

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: P558423

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-82-87-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: P558423  
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-LD4-3STD-50-UNV-82-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

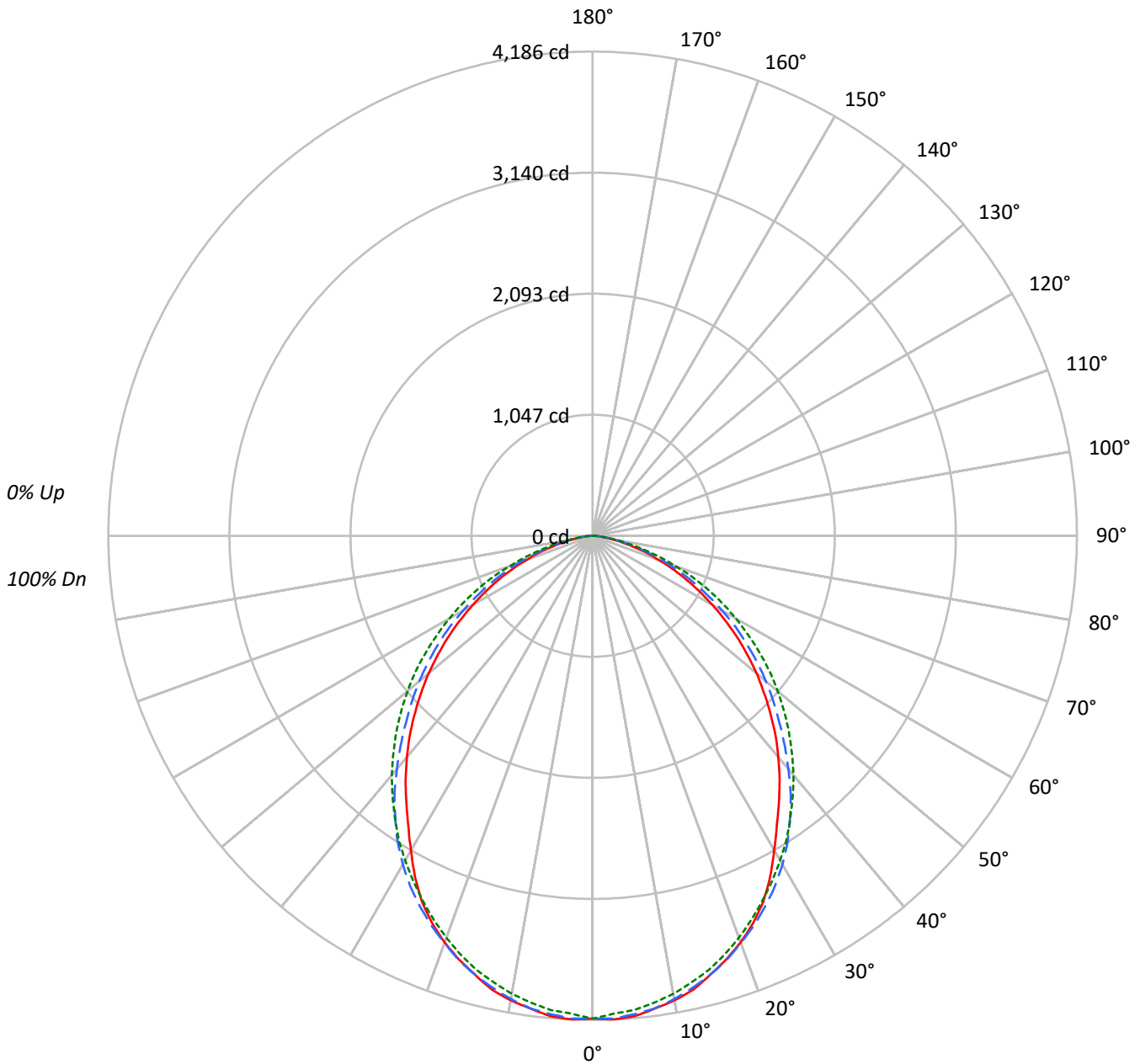
Lumens per Lamp: N/A  
Luminaire Lumens: 9652.0 lumens  
Efficiency: N/A  
Efficacy: 96.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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

