

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: P556758

Luminaire Tested: **FUSL-12-4-LD4-1STD-35-UNV-82-87-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: P556758  
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-LD4-1STD-35-UNV-82-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

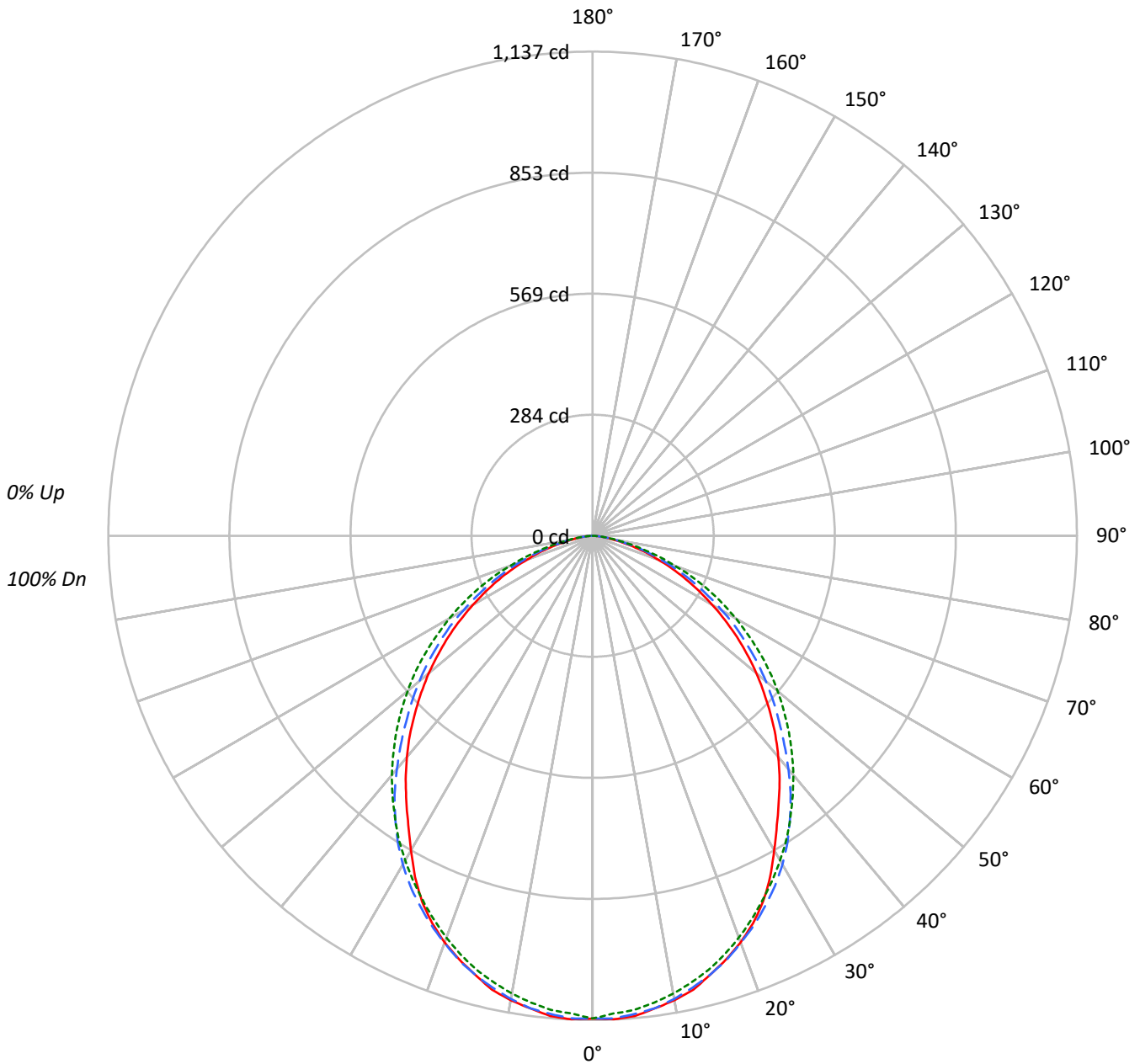
Lumens per Lamp: N/A  
Luminaire Lumens: 2621.0 lumens  
Efficiency: N/A  
Efficacy: 78.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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°	3050	3050	3050
5°	3058	3045	3019
10°	3026	3017	2983
15°	2972	2972	2938
20°	2909	2913	2876
25°	2814	2848	2803
30°	2649	2769	2735
35°	2504	2654	2658
40°	2382	2510	2576
45°	2246	2358	2479
50°	2102	2222	2374
55°	1939	2068	2245
60°	1746	1886	2088
65°	1542	1678	1899
70°	1285	1429	1614
75°	1010	1141	1263
80°	722	803	891
85°	469	469	445



