

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: P557346

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-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: P557346
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

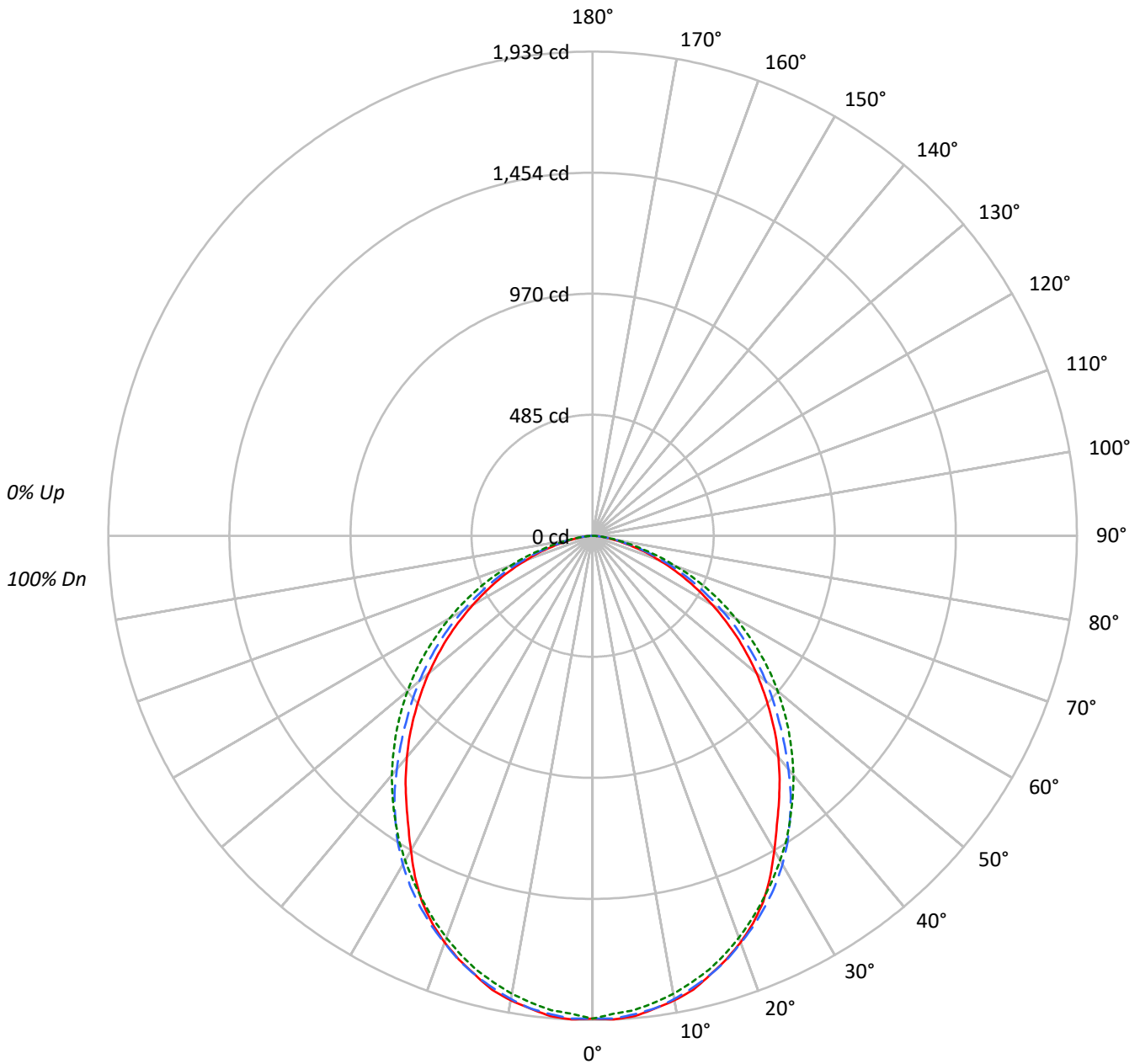
Lumens per Lamp: N/A
Luminaire Lumens: 4471.0 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
Input Voltage (V): NR
Input Current (A_{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°	5203	5203	5203
5°	5217	5195	5151
10°	5162	5147	5089
15°	5070	5070	5012
20°	4963	4969	4905
25°	4799	4859	4782
30°	4520	4722	4665
35°	4271	4527	4534
40°	4063	4282	4394
45°	3830	4023	4229
50°	3586	3791	4049
55°	3307	3527	3830
60°	2978	3218	3562
65°	2630	2862	3240
70°	2192	2437	2753
75°	1723	1946	2155
80°	1232	1370	1520
85°	803	803	756



