



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
vww3528-120-10-reel
Project Number
10345709
Test Number
33064

Test Date

2014-06-19

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

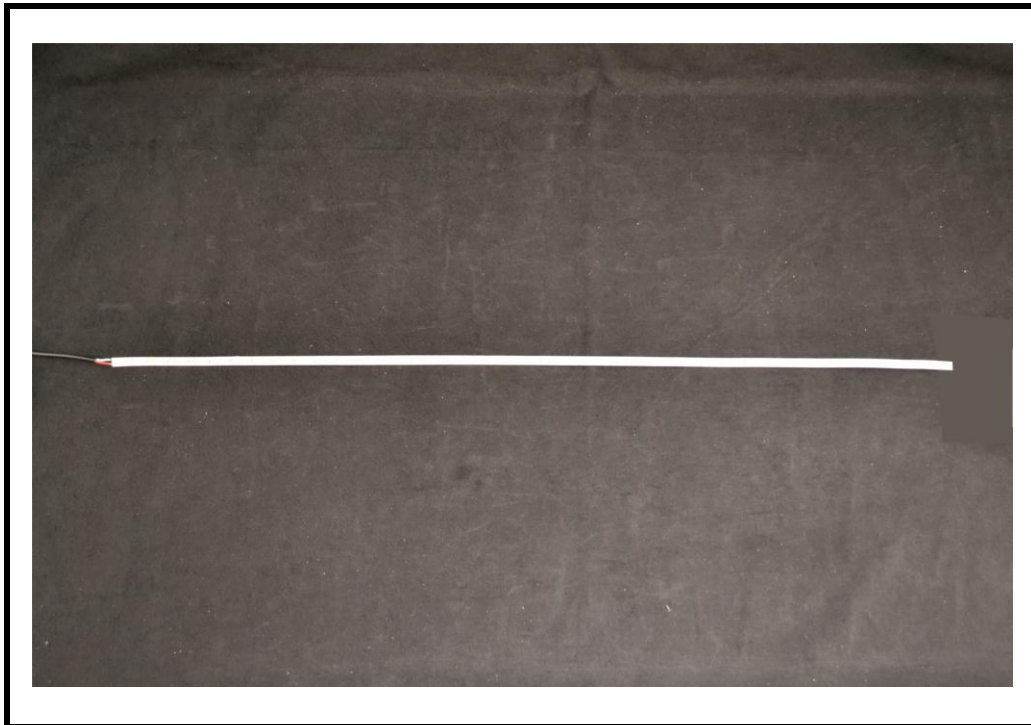
The results contained in this report pertain only to the tested sample.
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Luminaire Description: LED Strip Light
Catalog Number: vww3528-120-10-reel
Lamp: LED Array
Ballast/Driver: One Mean Well SP-240-12 Driver

