

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: P487014

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-3LO-40-120-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: P487014
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-LD4-3LO-40-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

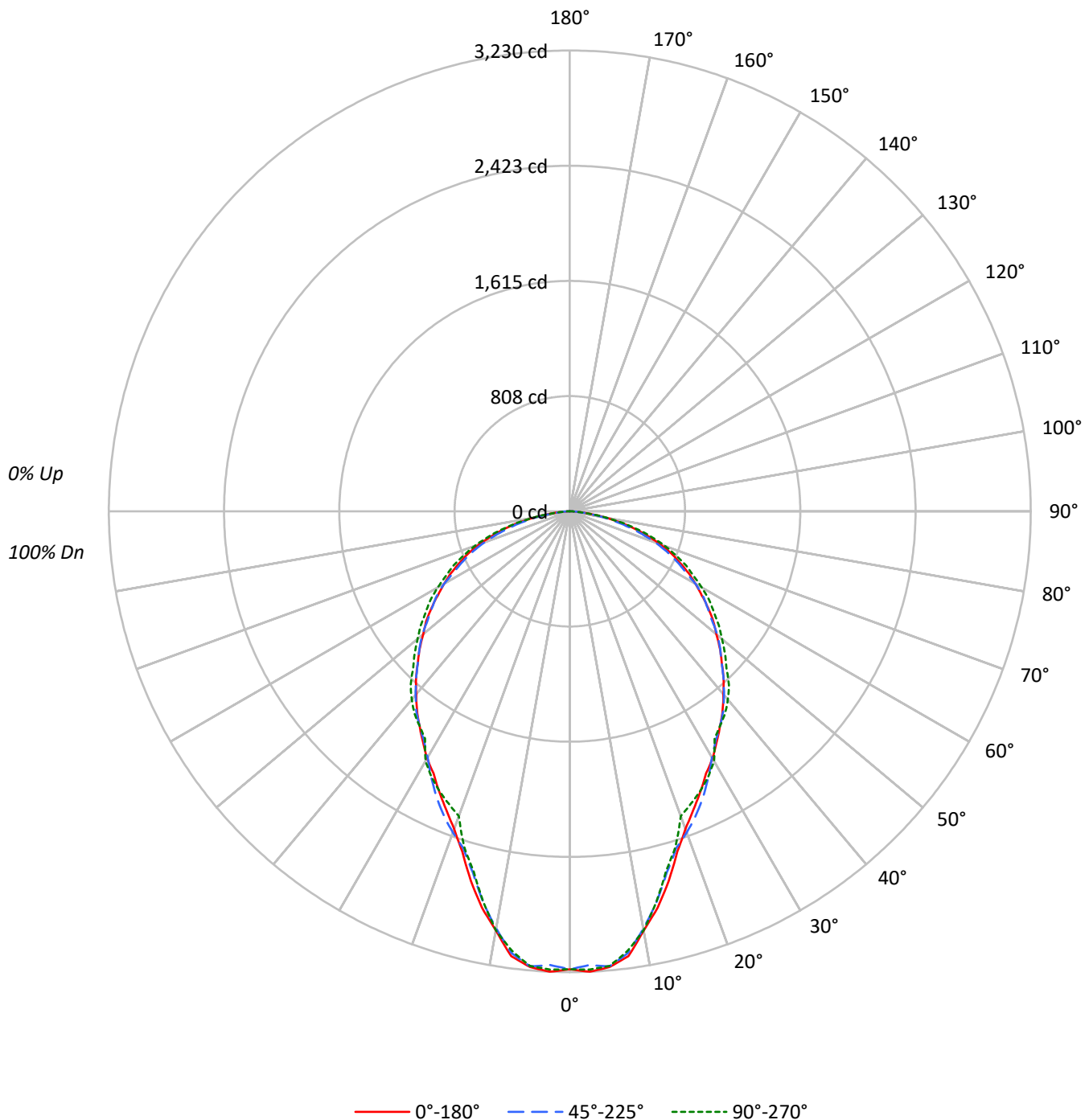
Lumens per Lamp: N/A
Luminaire Lumens: 6864.2 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	4318	4318	4318
5°	4331	4324	4319
10°	4075	4057	4073
15°	3734	3652	3632
20°	3391	3429	3255
25°	3216	3281	3211
30°	3107	3094	3140
35°	3016	3016	3016
40°	2940	2952	3025
45°	2868	2865	2954
50°	2806	2826	2914
55°	2776	2764	2890
60°	2740	2735	2875
65°	2705	2620	2859
70°	2653	2502	2784
75°	2456	2221	2577
80°	1991	1811	2043
85°	1263	1133	1108



