

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: P557658

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-82-94-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: P557658  
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-50-UNV-82-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

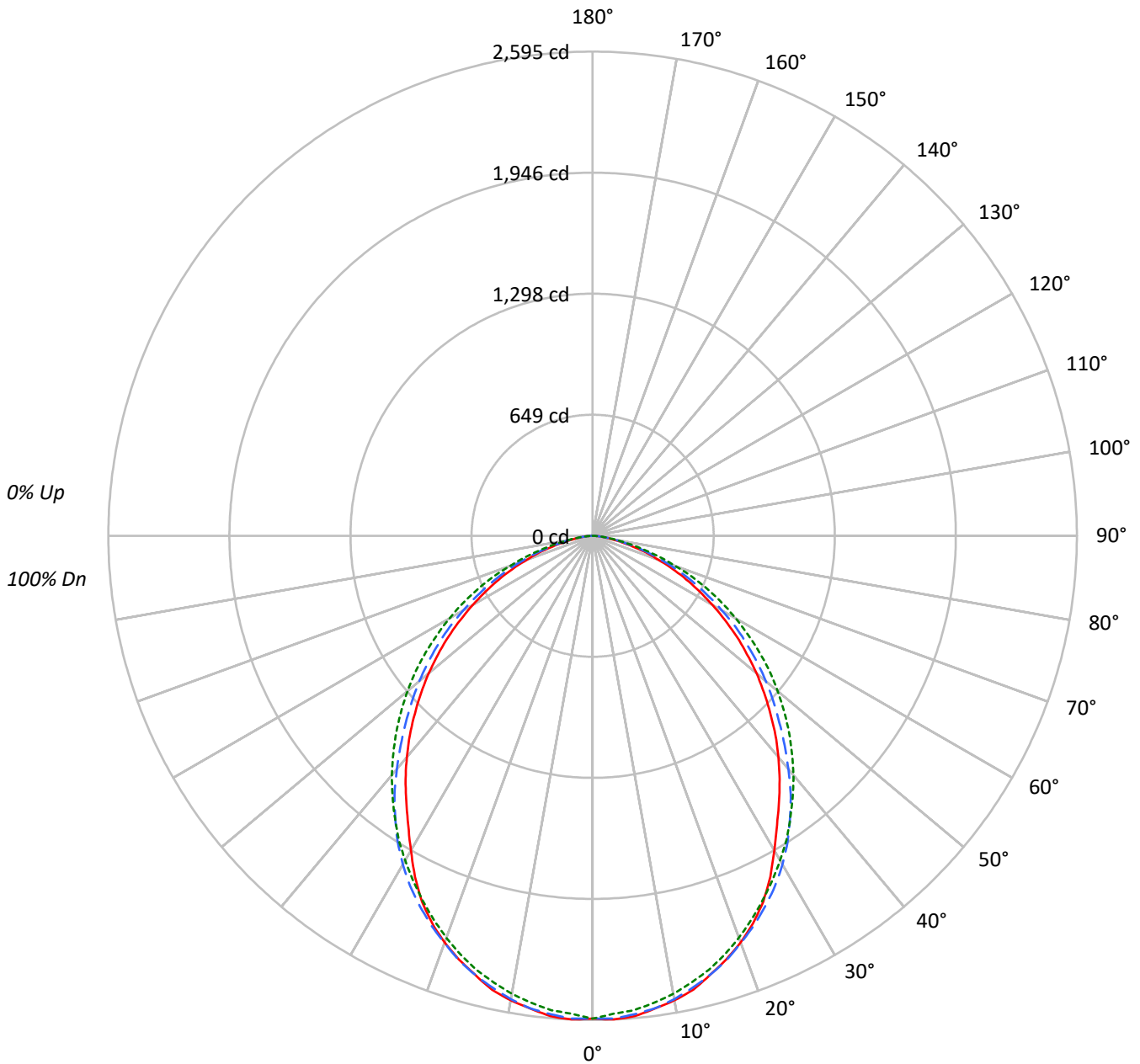
Lumens per Lamp: N/A  
Luminaire Lumens: 5984.0 lumens  
Efficiency: N/A  
Efficacy: 89.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6964	6964	6964
5°	6982	6953	6894
10°	6909	6889	6811
15°	6786	6786	6708
20°	6642	6651	6565
25°	6423	6503	6400
30°	6049	6321	6243
35°	5716	6059	6068
40°	5438	5731	5881
45°	5127	5384	5660
50°	4799	5074	5419
55°	4427	4720	5126
60°	3986	4307	4767
65°	3520	3830	4336
70°	2933	3262	3685
75°	2305	2604	2884
80°	1649	1833	2033
85°	1074	1074	1013



