

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: P557486

Luminaire Tested: **FUSL-12-4-LD4-2STD-30-UNV-93-97-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: P557486  
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-LD4-2STD-30-UNV-93-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

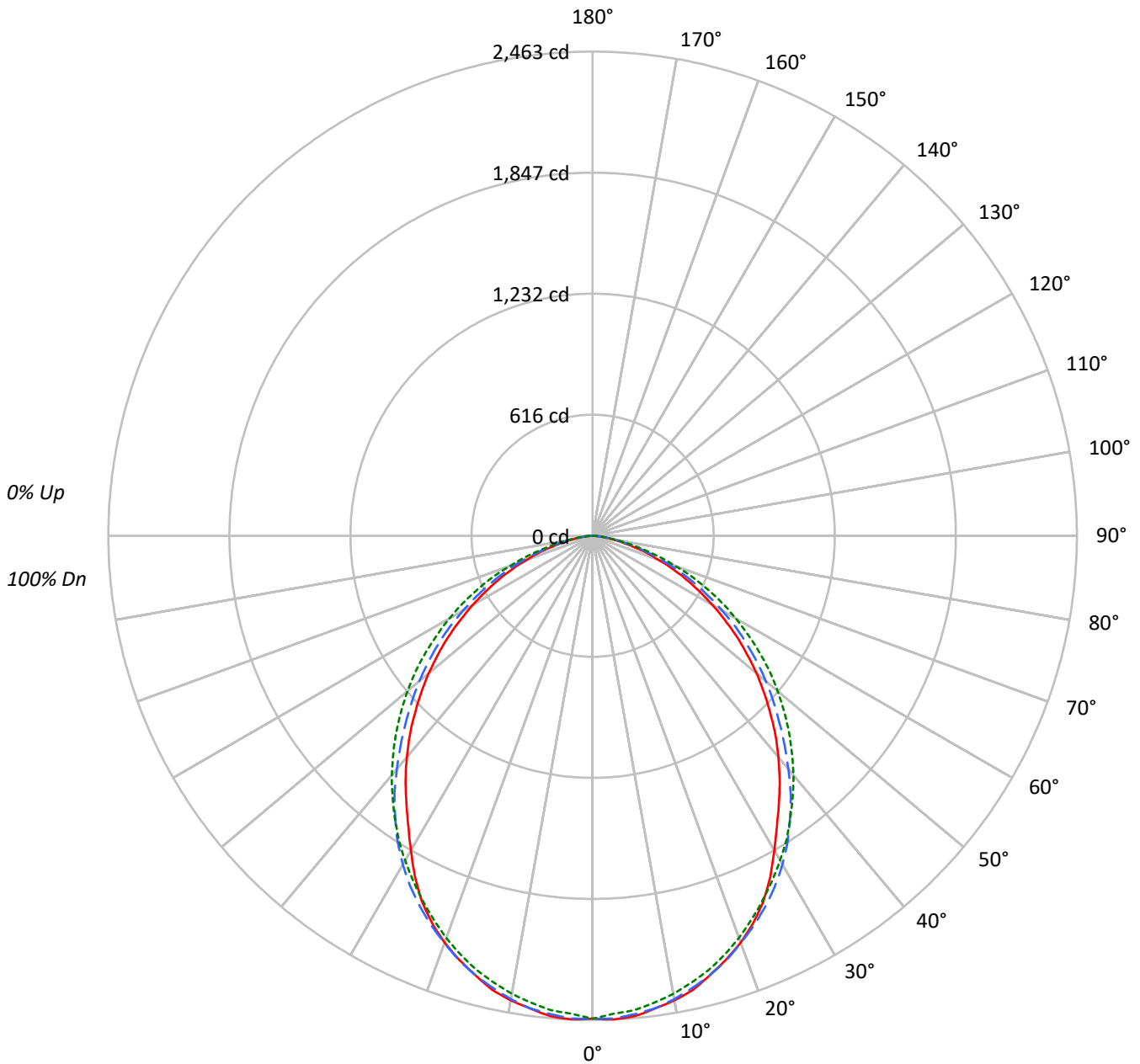
Lumens per Lamp: N/A  
Luminaire Lumens: 5680.0 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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

