

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: P557803

Luminaire Tested: **FUSL-12-4-LD4-3HI-35-UNV-93-94-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: P557803  
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-35-UNV-93-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

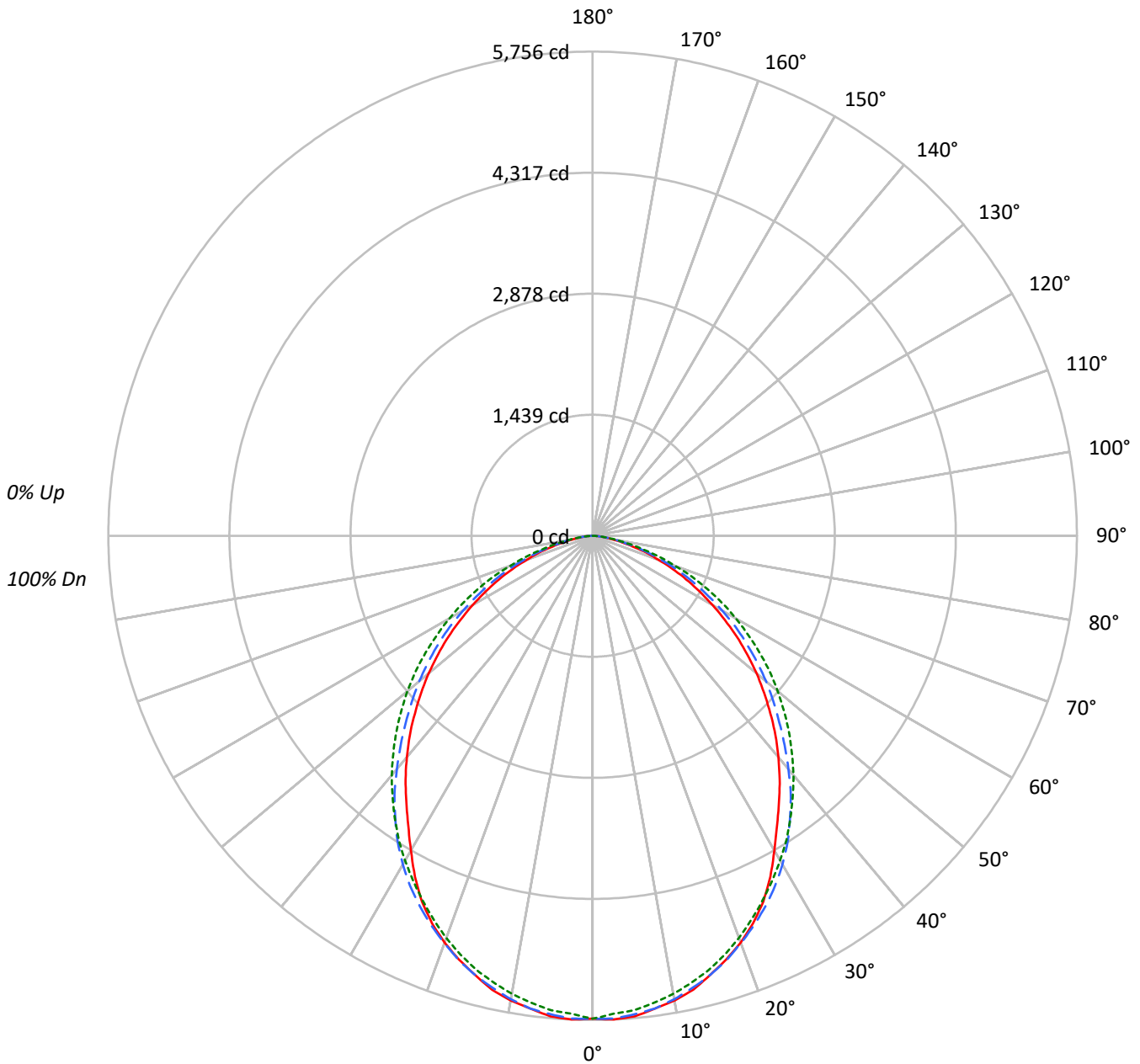
Lumens per Lamp: N/A  
Luminaire Lumens: 13275.0 lumens  
Efficiency: N/A  
Efficacy: 102.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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°	15449	15449	15449
5°	15490	15425	15294
10°	15326	15284	15109
15°	15054	15054	14882
20°	14735	14754	14565
25°	14250	14427	14198
30°	13419	14022	13851
35°	12679	13440	13462
40°	12063	12714	13047
45°	11373	11944	12557
50°	10646	11256	12022
55°	9820	10472	11372
60°	8843	9556	10577
65°	7808	8497	9620
70°	6508	7236	8173
75°	5113	5779	6398
80°	3657	4068	4511
85°	2384	2384	2248



