

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: P558384

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-80-84-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: P558384  
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-50-UNV-80-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

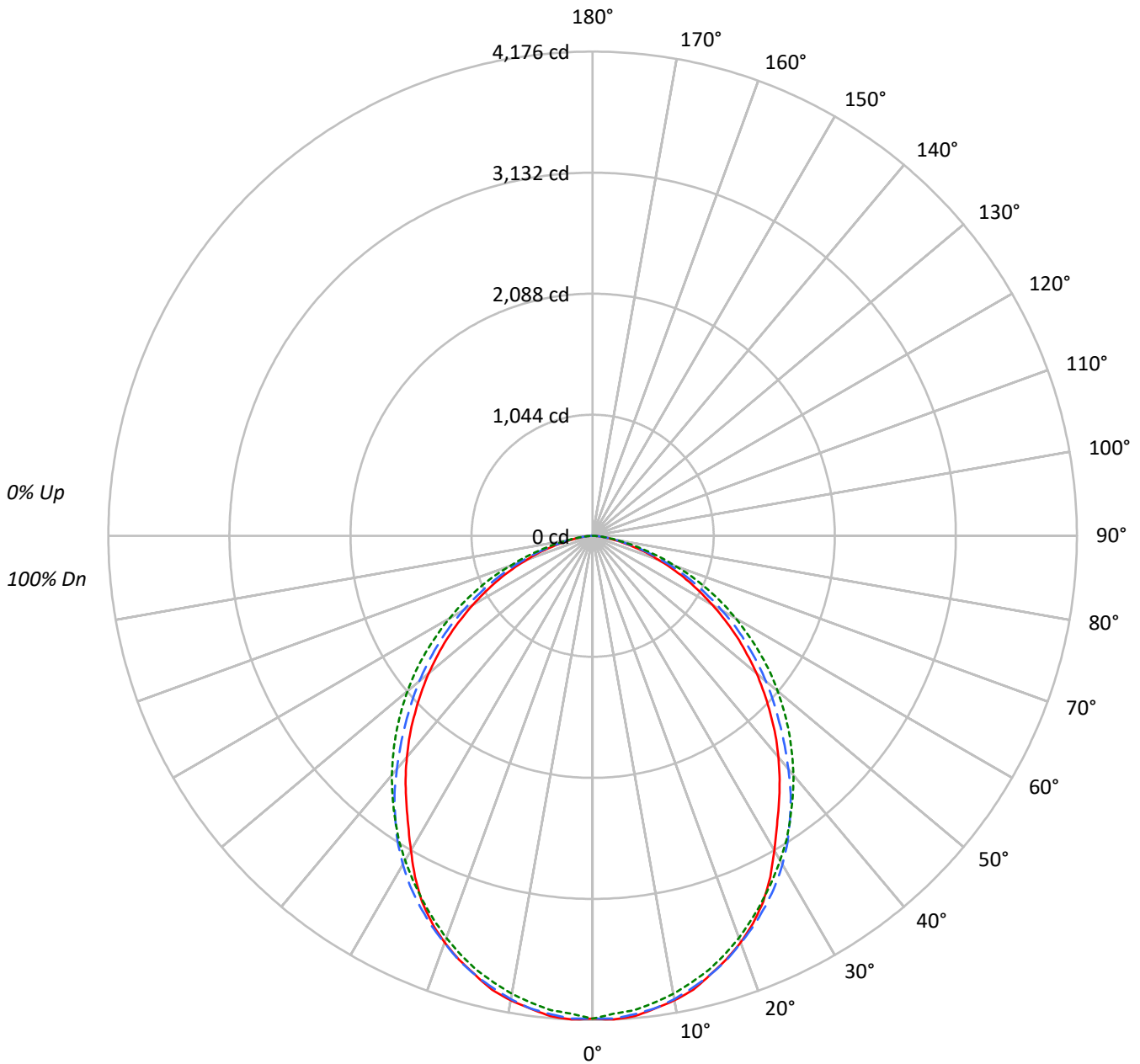
Lumens per Lamp: N/A  
Luminaire Lumens: 9630.0 lumens  
Efficiency: N/A  
Efficacy: 96.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	11207	11207	11207
5°	11237	11189	11094
10°	11118	11087	10960
15°	10920	10920	10796
20°	10689	10703	10566
25°	10337	10465	10299
30°	9734	10172	10047
35°	9198	9750	9766
40°	8751	9223	9465
45°	8251	8665	9109
50°	7723	8165	8721
55°	7124	7597	8250
60°	6415	6932	7673
65°	5664	6164	6979
70°	4721	5249	5929
75°	3710	4192	4641
80°	2653	2951	3273
85°	1729	1729	1630



