

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: P558018

Luminaire Tested: **FUSL-12-4-LD4-3LO-35-UNV-81-85-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: P558018  
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-81-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187  
CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

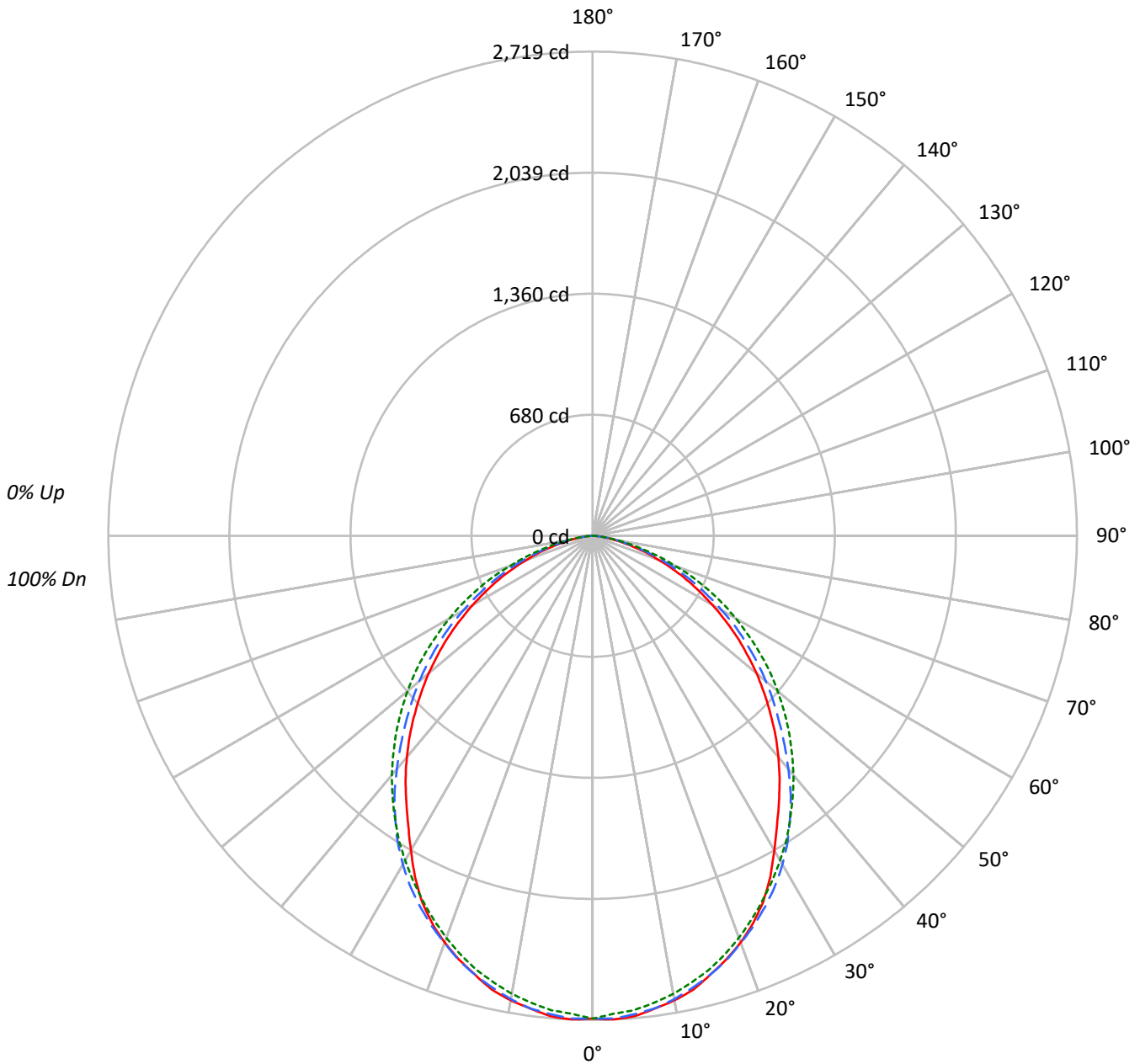
Lumens per Lamp: N/A  
Luminaire Lumens: 6270.0 lumens  
Efficiency: N/A  
Efficacy: 89.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°	7297	7297	7297
5°	7316	7285	7223
10°	7239	7219	7136
15°	7110	7110	7029
20°	6960	6969	6879
25°	6731	6814	6706
30°	6338	6623	6542
35°	5989	6348	6358
40°	5698	6005	6163
45°	5372	5641	5931
50°	5028	5316	5678
55°	4638	4946	5371
60°	4177	4513	4996
65°	3688	4013	4544
70°	3073	3418	3861
75°	2415	2729	3021
80°	1728	1922	2131
85°	1127	1127	1062



