

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P487012

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3LO-35-120-EDD-90**

Issue Date: 3/1/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P487012
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35357)
Test Lab: INNOVATION CENTER
Issue Date: 3/1/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-89BC-LD4-3LO-35-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

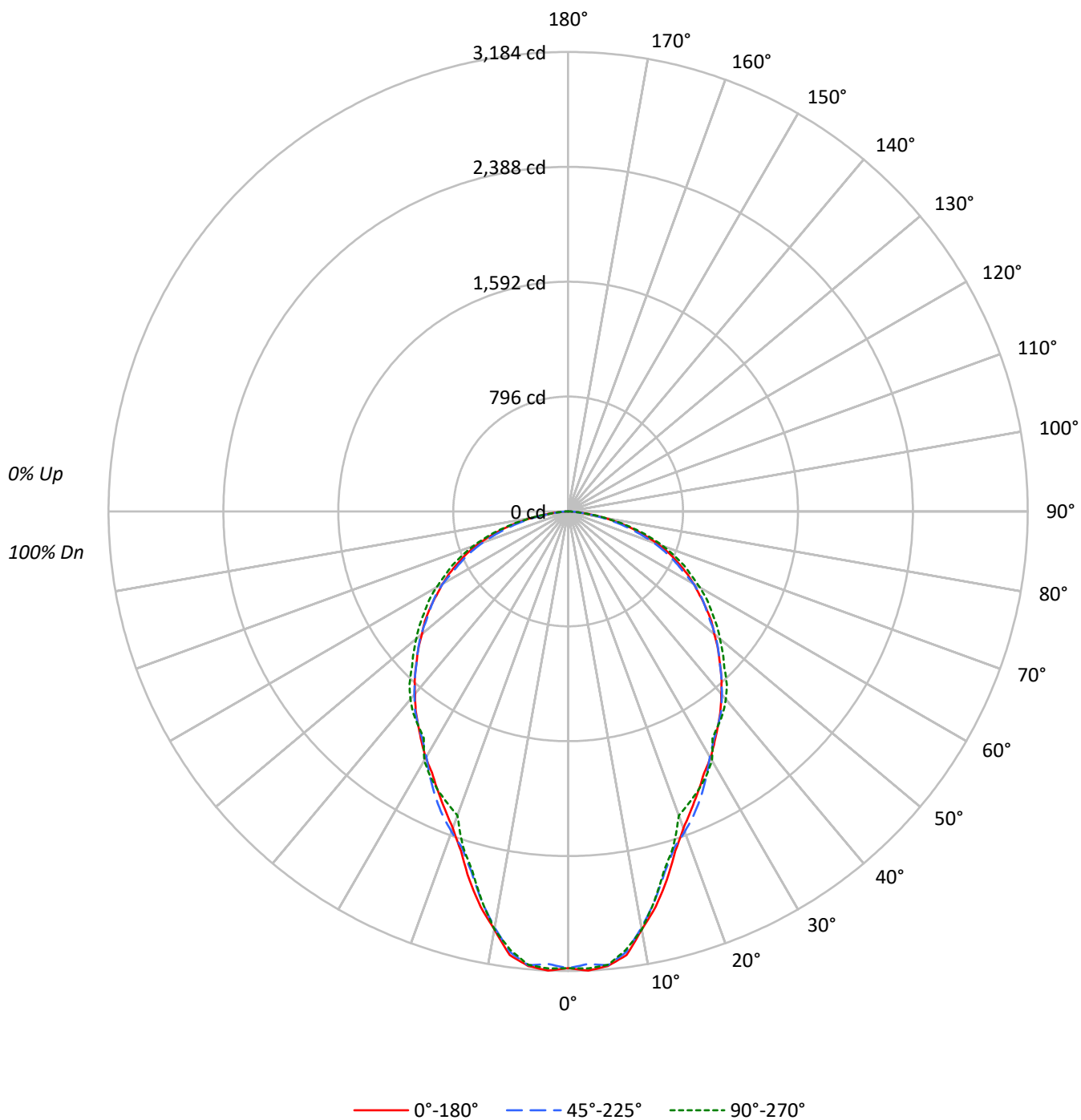
Lumens per Lamp: N/A
Luminaire Lumens: 6768.1 lumens
Efficiency: N/A
Efficacy: 96.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0			
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84			
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60			
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45			
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39			
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35			
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31			
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	35	30	28			
10	54	41	33	28	53	40	33	28	40	33	28	39	32	28	38	32	28	26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4258	4258	4258
5°	4270	4263	4259
10°	4018	4000	4016
15°	3682	3601	3581
20°	3344	3381	3209
25°	3171	3235	3166
30°	3063	3050	3096
35°	2973	2973	2973
40°	2899	2911	2983
45°	2828	2825	2912
50°	2766	2787	2873
55°	2737	2726	2849
60°	2701	2697	2834
65°	2667	2583	2819
70°	2616	2467	2745
75°	2421	2190	2541
80°	1963	1785	2015
85°	1244	1118	1093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.9	4.3
10°-20°	734.8	10.9
20°-30°	992.4	14.7
30°-40°	1136.5	16.8
40°-50°	1164.1	17.2
50°-60°	1056.3	15.6
60°-70°	824.4	12.2
70°-80°	467.6	6.9
80°-90°	98.1	1.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2021.2	29.9
0°-40°	3157.7	46.7
0°-60°	5378.0	79.5
