

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: P557835

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-81-94-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: P557835  
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-LD4-3HI-40-UNV-81-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

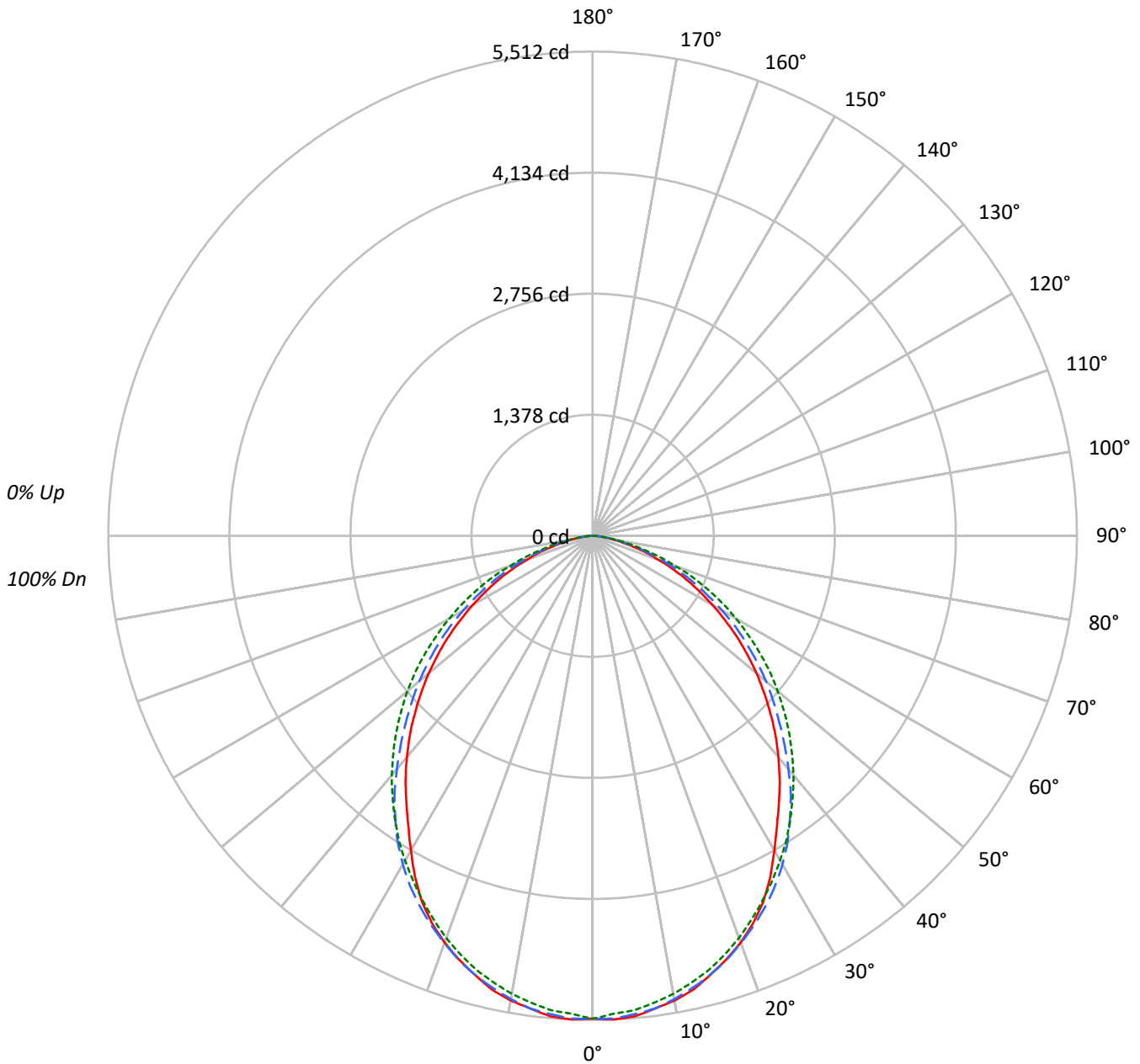
Lumens per Lamp: N/A  
Luminaire Lumens: 12712.0 lumens  
Efficiency: N/A  
Efficacy: 98.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	14794	14794	14794
5°	14833	14770	14645
10°	14676	14635	14468
15°	14416	14416	14251
20°	14110	14129	13947
25°	13646	13815	13596
30°	12850	13427	13263
35°	12142	12870	12891
40°	11552	12175	12494
45°	10891	11437	12024
50°	10195	10778	11512
55°	9403	10028	10890
60°	8469	9150	10128
65°	7477	8136	9212
70°	6231	6929	7827
75°	4897	5533	6127
80°	3502	3894	4320
85°	2282	2282	2152



