

## 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-FL06E-80WBH8DA1-BRFM30/40/50

Remark: a can be BH (black)/WH (white)/BR (brown) or customized;

b can be AM, FM and YM representing the support type;

c represents surge arrester, which can be "10SP", "20SP" or empty;

d can be any two numbers, representing the color temperature;

e can be W to indicate that the power is adjustable, and null to indicate that it is not adjustable.

Representative (Tested) Model:

BLT-FL06E-80WBH8DA1-BRFM30/40/50

BLT-FL06E-80WBH8DA1-BRFM30/40/50

BLT-FL06E-80WBH8DA1-BRFM30/40/50

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

Test & Report By:



Engineer: Winny Wu

Date: 2022-09-21

Review By:



Manager: Jason Luo

### 1.1 Product Information:

Organization Name	Beyond LED Technology	
Brand Name	Beyond LED Technology	
Model Number	BLT-FL06E-80WBH8DA1-BRFM30/40/50	
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	120-277 Vac, 50/60 Hz	
Nominal Power	80W	
Rated Initial Lamp Lumen	--	
Declared CCT	3000K,4000K,5000K(Color tunable)	
LED Manufacturer	Lumileds Holding B.V.	
LED Model	L128-XX80RC35003P1	
Sample Number	BLC2209011E-C1	
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	2022-09-07
Date of Test	2022-09-09
Test item	<ol style="list-style-type: none"> <li>1. Total Luminous Flux</li> <li>2. Luminous Distribution Intensity</li> <li>3. Luminous Efficacy</li> <li>4. Correlated Color Temperature</li> <li>5. Color Rendering Index</li> <li>6. Chromaticity Coordinate</li> <li>7. Electrical Parameters</li> </ol>
Reference Standard	<ol style="list-style-type: none"> <li>1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products</li> <li>2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products</li> <li>3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources</li> <li>4. CIE 15-2004 Technical Report Colorimetry</li> <li>5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source</li> <li>6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems</li> </ol>
Reference Work Instruction	BL-QP-033

## 1.3 Test Methods

### 1) Photometric and Light Distribution Measurement – Goniophotometer Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ , 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  $1\text{ }^{\circ}$  vertical intervals and  $22.5\text{ }^{\circ}$  horizontal intervals. Goniophotometer far field detector  $f\theta = 1.42\%$ , 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  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ . 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.

Self-absorption:

BLT-FL06E-80WBH8DA1-BRFM30/40/50:1.2433

BLT-FL06E-80WBH8DA1-BRFM30/40/50:1.2434

BLT-FL06E-80WBH8DA1-BRFM30/40/50:1.2435

### 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  $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$ . The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.

## 2.1 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction BL-QP-033)

<b>Test date</b>	2022-09-09	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	BLT-FL06E-80WBH8DA1-BRFM30/40/50		

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC220901	120.0	60	0.676	80.2	0.989	13.08
1E-C1	277.0	60	0.316	81.64	0.932	7.41
<b>DLC Pass Criteria</b>					>= 0.9(-3%)	<= 20(+5)

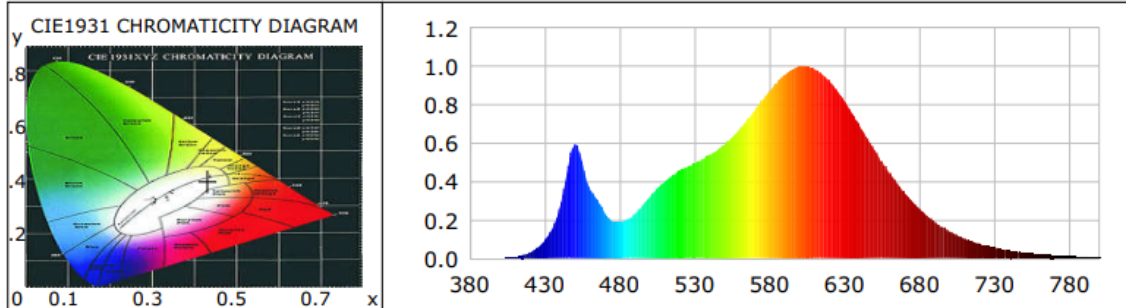
### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	5
Frequency (Hz)	60	R2	91	R10	80
CCT (K)	3018	R3	96	R11	80
Duv	-0.0023	R4	80	R12	74
Chromaticity (x, y)	x=0.4324 y=0.3968	R5	82	R13	83
Chromaticity (u', v')	u(u')=0.2508 v'=0.5178	R6	90	R14	98
Color Rendering Index (CRI)	82	R7	81	R15	73
R9	5	R8	58	--	--
Rf	84	--	--	--	--
Rg	97	--	--	--	--
Rcs,h1(%)	-12	--	--	--	--

### 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)	10356.4	10528.7	>=10000(-10%)
Luminous Efficacy (lm/W)	129.13	128.96	Premium: >= 120(-3%)
Most worst Luminous/Highest	126.85		
Zonal lumens in the 0-90 °zone (%)	100	--	Category 1: >=100(-1) Category 2: >=85(-3)
Zonal lumens in the 80-90 °zone (%)	1.1	--	<=10(+3)
Beam Angle ( °)	110.5	--	--
Center Beam Candle Power (cd)	3477	--	--

