

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: P557322

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-81-94-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: P557322  
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-40-UNV-81-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

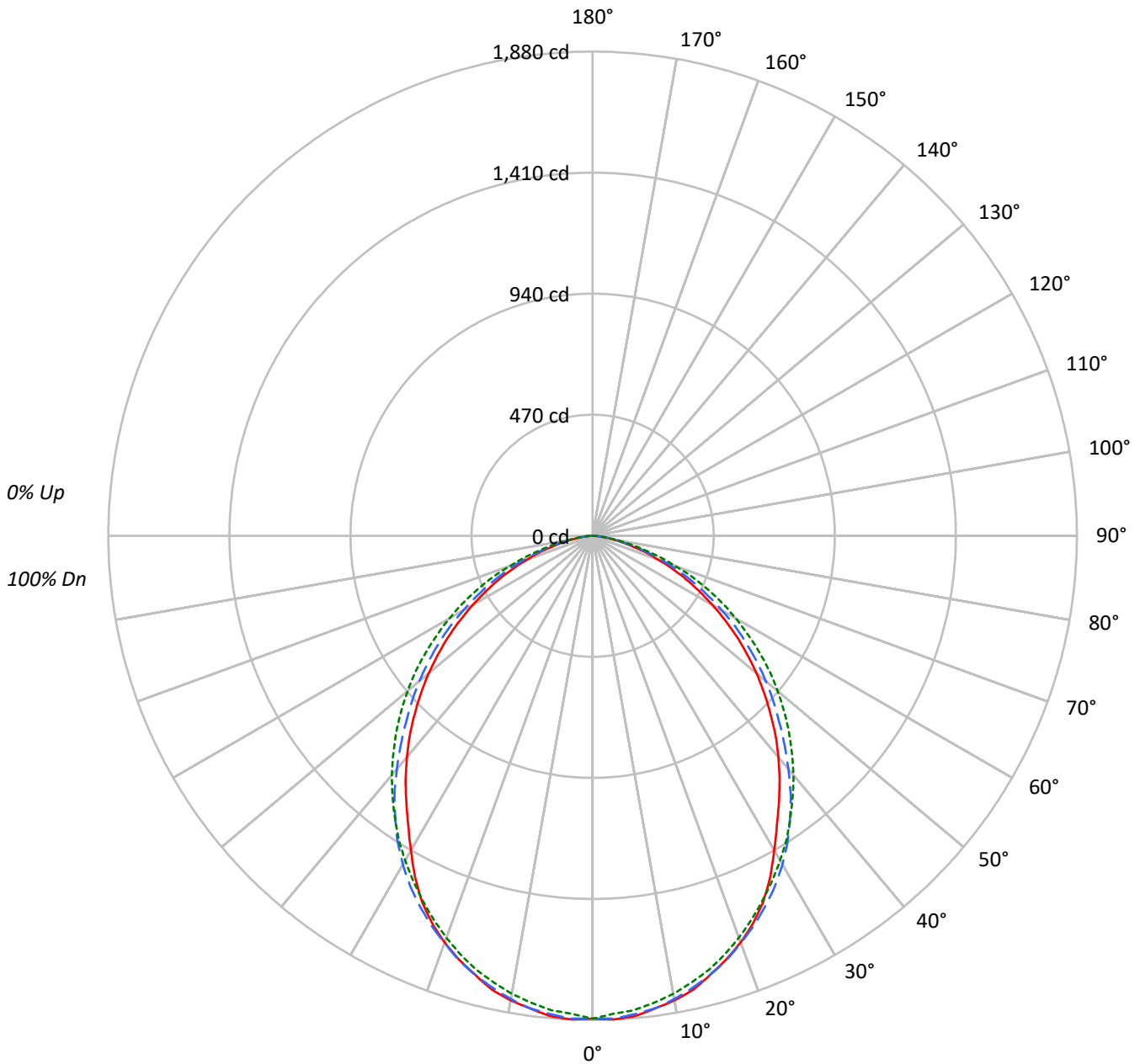
Lumens per Lamp: N/A  
Luminaire Lumens: 4335.0 lumens  
Efficiency: N/A  
Efficacy: 92.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

