

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: P557382

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-81-87-EDD-90**

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: P557382  
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-81-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

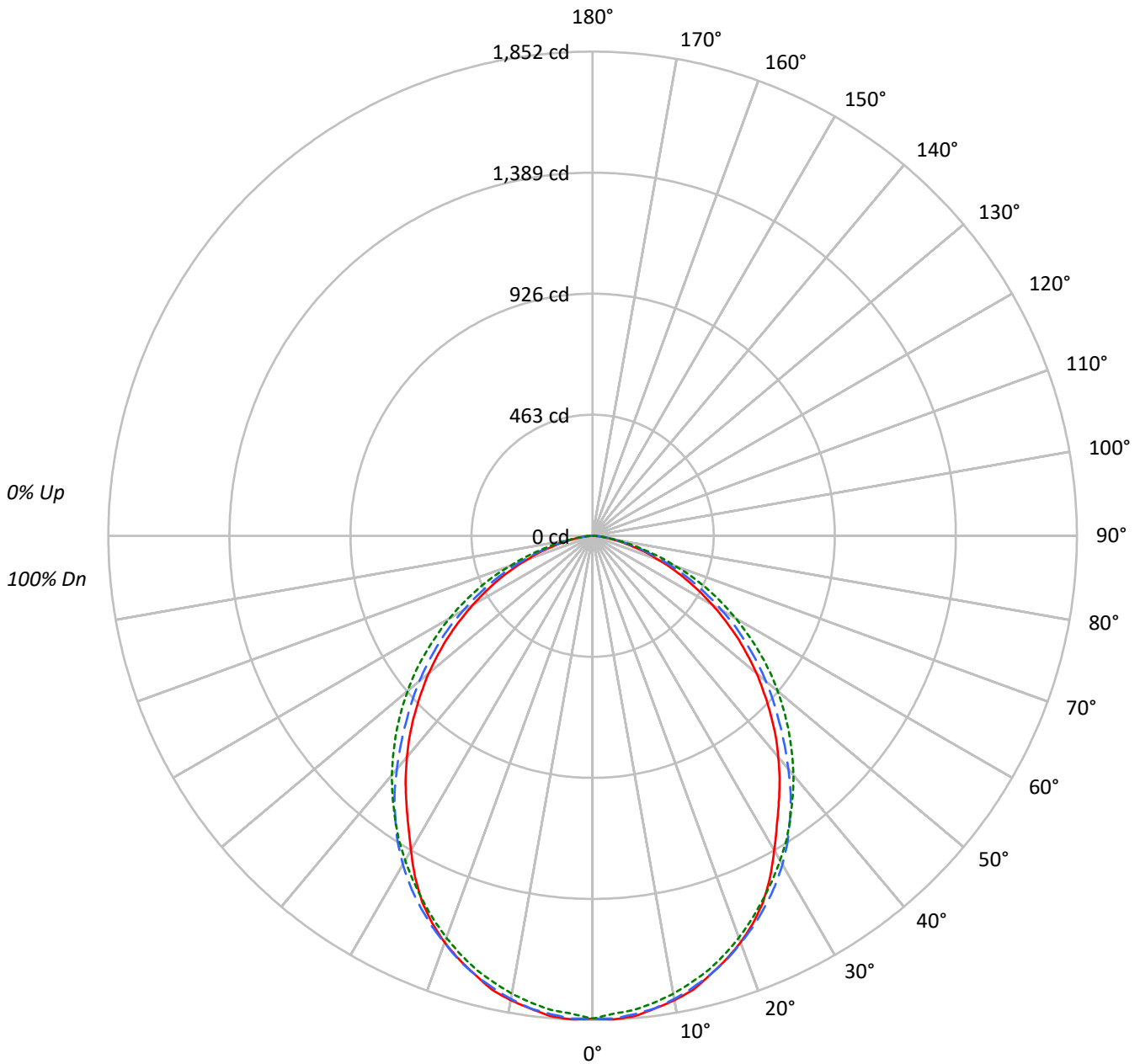
Lumens per Lamp: N/A  
Luminaire Lumens: 4270.0 lumens  
Efficiency: N/A  
Efficacy: 91.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	4969	4969	4969
5°	4982	4961	4919
10°	4930	4916	4860
15°	4842	4842	4787
20°	4740	4746	4685
25°	4584	4641	4567
30°	4316	4510	4455
35°	4078	4323	4330
40°	3880	4090	4197
45°	3658	3842	4039
50°	3424	3620	3867
55°	3159	3369	3658
60°	2844	3074	3402
65°	2511	2733	3095
70°	2093	2327	2629
75°	1645	1859	2058
80°	1176	1308	1450
85°	766	766	722



