

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: P557077

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-82-86-EDD**

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: P557077  
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-LD4-2HI-40-UNV-82-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

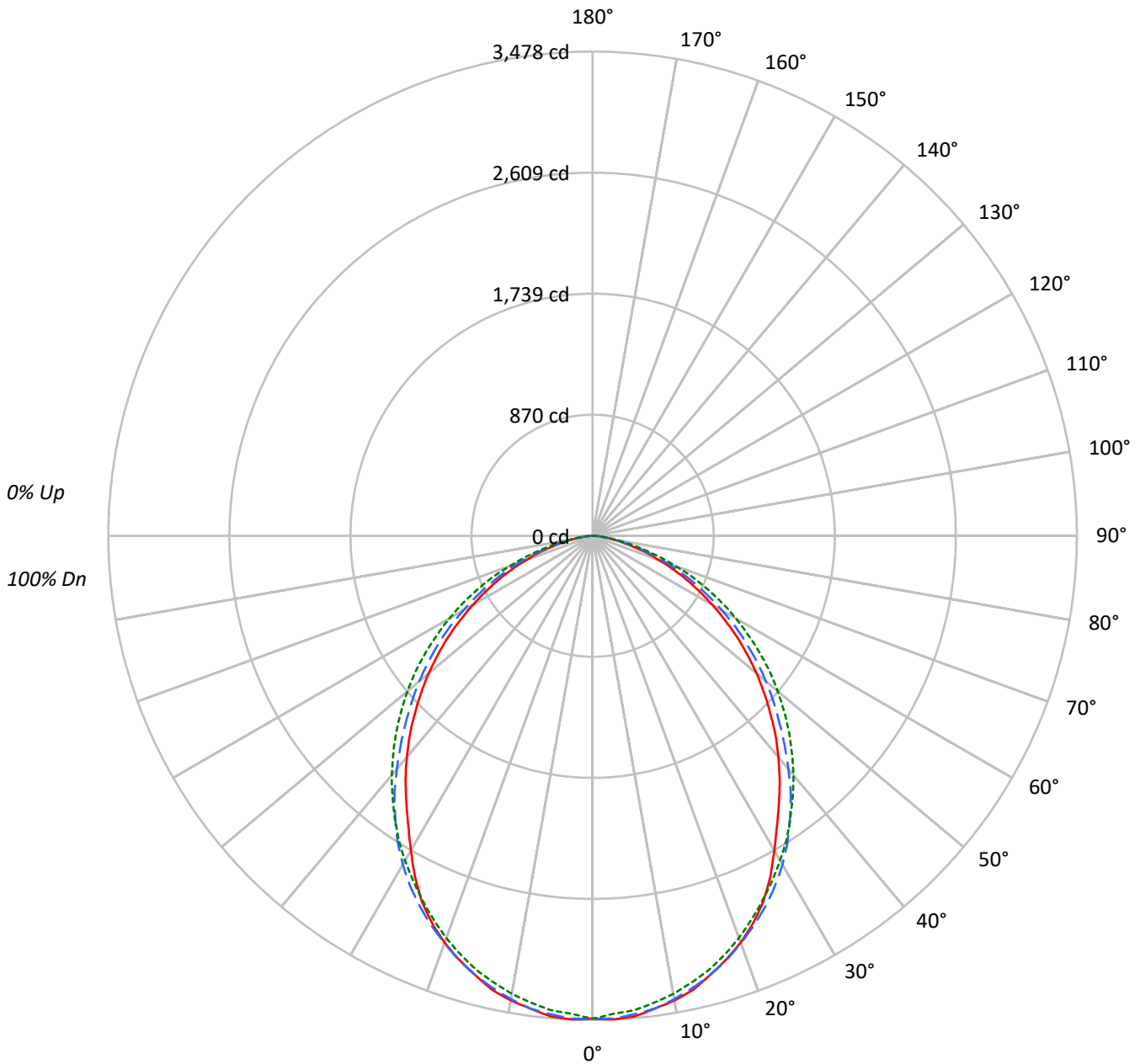
Lumens per Lamp: N/A  
Luminaire Lumens: 8021.0 lumens  
Efficiency: N/A  
Efficacy: 92.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	9335	9335	9335
5°	9360	9320	9241
10°	9260	9235	9129
15°	9096	9096	8992
20°	8903	8915	8800
25°	8610	8717	8579
30°	8108	8472	8369
35°	7661	8121	8134
40°	7289	7682	7883
45°	6872	7217	7587
50°	6432	6801	7264
55°	5933	6327	6871
60°	5343	5774	6391
65°	4718	5134	5813
70°	3932	4372	4939
75°	3090	3491	3866
80°	2210	2458	2726
85°	1439	1439	1359



