



Report No.: BLC2104008E-D

LM-79-08 Test Report

For

Beyond LED Technology

(Brand Name: Beyond LED Technology)

Parking Garage Luminaires

Model name(s): BLT-PG05B-75WAT2A1-abcd

Remark: "a" can be any two letters to represent Housing colors; "b" can be "S" or blank for Surge-Protective Device provided or not;

"c" can be "MS", "PS" or blank for Motion sensor, PIR sensor provided or not;

"d" can be any two digits for CCT.

Representative (Tested) Model:
BLT-PG05B-75WAT2A1-abcd

Model Different: N/A

Test & Report By:

Sophie Yang

Engineer: Sophie Yang

Date: 2021-04-25

Review By:


Jason Luo

Manager: Jason Luo



Report No.: BLC2104008E-D

1.1 Product Information:

Organization Name	Beyond LED Technology	
Brand Name	Beyond LED Technology	
Model Number	BLT-PG05B-75WAT2A1-abcd	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Parking Garage Luminaires	
Rated Voltage / Frequency	100-277Vac, 50/60 Hz	
Nominal Power	75W	
Rated Initial Lamp Lumen	--	
Declared CCT	3000K, 4000K, 5000K(Color tunable)	
LED Manufacturer	Lumileds Holding B.V.	
LED Model	L128-XX80RA35000H1 L128-XX80RA35003HX	
Sample Number	BLC2104008E-D1	
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	2021-04-10
Date of Test	2021-04-13
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 Premium	<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	2021-04-13	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	BLT-PG05B-75WAT2A1-abcd (Setting at 3000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC210400	120.0	60	0.604	71.61	0.988	13.79
8E-D1	277.0	60	0.281	70.71	0.907	12.62
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

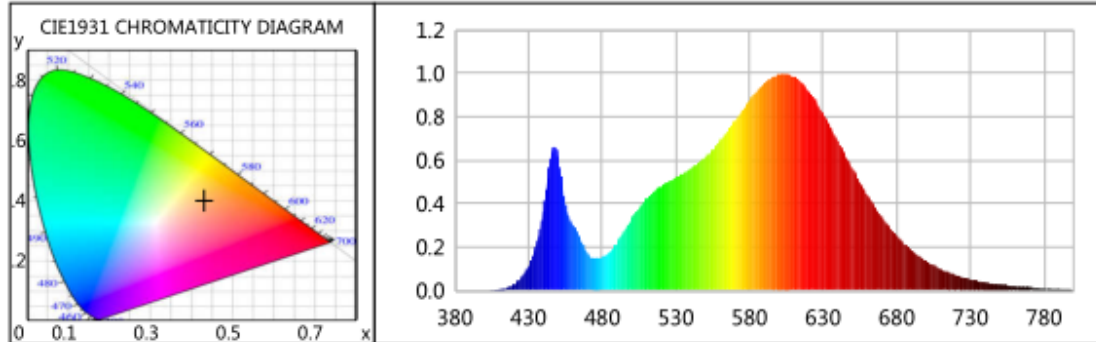
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	5
Frequency (Hz)	60	R2	89	R10	76
CCT (K)	3064	R3	96	R11	81
Duv	-0.0013	R4	81	R12	71
Chromaticity (x, y)	x=0.4306 y=0.3985	R5	81	R13	82
Chromaticity (u', v')	u(u')=0.2488 v'(v')=0.5182	R6	88	R14	98
Color Rendering Index (CRI)	82	R7	82	R15	73
R9	5	R8	58	--	--
Rf	83	--	--	--	--
Rg	98	--	--	--	--
Rcs,h1 (%)	-11	--	--	--	--

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)	10102.5	9895.1	>=10000lm (-10%)
Luminous Efficacy (lm/W)	141.08	139.94	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	138.18		
Zonal lumens in the 60-80 °zone (%)	32.1	--	>=30(-3)
Zonal lumens in the 70-80 °zone (%)	11.1	--	<=25(+3)
Beam Angle (°)	147.0	--	--
Center Beam Candle Power (cd)	1614	--	--



Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0002	0.0489	525	0.5006	103.0518	670	0.3355	69.0731
385	0.0002	0.0473	530	0.5176	106.5643	675	0.2903	59.7647
390	0.0004	0.0872	535	0.5381	110.7912	680	0.2514	51.7664
395	0.0006	0.1197	540	0.5602	115.3383	685	0.2166	44.5863
400	0.0007	0.1470	545	0.5851	120.4548	690	0.1858	38.2609
405	0.0020	0.4036	550	0.6133	126.2561	695	0.1584	32.6032
410	0.0050	1.0259	555	0.6487	133.5512	700	0.1347	27.7397
415	0.0126	2.5933	560	0.6895	141.9443	705	0.1156	23.8002
420	0.0286	5.8804	565	0.7335	151.0188	710	0.0981	20.2006
425	0.0586	12.0627	570	0.7795	160.4814	715	0.0828	17.0565
430	0.1118	23.0205	575	0.8282	170.5010	720	0.0713	14.6762
435	0.2030	41.7835	580	0.8734	179.8177	725	0.0600	12.3511
440	0.3682	75.8067	585	0.9147	188.3169	730	0.0503	10.3652
445	0.6117	125.9350	590	0.9546	196.5347	735	0.0424	8.7371
450	0.6173	127.0854	595	0.9806	201.8720	740	0.0356	7.3292
455	0.3934	80.9982	600	0.9956	204.9680	745	0.0314	6.4555
460	0.3007	61.9004	605	0.9963	205.1105	750	0.0261	5.3767
465	0.2388	49.1669	610	0.9859	202.9741	755	0.0231	4.7481
470	0.1682	34.6346	615	0.9601	197.6718	760	0.0194	3.9910
475	0.1460	30.0603	620	0.9203	189.4598	765	0.0158	3.2489
480	0.1536	31.6153	625	0.8718	179.4875	770	0.0143	2.9509
485	0.1752	36.0608	630	0.8125	167.2728	775	0.0119	2.4488
490	0.2173	44.7429	635	0.7534	155.1036	780	0.0094	1.9418
495	0.2733	56.2688	640	0.6902	142.1052	785	0.0077	1.5792
500	0.3296	67.8504	645	0.6233	128.3164	790	0.0085	1.7432
505	0.3785	77.9262	650	0.5607	115.4286	795	0.0059	1.2225
510	0.4226	87.0105	655	0.4989	102.7183	800	0.0063	1.2937
515	0.4549	93.6532	660	0.4403	90.6450			
520	0.4806	98.9527	665	0.3863	79.5314			



