



Report No.: UTU2502037E-B

## LM-79-08 Test Report

For

## RAB Lighting Inc.

(Brand Name:RAB Lighting)

408 W 14th St, New York, NY 10014 United States  
Xiao Xiang,15921313292,Gary.Xiao@rablighting.com

### Outdoor Full-Cutoff Wall-Mounted Area Luminaires

Model name(s): SLIM17FAFC60[blank,/PIR,/MVS,/LCB,/LCBS,  
/LCBS/MVS]

Test & Report By:

*Winnie Wu*

Engineer: Winnie Wu

Date: 2024-02-12

Review By:

*Jason Luo*

Manager: Jason Luo

### 1.1 Product Information:

Organization Name	RAB Lighting Inc.	
Brand Name	RAB Lighting	
Model Number	SLIM17FAFC60[blank,/PIR,/MVS,/LCB,/LCBS, /LCBS/MVS]	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Full-Cutoff Wall-Mounted Area Luminaires	
Rated Voltage / Frequency	120-347Vac, 50/60 Hz	
Nominal Power	60W	
Rated Initial Lamp Lumen	--	
Declared CCT	3000K,4000K, 5000K (Color tunable)	
LED Manufacturer	Lumileds Holding B.V.	
LED Model	L128-3080RC35003Z1 L128-5080RC35003Z1	
Sample Number	UTU2502037E-B1	
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	2025-02-20
Date of Test	2025-02-22
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-79-2019 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  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ , 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  $1^{\circ}$  vertical intervals and  $22.5^{\circ}$  horizontal intervals. Goniophotometer far field detector  $f1' = 1.42\%$ , Test distance: 14.14m

### 2) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm. Use 2m diameter integrated sphere (94-98% coating reflectance) and  $4\pi$  geometry.

Self-absorption:

AST-FWP01C-60WBT3DC1-abce :1.024

### 3) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$ . The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.

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

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Report Format Number BL-FM-SA-012

## 2.1 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction BL-QP-033)

<b>Test date</b>	2025-02-22	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	Horizontal	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	SLIM17FAFC60 at 3000K	<b>Operation time(min)</b>	110

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
UTU250203 7E-B1	120.0	60	0.500	59.58	0.993	11.02
	277.0	60	0.218	58.92	0.974	6.31
	347.0	60	0.181	59.25	0.943	8.21
<b>DLC Pass Criteria</b>					$\geq 0.9(-3\%)$	$\leq 20(+5)$

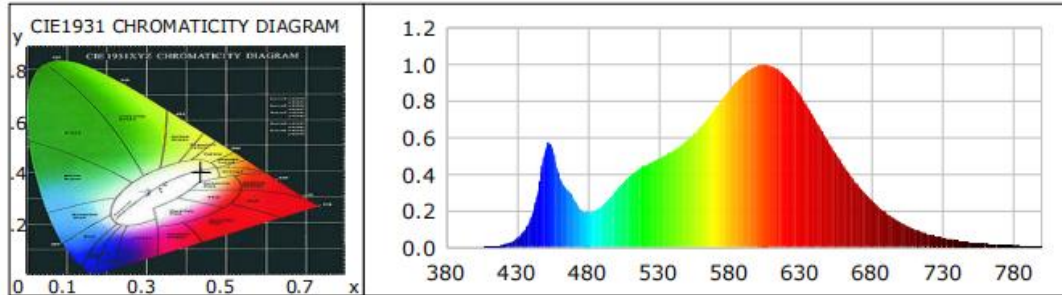
### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	5
Frequency (Hz)	60	R2	92	R10	82
CCT (K)	2964	R3	95	R11	79
Duv	-0.0007	R4	80	R12	71
Chromaticity (x, y)	x=0.4384 y=0.4027	R5	81	R13	84
Chromaticity (u', v')	u'=0.2521 v'=0.5211	R6	90	R14	98
Color Rendering Index (CRI)	82	R7	81	R15	73
R9	5	R8	57	--	--
Rf	84	--	--	--	--
Rg	95	--	--	--	--
Rcs,h1(%)	-12				

### Photometric Measurement – Goniophotometer Method:

Parameter	Result			DLC V5.1 Pass Criteria
Test Voltage (V)	120.0	277.0	347.0	--
Frequency (Hz)	60	60	60	
Total Luminous (lm)	8703.1	8716.8	8608.2	$\geq 300(-10\%)$
Luminous Efficacy (lm/W)	146.07	147.94	145.29	Premium: $\geq 120(-3\%)$
Most worst Luminous/Highest	144.48			
Zonal lumens in the 0-90° zone (%)	100	--	--	$\geq 100(-3\%)$
Zonal lumens in the 80-90°zone (%)	0.7	--	--	$\leq 10(+3\%)$
Beam Angle (°)	109.7	--	--	--
Center Beam Candle Power (cd)	3014	--	--	--

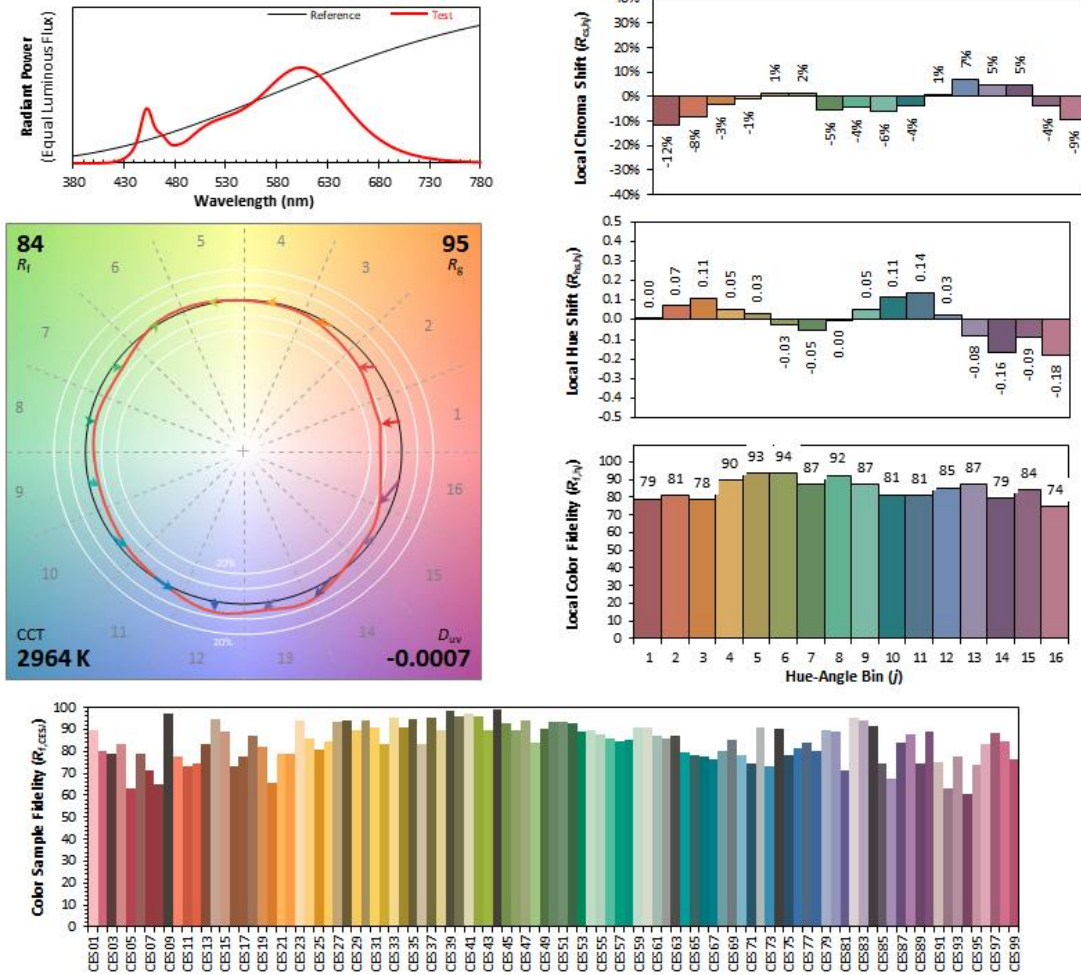
### Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0001	0.0146	535	0.4666	76.3843	690	0.3405	55.7465
385	0.0002	0.0389	540	0.4857	79.5115	695	0.2948	48.2655
390	0.0001	0.0178	545	0.5059	82.8230	700	0.2560	41.9183
395	0.0002	0.0246	550	0.5283	86.4890	705	0.2198	35.9923
400	0.0006	0.0929	555	0.5535	90.6198	710	0.1888	30.9018
405	0.0012	0.2022	560	0.5858	95.9071	715	0.1615	26.4459
410	0.0025	0.4103	565	0.6229	101.9751	720	0.1375	22.5034
415	0.0061	1.0007	570	0.6650	108.8722	725	0.1170	19.1492
420	0.0134	2.1910	575	0.7131	116.7386	730	0.0989	16.1861
425	0.0265	4.3319	580	0.7627	124.8675	735	0.0840	13.7598
430	0.0496	8.1148	585	0.8144	133.3299	740	0.0723	11.8424
435	0.0903	14.7844	590	0.8649	141.5918	745	0.0614	10.0546
440	0.1645	26.9248	595	0.9101	148.9935	750	0.0520	8.5158
445	0.3207	52.4971	600	0.9496	155.4594	755	0.0433	7.0809
450	0.5333	87.3127	605	0.9764	159.8443	760	0.0371	6.0674
455	0.5397	88.3504	610	0.9963	163.1038	765	0.0320	5.2315
460	0.3835	62.7788	615	0.9988	163.5146	770	0.0275	4.4960
465	0.3185	52.1364	620	0.9900	162.0834	775	0.0230	3.7678
470	0.2652	43.4144	625	0.9660	158.1425	780	0.0197	3.2253
475	0.2050	33.5620	630	0.9303	152.3067	785	0.0163	2.6679
480	0.1874	30.6874	635	0.8809	144.2163	790	0.0139	2.2827
485	0.2009	32.8877	640	0.8264	135.3011	795	0.0123	2.0097
490	0.2263	37.0528	645	0.7632	124.9548	800	0.0103	1.6825
495	0.2653	43.4351	650	0.7001	114.6188			
500	0.3118	51.0474	655	0.6336	103.7321			
505	0.3564	58.3486	660	0.5682	93.0297			
510	0.3924	64.2396	665	0.5054	82.7412			
515	0.4231	69.2603	670	0.4456	72.9554			
520	0.4464	73.0768	675	0.3904	63.9167			
525	0.4666	76.3843	680	0.3405	55.7465			
530	0.4857	79.5115	685	0.2948	48.2655			

