

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: P556195

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-93-85-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: P556195  
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-LD4-1HI-30-UNV-93-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

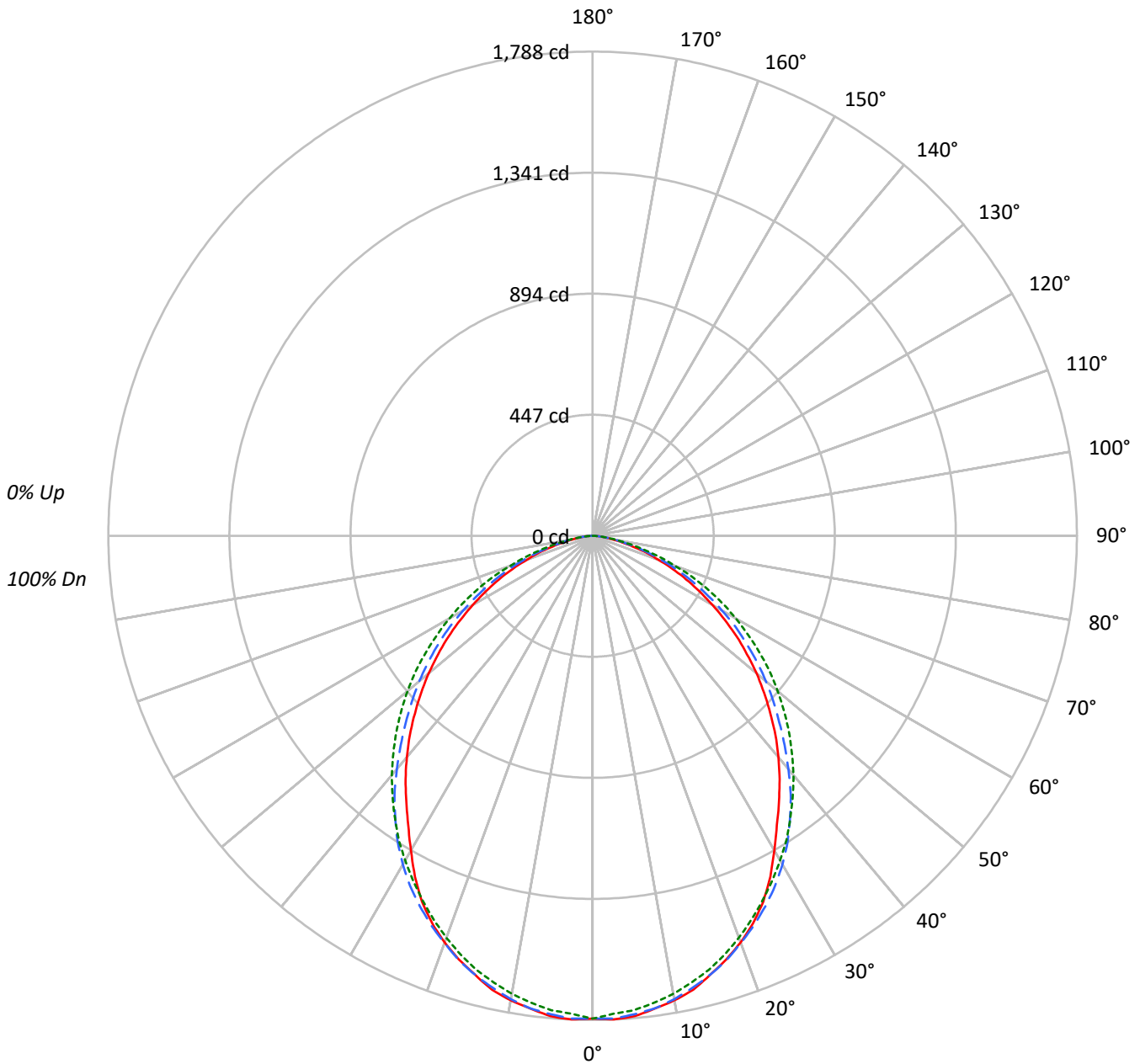
Lumens per Lamp: N/A  
Luminaire Lumens: 4123.0 lumens  
Efficiency: N/A  
Efficacy: 95.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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									
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°	4798	4798	4798
5°	4811	4791	4750
10°	4760	4747	4693
15°	4676	4676	4622
20°	4576	4582	4523
25°	4426	4481	4410
30°	4168	4355	4302
35°	3938	4174	4181
40°	3747	3949	4052
45°	3532	3710	3900
50°	3306	3496	3734
55°	3050	3252	3532
60°	2746	2968	3285
65°	2425	2639	2988
70°	2021	2248	2538
75°	1589	1795	1987
80°	1136	1263	1401
85°	741	741	698



