

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: P487004

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3HI-50-120-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: P487004
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-LD4-3HI-50-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

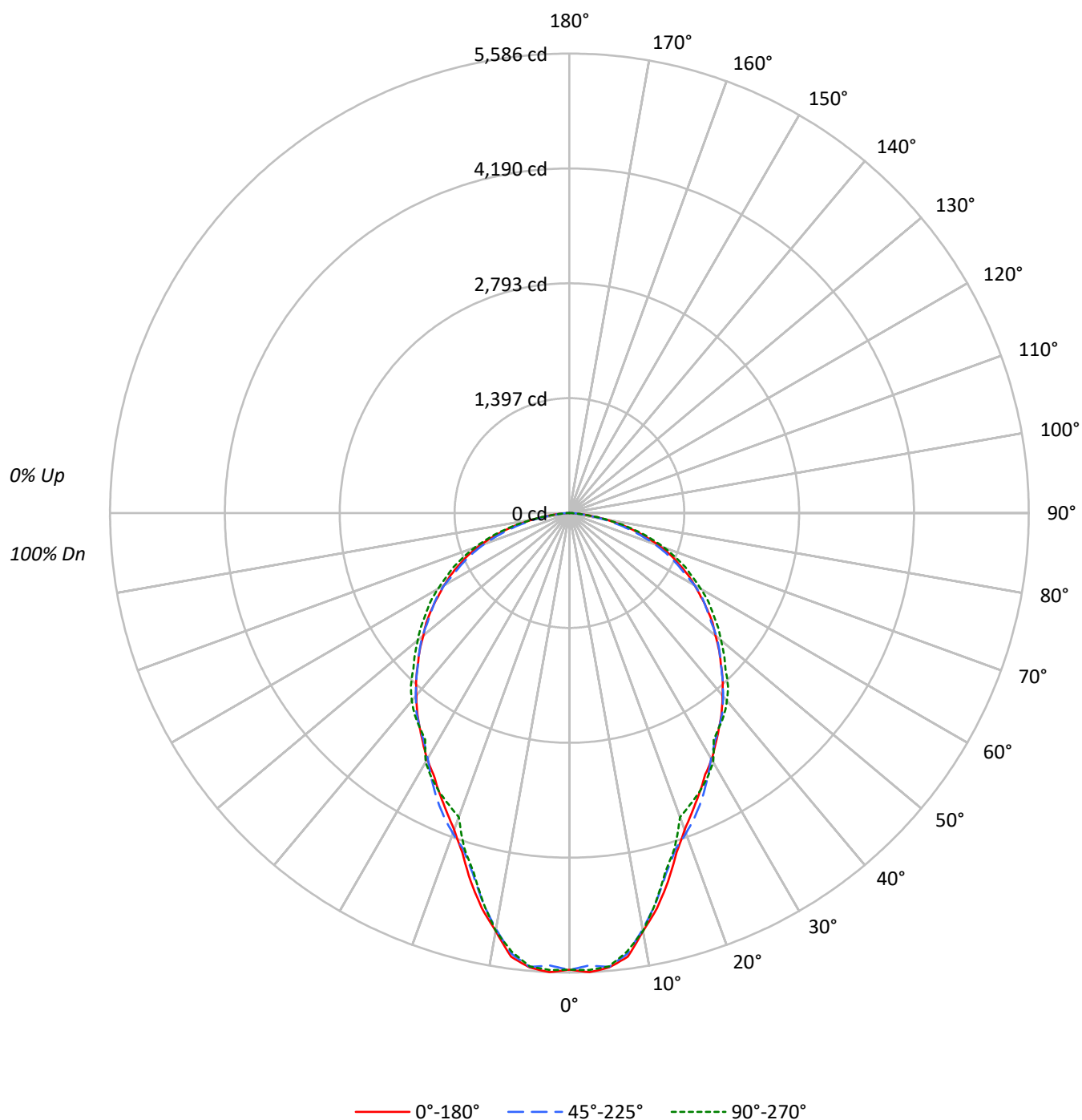
Lumens per Lamp: N/A
Luminaire Lumens: 11872.6 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 132
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					0
RW	70	50	30	10	70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	109	104	100	96	106	102	98	95		98	95	92		94	91	89		90	88	86
2	99	91	84	79	97	89	83	78		86	81	76		82	78	74		79	76	73
3	91	80	72	66	88	79	71	65		76	69	64		73	67	63		70	66	62
4	83	71	63	56	81	70	62	56		67	60	55		65	59	54		63	58	53
5	77	64	55	48	75	63	54	48		61	53	48		59	52	47		57	51	47
6	71	58	49	43	69	57	48	42		55	48	42		53	47	42		52	46	41
7	66	53	44	38	64	52	44	38		50	43	37		49	42	37		47	41	37
8	61	48	40	34	60	47	39	34		46	39	34		45	38	33		44	38	33
9	58	44	36	31	56	44	36	31		43	35	30		41	35	30		40	35	30
10	54	41	33	28	53	40	33	28		40	33	28		39	32	28		38	32	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7469	7469	7469
5°	7490	7479	7471
10°	7048	7017	7044
15°	6458	6317	6281
20°	5866	5932	5630
25°	5563	5675	5554
30°	5373	5351	5432
35°	5216	5216	5216
40°	5086	5106	5233
45°	4960	4955	5109
50°	4852	4889	5040
55°	4801	4781	4998
60°	4739	4731	4972
65°	4678	4531	4945
70°	4588	4327	4816
75°	4247	3842	4457
80°	3445	3132	3534
85°	2184	1961	1916



