

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: P556599

Luminaire Tested: **FUSL-12-4-LD4-1LO-50-UNV-80-87-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: P556599  
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  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

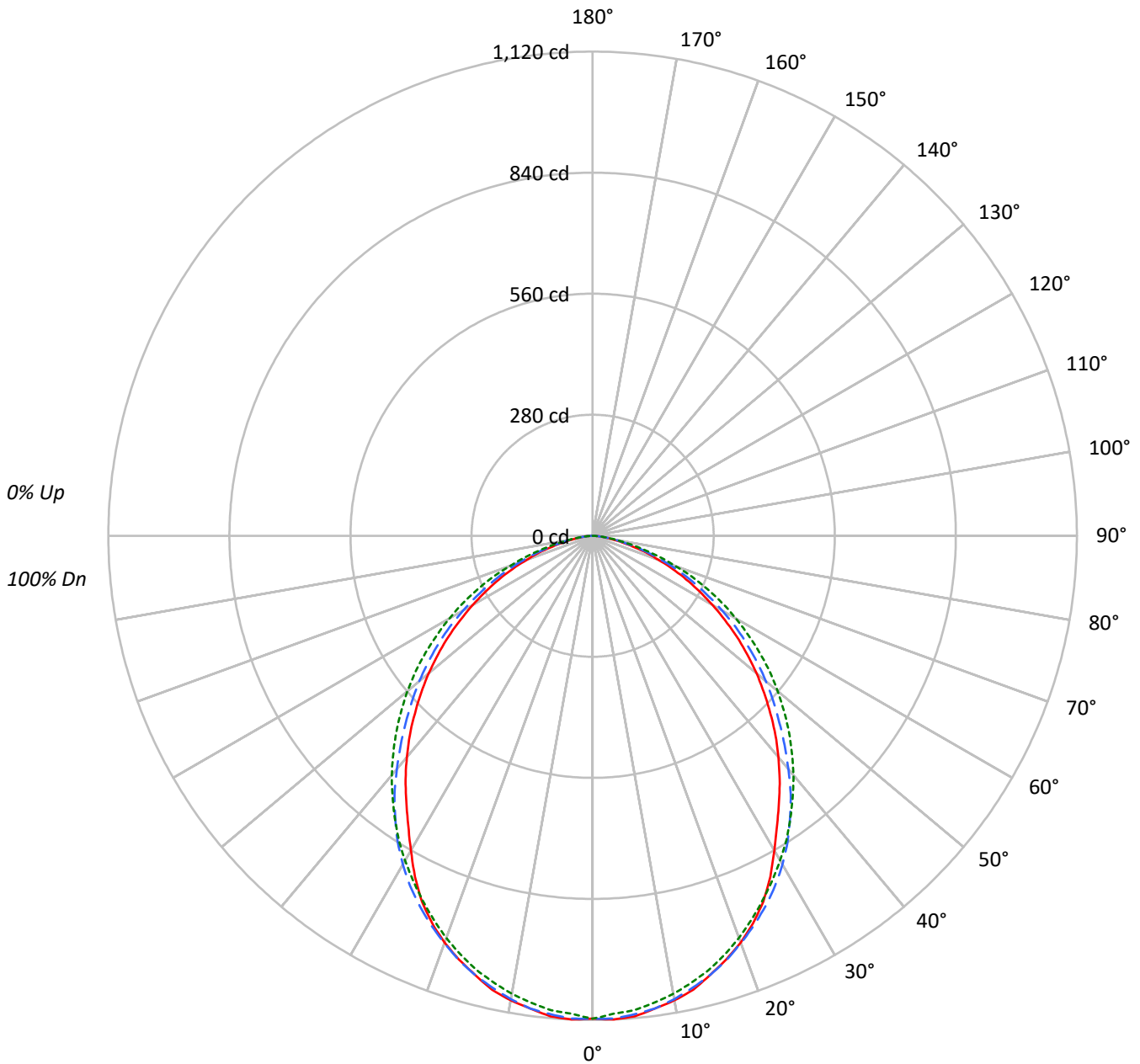
Lumens per Lamp: N/A  
Luminaire Lumens: 2583.0 lumens  
Efficiency: N/A  
Efficacy: 110.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3006	3006	3006
5°	3014	3001	2976
10°	2982	2974	2940
15°	2929	2929	2896
20°	2867	2871	2834
25°	2773	2807	2763
30°	2611	2728	2695
35°	2467	2615	2620
40°	2347	2474	2539
45°	2213	2324	2443
50°	2071	2190	2339
55°	1911	2038	2213
60°	1721	1859	2058
65°	1519	1653	1872
70°	1266	1408	1590
75°	995	1124	1245
80°	711	792	877
85°	463	463	438



