



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
sw3528-450-reel
Project Number
10345709
Test Number
33080

Test Date

2014-06-16

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

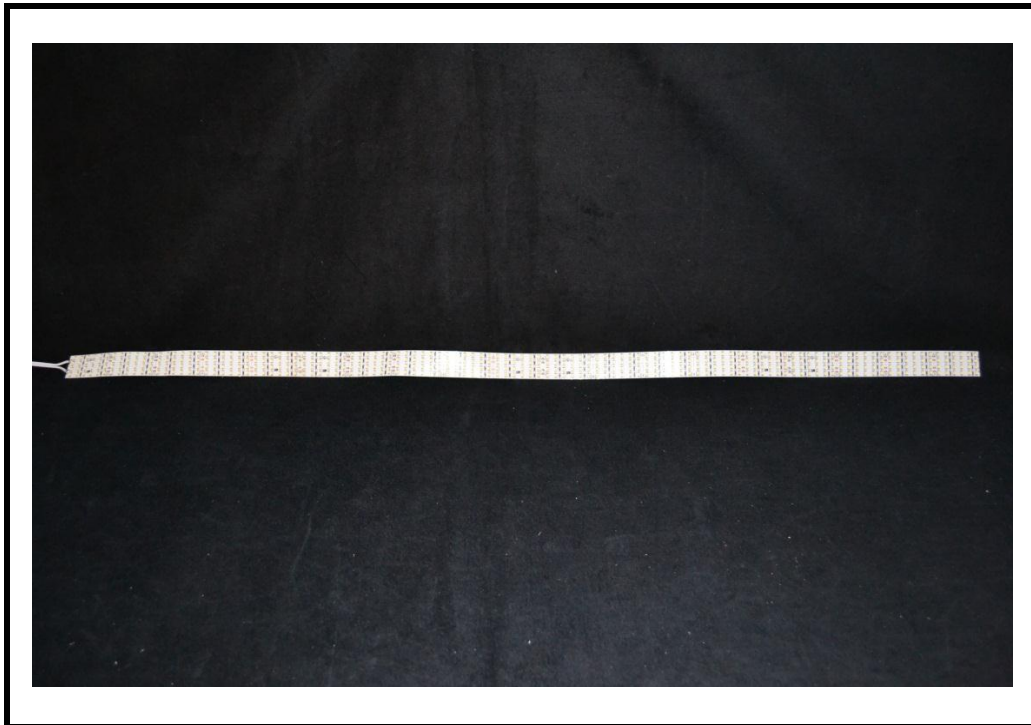
The results contained in this report pertain only to the tested sample.
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Luminaire Description: LED Strip Light
Catalog Number: sw3528-450-reel
Lamp: LED Array
Ballast/Driver: One Mean Well SP-320-24 Driver

