



8165 E Kaiser Blvd. Anaheim, CA 92808
www.lightlaboratory.com

Report No: L022110806



Report No: L022110806

Issue Date: 2/16/2021

Report Prepared For: Light and Green
2340 E Olympic Blvd. Unit E., Los Angeles, CA 90021

Model Number: LG-9022A-AC-30K

Test: Photometric/Electrical Test

Standards Used: Appropriate part or all test guidelines were used for test performed:

IESNA LM79: 2008 Approved Methods for Electrical and Photometric Measurements of Solid-State Lighting Products

ANSI NEMA ANSLG C78.377: 2008 Specification of the Chromaticity of Solid State Lighting Products

ANSI C82.77:2002: Harmonic Emission Limits-Related Quality Requirements for Lighting Equipment

Description of Sample: Client submitted the sample. Received in working and undamaged condition. No modifications were necessary.

Special Test Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 2/8/21

Date of Tests: 2/11/21 - 2/16/21

Seasoning of Sample: No seasoning was performed in accordance with IESNA LM-79.

Equipment List

Equipment Used	Model No	Stock No	Calibration Due Date
Chroma Programmable AC Source	61604	PS-AC02	--
Yokogawa Digital Power Meter	WT210	MT-EL06-S4	1/9/22
BK PRECISION	1747	PS-DC04	1/10/22
Fluke Digital Thermometer	52K/J	MT-TP05	1/10/22
LLI Type C Goniophotometer System	RMG-C-MKII	CD-LL04-GC	--
LLI 2M Sphere	2MR97	CD-SN03-S2	--
LLI Spectroradiometer	SPR-3000	MT-SC01-S2	Before Use

General Information

Manufacturer:	Light and Green
Model Number:	LG-9022A-AC-30K
Driver Model Number:	L.T.F. DIMMABLE LED DRIVER DA10W250C2040-3001 (2 DRIVERS)

Photometric & Electrical Test Results

Total Lumens:	1665.73
Efficacy:	73.89
Input Voltage (VAC/60Hz):	120.02
Input Current (Amp):	0.1884
Input Power (W):	22.54
Input Power Factor:	0.9970
Current ATHD (%):	6.3%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:50
Total Operating Time (Hours):	1:25

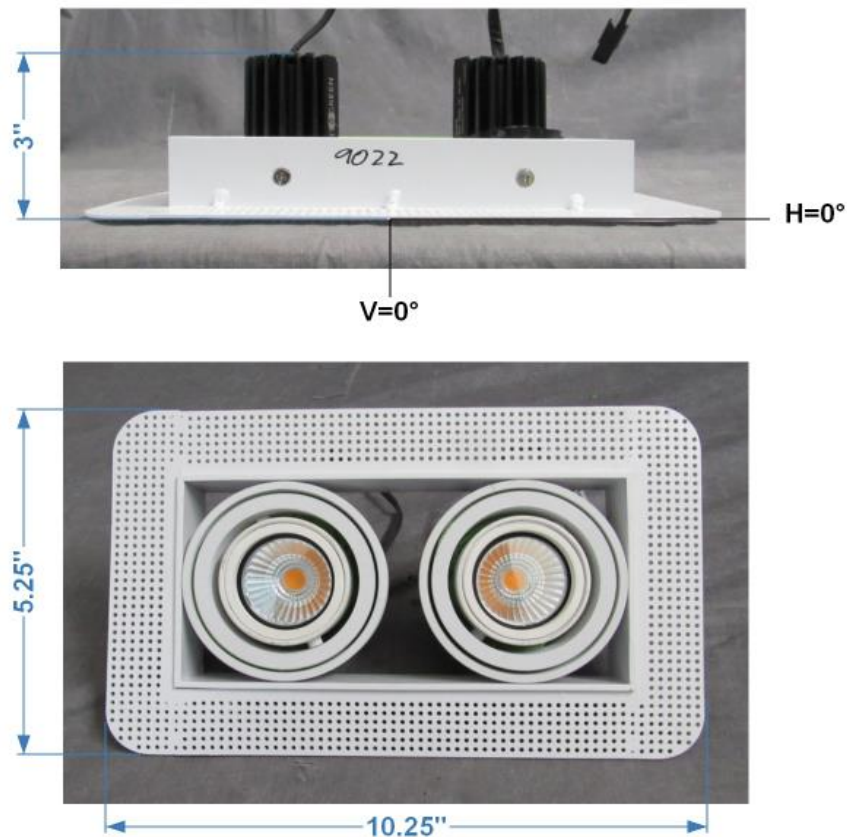


FIG. 1 LUMINAIRE



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Test Methods

Photometric Measurements - Goniophotometer

A Custom Light Laboratory Type C Rotating Mirror Goniophotometer was used to measure candelas(intensity) at each angle of distribution as defined by IESNA for the appropriate fixture type.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Spectral Measurements - Integrating Sphere

A Sensing Spectroradiometer SPR-3000, in conjunction with Light Laboratory 2 meter integrating sphere was used to measure chromaticity coordinates, correlated color temperature(CCT) and the color rendering index(CRI) for each sample.

