

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: P557717

Luminaire Tested: **FUSL-12-4-LD4-3HI-30-UNV-82-86-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: P557717  
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-30-UNV-82-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC 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**

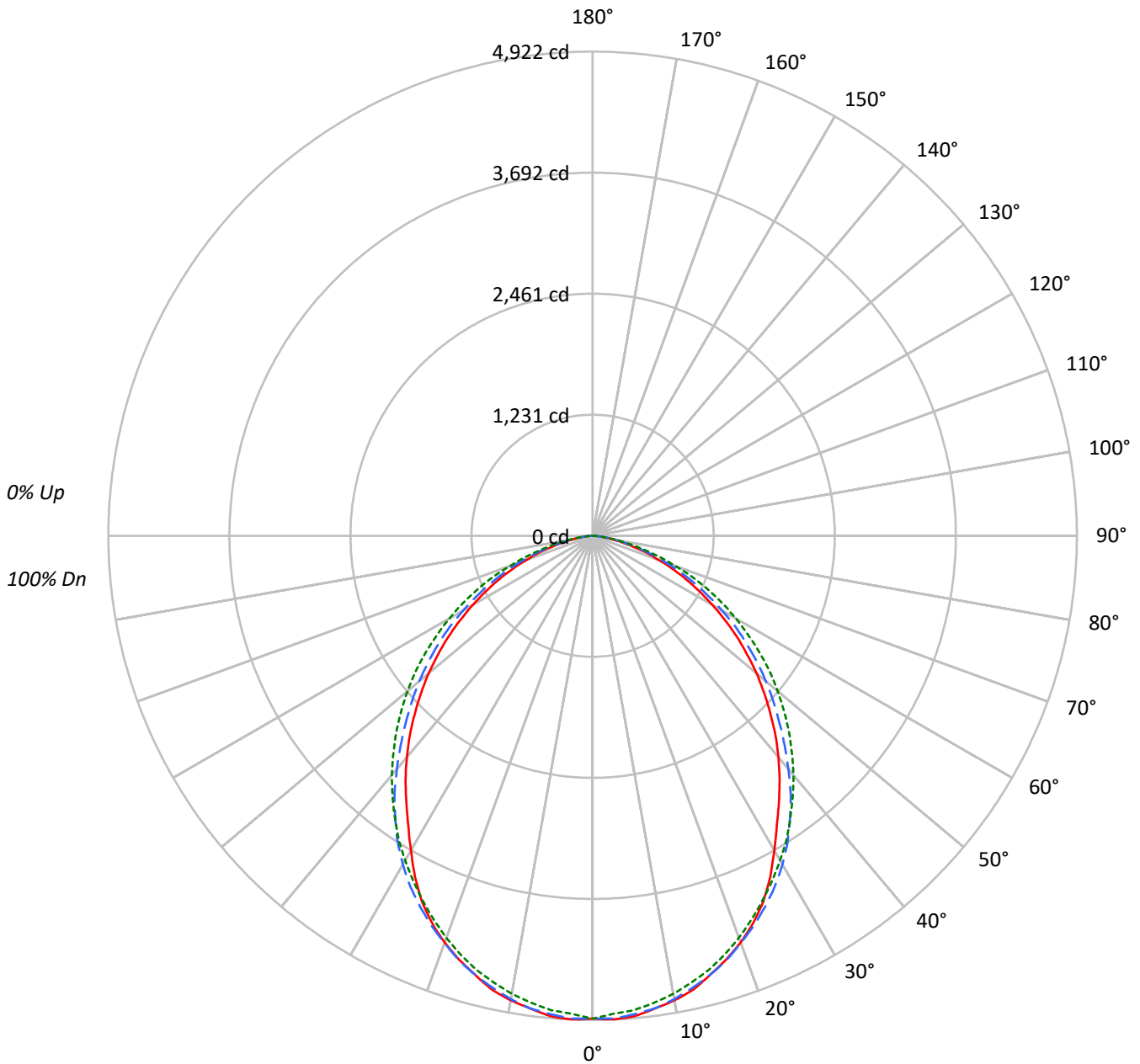
Lumens per Lamp: N/A  
Luminaire Lumens: 11350.0 lumens  
Efficiency: N/A  
Efficacy: 87.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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					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								
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°	13209	13209	13209
5°	13244	13188	13076
10°	13103	13067	12918
15°	12871	12871	12724
20°	12598	12615	12453
25°	12184	12335	12139
30°	11473	11988	11842
35°	10841	11491	11510
40°	10314	10870	11155
45°	9724	10212	10736
50°	9103	9623	10278
55°	8396	8953	9723
60°	7561	8170	9043
65°	6676	7265	8225
70°	5564	6187	6988
75°	4372	4941	5470
80°	3127	3477	3857
85°	2038	2038	1920



