

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: P557213

Luminaire Tested: **FUSL-12-4-LD4-2LO-30-UNV-82-96-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: P557213  
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-82-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

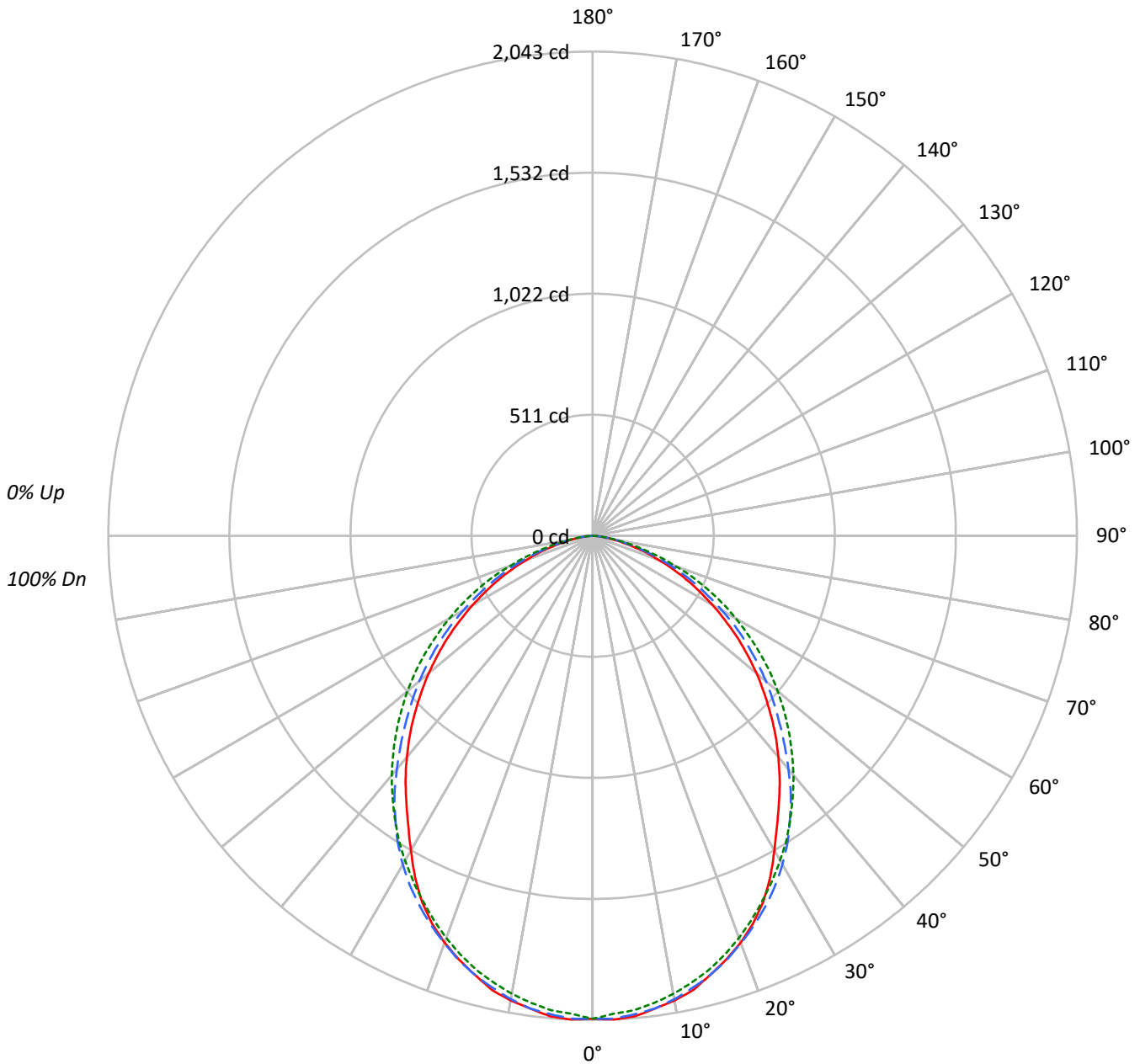
Lumens per Lamp: N/A  
Luminaire Lumens: 4712.0 lumens  
Efficiency: N/A  
Efficacy: 100.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	5484	5484	5484
5°	5498	5475	5428
10°	5440	5425	5363
15°	5343	5343	5282
20°	5230	5237	5170
25°	5058	5121	5040
30°	4763	4977	4916
35°	4501	4771	4778
40°	4282	4513	4631
45°	4037	4239	4457
50°	3779	3995	4267
55°	3485	3717	4037
60°	3139	3392	3754
65°	2772	3016	3415
70°	2310	2569	2901
75°	1815	2051	2271
80°	1299	1444	1601
85°	846	846	797