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	173.9	4.1
10°-20°	488.4	11.4
20°-30°	713.8	16.7
30°-40°	810.2	19.0
40°-50°	782.1	18.3
50°-60°	645.2	15.1
60°-70°	429.6	10.1
70°-80°	192.3	4.5
80°-90°	34.4	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°	1376.1	32.2
0°-40°	2186.3	51.2
0°-60°	3613.7	84.6
0°-90°	4270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4270.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1847	1847	1847	1847	1847	
5°	1844	1844	1837	1827	1821	175
15°	1738	1742	1738	1730	1718	490
25°	1544	1556	1563	1552	1538	707
35°	1242	1258	1316	1323	1318	778
45°	961	978	1010	1056	1061	742
55°	673	685	718	758	780	601
65°	394	405	429	460	486	391
75°	158	167	179	187	198	173
85°	25	25	25	23	23	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1846.7	1846.7	1846.7	1846.7	1846.7
2.5°	1851.6	1852.3	1848.1	1836.7	1829.6
5°	1844.5	1843.8	1836.7	1826.8	1821.1
7.5°	1824.0	1825.4	1823.3	1809.1	1801.3
10°	1804.1	1804.8	1799.1	1787.8	1778.6
12.5°	1778.6	1777.8	1770.0	1764.4	1749.5
15°	1738.1	1742.4	1738.1	1730.3	1718.3
17.5°	1699.1	1699.1	1701.9	1688.5	1679.2
20°	1655.1	1657.2	1657.2	1646.6	1636.0
22.5°	1604.0	1610.4	1612.6	1601.2	1588.4
25°	1543.7	1555.8	1562.9	1551.5	1538.1
27.5°	1470.7	1489.1	1510.4	1501.9	1487.0
30°	1389.1	1416.0	1451.5	1444.4	1433.8
32.5°	1311.7	1338.7	1387.7	1384.8	1379.1
35°	1241.5	1258.5	1316.0	1323.1	1318.1
37.5°	1174.8	1190.4	1244.4	1260.7	1256.4
40°	1104.6	1121.6	1164.2	1193.3	1194.7
42.5°	1035.1	1051.4	1086.1	1128.0	1128.0
45°	961.3	977.6	1009.5	1055.6	1061.3
47.5°	888.9	906.0	937.2	983.3	992.5
50°	818.0	833.6	864.8	909.5	923.7
52.5°	744.2	761.2	791.7	832.9	853.5
55°	673.3	684.6	718.0	757.7	779.7
57.5°	599.5	610.1	647.7	681.8	704.5
60°	528.5	542.0	571.1	605.9	632.1
62.5°	460.4	474.6	499.4	529.9	559.7
65°	394.4	405.1	429.2	459.7	486.0
67.5°	330.6	339.8	363.9	385.2	412.9
70°	266.0	278.1	295.8	316.4	334.1
72.5°	214.2	219.2	234.1	249.0	267.5
75°	158.2	166.7	178.8	187.3	197.9
77.5°	113.5	118.5	125.6	132.7	142.6
80°	75.9	78.0	84.4	85.8	93.6
82.5°	46.1	47.5	49.0	49.7	52.5
85°	24.8	24.8	24.8	23.4	23.4
87.5°	14.2	14.2	12.1	9.9	7.1
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)