

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: P557569

Luminaire Tested: **FUSL-12-4-LD4-2STD-40-UNV-81-84-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: P557569  
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-LD4-2STD-40-UNV-81-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

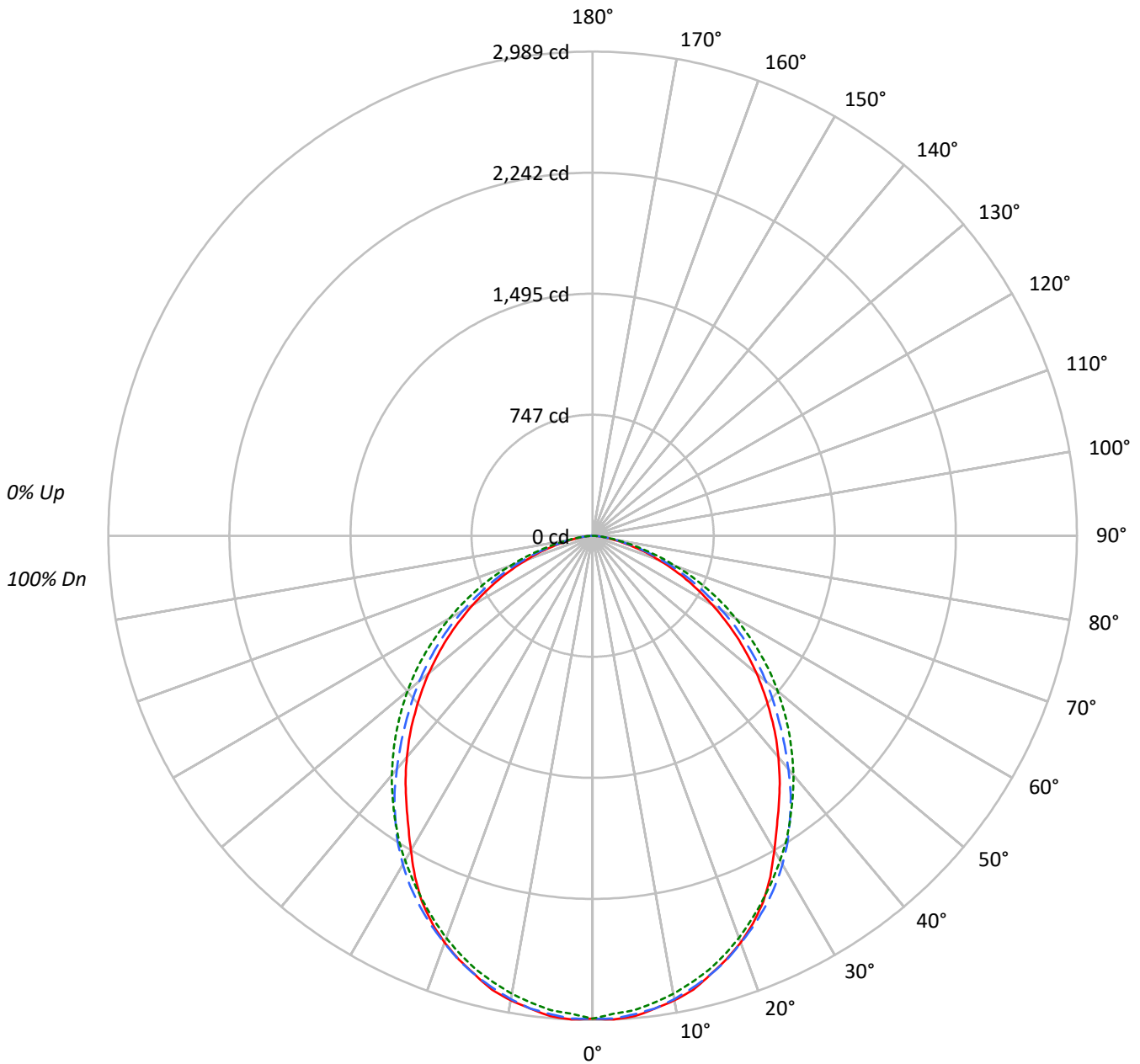
Lumens per Lamp: N/A  
Luminaire Lumens: 6893.0 lumens  
Efficiency: N/A  
Efficacy: 103.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	8022	8022	8022
5°	8043	8009	7941
10°	7958	7936	7845
15°	7817	7817	7728
20°	7651	7661	7563
25°	7399	7491	7372
30°	6968	7281	7192
35°	6584	6979	6990
40°	6264	6602	6775
45°	5906	6202	6520
50°	5528	5844	6242
55°	5099	5438	5905
60°	4592	4962	5492
65°	4055	4412	4995
70°	3379	3758	4244
75°	2655	3001	3322
80°	1898	2112	2343
85°	1238	1238	1167



