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LM-79-19 Test Report

For

LEDVANCE LLC

(Brand Name:  LEDVANCE)

200 Ballardvale Street, Wilmington, MA 01887, U.S.A

Model name(s):

LNSLOT1A98UNHD8SC196DIPWH

Report Type: Testing and Report According to IES LM-79-2008

**Type of
Luminaire:** LED Linear Light

Report Date: 2022-07-14

Ningbo TengLi Testing Co., Ltd

Prepared By: 2nd floor, Block B, Ningbo Testing and Certification Base,
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Review By:

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Manager: Garman Mo

Note: 1. The results contained in this report pertain only to the tested samples

2. This report does not imply product certification, approval, or endorsement by A2LA, or any agency of the Federal Government.

Report No.: JAE220201-G

Report Format Number STD/QP019-409-A/0-NB

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1.1 Product Information:		
Model Number	LNSLOT1A98UNHD8SC196DIPWH	
Remark	<p>The construction of Model LNSLOT1A48UNHD8SC148DIPWH(3000K) is similar with LNSLOT1A98UNHD8SC196DIPWH(3000K), except for length and wattage. The IES of LNSLOT1A98UNHD8SC196DIPWH(3000K) was calculated from the IES of Model LNSLOT1A48UNHD8SC148DIPWH(3000K). The data of Model LNSLOT1A48UNHD8SC148DIPWH(3000K) is from Report No.: JAE220201-E.</p>	
Representative (Tested) Model	<p>LNSLOT1A98UNHD8SC196DIPWH(3000K) LNSLOT1A98UNHD8SC196DIPWH(3500K) LNSLOT1A98UNHD8SC196DIPWH(4000K)</p>	
Model Difference	N/A	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	LED Linear Light	
LED Manufacturer	Bridgelux, Inc.	
LED Model	BXEN-XXX-11L-37A-00-0-0	
Dimming	Dimmable	
Integral Controls	N/A	
Sample Number	JAE220201-G1	
Date of Receipt	Jul. 11. 2021	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

1.2 Rated Values:	
Rated Voltage / Frequency	120-347Vac, 50/60Hz
Nominal Power	98W
Rated Initial Lamp Lumen	9800lm
Declared CCT	3000K, 3500K, 4000K



1.3 Test Specifications:

Test item	<ol style="list-style-type: none"> 1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Electrical Parameters
Reference Standard	<ol style="list-style-type: none"> 1. IES LM-79-2019 Electrical and Photometric Measurements of Solid-State Lighting Products 2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products 3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources 4. CIE 15-2004 Technical Report Colorimetry 5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source

1.4 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

Remark: LNSLOT1A48UNHD8SC148DIPWH(3000K) and
LNSLOT1A98UNHD8SC196DIPWH(3000K) have the same cross section structure.

Test date	2022-07-13	Test Ambient:	25 ± 1 ° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LNSLOT1A98UNHD8SC196DIP WH(3000K)	Total Operating Time(min)	75

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE220201-G1	120.0	60.01	0.8011	95.05	0.9888	13.25
	347.0	60.01	0.2881	93.88	0.9390	14.65

Photometric Measurement – Goniophotometer Method(Tset Distance: 26.00m):

Parameter	Result	
Test Voltage (V)	120	347
Frequency (Hz)	60	60
Total Luminous (lm)	9919.4**	9898.0**
Luminous Efficacy (lm/W)	104.36	105.43
Beam Angle (°)	100.7	--
Center Beam Candle Power (cd)	2946	--

**The calculation method is on page 23

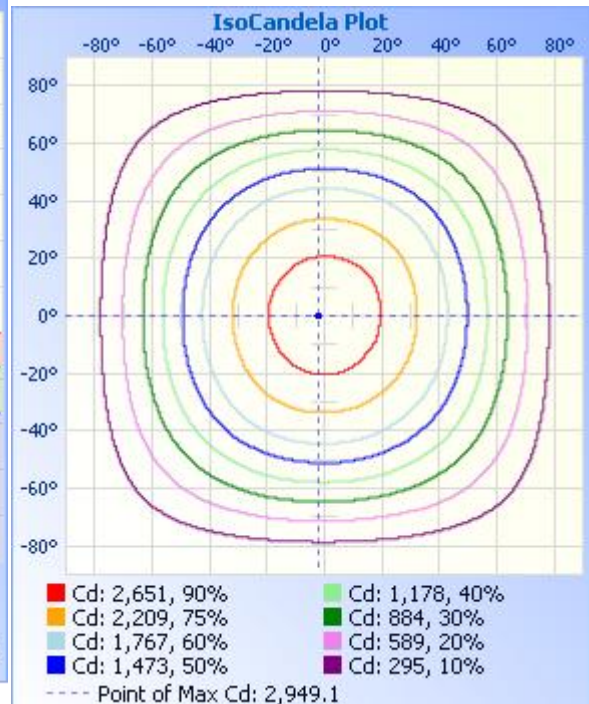
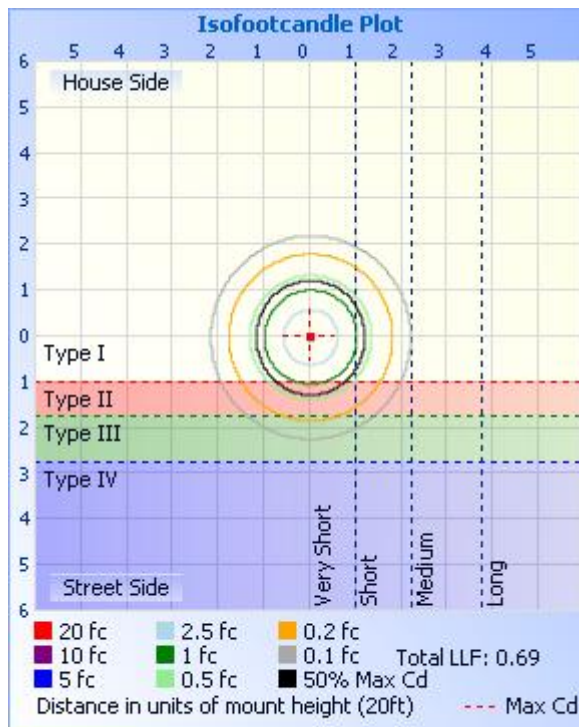
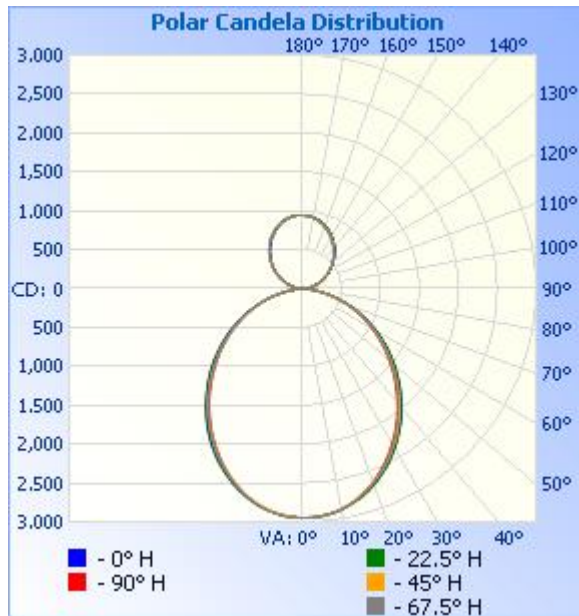


