

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: P557990

Luminaire Tested: **FUSL-12-4-LD4-3LO-30-UNV-93-87-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: P557990  
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-LD4-3LO-30-UNV-93-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

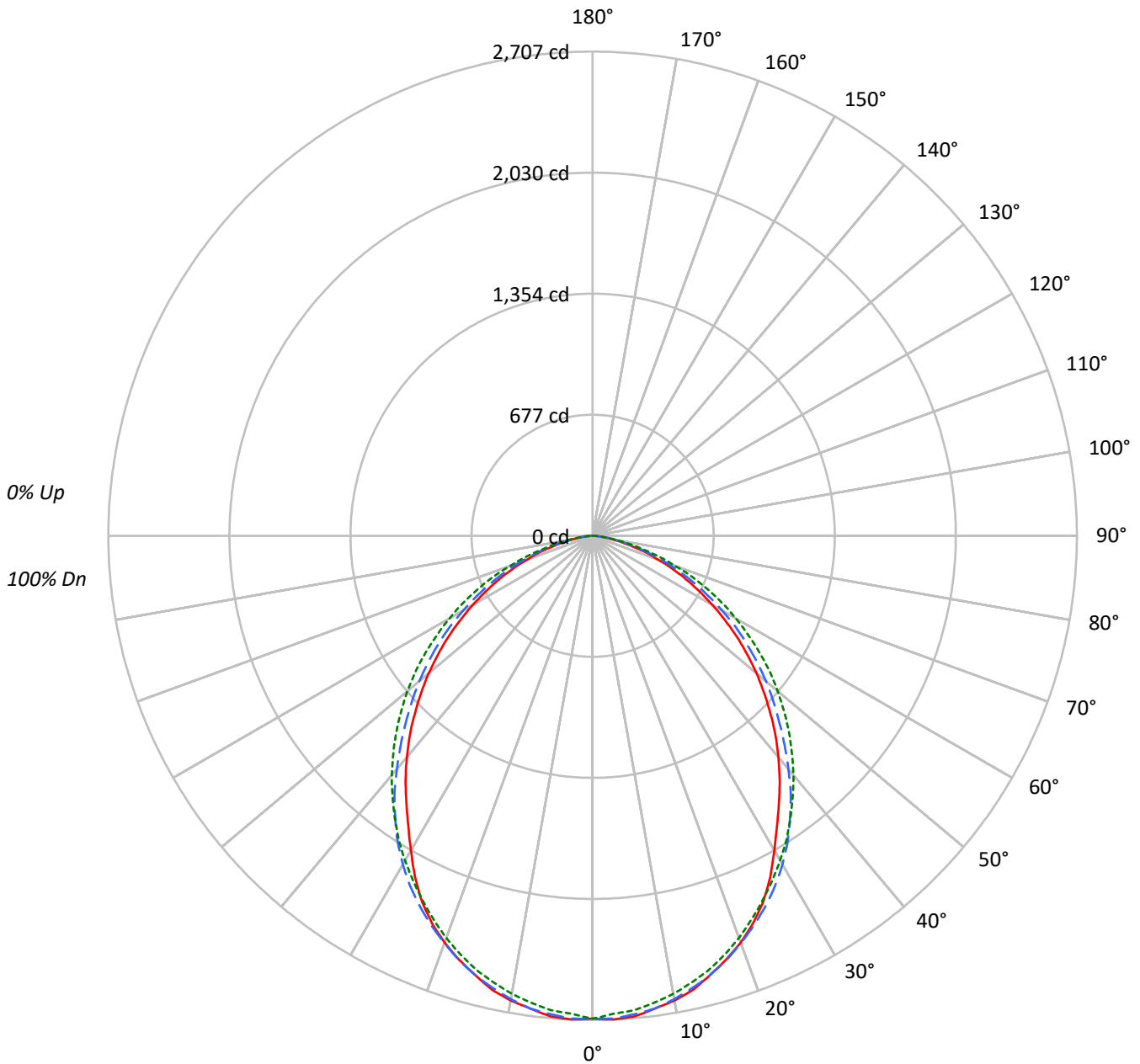
Lumens per Lamp: N/A  
Luminaire Lumens: 6243.0 lumens  
Efficiency: N/A  
Efficacy: 88.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°	7265	7265	7265
5°	7285	7254	7192
10°	7207	7188	7106
15°	7080	7080	6999
20°	6930	6939	6850
25°	6701	6785	6677
30°	6311	6594	6514
35°	5963	6321	6331
40°	5673	5979	6136
45°	5349	5617	5905
50°	5007	5293	5654
55°	4618	4925	5348
60°	4159	4494	4974
65°	3672	3996	4524
70°	3061	3403	3843
75°	2405	2718	3009
80°	1720	1912	2122
85°	1121	1121	1056



