

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: P557333

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-82-86-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: P557333  
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-82-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

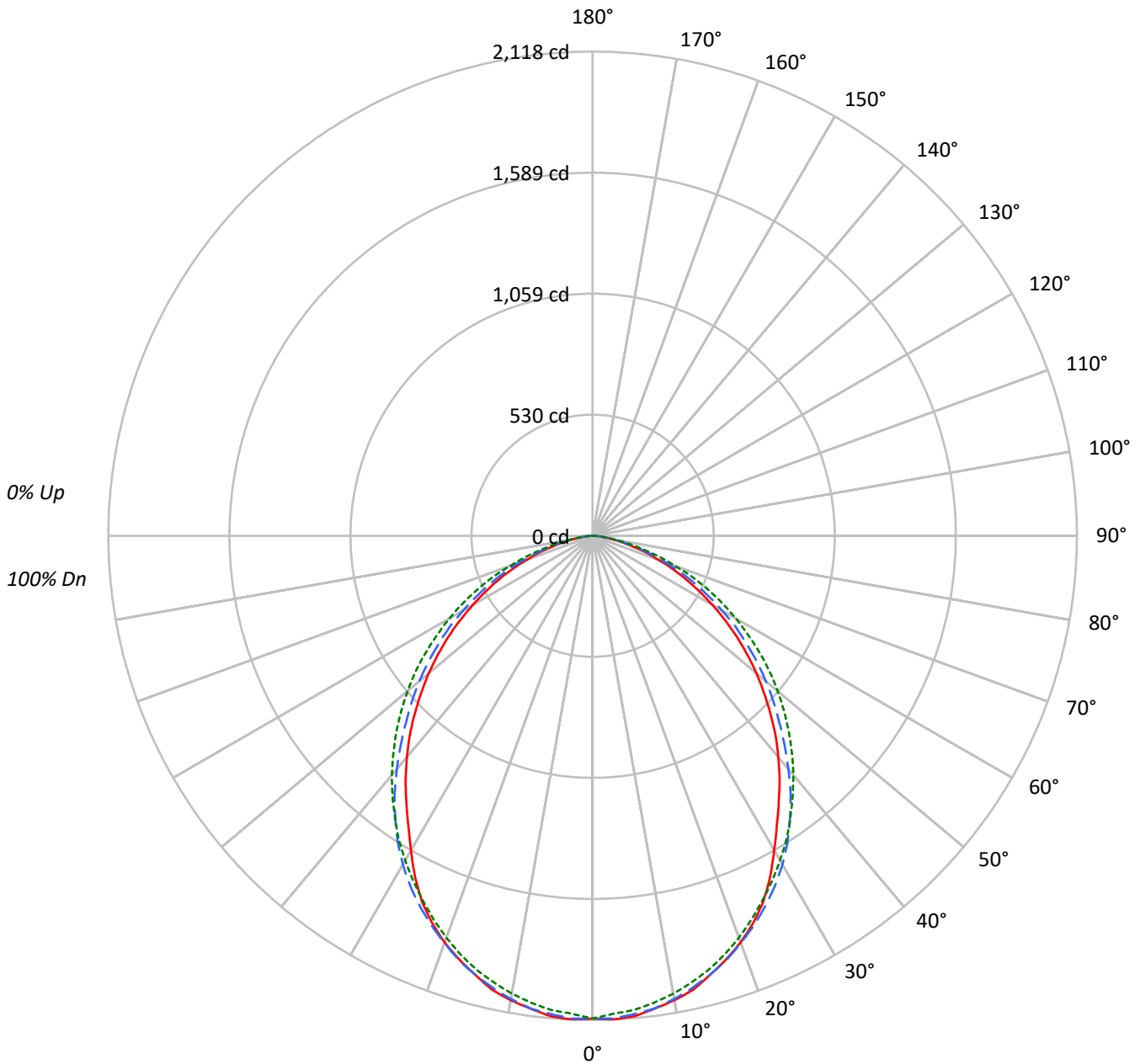
Lumens per Lamp: N/A  
Luminaire Lumens: 4883.0 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	5683	5683	5683
5°	5698	5674	5626
10°	5637	5622	5558
15°	5537	5537	5474
20°	5420	5427	5357
25°	5242	5307	5222
30°	4936	5158	5095
35°	4664	4944	4952
40°	4437	4677	4799
45°	4184	4394	4619
50°	3916	4140	4422
55°	3612	3852	4183
60°	3253	3515	3891
65°	2872	3125	3538
70°	2393	2662	3006
75°	1881	2125	2353
80°	1345	1495	1660
85°	877	877	827



