

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: P558418

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-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: P558418  
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-LD4-3STD-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

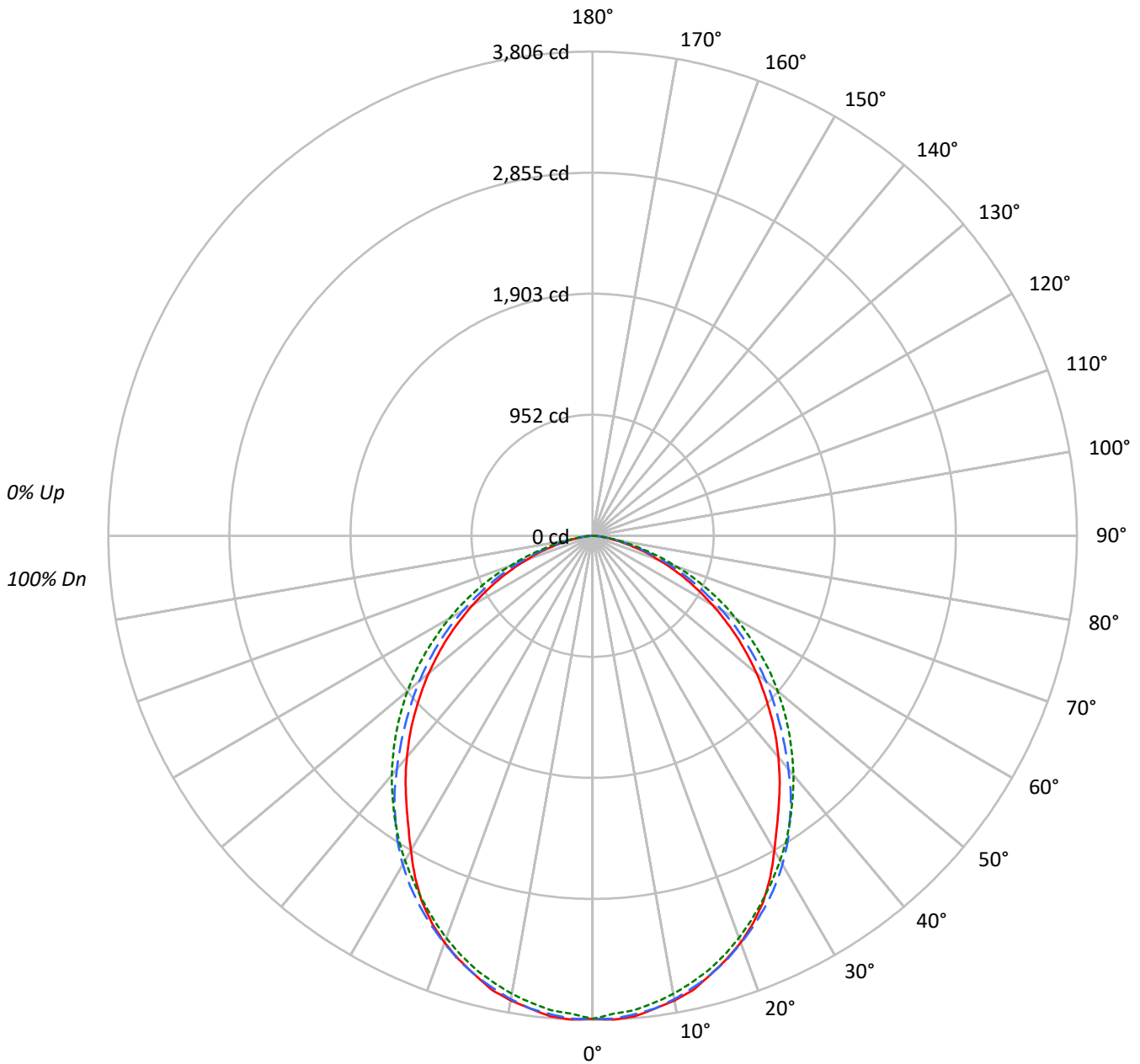
Lumens per Lamp: N/A  
Luminaire Lumens: 8778.0 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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: P558418

