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

Photometric Indoor Test Report

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

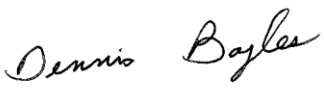
Prepared For
Environmental Lights
11235 W. Bernardo Court, Suite 102
San Diego, CA 92127

Catalog Number
wwrfEV3014-96-reel
Project Number
10345709
Test Number
33087

Test Date

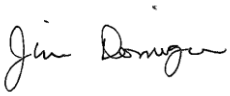
2014-06-21

Prepared By



Dennis Boyles, Technician

Approved By



Jim Domigan, Laboratory Team Leader

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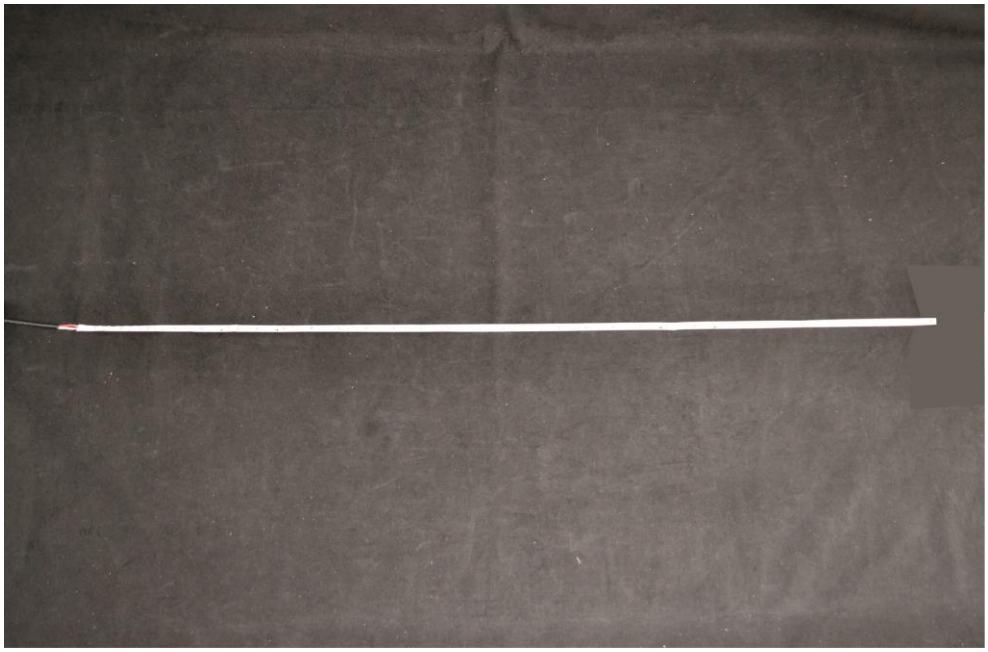
Luminaire Description:	LED Strip Light
Catalog Number:	wwrfEV3014-96-reel
Lamp:	LED Array
Ballast/Driver:	One Mean Well SP-240-12 Driver

Luminaire



Test Conditions

Test Temperature:	24.3 °C
Voltage:	12.0 VDC

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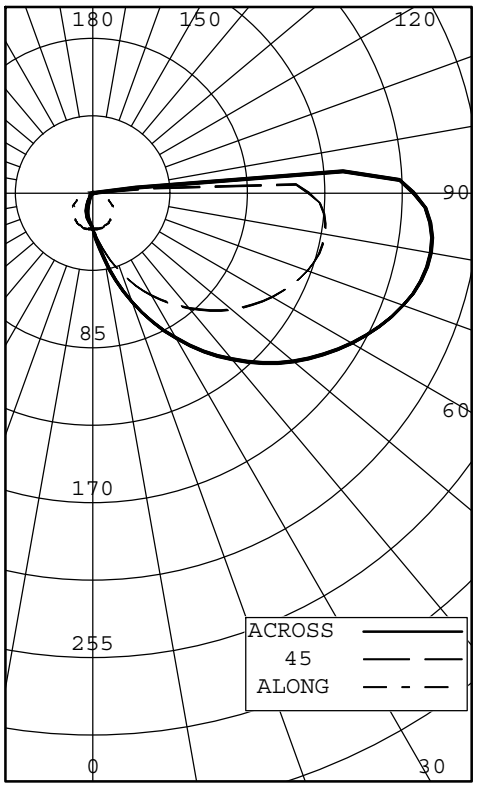

INTENSITY(CANDLEPOWER) SUMMARY

	BEAM SIDE				OUTPUT
ANGLE	ALONG	67.5	45	22.5	ACROSS	LUMENS
0	20	20	20	20	20	
5	20	22	24	26	26	1
15	20	27	39	46	50	5
25	19	34	56	72	78	12
35	17	42	74	98	106	22
45	16	49	91	122	132	33
55	13	56	107	143	155	44
65	10	70	120	160	174	55
75	7	69	129	171	187	61
85	4	54	127	171	186	60
90	1	51	119	161	176	
95	0	1	32	111	138	28
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	

BOTH SIDES
ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	24	7.21
0-40	48	14.34
0-60	128	38.25
0-90	307	91.58
40-90	259	77.23
60-90	179	53.33
90-180	28	8.42
0-180	336	100.00

EFFICACY (LUMENS PER WATT): 24.3

*** THIS IS AN ABSOLUTE TEST ***

LUMINOUS LENGTH: 39.370 INS
WIDTH: 0.062 INS

LUMINANCE SUMMARY - CD./SQ.M.

