

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: P558242

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-93-85-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: P558242  
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-30-UNV-93-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

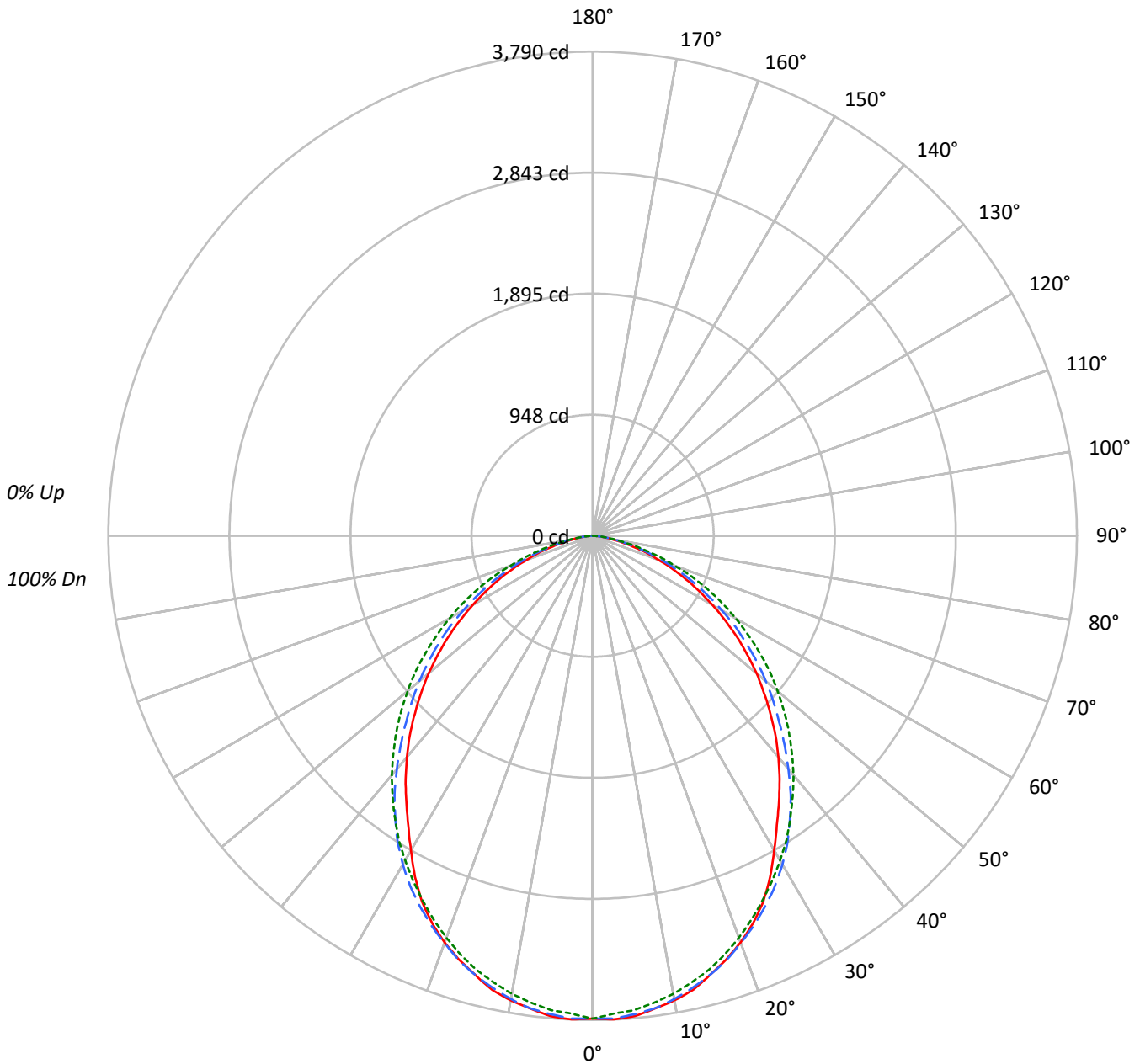
Lumens per Lamp: N/A  
Luminaire Lumens: 8739.0 lumens  
Efficiency: N/A  
Efficacy: 87.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (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°	10170	10170	10170
5°	10197	10154	10068
10°	10089	10061	9946
15°	9910	9910	9797
20°	9700	9713	9588
25°	9381	9497	9346
30°	8834	9231	9118
35°	8347	8848	8862
40°	7941	8370	8589
45°	7487	7863	8266
50°	7008	7410	7914
55°	6465	6894	7486
60°	5822	6290	6963
65°	5140	5593	6333
70°	4284	4764	5381
75°	3367	3804	4212
80°	2408	2678	2971
85°	1568	1568	1479



