

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: P557187

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-81-85-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: P557187  
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-LD4-2LO-30-UNV-81-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

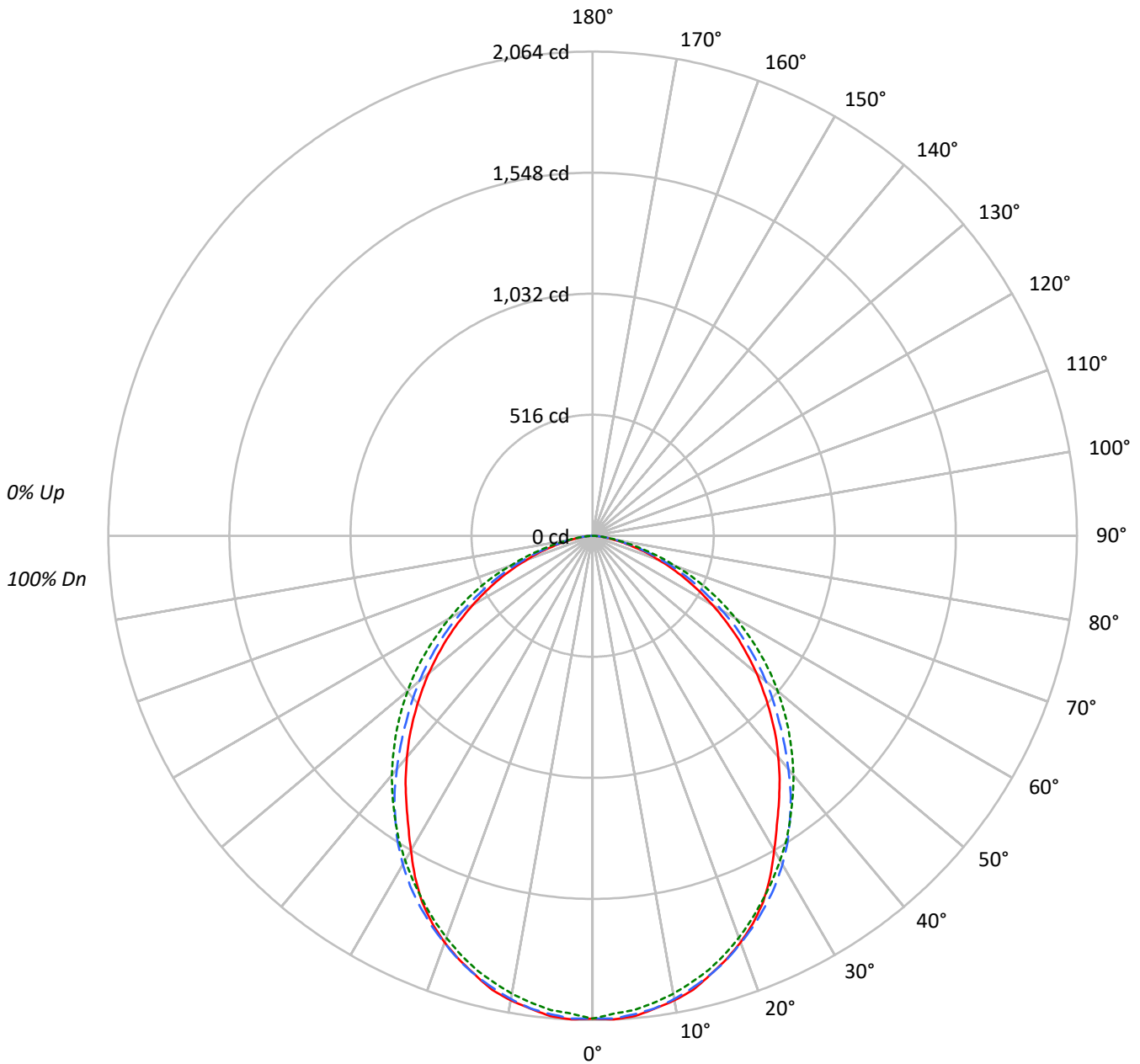
Lumens per Lamp: N/A  
Luminaire Lumens: 4759.0 lumens  
Efficiency: N/A  
Efficacy: 101.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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°	5538	5538	5538
5°	5553	5530	5483
10°	5494	5479	5416
15°	5397	5397	5335
20°	5283	5289	5221
25°	5108	5172	5090
30°	4811	5027	4965
35°	4546	4818	4826
40°	4325	4558	4677
45°	4077	4282	4502
50°	3817	4035	4310
55°	3521	3754	4077
60°	3171	3426	3792
65°	2799	3046	3449
70°	2333	2594	2930
75°	1833	2072	2294
80°	1311	1458	1618
85°	855	855	806