Zonal Lumen Tabulation

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	2,210.3	22.3%
0-40	3,541.1	35.7%
0-60	5,998.4	60.5%
60-90	1,379.8	13.9%
70-100	605.5	6.1%
90-120	534.9	5.4%
0-90	7,378.3	74.4%
90-180	2,539.4	25.6%
0-180	9,917.7	100%

Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	277.6	2.8%	90-100	59.3	0.6%
10-20	782.6	7.9%	100-110	176.1	1.8%
20-30	1,150.1	11.6%	110-120	299.6	3%
30-40	1,330.8	13.4%	120-130	396.2	4%
40-50	1,318.1	13.3%	130-140	447.3	4.5%
50-60	1,139.3	11.5%	140-150	442.8	4.5%
60-70	833.6	8.4%	150-160	376.1	3.8%
70-80	448.2	4.5%	160-170	253.0	2.6%
80-90	98.0	1.0%	170-180	89.1	0.9%

Photometric Data





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	2946	2946	2946	2946	2946	2946	2946	2946	2946	2946	2946	2946	2946	2946	2946	2946	2946
1	2945	2946	2944	2946	2947	2944	2945	2940	2943	2945	2943	2946	2946	2948	2945	2945	2945
2	2941	2946	2941	2948	2947	2940	2945	2938	2939	2941	2935	2943	2940	2943	2942	2945	2941
3	2936	2945	2939	2949	2945	2938	2939	2930	2936	2938	2931	2942	2937	2943	2941	2942	2936
4	2934	2942	2935	2939	2941	2932	2933	2926	2931	2935	2926	2938	2928	2938	2939	2937	2934
5	2929	2936	2929	2934	2929	2924	2925	2918	2925	2926	2919	2927	2919	2933	2934	2931	2929
6	2921	2931	2926	2928	2923	2917	2916	2910	2915	2915	2908	2915	2912	2920	2928	2923	2921
7	2912	2920	2912	2917	2914	2907	2904	2901	2905	2905	2897	2907	2905	2910	2921	2916	2912
8	2902	2909	2899	2903	2905	2896	2893	2892	2894	2892	2885	2895	2890	2897	2913	2906	2902
9	2891	2897	2887	2892	2890	2881	2878	2880	2881	2880	2868	2886	2874	2885	2902	2895	2891
10	2878	2885	2873	2877	2876	2866	2868	2868	2866	2865	2852	2867	2859	2871	2887	2880	2878
11	2866	2869	2854	2861	2860	2850	2852	2853	2851	2849	2834	2849	2844	2854	2876	2864	2866
12	2848	2854	2840	2847	2842	2833	2834	2833	2835	2834	2817	2831	2823	2837	2858	2847	2848
13	2830	2835	2822	2829	2822	2814	2814	2814	2817	2815	2795	2811	2803	2819	2842	2828	2830
14	2813	2819	2803	2808	2799	2791	2794	2795	2797	2795	2775	2789	2781	2799	2821	2811	2813
15	2794	2800	2782	2784	2777	2770	2773	2774	2777	2773	2753	2764	2759	2773	2801	2792	2794
16	2776	2782	2762	2762	2754	2747	2752	2749	2754	2749	2730	2739	2733	2750	2778	2772	2776
17	2754	2761	2737	2738	2729	2722	2731	2726	2729	2727	2704	2712	2701	2729	2757	2752	2754
18	2730	2735	2711	2710	2698	2697	2706	2703	2705	2703	2678	2687	2676	2707	2732	2730	2730
19	2704	2711	2684	2682	2673	2671	2679	2679	2680	2676	2653	2659	2647	2680	2706	2705	2704
20	2680	2683	2655	2656	2645	2642	2651	2651	2651	2647	2623	2627	2615	2650	2682	2677	2680
21	2653	2655	2628	2625	2613	2612	2620	2625	2623	2619	2594	2599	2588	2618	2651	2649	2653
22	2625	2626	2599	2592	2580	2582	2593	2599	2594	2589	2563	2565	2556	2585	2620	2623	2625
23	2595	2595	2568	2559	2548	2546	2564	2571	2563	2559	2532	2534	2521	2553	2589	2593	2595
24	2566	2568	2540	2526	2515	2515	2533	2543	2532	2528	2501	2501	2490	2521	2558	2565	2566
25	2535	2538	2507	2497	2482	2485	2503	2510	2502	2496	2465	2467	2455	2486	2526	2533	2535
26	2505	2505	2474	2465	2448	2450	2469	2480	2469	2463	2431	2432	2421	2450	2497	2502	2505
27	2470	2470	2437	2428	2413	2413	2435	2449	2437	2429	2399	2396	2384	2419	2460	2466	2470
28	2436	2436	2405	2391	2374	2378	2401	2415	2403	2394	2365	2362	2348	2380	2425	2430	2436
29	2401	2400	2368	2352	2336	2339	2365	2379	2368	2358	2328	2325	2308	2344	2385	2394	2401



