



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
dlrf3528-60-4-reel
Project Number
10345709
Test Number
33055

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

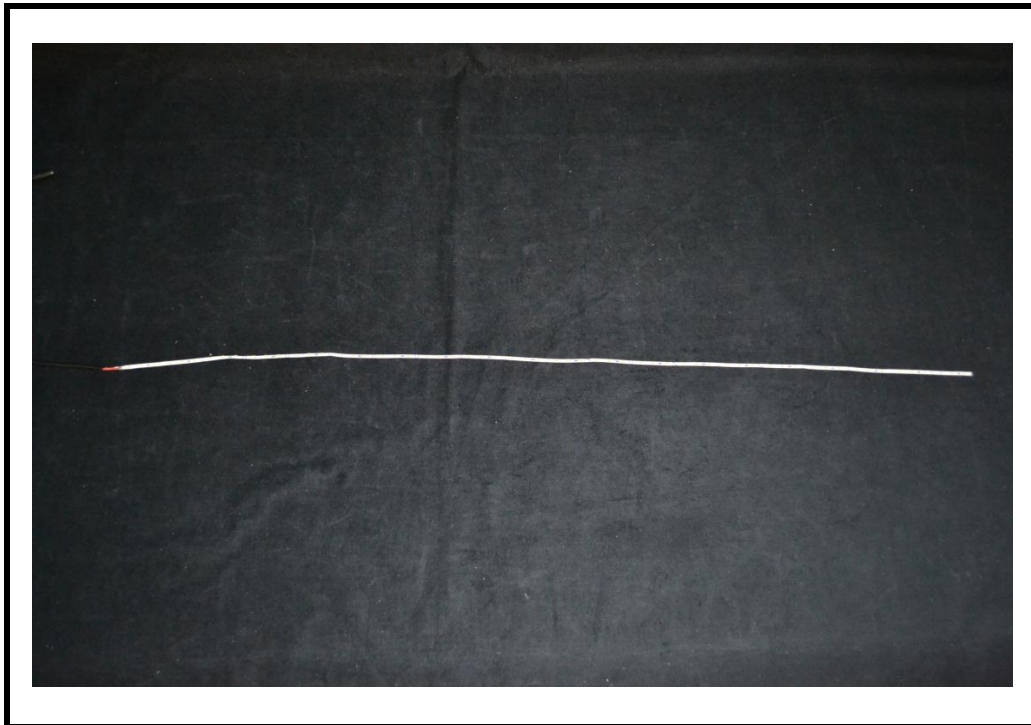
The results contained in this report pertain only to the tested sample.
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Luminaire Description: Narrow LED Strip Light
Catalog Number: dlrf3528-60-4-reel
Lamp: LED Array
Ballast/Driver: One Mean Well SP-240-12 Driver

Luminaire



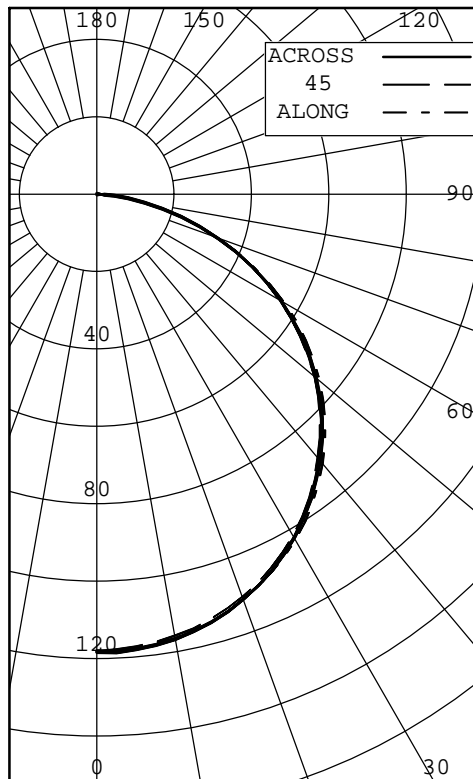
Test Conditions

Test Temperature: 24.7 °C
Voltage: 12.0 VDC



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INTENSITY (CANDLEPOWER) SUMMARY OUTPUT



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	118	118	118	118	118	
5	118	117	117	118	118	11
10	117	115	116	117	117	
15	114	113	114	115	115	32
20	111	110	111	111	111	
25	108	107	107	107	107	49
30	103	102	102	102	102	
35	97	96	96	97	96	60
40	91	89	89	90	90	
45	83	82	82	82	82	63
50	75	74	74	74	74	
55	66	64	64	65	65	58
60	56	54	54	55	55	
65	45	44	44	44	44	44
70	34	33	33	34	33	
75	23	22	23	23	23	24
80	13	13	13	13	13	
85	5	5	5	5	5	6
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	93	26.72
0-40	153	44.04
0-60	274	78.87
0-90	347	100.00
40-90	194	55.96
60-90	73	21.13
90-180	0	0.00
0-180	347	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	37148	36485	36798
55	36241	35388	35718
65	33685	32907	33178
75	27745	27474	27668
85	16262	16847	17050

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	118	118	118	118	118	118	
2.5	118	117	118	119	119	118	
5.0	118	117	117	118	118	118	11
7.5	117	116	117	118	118	117	
10.0	117	115	116	117	117	116	
12.5	116	115	115	116	116	115	
15.0	114	113	114	115	115	114	32
17.5	113	112	112	113	113	113	
20.0	111	110	111	111	111	111	
22.5	110	109	109	110	109	109	
25.0	108	107	107	107	107	107	49
27.5	105	104	104	105	105	105	
30.0	103	102	102	102	102	102	
32.5	100	99	99	100	99	99	
35.0	97	96	96	97	96	96	60
37.5	94	93	92	93	93	93	
40.0	91	89	89	90	90	90	
42.5	87	86	85	86	86	86	
45.0	83	82	82	82	82	82	63
47.5	79	78	78	78	78	78	
50.0	75	74	74	74	74	74	
52.5	71	69	69	69	69	69	
55.0	66	64	64	65	65	65	58
57.5	61	59	59	60	60	60	
60.0	56	54	54	55	55	55	
62.5	51	49	49	50	50	50	
65.0	45	44	44	44	44	44	44
67.5	40	39	39	39	39	39	
70.0	34	33	33	34	33	33	
72.5	28	28	28	28	28	28	
75.0	23	22	23	23	23	23	24
77.5	18	17	17	18	18	17	
80.0	13	13	13	13	13	13	
82.5	8	8	8	8	8	8	
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	.111	.11	1.061	.061	.061	.06	1.021	.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	0.750	.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	.630	.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	.420	.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	.26	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.



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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.