	BEAM SIDE		
ANGLE	ALONG	45	ACROSS
45	14368	82392	119172
55	14392	119022	171810
65	15025	181242	261838
75	17174	315895	459567
85	29144	930621	1361119

TESTED IN ACCORDANCE WITH IES PROCEDURES.

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BEAM SIDE
INTENSITY(CANDLEPOWER) DATA

ANGLE	PLANE						OUTPUT
	ALONG	67.5	45	22.5	ACROSS	AVERAGE	LUMENS
0	20	20	20	20	20	20	
5	20	22	24	26	26	24	1
10	20	24	31	35	37	30	
15	20	27	39	46	50	37	5
20	19	31	47	59	64	45	
25	19	34	56	72	78	53	12
30	18	38	65	85	92	61	
35	17	42	74	98	106	69	22
40	17	46	83	110	119	76	
45	16	49	91	122	132	84	33
50	15	53	100	133	144	91	
55	13	56	107	143	155	97	44
60	12	68	114	152	165	106	
65	10	70	120	160	174	110	55
70	9	70	125	167	181	114	
75	7	69	129	171	187	116	61
80	6	55	130	173	189	114	
85	4	54	127	171	186	112	60
90	1	51	119	161	176	105	
95	0	1	32	111	138	53	28
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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OPPOSITE SIDE TO BEAM
INTENSITY(CANDLEPOWER) DATA

ANGLE	PLANE						OUTPUT
	ALONG	112.5	135	157.5	ACROSS	AVERAGE	LUMENS
0	20	20	20	20	20	20	
5	20	19	18	17	17	18	1
10	20	17	16	15	14	16	
15	20	16	14	12	12	15	2
20	19	15	12	9	9	12	
25	19	13	10	7	6	10	2
30	18	12	7	4	4	9	
35	17	10	5	3	3	7	2
40	17	9	4	2	2	6	
45	16	8	3	2	2	5	2
50	15	6	3	2	2	5	
55	13	5	2	2	1	4	2
60	12	4	2	1	1	4	
65	10	4	2	1	1	3	1
70	9	3	1	1	1	2	
75	7	2	1	1	0	2	1
80	6	1	1	0	0	1	
85	4	1	0	0	0	1	0
90	1	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
RCR	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	1.21	1.21	1.21	1.21	1.17	1.17	1.17	1.17	1.13	1.13	1.13	1.13	1.06	1.06	1.06	1.00	1.00	1.00	0.94	0.94	0.94	0.92
1	1.03	0.94	0.85	0.78	0.99	0.90	0.83	0.76	0.94	0.87	0.80	0.74	0.81	0.75	0.70	0.75	0.71	0.66	0.70	0.66	0.63	0.60
2	0.90	0.77	0.66	0.56	0.86	0.74	0.64	0.55	0.82	0.71	0.61	0.53	0.65	0.58	0.51	0.61	0.54	0.48	0.56	0.51	0.46	0.42
3	0.80	0.64	0.52	0.42	0.76	0.61	0.50	0.41	0.72	0.59	0.49	0.40	0.55	0.46	0.38	0.50	0.43	0.36	0.46	0.40	0.34	0.31
4	0.72	0.55	0.43	0.34	0.69	0.53	0.42	0.33	0.65	0.51	0.41	0.32	0.47	0.38	0.31	0.44	0.36	0.29	0.40	0.33	0.28	0.25
5	0.65	0.48	0.36	0.27	0.62	0.46	0.35	0.26	0.59	0.44	0.33	0.26	0.41	0.31	0.25	0.38	0.30	0.23	0.35	0.28	0.22	0.19
6	0.59	0.42	0.30	0.22	0.56	0.40	0.29	0.21	0.54	0.38	0.28	0.21	0.36	0.27	0.20	0.33	0.25	0.19	0.30	0.23	0.18	0.15
7	0.54	0.36	0.25	0.18	0.51	0.35	0.25	0.18	0.49	0.34	0.24	0.17	0.31	0.22	0.16	0.29	0.21	0.15	0.27	0.20	0.14	0.12
8	0.49	0.32	0.22	0.15	0.47	0.31	0.22	0.15	0.45	0.30	0.21	0.14	0.28	0.20	0.14	0.26	0.18	0.13	0.24	0.17	0.12	0.10
9	0.46	0.30	0.19	0.12	0.44	0.29	0.19	0.12	0.42	0.27	0.18	0.12	0.25	0.17	0.11	0.24	0.16	0.11	0.22	0.15	0.10	0.08
10	0.42	0.27	0.17	0.11	0.40	0.26	0.16	0.11	0.39	0.25	0.16	0.10	0.23	0.15	0.10	0.21	0.14	0.09	0.20	0.13	0.09	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° 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.