



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

Report No: L062012203



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Issue Date: 6/18/2020

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

Model Number: RQSM-D60

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:	RQSM-D60
Driver Model Number:	LIFUD LF-GMD065YSV1500U

Photometric & Electrical Test Results

Total Lumens:	4782.95
Efficacy:	81.41
Input Voltage (VAC/60Hz):	120.03
Input Current (Amp):	0.4929
Input Power (W):	58.75
Input Power Factor:	0.9931
Current ATHD (%):	8.0%

Test Condition

Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	1:40
Total Operating Time (Hours):	3:10

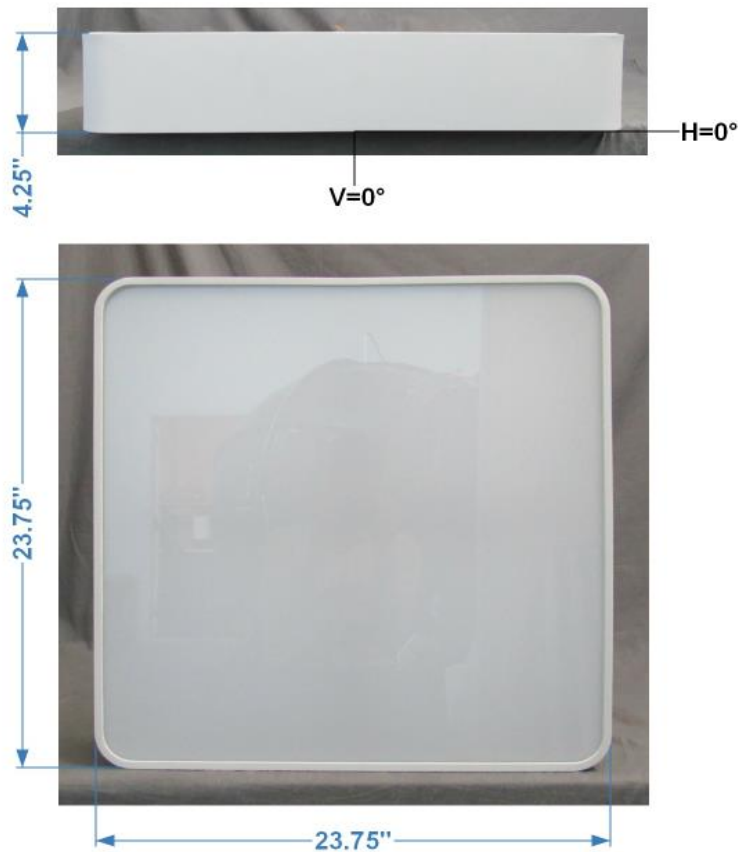


FIG. 1 LUMINAIRE

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 : L062012203.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L062012203
[TESTLAB] LIGHT LABORATORY, INC. (www.lightlaboratory.com)
[ISSUEDATE] 6/18/2020
[MANUFAC] Light and Green
[LUMCAT] RQSM-D60
[LUMINAIRE] Rondo Soft Edge Square surface mount, 60W SMD with lens 60cm
[BALLASTCAT] LIFUD LF-GMD065YSV1500U
[OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
[MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
[INPUT] 120.03VAC, 58.75W
[TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4783
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	81
Total Luminaire Watts	58.75
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	Rectangular
Luminous Length (0-180)	1.90 ft
Luminous Width (90-270)	1.90 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4685	4680	4680
55	4425	4415	4420
65	4152	4138	4138
75	3407	3395	3395
85	1811	1811	1811

