

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: P556420

Luminaire Tested: **FUSL-12-4-LD4-1LO-30-UNV-81-86-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: P556420
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-30-UNV-81-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

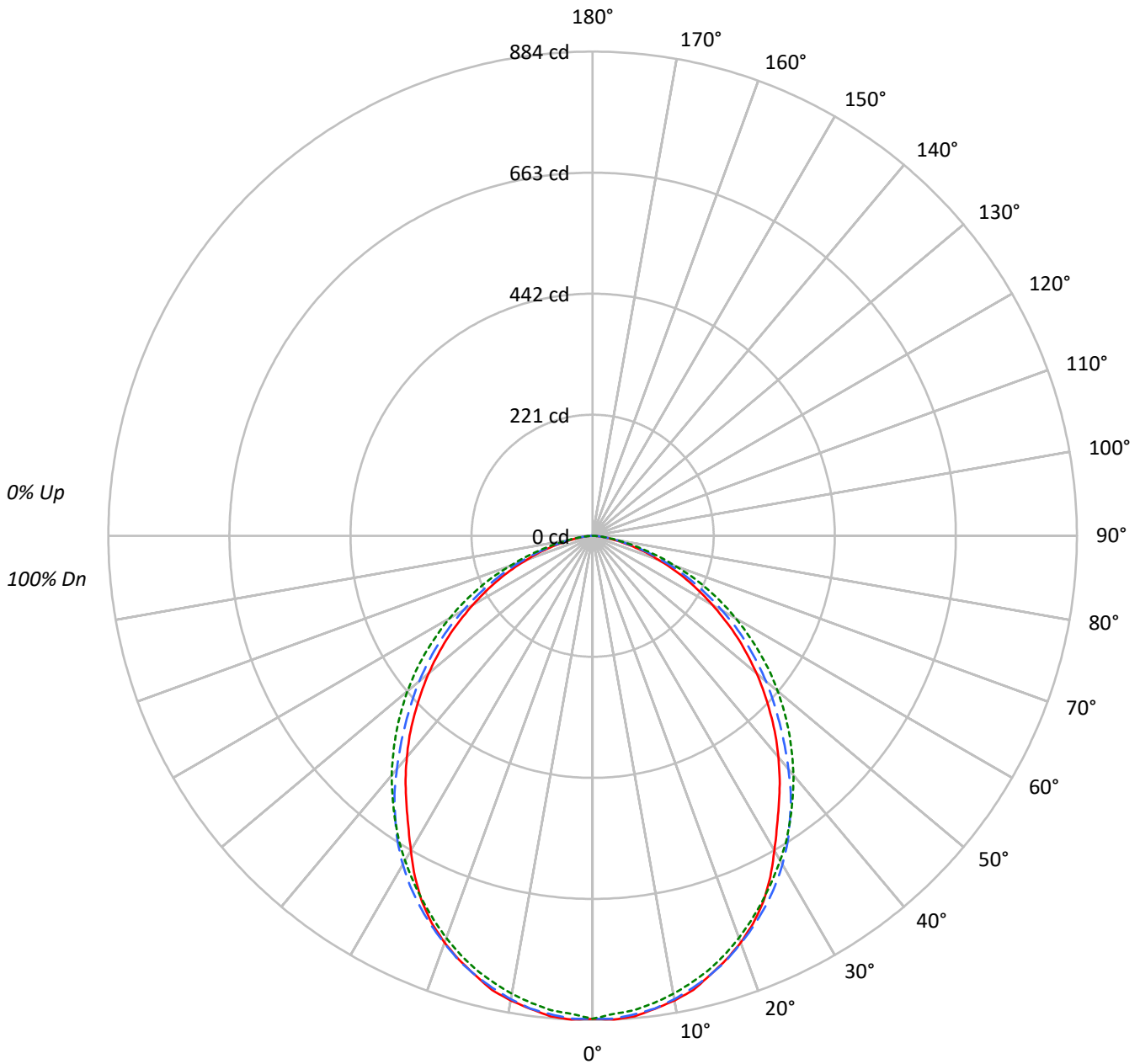
Lumens per Lamp: N/A
Luminaire Lumens: 2039.0 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2373	2373	2373
5°	2379	2369	2349
10°	2354	2347	2321
15°	2312	2312	2286
20°	2263	2266	2237
25°	2189	2216	2181
30°	2061	2154	2128
35°	1947	2064	2068
40°	1853	1953	2004
45°	1747	1835	1929
50°	1635	1729	1847
55°	1508	1608	1747
60°	1358	1468	1624
65°	1200	1305	1478
70°	999	1112	1256
75°	785	888	983
80°	561	625	693
85°	367	367	346



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.0	4.1
10°-20°	233.2	11.4
20°-30°	340.8	16.7
30°-40°	386.9	19.0
40°-50°	373.5	18.3
50°-60°	308.1	15.1
60°-70°	205.2	10.1
70°-80°	91.8	4.5
80°-90°	16.4	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°	657.1	32.2
0°-40°	1044.0	51.2
0°-60°	1725.6	84.6
0°-90°	2039.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2039.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	882	882	882	882	882	
5°	881	880	877	872	870	83
15°	830	832	830	826	820	234
25°	737	743	746	741	734	338
35°	593	601	628	632	629	371
45°	459	467	482	504	507	354
55°	322	327	343	362	372	287
65°	188	193	205	220	232	187
75°	76	80	85	89	94	83
85°	12	12	12	11	11	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	881.8	881.8	881.8	881.8	881.8
2.5°	884.2	884.5	882.5	877.1	873.7
5°	880.8	880.5	877.1	872.3	869.6
7.5°	871.0	871.7	870.6	863.9	860.1
10°	861.5	861.8	859.1	853.7	849.3
12.5°	849.3	849.0	845.2	842.5	835.4
15°	830.0	832.0	830.0	826.3	820.5
17.5°	811.4	811.4	812.7	806.3	801.9
20°	790.3	791.4	791.4	786.3	781.2
22.5°	766.0	769.0	770.0	764.6	758.5
25°	737.2	742.9	746.3	740.9	734.5
27.5°	702.3	711.1	721.2	717.2	710.1
30°	663.3	676.2	693.1	689.7	684.7
32.5°	626.4	639.3	662.6	661.3	658.6
35°	592.8	601.0	628.4	631.8	629.4
37.5°	561.0	568.5	594.2	602.0	600.0
40°	527.5	535.6	555.9	569.8	570.5
42.5°	494.3	502.1	518.7	538.6	538.6
45°	459.0	466.8	482.1	504.1	506.8
47.5°	424.5	432.6	447.5	469.5	473.9
50°	390.6	398.1	413.0	434.3	441.1
52.5°	355.4	363.5	378.1	397.7	407.5
55°	321.5	326.9	342.8	361.8	372.3
57.5°	286.3	291.3	309.3	325.6	336.4
60°	252.4	258.8	272.7	289.3	301.8
62.5°	219.9	226.6	238.5	253.1	267.3
65°	188.4	193.4	205.0	219.5	232.1
67.5°	157.9	162.3	173.8	184.0	197.2
70°	127.0	132.8	141.3	151.1	159.6
72.5°	102.3	104.7	111.8	118.9	127.7
75°	75.5	79.6	85.4	89.4	94.5
77.5°	54.2	56.6	60.0	63.3	68.1
80°	36.2	37.3	40.3	41.0	44.7
82.5°	22.0	22.7	23.4	23.7	25.1
85°	11.9	11.9	11.9	11.2	11.2
87.5°	6.8	6.8	5.8	4.7	3.4
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)