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

Photometric Indoor Test Report

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

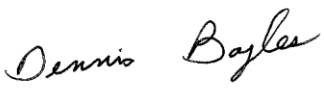
Prepared For
Environmental Lights
11235 W. Bernardo Court, Suite 102
San Diego, CA 92127

Catalog Number
vww3528-450-reel
Project Number
10345709
Test Number
33078

Test Date

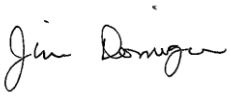
2014-06-09

Prepared By



Dennis Boyles, Technician

Approved By



Jim Domigan, Laboratory Team Leader

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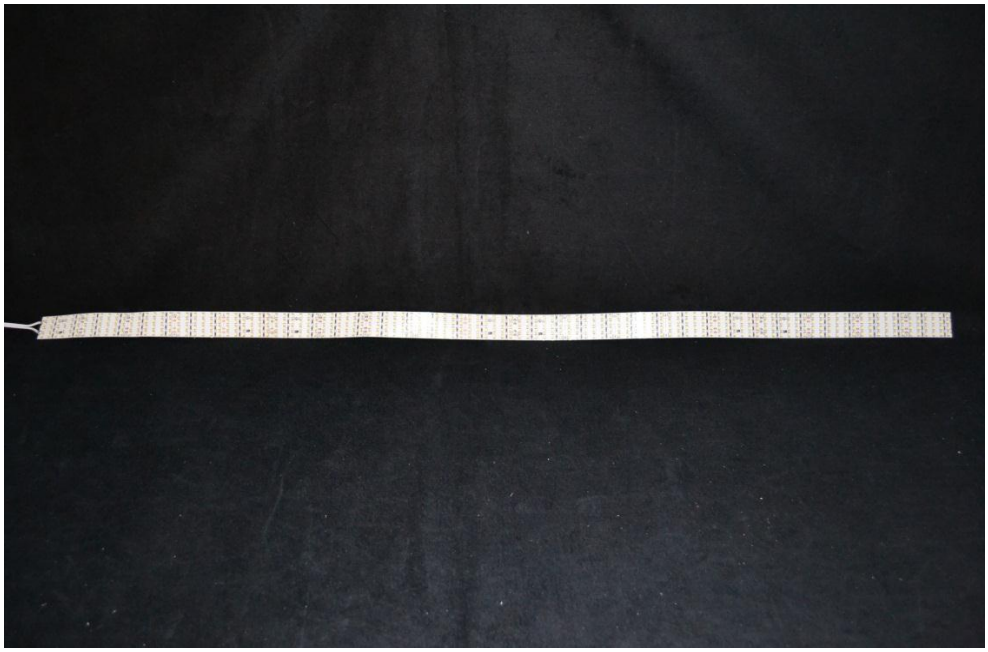
Luminaire Description:	LED Strip Light
Catalog Number:	vww3528-450-reel
Lamp:	LED Array
Ballast/Driver:	One Mean Well SP-320-24 Driver

Luminaire



Test Conditions

Test Temperature:	24.8 °C
Voltage:	24.0 VDC

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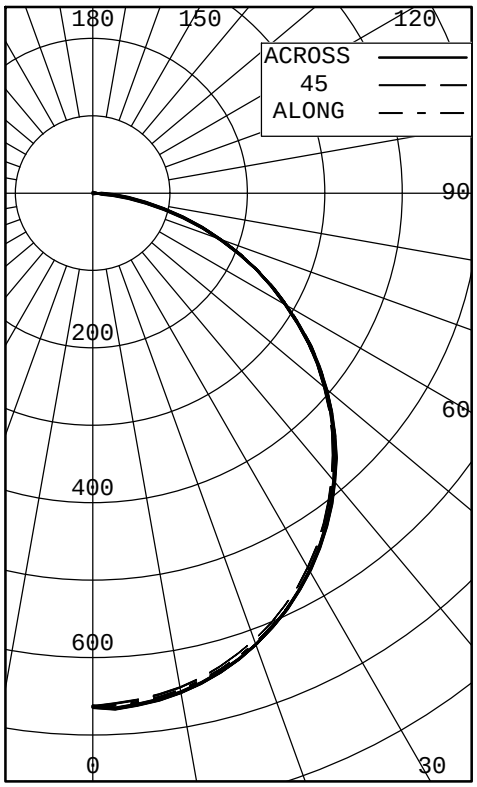

