



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

Report No: L062012205



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Issue Date: 6/18/2020

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

Model Number: RM-D45

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-D45
Driver Model Number:	LIFUD LF-GMD045YSV1050U

Photometric & Electrical Test Results

Total Lumens:	2881.10
Efficacy:	67.63
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	0.3581
Input Power (W):	42.60
Input Power Factor:	0.9913
Current ATHD (%):	10.2%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	0:55

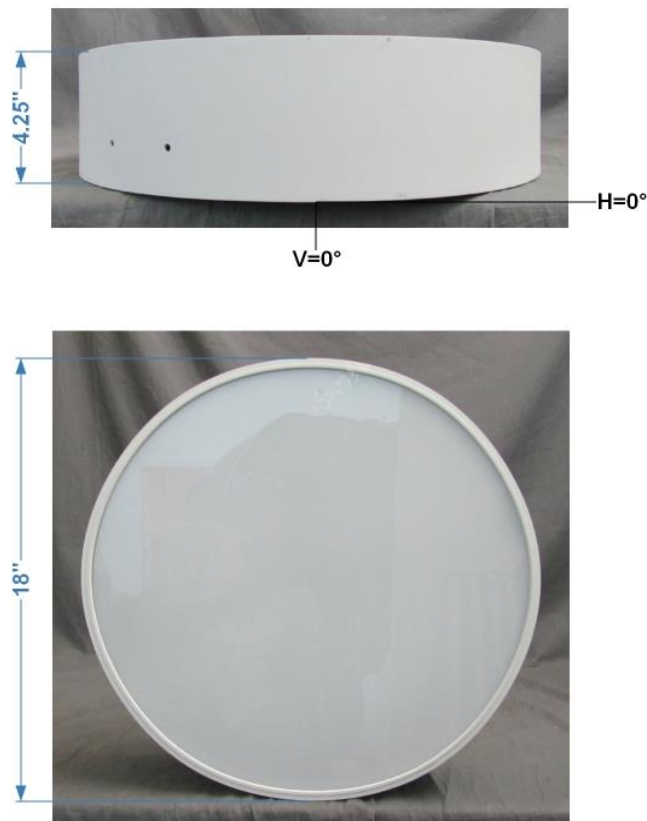


FIG. 1 LUMINAIRE

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 : L062012205.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L062012205
 [TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
 [ISSUEDATE] 6/18/2020
 [MANUFAC] Light and Green
 [LUMCAT] RM-D45
 [LUMINAIRE] Rondo Round surface mount, 40W SMD with lens 45cm
 [BALLASTCAT] LIFUD LF-GMD045YSV1050U
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 120.0VAC, 42.60W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2881
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	68
Total Luminaire Watts	42.6
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)	1.06 ft (Diameter)
Luminous Width (90-270)	1.06 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	11719	11719	11719
55	10942	10942	10942
65	9948	9948	9948
75	7816	7816	7816
85	3775	3775	3775

CANDELA TABULATION

	<u>0</u>
0	1087
5	1078
10	1057
15	1028
20	988
25	939
30	883
35	820
40	753
45	680
50	601
55	515
60	432
65	345
70	258
75	166
80	85
85	27
90	0

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L062012205.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	392.09	N.A.	13.60
0-30	824.77	N.A.	28.60
0-40	1337.99	N.A.	46.40
0-60	2323.72	N.A.	80.70
0-80	2843.28	N.A.	98.70
0-90	2881.1	N.A.	100.00
10-90	2778.85	N.A.	96.50
20-40	945.90	N.A.	32.80
20-50	1470.08	N.A.	51.00
40-70	1327.3	N.A.	46.10
60-80	519.56	N.A.	18.00
70-80	177.99	N.A.	6.20
80-90	37.83	N.A.	1.30
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	2881.1	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	102.26
10-20	289.83
20-30	432.68
30-40	513.22
40-50	524.18
50-60	461.55
60-70	341.57
70-80	177.99
80-90	37.83
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

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	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85
2	99	91	85	79	97	89	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	46	44
6	71	57	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