TEST NUMBER: P558423

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-87-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P558423

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-87-EDD

**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°	11233	11233	11233
5°	11263	11215	11120
10°	11143	11112	10985
15°	10946	10946	10820
20°	10714	10728	10590
25°	10361	10489	10323
30°	9757	10195	10070
35°	9219	9772	9788
40°	8771	9244	9486
45°	8269	8684	9130
50°	7741	8184	8741
55°	7140	7614	8268
60°	6430	6948	7690
65°	5677	6178	6995
70°	4732	5261	5943
75°	3718	4201	4652
80°	2659	2957	3281
85°	1732	1732	1633



TEST NUMBER: P558423

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-87-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	393.0	4.1
10°-20°	1104.1	11.4
20°-30°	1613.4	16.7
30°-40°	1831.4	19.0
40°-50°	1768.0	18.3
50°-60°	1458.5	15.1
60°-70°	971.2	10.1
70°-80°	434.6	4.5
80°-90°	77.8	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°	3110.6	32.2
0°-40°	4942.0	51.2
0°-60°	8168.4	84.6
0°-90°	9652.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9652.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4174	4174	4174	4174	4174	
5°	4169	4168	4152	4129	4116	395
15°	3929	3938	3929	3911	3884	1108
25°	3490	3517	3533	3507	3477	1598
35°	2806	2845	2975	2991	2980	1758
45°	2173	2210	2282	2386	2399	1677
55°	1522	1548	1623	1713	1762	1358
65°	892	916	970	1039	1098	884
75°	358	377	404	423	447	391
85°	56	56	56	53	53	76
90°	0	0	0	0	0	



TEST NUMBER: P558423

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-87-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4174.2	4174.2	4174.2	4174.2	4174.2
2.5°	4185.5	4187.1	4177.4	4151.8	4135.8
5°	4169.4	4167.8	4151.8	4129.3	4116.5
7.5°	4122.9	4126.1	4121.3	4089.2	4071.6
10°	4078.0	4079.6	4066.8	4041.1	4020.3
12.5°	4020.3	4018.7	4001.0	3988.2	3954.5
15°	3928.9	3938.5	3928.9	3911.2	3884.0
17.5°	3840.7	3840.7	3847.1	3816.6	3795.8
20°	3741.3	3746.1	3746.1	3722.0	3698.0
22.5°	3625.8	3640.2	3645.0	3619.4	3590.5
25°	3489.5	3516.8	3532.8	3507.1	3476.7
27.5°	3324.3	3366.0	3414.1	3394.9	3361.2
30°	3139.9	3200.8	3281.0	3265.0	3240.9
32.5°	2965.1	3026.0	3136.7	3130.3	3117.5
35°	2806.3	2844.8	2974.7	2990.8	2979.5
37.5°	2655.6	2690.9	2812.8	2849.6	2840.0
40°	2496.8	2535.3	2631.6	2697.3	2700.5
42.5°	2339.7	2376.6	2455.2	2549.8	2549.8
45°	2172.9	2209.8	2282.0	2386.2	2399.0
47.5°	2009.3	2047.8	2118.4	2222.6	2243.5
50°	1849.0	1884.3	1954.8	2055.8	2087.9
52.5°	1682.2	1720.7	1789.6	1882.7	1929.2
55°	1521.8	1547.5	1622.9	1712.7	1762.4
57.5°	1355.1	1379.1	1464.1	1541.1	1592.4
60°	1194.7	1225.2	1290.9	1369.5	1428.8
62.5°	1040.8	1072.8	1129.0	1197.9	1265.3
65°	891.6	915.7	970.2	1039.2	1098.5
67.5°	747.3	768.1	822.7	870.8	933.3
70°	601.4	628.6	668.7	715.2	755.3
72.5°	484.3	495.5	529.2	562.9	604.6
75°	357.6	376.9	404.1	423.4	447.4
77.5°	256.6	267.8	283.8	299.9	322.3
80°	171.6	176.4	190.8	194.0	211.7
82.5°	104.2	107.4	110.7	112.3	118.7
85°	56.1	56.1	56.1	52.9	52.9
87.5°	32.1	32.1	27.3	22.5	16.0
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)