

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: P557130

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-81-94-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: P557130  
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-LD4-2HI-50-UNV-81-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

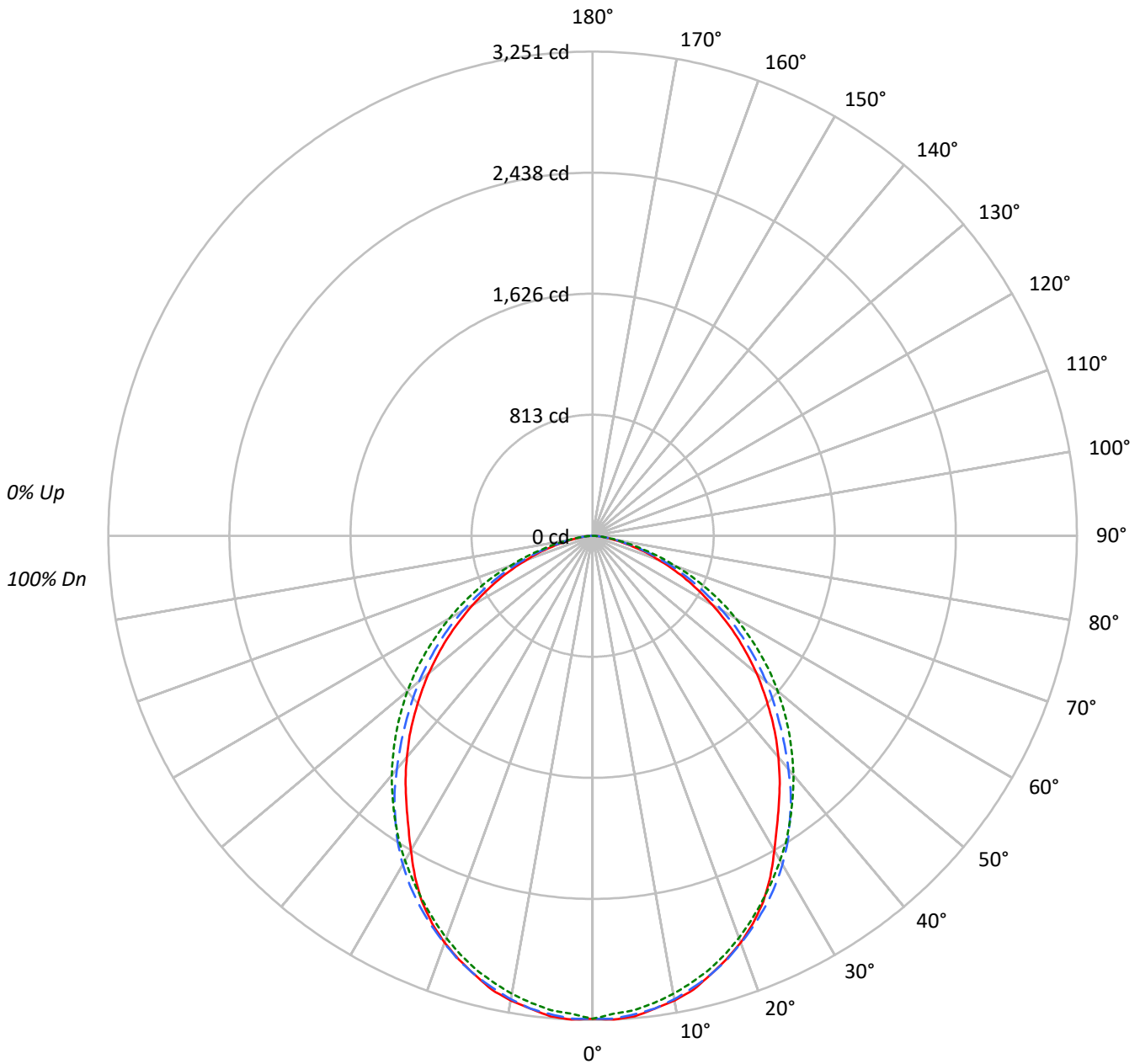
Lumens per Lamp: N/A  
Luminaire Lumens: 7498.0 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	8726	8726	8726
5°	8749	8712	8638
10°	8656	8632	8534
15°	8503	8503	8406
20°	8323	8334	8226
25°	8049	8149	8019
30°	7579	7920	7823
35°	7162	7591	7604
40°	6813	7181	7369
45°	6424	6746	7092
50°	6013	6357	6790
55°	5546	5915	6423
60°	4995	5397	5974
65°	4410	4799	5433
70°	3676	4087	4616
75°	2888	3264	3614
80°	2066	2297	2548
85°	1346	1346	1269



