



7826 East Evans Road
Scottsdale, AZ 85260
480-991-9260

Photometric Indoor Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

Prepared For
Environmental Lights
11235 W. Bernardo Court, Suite 102
San Diego, CA 92127

Catalog Number
swrfEV3014-96-reel
Project Number
10345709
Test Number
33088

Test Date

2014-06-21

Prepared By

Handwritten signature of Dennis Boyles in black ink.

Dennis Boyles, Technician

Approved By

Handwritten signature of Jim Domigan in black ink.

Jim Domigan, Laboratory Team Leader

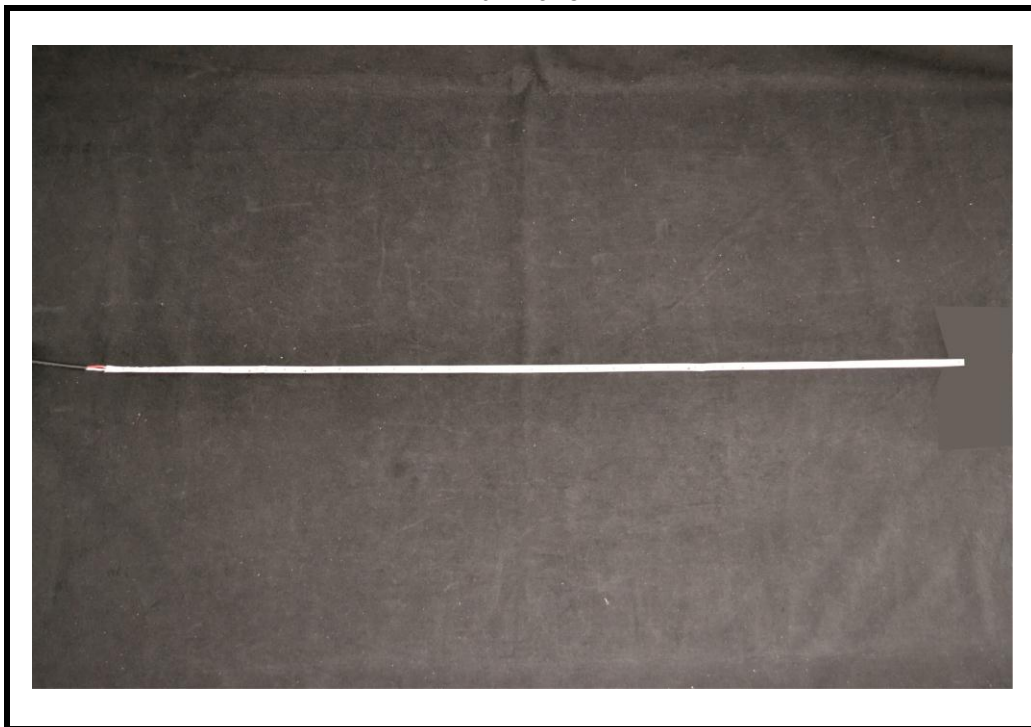
The results contained in this report pertain only to the tested sample.
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Luminaire Description: LED Strip Light
Catalog Number: swrfEV3014-96-reel
Lamp: LED Array
Ballast/Driver: One Mean Well SP-240-12 Driver

