



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  
**SFR-NW-B-20**  
Project Number  
**10345709**  
Test Number  
**33049**

Test Date

2014-06-09

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

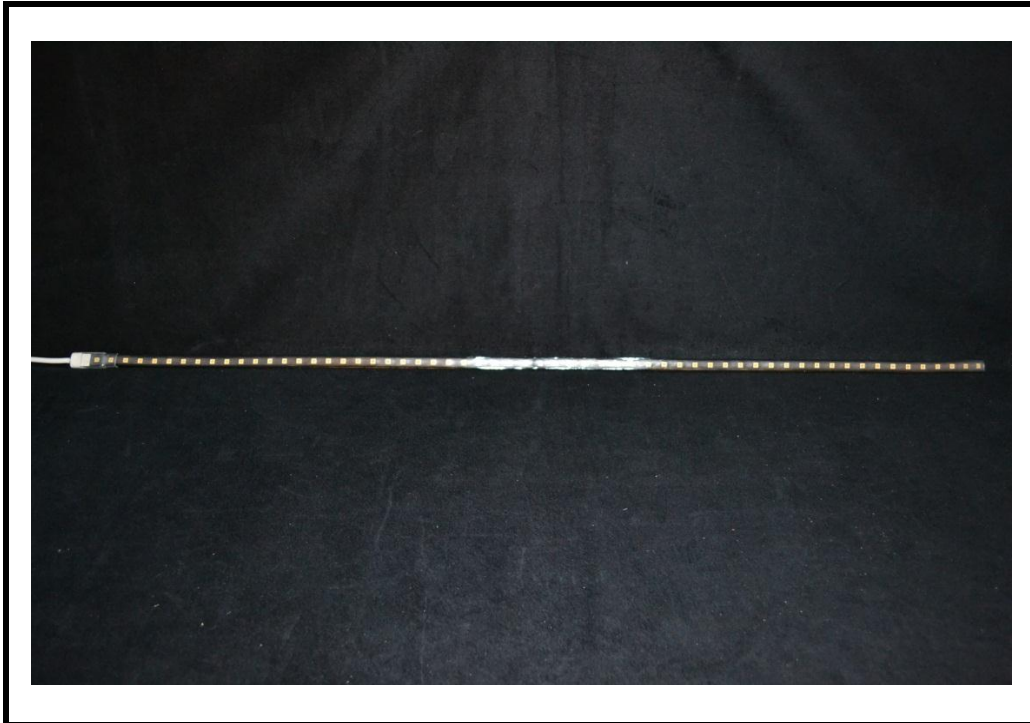
The results contained in this report pertain only to the tested sample.  
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Luminaire Description: LED Super Flat Rope  
Catalog Number: SFR-NW-B-20  
Lamp: 60 LEDs  
Ballast/Driver: One Mean Well SP-320-24 Driver

Luminaire



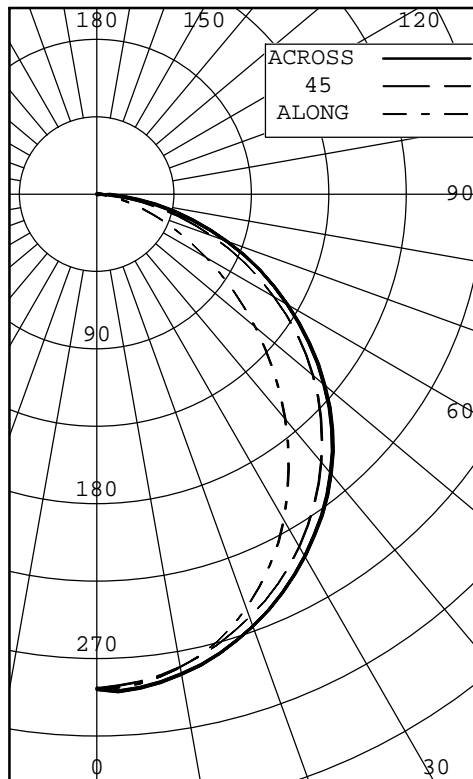
Test Conditions

Test Temperature: 24.7 °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	288	288	288	288	288	
5	286	283	285	287	288	27
10	280	278	279	283	284	
15	270	268	271	275	276	77
20	256	256	261	266	267	
25	238	242	250	255	256	114
30	218	226	236	241	243	
35	195	207	220	227	228	135
40	170	187	203	210	212	
45	145	166	184	192	194	137
50	120	143	164	172	173	
55	96	119	142	149	151	119
60	73	95	119	126	128	
65	53	72	95	102	105	86
70	35	50	72	79	81	
75	21	32	49	55	58	46
80	10	14	28	33	35	
85	3	4	10	14	15	11
90	0	0	0	0	0	

