

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: P558148

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-81-86-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: P558148  
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-81-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

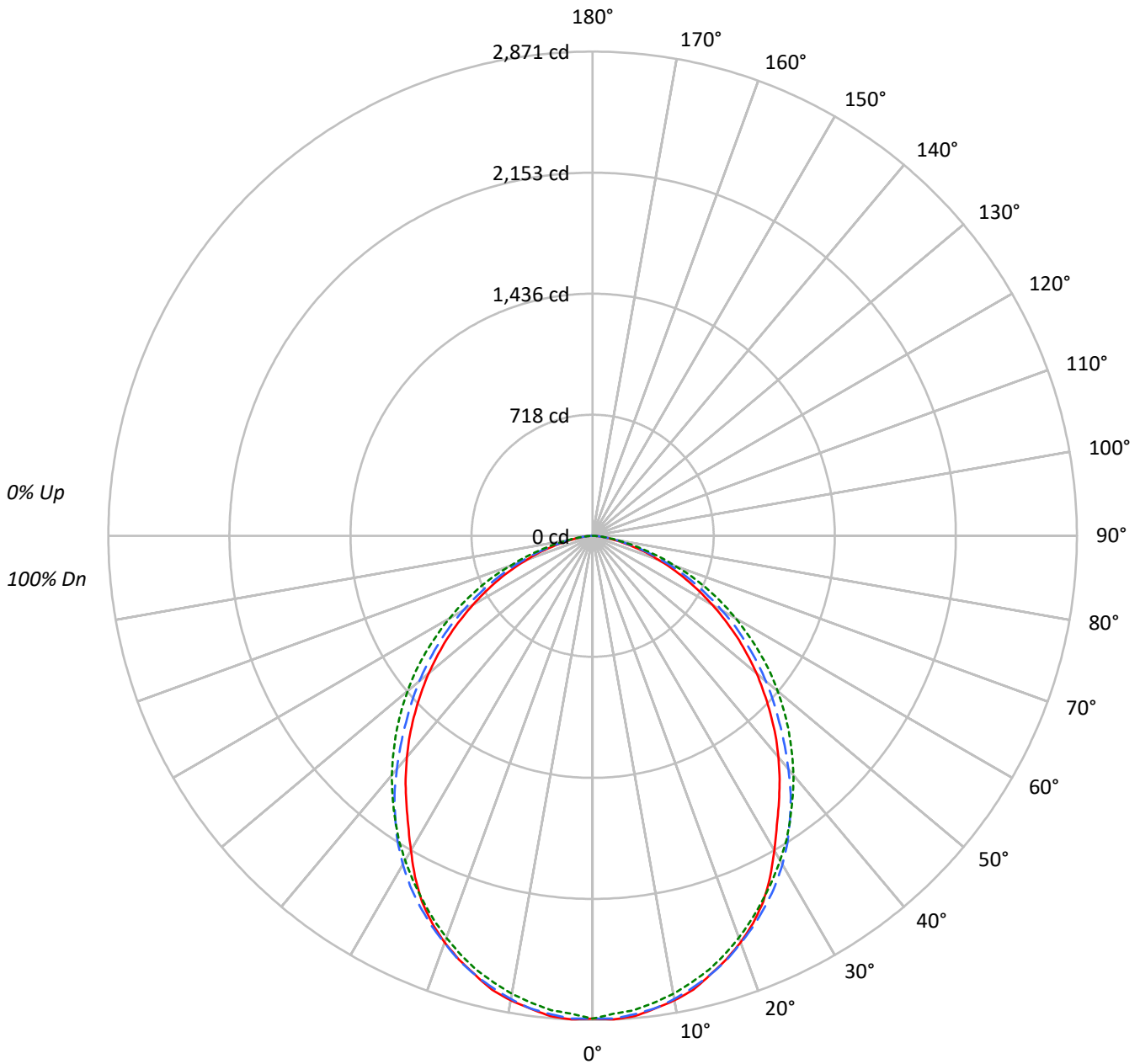
Lumens per Lamp: N/A  
Luminaire Lumens: 6620.0 lumens  
Efficiency: N/A  
Efficacy: 94.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7704	7704	7704
5°	7725	7692	7627
10°	7643	7622	7535
15°	7507	7507	7421
20°	7348	7358	7263
25°	7106	7194	7080
30°	6692	6992	6907
35°	6323	6703	6713
40°	6016	6340	6506
45°	5672	5956	6262
50°	5309	5613	5995
55°	4897	5222	5671
60°	4410	4765	5274
65°	3894	4237	4797
70°	3246	3608	4076
75°	2550	2882	3191
80°	1824	2029	2250
85°	1189	1189	1121



