

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: P557264

Luminaire Tested: **FUSL-12-4-LD4-2LO-35-UNV-82-84-EDD-90**

Issue Date: 7/16/2021

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: P557264  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-257-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FUSL-12-4-LD4-2LO-35-UNV-82-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

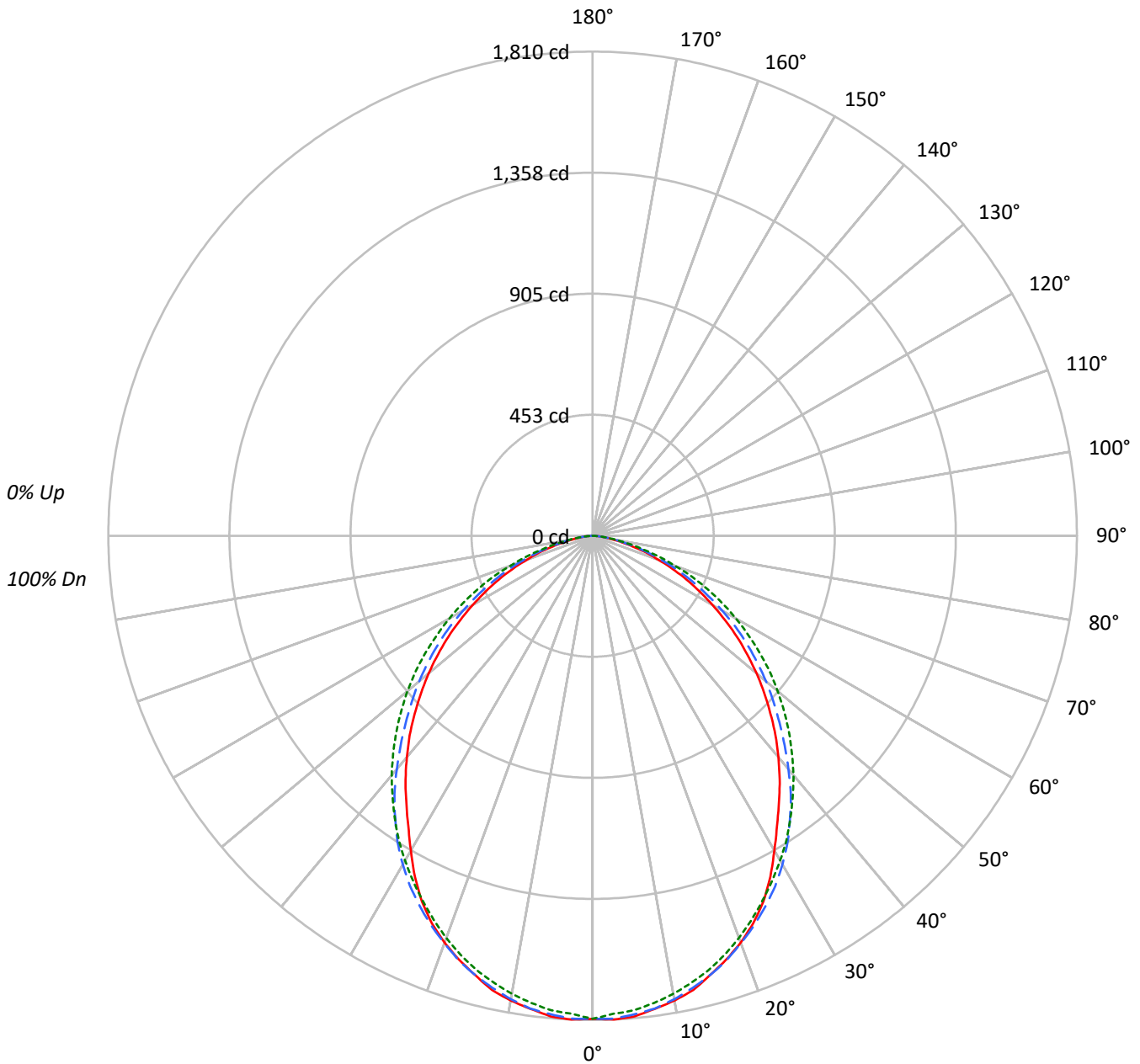
Lumens per Lamp: N/A  
Luminaire Lumens: 4175.0 lumens  
Efficiency: N/A  
Efficacy: 89.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73																			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63																			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54																			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47																			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42																			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37																			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4859	4859	4859
5°	4872	4851	4810
10°	4820	4807	4752
15°	4735	4735	4680
20°	4634	4640	4581
25°	4482	4537	4465
30°	4220	4410	4356
35°	3988	4227	4234
40°	3794	3999	4103
45°	3577	3757	3949
50°	3348	3540	3781
55°	3088	3293	3576
60°	2781	3005	3326
65°	2456	2672	3026
70°	2046	2276	2570
75°	1608	1817	2012
80°	1150	1278	1420
85°	750	750	707



