

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: P486996

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3HI-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: P486996
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-27-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

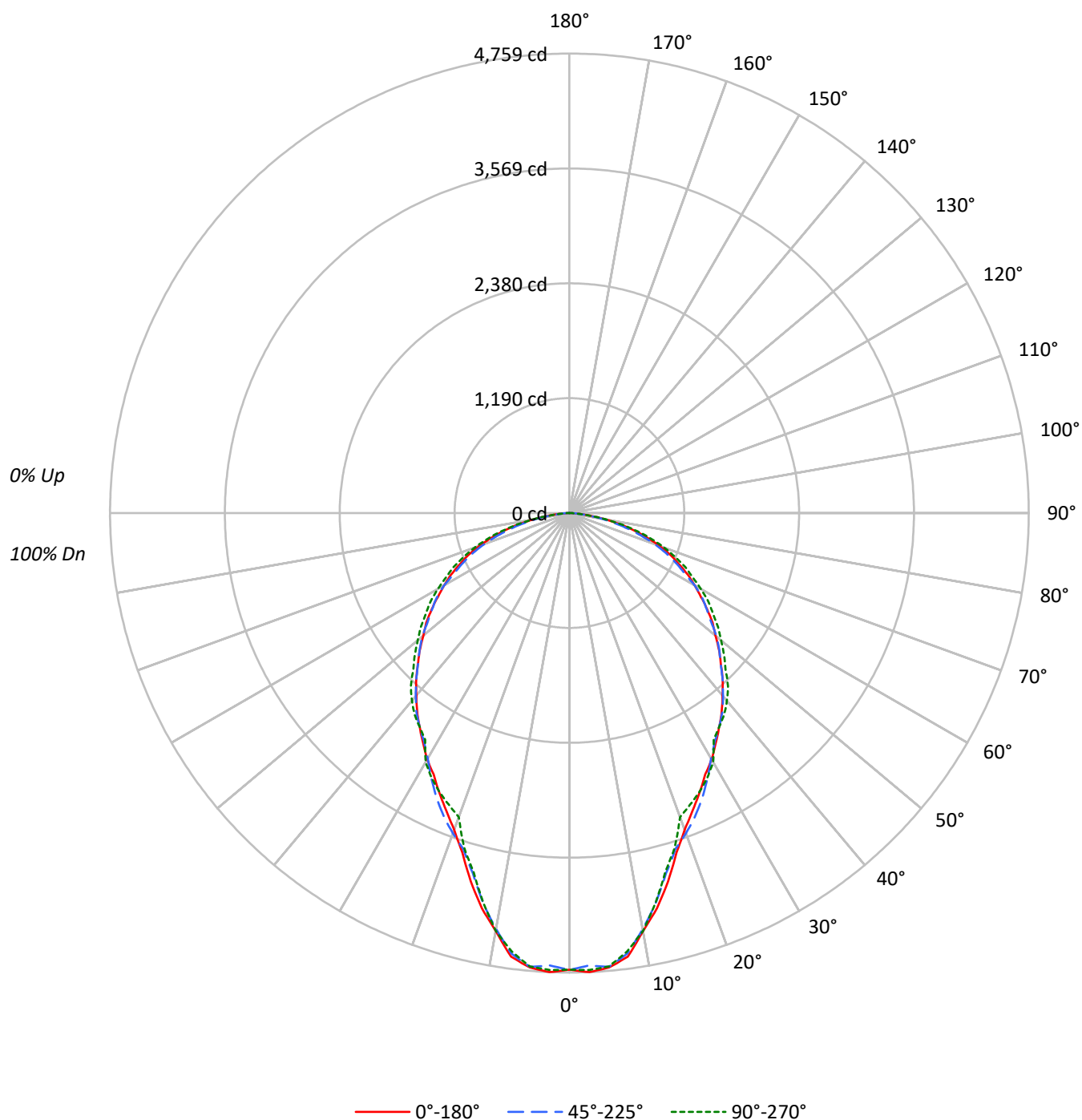
Lumens per Lamp: N/A
Luminaire Lumens: 10113.7 lumens
Efficiency: N/A
Efficacy: 76.6 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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					10
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°	6363	6363	6363
5°	6381	6371	6364
10°	6004	5977	6001
15°	5501	5382	5351
20°	4997	5053	4796
25°	4739	4834	4732
30°	4577	4558	4627
35°	4443	4443	4443
40°	4332	4350	4458
45°	4226	4221	4352
50°	4134	4164	4293
55°	4090	4073	4257
60°	4037	4030	4235
65°	3985	3860	4212
70°	3908	3686	4102
75°	3618	3273	3797
80°	2934	2668	3011
85°	1860	1670	1632



