

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: P557977

Luminaire Tested: **FUSL-12-4-LD4-3LO-30-UNV-82-88-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: P557977  
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-82-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

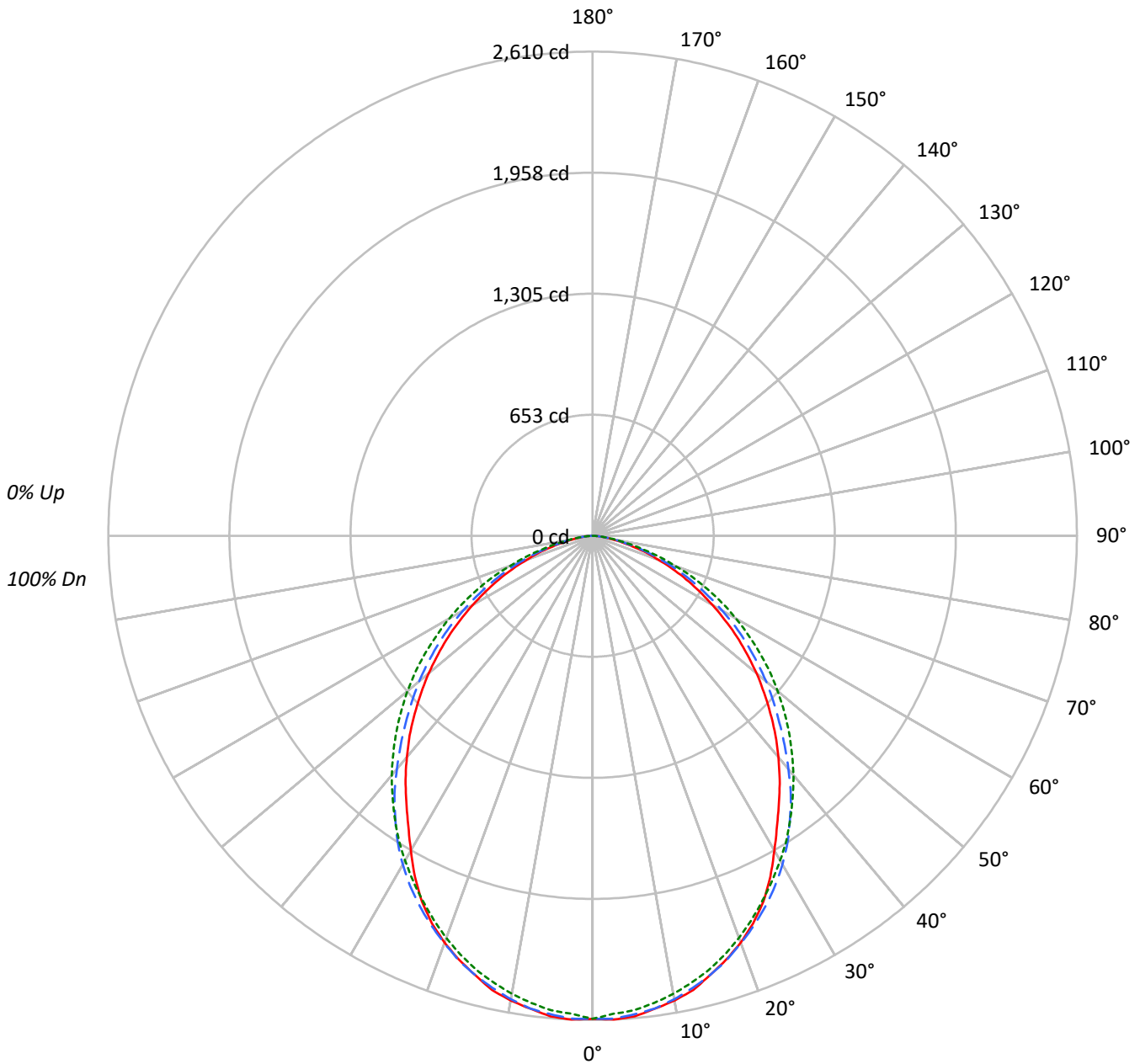
Lumens per Lamp: N/A  
Luminaire Lumens: 6020.0 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7006	7006	7006
5°	7025	6995	6935
10°	6950	6931	6852
15°	6827	6827	6749
20°	6682	6691	6605
25°	6462	6542	6438
30°	6085	6359	6281
35°	5750	6095	6105
40°	5471	5766	5917
45°	5158	5417	5694
50°	4828	5104	5452
55°	4453	4749	5157
60°	4010	4334	4796
65°	3541	3853	4362
70°	2951	3282	3707
75°	2319	2620	2902
80°	1658	1844	2046
85°	1081	1081	1019