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	170.0	4.1
10°-20°	477.6	11.4
20°-30°	697.9	16.7
30°-40°	792.2	19.0
40°-50°	764.7	18.3
50°-60°	630.9	15.1
60°-70°	420.1	10.1
70°-80°	188.0	4.5
80°-90°	33.6	0.8
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°	1345.5	32.2
0°-40°	2137.7	51.2
0°-60°	3533.3	84.6
0°-90°	4175.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4175.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1806	1806	1806	1806	1806	
5°	1804	1803	1796	1786	1781	171
15°	1700	1704	1700	1692	1680	479
25°	1509	1521	1528	1517	1504	691
35°	1214	1230	1287	1294	1289	761
45°	940	956	987	1032	1038	725
55°	658	669	702	741	762	588
65°	386	396	420	450	475	382
75°	155	163	175	183	194	169
85°	24	24	24	23	23	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1805.6	1805.6	1805.6	1805.6	1805.6
2.5°	1810.4	1811.1	1807.0	1795.9	1788.9
5°	1803.5	1802.8	1795.9	1786.2	1780.6
7.5°	1783.4	1784.8	1782.7	1768.8	1761.2
10°	1764.0	1764.7	1759.1	1748.0	1739.0
12.5°	1739.0	1738.3	1730.7	1725.1	1710.5
15°	1699.5	1703.6	1699.5	1691.8	1680.0
17.5°	1661.3	1661.3	1664.1	1650.9	1641.9
20°	1618.3	1620.4	1620.4	1610.0	1599.6
22.5°	1568.4	1574.6	1576.7	1565.6	1553.1
25°	1509.4	1521.2	1528.1	1517.0	1503.8
27.5°	1437.9	1456.0	1476.8	1468.5	1453.9
30°	1358.2	1384.5	1419.2	1412.3	1401.9
32.5°	1282.6	1308.9	1356.8	1354.0	1348.5
35°	1213.9	1230.5	1286.7	1293.7	1288.8
37.5°	1148.7	1164.0	1216.7	1232.6	1228.5
40°	1080.0	1096.7	1138.3	1166.7	1168.1
42.5°	1012.0	1028.0	1062.0	1102.9	1102.9
45°	939.9	955.9	987.1	1032.2	1037.7
47.5°	869.1	885.8	916.3	961.4	970.4
50°	799.8	815.0	845.6	889.3	903.1
52.5°	727.6	744.3	774.1	814.3	834.5
55°	658.3	669.4	702.0	740.8	762.3
57.5°	586.1	596.5	633.3	666.6	688.8
60°	516.8	530.0	558.4	592.4	618.0
62.5°	450.2	464.1	488.3	518.2	547.3
65°	385.7	396.1	419.7	449.5	475.2
67.5°	323.2	332.3	355.8	376.7	403.7
70°	260.1	271.9	289.3	309.4	326.7
72.5°	209.5	214.3	228.9	243.5	261.5
75°	154.7	163.0	174.8	183.1	193.5
77.5°	111.0	115.8	122.8	129.7	139.4
80°	74.2	76.3	82.5	83.9	91.6
82.5°	45.1	46.5	47.9	48.6	51.3
85°	24.3	24.3	24.3	22.9	22.9
87.5°	13.9	13.9	11.8	9.7	6.9
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)