**Spectral Power Distribution & Chromaticity Diagram**



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0001	0.0223	535	0.4757	100.9398	690	0.3411	72.3719
385	0.0005	0.1110	540	0.4930	104.6084	695	0.2974	63.0979
390	0.0004	0.0898	545	0.5143	109.1133	700	0.2575	54.6447
395	0.0005	0.1091	550	0.5385	114.2568	705	0.2236	47.4459
400	0.0014	0.3013	555	0.5619	119.2203	710	0.1911	40.5550
405	0.0031	0.6474	560	0.5935	125.9208	715	0.1642	34.8464
410	0.0072	1.5204	565	0.6291	133.4860	720	0.1402	29.7487
415	0.0158	3.3463	570	0.6728	142.7588	725	0.1209	25.6578
420	0.0302	6.3985	575	0.7194	152.6334	730	0.1034	21.9438
425	0.0539	11.4370	580	0.7667	162.6800	735	0.0881	18.6887
430	0.0927	19.6725	585	0.8225	174.5137	740	0.0753	15.9794
435	0.1544	32.7496	590	0.8731	185.2518	745	0.0642	13.6298
440	0.2600	55.1602	595	0.9147	194.0747	750	0.0546	11.5769
445	0.4465	94.7407	600	0.9564	202.9300	755	0.0461	9.7880
450	0.5963	126.5250	605	0.9831	208.5915	760	0.0407	8.6427
455	0.5022	106.5503	610	0.9998	212.1406	765	0.0342	7.2501
460	0.3649	77.4292	615	0.9979	211.7369	770	0.0292	6.1868
465	0.3060	64.9269	620	0.9854	209.0686	775	0.0257	5.4620
470	0.2390	50.7129	625	0.9601	203.7001	780	0.0215	4.5640
475	0.1933	41.0192	630	0.9218	195.5824	785	0.0174	3.6938
480	0.1873	39.7339	635	0.8738	185.3864	790	0.0153	3.2481
485	0.2031	43.0823	640	0.8161	173.1620	795	0.0133	2.8266
490	0.2309	48.9889	645	0.7554	160.2689	800	0.0108	2.2925
495	0.2733	57.9887	650	0.6920	146.8303			
500	0.3197	67.8298	655	0.6256	132.7327			
505	0.3617	76.7498	660	0.5626	119.3731			
510	0.3995	84.7650	665	0.5033	106.7812			
515	0.4300	91.2398	670	0.4431	94.0157			
520	0.4535	96.2199	675	0.3905	82.8558			
525	0.4757	100.9398	680	0.3411	72.3719			
530	0.4930	104.6084	685	0.2974	63.0979			

**TM30**

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

**Source:**

L128-XX80RC35003P1

**Manufacturer:**

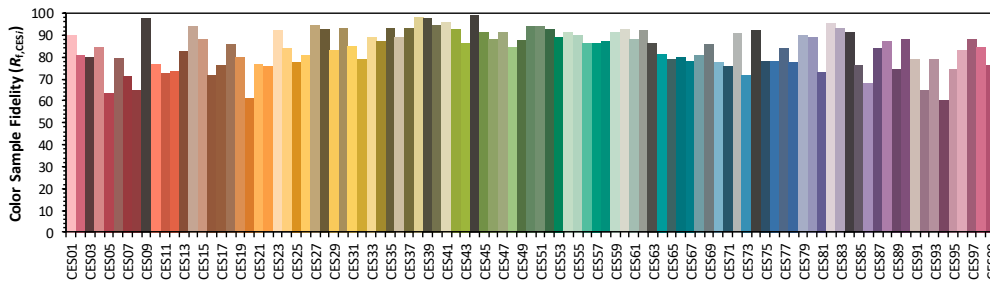
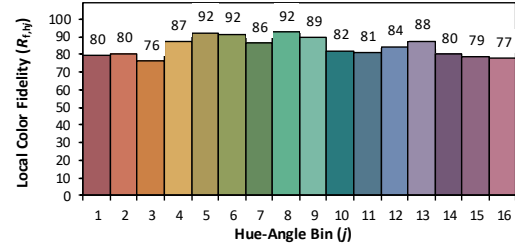
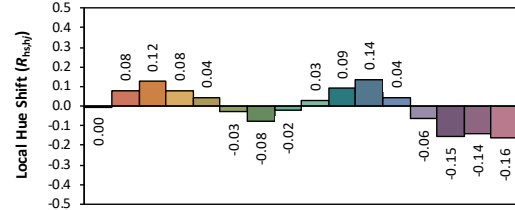
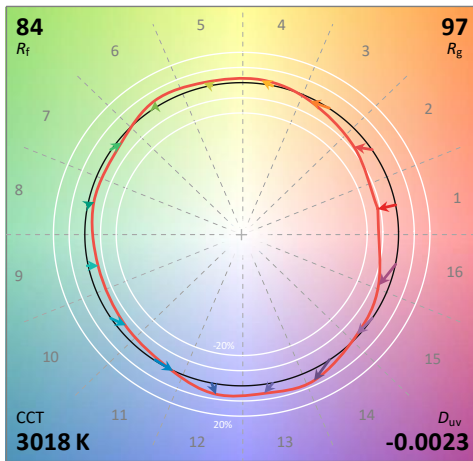
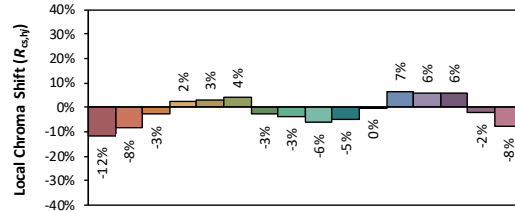
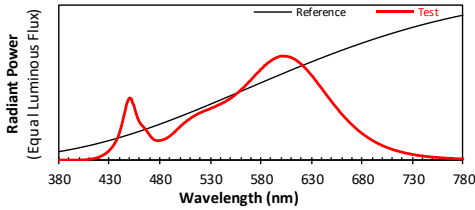
Beyond LED Technology

