

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: P558167

Luminaire Tested: **FUSL-12-4-LD4-3LO-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: P558167  
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-82-87-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**

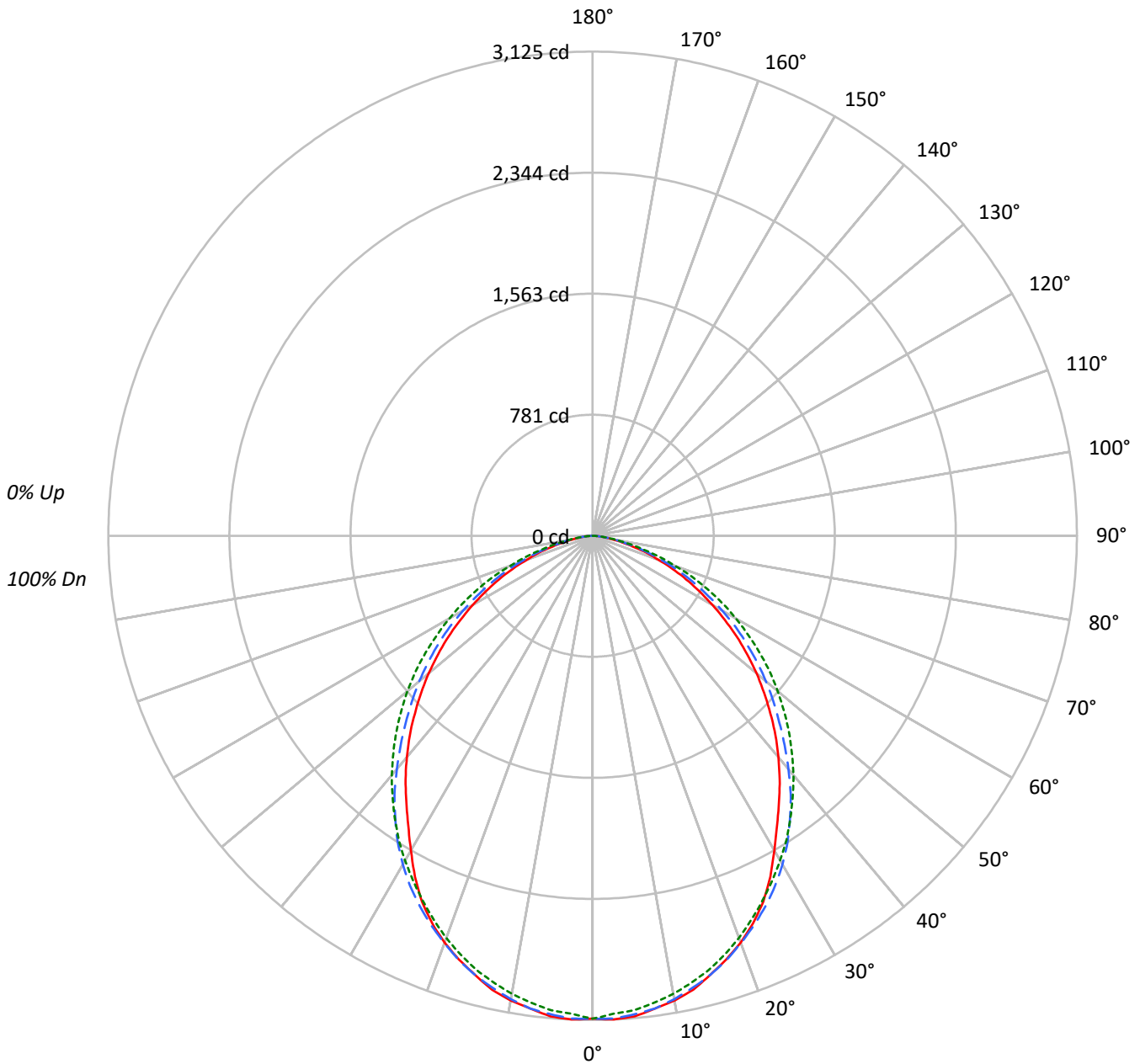
Lumens per Lamp: N/A  
Luminaire Lumens: 7207.0 lumens  
Efficiency: N/A  
Efficacy: 102.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	8387	8387	8387
5°	8410	8374	8303
10°	8320	8297	8203
15°	8173	8173	8079
20°	8000	8010	7907
25°	7736	7832	7708
30°	7285	7613	7520
35°	6884	7297	7309
40°	6549	6902	7083
45°	6175	6484	6817
50°	5780	6110	6527
55°	5331	5685	6174
60°	4801	5188	5742
65°	4239	4613	5223
70°	3533	3928	4437
75°	2776	3137	3474
80°	1985	2208	2450
85°	1294	1294	1220