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	198.8	4.1
10°-20°	558.6	11.4
20°-30°	816.3	16.7
30°-40°	926.5	19.0
40°-50°	894.4	18.3
50°-60°	737.8	15.1
60°-70°	491.3	10.1
70°-80°	219.9	4.5
80°-90°	39.3	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°	1573.7	32.2
0°-40°	2500.2	51.2
0°-60°	4132.5	84.6
0°-90°	4883.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4883.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2112	2112	2112	2112	2112	
5°	2109	2108	2100	2089	2083	200
15°	1988	1992	1988	1979	1965	560
25°	1765	1779	1787	1774	1759	808
35°	1420	1439	1505	1513	1507	890
45°	1099	1118	1154	1207	1214	848
55°	770	783	821	866	892	687
65°	451	463	491	526	556	447
75°	181	191	204	214	226	198
85°	28	28	28	27	27	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2111.8	2111.8	2111.8	2111.8	2111.8
2.5°	2117.5	2118.3	2113.4	2100.4	2092.3
5°	2109.3	2108.5	2100.4	2089.1	2082.6
7.5°	2085.8	2087.4	2085.0	2068.8	2059.8
10°	2063.1	2063.9	2057.4	2044.4	2033.9
12.5°	2033.9	2033.1	2024.2	2017.7	2000.6
15°	1987.6	1992.5	1987.6	1978.7	1964.9
17.5°	1943.0	1943.0	1946.3	1930.9	1920.3
20°	1892.7	1895.2	1895.2	1883.0	1870.8
22.5°	1834.3	1841.6	1844.0	1831.1	1816.5
25°	1765.4	1779.1	1787.3	1774.3	1758.9
27.5°	1681.8	1702.9	1727.2	1717.5	1700.5
30°	1588.5	1619.3	1659.9	1651.8	1639.6
32.5°	1500.1	1530.9	1586.9	1583.6	1577.1
35°	1419.7	1439.2	1504.9	1513.0	1507.4
37.5°	1343.5	1361.3	1423.0	1441.7	1436.8
40°	1263.2	1282.6	1331.3	1364.6	1366.2
42.5°	1183.7	1202.3	1242.1	1289.9	1289.9
45°	1099.3	1117.9	1154.5	1207.2	1213.7
47.5°	1016.5	1036.0	1071.7	1124.4	1135.0
50°	935.4	953.3	989.0	1040.1	1056.3
52.5°	851.0	870.5	905.4	952.4	976.0
55°	769.9	782.9	821.0	866.5	891.6
57.5°	685.5	697.7	740.7	779.6	805.6
60°	604.4	619.8	653.1	692.8	722.9
62.5°	526.5	542.7	571.1	606.0	640.1
65°	451.1	463.2	490.8	525.7	555.7
67.5°	378.1	388.6	416.2	440.5	472.2
70°	304.2	318.0	338.3	361.8	382.1
72.5°	245.0	250.7	267.7	284.8	305.9
75°	180.9	190.7	204.4	214.2	226.3
77.5°	129.8	135.5	143.6	151.7	163.1
80°	86.8	89.2	96.5	98.2	107.1
82.5°	52.7	54.4	56.0	56.8	60.0
85°	28.4	28.4	28.4	26.8	26.8
87.5°	16.2	16.2	13.8	11.4	8.1
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)