



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
nwrEV3014-96-reel
Project Number
10345709
Test Number
33089

Test Date

2014-06-21

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

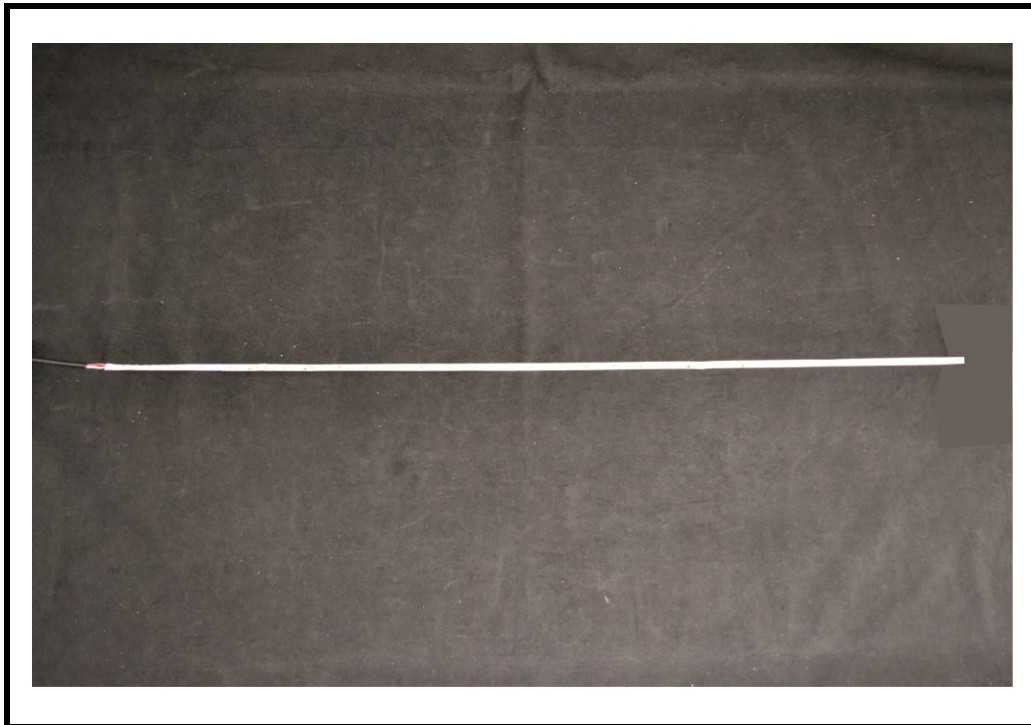
The results contained in this report pertain only to the tested sample.
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Luminaire Description: LED Strip Light
Catalog Number: nwrEV3014-96-reel
Lamp: LED Array
Ballast/Driver: One Mean Well SP-240-12 Driver

Luminaire



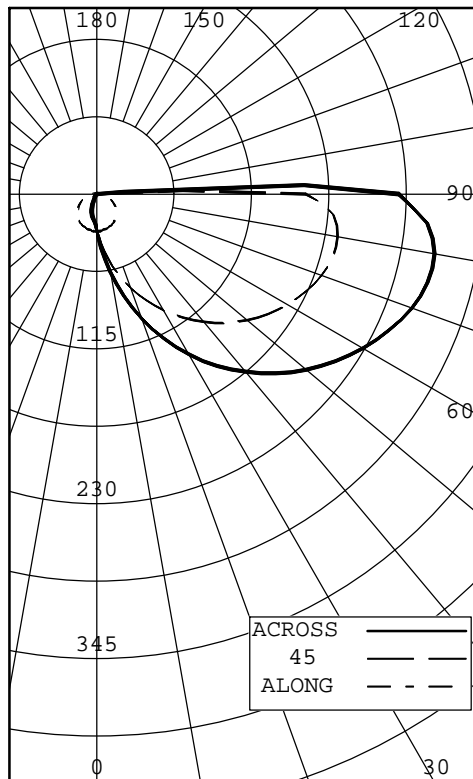
Test Conditions

Test Temperature: 24.7 °C
Voltage: 12.0 VDC



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INTENSITY (CANDLEPOWER) SUMMARY OUTPUT
 BEAM SIDE LUMENS



ANGLE	ALONG	67.5	45	22.5	ACROSS	LUMENS
0	27	27	27	27	27	
5	28	31	37	39	41	2
15	27	42	61	74	79	8
25	26	54	87	110	119	19
35	23	65	112	145	156	32
45	21	76	136	175	189	48
55	17	85	155	201	217	63
65	13	103	172	222	240	77
75	9	100	181	236	254	85
85	4	78	177	229	246	82
90	2	65	155	207	224	
95	0	1	1	11	21	20
105	0	0	0	0	0	0
115	0	0	0	0	0	0
125	0	0	0	0	0	0
135	0	0	0	0	0	0
145	0	0	0	0	0	0
155	0	0	0	0	0	0
165	0	0	0	0	0	0
175	0	0	0	0	0	0
180	0	0	0	0	0	0

BOTH SIDES
 ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	36	7.86
0-40	71	15.62
0-60	186	40.99
0-90	433	95.55
40-90	363	79.93
60-90	247	54.55
90-180	20	4.45
0-180	454	100.00

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 39.370 INS
 WIDTH: 0.062 INS

LUMINANCE SUMMARY - CD./SQ.M.

ANGLE	ALONG	45	ACROSS
45	18858	122237	170014
55	18820	172699	240711
65	19533	258594	361535
75	22081	445594	626548
85	29144	1289283	1800686

TESTED IN ACCORDANCE WITH IES PROCEDURES.



