

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: P557335

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-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: P557335  
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-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

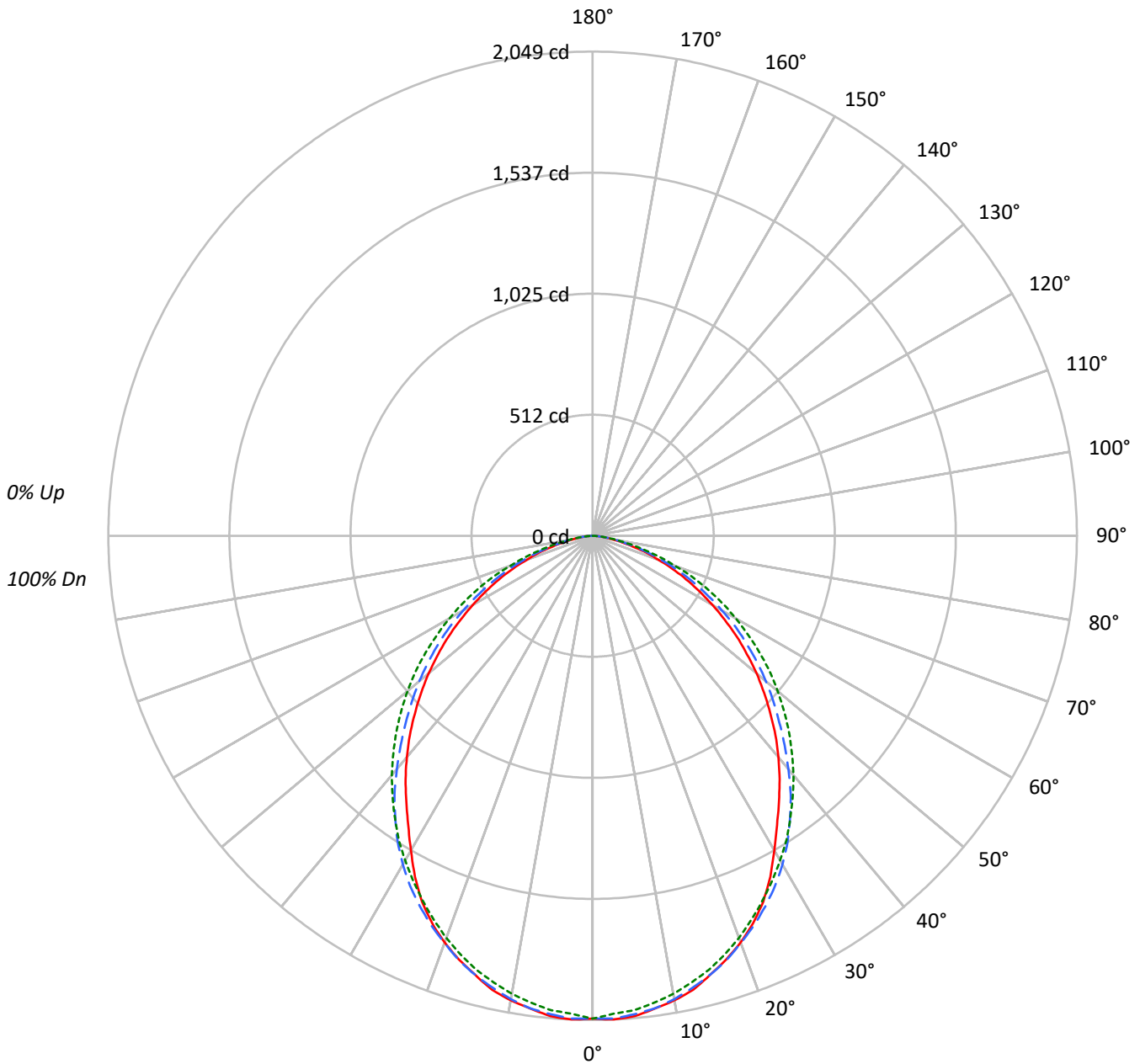
Lumens per Lamp: N/A  
Luminaire Lumens: 4725.0 lumens  
Efficiency: N/A  
Efficacy: 101.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	5499	5499	5499
5°	5514	5490	5444
10°	5455	5440	5378
15°	5358	5358	5297
20°	5245	5251	5184
25°	5072	5135	5054
30°	4776	4991	4930
35°	4513	4784	4792
40°	4294	4525	4644
45°	4048	4251	4469
50°	3789	4006	4279
55°	3495	3727	4048
60°	3147	3401	3765
65°	2779	3024	3424
70°	2316	2576	2910
75°	1821	2057	2277
80°	1302	1447	1605
85°	849	849	800



