

ANSI/IES LM-79-19
MEASUREMENT AND TEST REPORT
For

GREEN CREATIVE LTD

Room 3603, Level 36, Tower 1, Enterprise Square Five, 38 Wang Chiu Road, Kowloon Bay, Kowloon,
Hong Kong, China

Test Model:
NYXDM8RD/L9CCT5S/DIM010UNV/WD/WBW

Report Type:	Electrical and Photometric tests including: Luminous Flux, Luminous Intensity Distribution, THD
Reviewed By:	Ezer Pan <i>Ezer Pan</i>
Report Number:	KS2231107-64478E-EE-7
Test Date:	2023-11-11
Report Date:	2024-04-18
Approved by:	Blake Zhang / EE Engineer
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 5F (B-West), 6F, 7F, the 3rd Phase of Wan Li Industrial Building D Shihua Road, Futian Free Trade Zone Shenzhen 518038 China. Tel: +86-755-33320018 Fax: +86-755-33320008
Test Location:	Test facility was located at No.12, Pulong East 1 st Road, Tangxia Town, Dongguan, Guangdong, China.

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.(Shenzhen). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S. Government. *This report contains data that are not covered by the NVLAP accreditation.

1. Product Description[#]

General Information:

One test sample was in good condition and received on 2023-11-07, and used for testing. All tests and evaluations were performed at the most consumptive white light setting.

Model Tested: NYXDM8RD/L9CCT5S/DIM010UNV/WD/WBW
Manufacturer: GREEN CREATIVE LTD
Brand Name: GREEN CREATIVE
Product Designation: LED recessed downlight
Burning Time Before Test: 0hour(For New Products)

Rated Values:

Rated Voltage/Frequency: AC 120-277V 50/60Hz
Rated Power: 40W-50W-63W
Nominal CCT: 2700K/3000K/3500K/4000K/5000K
Nominal Lumen Output: 5860lm(2700K),6110lm(3000K),6300lm(3500K/4000K/5000K)

2. Standards Used

- ANSI/IES LM-79-19: Approved method :Optical and Electrical Measurements of Solid-State Lighting Products
- ANSI C82.77-10-2014: Harmonic Emission Limits – Related Power Quality Requirements for Lighting
- *IES TM-30-18: IES Method for Evaluating Light Source Color Rendition (This method is not in NVLAP accreditation scope)

3. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
AC POWER SUPPLY	EVERFINE	VPS1030 PWM	1012017	2023-09-02	2024-09-01
Digital CC&CV DC Power Supply	EVERFINE	WY12010	1009009	2023-09-02	2024-09-01
Digital power meter	YOKOGAWA	WT-210	91j926132	2023-09-02	2024-09-01
full-field speed goniophotometer	EVERFINE	GO-R5000	YG108492N10120001	2023-09-02	2024-09-01
wireless remote thermohygrometer	N/A	AOK-5017B	N/A	2023-09-02	2024-09-01
Standard Light Source	EVERFINE	D908	N/A	2023-05-12	2025-05-11

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

4. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with ANSI/IES LM-79-19. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at 25°C±1.2°C during measurement. And relative humidity is maintained between 10% and 65%.The air flow around the SSL product is less than 0.2m/s.

Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement.

Type C goniophotometer was used for measuring total luminous flux, luminous intensity distribution, and color spatial uniformity. The product was operated in its intended orientation in application and was recorded in this report. For luminous intensity distribution, The vertical angle (γ) test intervals were set no more than 2.5 degree, The horizontal angle (C plane) test intervals were set no more than 22.5 degree. For color spatial uniformity, The vertical angle (γ) test intervals were set no more than 90 degree, The horizontal angle (C plane) test intervals were set no more than 10 degree

The uncertainty of the luminous intensity is $U=2.00\%$ ($K=2$), at the 95% confidence level.

Additional Test

The Additional Test item may not be covered by ANSI/IES LM-79-2019. Additional test including power factor, off-state power and THD, was measured by Digital Power Meter after stabilized at $25^{\circ}\text{C}\pm 1.2^{\circ}\text{C}$. Test voltage for THD and power factor test would be equal to rated voltage or, in case of a voltage range, maximum value of that range.