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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°	6610	6610	6610
5°	6628	6600	6544
10°	6557	6539	6465
15°	6441	6441	6367
20°	6305	6313	6232
25°	6097	6173	6075
30°	5742	6000	5926
35°	5425	5751	5760
40°	5161	5440	5583
45°	4866	5111	5373
50°	4555	4816	5144
55°	4202	4480	4866
60°	3784	4089	4525
65°	3341	3635	4116
70°	2784	3096	3497
75°	2188	2472	2738
80°	1565	1740	1931
85°	1019	1019	960



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	231.3	4.1
10°-20°	649.7	11.4
20°-30°	949.5	16.7
30°-40°	1077.8	19.0
40°-50°	1040.4	18.3
50°-60°	858.3	15.1
60°-70°	571.5	10.1
70°-80°	255.8	4.5
80°-90°	45.7	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°	1830.5	32.2
0°-40°	2908.3	51.2
0°-60°	4807.0	84.6
0°-90°	5680.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5680.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2456	2456	2456	2456	2456	
5°	2454	2453	2443	2430	2422	232
15°	2312	2318	2312	2302	2286	652
25°	2054	2070	2079	2064	2046	940
35°	1652	1674	1751	1760	1753	1035
45°	1279	1300	1343	1404	1412	987
55°	896	911	955	1008	1037	799
65°	525	539	571	612	646	520
75°	210	222	238	249	263	230
85°	33	33	33	31	31	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2456.5	2456.5	2456.5	2456.5	2456.5
2.5°	2463.1	2464.0	2458.3	2443.2	2433.8
5°	2453.6	2452.7	2443.2	2430.0	2422.5
7.5°	2426.3	2428.1	2425.3	2406.4	2396.1
10°	2399.8	2400.8	2393.2	2378.1	2365.9
12.5°	2365.9	2364.9	2354.5	2347.0	2327.2
15°	2312.1	2317.7	2312.1	2301.7	2285.6
17.5°	2260.2	2260.2	2263.9	2246.0	2233.7
20°	2201.7	2204.5	2204.5	2190.3	2176.2
22.5°	2133.7	2142.2	2145.0	2129.9	2112.9
25°	2053.5	2069.5	2079.0	2063.9	2045.9
27.5°	1956.3	1980.8	2009.1	1997.8	1978.0
30°	1847.8	1883.6	1930.8	1921.4	1907.2
32.5°	1744.9	1780.8	1845.9	1842.1	1834.6
35°	1651.5	1674.1	1750.6	1760.0	1753.4
37.5°	1562.8	1583.5	1655.3	1677.0	1671.3
40°	1469.3	1492.0	1548.6	1587.3	1589.2
42.5°	1376.9	1398.6	1444.8	1500.5	1500.5
45°	1278.7	1300.4	1342.9	1404.2	1411.8
47.5°	1182.5	1205.1	1246.6	1308.0	1320.2
50°	1088.1	1108.8	1150.4	1209.8	1228.7
52.5°	989.9	1012.6	1053.2	1107.9	1135.3
55°	895.6	910.7	955.0	1007.9	1037.1
57.5°	797.4	811.6	861.6	906.9	937.1
60°	703.1	721.0	759.7	805.9	840.8
62.5°	612.5	631.3	664.4	704.9	744.6
65°	524.7	538.9	570.9	611.5	646.4
67.5°	439.8	452.0	484.1	512.4	549.2
70°	353.9	369.9	393.5	420.9	444.5
72.5°	285.0	291.6	311.4	331.2	355.8
75°	210.4	221.8	237.8	249.1	263.3
77.5°	151.0	157.6	167.0	176.5	189.7
80°	101.0	103.8	112.3	114.2	124.6
82.5°	61.3	63.2	65.1	66.1	69.8
85°	33.0	33.0	33.0	31.1	31.1
87.5°	18.9	18.9	16.0	13.2	9.4
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)