

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: P558113

Luminaire Tested: **FUSL-12-4-LD4-3LO-40-UNV-93-84-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: P558113  
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-40-UNV-93-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS 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**

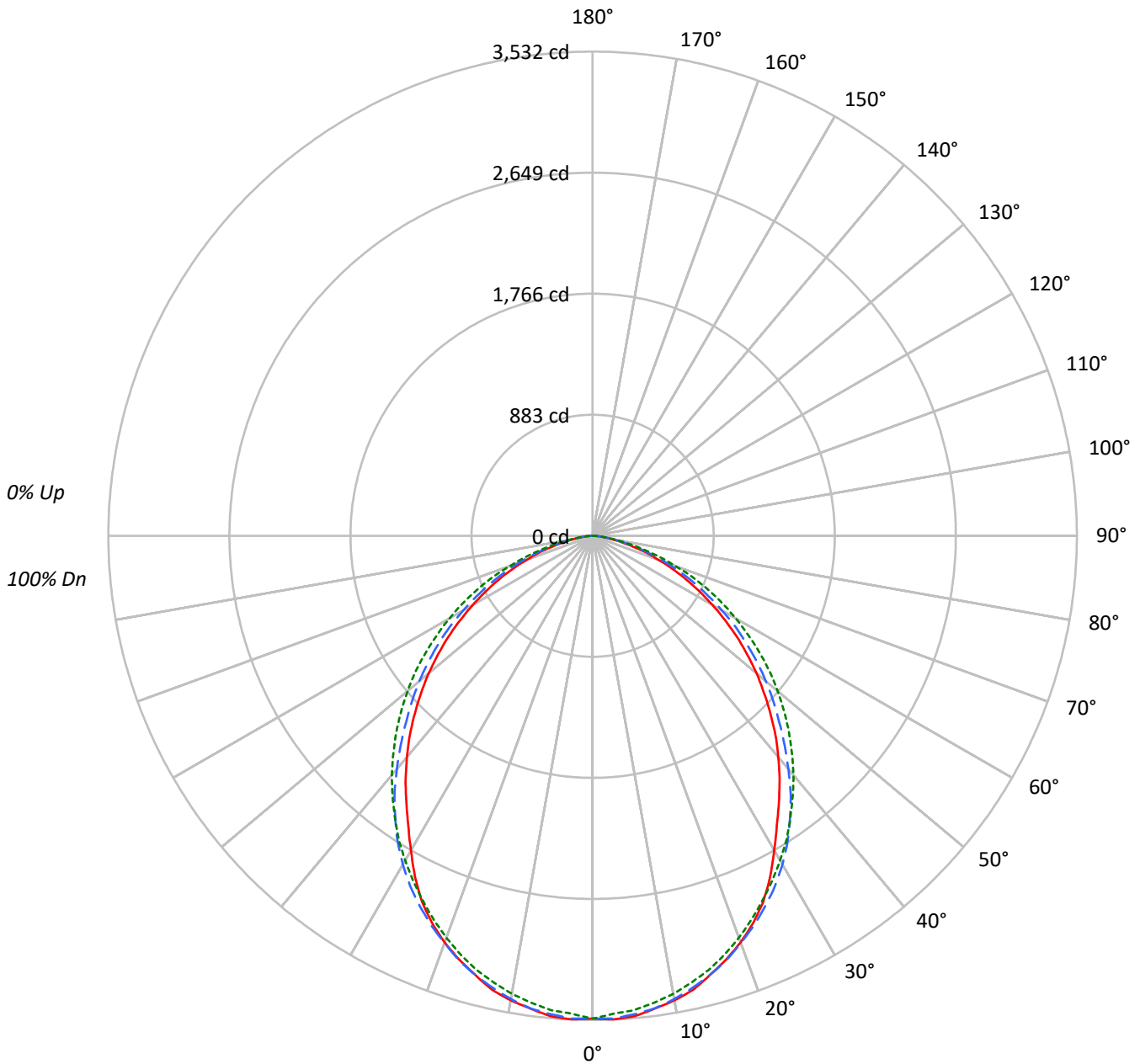
Lumens per Lamp: N/A  
Luminaire Lumens: 8144.0 lumens  
Efficiency: N/A  
Efficacy: 116.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	9478	9478	9478
5°	9503	9463	9383
10°	9402	9376	9269
15°	9235	9235	9130
20°	9040	9052	8935
25°	8742	8850	8710
30°	8232	8602	8497
35°	7779	8246	8259
40°	7400	7800	8004
45°	6977	7327	7703
50°	6531	6905	7375
55°	6024	6424	6976
60°	5425	5862	6488
65°	4790	5212	5902
70°	3992	4439	5014
75°	3137	3545	3925
80°	2244	2495	2768
85°	1463	1463	1380



