

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: P557098

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-93-94-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: P557098  
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-40-UNV-93-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

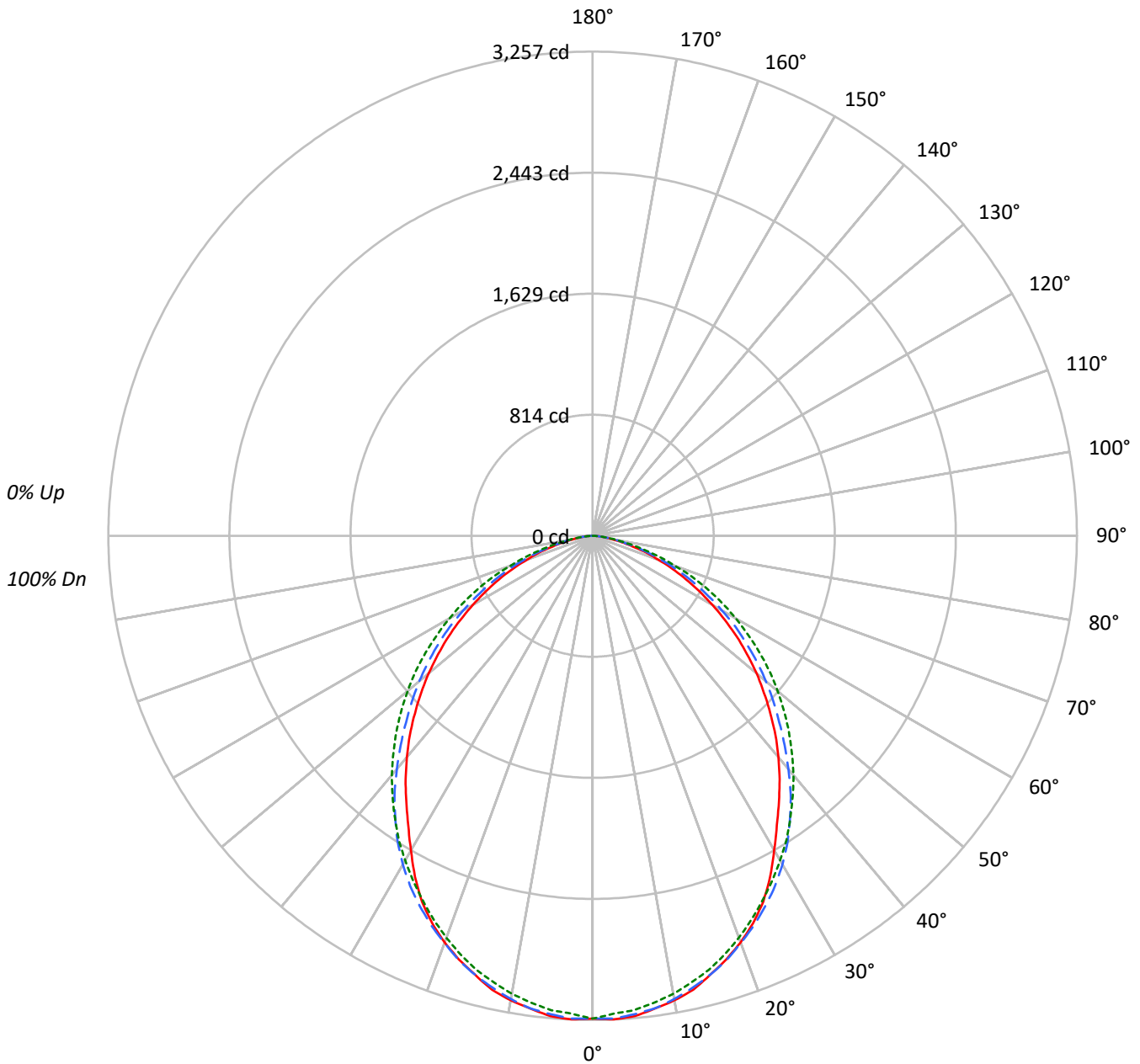
Lumens per Lamp: N/A  
Luminaire Lumens: 7510.0 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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					20					
RC	80					70					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8740	8740	8740
5°	8763	8726	8652
10°	8670	8646	8548
15°	8517	8517	8419
20°	8336	8347	8240
25°	8062	8162	8032
30°	7591	7933	7836
35°	7173	7604	7616
40°	6824	7193	7381
45°	6434	6757	7104
50°	6023	6368	6801
55°	5555	5924	6434
60°	5003	5406	5983
65°	4417	4807	5442
70°	3681	4094	4624
75°	2892	3269	3619
80°	2069	2301	2552
85°	1349	1349	1272