The uncertainty of power meter AC current $U=0.19\%$ of rdg, AC Voltage $U=0.15\%$ of rdg, Power $U=0.46\%$ ($K=2$), at the 95% confidence level.

Fidelity Index and Gamut Index Calculation

The R_i , R_g was calculated according to IES TM-30-18 by using calculation tools. The calculation was based on the measured SPD from 380nm to 780nm with 1nm intervals. All the colors in this report is for reference only.

5. Test Result

[Goniophotometer System]

The photometric distance: **2.513m**

Total operating time for luminous intensity distribution: **1.5 hour**

Test orientation: **Downward**

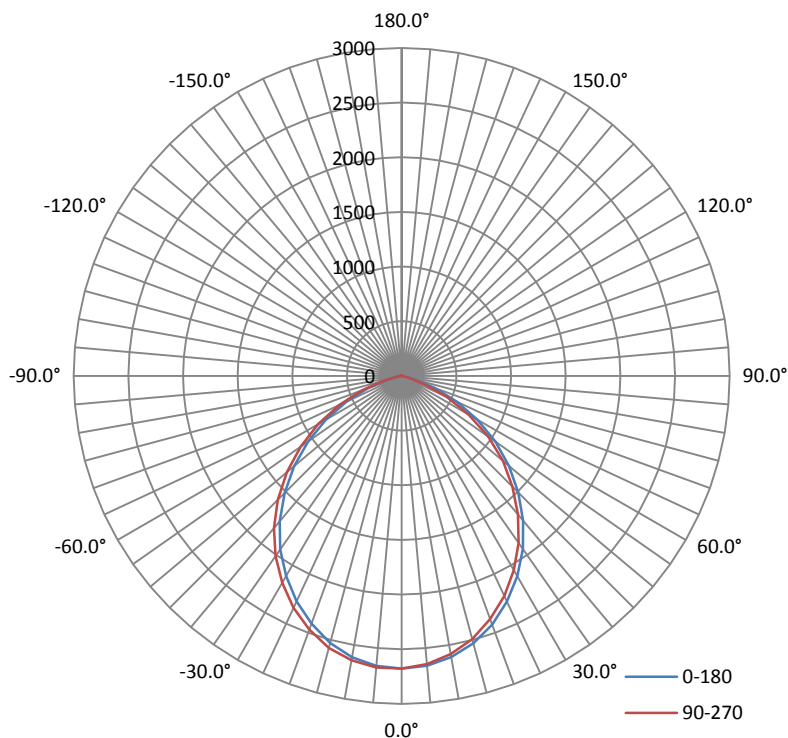
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.09	60	0.4988	59.420	0.9920

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
6038.65	101.63	2685	1.18	1.15

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	97.5	97.4	97.5	97.6	97.5
Field Angle (10% I_{max}):	142.4	142.4	141.6	142.5	142.2

