

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: P556149

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-80-86-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: P556149  
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-30-UNV-80-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

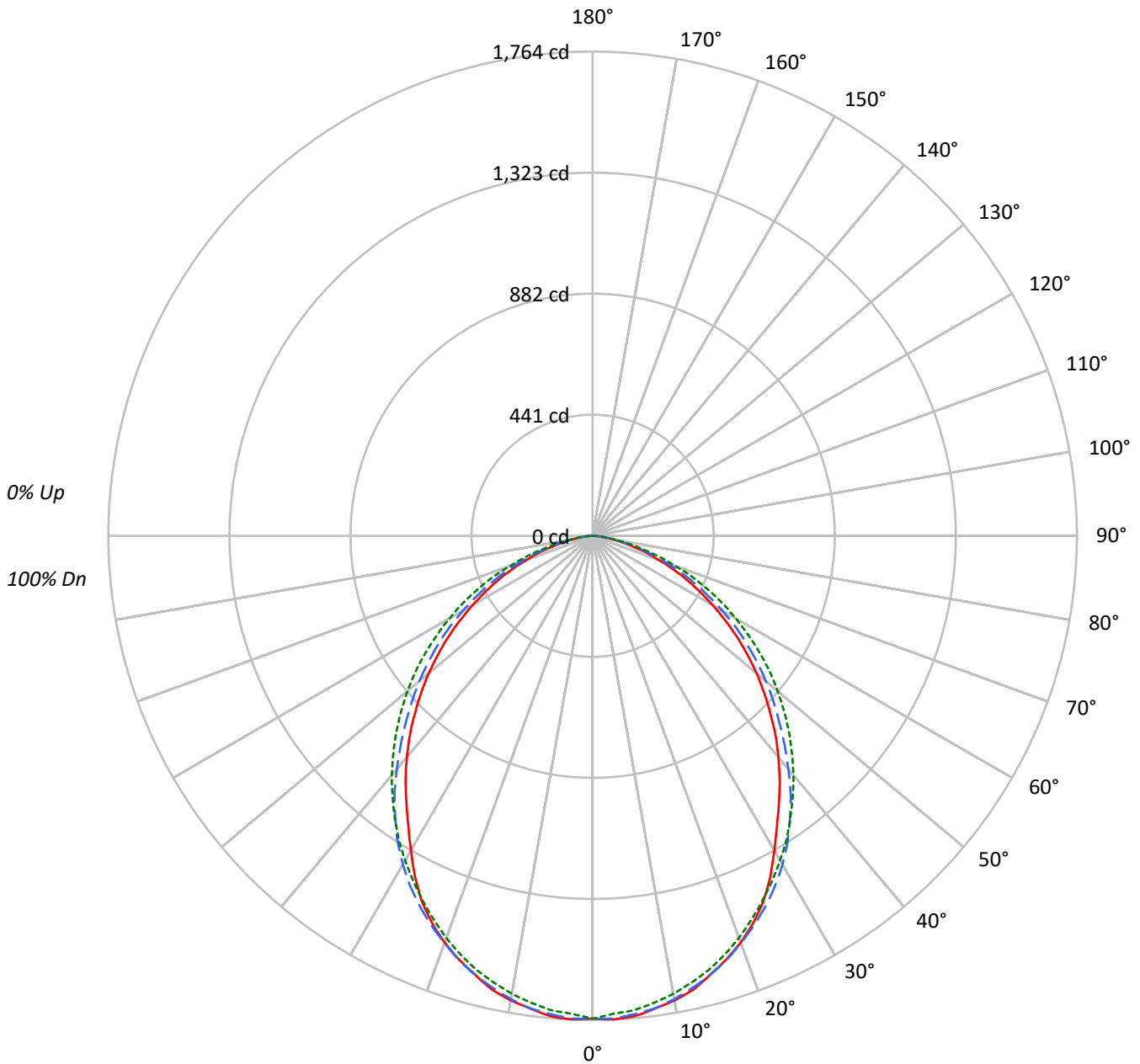
Lumens per Lamp: N/A  
Luminaire Lumens: 4068.0 lumens  
Efficiency: N/A  
Efficacy: 94.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (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°	4734	4734	4734
5°	4747	4727	4687
10°	4697	4683	4630
15°	4613	4613	4561
20°	4515	4521	4463
25°	4367	4421	4351
30°	4112	4297	4244
35°	3886	4119	4125
40°	3697	3896	3998
45°	3485	3660	3848
50°	3262	3449	3684
55°	3009	3209	3485
60°	2710	2928	3241
65°	2393	2604	2948
70°	1995	2217	2504
75°	1567	1771	1961
80°	1120	1246	1382
85°	732	732	689



