

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: P557585

Luminaire Tested: **FUSL-12-4-LD4-2STD-40-UNV-82-84-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: P557585  
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-82-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 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**

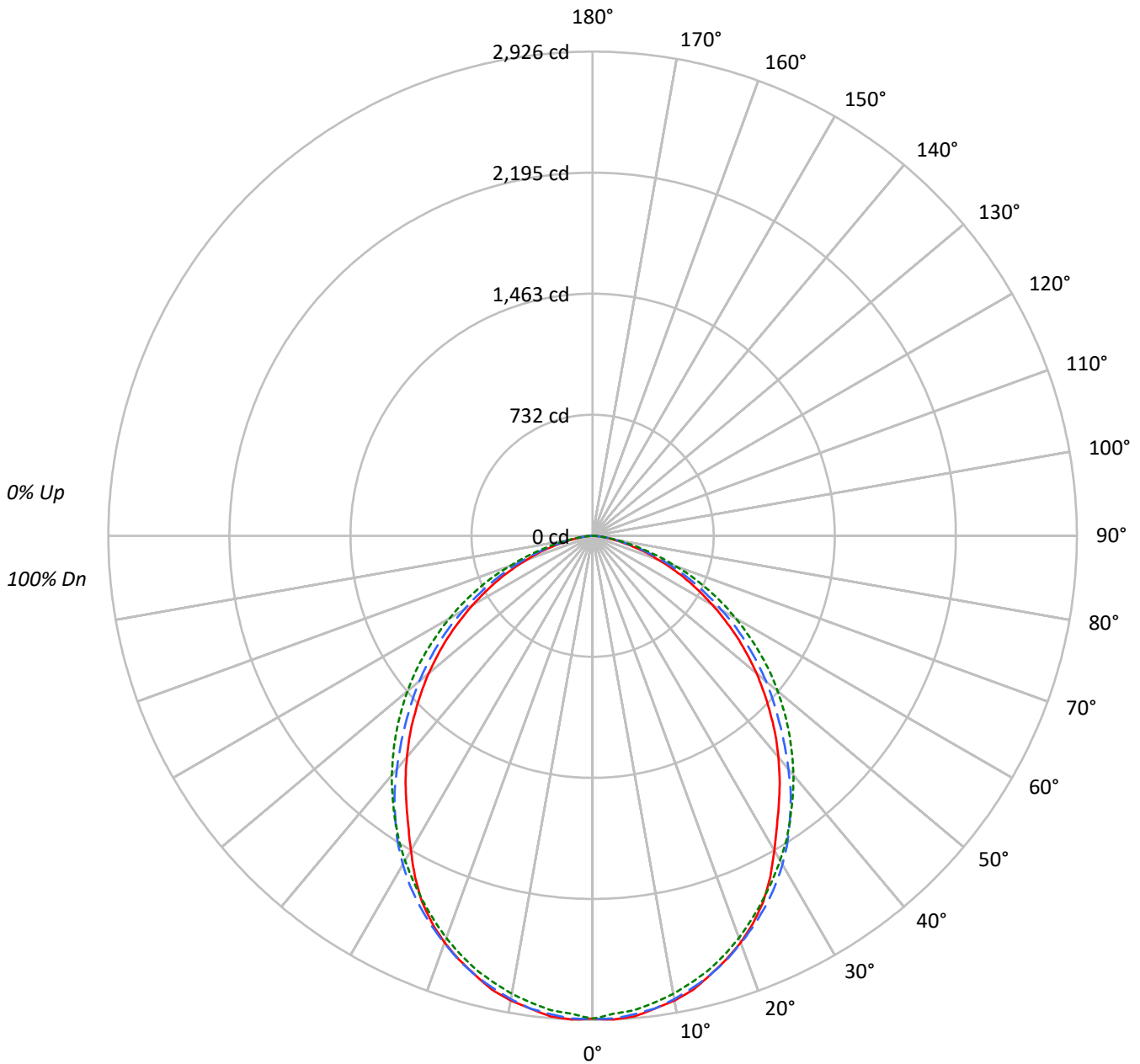
Lumens per Lamp: N/A  
Luminaire Lumens: 6748.0 lumens  
Efficiency: N/A  
Efficacy: 101.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	7853	7853	7853
5°	7874	7841	7774
10°	7791	7769	7680
15°	7652	7652	7565
20°	7490	7500	7404
25°	7244	7334	7217
30°	6821	7128	7040
35°	6445	6832	6843
40°	6132	6463	6632
45°	5781	6071	6383
50°	5412	5722	6111
55°	4992	5323	5780
60°	4496	4857	5376
65°	3969	4319	4890
70°	3308	3678	4155
75°	2599	2937	3252
80°	1860	2067	2294
85°	1210	1210	1142