Ambient temperature is set to 25°C and is measured from the center of the fixture, within 1ft from the outside of the fixture. Temperature is maintained at 25°C throughout the testing process and the sample is stabilized for at least 30mins and longer as necessary for the sample to achieve stabilization.

Electrical measurements are measured using the listed equipment.

Disclaimers:

This report must not be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST or any agency of Federal Government.

Report Prepared by : Keyur Patel

Test Report Reviewed by:

Steve Kang
Quality Assurance

**Attached are photometric data reports. Total number of pages: 9*



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Photometric Test Report

IES INDOOR REPORT

PHOTOMETRIC FILENAME : L022110806.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L022110806
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 2/16/2021
[MANUFAC] Light and Green
[LUMCAT] LG-9022A-AC-30K
[LUMINAIRE] LED Recessed Downlight
[BALLASTCAT] L.T.F. DIMMABLE LED DRIVER DA10W250C2040-3001(2 DRIVERS)
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120.02VAC, 22.54W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1666
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	74
Total Luminaire Watts	22.54
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.62
Spacing Criterion (90-270)	0.64
Spacing Criterion (Diagonal)	0.70
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.25 ft
Luminous Width (90-270)	0.25 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	24820	25428	25793
55	17999	18299	18599
65	15471	15878	15878
75	17949	18614	18614
85	31587	31587	31587

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L022110806.IES

CANDELA TABULATION

	<u>0</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>	<u>35</u>	<u>40</u>	<u>45</u>
0.0	2614	2614	2614	2614	2614	2614	2614	2614	2614	2614
1.0	2570	2572	2574	2577	2583	2588	2593	2598	2604	2611
3.0	2537	2539	2542	2545	2551	2557	2562	2567	2573	2580
5.0	2462	2465	2468	2472	2479	2486	2491	2496	2503	2510
7.0	2314	2316	2320	2323	2328	2335	2341	2344	2350	2358
9.0	2152	2154	2156	2159	2164	2169	2174	2179	2185	2192
11.0	1979	1981	1983	1986	1991	1997	2000	2005	2012	2018
13.0	1806	1807	1809	1811	1816	1821	1825	1828	1833	1841
15.0	1662	1664	1667	1669	1673	1675	1677	1680	1683	1689
17.0	1512	1514	1516	1516	1518	1520	1522	1523	1524	1530
19.5	1338	1338	1339	1340	1342	1344	1344	1344	1345	1347
22.5	1122	1123	1124	1125	1126	1128	1128	1128	1129	1131
25.5	918	920	920	922	924	925	926	926	927	930
29.0	733	735	736	737	740	741	743	742	744	747
33.0	575	576	577	579	581	582	584	584	585	588
37.5	349	349	351	352	352	353	354	355	356	359
42.5	123	123	123	124	124	125	125	125	126	127
47.5	81	81	81	81	81	81	81	81	82	82
55.0	60	60	60	60	60	60	61	61	61	61
65.0	38	38	38	38	38	38	38	38	38	39
75.0	27	27	27	27	27	28	28	28	28	28
85.0	16	16	16	16	16	16	16	16	16	16
90.0	0	0	0	0	0	0	0	0	0	0