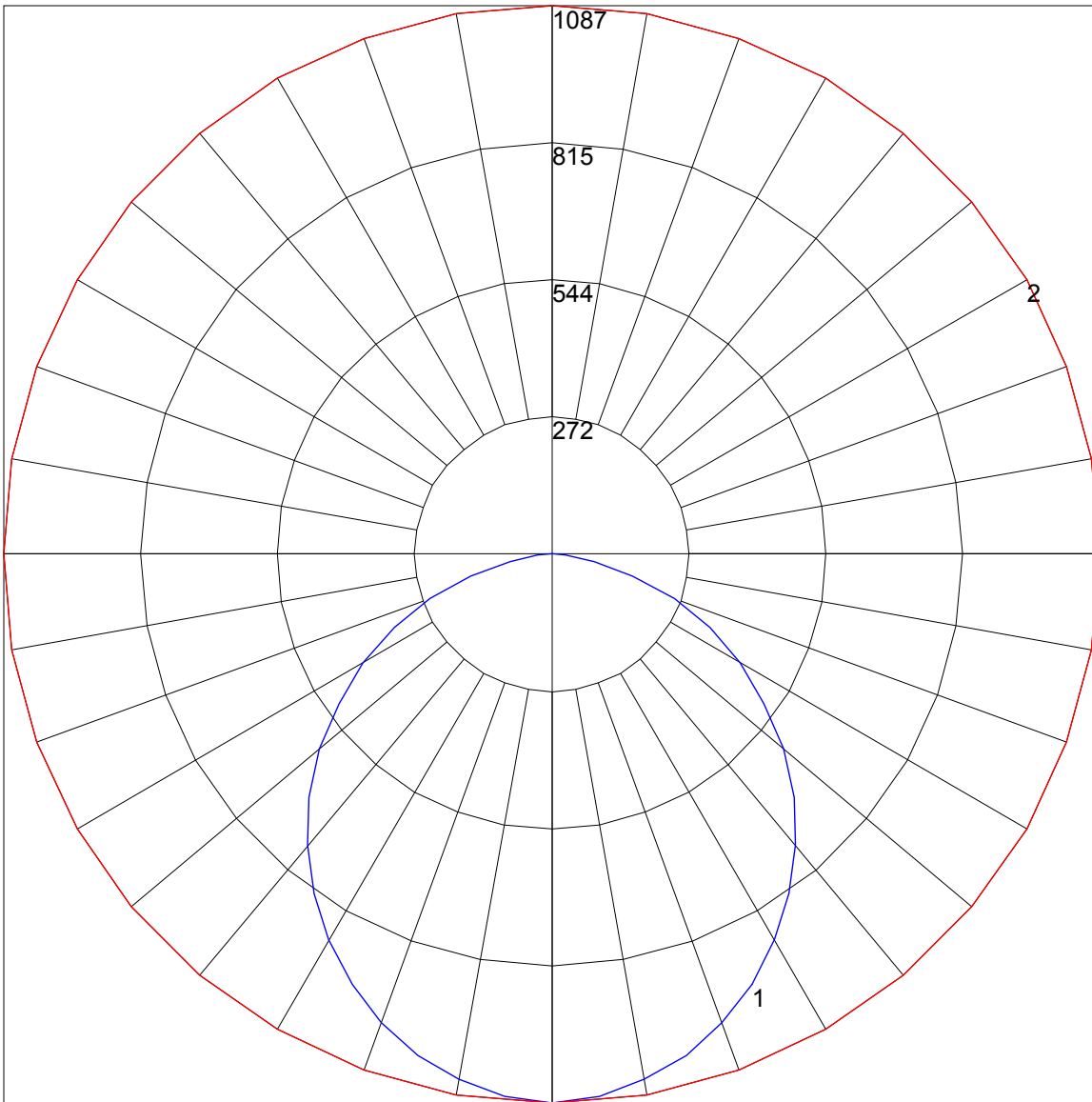
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UGR TABLE - CORRECTED

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	19.6	21.2	20.0	21.5	21.9	19.6	21.2	20.0	21.5	21.9
	3H	21.3	22.8	21.7	23.1	23.5	21.3	22.8	21.7	23.1	23.5
	4H	21.9	23.2	22.3	23.6	24.0	21.9	23.2	22.3	23.6	24.0
	6H	22.2	23.5	22.6	23.8	24.2	22.2	23.5	22.6	23.8	24.2
	8H	22.3	23.5	22.7	23.9	24.3	22.3	23.5	22.7	23.9	24.3
	12H	22.3	23.5	22.7	23.9	24.3	22.3	23.5	22.7	23.9	24.3
4H	2H	20.2	21.6	20.6	21.9	22.3	20.2	21.6	20.6	21.9	22.3
	3H	22.1	23.3	22.5	23.7	24.1	22.1	23.3	22.5	23.7	24.1
	4H	22.8	23.8	23.2	24.2	24.7	22.8	23.8	23.2	24.2	24.7
	6H	23.2	24.1	23.7	24.6	25.0	23.2	24.1	23.7	24.6	25.0
	8H	23.3	24.2	23.8	24.6	25.1	23.3	24.2	23.8	24.6	25.1
	12H	23.4	24.1	23.9	24.6	25.1	23.4	24.1	23.9	24.6	25.1
8H	4H	23.0	23.9	23.5	24.3	24.8	23.0	23.9	23.5	24.3	24.8
	6H	23.5	24.3	24.0	24.7	25.2	23.5	24.3	24.0	24.7	25.2
	8H	23.7	24.3	24.2	24.8	25.3	23.7	24.3	24.2	24.8	25.3
	12H	23.8	24.4	24.3	24.8	25.4	23.8	24.4	24.3	24.8	25.4
12H	4H	23.1	23.8	23.5	24.3	24.8	23.1	23.8	23.5	24.3	24.8
	6H	23.6	24.2	24.1	24.7	25.2	23.6	24.2	24.1	24.7	25.2
	8H	23.8	24.3	24.3	24.8	25.4	23.8	24.3	24.3	24.8	25.4

Maximum UGR = 25.4

POLAR GRAPH



Maximum Candela = 1087 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.)