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Report No: L031601805R02

Date: 5/6/2016



NVLAP LAB CODE 200927-0

Report No: L031601805R02

Prepared For: Suxess Inc., dba LUX Dynamics
 1350 Capital Blvd, Reno, NV 89502

Model Number: LED-GYM-3-UNV - 850 HO LADC

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. Catalog number is LED-GYM-3-UNV - 850 HO LADC. Received in working and undamaged condition. No modifications were necessary.

Testing Condition: Fixture is tested with no special conditions.

Sample Arrival Date: 2/16/16

Date of Tests: 3/15/16 - 3/17/16

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-S1	11/18/16
Xitron Power Analyzer	2503AH	MT-EL01	11/30/16
ITECH DC Power Supply	IT6122	PSDC-03-S1	11/17/16
Fluke Digital Thermometer	52k/J	MT-TP02-GC	11/24/16
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

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

Test Summary

Manufacturer:	Suxess Inc., dba LUX Dynamics
Model Number:	LED-GYM-3-UNV - 850 HO LADC
Driver Model Number:	OSRAM OPTOTRONIC OTi 85/120-277/2A6 DIMLT2 L (3 DRIVERS)
Total Lumens:	27617.08
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	2.19
Input Power (W):	262.63
Input Power Factor:	1.00
Current ATHD @ 120V(%):	3%
Current ATHD @ 277V(%):	N/A
Efficacy:	105
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:30
Total Operating Time (Hours):	2:20
Off State Power(W):	0.00

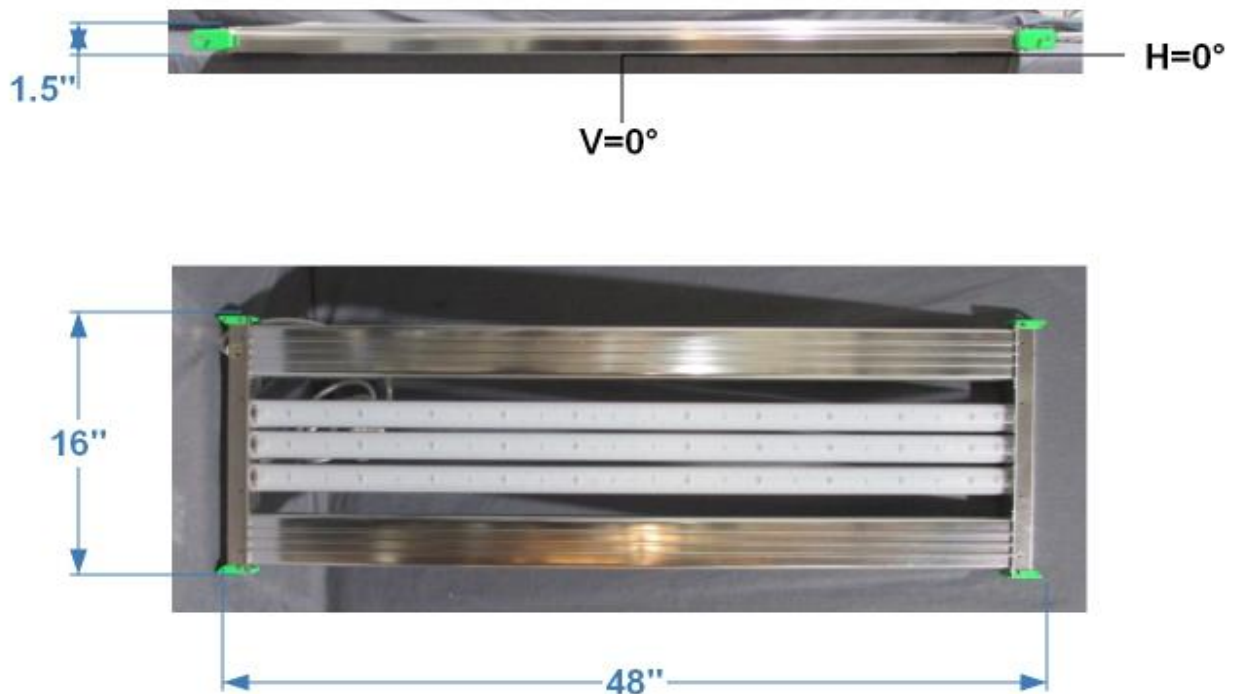


FIG.1 LUMINAIRE

*All Results in accordance to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

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 Released by:



Jeff Ahn
Engineering Manager

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 : L031601805R02.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] L031601805R02
 [TESTLAB] LIGHT LABORATORY, INC.
 [ISSUE DATE] 5/6/2016
 [MANUFAC] Suxess Inc., dba LUX Dynamics
 [LUMCAT] LED-GYM-3-UNV - 850 HO LADC
 [LUMINAIRE] 48"L. X 16"W. X 1.5"H. LED HIGH BAY
 [BALLASTCAT] OSRAM OPTOTRONIC OTi 85/120-277/2A6 DIMLT2 L (3 DRIVERS)
 [LAMPPOSITION] 0,0
 [LAMPCAT] N/A
 [OTHER] INDICATING THE CANDELA VALUES ARE ABSOLUTE AND
 [MORE] SHOULD NOT BE FACTORED FOR DIFFERENT LAMP RATINGS.
 [INPUT] 120VAC, 262.63W
 [TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	27617
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	262.63
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.34
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.83 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.06 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	43216	48457	48217
55	36428	44793	43261
65	27923	41073	43392
75	17465	36971	36340
85	10601	20530	17496

**IES INDOOR REPORT
PHOTOMETRIC FILENAME : L031601805R02.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	9338	9338	9338	9338	9338	9338	9338	9338	9338	9338
5	9284	9278	9281	9294	9328	9339	9383	9402	9417	9435
10	9121	9140	9165	9213	9260	9293	9312	9301	9289	9259
15	8910	8925	8967	9024	9054	9034	8991	8986	8983	9043
20	8608	8622	8656	8691	8640	8630	8696	8778	8784	8732
25	8195	8219	8237	8195	8185	8328	8394	8299	8206	8214
30	7714	7691	7674	7650	7830	7867	7745	7749	7901	8058
35	7100	7073	7023	7143	7284	7191	7258	7419	7539	7568
40	6364	6347	6390	6541	6585	6663	6773	6935	7022	7124
45	5527	5550	5682	5769	5948	6024	6236	6353	6451	6687
50	4667	4717	4858	5028	5209	5357	5521	5739	5940	6041
55	3804	3817	4037	4186	4394	4574	4848	5011	5187	5202
60	3030	3071	3240	3425	3624	3928	4103	4298	4426	4441
65	2172	2204	2349	2539	2807	3041	3262	3504	3608	3727
70	1411	1446	1551	1747	2001	2271	2580	2732	2908	2990
75	852	880	973	1144	1379	1653	1866	2063	2184	2314
80	457	482	568	706	909	1138	1273	1378	1361	1374
85	194	219	277	377	516	568	556	563	578	668
90	83	84	85	86	86	87	88	89	92	94
95	0	0	0	0	0	0	0	86	86	86
100	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0

Vert. 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	9338	9338	9338	9338	9338	9338	9338	9338	9338
5	9441	9445	9449	9460	9456	9457	9452	9452	9474
10	9256	9246	9241	9231	9230	9226	9223	9231	9242
15	9066	9080	9083	9078	9057	9039	9022	9014	9012
20	8667	8605	8581	8624	8667	8694	8738	8755	8762
25	8318	8457	8533	8543	8542	8540	8544	8543	8546
30	8090	8091	8120	8180	8243	8281	8312	8333	8342
35	7652	7751	7832	7921	7977	8016	8036	8055	8062
40	7240	7399	7504	7507	7487	7467	7469	7475	7489
45	6813	6808	6799	6804	6823	6818	6806	6798	6800
50	6055	6042	6016	6012	6019	6005	5995	5990	5991
55	5185	5222	5229	5212	5193	5190	5186	5176	5176
60	4508	4531	4520	4533	4543	4565	4586	4602	4619

**IES INDOOR REPORT
PHOTOMETRIC FILENAME : L031601805R02.IES**

CANDELA TABULATION - (Cont.)

65	3776	3794	3833	3878	3948	4015	4067	4092	4106
70	3040	3119	3204	3311	3400	3464	3496	3502	3502
75	2398	2425	2407	2409	2420	2429	2434	2427	2425
80	1483	1628	1721	1773	1796	1796	1788	1775	1769
85	813	919	951	908	823	742	685	654	644
90	94	93	92	91	91	91	91	91	90
95	86	86	87	87	87	87	87	87	87
100	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0
115	0	0	0	0	0	0	0	0	0
120	0	0	0	0	0	0	0	0	0
125	0	0	0	0	0	0	0	0	0
130	0	0	0	0	0	0	0	0	0
135	0	0	0	0	0	0	0	0	0
140	0	0	0	0	0	0	0	0	0
145	0	0	0	0	0	0	0	0	0
150	0	0	0	0	0	0	0	0	0
155	0	0	0	0	0	0	0	0	0
160	0	0	0	0	0	0	0	0	0
165	0	0	0	0	0	0	0	0	0
170	0	0	0	0	0	0	0	0	0
175	0	0	0	0	0	0	0	0	0
180	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	3432.85	N.A.	12.40
0-30	7291.74	N.A.	26.40
0-40	12023.1	N.A.	43.50
0-60	21319.99	N.A.	77.20
0-80	26834.11	N.A.	97.20
0-90	27562.4	N.A.	99.80
10-90	26671.76	N.A.	96.60
20-40	8590.24	N.A.	31.10
20-50	13519.82	N.A.	49.00
40-70	12697.06	N.A.	46.00
60-80	5514.13	N.A.	20.00
70-80	2113.96	N.A.	7.70
80-90	728.28	N.A.	2.60
90-110	54.68	N.A.	0.20
90-120	54.68	N.A.	0.20
90-130	54.68	N.A.	0.20
90-150	54.68	N.A.	0.20
90-180	54.68	N.A.	0.20
110-180	0.00	N.A.	0.00
0-180	27617.08	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	890.64
10-20	2542.22
20-30	3858.89
30-40	4731.35
40-50	4929.58
50-60	4367.32
60-70	3400.16
70-80	2113.96
80-90	728.28
90-100	54.68
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

