

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: P556368

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-82-84-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: P556368  
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-LD4-1HI-50-UNV-82-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

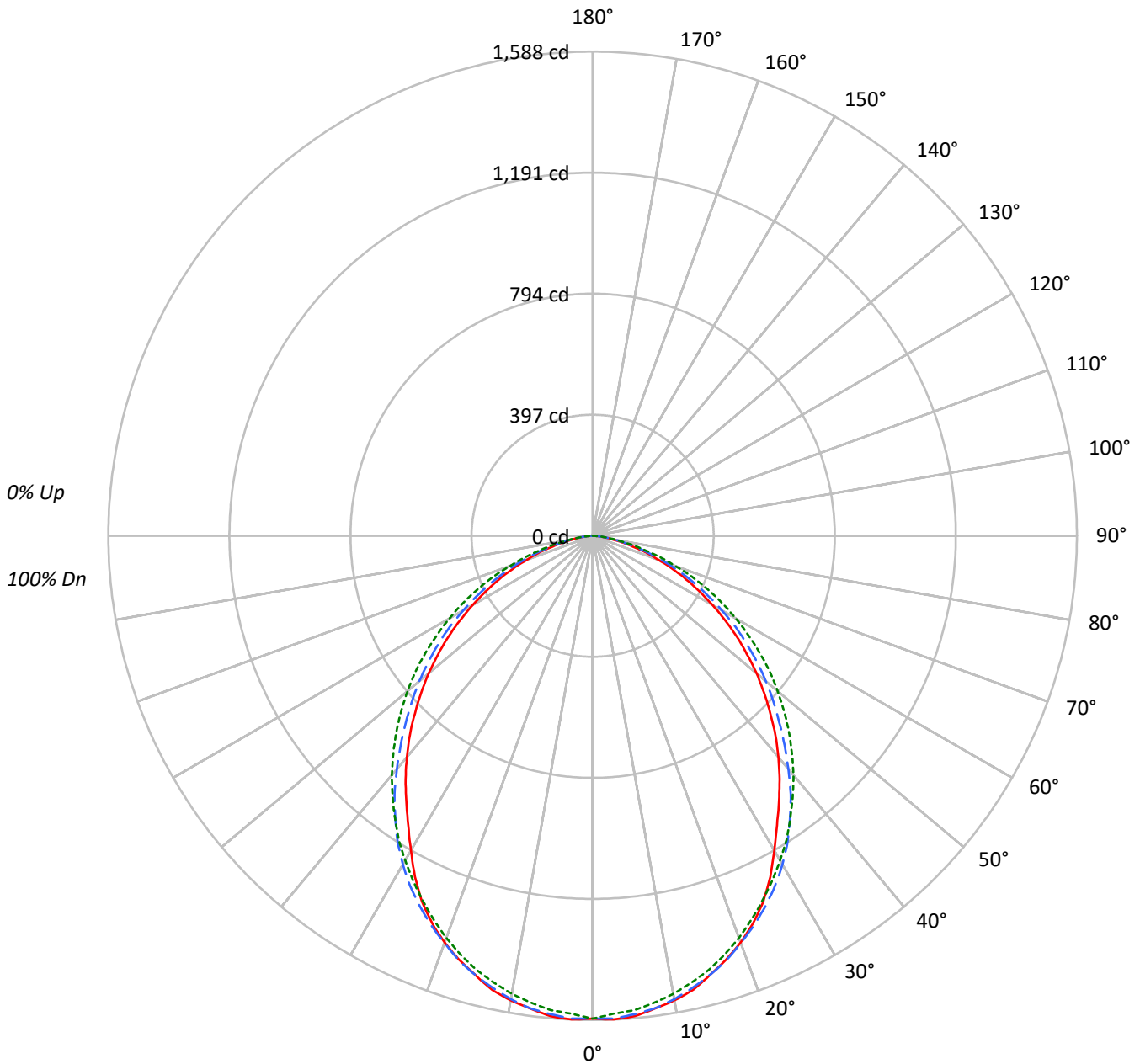
Lumens per Lamp: N/A  
Luminaire Lumens: 3662.0 lumens  
Efficiency: N/A  
Efficacy: 84.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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°	4262	4262	4262
5°	4273	4255	4219
10°	4228	4216	4168
15°	4153	4153	4105
20°	4065	4070	4018
25°	3931	3980	3917
30°	3702	3868	3821
35°	3498	3708	3713
40°	3328	3507	3599
45°	3137	3295	3464
50°	2937	3105	3316
55°	2709	2889	3137
60°	2440	2636	2918
65°	2154	2344	2654
70°	1795	1996	2255
75°	1411	1594	1764
80°	1009	1122	1244
85°	658	658	621



