

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: P557065

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-81-88-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: P557065  
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-LD4-2HI-40-UNV-81-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

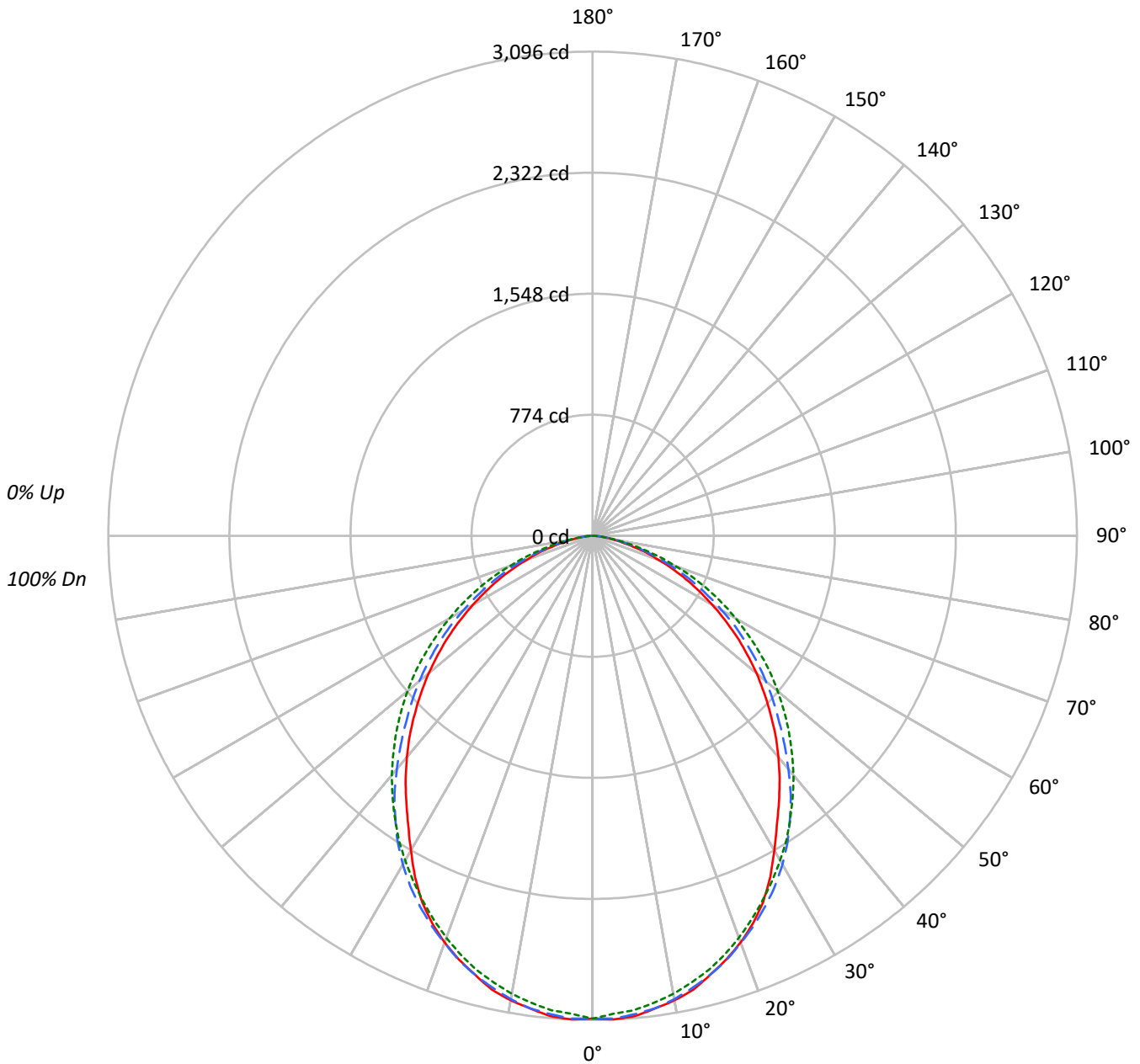
Lumens per Lamp: N/A  
Luminaire Lumens: 7139.0 lumens  
Efficiency: N/A  
Efficacy: 82.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	8308	8308	8308
5°	8330	8295	8225
10°	8242	8219	8125
15°	8096	8096	8003
20°	7924	7934	7833
25°	7663	7758	7635
30°	7216	7541	7448
35°	6819	7228	7240
40°	6487	6837	7017
45°	6116	6423	6753
50°	5725	6053	6465
55°	5281	5631	6115
60°	4755	5139	5688
65°	4199	4569	5174
70°	3500	3891	4396
75°	2750	3108	3440
80°	1967	2187	2427
85°	1281	1281	1207