**Date:**

2022/9/9

**Model:**

BLT-FL06E-80WBH8DA1-BRFM30/40/50



**Notes:**

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

$x$  0.4324  
 $y$  0.3968  
 $u'$  0.2508  
 $v'$  0.5178

CIE 13.3-1995 (CRI)  
 $R_a$  82  
 $R_9$  5

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

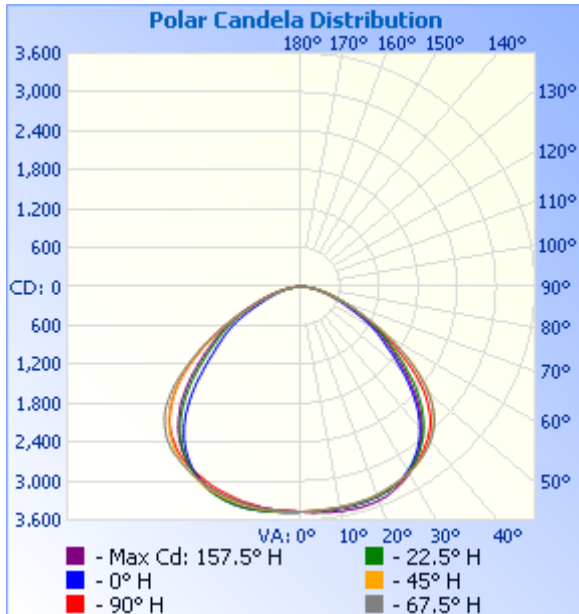
**Zonal Lumen Tabulation**

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Luminaire
0-30	2,881.6	27.8%	27.8%
0-40	4,879.4	47.1%	47.1%
0-60	8,736.7	84.4%	84.4%
60-90	1,618.6	15.6%	15.6%
70-100	573.2	5.5%	5.5%
90-120	0	0%	0%
0-90	10,355.3	100%	100%
90-180	0	0%	0%
0-180	10,355.3	100%	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	331.6	3.2%	90-100	0	0%
10-20	981.7	9.5%	100-110	0	0%
20-30	1,568.4	15.1%	110-120	0	0%
30-40	1,997.8	19.3%	120-130	0	0%
40-50	2,117.9	20.5%	130-140	0	0%
50-60	1,739.3	16.8%	140-150	0	0%
60-70	1,045.4	10.1%	150-160	0	0%
70-80	460.2	4.4%	160-170	0	0%
80-90	113.0	1.1%	170-180	0	0%



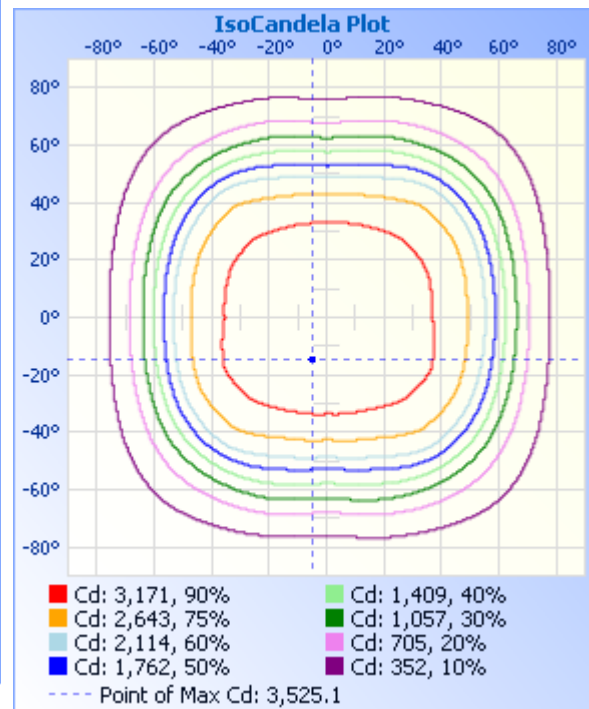
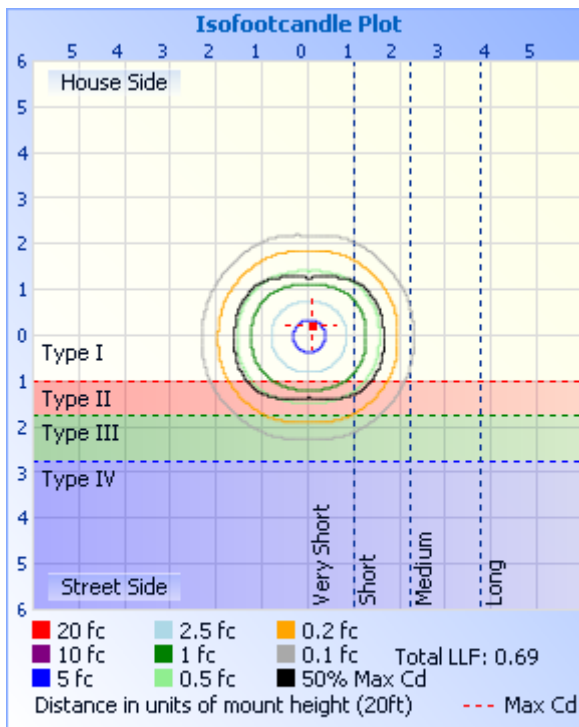
**Photometric Data**



**Illuminance at a Distance**

	Center Beam fc	Beam Width	
17.0ft	12.01 fc	45.3 ft	51.7 ft
34.0ft	3.00 fc	90.7 ft	103.5 ft
51.0ft	1.33 fc	136.0 ft	155.2 ft
68.0ft	0.75 fc	181.3 ft	206.9 ft
85.0ft	0.48 fc	226.7 ft	258.6 ft
102.0ft	0.33 fc	272.0 ft	310.4 ft

