

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: P558156

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-81-96-EDD-90**

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: P558156  
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-81-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

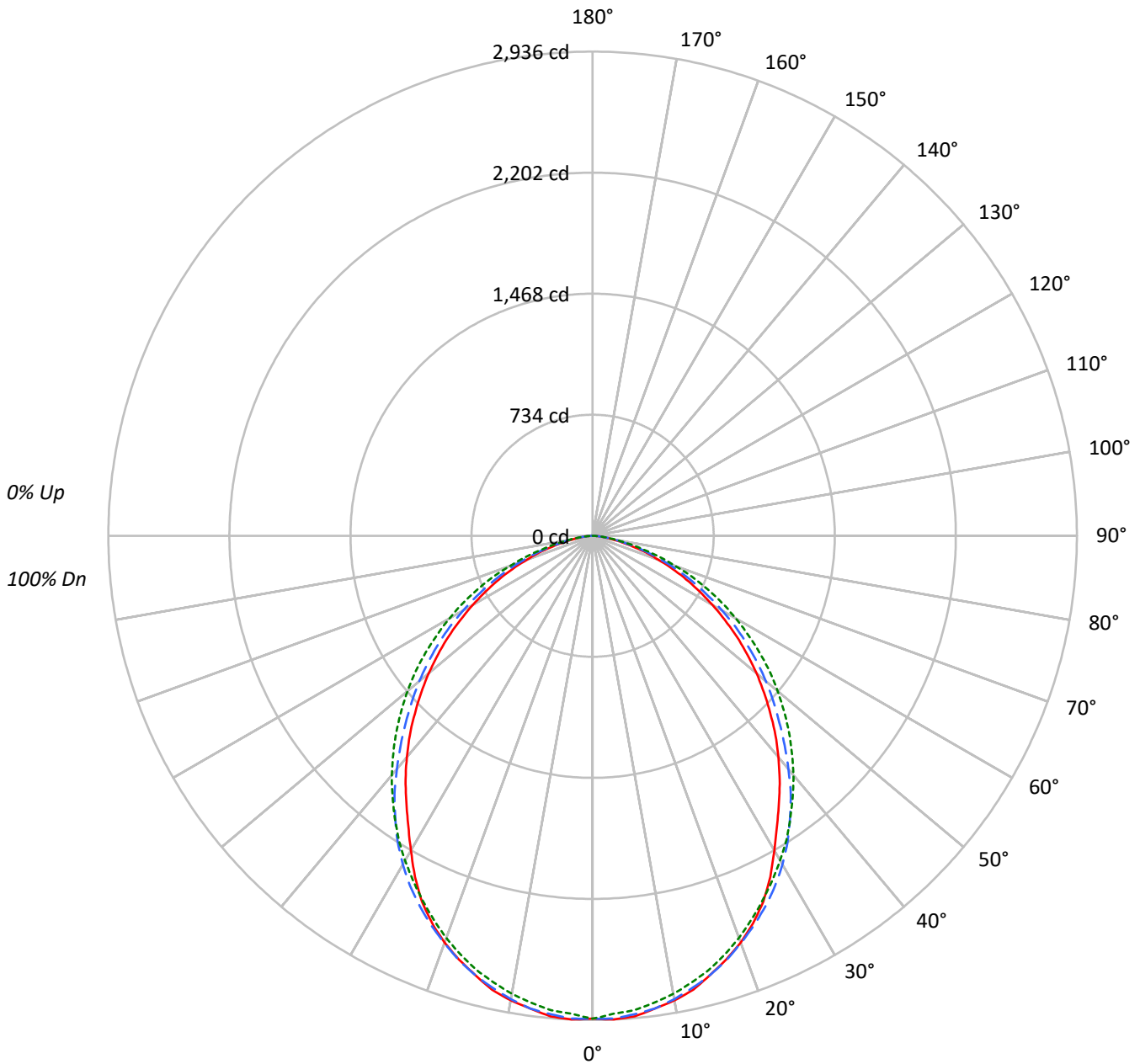
Lumens per Lamp: N/A  
Luminaire Lumens: 6771.0 lumens  
Efficiency: N/A  
Efficacy: 96.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°	7880	7880	7880
5°	7901	7867	7801
10°	7817	7796	7706
15°	7679	7679	7591
20°	7516	7525	7429
25°	7268	7358	7242
30°	6844	7152	7065
35°	6467	6855	6866
40°	6153	6485	6655
45°	5801	6092	6404
50°	5430	5741	6132
55°	5009	5341	5800
60°	4511	4874	5394
65°	3983	4334	4907
70°	3319	3691	4169
75°	2609	2948	3264
80°	1866	2075	2301
85°	1216	1216	1145



