

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: P556926

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-80-97-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: P556926  
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-30-UNV-80-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

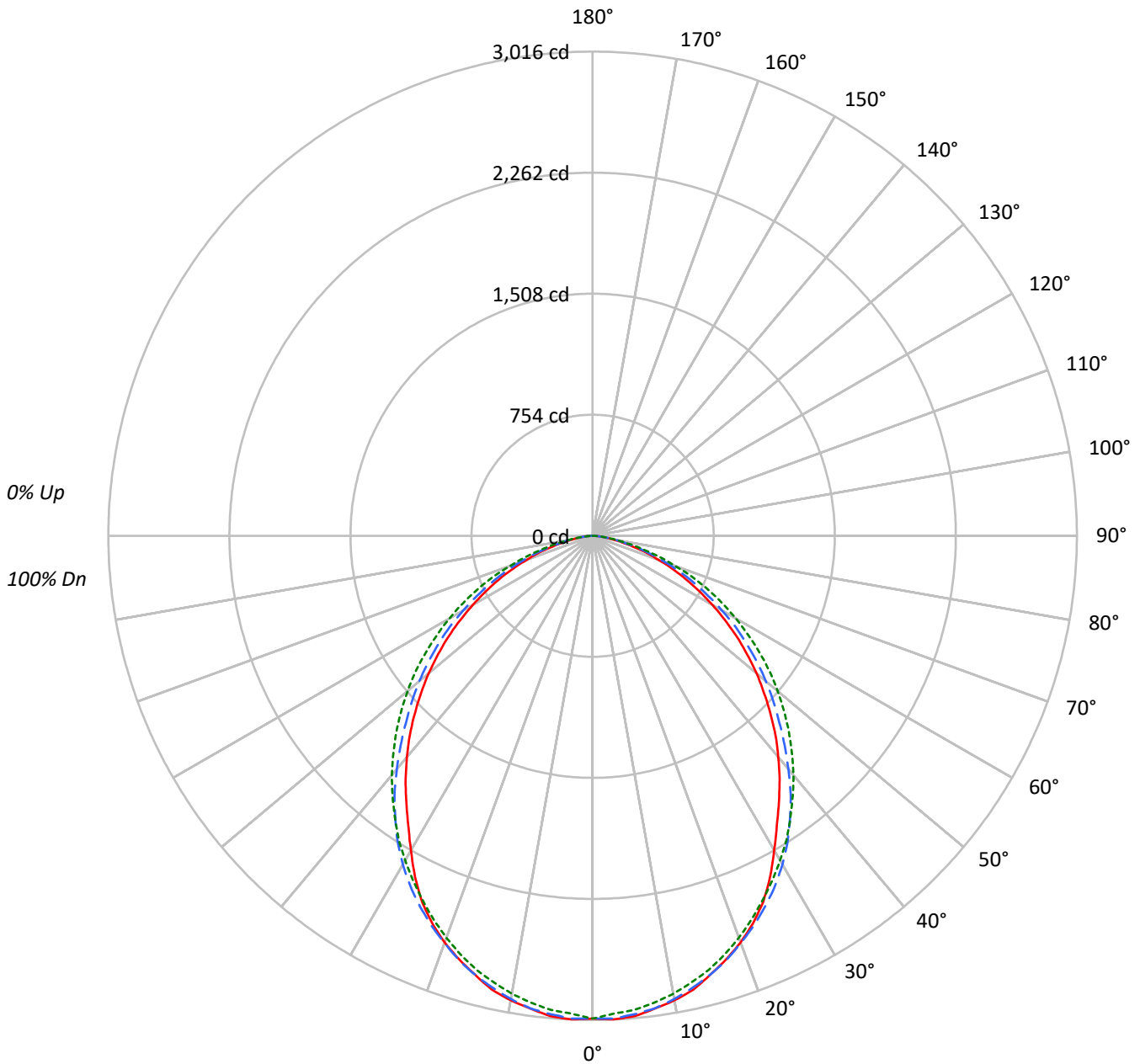
Lumens per Lamp: N/A  
Luminaire Lumens: 6954.0 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	8093	8093	8093
5°	8115	8080	8011
10°	8028	8006	7915
15°	7886	7886	7796
20°	7719	7729	7630
25°	7465	7557	7437
30°	7029	7345	7255
35°	6642	7041	7052
40°	6319	6660	6835
45°	5958	6257	6578
50°	5577	5896	6298
55°	5144	5485	5957
60°	4632	5006	5540
65°	4090	4451	5039
70°	3409	3791	4282
75°	2678	3028	3351
80°	1915	2131	2363
85°	1247	1247	1176