■ Vert. Spread: 106.3°  
■ Horiz. Spread: 113.4°



**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	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472	3472
1	3476	3473	3472	3466	3470	3472	3472	3479	3480	3479	3469	3470	3469	3472	3468	3471	3476
2	3472	3473	3467	3465	3470	3474	3476	3483	3483	3480	3473	3469	3468	3467	3465	3467	3472
3	3472	3474	3465	3465	3468	3478	3477	3490	3488	3485	3471	3472	3466	3466	3464	3464	3472
4	3470	3472	3464	3465	3467	3478	3482	3491	3490	3487	3474	3470	3465	3467	3462	3465	3470
5	3469	3467	3462	3463	3470	3475	3484	3491	3496	3488	3478	3468	3462	3465	3457	3464	3469
6	3468	3470	3456	3461	3467	3486	3487	3498	3495	3490	3479	3471	3462	3459	3455	3465	3468
7	3468	3465	3457	3458	3468	3483	3495	3508	3498	3497	3482	3468	3464	3458	3453	3465	3468
8	3468	3462	3455	3453	3465	3484	3492	3510	3502	3497	3482	3468	3462	3453	3450	3467	3468
9	3471	3465	3455	3457	3468	3487	3489	3511	3504	3503	3486	3471	3461	3454	3448	3466	3471
10	3469	3464	3453	3452	3460	3482	3496	3518	3509	3507	3486	3472	3459	3447	3444	3467	3469
11	3468	3461	3456	3451	3458	3474	3503	3521	3512	3514	3487	3469	3448	3443	3441	3463	3468
12	3473	3464	3452	3446	3455	3476	3501	3516	3514	3511	3484	3466	3445	3439	3446	3460	3473
13	3473	3461	3451	3448	3454	3478	3503	3521	3520	3510	3485	3463	3441	3439	3438	3460	3473
14	3473	3461	3444	3445	3452	3475	3506	3523	3520	3519	3479	3462	3436	3432	3440	3460	3473
15	3468	3461	3442	3441	3447	3471	3505	3525	3520	3515	3479	3457	3435	3422	3432	3453	3468
16	3466	3457	3441	3435	3448	3466	3500	3524	3517	3514	3480	3448	3425	3425	3428	3452	3466
17	3464	3455	3438	3431	3448	3467	3498	3520	3514	3510	3472	3446	3419	3418	3428	3450	3464
18	3457	3455	3433	3432	3442	3457	3495	3521	3506	3504	3467	3438	3409	3412	3422	3451	3457
19	3451	3445	3427	3422	3437	3454	3484	3515	3500	3502	3470	3434	3402	3407	3415	3450	3451
20	3446	3446	3423	3417	3429	3448	3481	3509	3495	3494	3460	3429	3393	3403	3415	3444	3446
21	3436	3437	3412	3405	3424	3445	3470	3499	3482	3485	3455	3422	3387	3396	3405	3434	3436
22	3428	3426	3412	3397	3415	3440	3474	3492	3470	3475	3449	3417	3382	3388	3397	3427	3428
23	3423	3419	3391	3390	3412	3436	3463	3476	3456	3465	3442	3407	3371	3376	3388	3419	3423
24	3409	3407	3388	3378	3402	3426	3452	3458	3444	3446	3431	3399	3364	3363	3381	3404	3409
25	3392	3390	3379	3371	3394	3418	3441	3436	3423	3430	3424	3393	3348	3360	3376	3395	3392
26	3375	3377	3365	3361	3384	3409	3431	3422	3402	3415	3407	3384	3336	3349	3359	3377	3375
27	3354	3362	3361	3349	3371	3393	3411	3401	3379	3390	3402	3373	3323	3339	3344	3364	3354
28	3333	3341	3343	3338	3357	3384	3398	3379	3353	3368	3384	3364	3308	3330	3335	3344	3333

29	3309	3319	3338	3327	3345	3375	3384	3352	3319	3344	3366	3350	3302	3317	3328	3326	3309
30	3285	3297	3319	3308	3319	3363	3366	3322	3290	3314	3346	3344	3287	3300	3310	3302	3285
31	3251	3272	3300	3294	3299	3351	3348	3293	3257	3285	3327	3332	3274	3284	3297	3274	3251
32	3221	3244	3285	3282	3277	3338	3322	3258	3220	3251	3313	3314	3262	3271	3282	3253	3221
33	3182	3213	3268	3264	3254	3322	3304	3220	3180	3213	3290	3297	3243	3259	3268	3221	3182
34	3144	3182	3245	3244	3228	3304	3280	3184	3133	3178	3264	3287	3229	3244	3244	3190	3144
35	3103	3149	3224	3226	3201	3285	3252	3147	3090	3140	3244	3268	3206	3225	3222	3152	3103
36	3059	3113	3199	3204	3171	3264	3224	3099	3041	3099	3219	3246	3185	3208	3199	3118	3059
37	3009	3066	3175	3180	3140	3236	3199	3051	2989	3056	3195	3238	3164	3193	3178	3076	3009
38	2963	3024	3151	3157	3104	3213	3166	2997	2931	3008	3169	3215	3133	3168	3148	3029	2963
39	2904	2978	3123	3130	3077	3183	3133	2947	2866	2951	3131	3192	3103	3145	3115	2985	2904
40	2844	2927	3091	3102	3043	3156	3097	2891	2802	2898	3101	3160	3072	3122	3095	2934	2844
41	2784	2874	3051	3067	3004	3124	3056	2828	2730	2835	3062	3138	3041	3088	3058	2883	2784
42	2711	2817	3019	3031	2960	3085	3015	2761	2656	2778	3023	3102	3004	3055	3019	2823	2711
43	2642	2754	2976	2989	2916	3042	2961	2692	2567	2703	2983	3057	2962	3028	2977	2762	2642
44	2567	2690	2931	2945	2864	2997	2915	2622	2487	2637	2933	3022	2919	2985	2930	2696	2567
45	2486	2624	2886	2897	2810	2945	2857	2553	2400	2563	2884	2972	2864	2943	2892	2632	2486
46	2401	2549	2833	2837	2739	2892	2801	2476	2310	2485	2827	2924	2807	2893	2840	2566	2401
47	2313	2475	2775	2781	2674	2826	2730	2395	2220	2406	2766	2868	2751	2826	2781	2481	2313
48	2226	2399	2717	2711	2603	2753	2665	2299	2128	2319	2698	2805	2680	2783	2729	2403	2226
49	2138	2320	2654	2641	2530	2677	2591	2215	2028	2230	2624	2735	2615	2722	2662	2319	2138
50	2045	2237	2576	2561	2442	2598	2511	2134	1940	2147	2552	2648	2542	2648	2593	2238	2045
51	1951	2140	2495	2476	2353	2507	2426	2047	1853	2062	2471	2566	2458	2570	2525	2154	1951
52	1864	2055	2414	2382	2258	2399	2324	1964	1770	1969	2385	2475	2376	2497	2446	2063	1864
53	1780	1969	2315	2292	2158	2299	2227	1874	1684	1877	2295	2373	2288	2396	2353	1980	1780
54	1692	1884	2218	2186	2061	2195	2125	1796	1612	1800	2186	2274	2188	2305	2268	1897	1692
55	1617	1798	2119	2084	1948	2089	2026	1719	1545	1723	2084	2161	2093	2208	2164	1817	1617
56	1544	1712	2010	1979	1847	1973	1907	1646	1485	1641	1982	2055	1993	2104	2073	1728	1544
57	1478	1634	1899	1872	1746	1870	1802	1570	1420	1569	1873	1944	1893	2006	1968	1652	1478
58	1414	1561	1777	1770	1649	1764	1696	1504	1360	1504	1766	1845	1798	1886	1856	1580	1414
59	1342	1489	1666	1664	1554	1661	1589	1440	1298	1438	1663	1736	1694	1785	1749	1511	1342