Vert. Angles **Horizontal Angles**

	<u>50</u>	<u>55</u>	<u>60</u>	<u>65</u>	<u>70</u>	<u>75</u>	<u>80</u>	<u>85</u>	<u>90</u>
0.0	2614	2614	2614	2614	2614	2614	2614	2614	2614
1.0	2618	2623	2629	2634	2638	2642	2646	2648	2649
3.0	2586	2592	2598	2603	2609	2613	2617	2620	2620
5.0	2516	2521	2527	2532	2536	2541	2545	2548	2549
7.0	2365	2370	2374	2379	2383	2386	2390	2392	2392
9.0	2198	2203	2208	2213	2219	2223	2227	2228	2229
11.0	2024	2030	2036	2041	2045	2049	2053	2054	2057
13.0	1847	1853	1857	1863	1867	1871	1875	1877	1878
15.0	1695	1699	1703	1708	1712	1717	1721	1722	1722
17.0	1533	1536	1540	1543	1547	1551	1554	1556	1556
19.5	1349	1351	1353	1355	1358	1360	1362	1364	1364
22.5	1132	1134	1135	1135	1137	1138	1139	1140	1141
25.5	932	934	935	935	935	937	938	938	938
29.0	748	750	751	752	753	754	755	755	756
33.0	589	591	590	591	590	591	591	592	593
37.5	359	360	360	359	360	360	361	362	362
42.5	128	128	128	128	128	128	129	129	129
47.5	82	82	82	83	83	83	83	83	83
55.0	61	61	61	62	62	62	62	62	62
65.0	39	39	39	39	39	39	39	39	39
75.0	28	28	28	28	28	28	28	28	28
85.0	16	16	16	16	16	16	16	16	16
90.0	0	0	0	0	0	0	0	0	0

IES INDOOR REPORT
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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	669.38	N.A.	40.20
0-30	1100.67	N.A.	66.10
0-40	1385.24	N.A.	83.20
0-60	1556.45	N.A.	93.40
0-80	1637.76	N.A.	98.30
0-90	1665.73	N.A.	100.00
10-90	1479.31	N.A.	88.80
20-40	715.85	N.A.	43.00
20-50	841.27	N.A.	50.50
40-70	218.41	N.A.	13.10
60-80	81.31	N.A.	4.90
70-80	34.11	N.A.	2.00
80-90	27.98	N.A.	1.70
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	1665.73	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	186.42
10-20	482.96
20-30	431.28
30-40	284.57
40-50	125.42
50-60	45.79
60-70	47.20
70-80	34.11
80-90	27.98
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85	83
3	100	93	87	83	98	92	86	82	89	84	81	86	83	80	84	81	78	77
4	95	86	80	76	93	85	80	75	83	78	74	81	77	74	79	76	73	71
5	90	81	74	70	88	80	74	70	78	73	69	76	72	68	75	71	68	66
6	85	76	69	65	84	75	69	65	73	68	64	72	67	64	71	66	63	62
7	81	71	65	60	80	71	65	60	69	64	60	68	63	60	67	63	59	58
8	77	67	61	57	76	67	61	56	65	60	56	64	60	56	63	59	56	54
9	74	63	57	53	72	63	57	53	62	57	53	61	56	53	60	56	53	51
10	70	60	54	50	69	60	54	50	59	54	50	58	53	50	57	53	50	48

