

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: P558376

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-UNV-93-88-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: P558376
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-40-UNV-93-88-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

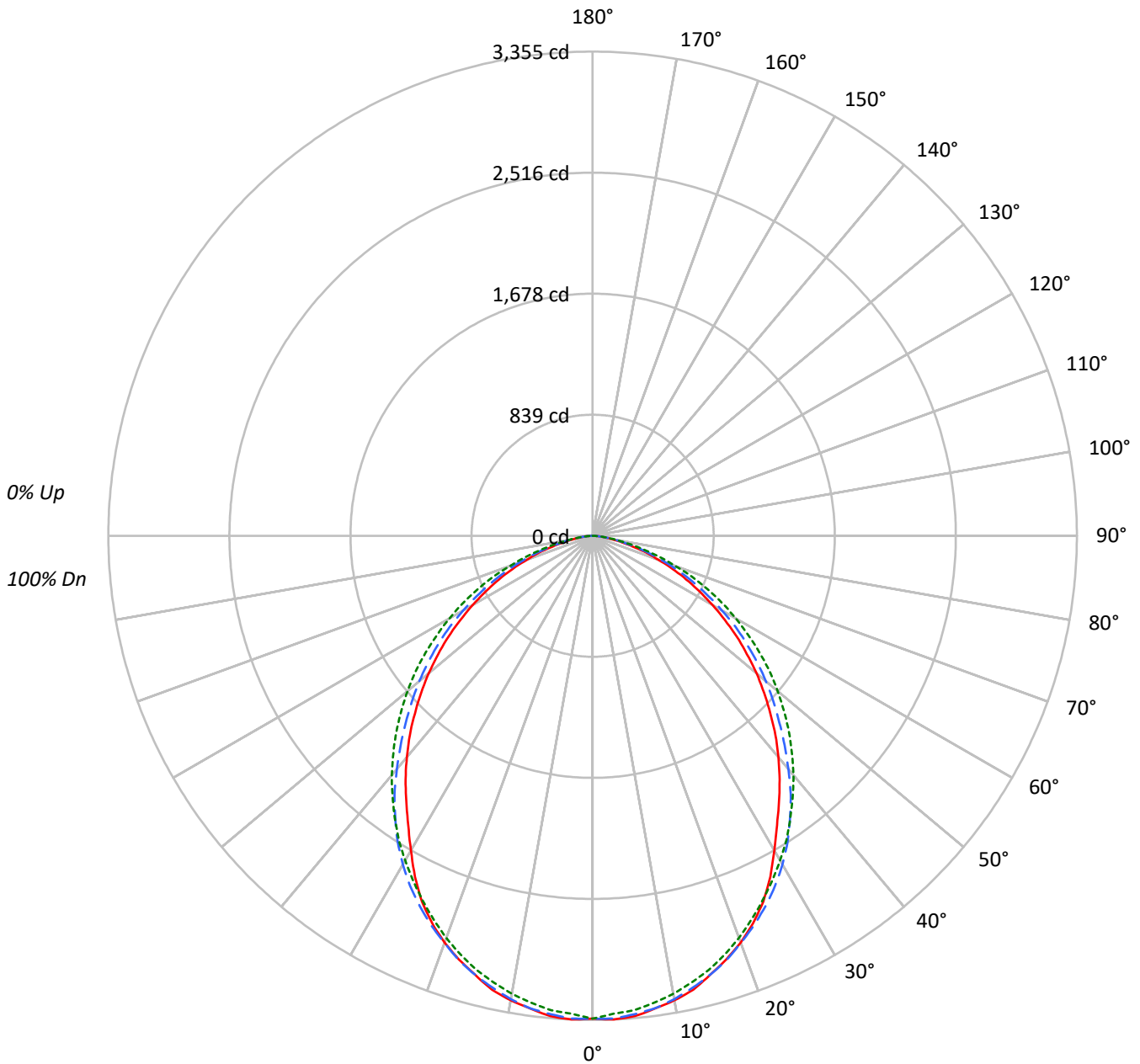
Lumens per Lamp: N/A
Luminaire Lumens: 7737.0 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (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°	9004	9004	9004
5°	9028	8990	8914
10°	8932	8908	8806
15°	8774	8774	8674
20°	8588	8599	8489
25°	8305	8408	8275
30°	7821	8172	8072
35°	7390	7833	7846
40°	7031	7410	7604
45°	6629	6961	7318
50°	6205	6560	7007
55°	5723	6103	6628
60°	5154	5569	6164
65°	4551	4952	5606
70°	3792	4217	4764
75°	2981	3368	3728
80°	2131	2371	2630
85°	1389	1389	1309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.0	4.1
10°-20°	885.0	11.4
20°-30°	1293.3	16.7
30°-40°	1468.1	19.0
40°-50°	1417.2	18.3
50°-60°	1169.1	15.1
60°-70°	778.5	10.1
70°-80°	348.4	4.5
80°-90°	62.3	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°	2493.4	32.2
0°-40°	3961.5	51.2
0°-60°	6547.8	84.6
0°-90°	7737.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7737.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3346	3346	3346	3346	3346	
5°	3342	3341	3328	3310	3300	316
15°	3149	3157	3149	3135	3113	888
25°	2797	2819	2832	2811	2787	1281
35°	2250	2280	2384	2397	2388	1409
45°	1742	1771	1829	1913	1923	1344
55°	1220	1240	1301	1373	1413	1089
65°	715	734	778	833	880	709
75°	287	302	324	339	359	313
85°	45	45	45	42	42	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3346.1	<i>3346.1</i>	3346.1	3346.1	3346.1
