

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: P558080

Luminaire Tested: **FUSL-12-4-LD4-3LO-40-UNV-81-84-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: P558080  
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-40-UNV-81-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

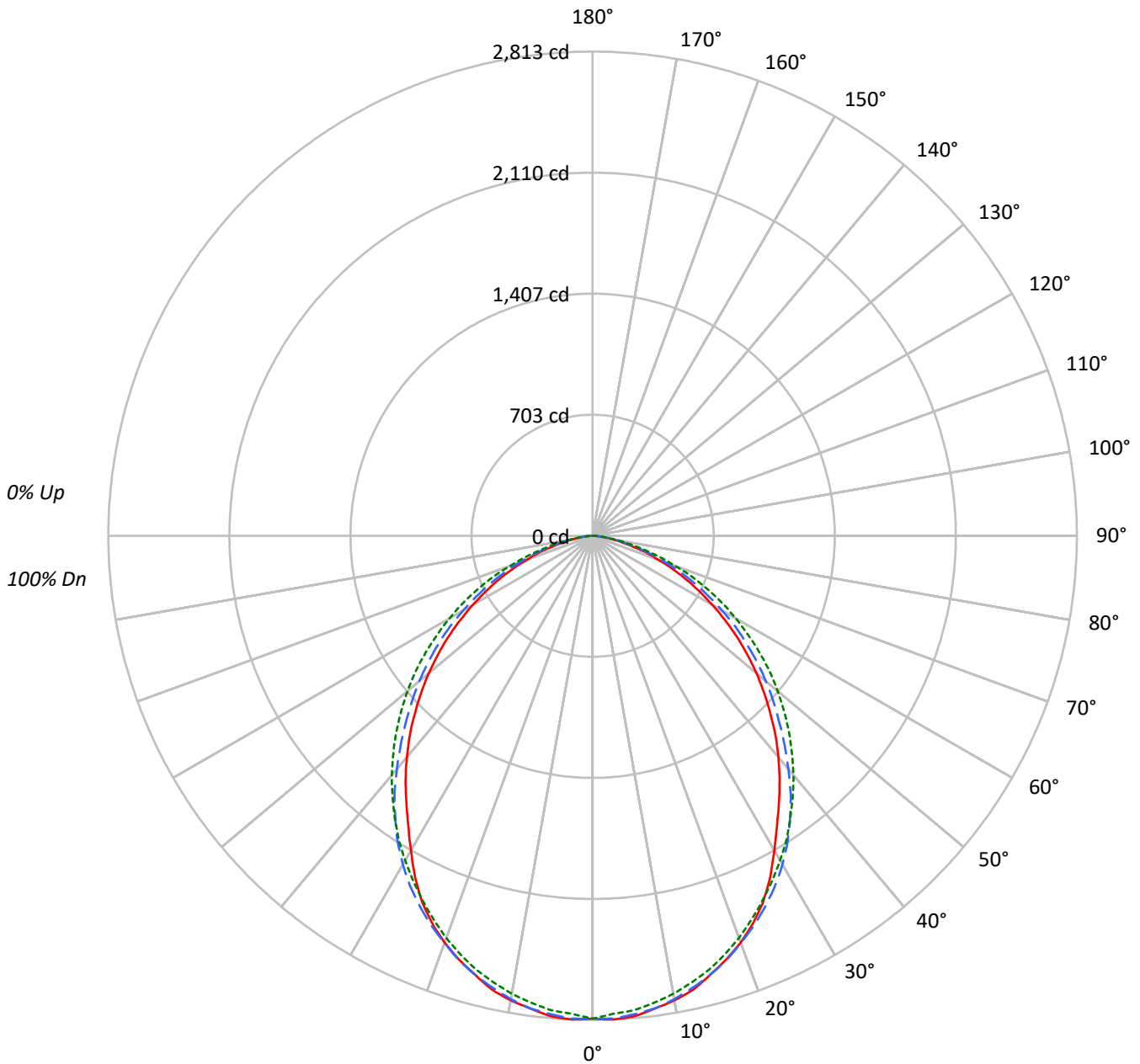
Lumens per Lamp: N/A  
Luminaire Lumens: 6487.0 lumens  
Efficiency: N/A  
Efficacy: 92.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7550	7550	7550
5°	7569	7538	7474
10°	7489	7468	7383
15°	7356	7356	7272
20°	7201	7210	7117
25°	6963	7050	6938
30°	6557	6852	6768
35°	6196	6568	6578
40°	5895	6213	6376
45°	5558	5837	6136
50°	5202	5500	5875
55°	4799	5117	5557
60°	4321	4669	5168
65°	3815	4152	4701
70°	3180	3536	3994
75°	2498	2824	3126
80°	1787	1988	2205
85°	1164	1164	1099