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BEAM SIDE
INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	67.5	45	22.5	ACROSS	AVERAGE	
0	27	27	27	27	27	27	
5	28	31	37	39	41	35	2
10	27	37	48	56	59	46	
15	27	42	61	74	79	57	8
20	26	48	74	92	99	69	
25	26	54	87	110	119	81	19
30	25	60	100	128	138	92	
35	23	65	112	145	156	103	32
40	22	71	124	160	172	113	
45	21	76	136	175	189	123	48
50	19	80	146	189	203	132	
55	17	85	155	201	217	139	63
60	15	102	164	212	229	150	
65	13	103	172	222	240	156	77
70	11	103	178	231	249	160	
75	9	100	181	236	254	162	85
80	7	80	182	237	255	157	
85	4	78	177	229	246	152	82
90	2	65	155	207	224	135	
95	0	1	1	11	21	6	20
100	0	1	0	0	0	0	
105	0	0	0	0	0	0	0
110	0	0	0	0	0	0	
115	0	0	0	0	0	0	0
120	0	0	0	0	0	0	
125	0	0	0	0	0	0	0
130	0	0	0	0	0	0	
135	0	0	0	0	0	0	0
140	0	0	0	0	0	0	
145	0	0	0	0	0	0	0
150	0	0	0	0	0	0	
155	0	0	0	0	0	0	0
160	0	0	0	0	0	0	
165	0	0	0	0	0	0	0
170	0	0	0	0	0	0	
175	0	0	0	0	0	0	0
180	0	0	0	0	0	0	



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OPPOSITE SIDE TO BEAM
INTENSITY (CANDLEPOWER) DATA

ANGLE	PLANE					AVERAGE	OUTPUT LUMENS
	ALONG	112.5	135	157.5	ACROSS		
0	27	27	27	27	27	27	
5	28	24	22	21	21	23	1
10	27	22	19	18	18	20	
15	27	20	17	15	14	18	3
20	26	18	15	11	10	16	
25	26	17	11	8	6	13	3
30	25	15	8	5	4	11	
35	23	13	6	3	3	9	3
40	22	11	4	3	3	8	
45	21	9	4	3	2	7	3
50	19	7	3	2	2	6	
55	17	6	3	2	2	5	2
60	15	5	2	2	1	4	
65	13	4	2	1	1	4	2
70	11	3	2	1	1	3	
75	9	2	1	1	1	2	1
80	7	1	1	1	0	2	
85	4	1	0	0	0	1	1
90	2	0	0	0	0	0	
95	0	0	0	0	0	0	0
100	0	0	0	0	0	0	
105	0	0	0	0	0	0	0
110	0	0	0	0	0	0	
115	0	0	0	0	0	0	0
120	0	0	0	0	0	0	
125	0	0	0	0	0	0	0
130	0	0	0	0	0	0	
135	0	0	0	0	0	0	0
140	0	0	0	0	0	0	
145	0	0	0	0	0	0	0
150	0	0	0	0	0	0	
155	0	0	0	0	0	0	0
160	0	0	0	0	0	0	
165	0	0	0	0	0	0	0
170	0	0	0	0	0	0	
175	0	0	0	0	0	0	0
180	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	1.211	1.211	1.211	1.211	1.181	1.181	1.181	1.181	1.151	1.151	1.151	1.151	1.091	1.091	1.091	1.091	1.091	1.091	1.031	1.031	1.031	1.031	1.031	1.031	0.980	0.980	0.980	0.980	0.96
1	1.030	0.940	0.860	0.79	0.990	0.910	0.840	0.77	0.960	0.880	0.810	0.75	0.830	0.770	0.72	0.780	0.730	0.69	0.730	0.690	0.66	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
2	0.900	0.770	0.660	0.56	0.870	0.740	0.640	0.55	0.830	0.720	0.620	0.54	0.670	0.590	0.52	0.630	0.560	0.50	0.590	0.530	0.48	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
3	0.800	0.640	0.520	0.42	0.770	0.620	0.500	0.41	0.730	0.600	0.490	0.41	0.560	0.470	0.39	0.520	0.440	0.38	0.490	0.420	0.36	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
4	0.720	0.550	0.430	0.34	0.690	0.530	0.420	0.33	0.660	0.520	0.410	0.33	0.480	0.390	0.32	0.450	0.370	0.31	0.420	0.350	0.29	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
5	0.660	0.480	0.360	0.27	0.630	0.460	0.350	0.26	0.600	0.450	0.340	0.26	0.420	0.320	0.25	0.390	0.310	0.24	0.370	0.290	0.23	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
6	0.600	0.420	0.300	0.22	0.570	0.400	0.290	0.22	0.540	0.390	0.290	0.21	0.360	0.270	0.20	0.340	0.260	0.20	0.320	0.250	0.19	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
7	0.540	0.370	0.260	0.18	0.520	0.350	0.250	0.18	0.500	0.340	0.240	0.17	0.320	0.230	0.17	0.300	0.220	0.16	0.280	0.210	0.15	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
8	0.500	0.330	0.220	0.15	0.480	0.320	0.220	0.15	0.460	0.310	0.210	0.14	0.290	0.200	0.14	0.270	0.190	0.14	0.250	0.180	0.13	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
9	0.460	0.300	0.190	0.12	0.440	0.290	0.190	0.12	0.420	0.280	0.190	0.12	0.260	0.180	0.12	0.250	0.170	0.11	0.230	0.160	0.11	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
10	0.420	0.270	0.170	0.11	0.410	0.260	0.160	0.11	0.390	0.250	0.160	0.10	0.240	0.160	0.10	0.220	0.150	0.10	0.210	0.140	0.09	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07

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.

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.