

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: P556589

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-93-96-EDD**

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: P556589
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-LD4-1LO-40-UNV-93-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

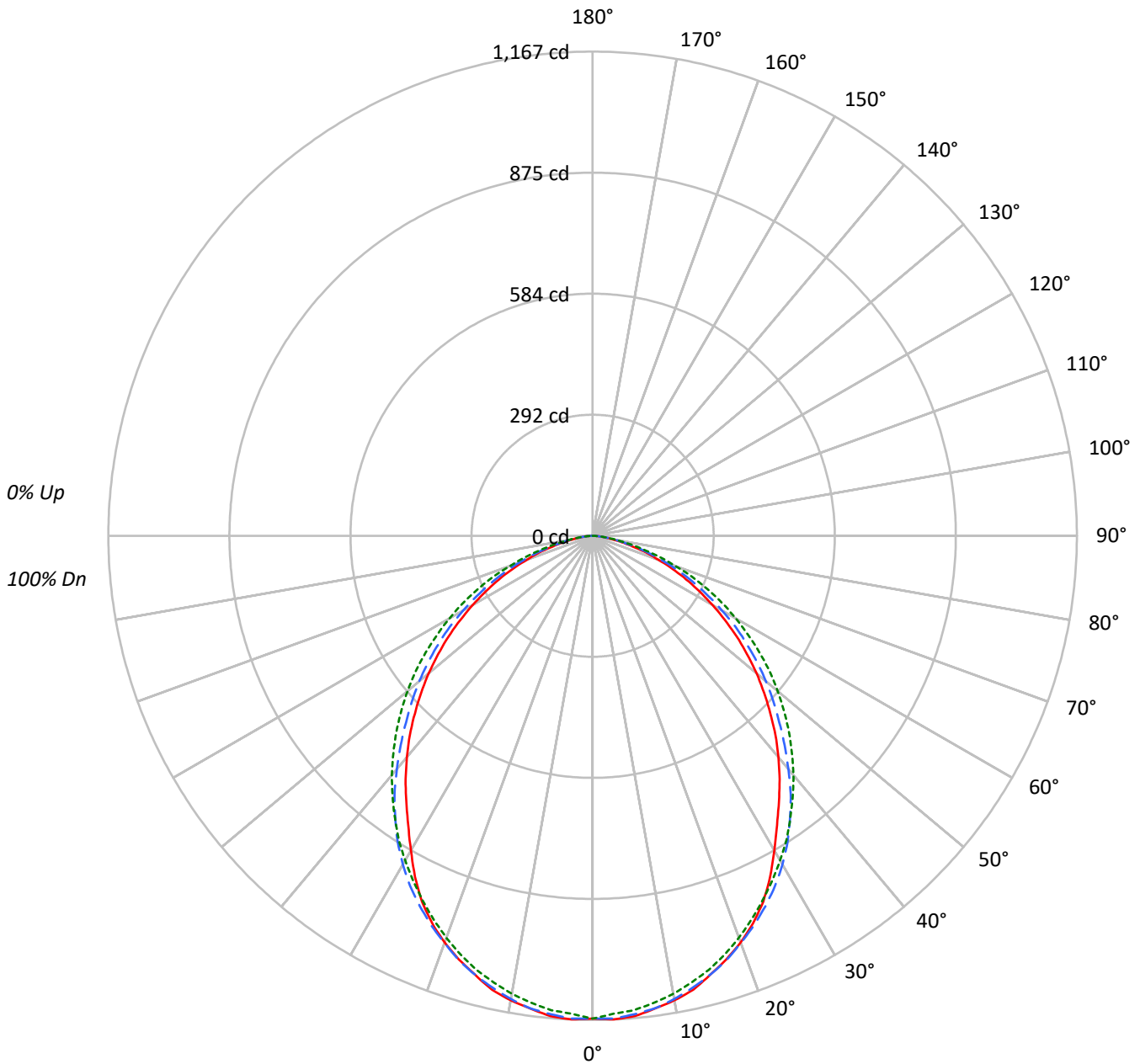
Lumens per Lamp: N/A
Luminaire Lumens: 2691.0 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	3132	3132	3132
5°	3140	3127	3100
10°	3107	3098	3063
15°	3052	3052	3017
20°	2987	2991	2952
25°	2889	2925	2878
30°	2720	2843	2808
35°	2570	2725	2729
40°	2445	2577	2645
45°	2305	2421	2546
50°	2158	2282	2437
55°	1991	2123	2305
60°	1793	1937	2144
65°	1583	1722	1950
70°	1319	1467	1657
75°	1037	1172	1297
80°	741	824	914
85°	482	482	457



