

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: P557411

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-93-85-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: P557411  
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-50-UNV-93-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

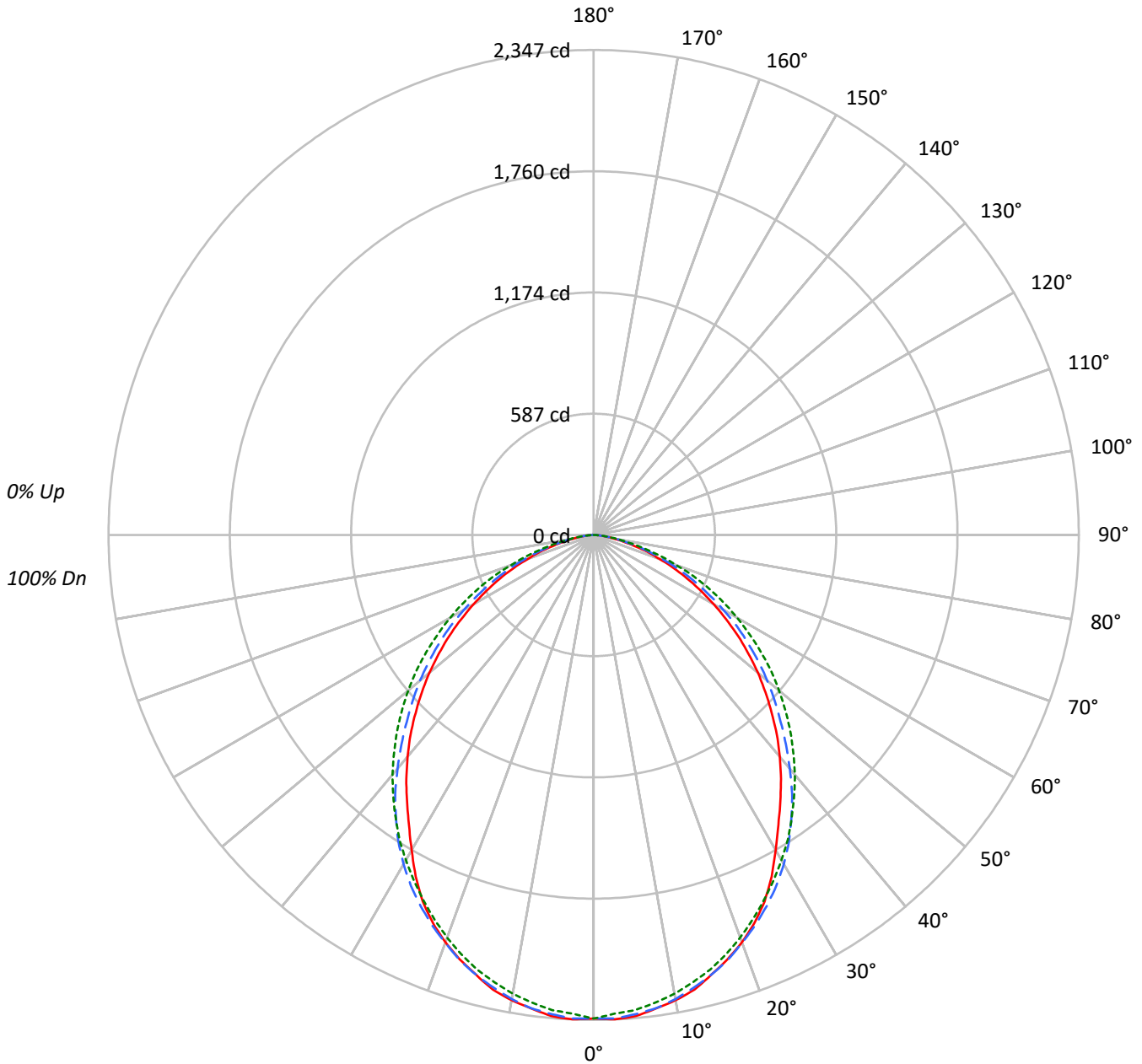
Lumens per Lamp: N/A  
Luminaire Lumens: 5412.0 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	6299	6299	6299
5°	6315	6289	6235
10°	6248	6231	6160
15°	6137	6137	6067
20°	6007	6015	5938
25°	5809	5882	5788
30°	5471	5716	5647
35°	5169	5480	5488
40°	4918	5183	5319
45°	4637	4869	5119
50°	4340	4589	4901
55°	4003	4269	4636
60°	3605	3895	4312
65°	3183	3464	3922
70°	2653	2950	3332
75°	2085	2356	2609
80°	1491	1658	1839
85°	973	973	917