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	274.8	4.1
10°-20°	771.9	11.4
20°-30°	1128.0	16.7
30°-40°	1280.4	19.0
40°-50°	1236.0	18.3
50°-60°	1019.7	15.1
60°-70°	679.0	10.1
70°-80°	303.8	4.5
80°-90°	54.4	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°	2174.7	32.2
0°-40°	3455.1	51.2
0°-60°	5710.8	84.6
0°-90°	6748.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6748.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2918	2918	2918	2918	2918	
5°	2915	2914	2903	2887	2878	276
15°	2747	2754	2747	2734	2715	774
25°	2440	2459	2470	2452	2431	1117
35°	1962	1989	2080	2091	2083	1229
45°	1519	1545	1595	1668	1677	1172
55°	1064	1082	1135	1197	1232	950
65°	623	640	678	726	768	618
75°	250	264	282	296	313	273
85°	39	39	39	37	37	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2918.3	2918.3	2918.3	2918.3	2918.3
2.5°	2926.2	2927.3	2920.6	2902.6	2891.4
5°	2915.0	2913.9	2902.6	2886.9	2878.0
7.5°	2882.5	2884.7	2881.3	2858.9	2846.6
10°	2851.1	2852.2	2843.2	2825.3	2810.7
12.5°	2810.7	2809.6	2797.3	2788.3	2764.7
15°	2746.8	2753.5	2746.8	2734.5	2715.4
17.5°	2685.1	2685.1	2689.6	2668.3	2653.7
20°	2615.6	2619.0	2619.0	2602.2	2585.4
22.5°	2534.9	2545.0	2548.4	2530.4	2510.2
25°	2439.6	2458.7	2469.9	2451.9	2430.6
27.5°	2324.1	2353.3	2386.9	2373.5	2349.9
30°	2195.2	2237.8	2293.9	2282.6	2265.8
32.5°	2073.0	2115.6	2193.0	2188.5	2179.5
35°	1962.0	1988.9	2079.7	2090.9	2083.1
37.5°	1856.6	1881.3	1966.5	1992.3	1985.5
40°	1745.6	1772.5	1839.8	1885.8	1888.0
42.5°	1635.7	1661.5	1716.5	1782.6	1782.6
45°	1519.1	1544.9	1595.4	1668.3	1677.2
47.5°	1404.8	1431.7	1481.0	1553.9	1568.5
50°	1292.7	1317.3	1366.7	1437.3	1459.7
52.5°	1176.1	1203.0	1251.2	1316.2	1348.7
55°	1064.0	1081.9	1134.6	1197.4	1232.1
57.5°	947.4	964.2	1023.6	1077.4	1113.3
60°	835.3	856.6	902.5	957.5	998.9
62.5°	727.6	750.0	789.3	837.5	884.6
65°	623.4	640.2	678.3	726.5	768.0
67.5°	522.5	537.0	575.1	608.8	652.5
70°	420.4	439.5	467.5	500.0	528.1
72.5°	338.6	346.4	370.0	393.5	422.7
75°	250.0	263.5	282.5	296.0	312.8
77.5°	179.4	187.2	198.4	209.7	225.3
80°	120.0	123.3	133.4	135.7	148.0
82.5°	72.9	75.1	77.4	78.5	83.0
85°	39.2	39.2	39.2	37.0	37.0
87.5°	22.4	22.4	19.1	15.7	11.2
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)