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

	0°	45°	90°
0°	5045	5045	5045
5°	5058	5037	4994
10°	5005	4991	4934
15°	4916	4916	4860
20°	4812	4818	4756
25°	4653	4711	4636
30°	4382	4579	4523
35°	4141	4389	4396
40°	3939	4152	4261
45°	3714	3900	4101
50°	3476	3676	3926
55°	3207	3420	3713
60°	2888	3120	3454
65°	2550	2774	3142
70°	2125	2363	2669
75°	1670	1887	2089
80°	1195	1328	1474
85°	778	778	735



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.5	4.1
10°-20°	495.9	11.4
20°-30°	724.7	16.7
30°-40°	822.6	19.0
40°-50°	794.0	18.3
50°-60°	655.0	15.1
60°-70°	436.2	10.1
70°-80°	195.2	4.5
80°-90°	34.9	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°	1397.1	32.2
0°-40°	2219.6	51.2
0°-60°	3668.7	84.6
0°-90°	4335.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4335.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1875	1875	1875	1875	1875	
5°	1873	1872	1865	1855	1849	177
15°	1765	1769	1765	1757	1744	497
25°	1567	1580	1587	1575	1562	718
35°	1260	1278	1336	1343	1338	790
45°	976	992	1025	1072	1078	753
55°	684	695	729	769	792	610
65°	400	411	436	467	493	397
75°	161	169	182	190	201	176
85°	25	25	25	24	24	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1874.8	1874.8	1874.8	1874.8	1874.8
2.5°	1879.8	1880.5	1876.2	1864.7	1857.5
5°	1872.6	1871.9	1864.7	1854.6	1848.8
7.5°	1851.7	1853.2	1851.0	1836.6	1828.7
10°	1831.6	1832.3	1826.5	1815.0	1805.6
12.5°	1805.6	1804.9	1797.0	1791.2	1776.1
15°	1764.6	1768.9	1764.6	1756.7	1744.4
17.5°	1725.0	1725.0	1727.8	1714.2	1704.8
20°	1680.3	1682.5	1682.5	1671.7	1660.9
22.5°	1628.5	1634.9	1637.1	1625.6	1612.6
25°	1567.2	1579.5	1586.7	1575.2	1561.5
27.5°	1493.1	1511.8	1533.4	1524.7	1509.6
30°	1410.2	1437.6	1473.6	1466.4	1455.6
32.5°	1331.7	1359.1	1408.8	1405.9	1400.1
35°	1260.4	1277.7	1336.0	1343.2	1338.2
37.5°	1192.7	1208.6	1263.3	1279.9	1275.5
40°	1121.4	1138.7	1181.9	1211.4	1212.9
42.5°	1050.8	1067.4	1102.7	1145.2	1145.2
45°	975.9	992.5	1024.9	1071.7	1077.5
47.5°	902.5	919.7	951.4	998.2	1007.6
50°	830.4	846.3	878.0	923.3	937.7
52.5°	755.5	772.8	803.8	845.6	866.4
55°	683.5	695.0	728.9	769.2	791.5
57.5°	608.6	619.4	657.6	692.1	715.2
60°	536.6	550.3	579.8	615.1	641.7
62.5°	467.4	481.8	507.0	538.0	568.3
65°	400.5	411.3	435.7	466.7	493.4
67.5°	335.6	345.0	369.5	391.1	419.2
70°	270.1	282.3	300.3	321.2	339.2
72.5°	217.5	222.6	237.7	252.8	271.5
75°	160.6	169.3	181.5	190.1	200.9
77.5°	115.2	120.3	127.5	134.7	144.8
80°	77.1	79.2	85.7	87.1	95.1
82.5°	46.8	48.3	49.7	50.4	53.3
85°	25.2	25.2	25.2	23.8	23.8
87.5°	14.4	14.4	12.2	10.1	7.2
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)