

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: P556598

Luminaire Tested: **FUSL-12-4-LD4-1LO-50-UNV-80-87-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: P556598  
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-50-UNV-80-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

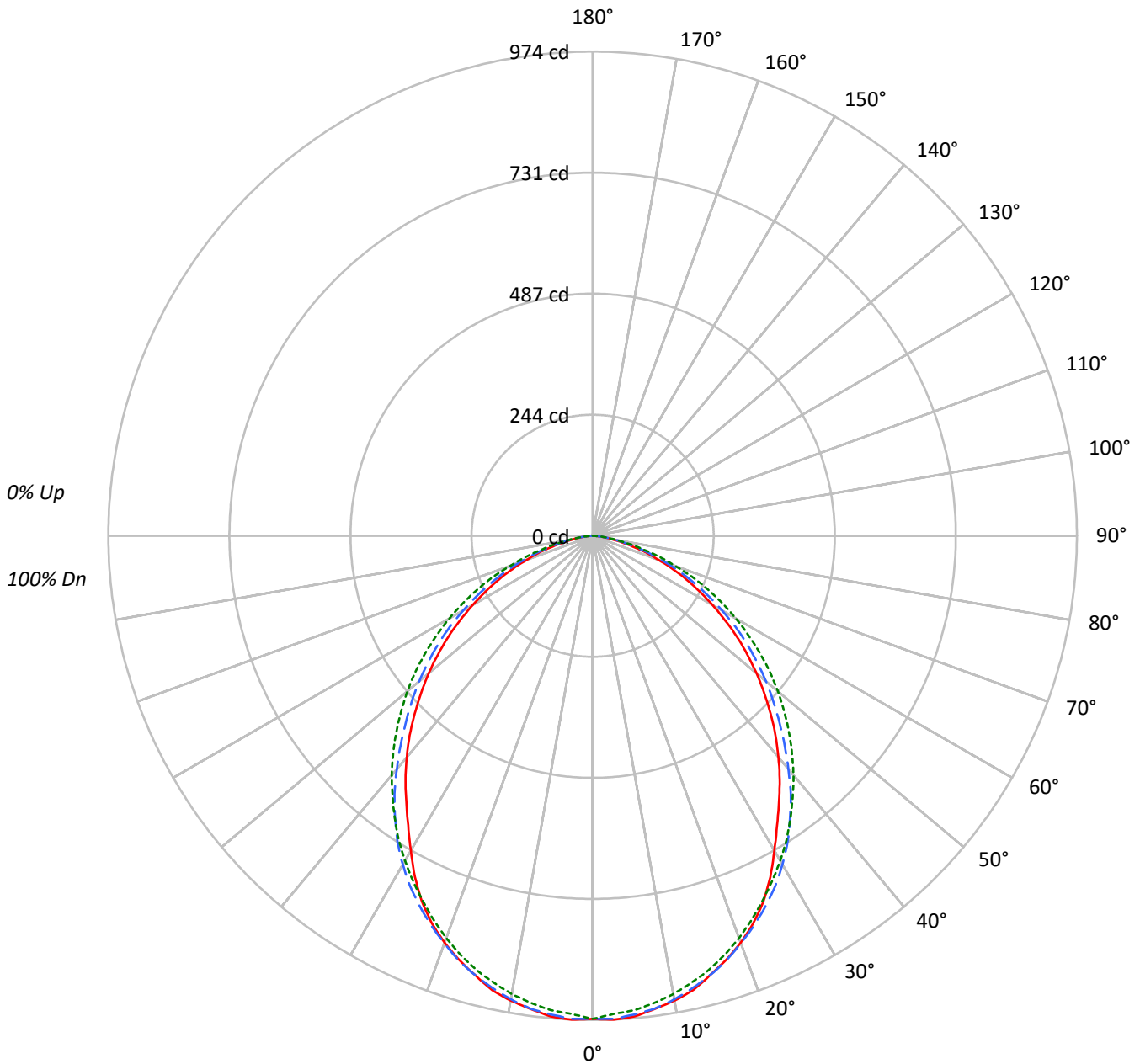
Lumens per Lamp: N/A  
Luminaire Lumens: 2247.0 lumens  
Efficiency: N/A  
Efficacy: 96.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	2615	2615	2615
5°	2622	2611	2589
10°	2594	2587	2557
15°	2548	2548	2519
20°	2494	2497	2465
25°	2412	2442	2403
30°	2271	2373	2344
35°	2146	2275	2279
40°	2042	2152	2209
45°	1925	2022	2125
50°	1802	1905	2035
55°	1662	1772	1925
60°	1497	1617	1790
65°	1322	1438	1628
70°	1102	1225	1383
75°	866	978	1083
80°	618	688	764
85°	404	404	380



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.5	4.1
10°-20°	257.0	11.4
20°-30°	375.6	16.7
30°-40°	426.4	19.0
40°-50°	411.6	18.3
50°-60°	339.5	15.1
60°-70°	226.1	10.1
70°-80°	101.2	4.5
80°-90°	18.1	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°	724.1	32.2
0°-40°	1150.5	51.2
0°-60°	1901.6	84.6
0°-90°	2247.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2247.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	972	972	972	972	972	
5°	971	970	966	961	958	92
15°	915	917	915	910	904	258
25°	812	819	822	816	809	372
35°	653	662	692	696	694	409
45°	506	514	531	556	558	390
55°	354	360	378	399	410	316
65°	208	213	226	242	256	206
75°	83	88	94	99	104	91
85°	13	13	13	12	12	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	971.8	971.8	971.8	971.8	971.8
2.5°	974.4	974.8	972.5	966.5	962.8
5°	970.6	970.3	966.5	961.3	958.3
7.5°	959.8	960.6	959.4	952.0	947.9
10°	949.4	949.7	946.8	940.8	935.9
12.5°	935.9	935.6	931.5	928.5	920.6
15°	914.7	916.9	914.7	910.5	904.2
17.5°	894.1	894.1	895.6	888.5	883.7
20°	871.0	872.1	872.1	866.5	860.9
22.5°	844.1	847.5	848.6	842.6	835.9
25°	812.4	818.7	822.4	816.5	809.4
27.5°	773.9	783.6	794.8	790.3	782.5
30°	731.0	745.2	763.8	760.1	754.5
32.5°	690.3	704.5	730.2	728.7	725.7
35°	653.3	662.3	692.5	696.3	693.6
37.5°	618.2	626.4	654.8	663.4	661.2
40°	581.3	590.2	612.6	627.9	628.7
42.5°	544.7	553.3	571.6	593.6	593.6
45°	505.9	514.4	531.2	555.5	558.5
47.5°	467.8	476.7	493.2	517.4	522.3
50°	430.4	438.7	455.1	478.6	486.1
52.5°	391.6	400.6	416.6	438.3	449.1
55°	354.3	360.3	377.8	398.7	410.3
57.5°	315.5	321.1	340.8	358.8	370.7
60°	278.1	285.2	300.5	318.8	332.6
62.5°	242.3	249.8	262.8	278.9	294.6
65°	207.6	213.2	225.9	241.9	255.7
67.5°	174.0	178.8	191.5	202.7	217.3
70°	140.0	146.3	155.7	166.5	175.8
72.5°	112.7	115.4	123.2	131.0	140.7
75°	83.3	87.7	94.1	98.6	104.2
77.5°	59.7	62.3	66.1	69.8	75.0
80°	39.9	41.1	44.4	45.2	49.3
82.5°	24.3	25.0	25.8	26.1	27.6
85°	13.1	13.1	13.1	12.3	12.3
87.5°	7.5	7.5	6.3	5.2	3.7
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)