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	439.2	4.3
10°-20°	1098.1	10.9
20°-30°	1483.0	14.7
30°-40°	1698.2	16.8
40°-50°	1739.5	17.2
50°-60°	1578.4	15.6
60°-70°	1231.9	12.2
70°-80°	698.7	6.9
80°-90°	146.7	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°	3020.3	29.9
0°-40°	4718.5	46.7
0°-60°	8036.4	79.5
0°-90°	10113.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10113.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4729	4729	4729	4729	4729	
5°	4724	4670	4717	4727	4712	441
15°	3950	3962	3863	3883	3841	1104
25°	3192	3234	3256	3177	3187	1473
35°	2705	2710	2705	2708	2705	1695
45°	2221	2238	2218	2309	2287	1717
55°	1744	1741	1736	1798	1815	1558
65°	1252	1225	1212	1269	1323	1241
75°	696	644	630	666	730	728
85°	120	108	108	101	106	159
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4729.1	4729.1	4729.1	4729.1	4729.1
2.5°	4758.6	4721.7	4689.7	4741.4	4736.5
5°	4724.2	4670.1	4716.8	4726.6	4711.9
7.5°	4633.2	4598.7	4601.2	4581.5	4579.1
10°	4394.6	4414.3	4375.0	4409.4	4392.2
12.5°	4190.5	4202.8	4134.0	4148.7	4129.0
15°	3949.5	3961.8	3863.4	3883.1	3841.3
17.5°	3686.4	3730.6	3649.5	3674.1	3629.8
20°	3489.6	3526.5	3529.0	3489.6	3349.5
22.5°	3334.7	3371.6	3401.1	3283.1	3268.3
25°	3192.1	3233.9	3256.0	3177.3	3187.2
27.5°	3049.4	3096.2	3096.2	3113.4	3091.2
30°	2946.1	2965.8	2933.9	2997.8	2978.1
32.5°	2823.2	2830.6	2803.5	2850.2	2781.4
35°	2705.1	2710.1	2705.1	2707.6	2705.1
37.5°	2592.0	2579.7	2601.9	2587.1	2633.8
40°	2466.6	2466.6	2476.4	2501.0	2537.9
42.5°	2351.0	2360.9	2348.6	2417.4	2432.2
45°	2220.7	2237.9	2218.2	2309.2	2287.1
47.5°	2102.6	2110.0	2105.1	2166.6	2171.5
50°	1974.8	1984.6	1989.5	2043.6	2051.0
52.5°	1869.0	1866.5	1849.3	1928.0	1940.3
55°	1743.6	1741.1	1736.2	1797.7	1814.9
57.5°	1615.7	1618.2	1630.5	1664.9	1706.7
60°	1500.1	1487.8	1497.7	1539.5	1573.9
62.5°	1382.1	1359.9	1337.8	1406.7	1438.6
65°	1251.7	1224.7	1212.4	1269.0	1323.1
67.5°	1131.2	1087.0	1079.6	1118.9	1182.9
70°	993.5	939.4	937.0	966.5	1042.7
72.5°	841.1	794.3	782.0	821.4	890.2
75°	696.0	644.3	629.6	666.4	730.4
77.5°	538.6	496.8	486.9	506.6	558.2
80°	378.7	354.1	344.3	351.7	388.6
82.5°	238.5	221.3	216.4	214.0	233.6
85°	120.5	108.2	108.2	100.8	105.7
87.5°	36.9	34.4	32.0	24.6	27.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)