

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: P558196

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-80-86-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: P558196  
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-30-UNV-80-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

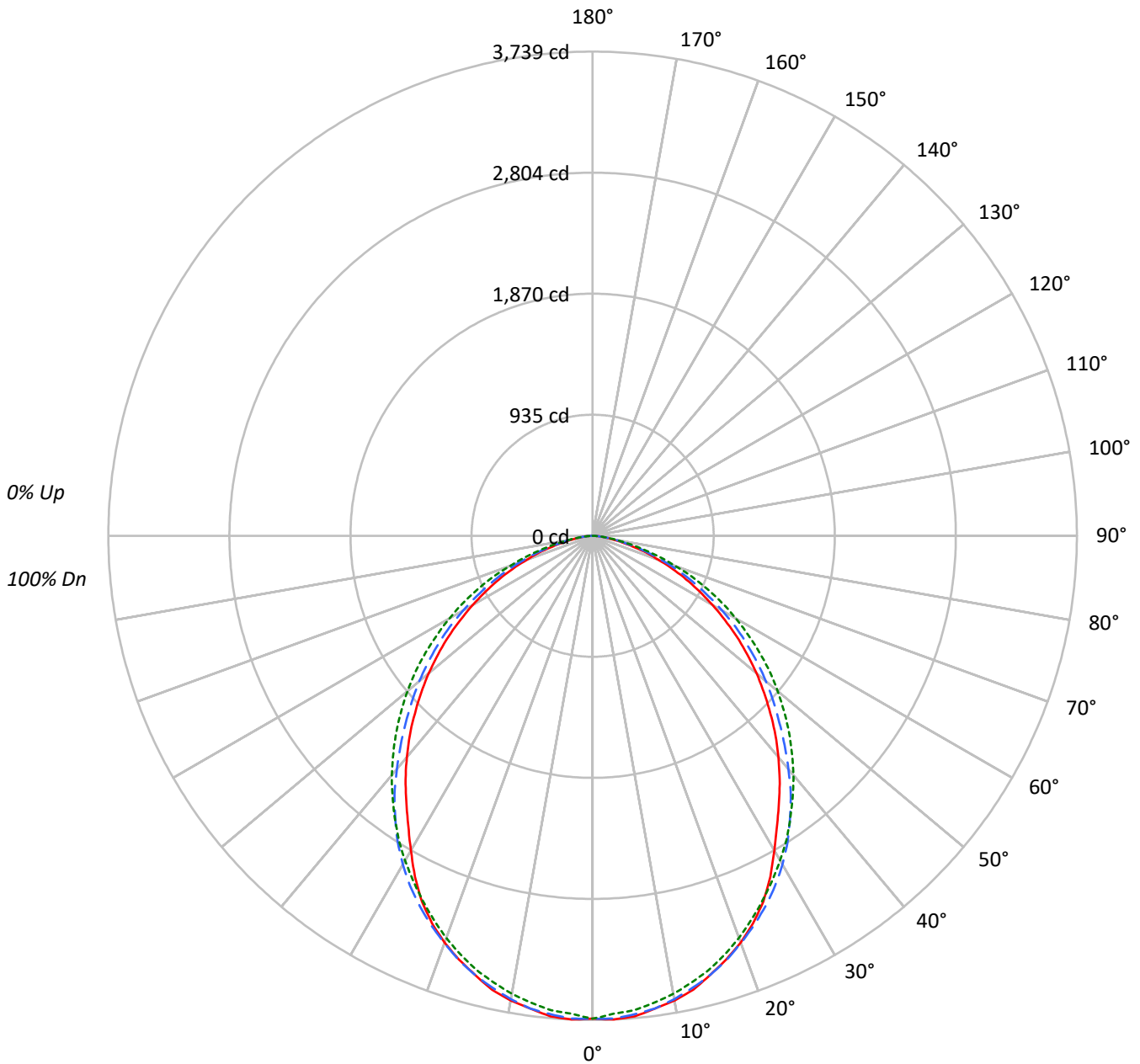
Lumens per Lamp: N/A  
Luminaire Lumens: 8623.0 lumens  
Efficiency: N/A  
Efficacy: 86.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	10035	10035	10035
5°	10062	10020	9934
10°	9955	9928	9814
15°	9779	9779	9667
20°	9572	9584	9461
25°	9256	9371	9222
30°	8717	9108	8997
35°	8236	8730	8745
40°	7836	8259	8475
45°	7388	7759	8157
50°	6916	7311	7809
55°	6379	6802	7387
60°	5744	6207	6870
65°	5072	5519	6249
70°	4227	4700	5309
75°	3322	3753	4156
80°	2376	2642	2930
85°	1547	1547	1460