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.7	4.1
10°-20°	299.8	11.4
20°-30°	438.1	16.7
30°-40°	497.3	19.0
40°-50°	480.1	18.3
50°-60°	396.1	15.1
60°-70°	263.7	10.1
70°-80°	118.0	4.5
80°-90°	21.1	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°	844.7	32.2
0°-40°	1342.0	51.2
0°-60°	2218.1	84.6
0°-90°	2621.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2621.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1134	1134	1134	1134	1134	
5°	1132	1132	1127	1121	1118	107
15°	1067	1070	1067	1062	1055	301
25°	948	955	959	952	944	434
35°	762	772	808	812	809	477
45°	590	600	620	648	652	455
55°	413	420	441	465	479	369
65°	242	249	264	282	298	240
75°	97	102	110	115	122	106
85°	15	15	15	14	14	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1133.5	1133.5	1133.5	1133.5	1133.5
2.5°	1136.6	1137.0	1134.4	1127.4	1123.1
5°	1132.2	1131.8	1127.4	1121.3	1117.8
7.5°	1119.6	1120.5	1119.1	1110.4	1105.6
10°	1107.4	1107.8	1104.3	1097.4	1091.7
12.5°	1091.7	1091.3	1086.5	1083.0	1073.9
15°	1066.9	1069.5	1066.9	1062.1	1054.7
17.5°	1042.9	1042.9	1044.7	1036.4	1030.7
20°	1015.9	1017.2	1017.2	1010.7	1004.2
22.5°	984.6	988.5	989.8	982.8	975.0
25°	947.6	955.0	959.3	952.4	944.1
27.5°	902.7	914.0	927.1	921.9	912.7
30°	852.6	869.2	891.0	886.6	880.1
32.5°	805.2	821.7	851.8	850.0	846.5
35°	762.1	772.5	807.8	812.1	809.1
37.5°	721.1	730.7	763.8	773.8	771.2
40°	678.0	688.5	714.6	732.5	733.3
42.5°	635.3	645.4	666.7	692.4	692.4
45°	590.1	600.1	619.7	648.0	651.5
47.5°	545.6	556.1	575.2	603.6	609.2
50°	502.1	511.7	530.8	558.3	567.0
52.5°	456.8	467.3	486.0	511.2	523.9
55°	413.3	420.2	440.7	465.1	478.6
57.5°	368.0	374.5	397.6	418.5	432.4
60°	324.4	332.7	350.5	371.9	388.0
62.5°	282.6	291.3	306.6	325.3	343.6
65°	242.1	248.7	263.5	282.2	298.3
67.5°	202.9	208.6	223.4	236.5	253.4
70°	163.3	170.7	181.6	194.2	205.1
72.5°	131.5	134.6	143.7	152.8	164.2
75°	97.1	102.3	109.7	115.0	121.5
77.5°	69.7	72.7	77.1	81.4	87.5
80°	46.6	47.9	51.8	52.7	57.5
82.5°	28.3	29.2	30.0	30.5	32.2
85°	15.2	15.2	15.2	14.4	14.4
87.5°	8.7	8.7	7.4	6.1	4.4
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)