**TM30**

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



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

$x$	0.4384	CIE 13.3-1995 (CRI)
$y$	0.4027	
$u'$	0.2521	
$v'$	0.5211	
		$R_a$ 82
		$R_g$ 5

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

## Zonal Lumen Tabulation

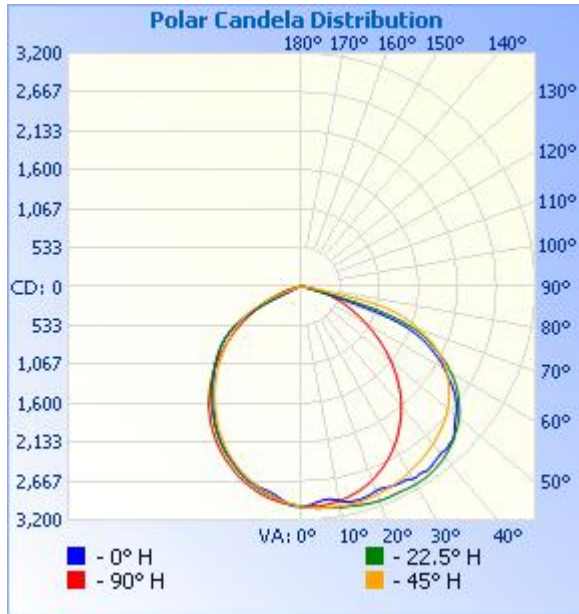
### Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	2,353.4	27%	27%
0-40	3,887.1	44.7%	44.7%
0-60	7,030.9	80.8%	80.8%
60-90	1,671.3	19.2%	19.2%
70-100	541.4	6.2%	6.2%
90-120	0	0%	0%
0-90	8,702.1	100%	100%
90-180	0	0%	0%
0-180	8,702.1	100%	100%

### Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	284.5	3.3%	90-100	0	0%
10-20	818.2	9.4%	100-110	0	0%
20-30	1,250.7	14.4%	110-120	0	0%
30-40	1,533.7	17.6%	120-130	0	0%
40-50	1,629.5	18.7%	130-140	0	0%
50-60	1,514.3	17.4%	140-150	0	0%
60-70	1,129.8	13.0%	150-160	0	0%
70-80	476.6	5.5%	160-170	0	0%
80-90	64.8	0.7%	170-180	0	0%

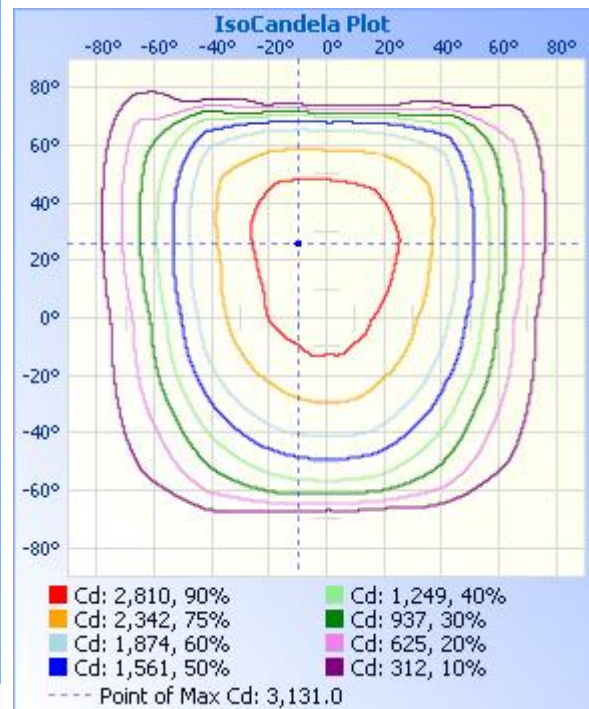
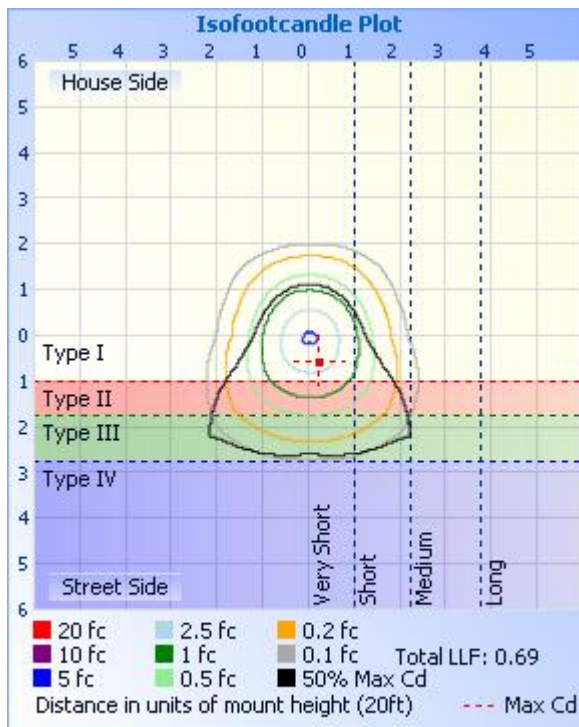
**Photometric Data**



**Illuminance at a Distance**

	Center Beam fc	Beam Width	
17.0ft	10.4 fc	55.3 ft	44.2 ft
34.0ft	2.61 fc	110.6 ft	88.4 ft
51.0ft	1.16 fc	165.9 ft	132.6 ft
68.0ft	0.65 fc	221.2 ft	176.8 ft
85.0ft	0.42 fc	276.5 ft	220.9 ft
102.0ft	0.29 fc	331.8 ft	265.1 ft

■ Vert. Spread: 116.8°  
■ Horiz. Spread: 104.8°



**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	3014	3014	3014	3014	3014	3014	3014	3014	3014	3014	3014	3014	3014	3014	3014	3014	3014
1	3015	3021	3021	3016	3015	3009	3004	3003	3014	3004	3004	3007	3005	3016	3020	3020	3015
2	3000	3030	3027	3020	3018	3011	2996	2997	3011	2993	2993	3001	3000	3021	3028	3029	3000
3	2986	3037	3033	3021	3016	3006	2986	2989	2997	2984	2981	2994	2994	3022	3034	3038	2986
4	2964	3043	3039	3019	3018	2995	2975	2981	2968	2971	2969	2981	2985	3024	3039	3039	2964
5	2954	3047	3042	3019	3016	2987	2963	2969	2940	2957	2954	2974	2975	3025	3044	3042	2954
6	2940	3051	3046	3018	3011	2978	2949	2956	2912	2945	2939	2961	2966	3020	3049	3046	2940
7	2939	3057	3048	3014	3005	2966	2933	2940	2882	2926	2925	2948	2953	3016	3054	3049	2939
8	2944	3062	3050	3010	2998	2954	2917	2925	2864	2907	2905	2933	2942	3011	3058	3046	2944
9	2960	3068	3053	3006	2990	2939	2898	2910	2844	2891	2886	2917	2929	3003	3059	3049	2960
10	2977	3072	3056	2998	2979	2923	2878	2896	2833	2877	2863	2901	2914	2996	3060	3053	2977
11	3003	3076	3057	2990	2973	2908	2858	2866	2822	2859	2840	2882	2899	2986	3063	3050	3003
12	3018	3079	3058	2983	2958	2890	2837	2847	2812	2839	2817	2861	2880	2977	3062	3049	3018
13	3024	3084	3060	2974	2949	2874	2816	2829	2791	2817	2793	2839	2860	2964	3063	3044	3024
14	3025	3091	3062	2966	2933	2853	2792	2807	2782	2795	2767	2814	2841	2949	3063	3046	3025
15	3028	3098	3062	2956	2920	2834	2768	2785	2767	2776	2743	2789	2818	2937	3061	3050	3028
16	3023	3107	3055	2944	2904	2810	2745	2764	2746	2753	2714	2764	2798	2925	3058	3052	3023
17	3016	3112	3049	2930	2885	2786	2720	2738	2722	2726	2689	2735	2775	2908	3054	3056	3016
18	3007	3117	3043	2915	2866	2761	2695	2713	2696	2698	2663	2711	2752	2891	3048	3060	3007
19	2992	3120	3039	2900	2846	2737	2672	2687	2659	2671	2637	2684	2722	2874	3041	3058	2992
20	2980	3124	3031	2884	2824	2711	2644	2659	2623	2640	2607	2658	2694	2856	3034	3059	2980
21	2973	3126	3024	2865	2801	2684	2617	2627	2588	2611	2578	2628	2667	2836	3025	3054	2973
22	2982	3127	3015	2850	2772	2656	2586	2597	2558	2583	2548	2599	2640	2814	3018	3051	2982
23	2990	3126	3009	2828	2748	2626	2553	2563	2531	2553	2515	2566	2610	2794	3011	3048	2990
24	2999	3123	3003	2811	2723	2599	2524	2531	2507	2524	2482	2528	2580	2773	3002	3041	2999
25	3004	3122	2996	2789	2694	2569	2494	2498	2478	2494	2450	2494	2548	2749	2992	3037	3004
26	3011	3121	2984	2766	2664	2535	2460	2462	2445	2460	2411	2459	2517	2723	2979	3033	3011
27	3012	3124	2976	2744	2633	2502	2428	2425	2416	2427	2375	2423	2486	2699	2961	3034	3012
28	3011	3128	2966	2720	2602	2471	2395	2387	2378	2391	2339	2384	2453	2673	2945	3032	3011



