

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: P558278

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-81-87-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: P558278  
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-LD4-3STD-35-UNV-81-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

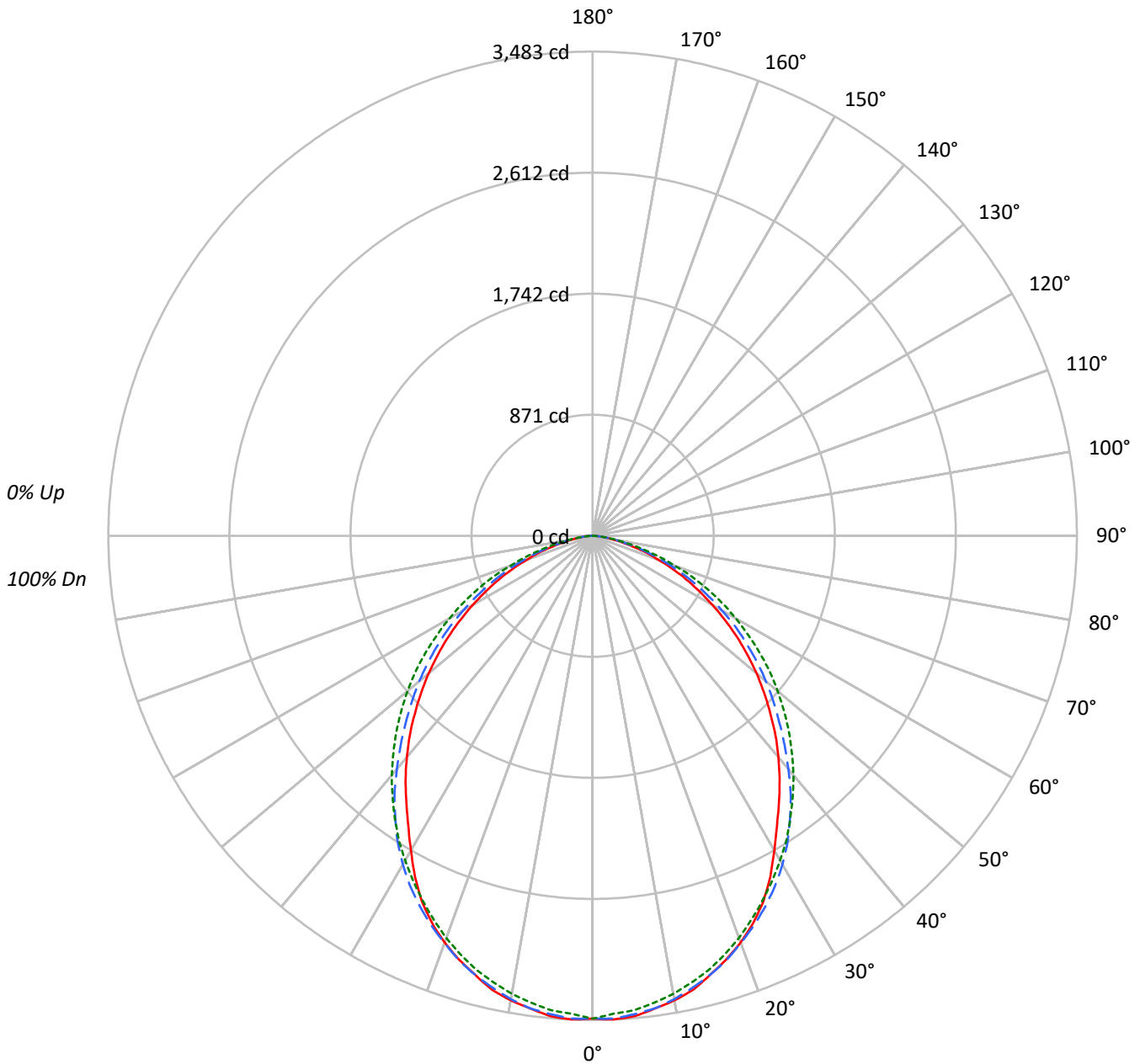
Lumens per Lamp: N/A  
Luminaire Lumens: 8032.0 lumens  
Efficiency: N/A  
Efficacy: 80.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (Ain): 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°	9347	9347	9347
5°	9372	9333	9253
10°	9273	9247	9142
15°	9109	9109	9004
20°	8915	8927	8812
25°	8622	8729	8590
30°	8119	8484	8380
35°	7672	8132	8145
40°	7299	7693	7894
45°	6881	7227	7598
50°	6441	6810	7274
55°	5941	6336	6881
60°	5351	5782	6399
65°	4725	5141	5820
70°	3937	4378	4945
75°	3094	3497	3871
80°	2213	2461	2731
85°	1442	1442	1359



