

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: P557391

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-UNV-81-97-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: P557391
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-81-97-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

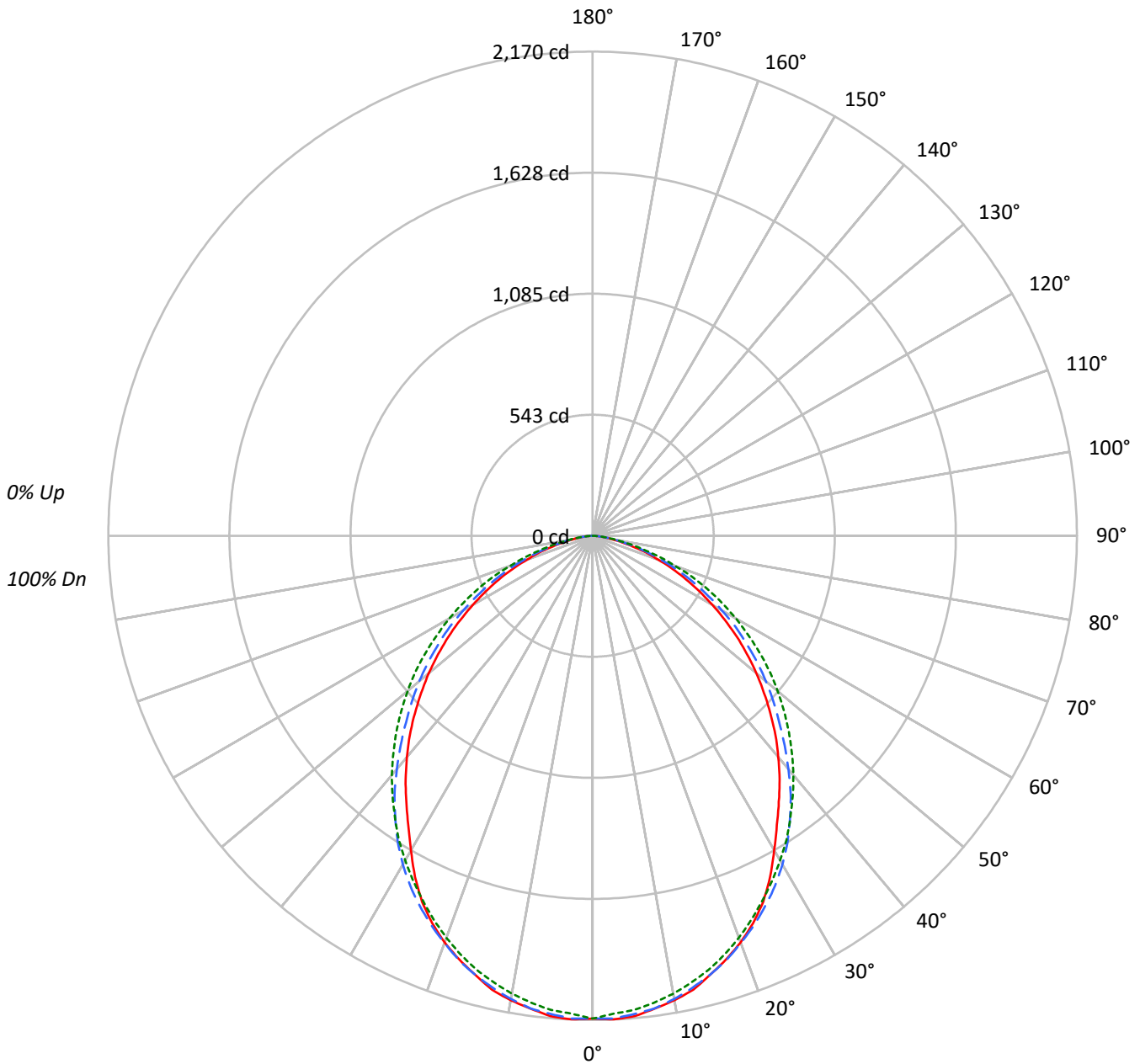
Lumens per Lamp: N/A
Luminaire Lumens: 5003.0 lumens
Efficiency: N/A
Efficacy: 106.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (A_{in}): 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°	5822	5822	5822
5°	5838	5813	5764
10°	5776	5760	5694
15°	5673	5673	5609
20°	5553	5560	5489
25°	5370	5437	5351
30°	5057	5285	5220
35°	4778	5065	5073
40°	4546	4791	4917
45°	4286	4501	4732
50°	4012	4242	4531
55°	3701	3947	4286
60°	3333	3601	3986
65°	2943	3202	3626
70°	2452	2727	3080
75°	1928	2178	2411
80°	1378	1533	1700
85°	898	898	846