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	392.1	4.1
10°-20°	1101.6	11.4
20°-30°	1609.8	16.7
30°-40°	1827.3	19.0
40°-50°	1764.0	18.3
50°-60°	1455.2	15.1
60°-70°	969.0	10.1
70°-80°	433.6	4.5
80°-90°	77.6	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°	3103.4	32.2
0°-40°	4930.7	51.2
0°-60°	8149.8	84.6
0°-90°	9630.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9630.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4165	4165	4165	4165	4165	
5°	4160	4158	4142	4120	4107	394
15°	3920	3930	3920	3902	3875	1105
25°	3482	3509	3525	3499	3469	1594
35°	2800	2838	2968	2984	2973	1754
45°	2168	2205	2277	2381	2394	1673
55°	1518	1544	1619	1709	1758	1355
65°	890	914	968	1037	1096	882
75°	357	376	403	422	446	390
85°	56	56	56	53	53	76
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4164.7	4164.7	4164.7	4164.7	4164.7
2.5°	4175.9	4177.5	4167.9	4142.3	4126.3
5°	4159.9	4158.3	4142.3	4119.9	4107.1
7.5°	4113.5	4116.7	4111.9	4079.9	4062.3
10°	4068.7	4070.3	4057.5	4031.9	4011.1
12.5°	4011.1	4009.5	3991.9	3979.1	3945.5
15°	3919.9	3929.5	3919.9	3902.3	3875.1
17.5°	3831.9	3831.9	3838.3	3807.9	3787.1
20°	3732.7	3737.5	3737.5	3713.5	3689.5
22.5°	3617.5	3631.9	3636.7	3611.1	3582.3
25°	3481.5	3508.7	3524.7	3499.1	3468.7
27.5°	3316.7	3358.3	3406.3	3387.1	3353.5
30°	3132.7	3193.5	3273.5	3257.5	3233.5
32.5°	2958.3	3019.1	3129.5	3123.1	3110.3
35°	2800.0	2838.3	2967.9	2983.9	2972.7
37.5°	2649.6	2684.8	2806.4	2843.1	2833.5
40°	2491.2	2529.6	2625.6	2691.2	2694.4
42.5°	2334.4	2371.2	2449.6	2544.0	2544.0
45°	2168.0	2204.8	2276.8	2380.8	2393.6
47.5°	2004.8	2043.2	2113.6	2217.6	2238.4
50°	1844.8	1880.0	1950.4	2051.2	2083.2
52.5°	1678.4	1716.8	1785.6	1878.4	1924.8
55°	1518.4	1544.0	1619.2	1708.8	1758.4
57.5°	1352.0	1376.0	1460.8	1537.6	1588.8
60°	1192.0	1222.4	1288.0	1366.4	1425.6
62.5°	1038.4	1070.4	1126.4	1195.2	1262.4
65°	889.6	913.6	968.0	1036.8	1096.0
67.5°	745.6	766.4	820.8	868.8	931.2
70°	600.0	627.2	667.2	713.6	753.6
72.5°	483.2	494.4	528.0	561.6	603.2
75°	356.8	376.0	403.2	422.4	446.4
77.5°	256.0	267.2	283.2	299.2	321.6
80°	171.2	176.0	190.4	193.6	211.2
82.5°	104.0	107.2	110.4	112.0	118.4
85°	56.0	56.0	56.0	52.8	52.8
87.5°	32.0	32.0	27.2	22.4	16.0
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)