



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
dl3528-240-10-reel
Project Number
10345709
Test Number
33073

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

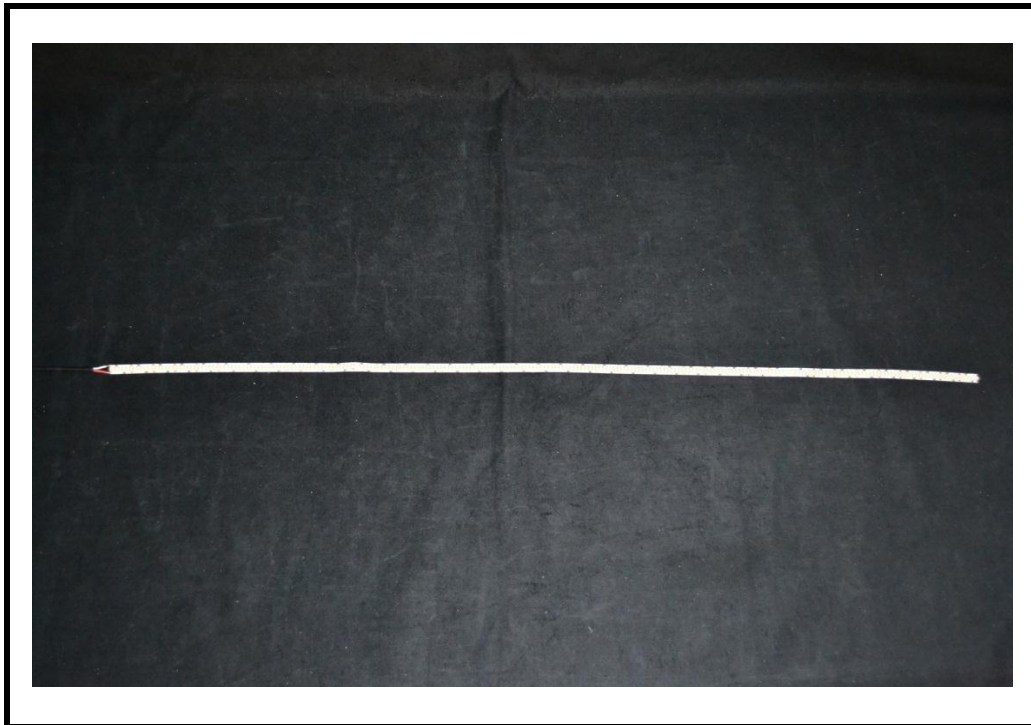
The results contained in this report pertain only to the tested sample.
This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.



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

Luminaire Description: LED Strip Light
Catalog Number: dl3528-240-10-reel
Lamp: LED Array
Ballast/Driver: One Mean Well SP-320-24 Driver

