

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: P556434

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-82-85-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: P556434  
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-30-UNV-82-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

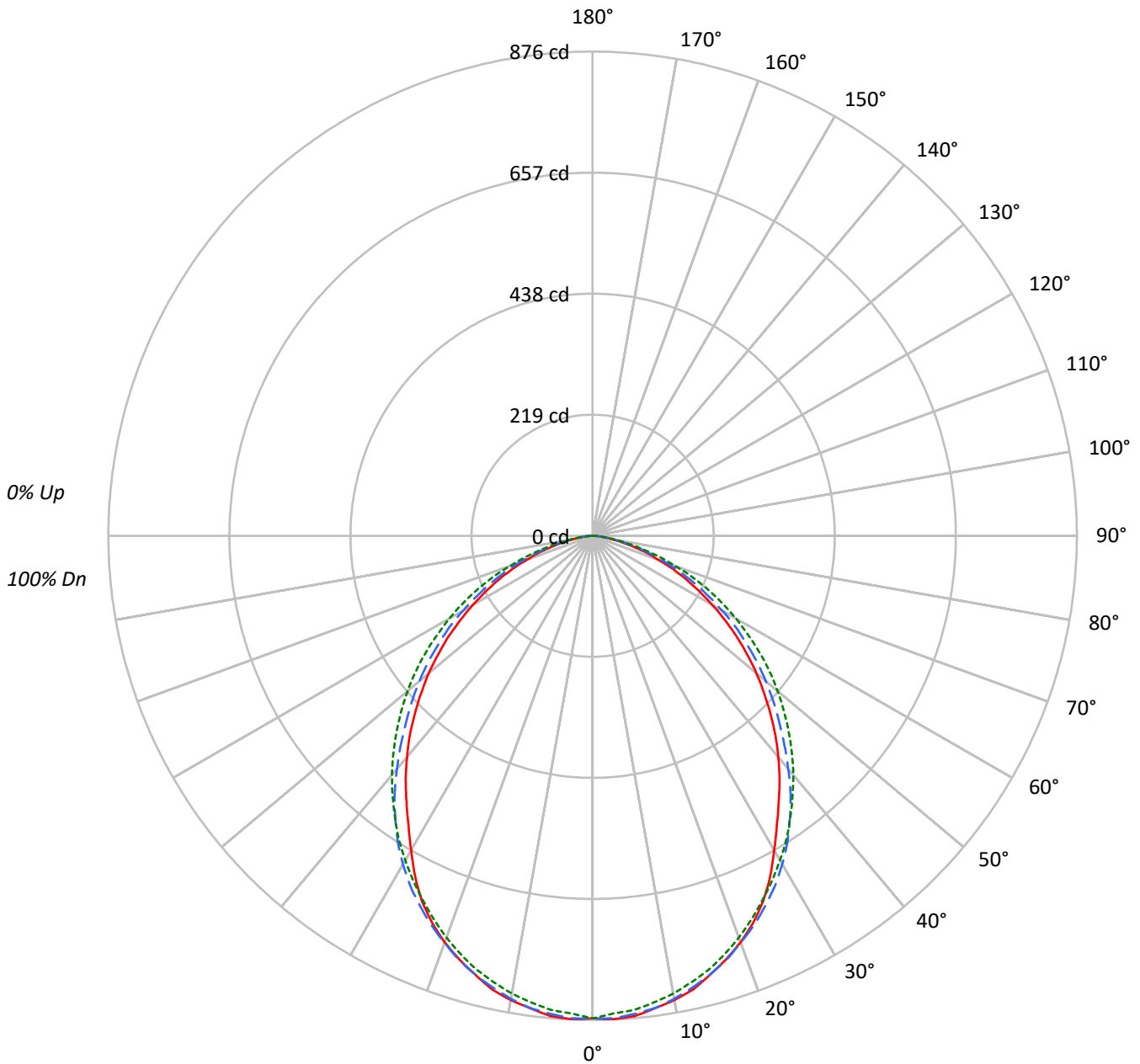
Lumens per Lamp: N/A  
Luminaire Lumens: 2019.0 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (Ain): 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°	2350	2350	2350
5°	2356	2346	2326
10°	2331	2325	2298
15°	2289	2289	2263
20°	2241	2244	2215
25°	2167	2194	2159
30°	2041	2133	2106
35°	1928	2044	2048
40°	1835	1934	1984
45°	1730	1816	1910
50°	1619	1712	1829
55°	1493	1593	1730
60°	1345	1453	1609
65°	1188	1292	1463
70°	990	1101	1243
75°	778	879	973
80°	556	618	687
85°	361	361	343



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.2	4.1
10°-20°	231.0	11.4
20°-30°	337.5	16.7
30°-40°	383.1	19.0
40°-50°	369.8	18.3
50°-60°	305.1	15.1
60°-70°	203.2	10.1
70°-80°	90.9	4.5
80°-90°	16.3	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°	650.7	32.2
0°-40°	1033.8	51.2
0°-60°	1708.7	84.6
0°-90°	2019.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2019.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	873	873	873	873	873	
5°	872	872	868	864	861	83
15°	822	824	822	818	812	232
25°	730	736	739	734	727	334
35°	587	595	622	626	623	368
45°	454	462	477	499	502	351
55°	318	324	340	358	369	284
65°	186	192	203	217	230	185
75°	75	79	84	89	94	82
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°	873.2	873.2	873.2	873.2	873.2
2.5°	875.5	875.8	873.8	868.5	865.1
5°	872.2	871.8	868.5	863.8	861.1
7.5°	862.4	863.1	862.1	855.4	851.7
10°	853.0	853.4	850.7	845.3	841.0
12.5°	841.0	840.6	836.9	834.3	827.2
15°	821.8	823.9	821.8	818.2	812.4
17.5°	803.4	803.4	804.7	798.4	794.0
20°	782.6	783.6	783.6	778.6	773.5
22.5°	758.4	761.5	762.5	757.1	751.1
25°	729.9	735.6	739.0	733.6	727.2
27.5°	695.4	704.1	714.2	710.1	703.1
30°	656.8	669.5	686.3	683.0	677.9
32.5°	620.2	633.0	656.1	654.8	652.1
35°	587.0	595.1	622.3	625.6	623.3
37.5°	555.5	562.9	588.4	596.1	594.1
40°	522.3	530.3	550.5	564.2	564.9
42.5°	489.4	497.1	513.6	533.4	533.4
45°	454.5	462.2	477.3	499.1	501.8
47.5°	420.3	428.4	443.1	464.9	469.3
50°	386.8	394.1	408.9	430.0	436.8
52.5°	351.9	359.9	374.4	393.8	403.5
55°	318.3	323.7	339.5	358.3	368.7
57.5°	283.5	288.5	306.3	322.4	333.1
60°	249.9	256.3	270.0	286.5	298.9
62.5°	217.7	224.4	236.2	250.6	264.7
65°	186.5	191.5	202.9	217.4	229.8
67.5°	156.3	160.7	172.1	182.1	195.2
70°	125.8	131.5	139.9	149.6	158.0
72.5°	101.3	103.7	110.7	117.7	126.5
75°	74.8	78.8	84.5	88.6	93.6
77.5°	53.7	56.0	59.4	62.7	67.4
80°	35.9	36.9	39.9	40.6	44.3
82.5°	21.8	22.5	23.1	23.5	24.8
85°	11.7	11.7	11.7	11.1	11.1
87.5°	6.7	6.7	5.7	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)