

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: P557542

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-UNV-93-87-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: P557542  
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-LD4-2STD-35-UNV-93-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

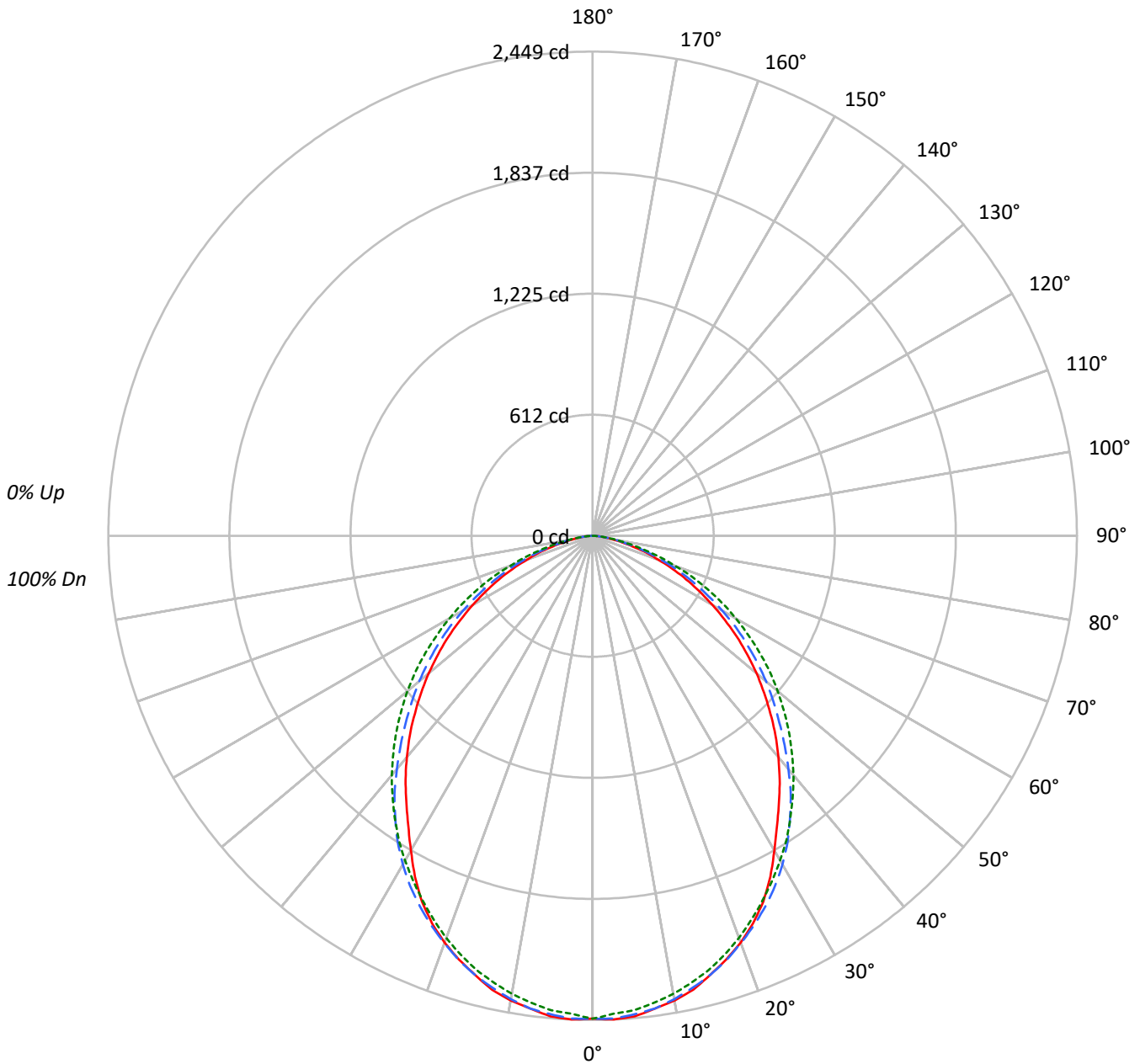
Lumens per Lamp: N/A  
Luminaire Lumens: 5648.0 lumens  
Efficiency: N/A  
Efficacy: 84.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	6573	6573	6573
5°	6591	6563	6507
10°	6521	6503	6428
15°	6405	6405	6332
20°	6269	6277	6197
25°	6063	6138	6040
30°	5709	5966	5893
35°	5395	5718	5728
40°	5133	5409	5551
45°	4839	5082	5342
50°	4530	4789	5115
55°	4178	4455	4838
60°	3763	4066	4500
65°	3322	3615	4093
70°	2769	3079	3478
75°	2176	2459	2722
80°	1556	1731	1920
85°	1013	1013	957



