	0.5155	494.9383	775	0.0073	7.0452
490	0.1513	145.3138	635	0.4601	441.7970	780	0.0063	6.0887
495	0.2026	194.5338	640	0.4080	391.7203	785	0.0049	4.7315
500	0.2689	258.2229	645	0.3585	344.1809	790	0.0049	4.6757
505	0.3354	322.0385	650	0.3150	302.4768	795	0.0033	3.1738
510	0.3994	383.4769	655	0.2744	263.5008	800	0.0029	2.7891
515	0.4537	435.6043	660	0.2370	227.5695			
520	0.4953	475.5708	665	0.2065	198.2872			

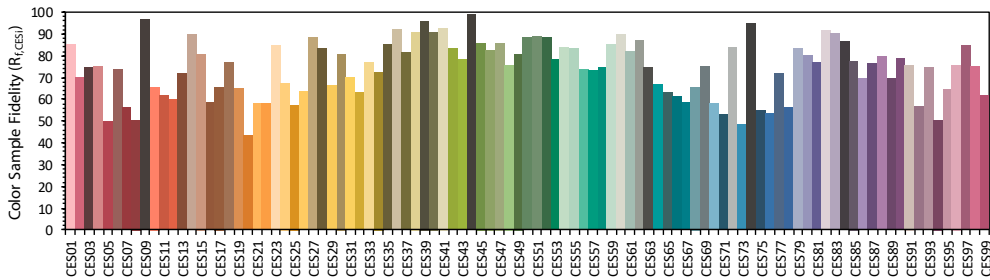
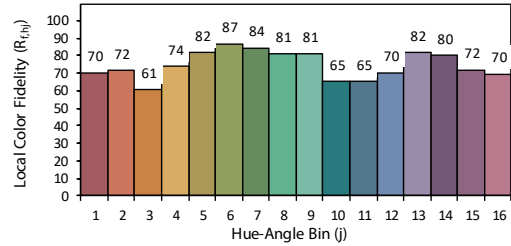
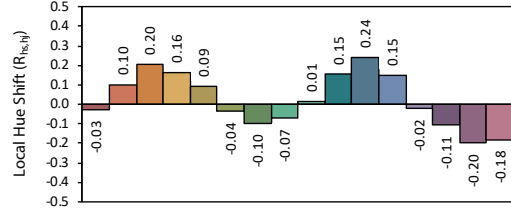
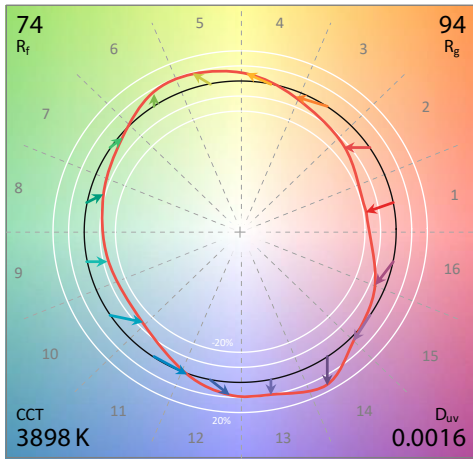
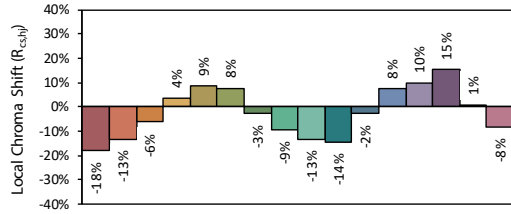
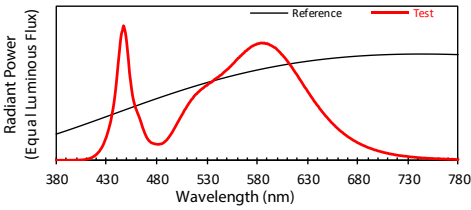


