

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: P557402

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-82-94-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: P557402  
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-50-UNV-82-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

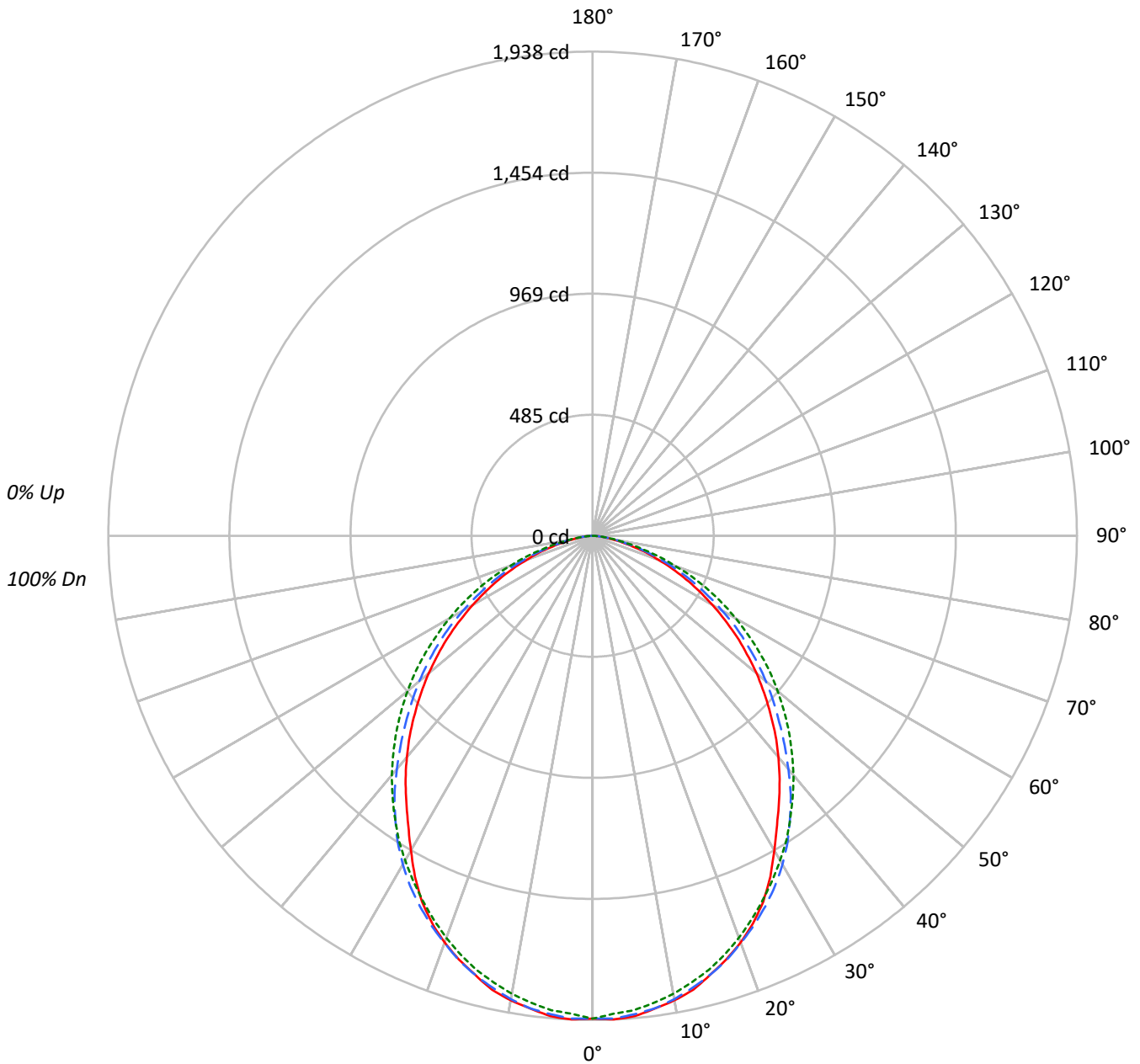
Lumens per Lamp: N/A  
Luminaire Lumens: 4469.0 lumens  
Efficiency: N/A  
Efficacy: 95.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	5201	5201	5201
5°	5215	5193	5149
10°	5159	5145	5086
15°	5068	5068	5010
20°	4961	4967	4903
25°	4797	4857	4779
30°	4517	4721	4663
35°	4269	4525	4532
40°	4061	4280	4392
45°	3829	4021	4227
50°	3584	3789	4047
55°	3306	3525	3828
60°	2977	3217	3561
65°	2628	2860	3238
70°	2190	2436	2751
75°	1722	1945	2154
80°	1230	1370	1519
85°	803	803	756