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	230.0	4.1
10°-20°	646.1	11.4
20°-30°	944.1	16.7
30°-40°	1071.7	19.0
40°-50°	1034.6	18.3
50°-60°	853.4	15.1
60°-70°	568.3	10.1
70°-80°	254.3	4.5
80°-90°	45.5	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°	1820.2	32.2
0°-40°	2891.9	51.2
0°-60°	4779.9	84.6
0°-90°	5648.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5648.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2443	2443	2443	2443	2443	
5°	2440	2439	2430	2416	2409	231
15°	2299	2305	2299	2289	2273	648
25°	2042	2058	2067	2052	2034	935
35°	1642	1665	1741	1750	1744	1029
45°	1272	1293	1335	1396	1404	981
55°	890	906	950	1002	1031	795
65°	522	536	568	608	643	517
75°	209	220	236	248	262	229
85°	33	33	33	31	31	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2442.6	2442.6	2442.6	2442.6	2442.6
2.5°	2449.2	2450.1	2444.5	2429.5	2420.1
5°	2439.8	2438.9	2429.5	2416.3	2408.8
7.5°	2412.6	2414.5	2411.6	2392.9	2382.6
10°	2386.3	2387.2	2379.7	2364.7	2352.5
12.5°	2352.5	2351.6	2341.3	2333.8	2314.1
15°	2299.0	2304.7	2299.0	2288.7	2272.8
17.5°	2247.4	2247.4	2251.2	2233.4	2221.2
20°	2189.3	2192.1	2192.1	2178.0	2163.9
22.5°	2121.7	2130.1	2132.9	2117.9	2101.0
25°	2041.9	2057.9	2067.3	2052.2	2034.4
27.5°	1945.3	1969.7	1997.8	1986.6	1966.9
30°	1837.4	1873.0	1919.9	1910.6	1896.5
32.5°	1735.1	1770.7	1835.5	1831.7	1824.2
35°	1642.2	1664.7	1740.7	1750.1	1743.5
37.5°	1554.0	1574.6	1645.9	1667.5	1661.9
40°	1461.1	1483.6	1539.9	1578.4	1580.2
42.5°	1369.1	1390.7	1436.7	1492.0	1492.0
45°	1271.5	1293.1	1335.3	1396.3	1403.8
47.5°	1175.8	1198.3	1239.6	1300.6	1312.8
50°	1082.0	1102.6	1143.9	1203.0	1221.8
52.5°	984.4	1006.9	1047.2	1101.7	1128.9
55°	890.5	905.5	949.6	1002.2	1031.3
57.5°	792.9	807.0	856.7	901.8	931.8
60°	699.1	716.9	755.4	801.4	836.1
62.5°	609.0	627.8	660.6	701.0	740.4
65°	521.7	535.8	567.7	608.1	642.8
67.5°	437.3	449.5	481.4	509.5	546.1
70°	351.9	367.8	391.3	418.5	442.0
72.5°	283.4	290.0	309.7	329.4	353.8
75°	209.3	220.5	236.5	247.7	261.8
77.5°	150.1	156.7	166.1	175.5	188.6
80°	100.4	103.2	111.7	113.5	123.9
82.5°	61.0	62.9	64.7	65.7	69.4
85°	32.8	32.8	32.8	31.0	31.0
87.5°	18.8	18.8	16.0	13.1	9.4
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)