

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: P558344

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-UNV-81-88-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: P558344  
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-40-UNV-81-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

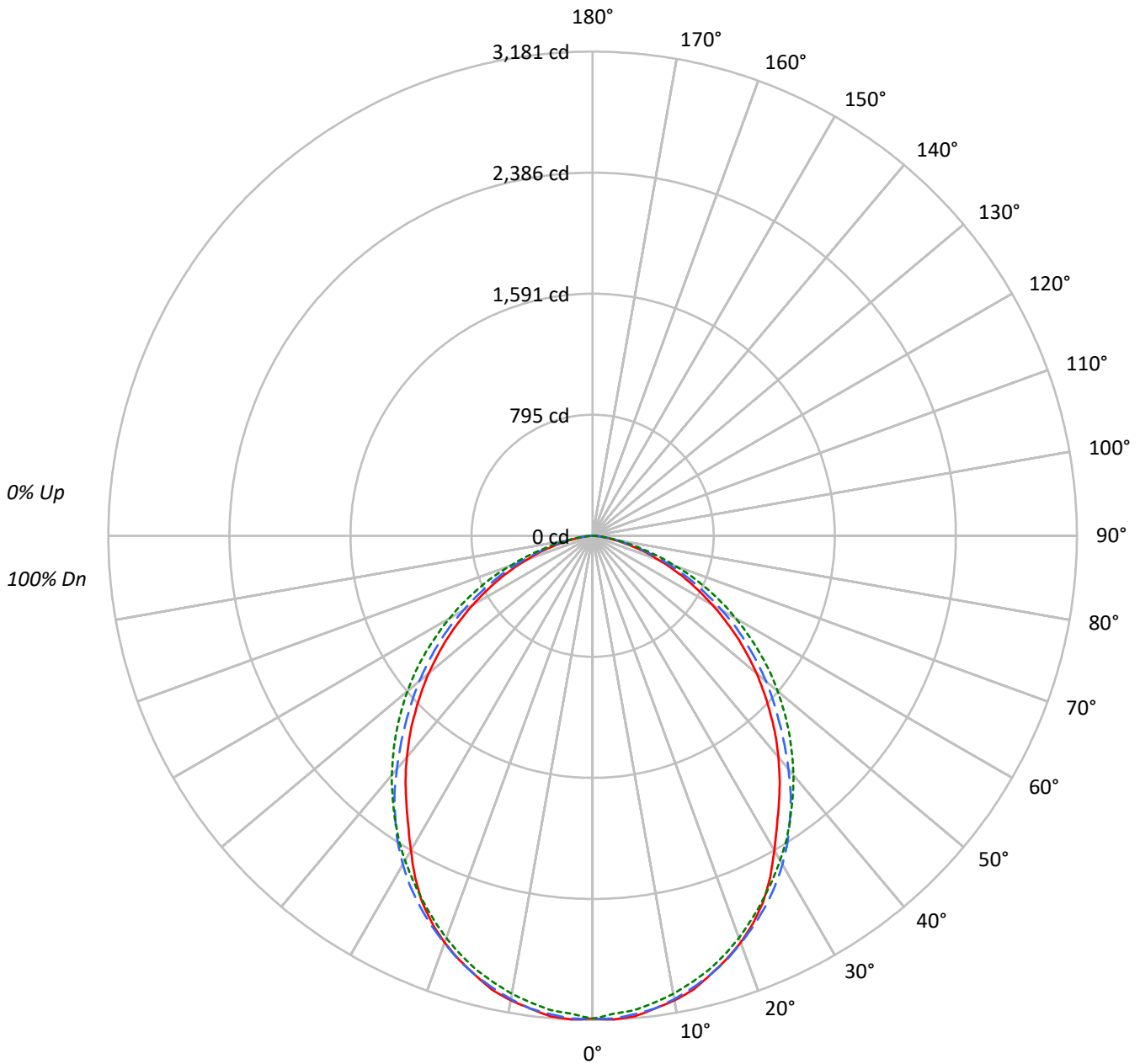
Lumens per Lamp: N/A  
Luminaire Lumens: 7336.0 lumens  
Efficiency: N/A  
Efficacy: 73.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (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°	8537	8537	8537
5°	8560	8524	8452
10°	8469	8446	8349
15°	8319	8319	8224
20°	8143	8153	8049
25°	7875	7973	7846
30°	7416	7749	7654
35°	7007	7427	7439
40°	6666	7026	7210
45°	6285	6600	6939
50°	5883	6220	6643
55°	5427	5787	6284
60°	4887	5281	5845
65°	4315	4695	5316
70°	3596	3999	4517
75°	2826	3193	3536
80°	2021	2247	2493
85°	1318	1318	1241



