

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: P557972

Luminaire Tested: **FUSL-12-4-LD4-3LO-30-UNV-82-86-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: P557972  
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-LD4-3LO-30-UNV-82-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

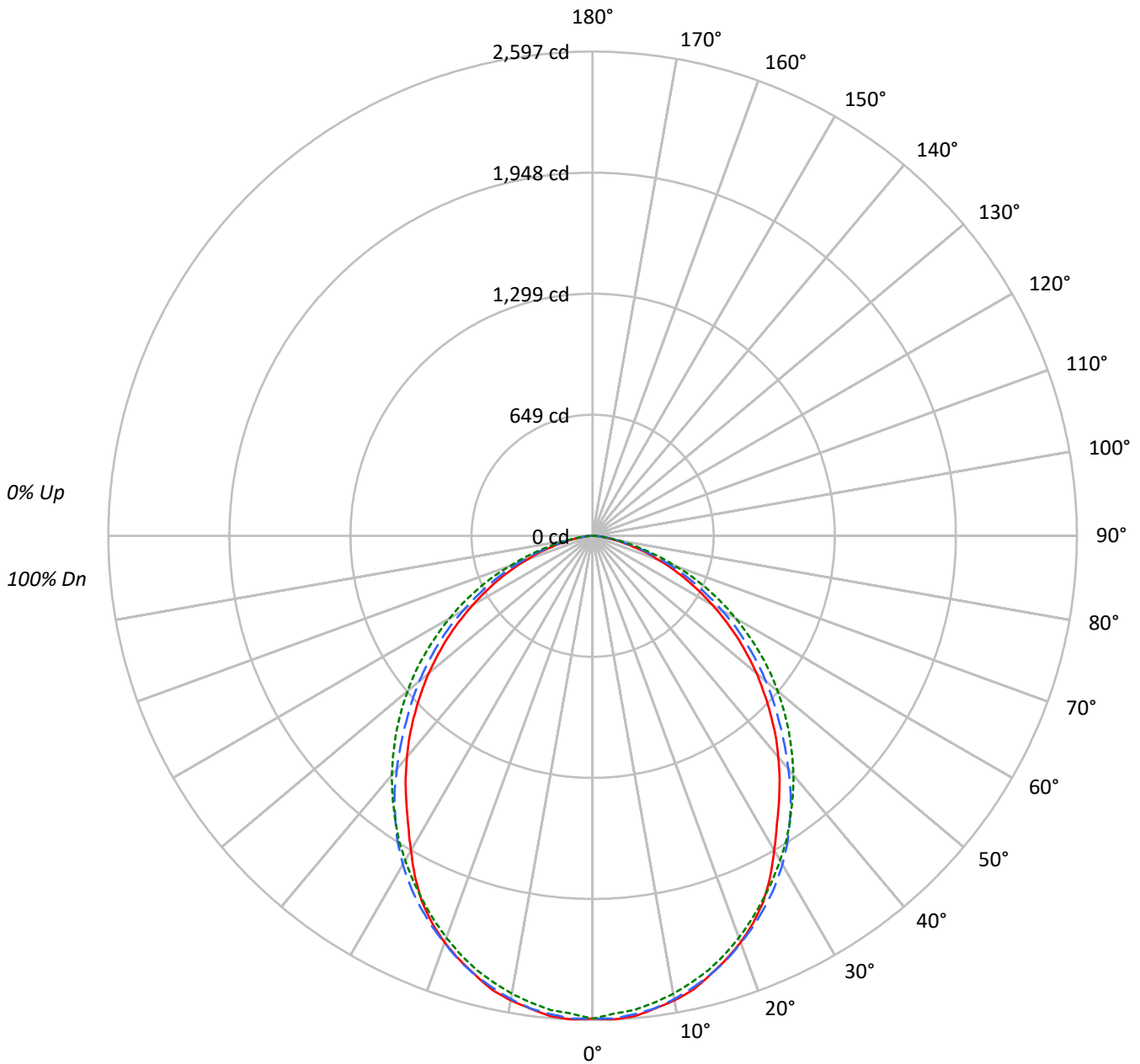
Lumens per Lamp: N/A  
Luminaire Lumens: 5988.0 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°	6969	6969	6969
5°	6987	6958	6898
10°	6913	6894	6815
15°	6790	6790	6713
20°	6647	6655	6570
25°	6428	6508	6404
30°	6053	6325	6247
35°	5719	6063	6072
40°	5441	5735	5885
45°	5130	5388	5664
50°	4802	5077	5423
55°	4429	4723	5130
60°	3989	4310	4771
65°	3522	3833	4339
70°	2936	3264	3687
75°	2307	2607	2886
80°	1650	1835	2035
85°	1074	1074	1013



