

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: P557456

Luminaire Tested: **FUSL-12-4-LD4-2STD-30-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: P557456  
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-30-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 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

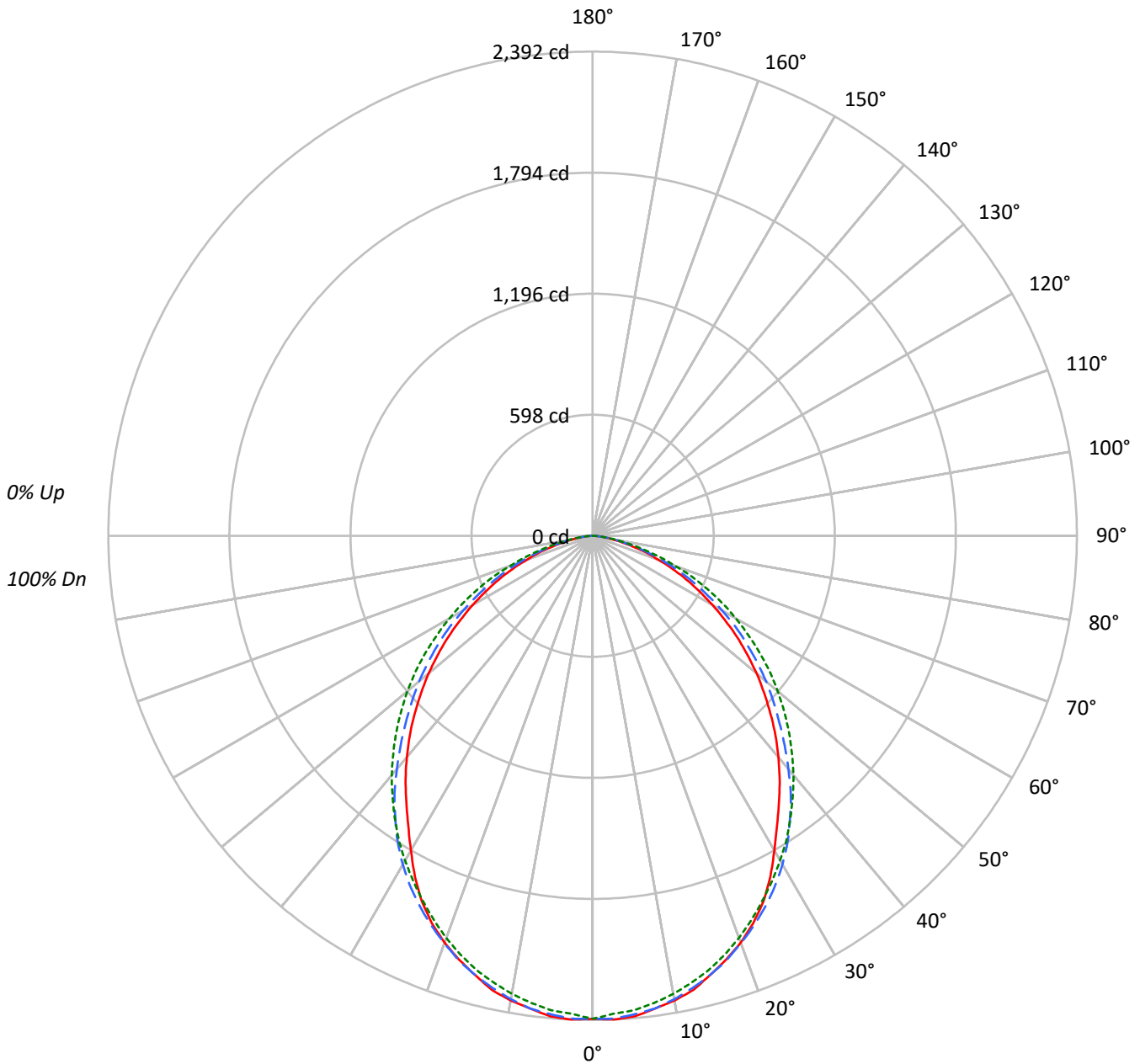
Lumens per Lamp: N/A  
Luminaire Lumens: 5517.0 lumens  
Efficiency: N/A  
Efficacy: 82.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
Input Voltage (V): NR  
Input Current (Ain): 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°	6421	6421	6421
5°	6438	6410	6356
10°	6369	6352	6279
15°	6256	6256	6185
20°	6124	6132	6053
25°	5922	5996	5900
30°	5577	5827	5756
35°	5270	5586	5595
40°	5014	5284	5422
45°	4727	4964	5219
50°	4425	4678	4996
55°	4081	4352	4726
60°	3675	3971	4395
65°	3245	3531	3998
70°	2704	3007	3397
75°	2125	2402	2659
80°	1520	1691	1875
85°	991	991	932