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-85-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P558418

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-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°	10216	10216	10216
5°	10243	10199	10113
10°	10134	10106	9991
15°	9954	9954	9841
20°	9744	9756	9631
25°	9423	9540	9388
30°	8873	9272	9159
35°	8384	8887	8902
40°	7977	8407	8627
45°	7521	7898	8303
50°	7040	7443	7950
55°	6493	6924	7520
60°	5847	6318	6993
65°	5163	5618	6361
70°	4303	4785	5404
75°	3381	3821	4231
80°	2419	2690	2983
85°	1575	1575	1485



TEST NUMBER: P558418

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-85-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	357.4	4.1
10°-20°	1004.1	11.4
20°-30°	1467.4	16.7
30°-40°	1665.6	19.0
40°-50°	1607.9	18.3
50°-60°	1326.4	15.1
60°-70°	883.3	10.1
70°-80°	395.2	4.5
80°-90°	70.7	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°	2828.9	32.2
0°-40°	4494.5	51.2
0°-60°	7428.8	84.6
0°-90°	8778.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8778.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3796	3796	3796	3796	3796	
5°	3792	3790	3776	3755	3744	359
15°	3573	3582	3573	3557	3532	1007
25°	3174	3198	3213	3190	3162	1453
35°	2552	2587	2705	2720	2710	1599
45°	1976	2010	2075	2170	2182	1525
55°	1384	1407	1476	1558	1603	1235
65°	811	833	882	945	999	804
75°	325	343	368	385	407	356
85°	51	51	51	48	48	69
90°	0	0	0	0	0	



TEST NUMBER: P558418

CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-82-85-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3796.3	3796.3	3796.3	3796.3	3796.3
2.5°	3806.5	3807.9	3799.2	3775.8	3761.3
5°	3791.9	3790.4	3775.8	3755.4	3743.8
7.5°	3749.6	3752.5	3748.1	3719.0	3702.9
10°	3708.8	3710.2	3698.5	3675.2	3656.3
12.5°	3656.3	3654.8	3638.7	3627.1	3596.5
15°	3573.1	3581.9	3573.1	3557.1	3532.3
17.5°	3492.9	3492.9	3498.7	3471.0	3452.1
20°	3402.5	3406.9	3406.9	3385.0	3363.1
22.5°	3297.5	3310.6	3315.0	3291.6	3265.4
25°	3173.5	3198.3	3212.9	3189.6	3161.8
27.5°	3023.3	3061.2	3105.0	3087.5	3056.8
30°	2855.6	2911.0	2983.9	2969.3	2947.5
32.5°	2696.6	2752.0	2852.7	2846.8	2835.2
35°	2552.2	2587.2	2705.4	2719.9	2709.7
37.5°	2415.1	2447.2	2558.1	2591.6	2582.9
40°	2270.8	2305.8	2393.3	2453.1	2456.0
42.5°	2127.8	2161.4	2232.8	2318.9	2318.9
45°	1976.2	2009.7	2075.3	2170.1	2181.8
47.5°	1827.4	1862.4	1926.6	2021.4	2040.3
50°	1681.6	1713.6	1777.8	1869.7	1898.9
52.5°	1529.9	1564.9	1627.6	1712.2	1754.5
55°	1384.0	1407.4	1475.9	1557.6	1602.8
57.5°	1232.4	1254.2	1331.5	1401.5	1448.2
60°	1086.5	1114.2	1174.0	1245.5	1299.4
62.5°	946.5	975.7	1026.7	1089.4	1150.7
65°	810.9	832.8	882.3	945.1	999.0
67.5°	679.6	698.6	748.2	791.9	848.8
70°	546.9	571.7	608.2	650.5	686.9
72.5°	440.4	450.7	481.3	511.9	549.8
75°	325.2	342.7	367.5	385.0	406.9
77.5°	233.3	243.6	258.1	272.7	293.1
80°	156.1	160.4	173.6	176.5	192.5
82.5°	94.8	97.7	100.6	102.1	107.9
85°	51.0	51.0	51.0	48.1	48.1
87.5°	29.2	29.2	24.8	20.4	14.6
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)