

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: P556562

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-82-85-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: P556562  
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-LD4-1LO-40-UNV-82-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

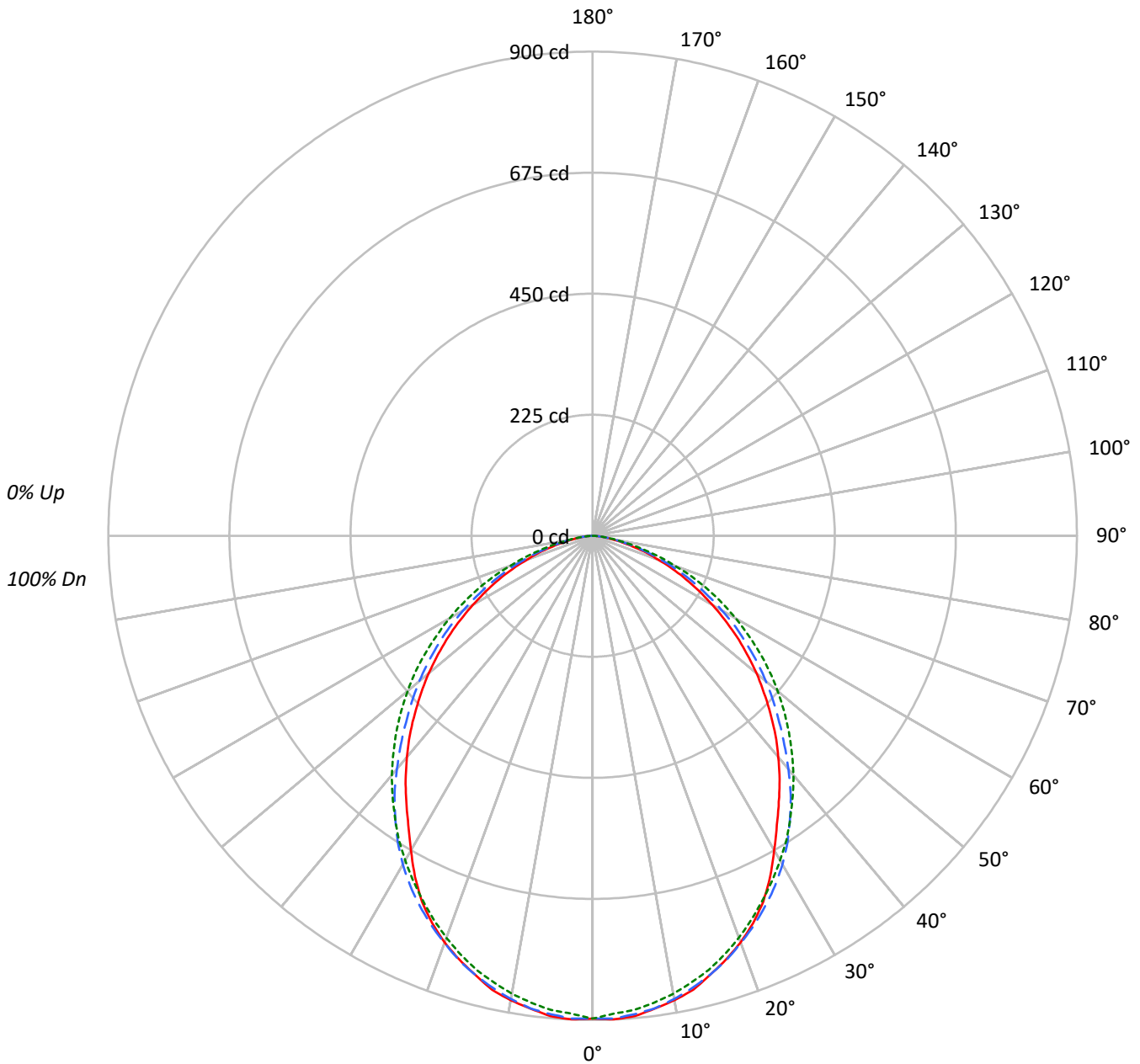
Lumens per Lamp: N/A  
Luminaire Lumens: 2075.0 lumens  
Efficiency: N/A  
Efficacy: 88.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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