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	220.4	4.1
10°-20°	619.1	11.4
20°-30°	904.7	16.7
30°-40°	1026.9	19.0
40°-50°	991.3	18.3
50°-60°	817.8	15.1
60°-70°	544.6	10.1
70°-80°	243.7	4.5
80°-90°	43.6	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°	1744.1	32.2
0°-40°	2771.0	51.2
0°-60°	4580.1	84.6
0°-90°	5412.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5412.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2341	2341	2341	2341	2341	
5°	2338	2337	2328	2315	2308	221
15°	2203	2208	2203	2193	2178	621
25°	1957	1972	1981	1966	1949	896
35°	1574	1595	1668	1677	1671	986
45°	1218	1239	1280	1338	1345	940
55°	853	868	910	960	988	762
65°	500	513	544	583	616	496
75°	200	211	227	237	251	219
85°	32	32	32	30	30	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2340.6	2340.6	2340.6	2340.6	2340.6
2.5°	2346.8	2347.7	2342.3	2328.0	2319.0
5°	2337.9	2337.0	2328.0	2315.4	2308.2
7.5°	2311.8	2313.6	2310.9	2292.9	2283.0
10°	2286.6	2287.5	2280.3	2265.9	2254.2
12.5°	2254.2	2253.3	2243.4	2236.2	2217.4
15°	2203.0	2208.4	2203.0	2193.1	2177.8
17.5°	2153.5	2153.5	2157.1	2140.0	2128.3
20°	2097.8	2100.5	2100.5	2087.0	2073.5
22.5°	2033.0	2041.1	2043.8	2029.4	2013.3
25°	1956.6	1971.9	1980.9	1966.5	1949.4
27.5°	1864.0	1887.4	1914.3	1903.6	1884.7
30°	1760.6	1794.8	1839.7	1830.7	1817.2
32.5°	1662.6	1696.7	1758.8	1755.2	1748.0
35°	1573.6	1595.1	1668.0	1677.0	1670.7
37.5°	1489.0	1508.8	1577.2	1597.8	1592.4
40°	1400.0	1421.6	1475.5	1512.4	1514.2
42.5°	1311.9	1332.6	1376.6	1429.7	1429.7
45°	1218.4	1239.1	1279.5	1338.0	1345.2
47.5°	1126.7	1148.2	1187.8	1246.3	1257.9
50°	1036.7	1056.5	1096.1	1152.7	1170.7
52.5°	943.2	964.8	1003.5	1055.6	1081.7
55°	853.3	867.7	910.0	960.3	988.2
57.5°	759.8	773.3	820.9	864.1	892.9
60°	669.9	687.0	723.8	767.9	801.2
62.5°	583.6	601.5	633.0	671.7	709.4
65°	499.9	513.4	544.0	582.7	615.9
67.5°	419.0	430.7	461.3	488.3	523.3
70°	337.2	352.5	375.0	401.0	423.5
72.5°	271.6	277.8	296.7	315.6	339.0
75°	200.5	211.3	226.6	237.4	250.9
77.5°	143.9	150.2	159.2	168.1	180.7
80°	96.2	98.9	107.0	108.8	118.7
82.5°	58.4	60.2	62.0	62.9	66.5
85°	31.5	31.5	31.5	29.7	29.7
87.5°	18.0	18.0	15.3	12.6	9.0
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)