Luminaire



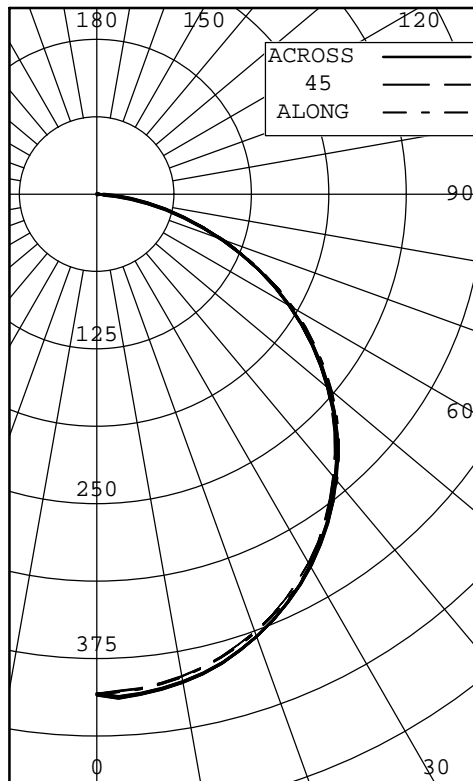
Test Conditions

Test Temperature: 24.5 °C
Voltage: 12.0 VDC



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INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	404	404	404	404	404	
5	401	399	401	405	405	39
10	396	394	395	400	400	
15	388	385	387	391	392	109
20	376	374	375	379	380	
25	362	360	361	364	364	167
30	345	343	343	346	346	
35	325	322	321	325	324	202
40	301	298	297	301	300	
45	276	273	272	274	274	210
50	248	244	243	245	245	
55	216	212	212	213	213	190
60	183	179	179	180	179	
65	148	144	144	144	144	143
70	111	108	108	108	108	
75	75	73	74	73	73	78
80	43	43	42	42	42	
85	17	17	17	16	16	20
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	315	27.19
0-40	517	44.63
0-60	917	79.21
0-90	1157	100.00
40-90	641	55.37
60-90	241	20.79
90-180	0	0.00
0-180	1157	100.00

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 39.370 INS
 WIDTH: 0.250 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.3
 SC: 1.3

ANGLE	ALONG	45	ACROSS
45	61456	60763	61255
55	59414	58387	58635
65	55018	53829	53919
75	45634	44988	44770
85	30175	29981	28205

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	404	404	404	404	404	404	
2.5	402	400	402	406	407	403	
5.0	401	399	401	405	405	402	39
7.5	399	397	398	402	403	400	
10.0	396	394	395	400	400	397	
12.5	392	390	392	396	397	393	
15.0	388	385	387	391	392	388	109
17.5	383	380	381	385	386	383	
20.0	376	374	375	379	380	377	
22.5	370	367	368	372	372	370	
25.0	362	360	361	364	364	362	167
27.5	354	352	352	355	356	354	
30.0	345	343	343	346	346	344	
32.5	335	333	333	336	336	334	
35.0	325	322	321	325	324	323	202
37.5	313	311	310	313	313	312	
40.0	301	298	297	301	300	299	
42.5	289	286	285	288	287	287	
45.0	276	273	272	274	274	273	210
47.5	262	258	258	260	260	259	
50.0	248	244	243	245	245	245	
52.5	232	228	228	230	229	229	
55.0	216	212	212	213	213	213	190
57.5	200	196	196	197	196	197	
60.0	183	179	179	180	179	180	
62.5	166	161	162	162	162	162	
65.0	148	144	144	144	144	145	143
67.5	129	126	126	126	126	126	
70.0	111	108	108	108	108	108	
72.5	93	91	91	90	90	91	
75.0	75	73	74	73	73	74	78
77.5	58	58	58	57	57	58	
80.0	43	43	42	42	42	42	
82.5	29	29	29	28	28	29	
85.0	17	17	17	16	16	16	20
87.5	7	7	7	6	6	7	
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	.98	1.071	.030	.990	.96	0.990	.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	.830	.78	0.840	.800	.77	0.810	.780	.75	0.73				
3	0.940	.840	.750	.69	0.920	.820	.740	.68	0.900	.810	.730	.68	0.780	.720	.67	0.750	.700	.65	0.730	.680	.64	0.62				
4	0.870	.750	.660	.59	0.850	.740	.650	.59	0.830	.720	.650	.58	0.700	.630	.58	0.670	.620	.57	0.650	.600	.56	0.54				
5	0.800	.670	.580	.51	0.780	.660	.570	.51	0.760	.650	.560	.50	0.620	.550	.50	0.600	.540	.49	0.590	.530	.49	0.47				
6	0.740	.600	.510	.44	0.720	.590	.500	.44	0.700	.580	.500	.44	0.560	.490	.43	0.540	.480	.43	0.530	.470	.42	0.41				
7	0.670	.530	.440	.39	0.660	.530	.440	.38	0.640	.520	.440	.38	0.500	.430	.38	0.490	.420	.37	0.480	.420	.37	0.35				
8	0.630	.480	.400	.34	0.610	.480	.390	.34	0.600	.470	.390	.33	0.460	.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	0.530	.390	.310	.26	0.510	.390	.310	.26	0.380	.310	.26	0.370	.300	.26	0.360	.300	.26	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.