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

Photometric Indoor Test Report

Relevant Standards
IES LM-79-2008
ANSI C82.77-2002

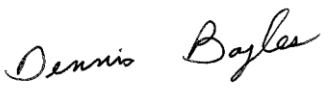
Prepared For
Environmental Lights
11235 W. Bernardo Court, Suite 102
San Diego, CA 92127

Catalog Number
swrf3528-60-4-reel
Project Number
10345709
Test Number
33054

Test Date

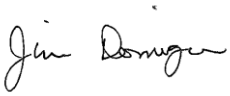
2014-06-18

Prepared By



Dennis Boyles, Technician

Approved By



Jim Domigan, Laboratory Team Leader

The results contained in this report pertain only to the tested sample.
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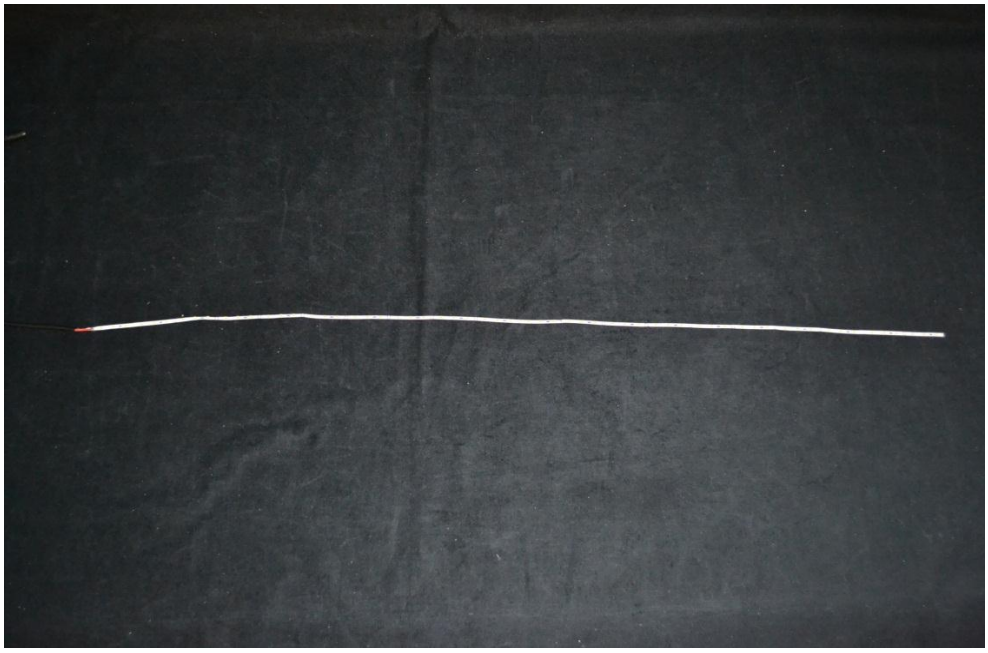
Luminaire Description:	Narrow LED Strip Light
Catalog Number:	swrf3528-60-4-reel
Lamp:	LED Array
Ballast/Driver:	One Mean Well SP-240-12 Driver

Luminaire



Test Conditions

Test Temperature:	24.6 °C
Voltage:	12.0 VDC

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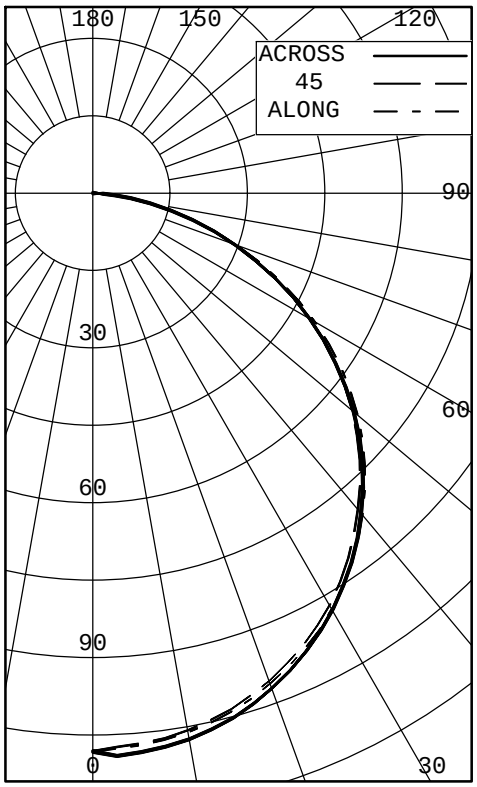

