LIGHT LABORATORY INC.
8165 E Kaiser Blvd. Anaheim, CA 92808
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Report No: L031601811R02
Date: 5/6/2016

NVLAP LAB CODE 200927-0

Report No: L031601811R02

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

Model Number: LED-GYM-16-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-16-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: 3/24/16 - 3/25/16

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.

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Test Summary	
Manufacturer:	Suxess Inc., dba LUX Dynamics
Model Number:	LED-GYM-16-UNV - 850 HO LADC
Driver Model Number:	OSRAM OPTOTRONIC OTi 85/120-277/2A6 DIMLT2 L (16 DRIVERS)
Total Lumens:	150417.80
Input Voltage (VAC/60Hz):	120.00
Input Current (Amp):	12.15
Input Power (W):	1456.90
Input Power Factor:	1.00
Current ATHD @ 120V(%):	2%
Current ATHD @ 277V(%):	N/A
Efficacy:	103
Ambient Temperature (°C):	25.0
Stabilization Time (Hours):	0:45
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.

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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*

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

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Photometric Test Report

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L031601811R02.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] L031601811R02
[TESTLAB] LIGHT LABORATORY, INC.
[ISSUEDATE] 5/6/2016
[MANUFAC] Suxess Inc., dba LUX Dynamics
[LUMCAT] LED-GYM-16-UNV - 850 HO LADC
[LUMINAIRE] 48.75"L. X 28.5"W. X 1.5"H. LED HIGH BAY
[BALLASTCAT] OSRAM OPTOTRONIC OTi 85/120-277/2A6 DIMLT2 L (16 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, 1456.90W
[_TEST PROCEDURE] IESNA:LM-79-08

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	150418
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	1456.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.36
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	3.83 ft
Luminous Width (90-270)	2.83 ft
Luminous Height	0.06 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	42013	50104	51254
55	35319	47432	47295
65	27335	44825	49626
75	17402	41097	39725
85	11219	30696	20434

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L031601811R02.IES

CANDELA TABULATION

	0	5	10	15	20	25	30	35	40	45
0	51035	51035	51035	51035	51035	51035	51035	51035	51035	51035
5	50774	50767	50785	50813	50851	50873	50912	50970	51021	51070
10	49977	50000	50095	50177	50253	50342	50414	50463	50488	50512
15	48685	48777	48909	48992	49017	49093	49206	49315	49468	49537
20	46974	47074	47158	47141	47288	47517	47692	47748	47736	47640
25	44775	44775	44775	44882	45202	45452	45544	45392	45164	45246
30	42038	41900	41953	42278	42605	42885	42716	42711	43059	43604
35	38670	38625	38709	39181	39649	39729	39910	40416	41067	41569
40	34764	34851	35113	35661	36169	36550	37119	37962	38557	39265
45	30412	30625	31065	31783	32581	33300	34057	34879	35790	36640
50	25747	26017	26707	27716	28650	29463	30394	31496	32519	33206
55	20875	21188	22066	23021	24006	25149	26418	27507	28304	28442
60	16790	17052	17769	18721	19938	21374	22617	23541	24102	24349
65	12035	12251	12883	13910	15255	16639	17908	19000	19677	20161
70	7850	8033	8594	9599	10934	12426	13776	14812	15563	16002
75	4805	4969	5460	6307	7510	8805	9959	10869	11486	11764
80	2645	2790	3206	3886	4839	5775	6391	6564	6436	6341
85	1162	1262	1489	1951	2421	2521	2247	2211	2670	3500
90	462	465	468	471	472	471	471	473	476	480
95	0	457	450	448	448	446	443	443	444	446
100	0	0	0	0	445	448	452	453	452	448
105	0	0	0	0	0	0	445	450	455	459
110	0	0	0	0	0	0	0	447	443	448
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. Angles **Horizontal Angles**

	50	55	60	65	70	75	80	85	90
0	51035	51035	51035	51035	51035	51035	51035	51035	51035
5	51146	51219	51271	51314	51351	51379	51400	51419	51403
10	50552	50611	50693	50747	50767	50806	50819	50837	50828
15	49553	49531	49499	49434	49378	49356	49318	49292	49301
20	47450	47312	47306	47352	47455	47561	47625	47708	47746
25	45472	45845	46241	46486	46616	46715	46814	46845	46878
30	44062	44341	44721	44957	45195	45426	45637	45724	45764
35	42072	42556	43068	43607	44005	44142	44260	44338	44377
40	39969	40698	41113	41415	41441	41333	41294	41303	41319
45	37376	37688	37551	37522	37464	37388	37346	37318	37303
50	33275	33136	32969	32921	32905	32835	32765	32727	32703
55	28347	28417	28534	28410	28339	28237	28184	28176	28170
60	24619	24710	24674	24725	24882	25034	25173	25276	25307

IES INDOOR REPORT
PHOTOMETRIC FILENAME : L031601811R02.IES

CANDELA TABULATION - (Cont.)

