



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
nw3528-450-reel
Project Number
10345709
Test Number
33081

Test Date

2014-06-16

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

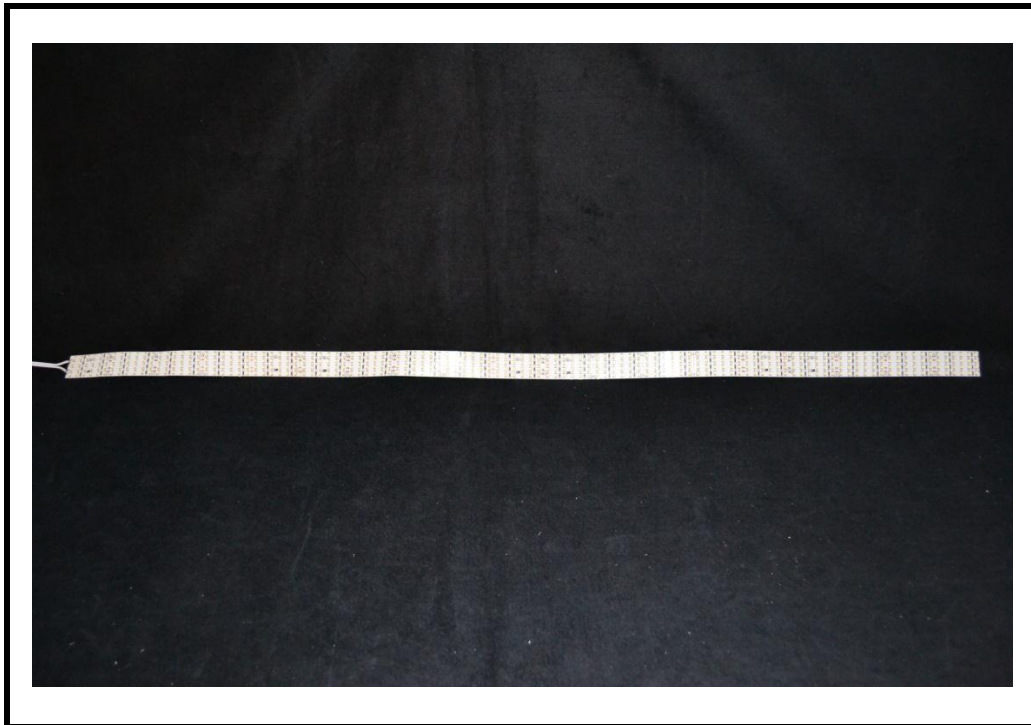
The results contained in this report pertain only to the tested sample.
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Luminaire Description: LED Strip Light
Catalog Number: nw3528-450-reel
Lamp: LED Array
Ballast/Driver: One Mean Well SP-320-24 Driver

