

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: P487023

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3STD-30-120-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: P487023
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-LD4-3STD-30-120-EDD
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

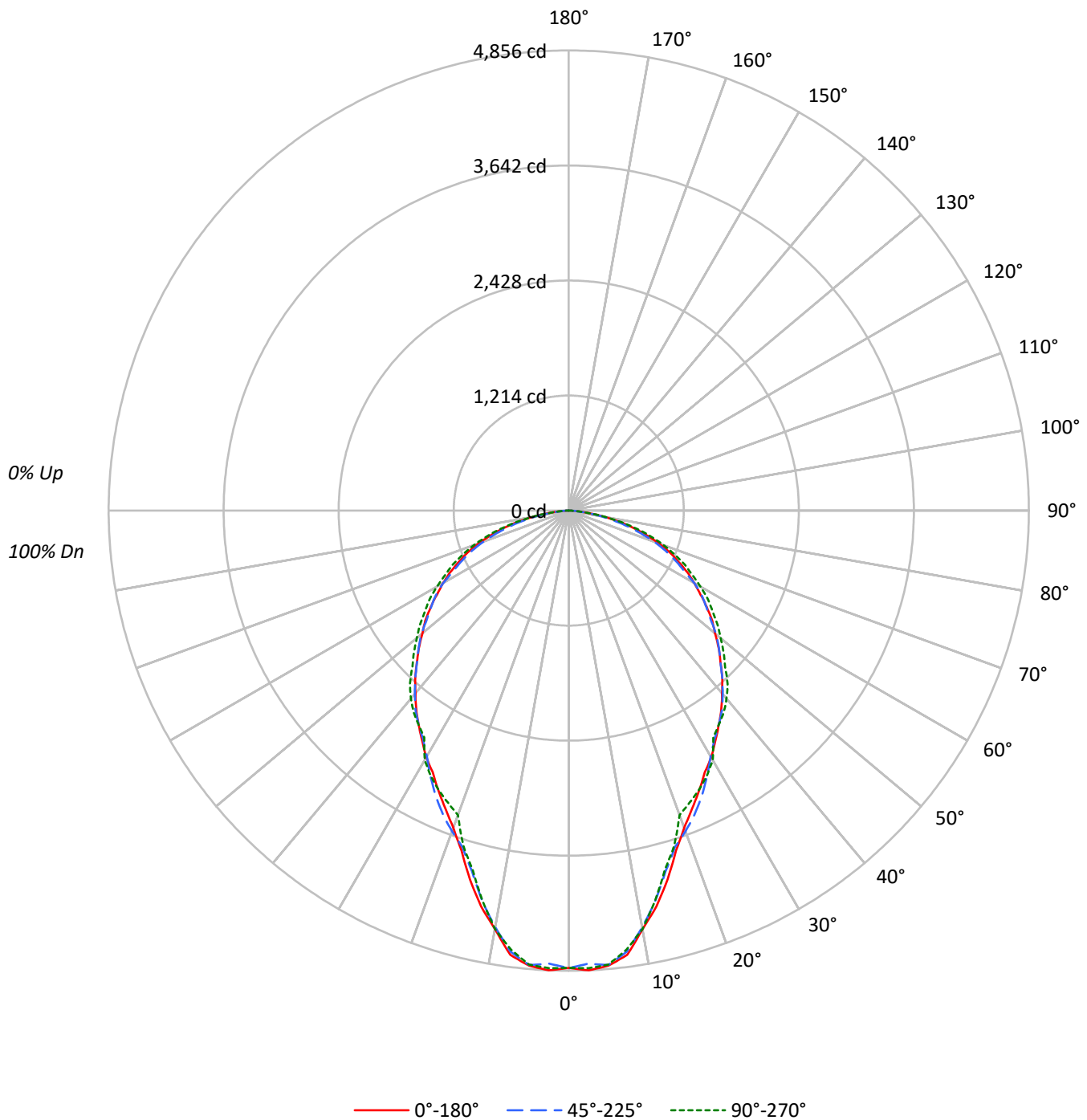
Lumens per Lamp: N/A
Luminaire Lumens: 10320.2 lumens
Efficiency: N/A
Efficacy: 103.3 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	6493	6493	6493
5°	6511	6501	6494
10°	6127	6099	6123
15°	5614	5491	5460
20°	5099	5156	4894
25°	4836	4933	4828
30°	4671	4651	4721
35°	4534	4534	4534
40°	4421	4438	4549
45°	4312	4307	4441
50°	4218	4249	4381
55°	4174	4156	4344
60°	4119	4112	4322
65°	4067	3939	4298
70°	3988	3761	4186
75°	3692	3340	3874
80°	2995	2722	3072
85°	1899	1704	1666



