

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: P557931

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-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: P557931  
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-50-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  
5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

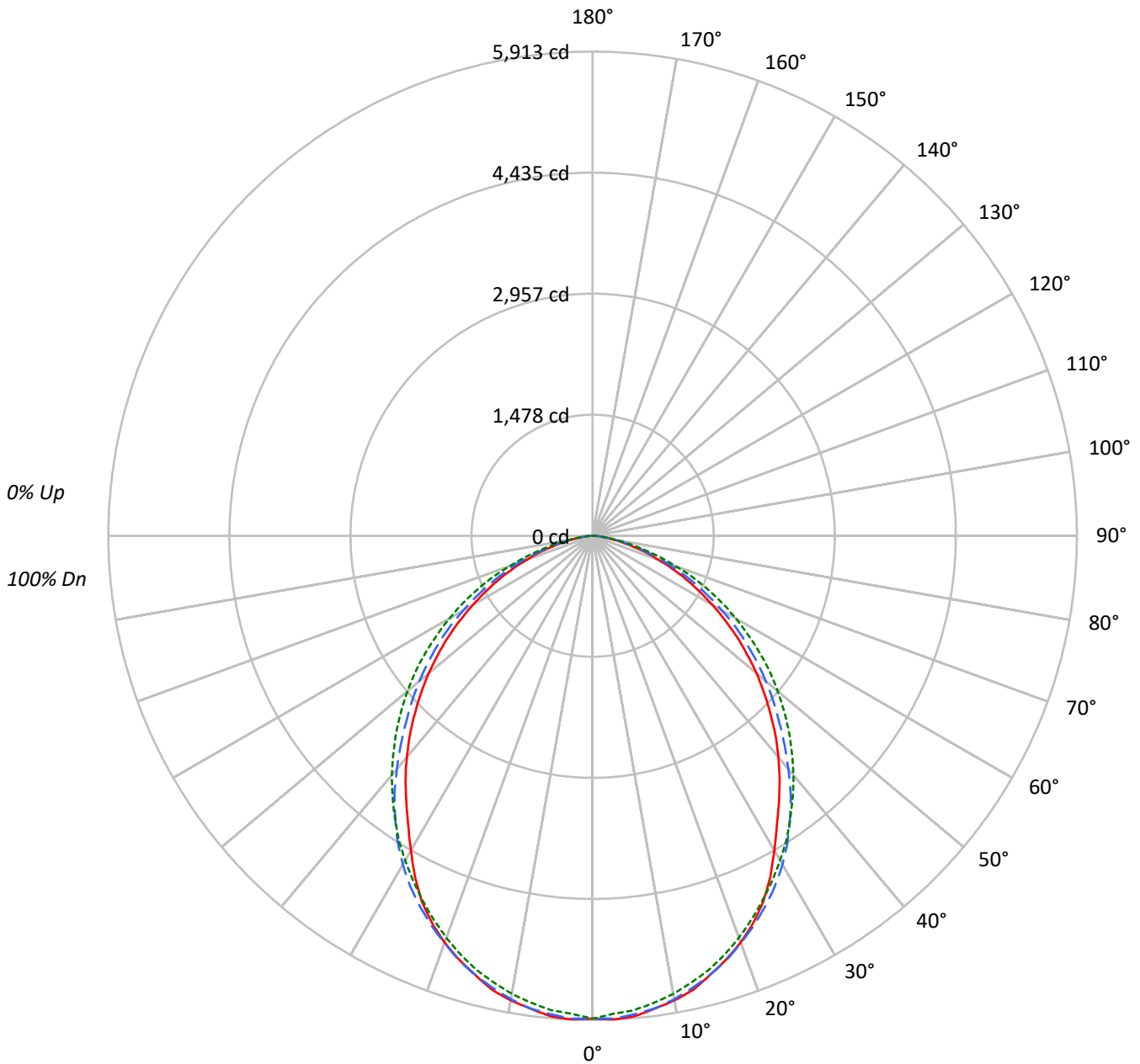
Lumens per Lamp: N/A  
Luminaire Lumens: 13635.0 lumens  
Efficiency: N/A  
Efficacy: 105.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	15868	15868	15868
5°	15910	15843	15708
10°	15742	15698	15519
15°	15462	15462	15286
20°	15135	15154	14960
25°	14637	14818	14582
30°	13783	14402	14226
35°	13023	13805	13827
40°	12390	13059	13401
45°	11682	12268	12897
50°	10935	11561	12348
55°	10086	10756	11681
60°	9083	9815	10863
65°	8020	8727	9881
70°	6684	7433	8395
75°	5253	5936	6571
80°	3756	4178	4634
85°	2448	2448	2309