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	517.6	4.1
10°-20°	1454.1	11.4
20°-30°	2125.0	16.7
30°-40°	2412.1	19.0
40°-50°	2328.5	18.3
50°-60°	1920.8	15.1
60°-70°	1279.1	10.1
70°-80°	572.4	4.5
80°-90°	102.4	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°	4096.7	32.2
0°-40°	6508.8	51.2
0°-60°	10758.1	84.6
0°-90°	12712.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12712.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5498	5498	5498	5498	5498	
5°	5491	5489	5468	5438	5422	520
15°	5174	5187	5174	5151	5115	1459
25°	4596	4632	4653	4619	4579	2105
35°	3696	3747	3918	3939	3924	2316
45°	2862	2910	3005	3143	3160	2208
55°	2004	2038	2137	2256	2321	1789
65°	1174	1206	1278	1369	1447	1164
75°	471	496	532	558	589	515
85°	74	74	74	70	70	100
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5497.6	5497.6	5497.6	5497.6	5497.6
2.5°	5512.4	5514.5	5501.8	5468.0	5446.9
5°	5491.3	5489.2	5468.0	5438.5	5421.6
7.5°	5430.0	5434.3	5427.9	5385.7	5362.4
10°	5370.9	5373.0	5356.1	5322.3	5294.9
12.5°	5294.9	5292.7	5269.5	5252.6	5208.3
15°	5174.5	5187.1	5174.5	5151.2	5115.3
17.5°	5058.3	5058.3	5066.8	5026.6	4999.2
20°	4927.4	4933.7	4933.7	4902.0	4870.3
22.5°	4775.3	4794.3	4800.6	4766.8	4728.8
25°	4595.8	4631.7	4652.8	4619.0	4578.9
27.5°	4378.2	4433.1	4496.5	4471.2	4426.8
30°	4135.4	4215.6	4321.2	4300.1	4268.4
32.5°	3905.1	3985.4	4131.1	4122.7	4105.8
35°	3696.1	3746.7	3917.8	3938.9	3924.2
37.5°	3497.5	3544.0	3704.5	3753.1	3740.4
40°	3288.4	3339.1	3465.8	3552.4	3556.7
42.5°	3081.5	3130.0	3233.5	3358.1	3358.1
45°	2861.8	2910.4	3005.4	3142.7	3159.6
47.5°	2646.4	2697.1	2790.0	2927.3	2954.7
50°	2435.2	2481.6	2574.6	2707.6	2749.9
52.5°	2215.5	2266.2	2357.0	2479.5	2540.8
55°	2004.3	2038.1	2137.4	2255.6	2321.1
57.5°	1784.7	1816.3	1928.3	2029.7	2097.2
60°	1573.5	1613.6	1700.2	1803.7	1881.8
62.5°	1370.7	1412.9	1486.9	1577.7	1666.4
65°	1174.3	1206.0	1277.8	1368.6	1446.7
67.5°	984.2	1011.7	1083.5	1146.8	1229.2
70°	792.0	827.9	880.7	942.0	994.8
72.5°	637.8	652.6	697.0	741.3	796.2
75°	471.0	496.3	532.2	557.6	589.3
77.5°	337.9	352.7	373.8	394.9	424.5
80°	226.0	232.3	251.3	255.6	278.8
82.5°	137.3	141.5	145.7	147.8	156.3
85°	73.9	73.9	73.9	69.7	69.7
87.5°	42.2	42.2	35.9	29.6	21.1
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)