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0°	2676	2676	2676	2676	2676	2676	2676	2676
1°	2679	2679	2679	2681	2680	2675	2680	2678
2°	2674	2673	2681	2679	2683	2678	2678	2676
3°	2671	2670	2684	2683	2683	2678	2679	2682
4°	2666	2665	2682	2685	2681	2672	2677	2673
5°	2662	2660	2680	2677	2677	2671	2674	2672
6°	2655	2651	2672	2673	2670	2662	2671	2671
7°	2642	2641	2661	2667	2662	2664	2659	2664
8°	2634	2632	2659	2668	2658	2656	2658	2656
9°	2622	2623	2656	2654	2651	2648	2645	2652
10°	2613	2611	2644	2642	2641	2635	2638	2639
11°	2598	2591	2632	2630	2627	2622	2627	2629
12°	2578	2574	2620	2618	2614	2608	2612	2618
13°	2560	2556	2607	2605	2601	2599	2601	2609
14°	2543	2539	2594	2596	2587	2582	2587	2583
15°	2529	2522	2577	2572	2577	2567	2570	2571
16°	2513	2499	2560	2555	2555	2541	2556	2553
17°	2484	2479	2534	2536	2532	2528	2525	2532
18°	2461	2450	2521	2519	2512	2510	2514	2516
19°	2439	2432	2498	2493	2492	2490	2492	2500
20°	2412	2410	2477	2468	2469	2467	2469	2475
21°	2393	2386	2454	2449	2447	2444	2444	2451
22°	2363	2355	2431	2424	2422	2413	2417	2422
23°	2331	2323	2407	2401	2395	2390	2395	2405
24°	2303	2296	2378	2377	2367	2363	2371	2370
25°	2275	2266	2351	2344	2341	2337	2343	2345
26°	2247	2237	2320	2316	2311	2302	2312	2316
27°	2217	2205	2288	2285	2279	2277	2278	2287
28°	2184	2167	2264	2259	2250	2247	2250	2256
29°	2148	2139	2234	2224	2221	2214	2222	2229
30°	2113	2106	2199	2190	2185	2183	2190	2195
31°	2083	2071	2165	2158	2153	2148	2156	2162
32°	2045	2035	2131	2122	2118	2116	2119	2123
33°	2011	1997	2098	2092	2084	2081	2085	2096
34°	1975	1962	2064	2060	2047	2046	2049	2055
35°	1937	1923	2028	2018	2012	2009	2015	2021
36°	1899	1883	1989	1979	1973	1968	1979	1984
37°	1859	1844	1949	1941	1936	1935	1936	1947
38°	1818	1798	1915	1907	1899	1897	1901	1908
39°	1776	1762	1876	1863	1863	1855	1861	1870
40°	1735	1720	1836	1823	1817	1815	1821	1828
41°	1695	1676	1792	1781	1775	1769	1778	1786
42°	1648	1633	1751	1736	1731	1729	1733	1743
43°	1605	1586	1708	1697	1688	1688	1692	1706
44°	1560	1543	1665	1656	1644	1648	1649	1659
45°	1514	1499	1621	1606	1602	1599	1604	1613
46°	1472	1454	1575	1561	1555	1547	1562	1567
47°	1422	1407	1527	1516	1509	1506	1513	1522
48°	1377	1357	1483	1471	1464	1461	1470	1478

Luminous Intensity (cd) Distribution Data

$\begin{matrix} \text{C} \\ \backslash \\ \gamma \end{matrix}$	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
49°	1331	1313	1437	1424	1419	1415	1425	1433
50°	1284	1265	1391	1378	1370	1370	1376	1384
51°	1240	1219	1346	1331	1324	1321	1329	1337
52°	1190	1171	1298	1283	1275	1273	1279	1289
53°	1143	1120	1253	1235	1228	1227	1232	1245
54°	1094	1073	1204	1191	1178	1181	1186	1197
55°	1044	1026	1154	1138	1128	1130	1137	1146
56°	995	976	1106	1090	1081	1080	1087	1097
57°	945	927	1058	1042	1033	1032	1039	1048
58°	898	877	1009	994	985	983	992	999
59°	849	828	961	944	935	935	944	952
60°	799	778	910	894	882	885	892	901
61°	752	731	861	846	832	835	844	851
62°	701	680	812	795	782	787	794	802
63°	652	632	765	747	731	737	745	755
64°	604	584	715	698	681	688	696	705
65°	557	537	664	645	629	636	646	654
66°	510	490	616	596	581	597	595	606
67°	462	444	568	550	533	545	550	559
68°	416	396	521	504	485	494	505	512
69°	370	351	474	455	438	447	457	465
70°	324	307	427	408	389	399	410	418
71°	279	264	380	362	344	354	364	371
72°	235	223	335	317	298	310	318	327
73°	194	184	292	274	256	267	276	285
74°	155	148	249	234	215	227	234	242
75°	119	115	210	194	176	188	195	202
76°	90	87	173	158	143	151	160	164
77°	66	64	139	125	112	119	127	129
78°	52	47	109	97	85	91	98	99
79°	38	33	84	73	64	68	74	73
80°	24	27	62	58	51	54	58	57
81°	20	21	49	44	38	40	42	41
82°	16	15	36	29	25	26	26	25
83°	14	13	23	21	19	19	18	17
84°	11	10	17	16	15	14	13	13
85°	8	8	15	14	13	12	11	11
86°	6	5	12	11	11	10	9	9
87°	3	3	10	9	8	8	7	7
88°	1	1	7	7	7	6	6	5
89°	0	0	5	5	5	5	4	4
90°	0	0	3	3	3	3	2	2
91°	0	0	1	2	1	1	1	1
92°	0	0	0	1	0	1	0	0
93°	0	0	0	0	0	0	0	0
94°	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0
96°	0	0	0	0	0	0	0	0
97°	0	0	0	0	0	0	0	0