TM30

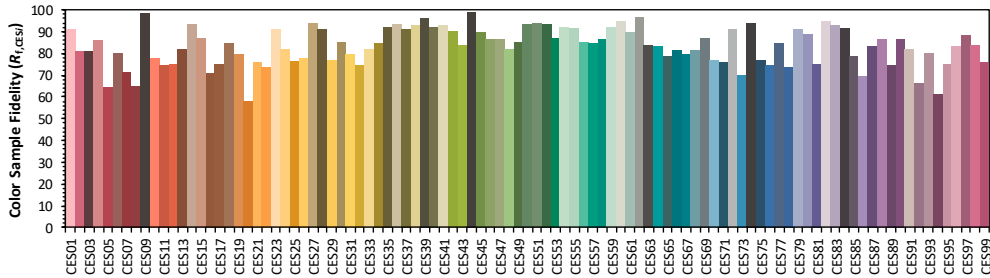
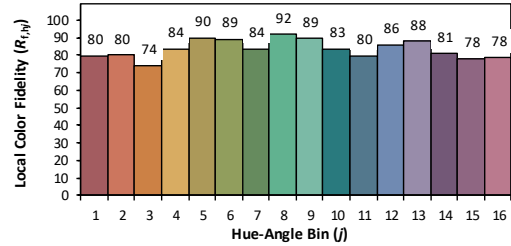
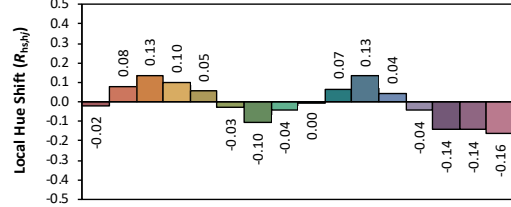
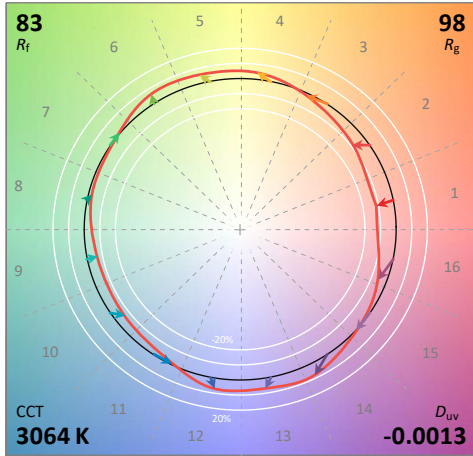
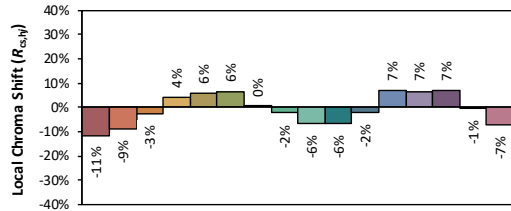
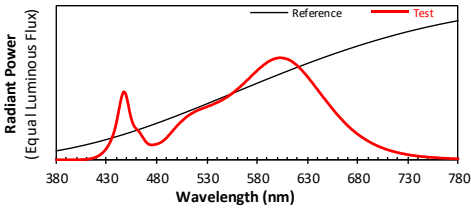
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1
L128-XX80RA35003HX

Date: 2021/4/12

Manufacturer: Beyond LED Technology

Model: BLT-PG05B-75WAT2A1-abcd
(Setting at 3000K)



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

x 0.4306
 y 0.3985
 u' 0.2489
 v' 0.5182

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

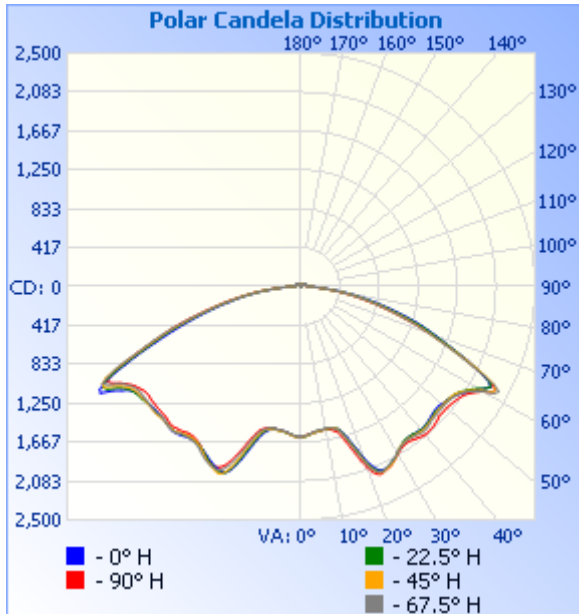
Zone	Lumens	% Lamp	% Luminaire
0-30	1,606.8	15.9%	15.9%
0-40	2,874.0	28.4%	28.4%
0-60	6,291.2	62.3%	62.3%
60-90	3,510.1	34.7%	34.7%
70-100	1,564.0	15.5%	15.5%
90-120	199.7	2%	2%
0-90	9,801.2	97%	97%
90-180	300.9	3%	3%
0-180	10,102.2	100%	100%

Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	149.4	1.5%	90-100	81.1	0.8%
10-20	480.2	4.8%	100-110	61.8	0.6%
20-30	977.3	9.7%	110-120	56.9	0.6%
30-40	1,267.1	12.5%	120-130	50.3	0.5%
40-50	1,565.5	15.5%	130-140	29.5	0.3%
50-60	1,851.7	18.3%	140-150	13.5	0.1%
60-70	2,027.1	20.1%	150-160	5.6	0.1%
70-80	1,124.2	11.1%	160-170	1.9	0%
80-90	358.7	3.6%	170-180	0.5	0%



