

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: P558169

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-82-88-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: P558169  
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-50-UNV-82-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

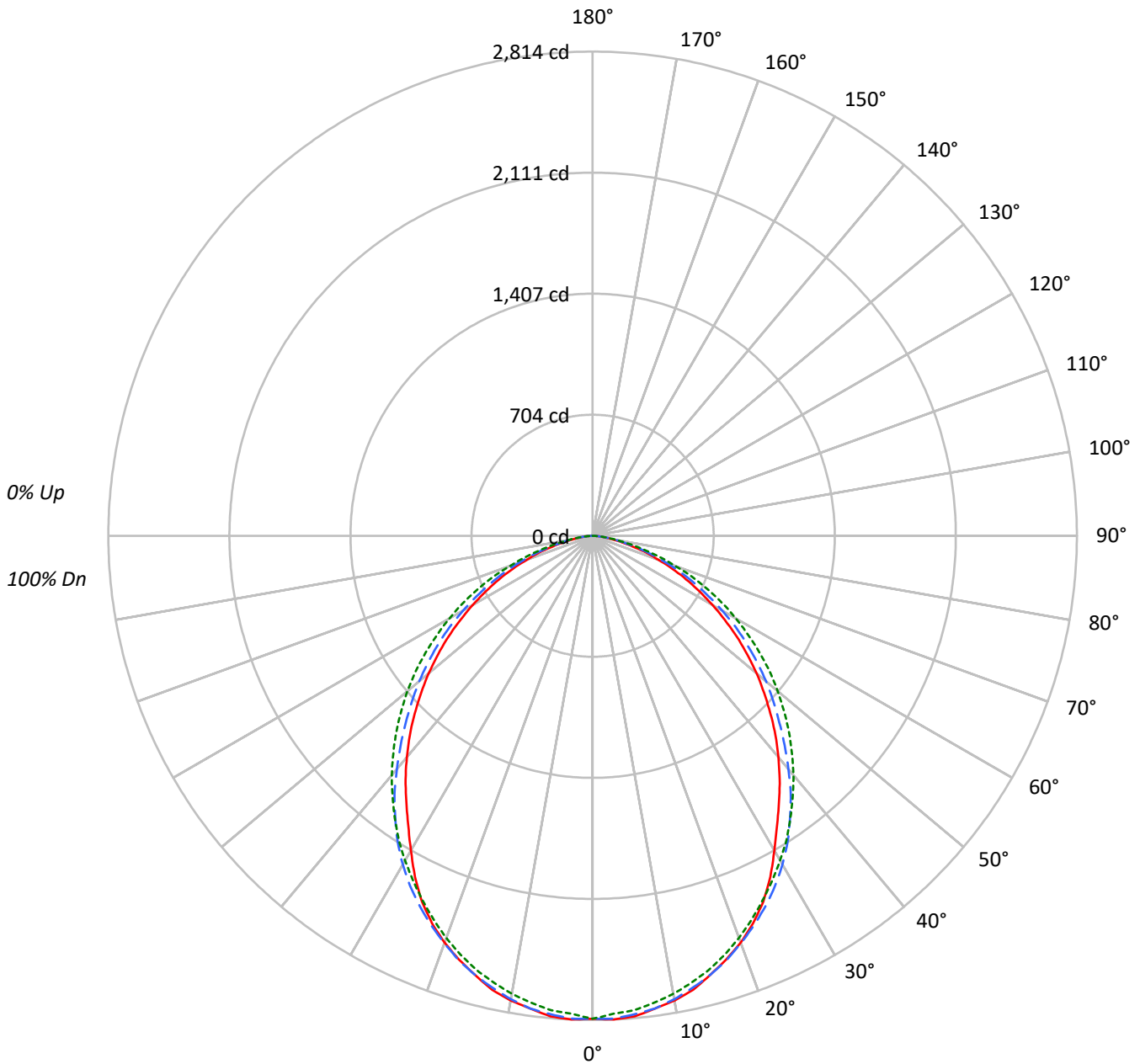
Lumens per Lamp: N/A  
Luminaire Lumens: 6490.0 lumens  
Efficiency: N/A  
Efficacy: 92.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7553	7553	7553
5°	7573	7541	7477
10°	7493	7472	7386
15°	7360	7360	7276
20°	7204	7213	7121
25°	6967	7053	6941
30°	6560	6855	6771
35°	6199	6571	6581
40°	5898	6216	6379
45°	5560	5839	6139
50°	5205	5503	5877
55°	4801	5119	5560
60°	4323	4672	5170
65°	3817	4154	4703
70°	3182	3537	3996
75°	2501	2825	3127
80°	1788	1988	2205
85°	1164	1164	1099