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	283.2	4.1
10°-20°	795.5	11.4
20°-30°	1162.4	16.7
30°-40°	1319.5	19.0
40°-50°	1273.8	18.3
50°-60°	1050.8	15.1
60°-70°	699.7	10.1
70°-80°	313.1	4.5
80°-90°	56.0	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°	2241.1	32.2
0°-40°	3560.6	51.2
0°-60°	5885.1	84.6
0°-90°	6954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6954.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3007	3007	3007	3007	3007	
5°	3004	3003	2991	2975	2966	284
15°	2831	2838	2831	2818	2798	798
25°	2514	2534	2545	2527	2505	1151
35°	2022	2050	2143	2155	2147	1267
45°	1566	1592	1644	1719	1728	1208
55°	1096	1115	1169	1234	1270	979
65°	642	660	699	749	791	637
75°	258	272	291	305	322	282
85°	40	40	40	38	38	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3007.4	<i>3007.4</i>	3007.4	3007.4	3007.4
2.5°	<i>3015.5</i>	<i>3016.7</i>	<i>3009.7</i>	<i>2991.3</i>	<i>2979.7</i>
5°	3004.0	<i>3002.8</i>	2991.3	2975.1	2965.8
7.5°	2970.5	<i>2972.8</i>	2969.3	2946.2	2933.5
10°	2938.1	<i>2939.3</i>	2930.0	2911.5	2896.5
12.5°	2896.5	<i>2895.4</i>	2882.6	2873.4	2849.1
15°	2830.7	<i>2837.6</i>	2830.7	2817.9	2798.3
17.5°	2767.1	<i>2767.1</i>	2771.7	2749.8	2734.8
20°	2695.5	<i>2698.9</i>	2698.9	2681.6	2664.3
22.5°	2612.3	<i>2622.7</i>	2626.2	2607.7	2586.9
25°	2514.1	<i>2533.7</i>	2545.3	2526.8	2504.8
27.5°	2395.1	<i>2425.1</i>	2459.8	2445.9	2421.7
30°	2262.2	<i>2306.1</i>	2363.9	2352.3	2335.0
32.5°	2136.3	<i>2180.2</i>	2259.9	2255.3	2246.0
35°	2021.9	<i>2049.6</i>	2143.2	2154.8	2146.7
37.5°	1913.3	<i>1938.7</i>	2026.5	2053.1	2046.2
40°	1798.9	<i>1826.6</i>	1896.0	1943.3	1945.6
42.5°	1685.7	<i>1712.3</i>	1768.9	1837.0	1837.0
45°	1565.5	<i>1592.1</i>	1644.1	1719.2	1728.4
47.5°	1447.7	<i>1475.4</i>	1526.2	1601.3	1616.4
50°	1332.1	<i>1357.6</i>	1408.4	1481.2	1504.3
52.5°	1212.0	<i>1239.7</i>	1289.4	1356.4	1389.9
55°	1096.4	<i>1114.9</i>	1169.2	1233.9	1269.8
57.5°	976.3	<i>993.6</i>	1054.9	1110.3	1147.3
60°	860.7	<i>882.7</i>	930.1	986.7	1029.4
62.5°	749.8	<i>772.9</i>	813.4	863.1	911.6
65°	642.4	<i>659.7</i>	699.0	748.7	791.4
67.5°	538.4	<i>553.4</i>	592.7	627.4	672.4
70°	433.3	<i>452.9</i>	481.8	515.3	544.2
72.5°	348.9	<i>357.0</i>	381.3	405.5	435.6
75°	257.6	<i>271.5</i>	291.2	305.0	322.3
77.5°	184.9	<i>192.9</i>	204.5	216.1	232.2
80°	123.6	<i>127.1</i>	137.5	139.8	152.5
82.5°	75.1	<i>77.4</i>	79.7	80.9	85.5
85°	40.4	<i>40.4</i>	40.4	38.1	38.1
87.5°	23.1	<i>23.1</i>	19.6	16.2	11.6
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)