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	326.6	4.1
10°-20°	917.5	11.4
20°-30°	1340.8	16.7
30°-40°	1522.0	19.0
40°-50°	1469.2	18.3
50°-60°	1212.0	15.1
60°-70°	807.1	10.1
70°-80°	361.2	4.5
80°-90°	64.6	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°	2584.9	32.2
0°-40°	4106.9	51.2
0°-60°	6788.1	84.6
0°-90°	8021.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8021.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3469	3469	3469	3469	3469	
5°	3465	3464	3450	3432	3421	328
15°	3265	3273	3265	3250	3228	920
25°	2900	2922	2936	2914	2889	1328
35°	2332	2364	2472	2485	2476	1461
45°	1806	1836	1896	1983	1994	1393
55°	1265	1286	1349	1423	1465	1129
65°	741	761	806	864	913	735
75°	297	313	336	352	372	325
85°	47	47	47	44	44	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3468.9	3468.9	3468.9	3468.9	3468.9
2.5°	3478.2	3479.5	3471.5	3450.2	3436.9
5°	3464.9	3463.5	3450.2	3431.6	3420.9
7.5°	3426.2	3428.9	3424.9	3398.2	3383.6
10°	3388.9	3390.2	3379.6	3358.3	3340.9
12.5°	3340.9	3339.6	3324.9	3314.3	3286.3
15°	3265.0	3273.0	3265.0	3250.3	3227.7
17.5°	3191.7	3191.7	3197.0	3171.7	3154.4
20°	3109.1	3113.1	3113.1	3093.1	3073.1
22.5°	3013.1	3025.1	3029.1	3007.8	2983.8
25°	2899.8	2922.5	2935.8	2914.5	2889.2
27.5°	2762.6	2797.2	2837.2	2821.2	2793.2
30°	2609.3	2660.0	2726.6	2713.3	2693.3
32.5°	2464.1	2514.7	2606.7	2601.3	2590.7
35°	2332.1	2364.1	2472.1	2485.4	2476.1
37.5°	2206.9	2236.2	2337.5	2368.1	2360.1
40°	2074.9	2106.9	2186.9	2241.5	2244.2
42.5°	1944.3	1975.0	2040.3	2118.9	2118.9
45°	1805.7	1836.4	1896.4	1983.0	1993.6
47.5°	1669.8	1701.8	1760.4	1847.0	1864.4
50°	1536.5	1565.9	1624.5	1708.5	1735.1
52.5°	1397.9	1429.9	1487.2	1564.5	1603.2
55°	1264.7	1286.0	1348.6	1423.3	1464.6
57.5°	1126.1	1146.1	1216.7	1280.7	1323.3
60°	992.8	1018.1	1072.8	1138.1	1187.4
62.5°	864.9	891.5	938.2	995.5	1051.5
65°	741.0	760.9	806.3	863.6	912.9
67.5°	621.0	638.3	683.6	723.6	775.6
70°	499.7	522.4	555.7	594.4	627.7
72.5°	402.5	411.8	439.8	467.8	502.4
75°	297.2	313.2	335.8	351.8	371.8
77.5°	213.2	222.6	235.9	249.2	267.9
80°	142.6	146.6	158.6	161.3	175.9
82.5°	86.6	89.3	92.0	93.3	98.6
85°	46.6	46.6	46.6	44.0	44.0
87.5°	26.7	26.7	22.7	18.7	13.3
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)