30	2366	2366	2336	2319	2296	2301	2330	2345	2334	2321	2290	2285	2270	2308	2348	2359	2366
31	2329	2329	2300	2279	2261	2264	2291	2308	2296	2284	2252	2246	2232	2268	2310	2323	2329
32	2291	2290	2263	2240	2224	2226	2257	2268	2258	2245	2212	2205	2195	2228	2272	2286	2291
33	2255	2250	2223	2198	2184	2187	2218	2229	2218	2205	2174	2167	2155	2190	2232	2248	2255
34	2218	2211	2184	2160	2144	2148	2178	2190	2179	2166	2135	2127	2113	2151	2192	2212	2218
35	2178	2174	2143	2120	2104	2108	2140	2150	2139	2125	2095	2087	2073	2113	2150	2173	2178
36	2138	2139	2102	2077	2062	2066	2099	2108	2098	2086	2056	2045	2029	2073	2113	2133	2138
37	2100	2097	2061	2037	2019	2024	2057	2068	2057	2045	2014	2002	1989	2031	2073	2091	2100
38	2060	2055	2021	1993	1979	1981	2015	2026	2015	2003	1974	1962	1949	1989	2030	2048	2060
39	2017	2014	1977	1954	1936	1939	1973	1983	1974	1962	1934	1920	1905	1945	1987	2008	2017
40	1976	1972	1939	1911	1891	1898	1932	1941	1930	1922	1891	1878	1865	1904	1945	1966	1976
41	1932	1929	1895	1868	1851	1855	1890	1900	1887	1880	1849	1836	1824	1862	1903	1923	1932
42	1891	1888	1850	1827	1808	1813	1847	1857	1846	1838	1806	1794	1781	1820	1857	1880	1891
43	1849	1844	1808	1786	1764	1769	1805	1815	1805	1797	1764	1752	1737	1778	1816	1838	1849
44	1804	1803	1763	1743	1721	1728	1761	1775	1763	1753	1720	1708	1694	1732	1773	1796	1804
45	1762	1759	1720	1698	1682	1685	1716	1730	1722	1711	1678	1665	1652	1690	1727	1751	1762
46	1717	1714	1674	1657	1638	1642	1674	1687	1680	1669	1634	1623	1610	1646	1683	1708	1717
47	1675	1674	1634	1612	1594	1599	1629	1644	1638	1624	1591	1579	1565	1604	1640	1666	1675
48	1631	1630	1588	1565	1549	1556	1585	1599	1595	1582	1546	1536	1522	1556	1597	1624	1631
49	1589	1585	1543	1525	1507	1514	1539	1553	1551	1538	1502	1492	1482	1512	1551	1581	1589
50	1545	1543	1499	1482	1464	1474	1496	1510	1507	1494	1459	1450	1439	1470	1507	1537	1545
51	1502	1498	1456	1437	1422	1432	1453	1467	1466	1452	1416	1406	1397	1426	1462	1493	1502
52	1458	1453	1413	1393	1378	1387	1407	1422	1423	1406	1372	1363	1356	1384	1417	1449	1458
53	1414	1408	1369	1346	1335	1344	1363	1379	1376	1362	1329	1320	1316	1341	1372	1404	1414
54	1370	1364	1325	1304	1294	1300	1320	1334	1330	1319	1287	1277	1273	1298	1332	1360	1370
55	1325	1318	1281	1263	1251	1258	1275	1292	1286	1275	1244	1235	1231	1254	1287	1317	1325
56	1283	1272	1237	1220	1209	1215	1231	1248	1244	1231	1200	1191	1189	1211	1242	1273	1283
57	1236	1228	1196	1175	1167	1172	1188	1203	1199	1187	1156	1149	1146	1172	1198	1228	1236
58	1193	1183	1150	1134	1124	1129	1145	1159	1156	1142	1114	1107	1104	1128	1154	1185	1193
59	1148	1139	1106	1091	1081	1085	1099	1115	1112	1098	1073	1064	1061	1084	1110	1140	1148
60	1104	1094	1064	1047	1038	1043	1057	1071	1071	1055	1030	1023	1021	1041	1065	1095	1104
61	1059	1050	1020	1005	996	1001	1013	1028	1027	1011	988	981	978	998	1024	1051	1059



62	1015	1005	978	964	953	957	969	984	983	967	945	939	937	957	980	1006	1015
63	970	961	937	922	910	915	926	940	939	924	902	899	895	912	935	963	970
64	928	914	894	880	869	873	884	897	894	881	861	857	853	869	893	918	928
65	883	871	853	837	827	831	841	854	852	837	820	814	812	826	849	875	883
66	837	828	810	794	786	788	796	810	808	793	778	772	771	784	807	831	837
67	793	784	767	751	745	746	754	766	765	750	737	730	728	743	762	787	793
68	747	740	724	708	703	704	711	723	721	707	696	688	688	700	720	742	747
69	703	697	682	666	661	663	669	680	677	665	655	646	646	658	677	698	703
70	662	653	641	624	621	622	626	637	635	622	614	606	606	616	636	655	662
71	619	610	598	583	580	582	583	594	592	580	573	566	565	575	594	611	619
72	578	568	557	542	540	542	541	551	550	538	531	526	524	534	552	567	578
73	533	525	514	502	499	502	500	507	507	497	489	487	484	493	509	524	533
74	488	482	472	462	459	462	460	467	465	456	449	450	444	453	466	480	488
75	445	441	432	422	419	422	420	425	424	415	409	411	403	412	426	438	445
76	403	400	391	381	381	382	381	385	383	377	370	371	363	372	385	397	403
77	363	359	351	341	344	343	342	344	344	337	332	333	323	334	345	357	363
78	322	319	312	304	306	306	303	305	304	298	294	293	285	297	306	317	322
79	282	279	273	268	269	268	266	267	266	260	258	257	249	261	270	278	282
80	243	241	235	231	233	232	229	230	228	224	221	222	214	224	232	238	243
81	206	205	199	197	198	196	194	193	192	189	186	187	180	191	197	202	206
82	172	170	166	164	165	163	161	158	157	154	153	155	149	158	164	168	172
83	138	138	135	133	134	131	129	126	125	122	123	125	120	127	132	135	138
84	108	107	105	104	106	103	99	96	95	92	94	96	95	99	102	104	108
85	79	79	78	80	82	78	72	68	67	66	68	74	74	76	75	77	79
86	55	55	57	59	63	59	52	47	46	45	49	56	55	56	54	54	55
87	34	34	37	41	45	41	33	28	26	26	32	40	42	41	35	32	34
88	16	17	22	28	32	27	19	13	11	12	20	30	34	31	23	16	16
89	5	8	15	23	25	20	11	4	1	5	16	26	30	27	18	7	5
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	2	10	24	37	43	39	28	14	3	9	19	26	29	26	16	6	2
92	4	17	33	46	52	48	37	20	7	14	26	35	39	34	23	10	4
93	9	24	42	56	61	57	46	28	13	19	33	43	47	42	30	16	9



