

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: P557359

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-93-97-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: P557359  
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-93-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

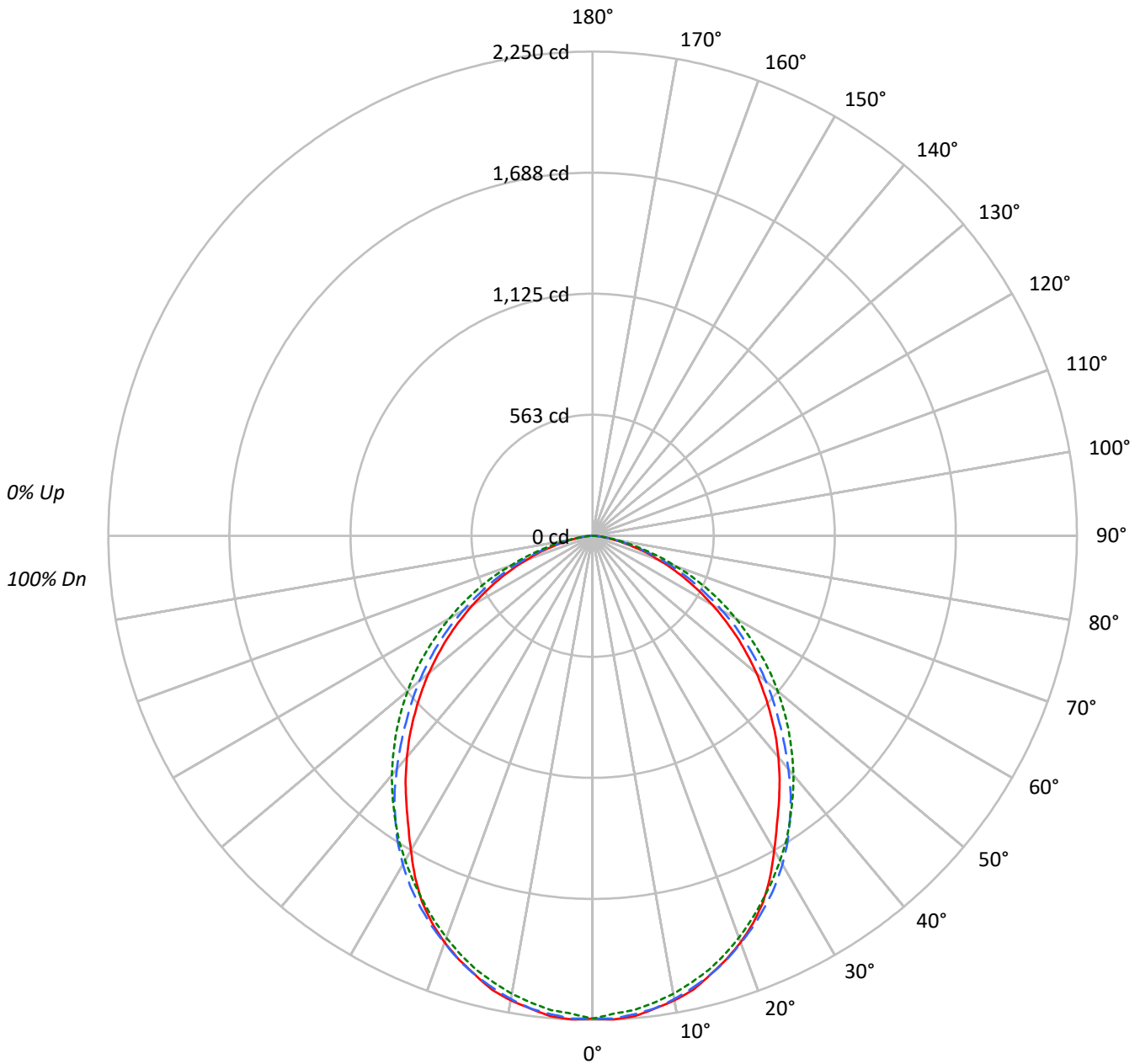
Lumens per Lamp: N/A  
Luminaire Lumens: 5188.0 lumens  
Efficiency: N/A  
Efficacy: 110.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): NR  
Input Current (Ain): 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°	6038	6038	6038
5°	6054	6028	5977
10°	5990	5973	5905
15°	5883	5883	5816
20°	5759	5766	5692
25°	5569	5638	5548
30°	5244	5480	5413
35°	4955	5253	5261
40°	4715	4969	5099
45°	4445	4668	4907
50°	4160	4399	4698
55°	3838	4092	4444
60°	3456	3735	4133
65°	3051	3321	3759
70°	2543	2828	3194
75°	1998	2258	2501
80°	1429	1590	1764
85°	932	932	877



