

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: P556203

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-93-94-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: P556203  
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-93-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

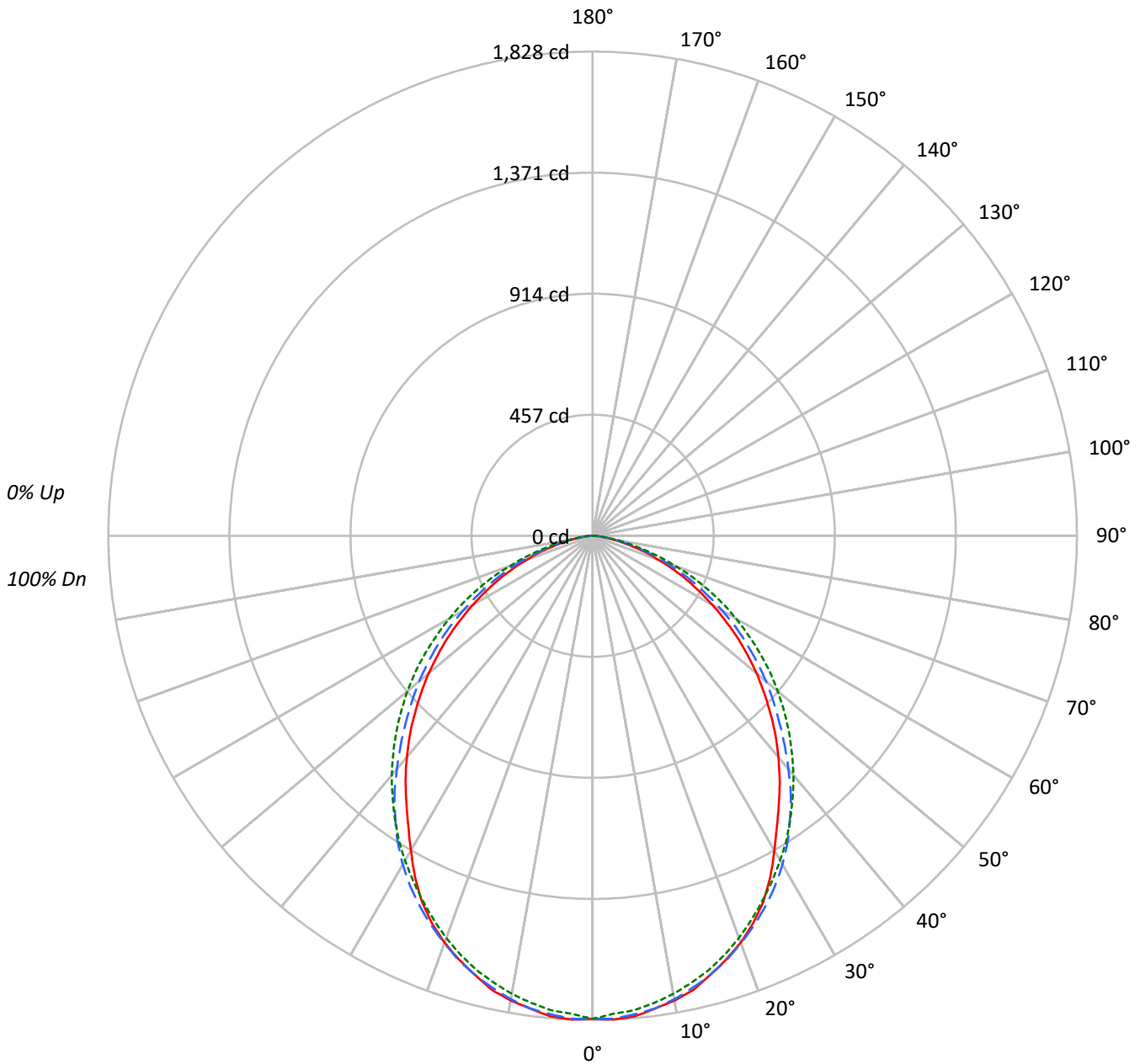
Lumens per Lamp: N/A  
Luminaire Lumens: 4216.0 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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				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°	4906	4906	4906
5°	4920	4899	4857
10°	4867	4854	4799
15°	4781	4781	4726
20°	4680	4686	4626
25°	4526	4582	4509
30°	4262	4453	4399
35°	4027	4269	4276
40°	3831	4038	4144
45°	3612	3793	3988
50°	3381	3575	3818
55°	3118	3326	3612
60°	2808	3035	3359
65°	2480	2699	3055
70°	2067	2298	2596
75°	1624	1835	2032
80°	1161	1292	1433
85°	756	756	713



