

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: P557020

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-82-96-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: P557020  
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-35-UNV-82-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

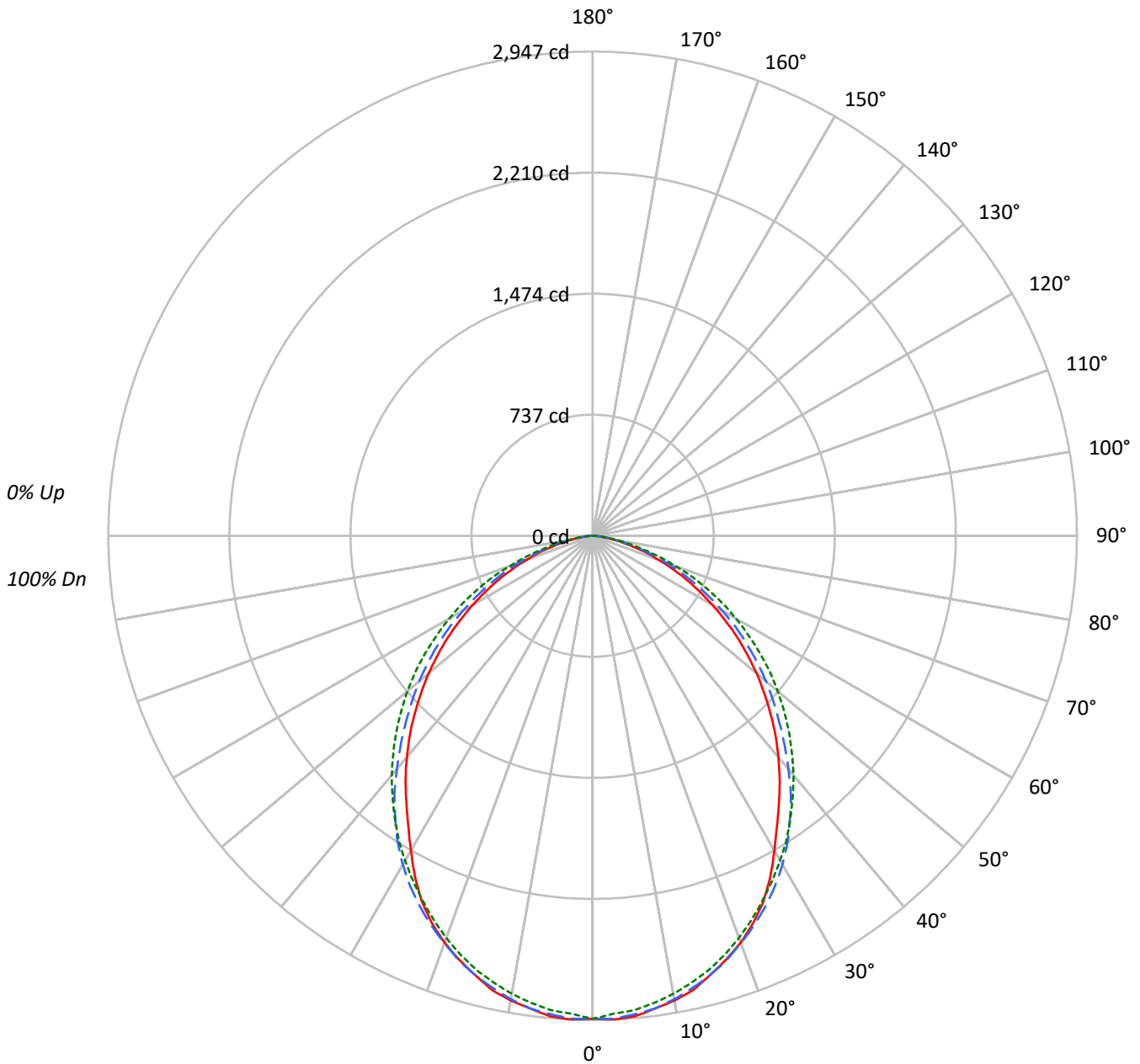
Lumens per Lamp: N/A  
Luminaire Lumens: 6797.0 lumens  
Efficiency: N/A  
Efficacy: 78.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	7910	7910	7910
5°	7931	7898	7831
10°	7847	7826	7736
15°	7708	7708	7620
20°	7545	7554	7457
25°	7296	7387	7269
30°	6870	7179	7092
35°	6492	6882	6893
40°	6177	6510	6680
45°	5823	6116	6429
50°	5451	5763	6155
55°	5028	5362	5823
60°	4528	4893	5415
65°	3998	4350	4926
70°	3332	3705	4185
75°	2618	2959	3276
80°	1872	2083	2311
85°	1220	1220	1152



