

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: P557908

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-UNV-82-86-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: P557908  
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-LD4-3HI-50-UNV-82-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

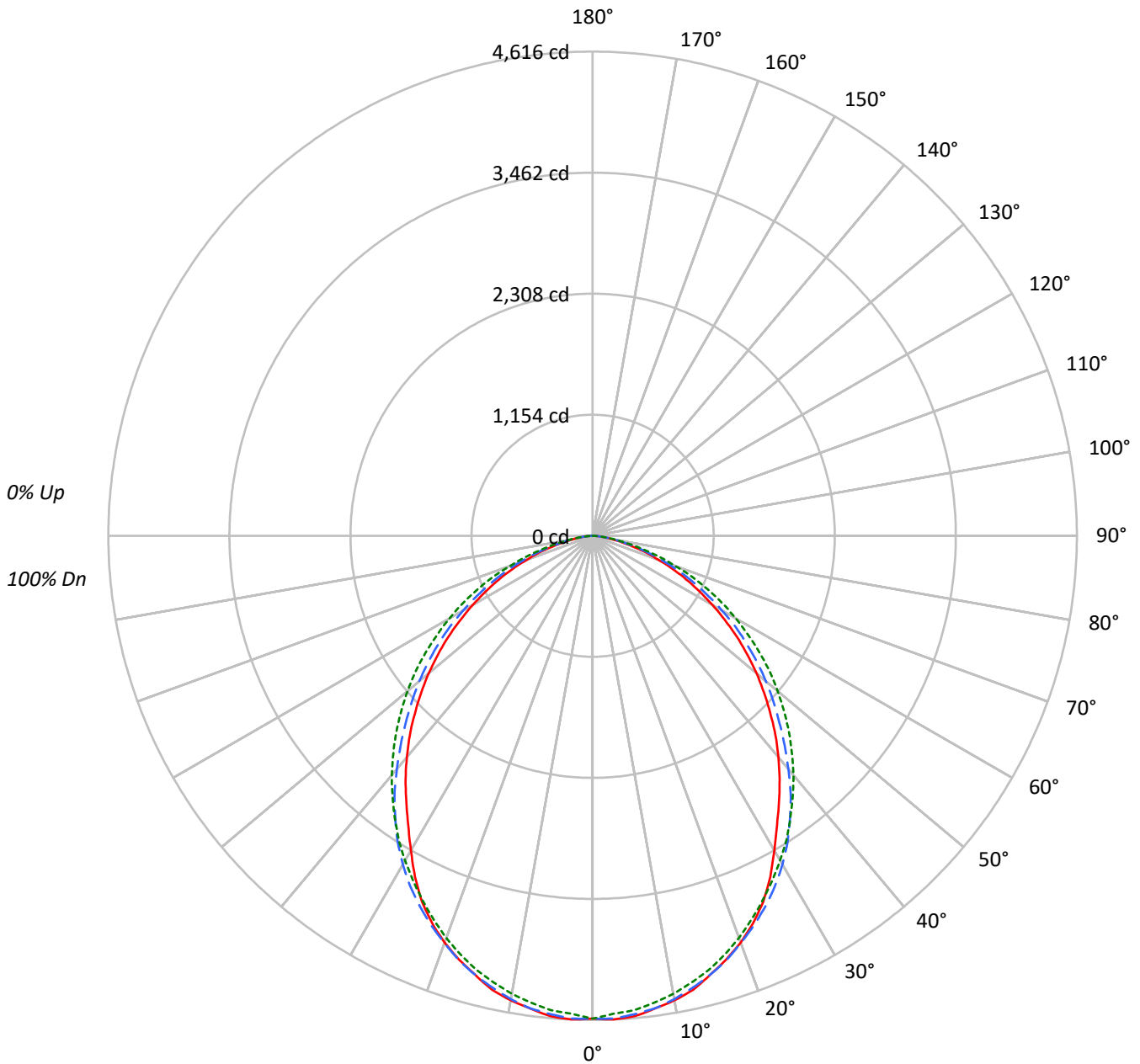
Lumens per Lamp: N/A  
Luminaire Lumens: 10645.0 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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

TEST NUMBER: P557908

CATALOG NUMBER: FUSL-12-4-LD4-3HI-50-UNV-82-86-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P557908

