

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: P557116

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-80-96-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: P557116  
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-80-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

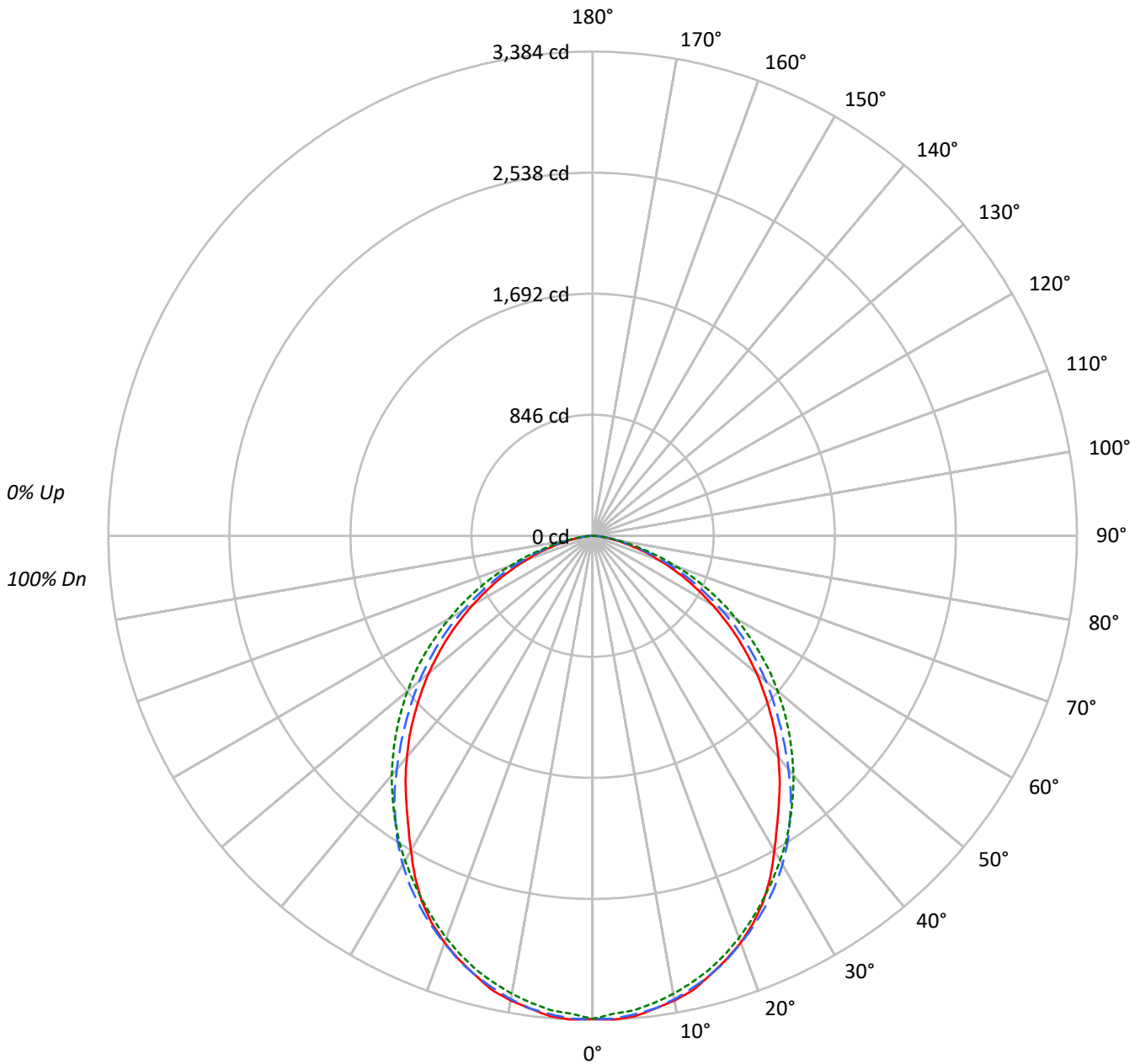
Lumens per Lamp: N/A  
Luminaire Lumens: 7805.0 lumens  
Efficiency: N/A  
Efficacy: 90.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	9083	9083	9083
5°	9108	9069	8992
10°	9011	8986	8883
15°	8851	8851	8750
20°	8663	8675	8563
25°	8378	8482	8348
30°	7890	8244	8143
35°	7455	7902	7915
40°	7093	7475	7671
45°	6687	7023	7383
50°	6260	6617	7068
55°	5773	6157	6686
60°	5200	5618	6218
65°	4591	4995	5656
70°	3826	4254	4806
75°	3007	3398	3762
80°	2151	2391	2653
85°	1402	1402	1321



