

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: P487030

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-4HI-20-120-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: P487030
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-20-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

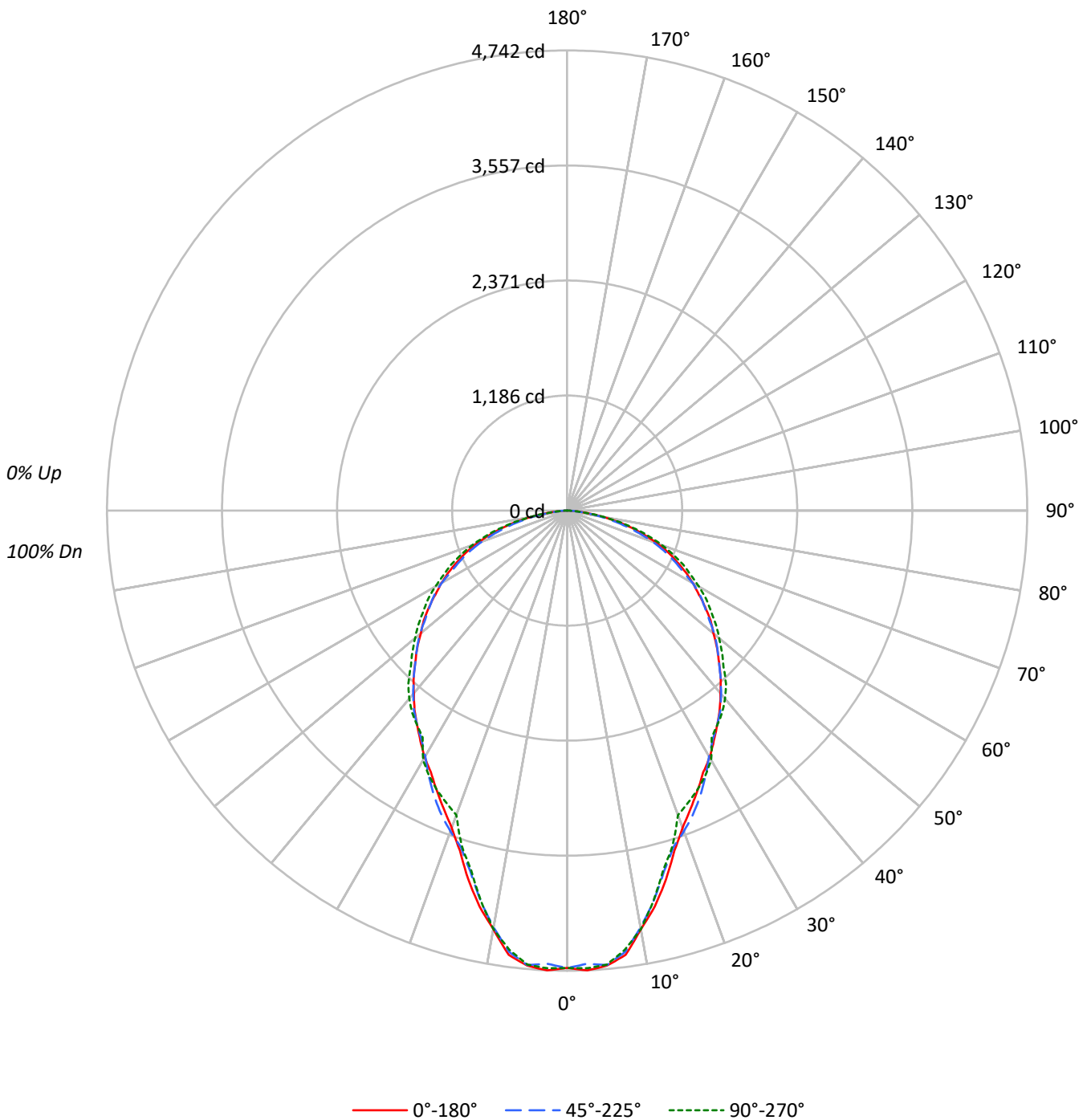
Lumens per Lamp: N/A
Luminaire Lumens: 10079.5 lumens
Efficiency: N/A
Efficacy: 57.3 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	6341	6341	6341
5°	6359	6349	6342
10°	5984	5957	5980
15°	5483	5363	5333
20°	4980	5036	4780
25°	4723	4817	4716
30°	4562	4543	4611
35°	4428	4428	4428
40°	4318	4335	4442
45°	4211	4207	4337
50°	4120	4150	4279
55°	4076	4059	4243
60°	4023	4017	4221
65°	3972	3847	4198
70°	3895	3674	4088
75°	3606	3262	3784
80°	2924	2658	3000
85°	1854	1664	1627