Luminaire



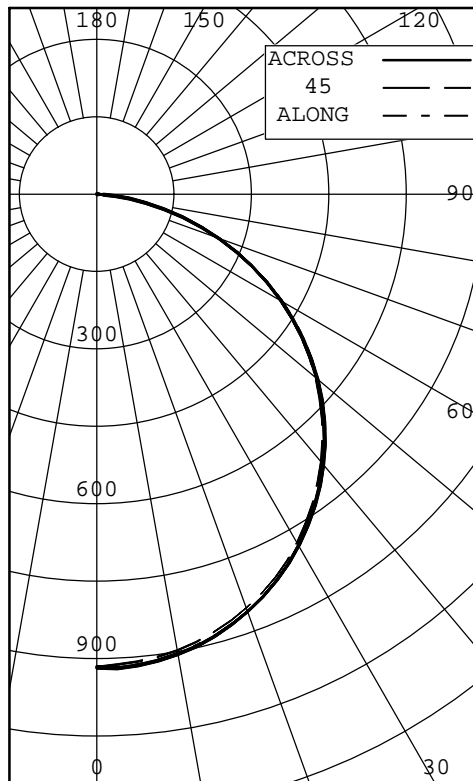
Test Conditions

Test Temperature: 24.7 °C
Voltage: 24.0 VDC



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INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	917	917	917	917	917	
5	915	906	910	918	917	88
10	904	894	898	907	906	
15	885	875	879	888	887	248
20	858	850	852	860	860	
25	826	818	819	827	826	378
30	786	779	778	786	785	
35	738	732	730	737	737	458
40	685	679	677	683	683	
45	625	620	618	623	623	478
50	560	556	554	558	558	
55	491	485	485	488	487	434
60	416	410	410	412	412	
65	339	332	333	334	333	329
70	258	253	253	253	253	
75	176	173	173	173	173	183
80	100	99	98	98	97	
85	38	37	37	36	36	45
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	715	27.05
0-40	1173	44.39
0-60	2085	78.89
0-90	2643	100.00
40-90	1470	55.61
60-90	558	21.11
90-180	0	0.00
0-180	2643	100.00

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 39.370 INS
 WIDTH: 0.875 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.3
 SC: 1.3

ANGLE	ALONG	45	ACROSS
45	39763	39464	39803
55	38528	38151	38329
65	36038	35583	35615
75	30623	30067	30103
85	19514	18892	18656

TESTED IN ACCORDANCE WITH IES PROCEDURES.



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INTENSITY (CANDLEPOWER) DATA
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	917	917	917	917	917	917	
2.5	918	909	913	922	920	915	
5.0	915	906	910	918	917	912	88
7.5	910	901	904	913	912	907	
10.0	904	894	898	907	906	901	
12.5	895	886	889	898	898	892	
15.0	885	875	879	888	887	882	248
17.5	872	863	866	875	874	869	
20.0	858	850	852	860	860	855	
22.5	843	835	837	845	844	840	
25.0	826	818	819	827	826	823	378
27.5	807	800	800	807	806	803	
30.0	786	779	778	786	785	782	
32.5	763	756	755	762	761	759	
35.0	738	732	730	737	737	734	458
37.5	712	706	704	711	711	708	
40.0	685	679	677	683	683	681	
42.5	656	650	648	654	654	652	
45.0	625	620	618	623	623	621	478
47.5	593	588	586	591	591	590	
50.0	560	556	554	558	558	557	
52.5	526	521	520	524	523	522	
55.0	491	485	485	488	487	487	434
57.5	454	448	448	450	450	449	
60.0	416	410	410	412	412	411	
62.5	377	372	372	373	373	373	
65.0	339	332	333	334	333	334	329
67.5	299	293	294	294	293	294	
70.0	258	253	253	253	253	254	
72.5	217	213	213	213	213	213	
75.0	176	173	173	173	173	173	183
77.5	137	134	134	134	133	134	
80.0	100	99	98	98	97	98	
82.5	67	65	65	64	64	65	
85.0	38	37	37	36	36	37	45
87.5	16	16	15	15	15	15	
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	.960	.93	0.950	.920	.90	0.910	.890	.87	0.85			
2	1.030	.950	.880	.82	1.000	.930	.870	.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	.68	0.780	.710	.66	0.750	.700	.65	0.720	.680	.64	0.62			
4	0.870	.750	.660	.59	0.850	.730	.650	.59	0.830	.720	.640	.58	0.700	.630	.58	0.670	.610	.57	0.650	.600	.56	0.54			
5	0.800	.670	.580	.51	0.780	.660	.570	.50	0.760	.640	.560	.50	0.620	.550	.50	0.600	.540	.49	0.580	.530	.48	0.47			
6	0.740	.600	.510	.44	0.720	.590	.500	.44	0.700	.580	.490	.43	0.560	.490	.43	0.540	.480	.43	0.530	.470	.42	0.40			
7	0.670	.530	.440	.39	0.660	.520	.440	.38	0.640	.520	.430	.38	0.500	.430	.37	0.490	.420	.37	0.470	.410	.37	0.35			
8	0.620	.480	.400	.34	0.610	.470	.390	.33	0.600	.470	.390	.33	0.450	.380	.33	0.440	.380	.33	0.430	.370	.33	0.31			
9	0.580	.440	.350	.29	0.570	.430	.350	.29	0.550	.430	.350	.29	0.410	.340	.29	0.400	.340	.29	0.390	.330	.29	0.27			
10	0.540	.400	.310	.26	0.520	.390	.310	.26	0.510	.390	.310	.26	0.380	.310	.26	0.370	.300	.26	0.360	.300	.25	0.24			

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.