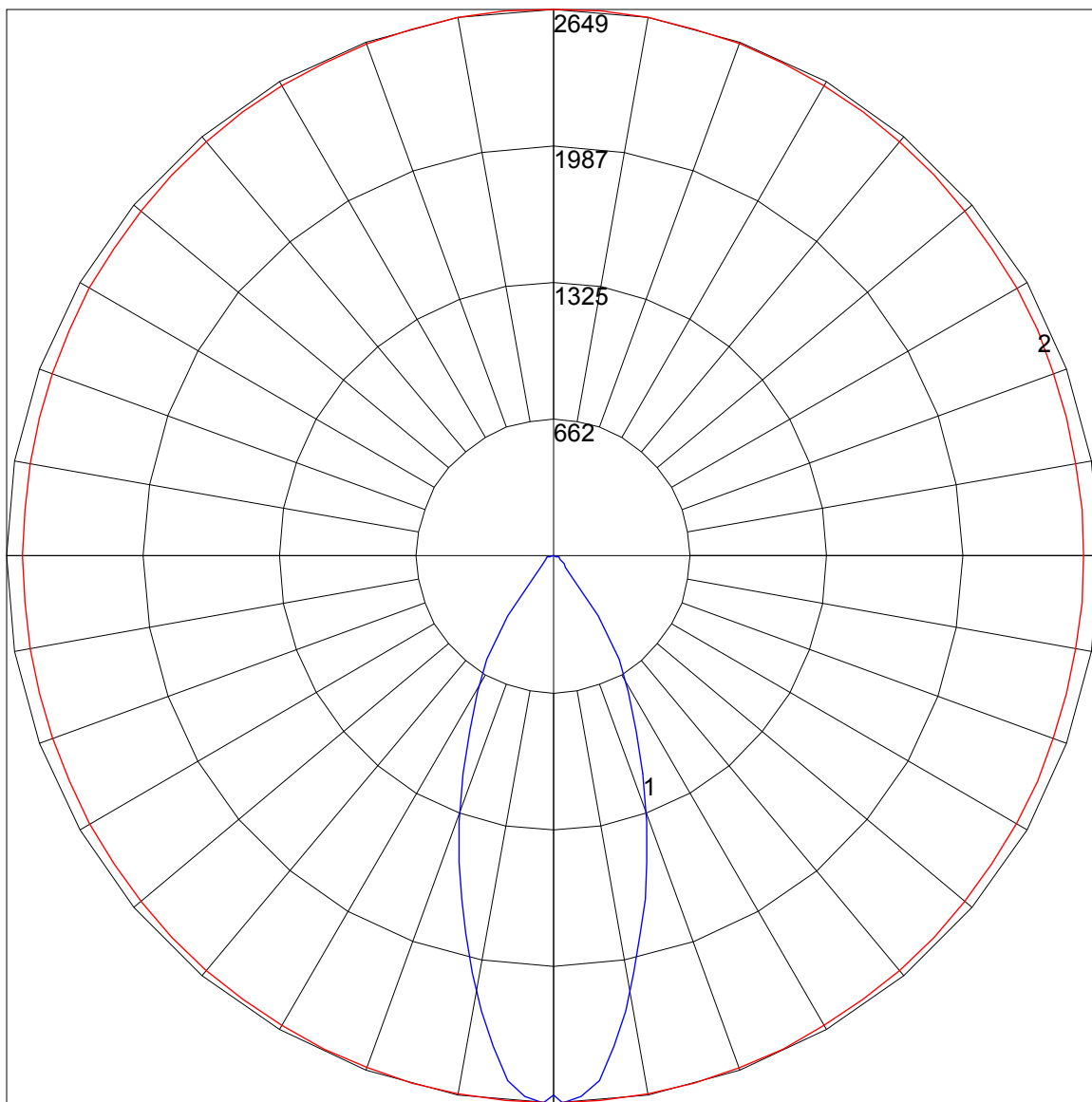
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UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	17.1	18.2	17.5	18.5	18.9	17.3	18.4	17.7	18.8	19.1
	3H	18.9	19.9	19.3	20.2	20.6	19.1	20.1	19.5	20.4	20.8
	4H	19.8	20.7	20.2	21.1	21.5	20.0	21.0	20.4	21.3	21.7
	6H	20.7	21.6	21.1	22.0	22.4	20.9	21.8	21.4	22.2	22.6
	8H	21.2	22.0	21.6	22.4	22.8	21.4	22.2	21.8	22.6	23.0
	12H	21.7	22.5	22.1	22.9	23.3	21.9	22.7	22.3	23.1	23.5
4H	2H	17.6	18.5	18.0	18.9	19.3	17.8	18.7	18.2	19.1	19.4
	3H	19.7	20.5	20.1	20.9	21.3	19.9	20.6	20.3	21.0	21.5
	4H	20.8	21.5	21.2	21.9	22.4	21.0	21.7	21.4	22.1	22.5
	6H	21.9	22.5	22.4	23.0	23.5	22.1	22.7	22.6	23.2	23.6
	8H	22.5	23.1	23.0	23.5	24.0	22.7	23.2	23.1	23.7	24.2
	12H	23.1	23.6	23.6	24.1	24.6	23.3	23.8	23.7	24.2	24.7
8H	4H	21.2	21.8	21.7	22.3	22.7	21.4	22.0	21.9	22.4	22.9
	6H	22.6	23.1	23.1	23.6	24.1	22.8	23.2	23.3	23.7	24.2
	8H	23.3	23.7	23.9	24.3	24.8	23.5	23.9	24.0	24.4	24.9
	12H	24.1	24.5	24.6	25.0	25.6	24.2	24.6	24.7	25.1	25.7
12H	4H	21.3	21.8	21.8	22.3	22.8	21.4	22.0	21.9	22.4	22.9
	6H	22.8	23.2	23.3	23.7	24.2	22.9	23.3	23.4	23.8	24.3
	8H	23.6	24.0	24.1	24.5	25.0	23.7	24.1	24.2	24.6	25.1

Maximum UGR = 25.7

POLAR GRAPH



Maximum Candela = 2649 Located At Horizontal Angle = 90, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)