

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: P558054

Luminaire Tested: **FUSL-12-4-LD4-3LO-35-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: P558054  
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-35-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 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

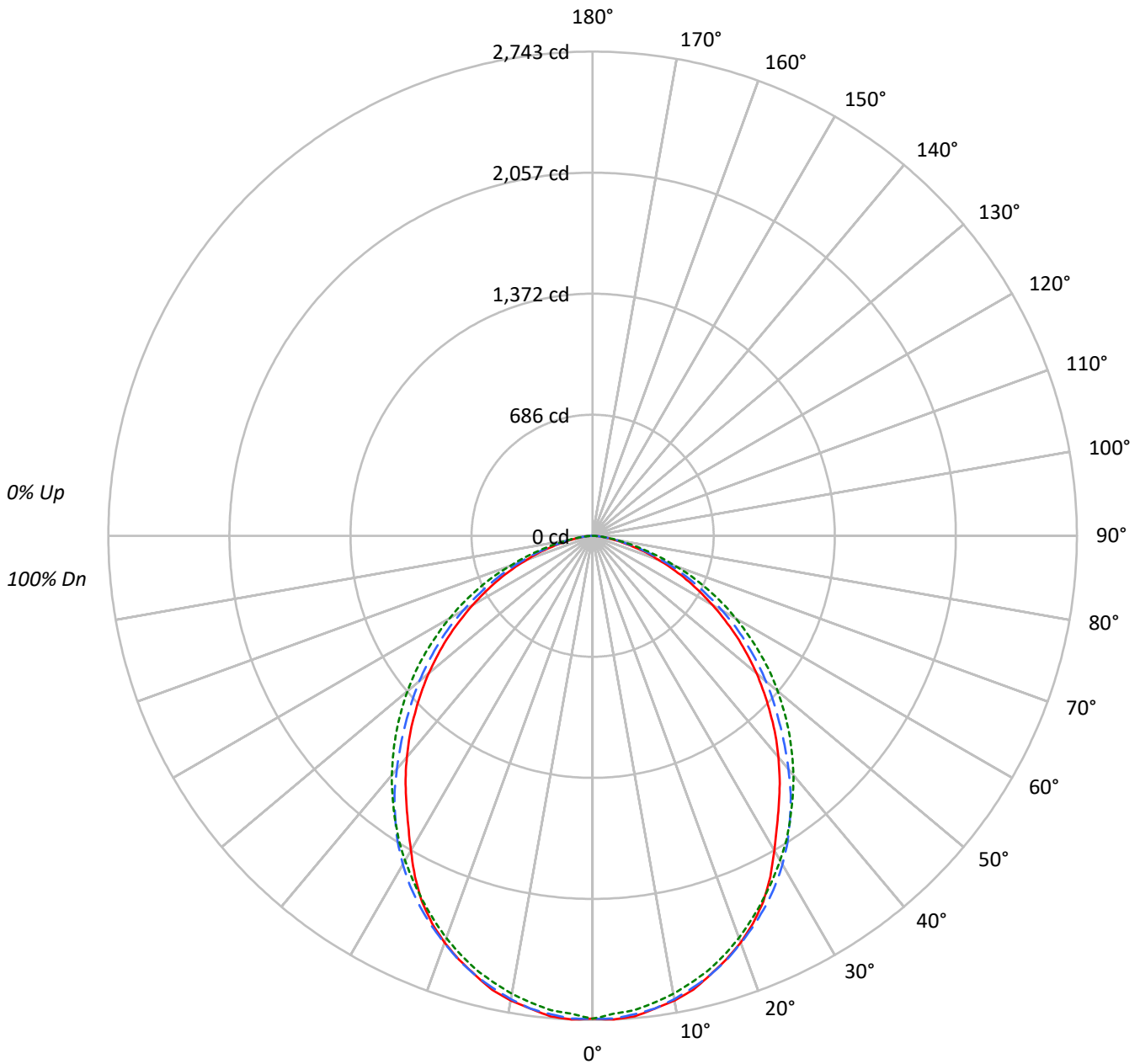
Lumens per Lamp: N/A  
Luminaire Lumens: 6326.0 lumens  
Efficiency: N/A  
Efficacy: 90.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	7362	7362	7362
5°	7382	7350	7288
10°	7303	7283	7200
15°	7174	7174	7092
20°	7022	7031	6941
25°	6790	6875	6766
30°	6394	6682	6600
35°	6042	6405	6415
40°	5749	6059	6217
45°	5420	5692	5984
50°	5073	5364	5729
55°	4679	4990	5419
60°	4214	4554	5040
65°	3721	4049	4585
70°	3101	3448	3895
75°	2437	2754	3048
80°	1743	1939	2149
85°	1136	1136	1071