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	243.7	4.1
10°-20°	684.5	11.4
20°-30°	1000.3	16.7
30°-40°	1135.4	19.0
40°-50°	1096.1	18.3
50°-60°	904.2	15.1
60°-70°	602.1	10.1
70°-80°	269.4	4.5
80°-90°	48.2	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°	1928.5	32.2
0°-40°	3063.9	51.2
0°-60°	5064.2	84.6
0°-90°	5984.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5984.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2588	2588	2588	2588	2588	
5°	2585	2584	2574	2560	2552	245
15°	2436	2442	2436	2425	2408	687
25°	2163	2180	2190	2174	2155	991
35°	1740	1764	1844	1854	1847	1090
45°	1347	1370	1415	1479	1487	1039
55°	944	959	1006	1062	1093	842
65°	553	568	602	644	681	548
75°	222	234	250	262	277	242
85°	35	35	35	33	33	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2587.9	2587.9	2587.9	2587.9	2587.9
2.5°	2594.9	2595.9	2589.9	2574.0	2564.1
5°	2584.9	2583.9	2574.0	2560.1	2552.1
7.5°	2556.1	2558.1	2555.1	2535.2	2524.3
10°	2528.3	2529.3	2521.3	2505.4	2492.5
12.5°	2492.5	2491.5	2480.6	2472.6	2451.7
15°	2435.8	2441.8	2435.8	2424.9	2408.0
17.5°	2381.1	2381.1	2385.1	2366.2	2353.3
20°	2319.5	2322.5	2322.5	2307.6	2292.6
22.5°	2247.9	2256.9	2259.8	2243.9	2226.0
25°	2163.4	2180.3	2190.2	2174.3	2155.4
27.5°	2061.0	2086.8	2116.7	2104.7	2083.9
30°	1946.7	1984.4	2034.2	2024.2	2009.3
32.5°	1838.3	1876.1	1944.7	1940.7	1932.7
35°	1739.9	1763.7	1844.3	1854.2	1847.2
37.5°	1646.4	1668.3	1743.8	1766.7	1760.7
40°	1548.0	1571.8	1631.5	1672.3	1674.2
42.5°	1450.6	1473.4	1522.1	1580.8	1580.8
45°	1347.2	1370.0	1414.8	1479.4	1487.3
47.5°	1245.7	1269.6	1313.3	1378.0	1390.9
50°	1146.3	1168.2	1211.9	1274.6	1294.5
52.5°	1042.9	1066.8	1109.5	1167.2	1196.0
55°	943.5	959.4	1006.1	1061.8	1092.6
57.5°	840.1	855.0	907.7	955.4	987.2
60°	740.7	759.6	800.3	849.1	885.8
62.5°	645.2	665.1	699.9	742.7	784.4
65°	552.8	567.7	601.5	644.2	681.0
67.5°	463.3	476.2	510.0	539.9	578.6
70°	372.8	389.7	414.6	443.4	468.3
72.5°	300.3	307.2	328.1	349.0	374.8
75°	221.7	233.6	250.5	262.5	277.4
77.5°	159.1	166.0	176.0	185.9	199.8
80°	106.4	109.4	118.3	120.3	131.2
82.5°	64.6	66.6	68.6	69.6	73.6
85°	34.8	34.8	34.8	32.8	32.8
87.5°	19.9	19.9	16.9	13.9	9.9
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)