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	290.7	4.1
10°-20°	816.6	11.4
20°-30°	1193.4	16.7
30°-40°	1354.6	19.0
40°-50°	1307.7	18.3
50°-60°	1078.7	15.1
60°-70°	718.3	10.1
70°-80°	321.4	4.5
80°-90°	57.5	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°	2300.7	32.2
0°-40°	3655.3	51.2
0°-60°	6041.7	84.6
0°-90°	7139.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7139.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3087	3087	3087	3087	3087	
5°	3084	3083	3071	3054	3045	292
15°	2906	2913	2906	2893	2873	819
25°	2581	2601	2613	2594	2572	1182
35°	2076	2104	2200	2212	2204	1301
45°	1607	1634	1688	1765	1774	1240
55°	1126	1145	1200	1267	1304	1005
65°	660	677	718	769	812	654
75°	264	279	299	313	331	289
85°	42	42	42	39	39	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3087.4	3087.4	3087.4	3087.4	3087.4
2.5°	3095.7	3096.9	3089.8	3070.8	3059.0
5°	3083.9	3082.7	3070.8	3054.2	3044.7
7.5°	3049.5	3051.8	3048.3	3024.6	3011.5
10°	3016.3	3017.5	3008.0	2989.0	2973.6
12.5°	2973.6	2972.4	2959.3	2949.8	2924.9
15°	2906.0	2913.1	2906.0	2892.9	2872.7
17.5°	2840.7	2840.7	2845.5	2822.9	2807.5
20°	2767.2	2770.7	2770.7	2753.0	2735.2
22.5°	2681.8	2692.5	2696.0	2677.0	2655.7
25°	2581.0	2601.1	2613.0	2594.0	2571.5
27.5°	2458.8	2489.6	2525.2	2511.0	2486.1
30°	2322.4	2367.5	2426.8	2414.9	2397.1
32.5°	2193.1	2238.2	2320.0	2315.3	2305.8
35°	2075.7	2104.2	2200.2	2212.1	2203.8
37.5°	1964.2	1990.3	2080.4	2107.7	2100.6
40°	1846.8	1875.2	1946.4	1995.0	1997.4
42.5°	1730.5	1757.8	1815.9	1885.9	1885.9
45°	1607.2	1634.5	1687.8	1764.9	1774.4
47.5°	1486.2	1514.7	1566.8	1643.9	1659.4
50°	1367.6	1393.7	1445.9	1520.6	1544.3
52.5°	1244.2	1272.7	1323.7	1392.5	1426.9
55°	1125.6	1144.6	1200.3	1266.8	1303.5
57.5°	1002.3	1020.1	1082.9	1139.8	1177.8
60°	883.6	906.2	954.8	1012.9	1056.8
62.5°	769.8	793.5	835.0	886.0	935.8
65°	659.5	677.3	717.6	768.6	812.5
67.5°	552.7	568.1	608.5	644.1	690.3
70°	444.8	465.0	494.6	529.0	558.7
72.5°	358.2	366.5	391.4	416.3	447.2
75°	264.5	278.7	298.9	313.1	330.9
77.5°	189.8	198.1	209.9	221.8	238.4
80°	126.9	130.5	141.1	143.5	156.6
82.5°	77.1	79.5	81.8	83.0	87.8
85°	41.5	41.5	41.5	39.1	39.1
87.5°	23.7	23.7	20.2	16.6	11.9
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)