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
98°	0	0	0	0	0	0	0	0
99°	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0
101°	0	0	0	0	0	0	0	0
102°	0	0	0	0	0	0	0	0
103°	0	0	0	0	0	0	0	0
104°	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0
106°	0	0	0	0	0	0	0	0
107°	0	1	0	0	0	0	0	0
108°	1	1	0	1	1	1	1	0
109°	1	1	1	1	1	1	1	1
110°	1	1	1	1	1	1	1	1
111°	1	1	1	1	1	1	1	1
112°	1	1	1	1	1	1	1	1
113°	1	1	1	1	1	1	1	1
114°	1	1	1	1	1	1	1	1
115°	1	1	1	1	1	1	1	1
116°	1	1	1	1	1	1	1	1
117°	1	1	1	1	1	1	1	1
118°	1	1	1	1	1	1	1	1
119°	1	1	1	1	1	1	1	1
120°	1	1	1	1	1	1	1	1
121°	1	1	1	1	1	1	1	1
122°	1	1	1	1	1	1	1	1
123°	1	1	1	1	1	1	1	1
124°	1	1	1	1	1	1	1	1
125°	1	1	1	1	1	1	1	1
126°	1	1	1	1	1	1	1	1
127°	1	1	1	1	1	1	1	1
128°	1	1	1	1	1	1	1	1
129°	1	1	1	1	1	1	1	1
130°	2	1	1	1	1	1	1	1
131°	2	2	1	1	1	1	1	1
132°	2	2	1	1	2	1	1	1
133°	2	2	1	2	2	2	2	1
134°	2	2	2	2	2	2	2	2
135°	2	2	2	2	2	2	2	2
136°	2	2	2	2	2	2	2	2
137°	2	2	2	2	2	2	2	2
138°	2	2	2	2	2	2	2	2
139°	2	2	2	2	2	2	2	2
140°	3	3	2	2	2	2	2	2
141°	3	3	2	2	2	2	2	2
142°	3	3	2	2	3	3	2	2
143°	3	3	3	3	3	3	3	2
144°	3	3	3	3	3	3	3	3
145°	3	3	3	3	3	3	3	3
146°	3	3	3	3	3	3	3	3

Luminous Intensity (cd) Distribution Data

C γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
147°	3	3	3	3	3	3	3	3
148°	3	4	3	3	3	3	3	3
149°	4	4	3	4	4	4	3	3
150°	4	4	4	4	4	4	4	3
151°	4	4	4	4	4	4	4	3
152°	4	4	4	4	4	4	4	4
153°	4	4	4	4	4	4	4	4
154°	4	4	4	4	4	4	4	4
155°	4	4	4	4	4	4	4	4
156°	4	4	4	4	4	4	4	4
157°	4	5	4	4	5	4	4	4
158°	4	5	4	5	5	5	4	4
159°	5	5	5	5	5	5	5	4
160°	5	5	5	5	5	5	5	4
161°	5	5	5	5	5	5	5	5
162°	5	5	5	5	5	5	5	5
163°	5	5	5	5	5	5	5	5
164°	5	5	5	5	5	5	5	5
165°	5	5	5	5	5	5	5	5
166°	5	5	5	5	5	5	5	5
167°	4	4	5	5	5	5	5	5
168°	4	4	5	5	5	5	5	5
169°	4	4	5	5	5	5	5	5
170°	4	4	5	5	5	5	5	5
171°	4	4	4	5	5	5	4	4
172°	4	4	4	4	4	4	4	4
173°	4	4	4	4	4	4	4	4
174°	4	4	4	4	4	4	4	4
175°	4	4	4	4	4	4	4	4
176°	4	4	4	4	4	4	4	4
177°	4	4	4	4	4	4	4	4
178°	4	4	4	4	4	4	4	4
179°	4	4	4	4	4	4	4	4
180°	4	4	4	4	4	4	4	4

Luminous Intensity (cd) Distribution Data (cont.)