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	192.4	4.1
10°-20°	540.5	11.4
20°-30°	789.8	16.7
30°-40°	896.6	19.0
40°-50°	865.5	18.3
50°-60°	714.0	15.1
60°-70°	475.4	10.1
70°-80°	212.8	4.5
80°-90°	38.1	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°	1522.7	32.2
0°-40°	2419.3	51.2
0°-60°	3998.7	84.6
0°-90°	4725.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4725.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2043	2043	2043	2043	2043	
5°	2041	2040	2032	2022	2015	193
15°	1923	1928	1923	1915	1901	542
25°	1708	1722	1729	1717	1702	782
35°	1374	1393	1456	1464	1459	861
45°	1064	1082	1117	1168	1174	821
55°	745	758	794	838	863	665
65°	436	448	475	509	538	433
75°	175	184	198	207	219	191
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°	2043.4	2043.4	2043.4	2043.4	2043.4
2.5°	2048.9	2049.7	2045.0	2032.5	2024.6
5°	2041.1	2040.3	2032.5	2021.5	2015.2
7.5°	2018.3	2019.9	2017.5	2001.8	1993.2
10°	1996.3	1997.1	1990.8	1978.3	1968.1
12.5°	1968.1	1967.3	1958.7	1952.4	1935.9
15°	1923.3	1928.0	1923.3	1914.7	1901.3
17.5°	1880.2	1880.2	1883.3	1868.4	1858.2
20°	1831.5	1833.8	1833.8	1822.1	1810.3
22.5°	1775.0	1782.0	1784.4	1771.8	1757.7
25°	1708.2	1721.6	1729.4	1716.9	1702.0
27.5°	1627.4	1647.8	1671.3	1661.9	1645.4
30°	1537.1	1566.9	1606.2	1598.3	1586.6
32.5°	1451.5	1481.4	1535.5	1532.4	1526.1
35°	1373.8	1392.6	1456.2	1464.1	1458.6
37.5°	1300.0	1317.3	1376.9	1395.0	1390.3
40°	1222.3	1241.1	1288.2	1320.4	1322.0
42.5°	1145.4	1163.4	1201.9	1248.2	1248.2
45°	1063.7	1081.8	1117.1	1168.1	1174.4
47.5°	983.6	1002.5	1037.0	1088.1	1098.3
50°	905.1	922.4	957.0	1006.4	1022.1
52.5°	823.5	842.3	876.1	921.6	944.4
55°	745.0	757.6	794.5	838.4	862.8
57.5°	663.4	675.1	716.7	754.4	779.5
60°	584.8	599.8	632.0	670.4	699.5
62.5°	509.5	525.2	552.7	586.4	619.4
65°	436.5	448.3	474.9	508.7	537.7
67.5°	365.8	376.0	402.7	426.3	456.9
70°	294.4	307.7	327.4	350.1	369.8
72.5°	237.1	242.6	259.1	275.5	296.0
75°	175.1	184.5	197.8	207.2	219.0
77.5°	125.6	131.1	139.0	146.8	157.8
80°	84.0	86.4	93.4	95.0	103.6
82.5°	51.0	52.6	54.2	55.0	58.1
85°	27.5	27.5	27.5	25.9	25.9
87.5°	15.7	15.7	13.3	11.0	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)