TEST NUMBER: P556562

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-82-85-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P556562

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-82-85-EDD-90

**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°	2415	2415	2415
5°	2421	2411	2391
10°	2396	2389	2362
15°	2353	2353	2326
20°	2303	2306	2277
25°	2227	2255	2219
30°	2097	2192	2165
35°	1982	2101	2104
40°	1886	1987	2040
45°	1778	1867	1963
50°	1664	1760	1879
55°	1535	1637	1778
60°	1382	1493	1653
65°	1221	1328	1504
70°	1017	1131	1278
75°	800	904	1000
80°	572	635	705
85°	374	374	352



TEST NUMBER: P556562

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-82-85-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.5	4.1
10°-20°	237.4	11.4
20°-30°	346.9	16.7
30°-40°	393.7	19.0
40°-50°	380.1	18.3
50°-60°	313.5	15.1
60°-70°	208.8	10.1
70°-80°	93.4	4.5
80°-90°	16.7	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°	668.7	32.2
0°-40°	1062.4	51.2
0°-60°	1756.1	84.6
0°-90°	2075.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2075.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	897	897	897	897	897	
5°	896	896	893	888	885	85
15°	845	847	845	841	835	238
25°	750	756	760	754	747	344
35°	603	612	640	643	640	378
45°	467	475	491	513	516	360
55°	327	333	349	368	379	292
65°	192	197	209	223	236	190
75°	77	81	87	91	96	84
85°	12	12	12	11	11	16
90°	0	0	0	0	0	



TEST NUMBER: P556562

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-82-85-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	897.4	897.4	897.4	897.4	897.4
2.5°	899.8	900.1	898.1	892.6	889.1
5°	896.3	896.0	892.6	887.7	885.0
7.5°	886.4	887.0	886.0	879.1	875.3
10°	876.7	877.0	874.3	868.8	864.3
12.5°	864.3	863.9	860.2	857.4	850.2
15°	844.6	846.7	844.6	840.8	835.0
17.5°	825.7	825.7	827.1	820.5	816.0
20°	804.3	805.3	805.3	800.2	795.0
22.5°	779.5	782.6	783.6	778.1	771.9
25°	750.2	756.0	759.5	754.0	747.4
27.5°	714.7	723.6	734.0	729.8	722.6
30°	675.0	688.1	705.4	701.9	696.7
32.5°	637.4	650.5	674.3	673.0	670.2
35°	603.3	611.6	639.5	643.0	640.5
37.5°	570.9	578.5	604.7	612.6	610.6
40°	536.8	545.0	565.7	579.9	580.6
42.5°	503.0	510.9	527.8	548.2	548.2
45°	467.1	475.1	490.6	513.0	515.7
47.5°	432.0	440.2	455.4	477.8	482.3
50°	397.5	405.1	420.3	442.0	448.9
52.5°	361.6	369.9	384.7	404.7	414.7
55°	327.2	332.7	348.9	368.2	378.9
57.5°	291.3	296.5	314.8	331.3	342.3
60°	256.8	263.4	277.5	294.4	307.2
62.5°	223.7	230.6	242.7	257.5	272.0
65°	191.7	196.9	208.6	223.4	236.2
67.5°	160.7	165.1	176.9	187.2	200.6
70°	129.3	135.1	143.8	153.8	162.4
72.5°	104.1	106.5	113.8	121.0	130.0
75°	76.9	81.0	86.9	91.0	96.2
77.5°	55.2	57.6	61.0	64.5	69.3
80°	36.9	37.9	41.0	41.7	45.5
82.5°	22.4	23.1	23.8	24.1	25.5
85°	12.1	12.1	12.1	11.4	11.4
87.5°	6.9	6.9	5.9	4.8	3.4
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)