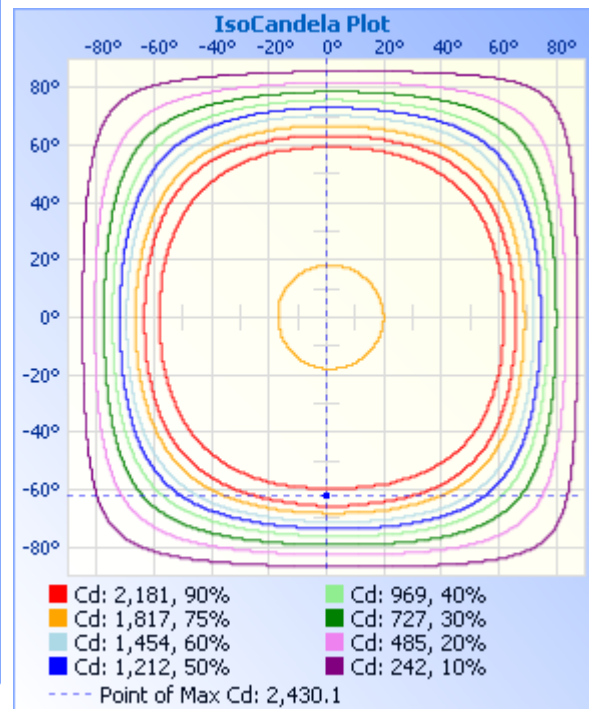
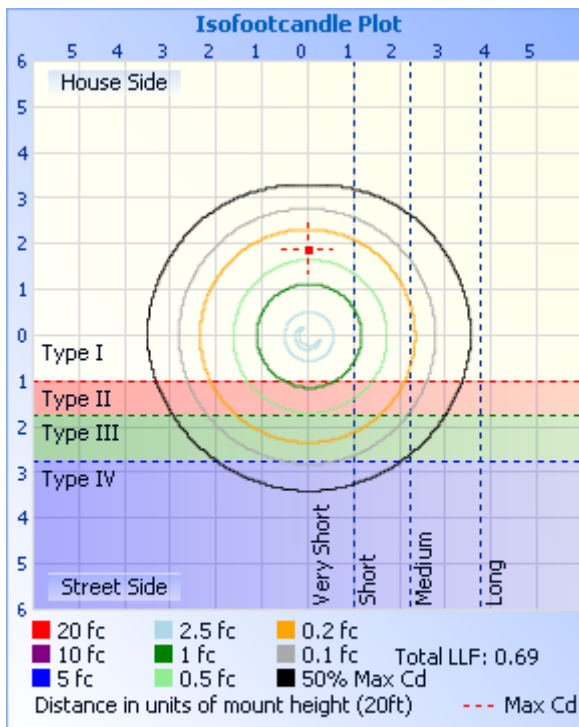
Photometric Data



Illuminance at a Distance

	Center Beam fc	Beam Width	
17.0ft	5.58 fc	114.1 ft	42.9 ft
34.0ft	1.40 fc	228.2 ft	85.8 ft
51.0ft	0.62 fc	342.4 ft	128.7 ft
68.0ft	0.35 fc	456.5 ft	171.6 ft
85.0ft	0.22 fc	570.6 ft	214.5 ft
102.0ft	0.16 fc	684.7 ft	257.4 ft

■ Vert. Spread: 146.8°
■ Horiz. Spread: 103.2°





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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	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614	1614
1	1608	1609	1610	1605	1604	1607	1605	1608	1614	1615	1619	1613	1614	1614	1612	1610	1608
2	1599	1600	1601	1594	1591	1593	1597	1595	1604	1606	1613	1606	1608	1611	1610	1603	1599
3	1587	1590	1587	1582	1582	1583	1588	1584	1596	1597	1601	1592	1597	1600	1599	1591	1587
4	1576	1576	1581	1574	1574	1576	1578	1576	1586	1585	1592	1582	1585	1587	1587	1579	1576
5	1569	1569	1573	1560	1562	1572	1568	1568	1573	1576	1579	1574	1575	1578	1579	1569	1569
6	1565	1564	1565	1552	1560	1566	1565	1561	1563	1571	1569	1564	1568	1571	1569	1561	1565
7	1556	1556	1557	1549	1558	1563	1561	1558	1560	1562	1563	1558	1560	1562	1561	1553	1556
8	1552	1553	1553	1546	1554	1558	1563	1555	1556	1559	1563	1552	1555	1557	1558	1552	1552
9	1546	1545	1550	1543	1553	1561	1559	1550	1552	1555	1559	1554	1550	1554	1555	1545	1546
10	1541	1543	1544	1540	1553	1561	1559	1549	1548	1549	1556	1548	1548	1552	1551	1540	1541
11	1539	1545	1546	1546	1560	1568	1566	1557	1550	1547	1552	1548	1546	1550	1548	1540	1539
12	1543	1545	1548	1550	1568	1578	1579	1568	1564	1556	1558	1549	1548	1553	1548	1540	1543
13	1550	1550	1553	1558	1583	1595	1597	1589	1581	1569	1565	1558	1554	1555	1552	1546	1550
14	1565	1565	1567	1576	1604	1626	1622	1619	1605	1591	1579	1569	1564	1562	1560	1556	1565
15	1592	1594	1604	1609	1652	1663	1673	1663	1645	1621	1606	1591	1579	1577	1573	1576	1592
16	1634	1646	1664	1666	1720	1732	1733	1725	1702	1680	1648	1622	1601	1605	1611	1618	1634
17	1694	1711	1732	1740	1794	1808	1808	1796	1773	1749	1712	1670	1644	1650	1664	1674	1694
18	1766	1789	1813	1823	1882	1887	1894	1883	1862	1828	1783	1740	1700	1709	1727	1742	1766
19	1852	1875	1902	1916	1973	1982	1996	1970	1952	1918	1867	1818	1773	1779	1806	1825	1852
20	1949	1976	1999	2007	2056	2070	2077	2042	2034	2015	1976	1906	1857	1875	1889	1914	1949
21	2030	2058	2079	2086	2125	2132	2138	2103	2105	2086	2066	1991	1941	1962	1979	2004	2030
22	2091	2114	2135	2132	2164	2173	2174	2136	2146	2144	2135	2067	2015	2037	2055	2070	2091
23	2135	2151	2163	2159	2182	2187	2178	2148	2160	2170	2175	2119	2077	2091	2106	2115	2135
24	2151	2165	2169	2161	2173	2183	2169	2146	2153	2172	2186	2152	2115	2132	2137	2137	2151
25	2145	2150	2157	2148	2163	2178	2156	2134	2139	2155	2176	2158	2135	2145	2146	2135	2145
26	2133	2135	2150	2133	2151	2158	2139	2125	2127	2144	2159	2151	2133	2140	2137	2121	2133
27	2121	2119	2135	2118	2137	2146	2119	2117	2109	2129	2138	2144	2126	2128	2124	2109	2121
28	2103	2103	2114	2103	2115	2123	2096	2096	2094	2110	2123	2133	2110	2111	2106	2093	2103
29	2084	2086	2087	2081	2092	2103	2069	2074	2072	2084	2103	2116	2095	2096	2087	2079	2084