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	437.7	4.3
10°-20°	1094.4	10.9
20°-30°	1478.0	14.7
30°-40°	1692.5	16.8
40°-50°	1733.6	17.2
50°-60°	1573.1	15.6
60°-70°	1227.7	12.2
70°-80°	696.3	6.9
80°-90°	146.2	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°	3010.1	29.9
0°-40°	4702.6	46.7
0°-60°	8009.3	79.5
0°-90°	10079.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10079.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4713	4713	4713	4713	4713	
5°	4708	4654	4701	4711	4696	440
15°	3936	3948	3850	3870	3828	1100
25°	3181	3223	3245	3167	3176	1468
35°	2696	2701	2696	2698	2696	1689
45°	2213	2230	2211	2301	2279	1711
55°	1738	1735	1730	1792	1809	1553
65°	1248	1221	1208	1265	1319	1236
75°	694	642	627	664	728	726
85°	120	108	108	100	105	159
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4713.1	4713.1	4713.1	4713.1	4713.1
2.5°	4742.5	4705.7	4673.9	4725.3	4720.4
5°	4708.2	4654.3	4700.8	4710.6	4695.9
7.5°	4617.5	4583.2	4585.6	4566.0	4563.6
10°	4379.8	4399.4	4360.2	4394.5	4377.3
12.5°	4176.3	4188.6	4120.0	4134.7	4115.1
15°	3936.2	3948.4	3850.4	3870.0	3828.3
17.5°	3673.9	3718.0	3637.1	3661.7	3617.5
20°	3477.8	3514.6	3517.0	3477.8	3338.1
22.5°	3323.4	3360.2	3389.6	3272.0	3257.3
25°	3181.3	3222.9	3245.0	3166.6	3176.4
27.5°	3039.1	3085.7	3085.7	3102.8	3080.8
30°	2936.2	2955.8	2923.9	2987.7	2968.0
32.5°	2813.6	2821.0	2794.0	2840.6	2772.0
35°	2696.0	2700.9	2696.0	2698.4	2696.0
37.5°	2583.3	2571.0	2593.1	2578.4	2624.9
40°	2458.3	2458.3	2468.1	2492.6	2529.3
42.5°	2343.1	2352.9	2340.6	2409.2	2423.9
45°	2213.2	2230.3	2210.7	2301.4	2279.3
47.5°	2095.5	2102.9	2098.0	2159.2	2164.1
50°	1968.1	1977.9	1982.8	2036.7	2044.1
52.5°	1862.7	1860.2	1843.1	1921.5	1933.8
55°	1737.7	1735.2	1730.3	1791.6	1808.8
57.5°	1610.2	1612.7	1625.0	1659.3	1700.9
60°	1495.1	1482.8	1492.6	1534.3	1568.6
62.5°	1377.4	1355.4	1333.3	1401.9	1433.8
65°	1247.5	1220.6	1208.3	1264.7	1318.6
67.5°	1127.4	1083.3	1075.9	1115.2	1178.9
70°	990.2	936.2	933.8	963.2	1039.2
72.5°	838.2	791.6	779.4	818.6	887.2
75°	693.6	642.1	627.4	664.2	727.9
77.5°	536.7	495.1	485.3	504.9	556.4
80°	377.4	352.9	343.1	350.5	387.2
82.5°	237.7	220.6	215.7	213.2	232.8
85°	120.1	107.8	107.8	100.5	105.4
87.5°	36.8	34.3	31.9	24.5	27.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)