TM30

ANSI / IES TM-30-18 Color Rendering Report

Source: BXEM-40C-12H-6C
Date: 2021/7/1

Manufacturer: Beyond LED Technology
Model: BLT-S-GB-300WJ3030T3H2-BR10SP50



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

x **0.3863**
 y **0.3837**
 U' **0.2261**
 v' **0.5055**

CIE 13.3-1995 (CRI)
 R_a 71
 R_9 -41

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	9,698.0	20.4%	20.4%
0-40	16,644.7	35.1%	35.1%
0-60	33,845.3	71.4%	71.4%
60-90	13,580.6	28.6%	28.6%
70-100	5,740.2	12.1%	12.1%
90-120	0	0%	0%
0-90	47,425.8	100%	100%
90-180	0	0%	0%
0-180	47,425.8	100%	100%

Lumens Per Zone

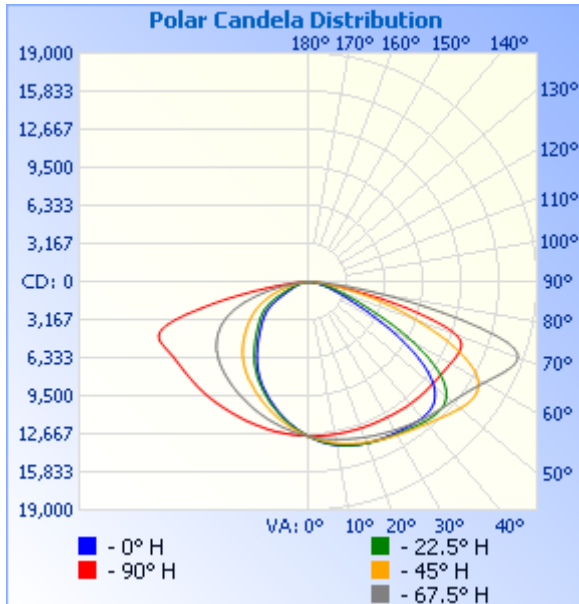
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	1,130.1	2.4%	90-100	0	0%
10-20	3,304.8	7.0%	100-110	0	0%
20-30	5,263.2	11.1%	110-120	0	0%
30-40	6,946.7	14.6%	120-130	0	0%
40-50	8,302.7	17.5%	130-140	0	0%
50-60	8,897.8	18.8%	140-150	0	0%
60-70	7,840.4	16.5%	150-160	0	0%
70-80	4,901.5	10.3%	160-170	0	0%
80-90	838.6	1.8%	170-180	0	0%



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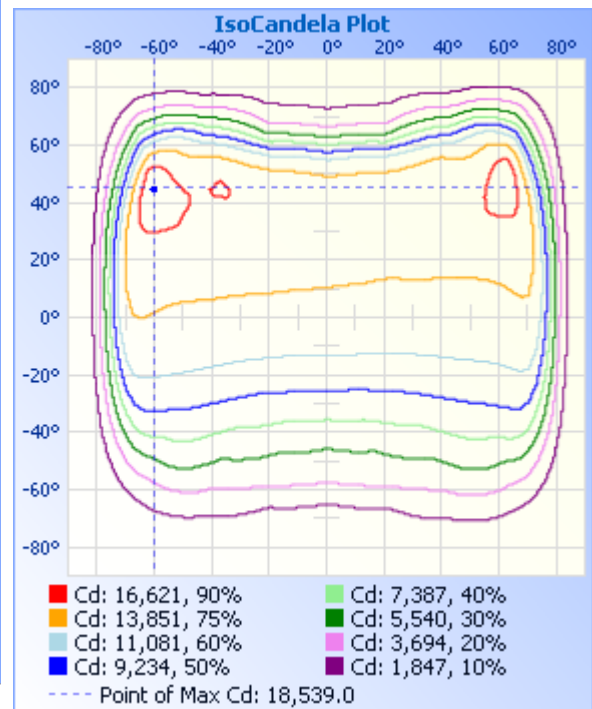
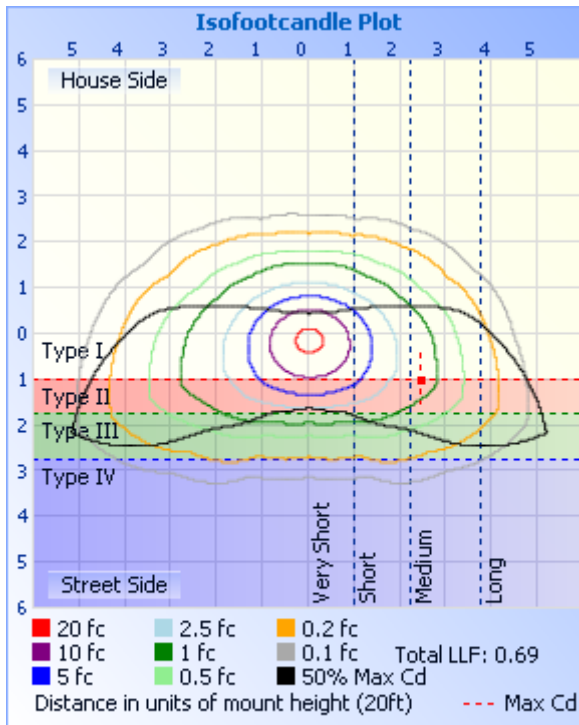
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width	
17.0ft	44.4 fc	38.1 ft	108.0 ft
34.0ft	11.1 fc	76.2 ft	216.0 ft
51.0ft	4.94 fc	114.3 ft	324.0 ft
68.0ft	2.78 fc	152.4 ft	432.0 ft
85.0ft	1.78 fc	190.6 ft	540.0 ft
102.0ft	1.23 fc	228.7 ft	648.0 ft

