



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
ct3528-450-reel-B
Project Number
10345709
Test Number
33077B

Test Date

2014-06-13

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

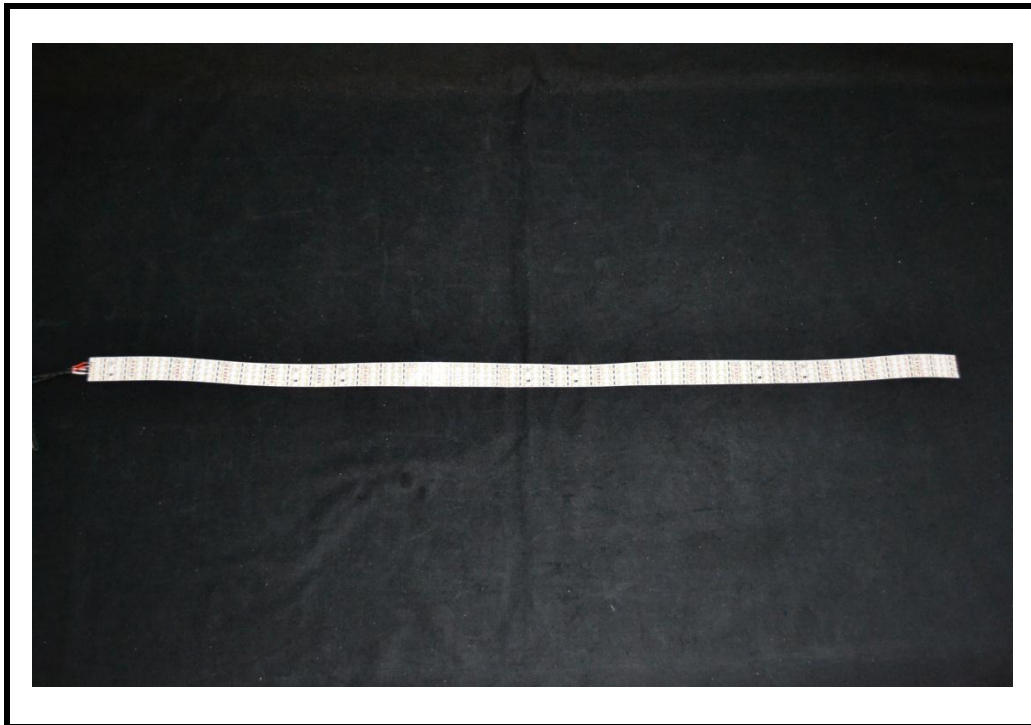
The results contained in this report pertain only to the tested sample.
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Luminaire Description: LED Strip Light
Catalog Number: ct3528-450-reel-B
Lamp: LED Array
Ballast/Driver: One Mean Well SP-320-24 Driver

