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Report No: L031603801

Date: 3/22/2016



NVLAP LAB CODE 200927-0

**Report No:** L031603801

**Report Prepared For:** EIKO Global, LLC  
 23220 W 84th Street, Shawnee, KS 66227

**Model Number:** SCRS-2C-U

**Test:** Electrical and Photometric tests

**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 SML-367-40W/4000K. Received in working and undamaged condition. No modifications were necessary.

**Testing Condition:** Fixture is tested with no special conditions.

**Sample Arrival Date:** 3/11/16

**Date of Tests:** 3/21/16 - 3/22/16

**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**

<b>Manufacturer:</b>	EiKO Global, LLC	
<b>Model Number:</b>	SCRS-2C-U	
<b>Driver Model Number:</b>	iPP LP1040-36-C0950	
<b>Total Lumens:</b>	3843.32	
<b>Input Voltage (VAC/60Hz):</b>	120.00	
<b>Input Current (Amp):</b>	0.33	
<b>Input Power (W):</b>	39.67	
<b>Input Power Factor:</b>	0.99	
<b>Current ATHD @ 120V(%):</b>	9%	
<b>Current ATHD @ 277V(%):</b>	15% (0.15A, 40.67W, 0.95PF)	
<b>Efficacy:</b>	97	
<b>Color Rendering Index (CRI):</b>	74	
<b>Correlated Color Temperature (K):</b>	5081	
<b>Chromaticity Coordinate x:</b>	0.3804	
<b>Chromaticity Coordinate y:</b>	0.3739	
<b>Ambient Temperature (°C):</b>	25.0	
<b>Stabilization Time (Hours):</b>	0:45	
<b>Total Operating Time (Hours):</b>	1:15	
<b>Off State Power(W):</b>	0.00	

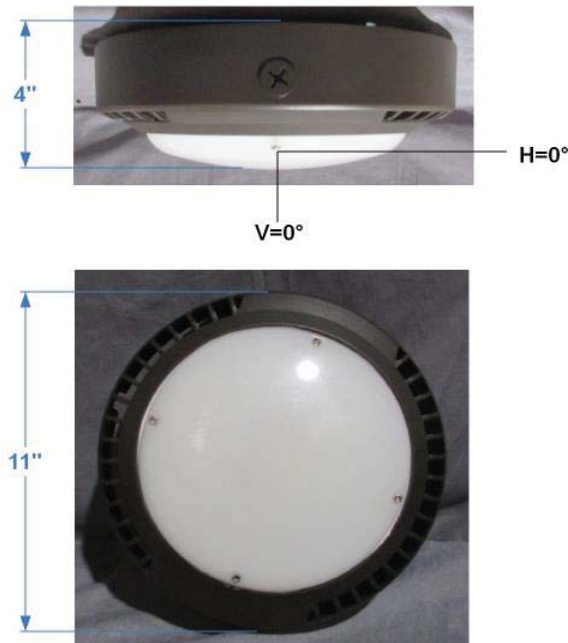
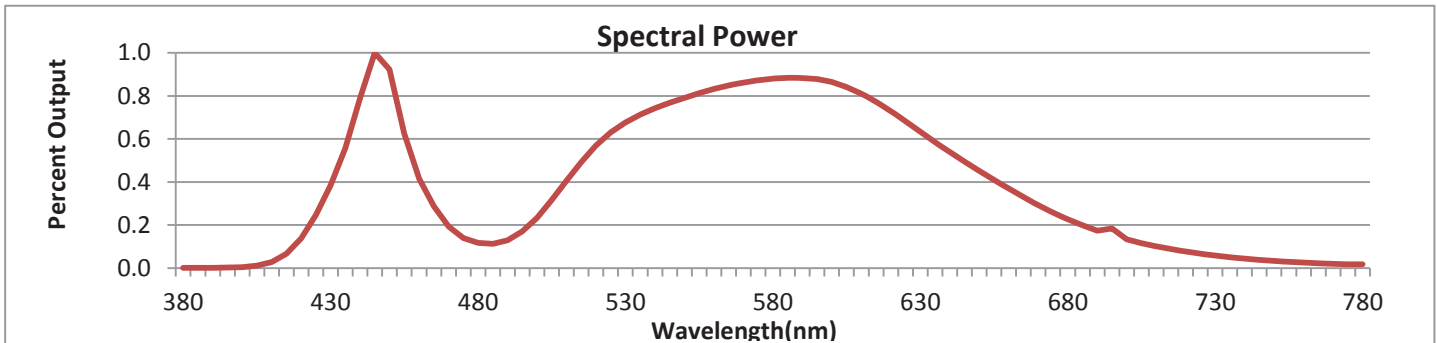