94	16	31	52	65	71	67	56	37	20	26	41	52	56	51	37	23	16
95	25	39	61	75	81	77	65	46	30	34	50	61	65	60	45	30	25
96	34	48	70	86	92	87	74	56	40	43	59	71	74	69	55	38	34
97	46	59	80	96	102	98	85	67	52	53	68	81	85	80	65	47	46
98	57	69	90	105	113	108	96	76	64	64	78	91	95	90	74	58	57
99	69	80	100	116	123	118	104	88	76	76	88	102	106	100	84	68	69
100	82	93	110	125	133	128	116	100	88	88	99	112	116	110	95	80	82
101	95	105	120	136	143	138	128	113	101	101	111	123	127	121	107	93	95
102	109	117	132	147	153	148	140	125	114	114	123	134	138	132	118	105	109
103	122	130	144	158	164	158	152	138	128	129	136	147	150	144	131	118	122
104	135	144	156	169	174	170	164	152	142	142	149	159	162	156	144	132	135
105	149	157	167	180	185	181	176	165	156	157	162	171	173	170	157	146	149
106	163	170	180	191	197	193	189	179	171	171	176	184	187	184	170	161	163
107	176	183	192	203	208	206	201	192	185	186	190	198	200	198	184	174	176
108	191	196	204	215	220	218	214	205	199	200	205	211	213	211	199	188	191
109	206	211	217	227	232	230	227	218	214	216	219	225	227	223	214	202	206
110	221	225	230	239	244	242	240	232	229	230	234	239	241	237	228	217	221
111	235	238	244	251	257	253	254	247	244	245	248	254	256	250	242	232	235
112	250	252	257	263	269	265	267	260	259	260	262	268	270	265	257	247	250
113	264	266	270	275	281	278	279	274	273	274	277	283	283	279	271	261	264
114	277	279	283	288	293	292	293	288	288	290	292	297	298	295	286	275	277
115	291	293	296	300	306	306	306	302	302	306	307	312	313	310	301	290	291
116	305	307	309	313	319	320	320	315	316	321	322	326	327	326	315	304	305
117	320	321	322	326	332	333	333	329	331	337	337	341	341	341	329	320	320
118	334	335	335	339	344	346	346	344	346	352	352	355	357	355	343	334	334
119	348	351	348	352	357	358	359	358	360	366	366	371	371	370	358	349	348
120	363	364	361	365	370	371	372	373	375	381	380	386	387	384	372	365	363
121	378	376	375	377	383	384	385	387	389	396	397	401	401	398	386	379	378
122	392	391	389	390	396	398	398	401	404	410	412	415	416	413	403	394	392
123	407	405	402	403	408	411	412	413	419	425	426	430	431	427	417	409	407
124	421	418	416	416	421	422	426	428	434	441	441	444	445	441	432	423	421
125	435	432	429	429	434	434	440	443	448	456	456	458	460	456	447	438	435



126	448	446	442	442	447	448	453	458	463	470	472	472	473	470	461	452	448
127	463	460	455	455	459	460	465	472	478	485	485	485	488	484	475	467	463
128	476	474	468	467	472	474	479	487	492	499	499	500	501	498	488	481	476
129	490	486	480	479	484	487	491	500	506	513	514	515	515	513	504	496	490
130	504	499	494	493	497	500	504	513	519	527	528	529	528	527	518	509	504
131	518	512	507	505	511	514	519	526	534	540	543	543	542	540	532	523	518
132	531	529	521	518	524	527	532	539	547	553	558	559	557	554	546	538	531
133	545	541	534	531	537	541	546	552	560	567	572	573	570	569	561	552	545
134	560	554	547	543	550	553	559	566	574	581	586	587	585	583	575	565	560
135	573	568	561	556	563	567	572	579	587	595	601	600	599	599	589	579	573
136	586	581	574	568	576	579	587	593	600	609	613	616	613	613	603	594	586
137	598	593	587	579	588	592	600	604	612	623	628	629	626	627	616	607	598
138	611	607	600	592	601	605	612	618	626	636	642	641	639	640	628	619	611
139	625	621	613	605	612	617	624	632	640	651	655	655	653	654	642	632	625
140	637	633	624	617	624	630	637	645	652	666	669	669	666	666	657	646	637
141	651	646	637	629	636	642	649	658	664	679	682	682	677	680	671	659	651
142	665	660	650	643	649	656	660	670	678	693	694	695	690	692	683	673	665
143	677	672	661	656	661	669	674	683	689	705	706	707	704	705	694	685	677
144	689	686	675	669	675	681	685	694	701	717	719	720	716	718	707	699	689
145	701	698	688	680	686	692	698	704	714	729	733	732	727	730	718	711	701
146	713	711	698	692	699	704	708	718	726	740	744	745	740	740	728	724	713
147	724	724	709	703	710	715	718	730	737	752	755	754	751	751	740	735	724
148	737	735	721	716	722	726	728	740	749	765	765	766	762	762	752	747	737
149	749	748	735	728	733	738	741	752	761	777	777	775	774	775	764	759	749
150	760	758	747	739	744	749	754	763	774	786	787	785	784	783	777	769	760
151	772	769	758	750	754	758	763	775	786	796	796	795	794	793	787	780	772
152	783	778	768	761	765	769	773	785	792	806	806	806	805	803	797	790	783
153	793	788	778	772	776	779	784	796	802	817	816	817	813	812	807	800	793
154	803	799	788	781	786	788	794	806	813	827	828	826	823	820	816	811	803
155	815	809	798	791	796	797	805	817	824	837	839	836	832	830	827	820	815
156	825	820	808	800	805	807	816	827	834	846	848	844	840	840	838	830	825
157	833	829	819	810	814	816	827	836	844	854	857	853	850	848	847	839	833