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	317.8	4.1
10°-20°	892.8	11.4
20°-30°	1304.7	16.7
30°-40°	1481.0	19.0
40°-50°	1429.6	18.3
50°-60°	1179.4	15.1
60°-70°	785.3	10.1
70°-80°	351.4	4.5
80°-90°	62.9	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°	2515.3	32.2
0°-40°	3996.3	51.2
0°-60°	6605.3	84.6
0°-90°	7805.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7805.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3376	3376	3376	3376	3376	
5°	3372	3370	3357	3339	3329	319
15°	3177	3185	3177	3163	3141	896
25°	2822	2844	2857	2836	2811	1292
35°	2269	2300	2406	2418	2409	1422
45°	1757	1787	1845	1930	1940	1356
55°	1231	1251	1312	1385	1425	1098
65°	721	740	784	840	888	715
75°	289	305	327	342	362	316
85°	45	45	45	43	43	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3375.5	3375.5	3375.5	3375.5	3375.5
2.5°	3384.5	3385.8	3378.1	3357.3	3344.3
5°	3371.6	3370.3	3357.3	3339.2	3328.8
7.5°	3334.0	3336.6	3332.7	3306.7	3292.5
10°	3297.7	3299.0	3288.6	3267.8	3251.0
12.5°	3251.0	3249.7	3235.4	3225.0	3197.8
15°	3177.1	3184.8	3177.1	3162.8	3140.7
17.5°	3105.7	3105.7	3110.9	3086.3	3069.4
20°	3025.3	3029.2	3029.2	3009.8	2990.3
22.5°	2932.0	2943.6	2947.5	2926.8	2903.4
25°	2821.7	2843.8	2856.8	2836.0	2811.4
27.5°	2688.2	2721.9	2760.8	2745.2	2718.0
30°	2539.1	2588.3	2653.2	2640.2	2620.7
32.5°	2397.7	2447.0	2536.5	2531.3	2520.9
35°	2269.3	2300.4	2405.5	2418.5	2409.4
37.5°	2147.4	2176.0	2274.5	2304.3	2296.6
40°	2019.1	2050.2	2128.0	2181.1	2183.7
42.5°	1892.0	1921.8	1985.3	2061.8	2061.8
45°	1757.1	1786.9	1845.3	1929.6	1939.9
47.5°	1624.8	1656.0	1713.0	1797.3	1814.2
50°	1495.2	1523.7	1580.7	1662.4	1688.4
52.5°	1360.3	1391.4	1447.2	1522.4	1560.0
55°	1230.6	1251.4	1312.3	1384.9	1425.1
57.5°	1095.8	1115.2	1183.9	1246.2	1287.7
60°	966.1	990.7	1043.9	1107.4	1155.4
62.5°	841.6	867.5	912.9	968.7	1023.1
65°	721.0	740.4	784.5	840.3	888.3
67.5°	604.3	621.1	665.2	704.1	754.7
70°	486.3	508.3	540.7	578.4	610.8
72.5°	391.6	400.7	427.9	455.2	488.9
75°	289.2	304.7	326.8	342.3	361.8
77.5°	207.5	216.6	229.5	242.5	260.6
80°	138.8	142.6	154.3	156.9	171.2
82.5°	84.3	86.9	89.5	90.8	96.0
85°	45.4	45.4	45.4	42.8	42.8
87.5°	25.9	25.9	22.0	18.2	13.0
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)