

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: P557168

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-80-84-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: P557168  
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-30-UNV-80-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

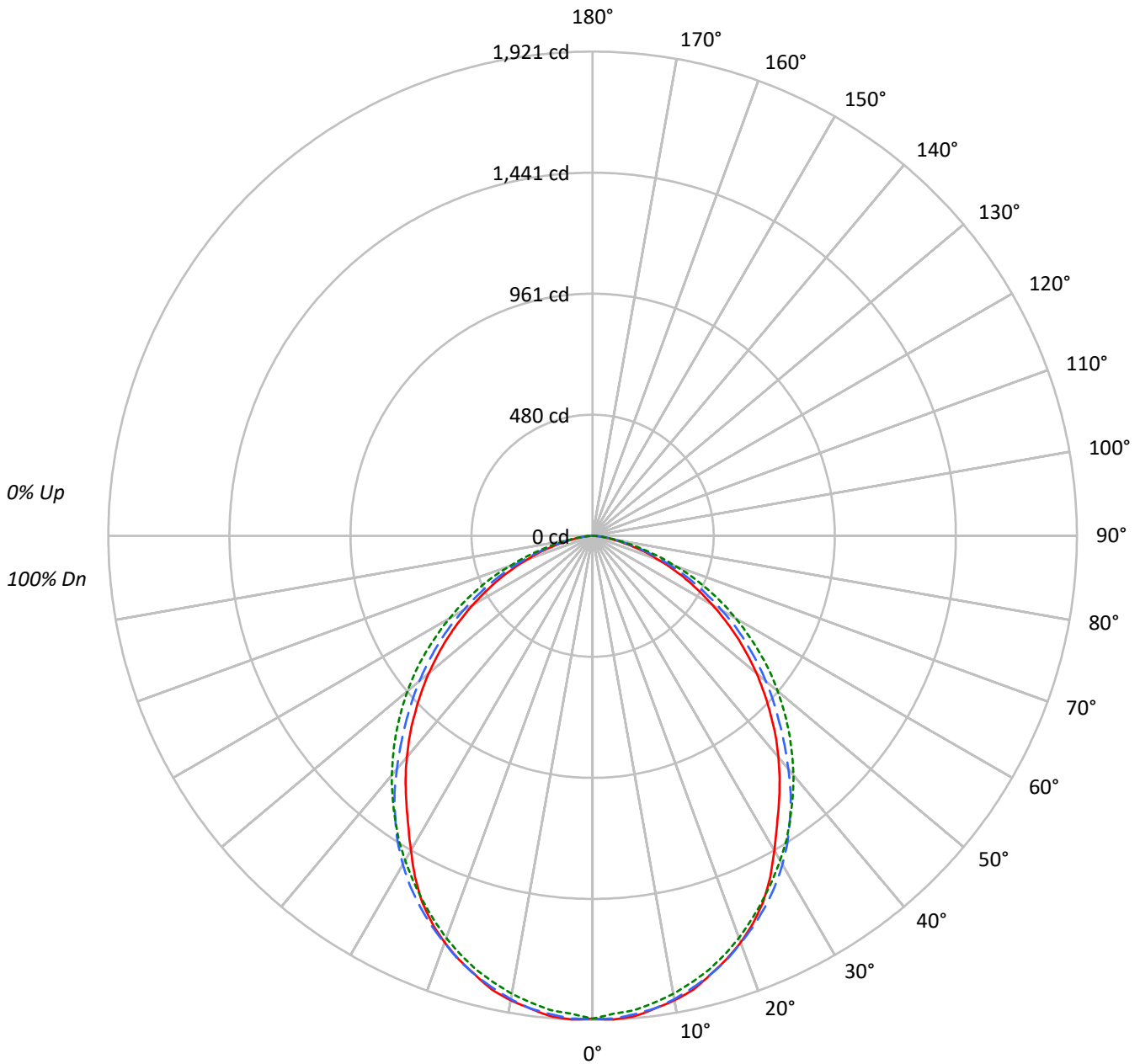
Lumens per Lamp: N/A  
Luminaire Lumens: 4430.0 lumens  
Efficiency: N/A  
Efficacy: 94.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): NR  
Input Current (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°	5156	5156	5156
5°	5169	5148	5104
10°	5114	5100	5042
15°	5024	5024	4966
20°	4917	4924	4861
25°	4755	4815	4738
30°	4478	4679	4622
35°	4231	4485	4492
40°	4026	4243	4354
45°	3795	3986	4190
50°	3553	3756	4012
55°	3277	3495	3795
60°	2951	3189	3529
65°	2606	2835	3210
70°	2172	2415	2728
75°	1706	1929	2135
80°	1221	1358	1506
85°	797	797	750