Luminaire



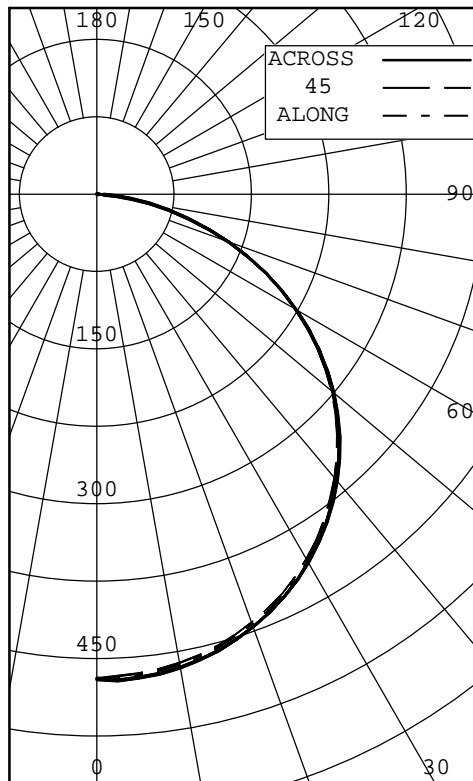
Test Conditions

Test Temperature: 24.5 °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	470	470	470	470	470	
5	468	464	466	471	470	45
10	463	459	461	466	466	
15	455	451	453	458	458	128
20	443	440	441	446	446	
25	428	426	426	430	430	197
30	410	407	407	411	411	
35	387	385	385	388	388	241
40	362	359	359	362	362	
45	333	330	330	332	332	255
50	300	298	297	299	299	
55	264	261	261	263	263	234
60	224	222	222	223	223	
65	183	181	181	181	181	179
70	139	137	138	138	137	
75	94	93	94	93	93	99
80	53	51	52	52	52	
85	19	18	20	19	19	24
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	370	26.42
0-40	612	43.65
0-60	1100	78.52
0-90	1401	100.00
40-90	789	56.35
60-90	301	21.48
90-180	0	0.00
0-180	1401	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	21157	21049	21235
55	20709	20572	20682
65	19467	19322	19338
75	16376	16335	16203
85	9576	10170	9898

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	470	470	470	470	470	470	
2.5	469	465	467	472	472	469	
5.0	468	464	466	471	470	468	45
7.5	466	462	464	469	469	466	
10.0	463	459	461	466	466	463	
12.5	459	456	458	462	462	459	
15.0	455	451	453	458	458	455	128
17.5	449	446	447	452	452	449	
20.0	443	440	441	446	446	443	
22.5	436	433	434	439	438	436	
25.0	428	426	426	430	430	428	197
27.5	419	417	417	421	421	419	
30.0	410	407	407	411	411	409	
32.5	399	396	396	400	400	398	
35.0	387	385	385	388	388	386	241
37.5	375	372	372	375	376	374	
40.0	362	359	359	362	362	360	
42.5	347	345	345	348	348	346	
45.0	333	330	330	332	332	331	255
47.5	317	314	314	316	316	315	
50.0	300	298	297	299	299	298	
52.5	283	280	280	282	281	281	
55.0	264	261	261	263	263	262	234
57.5	245	242	242	243	243	243	
60.0	224	222	222	223	223	223	
62.5	204	202	202	202	202	202	
65.0	183	181	181	181	181	181	179
67.5	161	159	160	160	159	160	
70.0	139	137	138	138	137	138	
72.5	117	115	116	116	115	115	
75.0	94	93	94	93	93	93	99
77.5	73	72	72	72	72	72	
80.0	53	51	52	52	52	52	
82.5	34	33	35	34	34	34	
85.0	19	18	20	19	19	19	24
87.5	7	7	8	8	8	8	
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	1.091	.051	.010	.97	1.071	.030	.990	.96	0.980	.950	.93	0.950	.920	.90	0.910	.890	.87	0.85				
2	1.030	.950	.880	.82	1.000	.930	.860	.81	0.980	.910	.850	.80	0.870	.820	.78	0.840	.800	.76	0.810	.780	.75	0.72				
3	0.940	.830	.750	.68	0.920	.820	.740	.68	0.890	.800	.730	.67	0.770	.710	.66	0.740	.690	.65	0.720	.680	.64	0.62				
4	0.870	.740	.650	.59	0.840	.730	.650	.58	0.820	.720	.640	.58	0.690	.620	.57	0.670	.610	.56	0.650	.600	.56	0.53				
5	0.800	.660	.570	.50	0.780	.650	.560	.50	0.750	.640	.560	.50	0.620	.550	.49	0.600	.540	.49	0.580	.530	.48	0.46				
6	0.730	.590	.500	.44	0.710	.580	.490	.43	0.690	.570	.490	.43	0.550	.480	.43	0.540	.470	.42	0.520	.460	.42	0.40				
7	0.670	.530	.440	.38	0.650	.520	.430	.38	0.640	.510	.430	.37	0.500	.420	.37	0.480	.410	.36	0.470	.410	.36	0.34				
8	0.620	.480	.390	.33	0.610	.470	.390	.33	0.590	.460	.380	.33	0.450	.380	.33	0.440	.370	.32	0.430	.370	.32	0.30				
9	0.580	.440	.350	.29	0.560	.430	.340	.29	0.550	.420	.340	.29	0.410	.340	.29	0.400	.330	.28	0.390	.330	.28	0.26				
10	0.530	.400	.310	.26	0.520	.390	.310	.26	0.510	.380	.310	.25	0.370	.300	.25	0.360	.300	.25	0.360	.290	.25	0.23				

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.