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Certificate#4810.01

30	2057	2058	2059	2057	2069	2083	2049	2053	2055	2066	2076	2095	2064	2071	2067	2057	2057
31	2034	2032	2032	2037	2047	2064	2027	2038	2038	2044	2050	2074	2046	2055	2049	2036	2034
32	2015	2011	2012	2016	2034	2055	2016	2024	2026	2029	2027	2051	2022	2029	2024	2013	2015
33	1998	1993	2002	2008	2023	2047	2010	2015	2014	2013	2016	2036	2003	2014	2007	1993	1998
34	1990	1982	1995	1997	2020	2043	2006	2010	2008	2008	1999	2023	1989	2000	1996	1984	1990
35	1982	1978	1990	1996	2020	2042	2004	2011	2008	2004	1995	2018	1982	1992	1989	1978	1982
36	1977	1978	1993	2002	2029	2048	2015	2013	2010	1999	1998	2018	1976	1990	1989	1982	1977
37	1982	1980	1997	2007	2040	2053	2025	2018	2018	2008	2002	2020	1977	1994	1991	1982	1982
38	1989	1992	2006	2013	2048	2063	2039	2028	2034	2019	2008	2025	1984	1999	2000	1994	1989
39	1991	1993	2008	2026	2059	2073	2051	2047	2046	2033	2022	2031	1998	2010	2005	1997	1991
40	1998	2001	2012	2029	2068	2081	2066	2055	2058	2044	2043	2051	2010	2016	2009	1995	1998
41	1994	2001	2012	2027	2067	2082	2063	2063	2065	2058	2058	2062	2017	2020	2007	1994	1994
42	1990	1993	2007	2022	2065	2083	2066	2064	2069	2057	2060	2070	2028	2022	2002	1991	1990
43	1984	1989	1998	2013	2061	2080	2065	2061	2064	2060	2061	2067	2028	2025	2000	1985	1984
44	1973	1982	1991	2000	2054	2074	2067	2046	2059	2058	2057	2055	2028	2015	1992	1974	1973
45	1967	1979	1981	1998	2046	2069	2062	2043	2051	2048	2052	2047	2019	2009	1981	1963	1967
46	1955	1969	1979	1992	2036	2061	2059	2038	2048	2046	2052	2042	2010	2000	1971	1951	1955
47	1948	1962	1977	1989	2024	2059	2060	2037	2042	2046	2054	2039	2009	2000	1967	1941	1948
48	1949	1969	1974	1988	2026	2057	2058	2037	2045	2049	2059	2046	2010	1992	1962	1938	1949
49	1948	1968	1974	1989	2026	2060	2064	2042	2042	2055	2065	2054	2009	1997	1963	1937	1948
50	1958	1977	1974	1987	2027	2061	2065	2045	2044	2051	2066	2057	2011	1998	1972	1944	1958
51	1969	1975	1973	1988	2035	2068	2066	2048	2048	2058	2061	2057	2008	2005	1976	1953	1969
52	1976	1981	1983	1992	2039	2067	2071	2049	2056	2061	2064	2056	2008	2014	1986	1963	1976
53	1988	1988	1986	2002	2049	2072	2075	2055	2058	2065	2063	2053	2009	2014	1990	1970	1988
54	2002	1996	1992	2011	2059	2080	2077	2063	2064	2072	2067	2051	2002	2020	2002	1983	2002
55	2025	2007	2010	2032	2071	2096	2081	2070	2074	2086	2073	2055	2005	2023	2012	1997	2025
56	2051	2028	2030	2050	2088	2109	2092	2080	2084	2093	2078	2057	2012	2034	2033	2021	2051
57	2080	2057	2064	2081	2112	2127	2108	2092	2095	2102	2084	2057	2026	2051	2056	2048	2080
58	2108	2092	2101	2122	2149	2153	2136	2112	2118	2117	2096	2071	2050	2070	2083	2079	2108
59	2149	2132	2158	2184	2190	2199	2185	2159	2153	2141	2116	2086	2070	2096	2110	2113	2149
60	2198	2181	2219	2245	2245	2247	2226	2219	2221	2179	2150	2116	2103	2131	2160	2168	2198
61	2250	2254	2330	2359	2331	2315	2274	2279	2297	2233	2199	2156	2145	2171	2205	2219	2250



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Certificate#4810.01

62	2292	2290	2357	2395	2348	2348	2307	2384	2430	2344	2273	2220	2195	2234	2276	2287	2292
63	2256	2270	2319	2318	2286	2304	2292	2341	2416	2380	2367	2314	2275	2316	2281	2281	2256
64	2162	2186	2208	2180	2179	2202	2232	2273	2335	2342	2363	2364	2307	2284	2243	2207	2162
65	2050	2061	2066	2035	2050	2068	2127	2158	2211	2238	2299	2282	2235	2194	2153	2091	2050
66	1951	1936	1939	1899	1928	1936	1997	2023	2064	2112	2164	2179	2131	2081	2034	1974	1951
67	1829	1822	1795	1773	1804	1812	1866	1873	1932	1973	2021	2046	2013	1968	1912	1849	1829
68	1720	1707	1677	1655	1691	1702	1734	1751	1802	1829	1872	1894	1887	1833	1794	1726	1720
69	1613	1607	1554	1547	1571	1586	1626	1633	1667	1715	1754	1780	1756	1709	1673	1615	1613
70	1528	1510	1461	1448	1462	1481	1511	1522	1552	1608	1642	1674	1642	1601	1576	1519	1528
71	1441	1423	1360	1346	1357	1373	1398	1405	1442	1505	1540	1562	1544	1507	1475	1433	1441
72	1356	1333	1273	1252	1249	1268	1276	1293	1334	1395	1437	1452	1454	1406	1383	1346	1356
73	1271	1227	1169	1152	1143	1157	1178	1193	1234	1278	1317	1340	1347	1306	1276	1262	1271
74	1169	1127	1082	1062	1050	1065	1086	1102	1132	1178	1214	1229	1242	1203	1178	1168	1169
75	1075	1037	987	977	962	980	990	1007	1043	1083	1108	1115	1128	1110	1087	1084	1075
76	989	946	901	892	876	897	908	925	956	989	1012	1014	1037	1021	1000	990	989
77	892	858	824	813	797	819	830	845	872	905	932	925	941	938	916	905	892
78	813	774	743	740	713	737	756	771	787	818	839	838	862	851	830	826	813
79	733	700	672	664	639	663	684	698	715	742	760	759	782	776	755	739	733
80	650	622	598	592	570	592	604	618	643	670	679	678	697	690	679	662	650
81	572	542	529	523	496	516	537	551	573	589	607	602	622	614	604	585	572
82	502	471	458	457	433	451	470	487	501	520	535	533	551	544	532	516	502
83	436	401	378	383	362	380	399	419	438	456	470	466	486	478	458	451	436
84	357	330	322	324	304	317	333	346	367	384	399	390	410	399	387	371	357
85	298	278	268	275	256	268	276	292	308	321	326	326	345	335	319	311	298
86	248	231	227	230	212	222	234	247	261	267	276	276	287	280	267	255	248
87	206	192	184	186	175	184	194	206	216	225	234	233	241	235	224	213	206
88	168	155	149	150	140	148	158	165	177	186	193	189	196	194	184	174	168
89	130	123	121	121	113	118	124	129	139	150	157	152	160	154	149	141	130
90	109	104	101	101	97	99	102	105	112	115	121	122	130	126	119	112	109
91	96	92	90	90	84	87	90	92	94	98	102	103	107	105	102	99	96
92	86	84	82	81	77	79	82	83	85	87	90	91	93	93	90	88	86
93	79	77	76	76	71	73	75	76	77	79	81	82	83	82	81	80	79



