



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
nw3528-240-10-reel
Project Number
10345709
Test Number
33072

Test Date

2014-06-11

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

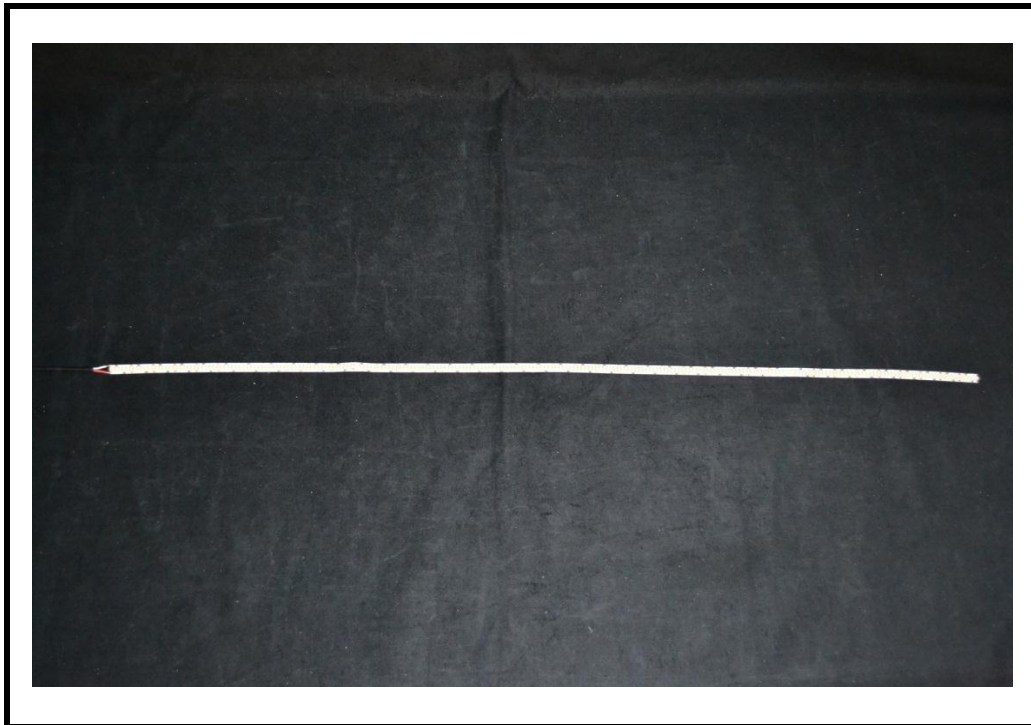
The results contained in this report pertain only to the tested sample.
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Luminaire Description: LED Strip Light
Catalog Number: nw3528-240-10-reel
Lamp: LED Array
Ballast/Driver: One Mean Well SP-320-24 Driver

Luminaire



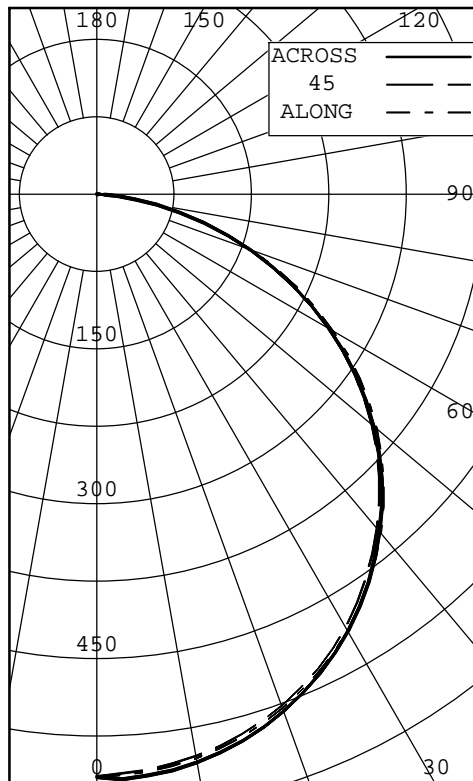
Test Conditions

Test Temperature: 24.3 °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	564	564	564	564	564	
5	562	557	560	566	566	54
10	555	551	553	559	559	
15	544	540	542	548	548	153
20	529	525	527	532	532	
25	510	507	507	512	512	234
30	487	484	483	488	488	
35	459	456	454	459	459	285
40	428	424	422	427	426	
45	393	388	387	391	390	300
50	354	349	348	350	350	
55	311	306	305	307	306	273
60	264	259	259	259	260	
65	215	209	210	210	210	208
70	163	159	159	159	159	
75	110	108	108	107	108	114
80	60	60	60	59	59	
85	21	21	21	21	21	27
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	442	26.80
0-40	727	44.12
0-60	1300	78.85
0-90	1649	100.00
40-90	921	55.88
60-90	349	21.15
90-180	0	0.00
0-180	1649	100.00

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 39.370 INS
 WIDTH: 0.125 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.3
 SC: 1.3

ANGLE	ALONG	45	ACROSS
45	174939	173058	174534
55	170775	167982	168837
65	160156	157169	157065
75	133861	132072	131441
85	75891	76991	75093

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	564	564	564	564	564	564	
2.5	563	559	562	568	568	563	
5.0	562	557	560	566	566	562	54
7.5	559	555	557	563	563	559	
10.0	555	551	553	559	559	555	
12.5	550	546	548	554	554	550	
15.0	544	540	542	548	548	544	153
17.5	537	533	535	541	541	537	
20.0	529	525	527	532	532	529	
22.5	520	516	517	523	523	519	
25.0	510	507	507	512	512	509	234
27.5	499	496	496	501	501	498	
30.0	487	484	483	488	488	486	
32.5	473	470	469	474	474	472	
35.0	459	456	454	459	459	457	285
37.5	444	440	439	443	443	441	
40.0	428	424	422	427	426	425	
42.5	411	406	405	409	409	408	
45.0	393	388	387	391	390	389	300
47.5	374	369	368	371	371	370	
50.0	354	349	348	350	350	350	
52.5	333	327	327	329	328	329	
55.0	311	306	305	307	306	306	273
57.5	288	283	282	284	283	283	
60.0	264	259	259	259	260	260	
62.5	240	234	235	235	235	235	
65.0	215	209	210	210	210	211	208
67.5	189	184	185	185	185	185	
70.0	163	159	159	159	159	160	
72.5	136	134	134	133	133	134	
75.0	110	108	108	107	108	108	114
77.5	84	83	84	83	83	83	
80.0	60	60	60	59	59	60	
82.5	39	39	39	38	38	39	
85.0	21	21	21	21	21	21	27
87.5	8	8	9	9	8	8	
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	.111	.11	1.061	.061	.06	1.021	.021	.02	1.00			
1	1.121	.071	.030	.99	1.101	.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	.67	0.770	.710	.66	0.750	.700	.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	.50	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	0.530	.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	.390	.310	.26	0.380	.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.