

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: P557223

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-93-87-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: P557223
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-93-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

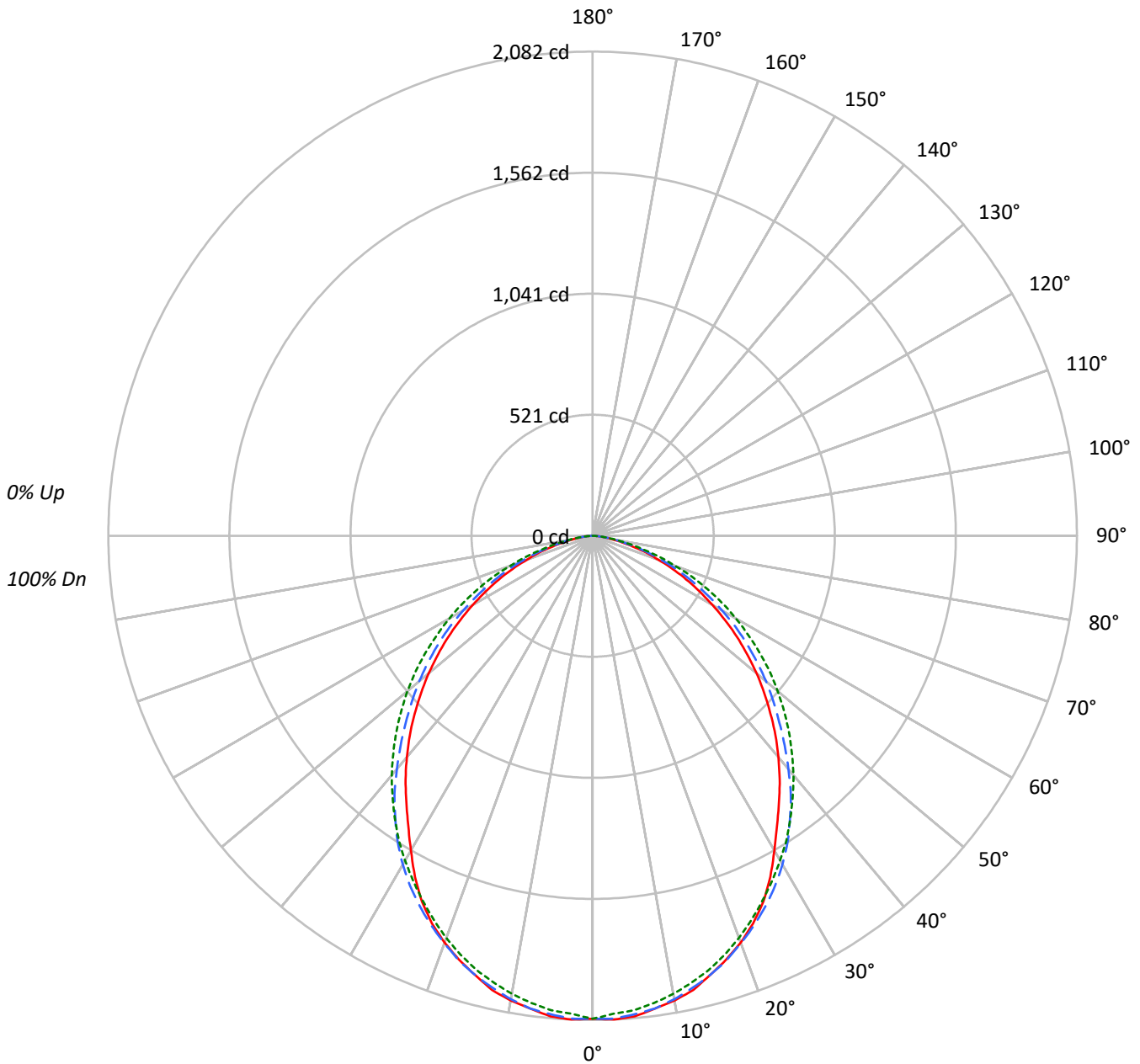
Lumens per Lamp: N/A
Luminaire Lumens: 4802.0 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	5588	5588	5588
5°	5603	5580	5532
10°	5544	5529	5465
15°	5446	5446	5383
20°	5330	5337	5269
25°	5155	5219	5136
30°	4854	5072	5010
35°	4587	4862	4870
40°	4364	4599	4719
45°	4114	4321	4542
50°	3851	4071	4349
55°	3552	3788	4114
60°	3199	3456	3826
65°	2825	3074	3480
70°	2354	2618	2957
75°	1850	2091	2314
80°	1323	1471	1632
85°	861	861	812