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	298.7	4.1
10°-20°	839.2	11.4
20°-30°	1226.3	16.7
30°-40°	1392.0	19.0
40°-50°	1343.7	18.3
50°-60°	1108.5	15.1
60°-70°	738.2	10.1
70°-80°	330.3	4.5
80°-90°	59.1	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°	2364.2	32.2
0°-40°	3756.2	51.2
0°-60°	6208.4	84.6
0°-90°	7336.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7336.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3173	3173	3173	3173	3173	
5°	3169	3168	3156	3138	3129	300
15°	2986	2994	2986	2973	2952	842
25°	2652	2673	2685	2666	2642	1215
35°	2133	2162	2261	2273	2265	1336
45°	1652	1680	1734	1814	1823	1274
55°	1157	1176	1234	1302	1340	1032
65°	678	696	737	790	835	672
75°	272	286	307	322	340	297
85°	43	43	43	40	40	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3172.6	3172.6	3172.6	3172.6	3172.6
2.5°	3181.2	3182.4	3175.1	3155.6	3143.4
5°	3169.0	3167.8	3155.6	3138.5	3128.8
7.5°	3133.6	3136.1	3132.4	3108.0	3094.6
10°	3099.5	3100.7	3091.0	3071.5	3055.6
12.5°	3055.6	3054.4	3041.0	3031.2	3005.6
15°	2986.1	2993.5	2986.1	2972.7	2952.0
17.5°	2919.1	2919.1	2924.0	2900.8	2885.0
20°	2843.5	2847.2	2847.2	2828.9	2810.6
22.5°	2755.8	2766.8	2770.4	2750.9	2729.0
25°	2652.2	2672.9	2685.1	2665.6	2642.4
27.5°	2526.6	2558.3	2594.9	2580.3	2554.7
30°	2386.5	2432.8	2493.7	2481.6	2463.3
32.5°	2253.6	2299.9	2384.0	2379.2	2369.4
35°	2133.0	2162.2	2260.9	2273.1	2264.6
37.5°	2018.4	2045.2	2137.8	2165.9	2158.6
40°	1897.7	1927.0	2000.1	2050.1	2052.5
42.5°	1778.3	1806.3	1866.0	1937.9	1937.9
45°	1651.5	1679.6	1734.4	1813.6	1823.4
47.5°	1527.2	1556.5	1610.1	1689.3	1705.2
50°	1405.3	1432.1	1485.8	1562.5	1586.9
52.5°	1278.6	1307.8	1360.2	1430.9	1466.3
55°	1156.7	1176.2	1233.5	1301.7	1339.5
57.5°	1029.9	1048.2	1112.8	1171.3	1210.3
60°	908.0	931.2	981.2	1040.9	1086.0
62.5°	791.0	815.4	858.1	910.5	961.7
65°	677.7	696.0	737.4	789.8	834.9
67.5°	568.0	583.8	625.3	661.8	709.4
70°	457.1	477.8	508.3	543.6	574.1
72.5°	368.1	376.6	402.2	427.8	459.5
75°	271.8	286.4	307.1	321.8	340.1
77.5°	195.0	203.5	215.7	227.9	245.0
80°	130.4	134.1	145.0	147.5	160.9
82.5°	79.2	81.7	84.1	85.3	90.2
85°	42.7	42.7	42.7	40.2	40.2
87.5°	24.4	24.4	20.7	17.1	12.2
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)