



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

Report No: L062012206



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Issue Date: 6/18/2020

Report Prepared For: Light and Green
5242 Washington Blvd, Commerce, CA 90040

Model Number: RM-D65

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: 6/15/20

Date of Tests: 6/15/20 - 6/18/20

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	1/9/21
BK PRECISION	1747	PS-DC04	1/10/21
Fluke Digital Thermometer	52K/J	MT-TP05	1/10/21
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:	RM-D65
Driver Model Number:	LIFUD LF-GMD065YSV1500U

Photometric & Electrical Test Results

Total Lumens:	4690.38
Efficacy:	78.06
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.5046
Input Power (W):	60.09
Input Power Factor:	0.9924
Current ATHD (%):	9.0%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:40
Total Operating Time (Hours):	2:15

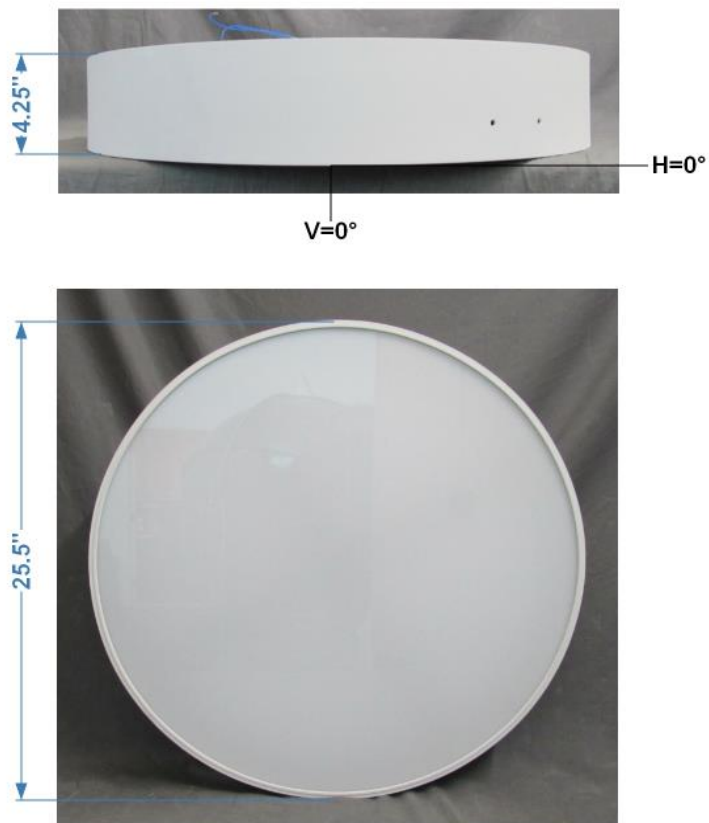


FIG. 1 LUMINAIRE

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 : L062012206.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L062012206
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
 [ISSUEDATE] 6/18/2020
 [MANUFAC] Light and Green
 [LUMCAT] RM-D65
 [LUMINAIRE] Rondo Round surface mount, 60W SMD with lens 65cm
 [BALLASTCAT] LIFUD LF-GMD065YSV1500U
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 120.0VAC, 60.09W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4690
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	78
Total Luminaire Watts	60.09
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Circular
Luminous Length (0-180)	2.06 ft (Diameter)
Luminous Width (90-270)	2.06 ft (Diameter)
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4974	4974	4974
55	4703	4703	4703
65	4413	4413	4413
75	3628	3628	3628
85	1962	1962	1962

CANDELA TABULATION

	<u>0</u>
0	1736
5	1725
10	1695
15	1648
20	1584
25	1508
30	1418
35	1317
40	1207
45	1090
50	966
55	836
60	717
65	578
70	434
75	291
80	157
85	53
90	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L062012206.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	628.39	N.A.	13.40
0-30	1322.97	N.A.	28.20
0-40	2146.83	N.A.	45.80
0-60	3738.37	N.A.	79.70
0-80	4618.8	N.A.	98.50
0-90	4690.38	N.A.	100.00
10-90	4526.66	N.A.	96.50
20-40	1518.44	N.A.	32.40
20-50	2359.19	N.A.	50.30
40-70	2162.6	N.A.	46.10
60-80	880.44	N.A.	18.80
70-80	309.38	N.A.	6.60
80-90	71.57	N.A.	1.50
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	4690.38	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	163.72
10-20	464.67
20-30	694.58
30-40	823.86
40-50	840.75
50-60	750.79
60-70	571.06
70-80	309.38
80-90	71.57
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L062012206.IES

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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	63	70	65	61	59
4	83	71	62	55	81	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	63	54	48	74	62	54	48	60	53	47	58	52	46	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36	47	41	36	34
8	61	47	39	33	59	47	38	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	26	25

