

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: P557218

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-93-85-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: P557218  
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-93-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

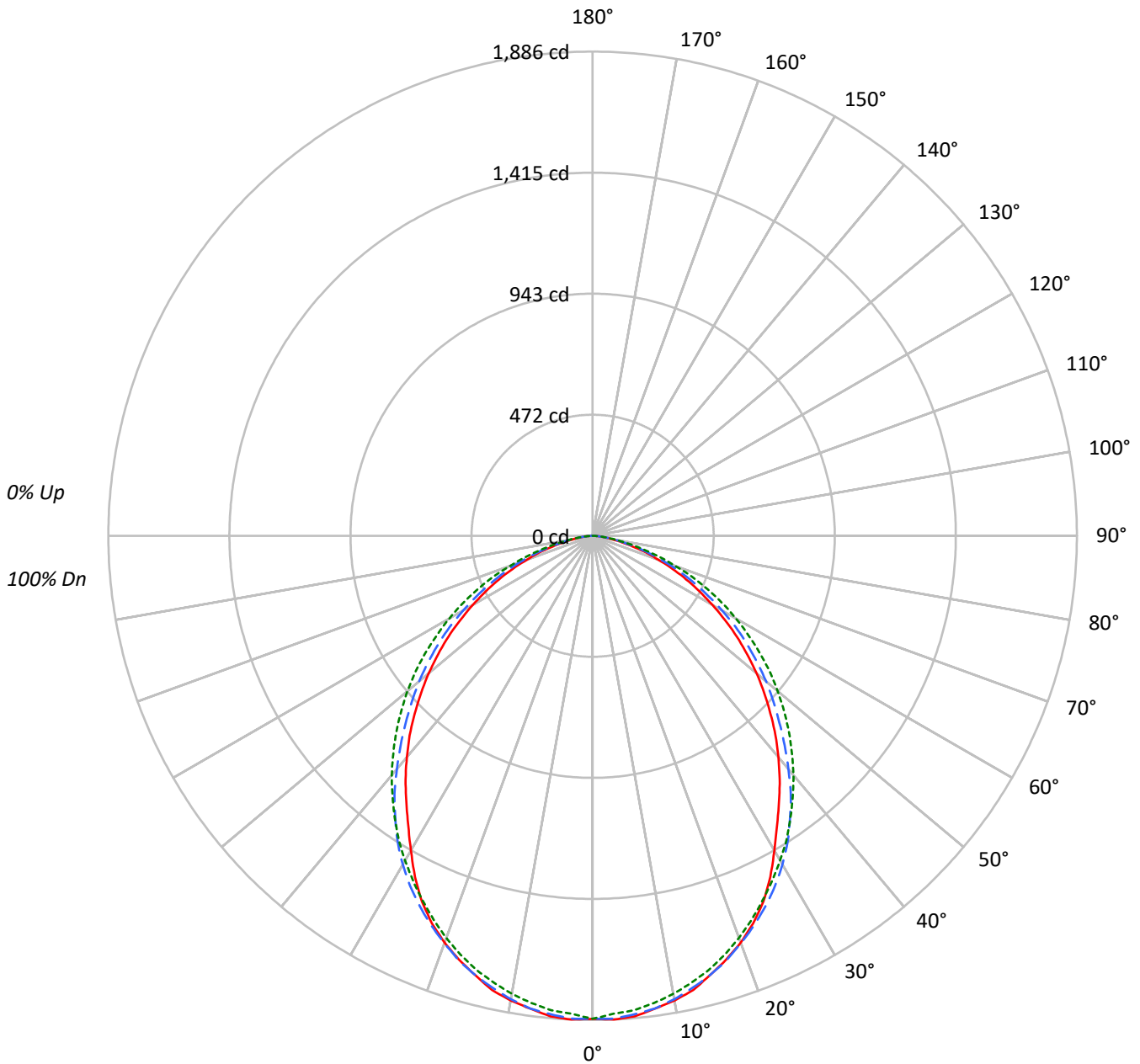
Lumens per Lamp: N/A  
Luminaire Lumens: 4350.0 lumens  
Efficiency: N/A  
Efficacy: 92.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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°	5063	5063	5063
5°	5076	5054	5011
10°	5022	5008	4951
15°	4933	4933	4876
20°	4828	4835	4773
25°	4670	4728	4652
30°	4397	4595	4538
35°	4155	4404	4411
40°	3953	4166	4275
45°	3727	3914	4115
50°	3489	3688	3939
55°	3218	3431	3727
60°	2898	3131	3466
65°	2558	2784	3152
70°	2132	2371	2678
75°	1676	1893	2096
80°	1198	1333	1478
85°	781	781	738



