

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: P557204

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-82-86-EDD-90**

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: P557204  
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-82-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

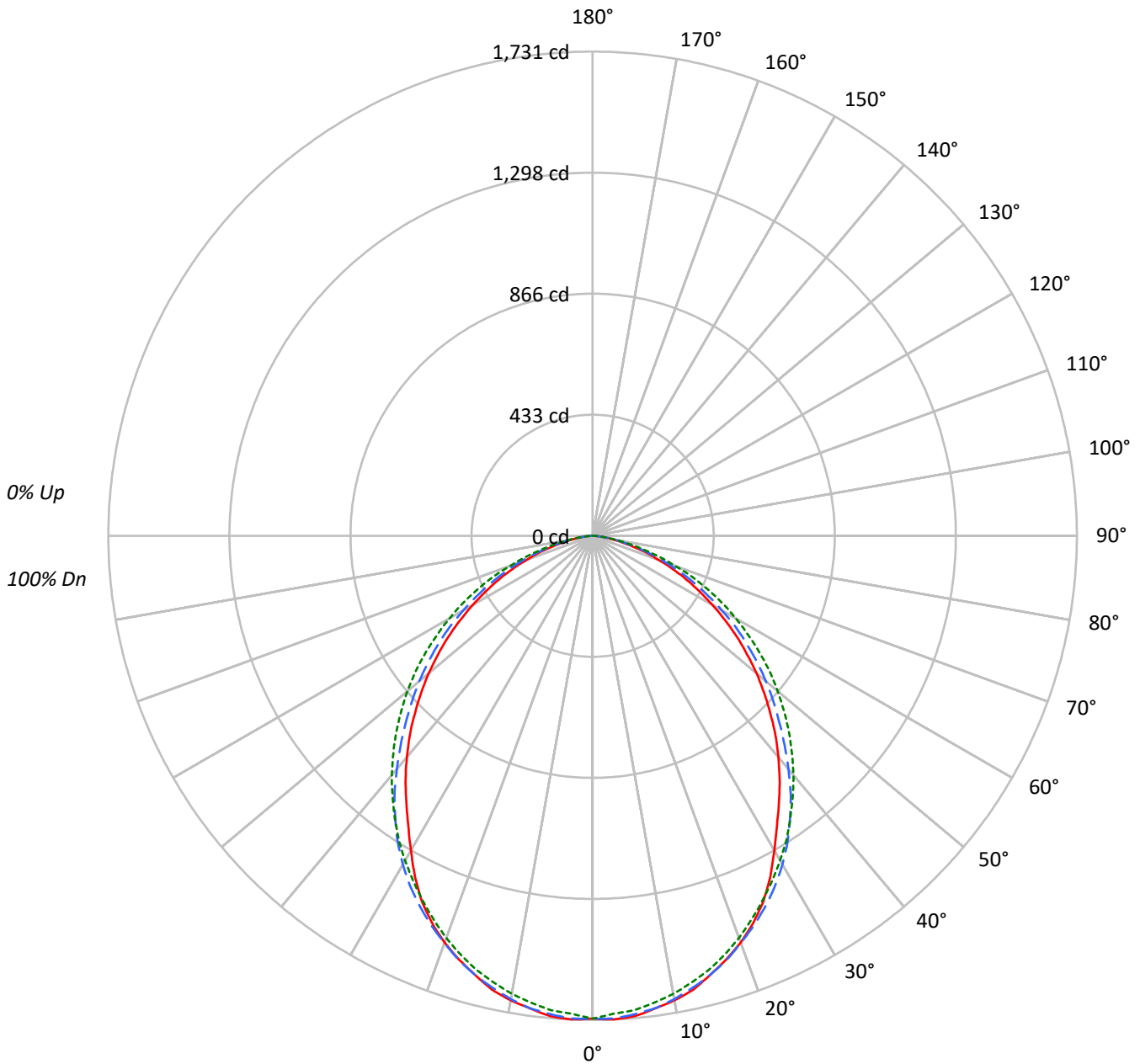
Lumens per Lamp: N/A  
Luminaire Lumens: 3992.0 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4646	4646	4646
5°	4658	4639	4599
10°	4609	4596	4544
15°	4527	4527	4475
20°	4431	4437	4380
25°	4285	4338	4269
30°	4035	4217	4165
35°	3813	4042	4048
40°	3628	3823	3923
45°	3420	3592	3776
50°	3201	3385	3615
55°	2953	3149	3420
60°	2659	2873	3181
65°	2348	2555	2893
70°	1957	2176	2458
75°	1538	1737	1923
80°	1100	1223	1356
85°	716	716	676



