

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: P557520

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-UNV-82-84-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: P557520  
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-LD4-2STD-35-UNV-82-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

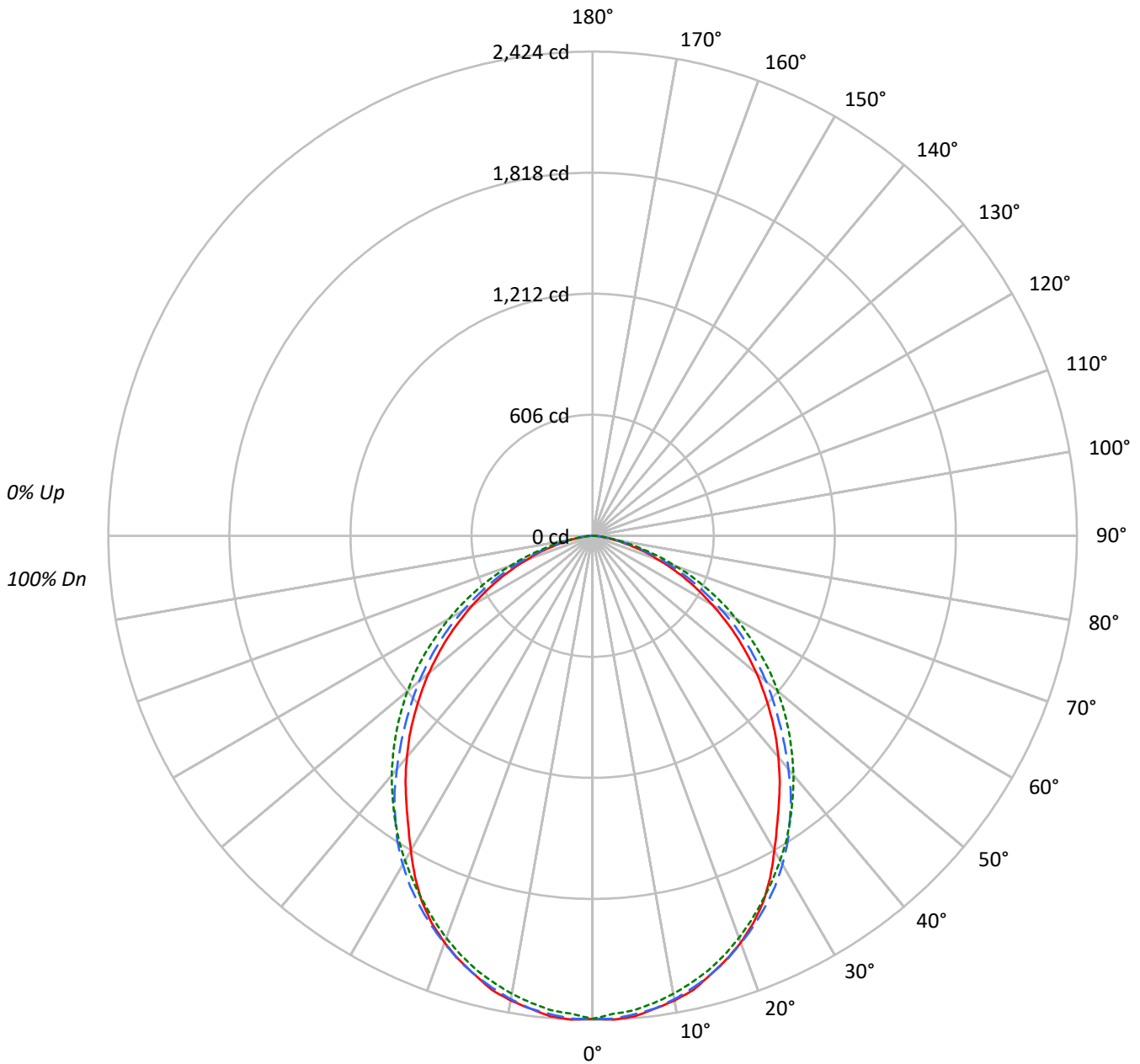
Lumens per Lamp: N/A  
Luminaire Lumens: 5591.0 lumens  
Efficiency: N/A  
Efficacy: 83.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6507	6507	6507
5°	6524	6497	6441
10°	6455	6437	6363
15°	6340	6340	6268
20°	6206	6214	6134
25°	6002	6076	5980
30°	5652	5906	5833
35°	5340	5661	5670
40°	5081	5355	5495
45°	4790	5030	5289
50°	4484	4740	5063
55°	4136	4411	4790
60°	3724	4025	4455
65°	3289	3578	4052
70°	2740	3048	3442
75°	2153	2434	2695
80°	1540	1712	1900
85°	1003	1003	948