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	448.2	4.3
10°-20°	1120.5	10.9
20°-30°	1513.3	14.7
30°-40°	1732.9	16.8
40°-50°	1775.0	17.2
50°-60°	1610.6	15.6
60°-70°	1257.0	12.2
70°-80°	713.0	6.9
80°-90°	149.6	1.4
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°	3082.0	29.9
0°-40°	4814.9	46.7
0°-60°	8200.5	79.5
0°-90°	10320.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10320.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4826	4826	4826	4826	4826	
5°	4821	4765	4813	4823	4808	450
15°	4030	4043	3942	3962	3920	1126
25°	3257	3300	3322	3242	3252	1503
35°	2760	2765	2760	2763	2760	1729
45°	2266	2284	2264	2356	2334	1752
55°	1779	1777	1772	1834	1852	1590
65°	1277	1250	1237	1295	1350	1266
75°	710	658	642	680	745	743
85°	123	110	110	103	108	162
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4825.6	4825.6	4825.6	4825.6	4825.6
2.5°	4855.8	4818.1	4785.5	4838.2	4833.2
5°	4820.6	4765.4	4813.1	4823.1	4808.1
7.5°	4727.8	4692.6	4695.2	4675.1	4672.6
10°	4484.4	4504.4	4464.3	4499.4	4481.8
12.5°	4276.1	4288.6	4218.4	4233.4	4213.3
15°	4030.2	4042.7	3942.3	3962.4	3919.7
17.5°	3761.6	3806.8	3724.0	3749.1	3703.9
20°	3560.9	3598.5	3601.0	3560.9	3417.8
22.5°	3402.8	3440.4	3470.5	3350.1	3335.0
25°	3257.2	3299.9	3322.5	3242.2	3252.2
27.5°	3111.7	3159.4	3159.4	3176.9	3154.4
30°	3006.3	3026.4	2993.8	3059.0	3038.9
32.5°	2880.8	2888.4	2860.8	2908.4	2838.2
35°	2760.4	2765.4	2760.4	2762.9	2760.4
37.5°	2644.9	2632.4	2655.0	2639.9	2687.6
40°	2517.0	2517.0	2527.0	2552.1	2589.7
42.5°	2399.0	2409.1	2396.5	2466.8	2481.8
45°	2266.0	2283.6	2263.5	2356.4	2333.8
47.5°	2145.6	2153.1	2148.1	2210.8	2215.8
50°	2015.1	2025.1	2030.1	2085.3	2092.9
52.5°	1907.2	1904.7	1887.1	1967.4	1979.9
55°	1779.2	1776.7	1771.7	1834.4	1852.0
57.5°	1648.7	1651.2	1663.8	1698.9	1741.5
60°	1530.8	1518.2	1528.2	1570.9	1606.0
62.5°	1410.3	1387.7	1365.1	1435.4	1468.0
65°	1277.3	1249.7	1237.2	1294.9	1350.1
67.5°	1154.3	1109.2	1101.6	1141.8	1207.0
70°	1013.8	958.6	956.1	986.2	1064.0
72.5°	858.2	810.5	798.0	838.2	908.4
75°	710.2	657.5	642.4	680.1	745.3
77.5°	549.6	506.9	496.9	516.9	569.6
80°	386.5	361.4	351.3	358.8	396.5
82.5°	243.4	225.8	220.8	218.3	238.4
85°	123.0	110.4	110.4	102.9	107.9
87.5°	37.6	35.1	32.6	25.1	27.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)