

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: P558180

Luminaire Tested: **FUSL-12-4-LD4-3LO-50-UNV-93-86-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: P558180
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-LD4-3LO-50-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

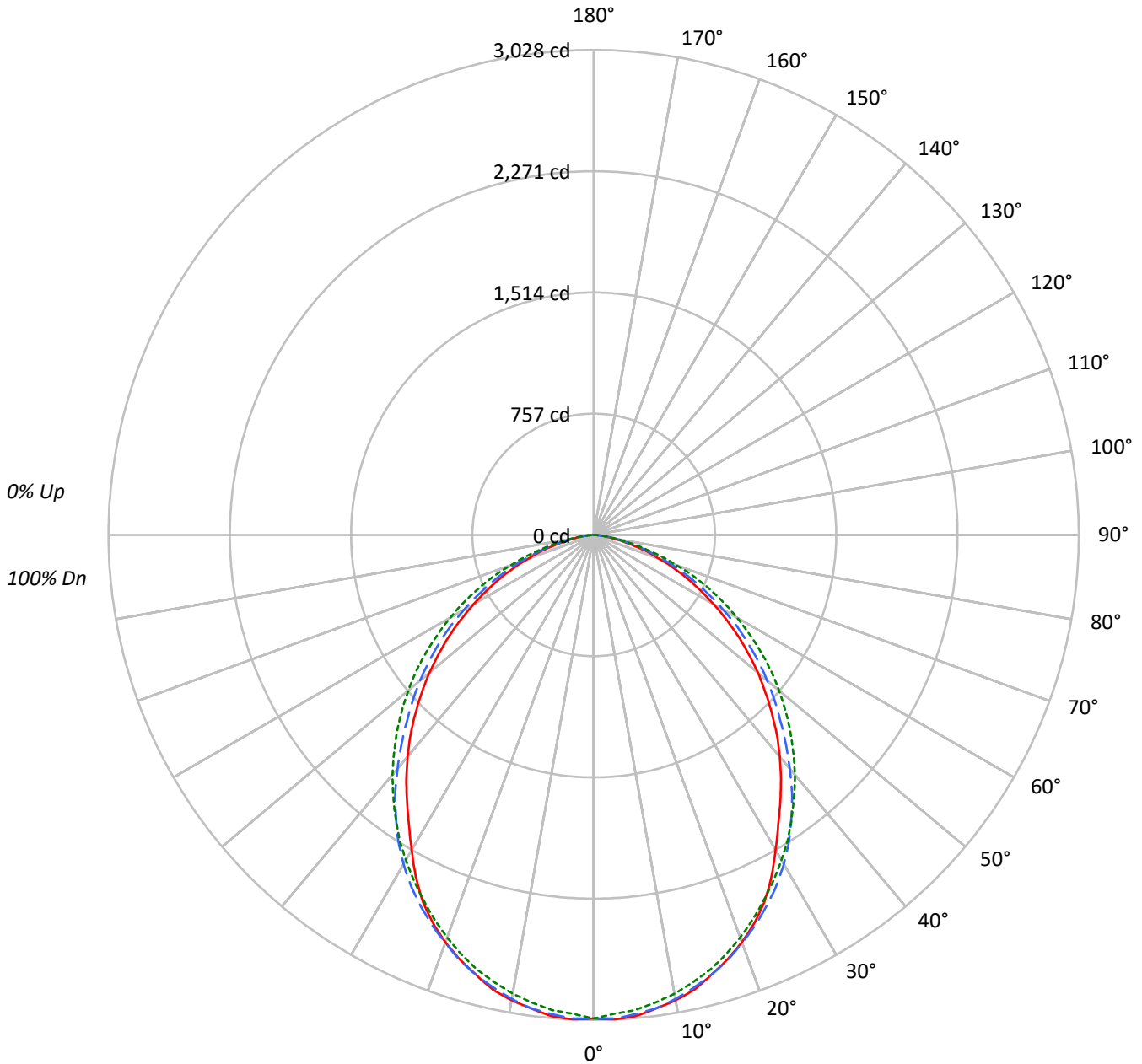
Lumens per Lamp: N/A
Luminaire Lumens: 6982.0 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
Input Voltage (V): NR
Input Current (A_{in}): 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°	8125	8125	8125
5°	8147	8113	8044
10°	8061	8038	7947
15°	7918	7918	7827
20°	7750	7760	7660
25°	7495	7588	7467
30°	7058	7375	7285
35°	6669	7069	7080
40°	6345	6687	6862
45°	5982	6282	6604
50°	5599	5920	6323
55°	5165	5507	5981
60°	4651	5026	5563
65°	4107	4469	5060
70°	3423	3806	4299
75°	2690	3039	3365
80°	1923	2139	2373
85°	1254	1254	1183