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	555.2	4.1
10°-20°	1559.7	11.4
20°-30°	2279.3	16.7
30°-40°	2587.2	19.0
40°-50°	2497.5	18.3
50°-60°	2060.3	15.1
60°-70°	1372.0	10.1
70°-80°	614.0	4.5
80°-90°	109.8	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°	4394.2	32.2
0°-40°	6981.4	51.2
0°-60°	11539.2	84.6
0°-90°	13635.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13635.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5897	5897	5897	5897	5897	
5°	5890	5888	5865	5833	5815	557
15°	5550	5564	5550	5525	5487	1565
25°	4930	4968	4991	4954	4911	2257
35°	3964	4019	4202	4225	4209	2484
45°	3070	3122	3224	3371	3389	2368
55°	2150	2186	2293	2419	2490	1919
65°	1260	1294	1371	1468	1552	1249
75°	505	532	571	598	632	552
85°	79	79	79	75	75	107
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5896.8	5896.8	5896.8	5896.8	5896.8
2.5°	5912.6	5914.9	5901.3	5865.1	5842.4
5°	5890.0	5887.7	5865.1	5833.4	5815.2
7.5°	5824.3	5828.8	5822.0	5776.7	5751.8
10°	5760.9	5763.1	5745.0	5708.8	5679.3
12.5°	5679.3	5677.0	5652.1	5634.0	5586.4
15°	5550.2	5563.8	5550.2	5525.3	5486.8
17.5°	5425.6	5425.6	5434.6	5391.6	5362.2
20°	5285.1	5291.9	5291.9	5257.9	5224.0
22.5°	5122.0	5142.4	5149.2	5113.0	5072.2
25°	4929.5	4968.0	4990.6	4954.4	4911.3
27.5°	4696.1	4755.0	4823.0	4795.8	4748.2
30°	4435.6	4521.7	4635.0	4612.3	4578.3
32.5°	4188.7	4274.8	4431.1	4422.0	4403.9
35°	3964.4	4018.8	4202.3	4224.9	4209.1
37.5°	3751.5	3801.3	3973.5	4025.6	4012.0
40°	3527.2	3581.6	3717.5	3810.4	3814.9
42.5°	3305.2	3357.3	3468.3	3602.0	3602.0
45°	3069.6	3121.7	3223.6	3370.9	3389.0
47.5°	2838.5	2892.9	2992.6	3139.8	3169.3
50°	2612.0	2661.8	2761.5	2904.2	2949.5
52.5°	2376.4	2430.8	2528.2	2659.6	2725.3
55°	2149.8	2186.1	2292.6	2419.4	2489.7
57.5°	1914.2	1948.2	2068.3	2177.0	2249.5
60°	1687.7	1730.8	1823.6	1934.6	2018.5
62.5°	1470.2	1515.5	1594.8	1692.2	1787.4
65°	1259.6	1293.5	1370.6	1468.0	1551.8
67.5°	1055.7	1085.1	1162.1	1230.1	1318.5
70°	849.5	888.0	944.7	1010.4	1067.0
72.5°	684.1	700.0	747.6	795.1	854.0
75°	505.2	532.4	570.9	598.1	632.0
77.5°	362.5	378.3	401.0	423.6	455.3
80°	242.4	249.2	269.6	274.1	299.0
82.5°	147.2	151.8	156.3	158.6	167.6
85°	79.3	79.3	79.3	74.8	74.8
87.5°	45.3	45.3	38.5	31.7	22.7
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)