60	1272	1417	1553	1567	1457	1556	1486	1374	1233	1373	1558	1627	1598	1684	1645	1441	1272
61	1197	1339	1450	1470	1355	1442	1378	1309	1165	1305	1457	1528	1503	1587	1539	1371	1197
62	1118	1266	1348	1366	1262	1340	1280	1233	1088	1241	1349	1424	1402	1487	1432	1288	1118
63	1043	1193	1247	1265	1173	1240	1190	1164	1015	1175	1252	1317	1310	1385	1328	1217	1043
64	963	1120	1143	1162	1085	1142	1101	1092	939	1106	1158	1215	1212	1277	1226	1145	963
65	892	1041	1055	1072	996	1049	1015	1019	863	1035	1070	1119	1127	1181	1125	1075	892
66	818	975	971	979	916	954	922	939	791	952	986	1024	1039	1088	1042	1000	818
67	756	906	890	898	842	870	848	865	722	880	900	938	959	998	954	929	756
68	698	838	813	814	772	792	778	798	668	813	825	848	877	909	872	861	698
69	649	774	740	734	698	713	708	737	619	743	757	771	805	818	801	799	649
70	597	713	678	661	638	648	650	680	572	687	694	702	726	744	732	735	597
71	552	656	617	601	583	586	595	619	523	635	631	639	667	667	675	681	552
72	512	607	567	541	530	530	543	568	481	582	576	573	606	604	616	625	512
73	469	557	518	491	479	480	494	518	441	535	525	520	554	545	564	575	469
74	434	507	470	442	435	427	444	468	405	483	476	470	504	491	514	529	434
75	396	464	428	396	394	385	401	424	367	441	427	425	455	443	466	483	396
76	362	418	384	357	355	345	361	383	334	400	386	383	410	398	425	438	362
77	329	378	346	318	319	310	323	345	303	361	347	340	369	360	382	397	329
78	298	344	304	282	281	272	280	308	273	320	308	304	330	321	339	358	298
79	269	306	266	251	248	240	245	271	241	286	272	270	295	287	299	322	269
80	240	277	234	218	216	206	213	240	214	254	235	237	261	252	260	291	240
81	213	243	200	186	183	174	185	210	189	223	204	202	230	222	227	256	213
82	187	209	171	154	154	140	154	178	164	190	175	170	200	188	195	222	187
83	161	179	143	125	127	113	127	153	140	161	148	140	169	157	166	193	161
84	136	148	116	101	100	89	102	123	114	134	121	114	139	128	137	160	136
85	112	121	91	77	74	66	78	98	92	108	96	89	113	101	111	131	112
86	87	94	69	55	47	46	55	74	70	85	72	65	84	79	86	103	87
87	65	67	46	36	25	25	32	49	46	60	51	45	59	55	61	77	65
88	39	40	25	16	7	8	14	29	26	37	28	27	32	34	37	51	39
89	12	15	6	4	3	3	4	10	9	16	10	10	10	14	15	21	12
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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
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97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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99	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
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110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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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

122	0	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	0
124	0	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	0
148	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
177	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
179	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

<b>BUG Rating</b>
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**Lum. Classification System (LCS)**

<b><u>LCS Zone</u></b>	<b><u>Lumens</u></b>	<b><u>%Lamp</u></b>	<b><u>%Lum</u></b>
FL (0-30)	1433.1	13.8	13.8
FM (30-60)	2942.3	28.4	28.4
FH (60-80)	768.8	7.4	7.4
FVH (80-90)	60.2	0.6	0.6
BL (0-30)	1448.5	14.0	14.0
BM (30-60)	2913.9	28.1	28.1
BH (60-80)	736.7	7.1	7.1
BVH(80-90)	52.8	0.5	0.5
UL (90-100)	0.0	0.0	0.0
UH (100-180)	0.0	0.0	0.0
Total	10356.3	99.9	100.0
<b>BUG Rating</b>	<b>B3-U0-G1</b>		