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	264.1	4.1
10°-20°	742.1	11.4
20°-30°	1084.4	16.7
30°-40°	1230.9	19.0
40°-50°	1188.2	18.3
50°-60°	980.2	15.1
60°-70°	652.7	10.1
70°-80°	292.1	4.5
80°-90°	52.3	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°	2090.6	32.2
0°-40°	3321.5	51.2
0°-60°	5489.9	84.6
0°-90°	6487.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6487.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2806	2806	2806	2806	2806	
5°	2802	2801	2790	2775	2767	265
15°	2641	2647	2641	2629	2610	744
25°	2345	2364	2374	2357	2337	1074
35°	1886	1912	1999	2010	2002	1182
45°	1460	1485	1534	1604	1612	1127
55°	1023	1040	1091	1151	1184	913
65°	599	615	652	698	738	594
75°	240	253	272	284	301	263
85°	38	38	38	36	36	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2805.5	2805.5	2805.5	2805.5	2805.5
2.5°	2813.0	2814.1	2807.6	2790.4	2779.6
5°	2802.2	2801.1	2790.4	2775.3	2766.7
7.5°	2771.0	2773.1	2769.9	2748.3	2736.5
10°	2740.8	2741.9	2733.2	2716.0	2702.0
12.5°	2702.0	2700.9	2689.1	2680.4	2657.8
15°	2640.6	2647.0	2640.6	2628.7	2610.4
17.5°	2581.3	2581.3	2585.6	2565.1	2551.1
20°	2514.5	2517.7	2517.7	2501.5	2485.4
22.5°	2436.9	2446.6	2449.8	2432.5	2413.1
25°	2345.2	2363.6	2374.3	2357.1	2336.6
27.5°	2234.2	2262.3	2294.6	2281.7	2259.0
30°	2110.3	2151.2	2205.1	2194.4	2178.2
32.5°	1992.8	2033.8	2108.1	2103.8	2095.2
35°	1886.1	1912.0	1999.3	2010.1	2002.5
37.5°	1784.8	1808.5	1890.4	1915.2	1908.7
40°	1678.1	1704.0	1768.6	1812.8	1815.0
42.5°	1572.5	1597.3	1650.1	1713.7	1713.7
45°	1460.4	1485.2	1533.7	1603.7	1612.4
47.5°	1350.5	1376.3	1423.7	1493.8	1507.8
50°	1242.7	1266.4	1313.8	1381.7	1403.3
52.5°	1130.6	1156.5	1202.8	1265.3	1296.6
55°	1022.8	1040.1	1090.7	1151.1	1184.5
57.5°	910.7	926.9	984.0	1035.7	1070.2
60°	802.9	823.4	867.6	920.4	960.3
62.5°	699.5	721.0	758.8	805.1	850.4
65°	599.2	615.4	652.1	698.4	738.3
67.5°	502.2	516.3	552.9	585.2	627.3
70°	404.2	422.5	449.4	480.7	507.6
72.5°	325.5	333.0	355.7	378.3	406.3
75°	240.3	253.3	271.6	284.5	300.7
77.5°	172.4	180.0	190.8	201.5	216.6
80°	115.3	118.6	128.3	130.4	142.3
82.5°	70.1	72.2	74.4	75.4	79.8
85°	37.7	37.7	37.7	35.6	35.6
87.5°	21.6	21.6	18.3	15.1	10.8
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)