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	171.7	4.1
10°-20°	482.3	11.4
20°-30°	704.8	16.7
30°-40°	800.0	19.0
40°-50°	772.2	18.3
50°-60°	637.0	15.1
60°-70°	424.2	10.1
70°-80°	189.8	4.5
80°-90°	34.0	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°	1358.7	32.2
0°-40°	2158.7	51.2
0°-60°	3568.0	84.6
0°-90°	4216.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4216.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1823	1823	1823	1823	1823	
5°	1821	1820	1814	1804	1798	172
15°	1716	1720	1716	1708	1696	484
25°	1524	1536	1543	1532	1519	698
35°	1226	1243	1299	1306	1302	768
45°	949	965	997	1042	1048	732
55°	665	676	709	748	770	593
65°	390	400	424	454	480	386
75°	156	165	176	185	195	171
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°	1823.3	1823.3	1823.3	1823.3	1823.3
2.5°	1828.2	1828.9	1824.7	1813.5	1806.5
5°	1821.2	1820.5	1813.5	1803.7	1798.1
7.5°	1800.9	1802.3	1800.2	1786.2	1778.5
10°	1781.3	1782.0	1776.4	1765.2	1756.1
12.5°	1756.1	1755.4	1747.7	1742.1	1727.3
15°	1716.1	1720.3	1716.1	1708.4	1696.5
17.5°	1677.6	1677.6	1680.4	1667.1	1658.0
20°	1634.2	1636.3	1636.3	1625.8	1615.3
22.5°	1583.8	1590.1	1592.2	1581.0	1568.3
25°	1524.2	1536.1	1543.1	1531.9	1518.6
27.5°	1452.1	1470.3	1491.3	1482.9	1468.2
30°	1371.5	1398.1	1433.2	1426.1	1415.6
32.5°	1295.2	1321.8	1370.1	1367.3	1361.7
35°	1225.8	1242.6	1299.4	1306.4	1301.5
37.5°	1160.0	1175.4	1228.6	1244.7	1240.5
40°	1090.6	1107.4	1149.5	1178.2	1179.6
42.5°	1022.0	1038.1	1072.4	1113.7	1113.7
45°	949.1	965.2	996.8	1042.3	1047.9
47.5°	877.7	894.5	925.3	970.8	980.0
50°	807.6	823.0	853.9	898.0	912.0
52.5°	734.8	751.6	781.7	822.3	842.7
55°	664.7	675.9	708.9	748.1	769.8
57.5°	591.9	602.4	639.5	673.1	695.6
60°	521.8	535.2	563.9	598.2	624.1
62.5°	454.6	468.6	493.1	523.2	552.7
65°	389.5	400.0	423.8	453.9	479.8
67.5°	326.4	335.5	359.3	380.4	407.7
70°	262.7	274.6	292.1	312.4	329.9
72.5°	211.5	216.4	231.2	245.9	264.1
75°	156.2	164.6	176.5	184.9	195.4
77.5°	112.1	117.0	124.0	131.0	140.8
80°	74.9	77.1	83.4	84.8	92.5
82.5°	45.5	46.9	48.3	49.0	51.8
85°	24.5	24.5	24.5	23.1	23.1
87.5°	14.0	14.0	11.9	9.8	7.0
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)