Luminaire



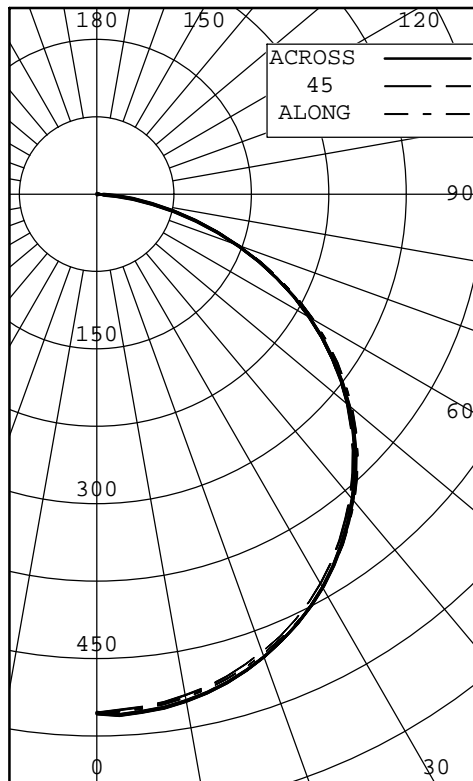
Test Conditions

Test Temperature: 24.4 °C
Voltage: 24.0 VDC



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

INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	503	503	503	503	503	
5	501	497	499	504	504	48
10	495	492	493	499	499	
15	486	482	484	490	490	137
20	474	470	471	476	477	
25	458	455	455	460	460	210
30	439	435	435	439	439	
35	415	411	410	414	414	258
40	388	383	382	386	386	
45	357	352	351	354	354	272
50	323	317	317	319	319	
55	284	278	279	280	280	249
60	243	237	237	238	237	
65	197	192	193	193	193	191
70	149	146	147	146	146	
75	101	100	100	99	100	105
80	56	54	55	55	55	
85	20	19	19	19	19	24
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	396	26.48
0-40	653	43.71
0-60	1174	78.58
0-90	1495	100.00
40-90	841	56.29
60-90	320	21.42
90-180	0	0.00
0-180	1495	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	159082	156984	158393
55	156086	153540	154092
65	146779	144267	144123
75	123030	121777	121607
85	71374	69020	70558

TESTED IN ACCORDANCE WITH IES PROCEDURES.



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

INTENSITY (CANDLEPOWER) DATA
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	503	503	503	503	503	503	
2.5	502	498	500	505	505	502	
5.0	501	497	499	504	504	501	48
7.5	499	495	497	502	502	498	
10.0	495	492	493	499	499	495	
12.5	491	487	489	495	495	491	
15.0	486	482	484	490	490	486	137
17.5	481	477	478	483	484	480	
20.0	474	470	471	476	477	473	
22.5	466	463	464	469	469	466	
25.0	458	455	455	460	460	457	210
27.5	449	445	446	450	450	447	
30.0	439	435	435	439	439	437	
32.5	427	423	423	427	427	425	
35.0	415	411	410	414	414	412	258
37.5	402	397	396	400	400	399	
40.0	388	383	382	386	386	384	
42.5	373	368	367	370	371	369	
45.0	357	352	351	354	354	353	272
47.5	340	335	334	337	337	336	
50.0	323	317	317	319	319	318	
52.5	304	298	298	300	299	299	
55.0	284	278	279	280	280	280	249
57.5	264	258	258	259	259	259	
60.0	243	237	237	238	237	238	
62.5	220	215	215	216	215	216	
65.0	197	192	193	193	193	193	191
67.5	173	169	170	170	170	170	
70.0	149	146	147	146	146	147	
72.5	125	123	123	123	123	123	
75.0	101	100	100	99	100	100	105
77.5	78	77	77	76	77	77	
80.0	56	54	55	55	55	55	
82.5	36	35	36	35	35	35	
85.0	20	19	19	19	19	19	24
87.5	7	6	7	7	7	7	
90.0	0	0	0	0	0	0	



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

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	.68	0.920	.820	.740	.68	0.890	.800	.730	.67	0.770	.710	.66	0.740	.690	.65	0.720	.680	.64	0.62			
4	0.870	.740	.650	.59	0.840	.730	.650	.58	0.820	.720	.640	.58	0.690	.620	.57	0.670	.610	.56	0.650	.600	.56	0.54			
5	0.800	.660	.570	.50	0.780	.650	.560	.50	0.750	.640	.560	.50	0.620	.550	.49	0.600	.540	.49	0.580	.530	.48	0.46			
6	0.730	.590	.500	.44	0.710	.580	.500	.43	0.690	.570	.490	.43	0.550	.480	.43	0.540	.470	.42	0.520	.460	.42	0.40			
7	0.670	.530	.440	.38	0.650	.520	.430	.38	0.640	.510	.430	.37	0.500	.420	.37	0.480	.410	.36	0.470	.410	.36	0.34			
8	0.620	.480	.390	.33	0.610	.470	.390	.33	0.590	.460	.380	.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	.340	.29	0.410	.340	.29	0.400	.330	.28	0.390	.330	.28	0.26			
10	0.530	.400	.310	.26	0.520	.390	.310	.26	0.510	.380	.310	.25	0.370	.300	.25	0.360	.300	.25	0.360	.290	.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.



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

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.