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	211.2	4.1
10°-20°	593.5	11.4
20°-30°	867.2	16.7
30°-40°	984.4	19.0
40°-50°	950.3	18.3
50°-60°	783.9	15.1
60°-70°	522.0	10.1
70°-80°	233.6	4.5
80°-90°	41.8	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°	1671.9	32.2
0°-40°	2656.3	51.2
0°-60°	4390.6	84.6
0°-90°	5188.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5188.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2244	2244	2244	2244	2244	
5°	2241	2240	2232	2220	2213	212
15°	2112	2117	2112	2102	2088	595
25°	1876	1890	1899	1885	1869	859
35°	1508	1529	1599	1608	1602	945
45°	1168	1188	1227	1283	1290	901
55°	818	832	872	921	947	730
65°	479	492	522	558	590	475
75°	192	203	217	228	240	210
85°	30	30	30	28	28	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2243.7	2243.7	2243.7	2243.7	2243.7
2.5°	2249.7	2250.6	2245.4	2231.6	2223.0
5°	2241.1	2240.2	2231.6	2219.5	2212.6
7.5°	2216.1	2217.8	2215.2	2198.0	2188.5
10°	2192.0	2192.8	2185.9	2172.1	2160.9
12.5°	2160.9	2160.1	2150.6	2143.7	2125.6
15°	2111.8	2117.0	2111.8	2102.3	2087.7
17.5°	2064.4	2064.4	2067.8	2051.5	2040.3
20°	2010.9	2013.5	2013.5	2000.6	1987.7
22.5°	1948.9	1956.6	1959.2	1945.4	1929.9
25°	1875.6	1890.3	1898.9	1885.1	1868.7
27.5°	1786.8	1809.2	1835.1	1824.8	1806.7
30°	1687.7	1720.5	1763.6	1754.9	1742.0
32.5°	1593.8	1626.5	1686.0	1682.5	1675.6
35°	1508.4	1529.1	1598.9	1607.6	1601.5
37.5°	1427.4	1446.4	1511.9	1531.7	1526.5
40°	1342.1	1362.8	1414.5	1449.8	1451.5
42.5°	1257.6	1277.4	1319.7	1370.5	1370.5
45°	1168.0	1187.8	1226.6	1282.6	1289.5
47.5°	1080.0	1100.7	1138.6	1194.7	1205.9
50°	993.8	1012.8	1050.7	1105.0	1122.3
52.5°	904.2	924.9	961.9	1011.9	1036.9
55°	818.0	831.8	872.3	920.6	947.3
57.5°	728.4	741.3	787.0	828.3	855.9
60°	642.2	658.5	693.9	736.1	768.0
62.5°	559.4	576.6	606.8	643.9	680.1
65°	479.2	492.2	521.5	558.5	590.4
67.5°	401.7	412.9	442.2	468.0	501.7
70°	323.2	337.9	359.4	384.4	406.0
72.5°	260.3	266.3	284.4	302.5	325.0
75°	192.2	202.6	217.2	227.6	240.5
77.5°	137.9	143.9	152.6	161.2	173.3
80°	92.2	94.8	102.6	104.3	113.8
82.5°	56.0	57.8	59.5	60.3	63.8
85°	30.2	30.2	30.2	28.4	28.4
87.5°	17.2	17.2	14.7	12.1	8.6
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)