FIG. 1 LUMINAIRE

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



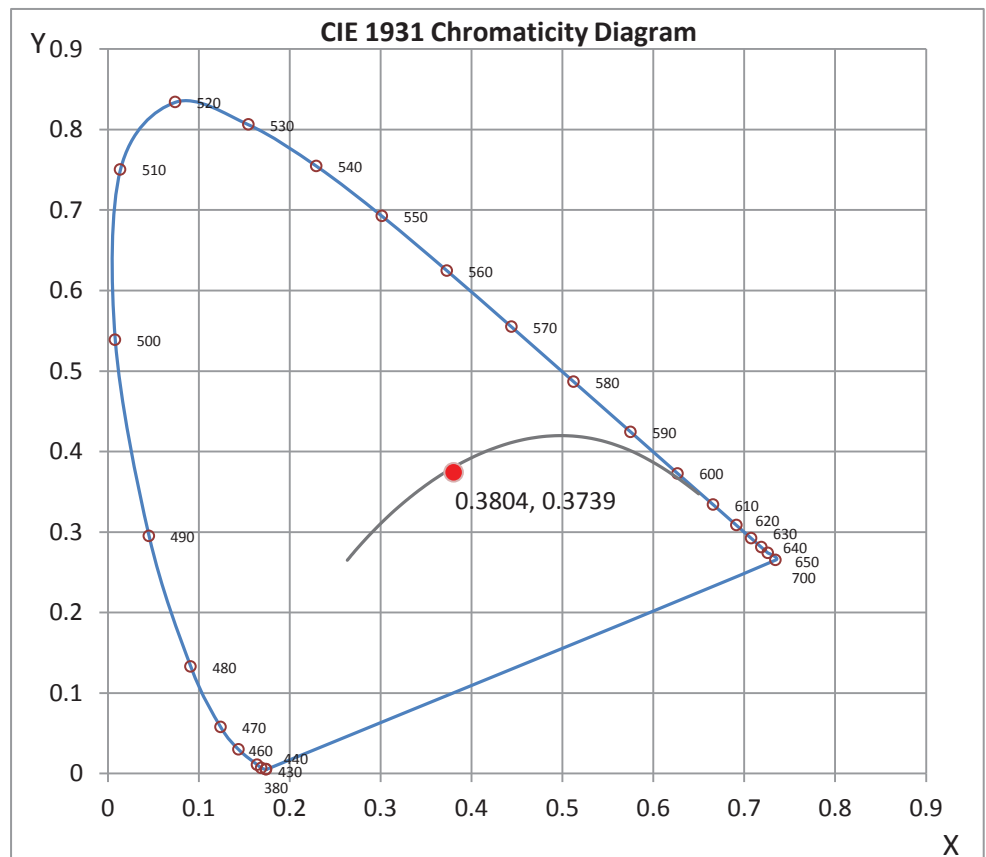
Wavelength	W/m <sup>2</sup> nm	440	0.0430	510	0.0221	580	0.0479	650	0.0246	720	0.0042
380	0.0001	450	0.0503	520	0.0310	590	0.0481	660	0.0201	730	0.0032
390	0.0001	460	0.0226	530	0.0369	600	0.0471	670	0.0160	740	0.0024
400	0.0003	470	0.0105	540	0.0404	610	0.0441	680	0.0124	750	0.0018
410	0.0015	480	0.0064	550	0.0431	620	0.0397	690	0.0095	760	0.0014
420	0.0075	490	0.0071	560	0.0454	630	0.0345	700	0.0072	770	0.0011
430	0.0209	500	0.0127	570	0.0470	640	0.0294	710	0.0055	780	0.0009