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.1	4.1
10°-20°	418.9	11.4
20°-30°	612.1	16.7
30°-40°	694.9	19.0
40°-50°	670.8	18.3
50°-60°	553.3	15.1
60°-70°	368.5	10.1
70°-80°	164.9	4.5
80°-90°	29.5	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°	1180.2	32.2
0°-40°	1875.0	51.2
0°-60°	3099.1	84.6
0°-90°	3662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3662.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1584	1584	1584	1584	1584	
5°	1582	1581	1575	1567	1562	150
15°	1491	1494	1491	1484	1474	420
25°	1324	1334	1340	1331	1319	606
35°	1065	1079	1129	1135	1130	667
45°	824	838	866	905	910	636
55°	577	587	616	650	669	515
65°	338	347	368	394	417	335
75°	136	143	153	161	170	148
85°	21	21	21	20	20	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1583.7	1583.7	1583.7	1583.7	1583.7
2.5°	1588.0	1588.6	1584.9	1575.2	1569.1
5°	1581.9	1581.3	1575.2	1566.7	1561.8
7.5°	1564.3	1565.5	1563.6	1551.5	1544.8
10°	1547.2	1547.8	1543.0	1533.2	1525.3
12.5°	1525.3	1524.7	1518.0	1513.1	1500.4
15°	1490.6	1494.3	1490.6	1483.9	1473.6
17.5°	1457.2	1457.2	1459.6	1448.0	1440.1
20°	1419.4	1421.3	1421.3	1412.1	1403.0
22.5°	1375.6	1381.1	1382.9	1373.2	1362.3
25°	1323.9	1334.3	1340.4	1330.6	1319.1
27.5°	1261.3	1277.1	1295.3	1288.0	1275.3
30°	1191.3	1214.4	1244.8	1238.7	1229.6
32.5°	1125.0	1148.1	1190.1	1187.6	1182.8
35°	1064.7	1079.3	1128.6	1134.7	1130.4
37.5°	1007.5	1020.9	1067.2	1081.2	1077.5
40°	947.3	961.9	998.4	1023.4	1024.6
42.5°	887.7	901.7	931.5	967.4	967.4
45°	824.4	838.4	865.8	905.3	910.2
47.5°	762.4	777.0	803.7	843.3	851.2
50°	701.5	714.9	741.7	780.0	792.2
52.5°	638.2	652.8	679.0	714.3	731.9
55°	577.4	587.1	615.7	649.8	668.7
57.5°	514.1	523.2	555.5	584.7	604.2
60°	453.3	464.8	489.8	519.6	542.1
62.5°	394.9	407.0	428.3	454.5	480.0
65°	338.3	347.4	368.1	394.3	416.8
67.5°	283.5	291.4	312.1	330.4	354.1
70°	228.2	238.5	253.7	271.4	286.6
72.5°	183.7	188.0	200.8	213.6	229.4
75°	135.7	143.0	153.3	160.6	169.7
77.5°	97.3	101.6	107.7	113.8	122.3
80°	65.1	66.9	72.4	73.6	80.3
82.5°	39.5	40.8	42.0	42.6	45.0
85°	21.3	21.3	21.3	20.1	20.1
87.5°	12.2	12.2	10.3	8.5	6.1
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)