

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: P557340

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-82-96-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: P557340  
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-82-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

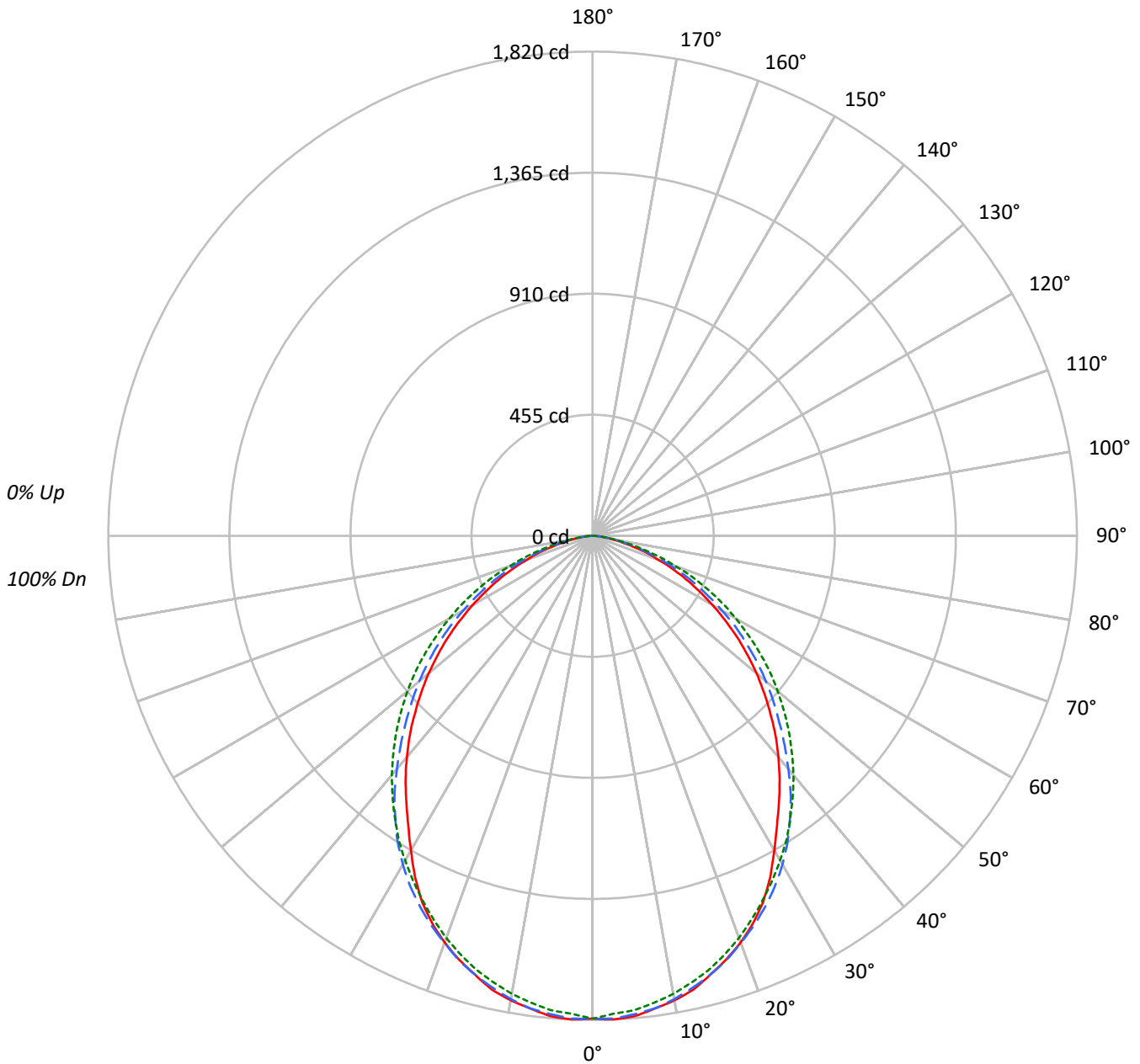
Lumens per Lamp: N/A  
Luminaire Lumens: 4197.0 lumens  
Efficiency: N/A  
Efficacy: 89.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): NR  
Input Current (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°	4884	4884	4884
5°	4897	4877	4835
10°	4846	4832	4777
15°	4759	4759	4705
20°	4659	4665	4605
25°	4505	4561	4489
30°	4242	4433	4379
35°	4009	4249	4256
40°	3814	4020	4125
45°	3596	3776	3970
50°	3366	3558	3801
55°	3104	3311	3595
60°	2796	3021	3344
65°	2469	2686	3042
70°	2057	2288	2584
75°	1617	1827	2022
80°	1156	1286	1426
85°	753	753	710



