

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: P556938

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-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: P556938  
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-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 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

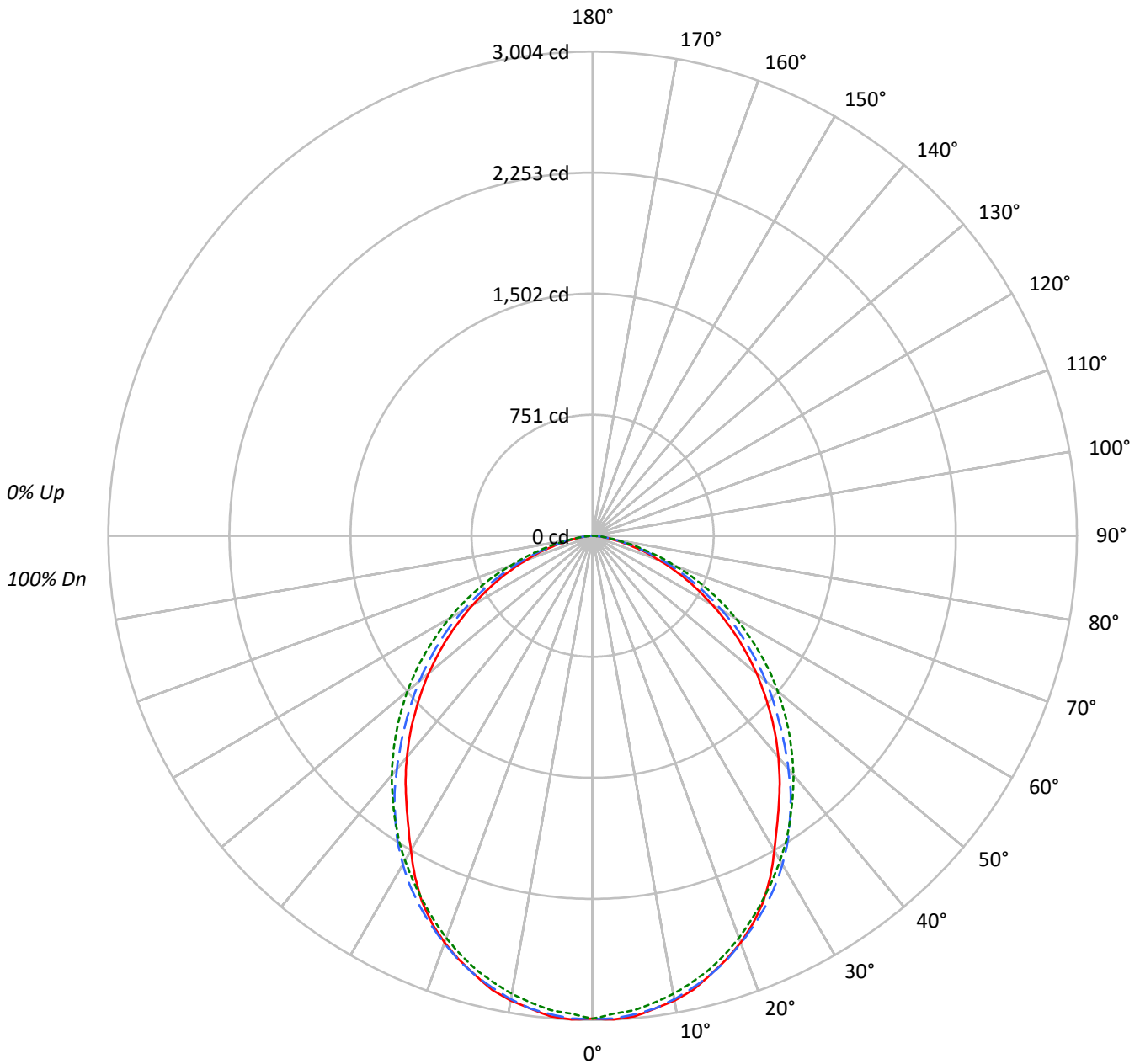
Lumens per Lamp: N/A  
Luminaire Lumens: 6928.0 lumens  
Efficiency: N/A  
Efficacy: 80.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	8063	8063	8063
5°	8084	8050	7981
10°	7998	7976	7885
15°	7857	7857	7767
20°	7690	7700	7601
25°	7437	7529	7410
30°	7003	7318	7228
35°	6617	7014	7025
40°	6296	6635	6809
45°	5936	6233	6553
50°	5556	5874	6274
55°	5125	5465	5935
60°	4615	4987	5520
65°	4075	4434	5021
70°	3396	3777	4265
75°	2669	3016	3339
80°	1909	2123	2354
85°	1244	1244	1173



