

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: P556237

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-UNV-81-96-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: P556237  
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-35-UNV-81-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

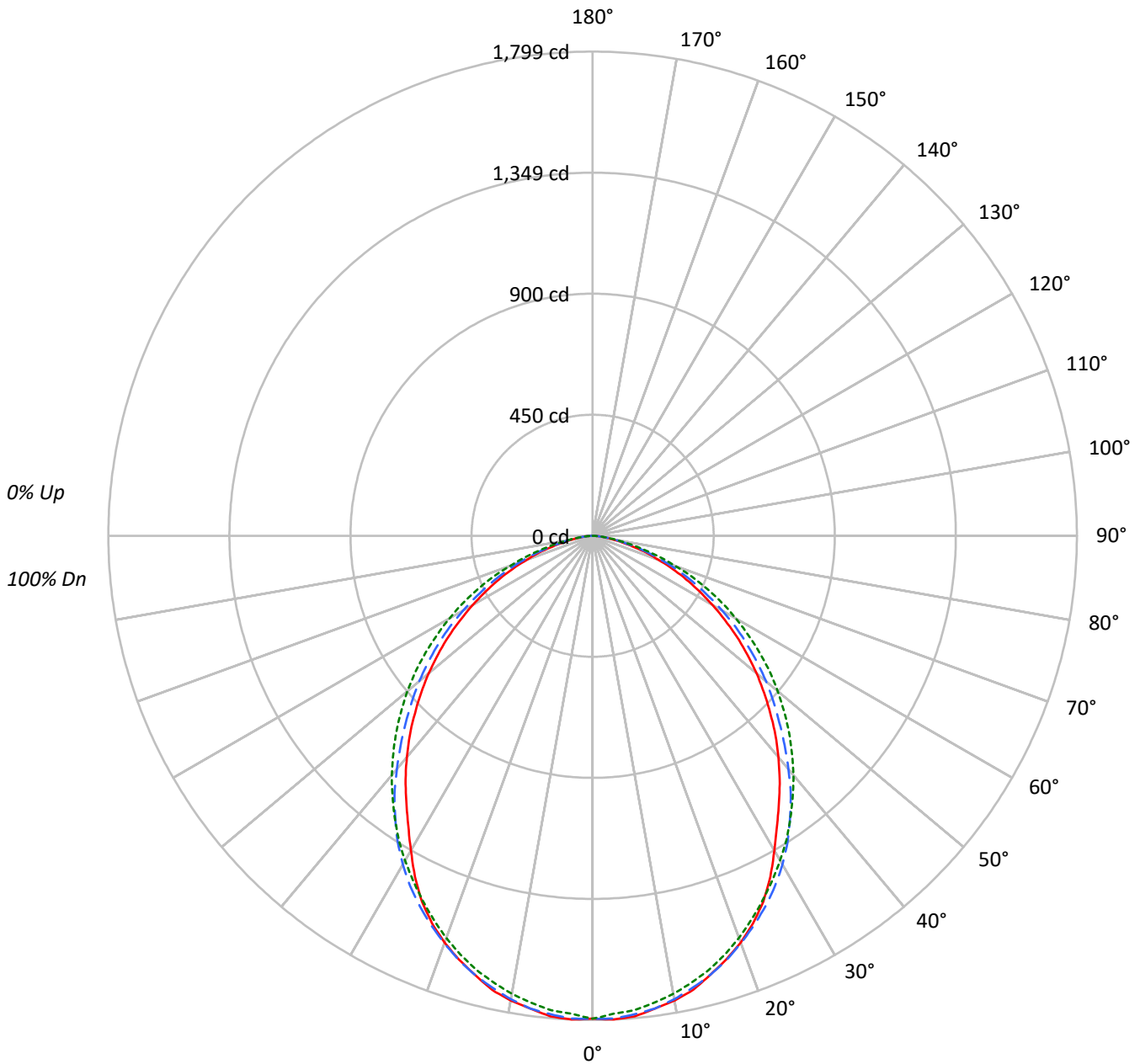
Lumens per Lamp: N/A  
Luminaire Lumens: 4149.0 lumens  
Efficiency: N/A  
Efficacy: 96.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4828	4828	4828
5°	4841	4821	4780
10°	4790	4777	4722
15°	4705	4705	4651
20°	4605	4611	4552
25°	4454	4509	4437
30°	4194	4383	4329
35°	3963	4201	4208
40°	3770	3974	4078
45°	3554	3733	3924
50°	3327	3518	3757
55°	3069	3273	3554
60°	2764	2986	3306
65°	2441	2655	3007
70°	2034	2262	2555
75°	1598	1806	1999
80°	1144	1271	1410
85°	744	744	701



