

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: P487115

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-6LO-20-120-EDD**

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: P487115
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-LD4-6LO-20-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

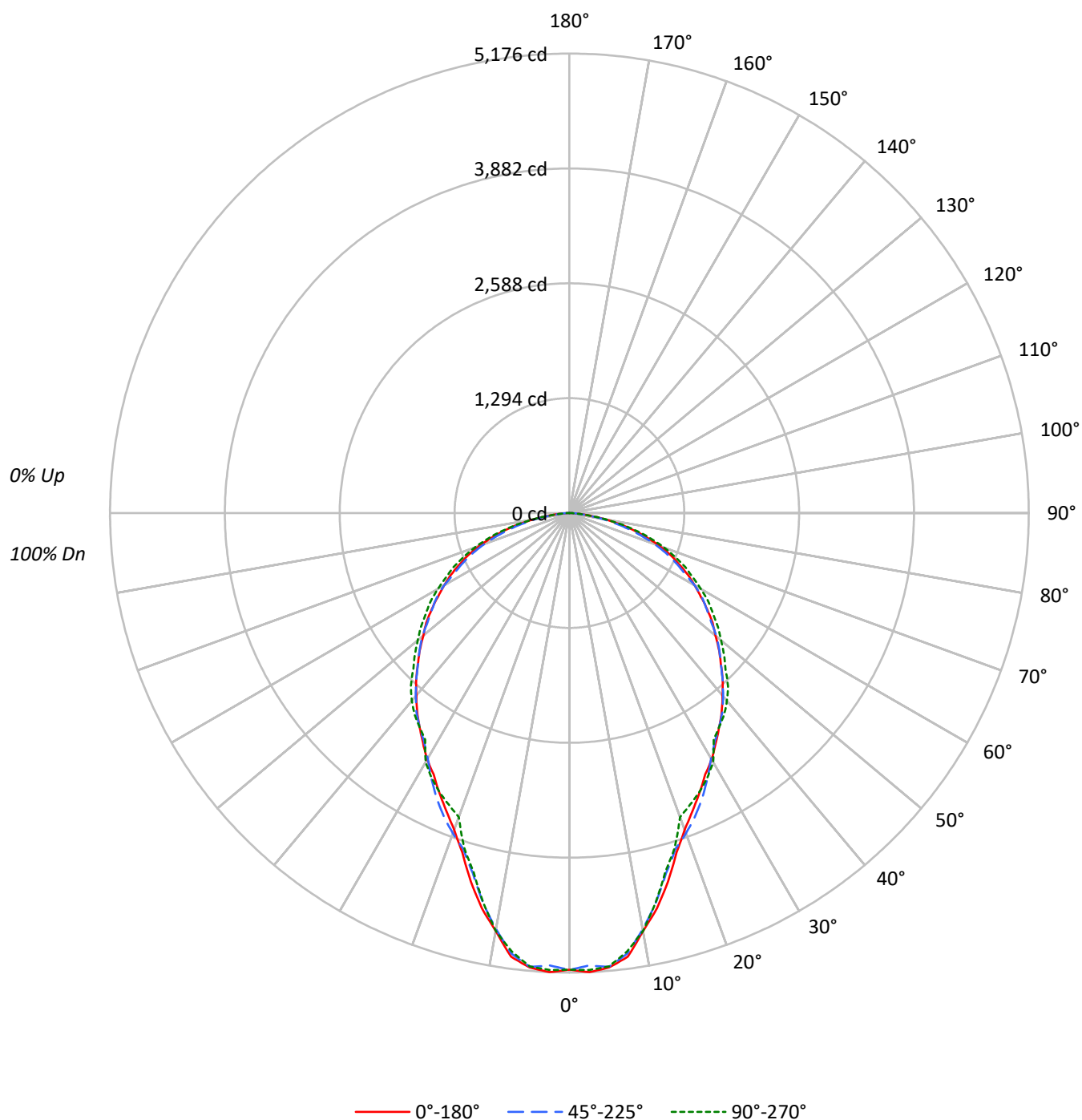
Lumens per Lamp: N/A
Luminaire Lumens: 11000.4 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 140.4
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°	6921	6921	6921
5°	6940	6929	6922
10°	6531	6501	6527
15°	5984	5853	5820
20°	5435	5496	5216
25°	5154	5258	5146
30°	4978	4958	5033
35°	4833	4833	4833
40°	4712	4731	4848
45°	4596	4591	4733
50°	4496	4529	4670
55°	4449	4430	4631
60°	4391	4384	4607
65°	4335	4198	4582
70°	4251	4009	4461
75°	3935	3560	4130
80°	3192	2902	3274
85°	2024	1817	1775



