

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: P557710

Luminaire Tested: **FUSL-12-4-LD4-3HI-30-UNV-81-97-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: P557710
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-LD4-3HI-30-UNV-81-97-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

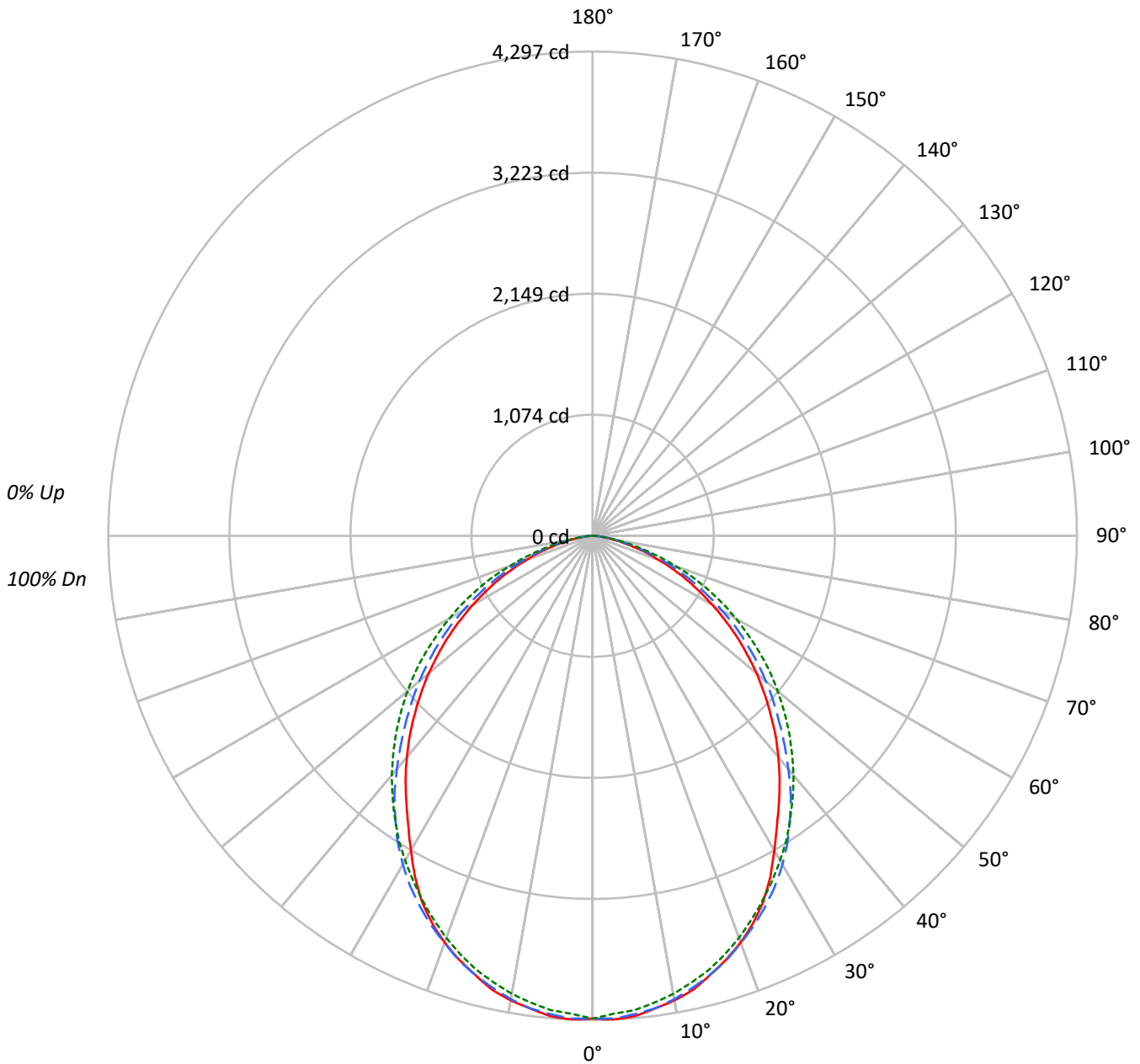
Lumens per Lamp: N/A
Luminaire Lumens: 9909.0 lumens
Efficiency: N/A
Efficacy: 76.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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				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°	11532	11532	11532
5°	11562	11514	11416
10°	11440	11408	11278
15°	11237	11237	11109
20°	10999	11013	10872
25°	10637	10769	10598
30°	10016	10467	10339
35°	9465	10032	10049
40°	9004	9490	9739
45°	8490	8915	9373
50°	7947	8402	8974
55°	7330	7817	8488
60°	6601	7133	7895
65°	5829	6342	7181
70°	4858	5401	6101
75°	3817	4314	4775
80°	2731	3036	3367
85°	1778	1778	1677