Report No.: BLC2104008E-D

Certificate#4810.01

94	74	73	72	71	67	68	71	71	72	73	74	76	76	76	75	74	74
95	71	70	68	68	65	66	67	68	68	69	70	71	71	71	71	71	71
96	68	67	67	66	62	63	64	65	66	66	67	68	67	68	68	69	68
97	66	65	65	65	61	61	63	63	64	64	65	65	65	66	66	67	66
98	65	64	64	63	59	60	61	61	62	62	63	63	63	64	65	65	65
99	64	63	63	62	59	59	60	61	60	61	61	62	62	63	64	64	64
100	63	63	63	61	58	58	59	60	60	60	61	61	61	62	63	64	63
101	62	61	62	61	58	58	59	60	60	60	61	61	61	61	62	63	62
102	61	61	61	60	56	57	58	58	59	60	60	60	60	61	62	62	61
103	61	60	60	60	56	56	57	58	59	59	59	60	59	60	61	61	61
104	60	60	60	59	56	56	57	57	58	59	59	59	59	60	60	60	60
105	59	59	59	58	55	56	56	57	57	58	58	58	58	59	59	59	59
106	58	58	59	58	55	55	56	56	57	57	57	58	58	58	59	59	58
107	59	58	59	58	55	55	55	56	57	57	57	57	57	58	59	59	59
108	59	59	59	58	54	54	55	56	56	56	57	57	57	57	59	59	59
109	59	59	59	57	55	55	56	56	56	56	57	56	57	58	59	59	59
110	59	59	59	58	55	55	56	56	57	57	57	57	56	58	59	59	59
111	59	58	59	58	55	55	56	56	56	56	57	57	56	58	59	59	59
112	59	58	59	58	54	54	56	56	56	56	56	56	57	58	59	59	59
113	59	59	60	58	54	54	55	55	56	56	56	56	57	58	59	59	59
114	59	59	60	58	54	54	55	56	54	56	56	56	57	59	60	60	59
115	55	59	61	59	54	54	55	56	52	56	57	56	57	59	60	60	55
116	55	59	61	59	55	55	56	56	52	57	57	57	58	59	60	60	55
117	54	59	60	60	55	56	56	57	52	58	58	58	59	60	59	61	54
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120	54	59	62	60	56	56	57	58	52	59	58	58	59	61	58	61	54
121	55	59	61	60	56	56	57	58	53	58	58	59	60	61	58	61	55
122	54	59	61	60	56	56	57	58	53	58	58	58	60	61	59	61	54
123	53	59	61	60	56	56	56	58	53	57	58	59	60	61	59	61	53
124	53	58	62	60	56	57	57	58	52	56	58	59	60	61	60	61	53
125	52	57	61	60	55	57	57	58	52	55	58	59	60	62	60	60	52



Report No.: BLC2104008E-D

Certificate#4810.01

126	51	56	59	58	55	56	55	58	51	54	58	59	60	61	60	58	51
127	49	54	57	56	53	54	53	56	50	53	57	59	59	60	59	57	49
128	47	52	55	54	51	52	50	53	49	50	56	57	58	58	57	53	47
129	45	50	53	52	50	49	48	50	47	48	54	54	55	56	56	51	45
130	44	49	51	49	47	47	46	47	45	46	52	52	52	53	54	49	44
131	42	46	48	47	45	45	45	44	42	45	50	50	50	51	52	47	42
132	40	44	46	44	44	43	43	41	40	42	49	48	48	48	49	44	40
133	38	42	44	42	41	41	41	39	37	41	46	46	46	45	47	42	38
134	37	39	42	39	35	38	38	37	36	39	45	44	42	43	45	39	37
135	35	36	40	37	32	35	36	35	34	37	42	42	37	40	42	36	35
136	34	34	38	35	30	33	34	32	32	35	40	39	34	38	41	34	34
137	31	31	35	32	28	31	32	30	30	32	38	37	32	36	39	31	31
138	30	30	33	31	26	29	30	29	29	30	36	35	30	34	36	30	30
139	28	28	32	29	25	27	28	27	27	28	34	32	28	31	34	28	28
140	26	27	30	27	24	26	27	25	26	27	32	31	26	30	32	27	26
141	25	25	29	26	22	24	26	23	24	26	30	29	25	28	31	25	25
142	24	24	27	24	21	23	25	22	23	24	29	27	24	27	29	24	24
143	23	23	26	23	20	21	24	20	21	23	28	26	22	25	28	23	23
144	21	22	24	22	19	20	22	19	19	21	26	24	21	24	26	22	21
145	21	21	24	21	18	19	21	17	17	20	25	23	20	22	25	21	21
146	19	20	22	20	17	18	20	16	16	19	23	22	19	21	24	20	19
147	19	19	21	19	16	17	19	15	15	18	22	20	18	20	22	19	19
148	17	18	20	18	15	16	18	15	14	17	21	19	17	19	21	18	17
149	16	18	19	17	14	15	17	14	14	16	20	18	16	18	20	17	16
150	15	16	18	16	14	14	16	13	13	15	19	17	16	17	19	16	15
151	14	15	17	15	13	13	15	13	13	14	17	16	14	16	17	15	14
152	14	15	16	14	12	12	14	12	12	14	17	15	14	15	16	14	14
153	13	14	15	13	12	11	13	11	12	13	15	14	13	14	16	13	13
154	12	13	14	13	10	11	12	11	11	13	15	14	12	13	14	12	12
155	11	12	13	12	10	10	12	10	11	12	13	13	11	13	13	12	11
156	11	12	12	11	9	9	11	9	10	12	13	12	11	12	13	11	11
157	10	11	11	11	8	9	10	9	9	11	12	12	10	11	12	10	10