IES INDOOR REPORT
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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	1778	1778	1778	1778	1778	1778	1778	1778	1778	1778
5	1768	1768	1768	1767	1767	1766	1766	1766	1766	1766
10	1737	1737	1737	1736	1736	1735	1735	1735	1735	1735
15	1688	1688	1688	1688	1687	1687	1687	1687	1687	1686
20	1623	1622	1622	1622	1622	1621	1621	1621	1621	1620
25	1544	1543	1543	1543	1543	1543	1542	1542	1542	1542
30	1450	1450	1450	1450	1450	1449	1449	1449	1449	1448
35	1346	1346	1346	1346	1346	1345	1345	1345	1345	1344
40	1233	1233	1232	1232	1232	1232	1232	1231	1231	1231
45	1112	1112	1112	1112	1112	1112	1111	1111	1111	1111
50	985	985	985	985	984	984	984	983	983	983
55	852	852	852	852	851	851	851	851	850	850
60	731	730	730	730	730	730	730	730	729	729
65	589	588	588	588	588	588	587	587	587	587
70	442	442	442	442	442	441	441	441	441	441
75	296	296	296	296	296	295	295	295	295	295
80	160	159	159	159	159	159	159	159	158	158
85	53	53	53	53	53	53	53	53	53	53
90	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	1778	1778	1778	1778	1778	1778	1778	1778	1778
5	1766	1766	1766	1766	1767	1767	1768	1768	1768
10	1735	1735	1735	1735	1736	1736	1736	1737	1737
15	1687	1687	1687	1687	1687	1687	1688	1688	1688
20	1621	1621	1621	1621	1621	1621	1622	1622	1622
25	1542	1542	1542	1542	1542	1542	1542	1543	1543
30	1448	1448	1448	1449	1449	1449	1449	1449	1449
35	1344	1344	1344	1345	1345	1345	1345	1345	1345
40	1231	1231	1231	1231	1231	1231	1231	1232	1231
45	1111	1110	1111	1111	1111	1111	1111	1111	1111
50	983	983	983	983	983	984	984	984	984
55	850	850	850	850	850	851	851	851	851
60	729	729	729	729	729	730	729	729	730
65	587	587	587	587	587	587	587	587	587
70	441	441	441	441	441	441	441	441	441
75	294	294	295	295	295	295	295	295	295
80	158	158	158	159	159	159	159	159	159
85	53	53	53	53	53	53	53	53	53
90	0	0	0	0	0	0	0	0	0

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	643.40	N.A.	13.50
0-30	1353.79	N.A.	28.30
0-40	2195.11	N.A.	45.90
0-60	3816.4	N.A.	79.80
0-80	4710.9	N.A.	98.50
0-90	4782.95	N.A.	100.00
10-90	4615.28	N.A.	96.50
20-40	1551.71	N.A.	32.40
20-50	2408.81	N.A.	50.40
40-70	2201.86	N.A.	46.00
60-80	894.50	N.A.	18.70
70-80	313.93	N.A.	6.60
80-90	72.05	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	4782.95	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	167.67
10-20	475.73
20-30	710.39
30-40	841.32
40-50	857.10
50-60	764.18
60-70	580.58
70-80	313.93
80-90	72.05
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
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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	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	56	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	47	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	41	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	35	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	27	25