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	282.1	4.1
10°-20°	792.5	11.4
20°-30°	1158.1	16.7
30°-40°	1314.6	19.0
40°-50°	1269.0	18.3
50°-60°	1046.9	15.1
60°-70°	697.1	10.1
70°-80°	311.9	4.5
80°-90°	55.8	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°	2232.7	32.2
0°-40°	3547.3	51.2
0°-60°	5863.1	84.6
0°-90°	6928.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6928.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2996	2996	2996	2996	2996	
5°	2993	2992	2980	2964	2955	283
15°	2820	2827	2820	2807	2788	795
25°	2505	2524	2536	2517	2496	1147
35°	2014	2042	2135	2147	2139	1262
45°	1560	1586	1638	1713	1722	1203
55°	1092	1111	1165	1229	1265	975
65°	640	657	696	746	788	635
75°	257	270	290	304	321	281
85°	40	40	40	38	38	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2996.2	2996.2	2996.2	2996.2	2996.2
2.5°	3004.2	3005.4	2998.5	2980.1	2968.6
5°	2992.7	2991.6	2980.1	2964.0	2954.7
7.5°	2959.3	2961.6	2958.2	2935.2	2922.5
10°	2927.1	2928.3	2919.1	2900.6	2885.7
12.5°	2885.7	2884.5	2871.9	2862.7	2838.5
15°	2820.1	2827.0	2820.1	2807.4	2787.8
17.5°	2756.8	2756.8	2761.4	2739.5	2724.5
20°	2685.4	2688.9	2688.9	2671.6	2654.3
22.5°	2602.5	2612.9	2616.3	2597.9	2577.2
25°	2504.7	2524.3	2535.8	2517.3	2495.5
27.5°	2386.1	2416.1	2450.6	2436.8	2412.6
30°	2253.8	2297.5	2355.0	2343.5	2326.3
32.5°	2128.3	2172.0	2251.5	2246.8	2237.6
35°	2014.3	2042.0	2135.2	2146.7	2138.6
37.5°	1906.1	1931.5	2018.9	2045.4	2038.5
40°	1792.2	1819.8	1888.9	1936.1	1938.4
42.5°	1679.4	1705.9	1762.3	1830.2	1830.2
45°	1559.7	1586.1	1637.9	1712.8	1722.0
47.5°	1442.3	1469.9	1520.5	1595.4	1610.3
50°	1327.2	1352.5	1403.1	1475.6	1498.7
52.5°	1207.5	1235.1	1284.6	1351.3	1384.7
55°	1092.3	1110.8	1164.9	1229.3	1265.0
57.5°	972.6	989.9	1050.9	1106.2	1143.0
60°	857.5	879.4	926.6	983.0	1025.6
62.5°	747.0	770.1	810.3	859.8	908.2
65°	640.0	657.2	696.4	745.9	788.5
67.5°	536.4	551.4	590.5	625.0	669.9
70°	431.6	451.2	480.0	513.4	542.1
72.5°	347.6	355.7	379.8	404.0	433.9
75°	256.7	270.5	290.1	303.9	321.1
77.5°	184.2	192.2	203.7	215.2	231.4
80°	123.2	126.6	137.0	139.3	151.9
82.5°	74.8	77.1	79.4	80.6	85.2
85°	40.3	40.3	40.3	38.0	38.0
87.5°	23.0	23.0	19.6	16.1	11.5
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)