$\begin{matrix} \diagup C \\ \diagdown \gamma \end{matrix}$	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0°	2676	2676	2676	2676	2676	2676	2676	2676
1°	2677	2673	2674	2675	2674	2672	2671	2674
2°	2677	2672	2671	2676	2670	2668	2667	2663
3°	2675	2675	2657	2663	2661	2662	2655	2656
4°	2668	2670	2653	2655	2654	2648	2654	2650
5°	2661	2664	2644	2644	2646	2644	2647	2643
6°	2652	2655	2634	2637	2635	2631	2635	2631
7°	2646	2645	2624	2624	2624	2623	2621	2625
8°	2636	2639	2609	2609	2613	2608	2605	2604
9°	2629	2627	2594	2596	2596	2588	2591	2588
10°	2611	2616	2576	2577	2583	2586	2580	2575
11°	2597	2600	2557	2564	2569	2564	2566	2562
12°	2584	2580	2541	2549	2547	2544	2548	2539
13°	2563	2571	2518	2526	2528	2526	2529	2517
14°	2549	2556	2505	2507	2511	2498	2511	2498
15°	2533	2535	2480	2481	2493	2486	2484	2478
16°	2510	2515	2460	2463	2467	2465	2463	2455
17°	2486	2491	2433	2436	2442	2441	2440	2440
18°	2464	2468	2407	2409	2417	2417	2409	2409
19°	2446	2442	2382	2389	2394	2388	2388	2381
20°	2421	2423	2355	2363	2366	2364	2361	2351
21°	2392	2394	2323	2333	2343	2338	2334	2329
22°	2365	2366	2296	2306	2309	2309	2310	2298
23°	2335	2342	2260	2272	2281	2278	2278	2268
24°	2304	2314	2236	2242	2250	2243	2245	2237
25°	2277	2285	2209	2212	2221	2217	2214	2207
26°	2244	2255	2171	2181	2187	2185	2182	2171
27°	2216	2222	2138	2146	2155	2157	2148	2145
28°	2182	2190	2102	2111	2119	2122	2113	2106
29°	2154	2156	2066	2076	2086	2082	2082	2071
30°	2115	2122	2031	2043	2052	2048	2044	2039
31°	2082	2088	1996	2007	2020	2014	2010	2002
32°	2048	2049	1957	1970	1984	1977	1977	1963
33°	2010	2016	1918	1932	1944	1942	1933	1925
34°	1969	1982	1881	1892	1902	1898	1901	1887
35°	1932	1945	1842	1853	1865	1863	1860	1848
36°	1891	1904	1801	1816	1822	1822	1817	1807
37°	1855	1865	1759	1774	1783	1785	1776	1766
38°	1815	1826	1715	1731	1742	1739	1732	1723
39°	1776	1783	1671	1686	1697	1694	1693	1677
40°	1728	1741	1629	1641	1654	1653	1650	1639
41°	1686	1696	1585	1598	1613	1609	1606	1596
42°	1643	1651	1542	1554	1568	1566	1563	1549
43°	1602	1610	1494	1510	1522	1521	1514	1503
44°	1555	1567	1450	1464	1477	1473	1472	1459
45°	1509	1523	1403	1417	1431	1431	1426	1413
46°	1461	1476	1360	1375	1383	1386	1380	1367
47°	1417	1430	1312	1328	1338	1340	1334	1322
48°	1369	1385	1269	1284	1294	1291	1287	1279

Luminous Intensity (cd) Distribution Data (cont.)