Luminaire



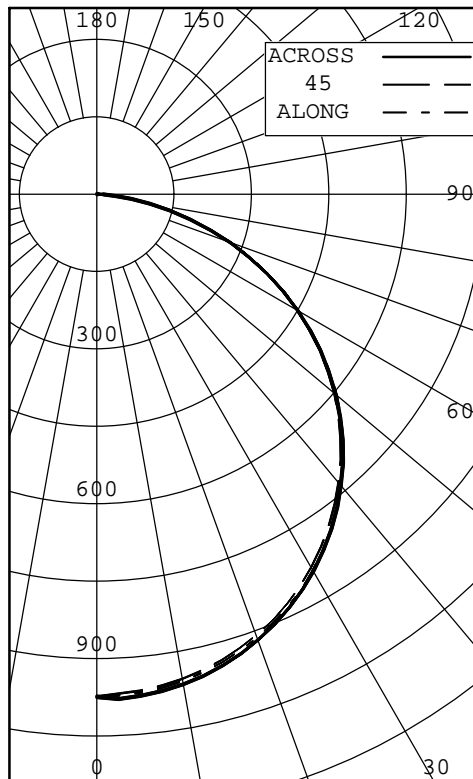
Test Conditions

Test Temperature: 24.8 °C
Voltage: 24.0 VDC



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INTENSITY (CANDLEPOWER) SUMMARY OUTPUT LUMENS



ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	974	974	974	974	974	
5	970	962	966	976	976	94
10	959	951	954	965	965	
15	940	932	935	946	946	265
20	913	906	908	918	918	
25	880	874	875	884	884	404
30	840	834	833	842	842	
35	791	785	784	791	793	492
40	737	731	729	736	736	
45	675	670	668	674	674	517
50	607	602	601	605	604	
55	533	529	527	531	530	472
60	452	448	447	449	449	
65	368	364	364	365	364	360
70	281	277	277	277	276	
75	191	189	188	188	187	200
80	107	107	105	105	104	
85	39	39	37	37	37	47
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	762	26.75
0-40	1255	44.02
0-60	2243	78.71
0-90	2850	100.00
40-90	1595	55.98
60-90	607	21.29
90-180	0	0.00
0-180	2850	100.00

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 39.370 INS
 WIDTH: 0.875 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.3
 SC: 1.3

ANGLE	ALONG	45	ACROSS
45	42941	42655	43051
55	41795	41510	41699
65	39206	38895	38901
75	33204	32765	32685
85	19979	19332	18967

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	974	974	974	974	974	974	
2.5	973	965	969	979	980	972	
5.0	970	962	966	976	976	969	94
7.5	965	958	961	971	972	964	
10.0	959	951	954	965	965	958	
12.5	950	942	946	956	957	949	
15.0	940	932	935	946	946	939	265
17.5	927	920	922	932	933	926	
20.0	913	906	908	918	918	912	
22.5	897	891	893	902	902	896	
25.0	880	874	875	884	884	879	404
27.5	861	855	855	864	864	859	
30.0	840	834	833	842	842	837	
32.5	816	811	809	817	818	814	
35.0	791	785	784	791	793	788	492
37.5	765	759	757	764	765	761	
40.0	737	731	729	736	736	733	
42.5	707	702	699	706	706	703	
45.0	675	670	668	674	674	672	517
47.5	642	637	635	640	640	638	
50.0	607	602	601	605	604	604	
52.5	571	566	565	569	568	567	
55.0	533	529	527	531	530	529	472
57.5	493	489	488	491	490	490	
60.0	452	448	447	449	449	449	
62.5	410	406	406	408	407	407	
65.0	368	364	364	365	364	365	360
67.5	326	321	321	322	320	322	
70.0	281	277	277	277	276	277	
72.5	236	233	232	233	232	233	
75.0	191	189	188	188	187	189	200
77.5	148	146	145	145	145	146	
80.0	107	107	105	105	104	106	
82.5	70	70	68	68	68	69	
85.0	39	39	37	37	37	38	47
87.5	16	17	15	15	14	15	
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	.97	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	.820	.78	0.840	.800	.76	0.810	.780	.75	0.73				
3	0.940	.830	.750	.69	0.920	.820	.740	.68	0.890	.800	.730	.67	0.770	.710	.66	0.750	.700	.65	0.720	.680	.64	0.62				
4	0.870	.740	.650	.59	0.850	.730	.650	.59	0.820	.720	.640	.58	0.690	.630	.57	0.670	.610	.57	0.650	.600	.56	0.54				
5	0.800	.670	.570	.50	0.780	.650	.570	.50	0.750	.640	.560	.50	0.620	.550	.49	0.600	.540	.49	0.580	.530	.48	0.46				
6	0.740	.590	.500	.44	0.720	.580	.500	.44	0.700	.570	.490	.43	0.560	.480	.43	0.540	.470	.43	0.530	.470	.42	0.40				
7	0.670	.530	.440	.38	0.660	.520	.440	.38	0.640	.510	.430	.37	0.500	.420	.37	0.480	.420	.37	0.470	.410	.36	0.35				
8	0.620	.480	.390	.33	0.610	.470	.390	.33	0.590	.470	.390	.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	.350	.29	0.410	.340	.29	0.400	.330	.29	0.390	.330	.28	0.27				
10	0.530	.400	.310	.26	0.520	.390	.310	.26	0.510	.390	.310	.26	0.380	.300	.26	0.370	.300	.25	0.360	.300	.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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, 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.