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.9	4.1
10°-20°	471.6	11.4
20°-30°	689.2	16.7
30°-40°	782.3	19.0
40°-50°	755.2	18.3
50°-60°	623.0	15.1
60°-70°	414.9	10.1
70°-80°	185.6	4.5
80°-90°	33.2	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°	1328.7	32.2
0°-40°	2111.1	51.2
0°-60°	3489.3	84.6
0°-90°	4123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4123.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1783	1783	1783	1783	1783	
5°	1781	1780	1774	1764	1758	169
15°	1678	1682	1678	1671	1659	473
25°	1491	1502	1509	1498	1485	683
35°	1199	1215	1271	1278	1273	751
45°	928	944	975	1019	1025	716
55°	650	661	693	732	753	580
65°	381	391	414	444	469	378
75°	153	161	173	181	191	167
85°	24	24	24	23	23	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1783.1	1783.1	1783.1	1783.1	1783.1
2.5°	1787.9	1788.6	1784.5	1773.5	1766.7
5°	1781.0	1780.4	1773.5	1763.9	1758.4
7.5°	1761.2	1762.5	1760.5	1746.8	1739.3
10°	1742.0	1742.7	1737.2	1726.2	1717.3
12.5°	1717.3	1716.6	1709.1	1703.6	1689.2
15°	1678.3	1682.4	1678.3	1670.7	1659.1
17.5°	1640.6	1640.6	1643.3	1630.3	1621.4
20°	1598.1	1600.2	1600.2	1589.9	1579.6
22.5°	1548.8	1555.0	1557.0	1546.1	1533.7
25°	1490.6	1502.2	1509.1	1498.1	1485.1
27.5°	1420.0	1437.8	1458.4	1450.2	1435.8
30°	1341.3	1367.3	1401.5	1394.7	1384.4
32.5°	1266.6	1292.6	1339.9	1337.1	1331.7
35°	1198.8	1215.2	1270.7	1277.6	1272.8
37.5°	1134.4	1149.5	1201.5	1217.3	1213.2
40°	1066.6	1083.0	1124.1	1152.2	1153.6
42.5°	999.4	1015.2	1048.8	1089.2	1089.2
45°	928.2	943.9	974.8	1019.3	1024.8
47.5°	858.3	874.8	904.9	949.4	958.3
50°	789.8	804.9	835.0	878.2	891.9
52.5°	718.6	735.0	764.5	804.2	824.1
55°	650.1	661.0	693.2	731.6	752.8
57.5°	578.8	589.1	625.4	658.3	680.2
60°	510.3	523.4	551.4	585.0	610.3
62.5°	444.6	458.3	482.2	511.7	540.5
65°	380.9	391.1	414.4	443.9	469.2
67.5°	319.2	328.1	351.4	372.0	398.7
70°	256.9	268.5	285.7	305.5	322.6
72.5°	206.9	211.7	226.1	240.4	258.3
75°	152.8	161.0	172.6	180.8	191.1
77.5°	109.6	114.4	121.2	128.1	137.7
80°	73.3	75.4	81.5	82.9	90.4
82.5°	44.5	45.9	47.3	48.0	50.7
85°	24.0	24.0	24.0	22.6	22.6
87.5°	13.7	13.7	11.6	9.6	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)