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	224.6	4.1
10°-20°	631.1	11.4
20°-30°	922.2	16.7
30°-40°	1046.8	19.0
40°-50°	1010.6	18.3
50°-60°	833.6	15.1
60°-70°	555.1	10.1
70°-80°	248.4	4.5
80°-90°	44.4	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°	1778.0	32.2
0°-40°	2824.8	51.2
0°-60°	4669.0	84.6
0°-90°	5517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5517.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2386	2386	2386	2386	2386	
5°	2383	2382	2373	2360	2353	226
15°	2246	2251	2246	2236	2220	633
25°	1995	2010	2019	2005	1987	913
35°	1604	1626	1700	1710	1703	1005
45°	1242	1263	1304	1364	1371	958
55°	870	884	928	979	1007	776
65°	510	523	555	594	628	505
75°	204	215	231	242	256	224
85°	32	32	32	30	30	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2386.0	2386.0	2386.0	2386.0	2386.0
2.5°	2392.4	2393.3	2387.8	2373.1	2364.0
5°	2383.2	2382.3	2373.1	2360.3	2353.0
7.5°	2356.6	2358.5	2355.7	2337.4	2327.3
10°	2331.0	2331.9	2324.5	2309.9	2298.0
12.5°	2298.0	2297.0	2287.0	2279.6	2260.4
15°	2245.7	2251.2	2245.7	2235.6	2220.1
17.5°	2195.3	2195.3	2199.0	2181.6	2169.6
20°	2138.5	2141.2	2141.2	2127.5	2113.7
22.5°	2072.5	2080.7	2083.5	2068.8	2052.3
25°	1994.6	2010.1	2019.3	2004.6	1987.2
27.5°	1900.2	1924.0	1951.5	1940.5	1921.2
30°	1794.7	1829.6	1875.4	1866.2	1852.5
32.5°	1694.8	1729.7	1792.9	1789.2	1781.9
35°	1604.1	1626.1	1700.3	1709.5	1703.1
37.5°	1517.9	1538.1	1607.8	1628.8	1623.3
40°	1427.2	1449.2	1504.2	1541.8	1543.6
42.5°	1337.3	1358.4	1403.3	1457.4	1457.4
45°	1242.0	1263.1	1304.3	1363.9	1371.3
47.5°	1148.5	1170.5	1210.9	1270.4	1282.4
50°	1056.9	1077.0	1117.4	1175.1	1193.4
52.5°	961.5	983.5	1022.9	1076.1	1102.7
55°	869.9	884.5	927.6	978.9	1007.4
57.5°	774.5	788.3	836.9	880.9	910.2
60°	682.9	700.3	737.9	782.8	816.7
62.5°	594.9	613.2	645.3	684.7	723.2
65°	509.6	523.4	554.6	594.0	627.9
67.5°	427.1	439.1	470.2	497.7	533.5
70°	343.7	359.3	382.2	408.8	431.7
72.5°	276.8	283.2	302.5	321.7	345.6
75°	204.4	215.4	231.0	242.0	255.7
77.5°	146.7	153.1	162.2	171.4	184.2
80°	98.1	100.8	109.1	110.9	121.0
82.5°	59.6	61.4	63.2	64.2	67.8
85°	32.1	32.1	32.1	30.2	30.2
87.5°	18.3	18.3	15.6	12.8	9.2
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)