INTENSITY(CANDLEPOWER) SUMMARY

ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	663	663	663	663	663	
5	661	655	658	664	664	64
10	652	646	648	655	655	
15	637	631	634	641	640	179
20	617	612	613	619	619	
25	592	587	588	594	594	272
30	562	557	557	562	562	
35	526	521	521	526	526	327
40	486	482	481	486	485	
45	442	438	437	441	441	338
50	395	391	391	394	393	
55	345	341	340	343	342	305
60	291	287	287	289	288	
65	236	232	233	234	233	230
70	180	177	177	177	177	
75	123	121	121	122	121	129
80	71	70	70	70	70	
85	28	28	28	28	27	33
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	514	27.41
0-40	841	44.82
0-60	1484	79.10
0-90	1877	100.00
40-90	1035	55.18
60-90	392	20.90
90-180	0	0.00
0-180	1877	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	28137	27929	28178
55	27036	26785	26942
65	25125	24872	24906
75	21409	21138	21080
85	14326	14285	13992

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	663	663	663	663	663	663	
2.5	663	657	660	667	667	662	
5.0	661	655	658	664	664	660	64
7.5	657	651	654	660	660	656	
10.0	652	646	648	655	655	651	
12.5	645	639	642	649	649	644	
15.0	637	631	634	641	640	636	179
17.5	628	622	624	631	631	626	
20.0	617	612	613	619	619	616	
22.5	605	600	601	607	607	604	
25.0	592	587	588	594	594	590	272
27.5	578	573	573	579	579	576	
30.0	562	557	557	562	562	560	
32.5	544	540	539	545	544	542	
35.0	526	521	521	526	526	523	327
37.5	507	502	501	506	506	504	
40.0	486	482	481	486	485	484	
42.5	465	461	459	464	464	462	
45.0	442	438	437	441	441	440	338
47.5	419	415	415	418	418	416	
50.0	395	391	391	394	393	392	
52.5	370	367	366	369	368	368	
55.0	345	341	340	343	342	342	305
57.5	318	315	314	316	315	315	
60.0	291	287	287	289	288	288	
62.5	263	260	260	261	261	261	
65.0	236	232	233	234	233	233	230
67.5	208	205	205	205	205	206	
70.0	180	177	177	177	177	177	
72.5	151	149	149	149	148	149	
75.0	123	121	121	122	121	122	129
77.5	96	95	95	95	94	95	
80.0	71	70	70	70	70	70	
82.5	48	47	47	47	47	47	
85.0	28	28	28	28	27	28	33
87.5	12	12	12	12	12	12	
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	0.98	1.07	1.03	0.99	0.96	0.99	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	0.84	0.75	0.69	0.92	0.82	0.74	0.68	0.90	0.81	0.73	0.68	0.78	0.72	0.67	0.75	0.70	0.65	0.73	0.68	0.64	0.62
4	0.87	0.75	0.66	0.59	0.85	0.74	0.65	0.59	0.83	0.72	0.65	0.59	0.70	0.63	0.58	0.68	0.62	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	0.51	0.76	0.65	0.56	0.50	0.62	0.55	0.50	0.61	0.54	0.49	0.59	0.53	0.49	0.47
6	0.74	0.60	0.51	0.45	0.72	0.59	0.50	0.44	0.70	0.58	0.50	0.44	0.56	0.49	0.43	0.54	0.48	0.43	0.53	0.47	0.43	0.41
7	0.67	0.54	0.45	0.39	0.66	0.53	0.44	0.38	0.64	0.52	0.44	0.38	0.50	0.43	0.38	0.49	0.42	0.37	0.48	0.42	0.37	0.35
8	0.63	0.49	0.40	0.34	0.61	0.48	0.40	0.34	0.60	0.47	0.39	0.34	0.46	0.38	0.33	0.45	0.38	0.33	0.43	0.37	0.33	0.31
9	0.58	0.44	0.35	0.30	0.57	0.44	0.35	0.30	0.55	0.43	0.35	0.30	0.42	0.34	0.29	0.41	0.34	0.29	0.40	0.33	0.29	0.27
10	0.54	0.40	0.32	0.26	0.53	0.40	0.32	0.26	0.52	0.39	0.32	0.26	0.38	0.31	0.26	0.37	0.30	0.26	0.36	0.30	0.26	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° 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.