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	218	28.98
0-40	353	46.91
0-60	609	80.91
0-90	753	100.00
40-90	400	53.09
60-90	144	19.09
90-180	0	0.00
0-180	753	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(ALONG): 1.1, SC(ACROSS): 1.3

ANGLE	ALONG	45	ACROSS
45	16191	20612	21629
55	13199	19609	20780
65	9828	17799	19581
75	6343	14864	17621
85	2710	9284	13966

TESTED IN ACCORDANCE WITH IES PROCEDURES.



INTENSITY (CANDLEPOWER) DATA  
 IN 2.5 DEGREE STEPS

ANGLE	PLANE						OUTPUT LUMENS
	ALONG	22.5	45	67.5	ACROSS	AVERAGE	
0.0	288	288	288	288	288	288	
2.5	287	285	286	289	289	287	
5.0	286	283	285	287	288	286	27
7.5	283	281	282	285	286	283	
10.0	280	278	279	283	284	280	
12.5	275	273	276	279	280	276	
15.0	270	268	271	275	276	272	77
17.5	263	263	266	271	272	267	
20.0	256	256	261	266	267	261	
22.5	247	250	256	260	262	255	
25.0	238	242	250	255	256	248	114
27.5	228	234	243	248	249	241	
30.0	218	226	236	241	243	233	
32.5	206	217	228	234	235	225	
35.0	195	207	220	227	228	216	135
37.5	183	197	212	219	220	207	
40.0	170	187	203	210	212	198	
42.5	158	176	194	202	203	188	
45.0	145	166	184	192	194	178	137
47.5	133	154	175	182	184	167	
50.0	120	143	164	172	173	156	
52.5	108	131	154	161	162	145	
55.0	96	119	142	149	151	134	119
57.5	84	107	131	138	139	122	
60.0	73	95	119	126	128	110	
62.5	63	83	107	114	116	98	
65.0	53	72	95	102	105	87	86
67.5	44	61	84	91	93	76	
70.0	35	50	72	79	81	65	
72.5	28	40	60	67	69	54	
75.0	21	32	49	55	58	44	46
77.5	15	23	38	44	46	34	
80.0	10	14	28	33	35	24	
82.5	6	9	18	23	25	16	
85.0	3	4	10	14	15	9	11
87.5	1	2	5	7	8	4	
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	.061	.06	1.021	.021	.021	.02	1.00
	1	1.121	.081	.041	.00	1.101	.061	.020	.98	1.071	.031	.000	.97	0.990	.960	.94	0.950	.930	.91	0.920	.900	.88	0.86			
	2	1.030	.960	.890	.83	1.010	.940	.880	.82	0.990	.920	.860	.81	0.880	.840	.79	0.850	.810	.78	0.820	.790	.76	0.74			
	3	0.950	.850	.770	.70	0.930	.830	.760	.70	0.900	.820	.750	.69	0.790	.730	.68	0.760	.710	.67	0.740	.690	.66	0.64			
	4	0.880	.760	.670	.61	0.860	.750	.670	.60	0.840	.730	.660	.60	0.710	.640	.59	0.690	.630	.59	0.670	.620	.58	0.56			
	5	0.810	.680	.590	.52	0.790	.670	.590	.52	0.770	.660	.580	.52	0.640	.570	.52	0.620	.560	.51	0.600	.550	.50	0.48			
	6	0.750	.610	.520	.46	0.730	.600	.520	.46	0.710	.590	.510	.45	0.570	.500	.45	0.560	.490	.45	0.540	.490	.44	0.42			
	7	0.680	.550	.460	.40	0.670	.540	.460	.40	0.650	.530	.450	.39	0.520	.440	.39	0.500	.440	.39	0.490	.430	.38	0.37			
	8	0.640	.500	.410	.35	0.620	.490	.410	.35	0.610	.480	.400	.35	0.470	.400	.35	0.460	.390	.34	0.450	.390	.34	0.32			
	9	0.590	.450	.370	.31	0.580	.450	.370	.31	0.560	.440	.360	.31	0.430	.360	.31	0.420	.350	.31	0.410	.350	.30	0.29			
	10	0.550	.410	.330	.28	0.540	.410	.330	.28	0.520	.400	.330	.27	0.390	.320	.27	0.380	.320	.27	0.370	.310	.27	0.25			

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.