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	269.6	4.1
10°-20°	757.3	11.4
20°-30°	1106.6	16.7
30°-40°	1256.1	19.0
40°-50°	1212.6	18.3
50°-60°	1000.3	15.1
60°-70°	666.1	10.1
70°-80°	298.1	4.5
80°-90°	53.3	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°	2133.4	32.2
0°-40°	3389.6	51.2
0°-60°	5602.5	84.6
0°-90°	6620.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6620.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2863	2863	2863	2863	2863	
5°	2860	2859	2848	2832	2823	271
15°	2695	2701	2695	2683	2664	760
25°	2393	2412	2423	2405	2384	1096
35°	1925	1951	2040	2051	2044	1206
45°	1490	1516	1565	1637	1645	1150
55°	1044	1061	1113	1175	1209	932
65°	612	628	665	713	753	606
75°	245	258	277	290	307	268
85°	38	38	38	36	36	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2863.0	2863.0	2863.0	2863.0	2863.0
2.5°	2870.7	2871.8	2865.2	2847.6	2836.6
5°	2859.7	2858.6	2847.6	2832.2	2823.4
7.5°	2827.8	2830.0	2826.7	2804.7	2792.6
10°	2797.0	2798.1	2789.3	2771.7	2757.4
12.5°	2757.4	2756.3	2744.2	2735.4	2712.3
15°	2694.7	2701.3	2694.7	2682.6	2663.9
17.5°	2634.2	2634.2	2638.6	2617.7	2603.4
20°	2566.0	2569.3	2569.3	2552.8	2536.3
22.5°	2486.8	2496.7	2500.0	2482.4	2462.6
25°	2393.3	2412.0	2423.0	2405.4	2384.5
27.5°	2280.0	2308.6	2341.6	2328.4	2305.3
30°	2153.6	2195.4	2250.3	2239.3	2222.9
32.5°	2033.7	2075.5	2151.4	2147.0	2138.2
35°	1924.8	1951.2	2040.3	2051.3	2043.6
37.5°	1821.4	1845.6	1929.2	1954.5	1947.9
40°	1712.5	1738.9	1804.9	1850.0	1852.2
42.5°	1604.7	1630.0	1683.9	1748.8	1748.8
45°	1490.3	1515.6	1565.1	1636.6	1645.4
47.5°	1378.1	1404.5	1452.9	1524.4	1538.7
50°	1268.2	1292.4	1340.7	1410.0	1432.0
52.5°	1153.8	1180.2	1227.5	1291.3	1323.2
55°	1043.8	1061.4	1113.1	1174.7	1208.8
57.5°	929.4	945.9	1004.2	1057.0	1092.2
60°	819.4	840.3	885.4	939.3	980.0
62.5°	713.8	735.8	774.3	821.6	867.8
65°	611.5	628.0	665.4	712.7	753.4
67.5°	512.5	526.8	564.2	597.2	640.1
70°	412.5	431.2	458.6	490.5	518.0
72.5°	332.2	339.9	363.0	386.1	414.7
75°	245.3	258.5	277.2	290.4	306.9
77.5°	176.0	183.7	194.7	205.7	221.1
80°	117.7	121.0	130.9	133.1	145.2
82.5°	71.5	73.7	75.9	77.0	81.4
85°	38.5	38.5	38.5	36.3	36.3
87.5°	22.0	22.0	18.7	15.4	11.0
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)