**CRI & CCT**

x	0.3804
y	0.3739
u'	0.2262
v'	0.5003
CRI	74.10
CCT	3981
Duv	-0.00133

**R Values**

R1	73.23
R2	79.04
R3	82.29
R4	74.76
R5	71.78
R6	69.58
R7	81.97
R8	60.51
R9	-7.96
R10	48.98
R11	70.97
R12	45.22
R13	73.52
R14	89.31



\*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 : L031603801.IES**

**DESCRIPTION INFORMATION (From Photometric File)**

IESNA:LM-63-2002  
 [TEST] L031603801  
 [TESTLAB] LIGHT LABORATORY, INC.  
 [ISSUEDATE] 3/22/2016  
 [MANUFAC] EIKO GLOBAL, LLC  
 [LUMCAT] SCRS-2C-U  
 [LUMINAIRE] 11"DIA. X 4"H. ROUND CANOPY  
 [BALLASTCAT] iPP LP1040-36-C0950  
 [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, 39.67W  
 [TEST PROCEDURE] IESNA:LM-79-08

**CHARACTERISTICS**

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3843
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	97
Total Luminaire Watts	39.67
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.67 ft (Diameter)
Luminous Width (90-270)	0.67 ft (Diameter)
Luminous Height	0.13 ft

**LUMINANCE DATA (cd/sq.m)**

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	29091	29091	29091
55	25551	25551	25551
65	21796	21796	21796
75	16862	16862	16862
85	10891	10891	10891

IES INDOOR REPORT  
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CANDELA TABULATION

	<u>0</u>
0	1321
5	1316
10	1295
15	1262
20	1216
25	1157
30	1089
35	1012
40	931
45	841
50	747
55	650
60	556
65	462
70	364
75	275
80	194
85	119
90	65
95	35
100	23
105	19
110	16
115	14
120	11
125	0
130	0
135	0
140	0
145	0
150	0
155	0
160	0
165	0
170	0
175	0
180	0

**IES INDOOR REPORT**  
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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	480.83	N.A.	12.50
0-30	1013.95	N.A.	26.40
0-40	1647.51	N.A.	42.90
0-60	2879.01	N.A.	74.90
0-80	3628.15	N.A.	94.40
0-90	3763.58	N.A.	97.90
10-90	3638.65	N.A.	94.70
20-40	1166.68	N.A.	30.40
20-50	1815.66	N.A.	47.20
40-70	1688.12	N.A.	43.90
60-80	749.14	N.A.	19.50
70-80	292.52	N.A.	7.60
80-90	135.43	N.A.	3.50
90-110	63.53	N.A.	1.70
90-120	77.20	N.A.	2.00
90-130	79.74	N.A.	2.10
90-150	79.74	N.A.	2.10
90-180	79.74	N.A.	2.10
110-180	16.22	N.A.	0.40
0-180	3843.32	N.A.	100.00

