

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: P556822

Luminaire Tested: **FUSL-12-4-LD4-1STD-40-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: P556822  
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-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

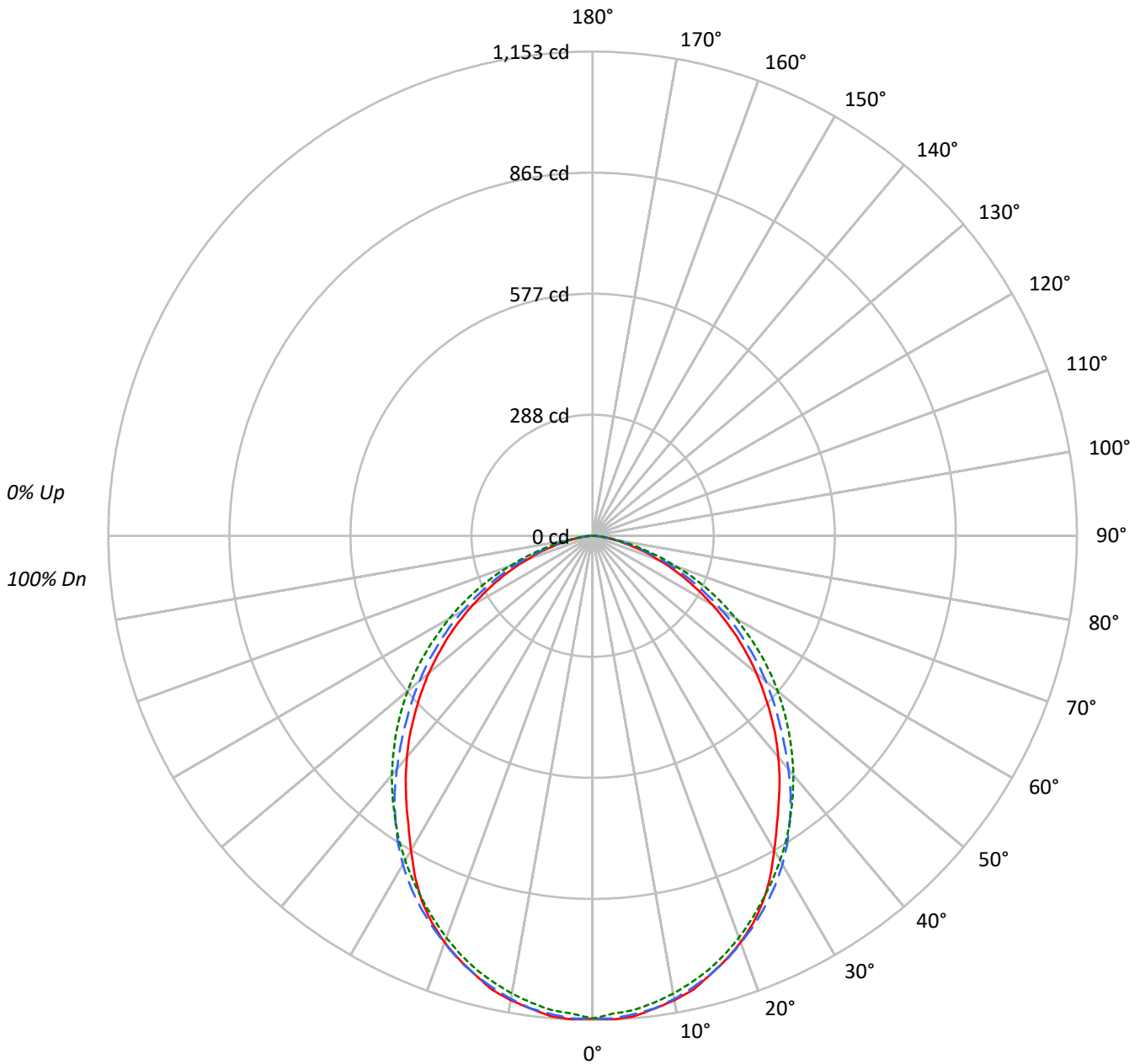
Lumens per Lamp: N/A  
Luminaire Lumens: 2658.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 33.3  
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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3093	3093	3093
5°	3102	3088	3062
10°	3069	3060	3025
15°	3014	3014	2980
20°	2950	2954	2916
25°	2853	2889	2843
30°	2687	2807	2773
35°	2539	2691	2695
40°	2415	2546	2612
45°	2277	2391	2514
50°	2132	2254	2407
55°	1966	2097	2277
60°	1771	1913	2118
65°	1563	1701	1926
70°	1303	1449	1637
75°	1024	1157	1281
80°	733	815	903
85°	479	479	451