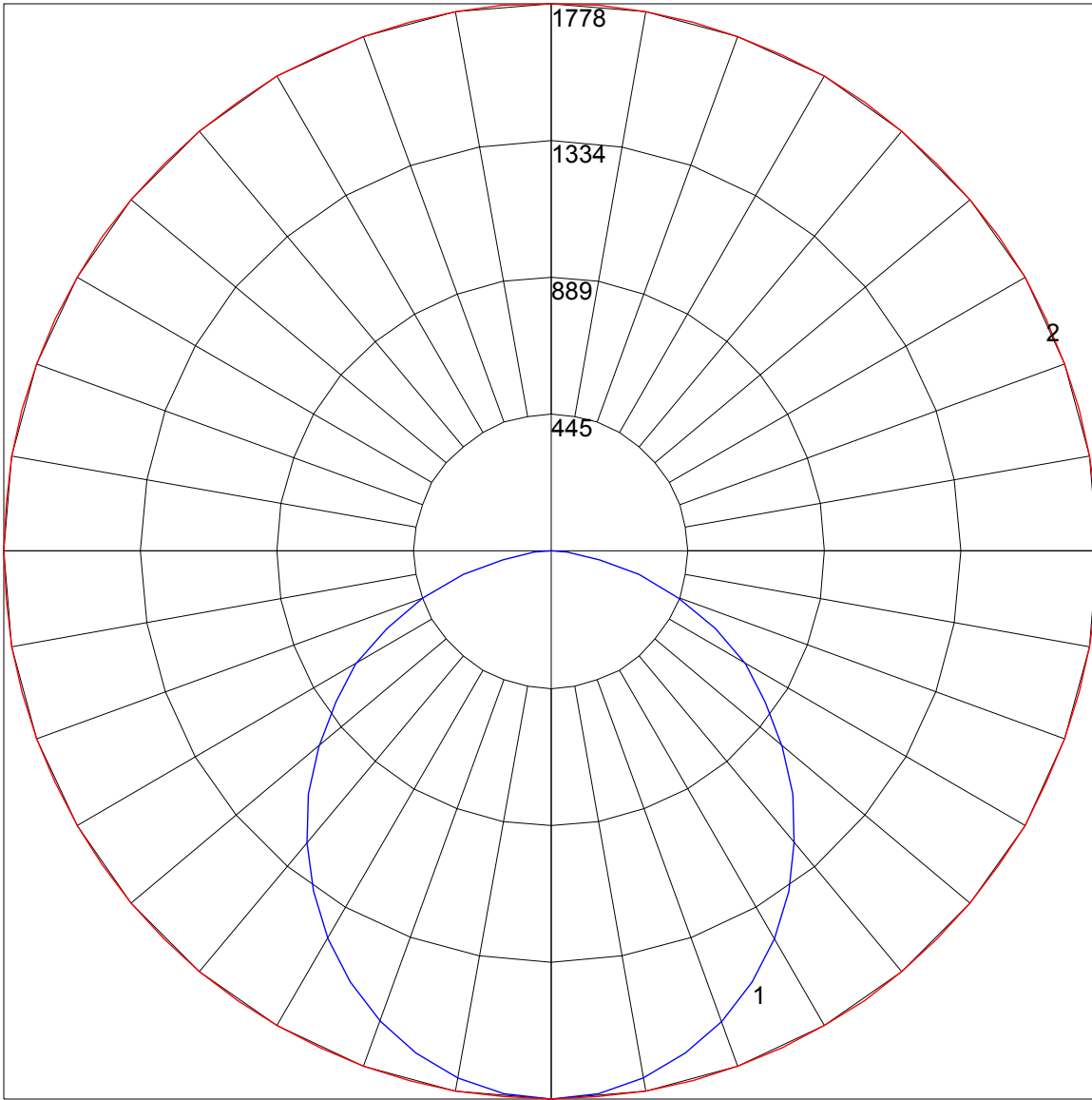
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UGR TABLE - CORRECTED

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	17.3	18.9	17.6	19.2	19.5	17.3	18.9	17.6	19.2	19.5
	3H	19.1	20.5	19.4	20.9	21.2	19.0	20.5	19.4	20.8	21.2
	4H	19.7	21.1	20.1	21.4	21.8	19.7	21.0	20.1	21.4	21.8
	6H	20.1	21.3	20.5	21.7	22.1	20.1	21.3	20.5	21.7	22.1
	8H	20.2	21.4	20.6	21.8	22.2	20.2	21.4	20.6	21.8	22.2
	12H	20.2	21.4	20.6	21.8	22.2	20.2	21.4	20.6	21.8	22.2
4H	2H	17.9	19.3	18.3	19.7	20.0	17.9	19.3	18.3	19.7	20.0
	3H	19.9	21.1	20.3	21.5	21.9	19.9	21.1	20.3	21.5	21.9
	4H	20.6	21.7	21.1	22.1	22.5	20.6	21.7	21.1	22.1	22.5
	6H	21.1	22.0	21.6	22.5	22.9	21.1	22.0	21.6	22.5	22.9
	8H	21.3	22.1	21.7	22.6	23.0	21.3	22.1	21.7	22.5	23.0
	12H	21.3	22.1	21.8	22.6	23.0	21.3	22.1	21.8	22.6	23.0
8H	4H	20.9	21.8	21.4	22.2	22.7	20.9	21.7	21.4	22.2	22.7
	6H	21.5	22.2	22.0	22.7	23.2	21.5	22.2	22.0	22.7	23.2
	8H	21.7	22.3	22.2	22.8	23.3	21.7	22.3	22.2	22.8	23.3
	12H	21.8	22.4	22.3	22.9	23.4	21.8	22.4	22.3	22.8	23.4
12H	4H	20.9	21.7	21.4	22.2	22.6	20.9	21.7	21.4	22.2	22.6
	6H	21.5	22.2	22.0	22.6	23.2	21.5	22.2	22.0	22.6	23.2
	8H	21.8	22.3	22.3	22.8	23.4	21.8	22.3	22.3	22.8	23.4

Maximum UGR = 23.4

POLAR GRAPH



Maximum Candela = 1778 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.)