

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: P487032

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-4HI-27-120-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: P487032
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-LD4-4HI-27-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

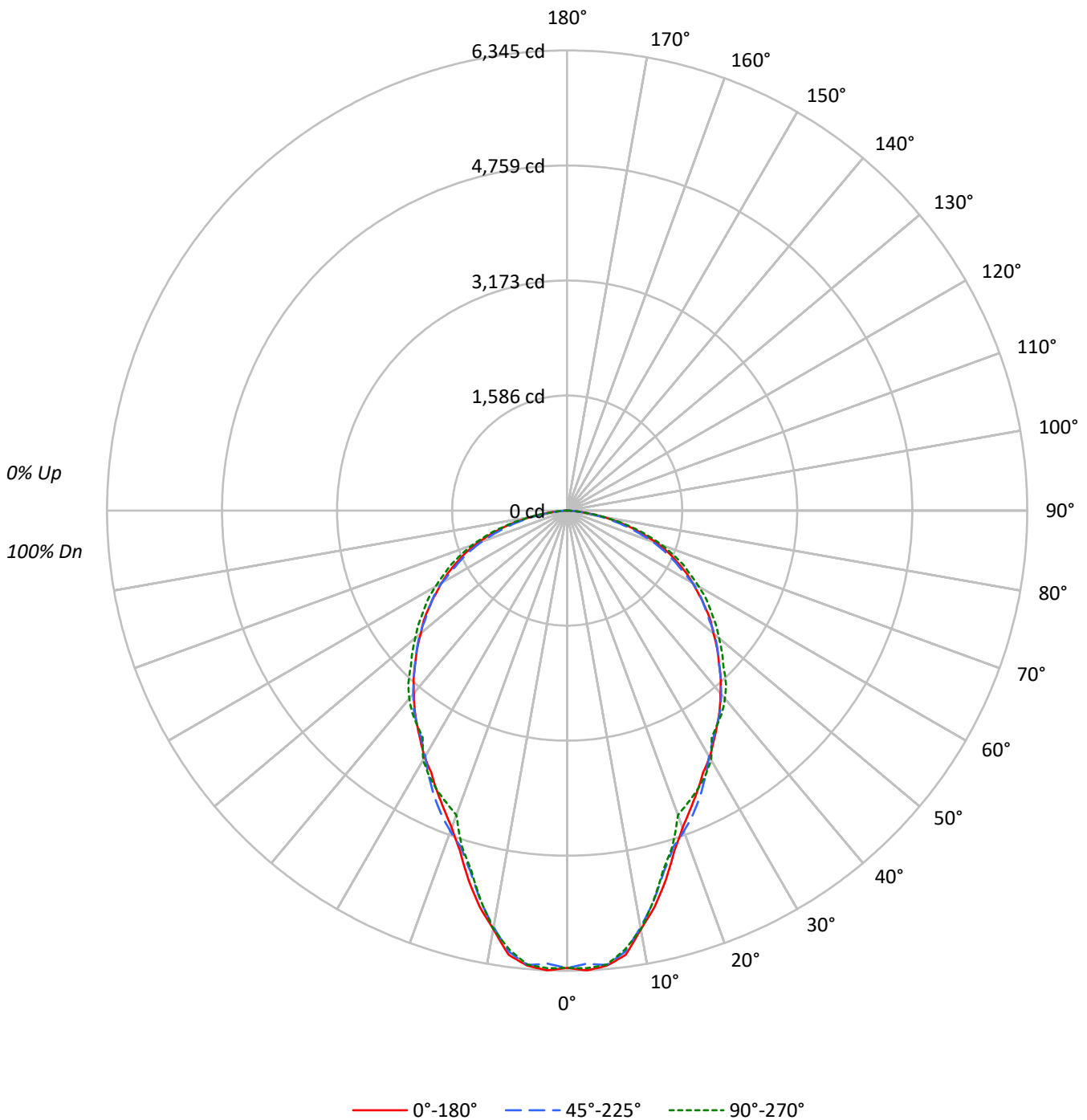
Lumens per Lamp: N/A
Luminaire Lumens: 13484.9 lumens
Efficiency: N/A
Efficacy: 76.6 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 176
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	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					100			
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	84	79	97	89	83	78	86	81	76	82	78	74	79	76	73	70					70			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60					60			
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39					39			
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31					31			
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	35	30	28					28			
10	54	41	33	28	53	40	33	28	40	33	28	39	32	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8484	8484	8484
5°	8507	8494	8485
10°	8006	7970	8001
15°	7335	7175	7134
20°	6662	6737	6394
25°	6319	6445	6309
30°	6103	6078	6169
35°	5924	5924	5924
40°	5776	5799	5944
45°	5634	5628	5802
50°	5511	5553	5724
55°	5453	5430	5677
60°	5382	5374	5647
65°	5314	5146	5616
70°	5211	4915	5469
75°	4824	4364	5062
80°	3913	3557	4014
85°	2481	2228	2177



