

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: P557657

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-82-88-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: P557657  
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-50-UNV-82-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

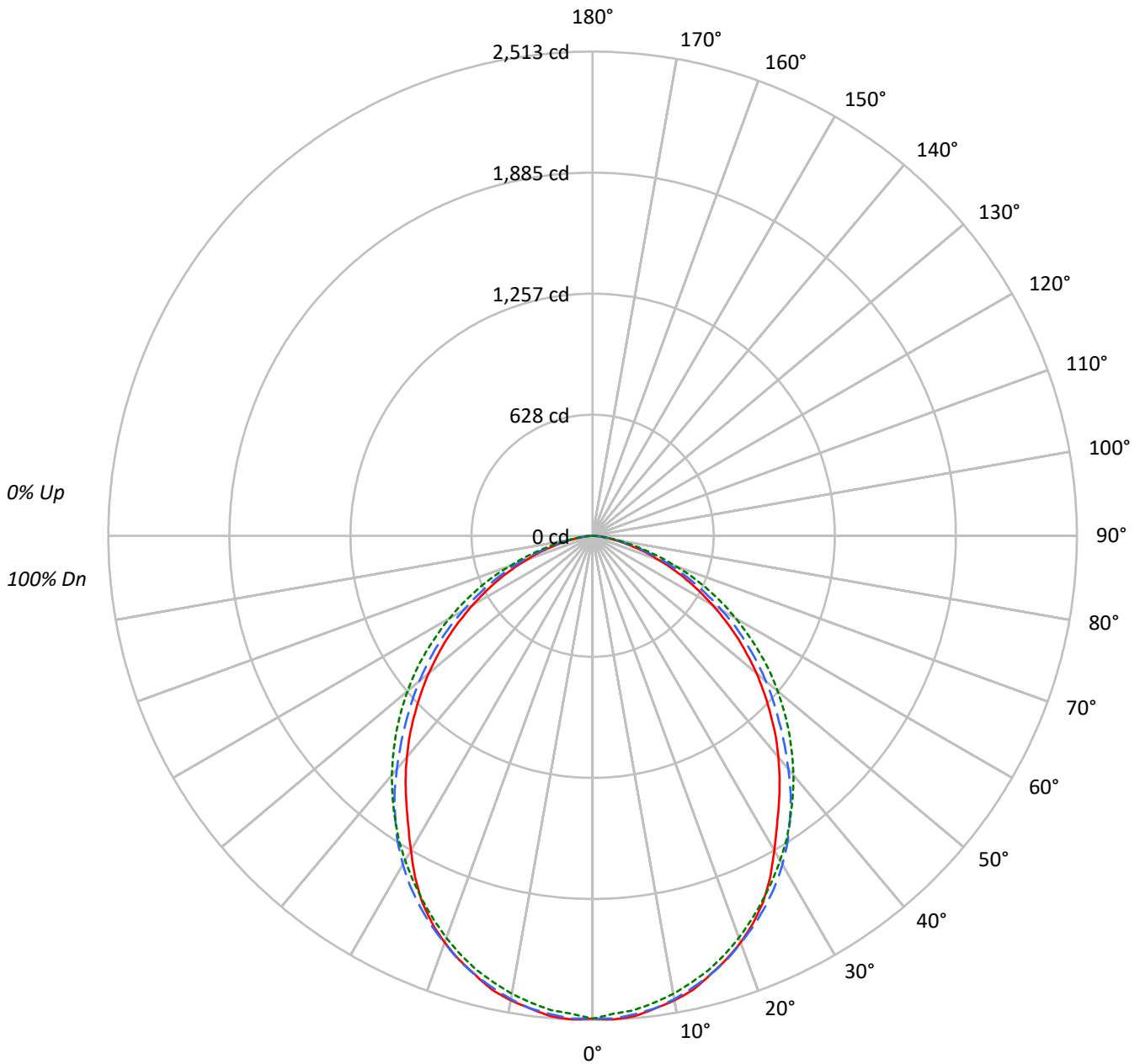
Lumens per Lamp: N/A  
Luminaire Lumens: 5795.0 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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									
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°	6744	6744	6744
5°	6762	6733	6676
10°	6690	6672	6596
15°	6572	6572	6496
20°	6432	6441	6358
25°	6221	6298	6198
30°	5858	6121	6046
35°	5535	5867	5877
40°	5266	5550	5696
45°	4965	5214	5482
50°	4647	4914	5248
55°	4287	4571	4964
60°	3860	4172	4617
65°	3408	3709	4199
70°	2841	3159	3568
75°	2232	2522	2793
80°	1596	1776	1970
85°	1041	1041	982



