

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: P556259

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-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: P556259  
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-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

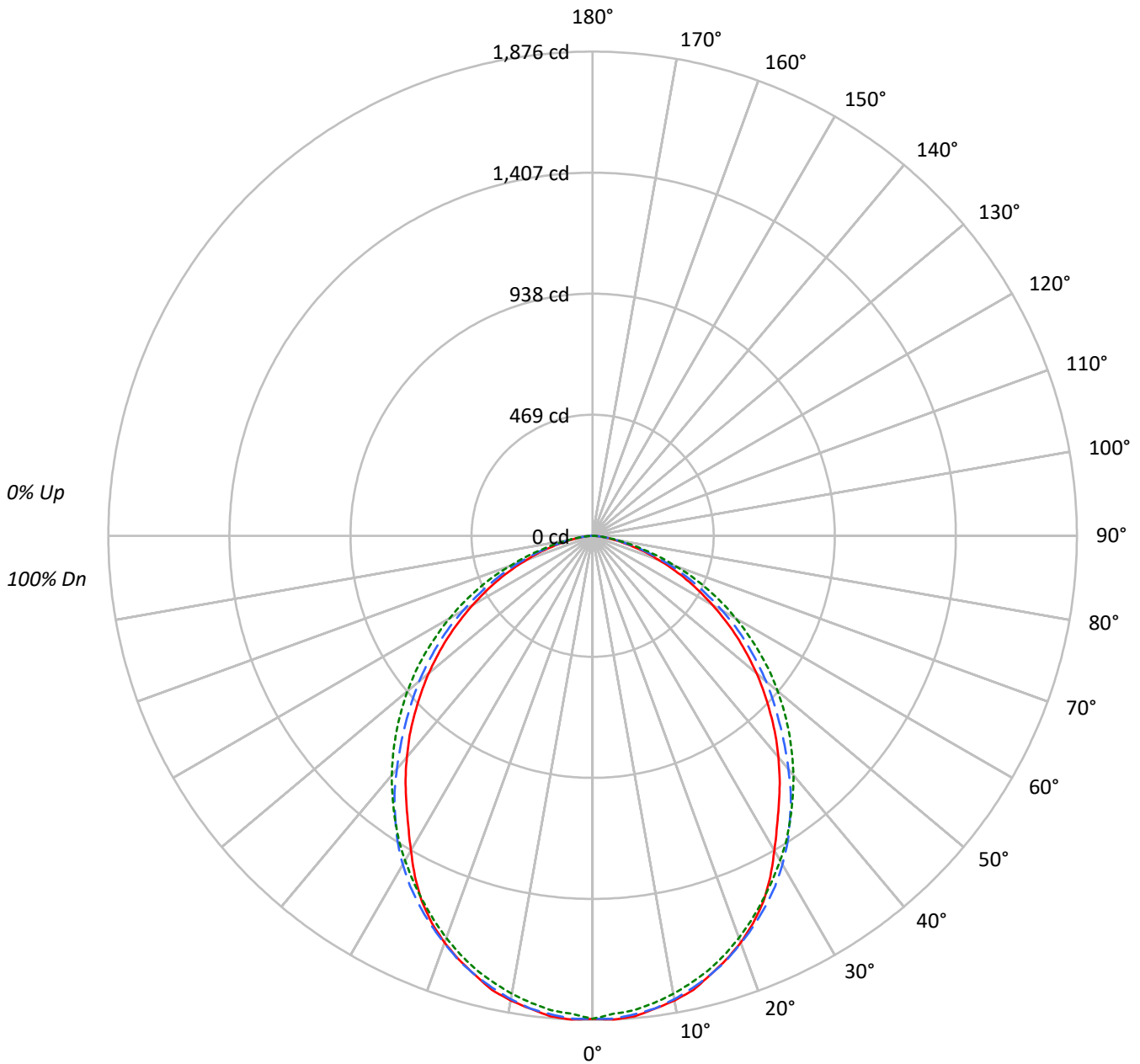
Lumens per Lamp: N/A  
Luminaire Lumens: 4327.0 lumens  
Efficiency: N/A  
Efficacy: 100.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	5036	5036	5036
5°	5049	5028	4985
10°	4996	4982	4925
15°	4907	4907	4851
20°	4803	4809	4747
25°	4645	4703	4628
30°	4374	4570	4515
35°	4133	4381	4388
40°	3932	4144	4253
45°	3707	3893	4093
50°	3470	3669	3918
55°	3201	3413	3707
60°	2883	3115	3447
65°	2545	2769	3136
70°	2121	2359	2664
75°	1667	1884	2086
80°	1192	1325	1471
85°	778	778	732



