

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: P557257

Luminaire Tested: **FUSL-12-4-LD4-2LO-35-UNV-81-88-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: P557257  
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-35-UNV-81-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

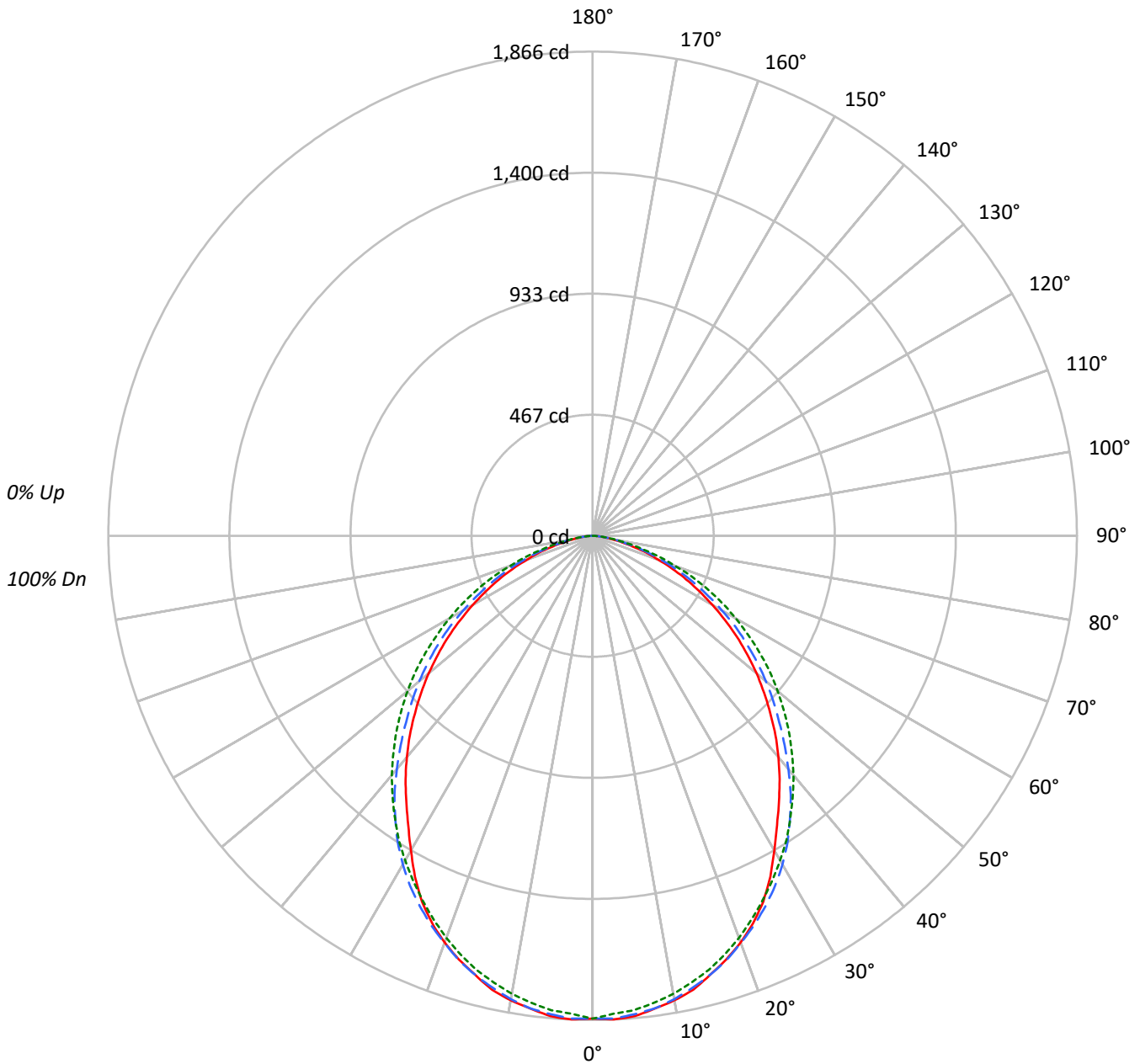
Lumens per Lamp: N/A  
Luminaire Lumens: 4303.0 lumens  
Efficiency: N/A  
Efficacy: 91.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	5008	5008	5008
5°	5021	5000	4957
10°	4968	4954	4897
15°	4880	4880	4824
20°	4776	4783	4721
25°	4619	4676	4602
30°	4350	4545	4490
35°	4110	4357	4364
40°	3910	4121	4229
45°	3687	3871	4070
50°	3451	3648	3897
55°	3183	3394	3686
60°	2866	3097	3428
65°	2531	2754	3118
70°	2109	2345	2649
75°	1657	1874	2074
80°	1185	1319	1463
85°	772	772	729