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	236.0	4.1
10°-20°	662.9	11.4
20°-30°	968.7	16.7
30°-40°	1099.6	19.0
40°-50°	1061.5	18.3
50°-60°	875.7	15.1
60°-70°	583.1	10.1
70°-80°	260.9	4.5
80°-90°	46.7	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°	1867.6	32.2
0°-40°	2967.2	51.2
0°-60°	4904.3	84.6
0°-90°	5795.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5795.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2506	2506	2506	2506	2506	
5°	2503	2502	2493	2479	2472	237
15°	2359	2365	2359	2348	2332	665
25°	2095	2111	2121	2106	2087	959
35°	1685	1708	1786	1796	1789	1056
45°	1305	1327	1370	1433	1440	1007
55°	914	929	974	1028	1058	816
65°	535	550	582	624	660	531
75°	215	226	243	254	269	235
85°	34	34	34	32	32	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2506.2	2506.2	2506.2	2506.2	2506.2
2.5°	2512.9	2513.9	2508.1	2492.7	2483.1
5°	2503.3	2502.3	2492.7	2479.2	2471.5
7.5°	2475.4	2477.3	2474.4	2455.2	2444.6
10°	2448.4	2449.4	2441.7	2426.3	2413.8
12.5°	2413.8	2412.8	2402.2	2394.5	2374.3
15°	2358.9	2364.7	2358.9	2348.3	2331.9
17.5°	2305.9	2305.9	2309.8	2291.5	2279.0
20°	2246.2	2249.1	2249.1	2234.7	2220.2
22.5°	2176.9	2185.6	2188.5	2173.1	2155.7
25°	2095.1	2111.4	2121.1	2105.7	2087.4
27.5°	1995.9	2020.9	2049.8	2038.3	2018.0
30°	1885.2	1921.8	1969.9	1960.3	1945.8
32.5°	1780.2	1816.8	1883.3	1879.4	1871.7
35°	1684.9	1708.0	1786.0	1795.6	1788.9
37.5°	1594.4	1615.6	1688.8	1710.9	1705.1
40°	1499.1	1522.2	1580.0	1619.4	1621.4
42.5°	1404.7	1426.9	1474.1	1530.9	1530.9
45°	1304.6	1326.7	1370.1	1432.7	1440.4
47.5°	1206.4	1229.5	1271.9	1334.5	1347.0
50°	1110.1	1131.3	1173.7	1234.3	1253.6
52.5°	1010.0	1033.1	1074.5	1130.3	1158.3
55°	913.7	929.1	974.4	1028.3	1058.1
57.5°	813.6	828.0	879.0	925.3	956.1
60°	717.3	735.6	775.1	822.2	857.9
62.5°	624.9	644.1	677.8	719.2	759.7
65°	535.3	549.8	582.5	623.9	659.5
67.5°	448.7	461.2	493.9	522.8	560.4
70°	361.1	377.4	401.5	429.4	453.5
72.5°	290.8	297.5	317.7	337.9	363.0
75°	214.7	226.3	242.6	254.2	268.6
77.5°	154.0	160.8	170.4	180.0	193.5
80°	103.0	105.9	114.6	116.5	127.1
82.5°	62.6	64.5	66.4	67.4	71.2
85°	33.7	33.7	33.7	31.8	31.8
87.5°	19.3	19.3	16.4	13.5	9.6
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)