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	276.8	4.1
10°-20°	777.5	11.4
20°-30°	1136.2	16.7
30°-40°	1289.7	19.0
40°-50°	1245.0	18.3
50°-60°	1027.1	15.1
60°-70°	683.9	10.1
70°-80°	306.1	4.5
80°-90°	54.8	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°	2190.5	32.2
0°-40°	3480.2	51.2
0°-60°	5752.3	84.6
0°-90°	6797.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6797.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2940	2940	2940	2940	2940	
5°	2936	2935	2924	2908	2899	278
15°	2767	2774	2767	2754	2735	780
25°	2457	2476	2488	2470	2448	1125
35°	1976	2003	2095	2106	2098	1238
45°	1530	1556	1607	1680	1689	1181
55°	1072	1090	1143	1206	1241	957
65°	628	645	683	732	774	623
75°	252	265	285	298	315	275
85°	40	40	40	37	37	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2939.5	2939.5	2939.5	2939.5	2939.5
2.5°	2947.4	2948.6	2941.8	2923.7	2912.4
5°	2936.1	2935.0	2923.7	2907.9	2898.9
7.5°	2903.4	2905.6	2902.3	2879.7	2867.3
10°	2871.8	2872.9	2863.9	2845.8	2831.1
12.5°	2831.1	2830.0	2817.6	2808.5	2784.8
15°	2766.7	2773.5	2766.7	2754.3	2735.1
17.5°	2704.6	2704.6	2709.2	2687.7	2673.0
20°	2634.6	2638.0	2638.0	2621.1	2604.1
22.5°	2553.3	2563.5	2566.9	2548.8	2528.5
25°	2457.3	2476.5	2487.8	2469.7	2448.3
27.5°	2341.0	2370.4	2404.2	2390.7	2367.0
30°	2211.1	2254.1	2310.5	2299.2	2282.3
32.5°	2088.0	2131.0	2208.9	2204.4	2195.3
35°	1976.2	2003.4	2094.8	2106.1	2098.2
37.5°	1870.1	1894.9	1980.8	2006.7	2000.0
40°	1758.3	1785.4	1853.2	1899.5	1901.7
42.5°	1647.6	1673.6	1728.9	1795.6	1795.6
45°	1530.2	1556.2	1607.0	1680.4	1689.4
47.5°	1415.0	1442.1	1491.8	1565.2	1579.9
50°	1302.1	1326.9	1376.6	1447.7	1470.3
52.5°	1184.6	1211.7	1260.3	1325.8	1358.5
55°	1071.7	1089.8	1142.8	1206.1	1241.1
57.5°	954.2	971.2	1031.0	1085.2	1121.4
60°	841.3	862.8	909.1	964.4	1006.2
62.5°	732.9	755.5	795.0	843.6	891.0
65°	627.9	644.8	683.2	731.8	773.6
67.5°	526.2	540.9	579.3	613.2	657.2
70°	423.5	442.7	470.9	503.7	531.9
72.5°	341.0	348.9	372.7	396.4	425.7
75°	251.8	265.4	284.6	298.1	315.1
77.5°	180.7	188.6	199.9	211.2	227.0
80°	120.8	124.2	134.4	136.6	149.1
82.5°	73.4	75.7	77.9	79.0	83.6
85°	39.5	39.5	39.5	37.3	37.3
87.5°	22.6	22.6	19.2	15.8	11.3
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)