

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: P557399

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-82-87-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: P557399  
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-50-UNV-82-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

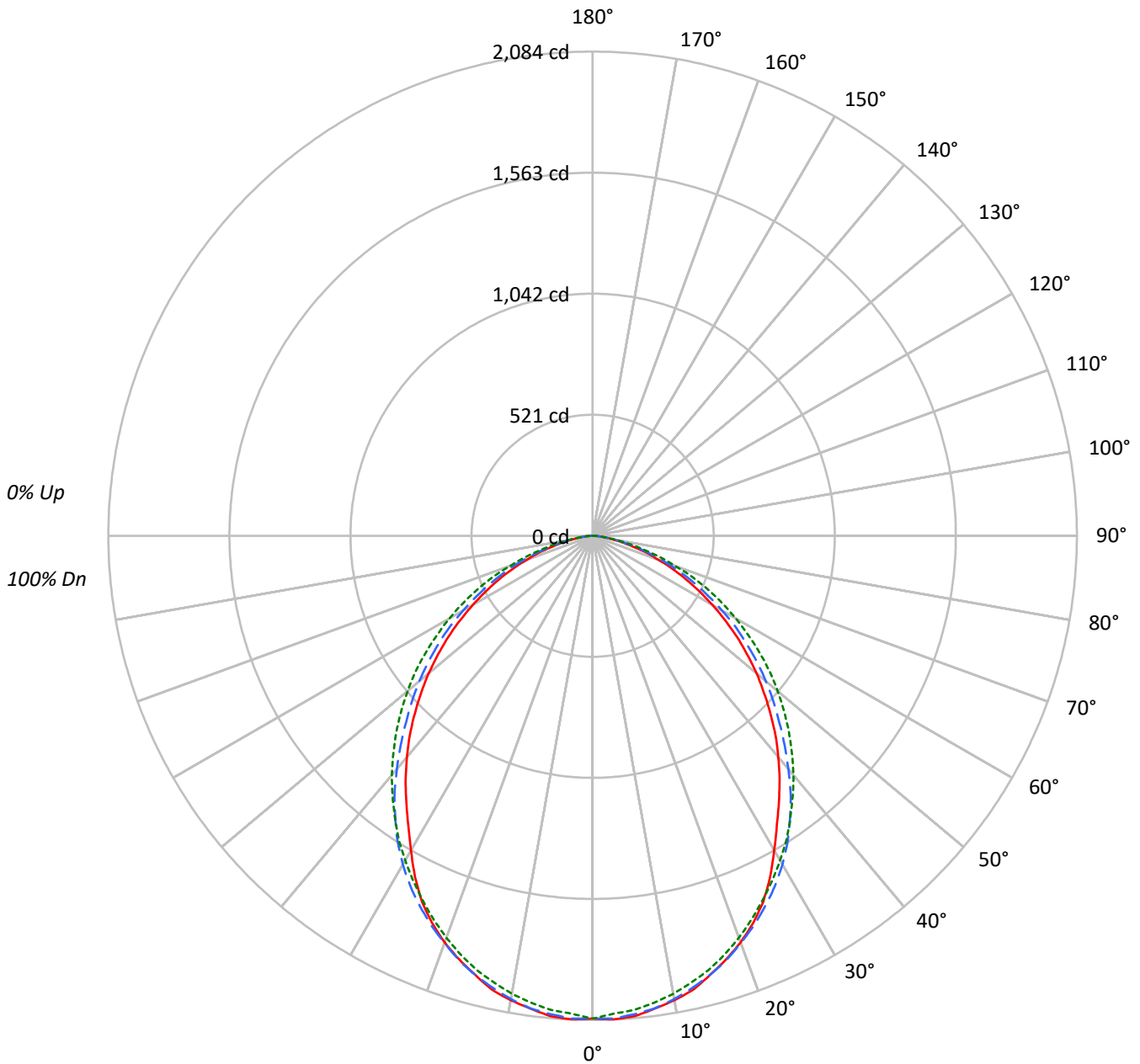
Lumens per Lamp: N/A  
Luminaire Lumens: 4805.0 lumens  
Efficiency: N/A  
Efficacy: 102.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	5592	5592	5592
5°	5607	5583	5536
10°	5547	5532	5469
15°	5449	5449	5387
20°	5334	5340	5272
25°	5158	5222	5139
30°	4857	5075	5013
35°	4590	4865	4873
40°	4366	4602	4723
45°	4117	4323	4545
50°	3854	4074	4351
55°	3554	3790	4116
60°	3201	3459	3828
65°	2826	3075	3482
70°	2356	2619	2958
75°	1851	2092	2315
80°	1323	1472	1633
85°	861	861	812



