

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: P557324

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-81-96-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: P557324  
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-81-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 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**

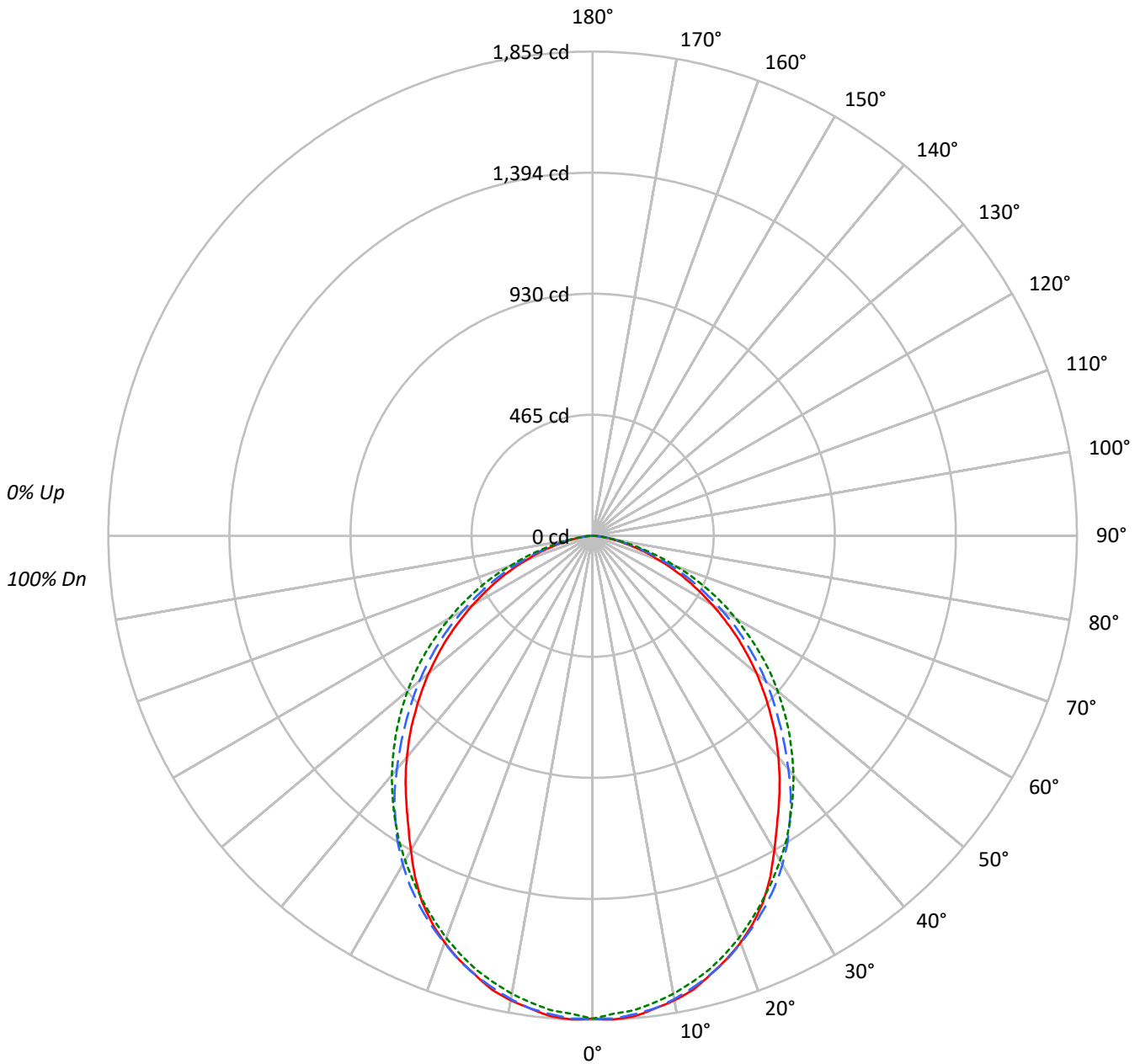
Lumens per Lamp: N/A  
Luminaire Lumens: 4287.0 lumens  
Efficiency: N/A  
Efficacy: 91.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4989	4989	4989
5°	5002	4981	4939
10°	4949	4936	4879
15°	4861	4861	4806
20°	4759	4765	4704
25°	4602	4659	4585
30°	4333	4528	4473
35°	4095	4340	4347
40°	3896	4106	4213
45°	3673	3857	4055
50°	3438	3635	3882
55°	3171	3382	3673
60°	2856	3086	3415
65°	2521	2744	3107
70°	2102	2337	2640
75°	1651	1866	2066
80°	1181	1314	1457
85°	769	769	726



