

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: P558305

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-93-84-EDD**

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: P558305  
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-35-UNV-93-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

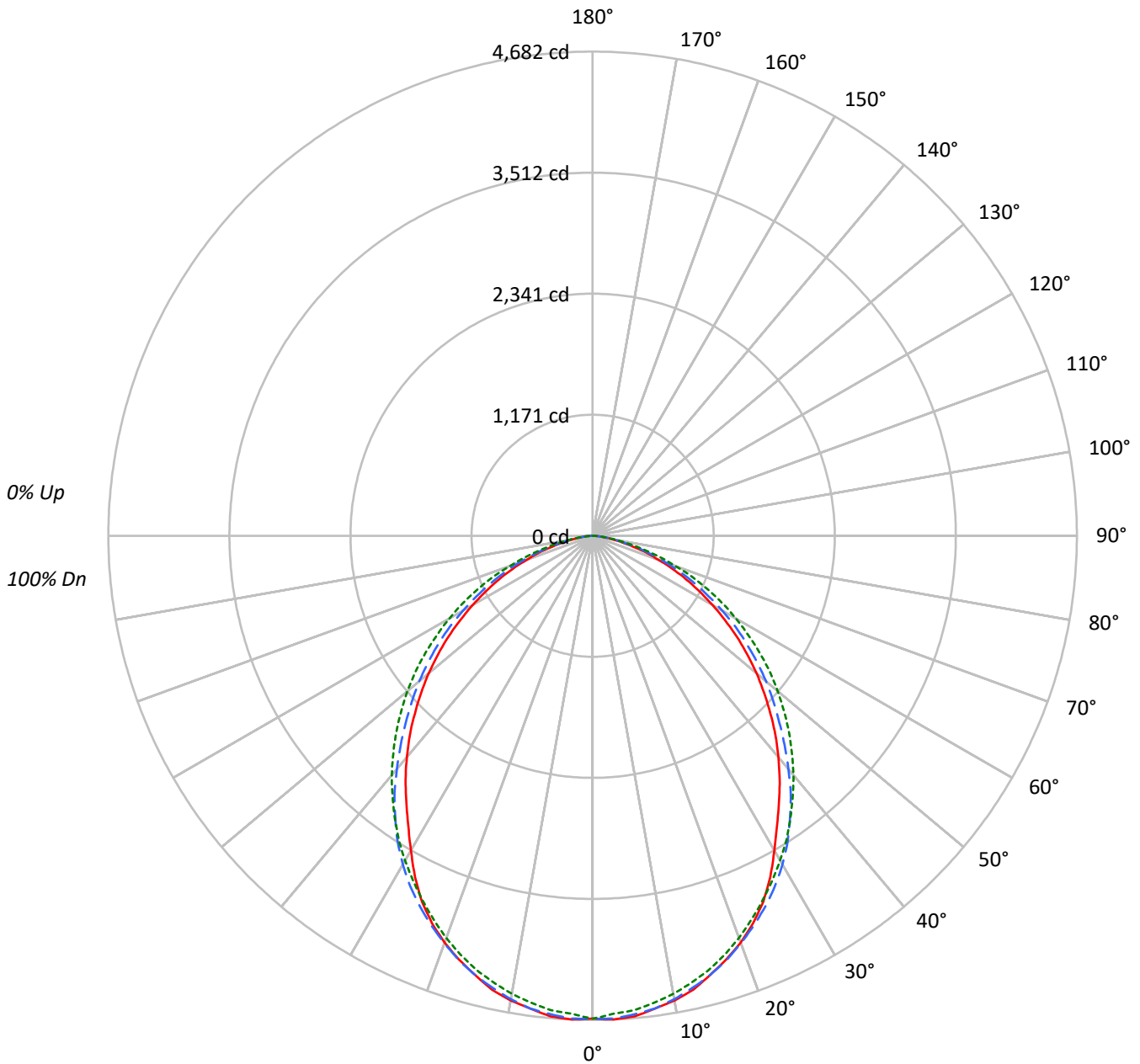
Lumens per Lamp: N/A  
Luminaire Lumens: 10798.0 lumens  
Efficiency: N/A  
Efficacy: 108.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	12567	12567	12567
5°	12600	12547	12440
10°	12466	12432	12290
15°	12245	12245	12105
20°	11986	12001	11847
25°	11591	11735	11549
30°	10915	11406	11266
35°	10314	10932	10950
40°	9812	10342	10613
45°	9251	9715	10214
50°	8660	9155	9779
55°	7987	8518	9250
60°	7194	7773	8603
65°	6351	6911	7825
70°	5294	5886	6648
75°	4160	4701	5204
80°	2975	3309	3670
85°	1939	1939	1828