2.5°	<i>3355.1</i>	<i>3356.3</i>	<i>3348.6</i>	<i>3328.1</i>	<i>3315.2</i>
5°	3342.2	<i>3340.9</i>	3328.1	3310.1	3299.8
7.5°	3304.9	<i>3307.5</i>	3303.6	3277.9	3263.8
10°	3268.9	<i>3270.2</i>	3259.9	3239.4	3222.6
12.5°	3222.6	<i>3221.4</i>	3207.2	3196.9	3169.9
15°	3149.4	<i>3157.1</i>	3149.4	3135.2	3113.4
17.5°	3078.7	<i>3078.7</i>	3083.8	3059.4	3042.7
20°	2999.0	<i>3002.8</i>	3002.8	2983.6	2964.3
22.5°	2906.4	<i>2918.0</i>	2921.9	2901.3	2878.1
25°	2797.2	<i>2819.0</i>	2831.9	2811.3	2786.9
27.5°	2664.8	<i>2698.2</i>	2736.7	2721.3	2694.3
30°	2516.9	<i>2565.8</i>	2630.1	2617.2	2597.9
32.5°	2376.8	<i>2425.7</i>	2514.4	2509.2	2498.9
35°	2249.6	<i>2280.4</i>	2384.5	2397.4	2388.4
37.5°	2128.7	<i>2157.0</i>	2254.7	2284.3	2276.5
40°	2001.5	<i>2032.3</i>	2109.4	2162.1	2164.7
42.5°	1875.5	<i>1905.1</i>	1968.0	2043.9	2043.9
45°	1741.8	<i>1771.4</i>	1829.2	1912.8	1923.0
47.5°	1610.7	<i>1641.5</i>	1698.1	1781.6	1798.4
50°	1482.1	<i>1510.4</i>	1567.0	1648.0	1673.7
52.5°	1348.4	<i>1379.3</i>	1434.6	1509.1	1546.4
55°	1219.9	<i>1240.5</i>	1300.9	1372.9	1412.7
57.5°	1086.2	<i>1105.5</i>	1173.6	1235.3	1276.5
60°	957.7	<i>982.1</i>	1034.8	1097.8	1145.3
62.5°	834.3	<i>860.0</i>	905.0	960.2	1014.2
65°	714.7	<i>734.0</i>	777.7	833.0	880.5
67.5°	599.0	<i>615.7</i>	659.4	698.0	748.1
70°	482.0	<i>503.9</i>	536.0	573.3	605.5
72.5°	388.2	<i>397.2</i>	424.2	451.2	484.6
75°	286.7	<i>302.1</i>	323.9	339.4	358.6
77.5°	205.7	<i>214.7</i>	227.5	240.4	258.4
80°	137.5	<i>141.4</i>	153.0	155.5	169.7
82.5°	83.6	<i>86.1</i>	88.7	90.0	95.1
85°	45.0	<i>45.0</i>	45.0	42.4	42.4
87.5°	25.7	<i>25.7</i>	21.9	18.0	12.9
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)