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.1	4.1
10°-20°	511.4	11.4
20°-30°	747.4	16.7
30°-40°	848.4	19.0
40°-50°	819.0	18.3
50°-60°	675.6	15.1
60°-70°	449.9	10.1
70°-80°	201.3	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°	1440.9	32.2
0°-40°	2289.2	51.2
0°-60°	3783.8	84.6
0°-90°	4471.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4471.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1934	1934	1934	1934	1934	
5°	1931	1931	1923	1913	1907	183
15°	1820	1824	1820	1812	1799	513
25°	1616	1629	1636	1625	1610	740
35°	1300	1318	1378	1385	1380	815
45°	1006	1024	1057	1105	1111	777
55°	705	717	752	793	816	629
65°	413	424	449	481	509	410
75°	166	175	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°	1933.6	1933.6	1933.6	1933.6	1933.6
2.5°	1938.8	1939.5	1935.1	1923.2	1915.8
5°	1931.4	1930.6	1923.2	1912.8	1906.9
7.5°	1909.8	1911.3	1909.1	1894.2	1886.1
10°	1889.0	1889.8	1883.8	1871.9	1862.3
12.5°	1862.3	1861.5	1853.4	1847.4	1831.8
15°	1819.9	1824.4	1819.9	1811.8	1799.1
17.5°	1779.1	1779.1	1782.1	1767.9	1758.3
20°	1733.0	1735.3	1735.3	1724.1	1713.0
22.5°	1679.5	1686.2	1688.5	1676.6	1663.2
25°	1616.4	1629.0	1636.5	1624.6	1610.5
27.5°	1539.9	1559.2	1581.5	1572.6	1557.0
30°	1454.5	1482.7	1519.8	1512.4	1501.3
32.5°	1373.5	1401.7	1453.0	1450.0	1444.1
35°	1300.0	1317.8	1378.0	1385.4	1380.2
37.5°	1230.1	1246.5	1302.9	1320.0	1315.6
40°	1156.6	1174.4	1219.0	1249.4	1250.9
42.5°	1083.8	1100.9	1137.3	1181.1	1181.1
45°	1006.5	1023.6	1057.1	1105.3	1111.3
47.5°	930.8	948.6	981.3	1029.6	1039.2
50°	856.5	872.8	905.5	952.3	967.2
52.5°	779.2	797.1	829.0	872.1	893.6
55°	704.9	716.8	751.7	793.3	816.4
57.5°	627.7	638.8	678.2	713.9	737.6
60°	553.4	567.5	598.0	634.4	661.9
62.5°	482.1	497.0	523.0	554.9	586.1
65°	413.0	424.2	449.4	481.4	508.8
67.5°	346.2	355.8	381.1	403.4	432.3
70°	278.6	291.2	309.8	331.3	349.9
72.5°	224.3	229.5	245.1	260.7	280.0
75°	165.7	174.6	187.2	196.1	207.3
77.5°	118.9	124.1	131.5	138.9	149.3
80°	79.5	81.7	88.4	89.9	98.1
82.5°	48.3	49.8	51.3	52.0	55.0
85°	26.0	26.0	26.0	24.5	24.5
87.5°	14.9	14.9	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)