

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: P556383

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-82-97-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: P556383  
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-82-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375  
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT  
LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

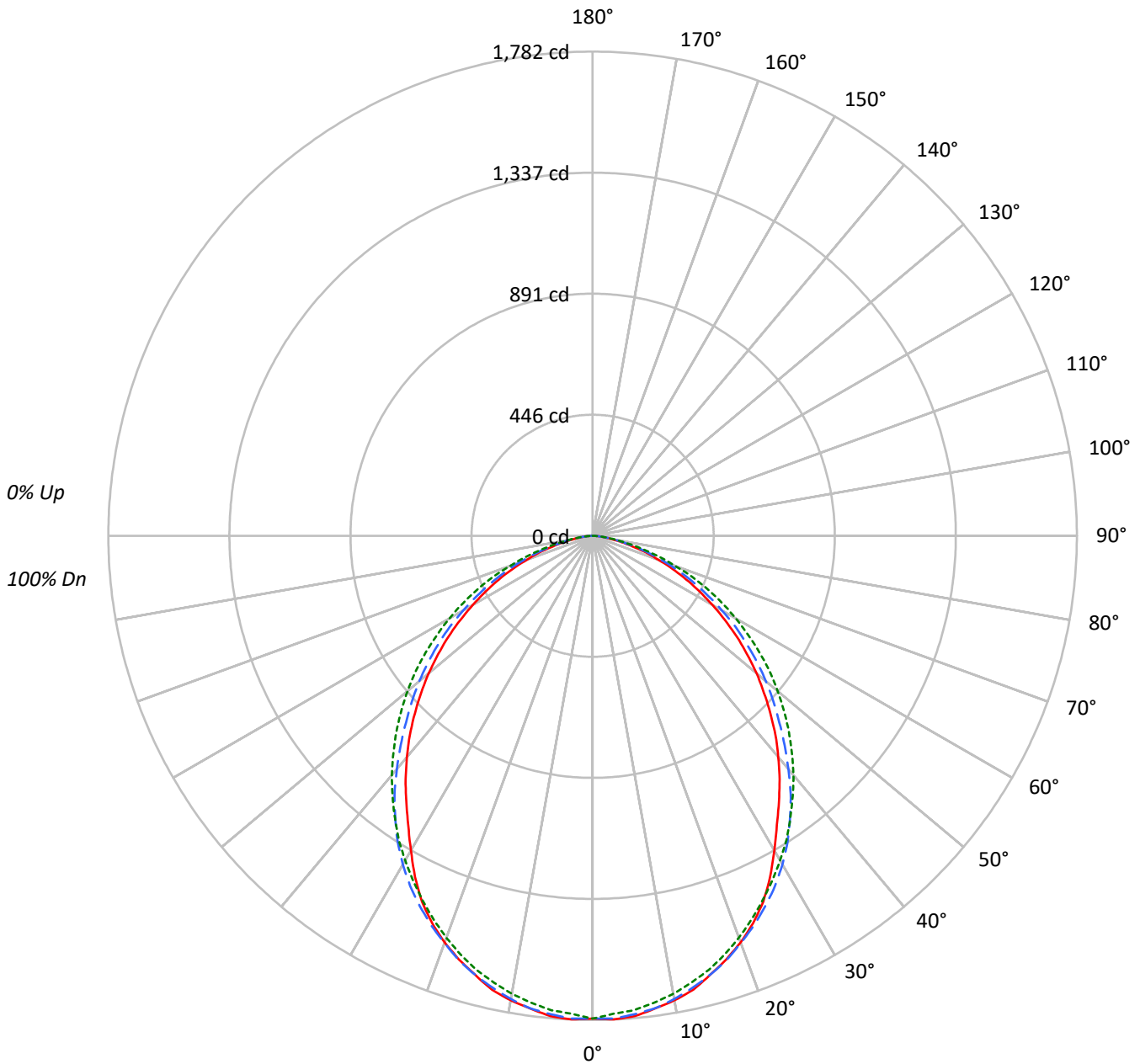
Lumens per Lamp: N/A  
Luminaire Lumens: 4109.0 lumens  
Efficiency: N/A  
Efficacy: 95.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4782	4782	4782
5°	4795	4774	4734
10°	4744	4731	4677
15°	4660	4660	4606
20°	4561	4567	4508
25°	4411	4466	4395
30°	4153	4340	4287
35°	3925	4160	4167
40°	3734	3935	4038
45°	3520	3697	3887
50°	3295	3484	3721
55°	3040	3241	3520
60°	2737	2958	3274
65°	2417	2630	2977
70°	2014	2240	2530
75°	1582	1788	1981
80°	1131	1258	1396
85°	738	738	695



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.3	4.1
10°-20°	470.0	11.4
20°-30°	686.9	16.7
30°-40°	779.7	19.0
40°-50°	752.6	18.3
50°-60°	620.9	15.1
60°-70°	413.5	10.1
70°-80°	185.0	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°	1324.2	32.2
0°-40°	2103.9	51.2
0°-60°	3477.4	84.6
0°-90°	4109.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4109.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1777	1777	1777	1777	1777	
5°	1775	1774	1768	1758	1752	168
15°	1673	1677	1673	1665	1654	472
25°	1486	1497	1504	1493	1480	680
35°	1195	1211	1266	1273	1268	749
45°	925	941	972	1016	1021	714
55°	648	659	691	729	750	578
65°	380	390	413	442	468	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°	1777.0	1777.0	1777.0	1777.0	1777.0
2.5°	1781.8	1782.5	1778.4	1767.5	1760.7
5°	1775.0	1774.3	1767.5	1757.9	1752.5
7.5°	1755.2	1756.6	1754.5	1740.9	1733.3
10°	1736.1	1736.8	1731.3	1720.4	1711.5
12.5°	1711.5	1710.8	1703.3	1697.8	1683.5
15°	1672.6	1676.7	1672.6	1665.1	1653.5
17.5°	1635.0	1635.0	1637.8	1624.8	1615.9
20°	1592.7	1594.8	1594.8	1584.5	1574.3
22.5°	1543.6	1549.7	1551.7	1540.8	1528.5
25°	1485.5	1497.1	1504.0	1493.0	1480.1
27.5°	1415.2	1433.0	1453.4	1445.3	1430.9
30°	1336.7	1362.6	1396.8	1390.0	1379.7
32.5°	1262.3	1288.2	1335.3	1332.6	1327.1
35°	1194.7	1211.1	1266.4	1273.2	1268.4
37.5°	1130.5	1145.6	1197.4	1213.1	1209.0
40°	1062.9	1079.3	1120.3	1148.3	1149.6
42.5°	996.0	1011.7	1045.2	1085.5	1085.5
45°	925.0	940.7	971.5	1015.8	1021.3
47.5°	855.4	871.8	901.8	946.2	955.1
50°	787.1	802.2	832.2	875.2	888.9
52.5°	716.1	732.5	761.9	801.5	821.3
55°	647.9	658.8	690.9	729.1	750.3
57.5°	576.9	587.1	623.3	656.1	677.9
60°	508.6	521.6	549.6	583.0	608.3
62.5°	443.1	456.7	480.6	510.0	538.6
65°	379.6	389.8	413.0	442.4	467.6
67.5°	318.1	327.0	350.2	370.7	397.3
70°	256.0	267.6	284.7	304.5	321.5
72.5°	206.2	211.0	225.3	239.6	257.4
75°	152.2	160.4	172.0	180.2	190.5
77.5°	109.2	114.0	120.8	127.7	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°	13.7	13.7	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)