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	351.1	4.1
10°-20°	986.4	11.4
20°-30°	1441.4	16.7
30°-40°	1636.2	19.0
40°-50°	1579.5	18.3
50°-60°	1303.0	15.1
60°-70°	867.7	10.1
70°-80°	388.3	4.5
80°-90°	69.5	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°	2778.9	32.2
0°-40°	4415.1	51.2
0°-60°	7297.6	84.6
0°-90°	8623.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8623.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3729	3729	3729	3729	3729	
5°	3725	3724	3709	3689	3678	353
15°	3510	3519	3510	3494	3470	990
25°	3118	3142	3156	3133	3106	1428
35°	2507	2542	2658	2672	2662	1571
45°	1941	1974	2039	2132	2143	1498
55°	1360	1382	1450	1530	1574	1213
65°	797	818	867	928	981	790
75°	320	337	361	378	400	349
85°	50	50	50	47	47	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3729.2	3729.2	3729.2	3729.2	3729.2
2.5°	3739.3	3740.7	3732.1	3709.2	3694.8
5°	3724.9	3723.5	3709.2	3689.1	3677.6
7.5°	3683.4	3686.2	3681.9	3653.3	3637.5
10°	3643.3	3644.7	3633.2	3610.3	3591.7
12.5°	3591.7	3590.3	3574.5	3563.0	3532.9
15°	3510.0	3518.6	3510.0	3494.3	3469.9
17.5°	3431.2	3431.2	3437.0	3409.7	3391.1
20°	3342.4	3346.7	3346.7	3325.2	3303.7
22.5°	3239.3	3252.1	3256.4	3233.5	3207.7
25°	3117.5	3141.8	3156.2	3133.2	3106.0
27.5°	2969.9	3007.2	3050.1	3033.0	3002.9
30°	2805.2	2859.6	2931.2	2916.9	2895.4
32.5°	2649.0	2703.4	2802.3	2796.6	2785.1
35°	2507.2	2541.5	2657.6	2671.9	2661.9
37.5°	2372.5	2404.0	2512.9	2545.8	2537.2
40°	2230.7	2265.0	2351.0	2409.7	2412.6
42.5°	2090.3	2123.2	2193.4	2277.9	2277.9
45°	1941.3	1974.2	2038.7	2131.8	2143.3
47.5°	1795.1	1829.5	1892.5	1985.7	2004.3
50°	1651.9	1683.4	1746.4	1836.7	1865.3
52.5°	1502.9	1537.2	1598.9	1681.9	1723.5
55°	1359.6	1382.5	1449.9	1530.1	1574.5
57.5°	1210.6	1232.1	1308.0	1376.8	1422.6
60°	1067.3	1094.6	1153.3	1223.5	1276.5
62.5°	929.8	958.5	1008.6	1070.2	1130.4
65°	796.6	818.1	866.8	928.4	981.4
67.5°	667.6	686.2	735.0	777.9	833.8
70°	537.2	561.6	597.4	639.0	674.8
72.5°	432.7	442.7	472.8	502.9	540.1
75°	319.5	336.7	361.0	378.2	399.7
77.5°	229.2	239.3	253.6	267.9	288.0
80°	153.3	157.6	170.5	173.4	189.1
82.5°	93.1	96.0	98.9	100.3	106.0
85°	50.1	50.1	50.1	47.3	47.3
87.5°	28.7	28.7	24.4	20.1	14.3
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)