158	842	838	828	820	823	824	835	845	853	862	864	861	861	858	855	849	842
159	850	848	839	830	832	833	843	853	860	869	872	869	867	864	863	857	850
160	858	856	847	840	840	844	852	861	867	878	880	878	875	873	870	866	858
161	867	864	856	850	851	854	859	871	874	887	888	886	883	883	877	872	867
162	874	869	862	859	861	863	869	878	882	893	893	895	893	891	885	880	874
163	882	877	868	867	870	872	877	885	890	900	899	901	899	897	891	886	882
164	889	886	877	873	878	879	884	892	896	905	907	906	908	903	897	892	889
165	894	892	884	881	885	887	891	898	903	911	912	911	913	909	905	899	894
166	901	900	890	888	889	894	897	904	909	915	918	917	918	914	911	904	901
167	906	905	898	894	897	898	903	909	915	920	924	923	922	919	915	909	906
168	912	910	903	901	902	906	910	915	920	925	929	928	928	924	919	912	912
169	916	914	909	906	909	911	915	919	924	929	933	930	932	928	923	917	916
170	921	917	914	912	915	916	920	923	928	933	937	934	935	931	928	922	921
171	925	922	919	917	920	921	925	926	933	937	938	939	942	935	932	926	925
172	929	926	923	922	925	926	931	929	936	939	939	941	943	939	934	930	929
173	933	928	928	928	929	931	935	931	940	941	940	945	944	941	936	932	933
174	936	931	932	930	933	933	936	936	943	943	941	945	945	941	938	936	936
175	939	934	935	932	936	936	938	939	945	944	943	945	946	942	940	938	939
176	940	936	937	935	937	938	941	942	945	944	944	945	947	942	941	940	940
177	942	940	939	936	939	938	941	943	945	944	945	945	947	943	942	941	942
178	942	941	941	939	941	941	943	944	945	944	946	945	945	944	943	943	942
179	943	944	943	941	943	943	944	944	945	944	946	944	944	944	943	943	943
180	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944	944



2.2 Electrical, Photometric and Chromaticity Measurements

Test date	2022-07-13	Test Ambient:	25 ± 1 ° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LNSLOT1A98UNHD8SC196DIP WH(3000K)	Total Operating Time(min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE220201-G1	120.0	60	0.7940	95.18	0.9989	13.23
	347.0	60	0.2889	94.15	0.9391	14.63

Chromaticity Measurement - Sphere-Spectroradiometer

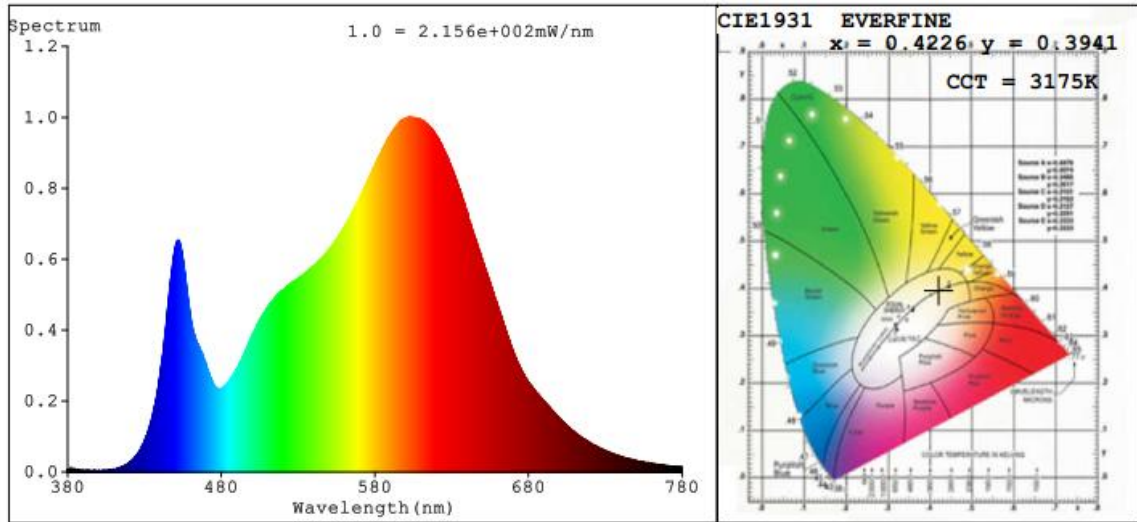
Method(Self-absorption:1.1925)(4 π geometry):

Parameter	Result
Test Voltage (V)	120
Frequency (Hz)	60
CCT (K)	3175
Duv	-0.0019
Chromaticity (x, y)	x=0.4226 y=0.3941
Chromaticity (u', v')	u'=0.2455 v'=0.5152
Color Rendering Index (CRI)	86.1
R9	20
Rg	97
Rf	86
Rcs,h1	-10

Photometric Measurement –Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120	347
Frequency (Hz)	60	60
Total Luminous (lm)	9989	9976
Luminous Efficacy (lm/W)	104.95	105.96

Spectral Power Distribution & Chromaticity Diagram



R1 =86	R2 =94	R3 =96	R4 =85	R5 =86	R6 =93	R7 =84	
R8 =65	R9 =20	R10=86	R11=86	R12=77	R13=88	R14=99	R15=79

TM30

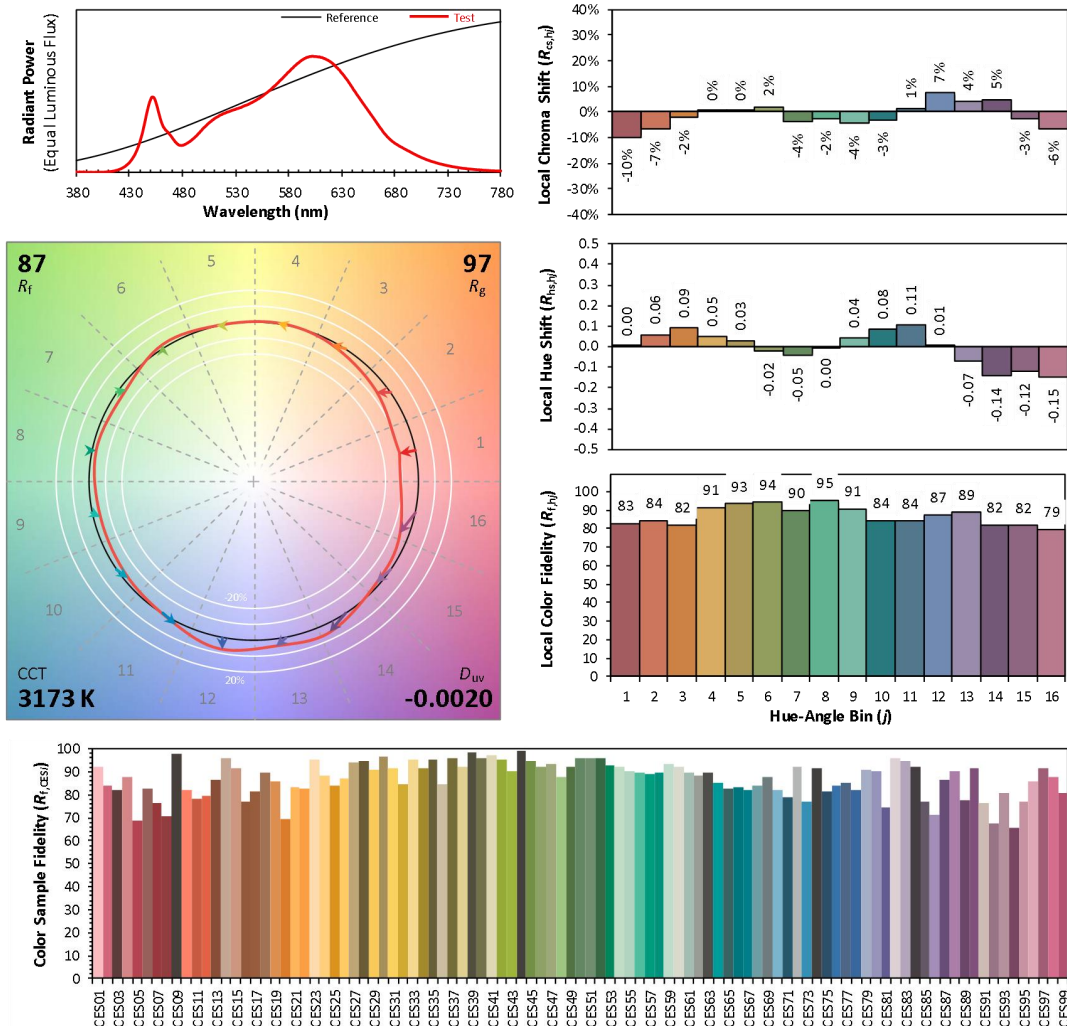
ANSI/IES TM-30-18 Color Rendition Report

