

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: P558197

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-80-86-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: P558197  
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-LD4-3STD-30-UNV-80-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

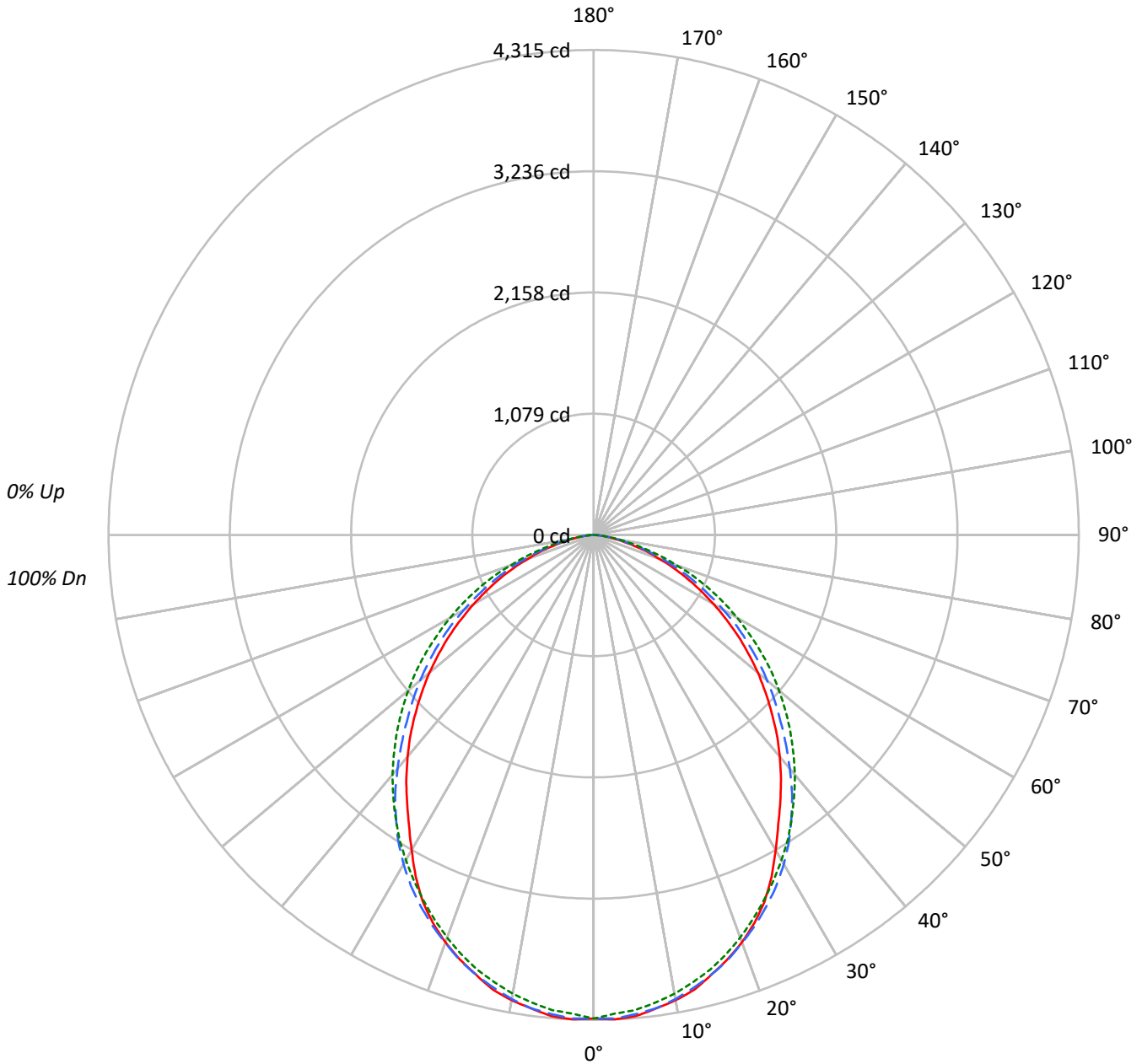
Lumens per Lamp: N/A  
Luminaire Lumens: 9950.0 lumens  
Efficiency: N/A  
Efficacy: 99.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	11580	11580	11580
5°	11611	11561	11463
10°	11487	11456	11325
15°	11283	11283	11154
20°	11045	11059	10917
25°	10681	10813	10641
30°	10058	10510	10381
35°	9504	10074	10090
40°	9042	9530	9779
45°	8525	8952	9412
50°	7980	8436	9011
55°	7360	7849	8524
60°	6628	7162	7927
65°	5852	6368	7210
70°	4877	5424	6126
75°	3832	4331	4795
80°	2741	3048	3381
85°	1788	1788	1686



