

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: P558161

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-82-84-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: P558161  
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-LD4-3LO-50-UNV-82-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

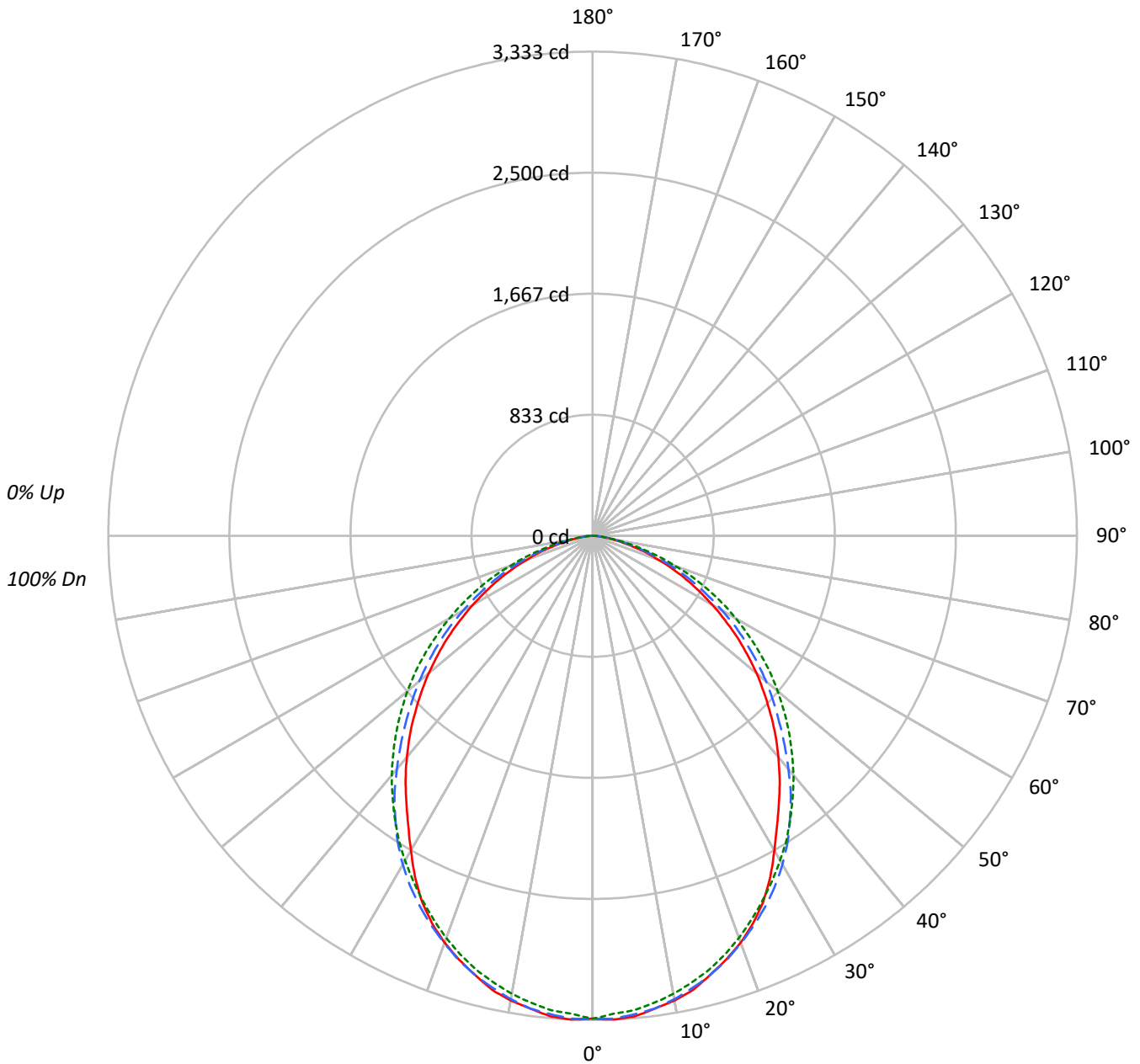
Lumens per Lamp: N/A  
Luminaire Lumens: 7687.0 lumens  
Efficiency: N/A  
Efficacy: 109.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	8946	8946	8946
5°	8970	8932	8856
10°	8875	8850	8749
15°	8717	8717	8618
20°	8533	8544	8434
25°	8252	8354	8221
30°	7770	8120	8020
35°	7342	7783	7795
40°	6985	7362	7555
45°	6586	6916	7271
50°	6165	6517	6962
55°	5686	6064	6585
60°	5121	5533	6124
65°	4521	4920	5570
70°	3768	4190	4733
75°	2961	3346	3705
80°	2118	2356	2613
85°	1380	1380	1300