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	462.2	4.1
10°-20°	1298.3	11.4
20°-30°	1897.3	16.7
30°-40°	2153.6	19.0
40°-50°	2079.0	18.3
50°-60°	1715.0	15.1
60°-70°	1142.1	10.1
70°-80°	511.1	4.5
80°-90°	91.4	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°	3657.8	32.2
0°-40°	5811.4	51.2
0°-60°	9605.4	84.6
0°-90°	11350.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11350.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4909	4909	4909	4909	4909	
5°	4903	4901	4882	4856	4841	464
15°	4620	4631	4620	4599	4567	1302
25°	4103	4135	4154	4124	4088	1879
35°	3300	3345	3498	3517	3504	2068
45°	2555	2599	2683	2806	2821	1971
55°	1790	1820	1908	2014	2072	1597
65°	1048	1077	1141	1222	1292	1040
75°	420	443	475	498	526	460
85°	66	66	66	62	62	89
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4908.6	4908.6	4908.6	4908.6	4908.6
2.5°	4921.8	4923.7	4912.4	4882.2	4863.3
5°	4902.9	4901.0	4882.2	4855.8	4840.7
7.5°	4848.2	4852.0	4846.4	4808.6	4787.9
10°	4795.4	4797.3	4782.2	4752.1	4727.6
12.5°	4727.6	4725.7	4704.9	4689.8	4650.2
15°	4620.1	4631.4	4620.1	4599.3	4567.3
17.5°	4516.3	4516.3	4523.9	4488.1	4463.5
20°	4399.4	4405.1	4405.1	4376.8	4348.5
22.5°	4263.7	4280.6	4286.3	4256.1	4222.2
25°	4103.4	4135.4	4154.3	4124.1	4088.3
27.5°	3909.1	3958.2	4014.7	3992.1	3952.5
30°	3692.3	3763.9	3858.2	3839.4	3811.1
32.5°	3486.7	3558.4	3688.5	3681.0	3665.9
35°	3300.0	3345.3	3498.0	3516.9	3503.7
37.5°	3122.8	3164.3	3307.6	3351.0	3339.6
40°	2936.1	2981.4	3094.5	3171.8	3175.6
42.5°	2751.3	2794.7	2887.1	2998.3	2998.3
45°	2555.2	2598.6	2683.4	2806.0	2821.1
47.5°	2362.8	2408.1	2491.1	2613.6	2638.2
50°	2174.3	2215.7	2298.7	2417.5	2455.2
52.5°	1978.1	2023.4	2104.5	2213.9	2268.5
55°	1789.6	1819.7	1908.4	2014.0	2072.4
57.5°	1593.5	1621.7	1721.7	1812.2	1872.5
60°	1404.9	1440.7	1518.0	1610.4	1680.2
62.5°	1223.8	1261.6	1327.6	1408.6	1487.8
65°	1048.5	1076.8	1140.9	1222.0	1291.7
67.5°	878.8	903.3	967.4	1024.0	1097.5
70°	707.2	739.2	786.4	841.0	888.2
72.5°	569.5	582.7	622.3	661.9	710.9
75°	420.5	443.1	475.2	497.8	526.1
77.5°	301.7	314.9	333.8	352.6	379.0
80°	201.8	207.4	224.4	228.2	248.9
82.5°	122.6	126.3	130.1	132.0	139.5
85°	66.0	66.0	66.0	62.2	62.2
87.5°	37.7	37.7	32.1	26.4	18.9
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)