

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: P557185

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-81-84-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: P557185  
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-81-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

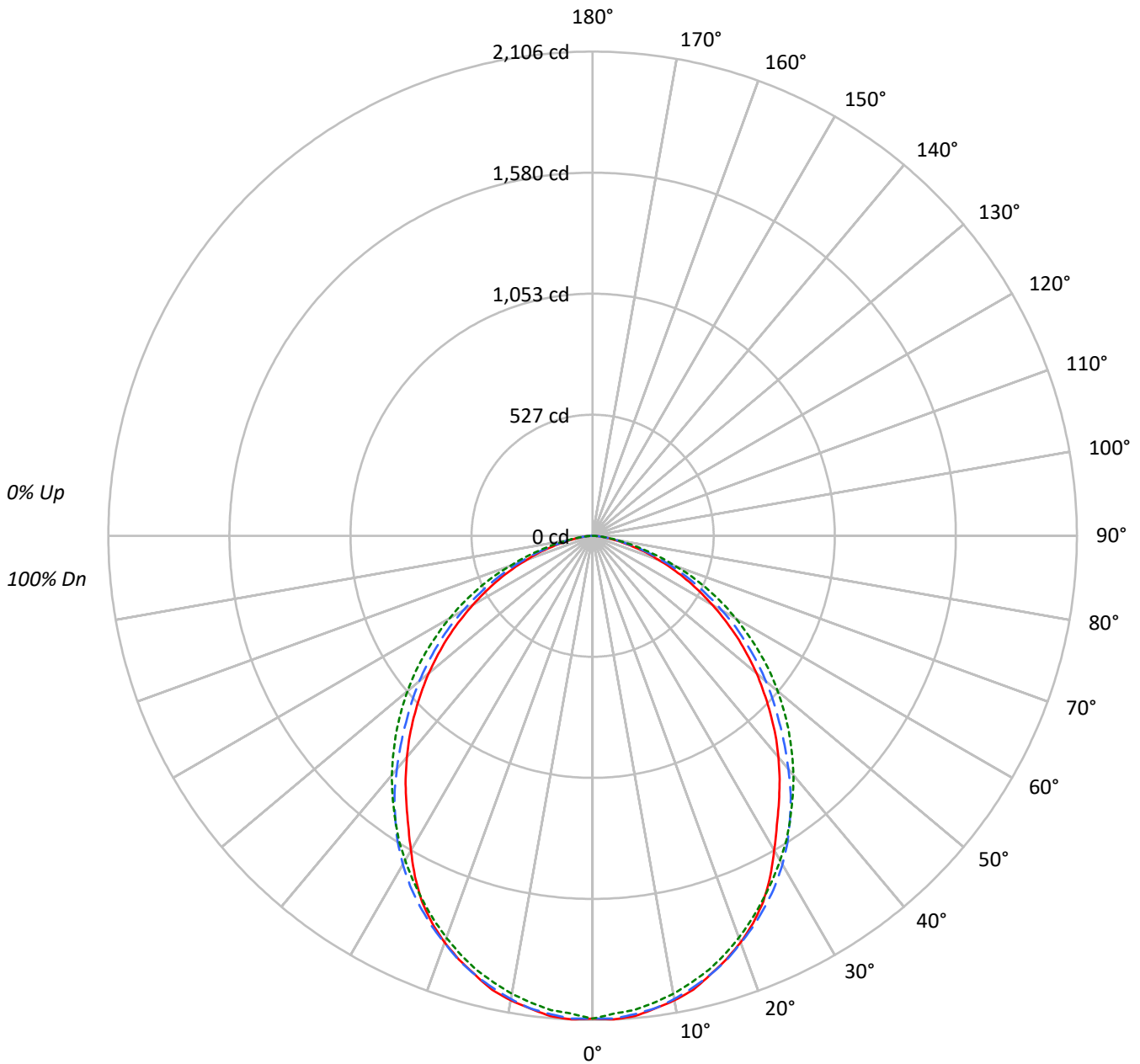
Lumens per Lamp: N/A  
Luminaire Lumens: 4856.0 lumens  
Efficiency: N/A  
Efficacy: 103.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	5651	5651	5651
5°	5666	5642	5594
10°	5606	5591	5527
15°	5507	5507	5444
20°	5390	5397	5328
25°	5213	5277	5193
30°	4909	5129	5066
35°	4638	4916	4924
40°	4413	4651	4773
45°	4160	4369	4593
50°	3894	4117	4398
55°	3592	3831	4160
60°	3235	3496	3869
65°	2856	3108	3519
70°	2380	2647	2990
75°	1870	2114	2340
80°	1337	1488	1650
85°	871	871	821