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	313.0	4.1
10°-20°	879.3	11.4
20°-30°	1285.0	16.7
30°-40°	1458.6	19.0
40°-50°	1408.0	18.3
50°-60°	1161.5	15.1
60°-70°	773.5	10.1
70°-80°	346.1	4.5
80°-90°	61.9	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°	2477.3	32.2
0°-40°	3935.9	51.2
0°-60°	6505.5	84.6
0°-90°	7687.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7687.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3324	3324	3324	3324	3324	
5°	3321	3319	3306	3289	3278	314
15°	3129	3137	3129	3115	3093	882
25°	2779	2801	2814	2793	2769	1273
35°	2235	2266	2369	2382	2373	1400
45°	1730	1760	1817	1900	1911	1335
55°	1212	1232	1292	1364	1404	1082
65°	710	729	773	828	875	704
75°	285	300	322	337	356	311
85°	45	45	45	42	42	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3324.4	3324.4	3324.4	3324.4	3324.4
2.5°	3333.4	3334.6	3327.0	3306.5	3293.8
5°	3320.6	3319.3	3306.5	3288.7	3278.5
7.5°	3283.6	3286.1	3282.3	3256.7	3242.7
10°	3247.8	3249.1	3238.9	3218.4	3201.8
12.5°	3201.8	3200.5	3186.5	3176.3	3149.5
15°	3129.0	3136.7	3129.0	3115.0	3093.3
17.5°	3058.8	3058.8	3063.9	3039.6	3023.0
20°	2979.6	2983.4	2983.4	2964.3	2945.1
22.5°	2887.6	2899.1	2903.0	2882.5	2859.5
25°	2779.1	2800.8	2813.6	2793.1	2768.9
27.5°	2647.5	2680.7	2719.1	2703.7	2676.9
30°	2500.7	2549.2	2613.1	2600.3	2581.1
32.5°	2361.5	2410.0	2498.1	2493.0	2482.8
35°	2235.0	2265.7	2369.1	2381.9	2373.0
37.5°	2115.0	2143.1	2240.1	2269.5	2261.8
40°	1988.5	2019.2	2095.8	2148.2	2150.7
42.5°	1863.4	1892.7	1955.3	2030.7	2030.7
45°	1730.5	1759.9	1817.4	1900.4	1910.6
47.5°	1600.3	1630.9	1687.1	1770.1	1786.7
50°	1472.6	1500.7	1556.8	1637.3	1662.9
52.5°	1339.7	1370.4	1425.3	1499.4	1536.4
55°	1212.0	1232.5	1292.5	1364.0	1403.6
57.5°	1079.2	1098.4	1166.0	1227.3	1268.2
60°	951.5	975.7	1028.1	1090.7	1137.9
62.5°	828.9	854.4	899.1	954.0	1007.7
65°	710.1	729.3	772.7	827.6	874.8
67.5°	595.2	611.8	655.2	693.5	743.3
70°	478.9	500.6	532.6	569.6	601.5
72.5°	385.7	394.6	421.5	448.3	481.5
75°	284.8	300.1	321.8	337.2	356.3
77.5°	204.3	213.3	226.1	238.8	256.7
80°	136.7	140.5	152.0	154.5	168.6
82.5°	83.0	85.6	88.1	89.4	94.5
85°	44.7	44.7	44.7	42.1	42.1
87.5°	25.5	25.5	21.7	17.9	12.8
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)