

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: P556510

Luminaire Tested: **FUSL-12-4-LD4-1LO-35-UNV-82-97-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: P556510  
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-35-UNV-82-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

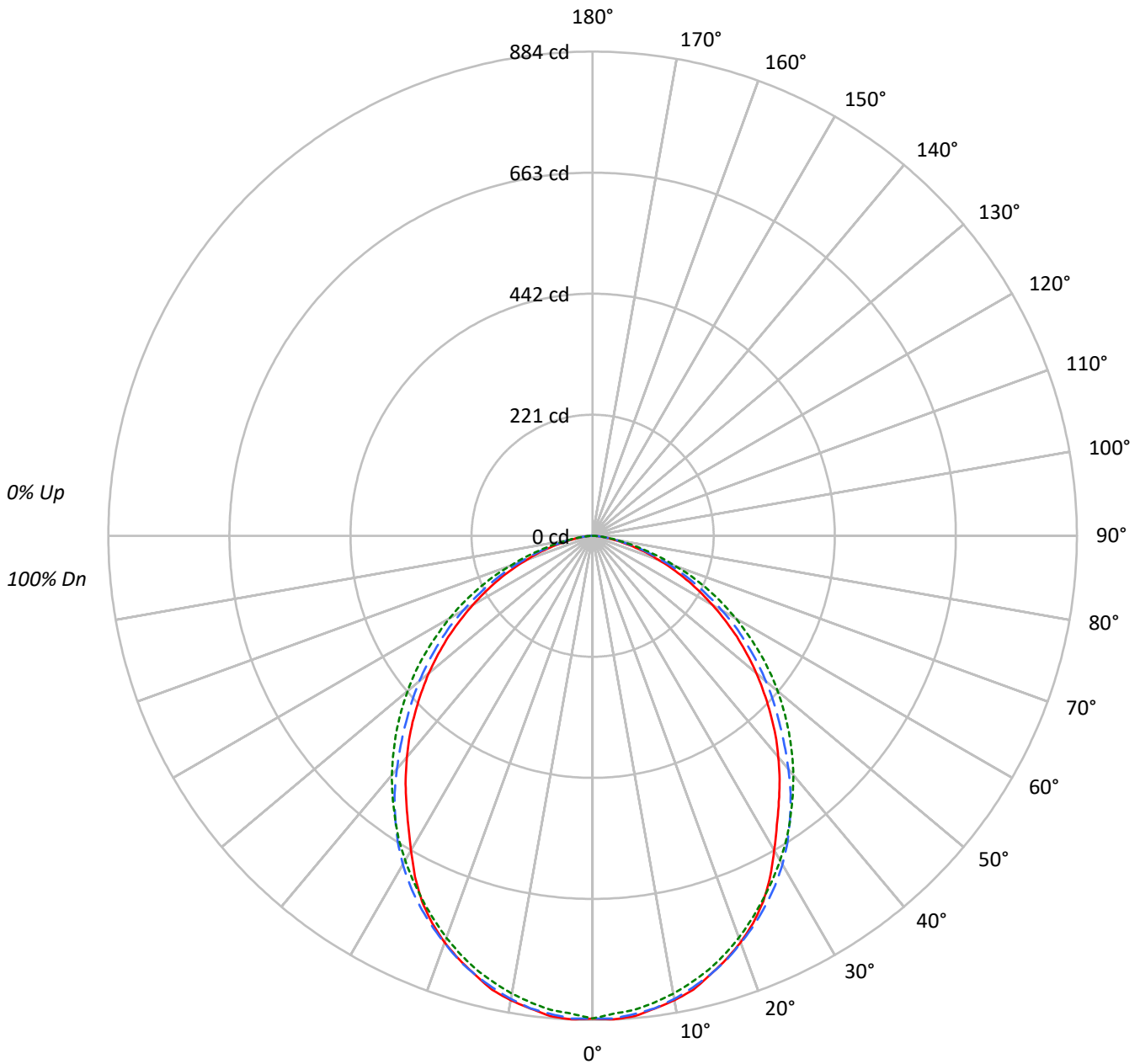
Lumens per Lamp: N/A  
Luminaire Lumens: 2038.0 lumens  
Efficiency: N/A  
Efficacy: 87.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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									
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°	2372	2372	2372
5°	2378	2368	2348
10°	2353	2346	2320
15°	2311	2311	2285
20°	2262	2265	2236
25°	2188	2215	2180
30°	2060	2153	2126
35°	1947	2063	2067
40°	1852	1952	2003
45°	1746	1834	1928
50°	1634	1728	1846
55°	1507	1608	1746
60°	1358	1467	1624
65°	1199	1305	1477
70°	999	1111	1255
75°	785	887	983
80°	561	625	693
85°	367	367	346



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.0	4.1
10°-20°	233.1	11.4
20°-30°	340.7	16.7
30°-40°	386.7	19.0
40°-50°	373.3	18.3
50°-60°	308.0	15.1
60°-70°	205.1	10.1
70°-80°	91.8	4.5
80°-90°	16.4	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°	656.8	32.2
0°-40°	1043.5	51.2
0°-60°	1724.7	84.6
0°-90°	2038.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2038.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	881	881	881	881	881	
5°	880	880	877	872	869	83
15°	830	832	830	826	820	234
25°	737	743	746	740	734	337
35°	593	601	628	632	629	371
45°	459	467	482	504	506	354
55°	321	327	343	362	372	287
65°	188	193	205	219	232	187
75°	76	80	85	89	94	83
85°	12	12	12	11	11	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	881.4	881.4	881.4	881.4	881.4
2.5°	883.8	884.1	882.1	876.6	873.3
5°	880.4	880.0	876.6	871.9	869.2
7.5°	870.5	871.2	870.2	863.4	859.7
10°	861.1	861.4	858.7	853.3	848.9
12.5°	848.9	848.5	844.8	842.1	835.0
15°	829.6	831.6	829.6	825.9	820.1
17.5°	811.0	811.0	812.3	805.9	801.5
20°	790.0	791.0	791.0	785.9	780.8
22.5°	765.6	768.6	769.6	764.2	758.1
25°	736.8	742.6	745.9	740.5	734.1
27.5°	701.9	710.7	720.9	716.8	709.7
30°	663.0	675.9	692.8	689.4	684.3
32.5°	626.1	638.9	662.3	661.0	658.2
35°	592.6	600.7	628.1	631.5	629.1
37.5°	560.7	568.2	593.9	601.7	599.7
40°	527.2	535.3	555.6	569.5	570.2
42.5°	494.0	501.8	518.4	538.4	538.4
45°	458.8	466.6	481.8	503.8	506.5
47.5°	424.3	432.4	447.3	469.3	473.7
50°	390.4	397.9	412.8	434.1	440.9
52.5°	355.2	363.3	377.9	397.5	407.3
55°	321.3	326.8	342.7	361.6	372.1
57.5°	286.1	291.2	309.1	325.4	336.2
60°	252.3	258.7	272.6	289.2	301.7
62.5°	219.8	226.5	238.4	252.9	267.2
65°	188.3	193.3	204.9	219.4	231.9
67.5°	157.8	162.2	173.7	183.9	197.1
70°	127.0	132.7	141.2	151.0	159.5
72.5°	102.3	104.6	111.7	118.8	127.7
75°	75.5	79.6	85.3	89.4	94.5
77.5°	54.2	56.5	59.9	63.3	68.1
80°	36.2	37.2	40.3	41.0	44.7
82.5°	22.0	22.7	23.4	23.7	25.1
85°	11.9	11.9	11.9	11.2	11.2
87.5°	6.8	6.8	5.8	4.7	3.4
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)