

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: P557211

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-82-94-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: P557211  
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-30-UNV-82-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

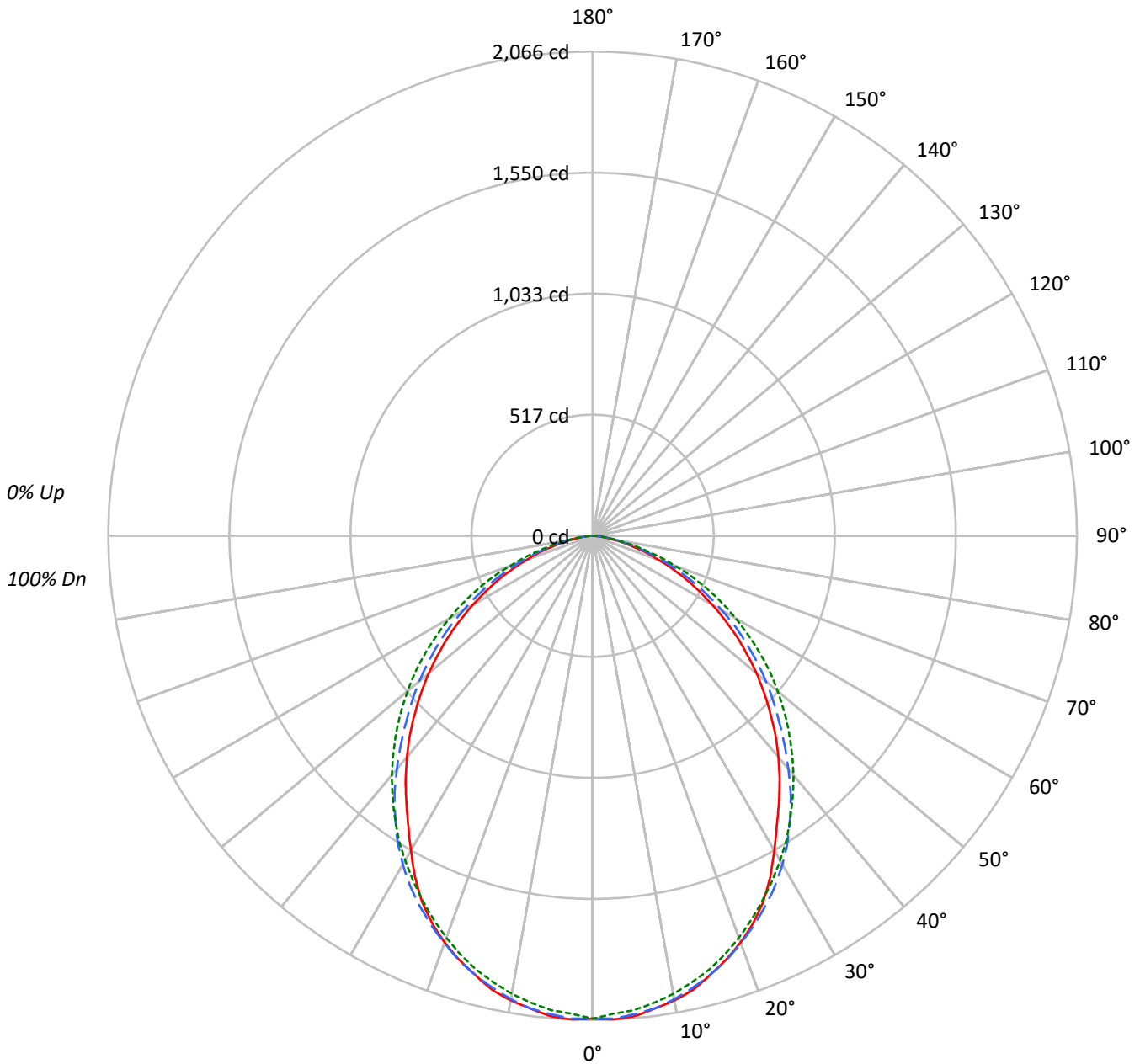
Lumens per Lamp: N/A  
Luminaire Lumens: 4764.0 lumens  
Efficiency: N/A  
Efficacy: 101.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): NR  
Input Current (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°	5544	5544	5544
5°	5559	5535	5488
10°	5500	5485	5422
15°	5402	5402	5341
20°	5288	5295	5227
25°	5114	5177	5095
30°	4816	5032	4970
35°	4550	4823	4831
40°	4329	4563	4682
45°	4082	4286	4506
50°	3821	4039	4314
55°	3524	3758	4081
60°	3174	3429	3795
65°	2802	3049	3452
70°	2335	2597	2933
75°	1835	2074	2296
80°	1313	1460	1619
85°	855	855	806