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	439.7	4.1
10°-20°	1235.2	11.4
20°-30°	1805.0	16.7
30°-40°	2048.9	19.0
40°-50°	1977.9	18.3
50°-60°	1631.6	15.1
60°-70°	1086.5	10.1
70°-80°	486.2	4.5
80°-90°	87.0	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°	3479.9	32.2
0°-40°	5528.8	51.2
0°-60°	9138.3	84.6
0°-90°	10798.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10798.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4670	4670	4670	4670	4670	
5°	4664	4663	4645	4620	4605	441
15°	4395	4406	4395	4376	4345	1239
25°	3904	3934	3952	3924	3890	1788
35°	3140	3183	3328	3346	3333	1967
45°	2431	2472	2553	2670	2684	1876
55°	1702	1731	1816	1916	1972	1520
65°	998	1024	1085	1162	1229	989
75°	400	422	452	474	500	437
85°	63	63	63	59	59	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4669.9	4669.9	4669.9	4669.9	4669.9
2.5°	4682.4	4684.2	4673.4	4644.7	4626.8
5°	4664.5	4662.7	4644.7	4619.6	4605.3
7.5°	4612.4	4616.0	4610.7	4574.8	4555.0
10°	4562.2	4564.0	4549.7	4521.0	4497.6
12.5°	4497.6	4495.8	4476.1	4461.7	4424.1
15°	4395.4	4406.1	4395.4	4375.6	4345.1
17.5°	4296.7	4296.7	4303.9	4269.8	4246.5
20°	4185.5	4190.9	4190.9	4163.9	4137.0
22.5°	4056.3	4072.4	4077.8	4049.1	4016.8
25°	3903.8	3934.3	3952.2	3923.5	3889.5
27.5°	3719.0	3765.7	3819.5	3798.0	3760.3
30°	3512.7	3580.9	3670.6	3652.6	3625.7
32.5°	3317.2	3385.3	3509.1	3501.9	3487.6
35°	3139.5	3182.6	3327.9	3345.9	3333.3
37.5°	2970.9	3010.4	3146.7	3188.0	3177.2
40°	2793.3	2836.4	2944.0	3017.6	3021.1
42.5°	2617.5	2658.8	2746.7	2852.5	2852.5
45°	2430.9	2472.2	2552.9	2669.5	2683.9
47.5°	2247.9	2291.0	2369.9	2486.5	2509.8
50°	2068.5	2108.0	2186.9	2299.9	2335.8
52.5°	1881.9	1925.0	2002.1	2106.2	2158.2
55°	1702.5	1731.2	1815.6	1916.0	1971.6
57.5°	1516.0	1542.9	1637.9	1724.1	1781.5
60°	1336.6	1370.6	1444.2	1532.1	1598.5
62.5°	1164.3	1200.2	1263.0	1340.1	1415.5
65°	997.5	1024.4	1085.4	1162.5	1228.9
67.5°	836.0	859.3	920.3	974.2	1044.1
70°	672.8	703.3	748.1	800.1	845.0
72.5°	541.8	554.4	592.0	629.7	676.3
75°	400.1	421.6	452.1	473.6	500.5
77.5°	287.0	299.6	317.5	335.5	360.6
80°	192.0	197.3	213.5	217.1	236.8
82.5°	116.6	120.2	123.8	125.6	132.8
85°	62.8	62.8	62.8	59.2	59.2
87.5°	35.9	35.9	30.5	25.1	17.9
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)