Total Luminaire Efficiency = N.A.%

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	124.93
10-20	355.90
20-30	533.12
30-40	633.56
40-50	648.98
50-60	582.52
60-70	456.63
70-80	292.52
80-90	135.43
90-100	43.14
100-110	20.39
110-120	13.67
120-130	2.54
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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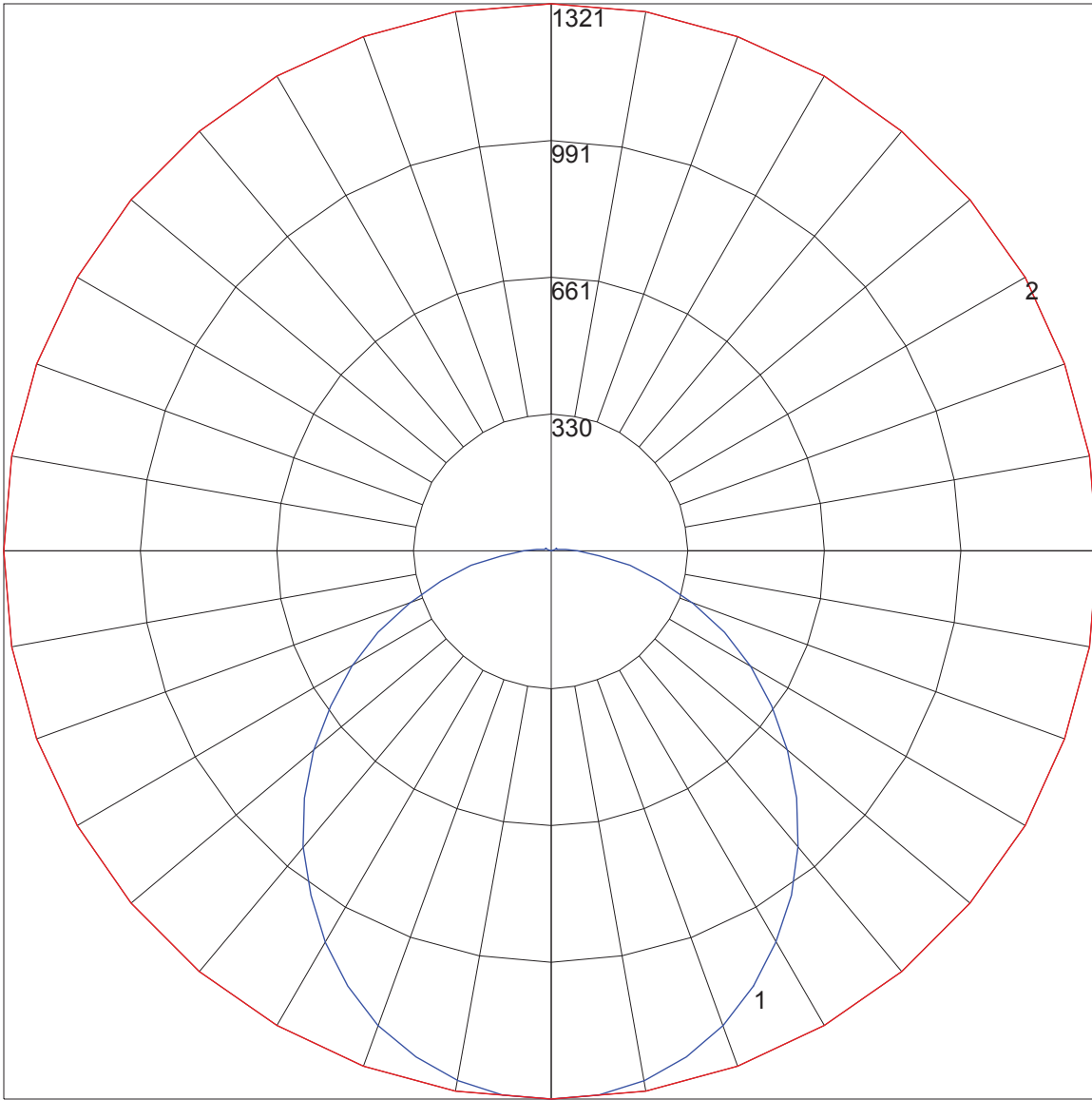
**COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD**

Effective Floor Cavity Reflectance 0.20

RC	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	119	116	116	116	116	116	110	110	110	105	105	105	100	100	100	98
1	108	102	98	94	94	105	100	96	92	92	95	92	89	91	88	86	87	85	83	80
2	98	89	82	76	76	95	87	80	75	75	83	77	73	79	75	71	76	72	69	67
3	89	78	70	63	63	86	76	68	62	62	73	66	61	70	64	59	67	62	58	56
4	81	69	60	53	53	79	68	59	53	53	65	58	52	62	56	51	60	54	50	48
5	75	62	53	46	46	72	60	52	45	45	58	51	45	56	49	44	54	48	43	41
6	69	56	46	40	40	67	54	46	40	40	52	45	39	51	44	39	49	43	38	36
7	64	50	42	35	35	62	49	41	35	35	48	40	35	46	39	34	45	39	34	32
8	60	46	37	31	31	58	45	37	31	31	44	36	31	42	36	31	41	35	30	28
9	56	42	34	28	28	54	42	34	28	28	40	33	28	39	32	28	38	32	27	26
10	52	39	31	26	26	51	38	31	26	26	37	30	25	36	30	25	35	29	25	23



POLAR GRAPH



Maximum Candela = 1321 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.)