CATALOG NUMBER: FUSL-12-4-LD4-3HI-50-UNV-82-86-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°	12388	12388	12388
5°	12421	12369	12264
10°	12290	12256	12116
15°	12072	12072	11934
20°	11816	11831	11679
25°	11427	11568	11385
30°	10760	11244	11107
35°	10168	10778	10795
40°	9673	10195	10462
45°	9120	9578	10069
50°	8537	9026	9640
55°	7874	8397	9119
60°	7091	7662	8481
65°	6261	6813	7714
70°	5218	5803	6554
75°	4101	4634	5130
80°	2932	3262	3618
85°	1911	1911	1803



TEST NUMBER: P557908

CATALOG NUMBER: FUSL-12-4-LD4-3HI-50-UNV-82-86-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	433.5	4.1
10°-20°	1217.7	11.4
20°-30°	1779.4	16.7
30°-40°	2019.9	19.0
40°-50°	1949.9	18.3
50°-60°	1608.5	15.1
60°-70°	1071.1	10.1
70°-80°	479.3	4.5
80°-90°	85.8	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°	3430.6	32.2
0°-40°	5450.4	51.2
0°-60°	9008.8	84.6
0°-90°	10645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10645.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4604	4604	4604	4604	4604	
5°	4598	4597	4579	4554	4540	435
15°	4333	4344	4333	4314	4284	1222
25°	3848	3879	3896	3868	3834	1762
35°	3095	3138	3281	3298	3286	1939
45°	2396	2437	2517	2632	2646	1849
55°	1678	1707	1790	1889	1944	1498
65°	983	1010	1070	1146	1212	975
75°	394	416	446	467	493	431
85°	62	62	62	58	58	83
90°	0	0	0	0	0	



TEST NUMBER: P557908

CATALOG NUMBER: FUSL-12-4-LD4-3HI-50-UNV-82-86-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4603.7	4603.7	4603.7	4603.7	4603.7
2.5°	4616.1	4617.8	4607.2	4578.9	4561.2
5°	4598.4	4596.6	4578.9	4554.2	4540.0
7.5°	4547.1	4550.6	4545.3	4510.0	4490.5
10°	4497.6	4499.3	4485.2	4456.9	4433.9
12.5°	4433.9	4432.1	4412.7	4398.5	4361.4
15°	4333.1	4343.7	4333.1	4313.6	4283.6
17.5°	4235.8	4235.8	4242.9	4209.3	4186.3
20°	4126.2	4131.5	4131.5	4104.9	4078.4
22.5°	3998.8	4014.7	4020.0	3991.7	3959.9
25°	3848.5	3878.6	3896.2	3867.9	3834.3
27.5°	3666.3	3712.3	3765.4	3744.1	3707.0
30°	3462.9	3530.1	3618.6	3600.9	3574.4
32.5°	3270.2	3337.4	3459.4	3452.3	3438.2
35°	3095.1	3137.5	3280.8	3298.5	3286.1
37.5°	2928.8	2967.7	3102.1	3142.8	3132.2
40°	2753.7	2796.2	2902.3	2974.8	2978.3
42.5°	2580.4	2621.1	2707.7	2812.1	2812.1
45°	2396.5	2437.1	2516.7	2631.7	2645.8
47.5°	2216.1	2258.5	2336.3	2451.3	2474.3
50°	2039.2	2078.1	2155.9	2267.4	2302.7
52.5°	1855.3	1897.7	1973.8	2076.3	2127.6
55°	1678.4	1706.7	1789.8	1888.9	1943.7
57.5°	1494.5	1521.0	1614.7	1699.6	1756.2
60°	1317.6	1351.2	1423.7	1510.4	1575.8
62.5°	1147.8	1183.2	1245.1	1321.2	1395.4
65°	983.3	1009.9	1070.0	1146.1	1211.5
67.5°	824.2	847.2	907.3	960.4	1029.3
70°	663.2	693.3	737.5	788.8	833.0
72.5°	534.1	546.5	583.6	620.8	666.8
75°	394.4	415.6	445.7	466.9	493.4
77.5°	283.0	295.4	313.0	330.7	355.5
80°	189.2	194.5	210.5	214.0	233.5
82.5°	115.0	118.5	122.0	123.8	130.9
85°	61.9	61.9	61.9	58.4	58.4
87.5°	35.4	35.4	30.1	24.8	17.7
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)