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29	3022	3129	2953	2695	2566	2435	2360	2350	2337	2354	2303	2343	2420	2646	2932	3030	3022
30	3046	3131	2938	2669	2533	2399	2324	2313	2305	2318	2264	2303	2378	2621	2918	3026	3046
31	3049	3127	2925	2644	2499	2363	2288	2277	2270	2281	2226	2261	2344	2593	2903	3019	3049
32	3038	3124	2912	2617	2461	2320	2249	2243	2229	2244	2183	2220	2309	2564	2887	3019	3038
33	3037	3124	2901	2587	2421	2282	2210	2203	2183	2205	2142	2173	2271	2533	2872	3014	3037
34	3050	3117	2891	2558	2381	2241	2171	2166	2138	2166	2103	2127	2234	2502	2859	3007	3050
35	3048	3108	2878	2526	2340	2201	2132	2126	2094	2126	2062	2083	2191	2469	2842	3000	3048
36	3033	3101	2866	2498	2299	2159	2092	2086	2056	2085	2021	2037	2150	2437	2826	2993	3033
37	3016	3089	2851	2467	2259	2115	2047	2045	2012	2049	1978	1992	2109	2402	2808	2985	3016
38	3003	3076	2837	2435	2215	2073	2007	2003	1969	2011	1938	1943	2067	2368	2789	2970	3003
39	2992	3064	2821	2403	2170	2027	1965	1963	1928	1971	1896	1896	2022	2332	2770	2957	2992
40	2977	3049	2806	2370	2126	1984	1922	1924	1890	1931	1854	1848	1972	2296	2749	2940	2977
41	2983	3031	2791	2338	2081	1936	1880	1883	1854	1889	1811	1800	1923	2259	2731	2926	2983
42	2983	3013	2774	2300	2027	1891	1838	1843	1818	1846	1769	1752	1877	2219	2708	2910	2983
43	2964	2993	2758	2266	1980	1839	1792	1799	1782	1806	1721	1700	1829	2181	2688	2895	2964
44	2955	2974	2739	2229	1929	1792	1749	1759	1740	1766	1677	1651	1775	2139	2666	2880	2955
45	2940	2950	2722	2192	1874	1738	1706	1719	1702	1724	1634	1599	1726	2096	2647	2858	2940
46	2910	2921	2703	2152	1822	1688	1662	1678	1666	1683	1590	1549	1674	2053	2619	2839	2910
47	2869	2897	2680	2115	1770	1638	1612	1637	1629	1643	1543	1498	1623	2013	2596	2821	2869
48	2825	2872	2660	2078	1713	1587	1565	1595	1592	1602	1498	1446	1568	1971	2573	2798	2825
49	2792	2846	2638	2041	1660	1535	1521	1552	1550	1561	1454	1390	1510	1929	2547	2765	2792
50	2759	2816	2614	2003	1604	1479	1476	1513	1514	1516	1411	1338	1456	1885	2516	2733	2759
51	2730	2782	2588	1961	1546	1427	1427	1473	1475	1477	1362	1289	1400	1836	2488	2703	2730
52	2693	2747	2558	1922	1491	1375	1382	1435	1440	1436	1320	1238	1343	1792	2457	2674	2693
53	2658	2704	2530	1883	1432	1322	1337	1389	1398	1395	1277	1182	1285	1746	2427	2639	2658
54	2614	2667	2499	1843	1375	1270	1293	1349	1358	1355	1234	1131	1221	1700	2396	2600	2614
55	2566	2625	2467	1797	1318	1217	1249	1308	1312	1309	1192	1079	1163	1654	2364	2557	2566
56	2508	2582	2435	1756	1258	1158	1203	1266	1264	1266	1148	1029	1107	1604	2329	2515	2508
57	2447	2535	2400	1713	1199	1103	1160	1222	1205	1220	1106	973	1051	1556	2296	2469	2447
58	2380	2482	2364	1672	1143	1049	1117	1176	1145	1168	1064	922	995	1510	2261	2415	2380
59	2321	2428	2326	1630	1082	997	1075	1128	1076	1106	1024	873	936	1463	2224	2360	2321

60	2268	2367	2288	1588	1027	943	1032	1073	998	1041	980	826	880	1416	2185	2298	2268
61	2208	2307	2247	1541	971	888	984	1011	916	970	933	779	828	1366	2138	2238	2208
62	2150	2244	2204	1499	919	838	941	935	819	891	888	730	772	1319	2093	2173	2150
63	2064	2179	2150	1457	868	786	898	859	725	797	841	686	723	1274	2046	2106	2064
64	1992	2099	2101	1417	813	743	851	776	625	704	788	643	673	1229	1995	2029	1992
65	1919	2027	2047	1372	764	693	799	690	482	611	726	603	626	1181	1937	1960	1919
66	1840	1951	1991	1331	713	648	748	590	320	480	665	561	580	1137	1882	1877	1840
67	1748	1874	1931	1289	665	605	693	466	207	323	599	519	536	1092	1819	1797	1748
68	1637	1792	1862	1248	618	560	635	317	160	209	531	483	490	1049	1752	1713	1637
69	1527	1694	1794	1203	575	520	566	213	139	159	456	446	449	1003	1688	1615	1527
70	1363	1581	1725	1163	528	482	502	156	125	136	386	411	409	961	1615	1507	1363
71	1154	1455	1645	1121	484	445	436	133	113	122	278	373	368	920	1538	1365	1154
72	870	1271	1567	1081	445	406	369	119	101	108	185	339	331	881	1459	1172	870
73	553	1072	1482	1040	407	372	259	106	90	96	132	306	295	842	1378	914	553
74	302	761	1397	998	368	340	177	93	81	85	109	270	262	800	1279	603	302
75	168	445	1290	959	329	309	131	82	73	75	93	238	228	762	1172	340	168
76	117	242	1166	919	294	277	107	73	66	68	80	206	198	721	1024	186	117
77	97	144	1001	878	258	243	91	65	57	58	69	175	169	679	811	123	97
78	83	111	770	830	226	212	76	57	51	52	58	144	143	633	547	99	83
79	71	93	505	784	195	183	65	50	45	46	49	98	119	589	301	83	71
80	60	78	275	736	164	155	55	44	35	37	41	69	95	543	170	70	60
81	49	65	157	680	135	121	47	36	27	26	34	51	75	494	107	56	49
82	40	52	104	625	111	85	38	25	18	18	24	37	56	438	72	44	40
83	32	41	73	567	87	59	31	17	11	11	16	26	40	369	52	36	32
84	25	33	55	493	66	42	21	10	7	8	10	17	26	270	36	28	25
85	20	25	38	380	48	28	14	7	5	6	6	9	15	148	26	21	20
86	11	19	28	237	32	20	8	5	4	3	3	4	8	44	16	11	11
87	6	8	19	108	20	11	5	2	3	3	2	4	5	14	8	7	6
88	6	7	8	39	11	6	4	3	3	3	2	2	2	7	7	6	6
89	5	6	6	10	7	5	3	3	2	3	3	2	2	6	5	6	5
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Report No.: UTU2502037E-B

91	0	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	0
93	0	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	0
95	0	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	0
97	0	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	0
99	0	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	0
101	0	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	0
103	0	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	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	0	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	0
114	0	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	0
116	0	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	0
118	0	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	0
120	0	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	0



Report No.: UTU2502037E-B

122	0	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	0
124	0	0	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	0	0
126	0	0	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	0	0
128	0	0	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	0	0
130	0	0	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	0	0
132	0	0	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	0	0
134	0	0	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	0	0
136	0	0	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	0	0
138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	0	0	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	0	0
143	0	0	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	0	0
145	0	0	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	0	0
147	0	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	0
149	0	0	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	0	0
151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Report No.: UTU2502037E-B

153	0	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	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
157	0	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	0
159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
163	0	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	0
165	0	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	0
167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## BUG Rating

### Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	1242.1	14.3	14.3
FM (30-60)	2802.7	32.2	32.2
FH (60-80)	1192.4	13.7	13.7
FVH (80-90)	53.1	0.6	0.6
BL (0-30)	1111.3	12.8	12.8
BM (30-60)	1875.7	21.6	21.6
BH (60-80)	414.0	4.8	4.8
BVH (80-90)	11.7	0.1	0.1
UL (90-100)	0.0	0.0	0.0
UH (100-180)	0.0	0.0	0.0
Total	8703.0	100.1	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>	2025-02-22	<b>Test Ambient:</b>	25.2 ° C
<b>Test Orientation</b>	Horizontal	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	SLIM17FAFC60 at 4000K	<b>Operation time(min)</b>	110

### Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
UTU250203 7E-B1	120.0	60	0.482	57.45	0.993	11.32
	277.0	60	0.211	57.23	0.979	6.85
	347.0	60	0.176	57.43	0.94	8.31
<b>DLC Pass Criteria</b>					<b>&gt;= 0.9(-3%)</b>	<b>&lt;= 20(+5)</b>

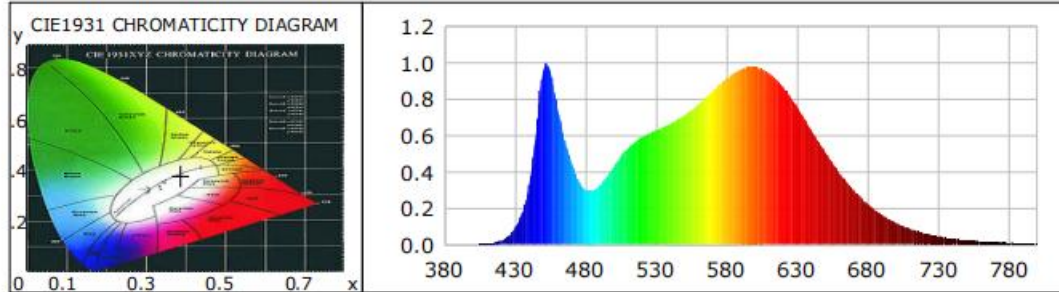
### Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	84	R9	14
Frequency (Hz)	60	R2	93	R10	82
CCT (K)	3787	R3	96	R11	82
Duv	-0.0025	R4	82	R12	66
Chromaticity (x, y)	x=0.3882 y=0.376	R5	84	R13	86
Chromaticity (u', v')	u'=0.2306 v'=0.5024	R6	89	R14	98
Color Rendering Index (CRI)	85	R7	84	R15	78
R9	14	R8	64	--	--
Rf	84	--	--	--	--
Rg	95	--	--	--	--
Rcs,h1(%)	-11				

### Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result			DLC V5.1 Pass Criteria
Test Voltage (V)	120.0	277.0	347.0	--
Frequency (Hz)	60	60	60	
Total Luminous (lm)	9320.5	9446.7	9344.1	>=300(-10%)
Luminous Efficacy (lm/W)	162.24	165.07	162.70	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	162.24			
Zonal lumens in the 0-90° zone (%)	100	--	--	>=100(-3%)
Zonal lumens in the 80-90°zone (%)	0.8	--	--	<=10(+3%)
Beam Angle (°)	110.2	--	--	--
Center Beam Candle Power (cd)	3184	--	--	--

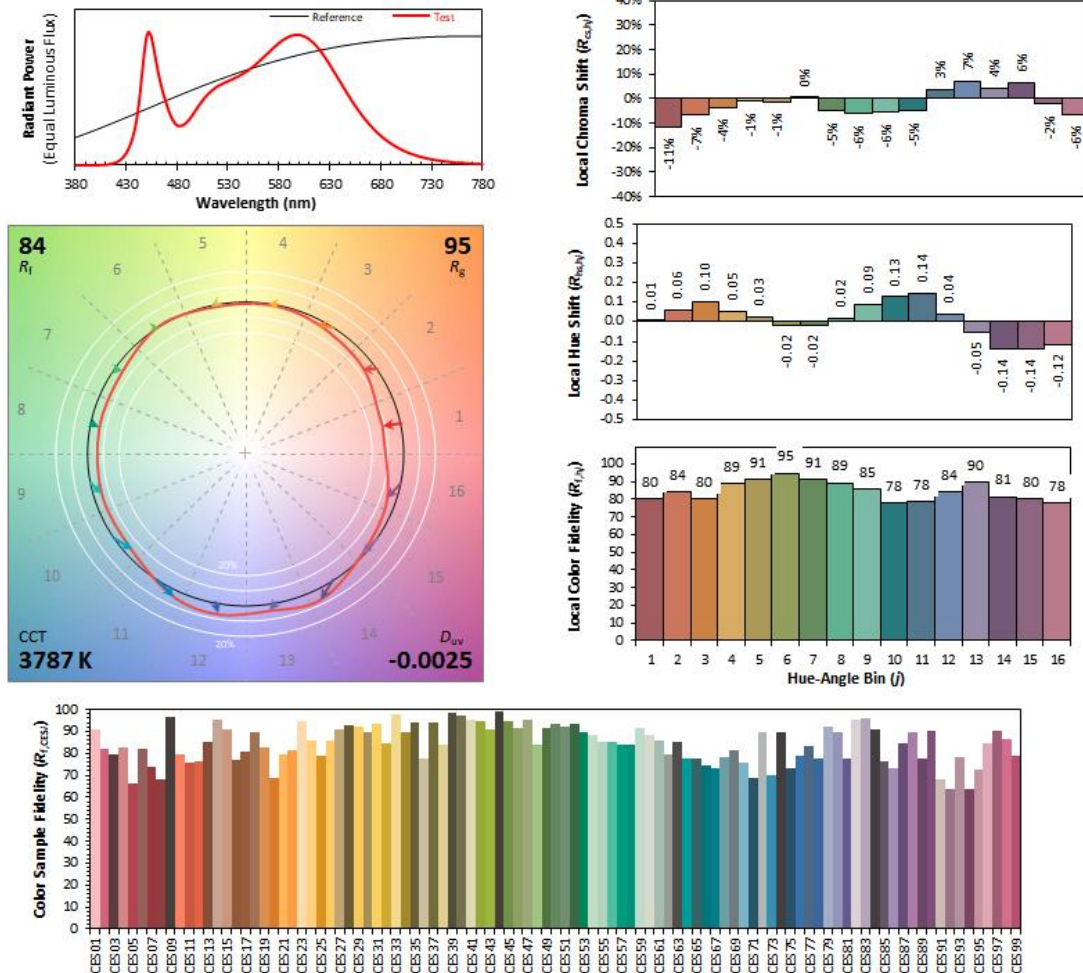
**Spectral Power Distribution & Chromaticity Diagram**



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0004	0.0607	535	0.6112	94.6296	690	0.2985	46.2107
385	0.0002	0.0261	540	0.6283	97.2735	695	0.2579	39.9306
390	0.0006	0.0889	545	0.6469	100.1548	700	0.2235	34.6019
395	0.0008	0.1223	550	0.6647	102.9205	705	0.1909	29.5555
400	0.0008	0.1173	555	0.6863	106.2536	710	0.1637	25.3521
405	0.0019	0.2995	560	0.7108	110.0507	715	0.1401	21.6856
410	0.0038	0.5917	565	0.7405	114.6464	720	0.1189	18.4095
415	0.0092	1.4208	570	0.7721	119.5479	725	0.1011	15.6511
420	0.0207	3.2011	575	0.8090	125.2525	730	0.0859	13.2986
425	0.0443	6.8534	580	0.8437	130.6297	735	0.0735	11.3829
430	0.0885	13.7093	585	0.8812	136.4414	740	0.0618	9.5655
435	0.1721	26.6427	590	0.9147	141.6217	745	0.0523	8.0902
440	0.3257	50.4347	595	0.9415	145.7753	750	0.0442	6.8440
445	0.6291	97.3987	600	0.9635	149.1744	755	0.0374	5.7919
450	0.9571	148.1879	605	0.9755	151.0407	760	0.0327	5.0652
455	0.9565	148.0940	610	0.9756	151.0550	765	0.0282	4.3616
460	0.7574	117.2687	615	0.9656	149.5061	770	0.0232	3.5846
465	0.5833	90.3185	620	0.9432	146.0411	775	0.0196	3.0400
470	0.4521	69.9953	625	0.9089	140.7260	780	0.0170	2.6272
475	0.3516	54.4347	630	0.8660	134.0748	785	0.0145	2.2374
480	0.3001	46.4618	635	0.8136	125.9639	790	0.0127	1.9709
485	0.2976	46.0755	640	0.7545	116.8112	795	0.0101	1.5575
490	0.3253	50.3726	645	0.6911	106.9972	800	0.0085	1.3113
495	0.3728	57.7253	650	0.6290	97.3951			
500	0.4293	66.4623	655	0.5656	87.5674			
505	0.4831	74.8005	660	0.5042	78.0716			
510	0.5294	81.9740	665	0.4457	69.0084			
515	0.5639	87.3047	670	0.3921	60.7019			
520	0.5920	91.6603	675	0.3417	52.9109			
525	0.6112	94.6296	680	0.2985	46.2107			
530	0.6283	97.2735	685	0.2579	39.9306			

**TM30**

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



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

$x$  0.3882  
 $y$  0.3760  
 $u'$  0.2306  
 $v'$  0.5024

CIE 13.3-1995 (CRI)  
 $R_a$  85  
 $R_g$  14

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

## Zonal Lumen Tabulation

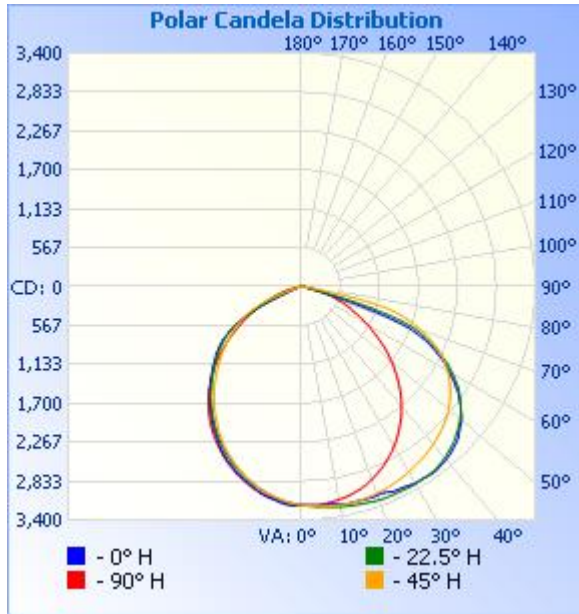
### Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	2,500.4	26.8%	26.8%
0-40	4,138.3	44.4%	44.4%
0-60	7,512.5	80.6%	80.6%
60-90	1,807.1	19.4%	19.4%
70-100	585.9	6.3%	6.3%
90-120	0	0%	0%
0-90	9,319.6	100%	100%
90-180	0	0%	0%
0-180	9,319.6	100%	100%

### Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	301.5	3.2%	90-100	0	0%
10-20	867.8	9.3%	100-110	0	0%
20-30	1,331.0	14.3%	110-120	0	0%
30-40	1,638.0	17.6%	120-130	0	0%
40-50	1,746.2	18.7%	130-140	0	0%
50-60	1,628.0	17.5%	140-150	0	0%
60-70	1,221.2	13.1%	150-160	0	0%
70-80	513.9	5.5%	160-170	0	0%
80-90	72.0	0.8%	170-180	0	0%

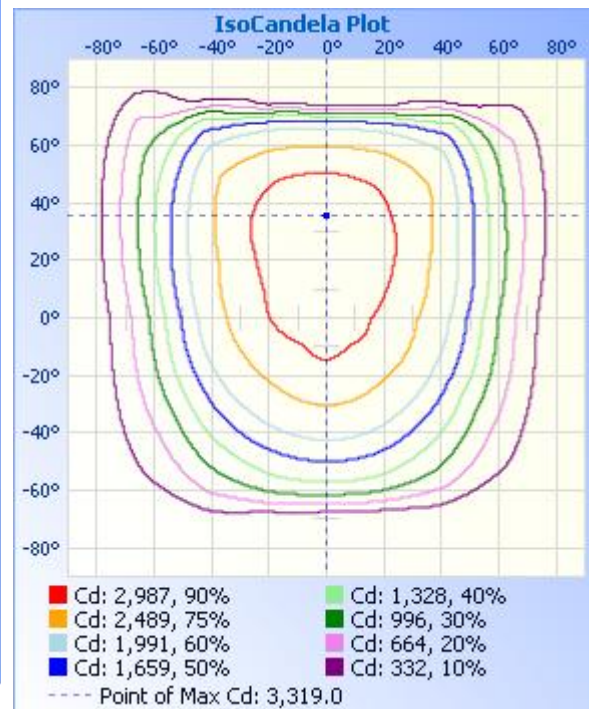
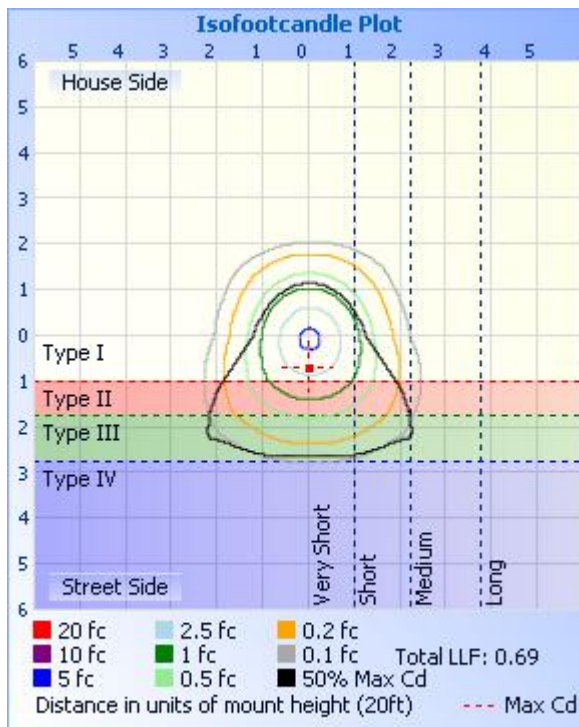
**Photometric Data**