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	477.7	4.3
10°-20°	1194.4	10.9
20°-30°	1613.0	14.7
30°-40°	1847.1	16.8
40°-50°	1892.0	17.2
50°-60°	1716.8	15.6
60°-70°	1339.9	12.2
70°-80°	760.0	6.9
80°-90°	159.5	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°	3285.1	29.9
0°-40°	5132.2	46.7
0°-60°	8741.0	79.5
0°-90°	11000.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11000.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5144	5144	5144	5144	5144	
5°	5138	5080	5130	5141	5125	480
15°	4296	4309	4202	4224	4178	1201
25°	3472	3517	3542	3456	3467	1602
35°	2942	2948	2942	2945	2942	1843
45°	2415	2434	2413	2512	2488	1867
55°	1896	1894	1888	1955	1974	1695
65°	1362	1332	1319	1380	1439	1349
75°	757	701	685	725	794	792
85°	131	118	118	110	115	173
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5143.7	5143.7	5143.7	5143.7	5143.7
2.5°	5175.8	5135.7	5100.9	5157.1	5151.7
5°	5138.3	5079.5	5130.3	5141.0	5125.0
7.5°	5039.4	5001.9	5004.6	4983.2	4980.5
10°	4779.9	4801.3	4758.5	4796.0	4777.2
12.5°	4557.9	4571.3	4496.4	4512.4	4491.0
15°	4295.8	4309.1	4202.2	4223.6	4178.1
17.5°	4009.6	4057.7	3969.4	3996.2	3948.0
20°	3795.6	3835.7	3838.4	3795.6	3643.1
22.5°	3627.1	3667.2	3699.3	3570.9	3554.8
25°	3471.9	3517.4	3541.5	3455.9	3466.6
27.5°	3316.8	3367.6	3367.6	3386.3	3362.3
30°	3204.4	3225.8	3191.1	3260.6	3239.2
32.5°	3070.7	3078.7	3049.3	3100.1	3025.2
35°	2942.3	2947.7	2942.3	2945.0	2942.3
37.5°	2819.3	2805.9	2830.0	2813.9	2864.7
40°	2682.9	2682.9	2693.6	2720.3	2760.4
42.5°	2557.1	2567.8	2554.5	2629.4	2645.4
45°	2415.4	2434.1	2412.7	2511.7	2487.6
47.5°	2287.0	2295.0	2289.7	2356.5	2361.9
50°	2147.9	2158.6	2163.9	2222.8	2230.8
52.5°	2032.9	2030.2	2011.5	2097.1	2110.4
55°	1896.5	1893.8	1888.4	1955.3	1974.0
57.5°	1757.4	1760.0	1773.4	1810.9	1856.3
60°	1631.6	1618.3	1629.0	1674.4	1711.9
62.5°	1503.3	1479.2	1455.1	1530.0	1564.8
65°	1361.5	1332.1	1318.7	1380.2	1439.1
67.5°	1230.4	1182.3	1174.3	1217.0	1286.6
70°	1080.6	1021.8	1019.1	1051.2	1134.1
72.5°	914.8	864.0	850.6	893.4	968.3
75°	757.0	700.8	684.8	724.9	794.4
77.5°	585.8	540.3	529.6	551.0	607.2
80°	411.9	385.2	374.5	382.5	422.6
82.5°	259.5	240.7	235.4	232.7	254.1
85°	131.1	117.7	117.7	109.7	115.0
87.5°	40.1	37.4	34.8	26.7	29.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)