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.9	4.1
10°-20°	474.6	11.4
20°-30°	693.6	16.7
30°-40°	787.3	19.0
40°-50°	760.0	18.3
50°-60°	626.9	15.1
60°-70°	417.5	10.1
70°-80°	186.8	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°	1337.1	32.2
0°-40°	2124.4	51.2
0°-60°	3511.3	84.6
0°-90°	4149.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4149.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1794	1794	1794	1794	1794	
5°	1792	1792	1785	1775	1770	170
15°	1689	1693	1689	1681	1670	476
25°	1500	1512	1519	1508	1494	687
35°	1206	1223	1279	1286	1281	756
45°	934	950	981	1026	1031	721
55°	654	665	698	736	758	584
65°	383	394	417	447	472	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°	1794.3	1794.3	1794.3	1794.3	1794.3
2.5°	1799.2	1799.9	1795.7	1784.7	1777.8
5°	1792.3	1791.6	1784.7	1775.0	1769.5
7.5°	1772.3	1773.7	1771.6	1757.8	1750.2
10°	1753.0	1753.7	1748.2	1737.1	1728.2
12.5°	1728.2	1727.5	1719.9	1714.4	1699.9
15°	1688.9	1693.0	1688.9	1681.3	1669.6
17.5°	1651.0	1651.0	1653.7	1640.6	1631.7
20°	1608.2	1610.3	1610.3	1599.9	1589.6
22.5°	1558.6	1564.8	1566.9	1555.8	1543.4
25°	1500.0	1511.7	1518.6	1507.6	1494.5
27.5°	1429.0	1446.9	1467.6	1459.3	1444.8
30°	1349.7	1375.9	1410.4	1403.5	1393.1
32.5°	1274.6	1300.8	1348.3	1345.6	1340.1
35°	1206.3	1222.9	1278.7	1285.6	1280.8
37.5°	1141.5	1156.7	1209.1	1224.9	1220.8
40°	1073.3	1089.8	1131.2	1159.5	1160.8
42.5°	1005.7	1021.6	1055.4	1096.0	1096.0
45°	934.0	949.9	980.9	1025.7	1031.2
47.5°	863.7	880.3	910.6	955.4	964.4
50°	794.8	810.0	840.3	883.7	897.5
52.5°	723.1	739.7	769.3	809.3	829.3
55°	654.2	665.2	697.6	736.2	757.6
57.5°	582.5	592.8	629.4	662.4	684.5
60°	513.6	526.7	554.9	588.7	614.2
62.5°	447.4	461.2	485.3	514.9	543.9
65°	383.3	393.6	417.0	446.7	472.2
67.5°	321.2	330.2	353.6	374.3	401.2
70°	258.5	270.2	287.5	307.4	324.7
72.5°	208.2	213.0	227.5	242.0	259.9
75°	153.7	162.0	173.7	182.0	192.3
77.5°	110.3	115.1	122.0	128.9	138.6
80°	73.8	75.8	82.0	83.4	91.0
82.5°	44.8	46.2	47.6	48.3	51.0
85°	24.1	24.1	24.1	22.7	22.7
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)