**Illuminance at a Distance**

	Center Beam fc	Beam Width	
17.0ft	11.0 fc	57.1 ft	44.4 ft
34.0ft	2.75 fc	114.1 ft	88.8 ft
51.0ft	1.22 fc	171.2 ft	133.2 ft
68.0ft	0.69 fc	228.2 ft	177.6 ft
85.0ft	0.44 fc	285.3 ft	222.1 ft
102.0ft	0.31 fc	342.3 ft	266.5 ft

■ Vert. Spread: 118.4°  
■ Horiz. Spread: 105.1°



**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	3184	3184	3184	3184	3184	3184	3184	3184	3184	3184	3184	3184	3184	3184	3184	3184	3184
1	3188	3191	3190	3189	3186	3179	3174	3178	3191	3173	3176	3178	3177	3186	3190	3189	3188
2	3186	3199	3194	3193	3187	3175	3163	3173	3194	3164	3164	3173	3171	3188	3199	3197	3186
3	3190	3205	3200	3194	3188	3170	3153	3165	3187	3154	3153	3166	3166	3188	3206	3202	3190
4	3194	3214	3205	3193	3188	3162	3141	3154	3180	3142	3140	3155	3157	3185	3212	3202	3194
5	3201	3218	3209	3193	3184	3154	3126	3141	3169	3128	3125	3148	3145	3186	3218	3204	3201
6	3200	3224	3216	3191	3179	3145	3112	3124	3155	3110	3110	3136	3135	3180	3224	3206	3200
7	3196	3232	3221	3188	3173	3133	3096	3107	3134	3093	3094	3124	3120	3176	3227	3209	3196
8	3204	3240	3222	3185	3167	3120	3076	3090	3120	3076	3075	3110	3108	3171	3229	3214	3204
9	3212	3249	3226	3178	3158	3108	3058	3073	3106	3058	3056	3095	3094	3163	3234	3221	3212
10	3221	3255	3228	3173	3149	3091	3039	3057	3092	3042	3034	3073	3079	3156	3236	3225	3221
11	3230	3260	3232	3165	3140	3076	3017	3035	3073	3023	3013	3057	3062	3147	3237	3224	3230
12	3232	3264	3231	3159	3130	3058	2995	3016	3048	3003	2990	3036	3045	3138	3237	3225	3232
13	3230	3270	3231	3148	3116	3039	2972	2998	3017	2977	2967	3016	3028	3126	3235	3228	3230
14	3226	3276	3230	3140	3101	3019	2946	2977	2994	2956	2941	2993	3009	3113	3233	3230	3226
15	3230	3281	3230	3128	3086	2996	2921	2955	2970	2934	2916	2968	2987	3101	3232	3231	3230
16	3232	3284	3225	3118	3072	2974	2896	2932	2948	2911	2889	2945	2964	3086	3229	3233	3232
17	3232	3290	3221	3105	3053	2949	2872	2904	2921	2885	2860	2916	2938	3071	3225	3236	3232
18	3237	3296	3215	3091	3035	2922	2846	2879	2899	2860	2833	2889	2912	3050	3219	3236	3237
19	3236	3301	3208	3074	3010	2891	2818	2851	2876	2832	2806	2861	2887	3034	3208	3236	3236
20	3231	3307	3202	3059	2986	2864	2789	2821	2842	2803	2770	2830	2860	3016	3201	3234	3231
21	3227	3310	3194	3042	2962	2836	2760	2791	2811	2773	2740	2801	2832	2997	3192	3234	3227
22	3235	3314	3190	3024	2938	2806	2733	2761	2785	2744	2709	2771	2802	2977	3185	3232	3235
23	3250	3311	3185	3005	2913	2776	2701	2727	2760	2712	2676	2735	2770	2954	3177	3230	3250
24	3269	3311	3177	2985	2886	2745	2671	2693	2726	2681	2643	2703	2739	2933	3167	3228	3269
25	3273	3310	3168	2965	2856	2713	2638	2660	2690	2644	2610	2669	2709	2910	3155	3224	3273
26	3274	3311	3159	2942	2823	2680	2601	2622	2657	2611	2573	2633	2678	2885	3141	3222	3274
27	3279	3313	3150	2917	2792	2647	2567	2587	2624	2575	2536	2589	2639	2858	3126	3223	3279
28	3287	3318	3140	2893	2759	2611	2532	2551	2578	2538	2498	2553	2607	2836	3108	3219	3287



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29	3299	3319	3129	2868	2725	2574	2495	2512	2535	2501	2459	2512	2572	2808	3094	3218	3299
30	3309	3318	3116	2844	2689	2531	2458	2474	2494	2464	2419	2471	2534	2778	3079	3214	3309
31	3308	3314	3103	2817	2654	2494	2418	2435	2455	2423	2374	2428	2499	2749	3062	3210	3308
32	3306	3311	3090	2789	2612	2455	2380	2394	2421	2386	2333	2384	2462	2717	3048	3210	3306
33	3309	3313	3078	2761	2572	2415	2340	2355	2379	2347	2292	2338	2420	2685	3030	3207	3309
34	3319	3310	3068	2731	2532	2374	2300	2313	2333	2306	2249	2292	2380	2654	3014	3205	3319
35	3319	3305	3056	2702	2490	2326	2259	2272	2294	2266	2207	2245	2338	2621	2992	3200	3319
36	3316	3302	3044	2672	2446	2284	2211	2232	2250	2224	2159	2197	2296	2585	2973	3194	3316
37	3312	3290	3032	2637	2404	2240	2170	2186	2209	2183	2117	2145	2252	2550	2955	3186	3312
38	3300	3278	3017	2610	2359	2196	2128	2145	2164	2143	2073	2098	2205	2514	2936	3176	3300
39	3291	3264	3002	2578	2312	2150	2085	2103	2123	2101	2029	2050	2159	2475	2917	3165	3291
40	3279	3248	2987	2545	2264	2099	2041	2062	2080	2059	1985	2000	2111	2437	2897	3152	3279
41	3268	3230	2971	2507	2218	2052	1995	2019	2038	2010	1939	1950	2062	2399	2876	3139	3268
42	3254	3213	2956	2474	2162	2004	1945	1976	1997	1967	1889	1899	2012	2353	2857	3122	3254
43	3233	3194	2940	2440	2112	1955	1900	1926	1953	1926	1845	1842	1955	2312	2836	3105	3233
44	3212	3174	2925	2402	2058	1898	1856	1883	1907	1883	1799	1790	1904	2268	2813	3088	3212
45	3196	3153	2905	2363	2001	1847	1808	1839	1863	1836	1747	1736	1851	2229	2790	3065	3196
46	3171	3125	2885	2326	1947	1794	1761	1795	1818	1793	1700	1681	1797	2185	2767	3047	3171
47	3135	3101	2863	2285	1891	1741	1715	1749	1775	1751	1655	1621	1742	2137	2743	3024	3135
48	3098	3072	2841	2247	1836	1686	1667	1704	1734	1707	1608	1566	1686	2093	2720	3001	3098
49	3067	3043	2819	2206	1779	1627	1621	1661	1686	1665	1561	1510	1625	2049	2695	2973	3067
50	3037	3012	2793	2165	1720	1572	1568	1620	1647	1618	1512	1456	1567	2002	2665	2942	3037
51	2999	2979	2766	2126	1656	1517	1520	1577	1608	1576	1465	1395	1508	1955	2636	2910	2999
52	2946	2943	2738	2081	1598	1462	1471	1530	1570	1534	1420	1341	1447	1905	2605	2877	2946
53	2899	2905	2706	2041	1538	1406	1424	1487	1524	1491	1374	1286	1380	1858	2575	2838	2899
54	2852	2860	2675	1998	1478	1344	1377	1442	1478	1447	1329	1231	1318	1810	2544	2799	2852
55	2801	2816	2640	1955	1411	1288	1327	1399	1430	1397	1279	1176	1257	1761	2513	2756	2801
56	2751	2772	2607	1912	1351	1232	1283	1352	1378	1351	1236	1117	1190	1712	2480	2709	2751
57	2681	2721	2571	1865	1290	1175	1236	1305	1313	1300	1191	1062	1130	1656	2441	2658	2681
58	2622	2663	2534	1820	1229	1118	1191	1256	1248	1245	1146	1007	1071	1606	2406	2601	2622
59	2554	2604	2497	1774	1170	1056	1140	1203	1174	1179	1097	954	1012	1557	2366	2543	2554