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	170.9	4.1
10°-20°	480.1	11.4
20°-30°	701.6	16.7
30°-40°	796.4	19.0
40°-50°	768.8	18.3
50°-60°	634.2	15.1
60°-70°	422.3	10.1
70°-80°	189.0	4.5
80°-90°	33.8	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°	1352.6	32.2
0°-40°	2148.9	51.2
0°-60°	3551.9	84.6
0°-90°	4197.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4197.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1815	1815	1815	1815	1815	
5°	1813	1812	1805	1796	1790	172
15°	1708	1713	1708	1701	1689	482
25°	1517	1529	1536	1525	1512	695
35°	1220	1237	1294	1300	1296	765
45°	945	961	992	1038	1043	729
55°	662	673	706	745	766	591
65°	388	398	422	452	478	384
75°	156	164	176	184	194	170
85°	24	24	24	23	23	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1815.1	1815.1	1815.1	1815.1	1815.1
2.5°	1820.0	1820.7	1816.5	1805.3	1798.4
5°	1813.0	1812.3	1805.3	1795.6	1790.0
7.5°	1792.8	1794.2	1792.1	1778.1	1770.5
10°	1773.3	1774.0	1768.4	1757.2	1748.2
12.5°	1748.2	1747.5	1739.8	1734.2	1719.6
15°	1708.4	1712.6	1708.4	1700.7	1688.9
17.5°	1670.1	1670.1	1672.8	1659.6	1650.5
20°	1626.8	1628.9	1628.9	1618.5	1608.0
22.5°	1576.6	1582.9	1585.0	1573.8	1561.3
25°	1517.3	1529.2	1536.2	1525.0	1511.8
27.5°	1445.5	1463.7	1484.6	1476.2	1461.6
30°	1365.3	1391.8	1426.7	1419.7	1409.3
32.5°	1289.3	1315.8	1363.9	1361.1	1355.6
35°	1220.3	1237.0	1293.5	1300.5	1295.6
37.5°	1154.7	1170.1	1223.1	1239.1	1234.9
40°	1085.7	1102.4	1144.3	1172.9	1174.3
42.5°	1017.4	1033.4	1067.6	1108.7	1108.7
45°	944.9	960.9	992.3	1037.6	1043.2
47.5°	873.7	890.5	921.1	966.5	975.5
50°	804.0	819.3	850.0	893.9	907.9
52.5°	731.5	748.2	778.2	818.6	838.9
55°	661.7	672.9	705.7	744.7	766.3
57.5°	589.2	599.7	636.6	670.1	692.4
60°	519.5	532.7	561.3	595.5	621.3
62.5°	452.6	466.5	490.9	520.9	550.2
65°	387.7	398.2	421.9	451.9	477.7
67.5°	324.9	334.0	357.7	378.6	405.8
70°	261.5	273.3	290.8	311.0	328.4
72.5°	210.6	215.5	230.1	244.8	262.9
75°	155.5	163.9	175.7	184.1	194.5
77.5°	111.6	116.5	123.4	130.4	140.2
80°	74.6	76.7	83.0	84.4	92.0
82.5°	45.3	46.7	48.1	48.8	51.6
85°	24.4	24.4	24.4	23.0	23.0
87.5°	13.9	13.9	11.9	9.8	7.0
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)