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	254.2	4.1
10°-20°	714.1	11.4
20°-30°	1043.6	16.7
30°-40°	1184.6	19.0
40°-50°	1143.5	18.3
50°-60°	943.3	15.1
60°-70°	628.2	10.1
70°-80°	281.1	4.5
80°-90°	50.3	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°	2011.9	32.2
0°-40°	3196.5	51.2
0°-60°	5283.4	84.6
0°-90°	6243.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6243.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2700	2700	2700	2700	2700	
5°	2697	2696	2685	2671	2663	255
15°	2541	2548	2541	2530	2512	716
25°	2257	2275	2285	2268	2249	1034
35°	1815	1840	1924	1934	1927	1137
45°	1406	1429	1476	1543	1552	1084
55°	984	1001	1050	1108	1140	879
65°	577	592	628	672	710	572
75°	231	244	261	274	289	253
85°	36	36	36	34	34	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2699.9	2699.9	2699.9	2699.9	2699.9
2.5°	2707.2	2708.2	2702.0	2685.4	2675.0
5°	2696.8	2695.8	2685.4	2670.9	2662.6
7.5°	2666.7	2668.8	2665.7	2645.0	2633.6
10°	2637.7	2638.7	2630.4	2613.8	2600.4
12.5°	2600.4	2599.3	2587.9	2579.6	2557.8
15°	2541.2	2547.5	2541.2	2529.8	2512.2
17.5°	2484.2	2484.2	2488.3	2468.6	2455.1
20°	2419.9	2423.0	2423.0	2407.4	2391.9
22.5°	2345.2	2354.5	2357.6	2341.1	2322.4
25°	2257.0	2274.7	2285.0	2268.4	2248.7
27.5°	2150.2	2177.2	2208.3	2195.8	2174.1
30°	2030.9	2070.3	2122.2	2111.8	2096.3
32.5°	1917.9	1957.3	2028.8	2024.7	2016.4
35°	1815.2	1840.1	1924.1	1934.5	1927.2
37.5°	1717.7	1740.5	1819.3	1843.2	1837.0
40°	1615.0	1639.9	1702.1	1744.6	1746.7
42.5°	1513.3	1537.2	1588.0	1649.2	1649.2
45°	1405.5	1429.3	1476.0	1543.4	1551.7
47.5°	1299.7	1324.6	1370.2	1437.6	1451.1
50°	1195.9	1218.8	1264.4	1329.7	1350.5
52.5°	1088.1	1113.0	1157.6	1217.7	1247.8
55°	984.3	1000.9	1049.7	1107.8	1139.9
57.5°	876.5	892.0	947.0	996.8	1030.0
60°	772.7	792.5	835.0	885.8	924.2
62.5°	673.2	693.9	730.2	774.8	818.4
65°	576.7	592.3	627.5	672.1	710.5
67.5°	483.4	496.8	532.1	563.2	603.7
70°	389.0	406.6	432.5	462.6	488.5
72.5°	313.2	320.5	342.3	364.1	391.0
75°	231.3	243.8	261.4	273.8	289.4
77.5°	166.0	173.2	183.6	194.0	208.5
80°	111.0	114.1	123.4	125.5	136.9
82.5°	67.4	69.5	71.6	72.6	76.8
85°	36.3	36.3	36.3	34.2	34.2
87.5°	20.7	20.7	17.6	14.5	10.4
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)