## 2.2 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction BL-QP-033)

<b>Test date</b>	2022-09-09	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	BLT-FL06E-80WBH8DA1-BRFM30/40/50		

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC220901	120.0	60	0.649	77.03	0.989	12.88
1E-C2	277.0	60	0.304	78.45	0.932	7.36
<b>DLC Pass Criteria</b>					>= 0.9(-3%)	<= 20(+5)

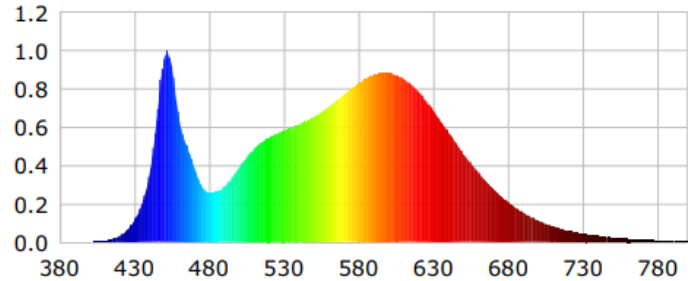
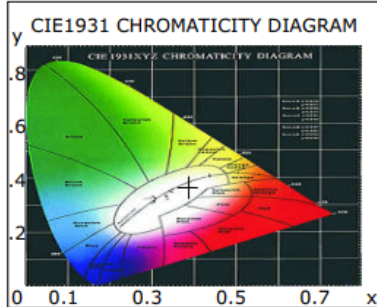
### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	84	R9	16
Frequency (Hz)	60	R2	92	R10	80
CCT (K)	3842	R3	96	R11	83
Duv	-0.0034	R4	83	R12	67
Chromaticity (x, y)	x=0.3850 y=0.3723	R5	84	R13	86
Chromaticity (u', v')	u(u')=0.2299 v'=0.5003	R6	89	R14	98
Color Rendering Index (CRI)	85	R7	84	R15	79
R9	16	R8	66	--	--
Rf	85	--	--	--	--
Rg	96	--	--	--	--
Rcs,h1 (%)	-11	--	--	--	--

### 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)	11169.4	11339.9	>=10000(-10%)
Luminous Efficacy (lm/W)	145.00	144.55	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	142.38		

**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	0.1183	535	0.5654	131.5935	690	0.2769	64.4452
385	0.0008	0.1821	540	0.5813	135.2924	695	0.2409	56.0670
390	0.0004	0.1035	545	0.5968	138.9054	700	0.2072	48.2339
395	0.0005	0.1059	550	0.6149	143.1059	705	0.1797	41.8216
400	0.0008	0.1925	555	0.6315	146.9685	710	0.1550	36.0803
405	0.0024	0.5647	560	0.6545	152.3184	715	0.1310	30.4998
410	0.0068	1.5757	565	0.6778	157.7454	720	0.1129	26.2723
415	0.0156	3.6296	570	0.7083	164.8436	725	0.0964	22.4382
420	0.0322	7.4843	575	0.7376	171.6741	730	0.0831	19.3464
425	0.0616	14.3452	580	0.7689	178.9572	735	0.0702	16.3423
430	0.1119	26.0496	585	0.8026	186.8046	740	0.0594	13.8301
435	0.1971	45.8733	590	0.8321	193.6638	745	0.0510	11.8802
440	0.3452	80.3461	595	0.8521	198.3163	750	0.0430	10.0062
445	0.6348	147.7332	600	0.8738	203.3614	755	0.0363	8.4456
450	0.9625	224.0029	605	0.8834	205.5903	760	0.0318	7.3904
455	0.9183	213.7277	610	0.8850	205.9675	765	0.0286	6.6589
460	0.6426	149.5577	615	0.8723	203.0227	770	0.0225	5.2339
465	0.5030	117.0648	620	0.8542	198.7991	775	0.0197	4.5856
470	0.3919	91.2163	625	0.8236	191.6928	780	0.0160	3.7139
475	0.2943	68.5000	630	0.7837	182.3909	785	0.0139	3.2375
480	0.2582	60.0864	635	0.7353	171.1278	790	0.0123	2.8695
485	0.2639	61.4176	640	0.6839	159.1708	795	0.0113	2.6295
490	0.2899	67.4654	645	0.6295	146.5020	800	0.0074	1.7180
495	0.3343	77.8082	650	0.5736	133.5010			
500	0.3891	90.5673	655	0.5160	120.0949			
505	0.4394	102.2636	660	0.4619	107.4926			
510	0.4860	113.0998	665	0.4102	95.4689			
515	0.5197	120.9643	670	0.3618	84.1959			
520	0.5440	126.6018	675	0.3173	73.8399			
525	0.5654	131.5935	680	0.2769	64.4452			
530	0.5813	135.2924	685	0.2409	56.0670			