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	327.1	4.1
10°-20°	918.8	11.4
20°-30°	1342.6	16.7
30°-40°	1524.1	19.0
40°-50°	1471.2	18.3
50°-60°	1213.7	15.1
60°-70°	808.2	10.1
70°-80°	361.7	4.5
80°-90°	64.7	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°	2588.5	32.2
0°-40°	4112.5	51.2
0°-60°	6797.4	84.6
0°-90°	8032.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8032.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3474	3474	3474	3474	3474	
5°	3470	3468	3455	3436	3426	328
15°	3270	3278	3270	3255	3232	922
25°	2904	2926	2940	2918	2893	1330
35°	2335	2367	2475	2489	2480	1463
45°	1808	1839	1899	1986	1996	1395
55°	1266	1288	1350	1425	1467	1130
65°	742	762	807	865	914	736
75°	298	314	336	352	372	325
85°	47	47	47	44	44	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3473.6	3473.6	3473.6	3473.6	3473.6
2.5°	3483.0	3484.3	3476.3	3454.9	3441.6
5°	3469.6	3468.3	3454.9	3436.3	3425.6
7.5°	3430.9	3433.6	3429.6	3402.9	3388.2
10°	3393.6	3394.9	3384.2	3362.9	3345.5
12.5°	3345.5	3344.2	3329.5	3318.8	3290.8
15°	3269.5	3277.5	3269.5	3254.8	3232.1
17.5°	3196.1	3196.1	3201.4	3176.0	3158.7
20°	3113.3	3117.3	3117.3	3097.3	3077.3
22.5°	3017.2	3029.3	3033.3	3011.9	2987.9
25°	2903.8	2926.5	2939.8	2918.5	2893.1
27.5°	2766.4	2801.1	2841.1	2825.1	2797.1
30°	2612.9	2663.6	2730.3	2717.0	2697.0
32.5°	2467.4	2518.2	2610.2	2604.9	2594.2
35°	2335.3	2367.4	2475.4	2488.8	2479.5
37.5°	2209.9	2239.2	2340.7	2371.4	2363.4
40°	2077.8	2109.8	2189.9	2244.6	2247.3
42.5°	1947.0	1977.7	2043.1	2121.8	2121.8
45°	1808.2	1838.9	1899.0	1985.7	1996.4
47.5°	1672.1	1704.1	1762.8	1849.6	1866.9
50°	1538.6	1568.0	1626.7	1710.8	1737.5
52.5°	1399.9	1431.9	1489.3	1566.7	1605.4
55°	1266.4	1287.8	1350.5	1425.2	1466.6
57.5°	1127.6	1147.6	1218.4	1282.4	1325.1
60°	994.2	1019.5	1074.3	1139.6	1189.0
62.5°	866.1	892.8	939.5	996.9	1052.9
65°	742.0	762.0	807.4	864.7	914.1
67.5°	621.9	639.2	684.6	724.6	776.7
70°	500.4	523.1	556.5	595.2	628.5
72.5°	403.0	412.4	440.4	468.4	503.1
75°	297.6	313.6	336.3	352.3	372.3
77.5°	213.5	222.9	236.2	249.5	268.2
80°	142.8	146.8	158.8	161.5	176.2
82.5°	86.7	89.4	92.1	93.4	98.8
85°	46.7	46.7	46.7	44.0	44.0
87.5°	26.7	26.7	22.7	18.7	13.3
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)