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.6	4.1
10°-20°	490.4	11.4
20°-30°	716.6	16.7
30°-40°	813.4	19.0
40°-50°	785.3	18.3
50°-60°	647.8	15.1
60°-70°	431.4	10.1
70°-80°	193.0	4.5
80°-90°	34.5	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°	1381.6	32.2
0°-40°	2195.0	51.2
0°-60°	3628.1	84.6
0°-90°	4287.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4287.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1854	1854	1854	1854	1854	
5°	1852	1851	1844	1834	1828	175
15°	1745	1749	1745	1737	1725	492
25°	1550	1562	1569	1558	1544	710
35°	1246	1264	1321	1328	1323	781
45°	965	982	1014	1060	1066	745
55°	676	687	721	761	783	603
65°	396	407	431	462	488	393
75°	159	167	180	188	199	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°	1854.0	1854.0	1854.0	1854.0	1854.0
2.5°	1859.0	1859.7	1855.4	1844.0	1836.9
5°	1851.9	1851.2	1844.0	1834.1	1828.4
7.5°	1831.2	1832.6	1830.5	1816.3	1808.4
10°	1811.3	1812.0	1806.3	1794.9	1785.6
12.5°	1785.6	1784.9	1777.1	1771.4	1756.4
15°	1745.0	1749.3	1745.0	1737.2	1725.1
17.5°	1705.9	1705.9	1708.7	1695.2	1685.9
20°	1661.7	1663.8	1663.8	1653.2	1642.5
22.5°	1610.4	1616.8	1619.0	1607.6	1594.8
25°	1549.9	1562.0	1569.1	1557.7	1544.2
27.5°	1476.5	1495.0	1516.4	1507.9	1492.9
30°	1394.6	1421.7	1457.3	1450.2	1439.5
32.5°	1317.0	1344.0	1393.2	1390.3	1384.6
35°	1246.5	1263.6	1321.2	1328.4	1323.4
37.5°	1179.5	1195.2	1249.3	1265.7	1261.4
40°	1109.0	1126.1	1168.8	1198.0	1199.4
42.5°	1039.2	1055.6	1090.5	1132.5	1132.5
45°	965.1	981.5	1013.5	1059.8	1065.5
47.5°	892.5	909.6	940.9	987.2	996.5
50°	821.2	836.9	868.2	913.1	927.4
52.5°	747.2	764.3	794.9	836.2	856.9
55°	675.9	687.3	720.8	760.7	782.8
57.5°	601.9	612.5	650.3	684.5	707.3
60°	530.6	544.2	573.4	608.3	634.6
62.5°	462.3	476.5	501.4	532.1	562.0
65°	396.0	406.7	430.9	461.5	487.9
67.5°	331.9	341.2	365.4	386.8	414.5
70°	267.1	279.2	297.0	317.7	335.5
72.5°	215.1	220.1	235.0	250.0	268.5
75°	158.8	167.4	179.5	188.0	198.7
77.5°	114.0	118.9	126.1	133.2	143.2
80°	76.2	78.3	84.8	86.2	94.0
82.5°	46.3	47.7	49.1	49.9	52.7
85°	24.9	24.9	24.9	23.5	23.5
87.5°	14.2	14.2	12.1	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)