

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: P557174

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-80-87-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: P557174  
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-30-UNV-80-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

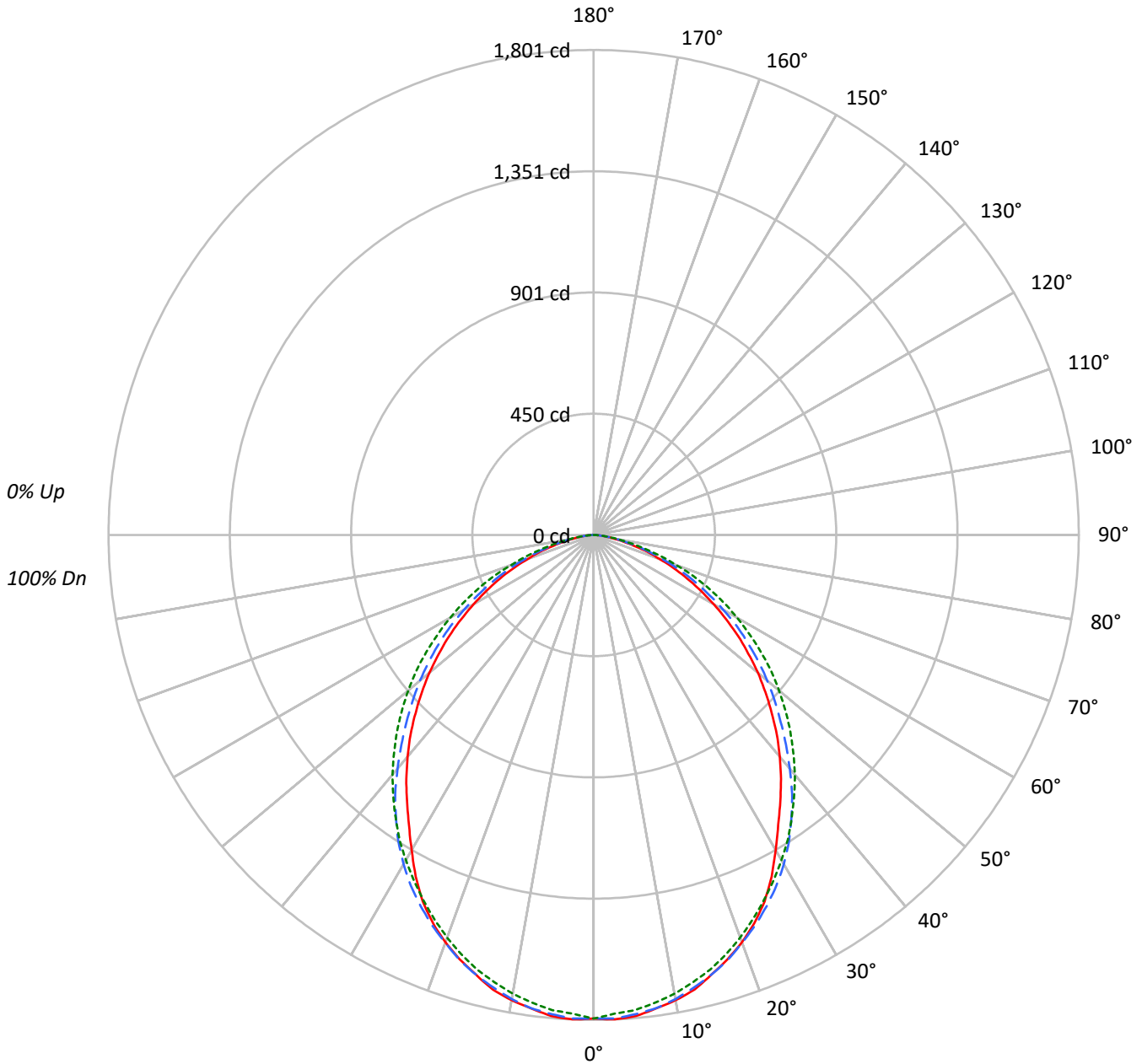
Lumens per Lamp: N/A  
Luminaire Lumens: 4153.0 lumens  
Efficiency: N/A  
Efficacy: 88.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4833	4833	4833
5°	4846	4826	4784
10°	4795	4781	4727
15°	4710	4710	4656
20°	4610	4616	4556
25°	4458	4513	4442
30°	4198	4387	4333
35°	3967	4205	4211
40°	3774	3978	4082
45°	3558	3737	3928
50°	3331	3521	3761
55°	3072	3276	3558
60°	2766	2989	3309
65°	2443	2658	3009
70°	2035	2264	2557
75°	1600	1808	2001
80°	1144	1272	1412
85°	744	744	704