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	257.6	4.1
10°-20°	723.6	11.4
20°-30°	1057.5	16.7
30°-40°	1200.3	19.0
40°-50°	1158.7	18.3
50°-60°	955.9	15.1
60°-70°	636.5	10.1
70°-80°	284.8	4.5
80°-90°	51.0	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°	2038.7	32.2
0°-40°	3239.0	51.2
0°-60°	5353.6	84.6
0°-90°	6326.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6326.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2736	2736	2736	2736	2736	
5°	2733	2732	2721	2706	2698	259
15°	2575	2581	2575	2564	2546	726
25°	2287	2305	2315	2299	2279	1047
35°	1839	1864	1950	1960	1953	1152
45°	1424	1448	1496	1564	1572	1099
55°	997	1014	1064	1122	1155	890
65°	584	600	636	681	720	579
75°	234	247	265	278	293	256
85°	37	37	37	35	35	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2735.8	2735.8	2735.8	2735.8	2735.8
2.5°	2743.2	2744.2	2737.9	2721.1	2710.6
5°	2732.7	2731.6	2721.1	2706.4	2698.0
7.5°	2702.2	2704.3	2701.1	2680.1	2668.6
10°	2672.8	2673.8	2665.4	2648.6	2634.9
12.5°	2634.9	2633.9	2622.3	2613.9	2591.8
15°	2575.0	2581.3	2575.0	2563.5	2545.6
17.5°	2517.2	2517.2	2521.4	2501.5	2487.8
20°	2452.1	2455.2	2455.2	2439.4	2423.7
22.5°	2376.4	2385.8	2389.0	2372.2	2353.3
25°	2287.0	2304.9	2315.4	2298.6	2278.6
27.5°	2178.8	2206.1	2237.6	2225.0	2203.0
30°	2057.9	2097.9	2150.4	2139.9	2124.1
32.5°	1943.4	1983.3	2055.8	2051.6	2043.2
35°	1839.3	1864.5	1949.7	1960.2	1952.8
37.5°	1740.5	1763.6	1843.5	1867.7	1861.4
40°	1636.5	1661.7	1724.7	1767.8	1769.9
42.5°	1533.5	1557.6	1609.1	1671.1	1671.1
45°	1424.1	1448.3	1495.6	1563.9	1572.3
47.5°	1316.9	1342.2	1388.4	1456.7	1470.4
50°	1211.8	1235.0	1281.2	1347.4	1368.4
52.5°	1102.5	1127.8	1172.9	1233.9	1264.4
55°	997.4	1014.2	1063.6	1122.5	1155.1
57.5°	888.1	903.9	959.6	1010.0	1043.7
60°	783.0	803.0	846.1	897.6	936.5
62.5°	682.1	703.1	739.9	785.1	829.3
65°	584.4	600.1	635.9	681.1	720.0
67.5°	489.8	503.4	539.2	570.7	611.7
70°	394.1	412.0	438.3	468.8	495.0
72.5°	317.4	324.8	346.8	368.9	396.2
75°	234.4	247.0	264.9	277.5	293.2
77.5°	168.2	175.5	186.0	196.5	211.3
80°	112.5	115.6	125.1	127.2	138.7
82.5°	68.3	70.4	72.5	73.6	77.8
85°	36.8	36.8	36.8	34.7	34.7
87.5°	21.0	21.0	17.9	14.7	10.5
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)