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	355.8	4.1
10°-20°	999.7	11.4
20°-30°	1460.8	16.7
30°-40°	1658.2	19.0
40°-50°	1600.7	18.3
50°-60°	1320.5	15.1
60°-70°	879.4	10.1
70°-80°	393.5	4.5
80°-90°	70.4	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°	2816.3	32.2
0°-40°	4474.5	51.2
0°-60°	7395.8	84.6
0°-90°	8739.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8739.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3779	3779	3779	3779	3779	
5°	3775	3774	3759	3739	3727	357
15°	3557	3566	3557	3541	3517	1003
25°	3159	3184	3199	3175	3148	1447
35°	2541	2576	2693	2708	2698	1592
45°	1967	2001	2066	2160	2172	1518
55°	1378	1401	1469	1551	1596	1230
65°	807	829	878	941	995	800
75°	324	341	366	383	405	354
85°	51	51	51	48	48	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3779.4	3779.4	3779.4	3779.4	3779.4
2.5°	3789.6	3791.0	3782.3	3759.1	3744.5
5°	3775.0	3773.6	3759.1	3738.7	3727.1
7.5°	3732.9	3735.8	3731.5	3702.4	3686.5
10°	3692.3	3693.7	3682.1	3658.9	3640.0
12.5°	3640.0	3638.6	3622.6	3611.0	3580.5
15°	3557.2	3566.0	3557.2	3541.3	3516.6
17.5°	3477.4	3477.4	3483.2	3455.6	3436.7
20°	3387.4	3391.7	3391.7	3369.9	3348.2
22.5°	3282.8	3295.9	3300.3	3277.0	3250.9
25°	3159.4	3184.1	3198.6	3175.4	3147.8
27.5°	3009.9	3047.6	3091.2	3073.8	3043.3
30°	2842.9	2898.1	2970.7	2956.1	2934.4
32.5°	2684.6	2739.8	2840.0	2834.2	2822.6
35°	2540.9	2575.7	2693.3	2707.9	2697.7
37.5°	2404.4	2436.4	2546.7	2580.1	2571.4
40°	2260.7	2295.5	2382.6	2442.2	2445.1
42.5°	2118.4	2151.8	2222.9	2308.6	2308.6
45°	1967.4	2000.8	2066.1	2160.5	2172.1
47.5°	1819.3	1854.1	1918.0	2012.4	2031.3
50°	1674.1	1706.0	1769.9	1861.4	1890.4
52.5°	1523.1	1557.9	1620.4	1704.6	1746.7
55°	1377.9	1401.1	1469.4	1550.7	1595.7
57.5°	1226.9	1248.7	1325.6	1395.3	1441.8
60°	1081.7	1109.3	1168.8	1240.0	1293.7
62.5°	942.3	971.3	1022.2	1084.6	1145.6
65°	807.3	829.1	878.4	940.9	994.6
67.5°	676.6	695.5	744.8	788.4	845.0
70°	544.5	569.2	605.5	647.6	683.9
72.5°	438.5	448.6	479.1	509.6	547.4
75°	323.8	341.2	365.9	383.3	405.1
77.5°	232.3	242.5	257.0	271.5	291.8
80°	155.4	159.7	172.8	175.7	191.7
82.5°	94.4	97.3	100.2	101.6	107.4
85°	50.8	50.8	50.8	47.9	47.9
87.5°	29.0	29.0	24.7	20.3	14.5
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)