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	305.8	4.1
10°-20°	859.1	11.4
20°-30°	1255.4	16.7
30°-40°	1425.0	19.0
40°-50°	1375.6	18.3
50°-60°	1134.8	15.1
60°-70°	755.7	10.1
70°-80°	338.2	4.5
80°-90°	60.5	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°	2420.3	32.2
0°-40°	3845.3	51.2
0°-60°	6355.7	84.6
0°-90°	7510.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7510.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3248	3248	3248	3248	3248	
5°	3244	3243	3230	3213	3203	307
15°	3057	3064	3057	3043	3022	862
25°	2715	2736	2749	2729	2705	1243
35°	2184	2214	2315	2327	2318	1368
45°	1691	1719	1776	1857	1867	1304
55°	1184	1204	1263	1333	1371	1057
65°	694	712	755	808	855	688
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°	3247.9	3247.9	3247.9	3247.9	3247.9
2.5°	3256.6	3257.9	3250.4	3230.4	3217.9
5°	3244.1	3242.9	3230.4	3212.9	3203.0
7.5°	3208.0	3210.4	3206.7	3181.8	3168.0
10°	3173.0	3174.3	3164.3	3144.3	3128.1
12.5°	3128.1	3126.8	3113.1	3103.1	3076.9
15°	3057.0	3064.5	3057.0	3043.3	3022.0
17.5°	2988.4	2988.4	2993.3	2969.6	2953.4
20°	2911.0	2914.7	2914.7	2896.0	2877.3
22.5°	2821.2	2832.4	2836.1	2816.2	2793.7
25°	2715.1	2736.3	2748.8	2728.8	2705.1
27.5°	2586.6	2619.0	2656.4	2641.5	2615.3
30°	2443.1	2490.5	2552.9	2540.4	2521.7
32.5°	2307.1	2354.5	2440.6	2435.6	2425.6
35°	2183.6	2213.5	2314.6	2327.0	2318.3
37.5°	2066.3	2093.7	2188.5	2217.2	2209.8
40°	1942.7	1972.7	2047.6	2098.7	2101.2
42.5°	1820.5	1849.2	1910.3	1983.9	1983.9
45°	1690.7	1719.4	1775.5	1856.6	1866.6
47.5°	1563.4	1593.4	1648.3	1729.4	1745.6
50°	1438.7	1466.1	1521.0	1599.6	1624.6
52.5°	1308.9	1338.8	1392.5	1464.9	1501.0
55°	1184.1	1204.1	1262.7	1332.6	1371.3
57.5°	1054.3	1073.1	1139.2	1199.1	1239.0
60°	929.6	953.3	1004.4	1065.6	1111.7
62.5°	809.8	834.7	878.4	932.1	984.5
65°	693.7	712.5	754.9	808.5	854.7
67.5°	581.4	597.7	640.1	677.5	726.2
70°	467.9	489.1	520.3	556.5	587.7
72.5°	376.8	385.6	411.8	438.0	470.4
75°	278.2	293.2	314.4	329.4	348.1
77.5°	199.6	208.4	220.9	233.3	250.8
80°	133.5	137.3	148.5	151.0	164.7
82.5°	81.1	83.6	86.1	87.3	92.3
85°	43.7	43.7	43.7	41.2	41.2
87.5°	25.0	25.0	21.2	17.5	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)