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	403.5	4.1
10°-20°	1133.5	11.4
20°-30°	1656.4	16.7
30°-40°	1880.2	19.0
40°-50°	1815.0	18.3
50°-60°	1497.3	15.1
60°-70°	997.1	10.1
70°-80°	446.2	4.5
80°-90°	79.8	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°	3193.4	32.2
0°-40°	5073.6	51.2
0°-60°	8385.9	84.6
0°-90°	9909.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9909.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4285	4285	4285	4285	4285	
5°	4280	4279	4262	4239	4226	405
15°	4034	4043	4034	4015	3987	1137
25°	3582	3610	3627	3600	3569	1641
35°	2881	2921	3054	3070	3059	1805
45°	2231	2269	2343	2450	2463	1721
55°	1562	1589	1666	1758	1809	1394
65°	915	940	996	1067	1128	908
75°	367	387	415	435	459	401
85°	58	58	58	54	54	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4285.4	4285.4	4285.4	4285.4	4285.4
2.5°	4296.9	4298.6	4288.7	4262.3	4245.9
5°	4280.4	4278.8	4262.3	4239.3	4226.1
7.5°	4232.7	4236.0	4231.1	4198.1	4180.0
10°	4186.6	4188.3	4175.1	4148.7	4127.3
12.5°	4127.3	4125.7	4107.6	4094.4	4059.8
15°	4033.5	4043.4	4033.5	4015.4	3987.4
17.5°	3943.0	3943.0	3949.5	3918.3	3896.9
20°	3840.9	3845.8	3845.8	3821.1	3796.4
22.5°	3722.3	3737.2	3742.1	3715.8	3686.1
25°	3582.4	3610.4	3626.9	3600.5	3569.2
27.5°	3412.8	3455.6	3505.0	3485.3	3450.7
30°	3223.5	3286.1	3368.4	3351.9	3327.2
32.5°	3044.1	3106.6	3220.2	3213.6	3200.5
35°	2881.1	2920.6	3053.9	3070.4	3058.9
37.5°	2726.3	2762.5	2887.7	2925.5	2915.6
40°	2563.3	2602.8	2701.6	2769.1	2772.4
42.5°	2402.0	2439.9	2520.5	2617.7	2617.7
45°	2230.8	2268.6	2342.7	2449.7	2462.9
47.5°	2062.8	2102.4	2174.8	2281.8	2303.2
50°	1898.2	1934.4	2006.9	2110.6	2143.5
52.5°	1727.0	1766.5	1837.3	1932.8	1980.5
55°	1562.4	1588.7	1666.1	1758.3	1809.3
57.5°	1391.1	1415.8	1503.1	1582.1	1634.8
60°	1226.5	1257.8	1325.3	1406.0	1466.9
62.5°	1068.5	1101.4	1159.0	1229.8	1299.0
65°	915.4	940.1	996.0	1066.8	1127.7
67.5°	767.2	788.6	844.6	894.0	958.2
70°	617.4	645.4	686.5	734.3	775.4
72.5°	497.2	508.7	543.3	577.9	620.7
75°	367.1	386.9	414.9	434.6	459.3
77.5°	263.4	274.9	291.4	307.9	330.9
80°	176.2	181.1	195.9	199.2	217.3
82.5°	107.0	110.3	113.6	115.2	121.8
85°	57.6	57.6	57.6	54.3	54.3
87.5°	32.9	32.9	28.0	23.0	16.5
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)