

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: P556556

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-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: P556556  
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-LD4-1LO-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

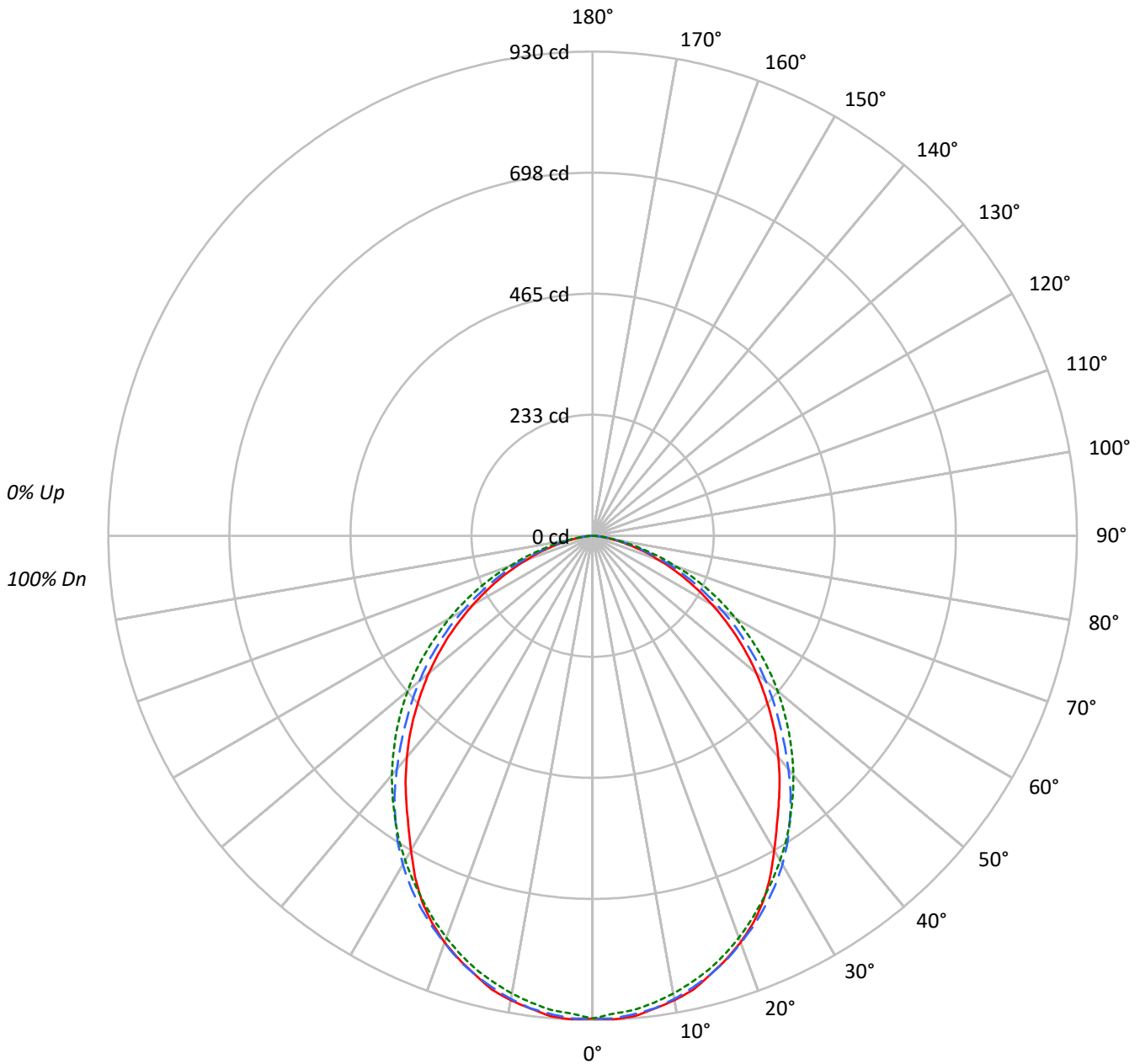
Lumens per Lamp: N/A  
Luminaire Lumens: 2144.0 lumens  
Efficiency: N/A  
Efficacy: 91.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2495	2495	2495
5°	2502	2491	2470
10°	2475	2469	2440
15°	2431	2431	2403
20°	2380	2383	2352
25°	2301	2330	2293
30°	2167	2265	2237
35°	2048	2171	2174
40°	1948	2053	2107
45°	1837	1929	2028
50°	1719	1818	1942
55°	1586	1691	1837
60°	1428	1544	1708
65°	1261	1372	1554
70°	1051	1168	1320
75°	826	934	1033
80°	590	657	728
85°	386	386	364



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.3	4.1
10°-20°	245.3	11.4
20°-30°	358.4	16.7
30°-40°	406.8	19.0
40°-50°	392.7	18.3
50°-60°	324.0	15.1
60°-70°	215.7	10.1
70°-80°	96.5	4.5
80°-90°	17.3	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°	691.0	32.2
0°-40°	1097.8	51.2
0°-60°	1814.5	84.6
0°-90°	2144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2144.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	927	927	927	927	927	
5°	926	926	922	917	914	88
15°	873	875	873	869	863	246
25°	775	781	785	779	772	355
35°	623	632	661	664	662	391
45°	483	491	507	530	533	372
55°	338	344	360	380	392	302
65°	198	203	216	231	244	196
75°	79	84	90	94	99	87
85°	12	12	12	12	12	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	927.2	927.2	927.2	927.2	927.2
2.5°	929.7	930.1	927.9	922.2	918.7
5°	926.2	925.8	922.2	917.3	914.4
7.5°	915.8	916.5	915.5	908.3	904.4
10°	905.9	906.2	903.4	897.7	893.0
12.5°	893.0	892.7	888.8	885.9	878.4
15°	872.7	874.9	872.7	868.8	862.7
17.5°	853.1	853.1	854.6	847.8	843.2
20°	831.0	832.1	832.1	826.8	821.4
22.5°	805.4	808.6	809.7	804.0	797.6
25°	775.1	781.2	784.7	779.0	772.3
27.5°	738.4	747.7	758.4	754.1	746.6
30°	697.5	711.0	728.8	725.3	719.9
32.5°	658.6	672.2	696.8	695.3	692.5
35°	623.4	631.9	660.8	664.3	661.8
37.5°	589.9	597.7	624.8	633.0	630.9
40°	554.6	563.2	584.5	599.2	599.9
42.5°	519.7	527.9	545.4	566.4	566.4
45°	482.7	490.9	506.9	530.0	532.9
47.5°	446.3	454.9	470.6	493.7	498.3
50°	410.7	418.6	434.2	456.7	463.8
52.5°	373.7	382.2	397.5	418.2	428.5
55°	338.0	343.7	360.5	380.4	391.5
57.5°	301.0	306.3	325.2	342.3	353.7
60°	265.4	272.1	286.8	304.2	317.4
62.5°	231.2	238.3	250.8	266.1	281.1
65°	198.1	203.4	215.5	230.8	244.0
67.5°	166.0	170.6	182.7	193.4	207.3
70°	133.6	139.6	148.5	158.9	167.8
72.5°	107.6	110.1	117.6	125.0	134.3
75°	79.4	83.7	89.8	94.0	99.4
77.5°	57.0	59.5	63.0	66.6	71.6
80°	38.1	39.2	42.4	43.1	47.0
82.5°	23.2	23.9	24.6	24.9	26.4
85°	12.5	12.5	12.5	11.8	11.8
87.5°	7.1	7.1	6.1	5.0	3.6
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)