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	284.3	4.1
10°-20°	798.7	11.4
20°-30°	1167.1	16.7
30°-40°	1324.8	19.0
40°-50°	1278.9	18.3
50°-60°	1055.0	15.1
60°-70°	702.6	10.1
70°-80°	314.4	4.5
80°-90°	56.2	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°	2250.1	32.2
0°-40°	3574.9	51.2
0°-60°	5908.8	84.6
0°-90°	6982.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6982.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3020	3020	3020	3020	3020	
5°	3016	3015	3003	2987	2978	285
15°	2842	2849	2842	2829	2810	801
25°	2524	2544	2556	2537	2515	1156
35°	2030	2058	2152	2163	2155	1272
45°	1572	1598	1651	1726	1735	1213
55°	1101	1119	1174	1239	1275	983
65°	645	662	702	752	795	640
75°	259	273	292	306	324	283
85°	41	41	41	38	38	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3019.5	3019.5	3019.5	3019.5	3019.5
2.5°	3027.7	3028.8	3021.9	3003.3	2991.7
5°	3016.1	3014.9	3003.3	2987.1	2977.8
7.5°	2982.4	2984.7	2981.3	2958.1	2945.3
10°	2949.9	2951.1	2941.8	2923.3	2908.2
12.5°	2908.2	2907.0	2894.3	2885.0	2860.6
15°	2842.1	2849.0	2842.1	2829.3	2809.6
17.5°	2778.3	2778.3	2782.9	2760.9	2745.8
20°	2706.3	2709.8	2709.8	2692.4	2675.0
22.5°	2622.8	2633.2	2636.7	2618.2	2597.3
25°	2524.2	2543.9	2555.5	2537.0	2514.9
27.5°	2404.7	2434.9	2469.7	2455.8	2431.4
30°	2271.3	2315.4	2373.4	2361.8	2344.4
32.5°	2144.9	2189.0	2269.0	2264.4	2255.1
35°	2030.0	2057.9	2151.8	2163.4	2155.3
37.5°	1921.0	1946.5	2034.7	2061.4	2054.4
40°	1806.2	1834.0	1903.6	1951.2	1953.5
42.5°	1692.5	1719.2	1776.0	1844.4	1844.4
45°	1571.8	1598.5	1650.7	1726.1	1735.4
47.5°	1453.5	1481.3	1532.4	1607.8	1622.9
50°	1337.5	1363.0	1414.1	1487.1	1510.3
52.5°	1216.9	1244.7	1294.6	1361.9	1395.5
55°	1100.9	1119.4	1173.9	1238.9	1274.9
57.5°	980.2	997.6	1059.1	1114.8	1151.9
60°	864.2	886.3	933.8	990.7	1033.6
62.5°	752.9	776.1	816.7	866.5	915.3
65°	645.0	662.4	701.8	751.7	794.6
67.5°	540.6	555.7	595.1	629.9	675.1
70°	435.0	454.7	483.7	517.4	546.4
72.5°	350.3	358.4	382.8	407.2	437.3
75°	258.7	272.6	292.3	306.2	323.6
77.5°	185.6	193.7	205.3	216.9	233.2
80°	124.1	127.6	138.0	140.4	153.1
82.5°	75.4	77.7	80.0	81.2	85.8
85°	40.6	40.6	40.6	38.3	38.3
87.5°	23.2	23.2	19.7	16.2	11.6
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)