

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: P558145

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-81-84-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: P558145  
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-LD4-3LO-50-UNV-81-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

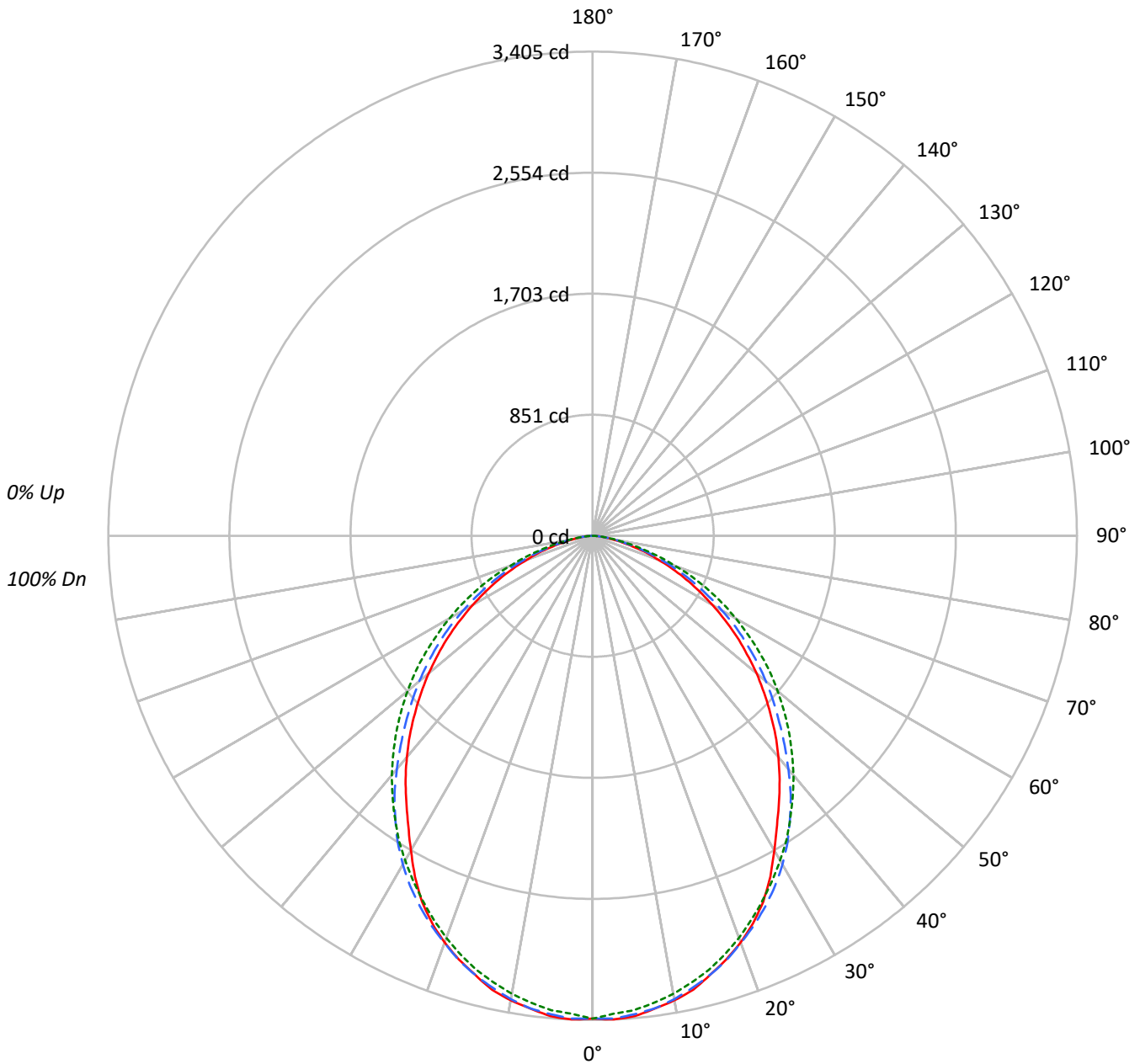
Lumens per Lamp: N/A  
Luminaire Lumens: 7852.0 lumens  
Efficiency: N/A  
Efficacy: 111.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°	9138	9138	9138
5°	9162	9123	9046
10°	9065	9040	8937
15°	8904	8904	8803
20°	8716	8727	8615
25°	8429	8533	8398
30°	7937	8294	8192
35°	7500	7950	7963
40°	7135	7520	7717
45°	6727	7065	7427
50°	6297	6658	7111
55°	5808	6194	6726
60°	5231	5652	6256
65°	4618	5026	5690
70°	3849	4280	4835
75°	3025	3419	3785
80°	2163	2405	2669
85°	1411	1411	1331



