

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: P556251

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-UNV-82-94-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: P556251  
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-35-UNV-82-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

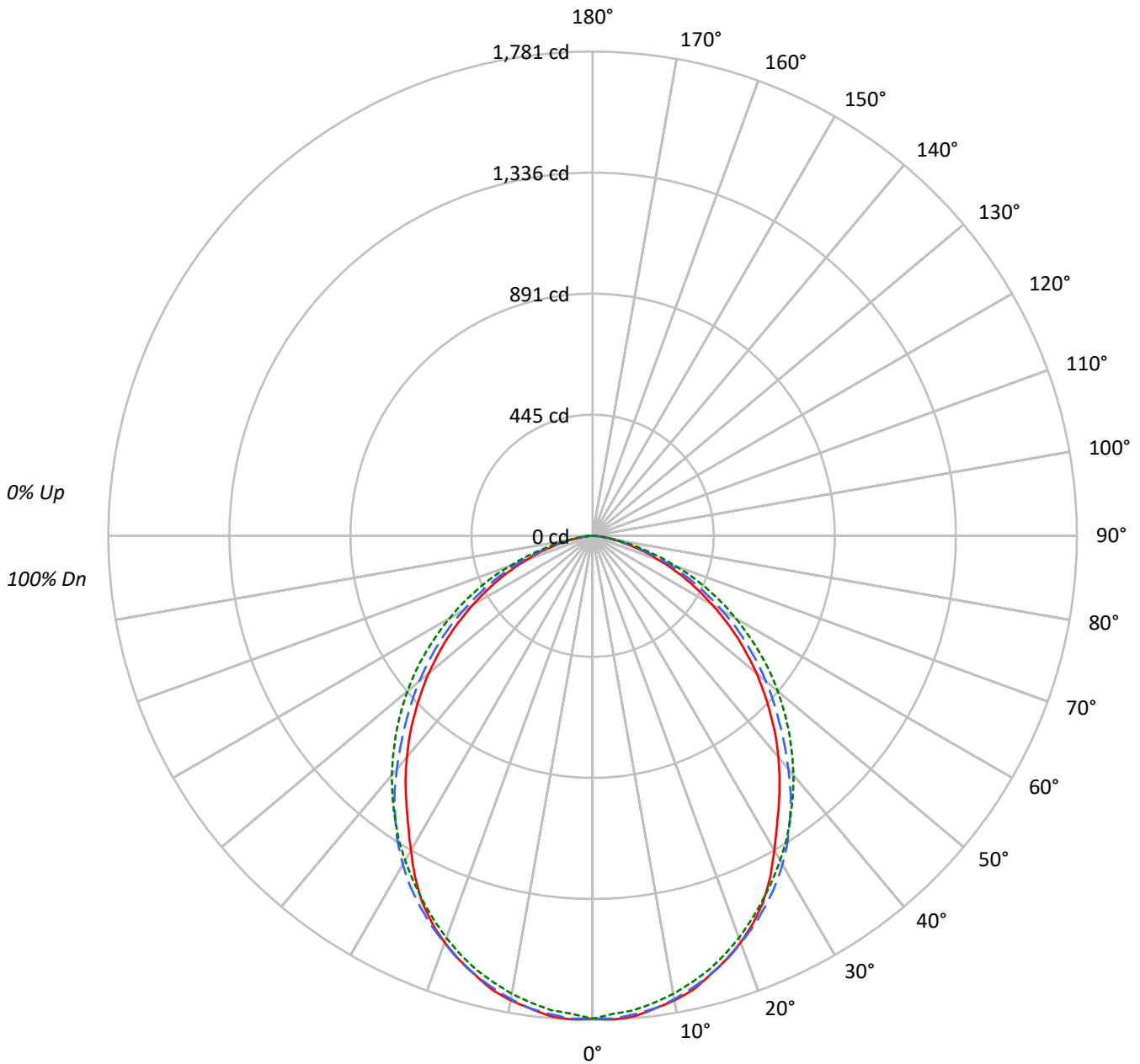
Lumens per Lamp: N/A  
Luminaire Lumens: 4107.0 lumens  
Efficiency: N/A  
Efficacy: 95.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4780	4780	4780
5°	4792	4772	4732
10°	4741	4729	4674
15°	4657	4657	4604
20°	4559	4565	4506
25°	4409	4463	4392
30°	4152	4338	4285
35°	3923	4158	4165
40°	3732	3933	4037
45°	3519	3695	3885
50°	3294	3482	3719
55°	3038	3240	3518
60°	2736	2956	3272
65°	2416	2628	2976
70°	2013	2238	2529
75°	1582	1788	1980
80°	1131	1258	1396
85°	738	738	695