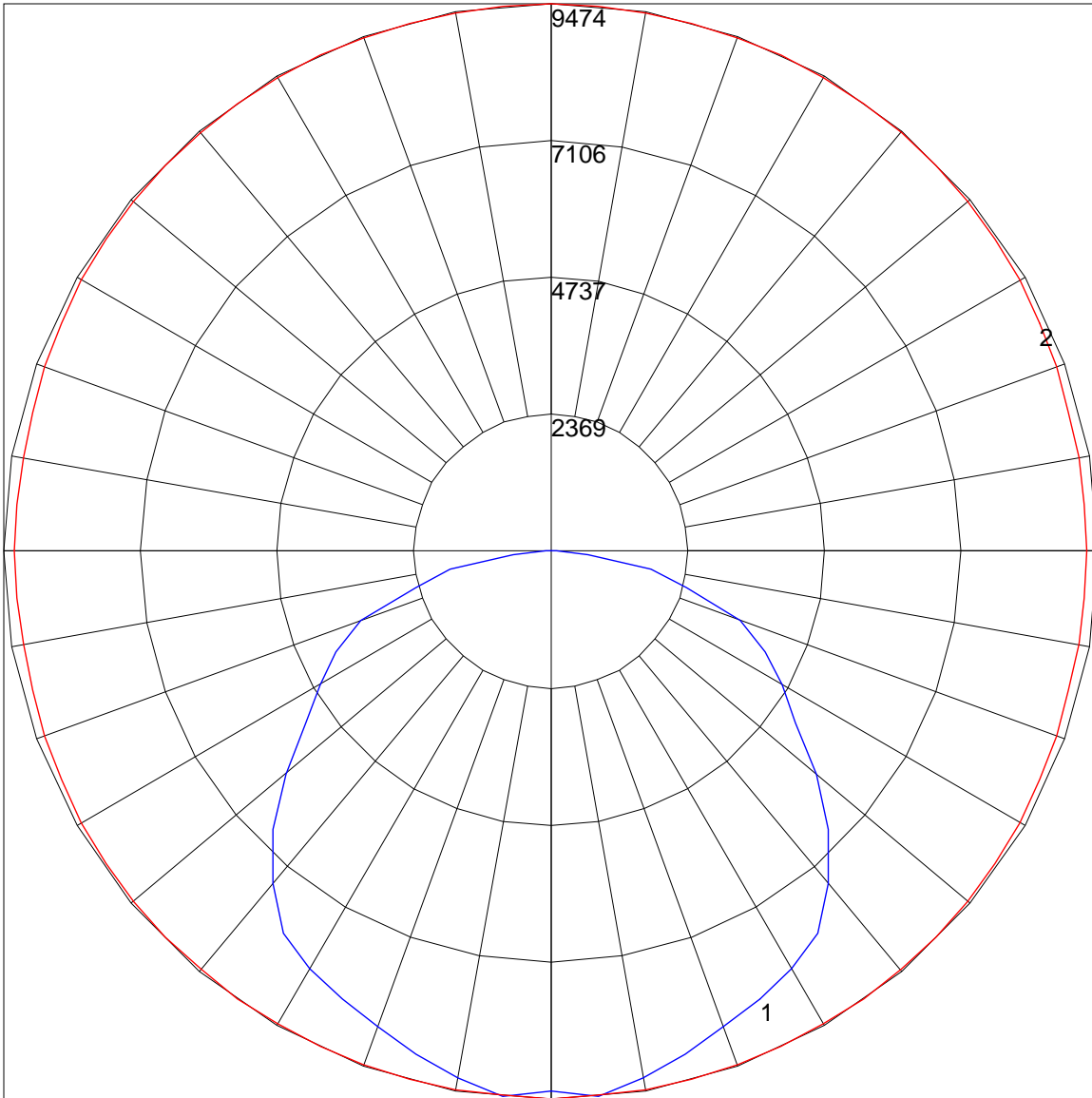
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC RW	80				70				50			30			10			0
	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	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	79	70	64	87	77	69	63	74	67	62	71	65	61	69	64	60	57
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	23

POLAR GRAPH



Maximum Candela = 9474 Located At Horizontal Angle = 90, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)