**TM30**

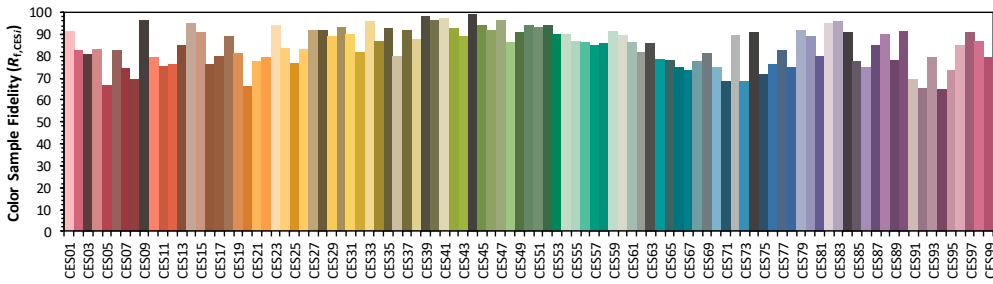
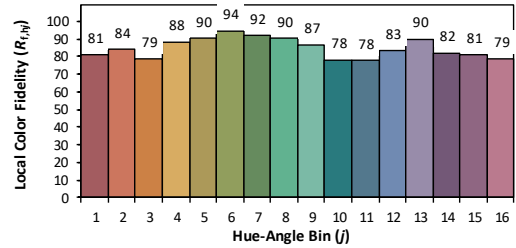
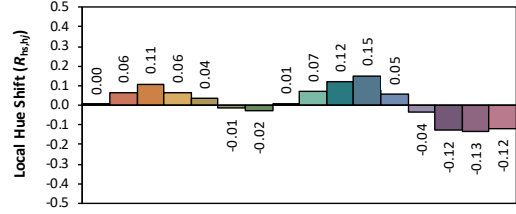
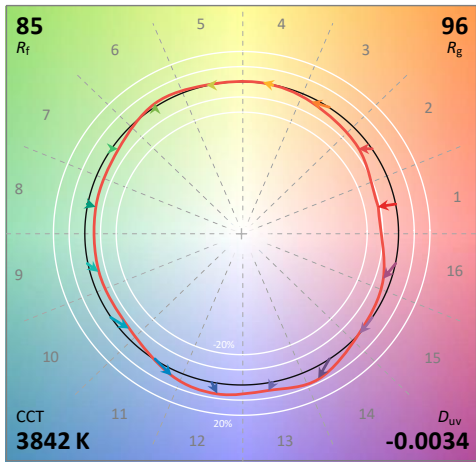
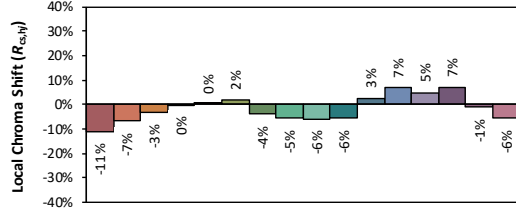
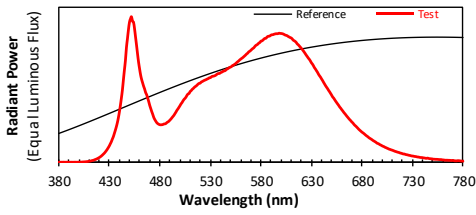
**ANSI/IES TM-30-18 Color Rendition Report**

**Source:** L128-XX80RC35003P1

**Date:** 2022/9/9

**Manufacturer:** Beyond LED Technology

**Model:** BLT-FLO6E-80WBH8DA1-BRFM30/40/50



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

$x$  0.3850  
 $y$  0.3723  
 $u'$  0.2299  
 $v'$  0.5003

CIE 13.3-1995 (CRI)	
$R_a$	85
$R_9$	16

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)

<b>Test date</b>	2022-09-09	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	As intended	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	BLT-FL06E-80WBH8DA1-BRFM30/40/50		

#### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC220901	120.0	60	0.675	80.14	0.989	13.16
1E-C3	277.0	60	0.316	81.57	0.932	7.3
<b>DLC Pass Criteria</b>					>= 0.9(-3%)	<= 20(+5)

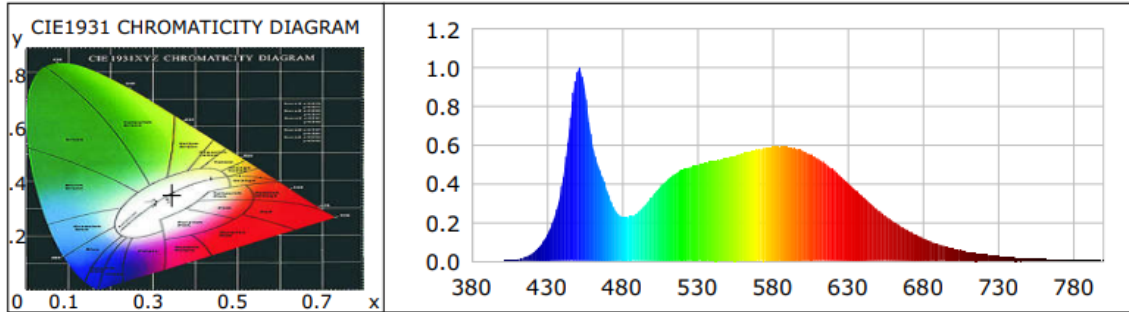
#### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	82	R9	7
Frequency (Hz)	60	R2	89	R10	72
CCT (K)	5020	R3	93	R11	82
Duv	0.0003	R4	83	R12	62
Chromaticity (x, y)	x=0.3446 y=0.3517	R5	82	R13	84
Chromaticity (u', v')	u(u')=0.2110 v'(v')=0.4846	R6	84	R14	96
Color Rendering Index (CRI)	83	R7	86	R15	77
R9	7	R8	67	--	--
Rf	83	--	--	--	--
Rg	96	--	--	--	--
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)	10910.3	11076.4	>=10000(-10%)
Luminous Efficacy (lm/W)	136.14	135.79	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	133.75		