$\begin{matrix} \text{C} \\ \backslash \\ \gamma \end{matrix}$	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
49°	1327	1339	1226	1240	1251	1250	1245	1236
50°	1282	1296	1182	1196	1208	1209	1204	1193
51°	1238	1251	1134	1148	1161	1161	1157	1146
52°	1193	1206	1086	1100	1112	1112	1108	1096
53°	1144	1161	1036	1051	1060	1062	1057	1048
54°	1095	1113	987	1003	1011	1012	1009	998
55°	1047	1064	937	953	963	964	961	948
56°	997	1016	888	904	911	914	912	898
57°	946	965	839	854	860	864	862	848
58°	896	916	788	803	809	813	811	800
59°	847	866	740	753	757	762	763	750
60°	797	818	690	703	706	714	712	700
61°	747	768	640	651	656	662	663	651
62°	698	716	591	601	603	612	611	601
63°	649	667	540	551	552	562	562	552
64°	600	619	491	501	501	511	513	504
65°	551	569	442	452	453	463	464	455
66°	504	522	395	405	404	415	416	408
67°	457	474	349	357	356	367	370	361
68°	409	427	303	313	310	323	324	315
69°	365	380	261	268	265	278	281	271
70°	319	335	220	227	222	237	239	229
71°	276	290	181	187	183	197	199	188
72°	234	247	147	154	148	163	166	155
73°	193	207	113	122	114	129	132	122
74°	158	172	86	89	87	95	99	88
75°	122	136	63	66	64	72	75	65
76°	87	100	46	49	47	54	56	47
77°	63	74	32	36	35	40	41	34
78°	45	53	22	25	26	29	29	25
79°	30	37	16	19	20	22	22	20
80°	20	25	14	16	17	18	18	17
81°	17	17	11	13	14	15	15	14
82°	13	15	9	11	12	12	12	11
83°	10	12	7	8	9	9	9	8
84°	8	9	5	6	7	7	7	5
85°	6	7	3	4	5	5	4	3
86°	4	5	1	2	2	3	2	1
87°	3	3	0	0	0	1	0	0
88°	1	2	0	0	0	0	0	0
89°	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0
91°	0	0	0	0	0	0	0	0
92°	0	0	0	0	0	0	0	0
93°	0	0	0	0	0	0	0	0
94°	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0
96°	0	0	0	0	0	0	0	0
97°	0	0	0	0	0	0	0	0

Luminous Intensity (cd) Distribution Data (cont.)

C y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
98°	0	0	0	0	0	0	0	0
99°	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0
101°	0	0	0	0	0	0	0	0
102°	0	0	0	0	0	0	0	0
103°	0	0	0	0	0	0	0	0
104°	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0
106°	0	0	0	0	0	0	0	0
107°	0	0	0	0	0	0	0	0
108°	0	0	0	0	0	0	0	0
109°	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0
111°	0	0	0	0	0	0	0	0
112°	0	0	0	0	0	0	0	0
113°	0	0	0	0	0	0	0	0
114°	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0
116°	1	0	0	0	0	0	0	0
117°	1	0	0	0	0	0	0	0
118°	1	0	0	0	0	0	0	0
119°	1	0	0	0	0	0	0	0
120°	1	0	1	1	1	0	1	1
121°	1	0	1	1	1	1	1	1
122°	1	1	1	1	1	1	1	1
123°	1	1	1	1	1	1	1	1
124°	1	1	1	1	1	1	1	1
125°	1	1	1	1	1	1	1	1
126°	1	1	1	1	1	1	1	1
127°	1	1	1	1	1	1	1	1
128°	1	1	1	1	1	1	1	1
129°	1	1	1	1	1	1	1	1
130°	1	1	1	1	1	1	1	1
131°	1	1	1	1	1	1	1	1
132°	1	1	1	1	1	1	1	1
133°	1	1	1	1	1	1	1	1
134°	1	1	1	1	1	1	1	1
135°	1	1	1	1	1	1	1	1
136°	1	1	1	1	1	1	1	1
137°	1	1	1	1	1	1	1	1
138°	1	1	1	1	1	1	1	1
139°	1	1	1	1	1	1	1	1
140°	1	1	1	1	1	1	1	1
141°	1	1	1	1	1	1	1	1
142°	1	1	1	1	1	1	1	1
143°	1	1	1	2	1	1	1	1
144°	1	1	1	2	2	2	1	2
145°	1	1	1	2	2	2	2	2
146°	1	1	2	2	2	2	2	2

Luminous Intensity (cd) Distribution Data (cont.)