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.7	4.1
10°-20°	572.3	11.4
20°-30°	836.3	16.7
30°-40°	949.3	19.0
40°-50°	916.4	18.3
50°-60°	756.0	15.1
60°-70°	503.4	10.1
70°-80°	225.3	4.5
80°-90°	40.3	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°	1612.3	32.2
0°-40°	2561.6	51.2
0°-60°	4234.0	84.6
0°-90°	5003.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5003.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2164	2164	2164	2164	2164	
5°	2161	2160	2152	2140	2134	205
15°	2036	2042	2036	2027	2013	574
25°	1809	1823	1831	1818	1802	828
35°	1455	1475	1542	1550	1544	911
45°	1126	1145	1183	1237	1244	869
55°	789	802	841	888	914	704
65°	462	475	503	539	569	458
75°	185	195	210	219	232	203
85°	29	29	29	27	27	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2163.7	2163.7	2163.7	2163.7	2163.7
2.5°	2169.5	2170.3	2165.3	2152.0	2143.7
5°	2161.2	2160.3	2152.0	2140.4	2133.7
7.5°	2137.1	2138.7	2136.2	2119.6	2110.5
10°	2113.8	2114.6	2108.0	2094.7	2083.9
12.5°	2083.9	2083.0	2073.9	2067.2	2049.8
15°	2036.5	2041.5	2036.5	2027.3	2013.2
17.5°	1990.8	1990.8	1994.1	1978.3	1967.5
20°	1939.2	1941.7	1941.7	1929.3	1916.8
22.5°	1879.4	1886.9	1889.4	1876.1	1861.1
25°	1808.7	1822.9	1831.2	1817.9	1802.1
27.5°	1723.1	1744.7	1769.7	1759.7	1742.2
30°	1627.5	1659.1	1700.7	1692.4	1679.9
32.5°	1536.9	1568.5	1625.9	1622.5	1615.9
35°	1454.6	1474.6	1541.9	1550.2	1544.4
37.5°	1376.5	1394.8	1458.0	1477.1	1472.1
40°	1294.2	1314.2	1364.0	1398.1	1399.8
42.5°	1212.8	1231.9	1272.6	1321.6	1321.6
45°	1126.3	1145.4	1182.8	1236.9	1243.5
47.5°	1041.5	1061.5	1098.0	1152.1	1162.9
50°	958.4	976.7	1013.3	1065.6	1082.2
52.5°	872.0	891.9	927.6	975.9	1000.0
55°	788.8	802.1	841.2	887.7	913.5
57.5°	702.4	714.9	758.9	798.8	825.4
60°	619.3	635.1	669.1	709.9	740.6
62.5°	539.5	556.1	585.2	620.9	655.8
65°	462.2	474.6	502.9	538.6	569.4
67.5°	387.3	398.2	426.4	451.4	483.8
70°	311.7	325.8	346.6	370.7	391.5
72.5°	251.0	256.8	274.3	291.8	313.4
75°	185.4	195.3	209.5	219.4	231.9
77.5°	133.0	138.8	147.1	155.4	167.1
80°	88.9	91.4	98.9	100.6	109.7
82.5°	54.0	55.7	57.4	58.2	61.5
85°	29.1	29.1	29.1	27.4	27.4
87.5°	16.6	16.6	14.1	11.6	8.3
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)