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	515.6	4.3
10°-20°	1289.1	10.9
20°-30°	1740.9	14.7
30°-40°	1993.6	16.8
40°-50°	2042.0	17.2
50°-60°	1852.9	15.6
60°-70°	1446.1	12.2
70°-80°	820.2	6.9
80°-90°	172.2	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°	3545.6	29.9
0°-40°	5539.1	46.7
0°-60°	9434.1	79.5
0°-90°	11872.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11872.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5552	5552	5552	5552	5552	
5°	5546	5482	5537	5549	5531	518
15°	4636	4651	4535	4558	4509	1296
25°	3747	3796	3822	3730	3741	1729
35°	3176	3181	3176	3178	3176	1989
45°	2607	2627	2604	2711	2685	2016
55°	2047	2044	2038	2110	2130	1829
65°	1469	1438	1423	1490	1553	1456
75°	817	756	739	782	857	855
85°	142	127	127	118	124	187
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5551.5	5551.5	5551.5	5551.5	5551.5
2.5°	5586.2	5542.9	5505.3	5566.0	5560.2
5°	5545.8	5482.2	5537.1	5548.6	5531.3
7.5°	5438.9	5398.5	5401.4	5378.3	5375.4
10°	5158.9	5182.0	5135.8	5176.2	5156.0
12.5°	4919.3	4933.7	4852.9	4870.2	4847.1
15°	4636.4	4650.8	4535.3	4558.4	4509.4
17.5°	4327.5	4379.4	4284.2	4313.0	4261.1
20°	4096.5	4139.8	4142.7	4096.5	3932.0
22.5°	3914.7	3958.0	3992.6	3854.0	3836.7
25°	3747.2	3796.3	3822.3	3729.9	3741.4
27.5°	3579.8	3634.6	3634.6	3654.8	3628.8
30°	3458.5	3481.6	3444.1	3519.1	3496.0
32.5°	3314.2	3322.8	3291.1	3345.9	3265.1
35°	3175.6	3181.4	3175.6	3178.5	3175.6
37.5°	3042.8	3028.4	3054.4	3037.0	3091.9
40°	2895.6	2895.6	2907.1	2936.0	2979.3
42.5°	2759.9	2771.4	2757.0	2837.8	2855.2
45°	2606.9	2627.1	2604.0	2710.8	2684.8
47.5°	2468.3	2477.0	2471.2	2543.4	2549.1
50°	2318.2	2329.7	2335.5	2399.0	2407.7
52.5°	2194.1	2191.2	2171.0	2263.3	2277.8
55°	2046.8	2043.9	2038.2	2110.3	2130.5
57.5°	1896.7	1899.6	1914.0	1954.4	2003.5
60°	1761.0	1746.6	1758.1	1807.2	1847.6
62.5°	1622.4	1596.5	1570.5	1651.3	1688.8
65°	1469.4	1437.7	1423.2	1489.6	1553.2
67.5°	1328.0	1276.0	1267.4	1313.5	1388.6
70°	1166.3	1102.8	1099.9	1134.6	1224.1
72.5°	987.3	932.5	918.0	964.2	1045.1
75°	817.0	756.4	739.0	782.4	857.4
77.5°	632.2	583.2	571.6	594.7	655.3
80°	444.6	415.7	404.2	412.8	456.1
82.5°	280.0	259.8	254.0	251.2	274.3
85°	141.5	127.0	127.0	118.4	124.1
87.5°	43.3	40.4	37.5	28.9	31.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)