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	585.6	4.3
10°-20°	1464.1	10.9
20°-30°	1977.3	14.7
30°-40°	2264.3	16.8
40°-50°	2319.4	17.2
50°-60°	2104.5	15.6
60°-70°	1642.5	12.2
70°-80°	931.6	6.9
80°-90°	195.5	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°	4027.1	29.9
0°-40°	6291.4	46.7
0°-60°	10715.2	79.5
0°-90°	13484.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13484.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6305	6305	6305	6305	6305	
5°	6299	6227	6289	6302	6282	588
15°	5266	5282	5151	5178	5122	1472
25°	4256	4312	4341	4236	4250	1964
35°	3607	3613	3607	3610	3607	2259
45°	2961	2984	2958	3079	3049	2289
55°	2325	2322	2315	2397	2420	2078
65°	1669	1633	1616	1692	1764	1654
75°	928	859	839	889	974	971
85°	161	144	144	134	141	212
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6305.4	6305.4	6305.4	6305.4	6305.4
2.5°	6344.8	6295.6	6253.0	6321.8	6315.3
5°	6298.9	6226.7	6289.0	6302.1	6282.5
7.5°	6177.5	6131.6	6134.9	6108.7	6105.4
10°	5859.5	5885.7	5833.3	5879.2	5856.2
12.5°	5587.3	5603.7	5511.9	5531.6	5505.4
15°	5266.0	5282.4	5151.2	5177.5	5121.7
17.5°	4915.2	4974.2	4866.0	4898.8	4839.7
20°	4652.8	4702.0	4705.3	4652.8	4465.9
22.5°	4446.3	4495.4	4534.8	4377.4	4357.7
25°	4256.1	4311.8	4341.3	4236.4	4249.5
27.5°	4065.9	4128.2	4128.2	4151.2	4121.6
30°	3928.2	3954.4	3911.8	3997.0	3970.8
32.5°	3764.2	3774.1	3738.0	3800.3	3708.5
35°	3606.8	3613.4	3606.8	3610.1	3606.8
37.5°	3456.0	3439.6	3469.1	3449.5	3511.8
40°	3288.8	3288.8	3301.9	3334.7	3383.9
42.5°	3134.7	3147.8	3131.4	3223.2	3242.9
45°	2960.9	2983.8	2957.6	3078.9	3049.4
47.5°	2803.5	2813.3	2806.8	2888.8	2895.3
50°	2633.0	2646.1	2652.7	2724.8	2734.6
52.5°	2492.0	2488.7	2465.8	2570.7	2587.1
55°	2324.8	2321.5	2314.9	2396.9	2419.9
57.5°	2154.3	2157.6	2173.9	2219.9	2275.6
60°	2000.2	1983.8	1996.9	2052.6	2098.5
62.5°	1842.8	1813.3	1783.8	1875.6	1918.2
65°	1669.0	1632.9	1616.5	1691.9	1764.1
67.5°	1508.3	1449.3	1439.5	1491.9	1577.2
70°	1324.7	1252.6	1249.3	1288.6	1390.3
72.5°	1121.4	1059.1	1042.7	1095.2	1187.0
75°	927.9	859.1	839.4	888.6	973.8
77.5°	718.1	662.3	649.2	675.5	744.3
80°	505.0	472.2	459.1	468.9	518.1
82.5°	318.1	295.1	288.5	285.3	311.5
85°	160.7	144.3	144.3	134.4	141.0
87.5°	49.2	45.9	42.6	32.8	36.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)