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60	2490	2542	2453	1729	1110	999	1093	1144	1090	1109	1050	901	953	1507	2326	2482	2490
61	2426	2479	2405	1684	1048	945	1047	1072	1001	1033	1003	845	897	1459	2281	2410	2426
62	2354	2411	2357	1640	992	888	1000	999	898	949	953	798	837	1405	2232	2340	2354
63	2270	2333	2309	1592	936	837	948	919	801	850	897	751	784	1356	2183	2267	2270
64	2191	2260	2253	1547	877	786	899	832	696	753	839	704	731	1309	2132	2187	2191
65	2105	2182	2196	1503	825	738	848	733	559	657	778	655	680	1258	2077	2113	2105
66	2024	2102	2136	1458	775	690	793	640	408	530	711	611	631	1211	2011	2030	2024
67	1923	2017	2073	1413	724	644	736	524	294	387	640	568	578	1165	1947	1943	1923
68	1801	1918	2002	1365	673	595	669	387	233	279	561	528	533	1117	1879	1852	1801
69	1662	1820	1924	1321	622	552	604	277	191	220	488	484	489	1071	1811	1743	1662
70	1440	1707	1850	1276	576	511	537	218	148	179	414	445	446	1021	1734	1624	1440
71	1191	1547	1771	1229	531	468	469	177	127	140	312	408	401	980	1656	1456	1191
72	884	1321	1687	1186	487	430	394	137	112	120	221	370	361	936	1574	1224	884
73	583	1064	1594	1142	444	394	301	119	99	106	171	330	321	896	1487	963	583
74	354	769	1491	1101	399	358	222	103	89	92	132	293	285	856	1389	633	354
75	202	466	1384	1054	361	322	172	91	79	81	105	258	248	813	1261	384	202
76	147	271	1243	1009	318	288	132	80	70	72	87	222	215	767	1084	224	147
77	124	175	1016	964	280	256	101	71	61	63	72	188	184	720	854	151	124
78	106	137	767	915	243	223	83	61	53	54	60	150	155	675	598	123	106
79	91	115	512	864	209	193	69	52	45	46	50	111	126	628	353	103	91
80	78	96	312	806	178	161	57	44	35	36	41	80	102	580	210	87	78
81	65	81	180	750	148	131	46	35	26	27	32	53	81	520	134	71	65
82	55	68	123	689	119	97	37	25	17	18	23	36	61	461	94	59	55
83	44	55	91	615	94	67	29	16	10	9	15	25	44	391	67	48	44
84	34	44	70	526	71	43	20	9	7	5	7	16	27	285	49	37	34
85	25	33	50	405	52	28	13	5	5	4	5	9	15	168	34	26	25
86	17	24	36	275	34	18	6	5	3	3	2	4	8	75	21	16	17
87	9	14	24	139	22	10	4	4	2	3	2	4	4	13	9	9	9
88	7	8	13	56	12	6	3	3	3	2	3	3	2	7	6	6	7
89	5	6	7	12	7	4	3	3	3	2	2	2	3	5	5	5	5
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	0
92	0	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	0
94	0	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	0
96	0	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	0
98	0	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	0
100	0	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	0
102	0	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	0
104	0	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	0
106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	0	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	0
114	0	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	0
116	0	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	0
118	0	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	0
120	0	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	0



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122	0	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	0
124	0	0	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	0	0
126	0	0	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	0	0
128	0	0	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	0	0
130	0	0	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	0	0
132	0	0	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	0	0
134	0	0	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	0	0
136	0	0	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	0	0
138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	0	0	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	0	0
143	0	0	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	0	0
145	0	0	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	0	0
147	0	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	0
149	0	0	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	0	0
151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

153	0	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	0
155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
157	0	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	0
159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
163	0	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	0
165	0	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	0
167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## BUG Rating

### Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	1318.5	14.1	14.1
FM (30-60)	3003.1	32.2	32.2
FH (60-80)	1284.8	13.8	13.8
FVH (80-90)	60.0	0.6	0.6
BL (0-30)	1181.9	12.7	12.7
BM (30-60)	2010.0	21.6	21.6
BH (60-80)	450.2	4.8	4.8
BVH (80-90)	11.9	0.1	0.1
UL (90-100)	0.0	0.0	0.0
UH (100-180)	0.0	0.0	0.0
Total	9320.4	99.9	100.0
<b>BUG Rating</b>	<b>B3-U0-G1</b>		

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

<b>Test date</b>	2025-02-22	<b>Test Ambient:</b>	25.2 °C
<b>Test Orientation</b>	Horizontal	<b>Stabilization Time (min)</b>	90
<b>Model Number</b>	SLIM17FAFC60 at 5000K	<b>Operation time(min)</b>	110

**Electrical Measurement:**

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
UTU250203 7E-B1	120.0	60	0.498	59.38	0.993	10.94
	277.0	60	0.216	58.77	0.98	6.83
	347.0	60	0.181	59.25	0.943	8.21
<b>DLC Pass Criteria</b>					<b>&gt;= 0.9(-3%)</b>	<b>&lt;= 20(+5)</b>

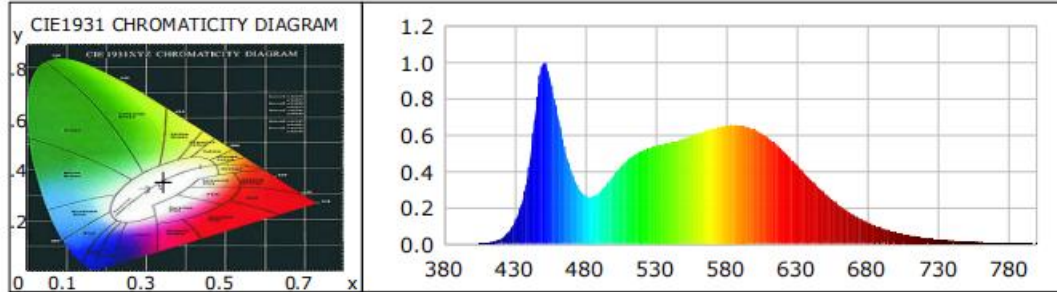
**Chromaticity Measurement - Sphere-Spectroradiometer Method:**

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	81	R9	2
Frequency (Hz)	60	R2	89	R10	73
CCT (K)	4998	R3	94	R11	79
Duv	0.0012	R4	81	R12	56
Chromaticity (x, y)	x=0.3454 y=0.3541	R5	81	R13	83
Chromaticity (u', v')	u'=0.2106 v'=0.4859	R6	84	R14	97
Color Rendering Index (CRI)	82	R7	86	R15	75
R9	2	R8	65	--	--
Rf	83	--	--	--	--
Rg	95	--	--	--	--
Rcs,h1(%)	-13				

**Photometric Measurement – Sphere-Spectroradiometer Method:**

Parameter	Result			DLC V5.1 Pass Criteria
Test Voltage (V)	120.0	277.0	347.0	--
Frequency (Hz)	60	60	60	
Total Luminous (lm)	9237.3	9308.8	9260.6	>=300(-10%)
Luminous Efficacy (lm/W)	155.56	158.39	156.30	Premium: >= 120(-3%)
Most worst Luminous/Highest Watts	155.56			
Zonal lumens in the 0-90° zone (%)	100	--	--	>=100(-3%)
Zonal lumens in the 80-90°zone (%)	0.8	--	--	<=10(+3%)
Beam Angle (°)	110.4	--	--	--
Center Beam Candle Power (cd)	3114	--	--	--

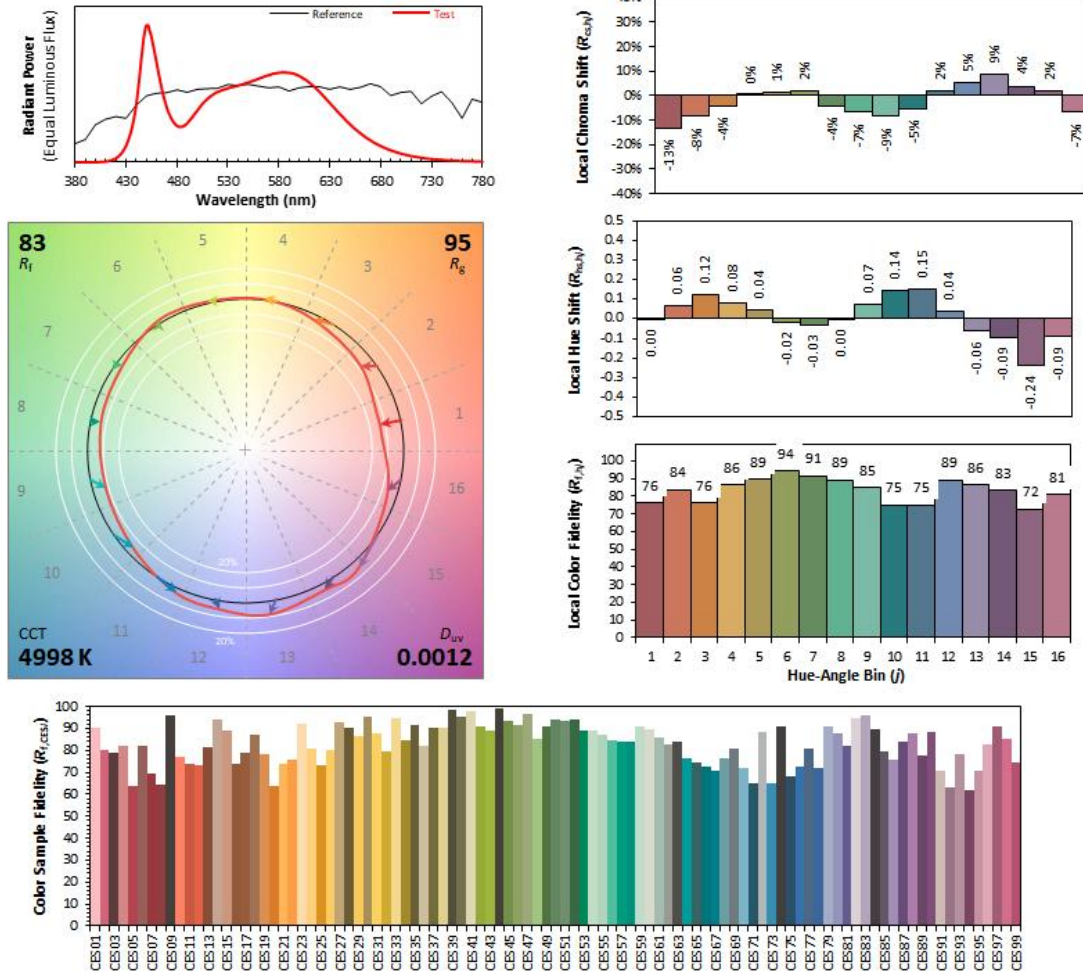
**Spectral Power Distribution & Chromaticity Diagram**