Report No.: BLC2104008E-D

Certificate#4810.01

158	10	10	10	9	8	9	9	9	9	10	11	11	9	10	11	10	10
159	9	9	9	8	7	8	9	8	9	9	10	10	9	10	10	10	9
160	8	8	9	8	7	8	9	7	7	9	10	10	8	9	9	9	8
161	8	8	8	8	6	7	7	8	7	9	9	9	7	8	8	8	8
162	7	8	8	8	6	7	7	8	7	8	9	9	7	8	8	8	7
163	7	7	8	6	6	7	7	7	7	7	8	8	7	8	8	7	7
164	7	6	7	7	5	6	6	7	6	7	8	7	7	7	7	7	7
165	7	7	7	6	5	6	6	6	7	7	7	7	6	6	7	7	7
166	6	7	6	6	5	5	7	6	6	7	7	7	6	6	6	6	6
167	6	6	6	6	4	5	6	6	6	6	7	7	5	6	6	6	6
168	6	6	6	6	4	5	6	6	5	7	6	7	5	6	6	6	6
169	5	6	6	6	4	5	6	6	6	6	6	6	5	5	5	6	5
170	6	6	6	6	4	5	5	6	5	6	6	7	5	5	6	5	6
171	6	6	6	5	4	5	5	6	6	6	6	6	5	5	6	5	6
172	5	4	6	5	4	5	5	6	6	6	6	6	4	5	4	5	5
173	5	5	5	6	4	5	5	6	5	5	6	6	5	5	5	5	5
174	5	5	5	4	4	4	5	5	5	5	5	6	5	5	5	6	5
175	5	4	5	5	4	4	5	5	5	5	6	6	5	4	5	6	5
176	4	5	4	5	4	4	4	5	5	5	5	5	4	5	5	5	4
177	5	4	5	5	4	4	5	4	5	5	5	5	4	5	5	5	5
178	4	4	5	5	4	4	4	4	5	5	5	5	4	5	5	5	4
179	5	5	5	5	4	4	5	5	5	5	5	5	4	4	4	5	5
180	5	5	6	5	4	4	4	5	5	5	5	6	4	4	5	5	5



BUG

Lum. Classification System (LCS)

<u>LCS Zone</u>	<u>Lumens</u>	<u>%Lamp</u>	<u>%Lum</u>
FL (0-30)	798.1	7.9	7.9
FM (30-60)	2316.8	22.9	22.9
FH (60-80)	1560.9	15.5	15.5
FVH(80-90)	178.3	1.8	1.8
BL (0-30)	808.6	8.0	8.0
BM (30-60)	2368.2	23.4	23.4
BH (60-80)	1590.2	15.7	15.7
BVH(80-90)	180.4	1.8	1.8
UL (90-100)	81.0	0.8	0.8
UH (100-180)	219.9	2.2	2.2
Total	10102.4	100.0	100.0
BUG Rating	B3-U3-G2		

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

Test date	2021-04-13	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	BLT-PG05B-75WAT2A1-abcd (Setting at 4000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %	
BLC210400	120.0	60	0.583	69.09	0.987	13.91	
8E-D1	277.0	60	0.270	67.96	0.907	12.65	
DLC Pass Criteria						>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

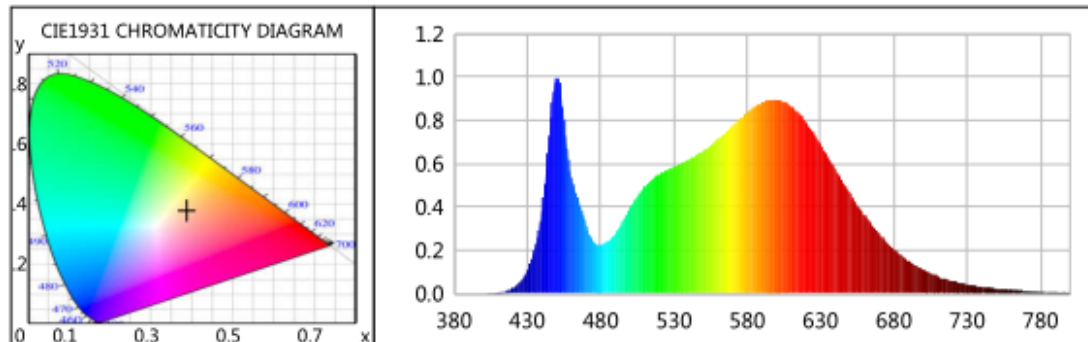
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	83	R9	11
Frequency (Hz)	60	R2	91	R10	78
CCT (K)	3771	R3	95	R11	83
Duv	-0.0024	R4	83	R12	66
Chromaticity (x, y)	x=0.3891 y=0.3768	R5	83	R13	85
Chromaticity (u', v')	u(u')=0.2308 v'(v')=0.5029	R6	87	R14	98
Color Rendering Index (CRI)	84	R7	84	R15	77
R9	11	R8	64	--	--
Rf	84	--	--	--	--
Rg	97	--	--	--	--
Rcs,h1(%)	-12	--	--	--	--

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)	10631.6	10414.2	>=10000(-10%)
Luminous Efficacy (lm/W)	153.88	153.24	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	150.73		



Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0002	0.0361	525	0.5706	122.8674	670	0.2739	58.9759
385	0.0004	0.0870	530	0.5858	126.1471	675	0.2363	50.8870
390	0.0003	0.0729	535	0.6019	129.6128	680	0.2049	44.1355
395	0.0003	0.0741	540	0.6191	133.3277	685	0.1763	37.9558
400	0.0006	0.1269	545	0.6362	136.9947	690	0.1517	32.6779
405	0.0019	0.3988	550	0.6580	141.7075	695	0.1298	27.9518
410	0.0042	0.8969	555	0.6837	147.2425	700	0.1096	23.5958
415	0.0105	2.2507	560	0.7146	153.8871	705	0.0939	20.2203
420	0.0239	5.1471	565	0.7434	160.1002	710	0.0794	17.0945
425	0.0516	11.1092	570	0.7753	166.9536	715	0.0681	14.6679
430	0.1059	22.8009	575	0.8069	173.7540	720	0.0571	12.3051
435	0.2041	43.9521	580	0.8368	180.2054	725	0.0497	10.7115
440	0.3863	83.1984	585	0.8624	185.7242	730	0.0409	8.7999
445	0.7343	158.1267	590	0.8820	189.9306	735	0.0349	7.5155
450	1.0000	215.3479	595	0.8930	192.3155	740	0.0308	6.6313
455	0.8005	172.3757	600	0.8950	192.7456	745	0.0254	5.4710
460	0.5341	115.0072	605	0.8856	190.7172	750	0.0222	4.7881
465	0.4292	92.4244	610	0.8661	186.5031	755	0.0191	4.1239
470	0.3184	68.5714	615	0.8341	179.6205	760	0.0166	3.5736
475	0.2388	51.4239	620	0.7912	170.3762	765	0.0146	3.1378
480	0.2254	48.5330	625	0.7424	159.8719	770	0.0116	2.5050
485	0.2410	51.9069	630	0.6871	147.9573	775	0.0088	1.9041
490	0.2762	59.4817	635	0.6315	135.9867	780	0.0075	1.6142
495	0.3317	71.4211	640	0.5737	123.5501	785	0.0058	1.2565
500	0.3919	84.3883	645	0.5169	111.3173	790	0.0065	1.3929
505	0.4460	96.0361	650	0.4626	99.6278	795	0.0054	1.1728
510	0.4934	106.2497	655	0.4093	88.1452	800	0.0042	0.8984
515	0.5261	113.3010	660	0.3619	77.9436			
520	0.5528	119.0379	665	0.3159	68.0274			