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	197.7	4.1
10°-20°	555.5	11.4
20°-30°	811.7	16.7
30°-40°	921.4	19.0
40°-50°	889.5	18.3
50°-60°	733.8	15.1
60°-70°	488.6	10.1
70°-80°	218.6	4.5
80°-90°	39.1	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°	1565.0	32.2
0°-40°	2486.4	51.2
0°-60°	4109.6	84.6
0°-90°	4856.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4856.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2100	2100	2100	2100	2100	
5°	2098	2097	2089	2078	2071	199
15°	1977	1982	1977	1968	1954	557
25°	1756	1769	1777	1764	1749	804
35°	1412	1431	1497	1505	1499	885
45°	1093	1112	1148	1200	1207	843
55°	766	779	816	862	887	683
65°	449	461	488	523	553	445
75°	180	190	203	213	225	197
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°	2100.1	2100.1	2100.1	2100.1	2100.1
2.5°	2105.7	2106.5	2101.7	2088.8	2080.7
5°	2097.7	2096.9	2088.8	2077.5	2071.0
7.5°	2074.3	2075.9	2073.5	2057.3	2048.5
10°	2051.7	2052.5	2046.0	2033.1	2022.6
12.5°	2022.6	2021.8	2013.0	2006.5	1989.6
15°	1976.7	1981.5	1976.7	1967.8	1954.1
17.5°	1932.3	1932.3	1935.5	1920.2	1909.7
20°	1882.3	1884.7	1884.7	1872.6	1860.5
22.5°	1824.2	1831.4	1833.9	1820.9	1806.4
25°	1755.6	1769.3	1777.4	1764.5	1749.1
27.5°	1672.5	1693.5	1717.7	1708.0	1691.0
30°	1579.7	1610.4	1650.7	1642.6	1630.5
32.5°	1491.8	1522.4	1578.1	1574.9	1568.4
35°	1411.9	1431.3	1496.6	1504.7	1499.0
37.5°	1336.1	1353.8	1415.1	1433.7	1428.8
40°	1256.2	1275.5	1324.0	1357.0	1358.6
42.5°	1177.1	1195.7	1235.2	1282.8	1282.8
45°	1093.2	1111.8	1148.1	1200.5	1207.0
47.5°	1010.9	1030.3	1065.8	1118.2	1128.7
50°	930.2	948.0	983.5	1034.3	1050.5
52.5°	846.3	865.7	900.4	947.2	970.6
55°	765.7	778.6	816.5	861.7	886.7
57.5°	681.7	693.8	736.6	775.3	801.2
60°	601.1	616.4	649.5	689.0	718.9
62.5°	523.6	539.7	568.0	602.7	636.6
65°	448.6	460.7	488.1	522.8	552.7
67.5°	376.0	386.5	413.9	438.1	469.6
70°	302.5	316.3	336.4	359.8	380.0
72.5°	243.7	249.3	266.2	283.2	304.2
75°	179.9	189.6	203.3	213.0	225.1
77.5°	129.1	134.7	142.8	150.9	162.2
80°	86.3	88.7	96.0	97.6	106.5
82.5°	52.4	54.1	55.7	56.5	59.7
85°	28.2	28.2	28.2	26.6	26.6
87.5°	16.1	16.1	13.7	11.3	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)