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	305.3	4.1
10°-20°	857.7	11.4
20°-30°	1253.4	16.7
30°-40°	1422.7	19.0
40°-50°	1373.4	18.3
50°-60°	1133.0	15.1
60°-70°	754.5	10.1
70°-80°	337.6	4.5
80°-90°	60.4	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°	2416.4	32.2
0°-40°	3839.1	51.2
0°-60°	6345.5	84.6
0°-90°	7498.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7498.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3243	3243	3243	3243	3243	
5°	3239	3238	3225	3208	3198	307
15°	3052	3060	3052	3038	3017	860
25°	2711	2732	2744	2724	2701	1241
35°	2180	2210	2311	2323	2315	1366
45°	1688	1717	1773	1854	1864	1302
55°	1182	1202	1261	1330	1369	1055
65°	693	711	754	807	853	687
75°	278	293	314	329	348	304
85°	44	44	44	41	41	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3242.7	3242.7	3242.7	3242.7	3242.7
2.5°	3251.4	3252.7	3245.2	3225.3	3212.8
5°	3239.0	3237.7	3225.3	3207.8	3197.8
7.5°	3202.8	3205.3	3201.6	3176.7	3163.0
10°	3167.9	3169.2	3159.2	3139.3	3123.1
12.5°	3123.1	3121.9	3108.2	3098.2	3072.0
15°	3052.1	3059.6	3052.1	3038.4	3017.2
17.5°	2983.6	2983.6	2988.6	2964.9	2948.7
20°	2906.3	2910.1	2910.1	2891.4	2872.7
22.5°	2816.6	2827.9	2831.6	2811.7	2789.2
25°	2710.8	2731.9	2744.4	2724.5	2700.8
27.5°	2582.4	2614.8	2652.2	2637.3	2611.1
30°	2439.2	2486.5	2548.8	2536.4	2517.7
32.5°	2303.4	2350.7	2436.7	2431.7	2421.7
35°	2180.1	2210.0	2310.9	2323.3	2314.6
37.5°	2063.0	2090.4	2185.0	2213.7	2206.2
40°	1939.6	1969.5	2044.3	2095.4	2097.8
42.5°	1817.6	1846.2	1907.2	1980.7	1980.7
45°	1688.0	1716.6	1772.7	1853.7	1863.6
47.5°	1560.9	1590.8	1645.6	1726.6	1742.8
50°	1436.4	1463.8	1518.6	1597.1	1622.0
52.5°	1306.8	1336.7	1390.3	1462.5	1498.6
55°	1182.2	1202.2	1260.7	1330.5	1369.1
57.5°	1052.7	1071.3	1137.4	1197.2	1237.0
60°	928.1	951.8	1002.8	1063.9	1110.0
62.5°	808.5	833.4	877.0	930.6	982.9
65°	692.6	711.3	753.7	807.2	853.3
67.5°	580.5	596.7	639.1	676.4	725.0
70°	467.2	488.3	519.5	555.6	586.7
72.5°	376.2	384.9	411.1	437.3	469.6
75°	277.8	292.8	313.9	328.9	347.6
77.5°	199.3	208.0	220.5	233.0	250.4
80°	133.3	137.0	148.2	150.7	164.4
82.5°	81.0	83.5	86.0	87.2	92.2
85°	43.6	43.6	43.6	41.1	41.1
87.5°	24.9	24.9	21.2	17.4	12.5
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)