

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 sw-module-5050-3 Project Number 10345709 Test Number 33101

Test Date

2014-06-23

Prepared By

Dennis Boyles

Dennis Boyles, Technician

Approved By

Jim Donugen

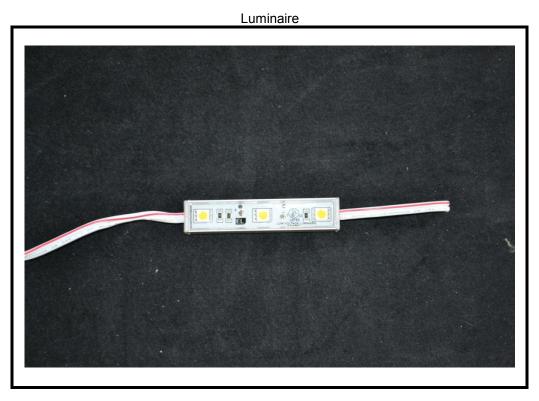
Jim Domigan, Laboratory Team Leader

The results contained in this report pertain only to the tested sample. This report shall not be reproduced, except in full, without written approval of Underwriters Laboratories.



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Luminaire Description:LED Strip LightCatalog Number:sw-module-5050-3Lamp:LED ArrayBallast/Driver:One Mean Well SP-240-12 Driver



Test ConditionsTest Temperature:24.8 °CVoltage:12.0 VDC



	II	INTENSITY(CANDLEPOWER) SUMMARY										
	ANCTE	ALONG	22.5	67 F	ACROSS	LUMENS						
	ANGLE 0	ALONG 16	22.5 16	45 16	16	16						
	5	10	16	16	17	17	2					
180 / 1/50 / 1/20	10	16	16	16	16	16	2					
ACROSS	15	16	16	16	16	16	4					
$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	20	15	15	15	15	15	-					
ALONG	25	15	15	15	15	15	7					
Y Y H	30	14	14	14	14	14						
	35	13	13	13	13	13	8					
90	40	12	12	12	12	12						
	45	11	11	11	11	11	9					
	50	10	10	10	10	10						
	55	9	9	9	9	9	8					
$\langle \rangle \times \times \times \times$	60	7	7	7	7	7	~					
\mathcal{T}	65	6	6 5	6	6 5	6	б					
///	70 75	4 3	3	5 3	5 3	5 3	3					
	80	2	2	2	2	2	5					
	85	1	1	1	1	1	1					
	90	0	0	0	0	0	-					
10 K X												
ZONAL LUMENS AND PERCENTAGES												
		ZONE	LUN	4ENS %	LUMI	NAIRE						
		0-30		13	27	7.06						
15		0-40		21	44	1.41						
		0-60		38	79	9.07						
		0-90		47	100	0.00						
		40-90		26 10		5.59						
		60-90).93							
ф <i>1</i> <u></u>		90-180)		0.00							
		0-180		47	100	0.00						
*** THIS IS AN ABSOLUTE TEST ***												
		LUMINC	DUS LEN	NGTH:	3.250							
			WII)TH:	0.250) INS						
LUMINANCE SUMMARY CD./SQ.M.						S/MH:	1.3					
						SC:	1.3					
ANGLE ALONG 45 ACROS	s											
45 30216 30060 30467												
55 29102 29380 29380)											
65 26632 27405 27185	7											

652663227405271877522112225072256685131331426414282

TESTED IN ACCORDANCE WITH IES PROCEDURES.



