

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: P557800

Luminaire Tested: **FUSL-12-4-LD4-3HI-35-UNV-93-88-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: P557800  
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-35-UNV-93-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

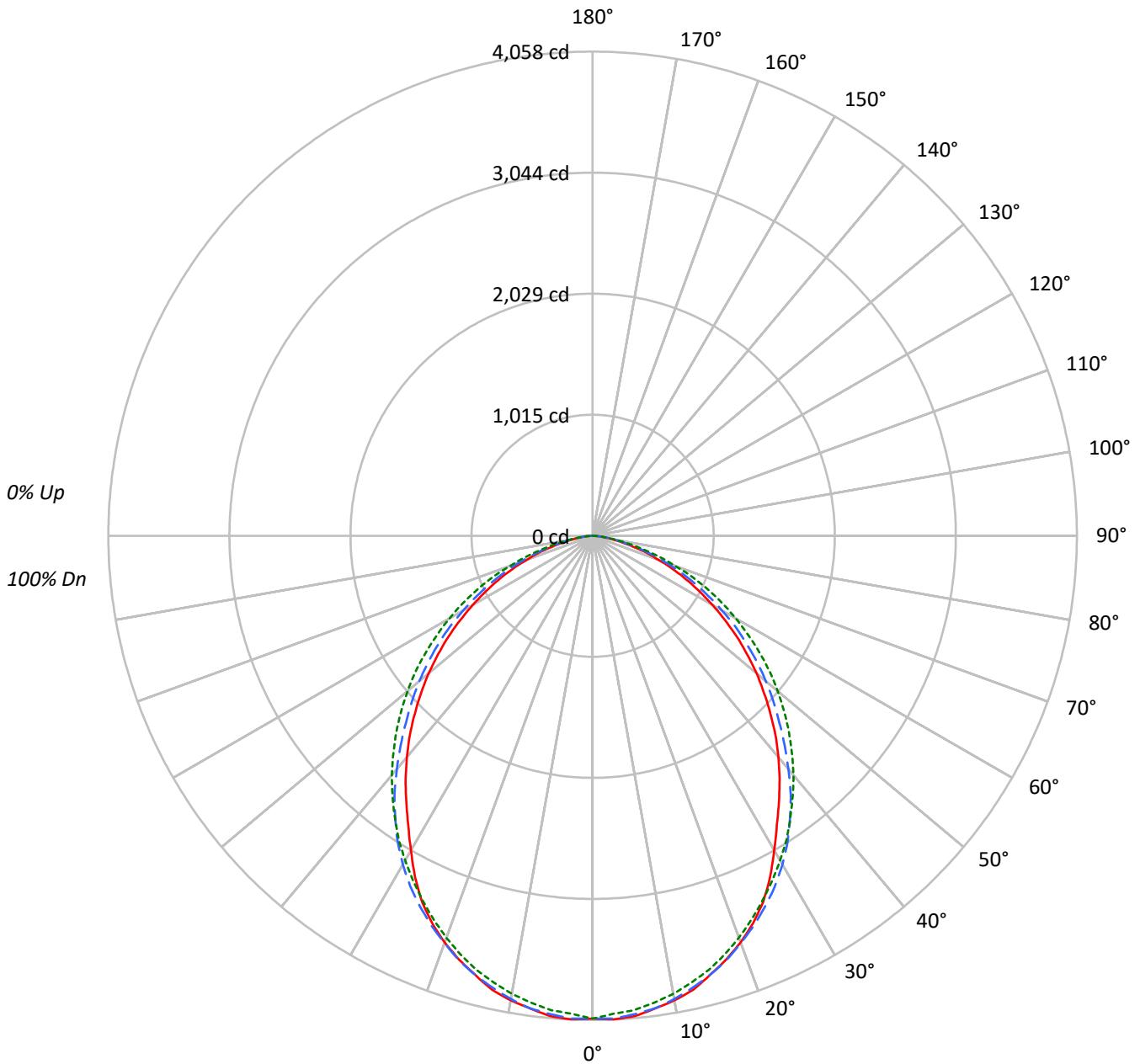
Lumens per Lamp: N/A  
Luminaire Lumens: 9357.0 lumens  
Efficiency: N/A  
Efficacy: 72.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	10890	10890	10890
5°	10918	10872	10780
10°	10803	10773	10650
15°	10611	10611	10490
20°	10386	10400	10266
25°	10044	10169	10007
30°	9458	9883	9763
35°	8937	9474	9489
40°	8503	8962	9197
45°	8017	8419	8851
50°	7504	7934	8474
55°	6921	7381	8016
60°	6233	6736	7455
65°	5504	5989	6781
70°	4587	5101	5761
75°	3605	4074	4509
80°	2577	2867	3180
85°	1680	1680	1584