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	405.2	4.1
10°-20°	1138.2	11.4
20°-30°	1663.3	16.7
30°-40°	1888.0	19.0
40°-50°	1822.6	18.3
50°-60°	1503.5	15.1
60°-70°	1001.2	10.1
70°-80°	448.0	4.5
80°-90°	80.2	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°	3206.6	32.2
0°-40°	5094.6	51.2
0°-60°	8420.6	84.6
0°-90°	9950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9950.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4303	4303	4303	4303	4303	
5°	4298	4296	4280	4257	4244	407
15°	4050	4060	4050	4032	4004	1142
25°	3597	3625	3642	3615	3584	1647
35°	2893	2933	3067	3083	3072	1813
45°	2240	2278	2352	2460	2473	1728
55°	1569	1595	1673	1766	1817	1400
65°	919	944	1000	1071	1132	911
75°	369	388	417	436	461	403
85°	58	58	58	55	55	78
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4303.1	<i>4303.1</i>	4303.1	4303.1	4303.1
2.5°	<i>4314.7</i>	<i>4316.3</i>	<i>4306.4</i>	<i>4280.0</i>	<i>4263.4</i>
5°	4298.2	<i>4296.5</i>	4280.0	4256.8	4243.6
7.5°	4250.2	<i>4253.5</i>	4248.6	4215.5	4197.3
10°	4203.9	<i>4205.6</i>	4192.4	4165.9	4144.4
12.5°	4144.4	<i>4142.8</i>	4124.6	4111.4	4076.6
15°	4050.2	<i>4060.1</i>	4050.2	4032.0	4003.9
17.5°	3959.3	<i>3959.3</i>	3965.9	3934.5	3913.0
20°	3856.8	<i>3861.7</i>	3861.7	3836.9	3812.1
22.5°	3737.7	<i>3752.6</i>	3757.6	3731.1	3701.4
25°	3597.2	<i>3625.3</i>	3641.9	3615.4	3584.0
27.5°	3427.0	<i>3469.9</i>	3519.5	3499.7	3465.0
30°	3236.8	<i>3299.7</i>	3382.3	3365.8	3341.0
32.5°	3056.7	<i>3119.5</i>	3233.5	3226.9	3213.7
35°	2893.0	<i>2932.7</i>	3066.6	3083.1	3071.5
37.5°	2737.6	<i>2774.0</i>	2899.6	2937.6	2927.7
40°	2573.9	<i>2613.6</i>	2712.8	2780.6	2783.9
42.5°	2411.9	<i>2450.0</i>	2531.0	2628.5	2628.5
45°	2240.0	<i>2278.0</i>	2352.4	2459.9	2473.1
47.5°	2071.4	<i>2111.1</i>	2183.8	2291.2	2312.7
50°	1906.1	<i>1942.4</i>	2015.2	2119.3	2152.4
52.5°	1734.1	<i>1773.8</i>	1844.9	1940.8	1988.7
55°	1568.8	<i>1595.3</i>	1673.0	1765.6	1816.8
57.5°	1396.9	<i>1421.7</i>	1509.3	1588.7	1641.6
60°	1231.6	<i>1263.0</i>	1330.8	1411.8	1472.9
62.5°	1072.9	<i>1105.9</i>	1163.8	1234.9	1304.3
65°	919.1	<i>943.9</i>	1000.1	1071.2	1132.4
67.5°	770.4	<i>791.9</i>	848.1	897.7	962.1
70°	619.9	<i>648.0</i>	689.4	737.3	778.6
72.5°	499.2	<i>510.8</i>	545.5	580.3	623.2
75°	368.6	<i>388.5</i>	416.6	436.4	461.2
77.5°	264.5	<i>276.1</i>	292.6	309.1	332.3
80°	176.9	<i>181.8</i>	196.7	200.0	218.2
82.5°	107.5	<i>110.8</i>	114.1	115.7	122.3
85°	57.9	<i>57.9</i>	57.9	54.6	54.6
87.5°	33.1	<i>33.1</i>	28.1	23.1	16.5
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)