



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
swrf390-reel
Project Number
10345709
Test Number
33061

Test Date

2014-06-18

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

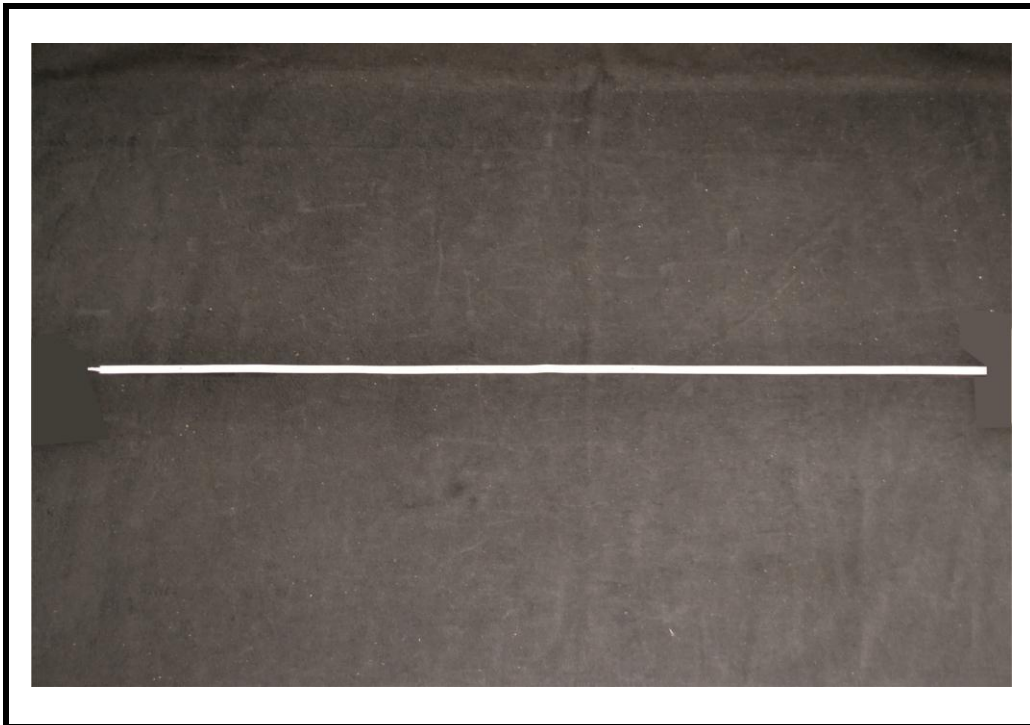
The results contained in this report pertain only to the tested sample.
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Luminaire Description: LED Strip Light
Catalog Number: swrf390-reel
Lamp: LED Array
Ballast/Driver: One Mean Well SP-240-12 Driver

Luminaire



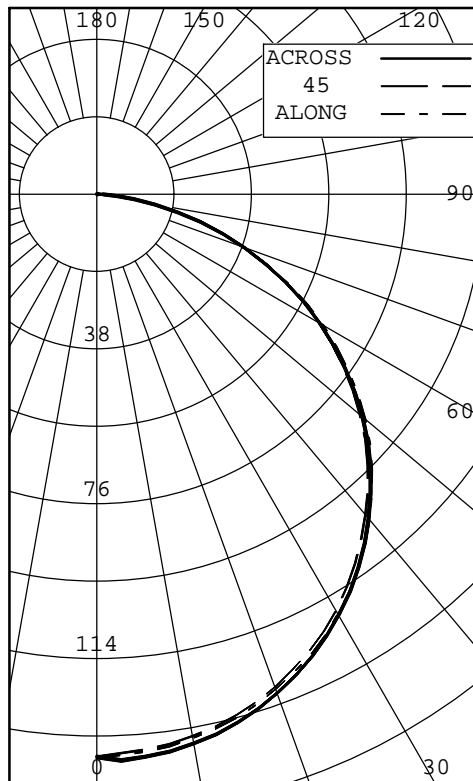
Test Conditions

Test Temperature: 24.9 °C
Voltage: 12.0 VDC



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INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	138	138	138	138	138	
5	137	136	137	139	139	13
10	136	135	135	137	137	
15	133	132	132	134	134	37
20	129	128	129	130	130	
25	125	124	124	125	125	57
30	119	118	118	119	119	
35	112	111	111	112	112	70
40	104	103	103	104	104	
45	96	94	94	95	95	73
50	86	85	84	85	85	
55	75	74	74	75	74	66
60	64	63	63	63	63	
65	52	51	51	51	51	50
70	39	39	39	39	39	
75	27	26	26	26	26	28
80	15	14	15	15	15	
85	5	5	5	5	5	6
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	108	26.90
0-40	177	44.23
0-60	317	78.91
0-90	401	100.00
40-90	224	55.77
60-90	85	21.09
90-180	0	0.00
0-180	401	100.00

