

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: P557369

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-80-88-EDD**

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: P557369  
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-50-UNV-80-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

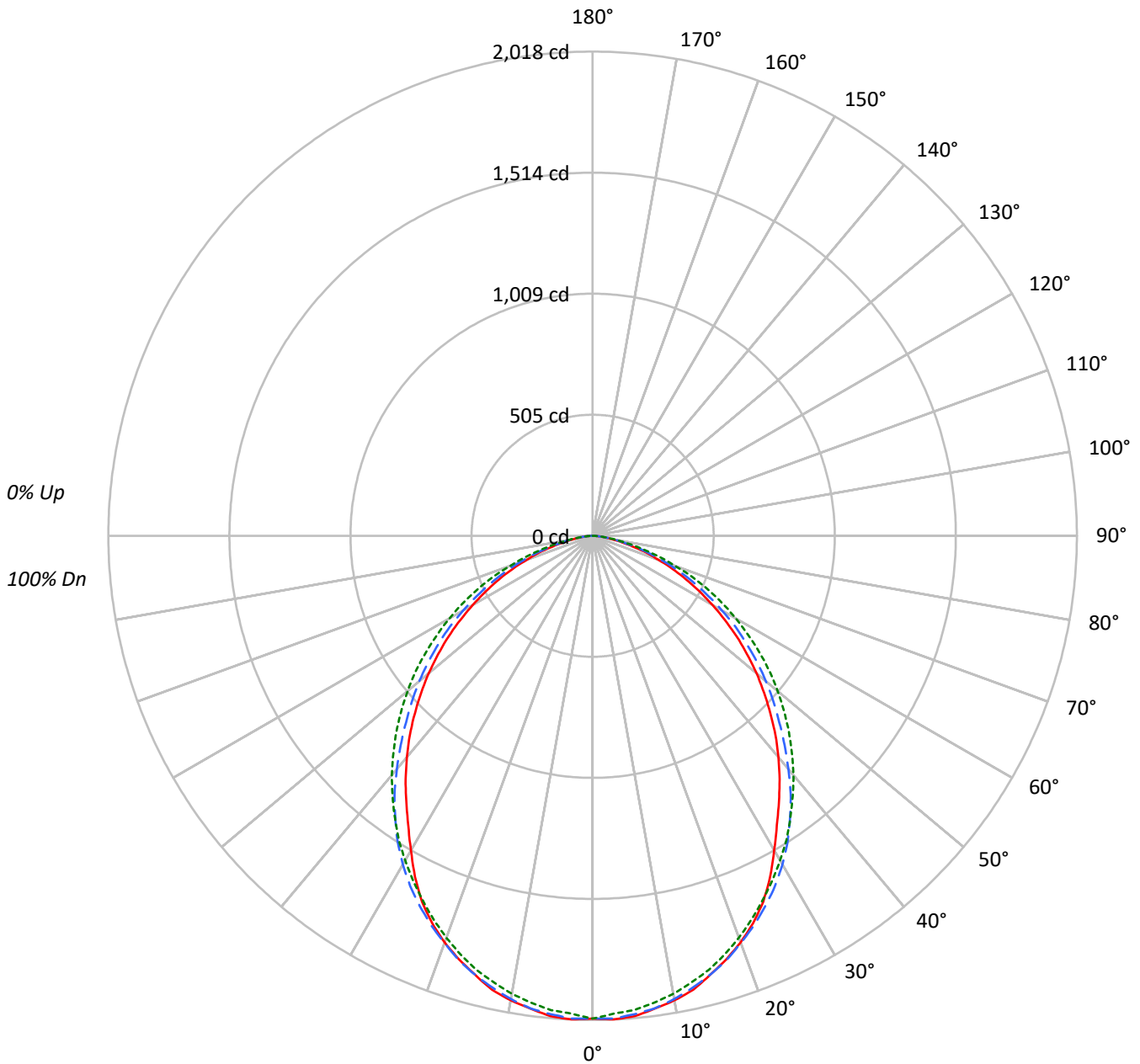
Lumens per Lamp: N/A  
Luminaire Lumens: 4653.0 lumens  
Efficiency: N/A  
Efficacy: 99.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	5415	5415	5415
5°	5430	5407	5361
10°	5372	5357	5296
15°	5277	5277	5216
20°	5165	5172	5105
25°	4995	5057	4976
30°	4703	4915	4855
35°	4444	4711	4719
40°	4228	4456	4573
45°	3986	4187	4401
50°	3732	3945	4214
55°	3442	3670	3986
60°	3099	3349	3707
65°	2737	2978	3372
70°	2281	2537	2865
75°	1792	2025	2243
80°	1282	1426	1581
85°	837	837	787