TM30

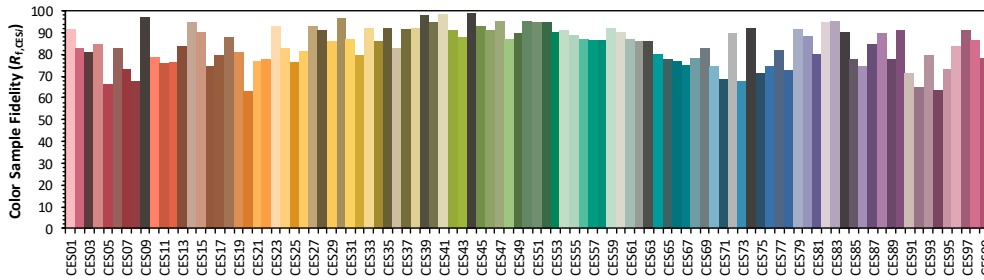
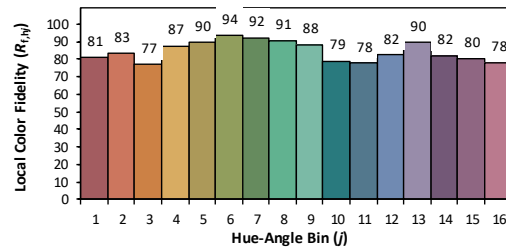
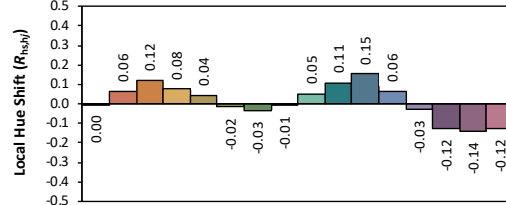
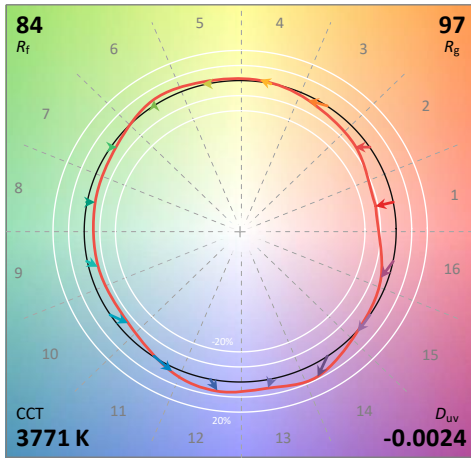
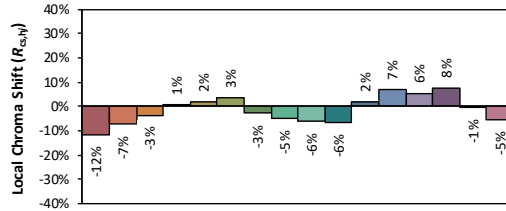
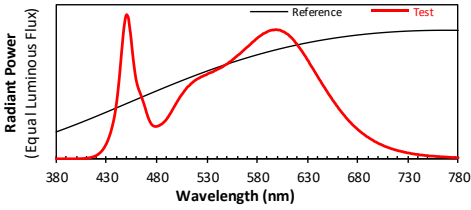
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1
L128-XX80RA35003HX

Date: 2021/4/12

Manufacturer: Beyond LED Technology

Model: BLT-PG05B-75WAT2A1-abcd
(Setting at 4000K)



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

x 0.3891
 y 0.3768
 u' 0.2308
 v' 0.5029

CIE 13.3-1995 (CRI)	
R_a	84
R_9	11

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

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

Test date	2021-04-13	Test Ambient:	25.2 °C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	BLT-PG05B-75WAT2A1-abcd (Setting at 5000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC210400	120.0	60	0.604	71.58	0.987	13.69
8E-D1	277.0	60	0.281	70.69	0.908	12.5
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

Chromaticity Measurement - Sphere-Spectroradiometer Method:

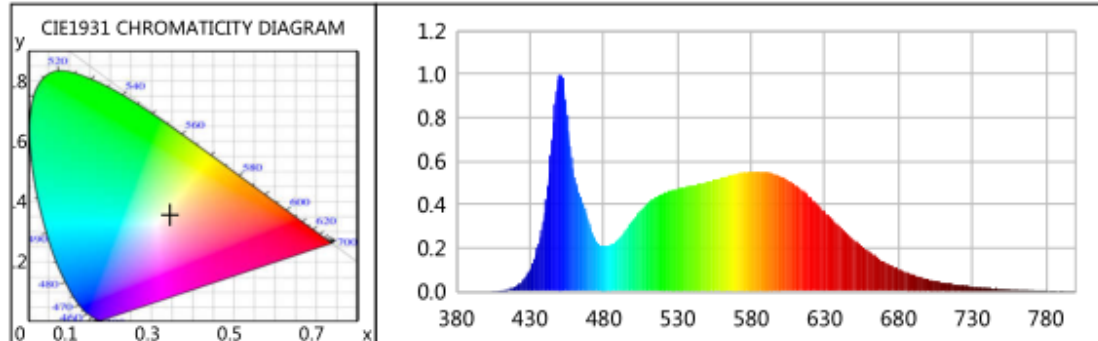
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	1
Frequency (Hz)	60	R2	88	R10	71
CCT (K)	5095	R3	92	R11	82
Duv	0.0018	R4	82	R12	60
Chromaticity (x, y)	x=0.3427 y=0.3532	R5	82	R13	82
Chromaticity (u', v')	u(u')=0.2092 v'(v')=0.4851	R6	83	R14	96
Color Rendering Index (CRI)	82	R7	86	R15	75
R9	1	R8	65	--	--
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)	10306.1	10116.4	$\geq 10000(-10\%)$
Luminous Efficacy (lm/W)	143.98	143.11	Premium: $\geq 120(-3\%)$
Most worst Luminous/Highest Watts	141.33		



