

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: P557896

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-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: P557896  
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-LD4-3HI-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

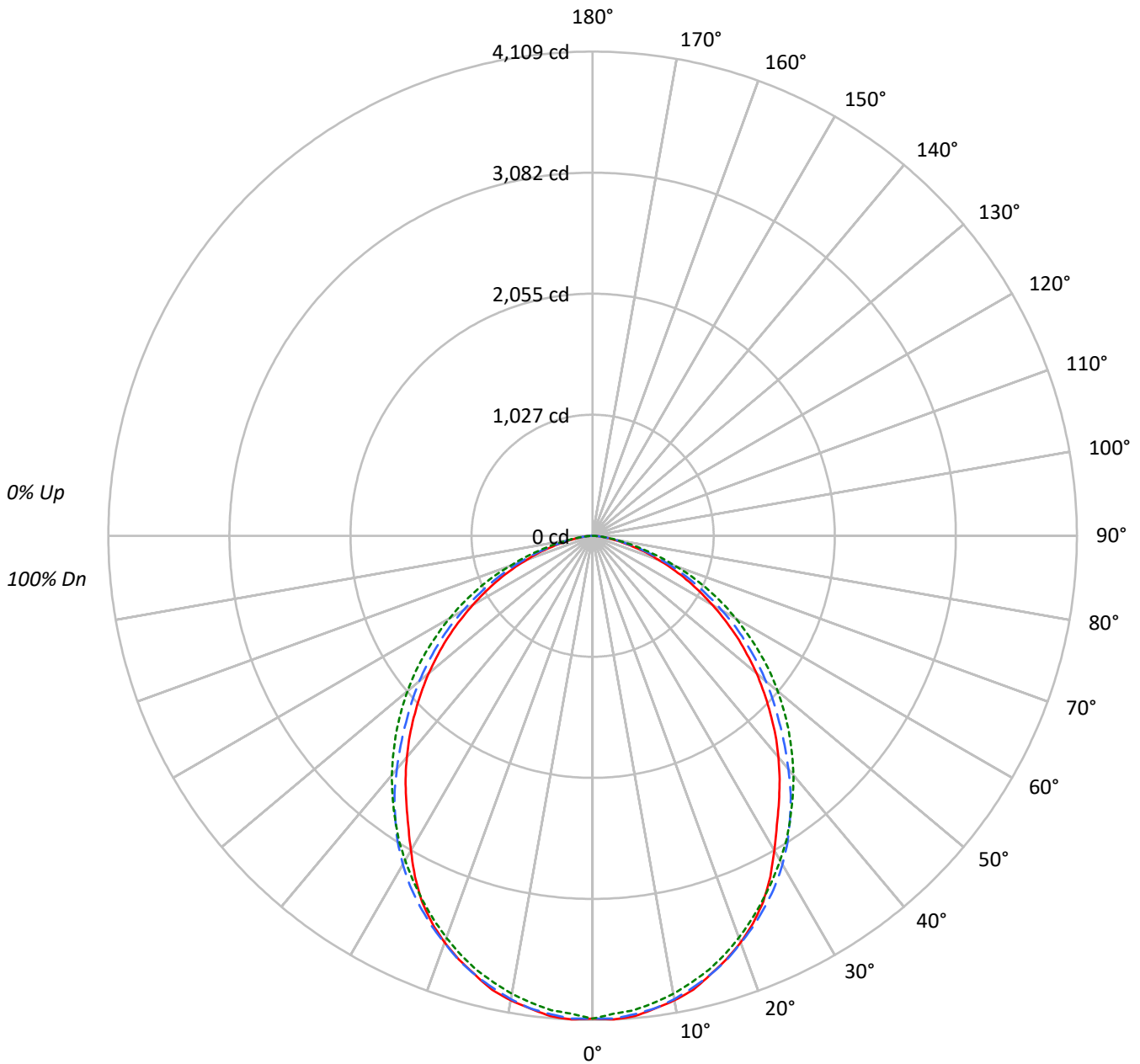
Lumens per Lamp: N/A  
Luminaire Lumens: 9475.0 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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°	11027	11027	11027
5°	11056	11010	10916
10°	10939	10909	10784
15°	10745	10745	10622
20°	10517	10531	10395
25°	10171	10297	10133
30°	9578	10008	9886
35°	9050	9593	9609
40°	8610	9075	9312
45°	8118	8525	8962
50°	7599	8034	8580
55°	7009	7474	8117
60°	6312	6820	7549
65°	5573	6064	6866
70°	4644	5164	5834
75°	3650	4125	4566
80°	2610	2903	3220
85°	1701	1701	1602