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.2	4.1
10°-20°	492.2	11.4
20°-30°	719.3	16.7
30°-40°	816.5	19.0
40°-50°	788.2	18.3
50°-60°	650.2	15.1
60°-70°	433.0	10.1
70°-80°	193.7	4.5
80°-90°	34.7	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°	1386.7	32.2
0°-40°	2203.2	51.2
0°-60°	3641.6	84.6
0°-90°	4303.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4303.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1861	1861	1861	1861	1861	
5°	1859	1858	1851	1841	1835	176
15°	1752	1756	1752	1744	1732	494
25°	1556	1568	1575	1564	1550	712
35°	1251	1268	1326	1333	1328	784
45°	969	985	1017	1064	1070	747
55°	678	690	724	764	786	606
65°	398	408	432	463	490	394
75°	159	168	180	189	200	174
85°	25	25	25	24	24	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1860.9	1860.9	1860.9	1860.9	1860.9
2.5°	1865.9	1866.7	1862.4	1850.9	1843.8
5°	1858.8	1858.1	1850.9	1840.9	1835.2
7.5°	1838.1	1839.5	1837.3	1823.0	1815.2
10°	1818.0	1818.8	1813.0	1801.6	1792.3
12.5°	1792.3	1791.6	1783.7	1778.0	1763.0
15°	1751.6	1755.8	1751.6	1743.7	1731.5
17.5°	1712.2	1712.2	1715.1	1701.5	1692.2
20°	1667.9	1670.1	1670.1	1659.3	1648.6
22.5°	1616.4	1622.9	1625.0	1613.6	1600.7
25°	1555.7	1567.8	1575.0	1563.5	1549.9
27.5°	1482.0	1500.6	1522.1	1513.5	1498.5
30°	1399.8	1427.0	1462.7	1455.6	1444.9
32.5°	1321.9	1349.1	1398.4	1395.5	1389.8
35°	1251.1	1268.3	1326.2	1333.3	1328.3
37.5°	1183.9	1199.6	1254.0	1270.4	1266.1
40°	1113.1	1130.3	1173.2	1202.5	1203.9
42.5°	1043.1	1059.5	1094.5	1136.7	1136.7
45°	968.7	985.2	1017.3	1063.8	1069.5
47.5°	895.8	913.0	944.4	990.9	1000.2
50°	824.3	840.0	871.5	916.5	930.8
52.5°	750.0	767.1	797.9	839.3	860.0
55°	678.5	689.9	723.5	763.5	785.7
57.5°	604.1	614.8	652.7	687.0	709.9
60°	532.6	546.2	575.5	610.5	637.0
62.5°	464.0	478.3	503.3	534.0	564.1
65°	397.5	408.2	432.5	463.3	489.7
67.5°	333.2	342.4	366.8	388.2	416.1
70°	268.1	280.2	298.1	318.9	336.7
72.5°	215.9	220.9	235.9	250.9	269.5
75°	159.4	168.0	180.2	188.7	199.5
77.5°	114.4	119.4	126.5	133.7	143.7
80°	76.5	78.6	85.1	86.5	94.4
82.5°	46.5	47.9	49.3	50.0	52.9
85°	25.0	25.0	25.0	23.6	23.6
87.5°	14.3	14.3	12.2	10.0	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)