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	255.3	4.1
10°-20°	717.2	11.4
20°-30°	1048.1	16.7
30°-40°	1189.7	19.0
40°-50°	1148.5	18.3
50°-60°	947.4	15.1
60°-70°	630.9	10.1
70°-80°	282.3	4.5
80°-90°	50.5	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°	2020.6	32.2
0°-40°	3210.3	51.2
0°-60°	5306.3	84.6
0°-90°	6270.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6270.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2712	2712	2712	2712	2712	
5°	2708	2707	2697	2682	2674	256
15°	2552	2558	2552	2541	2523	719
25°	2267	2284	2295	2278	2258	1038
35°	1823	1848	1932	1943	1936	1142
45°	1412	1436	1482	1550	1558	1089
55°	989	1005	1054	1113	1145	882
65°	579	595	630	675	714	574
75°	232	245	262	275	291	254
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°	2711.6	2711.6	2711.6	2711.6	2711.6
2.5°	2718.9	2719.9	2713.7	2697.0	2686.6
5°	2708.5	2707.4	2697.0	2682.4	2674.1
7.5°	2678.3	2680.4	2677.2	2656.4	2644.9
10°	2649.1	2650.2	2641.8	2625.1	2611.6
12.5°	2611.6	2610.6	2599.1	2590.8	2568.9
15°	2552.2	2558.5	2552.2	2540.8	2523.1
17.5°	2494.9	2494.9	2499.1	2479.3	2465.8
20°	2430.3	2433.5	2433.5	2417.8	2402.2
22.5°	2355.3	2364.7	2367.8	2351.2	2332.4
25°	2266.8	2284.5	2294.9	2278.3	2258.5
27.5°	2159.5	2186.6	2217.8	2205.3	2183.5
30°	2039.7	2079.3	2131.4	2121.0	2105.3
32.5°	1926.2	1965.7	2037.6	2033.4	2025.1
35°	1823.0	1848.0	1932.4	1942.8	1935.5
37.5°	1725.1	1748.0	1827.2	1851.1	1844.9
40°	1622.0	1647.0	1709.5	1752.2	1754.3
42.5°	1519.9	1543.8	1594.9	1656.3	1656.3
45°	1411.5	1435.5	1482.4	1550.1	1558.4
47.5°	1305.3	1330.3	1376.1	1443.8	1457.4
50°	1201.1	1224.0	1269.9	1335.5	1356.3
52.5°	1092.8	1117.8	1162.6	1223.0	1253.2
55°	988.6	1005.3	1054.2	1112.6	1144.9
57.5°	880.3	895.9	951.1	1001.1	1034.4
60°	776.1	795.9	838.6	889.6	928.2
62.5°	676.1	696.9	733.4	778.2	821.9
65°	579.2	594.8	630.2	675.0	713.6
67.5°	485.4	499.0	534.4	565.7	606.3
70°	390.6	408.4	434.4	464.6	490.7
72.5°	314.6	321.9	343.8	365.6	392.7
75°	232.3	244.8	262.5	275.0	290.6
77.5°	166.7	174.0	184.4	194.8	209.4
80°	111.5	114.6	124.0	126.0	137.5
82.5°	67.7	69.8	71.9	72.9	77.1
85°	36.5	36.5	36.5	34.4	34.4
87.5°	20.8	20.8	17.7	14.6	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)