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	194.0	4.1
10°-20°	545.0	11.4
20°-30°	796.4	16.7
30°-40°	904.0	19.0
40°-50°	872.6	18.3
50°-60°	719.9	15.1
60°-70°	479.4	10.1
70°-80°	214.5	4.5
80°-90°	38.4	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°	1535.3	32.2
0°-40°	2439.3	51.2
0°-60°	4031.7	84.6
0°-90°	4764.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4764.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2060	2060	2060	2060	2060	
5°	2058	2057	2049	2038	2032	195
15°	1939	1944	1939	1930	1917	547
25°	1722	1736	1744	1731	1716	789
35°	1385	1404	1468	1476	1471	868
45°	1072	1091	1126	1178	1184	827
55°	751	764	801	845	870	670
65°	440	452	479	513	542	436
75°	176	186	200	209	221	193
85°	28	28	28	26	26	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2060.3	2060.3	2060.3	2060.3	2060.3
2.5°	2065.8	2066.6	2061.9	2049.2	2041.3
5°	2057.9	2057.1	2049.2	2038.1	2031.8
7.5°	2035.0	2036.6	2034.2	2018.4	2009.7
10°	2012.8	2013.6	2007.3	1994.6	1984.3
12.5°	1984.3	1983.5	1974.8	1968.5	1951.9
15°	1939.2	1944.0	1939.2	1930.5	1917.0
17.5°	1895.7	1895.7	1898.8	1883.8	1873.5
20°	1846.6	1849.0	1849.0	1837.1	1825.2
22.5°	1789.6	1796.7	1799.1	1786.4	1772.2
25°	1722.3	1735.8	1743.7	1731.0	1716.0
27.5°	1640.8	1661.4	1685.1	1675.6	1659.0
30°	1549.8	1579.9	1619.4	1611.5	1599.6
32.5°	1463.5	1493.6	1548.2	1545.0	1538.7
35°	1385.1	1404.1	1468.3	1476.2	1470.6
37.5°	1310.7	1328.2	1388.3	1406.5	1401.8
40°	1232.4	1251.4	1298.9	1331.3	1332.9
42.5°	1154.8	1173.0	1211.8	1258.5	1258.5
45°	1072.5	1090.7	1126.3	1177.8	1184.1
47.5°	991.8	1010.8	1045.6	1097.0	1107.3
50°	912.6	930.0	964.9	1014.7	1030.5
52.5°	830.3	849.3	883.3	929.2	952.2
55°	751.1	763.8	801.0	845.3	869.9
57.5°	668.8	680.7	722.7	760.6	786.0
60°	589.7	604.7	637.2	676.0	705.2
62.5°	513.7	529.5	557.2	591.3	624.5
65°	440.1	452.0	478.9	512.9	542.2
67.5°	368.8	379.1	406.0	429.8	460.7
70°	296.8	310.3	330.1	353.0	372.8
72.5°	239.0	244.6	261.2	277.8	298.4
75°	176.5	186.0	199.5	209.0	220.8
77.5°	126.6	132.2	140.1	148.0	159.1
80°	84.7	87.1	94.2	95.8	104.5
82.5°	51.4	53.0	54.6	55.4	58.6
85°	27.7	27.7	27.7	26.1	26.1
87.5°	15.8	15.8	13.5	11.1	7.9
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)