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.6	4.1
10°-20°	307.8	11.4
20°-30°	449.8	16.7
30°-40°	510.6	19.0
40°-50°	492.9	18.3
50°-60°	406.6	15.1
60°-70°	270.8	10.1
70°-80°	121.2	4.5
80°-90°	21.7	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°	867.2	32.2
0°-40°	1377.8	51.2
0°-60°	2277.4	84.6
0°-90°	2691.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2691.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1164	1164	1164	1164	1164	
5°	1162	1162	1158	1151	1148	110
15°	1095	1098	1095	1090	1083	309
25°	973	980	985	978	969	446
35°	782	793	829	834	831	490
45°	606	616	636	665	669	467
55°	424	431	452	478	491	379
65°	249	255	270	290	306	246
75°	100	105	113	118	125	109
85°	16	16	16	15	15	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1163.8	<i>1163.8</i>	1163.8	1163.8	1163.8
2.5°	<i>1166.9</i>	<i>1167.4</i>	<i>1164.7</i>	<i>1157.5</i>	<i>1153.1</i>
5°	1162.4	<i>1162.0</i>	1157.5	1151.3	1147.7
7.5°	1149.5	<i>1150.4</i>	1149.0	1140.1	1135.2
10°	1137.0	<i>1137.4</i>	1133.8	1126.7	1120.9
12.5°	1120.9	<i>1120.4</i>	1115.5	1111.9	1102.5
15°	1095.4	<i>1098.1</i>	1095.4	1090.5	1082.9
17.5°	1070.8	<i>1070.8</i>	1072.6	1064.1	1058.3
20°	1043.1	<i>1044.4</i>	1044.4	1037.7	1031.0
22.5°	1010.9	<i>1014.9</i>	1016.2	1009.1	1001.0
25°	972.9	<i>980.5</i>	985.0	977.8	969.3
27.5°	926.8	<i>938.5</i>	951.9	946.5	937.1
30°	875.4	<i>892.4</i>	914.8	910.3	903.6
32.5°	826.7	<i>843.7</i>	874.5	872.7	869.2
35°	782.4	<i>793.1</i>	829.4	833.8	830.7
37.5°	740.4	<i>750.2</i>	784.2	794.5	791.8
40°	696.1	<i>706.9</i>	733.7	752.0	752.9
42.5°	652.3	<i>662.6</i>	684.5	710.9	710.9
45°	605.8	<i>616.1</i>	636.2	665.3	668.9
47.5°	560.2	<i>570.9</i>	590.6	619.7	625.5
50°	515.5	<i>525.3</i>	545.0	573.2	582.1
52.5°	469.0	<i>479.7</i>	499.0	524.9	537.9
55°	424.3	<i>431.4</i>	452.5	477.5	491.4
57.5°	377.8	<i>384.5</i>	408.2	429.7	444.0
60°	333.1	<i>341.6</i>	359.9	381.8	398.4
62.5°	290.2	<i>299.1</i>	314.8	334.0	352.8
65°	248.6	<i>255.3</i>	270.5	289.7	306.3
67.5°	208.3	<i>214.2</i>	229.4	242.8	260.2
70°	167.7	<i>175.3</i>	186.4	199.4	210.6
72.5°	135.0	<i>138.2</i>	147.5	156.9	168.6
75°	99.7	<i>105.1</i>	112.7	118.0	124.7
77.5°	71.5	<i>74.7</i>	79.1	83.6	89.9
80°	47.8	<i>49.2</i>	53.2	54.1	59.0
82.5°	29.1	<i>30.0</i>	30.8	31.3	33.1
85°	15.6	<i>15.6</i>	15.6	14.8	14.8
87.5°	8.9	<i>8.9</i>	7.6	6.3	4.5
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)