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	182.0	4.1
10°-20°	511.2	11.4
20°-30°	747.0	16.7
30°-40°	848.0	19.0
40°-50°	818.6	18.3
50°-60°	675.3	15.1
60°-70°	449.7	10.1
70°-80°	201.2	4.5
80°-90°	36.0	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°	1440.2	32.2
0°-40°	2288.2	51.2
0°-60°	3782.1	84.6
0°-90°	4469.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4469.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1933	1933	1933	1933	1933	
5°	1930	1930	1922	1912	1906	183
15°	1819	1824	1819	1811	1798	513
25°	1616	1628	1636	1624	1610	740
35°	1299	1317	1377	1385	1380	814
45°	1006	1023	1057	1105	1111	776
55°	705	716	751	793	816	629
65°	413	424	449	481	509	409
75°	166	174	187	196	207	181
85°	26	26	26	24	24	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1932.7	1932.7	1932.7	1932.7	1932.7
2.5°	1937.9	1938.7	1934.2	1922.3	1914.9
5°	1930.5	1929.8	1922.3	1911.9	1906.0
7.5°	1909.0	1910.5	1908.2	1893.4	1885.2
10°	1888.2	1888.9	1883.0	1871.1	1861.4
12.5°	1861.4	1860.7	1852.5	1846.6	1831.0
15°	1819.1	1823.6	1819.1	1811.0	1798.3
17.5°	1778.3	1778.3	1781.3	1767.1	1757.5
20°	1732.3	1734.5	1734.5	1723.3	1712.2
22.5°	1678.8	1685.5	1687.7	1675.8	1662.5
25°	1615.7	1628.3	1635.7	1623.8	1609.7
27.5°	1539.2	1558.5	1580.8	1571.9	1556.3
30°	1453.8	1482.0	1519.2	1511.7	1500.6
32.5°	1372.9	1401.1	1452.3	1449.4	1443.4
35°	1299.4	1317.2	1377.3	1384.8	1379.6
37.5°	1229.6	1245.9	1302.3	1319.4	1315.0
40°	1156.1	1173.9	1218.4	1248.9	1250.4
42.5°	1083.3	1100.4	1136.8	1180.6	1180.6
45°	1006.1	1023.2	1056.6	1104.8	1110.8
47.5°	930.4	948.2	980.8	1029.1	1038.8
50°	856.1	872.4	905.1	951.9	966.7
52.5°	778.9	796.7	828.6	871.7	893.2
55°	704.6	716.5	751.4	793.0	816.0
57.5°	627.4	638.5	677.9	713.5	737.3
60°	553.2	567.3	597.7	634.1	661.6
62.5°	481.9	496.7	522.7	554.6	585.8
65°	412.8	424.0	449.2	481.1	508.6
67.5°	346.0	355.7	380.9	403.2	432.1
70°	278.4	291.1	309.6	331.2	349.7
72.5°	224.2	229.4	245.0	260.6	279.9
75°	165.6	174.5	187.1	196.0	207.2
77.5°	118.8	124.0	131.4	138.8	149.2
80°	79.4	81.7	88.4	89.8	98.0
82.5°	48.3	49.7	51.2	52.0	54.9
85°	26.0	26.0	26.0	24.5	24.5
87.5°	14.8	14.8	12.6	10.4	7.4
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)