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	275.7	4.1
10°-20°	774.5	11.4
20°-30°	1131.8	16.7
30°-40°	1284.8	19.0
40°-50°	1240.2	18.3
50°-60°	1023.1	15.1
60°-70°	681.3	10.1
70°-80°	304.9	4.5
80°-90°	54.5	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°	2182.1	32.2
0°-40°	3466.9	51.2
0°-60°	5730.3	84.6
0°-90°	6771.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6771.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2928	2928	2928	2928	2928	
5°	2925	2924	2912	2897	2888	277
15°	2756	2763	2756	2744	2725	777
25°	2448	2467	2478	2460	2439	1121
35°	1969	1996	2087	2098	2090	1234
45°	1524	1550	1601	1674	1683	1176
55°	1068	1086	1138	1202	1236	953
65°	626	642	681	729	771	620
75°	251	264	284	297	314	274
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°	2928.3	2928.3	2928.3	2928.3	2928.3
2.5°	2936.2	2937.3	2930.5	2912.5	2901.3
5°	2924.9	2923.8	2912.5	2896.8	2887.8
7.5°	2892.3	2894.5	2891.2	2868.7	2856.3
10°	2860.8	2861.9	2852.9	2834.9	2820.3
12.5°	2820.3	2819.2	2806.8	2797.8	2774.2
15°	2756.2	2762.9	2756.2	2743.8	2724.7
17.5°	2694.3	2694.3	2698.8	2677.4	2662.8
20°	2624.5	2627.9	2627.9	2611.0	2594.2
22.5°	2543.5	2553.7	2557.0	2539.0	2518.8
25°	2447.9	2467.0	2478.3	2460.3	2438.9
27.5°	2332.1	2361.3	2395.0	2381.5	2357.9
30°	2202.7	2245.4	2301.7	2290.4	2273.6
32.5°	2080.1	2122.8	2200.4	2195.9	2186.9
35°	1968.7	1995.7	2086.8	2098.1	2090.2
37.5°	1862.9	1887.7	1973.2	1999.1	1992.3
40°	1751.6	1778.6	1846.1	1892.2	1894.4
42.5°	1641.3	1667.2	1722.3	1788.7	1788.7
45°	1524.3	1550.2	1600.8	1673.9	1682.9
47.5°	1409.6	1436.6	1486.1	1559.2	1573.8
50°	1297.1	1321.8	1371.3	1442.2	1464.7
52.5°	1180.1	1207.1	1255.5	1320.7	1353.3
55°	1067.6	1085.6	1138.5	1201.5	1236.3
57.5°	950.6	967.5	1027.1	1081.1	1117.1
60°	838.1	859.5	905.6	960.7	1002.3
62.5°	730.1	752.6	792.0	840.3	887.6
65°	625.5	642.4	680.6	729.0	770.6
67.5°	524.2	538.9	577.1	610.9	654.7
70°	421.9	441.0	469.1	501.7	529.9
72.5°	339.7	347.6	371.2	394.9	424.1
75°	250.9	264.4	283.5	297.0	313.9
77.5°	180.0	187.9	199.1	210.4	226.1
80°	120.4	123.7	133.9	136.1	148.5
82.5°	73.1	75.4	77.6	78.7	83.2
85°	39.4	39.4	39.4	37.1	37.1
87.5°	22.5	22.5	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)