Source: BXEN-XXX-11L-37A-00-0-0

Manufacturer: LEDVANCE LLC

Date: 2022-07-13

Model: LNSLOT1A98UNHD8SC196DIPWH (3000K)



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

x 0.4226
 y 0.3940
 u' 0.2456
 v' 0.5152

CIE 13.3-1995
(CRI)

R_a 86
 R_g 20

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.0



2.3 Electrical, Photometric and Chromaticity Measurements

Test date	2022-07-13	Test Ambient:	25 ± 1 °C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LNSLOT1A98UNHD8SC196DIP WH(3500K)	Total Operating Time(min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE220201-G1	120.0	60	0.7698	91.31	0.9884	13.31
	347.0	60	0.2771	90.24	0.9386	14.71

Chromaticity Measurement - Sphere-Spectroradiometer

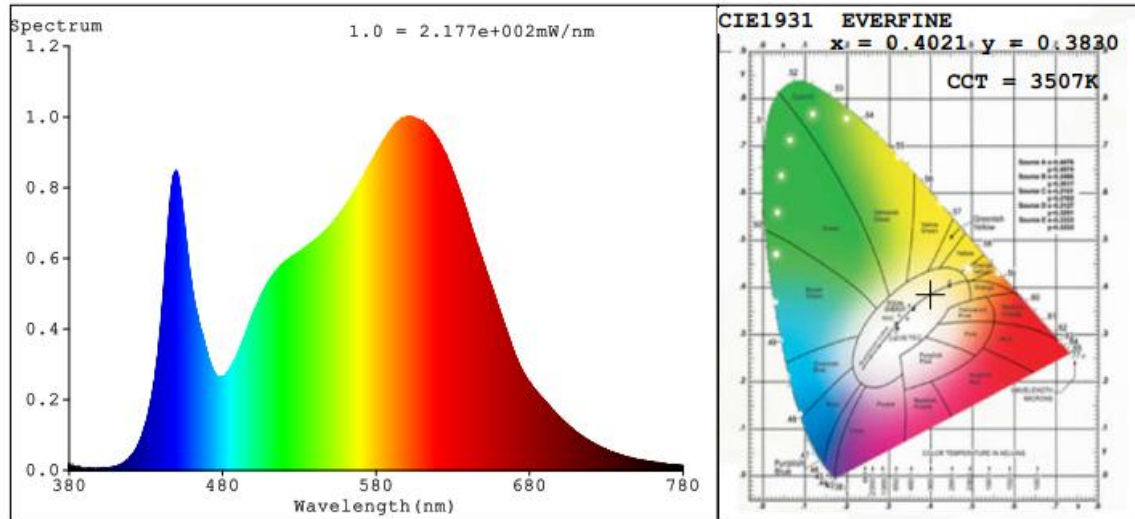
Method(Self-absorption:1.1928)(4π geometry):

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	3507
Duv	-0.0027
Chromaticity (x, y)	x=0.4021 y=0.3830
Chromaticity (u', v')	u'=0.2368 v'=0.5075
Color Rendering Index (CRI)	87.0
R9	25
Rg	98
Rf	87
Rcs,h1	-10

Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120	347
Frequency (Hz)	60	60
Total Luminous (lm)	10715	10702
Luminous Efficacy (lm/W)	117.35	118.59