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	264.3	4.1
10°-20°	742.4	11.4
20°-30°	1084.9	16.7
30°-40°	1231.5	19.0
40°-50°	1188.8	18.3
50°-60°	980.7	15.1
60°-70°	653.0	10.1
70°-80°	292.2	4.5
80°-90°	52.3	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°	2091.5	32.2
0°-40°	3323.0	51.2
0°-60°	5492.5	84.6
0°-90°	6490.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6490.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2807	2807	2807	2807	2807	
5°	2804	2802	2792	2777	2768	265
15°	2642	2648	2642	2630	2612	745
25°	2346	2365	2375	2358	2338	1075
35°	1887	1913	2000	2011	2003	1182
45°	1461	1486	1534	1604	1613	1127
55°	1023	1040	1091	1152	1185	913
65°	600	616	652	699	739	594
75°	240	253	272	285	301	263
85°	38	38	38	36	36	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2806.8	2806.8	2806.8	2806.8	2806.8
2.5°	2814.3	2815.4	2808.9	2791.7	2780.9
5°	2803.5	2802.4	2791.7	2776.6	2767.9
7.5°	2772.3	2774.4	2771.2	2749.6	2737.7
10°	2742.1	2743.1	2734.5	2717.3	2703.2
12.5°	2703.2	2702.2	2690.3	2681.7	2659.0
15°	2641.8	2648.3	2641.8	2629.9	2611.6
17.5°	2582.5	2582.5	2586.8	2566.3	2552.3
20°	2515.6	2518.9	2518.9	2502.7	2486.5
22.5°	2438.0	2447.7	2450.9	2433.7	2414.3
25°	2346.3	2364.7	2375.4	2358.2	2337.7
27.5°	2235.3	2263.3	2295.7	2282.7	2260.1
30°	2111.3	2152.2	2206.2	2195.4	2179.2
32.5°	1993.7	2034.7	2109.1	2104.8	2096.2
35°	1887.0	1912.9	2000.2	2011.0	2003.4
37.5°	1785.6	1809.4	1891.3	1916.1	1909.6
40°	1678.9	1704.8	1769.5	1813.7	1815.8
42.5°	1573.2	1598.0	1650.8	1714.5	1714.5
45°	1461.1	1485.9	1534.4	1604.5	1613.1
47.5°	1351.1	1377.0	1424.4	1494.5	1508.5
50°	1243.3	1267.0	1314.4	1382.4	1403.9
52.5°	1131.1	1157.0	1203.4	1265.9	1297.2
55°	1023.3	1040.5	1091.2	1151.6	1185.0
57.5°	911.1	927.3	984.5	1036.2	1070.7
60°	803.3	823.8	868.0	920.8	960.7
62.5°	699.8	721.4	759.1	805.5	850.8
65°	599.5	615.7	652.4	698.7	738.6
67.5°	502.5	516.5	553.2	585.5	627.6
70°	404.4	422.7	449.6	480.9	507.9
72.5°	325.6	333.2	355.8	378.5	406.5
75°	240.5	253.4	271.7	284.7	300.8
77.5°	172.5	180.1	190.9	201.6	216.7
80°	115.4	118.6	128.3	130.5	142.3
82.5°	70.1	72.2	74.4	75.5	79.8
85°	37.7	37.7	37.7	35.6	35.6
87.5°	21.6	21.6	18.3	15.1	10.8
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)