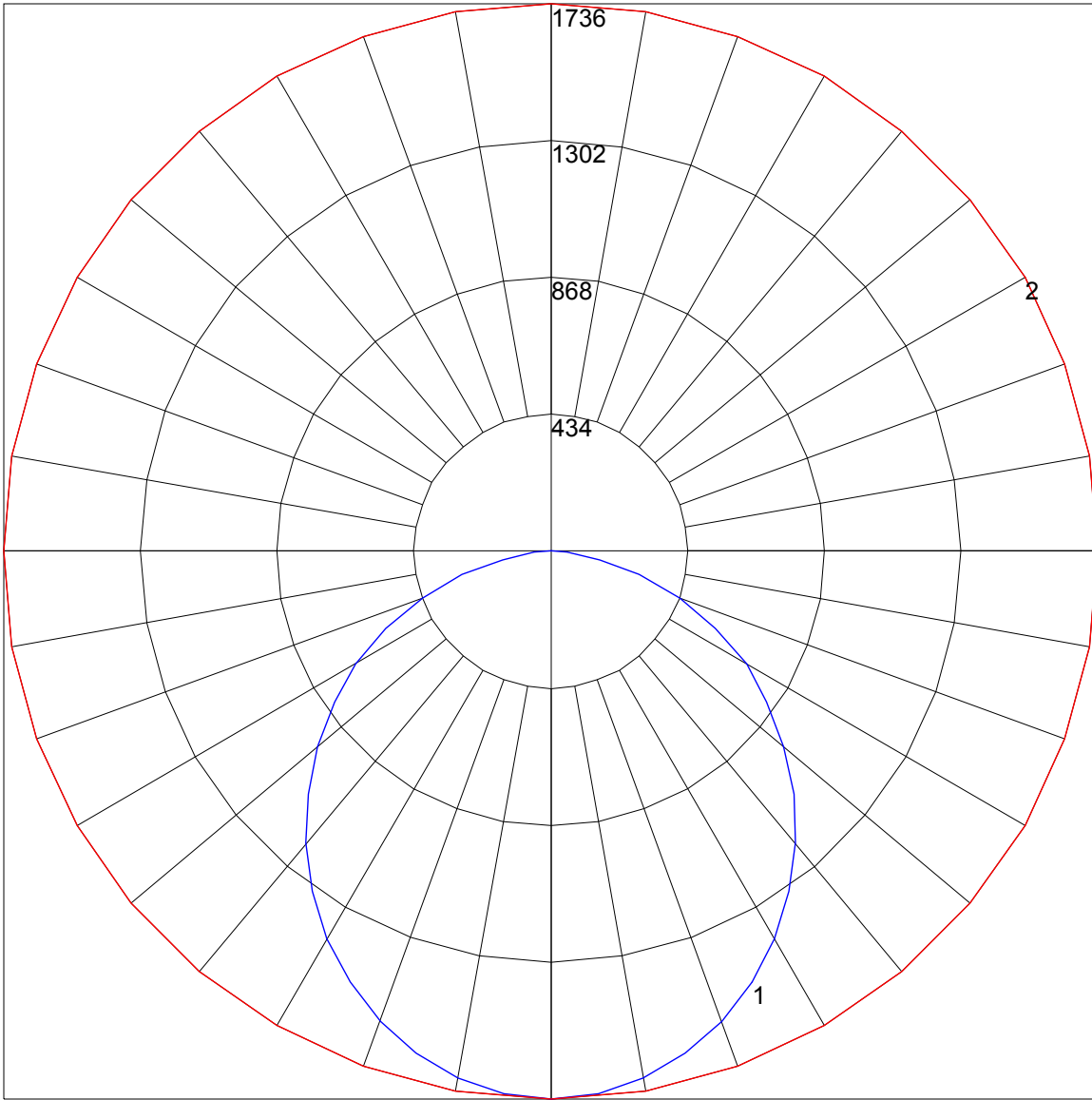
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UGR TABLE - CORRECTED

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	16.7	18.4	17.1	18.7	19.0	16.7	18.4	17.1	18.7	19.0
	3H	18.5	20.0	18.9	20.3	20.7	18.5	20.0	18.9	20.3	20.7
	4H	19.1	20.5	19.5	20.9	21.2	19.1	20.5	19.5	20.9	21.2
	6H	19.5	20.8	19.9	21.2	21.6	19.5	20.8	19.9	21.2	21.6
	8H	19.6	20.8	20.0	21.2	21.6	19.6	20.8	20.0	21.2	21.6
	12H	19.7	20.8	20.1	21.2	21.7	19.7	20.8	20.1	21.2	21.7
4H	2H	17.4	18.8	17.8	19.1	19.5	17.4	18.8	17.8	19.1	19.5
	3H	19.3	20.5	19.8	20.9	21.3	19.3	20.5	19.8	20.9	21.3
	4H	20.1	21.1	20.5	21.5	22.0	20.1	21.1	20.5	21.5	22.0
	6H	20.6	21.5	21.0	21.9	22.4	20.6	21.5	21.0	21.9	22.4
	8H	20.7	21.6	21.2	22.0	22.5	20.7	21.6	21.2	22.0	22.5
	12H	20.8	21.6	21.3	22.0	22.5	20.8	21.6	21.3	22.0	22.5
8H	4H	20.4	21.2	20.8	21.7	22.1	20.4	21.2	20.8	21.7	22.1
	6H	21.0	21.7	21.5	22.2	22.6	21.0	21.7	21.5	22.2	22.6
	8H	21.1	21.8	21.6	22.3	22.8	21.1	21.8	21.6	22.3	22.8
	12H	21.3	21.8	21.8	22.3	22.9	21.3	21.8	21.8	22.3	22.9
12H	4H	20.4	21.1	20.9	21.6	22.1	20.4	21.1	20.9	21.6	22.1
	6H	21.0	21.6	21.5	22.1	22.6	21.0	21.6	21.5	22.1	22.6
	8H	21.2	21.8	21.7	22.3	22.8	21.2	21.8	21.7	22.3	22.8

Maximum UGR = 22.9

POLAR GRAPH



Maximum Candela = 1736 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.)