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.2	4.1
10°-20°	304.0	11.4
20°-30°	444.3	16.7
30°-40°	504.3	19.0
40°-50°	486.9	18.3
50°-60°	401.6	15.1
60°-70°	267.5	10.1
70°-80°	119.7	4.5
80°-90°	21.4	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°	856.6	32.2
0°-40°	1360.9	51.2
0°-60°	2249.4	84.6
0°-90°	2658.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2658.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1150	1150	1150	1150	1150	
5°	1148	1148	1143	1137	1134	109
15°	1082	1085	1082	1077	1070	305
25°	961	968	973	966	957	440
35°	773	783	819	824	820	484
45°	598	608	628	657	661	462
55°	419	426	447	472	485	374
65°	246	252	267	286	302	243
75°	98	104	111	117	123	108
85°	16	16	16	15	15	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1149.5	1149.5	1149.5	1149.5	1149.5
2.5°	1152.6	1153.0	1150.4	1143.3	1138.9
5°	1148.2	1147.7	1143.3	1137.2	1133.6
7.5°	1135.4	1136.3	1134.9	1126.1	1121.3
10°	1123.0	1123.5	1119.9	1112.9	1107.1
12.5°	1107.1	1106.7	1101.8	1098.3	1089.0
15°	1081.9	1084.6	1081.9	1077.1	1069.6
17.5°	1057.7	1057.7	1059.4	1051.0	1045.3
20°	1030.3	1031.6	1031.6	1025.0	1018.4
22.5°	998.5	1002.5	1003.8	996.7	988.8
25°	960.9	968.5	972.9	965.8	957.4
27.5°	915.5	926.9	940.2	934.9	925.6
30°	864.7	881.5	903.5	899.1	892.5
32.5°	816.5	833.3	863.8	862.0	858.5
35°	772.8	783.4	819.2	823.6	820.5
37.5°	731.3	741.0	774.6	784.7	782.1
40°	687.6	698.2	724.7	742.8	743.7
42.5°	644.3	654.5	676.1	702.2	702.2
45°	598.4	608.5	628.4	657.1	660.7
47.5°	553.3	563.9	583.4	612.1	617.8
50°	509.2	518.9	538.3	566.1	575.0
52.5°	463.3	473.8	492.8	518.5	531.3
55°	419.1	426.2	446.9	471.6	485.3
57.5°	373.2	379.8	403.2	424.4	438.5
60°	329.0	337.4	355.5	377.1	393.5
62.5°	286.6	295.4	310.9	329.9	348.4
65°	245.5	252.2	267.2	286.2	302.5
67.5°	205.8	211.5	226.5	239.8	257.0
70°	165.6	173.1	184.2	197.0	208.0
72.5°	133.4	136.5	145.7	155.0	166.5
75°	98.5	103.8	111.3	116.6	123.2
77.5°	70.7	73.7	78.2	82.6	88.8
80°	47.3	48.6	52.6	53.4	58.3
82.5°	28.7	29.6	30.5	30.9	32.7
85°	15.5	15.5	15.5	14.6	14.6
87.5°	8.8	8.8	7.5	6.2	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)