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0006	0.1205	535	0.5269	108.0991	690	0.1596	32.7517
385	0.0007	0.1369	540	0.5374	110.2424	695	0.1373	28.1756
390	0.0004	0.0778	545	0.5495	112.7381	700	0.1187	24.3570
395	0.0007	0.1412	550	0.5589	114.6658	705	0.1002	20.5617
400	0.0008	0.1577	555	0.5688	116.6836	710	0.0869	17.8338
405	0.0021	0.4241	560	0.5809	119.1778	715	0.0734	15.0610
410	0.0053	1.0945	565	0.5944	121.9458	720	0.0625	12.8243
415	0.0131	2.6788	570	0.6076	124.6460	725	0.0540	11.0719
420	0.0287	5.8938	575	0.6232	127.8401	730	0.0445	9.1355
425	0.0601	12.3199	580	0.6342	130.1114	735	0.0390	8.0091
430	0.1203	24.6829	585	0.6453	132.3845	740	0.0324	6.6440
435	0.2275	46.6672	590	0.6519	133.7404	745	0.0275	5.6395
440	0.4208	86.3271	595	0.6530	133.9699	750	0.0228	4.6847
445	0.7529	154.4639	600	0.6518	133.7180	755	0.0203	4.1631
450	0.9964	204.4138	605	0.6445	132.2143	760	0.0171	3.5102
455	0.9117	187.0372	610	0.6299	129.2162	765	0.0149	3.0663
460	0.7246	148.6436	615	0.6068	124.4831	770	0.0123	2.5270
465	0.5386	110.4979	620	0.5816	119.3113	775	0.0118	2.4145
470	0.3982	81.6950	625	0.5494	112.7004	780	0.0088	1.8097
475	0.3114	63.8851	630	0.5129	105.2246	785	0.0082	1.6867
480	0.2658	54.5331	635	0.4740	97.2434	790	0.0064	1.3163
485	0.2598	53.2990	640	0.4324	88.7075	795	0.0065	1.3361
490	0.2846	58.3957	645	0.3930	80.6157	800	0.0044	0.8963
495	0.3286	67.4055	650	0.3513	72.0793			
500	0.3761	77.1593	655	0.3130	64.2018			
505	0.4246	87.0977	660	0.2758	56.5875			
510	0.4627	94.9189	665	0.2430	49.8531			
515	0.4913	100.7922	670	0.2118	43.4456			
520	0.5121	105.0494	675	0.1841	37.7749			
525	0.5269	108.0991	680	0.1596	32.7517			
530	0.5374	110.2424	685	0.1373	28.1756			

TM30

ANSI/IES TM-30-18 Color Rendition Report



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

$x$  0.3454  
 $y$  0.3541  
 $u'$  0.2106  
 $v'$  0.4859

CIE 13.3-1995 (CRI)  
 $R_a$  82  
 $R_g$  2

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

## Zonal Lumen Tabulation

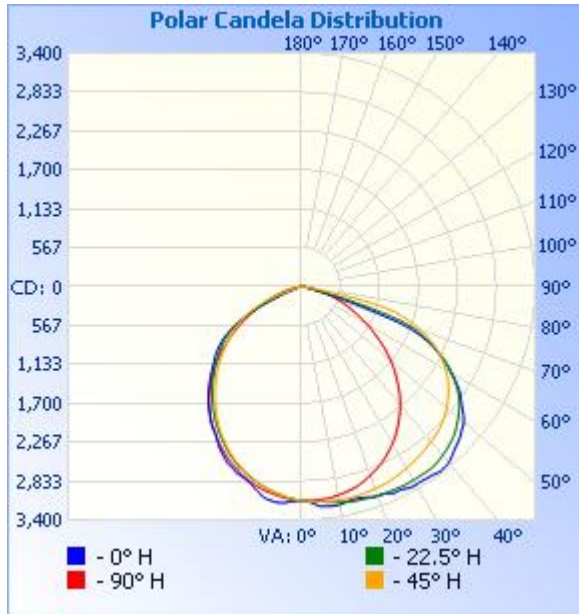
### Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	2,459.2	26.6%	26.6%
0-40	4,078.5	44.2%	44.2%
0-60	7,429.1	80.4%	80.4%
60-90	1,807.3	19.6%	19.6%
70-100	586.7	6.4%	6.4%
90-120	0	0%	0%
0-90	9,236.4	100%	100%
90-180	0	0%	0%
0-180	9,236.4	100%	100%

### Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	295.9	3.2%	90-100	0	0%
10-20	852.1	9.2%	100-110	0	0%
20-30	1,311.1	14.2%	110-120	0	0%
30-40	1,619.3	17.5%	120-130	0	0%
40-50	1,731.8	18.7%	130-140	0	0%
50-60	1,618.7	17.5%	140-150	0	0%
60-70	1,220.6	13.2%	150-160	0	0%
70-80	512.6	5.5%	160-170	0	0%
80-90	74.2	0.8%	170-180	0	0%

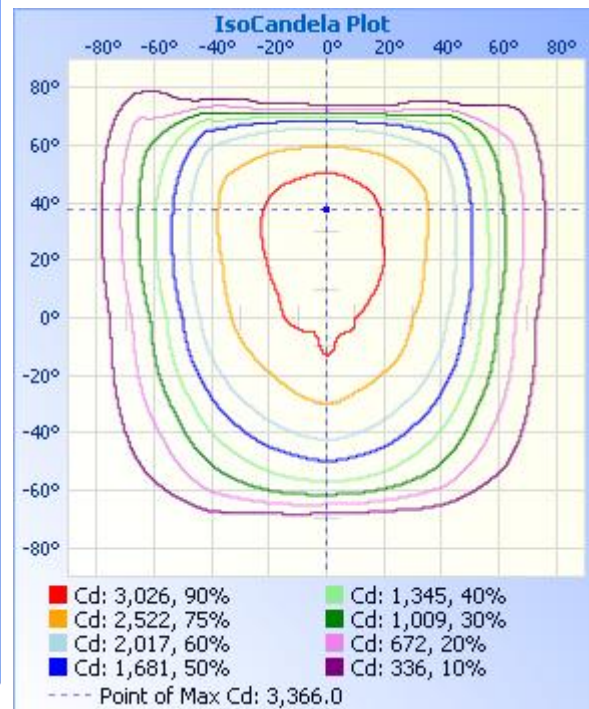
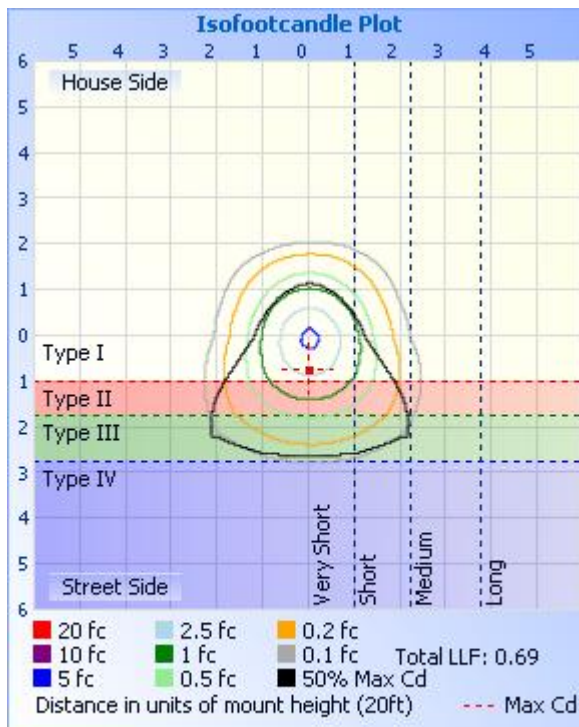
**Photometric Data**



**Illuminance at a Distance**

	Center Beam fc	Beam Width	
17.0ft	10.8 fc	56.8 ft	43.5 ft
34.0ft	2.69 fc	113.5 ft	87.0 ft
51.0ft	1.20 fc	170.3 ft	130.5 ft
68.0ft	0.67 fc	227.0 ft	174.0 ft
85.0ft	0.43 fc	283.8 ft	217.5 ft
102.0ft	0.30 fc	340.5 ft	261.1 ft

■ Vert. Spread: 118.1°  
■ Horiz. Spread: 104.0°



**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	3114	3114	3114	3114	3114	3114	3114	3114	3114	3114	3114	3114	3114	3114	3114	3114	3114
1	3121	3121	3118	3118	3116	3113	3105	3111	3118	3105	3105	3108	3111	3113	3122	3116	3121
2	3138	3129	3126	3120	3118	3109	3094	3105	3128	3097	3096	3104	3106	3113	3129	3120	3138
3	3159	3134	3131	3122	3118	3105	3082	3099	3131	3089	3087	3095	3098	3113	3136	3123	3159
4	3188	3139	3137	3122	3117	3098	3069	3089	3151	3078	3073	3087	3092	3115	3140	3124	3188
5	3214	3147	3143	3124	3114	3089	3051	3076	3157	3063	3063	3079	3081	3111	3147	3124	3214
6	3220	3153	3145	3123	3111	3082	3035	3058	3164	3046	3048	3068	3070	3107	3152	3126	3220
7	3218	3162	3149	3118	3106	3072	3021	3040	3161	3032	3032	3060	3058	3103	3156	3133	3218
8	3227	3171	3150	3117	3101	3057	3005	3023	3149	3014	3016	3048	3046	3098	3160	3142	3227
9	3227	3182	3152	3111	3091	3045	2988	3006	3139	2996	2997	3033	3032	3092	3167	3148	3227
10	3222	3192	3155	3107	3084	3031	2967	2989	3121	2976	2976	3020	3020	3083	3168	3154	3222
11	3211	3200	3156	3099	3073	3014	2945	2972	3091	2957	2957	3001	3004	3075	3166	3157	3211
12	3199	3205	3159	3092	3063	2998	2924	2954	3051	2939	2937	2983	2988	3068	3166	3159	3199
13	3190	3213	3157	3086	3051	2979	2903	2937	3019	2918	2916	2965	2970	3053	3161	3162	3190
14	3184	3218	3155	3078	3038	2960	2881	2920	2981	2893	2892	2944	2951	3043	3157	3163	3184
15	3189	3220	3153	3065	3024	2938	2858	2899	2947	2873	2866	2923	2931	3031	3158	3163	3189
16	3198	3222	3149	3053	3008	2917	2833	2878	2928	2850	2842	2899	2909	3017	3155	3166	3198
17	3209	3227	3146	3041	2989	2891	2804	2854	2905	2829	2815	2872	2888	3002	3150	3167	3209
18	3224	3231	3142	3029	2969	2865	2778	2832	2890	2806	2787	2846	2865	2988	3145	3167	3224
19	3241	3235	3136	3015	2947	2838	2753	2804	2876	2781	2761	2819	2835	2970	3138	3167	3241
20	3242	3240	3131	2998	2925	2807	2725	2773	2849	2752	2733	2791	2810	2954	3131	3167	3242
21	3244	3245	3126	2985	2902	2781	2698	2745	2821	2723	2705	2761	2784	2937	3121	3166	3244
22	3248	3249	3121	2967	2880	2753	2670	2717	2803	2694	2671	2732	2757	2917	3112	3166	3248
23	3270	3249	3118	2949	2855	2721	2641	2683	2781	2663	2639	2699	2728	2898	3101	3166	3270
24	3296	3250	3111	2930	2829	2691	2611	2651	2740	2632	2606	2670	2697	2879	3092	3166	3296
25	3294	3249	3103	2910	2802	2660	2579	2620	2703	2598	2573	2637	2664	2854	3078	3166	3294
26	3290	3255	3095	2890	2772	2624	2544	2589	2671	2563	2537	2604	2634	2831	3066	3168	3290
27	3303	3255	3085	2868	2739	2592	2511	2554	2634	2527	2501	2564	2602	2806	3051	3167	3303
28	3324	3257	3077	2845	2709	2558	2477	2520	2588	2493	2466	2529	2570	2783	3035	3166	3324

