

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: P558222

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-81-97-EDD-90**

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: P558222  
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-LD4-3STD-30-UNV-81-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

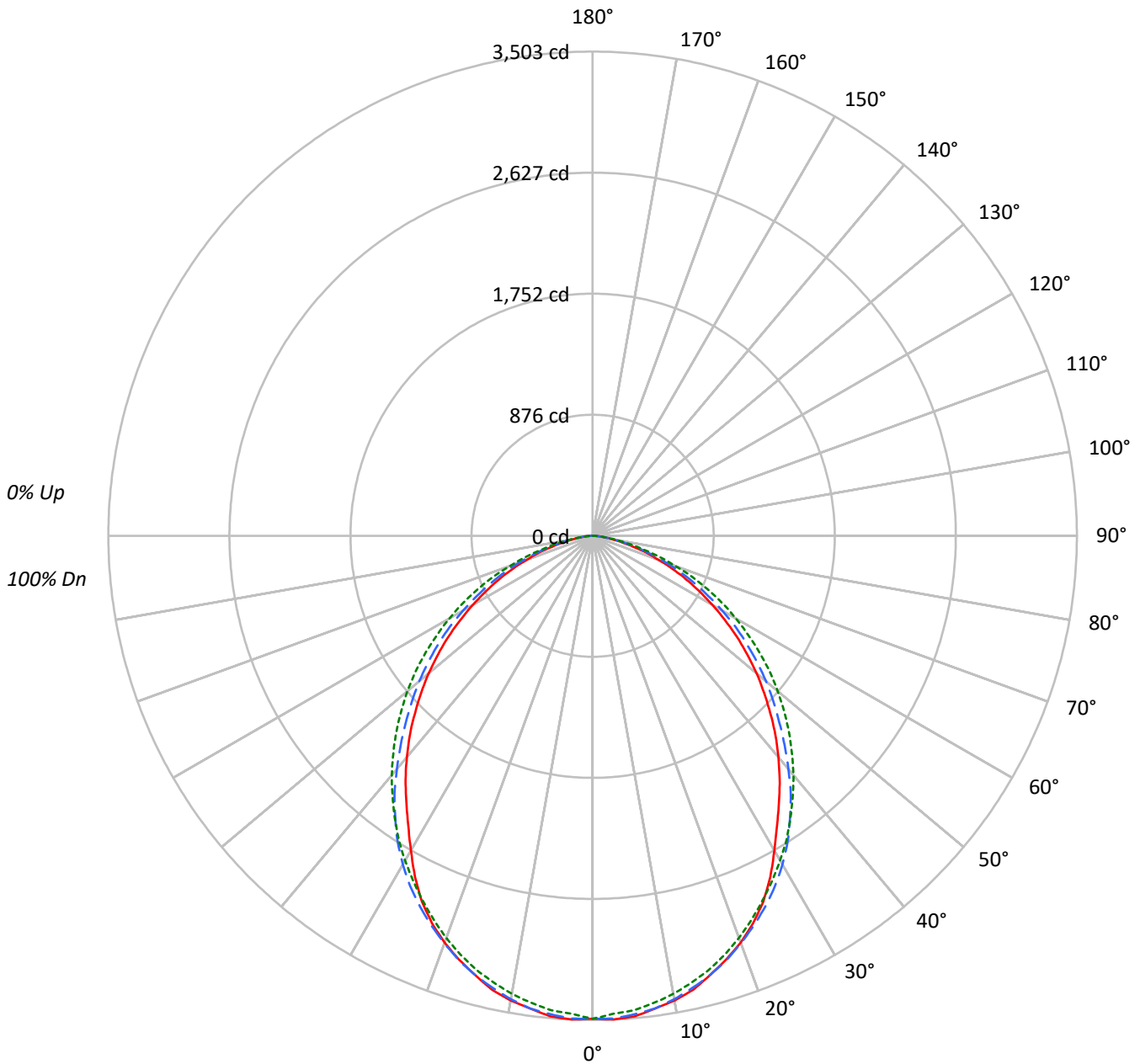
Lumens per Lamp: N/A  
Luminaire Lumens: 8079.0 lumens  
Efficiency: N/A  
Efficacy: 80.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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									
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°	9402	9402	9402
5°	9427	9387	9307
10°	9327	9301	9195
15°	9162	9162	9057
20°	8968	8979	8864
25°	8672	8780	8641
30°	8167	8534	8429
35°	7717	8180	8193
40°	7341	7738	7940
45°	6922	7269	7642
50°	6479	6850	7317
55°	5976	6373	6921
60°	5382	5815	6437
65°	4752	5171	5855
70°	3961	4404	4974
75°	3112	3517	3894
80°	2225	2475	2746
85°	1451	1451	1368