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.2	4.1
10°-20°	469.8	11.4
20°-30°	686.5	16.7
30°-40°	779.3	19.0
40°-50°	752.3	18.3
50°-60°	620.6	15.1
60°-70°	413.2	10.1
70°-80°	184.9	4.5
80°-90°	33.1	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°	1323.6	32.2
0°-40°	2102.9	51.2
0°-60°	3475.7	84.6
0°-90°	4107.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4107.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1776	1776	1776	1776	1776	
5°	1774	1773	1767	1757	1752	168
15°	1672	1676	1672	1664	1653	471
25°	1485	1496	1503	1492	1479	680
35°	1194	1210	1266	1273	1268	748
45°	925	940	971	1015	1021	713
55°	648	658	690	729	750	578
65°	379	390	413	442	467	376
75°	152	160	172	180	190	166
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°	1776.2	1776.2	1776.2	1776.2	1776.2
2.5°	1780.9	1781.6	1777.5	1766.6	1759.8
5°	1774.1	1773.4	1766.6	1757.1	1751.6
7.5°	1754.3	1755.7	1753.7	1740.0	1732.5
10°	1735.2	1735.9	1730.5	1719.5	1710.7
12.5°	1710.7	1710.0	1702.5	1697.0	1682.7
15°	1671.8	1675.9	1671.8	1664.3	1652.7
17.5°	1634.2	1634.2	1637.0	1624.0	1615.1
20°	1591.9	1594.0	1594.0	1583.7	1573.5
22.5°	1542.8	1548.9	1551.0	1540.1	1527.8
25°	1484.8	1496.4	1503.2	1492.3	1479.3
27.5°	1414.5	1432.3	1452.7	1444.5	1430.2
30°	1336.1	1362.0	1396.1	1389.3	1379.0
32.5°	1261.7	1287.6	1334.7	1332.0	1326.5
35°	1194.1	1210.5	1265.8	1272.6	1267.8
37.5°	1130.0	1145.0	1196.9	1212.5	1208.5
40°	1062.4	1078.8	1119.7	1147.7	1149.1
42.5°	995.6	1011.3	1044.7	1084.9	1084.9
45°	924.6	940.3	971.0	1015.3	1020.8
47.5°	855.0	871.4	901.4	945.7	954.6
50°	786.8	801.8	831.8	874.8	888.4
52.5°	715.8	732.2	761.5	801.1	820.9
55°	647.6	658.5	690.5	728.8	749.9
57.5°	576.6	586.8	623.0	655.7	677.6
60°	508.4	521.3	549.3	582.7	608.0
62.5°	442.8	456.5	480.4	509.7	538.4
65°	379.4	389.6	412.8	442.2	467.4
67.5°	318.0	326.8	350.0	370.5	397.1
70°	255.9	267.5	284.5	304.3	321.4
72.5°	206.1	210.8	225.2	239.5	257.2
75°	152.2	160.4	172.0	180.1	190.4
77.5°	109.2	114.0	120.8	127.6	137.2
80°	73.0	75.1	81.2	82.6	90.1
82.5°	44.4	45.7	47.1	47.8	50.5
85°	23.9	23.9	23.9	22.5	22.5
87.5°	13.6	13.6	11.6	9.6	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)