65	20399	20516	20755	21113	21446	21724	21936	22065	22100
70	16254	16544	16900	17274	17617	17781	17816	17774	17736
75	11933	12046	11941	11723	11508	11366	11271	11209	11183
80	6697	7372	7947	8246	8306	8255	8187	8121	8094
85	4300	4760	4607	4046	3370	2832	2468	2287	2230
90	483	485	485	484	483	482	481	481	480
95	448	449	451	452	453	454	454	454	454
100	446	442	440	440	440	440	440	440	440
105	461	463	463	463	462	461	460	460	459
110	453	459	463	466	468	469	470	470	470
115	448	450	454	458	462	464	466	468	468
120	0	0	0	453	454	455	457	458	458
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	18743.00	N.A.	12.50
0-30	39842.96	N.A.	26.50
0-40	65815.33	N.A.	43.80
0-60	116817.7	N.A.	77.70
0-80	145965.2	N.A.	97.00
0-90	149362.3	N.A.	99.30
10-90	144507.3	N.A.	96.10
20-40	47072.34	N.A.	31.30
20-50	74169.04	N.A.	49.30
40-70	69427.4	N.A.	46.20
60-80	29147.51	N.A.	19.40
70-80	10722.46	N.A.	7.10
80-90	3397.16	N.A.	2.30
90-110	807.36	N.A.	0.50
90-120	1023.28	N.A.	0.70
90-130	1055.46	N.A.	0.70
90-150	1055.46	N.A.	0.70
90-180	1055.46	N.A.	0.70
110-180	248.10	N.A.	0.20
0-180	150417.8	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	4855.1
10-20	13887.9
20-30	21099.96
30-40	25972.38
40-50	27096.73
50-60	23905.61
60-70	18425.06
70-80	10722.46
80-90	3397.16
90-100	466.28
100-110	341.08
110-120	215.92
120-130	32.18
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	101	101	101	99
1	108	103	99	95	106	101	97	94	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	76	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	47	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	41	68	55	47	40	53	46	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	46	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	29	55	42	34	29	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24

IES INDOOR REPORT
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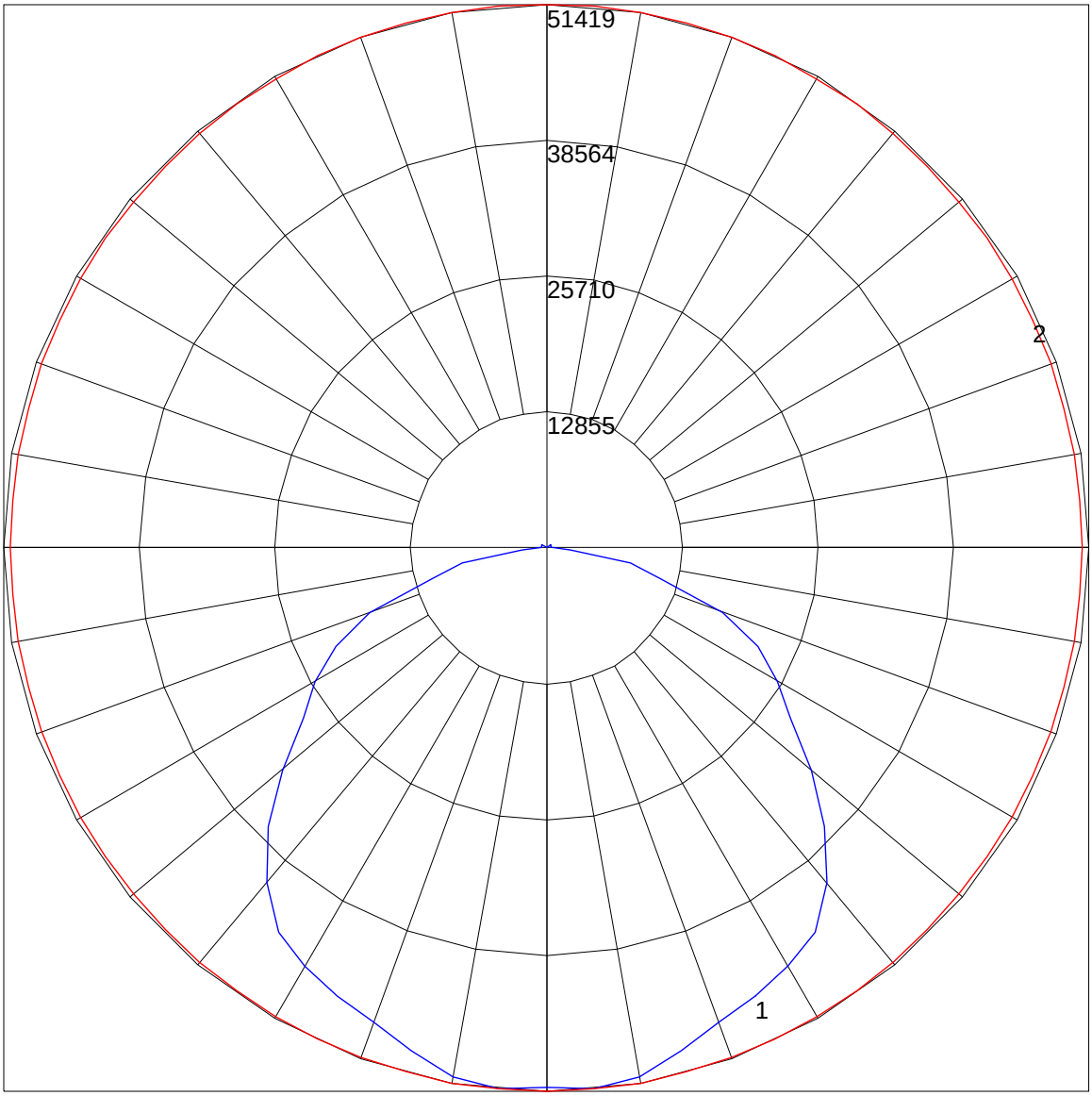
POLAR GRAPH



Maximum Candela = 51419 Located At Horizontal Angle = 85, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (85 - 265) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)