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	331.6	4.1
10°-20°	931.6	11.4
20°-30°	1361.4	16.7
30°-40°	1545.3	19.0
40°-50°	1491.7	18.3
50°-60°	1230.6	15.1
60°-70°	819.5	10.1
70°-80°	366.7	4.5
80°-90°	65.6	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°	2624.6	32.2
0°-40°	4169.9	51.2
0°-60°	6892.2	84.6
0°-90°	8144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8144.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3522	3522	3522	3522	3522	
5°	3518	3517	3503	3484	3473	333
15°	3315	3323	3315	3300	3277	935
25°	2944	2967	2981	2959	2934	1348
35°	2368	2400	2510	2524	2514	1484
45°	1833	1864	1925	2013	2024	1415
55°	1284	1306	1369	1445	1487	1146
65°	752	773	819	877	927	746
75°	302	318	341	357	378	330
85°	47	47	47	45	45	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3522.1	3522.1	3522.1	3522.1	3522.1
2.5°	3531.5	3532.9	3524.8	3503.1	3489.6
5°	3518.0	3516.7	3503.1	3484.2	3473.4
7.5°	3478.8	3481.5	3477.4	3450.4	3435.5
10°	3440.9	3442.2	3431.4	3409.8	3392.2
12.5°	3392.2	3390.8	3375.9	3365.1	3336.7
15°	3315.0	3323.2	3315.0	3300.2	3277.2
17.5°	3240.6	3240.6	3246.0	3220.3	3202.7
20°	3156.7	3160.8	3160.8	3140.5	3120.2
22.5°	3059.3	3071.5	3075.6	3053.9	3029.5
25°	2944.3	2967.3	2980.8	2959.2	2933.5
27.5°	2804.9	2840.1	2880.7	2864.5	2836.1
30°	2649.3	2700.7	2768.4	2754.9	2734.6
32.5°	2501.8	2553.3	2646.6	2641.2	2630.4
35°	2367.9	2400.4	2510.0	2523.5	2514.0
37.5°	2240.7	2270.5	2373.3	2404.4	2396.3
40°	2106.7	2139.2	2220.4	2275.9	2278.6
42.5°	1974.1	2005.3	2071.6	2151.4	2151.4
45°	1833.4	1864.5	1925.4	2013.4	2024.2
47.5°	1695.4	1727.9	1787.4	1875.4	1893.0
50°	1560.1	1589.9	1649.4	1734.6	1761.7
52.5°	1419.4	1451.9	1510.0	1588.5	1627.8
55°	1284.1	1305.7	1369.3	1445.1	1487.0
57.5°	1143.4	1163.6	1235.4	1300.3	1343.6
60°	1008.0	1033.8	1089.2	1155.5	1205.6
62.5°	878.1	905.2	952.6	1010.8	1067.6
65°	752.3	772.6	818.6	876.8	926.9
67.5°	630.5	648.1	694.1	734.7	787.5
70°	507.4	530.4	564.2	603.5	637.3
72.5°	408.6	418.1	446.5	474.9	510.1
75°	301.7	318.0	341.0	357.2	377.5
77.5°	216.5	226.0	239.5	253.0	272.0
80°	144.8	148.8	161.0	163.7	178.6
82.5°	88.0	90.7	93.4	94.7	100.1
85°	47.4	47.4	47.4	44.7	44.7
87.5°	27.1	27.1	23.0	18.9	13.5
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)