



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

Report No: L032111001



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Issue Date: 3/4/2021

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

Model Number: LG-9041-30K-WH

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: 3/3/21

Date of Tests: 3/3/21 - 3/4/21

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-9041-30K-WH
Driver Model Number:	N/A

Photometric & Electrical Test Results

Total Lumens:	1286.83
Efficacy:	78.17
Input Voltage (VDC):	24.00
Input Current (Amp):	0.6856
Input Power (W):	16.46
Input Power Factor:	1.0000
Current ATHD (%):	N/A

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
Total Operating Time (Hours):	1:10

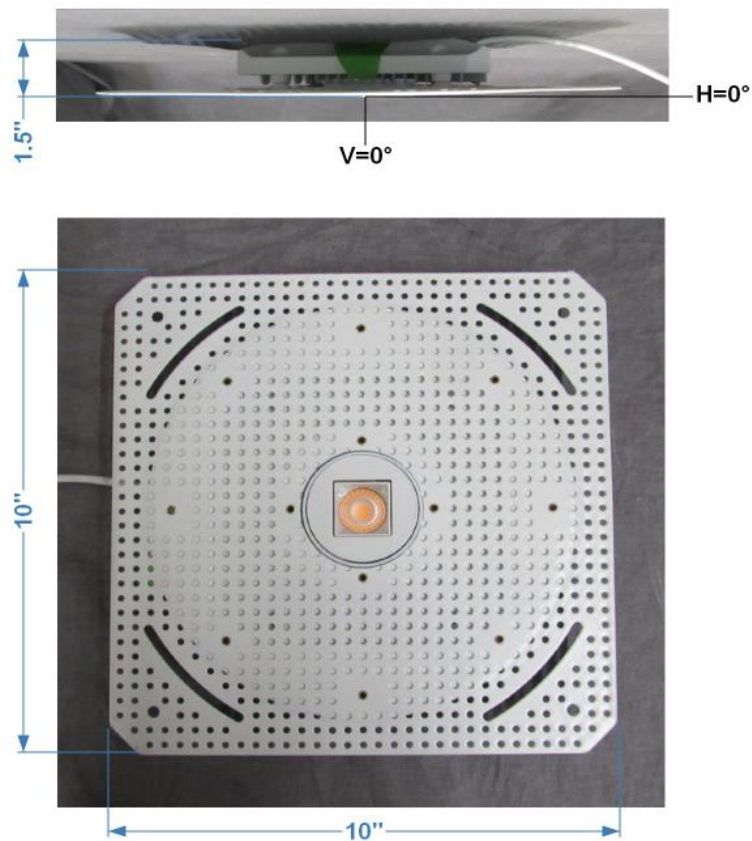


FIG. 1 LUMINAIRE

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 : L032111001.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L032111001
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUE DATE] 3/4/2021
[MANUFAC] Light and Green
[LUMCAT] LG-9041-30K-WH
[LUMINAIRE] Recessed Spotlight LED
[BALLASTCAT] N/A
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[POWER SUPPLY] 24VDC CONSTANT VOLTAGE SOURCE
[INPUT] 24.0VDC, 16.46W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	1287
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	78
Total Luminaire Watts	16.46
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.64
Spacing Criterion (90-270)	0.66
Spacing Criterion (Diagonal)	0.70
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.08 ft
Luminous Width (90-270)	0.08 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	210301	212677	212677
55	196276	187487	202135
65	174939	178915	182891
75	155811	162303	168795
85	154233	173512	173512