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.5	4.1
10°-20°	532.3	11.4
20°-30°	777.8	16.7
30°-40°	882.9	19.0
40°-50°	852.3	18.3
50°-60°	703.1	15.1
60°-70°	468.2	10.1
70°-80°	209.5	4.5
80°-90°	37.5	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°	1499.5	32.2
0°-40°	2382.4	51.2
0°-60°	3937.8	84.6
0°-90°	4653.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4653.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2012	2012	2012	2012	2012	
5°	2010	2009	2002	1991	1984	190
15°	1894	1899	1894	1886	1872	534
25°	1682	1695	1703	1691	1676	770
35°	1353	1371	1434	1442	1436	848
45°	1048	1065	1100	1150	1156	808
55°	734	746	782	826	850	655
65°	430	441	468	501	530	426
75°	172	182	195	204	216	189
85°	27	27	27	26	26	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2012.3	2012.3	2012.3	2012.3	2012.3
2.5°	2017.7	2018.5	2013.8	2001.5	1993.7
5°	2010.0	2009.2	2001.5	1990.7	1984.5
7.5°	1987.6	1989.1	1986.8	1971.3	1962.8
10°	1965.9	1966.7	1960.5	1948.1	1938.1
12.5°	1938.1	1937.3	1928.8	1922.6	1906.4
15°	1894.0	1898.7	1894.0	1885.5	1872.4
17.5°	1851.5	1851.5	1854.6	1839.9	1829.9
20°	1803.6	1805.9	1805.9	1794.3	1782.7
22.5°	1747.9	1754.9	1757.2	1744.8	1730.9
25°	1682.2	1695.3	1703.1	1690.7	1676.0
27.5°	1602.6	1622.7	1645.9	1636.6	1620.4
30°	1513.7	1543.0	1581.7	1574.0	1562.4
32.5°	1429.4	1458.8	1512.1	1509.0	1502.8
35°	1352.9	1371.4	1434.0	1441.8	1436.4
37.5°	1280.2	1297.2	1356.0	1373.7	1369.1
40°	1203.7	1222.2	1268.6	1300.3	1301.9
42.5°	1127.9	1145.7	1183.6	1229.2	1229.2
45°	1047.5	1065.3	1100.1	1150.3	1156.5
47.5°	968.7	987.2	1021.2	1071.5	1081.5
50°	891.4	908.4	942.4	991.1	1006.5
52.5°	811.0	829.5	862.7	907.6	930.0
55°	733.6	746.0	782.3	825.6	849.6
57.5°	653.2	664.8	705.8	742.9	767.7
60°	575.9	590.6	622.3	660.2	688.8
62.5°	501.7	517.2	544.2	577.5	610.0
65°	429.8	441.4	467.7	500.9	529.6
67.5°	360.3	370.3	396.6	419.8	449.9
70°	289.9	303.0	322.4	344.8	364.1
72.5°	233.5	238.9	255.1	271.3	291.4
75°	172.4	181.7	194.8	204.1	215.7
77.5°	123.7	129.1	136.8	144.6	155.4
80°	82.7	85.0	92.0	93.5	102.0
82.5°	50.2	51.8	53.3	54.1	57.2
85°	27.1	27.1	27.1	25.5	25.5
87.5°	15.5	15.5	13.1	10.8	7.7
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)