Spectral Power Distribution & Chromaticity Diagram



R1 =87	R2 =93	R3 =97	R4 =87	R5 =87	R6 =91	R7 =86	
R8 =68	R9 =25	R10=84	R11=87	R12=75	R13=88	R14=99	R15=81



TM30

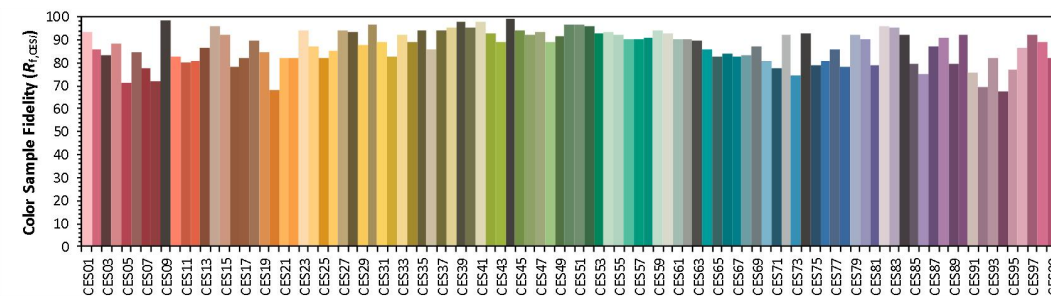
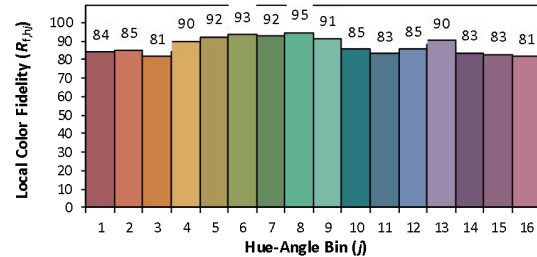
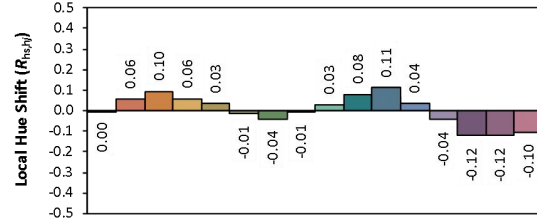
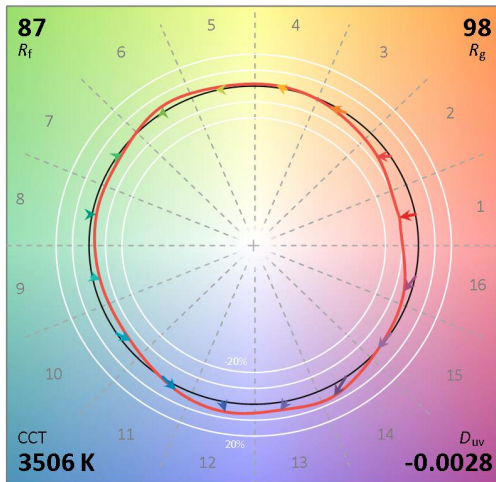
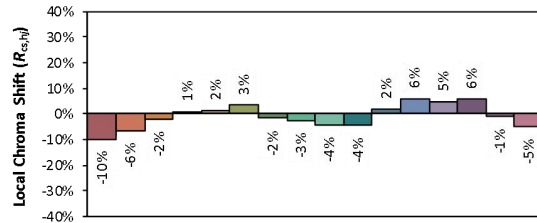
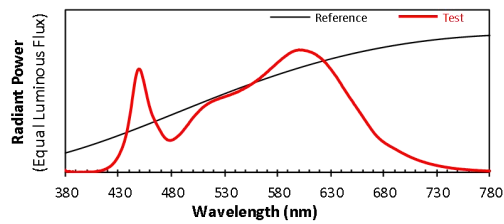
ANSI/IES TM-30-18 Color Rendition Report

Source: BXEN-XXX-11L-37A-00-0-0

Manufacturer: LEDVANCE LLC

Date: 2022-07-13

Model: LNSLOT1A98UNHD8SC196DIPWH (3500K)



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

x 0.4021
 y 0.3828
 u' 0.2369
 v' 0.5075

CIE 13.3-1995
(CRI)
 R_a 87
 R_9 25

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2.4 Electrical, Photometric and Chromaticity Measurements

Test date	2022-07-13	Test Ambient:	25 ± 1 ° C
Test Orientation	As intended	Stabilization Time (min)	60
Model Number	LNSLOT1A98UNHD8SC196DIP WH(4000K)	Total Operating Time(min)	61

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
JAE220201-G1	120.0	60	0.7997	94.91	0.9890	13.22
	347.0	60	0.2881	93.88	0.9392	14.62

Chromaticity Measurement - Sphere-Spectroradiometer

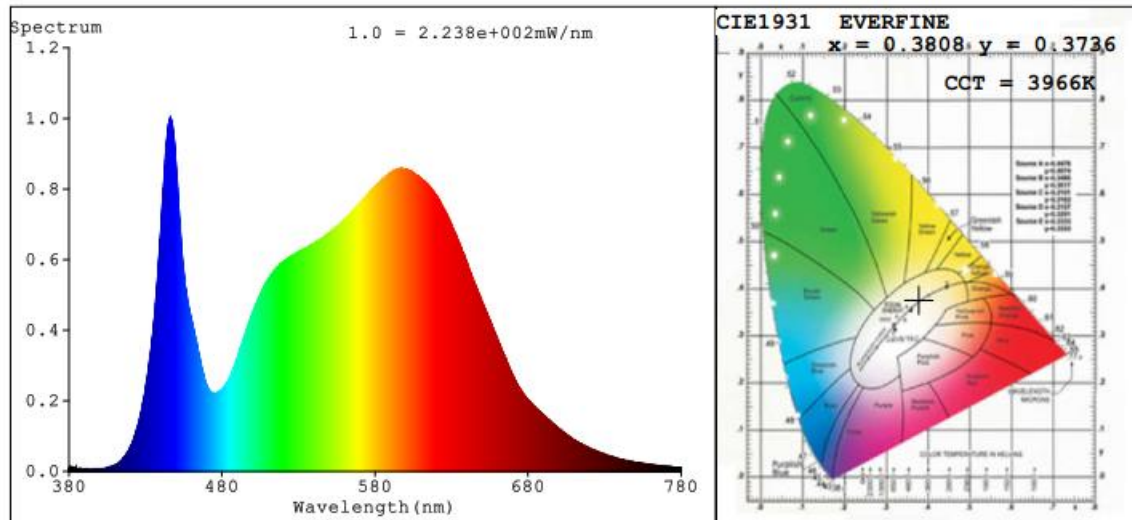
Method(Self-absorption:1.1924)(4π geometry):

Parameter	Result
Test Voltage (V)	120.0
Frequency (Hz)	60
CCT (K)	3966
Duv	-0.0016
Chromaticity (x, y)	x=0.3808 y=0.3736
Chromaticity (u', v')	u'=0.2266 v'=0.5003
Color Rendering Index (CRI)	85.8
R9	23
Rg	99
Rf	85
Rcs,h1	-10

Photometric Measurement – Sphere-Spectroradiometer Method:

Parameter	Result	
Test Voltage (V)	120	347
Frequency (Hz)	60	60
Total Luminous (lm)	10190	10177
Luminous Efficacy (lm/W)	107.36	108.40