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	381.0	4.1
10°-20°	1070.4	11.4
20°-30°	1564.1	16.7
30°-40°	1775.5	19.0
40°-50°	1713.9	18.3
50°-60°	1413.9	15.1
60°-70°	941.5	10.1
70°-80°	421.3	4.5
80°-90°	75.4	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°	3015.5	32.2
0°-40°	4791.0	51.2
0°-60°	7918.8	84.6
0°-90°	9357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9357.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4047	4047	4047	4047	4047	
5°	4042	4040	4025	4003	3991	383
15°	3809	3818	3809	3792	3765	1074
25°	3383	3409	3425	3400	3370	1549
35°	2721	2758	2884	2899	2888	1705
45°	2106	2142	2212	2313	2326	1625
55°	1475	1500	1573	1660	1708	1317
65°	864	888	940	1007	1065	857
75°	347	365	392	410	434	379
85°	54	54	54	51	51	73
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4046.7	4046.7	4046.7	4046.7	4046.7
2.5°	4057.5	4059.1	4049.8	4024.9	4009.4
5°	4042.0	4040.4	4024.9	4003.1	3990.7
7.5°	3996.9	4000.0	3995.4	3964.3	3947.2
10°	3953.4	3954.9	3942.5	3917.6	3897.4
12.5°	3897.4	3895.9	3878.8	3866.3	3833.7
15°	3808.8	3818.1	3808.8	3791.7	3765.3
17.5°	3723.3	3723.3	3729.5	3700.0	3679.8
20°	3626.9	3631.6	3631.6	3608.3	3584.9
22.5°	3515.0	3529.0	3533.6	3508.8	3480.8
25°	3382.8	3409.3	3424.8	3399.9	3370.4
27.5°	3222.7	3263.1	3309.8	3291.1	3258.5
30°	3043.9	3103.0	3180.7	3165.2	3141.9
32.5°	2874.5	2933.6	3040.8	3034.6	3022.2
35°	2720.6	2757.9	2883.8	2899.4	2888.5
37.5°	2574.4	2608.6	2726.8	2762.5	2753.2
40°	2420.5	2457.8	2551.1	2614.9	2618.0
42.5°	2268.2	2303.9	2380.1	2471.8	2471.8
45°	2106.5	2142.3	2212.2	2313.3	2325.7
47.5°	1947.9	1985.2	2053.6	2154.7	2174.9
50°	1792.5	1826.7	1895.1	1993.0	2024.1
52.5°	1630.8	1668.1	1734.9	1825.1	1870.2
55°	1475.3	1500.2	1573.3	1660.3	1708.5
57.5°	1313.6	1337.0	1419.4	1494.0	1543.7
60°	1158.2	1187.7	1251.5	1327.6	1385.2
62.5°	1008.9	1040.0	1094.4	1161.3	1226.6
65°	864.4	887.7	940.5	1007.4	1064.9
67.5°	724.5	744.7	797.5	844.2	904.8
70°	583.0	609.4	648.3	693.4	732.2
72.5°	469.5	480.4	513.0	545.7	586.1
75°	346.7	365.3	391.8	410.4	433.7
77.5°	248.7	259.6	275.2	290.7	312.5
80°	166.3	171.0	185.0	188.1	205.2
82.5°	101.0	104.2	107.3	108.8	115.0
85°	54.4	54.4	54.4	51.3	51.3
87.5°	31.1	31.1	26.4	21.8	15.5
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)