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.2	4.1
10°-20°	495.0	11.4
20°-30°	723.3	16.7
30°-40°	821.0	19.0
40°-50°	792.6	18.3
50°-60°	653.8	15.1
60°-70°	435.4	10.1
70°-80°	194.8	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°	1394.5	32.2
0°-40°	2215.5	51.2
0°-60°	3661.9	84.6
0°-90°	4327.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4327.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1871	1871	1871	1871	1871	
5°	1869	1868	1861	1851	1845	177
15°	1761	1766	1761	1753	1741	497
25°	1564	1577	1584	1572	1559	716
35°	1258	1275	1334	1341	1336	788
45°	974	991	1023	1070	1076	752
55°	682	694	728	768	790	609
65°	400	410	435	466	492	396
75°	160	169	181	190	201	175
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°	1871.3	1871.3	1871.3	1871.3	1871.3
2.5°	1876.3	1877.1	1872.8	1861.3	1854.1
5°	1869.2	1868.4	1861.3	1851.2	1845.4
7.5°	1848.3	1849.7	1847.6	1833.2	1825.3
10°	1828.2	1828.9	1823.1	1811.6	1802.3
12.5°	1802.3	1801.6	1793.7	1787.9	1772.8
15°	1761.3	1765.6	1761.3	1753.4	1741.2
17.5°	1721.8	1721.8	1724.7	1711.0	1701.7
20°	1677.2	1679.4	1679.4	1668.6	1657.8
22.5°	1625.4	1631.9	1634.1	1622.6	1609.6
25°	1564.3	1576.6	1583.8	1572.3	1558.6
27.5°	1490.3	1509.0	1530.6	1521.9	1506.8
30°	1407.6	1434.9	1470.9	1463.7	1452.9
32.5°	1329.3	1356.6	1406.2	1403.3	1397.6
35°	1258.1	1275.3	1333.6	1340.8	1335.7
37.5°	1190.5	1206.3	1261.0	1277.5	1273.2
40°	1119.3	1136.6	1179.7	1209.2	1210.6
42.5°	1048.9	1065.4	1100.6	1143.1	1143.1
45°	974.1	990.7	1023.0	1069.7	1075.5
47.5°	900.8	918.0	949.7	996.4	1005.8
50°	828.9	844.7	876.3	921.6	936.0
52.5°	754.1	771.4	802.3	844.0	864.8
55°	682.2	693.7	727.5	767.8	790.1
57.5°	607.5	618.3	656.4	690.9	713.9
60°	535.6	549.2	578.7	613.9	640.5
62.5°	466.6	480.9	506.1	537.0	567.2
65°	399.7	410.5	434.9	465.9	492.5
67.5°	335.0	344.4	368.8	390.4	418.4
70°	269.6	281.8	299.8	320.6	338.6
72.5°	217.1	222.1	237.2	252.3	271.0
75°	160.3	168.9	181.2	189.8	200.6
77.5°	115.0	120.1	127.2	134.4	144.5
80°	76.9	79.1	85.5	87.0	94.9
82.5°	46.7	48.2	49.6	50.3	53.2
85°	25.2	25.2	25.2	23.7	23.7
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)