Luminaire



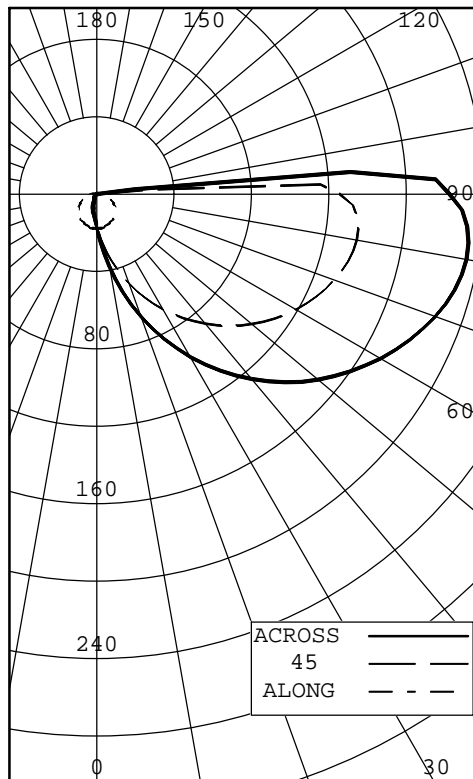
Test Conditions

Test Temperature: 24.6 °C
Voltage: 12.0 VDC



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INTENSITY (CANDLEPOWER) SUMMARY OUTPUT
 BEAM SIDE LUMENS



ANGLE	ALONG	67.5	45	22.5	ACROSS	OUTPUT LUMENS
0	17	17	17	17	17	
5	18	20	23	25	25	1
15	17	27	40	49	52	5
25	16	35	59	76	83	13
35	15	44	78	103	112	23
45	14	52	97	127	138	34
55	12	59	112	148	160	46
65	9	73	125	165	178	57
75	6	72	135	177	192	63
85	4	59	135	178	192	63
90	2	54	126	168	182	
95	0	1	27	105	132	28
105	0	0	0	0	0	0
115	0	0	0	0	0	0
125	0	0	0	0	0	0
135	0	0	0	0	0	0
145	0	0	0	0	0	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

BOTH SIDES
 ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	23	6.77
0-40	48	13.84
0-60	130	37.80
0-90	316	91.64
40-90	268	77.80
60-90	186	53.84
90-180	29	8.36
0-180	345	100.00

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 39.370 INS
 WIDTH: 0.062 INS

LUMINANCE SUMMARY - CD./SQ.M.

ANGLE	ALONG	45	ACROSS
45	12572	86990	124040
55	13285	124801	177700
65	13522	188932	269078
75	14720	330388	471635
85	29144	987598	1405734

TESTED IN ACCORDANCE WITH IES PROCEDURES.



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BEAM SIDE
INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE					AVERAGE	OUTPUT LUMENS
	ALONG	67.5	45	22.5	ACROSS		
0	17	17	17	17	17	17	
5	18	20	23	25	25	22	1
10	18	23	31	36	38	29	
15	17	27	40	49	52	37	5
20	17	31	50	63	68	46	
25	16	35	59	76	83	55	13
30	16	39	69	90	97	64	
35	15	44	78	103	112	72	23
40	14	48	88	115	125	80	
45	14	52	97	127	138	88	34
50	13	56	105	138	149	95	
55	12	59	112	148	160	101	46
60	10	72	119	157	170	110	
65	9	73	125	165	178	114	57
70	8	73	130	171	186	118	
75	6	72	135	177	192	121	63
80	5	58	137	180	194	118	
85	4	59	135	178	192	117	63
90	2	54	126	168	182	110	
95	0	1	27	105	132	50	28
100	0	0	0	0	0	0	
105	0	0	0	0	0	0	0
110	0	0	0	0	0	0	
115	0	0	0	0	0	0	0
120	0	0	0	0	0	0	
125	0	0	0	0	0	0	0
130	0	0	0	0	0	0	
135	0	0	0	0	0	0	0
140	0	0	0	0	0	0	
145	0	0	0	0	0	0	0
150	0	0	0	0	0	0	
155	0	0	0	0	0	0	0
160	0	0	0	0	0	0	
165	0	0	0	0	0	0	0
170	0	0	0	0	0	0	
175	0	0	0	0	0	0	0
180	0	0	0	0	0	0	



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OPPOSITE SIDE TO BEAM
INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE					AVERAGE	OUTPUT LUMENS
	ALONG	112.5	135	157.5	ACROSS		
0	17	17	17	17	17	17	
5	18	15	14	13	13	14	1
10	18	14	12	10	10	12	
15	17	12	10	8	8	11	1
20	17	11	8	6	5	9	
25	16	9	6	4	3	7	2
30	16	8	5	3	2	6	
35	15	7	3	2	2	5	2
40	14	6	3	2	2	5	
45	14	5	3	2	2	4	2
50	13	4	2	2	2	4	
55	12	4	2	2	1	3	2
60	10	3	2	1	1	3	
65	9	3	1	1	1	2	1
70	8	2	1	1	1	2	
75	6	2	1	1	0	2	1
80	5	1	1	0	0	1	
85	4	0	0	0	0	1	0
90	2	0	0	0	0	0	
95	0	0	0	0	0	0	0
100	0	0	0	0	0	0	
105	0	0	0	0	0	0	0
110	0	0	0	0	0	0	
115	0	0	0	0	0	0	0
120	0	0	0	0	0	0	
125	0	0	0	0	0	0	0
130	0	0	0	0	0	0	
135	0	0	0	0	0	0	0
140	0	0	0	0	0	0	
145	0	0	0	0	0	0	0
150	0	0	0	0	0	0	
155	0	0	0	0	0	0	0
160	0	0	0	0	0	0	
165	0	0	0	0	0	0	0
170	0	0	0	0	0	0	
175	0	0	0	0	0	0	0
180	0	0	0	0	0	0	



