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

Photometric Indoor Test Report

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

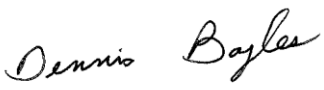
Prepared For
Environmental Lights
11235 W. Bernardo Court, Suite 102
San Diego, CA 92127

Catalog Number
wwrf3528-240-reel
Project Number
10345709
Test Number
33074

Test Date

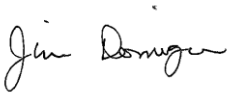
2014-06-13

Prepared By



Dennis Boyles, Technician

Approved By



Jim Domigan, Laboratory Team Leader

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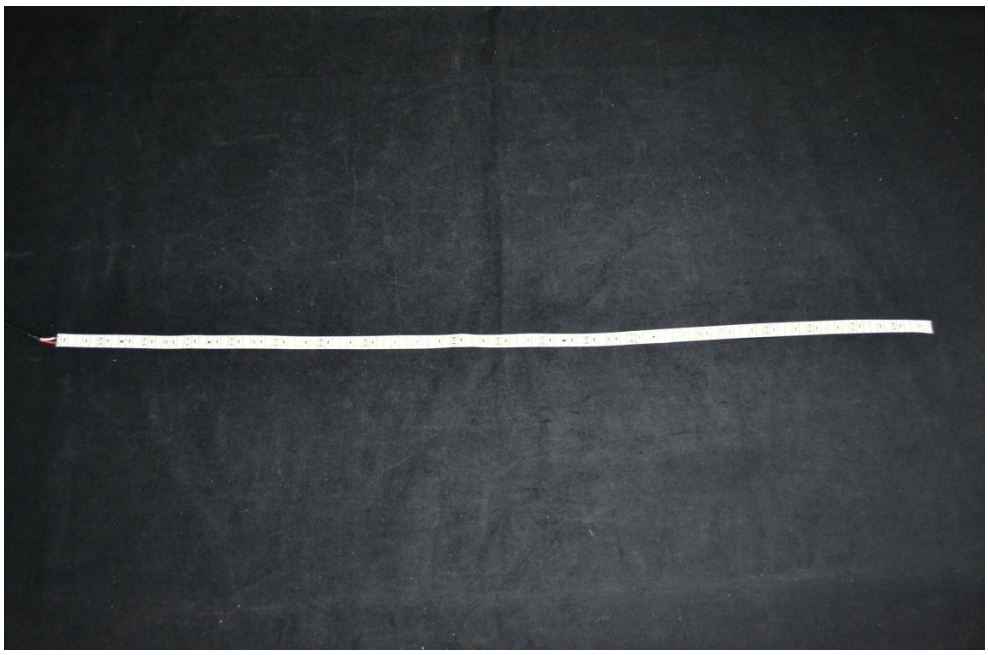
Luminaire Description:	LED Strip Light
Catalog Number:	wwrf3528-240-reel
Lamp:	LED Array
Ballast/Driver:	One Mean Well SP-320-24

Luminaire



Test Conditions

Test Temperature:	24.1 °C
Voltage:	24.0 VDC

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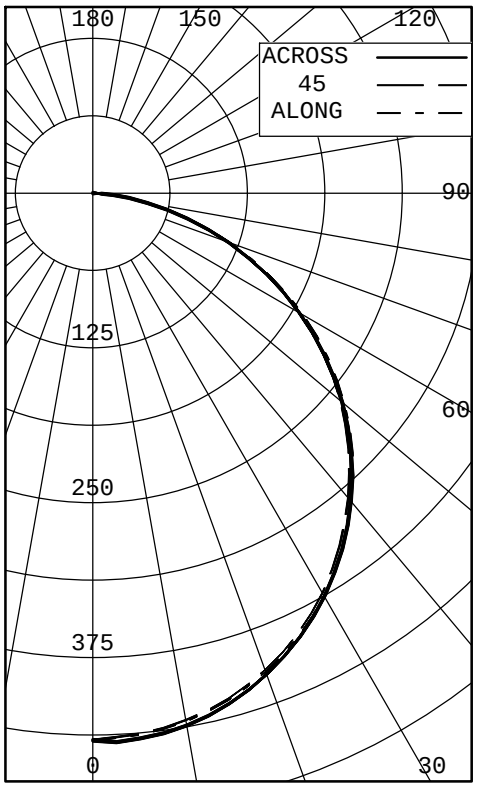

INTENSITY(CANDLEPOWER) SUMMARY

ANGLE	ALONG	22.5	45	67.5	ACROSS	OUTPUT LUMENS
0	442	442	442	442	442	
5	439	436	438	443	442	42
10	433	431	432	436	437	
15	424	421	423	427	427	119
20	411	408	409	413	413	
25	394	392	392	396	396	181
30	375	372	372	375	375	
35	351	348	347	351	351	218
40	325	322	321	324	324	
45	296	293	292	295	295	226
50	265	262	261	263	263	
55	232	228	227	229	228	204
60	196	192	192	193	192	
65	158	155	155	156	155	154
70	120	117	117	118	117	
75	81	80	80	80	80	85
80	46	46	45	45	45	
85	17	17	17	17	17	21
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	343	27.42
0-40	561	44.87
0-60	991	79.27
0-90	1250	100.00
40-90	689	55.13
60-90	259	20.73
90-180	0	0.00
0-180	1250	100.00

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 39.370 INS
WIDTH: 0.500 INS

LUMINANCE SUMMARY CD./SQ.M.

S/MH: 1.3
SC: 1.3

ANGLE	ALONG	45	ACROSS
45	32994	32651	32964
55	31835	31343	31481
65	29521	28971	28989
75	24688	24321	24278
85	15449	15262	15327

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	442	442	442	442	442	442	
2.5	440	438	440	444	444	441	
5.0	439	436	438	443	442	439	42
7.5	436	434	436	440	440	437	
10.0	433	431	432	436	437	434	
12.5	429	426	428	432	432	429	
15.0	424	421	423	427	427	424	119
17.5	418	415	416	420	420	418	
20.0	411	408	409	413	413	410	
22.5	403	400	401	405	405	402	
25.0	394	392	392	396	396	394	181
27.5	385	382	382	386	386	384	
30.0	375	372	372	375	375	373	
32.5	363	361	360	363	363	362	
35.0	351	348	347	351	351	349	218
37.5	338	335	334	338	338	336	
40.0	325	322	321	324	324	323	
42.5	311	308	307	310	310	309	
45.0	296	293	292	295	295	294	226
47.5	281	278	277	279	279	279	
50.0	265	262	261	263	263	262	
52.5	249	245	245	246	246	246	
55.0	232	228	227	229	228	229	204
57.5	214	210	210	211	211	211	
60.0	196	192	192	193	192	193	
62.5	178	174	174	174	174	174	
65.0	158	155	155	156	155	156	154
67.5	139	136	136	137	136	137	
70.0	120	117	117	118	117	118	
72.5	100	99	98	99	98	99	
75.0	81	80	80	80	80	80	85
77.5	63	62	62	62	62	62	
80.0	46	46	45	45	45	45	
82.5	30	30	30	30	30	30	
85.0	17	17	17	17	17	17	21
87.5	7	8	7	8	8	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
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	0.74	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	0.53	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	0.48	0.40	0.34	0.61	0.48	0.40	0.34	0.60	0.47	0.39	0.33	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	0.39	0.33	0.29	0.27
10	0.54	0.40	0.31	0.26	0.53	0.40	0.31	0.26	0.52	0.39	0.31	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.