Spectral Power Distribution & Chromaticity Diagram



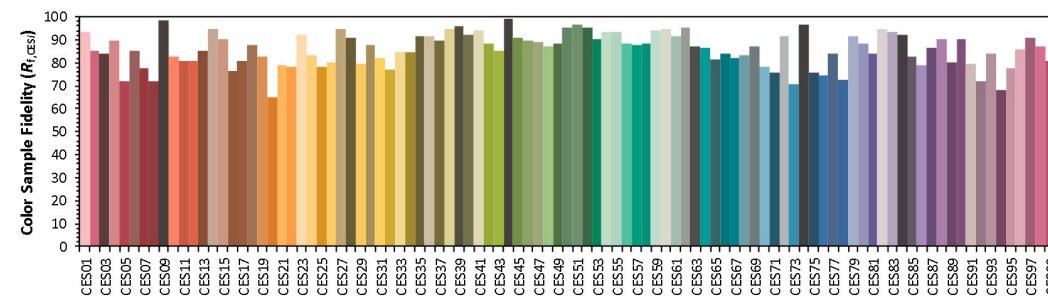
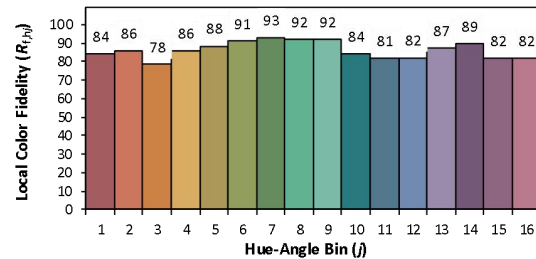
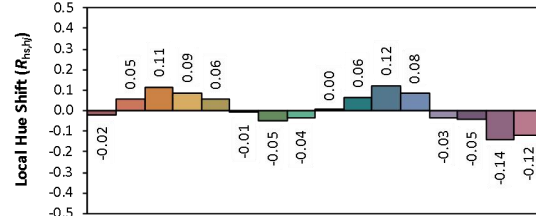
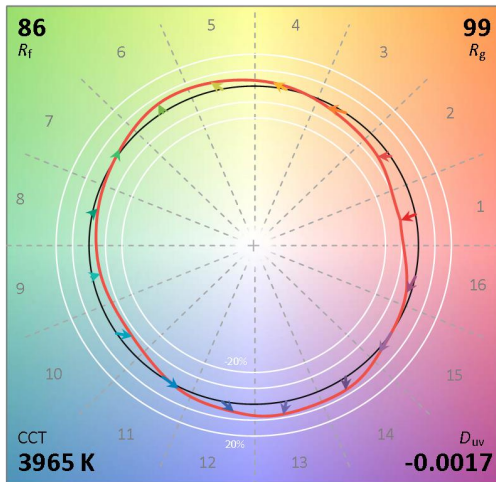
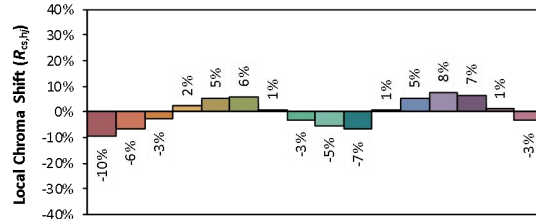
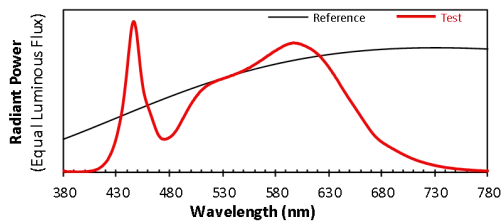
R1 =85	R2 =90	R3 =94	R4 =87	R5 =86	R6 =87	R7 =87	
R8 =70	R9 =23	R10=77	R11=88	R12=72	R13=86	R14=97	R15=80



TM30

ANSI/IES TM-30-18 Color Rendition Report

Source:	BXEN-XXX-11L-37A-00-0-0	Manufacturer:	LEDVANCE LLC
Date:	2022-07-13	Model:	LNSLOT1A98UNHD8SC196DIPWH (4000K)



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

x 0.3808
 y 0.3734
 u' 0.2267
 v' 0.5002

CIE 13.3-1995
(CRI)
 R_a 86
 R_g 23

lors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.0

2.5 Liner product comparison for 1.2m and 2.4m

Model	LNSLOT1A48UNHD8SC148DIP WH(3000K)	LNSLOT1A98UNHD8SC196DIP WH(3000K)
Rated power(W)	48W	96W
Size(m)	1.20	2.40
LED Spacing (mm)	2.91	2.91
LED QTY	576	1152
Driver Model Number	BQE46C-1200-38-PV	BQE46C-1200-38-PV*2
Calculation Method	Please refer to below "Calculation method"	
LED Working Current (mA)	24.3	24.4

Remark	LNSLOT1A48UNHD8SC148DIPWH(3000 K)	LNSLOT1A98UNHD8SC196DIPWH(3000 K)
Cross Section		
Overall Appearance		
Without lens& lens		
The LED quantity, wattage and the length of LNSLOT1A48UNHD8SC148DIPWH(3000K) are half of LNSLOT1A98UNHD8SC196DIPWH(3000K).		



Calculation method				
Model number	LNSLOT1A48UNHD8SC148 DIPWH(3000K)		LNSLOT1A98UNHD8SC196 DIPWH(3000K)	
Test Voltage (V)	120	347	120	347
Frequency (Hz)	60	60	60	60
Total Luminous of integrating sphere (lm)	4968	4957	9989	9976
Total Luminous of goniophotometer (lm)	4935.0	4924.4	9919.4**	9898.0**
Scale factor= 2.4m integrating sphere (lm)/ 1.2m integrating sphere (lm)	2.01	2.01	--	--

Note: The data of LNSLOT1A48UNHD8SC148DIPWH(3000K) is from Report No.: JAE220201-E.

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

$$9919.4 = 4935.0 \times 2.01$$

$$9898.0 = 4924.4 \times 2.01$$



3. Test Equipment

Equipment ID	Equipment Name	Last Calibration Date	Next Calibration Date
ST-R-702	2 meter Integrating Sphere	Verified by D204 standard lamp	
ST-R-701	Spectral analysis system HAAS-1200	Verified by D204 standard lamp	
ST-R-703	Standard Lamp D204	2022-01-14	2023-01-13
ST-R-704	Power Meter for Integrating Sphere	2022-01-03	2023-01-02
ST-R-707	Temperature Probe for Integrating Sphere	2022-01-03	2023-01-02
ST-R-714	Goniophotometer system	Verified by D908S standard lamp	
ST-R-710	Standard Lamp D908S	2022-01-14	2023-01-13
ST-R-711	Power Meter for Goniophotometer	2022-01-03	2023-01-02
ST-R-709	Hygrothermograph for Goniophotometer	2022-01-03	2023-01-02
Uncertainty(K=2): Photometric Measurement (Sphere):3.40% Chromaticity Measurement(Sphere):44.8K Photometric Measurement(Goniophotometer):3.64%			

4. Product Photo



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