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COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL	90				80				70				50				30				10				0
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																									
0	1.211	1.211	1.211	1.211	1.171	1.171	1.171	1.171	1.131	1.131	1.131	1.131	1.061	1.061	1.061	1.001	1.001	1.001	0.940	0.940	0.940	0.940	0.940	0.940	0.92
1	1.020	0.930	0.850	0.78	0.980	0.900	0.830	0.76	0.940	0.870	0.800	0.74	0.810	0.750	0.70	0.750	0.700	0.66	0.700	0.660	0.62	0.700	0.660	0.62	0.59
2	0.890	0.760	0.650	0.56	0.860	0.730	0.630	0.54	0.820	0.710	0.610	0.53	0.650	0.570	0.50	0.600	0.540	0.48	0.560	0.500	0.45	0.560	0.500	0.45	0.42
3	0.790	0.630	0.510	0.42	0.760	0.610	0.500	0.41	0.720	0.590	0.480	0.40	0.540	0.450	0.38	0.500	0.420	0.36	0.460	0.400	0.34	0.460	0.400	0.34	0.31
4	0.720	0.550	0.420	0.33	0.690	0.530	0.410	0.33	0.650	0.510	0.400	0.32	0.470	0.380	0.30	0.430	0.350	0.29	0.400	0.330	0.28	0.400	0.330	0.28	0.25
5	0.650	0.470	0.360	0.26	0.620	0.460	0.340	0.26	0.590	0.440	0.330	0.25	0.400	0.310	0.24	0.370	0.290	0.23	0.350	0.280	0.22	0.350	0.280	0.22	0.19
6	0.590	0.410	0.300	0.22	0.560	0.400	0.290	0.21	0.530	0.380	0.280	0.20	0.350	0.260	0.19	0.330	0.250	0.19	0.300	0.230	0.18	0.300	0.230	0.18	0.15
7	0.530	0.360	0.250	0.18	0.510	0.350	0.240	0.17	0.490	0.340	0.240	0.17	0.310	0.220	0.16	0.290	0.210	0.15	0.270	0.200	0.14	0.270	0.200	0.14	0.12
8	0.490	0.320	0.220	0.15	0.470	0.310	0.210	0.14	0.450	0.300	0.210	0.14	0.280	0.190	0.13	0.260	0.180	0.13	0.240	0.170	0.12	0.240	0.170	0.12	0.10
9	0.460	0.290	0.190	0.12	0.440	0.280	0.190	0.12	0.420	0.270	0.180	0.12	0.250	0.170	0.11	0.230	0.160	0.11	0.220	0.150	0.10	0.220	0.150	0.10	0.08
10	0.420	0.270	0.160	0.11	0.400	0.260	0.160	0.10	0.390	0.240	0.160	0.10	0.230	0.150	0.10	0.210	0.140	0.09	0.200	0.130	0.08	0.200	0.130	0.08	0.06

THE ABOVE COEFFICIENTS HAVE BEEN CALCULATED BASED ON LUMINAIRE LUMENS
 BECAUSE IN AN ABSOLUTE TEST THE BARE LAMP LUMENS ARE UNKNOWN.
 LIGHTING DESIGN CALCULATIONS MADE USING THESE COEFFICIENTS SHOULD
 THEREFORE USE THE LUMINAIRE LUMENS IN THE CALCULATION FORMULA

LABORATORY RESULTS MAY NOT BE REPRESENTATIVE OF FIELD PERFORMANCE.
 BALLAST AND FIELD FACTORS HAVE NOT BEEN APPLIED.

TEST DISTANCE EXCEEDS FIVE TIMES THE GREATEST
 LUMINOUS OPENING OF LUMINAIRE.

All testing was conducted in accordance with LM-79-08,

Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products as published by the Illuminating Engineering Society of North America (IESNA).

The condition of the item tested was new. Stabilization time before testing meets the stabilization requirements of LM-79-08.

The test results (luminous distribution and flux) were obtained by using a Lighting Sciences series 6000 Type C Moving Mirror Goniophotometer

- The photometric reference standard used is a set of three incandescent luminous intensity standard lamps calibrated and traceable to the U.S. National Institute of Standards and Technology.

Power measurements were obtained with a Xitron 2801 power analyzer.

Ambient temperature during testing was $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured using an Omega model DP460.

Calibration certificates are on file at the laboratory

The results in this report apply to the test sample(s) mentioned in this report at the time of the testing period only and are not to be used to indicate applicability to other similar products.