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	180.4	4.1
10°-20°	506.7	11.4
20°-30°	740.5	16.7
30°-40°	840.6	19.0
40°-50°	811.5	18.3
50°-60°	669.4	15.1
60°-70°	445.8	10.1
70°-80°	199.5	4.5
80°-90°	35.7	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°	1427.7	32.2
0°-40°	2268.2	51.2
0°-60°	3749.1	84.6
0°-90°	4430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4430.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1916	1916	1916	1916	1916	
5°	1914	1913	1906	1895	1889	181
15°	1803	1808	1803	1795	1783	508
25°	1602	1614	1622	1610	1596	733
35°	1288	1306	1365	1373	1368	807
45°	997	1014	1047	1095	1101	769
55°	698	710	745	786	809	623
65°	409	420	445	477	504	406
75°	164	173	186	194	205	179
85°	26	26	26	24	24	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1915.9	1915.9	1915.9	1915.9	1915.9
2.5°	1921.0	1921.7	1917.3	1905.6	1898.2
5°	1913.7	1912.9	1905.6	1895.3	1889.4
7.5°	1892.3	1893.8	1891.6	1876.9	1868.8
10°	1871.7	1872.4	1866.5	1854.8	1845.2
12.5°	1845.2	1844.5	1836.4	1830.5	1815.0
15°	1803.2	1807.7	1803.2	1795.2	1782.6
17.5°	1762.8	1762.8	1765.7	1751.7	1742.2
20°	1717.1	1719.3	1719.3	1708.3	1697.3
22.5°	1664.1	1670.8	1673.0	1661.2	1647.9
25°	1601.6	1614.1	1621.5	1609.7	1595.7
27.5°	1525.8	1544.9	1567.0	1558.2	1542.7
30°	1441.1	1469.1	1505.9	1498.5	1487.5
32.5°	1360.9	1388.9	1439.7	1436.7	1430.8
35°	1288.0	1305.7	1365.3	1372.7	1367.5
37.5°	1218.8	1235.0	1291.0	1307.9	1303.5
40°	1146.0	1163.6	1207.8	1238.0	1239.5
42.5°	1073.9	1090.8	1126.8	1170.3	1170.3
45°	997.3	1014.2	1047.4	1095.2	1101.1
47.5°	922.2	939.9	972.3	1020.1	1029.7
50°	848.6	864.8	897.2	943.6	958.3
52.5°	772.1	789.7	821.4	864.1	885.4
55°	698.5	710.3	744.9	786.1	808.9
57.5°	621.9	633.0	672.0	707.3	730.9
60°	548.3	562.3	592.5	628.6	655.8
62.5°	477.7	492.4	518.2	549.8	580.7
65°	409.2	420.3	445.3	476.9	504.2
67.5°	343.0	352.6	377.6	399.7	428.4
70°	276.0	288.5	306.9	328.3	346.7
72.5°	222.3	227.4	242.9	258.3	277.5
75°	164.1	173.0	185.5	194.3	205.3
77.5°	117.8	122.9	130.3	137.6	147.9
80°	78.8	81.0	87.6	89.1	97.2
82.5°	47.8	49.3	50.8	51.5	54.5
85°	25.8	25.8	25.8	24.3	24.3
87.5°	14.7	14.7	12.5	10.3	7.4
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)