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	227.7	4.1
10°-20°	639.6	11.4
20°-30°	934.6	16.7
30°-40°	1060.9	19.0
40°-50°	1024.1	18.3
50°-60°	844.8	15.1
60°-70°	562.6	10.1
70°-80°	251.7	4.5
80°-90°	45.0	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°	1801.8	32.2
0°-40°	2862.7	51.2
0°-60°	4731.6	84.6
0°-90°	5591.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5591.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2418	2418	2418	2418	2418	
5°	2415	2414	2405	2392	2384	229
15°	2276	2281	2276	2266	2250	642
25°	2021	2037	2046	2032	2014	926
35°	1626	1648	1723	1732	1726	1019
45°	1259	1280	1322	1382	1390	971
55°	882	896	940	992	1021	787
65°	516	530	562	602	636	512
75°	207	218	234	245	259	226
85°	32	32	32	31	31	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2418.0	2418.0	2418.0	2418.0	2418.0
2.5°	2424.5	2425.4	2419.8	2405.0	2395.7
5°	2415.2	2414.2	2405.0	2392.0	2384.5
7.5°	2388.2	2390.1	2387.3	2368.7	2358.5
10°	2362.2	2363.2	2355.7	2340.9	2328.8
12.5°	2328.8	2327.9	2317.6	2310.2	2290.7
15°	2275.8	2281.4	2275.8	2265.6	2249.8
17.5°	2224.7	2224.7	2228.5	2210.8	2198.7
20°	2167.2	2169.9	2169.9	2156.0	2142.1
22.5°	2100.3	2108.6	2111.4	2096.6	2079.8
25°	2021.3	2037.1	2046.4	2031.5	2013.9
27.5°	1925.6	1949.8	1977.7	1966.5	1947.0
30°	1818.8	1854.1	1900.6	1891.3	1877.3
32.5°	1717.6	1752.9	1817.0	1813.2	1805.8
35°	1625.6	1647.9	1723.1	1732.4	1725.9
37.5°	1538.3	1558.7	1629.3	1650.7	1645.1
40°	1446.3	1468.6	1524.3	1562.4	1564.3
42.5°	1355.3	1376.7	1422.2	1477.0	1477.0
45°	1258.7	1280.0	1321.8	1382.2	1389.7
47.5°	1163.9	1186.2	1227.1	1287.5	1299.6
50°	1071.0	1091.5	1132.3	1190.9	1209.4
52.5°	974.4	996.7	1036.7	1090.5	1117.5
55°	881.5	896.4	940.1	992.1	1020.9
57.5°	784.9	798.9	848.1	892.7	922.4
60°	692.0	709.7	747.8	793.3	827.7
62.5°	602.9	621.4	654.0	693.9	732.9
65°	516.5	530.4	562.0	601.9	636.3
67.5°	432.9	444.9	476.5	504.4	540.6
70°	348.3	364.1	387.4	414.3	437.5
72.5°	280.5	287.0	306.5	326.0	350.2
75°	207.1	218.3	234.1	245.2	259.2
77.5°	148.6	155.1	164.4	173.7	186.7
80°	99.4	102.2	110.5	112.4	122.6
82.5°	60.4	62.2	64.1	65.0	68.7
85°	32.5	32.5	32.5	30.7	30.7
87.5°	18.6	18.6	15.8	13.0	9.3
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)