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.1	4.1
10°-20°	475.1	11.4
20°-30°	694.2	16.7
30°-40°	788.0	19.0
40°-50°	760.7	18.3
50°-60°	627.5	15.1
60°-70°	417.9	10.1
70°-80°	187.0	4.5
80°-90°	33.4	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°	1338.4	32.2
0°-40°	2126.4	51.2
0°-60°	3514.6	84.6
0°-90°	4153.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4153.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1796	1796	1796	1796	1796	
5°	1794	1793	1786	1777	1771	170
15°	1690	1695	1690	1683	1671	477
25°	1501	1513	1520	1509	1496	688
35°	1208	1224	1280	1287	1282	757
45°	935	951	982	1027	1032	721
55°	655	666	698	737	758	584
65°	384	394	417	447	473	380
75°	154	162	174	182	192	168
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°	1796.1	1796.1	1796.1	1796.1	1796.1
2.5°	1800.9	1801.6	1797.4	1786.4	1779.5
5°	1794.0	1793.3	1786.4	1776.7	1771.2
7.5°	1774.0	1775.4	1773.3	1759.5	1751.9
10°	1754.7	1755.4	1749.8	1738.8	1729.8
12.5°	1729.8	1729.1	1721.5	1716.0	1701.5
15°	1690.5	1694.6	1690.5	1682.9	1671.2
17.5°	1652.5	1652.5	1655.3	1642.2	1633.2
20°	1609.8	1611.8	1611.8	1601.5	1591.1
22.5°	1560.1	1566.3	1568.4	1557.3	1544.9
25°	1501.4	1513.2	1520.1	1509.0	1495.9
27.5°	1430.4	1448.3	1469.0	1460.7	1446.2
30°	1351.0	1377.2	1411.7	1404.8	1394.5
32.5°	1275.8	1302.0	1349.6	1346.9	1341.4
35°	1207.5	1224.1	1279.9	1286.8	1282.0
37.5°	1142.6	1157.8	1210.3	1226.1	1222.0
40°	1074.3	1090.9	1132.3	1160.6	1162.0
42.5°	1006.7	1022.6	1056.4	1097.1	1097.1
45°	934.9	950.8	981.9	1026.7	1032.2
47.5°	864.6	881.1	911.5	956.3	965.3
50°	795.6	810.7	841.1	884.6	898.4
52.5°	723.8	740.4	770.0	810.1	830.1
55°	654.8	665.8	698.3	736.9	758.3
57.5°	583.0	593.4	630.0	663.1	685.2
60°	514.0	527.2	555.4	589.3	614.8
62.5°	447.8	461.6	485.8	515.4	544.4
65°	383.6	394.0	417.4	447.1	472.6
67.5°	321.5	330.5	354.0	374.7	401.6
70°	258.7	270.5	287.7	307.7	325.0
72.5°	208.4	213.2	227.7	242.2	260.1
75°	153.9	162.1	173.9	182.2	192.5
77.5°	110.4	115.2	122.1	129.0	138.7
80°	73.8	75.9	82.1	83.5	91.1
82.5°	44.8	46.2	47.6	48.3	51.1
85°	24.1	24.1	24.1	22.8	22.8
87.5°	13.8	13.8	11.7	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)