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	193.8	4.1
10°-20°	544.4	11.4
20°-30°	795.5	16.7
30°-40°	903.0	19.0
40°-50°	871.7	18.3
50°-60°	719.1	15.1
60°-70°	478.9	10.1
70°-80°	214.3	4.5
80°-90°	38.3	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°	1533.7	32.2
0°-40°	2436.7	51.2
0°-60°	4027.5	84.6
0°-90°	4759.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4759.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2058	2058	2058	2058	2058	
5°	2056	2055	2047	2036	2030	195
15°	1937	1942	1937	1928	1915	546
25°	1720	1734	1742	1729	1714	788
35°	1384	1403	1467	1475	1469	867
45°	1071	1090	1125	1176	1183	827
55°	750	763	800	844	869	670
65°	440	452	478	512	542	436
75°	176	186	199	209	221	193
85°	28	28	28	26	26	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2058.1	2058.1	2058.1	2058.1	2058.1
2.5°	2063.7	2064.5	2059.7	2047.1	2039.2
5°	2055.8	2055.0	2047.1	2036.0	2029.7
7.5°	2032.8	2034.4	2032.1	2016.2	2007.5
10°	2010.7	2011.5	2005.2	1992.5	1982.2
12.5°	1982.2	1981.4	1972.8	1966.4	1949.8
15°	1937.2	1941.9	1937.2	1928.5	1915.0
17.5°	1893.7	1893.7	1896.8	1881.8	1871.5
20°	1844.7	1847.0	1847.0	1835.2	1823.3
22.5°	1787.7	1794.8	1797.2	1784.6	1770.3
25°	1720.5	1734.0	1741.9	1729.2	1714.2
27.5°	1639.1	1659.6	1683.4	1673.9	1657.3
30°	1548.2	1578.2	1617.7	1609.8	1598.0
32.5°	1462.0	1492.0	1546.6	1543.4	1537.1
35°	1383.7	1402.7	1466.7	1474.6	1469.1
37.5°	1309.4	1326.8	1386.9	1405.0	1400.3
40°	1231.1	1250.1	1297.5	1329.9	1331.5
42.5°	1153.6	1171.8	1210.5	1257.2	1257.2
45°	1071.4	1089.6	1125.1	1176.5	1182.9
47.5°	990.7	1009.7	1044.5	1095.9	1106.2
50°	911.7	929.1	963.8	1013.7	1029.5
52.5°	829.4	848.4	882.4	928.3	951.2
55°	750.4	763.0	800.2	844.4	869.0
57.5°	668.1	680.0	721.9	759.8	785.1
60°	589.1	604.1	636.5	675.2	704.5
62.5°	513.2	529.0	556.6	590.6	623.8
65°	439.6	451.5	478.4	512.4	541.6
67.5°	368.5	378.7	405.6	429.3	460.2
70°	296.5	309.9	329.7	352.6	372.4
72.5°	238.8	244.3	260.9	277.5	298.1
75°	176.3	185.8	199.3	208.7	220.6
77.5°	126.5	132.0	140.0	147.9	158.9
80°	84.6	87.0	94.1	95.7	104.4
82.5°	51.4	53.0	54.6	55.3	58.5
85°	27.7	27.7	27.7	26.1	26.1
87.5°	15.8	15.8	13.4	11.1	7.9
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)