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.5	4.1
10°-20°	549.3	11.4
20°-30°	802.7	16.7
30°-40°	911.2	19.0
40°-50°	879.6	18.3
50°-60°	725.6	15.1
60°-70°	483.2	10.1
70°-80°	216.2	4.5
80°-90°	38.7	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°	1547.5	32.2
0°-40°	2458.7	51.2
0°-60°	4063.9	84.6
0°-90°	4802.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4802.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2077	2077	2077	2077	2077	
5°	2074	2074	2066	2054	2048	196
15°	1955	1960	1955	1946	1932	551
25°	1736	1750	1758	1745	1730	795
35°	1396	1415	1480	1488	1482	875
45°	1081	1099	1135	1187	1194	834
55°	757	770	807	852	877	676
65°	444	456	483	517	546	440
75°	178	188	201	211	223	195
85°	28	28	28	26	26	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2076.7	2076.7	2076.7	2076.7	2076.7
2.5°	2082.3	2083.1	2078.3	2065.6	2057.6
5°	2074.3	2073.5	2065.6	2054.4	2048.0
7.5°	2051.2	2052.8	2050.4	2034.5	2025.7
10°	2028.9	2029.7	2023.3	2010.5	2000.1
12.5°	2000.1	1999.4	1990.6	1984.2	1967.4
15°	1954.7	1959.5	1954.7	1945.9	1932.3
17.5°	1910.8	1910.8	1914.0	1898.8	1888.5
20°	1861.3	1863.7	1863.7	1851.8	1839.8
22.5°	1803.9	1811.1	1813.5	1800.7	1786.3
25°	1736.1	1749.6	1757.6	1744.8	1729.7
27.5°	1653.9	1674.6	1698.6	1689.0	1672.2
30°	1562.1	1592.5	1632.4	1624.4	1612.4
32.5°	1475.2	1505.5	1560.5	1557.4	1551.0
35°	1396.2	1415.3	1480.0	1487.9	1482.4
37.5°	1321.2	1338.8	1399.4	1417.7	1412.9
40°	1242.2	1261.4	1309.2	1341.9	1343.5
42.5°	1164.0	1182.4	1221.5	1268.5	1268.5
45°	1081.1	1099.4	1135.3	1187.2	1193.5
47.5°	999.7	1018.8	1053.9	1105.8	1116.2
50°	919.9	937.4	972.5	1022.8	1038.8
52.5°	836.9	856.1	890.4	936.6	959.8
55°	757.1	769.9	807.4	852.1	876.8
57.5°	674.2	686.1	728.4	766.7	792.2
60°	594.4	609.5	642.2	681.3	710.9
62.5°	517.8	533.7	561.7	596.0	629.5
65°	443.6	455.6	482.7	517.0	546.5
67.5°	371.8	382.2	409.3	433.2	464.3
70°	299.2	312.7	332.7	355.8	375.8
72.5°	240.9	246.5	263.3	280.0	300.8
75°	177.9	187.5	201.1	210.6	222.6
77.5°	127.7	133.2	141.2	149.2	160.4
80°	85.4	87.8	94.9	96.5	105.3
82.5°	51.9	53.5	55.0	55.8	59.0
85°	27.9	27.9	27.9	26.3	26.3
87.5°	16.0	16.0	13.6	11.2	8.0
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)