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	243.8	4.1
10°-20°	685.0	11.4
20°-30°	1001.0	16.7
30°-40°	1136.2	19.0
40°-50°	1096.8	18.3
50°-60°	904.8	15.1
60°-70°	602.5	10.1
70°-80°	269.6	4.5
80°-90°	48.2	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°	1929.8	32.2
0°-40°	3066.0	51.2
0°-60°	5067.6	84.6
0°-90°	5988.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5988.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2590	2590	2590	2590	2590	
5°	2587	2586	2576	2562	2554	245
15°	2437	2443	2437	2426	2410	687
25°	2165	2182	2192	2176	2157	991
35°	1741	1765	1846	1855	1848	1091
45°	1348	1371	1416	1480	1488	1040
55°	944	960	1007	1062	1093	843
65°	553	568	602	645	682	548
75°	222	234	251	263	278	243
85°	35	35	35	33	33	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2589.7	2589.7	2589.7	2589.7	2589.7
2.5°	2596.6	2597.6	2591.6	2575.7	2565.8
5°	2586.7	2585.7	2575.7	2561.8	2553.8
7.5°	2557.8	2559.8	2556.8	2536.9	2526.0
10°	2530.0	2531.0	2523.0	2507.1	2494.1
12.5°	2494.1	2493.2	2482.2	2474.3	2453.4
15°	2437.4	2443.4	2437.4	2426.5	2409.6
17.5°	2382.7	2382.7	2386.7	2367.8	2354.9
20°	2321.0	2324.0	2324.0	2309.1	2294.2
22.5°	2249.4	2258.4	2261.3	2245.4	2227.5
25°	2164.8	2181.8	2191.7	2175.8	2156.9
27.5°	2062.4	2088.2	2118.1	2106.1	2085.3
30°	1948.0	1985.8	2035.5	2025.6	2010.6
32.5°	1839.5	1877.3	1946.0	1942.0	1934.0
35°	1741.0	1764.9	1845.5	1855.4	1848.5
37.5°	1647.5	1669.4	1745.0	1767.9	1761.9
40°	1549.0	1572.9	1632.6	1673.4	1675.4
42.5°	1451.5	1474.4	1523.2	1581.8	1581.8
45°	1348.1	1370.9	1415.7	1480.4	1488.3
47.5°	1246.6	1270.5	1314.2	1378.9	1391.8
50°	1147.1	1169.0	1212.8	1275.4	1295.3
52.5°	1043.6	1067.5	1110.3	1168.0	1196.8
55°	944.1	960.1	1006.8	1062.5	1093.4
57.5°	840.7	855.6	908.3	956.1	987.9
60°	741.2	760.1	800.9	849.6	886.4
62.5°	645.7	665.6	700.4	743.2	785.0
65°	553.1	568.1	601.9	644.7	681.5
67.5°	463.6	476.5	510.4	540.2	579.0
70°	373.1	390.0	414.9	443.7	468.6
72.5°	300.5	307.4	328.3	349.2	375.1
75°	221.9	233.8	250.7	262.6	277.6
77.5°	159.2	166.1	176.1	186.0	200.0
80°	106.5	109.4	118.4	120.4	131.3
82.5°	64.7	66.7	68.6	69.6	73.6
85°	34.8	34.8	34.8	32.8	32.8
87.5°	19.9	19.9	16.9	13.9	9.9
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)