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	385.8	4.1
10°-20°	1083.9	11.4
20°-30°	1583.9	16.7
30°-40°	1797.9	19.0
40°-50°	1735.5	18.3
50°-60°	1431.7	15.1
60°-70°	953.4	10.1
70°-80°	426.6	4.5
80°-90°	76.3	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°	3053.5	32.2
0°-40°	4851.4	51.2
0°-60°	8018.6	84.6
0°-90°	9475.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9475.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4098	4098	4098	4098	4098	
5°	4093	4091	4076	4054	4041	387
15°	3857	3866	3857	3840	3813	1087
25°	3426	3452	3468	3443	3413	1569
35°	2755	2793	2920	2936	2925	1726
45°	2133	2169	2240	2342	2355	1646
55°	1494	1519	1593	1681	1730	1333
65°	875	899	952	1020	1078	868
75°	351	370	397	416	439	384
85°	55	55	55	52	52	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4097.7	4097.7	4097.7	4097.7	4097.7
2.5°	4108.7	4110.3	4100.8	4075.7	4059.9
5°	4093.0	4091.4	4075.7	4053.6	4041.0
7.5°	4047.3	4050.5	4045.7	4014.3	3996.9
10°	4003.2	4004.8	3992.2	3967.0	3946.6
12.5°	3946.6	3945.0	3927.7	3915.1	3882.0
15°	3856.8	3866.3	3856.8	3839.5	3812.8
17.5°	3770.3	3770.3	3776.6	3746.6	3726.2
20°	3672.7	3677.4	3677.4	3653.8	3630.1
22.5°	3559.3	3573.5	3578.2	3553.0	3524.7
25°	3425.5	3452.3	3468.0	3442.8	3412.9
27.5°	3263.4	3304.3	3351.5	3332.6	3299.6
30°	3082.3	3142.1	3220.9	3205.1	3181.5
32.5°	2910.7	2970.6	3079.2	3072.9	3060.3
35°	2754.9	2792.7	2920.2	2935.9	2924.9
37.5°	2606.9	2641.5	2761.2	2797.4	2787.9
40°	2451.1	2488.8	2583.3	2647.8	2651.0
42.5°	2296.8	2333.0	2410.1	2503.0	2503.0
45°	2133.1	2169.3	2240.1	2342.4	2355.0
47.5°	1972.5	2010.3	2079.5	2181.9	2202.3
50°	1815.1	1849.7	1919.0	2018.1	2049.6
52.5°	1651.4	1689.1	1756.8	1848.1	1893.8
55°	1493.9	1519.1	1593.1	1681.3	1730.1
57.5°	1330.2	1353.8	1437.3	1512.8	1563.2
60°	1172.8	1202.7	1267.2	1344.4	1402.6
62.5°	1021.7	1053.2	1108.3	1175.9	1242.1
65°	875.3	898.9	952.4	1020.1	1078.3
67.5°	733.6	754.1	807.6	854.8	916.2
70°	590.3	617.1	656.4	702.1	741.5
72.5°	475.4	486.4	519.5	552.6	593.5
75°	351.1	369.9	396.7	415.6	439.2
77.5°	251.9	262.9	278.6	294.4	316.4
80°	168.4	173.2	187.3	190.5	207.8
82.5°	102.3	105.5	108.6	110.2	116.5
85°	55.1	55.1	55.1	51.9	51.9
87.5°	31.5	31.5	26.8	22.0	15.7
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)