■ Vert. Spread: 96.5°
■ Horiz. Spread: 145.0°





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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	12839	12839	12839	12839	12839	12839	12839	12839	12839	12839	12839	12839	12839	12839	12839	12839	12839
1	12959	12948	12925	12894	12841	12791	12752	12728	12722	12719	12739	12786	12835	12879	12916	12947	12959
2	13072	13050	13011	12943	12847	12748	12674	12615	12600	12601	12647	12731	12833	12915	12998	13055	13072
3	13195	13158	13096	12993	12847	12708	12585	12496	12464	12482	12556	12678	12824	12952	13067	13144	13195
4	13295	13259	13176	13036	12849	12663	12495	12380	12333	12360	12466	12629	12816	12991	13138	13240	13295
5	13395	13364	13267	13087	12849	12616	12405	12246	12193	12238	12370	12581	12802	13030	13210	13330	13395
6	13491	13452	13339	13137	12858	12575	12315	12120	12060	12113	12276	12522	12792	13061	13286	13420	13491
7	13579	13534	13416	13180	12866	12523	12209	11998	11926	11975	12169	12464	12781	13091	13348	13509	13579
8	13662	13616	13492	13221	12873	12475	12117	11870	11771	11842	12066	12406	12773	13124	13410	13586	13662
9	13742	13695	13567	13265	12876	12432	12017	11739	11633	11712	11959	12348	12766	13157	13475	13661	13742
10	13813	13766	13630	13314	12879	12382	11913	11594	11488	11579	11851	12285	12758	13193	13534	13725	13813
11	13881	13837	13696	13362	12885	12329	11813	11464	11340	11444	11743	12230	12754	13222	13586	13781	13881
12	13948	13903	13770	13404	12896	12278	11706	11329	11198	11306	11635	12169	12755	13249	13636	13844	13948
13	14002	13964	13828	13456	12896	12231	11598	11194	11062	11166	11527	12112	12746	13283	13686	13901	14002
14	14052	14023	13877	13504	12904	12179	11503	11063	10901	11011	11416	12049	12737	13312	13722	13950	14052
15	14098	14071	13939	13545	12913	12126	11401	10924	10750	10877	11304	11989	12723	13341	13779	13999	14098
16	14135	14127	13998	13592	12916	12075	11291	10773	10603	10736	11196	11933	12713	13371	13823	14038	14135
17	14176	14182	14062	13634	12918	12018	11182	10635	10452	10589	11076	11864	12704	13403	13862	14074	14176
18	14212	14219	14118	13681	12925	11968	11062	10495	10301	10450	10971	11797	12693	13431	13898	14110	14212
19	14247	14256	14165	13724	12940	11916	10956	10358	10150	10293	10857	11742	12678	13458	13943	14137	14247
20	14280	14296	14214	13780	12954	11855	10854	10206	9992	10148	10745	11677	12674	13493	13974	14171	14280
21	14306	14332	14268	13834	12960	11806	10747	10079	9836	10005	10632	11624	12670	13513	14008	14194	14306
22	14330	14374	14308	13874	12963	11754	10640	9925	9680	9862	10523	11560	12661	13546	14041	14219	14330
23	14353	14409	14364	13923	12971	11702	10531	9781	9545	9716	10398	11493	12660	13579	14076	14242	14353
24	14377	14440	14409	13976	12977	11650	10413	9633	9391	9541	10292	11430	12655	13604	14104	14261	14377
25	14404	14478	14457	14019	12989	11590	10310	9528	9230	9435	10186	11364	12646	13637	14139	14292	14404
26	14428	14514	14515	14065	12994	11540	10204	9361	9056	9282	10079	11307	12634	13661	14174	14317	14428
27	14460	14544	14566	14120	13007	11487	10100	9212	8887	9128	9949	11240	12626	13692	14205	14341	14460
28	14481	14581	14619	14175	13023	11438	9992	9059	8719	8979	9837	11179	12625	13737	14235	14364	14481