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.6	4.1
10°-20°	465.3	11.4
20°-30°	680.0	16.7
30°-40°	771.9	19.0
40°-50°	745.1	18.3
50°-60°	614.7	15.1
60°-70°	409.3	10.1
70°-80°	183.2	4.5
80°-90°	32.8	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°	1311.0	32.2
0°-40°	2082.9	51.2
0°-60°	3442.7	84.6
0°-90°	4068.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4068.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1759	1759	1759	1759	1759	
5°	1757	1757	1750	1740	1735	166
15°	1656	1660	1656	1648	1637	467
25°	1471	1482	1489	1478	1465	674
35°	1183	1199	1254	1260	1256	741
45°	916	931	962	1006	1011	707
55°	641	652	684	722	743	572
65°	376	386	409	438	463	373
75°	151	159	170	178	189	165
85°	24	24	24	22	22	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1759.3	1759.3	1759.3	1759.3	1759.3
2.5°	1764.0	1764.7	1760.7	1749.8	1743.1
5°	1757.3	1756.6	1749.8	1740.4	1735.0
7.5°	1737.7	1739.0	1737.0	1723.5	1716.0
10°	1718.8	1719.4	1714.0	1703.2	1694.4
12.5°	1694.4	1693.7	1686.3	1680.9	1666.7
15°	1655.9	1660.0	1655.9	1648.5	1637.0
17.5°	1618.7	1618.7	1621.4	1608.6	1599.8
20°	1576.8	1578.8	1578.8	1568.7	1558.6
22.5°	1528.2	1534.2	1536.3	1525.5	1513.3
25°	1470.7	1482.2	1489.0	1478.1	1465.3
27.5°	1401.1	1418.7	1438.9	1430.8	1416.6
30°	1323.4	1349.0	1382.8	1376.1	1365.9
32.5°	1249.7	1275.4	1322.0	1319.3	1313.9
35°	1182.8	1199.0	1253.7	1260.5	1255.8
37.5°	1119.3	1134.1	1185.5	1201.0	1197.0
40°	1052.3	1068.6	1109.1	1136.8	1138.2
42.5°	986.1	1001.6	1034.8	1074.6	1074.6
45°	915.8	931.4	961.8	1005.7	1011.1
47.5°	846.9	863.1	892.8	936.8	945.6
50°	779.3	794.2	823.9	866.5	880.0
52.5°	709.0	725.2	754.3	793.5	813.1
55°	641.4	652.2	684.0	721.8	742.8
57.5°	571.1	581.3	617.1	649.5	671.1
60°	503.5	516.4	544.1	577.2	602.2
62.5°	438.6	452.2	475.8	504.9	533.3
65°	375.8	385.9	408.9	438.0	463.0
67.5°	315.0	323.7	346.7	367.0	393.4
70°	253.5	264.9	281.8	301.4	318.3
72.5°	204.1	208.8	223.0	237.2	254.8
75°	150.7	158.8	170.3	178.4	188.6
77.5°	108.1	112.9	119.6	126.4	135.9
80°	72.3	74.3	80.4	81.8	89.2
82.5°	43.9	45.3	46.6	47.3	50.0
85°	23.7	23.7	23.7	22.3	22.3
87.5°	13.5	13.5	11.5	9.5	6.8
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)