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	293.5	4.1
10°-20°	824.4	11.4
20°-30°	1204.7	16.7
30°-40°	1367.5	19.0
40°-50°	1320.1	18.3
50°-60°	1089.0	15.1
60°-70°	725.2	10.1
70°-80°	324.5	4.5
80°-90°	58.0	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°	2322.6	32.2
0°-40°	3690.1	51.2
0°-60°	6099.2	84.6
0°-90°	7207.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7207.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3117	3117	3117	3117	3117	
5°	3113	3112	3100	3083	3074	295
15°	2934	2941	2934	2920	2900	827
25°	2606	2626	2638	2619	2596	1193
35°	2096	2124	2221	2233	2225	1313
45°	1622	1650	1704	1782	1791	1252
55°	1136	1156	1212	1279	1316	1014
65°	666	684	724	776	820	660
75°	267	281	302	316	334	292
85°	42	42	42	40	40	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3116.8	3116.8	3116.8	3116.8	3116.8
2.5°	3125.2	3126.4	3119.2	3100.1	3088.1
5°	3113.2	3112.1	3100.1	3083.3	3073.7
7.5°	3078.5	3080.9	3077.3	3053.4	3040.2
10°	3045.0	3046.2	3036.6	3017.5	3001.9
12.5°	3001.9	3000.7	2987.5	2977.9	2952.8
15°	2933.6	2940.8	2933.6	2920.5	2900.1
17.5°	2867.8	2867.8	2872.6	2849.8	2834.3
20°	2793.5	2797.1	2797.1	2779.2	2761.2
22.5°	2707.3	2718.1	2721.7	2702.5	2681.0
25°	2605.6	2625.9	2637.9	2618.7	2596.0
27.5°	2482.2	2513.4	2549.3	2534.9	2509.8
30°	2344.5	2390.0	2449.9	2437.9	2420.0
32.5°	2214.0	2259.5	2342.1	2337.3	2327.8
35°	2095.5	2124.2	2221.2	2233.2	2224.8
37.5°	1982.9	2009.2	2100.2	2127.8	2120.6
40°	1864.4	1893.1	1964.9	2014.0	2016.4
42.5°	1747.0	1774.6	1833.2	1903.9	1903.9
45°	1622.5	1650.0	1703.9	1781.7	1791.3
47.5°	1500.3	1529.1	1581.8	1659.6	1675.2
50°	1380.6	1406.9	1459.6	1535.1	1559.0
52.5°	1256.1	1284.8	1336.3	1405.8	1440.5
55°	1136.3	1155.5	1211.8	1278.8	1315.9
57.5°	1011.8	1029.8	1093.2	1150.7	1189.0
60°	892.1	914.8	963.9	1022.6	1066.9
62.5°	777.1	801.1	843.0	894.5	944.8
65°	665.8	683.7	724.4	775.9	820.2
67.5°	558.0	573.6	614.3	650.2	696.9
70°	449.0	469.4	499.3	534.0	564.0
72.5°	361.6	370.0	395.1	420.3	451.4
75°	267.0	281.4	301.7	316.1	334.1
77.5°	191.6	200.0	211.9	223.9	240.7
80°	128.1	131.7	142.5	144.9	158.1
82.5°	77.8	80.2	82.6	83.8	88.6
85°	41.9	41.9	41.9	39.5	39.5
87.5°	23.9	23.9	20.4	16.8	12.0
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)