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29	14501	14615	14669	14223	13030	11386	9873	8903	8546	8807	9729	11123	12621	13768	14264	14388	14501
30	14522	14656	14719	14274	13043	11325	9756	8740	8367	8642	9602	11062	12617	13790	14305	14409	14522
31	14549	14694	14789	14331	13064	11280	9638	8581	8167	8484	9559	11007	12617	13828	14340	14440	14549
32	14568	14737	14849	14386	13086	11234	9568	8404	7991	8327	9413	10938	12617	13866	14376	14469	14568
33	14604	14790	14910	14448	13095	11181	9453	8242	7802	8157	9287	10884	12623	13901	14424	14498	14604
34	14633	14837	14975	14500	13125	11135	9324	8068	7616	7989	9175	10825	12624	13948	14466	14530	14633
35	14670	14885	15040	14564	13145	11084	9202	7895	7423	7800	9052	10765	12629	13992	14515	14573	14670
36	14690	14926	15103	14624	13165	11027	9085	7720	7210	7623	8931	10710	12626	14034	14565	14614	14690
37	14716	14982	15177	14688	13190	10979	8961	7524	7022	7444	8812	10651	12630	14078	14617	14652	14716
38	14740	15035	15239	14762	13208	10932	8835	7345	6828	7271	8671	10588	12634	14125	14673	14702	14740
39	14759	15084	15326	14828	13225	10881	8696	7168	6645	7075	8544	10525	12641	14171	14734	14750	14759
40	14774	15153	15409	14888	13244	10817	8558	6991	6455	6900	8409	10462	12654	14221	14816	14797	14774
41	14772	15196	15499	14953	13258	10754	8417	6814	6274	6724	8269	10400	12650	14274	14895	14843	14772
42	14755	15244	15571	15015	13274	10700	8278	6639	6081	6555	8132	10342	12650	14330	14980	14880	14755
43	14728	15277	15668	15081	13285	10650	8132	6459	5919	6389	7977	10277	12654	14381	15054	14907	14728
44	14684	15302	15766	15141	13310	10582	7970	6298	5765	6213	7830	10214	12651	14441	15134	14926	14684
45	14617	15314	15880	15201	13313	10519	7813	6136	5595	6056	7677	10149	12654	14501	15235	14942	14617
46	14516	15312	15992	15267	13325	10453	7657	5986	5447	5902	7523	10080	12663	14561	15344	14930	14516
47	14370	15280	16099	15329	13334	10383	7496	5820	5303	5755	7372	10008	12668	14619	15446	14902	14370
48	14173	15213	16201	15406	13344	10315	7332	5677	5165	5611	7195	9928	12671	14693	15547	14838	14173
49	13960	15108	16313	15479	13352	10233	7152	5534	5026	5458	7036	9852	12676	14762	15663	14745	13960
50	13677	14965	16424	15556	13364	10151	6982	5396	4880	5323	6878	9764	12670	14839	15764	14619	13677
51	13326	14763	16522	15641	13381	10060	6817	5242	4742	5191	6715	9684	12676	14927	15865	14445	13326
52	12894	14520	16623	15743	13407	9974	6650	5111	4597	5062	6540	9553	12687	15014	15958	14210	12894
53	12438	14184	16700	15833	13425	9877	6463	4971	4451	4930	6380	9550	12690	15120	16043	13906	12438
54	11923	13819	16751	15950	13437	9749	6290	4830	4295	4780	6219	9412	12701	15213	16101	13562	11923
55	11269	13347	16784	16067	13465	9623	6127	4688	4111	4641	6063	9289	12710	15318	16161	13115	11269
56	10663	12813	16786	16191	13503	9563	5953	4520	3918	4500	5885	9176	12714	15448	16172	12607	10663
57	9936	12193	16744	16333	13532	9396	5769	4363	3700	4348	5724	9053	12728	15590	16151	12026	9936
58	9173	11572	16654	16494	13575	9248	5593	4189	3440	4181	5563	8923	12751	15720	16082	11377	9173
59	8454	10804	16501	16654	13596	9070	5415	4003	3145	3985	5399	8783	12774	15883	15951	10724	8454