**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	0.1417	535	0.4862	146.1848	690	0.1569	47.1744
385	0.0006	0.1713	540	0.4965	149.3079	695	0.1364	41.0062
390	0.0003	0.1000	545	0.5057	152.0484	700	0.1178	35.4139
395	0.0006	0.1743	550	0.5154	154.9691	705	0.1022	30.7211
400	0.0010	0.3054	555	0.5235	157.4006	710	0.0882	26.5116
405	0.0030	0.9142	560	0.5329	160.2457	715	0.0750	22.5498
410	0.0081	2.4277	565	0.5444	163.7074	720	0.0641	19.2782
415	0.0189	5.6950	570	0.5559	167.1674	725	0.0541	16.2707
420	0.0389	11.7018	575	0.5659	170.1529	730	0.0465	13.9884
425	0.0731	21.9780	580	0.5742	172.6673	735	0.0402	12.0954
430	0.1313	39.4745	585	0.5848	175.8438	740	0.0348	10.4689
435	0.2261	67.9960	590	0.5908	177.6549	745	0.0289	8.6770
440	0.3861	116.1114	595	0.5900	177.3958	750	0.0248	7.4483
445	0.6798	204.4094	600	0.5890	177.1124	755	0.0206	6.1871
450	0.9762	293.5393	605	0.5823	175.1015	760	0.0181	5.4457
455	0.8997	270.5338	610	0.5716	171.8780	765	0.0159	4.7950
460	0.6176	185.6984	615	0.5504	165.5111	770	0.0126	3.7888
465	0.4738	142.4524	620	0.5311	159.7115	775	0.0109	3.2749
470	0.3633	109.2553	625	0.5032	151.3130	780	0.0097	2.9237
475	0.2677	80.4910	630	0.4727	142.1264	785	0.0078	2.3448
480	0.2282	68.6084	635	0.4381	131.7247	790	0.0071	2.1217
485	0.2303	69.2379	640	0.4032	121.2492	795	0.0063	1.9024
490	0.2490	74.8779	645	0.3682	110.7178	800	0.0043	1.2907
495	0.2871	86.3410	650	0.3323	99.9117			
500	0.3358	100.9756	655	0.2972	89.3799			
505	0.3800	114.2489	660	0.2650	79.6895			
510	0.4207	126.5077	665	0.2345	70.5208			
515	0.4504	135.4334	670	0.2051	61.6769			
520	0.4697	141.2493	675	0.1801	54.1629			
525	0.4862	146.1848	680	0.1569	47.1744			
530	0.4965	149.3079	685	0.1364	41.0062			

**TM30**

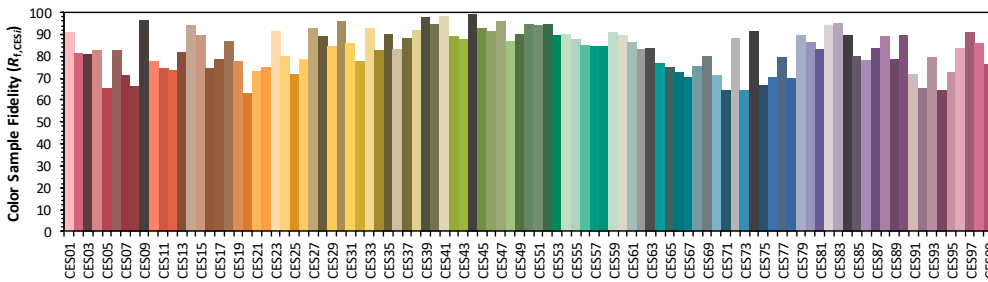
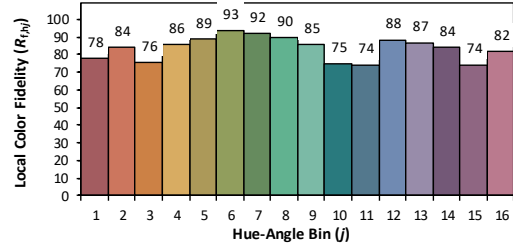
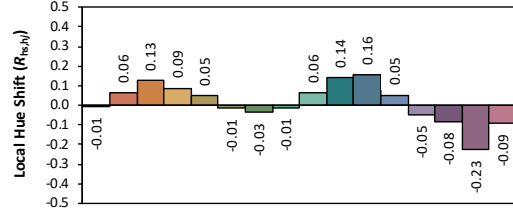
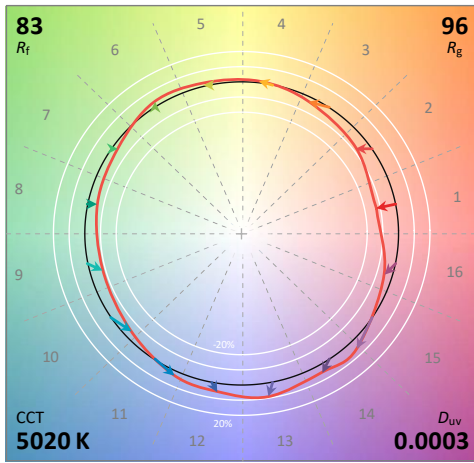
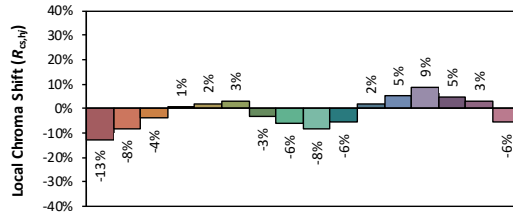
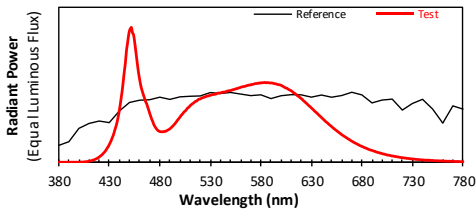
**ANSI/IES TM-30-18 Color Rendition Report**

**Source:** L128-XX80RC35003P1

**Date:** 2022/9/9

**Manufacturer:** Beyond LED Technology

**Model:** BLT-FLO6E-80WBH8DA1-BRFM30/40/50



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

$x$  0.3446  
 $y$  0.3517  
 $u'$  0.2110  
 $v'$  0.4846

CIE 13.3-1995 (CRI)  
 $R_a$  83  
 $R_9$  7

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	2022-01-18
AC Power Source	CHP-500C	DYBWD010159	2022-01-25
Total Luminous Flux Standard Lamp	24V/150W	DYJYR040040	2022-01-25
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 \*\*\*\*\*