

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: P487080

Luminaire Tested: **ORLG-24-4-INS-89BC-LD4-5LO-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: P487080
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-LD4-5LO-27-120-EDD-90
Description: 2X4 ORL LED LUMINAIRE WITH 89BC LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

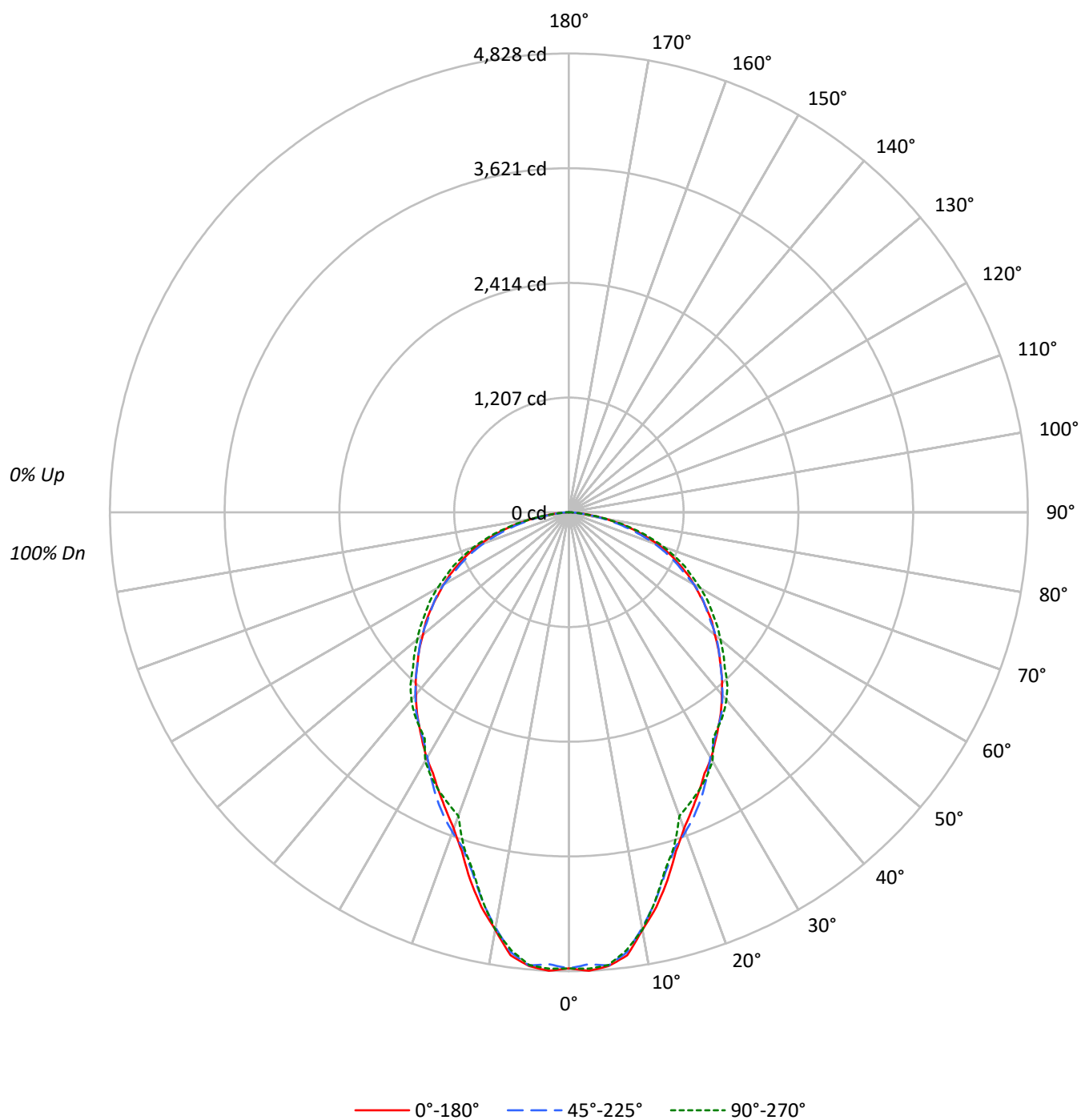
Lumens per Lamp: N/A
Luminaire Lumens: 10261.9 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 0.94 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 117
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°	6456	6456	6456
5°	6474	6464	6457
10°	6092	6065	6089
15°	5582	5460	5429
20°	5070	5127	4866
25°	4808	4905	4801
30°	4644	4625	4695
35°	4508	4508	4508
40°	4396	4413	4523
45°	4287	4283	4416
50°	4194	4226	4356
55°	4150	4133	4320
60°	4096	4089	4297
65°	4044	3917	4274
70°	3966	3740	4162
75°	3671	3321	3853
80°	2978	2707	3055
85°	1888	1695	1656