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60	7652	10097	16275	16839	13638	8896	5230	3785	2858	3774	5229	8638	12800	16061	15781	9975	7652
61	6912	9279	16000	17023	13682	8706	5044	3524	2588	3547	5058	8465	12839	16227	15540	9254	6912
62	6183	8547	15590	17236	13737	8493	4833	3262	2342	3263	4866	8297	12892	16416	15207	8461	6183
63	5560	7727	15102	17438	13777	8271	4634	2982	2098	2987	4684	8120	12947	16629	14808	7657	5560
64	4912	6911	14544	17660	13814	8028	4423	2691	1908	2696	4491	7923	13014	16865	14297	6907	4912
65	4379	6174	13916	17887	13837	7772	4204	2374	1745	2420	4289	7683	13083	17104	13697	6169	4379
66	3909	5564	13204	18095	13830	7478	3973	2114	1600	2157	4077	7452	13138	17323	13094	5510	3909
67	3540	4968	12470	18286	13809	7174	3721	1896	1479	1916	3845	7199	13200	17572	12348	4928	3540
68	3154	4468	11593	18439	13711	6799	3487	1714	1361	1735	3626	6930	13246	17808	11602	4427	3154
69	2835	3988	10751	18532	13520	6436	3251	1545	1264	1576	3401	6597	13263	18041	10797	3945	2835
70	2552	3579	9930	18539	13168	6044	3003	1412	1172	1442	3167	6266	13208	18219	9995	3542	2552
71	2299	3182	9178	18378	12602	5585	2725	1292	1084	1308	2901	5911	13049	18342	9206	3184	2299
72	2074	2861	8338	17989	11805	5139	2470	1175	994	1199	2649	5524	12749	18352	8430	2871	2074
73	1876	2577	7579	17327	10704	4684	2235	1065	911	1088	2409	5097	12206	18185	7601	2560	1876
74	1688	2313	6770	16171	9555	4222	2011	967	829	996	2156	4682	11456	17770	6859	2299	1688
75	1514	2058	6021	14728	8405	3743	1770	877	759	891	1935	4256	10423	16978	6092	2050	1514
76	1338	1832	5297	13144	7214	3323	1541	786	681	804	1712	3810	9185	15814	5385	1827	1338
77	1205	1625	4510	11434	6055	2918	1308	701	605	721	1484	3400	8039	14295	4695	1644	1205
78	1064	1433	3819	9878	4830	2474	1071	612	539	635	1253	2931	6931	12573	4062	1452	1064
79	942	1265	3168	8338	3831	2022	858	536	470	555	1000	2472	5685	10912	3387	1287	942
80	819	1098	2510	6782	2968	1589	673	462	405	474	798	2015	4552	9122	2768	1120	819
81	708	953	2028	5471	2185	1263	532	396	337	409	636	1576	3546	7524	2294	973	708
82	606	816	1635	4322	1621	973	417	315	274	337	503	1230	2672	6076	1825	839	606
83	515	700	1314	3300	1179	708	315	259	215	273	394	933	1998	4836	1486	711	515
84	421	574	1022	2405	837	476	209	184	153	205	284	675	1432	3659	1177	592	421
85	334	459	790	1715	568	314	137	120	106	138	196	465	1027	2692	929	482	334
86	255	344	557	1131	330	188	78	77	62	93	123	291	673	1825	679	373	255
87	171	243	362	694	171	98	44	24	17	50	66	172	393	1178	460	276	171
88	115	151	206	361	49	31	16	14	13	17	38	79	196	677	284	182	115
89	62	81	97	117	15	12	8	10	10	10	20	30	78	286	142	105	62
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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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
93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
118	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
120	0	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	0