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	191.9	4.1
10°-20°	539.0	11.4
20°-30°	787.7	16.7
30°-40°	894.1	19.0
40°-50°	863.1	18.3
50°-60°	712.0	15.1
60°-70°	474.1	10.1
70°-80°	212.2	4.5
80°-90°	38.0	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°	1518.5	32.2
0°-40°	2412.6	51.2
0°-60°	3987.7	84.6
0°-90°	4712.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4712.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2038	2038	2038	2038	2038	
5°	2036	2035	2027	2016	2010	193
15°	1918	1923	1918	1909	1896	541
25°	1704	1717	1725	1712	1697	780
35°	1370	1389	1452	1460	1455	858
45°	1061	1079	1114	1165	1171	818
55°	743	756	792	836	860	663
65°	435	447	474	507	536	432
75°	175	184	197	207	218	191
85°	27	27	27	26	26	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2037.8	2037.8	2037.8	2037.8	2037.8
2.5°	2043.3	2044.1	2039.4	2026.9	2019.0
5°	2035.5	2034.7	2026.9	2015.9	2009.6
7.5°	2012.8	2014.3	2012.0	1996.3	1987.7
10°	1990.8	1991.6	1985.4	1972.8	1962.7
12.5°	1962.7	1961.9	1953.3	1947.0	1930.6
15°	1918.0	1922.7	1918.0	1909.4	1896.1
17.5°	1875.0	1875.0	1878.1	1863.2	1853.1
20°	1826.4	1828.8	1828.8	1817.0	1805.3
22.5°	1770.1	1777.1	1779.5	1766.9	1752.9
25°	1703.5	1716.8	1724.7	1712.1	1697.3
27.5°	1622.9	1643.3	1666.7	1657.3	1640.9
30°	1532.9	1562.6	1601.8	1593.9	1582.2
32.5°	1447.5	1477.3	1531.3	1528.2	1521.9
35°	1370.0	1388.8	1452.2	1460.1	1454.6
37.5°	1296.4	1313.7	1373.2	1391.2	1386.5
40°	1218.9	1237.7	1284.7	1316.8	1318.4
42.5°	1142.2	1160.2	1198.6	1244.8	1244.8
45°	1060.8	1078.8	1114.0	1164.9	1171.2
47.5°	980.9	999.7	1034.2	1085.1	1095.2
50°	902.7	919.9	954.3	1003.6	1019.3
52.5°	821.2	840.0	873.7	919.1	941.8
55°	742.9	755.5	792.3	836.1	860.4
57.5°	661.5	673.3	714.8	752.3	777.4
60°	583.2	598.1	630.2	668.6	697.5
62.5°	508.1	523.7	551.1	584.8	617.7
65°	435.3	447.0	473.6	507.3	536.3
67.5°	364.8	375.0	401.6	425.1	455.6
70°	293.6	306.9	326.5	349.2	368.7
72.5°	236.4	241.9	258.3	274.8	295.1
75°	174.6	184.0	197.3	206.7	218.4
77.5°	125.3	130.7	138.6	146.4	157.4
80°	83.8	86.1	93.2	94.7	103.3
82.5°	50.9	52.5	54.0	54.8	57.9
85°	27.4	27.4	27.4	25.8	25.8
87.5°	15.7	15.7	13.3	11.0	7.8
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)