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	0.1062	525	0.4634	138.1583	670	0.1369	40.8215
385	0.0000	0.0117	530	0.4714	140.5673	675	0.1182	35.2380
390	0.0001	0.0403	535	0.4800	143.1158	680	0.1025	30.5611
395	0.0003	0.0937	540	0.4878	145.4363	685	0.0882	26.3133
400	0.0005	0.1344	545	0.4945	147.4374	690	0.0756	22.5337
405	0.0017	0.5146	550	0.5040	150.2842	695	0.0649	19.3617
410	0.0038	1.1184	555	0.5134	153.0740	700	0.0558	16.6279
415	0.0095	2.8424	560	0.5240	156.2541	705	0.0474	14.1258
420	0.0228	6.7950	565	0.5337	159.1260	710	0.0404	12.0378
425	0.0492	14.6722	570	0.5407	161.2088	715	0.0347	10.3434
430	0.1024	30.5439	575	0.5469	163.0815	720	0.0297	8.8493
435	0.1984	59.1565	580	0.5510	164.2984	725	0.0254	7.5705
440	0.3703	110.4002	585	0.5519	164.5578	730	0.0216	6.4501
445	0.7044	210.0377	590	0.5505	164.1362	735	0.0176	5.2418
450	0.9997	298.0900	595	0.5428	161.8335	740	0.0157	4.6730
455	0.8112	241.8884	600	0.5314	158.4549	745	0.0132	3.9426
460	0.5275	157.2909	605	0.5125	152.8099	750	0.0115	3.4212
465	0.4222	125.8727	610	0.4911	146.4181	755	0.0101	3.0163
470	0.3134	93.4481	615	0.4639	138.3249	760	0.0087	2.5801
475	0.2281	68.0211	620	0.4334	129.2264	765	0.0065	1.9282
480	0.2083	62.1049	625	0.3995	119.1129	770	0.0068	2.0260
485	0.2162	64.4536	630	0.3648	108.7796	775	0.0051	1.5080
490	0.2400	71.5566	635	0.3306	98.5852	780	0.0040	1.1944
495	0.2812	83.8525	640	0.2986	89.0186	785	0.0033	0.9743
500	0.3290	98.1045	645	0.2659	79.2742	790	0.0031	0.9353
505	0.3711	110.6367	650	0.2355	70.2211	795	0.0024	0.7116
510	0.4074	121.4674	655	0.2076	61.9030	800	0.0018	0.5468
515	0.4323	128.8951	660	0.1823	54.3506			
520	0.4510	134.4734	665	0.1587	47.3070			



TM30

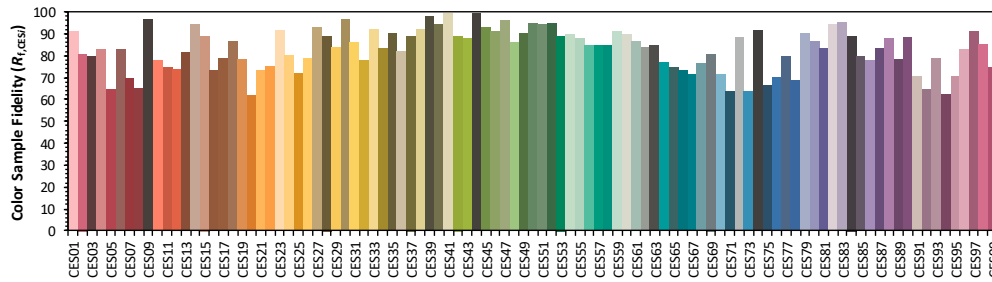
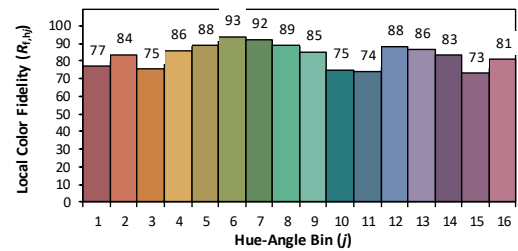
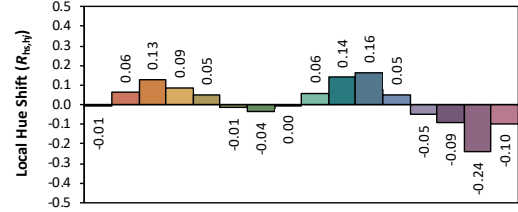
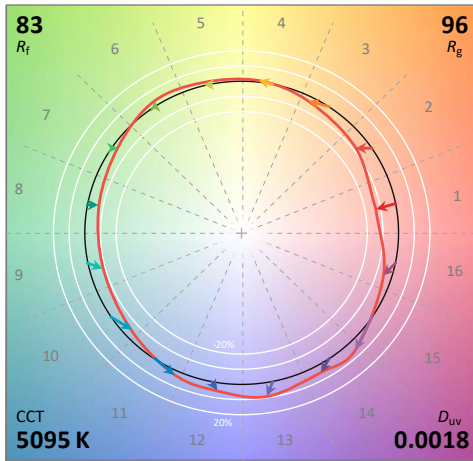
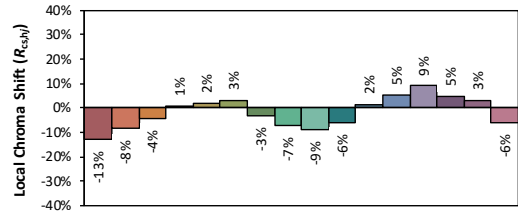
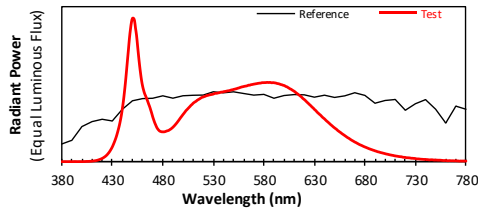
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-XX80RA35000H1
L128-XX80RA35003HX

Date: 2021/4/12

Manufacturer: Beyond LED Technology

Model: BLT-PG05B-75WAT2A1-abcd
(Setting at 5000K)



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

x 0.3427
 y 0.3532
 u' 0.2092
 v' 0.4851

CIE 13.3-1995 (CRI)	
R_a	82
R_9	1

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



Report No.: BLC2104008E-D

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 *****