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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
126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
132	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
143	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
144	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
151	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



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153	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
154	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
158	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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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



Report No.: BLC2106046E-C

BUG Rating

Lum. Classification System (LCS)

<u>LCS Zone</u>	<u>Lumens</u>	<u>%Lamp</u>	<u>%Lum</u>
FL (0-30)	5827.0	11.4	11.4
FM (30-60)	16653.9	32.5	32.5
FH (60-80)	9502.7	18.6	18.6
FVH (80-90)	686.7	1.3	1.3
BL (0-30)	4646.1	9.1	9.1
BM (30-60)	9428.0	18.4	18.4
BH (60-80)	4256.8	8.3	8.3
BVH(80-90)	218.8	0.4	0.4
UL (90-100)	0.0	0.0	0.0
UH (100-180)	0.0	0.0	0.0
Total	51220.0	100.0	100.0
BUG Rating	B5-U0-G4		

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

Test date	2021-07-01	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	BLT-S-GB-300WJ3030T3H2-BR10SP50		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC210604	277.0	60	1.076	295.03	0.99	3.89
6E-C2	480.0	60	0.663	291.35	0.915	15.2
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

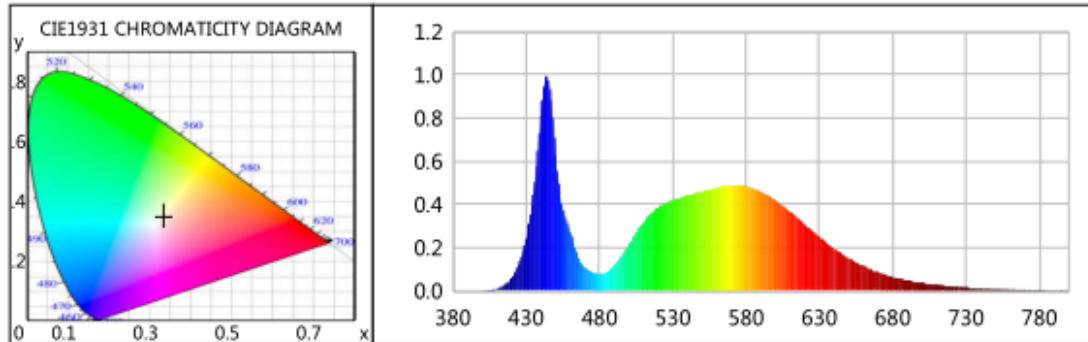
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	277.0	R1	68	R9	-40
Frequency (Hz)	60	R2	75	R10	41
CCT (K)	5367	R3	80	R11	72
Duv	0.0029	R4	73	R12	47
Chromaticity (x, y)	x=0.3357 y=0.3496	R5	71	R13	69
Chromaticity (u', v')	u(u')=0.2059 v'=0.4823	R6	67	R14	89
Color Rendering Index (CRI)	71	R7	78	R15	61
R9	-40	R8	55	--	--
Rf	72	--	--	--	--
Rg	96	--	--	--	--
Rcs,h1(%)	-18				

Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result		DLC V5.1 Pass Criteria
Test Voltage (V)	277.0	480.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	50385.2	49771.3	>=10000(-10%)
Luminous Efficacy (lm/W)	170.78	170.83	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	168.70		



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	0.7343	525	0.4051	610.8879	670	0.0862	130.0547
385	0.0003	0.4186	530	0.4194	632.4028	675	0.0746	112.4738
390	0.0004	0.6002	535	0.4313	650.2842	680	0.0643	96.9251
395	0.0005	0.7366	540	0.4430	668.0274	685	0.0560	84.4932
400	0.0010	1.4859	545	0.4502	678.7942	690	0.0480	72.3343
405	0.0034	5.1764	550	0.4606	694.5947	695	0.0415	62.6327
410	0.0104	15.6105	555	0.4688	706.8748	700	0.0355	53.5331
415	0.0260	39.1701	560	0.4785	721.5728	705	0.0309	46.5789
420	0.0593	89.4416	565	0.4851	731.4301	710	0.0258	38.8292
425	0.1259	189.8527	570	0.4880	735.7901	715	0.0218	32.8879
430	0.2428	366.1216	575	0.4889	737.1893	720	0.0194	29.2284
435	0.4484	676.2059	580	0.4857	732.3310	725	0.0175	26.3649
440	0.8100	1221.3224	585	0.4742	715.0478	730	0.0141	21.2013
445	0.9813	1479.6153	590	0.4615	695.8126	735	0.0128	19.2676
450	0.6336	955.3186	595	0.4428	667.7123	740	0.0107	16.1586
455	0.3768	568.1839	600	0.4206	634.1658	745	0.0090	13.5369
460	0.2703	407.5087	605	0.3944	594.6347	750	0.0083	12.4659
465	0.1659	250.2171	610	0.3672	553.6783	755	0.0069	10.4783
470	0.1063	160.2801	615	0.3384	510.3267	760	0.0055	8.2363
475	0.0867	130.6897	620	0.3082	464.6846	765	0.0045	6.7515
480	0.0783	118.1111	625	0.2783	419.7037	770	0.0041	6.1848
485	0.0868	130.9378	630	0.2494	376.1205	775	0.0032	4.8538
490	0.1160	174.8524	635	0.2225	335.5508	780	0.0045	6.7639
495	0.1615	243.5690	640	0.1963	296.0291	785	0.0023	3.4543
500	0.2150	324.2018	645	0.1727	260.3741	790	0.0024	3.6229
505	0.2686	405.0848	650	0.1518	228.9031	795	0.0026	3.9396
510	0.3179	479.3556	655	0.1320	199.0559	800	0.0015	2.2090
515	0.3562	537.1181	660	0.1154	174.0588			
520	0.3844	579.6406	665	0.0994	149.9325			