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	540.5	4.1
10°-20°	1518.5	11.4
20°-30°	2219.1	16.7
30°-40°	2518.9	19.0
40°-50°	2431.6	18.3
50°-60°	2005.9	15.1
60°-70°	1335.8	10.1
70°-80°	597.7	4.5
80°-90°	106.9	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°	4278.2	32.2
0°-40°	6797.0	51.2
0°-60°	11234.6	84.6
0°-90°	13275.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13275.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5741	5741	5741	5741	5741	
5°	5734	5732	5710	5679	5662	543
15°	5404	5417	5404	5379	5342	1523
25°	4799	4837	4859	4824	4782	2198
35°	3860	3913	4091	4113	4098	2418
45°	2988	3039	3138	3282	3300	2306
55°	2093	2128	2232	2356	2424	1868
65°	1226	1259	1334	1429	1511	1216
75°	492	518	556	582	615	538
85°	77	77	77	73	73	104
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5741.1	5741.1	5741.1	5741.1	5741.1
2.5°	5756.5	5758.7	5745.5	5710.2	5688.2
5°	5734.5	5732.3	5710.2	5679.3	5661.7
7.5°	5670.5	5674.9	5668.3	5624.2	5599.9
10°	5608.8	5611.0	5593.3	5558.0	5529.4
12.5°	5529.4	5527.2	5502.9	5485.2	5438.9
15°	5403.6	5416.9	5403.6	5379.4	5341.9
17.5°	5282.3	5282.3	5291.2	5249.3	5220.6
20°	5145.6	5152.2	5152.2	5119.1	5086.0
22.5°	4986.8	5006.6	5013.3	4978.0	4938.3
25°	4799.3	4836.8	4858.9	4823.6	4781.7
27.5°	4572.1	4629.5	4695.7	4669.2	4622.9
30°	4318.5	4402.3	4512.6	4490.5	4457.5
32.5°	4078.1	4161.9	4314.1	4305.3	4287.6
35°	3859.7	3912.7	4091.3	4113.4	4097.9
37.5°	3652.4	3700.9	3868.6	3919.3	3906.1
40°	3434.1	3487.0	3619.3	3709.8	3714.2
42.5°	3217.9	3268.7	3376.7	3506.9	3506.9
45°	2988.5	3039.3	3138.5	3281.9	3299.5
47.5°	2763.6	2816.5	2913.6	3056.9	3085.6
50°	2543.0	2591.5	2688.6	2827.5	2871.7
52.5°	2313.6	2366.6	2461.4	2589.3	2653.3
55°	2093.1	2128.4	2232.0	2355.5	2423.9
57.5°	1863.7	1896.8	2013.7	2119.6	2190.1
60°	1643.1	1685.1	1775.5	1883.6	1965.2
62.5°	1431.4	1475.5	1552.7	1647.6	1740.2
65°	1226.3	1259.4	1334.4	1429.2	1510.8
67.5°	1027.8	1056.5	1131.5	1197.6	1283.6
70°	827.1	864.6	919.7	983.7	1038.8
72.5°	666.1	681.5	727.8	774.2	831.5
75°	491.8	518.3	555.8	582.3	615.4
77.5°	352.9	368.3	390.4	412.4	443.3
80°	236.0	242.6	262.5	266.9	291.1
82.5°	143.4	147.8	152.2	154.4	163.2
85°	77.2	77.2	77.2	72.8	72.8
87.5°	44.1	44.1	37.5	30.9	22.1
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)