INTENSITY(CANDLEPOWER) DATA IN 2.5 DEGREE STEPS

ALONG22.54567.5ACROSSAVERAGELUMENS0.016161617171622.517161617171625.017161617171627.51616161616161610.01616161616161612.51616161616161615.01515151515151522.515151515151522.51515151515727.5151414141432.51414131313133313131313131340.0121212121242.512121212121445.011111111111150.01010101010955.0999999860.077777762.577777765.066666667.555555572.54444 <t< th=""><th>ANGLE</th><th></th><th></th><th></th><th>OUTPUT</th></t<>	ANGLE				OUTPUT			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		ALONG	22.5	45	67.5	ACROSS	AVERAGE	LUMENS
$\begin{array}{cccccccccccccccccccccccccccccccccccc$								
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.0	16	16	16	16	16	16	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2.5							
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5.0	17	16		17	17	16	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					17	16		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$								
15.016161616161616417.51616151616161620.01515151515151522.51515151515151525.0151515151515727.515141414141430.014141314141435.01313131313837.513131313131340.012121212121242.512121212121447.51111111111947.51111111111950.01010101010955.0999999865.066666667.555555572.544444475.0333333377.5222222280.0222222282.51111111187.50 <t< td=""><td></td><td>16</td><td>16</td><td>16</td><td>16</td><td>16</td><td>16</td><td></td></t<>		16	16	16	16	16	16	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		16			16	16	16	4
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17.5	16		15	16	16	16	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20.0		15	15	15	15	15	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	22.5	15	15	15	15	15	15	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	25.0	15	15	15	15	15	15	7
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		15						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	30.0	14		14	14	14	14	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	32.5	14	14	13	14	14	14	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	35.0	13	13	13	13	13	13	8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	37.5	13	13	13	13	13	13	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	40.0	12	12	12	12	12	12	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	42.5	12	12	12	12	12	12	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	45.0	11	11	11	11	11	11	9
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	47.5	11	11	11	11	11	11	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	50.0	10	10	10	10	10	10	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	52.5	9	9	9	10	10	9	
	55.0	9	9	9	9	9	9	8
	57.5	8	8	8	8	8	8	
65.0 6 6 6 6 6 6 6 67.5 5 5 5 5 5 5 5 70.0 4 5 5 5 5 5 5 72.5 4 4 4 4 4 4 75.0 3 3 3 3 3 3 3 77.5 2 2 2 2 2 2 2 80.0 2 2 2 2 2 2 2 82.5 1 1 1 1 1 1 1 85.0 1 1 1 1 1 1 1 87.5 0 0 0 0 0 0 0	60.0	7	7	7	7	7	7	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	62.5	7	7	7	7	7	7	
70.0 4 5 5 5 5 5 72.5 4 4 4 4 4 4 75.0 3 3 3 3 3 3 3 77.5 2 2 2 2 2 2 2 80.0 2 2 2 2 2 2 2 82.5 1 1 1 1 1 1 1 85.0 1 1 1 1 1 1 1 87.5 0 0 0 0 0 0 0	65.0	б		6	б			6
72.5 4 4 4 4 4 4 75.0 3 3 3 3 3 3 3 77.5 2 2 2 2 2 2 2 80.0 2 2 2 2 2 2 2 82.5 1 1 1 1 1 1 1 85.0 1 1 1 1 1 1 1 87.5 0 0 0 0 0 0 0	67.5	5						
75.03333333377.522222280.022222282.511111185.011111187.5000000	70.0	4	5	5	5	5	5	
77.522222280.022222282.511111185.011111187.5000000	72.5	4	4	4	4	4	4	
80.0 2 2 2 2 2 2 82.5 1 1 1 1 1 1 85.0 1 1 1 1 1 1 87.5 0 0 0 0 0 0	75.0							3
82.5 1 1 1 1 1 85.0 1 1 1 1 1 1 87.5 0 0 0 0 0 0	77.5	2	2	2	2	2	2	
85.0 1		2						
87.5 0 0 0 0 0 0	82.5	1	1			1	1	
	85.0	1	1	1		1	1	1
90.0 0 0 0 0 0		0	0	0	0			
	90.0	0	0	0	0	0	0	



COEFFICIENTS OF UTILIZATION

ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE = .20

CC WALL		90			80			70				50			30				10		0	
ШЦАМ	70	50	30	10	70	50	30	10	70	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 1.061.061.06 1.021.021.02 1.00 1 1.131.081.041.00 1.101.061.020.98 1.071.041.000.97 0.990.960.94 0.950.930.91 0.920.900.88 0.86 2 1.030.950.890.83 1.010.940.870.82 0.990.920.860.81 0.880.830.79 0.850.810.77 0.820.790.76 0.74 3 0.950.840.760.70 0.920.820.750.69 0.900.810.740.68 0.780.720.67 0.750.700.66 0.730.690.65 0.63 4 0.870.750.660.60 0.850.740.660.59 0.830.730.650.59 0.700.640.58 0.680.620.58 0.660.610.57 0.55 5 0.810.670.580.51 0.780.660.570.51 0.760.650.570.51 0.630.560.50 0.610.550.50 0.590.540.49 0.47 6 0.740.600.510.45 0.720.590.500.44 0.700.580.500.44 0.560.490.44 0.550.480.43 0.530.470.43 0.41 7 0.680.540.450.39 0.660.530.440.39 0.650.520.440.38 0.500.430.38 0.490.420.37 0.480.420.37 0.35 8 0.630.490.400.34 0.610.480.400.34 0.600.470.390.34 0.460.390.33 0.450.380.33 0.430.370.33 0.31 9 0.580.440.350.30 0.570.440.350.30 0.550.430.350.30 0.420.340.29 0.410.340.29 0.400.330.29 0.27 10 0.540.400.320.26 0.530.440.320.26 0.520.390.320.26 0.380.310.26 0.370.300.26 0.360.300.26 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.



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 \pm 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.