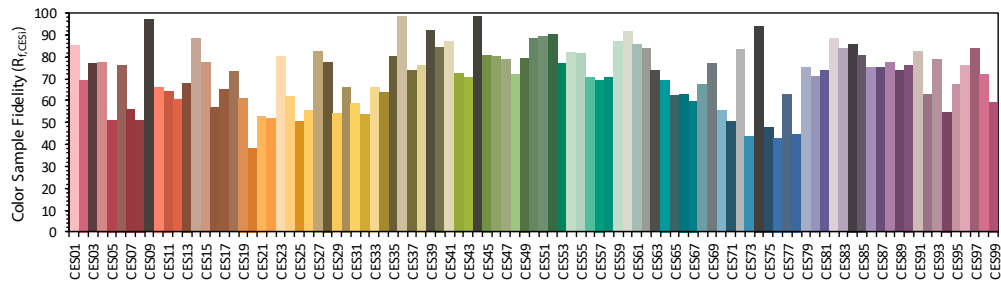
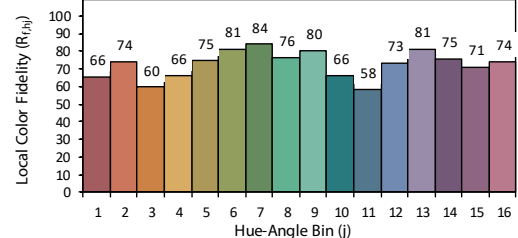
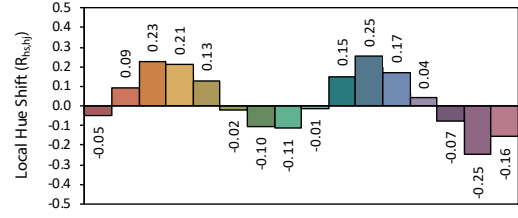
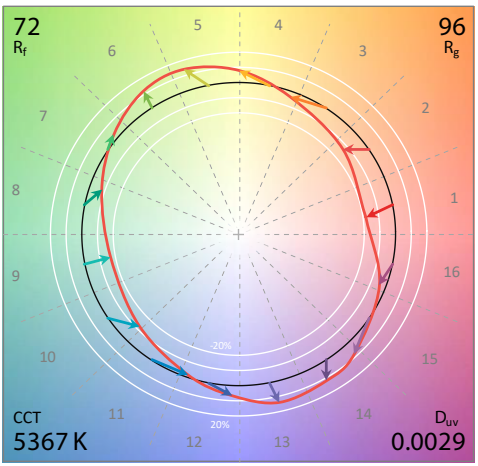
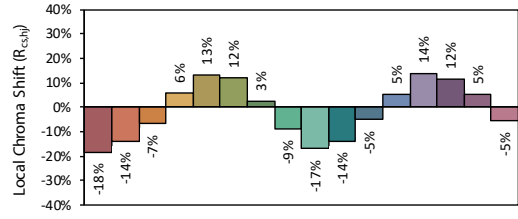
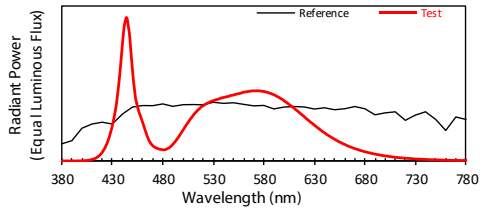


TM30

ANSI / IES TM-30-18 Color Rendering Report

Source: BXEM-40C-12H-6C
Date: 2021/7/1

Manufacturer: Beyond LED Technology
Model: BLT-S-GB-300WJ3030T3H2-BR10SP50



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

x 0.3357
 y 0.3496
 u' 0.2059
 v' 0.4823

CIE 13.3-1995 (CRI)	
R_a	71
R_9	-40

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-GB-300WJ3030T3H2-BR10SP50	51220.1	294.69	173.81
BLT-S-GB-300WJ3030T3H2-BR10SP51	51011.4	294.86	173.00
BLT-S-GB-300WJ3030T3H2-BR10SP52	50802.7	294.95	172.24
BLT-S-GB-300WJ3030T3H2-BR10SP53	50385.2	295.03	170.78

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

$$51011.4 = (50385.2 - 51220.1) / 4 + 51220.1$$

$$50802.7 = (50385.2 - 51220.1) / 4 + 51011.4$$

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

$$294.86 = (295.03 + 294.69) / 2$$

$$294.95 = (295.03 + 294.86) / 2$$

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

$$173.00 = 51011.4 / 294.86$$

$$172.24 = 50802.7 / 294.95$$



Report No.: BLC2106046E-C

3. Test Equipment

Equipment Name	Model No.	Serial No.	Next Calibration Date
Goniophotometric System	GPM-3000	DYHXF120001	2022-01-18
AC Power Source	CHP-500	DYBWD010159	2022-01-25
Total Luminous Flux Standard Lamp	24V/150W	DYJYR040040	2022-01-24
Digital Power Meter	WT500	DYDWQ20010	2022-01-25
Integral Sphere (2M)	2M	DYJCE120067	2022-01-18
Digital Power Meter	WT500	DYDWQ20006	2022-01-25
Optical Color and Electrical Measurement System	CMS-3000S	DYJCE120067	2022-01-18

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 *****