

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: P556225

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-UNV-81-84-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: P556225  
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-81-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

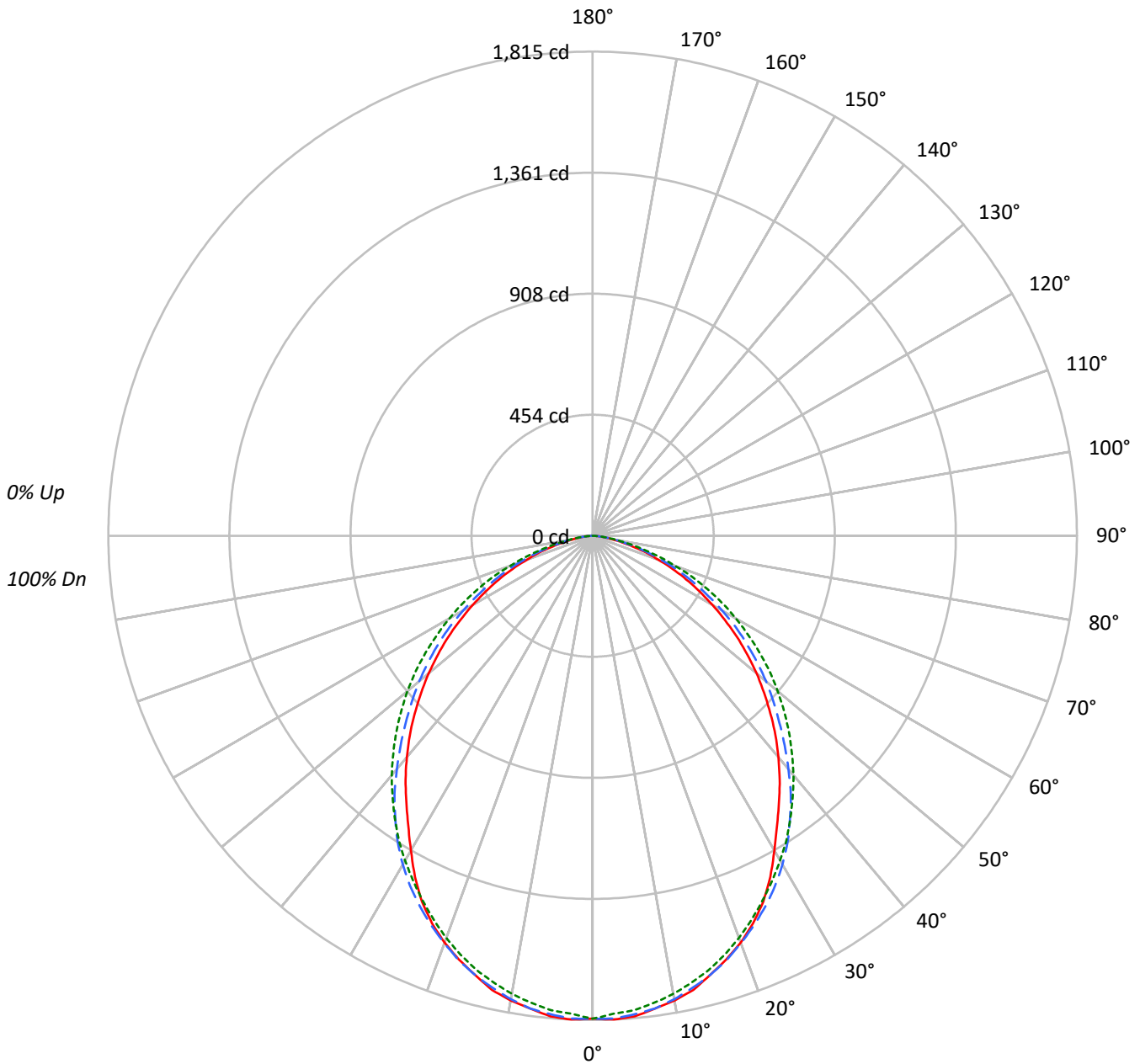
Lumens per Lamp: N/A  
Luminaire Lumens: 4186.0 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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					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								
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°	4871	4871	4871
5°	4885	4864	4823
10°	4833	4819	4764
15°	4747	4747	4693
20°	4647	4652	4593
25°	4494	4549	4477
30°	4231	4422	4368
35°	3998	4238	4245
40°	3804	4009	4114
45°	3586	3766	3959
50°	3357	3549	3791
55°	3096	3302	3586
60°	2788	3013	3335
65°	2462	2679	3033
70°	2052	2282	2578
75°	1613	1823	2017
80°	1153	1283	1423
85°	750	750	710