INTENSITY(CANDLEPOWER) SUMMARY

ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	108	108	108	108	108	
5	107	107	107	108	109	10
10	106	105	106	107	108	
15	104	103	104	105	105	29
20	101	100	100	102	102	
25	97	97	97	98	98	45
30	93	92	92	93	93	
35	87	87	86	87	87	54
40	81	80	80	81	81	
45	74	73	73	74	74	57
50	67	66	66	66	66	
55	59	57	57	58	57	51
60	50	48	48	49	48	
65	40	39	39	39	39	39
70	30	29	30	29	30	
75	20	20	20	20	20	21
80	11	11	11	11	11	
85	4	4	4	4	4	5
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	84	27.09
0-40	139	44.50
0-60	247	79.17
0-90	312	100.00
40-90	173	55.50
60-90	65	20.83
90-180	0	0.00
0-180	312	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	33161	32729	33020
55	32233	31639	31639
65	29847	29317	29213
75	24521	24367	24553
85	14274	14854	15780

TESTED IN ACCORDANCE WITH IES PROCEDURES.

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INTENSITY(CANDLEPOWER) DATA
IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	LUMENS
0.0	108	108	108	108	108	108	
2.5	108	107	107	109	109	108	
5.0	107	107	107	108	109	108	10
7.5	107	106	107	108	108	107	
10.0	106	105	106	107	108	106	
12.5	105	104	105	106	106	105	
15.0	104	103	104	105	105	104	29
17.5	103	102	102	103	104	103	
20.0	101	100	100	102	102	101	
22.5	99	99	99	100	100	99	
25.0	97	97	97	98	98	97	45
27.5	95	94	94	96	96	95	
30.0	93	92	92	93	93	92	
32.5	90	89	89	90	90	90	
35.0	87	87	86	87	87	87	54
37.5	85	84	83	84	84	84	
40.0	81	80	80	81	81	81	
42.5	78	77	77	78	78	77	
45.0	74	73	73	74	74	74	57
47.5	71	70	69	70	70	70	
50.0	67	66	66	66	66	66	
52.5	63	62	62	62	62	62	
55.0	59	57	57	58	57	58	51
57.5	54	53	53	53	53	53	
60.0	50	48	48	49	48	49	
62.5	45	44	44	44	44	44	
65.0	40	39	39	39	39	39	39
67.5	35	34	34	34	34	34	
70.0	30	29	30	29	30	30	
72.5	25	25	25	25	25	25	
75.0	20	20	20	20	20	20	21
77.5	15	15	15	15	16	15	
80.0	11	11	11	11	11	11	
82.5	7	7	7	8	8	7	
85.0	4	4	4	4	4	4	5
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
RCR	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	1.22	1.22	1.22	1.22	1.19	1.19	1.19	1.19	1.16	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	1.00
1	1.12	1.07	1.03	0.99	1.10	1.05	1.01	0.97	1.07	1.03	0.99	0.96	0.98	0.96	0.93	0.95	0.92	0.90	0.91	0.89	0.87	0.85
2	1.03	0.95	0.88	0.82	1.00	0.93	0.87	0.81	0.98	0.91	0.85	0.80	0.87	0.83	0.78	0.84	0.80	0.77	0.81	0.78	0.75	0.73
3	0.94	0.83	0.75	0.69	0.92	0.82	0.74	0.68	0.89	0.80	0.73	0.68	0.78	0.71	0.66	0.75	0.70	0.65	0.72	0.68	0.64	0.62
4	0.87	0.75	0.66	0.59	0.85	0.73	0.65	0.59	0.83	0.72	0.65	0.58	0.70	0.63	0.58	0.67	0.61	0.57	0.65	0.60	0.56	0.54
5	0.80	0.67	0.58	0.51	0.78	0.66	0.57	0.50	0.76	0.64	0.56	0.50	0.62	0.55	0.50	0.60	0.54	0.49	0.58	0.53	0.49	0.47
6	0.74	0.60	0.51	0.44	0.72	0.59	0.50	0.44	0.70	0.58	0.49	0.43	0.56	0.49	0.43	0.54	0.48	0.43	0.53	0.47	0.42	0.40
7	0.67	0.53	0.44	0.39	0.66	0.52	0.44	0.38	0.64	0.52	0.43	0.38	0.50	0.43	0.37	0.48	0.42	0.37	0.47	0.41	0.37	0.35
8	0.62	0.48	0.40	0.34	0.61	0.47	0.39	0.33	0.59	0.47	0.39	0.33	0.45	0.38	0.33	0.44	0.38	0.33	0.43	0.37	0.32	0.31
9	0.58	0.44	0.35	0.29	0.56	0.43	0.35	0.29	0.55	0.43	0.35	0.29	0.41	0.34	0.29	0.40	0.34	0.29	0.39	0.33	0.28	0.27
10	0.53	0.40	0.31	0.26	0.52	0.39	0.31	0.26	0.51	0.39	0.31	0.26	0.38	0.31	0.26	0.37	0.30	0.25	0.36	0.30	0.25	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° C ± 1° 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.