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	280.7	4.1
10°-20°	788.5	11.4
20°-30°	1152.3	16.7
30°-40°	1307.9	19.0
40°-50°	1262.6	18.3
50°-60°	1041.6	15.1
60°-70°	693.6	10.1
70°-80°	310.4	4.5
80°-90°	55.5	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°	2221.4	32.2
0°-40°	3529.3	51.2
0°-60°	5833.5	84.6
0°-90°	6893.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6893.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2981	2981	2981	2981	2981	
5°	2978	2976	2965	2949	2940	282
15°	2806	2813	2806	2793	2774	791
25°	2492	2512	2523	2505	2483	1141
35°	2004	2032	2124	2136	2128	1256
45°	1552	1578	1630	1704	1713	1197
55°	1087	1105	1159	1223	1259	970
65°	637	654	693	742	784	631
75°	255	269	289	302	320	279
85°	40	40	40	38	38	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2981.0	2981.0	2981.0	2981.0	2981.0
2.5°	2989.1	2990.2	2983.3	2965.0	2953.6
5°	2977.6	2976.5	2965.0	2949.0	2939.8
7.5°	2944.4	2946.7	2943.3	2920.3	2907.7
10°	2912.3	2913.5	2904.3	2886.0	2871.1
12.5°	2871.1	2870.0	2857.4	2848.2	2824.1
15°	2805.8	2812.7	2805.8	2793.2	2773.8
17.5°	2742.8	2742.8	2747.4	2725.7	2710.8
20°	2671.8	2675.3	2675.3	2658.1	2640.9
22.5°	2589.4	2599.7	2603.1	2584.8	2564.2
25°	2492.0	2511.5	2523.0	2504.6	2482.9
27.5°	2374.1	2403.8	2438.2	2424.5	2400.4
30°	2242.4	2285.9	2343.1	2331.7	2314.5
32.5°	2117.5	2161.1	2240.1	2235.5	2226.3
35°	2004.2	2031.6	2124.4	2135.9	2127.8
37.5°	1896.5	1921.7	2008.7	2035.1	2028.2
40°	1783.1	1810.6	1879.3	1926.3	1928.6
42.5°	1670.9	1697.2	1753.4	1820.9	1820.9
45°	1551.8	1578.1	1629.7	1704.1	1713.3
47.5°	1435.0	1462.5	1512.9	1587.3	1602.2
50°	1320.5	1345.7	1396.0	1468.2	1491.1
52.5°	1201.4	1228.8	1278.1	1344.5	1377.7
55°	1086.8	1105.2	1159.0	1223.1	1258.6
57.5°	967.7	984.9	1045.6	1100.6	1137.2
60°	853.2	875.0	921.9	978.0	1020.4
62.5°	743.3	766.2	806.2	855.5	903.6
65°	636.8	653.9	692.9	742.1	784.5
67.5°	533.7	548.6	587.5	621.9	666.5
70°	429.5	448.9	477.6	510.8	539.4
72.5°	345.9	353.9	377.9	402.0	431.8
75°	255.4	269.1	288.6	302.3	319.5
77.5°	183.2	191.3	202.7	214.2	230.2
80°	122.5	126.0	136.3	138.6	151.2
82.5°	74.4	76.7	79.0	80.2	84.7
85°	40.1	40.1	40.1	37.8	37.8
87.5°	22.9	22.9	19.5	16.0	11.5
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)