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.5	4.1
10°-20°	456.6	11.4
20°-30°	667.3	16.7
30°-40°	757.5	19.0
40°-50°	731.2	18.3
50°-60°	603.2	15.1
60°-70°	401.7	10.1
70°-80°	179.7	4.5
80°-90°	32.2	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°	1286.5	32.2
0°-40°	2044.0	51.2
0°-60°	3378.4	84.6
0°-90°	3992.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3992.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1726	1726	1726	1726	1726	
5°	1724	1724	1717	1708	1703	163
15°	1625	1629	1625	1618	1606	458
25°	1443	1454	1461	1450	1438	661
35°	1161	1177	1230	1237	1232	727
45°	899	914	944	987	992	693
55°	629	640	671	708	729	562
65°	369	379	401	430	454	366
75°	148	156	167	175	185	162
85°	23	23	23	22	22	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1726.4	1726.4	1726.4	1726.4	1726.4
2.5°	1731.1	1731.7	1727.8	1717.2	1710.5
5°	1724.4	1723.8	1717.2	1707.9	1702.6
7.5°	1705.2	1706.5	1704.5	1691.3	1684.0
10°	1686.6	1687.3	1682.0	1671.4	1662.8
12.5°	1662.8	1662.1	1654.8	1649.5	1635.6
15°	1625.0	1628.9	1625.0	1617.7	1606.4
17.5°	1588.5	1588.5	1591.1	1578.5	1569.9
20°	1547.4	1549.3	1549.3	1539.4	1529.5
22.5°	1499.6	1505.6	1507.6	1497.0	1485.0
25°	1443.2	1454.5	1461.1	1450.5	1437.9
27.5°	1374.9	1392.2	1412.1	1404.1	1390.2
30°	1298.6	1323.8	1357.0	1350.4	1340.4
32.5°	1226.3	1251.6	1297.3	1294.7	1289.4
35°	1160.7	1176.6	1230.3	1237.0	1232.3
37.5°	1098.3	1112.9	1163.3	1178.6	1174.6
40°	1032.7	1048.6	1088.4	1115.6	1116.9
42.5°	967.7	982.9	1015.4	1054.6	1054.6
45°	898.7	914.0	943.8	986.9	992.2
47.5°	831.1	847.0	876.2	919.3	927.9
50°	764.7	779.3	808.5	850.3	863.6
52.5°	695.7	711.7	740.2	778.7	797.9
55°	629.4	640.0	671.2	708.3	728.9
57.5°	560.4	570.4	605.5	637.4	658.6
60°	494.1	506.7	533.9	566.4	591.0
62.5°	430.4	443.7	466.9	495.4	523.3
65°	368.8	378.7	401.3	429.8	454.3
67.5°	309.1	317.7	340.2	360.1	386.0
70°	248.7	260.0	276.6	295.8	312.4
72.5°	200.3	204.9	218.9	232.8	250.0
75°	147.9	155.9	167.1	175.1	185.0
77.5°	106.1	110.8	117.4	124.0	133.3
80°	71.0	73.0	78.9	80.3	87.5
82.5°	43.1	44.4	45.8	46.4	49.1
85°	23.2	23.2	23.2	21.9	21.9
87.5°	13.3	13.3	11.3	9.3	6.6
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)