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.1	4.3
10°-20°	745.3	10.9
20°-30°	1006.5	14.7
30°-40°	1152.6	16.8
40°-50°	1180.6	17.2
50°-60°	1071.3	15.6
60°-70°	836.1	12.2
70°-80°	474.2	6.9
80°-90°	99.5	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°	2049.9	29.9
0°-40°	3202.5	46.7
0°-60°	5454.4	79.5
0°-90°	6864.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6864.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3210	3210	3210	3210	3210	
5°	3206	3170	3201	3208	3198	299
15°	2680	2689	2622	2636	2607	749
25°	2166	2195	2210	2156	2163	1000
35°	1836	1839	1836	1838	1836	1150
45°	1507	1519	1506	1567	1552	1165
55°	1183	1182	1178	1220	1232	1058
65°	850	831	823	861	898	842
75°	472	437	427	452	496	494
85°	82	73	73	68	72	108
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3209.6	3209.6	3209.6	3209.6	3209.6
2.5°	3229.7	3204.6	3182.9	3218.0	3214.7
5°	3206.3	3169.6	3201.3	3208.0	3198.0
7.5°	3144.5	3121.2	3122.9	3109.5	3107.8
10°	2982.6	2996.0	2969.3	2992.7	2981.0
12.5°	2844.1	2852.5	2805.7	2815.7	2802.4
15°	2680.5	2688.9	2622.1	2635.5	2607.1
17.5°	2502.0	2532.0	2476.9	2493.6	2463.6
20°	2368.4	2393.5	2395.1	2368.4	2273.3
22.5°	2263.3	2288.3	2308.3	2228.2	2218.2
25°	2166.5	2194.8	2209.9	2156.5	2163.1
27.5°	2069.7	2101.4	2101.4	2113.1	2098.0
30°	1999.6	2012.9	1991.2	2034.6	2021.3
32.5°	1916.1	1921.1	1902.8	1934.5	1887.7
35°	1836.0	1839.3	1836.0	1837.7	1836.0
37.5°	1759.2	1750.9	1765.9	1755.9	1787.6
40°	1674.1	1674.1	1680.8	1697.5	1722.5
42.5°	1595.6	1602.3	1594.0	1640.7	1650.7
45°	1507.2	1518.9	1505.5	1567.3	1552.2
47.5°	1427.1	1432.1	1428.7	1470.5	1473.8
50°	1340.3	1346.9	1350.3	1387.0	1392.0
52.5°	1268.5	1266.8	1255.1	1308.6	1316.9
55°	1183.4	1181.7	1178.4	1220.1	1231.8
57.5°	1096.6	1098.3	1106.6	1130.0	1158.3
60°	1018.1	1009.8	1016.5	1044.8	1068.2
62.5°	938.0	923.0	908.0	954.7	976.4
65°	849.6	831.2	822.9	861.2	898.0
67.5°	767.8	737.7	732.7	759.4	802.8
70°	674.3	637.6	635.9	655.9	707.7
72.5°	570.8	539.1	530.8	557.5	604.2
75°	472.4	437.3	427.3	452.3	495.7
77.5°	365.5	337.2	330.5	343.8	378.9
80°	257.0	240.3	233.7	238.7	263.7
82.5°	161.9	150.2	146.9	145.2	158.6
85°	81.8	73.4	73.4	68.4	71.8
87.5°	25.0	23.4	21.7	16.7	18.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)