**IES INDOOR REPORT
PHOTOMETRIC FILENAME : L032111001.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	2105	2105	2105	2105	2105	2105	2105	2105	2105	2105
1.0	2102	2101	2102	2102	2102	2102	2102	2101	2101	2101
3.0	2081	2081	2082	2082	2082	2082	2082	2082	2083	2083
5.0	2034	2034	2034	2036	2039	2044	2050	2056	2060	2063
7.0	1935	1937	1942	1950	1957	1959	1959	1958	1960	1962
9.0	1824	1797	1804	1808	1809	1815	1825	1837	1847	1855
11.0	1693	1693	1694	1704	1715	1727	1735	1741	1748	1749
13.0	1545	1544	1551	1563	1574	1585	1600	1616	1618	1615
15.0	1399	1402	1407	1418	1431	1443	1461	1466	1467	1470
17.0	1253	1255	1260	1269	1278	1288	1293	1298	1298	1297
19.5	1085	1087	1092	1098	1106	1111	1112	1108	1101	1097
22.5	862	863	869	877	887	897	903	900	894	891
25.5	653	656	663	675	687	698	707	715	726	733
29.0	453	454	461	469	483	494	509	529	547	554
33.0	281	282	284	288	295	304	318	333	345	350
37.5	160	160	160	160	159	160	164	170	175	178
42.5	97	97	97	97	98	97	98	99	100	101
47.5	80	80	79	79	78	78	77	77	78	78
55.0	67	67	67	67	66	66	65	65	65	64
65.0	44	44	44	45	45	45	45	45	45	45
75.0	24	24	25	25	25	25	25	25	25	25
85.0	8	8	8	9	9	9	9	9	9	9
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	2105	2105	2105	2105	2105	2105	2105	2105	2105
1.0	2101	2101	2101	2101	2101	2101	2101	2101	2101
3.0	2085	2086	2087	2088	2089	2090	2091	2091	2091
5.0	2064	2065	2064	2062	2059	2057	2056	2055	2055
7.0	1965	1967	1966	1961	1956	1953	1950	1948	1947
9.0	1855	1855	1858	1861	1860	1859	1857	1860	1855
11.0	1745	1742	1741	1740	1737	1731	1726	1724	1723
13.0	1613	1613	1610	1605	1597	1590	1584	1583	1583
15.0	1464	1460	1459	1449	1441	1439	1436	1435	1433
17.0	1296	1293	1289	1287	1283	1280	1278	1275	1274
19.5	1101	1106	1112	1116	1112	1105	1099	1094	1092
22.5	895	902	909	905	897	886	874	868	865
25.5	726	718	713	707	696	682	671	665	662
29.0	550	536	517	504	492	480	471	466	463
33.0	348	341	328	312	302	295	290	287	286
37.5	178	174	169	164	162	161	160	160	160
42.5	100	100	99	98	98	98	98	98	98
47.5	78	78	78	78	79	80	80	81	81
55.0	65	65	66	67	67	68	68	69	69
65.0	45	45	46	46	46	47	46	46	46
75.0	25	26	26	26	26	27	27	27	26
85.0	9	9	9	9	9	9	9	9	9
90.0	0	0	0	0	0	0	0	0	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L032111001.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	562.26	N.A.	43.70
0-30	890.19	N.A.	69.20
0-40	1049.25	N.A.	81.50
0-60	1176.49	N.A.	91.40
0-80	1265.87	N.A.	98.40
0-90	1286.83	N.A.	100.00
10-90	1133.31	N.A.	88.10
20-40	486.99	N.A.	37.80
20-50	567.74	N.A.	44.10
40-70	180.20	N.A.	14.00
60-80	89.38	N.A.	6.90
70-80	36.42	N.A.	2.80
80-90	20.96	N.A.	1.60
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	1286.83	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	153.52
10-20	408.74
20-30	327.94
30-40	159.05
40-50	80.75
50-60	46.50
60-70	52.96
70-80	36.42
80-90	20.96
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	109	106	104	101	102	100	98	99	97	95	95	94	92	91
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	85	83
3	100	93	87	82	98	91	86	82	88	84	80	86	82	79	84	81	78	76
4	95	86	80	76	93	85	79	75	83	78	74	81	77	73	79	75	72	71
5	90	81	74	70	88	80	74	69	78	73	69	76	72	68	75	71	68	66
6	85	76	70	65	84	75	69	65	74	68	64	72	67	64	71	67	63	62
7	81	72	65	61	80	71	65	61	70	64	60	68	64	60	67	63	60	58
8	78	68	62	57	76	67	61	57	66	61	57	65	60	57	64	60	56	55
9	74	64	58	54	73	64	58	54	63	57	54	62	57	54	61	57	53	52
10	71	61	55	51	70	61	55	51	60	55	51	59	54	51	58	54	51	49