0°-90°	6768.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6768.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3165	3165	3165	3165	3165	
5°	3161	3125	3156	3163	3153	295
15°	2643	2651	2585	2599	2571	739
25°	2136	2164	2179	2126	2133	986
35°	1810	1814	1810	1812	1810	1134
45°	1486	1498	1484	1545	1530	1149
55°	1167	1165	1162	1203	1214	1043
65°	838	820	811	849	885	830
75°	466	431	421	446	489	487
85°	81	72	72	68	71	106
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3164.7	3164.7	3164.7	3164.7	3164.7
2.5°	3184.5	3159.8	3138.4	3172.9	3169.6
5°	3161.4	3125.2	3156.5	3163.1	3153.2
7.5°	3100.5	3077.5	3079.1	3066.0	3064.3
10°	2940.9	2954.1	2927.7	2950.8	2939.2
12.5°	2804.3	2812.5	2766.4	2776.3	2763.2
15°	2643.0	2651.2	2585.4	2598.6	2570.6
17.5°	2466.9	2496.5	2442.2	2458.7	2429.1
20°	2335.3	2360.0	2361.6	2335.3	2241.5
22.5°	2231.6	2256.3	2276.0	2197.0	2187.2
25°	2136.1	2164.1	2178.9	2126.3	2132.8
27.5°	2040.7	2072.0	2072.0	2083.5	2068.7
30°	1971.6	1984.7	1963.3	2006.1	1993.0
32.5°	1889.3	1894.2	1876.1	1907.4	1861.3
35°	1810.3	1813.6	1810.3	1811.9	1810.3
37.5°	1734.6	1726.4	1741.2	1731.3	1762.6
40°	1650.7	1650.7	1657.2	1673.7	1698.4
42.5°	1573.3	1579.9	1571.7	1617.7	1627.6
45°	1486.1	1497.6	1484.4	1545.3	1530.5
47.5°	1407.1	1412.0	1408.7	1449.9	1453.2
50°	1321.5	1328.1	1331.4	1367.6	1372.5
52.5°	1250.7	1249.1	1237.6	1290.2	1298.5
55°	1166.8	1165.2	1161.9	1203.0	1214.5
57.5°	1081.2	1082.9	1091.1	1114.1	1142.1
60°	1003.9	995.7	1002.2	1030.2	1053.3
62.5°	924.9	910.1	895.3	941.3	962.7
65°	837.7	819.6	811.3	849.2	885.4
67.5°	757.0	727.4	722.5	748.8	791.6
70°	664.9	628.7	627.0	646.8	697.8
72.5°	562.8	531.6	523.3	549.7	595.7
75°	465.7	431.2	421.3	446.0	488.8
77.5°	360.4	332.4	325.9	339.0	373.6
80°	253.4	237.0	230.4	235.3	260.0
82.5°	159.6	148.1	144.8	143.2	156.3
85°	80.6	72.4	72.4	67.5	70.8
87.5°	24.7	23.0	21.4	16.5	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)