$\begin{matrix} \text{C} \\ \diagdown \\ \gamma \end{matrix}$	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
147°	2	1	2	2	2	2	2	2
148°	2	1	2	2	2	2	2	2
149°	2	1	2	2	2	2	2	2
150°	2	2	2	2	2	2	2	2
151°	2	2	2	2	2	2	2	2
152°	2	2	2	2	2	2	2	2
153°	2	2	2	2	2	2	2	2
154°	2	2	2	2	2	2	2	2
155°	2	2	2	2	2	2	2	2
156°	2	2	2	2	2	2	2	2
157°	2	2	2	2	2	2	2	2
158°	2	2	2	2	2	2	2	2
159°	2	2	2	2	2	2	2	2
160°	2	2	2	2	2	2	2	2
161°	2	2	2	2	2	2	2	2
162°	2	2	2	2	2	2	2	2
163°	2	2	2	2	2	2	2	3
164°	2	2	2	2	2	2	2	3
165°	2	2	2	2	2	2	2	3
166°	3	3	3	2	2	2	2	3
167°	3	3	3	3	2	2	2	3
168°	3	3	3	3	2	2	2	3
169°	3	3	3	3	3	2	3	3
170°	3	3	3	3	3	3	3	3
171°	3	3	3	3	3	3	3	3
172°	3	3	3	3	3	3	3	3
173°	3	3	3	3	3	3	3	3
174°	3	3	3	3	3	3	3	3
175°	3	3	3	3	3	3	3	3
176°	3	3	3	3	3	3	3	3
177°	3	3	4	3	3	3	3	4
178°	3	3	4	4	3	3	3	4
179°	4	4	4	4	4	4	4	4
180°	4	4	4	4	4	4	4	4

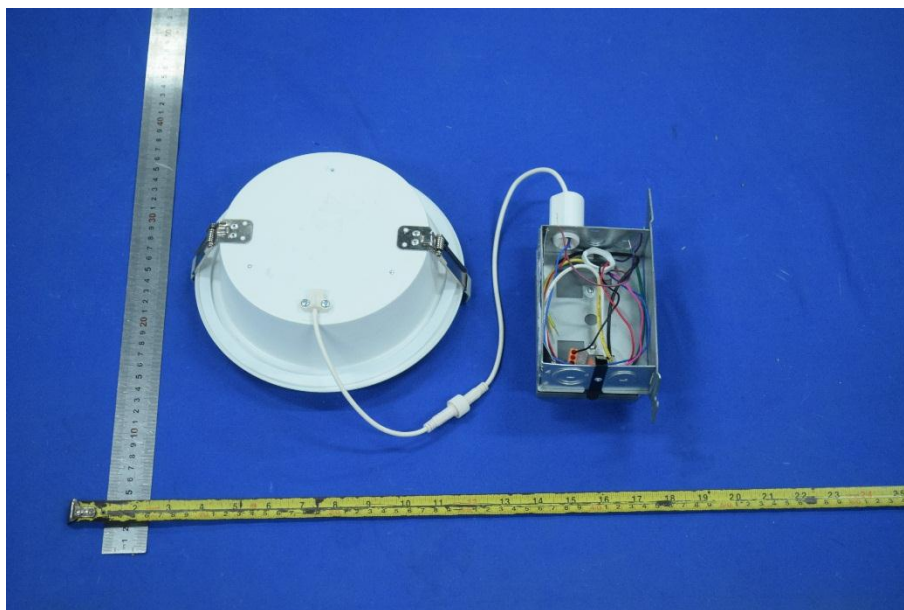
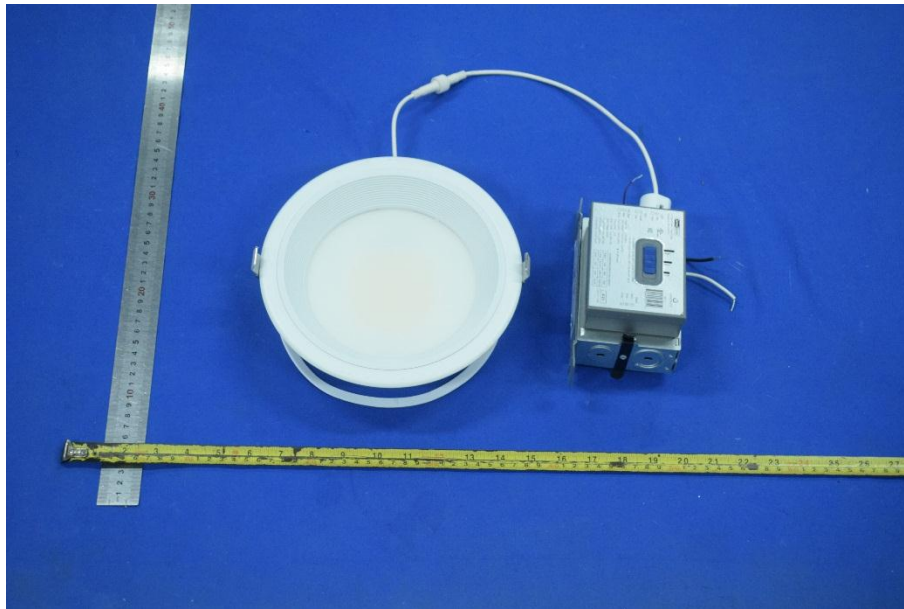
Zonal Lumen Density Measurement