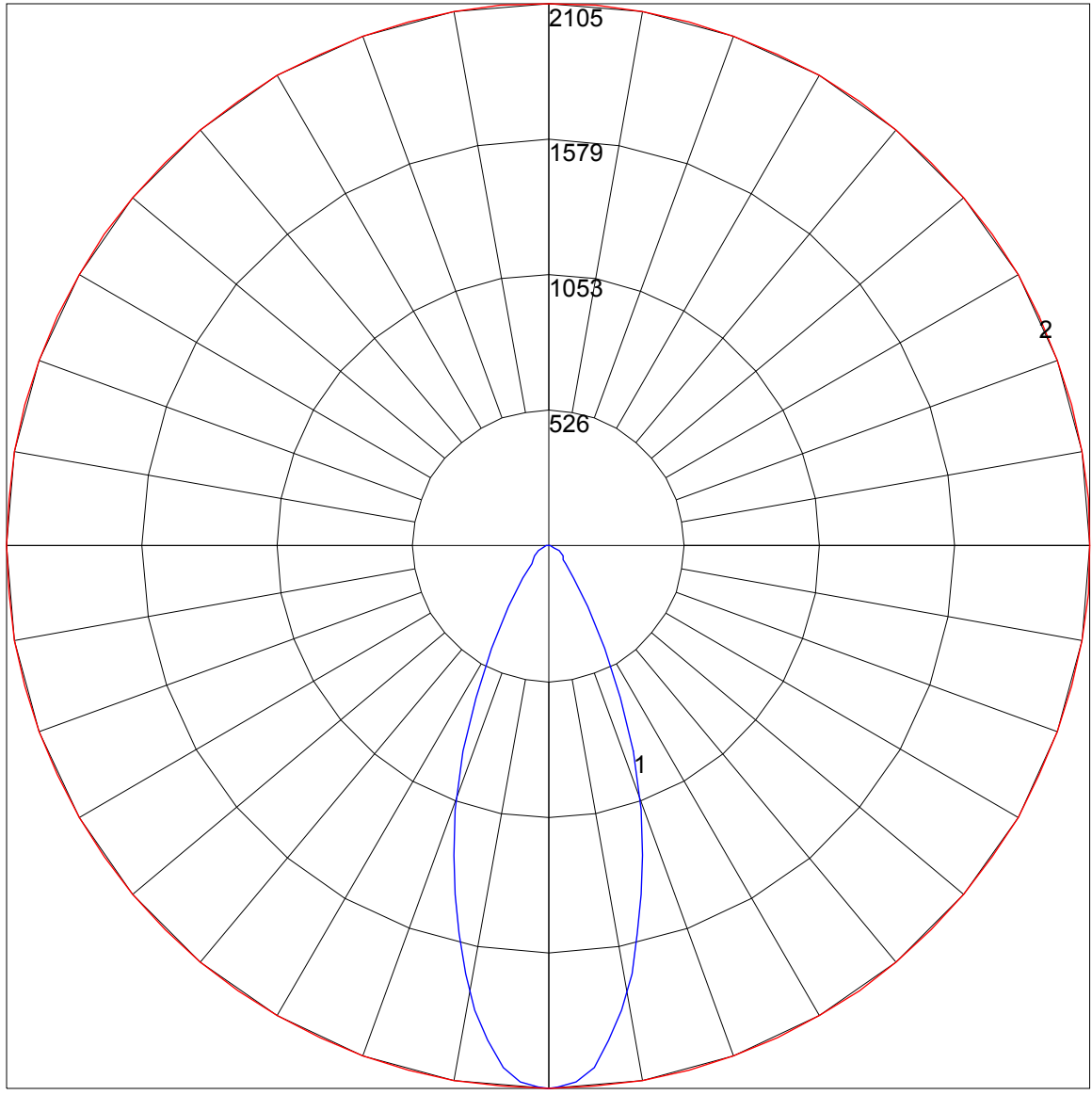
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UGR TABLE - CORRECTED

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	26.7	27.8	27.0	28.1	28.4	26.8	27.9	27.1	28.3	28.6
	3H	28.4	29.4	28.7	29.7	30.1	28.6	29.6	29.0	30.0	30.3
	4H	29.0	30.0	29.4	30.4	30.7	29.3	30.3	29.7	30.7	31.0
	6H	29.5	30.4	30.0	30.8	31.2	29.9	30.8	30.3	31.2	31.6
	8H	29.7	30.6	30.2	31.0	31.4	30.2	31.0	30.6	31.4	31.8
	12H	29.9	30.7	30.3	31.1	31.5	30.3	31.1	30.8	31.5	31.9
4H	2H	27.2	28.2	27.6	28.5	28.9	27.3	28.3	27.7	28.6	29.0
	3H	29.1	29.9	29.5	30.3	30.8	29.3	30.1	29.7	30.5	30.9
	4H	29.9	30.7	30.4	31.1	31.5	30.2	30.9	30.6	31.3	31.8
	6H	30.6	31.2	31.1	31.7	32.2	30.9	31.6	31.4	32.0	32.5
	8H	30.9	31.5	31.3	31.9	32.4	31.2	31.8	31.7	32.3	32.7
	12H	31.0	31.6	31.5	32.1	32.5	31.4	32.0	31.9	32.5	32.9
8H	4H	30.2	30.8	30.7	31.2	31.7	30.4	31.0	30.9	31.5	32.0
	6H	31.1	31.5	31.6	32.0	32.5	31.4	31.8	31.9	32.3	32.8
	8H	31.4	31.9	31.9	32.4	32.9	31.7	32.2	32.3	32.7	33.2
	12H	31.8	32.1	32.3	32.6	33.2	32.1	32.5	32.6	33.0	33.5
12H	4H	30.2	30.8	30.7	31.2	31.7	30.4	31.0	30.9	31.5	31.9
	6H	31.1	31.6	31.7	32.0	32.6	31.4	31.8	31.9	32.3	32.9
	8H	31.6	32.0	32.1	32.4	33.0	31.9	32.2	32.4	32.7	33.3

Maximum UGR = 33.5

POLAR GRAPH



Maximum Candela = 2105 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)