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	177.1	4.1
10°-20°	497.6	11.4
20°-30°	727.2	16.7
30°-40°	825.4	19.0
40°-50°	796.8	18.3
50°-60°	657.3	15.1
60°-70°	437.7	10.1
70°-80°	195.9	4.5
80°-90°	35.1	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°	1401.9	32.2
0°-40°	2227.3	51.2
0°-60°	3681.4	84.6
0°-90°	4350.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4350.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1881	1881	1881	1881	1881	
5°	1879	1878	1871	1861	1855	178
15°	1771	1775	1771	1763	1750	499
25°	1573	1585	1592	1581	1567	720
35°	1265	1282	1341	1348	1343	792
45°	979	996	1028	1075	1081	756
55°	686	697	731	772	794	612
65°	402	413	437	468	495	398
75°	161	170	182	191	202	176
85°	25	25	25	24	24	34
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1881.3	1881.3	1881.3	1881.3	1881.3
2.5°	1886.3	1887.0	1882.7	1871.1	1863.9
5°	1879.1	1878.4	1871.1	1861.0	1855.2
7.5°	1858.1	1859.6	1857.4	1843.0	1835.0
10°	1837.9	1838.6	1832.8	1821.3	1811.9
12.5°	1811.9	1811.2	1803.2	1797.4	1782.2
15°	1770.7	1775.0	1770.7	1762.7	1750.4
17.5°	1730.9	1730.9	1733.8	1720.1	1710.7
20°	1686.1	1688.3	1688.3	1677.5	1666.6
22.5°	1634.1	1640.6	1642.8	1631.2	1618.2
25°	1572.7	1584.9	1592.2	1580.6	1566.9
27.5°	1498.2	1517.0	1538.7	1530.0	1514.8
30°	1415.1	1442.6	1478.7	1471.5	1460.6
32.5°	1336.3	1363.8	1413.7	1410.8	1405.0
35°	1264.8	1282.1	1340.7	1347.9	1342.8
37.5°	1196.8	1212.7	1267.7	1284.3	1280.0
40°	1125.3	1142.6	1186.0	1215.6	1217.1
42.5°	1054.5	1071.1	1106.5	1149.1	1149.1
45°	979.3	995.9	1028.4	1075.4	1081.2
47.5°	905.6	922.9	954.7	1001.7	1011.1
50°	833.3	849.2	881.0	926.5	941.0
52.5°	758.1	775.5	806.6	848.5	869.4
55°	685.9	697.4	731.4	771.9	794.3
57.5°	610.7	621.5	659.9	694.5	717.7
60°	538.4	552.2	581.8	617.2	644.0
62.5°	469.1	483.5	508.8	539.9	570.2
65°	401.8	412.7	437.3	468.3	495.1
67.5°	336.8	346.2	370.8	392.4	420.6
70°	271.0	283.3	301.4	322.3	340.4
72.5°	218.3	223.3	238.5	253.7	272.5
75°	161.2	169.8	182.1	190.8	201.6
77.5°	115.6	120.7	127.9	135.2	145.3
80°	77.3	79.5	86.0	87.5	95.4
82.5°	47.0	48.4	49.9	50.6	53.5
85°	25.3	25.3	25.3	23.9	23.9
87.5°	14.5	14.5	12.3	10.1	7.2
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)