Deg	Flux (lm)	%
0-5	63.8	1.06
5-10	188.5	3.12
10-15	304.7	5.04
15-20	407.3	6.75
20-25	492.1	8.15
25-30	555.8	9.20
30-35	596.5	9.88
35-40	612.0	10.14
40-45	600.9	9.95
45-50	565.0	9.35
50-55	507.2	8.40
55-60	426.1	7.06
60-65	327.7	5.42
65-70	219.4	3.64
70-75	114.2	1.89
75-80	38.5	0.64
80-85	9.6	0.16
85-90	2.1	0.03
90-95	0.2	0.00
95-100	0.1	0.01
100-105	0.2	0.00
105-110	0.2	0.00
110-115	0.3	0.01
115-120	0.3	0.00
120-125	0.4	0.01
125-130	0.4	0.00
130-135	0.5	0.01
135-140	0.6	0.01
140-145	0.7	0.01
145-150	0.7	0.01
150-155	0.7	0.02
155-160	0.7	0.01
160-165	0.6	0.01
165-170	0.4	0.00
170-175	0.3	0.01
175-180	0.1	0.00

Deg	Flux (lm)	%
0-5	63.8	1.06
0-10	252.3	4.18
0-15	557.0	9.22
0-20	964.3	15.97
0-25	1456.4	24.12
0-30	2012.3	33.32
0-35	2608.8	43.20
0-40	3220.8	53.34
0-45	3821.6	63.29
0-50	4386.6	72.64
0-55	4893.8	81.04
0-60	5319.9	88.10
0-65	5647.6	93.52
0-70	5867.0	97.16
0-75	5981.2	99.05
0-80	6019.7	99.69
0-85	6029.3	99.85
0-90	6031.4	99.88
0-95	6031.6	99.88
0-100	6031.7	99.89
0-105	6031.9	99.89
0-110	6032.1	99.89
0-115	6032.3	99.90
0-120	6032.6	99.90
0-125	6033.0	99.91
0-130	6033.4	99.91
0-135	6033.9	99.92
0-140	6034.5	99.93
0-145	6035.2	99.94
0-150	6035.9	99.95
0-155	6036.6	99.97
0-160	6037.3	99.98
0-165	6037.9	99.99
0-170	6038.3	99.99
0-175	6038.6	100.00
0-180	6038.7	100.00

Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
Total Harmonic Distortion:	120	60	10.39%
Total Harmonic Distortion:	277	60	10.63%

6. Product Photo



Directions

1. The information marked "superscript #" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
2. This report includes some test methods are not in NVLAP accreditation scope marked *.
3. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $K=2$ with the 95% confidence interval.
6. This report cannot be reproduced except in full, without prior written approval of the Company.
7. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

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