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	329.0	4.1
10°-20°	924.2	11.4
20°-30°	1350.5	16.7
30°-40°	1533.0	19.0
40°-50°	1479.8	18.3
50°-60°	1220.8	15.1
60°-70°	812.9	10.1
70°-80°	363.8	4.5
80°-90°	65.1	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°	2603.6	32.2
0°-40°	4136.6	51.2
0°-60°	6837.2	84.6
0°-90°	8079.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8079.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3494	3494	3494	3494	3494	
5°	3490	3489	3475	3456	3446	330
15°	3289	3297	3289	3274	3251	927
25°	2921	2944	2957	2936	2910	1338
35°	2349	2381	2490	2503	2494	1472
45°	1819	1850	1910	1997	2008	1403
55°	1274	1295	1358	1434	1475	1137
65°	746	766	812	870	920	740
75°	299	315	338	354	374	327
85°	47	47	47	44	44	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3494.0	3494.0	3494.0	3494.0	3494.0
2.5°	3503.4	3504.7	3496.6	3475.2	3461.7
5°	3489.9	3488.6	3475.2	3456.4	3445.6
7.5°	3451.0	3453.7	3449.7	3422.8	3408.1
10°	3413.4	3414.8	3404.0	3382.5	3365.1
12.5°	3365.1	3363.8	3349.0	3338.3	3310.1
15°	3288.6	3296.6	3288.6	3273.8	3251.0
17.5°	3214.8	3214.8	3220.1	3194.6	3177.2
20°	3131.5	3135.6	3135.6	3115.4	3095.3
22.5°	3034.9	3047.0	3051.0	3029.5	3005.4
25°	2920.8	2943.6	2957.0	2935.6	2910.1
27.5°	2782.5	2817.4	2857.7	2841.6	2813.4
30°	2628.2	2679.2	2746.3	2732.9	2712.8
32.5°	2481.9	2532.9	2625.5	2620.1	2609.4
35°	2349.0	2381.2	2489.9	2503.4	2494.0
37.5°	2222.8	2252.3	2354.4	2385.2	2377.2
40°	2089.9	2122.1	2202.7	2257.7	2260.4
42.5°	1958.4	1989.3	2055.0	2134.2	2134.2
45°	1818.8	1849.7	1910.1	1997.3	2008.1
47.5°	1681.9	1714.1	1773.2	1860.4	1877.9
50°	1547.7	1577.2	1636.2	1720.8	1747.7
52.5°	1408.1	1440.3	1498.0	1575.8	1614.8
55°	1273.8	1295.3	1358.4	1433.6	1475.2
57.5°	1134.2	1154.4	1225.5	1289.9	1332.9
60°	1000.0	1025.5	1080.5	1146.3	1196.0
62.5°	871.1	898.0	945.0	1002.7	1059.1
65°	746.3	766.4	812.1	869.8	919.5
67.5°	625.5	643.0	688.6	728.9	781.2
70°	503.4	526.2	559.7	598.7	632.2
72.5°	405.4	414.8	443.0	471.1	506.0
75°	299.3	315.4	338.3	354.4	374.5
77.5°	214.8	224.2	237.6	251.0	269.8
80°	143.6	147.7	159.7	162.4	177.2
82.5°	87.2	89.9	92.6	94.0	99.3
85°	47.0	47.0	47.0	44.3	44.3
87.5°	26.8	26.8	22.8	18.8	13.4
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)