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	170.4	4.1
10°-20°	478.8	11.4
20°-30°	699.7	16.7
30°-40°	794.3	19.0
40°-50°	766.8	18.3
50°-60°	632.5	15.1
60°-70°	421.2	10.1
70°-80°	188.5	4.5
80°-90°	33.7	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°	1349.0	32.2
0°-40°	2143.3	51.2
0°-60°	3542.6	84.6
0°-90°	4186.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4186.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1810	1810	1810	1810	1810	
5°	1808	1808	1801	1791	1785	171
15°	1704	1708	1704	1696	1684	480
25°	1513	1525	1532	1521	1508	693
35°	1217	1234	1290	1297	1292	763
45°	942	958	990	1035	1040	727
55°	660	671	704	743	764	589
65°	387	397	421	451	476	383
75°	155	163	175	184	194	170
85°	24	24	24	23	23	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1810.3	1810.3	1810.3	1810.3	1810.3
2.5°	1815.2	1815.9	1811.7	1800.6	1793.6
5°	1808.3	1807.6	1800.6	1790.9	1785.3
7.5°	1788.1	1789.5	1787.4	1773.5	1765.8
10°	1768.6	1769.3	1763.7	1752.6	1743.6
12.5°	1743.6	1742.9	1735.2	1729.7	1715.1
15°	1703.9	1708.1	1703.9	1696.3	1684.5
17.5°	1665.7	1665.7	1668.5	1655.2	1646.2
20°	1622.6	1624.6	1624.6	1614.2	1603.8
22.5°	1572.5	1578.7	1580.8	1569.7	1557.2
25°	1513.4	1525.2	1532.1	1521.0	1507.8
27.5°	1441.7	1459.8	1480.7	1472.3	1457.7
30°	1361.8	1388.2	1423.0	1416.0	1405.6
32.5°	1285.9	1312.4	1360.4	1357.6	1352.0
35°	1217.1	1233.8	1290.1	1297.1	1292.2
37.5°	1151.7	1167.0	1219.9	1235.9	1231.7
40°	1082.9	1099.6	1141.3	1169.8	1171.2
42.5°	1014.7	1030.7	1064.8	1105.8	1105.8
45°	942.4	958.4	989.7	1034.9	1040.4
47.5°	871.4	888.1	918.7	963.9	973.0
50°	801.9	817.2	847.8	891.6	905.5
52.5°	729.6	746.3	776.2	816.5	836.7
55°	660.0	671.1	703.8	742.8	764.3
57.5°	587.7	598.1	635.0	668.4	690.6
60°	518.1	531.3	559.9	593.9	619.7
62.5°	451.4	465.3	489.6	519.5	548.7
65°	386.7	397.1	420.8	450.7	476.4
67.5°	324.1	333.1	356.8	377.6	404.8
70°	260.8	272.6	290.0	310.2	327.6
72.5°	210.0	214.9	229.5	244.1	262.2
75°	155.1	163.4	175.3	183.6	194.0
77.5°	111.3	116.1	123.1	130.1	139.8
80°	74.4	76.5	82.8	84.2	91.8
82.5°	45.2	46.6	48.0	48.7	51.5
85°	24.3	24.3	24.3	23.0	23.0
87.5°	13.9	13.9	11.8	9.7	7.0
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)