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	319.7	4.1
10°-20°	898.2	11.4
20°-30°	1312.6	16.7
30°-40°	1489.9	19.0
40°-50°	1438.3	18.3
50°-60°	1186.5	15.1
60°-70°	790.1	10.1
70°-80°	353.6	4.5
80°-90°	63.3	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°	2530.5	32.2
0°-40°	4020.4	51.2
0°-60°	6645.1	84.6
0°-90°	7852.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7852.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3396	3396	3396	3396	3396	
5°	3392	3391	3378	3359	3349	321
15°	3196	3204	3196	3182	3160	901
25°	2839	2861	2874	2853	2828	1300
35°	2283	2314	2420	2433	2424	1430
45°	1768	1798	1856	1941	1952	1364
55°	1238	1259	1320	1393	1434	1105
65°	725	745	789	845	894	719
75°	291	307	329	344	364	318
85°	46	46	46	43	43	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3395.8	3395.8	3395.8	3395.8	3395.8
2.5°	3404.9	3406.2	3398.4	3377.5	3364.5
5°	3391.9	3390.6	3377.5	3359.3	3348.8
7.5°	3354.0	3356.7	3352.7	3326.6	3312.3
10°	3317.5	3318.8	3308.4	3287.5	3270.5
12.5°	3270.5	3269.2	3254.9	3244.5	3217.1
15°	3196.2	3204.0	3196.2	3181.8	3159.7
17.5°	3124.4	3124.4	3129.7	3104.9	3087.9
20°	3043.6	3047.5	3047.5	3027.9	3008.3
22.5°	2949.6	2961.4	2965.3	2944.4	2920.9
25°	2838.7	2860.9	2874.0	2853.1	2828.3
27.5°	2704.4	2738.3	2777.4	2761.8	2734.4
30°	2554.3	2603.9	2669.1	2656.1	2636.5
32.5°	2412.1	2461.7	2551.7	2546.5	2536.1
35°	2283.0	2314.3	2420.0	2433.0	2423.9
37.5°	2160.4	2189.1	2288.2	2318.2	2310.4
40°	2031.2	2062.5	2140.8	2194.3	2196.9
42.5°	1903.4	1933.4	1997.3	2074.3	2074.3
45°	1767.7	1797.7	1856.4	1941.2	1951.6
47.5°	1634.6	1665.9	1723.3	1808.1	1825.1
50°	1504.2	1532.9	1590.3	1672.5	1698.5
52.5°	1368.5	1399.8	1455.9	1531.6	1569.4
55°	1238.0	1258.9	1320.2	1393.3	1433.7
57.5°	1102.4	1121.9	1191.1	1253.7	1295.4
60°	971.9	996.7	1050.2	1114.1	1162.4
62.5°	846.7	872.8	918.4	974.5	1029.3
65°	725.3	744.9	789.3	845.4	893.6
67.5°	607.9	624.9	669.2	708.4	759.3
70°	489.2	511.4	544.0	581.8	614.5
72.5°	394.0	403.1	430.5	457.9	491.8
75°	290.9	306.6	328.8	344.4	364.0
77.5°	208.7	217.9	230.9	244.0	262.2
80°	139.6	143.5	155.2	157.9	172.2
82.5°	84.8	87.4	90.0	91.3	96.5
85°	45.7	45.7	45.7	43.1	43.1
87.5°	26.1	26.1	22.2	18.3	13.0
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)