29	3332	3256	3066	2822	2677	2522	2441	2484	2542	2458	2428	2491	2538	2759	3022	3165	3332
30	3331	3254	3054	2799	2642	2485	2405	2447	2494	2423	2389	2451	2501	2730	3006	3162	3331
31	3326	3253	3043	2772	2609	2449	2365	2409	2458	2385	2349	2413	2467	2703	2990	3160	3326
32	3328	3252	3032	2749	2573	2410	2329	2366	2433	2349	2306	2374	2432	2674	2974	3162	3328
33	3335	3252	3019	2722	2533	2371	2289	2326	2400	2312	2265	2327	2395	2642	2957	3158	3335
34	3339	3254	3007	2693	2493	2329	2252	2286	2363	2273	2225	2283	2358	2611	2940	3161	3339
35	3342	3251	2997	2666	2452	2289	2212	2245	2323	2236	2183	2238	2313	2575	2918	3159	3342
36	3356	3249	2987	2639	2409	2247	2170	2205	2280	2191	2141	2192	2272	2543	2900	3152	3356
37	3366	3242	2978	2612	2368	2201	2127	2166	2242	2149	2093	2147	2230	2510	2883	3147	3366
38	3359	3229	2964	2583	2324	2158	2087	2122	2200	2109	2049	2096	2187	2474	2864	3140	3359
39	3351	3214	2952	2553	2279	2113	2046	2082	2155	2069	2007	2048	2142	2437	2846	3134	3351
40	3339	3200	2939	2523	2233	2068	2005	2042	2114	2027	1963	2000	2094	2398	2828	3126	3339
41	3315	3188	2928	2491	2188	2021	1960	1999	2070	1981	1917	1950	2046	2362	2810	3112	3315
42	3287	3172	2915	2460	2136	1970	1911	1956	2024	1939	1873	1901	1996	2318	2790	3098	3287
43	3258	3153	2901	2426	2087	1923	1868	1908	1978	1898	1826	1843	1947	2276	2771	3081	3258
44	3236	3134	2886	2390	2032	1875	1824	1865	1929	1856	1781	1792	1893	2239	2751	3061	3236
45	3216	3115	2867	2354	1978	1819	1776	1821	1882	1810	1738	1738	1841	2195	2731	3038	3216
46	3193	3093	2847	2316	1925	1767	1731	1778	1832	1768	1692	1684	1789	2152	2709	3019	3193
47	3168	3068	2827	2280	1872	1715	1685	1730	1787	1726	1642	1629	1735	2105	2687	2999	3168
48	3134	3036	2807	2241	1817	1661	1639	1686	1743	1683	1596	1569	1679	2063	2663	2976	3134
49	3112	3008	2784	2204	1762	1608	1594	1642	1697	1641	1550	1514	1617	2020	2640	2950	3112
50	3084	2979	2759	2165	1705	1548	1543	1600	1660	1595	1505	1460	1560	1974	2612	2923	3084
51	3040	2948	2729	2121	1646	1493	1497	1557	1622	1553	1454	1405	1501	1929	2583	2894	3040
52	2985	2914	2701	2081	1584	1439	1449	1512	1582	1514	1408	1351	1443	1879	2557	2862	2985
53	2929	2881	2671	2041	1526	1384	1403	1471	1536	1471	1363	1290	1383	1833	2530	2826	2929
54	2876	2843	2644	2000	1467	1329	1357	1427	1489	1428	1318	1235	1316	1787	2502	2787	2876
55	2829	2797	2610	1960	1408	1270	1307	1384	1441	1379	1273	1180	1255	1739	2472	2741	2829
56	2788	2750	2576	1914	1342	1215	1263	1336	1389	1333	1227	1121	1196	1691	2438	2691	2788
57	2730	2699	2544	1871	1281	1159	1218	1290	1325	1283	1182	1067	1137	1636	2405	2641	2730
58	2664	2644	2506	1825	1221	1103	1173	1240	1260	1228	1138	1012	1077	1588	2370	2585	2664
59	2599	2579	2469	1781	1163	1041	1129	1187	1185	1161	1093	960	1014	1540	2334	2529	2599

60	2525	2518	2427	1737	1106	986	1081	1127	1100	1091	1046	907	955	1492	2294	2469	2525
61	2459	2456	2380	1688	1049	933	1031	1063	1012	1016	994	856	899	1445	2247	2395	2459
62	2387	2391	2334	1644	988	881	985	985	912	936	944	802	840	1392	2203	2324	2387
63	2299	2324	2288	1599	934	827	933	908	817	840	892	755	787	1344	2155	2250	2299
64	2219	2244	2232	1555	880	777	883	824	717	748	836	708	734	1297	2105	2181	2219
65	2144	2168	2177	1505	829	729	833	738	596	657	769	663	684	1250	2048	2103	2144
66	2063	2089	2119	1460	774	681	780	641	468	545	703	614	634	1198	1994	2026	2063
67	1947	2003	2055	1415	723	635	723	538	362	427	634	571	587	1152	1932	1937	1947
68	1831	1905	1988	1370	674	587	657	425	291	330	564	530	538	1105	1867	1846	1831
69	1674	1806	1914	1324	628	545	594	327	232	266	486	489	493	1062	1795	1735	1674
70	1442	1692	1839	1280	577	504	530	263	160	208	415	446	450	1015	1726	1614	1442
71	1132	1546	1761	1235	532	464	465	209	132	148	328	408	405	972	1652	1431	1132
72	841	1277	1676	1192	488	422	400	146	116	123	255	370	363	931	1572	1170	841
73	573	995	1586	1150	446	386	316	122	101	107	200	332	324	892	1483	892	573
74	350	723	1479	1103	405	351	248	105	89	94	146	292	286	853	1371	604	350
75	221	484	1369	1060	361	315	198	91	79	82	108	256	248	806	1250	389	221
76	166	287	1224	1016	322	282	149	81	69	72	87	220	214	762	1058	242	166
77	142	193	980	966	284	250	108	71	60	62	71	187	183	718	806	166	142
78	124	151	739	916	248	218	84	60	50	52	58	154	154	673	573	136	124
79	106	128	514	863	210	188	67	50	42	42	46	116	127	622	387	116	106
80	89	108	332	810	178	157	55	40	32	35	37	85	101	572	231	98	89
81	76	91	199	747	149	130	43	34	23	25	27	55	79	519	149	81	76
82	66	77	136	685	118	101	33	24	14	16	20	35	59	455	102	70	66
83	54	65	102	617	93	71	25	15	6	7	13	22	42	380	77	58	54
84	41	53	80	526	71	44	18	7	4	5	6	13	26	285	59	43	41
85	30	38	61	411	52	26	10	4	4	4	4	7	15	184	38	28	30
86	22	27	45	282	36	15	5	4	3	2	3	4	8	95	22	21	22
87	11	19	27	174	21	9	4	3	2	2	2	3	4	12	11	10	11
88	7	8	17	77	12	6	3	3	3	2	3	3	2	7	8	6	7
89	5	6	7	12	7	3	3	3	2	2	2	2	2	5	5	5	5
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Report No.: UTU2502037E-B

91	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
93	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
95	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
97	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
99	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
101	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
103	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
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
112	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
114	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
116	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
118	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
120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
123	0	0	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	0	0
125	0	0	0	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	0	0	0
127	0	0	0	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	0	0	0
129	0	0	0	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	0	0	0
131	0	0	0	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	0	0	0
133	0	0	0	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	0	0	0
135	0	0	0	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	0	0	0
137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
141	0	0	0	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	0	0	0
143	0	0	0	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	0	0	0
145	0	0	0	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	0	0	0
147	0	0	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	0	0
149	0	0	0	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	0	0	0
151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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
156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
171	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
174	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
177	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
178	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
179	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

## BUG Rating

### Lum. Classification System (LCS)

LCS Zone	Lumens	%Lamp	%Lum
FL (0-30)	1295.7	14.0	14.0
FM (30-60)	2977.2	32.2	32.2
FH (60-80)	1279.3	13.8	13.8
FVH (80-90)	62.7	0.7	0.7
BL (0-30)	1163.6	12.6	12.6
BM (30-60)	1993.7	21.6	21.6
BH (60-80)	453.8	4.9	4.9
BVH (80-90)	11.4	0.1	0.1
UL (90-100)	0.0	0.0	0.0
UH (100-180)	0.0	0.0	0.0
Total	9237.4	99.9	100.0
<b>BUG Rating</b>	<b>B3-U0-G1</b>		

### 3. Test Equipment

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

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

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

Expand Uncertainty:

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

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

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

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