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.2	4.1
10°-20°	295.5	11.4
20°-30°	431.8	16.7
30°-40°	490.1	19.0
40°-50°	473.1	18.3
50°-60°	390.3	15.1
60°-70°	259.9	10.1
70°-80°	116.3	4.5
80°-90°	20.8	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°	832.4	32.2
0°-40°	1322.5	51.2
0°-60°	2186.0	84.6
0°-90°	2583.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2583.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1117	1117	1117	1117	1117	
5°	1116	1115	1111	1105	1102	106
15°	1051	1054	1051	1047	1039	296
25°	934	941	945	939	930	428
35°	751	761	796	800	797	471
45°	582	591	611	639	642	449
55°	407	414	434	458	472	363
65°	239	245	260	278	294	237
75°	96	101	108	113	120	105
85°	15	15	15	14	14	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1117.1	<i>1117.1</i>	1117.1	1117.1	1117.1
2.5°	<i>1120.1</i>	<i>1120.5</i>	<i>1117.9</i>	<i>1111.1</i>	<i>1106.8</i>
5°	1115.8	<i>1115.4</i>	1111.1	1105.1	1101.6
7.5°	1103.3	<i>1104.2</i>	1102.9	1094.3	1089.6
10°	1091.3	<i>1091.8</i>	1088.3	1081.5	1075.9
12.5°	1075.9	<i>1075.5</i>	1070.7	1067.3	1058.3
15°	1051.4	<i>1054.0</i>	1051.4	1046.7	1039.4
17.5°	1027.8	<i>1027.8</i>	1029.5	1021.4	1015.8
20°	1001.2	<i>1002.5</i>	1002.5	996.1	989.6
22.5°	970.3	<i>974.2</i>	975.5	968.6	960.9
25°	933.8	<i>941.1</i>	945.4	938.6	930.4
27.5°	889.6	<i>900.8</i>	913.7	908.5	899.5
30°	840.3	<i>856.6</i>	878.0	873.8	867.3
32.5°	793.5	<i>809.8</i>	839.4	837.7	834.3
35°	751.0	<i>761.3</i>	796.1	800.4	797.4
37.5°	710.7	<i>720.1</i>	752.7	762.6	760.0
40°	668.2	<i>678.5</i>	704.2	721.8	722.7
42.5°	626.1	<i>636.0</i>	657.0	682.4	682.4
45°	581.5	<i>591.4</i>	610.7	638.6	642.0
47.5°	537.7	<i>548.0</i>	566.9	594.8	600.4
50°	494.8	<i>504.3</i>	523.1	550.2	558.8
52.5°	450.2	<i>460.5</i>	478.9	503.8	516.3
55°	407.3	<i>414.1</i>	434.3	458.3	471.6
57.5°	362.6	<i>369.1</i>	391.8	412.4	426.1
60°	319.7	<i>327.9</i>	345.5	366.5	382.4
62.5°	278.5	<i>287.1</i>	302.1	320.6	338.6
65°	238.6	<i>245.0</i>	259.6	278.1	294.0
67.5°	200.0	<i>205.6</i>	220.2	233.0	249.8
70°	160.9	<i>168.2</i>	179.0	191.4	202.1
72.5°	129.6	<i>132.6</i>	141.6	150.6	161.8
75°	95.7	<i>100.9</i>	108.1	113.3	119.7
77.5°	68.7	<i>71.7</i>	76.0	80.3	86.3
80°	45.9	<i>47.2</i>	51.1	51.9	56.6
82.5°	27.9	<i>28.8</i>	29.6	30.0	31.8
85°	15.0	<i>15.0</i>	15.0	14.2	14.2
87.5°	8.6	<i>8.6</i>	7.3	6.0	4.3
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)