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 39.370 INS
 WIDTH: 0.250 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.3
 SC: 1.3

ANGLE	ALONG	45	ACROSS
45	21268	21025	21249
55	20687	20381	20505
65	19395	19052	19114
75	16276	16082	16124
85	8944	8876	9069

TESTED IN ACCORDANCE WITH IES PROCEDURES.



INTENSITY (CANDLEPOWER) DATA
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	138	138	138	138	138	138	
2.5	138	137	137	139	139	138	
5.0	137	136	137	139	139	137	13
7.5	137	136	136	138	138	137	
10.0	136	135	135	137	137	136	
12.5	134	133	134	136	136	135	
15.0	133	132	132	134	134	133	37
17.5	131	130	131	132	132	131	
20.0	129	128	129	130	130	129	
22.5	127	126	126	128	128	127	
25.0	125	124	124	125	125	124	57
27.5	122	121	121	122	122	122	
30.0	119	118	118	119	119	118	
32.5	116	115	114	116	116	115	
35.0	112	111	111	112	112	111	70
37.5	108	107	107	108	108	107	
40.0	104	103	103	104	104	103	
42.5	100	99	99	100	100	99	
45.0	96	94	94	95	95	95	73
47.5	91	90	89	90	90	90	
50.0	86	85	84	85	85	85	
52.5	81	79	79	80	80	80	
55.0	75	74	74	75	74	74	66
57.5	70	69	68	69	69	69	
60.0	64	63	63	63	63	63	
62.5	58	57	57	57	57	57	
65.0	52	51	51	51	51	51	50
67.5	46	45	45	45	45	45	
70.0	39	39	39	39	39	39	
72.5	33	32	33	33	33	33	
75.0	27	26	26	26	26	26	28
77.5	21	20	20	20	20	20	
80.0	15	14	15	15	15	15	
82.5	9	9	9	9	9	9	
85.0	5	5	5	5	5	5	6
87.5	2	2	2	2	2	2	
90.0	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	1.221	.221	.221	.22	1.191	.191	.191	.19	1.161	.161	.161	.16	1.111	.111	.11	1.061	.061	.06	1.021	.021	.02	1.00			
1	1.121	.071	.030	.99	1.091	.051	.010	.97	1.071	.030	.990	.96	0.980	.950	.93	0.950	.920	.90	0.910	.890	.87	0.85			
2	1.030	.950	.880	.82	1.000	.930	.860	.81	0.980	.910	.850	.80	0.870	.820	.78	0.840	.800	.76	0.810	.780	.75	0.73			
3	0.940	.830	.750	.69	0.920	.820	.740	.68	0.890	.800	.730	.67	0.770	.710	.66	0.750	.690	.65	0.720	.680	.64	0.62			
4	0.870	.740	.650	.59	0.850	.730	.650	.59	0.820	.720	.640	.58	0.690	.630	.57	0.670	.610	.57	0.650	.600	.56	0.54			
5	0.800	.670	.570	.50	0.780	.650	.570	.50	0.750	.640	.560	.50	0.620	.550	.49	0.600	.540	.49	0.580	.530	.48	0.46			
6	0.740	.590	.500	.44	0.720	.580	.500	.44	0.700	.570	.490	.43	0.560	.480	.43	0.540	.470	.43	0.520	.470	.42	0.40			
7	0.670	.530	.440	.38	0.660	.520	.440	.38	0.640	.510	.430	.37	0.500	.420	.37	0.480	.420	.37	0.470	.410	.36	0.35			
8	0.620	.480	.390	.33	0.610	.470	.390	.33	0.590	.470	.390	.33	0.450	.380	.33	0.440	.370	.32	0.430	.370	.32	0.30			
9	0.580	.440	.350	.29	0.560	.430	.350	.29	0.550	.420	.350	.29	0.410	.340	.29	0.400	.330	.29	0.390	.330	.28	0.27			
10	0.530	.400	.310	.26	0.520	.390	.310	.26	0.510	.380	.310	.26	0.370	.300	.26	0.370	.300	.25	0.360	.300	.25	0.23			

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.



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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.