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	245.1	4.1
10°-20°	688.6	11.4
20°-30°	1006.3	16.7
30°-40°	1142.3	19.0
40°-50°	1102.7	18.3
50°-60°	909.6	15.1
60°-70°	605.7	10.1
70°-80°	271.1	4.5
80°-90°	48.5	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°	1940.1	32.2
0°-40°	3082.4	51.2
0°-60°	5094.7	84.6
0°-90°	6020.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6020.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2604	2604	2604	2604	2604	
5°	2600	2600	2590	2576	2568	246
15°	2450	2456	2450	2440	2422	691
25°	2176	2193	2203	2187	2168	997
35°	1750	1774	1855	1865	1858	1097
45°	1355	1378	1423	1488	1496	1046
55°	949	965	1012	1068	1099	847
65°	556	571	605	648	685	551
75°	223	235	252	264	279	244
85°	35	35	35	33	33	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2603.5	2603.5	2603.5	2603.5	2603.5
2.5°	2610.5	2611.5	2605.5	2589.5	2579.5
5°	2600.5	2599.5	2589.5	2575.5	2567.5
7.5°	2571.5	2573.5	2570.5	2550.5	2539.5
10°	2543.5	2544.5	2536.5	2520.5	2507.5
12.5°	2507.5	2506.5	2495.5	2487.5	2466.5
15°	2450.5	2456.5	2450.5	2439.5	2422.5
17.5°	2395.5	2395.5	2399.5	2380.5	2367.4
20°	2333.4	2336.4	2336.4	2321.4	2306.4
22.5°	2261.4	2270.4	2273.4	2257.4	2239.4
25°	2176.4	2193.4	2203.4	2187.4	2168.4
27.5°	2073.4	2099.4	2129.4	2117.4	2096.4
30°	1958.4	1996.4	2046.4	2036.4	2021.4
32.5°	1849.4	1887.4	1956.4	1952.4	1944.4
35°	1750.3	1774.3	1855.4	1865.4	1858.4
37.5°	1656.3	1678.3	1754.3	1777.3	1771.3
40°	1557.3	1581.3	1641.3	1682.3	1684.3
42.5°	1459.3	1482.3	1531.3	1590.3	1590.3
45°	1355.3	1378.3	1423.3	1488.3	1496.3
47.5°	1253.2	1277.2	1321.3	1386.3	1399.3
50°	1153.2	1175.2	1219.2	1282.2	1302.2
52.5°	1049.2	1073.2	1116.2	1174.2	1203.2
55°	949.2	965.2	1012.2	1068.2	1099.2
57.5°	845.2	860.2	913.2	961.2	993.2
60°	745.1	764.1	805.2	854.2	891.2
62.5°	649.1	669.1	704.1	747.1	789.1
65°	556.1	571.1	605.1	648.1	685.1
67.5°	466.1	479.1	513.1	543.1	582.1
70°	375.1	392.1	417.1	446.1	471.1
72.5°	302.1	309.1	330.1	351.1	377.1
75°	223.0	235.0	252.0	264.1	279.1
77.5°	160.0	167.0	177.0	187.0	201.0
80°	107.0	110.0	119.0	121.0	132.0
82.5°	65.0	67.0	69.0	70.0	74.0
85°	35.0	35.0	35.0	33.0	33.0
87.5°	20.0	20.0	17.0	14.0	10.0
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)