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	195.7	4.1
10°-20°	549.6	11.4
20°-30°	803.2	16.7
30°-40°	911.7	19.0
40°-50°	880.1	18.3
50°-60°	726.1	15.1
60°-70°	483.5	10.1
70°-80°	216.4	4.5
80°-90°	38.7	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°	1548.5	32.2
0°-40°	2460.2	51.2
0°-60°	4066.5	84.6
0°-90°	4805.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4805.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2078	2078	2078	2078	2078	
5°	2076	2075	2067	2056	2049	196
15°	1956	1961	1956	1947	1934	551
25°	1737	1751	1759	1746	1731	796
35°	1397	1416	1481	1489	1483	875
45°	1082	1100	1136	1188	1194	835
55°	758	770	808	853	877	676
65°	444	456	483	517	547	440
75°	178	188	201	211	223	195
85°	28	28	28	26	26	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2078.0	2078.0	2078.0	2078.0	2078.0
2.5°	2083.6	2084.4	2079.6	2066.9	2058.9
5°	2075.6	2074.8	2066.9	2055.7	2049.3
7.5°	2052.5	2054.1	2051.7	2035.7	2026.9
10°	2030.1	2030.9	2024.6	2011.8	2001.4
12.5°	2001.4	2000.6	1991.8	1985.4	1968.7
15°	1955.9	1960.7	1955.9	1947.1	1933.5
17.5°	1912.0	1912.0	1915.2	1900.0	1889.6
20°	1862.5	1864.9	1864.9	1852.9	1840.9
22.5°	1805.0	1812.2	1814.6	1801.8	1787.4
25°	1737.2	1750.7	1758.7	1745.9	1730.8
27.5°	1654.9	1675.7	1699.6	1690.1	1673.3
30°	1563.1	1593.5	1633.4	1625.4	1613.4
32.5°	1476.1	1506.4	1561.5	1558.3	1551.9
35°	1397.1	1416.2	1480.9	1488.9	1483.3
37.5°	1322.0	1339.6	1400.3	1418.6	1413.8
40°	1243.0	1262.2	1310.1	1342.8	1344.4
42.5°	1164.8	1183.1	1222.2	1269.3	1269.3
45°	1081.7	1100.1	1136.0	1187.9	1194.3
47.5°	1000.3	1019.5	1054.6	1106.5	1116.9
50°	920.5	938.0	973.2	1023.5	1039.4
52.5°	837.4	856.6	890.9	937.2	960.4
55°	757.6	770.4	807.9	852.6	877.4
57.5°	674.6	686.6	728.9	767.2	792.7
60°	594.8	609.9	642.7	681.8	711.3
62.5°	518.1	534.1	562.0	596.3	629.9
65°	443.9	455.8	483.0	517.3	546.9
67.5°	372.0	382.4	409.5	433.5	464.6
70°	299.4	312.9	332.9	356.1	376.0
72.5°	241.1	246.7	263.4	280.2	301.0
75°	178.0	187.6	201.2	210.8	222.7
77.5°	127.7	133.3	141.3	149.3	160.5
80°	85.4	87.8	95.0	96.6	105.4
82.5°	51.9	53.5	55.1	55.9	59.1
85°	27.9	27.9	27.9	26.3	26.3
87.5°	16.0	16.0	13.6	11.2	8.0
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)