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	445.7	4.3
10°-20°	1114.2	10.9
20°-30°	1504.7	14.7
30°-40°	1723.1	16.8
40°-50°	1765.0	17.2
50°-60°	1601.5	15.6
60°-70°	1249.9	12.2
70°-80°	708.9	6.9
80°-90°	148.8	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°	3064.6	29.9
0°-40°	4787.7	46.7
0°-60°	8154.2	79.5
0°-90°	10261.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10261.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4798	4798	4798	4798	4798	
5°	4793	4738	4786	4796	4781	448
15°	4007	4020	3920	3940	3898	1120
25°	3239	3281	3304	3224	3234	1495
35°	2745	2750	2745	2747	2745	1719
45°	2253	2271	2251	2343	2321	1742
55°	1769	1767	1762	1824	1842	1581
65°	1270	1243	1230	1288	1342	1259
75°	706	654	639	676	741	739
85°	122	110	110	102	107	161
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4798.4	4798.4	4798.4	4798.4	4798.4
2.5°	4828.3	4790.9	4758.5	4810.9	4805.9
5°	4793.4	4738.5	4785.9	4795.9	4780.9
7.5°	4701.1	4666.1	4668.6	4648.7	4646.2
10°	4459.0	4479.0	4439.1	4474.0	4456.5
12.5°	4251.9	4264.4	4194.5	4209.5	4189.5
15°	4007.4	4019.9	3920.0	3940.0	3897.6
17.5°	3740.4	3785.3	3703.0	3727.9	3683.0
20°	3540.8	3578.2	3580.7	3540.8	3398.5
22.5°	3383.6	3421.0	3450.9	3331.2	3316.2
25°	3238.8	3281.3	3303.7	3223.9	3233.9
27.5°	3094.1	3141.5	3141.5	3159.0	3136.5
30°	2989.3	3009.3	2976.8	3041.7	3021.8
32.5°	2864.6	2872.0	2844.6	2892.0	2822.1
35°	2744.8	2749.8	2744.8	2747.3	2744.8
37.5°	2630.0	2617.5	2640.0	2625.0	2672.4
40°	2502.7	2502.7	2512.7	2537.7	2575.1
42.5°	2385.5	2395.4	2383.0	2452.8	2467.8
45°	2253.2	2270.7	2250.7	2343.0	2320.6
47.5°	2133.4	2140.9	2135.9	2198.3	2203.3
50°	2003.7	2013.7	2018.7	2073.6	2081.0
52.5°	1896.4	1893.9	1876.4	1956.3	1968.8
55°	1769.1	1766.6	1761.7	1824.0	1841.5
57.5°	1639.4	1641.9	1654.4	1689.3	1731.7
60°	1522.1	1509.6	1519.6	1562.0	1597.0
62.5°	1402.3	1379.9	1357.4	1427.3	1459.7
65°	1270.1	1242.6	1230.2	1287.6	1342.4
67.5°	1147.8	1102.9	1095.4	1135.3	1200.2
70°	1008.1	953.2	950.7	980.6	1058.0
72.5°	853.4	806.0	793.5	833.4	903.3
75°	706.2	653.8	638.8	676.2	741.1
77.5°	546.5	504.0	494.1	514.0	566.4
80°	384.3	359.3	349.3	356.8	394.3
82.5°	242.0	224.6	219.6	217.1	237.0
85°	122.3	109.8	109.8	102.3	107.3
87.5°	37.4	34.9	32.4	25.0	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)