

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: P558439

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-93-87-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: P558439
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-50-UNV-93-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

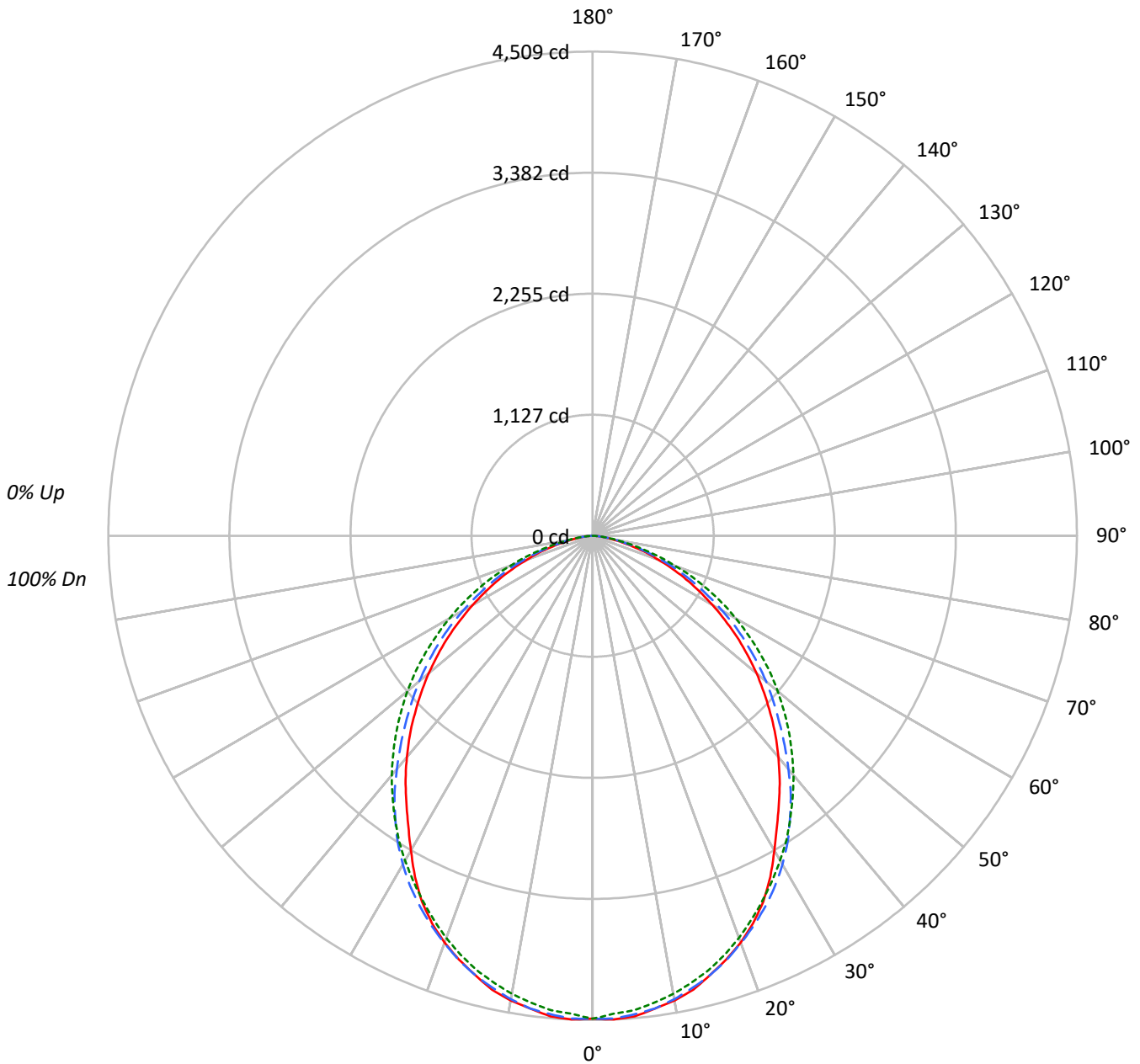
Lumens per Lamp: N/A
Luminaire Lumens: 10399.0 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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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CATALOG NUMBER: FUSL-12-4-LD4-3STD-50-UNV-93-87-EDD

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°	12102	12102	12102
5°	12134	12083	11980
10°	12005	11972	11836
15°	11793	11793	11658
20°	11543	11558	11409
25°	11163	11301	11122
30°	10512	10984	10850
35°	9932	10529	10545
40°	9450	9960	10221
45°	8909	9356	9836
50°	8340	8817	9417
55°	7692	8203	8908
60°	6928	7485	8285
65°	6117	6656	7536
70°	5098	5669	6403
75°	4006	4527	5011
80°	2865	3186	3535
85°	1868	1868	1760



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	423.4	4.1
10°-20°	1189.5	11.4
20°-30°	1738.3	16.7
30°-40°	1973.2	19.0
40°-50°	1904.8	18.3
50°-60°	1571.3	15.1
60°-70°	1046.4	10.1
70°-80°	468.2	4.5
80°-90°	83.8	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°	3351.3	32.2
0°-40°	5324.5	51.2
0°-60°	8800.6	84.6
0°-90°	10399.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10399.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4497	4497	4497	4497	4497	
5°	4492	4490	4473	4449	4435	425
15°	4233	4243	4233	4214	4185	1193
25°	3760	3789	3806	3779	3746	1722
35°	3024	3065	3205	3222	3210	1894
45°	2341	2381	2459	2571	2585	1806
55°	1640	1667	1748	1845	1899	1463
65°	961	986	1045	1120	1184	953
75°	385	406	435	456	482	421
85°	60	60	60	57	57	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4497.3	4497.3	4497.3	4497.3	4497.3
2.5°	4509.4	4511.1	4500.8	4473.1	4455.8
5°	4492.1	4490.4	4473.1	4448.9	4435.1
7.5°	4442.0	4445.5	4440.3	4405.7	4386.7
10°	4393.6	4395.4	4381.5	4353.9	4331.4
12.5°	4331.4	4329.7	4310.7	4296.9	4260.6
15°	4233.0	4243.3	4233.0	4214.0	4184.6
17.5°	4137.9	4137.9	4144.8	4112.0	4089.6
20°	4030.8	4036.0	4036.0	4010.1	3984.2
22.5°	3906.4	3922.0	3927.1	3899.5	3868.4
25°	3759.6	3788.9	3806.2	3778.6	3745.7
27.5°	3581.6	3626.5	3678.4	3657.6	3621.3
30°	3382.9	3448.6	3534.9	3517.7	3491.8
32.5°	3194.6	3260.2	3379.5	3372.5	3358.7
35°	3023.5	3065.0	3205.0	3222.2	3210.1
37.5°	2861.1	2899.1	3030.5	3070.2	3059.8
40°	2690.1	2731.6	2835.2	2906.1	2909.5
42.5°	2520.8	2560.5	2645.2	2747.1	2747.1
45°	2341.1	2380.8	2458.6	2570.9	2584.7
47.5°	2164.9	2206.3	2282.3	2394.6	2417.1
50°	1992.1	2030.1	2106.1	2215.0	2249.5
52.5°	1812.4	1853.9	1928.2	2028.4	2078.5
55°	1639.6	1667.3	1748.5	1845.2	1898.8
57.5°	1459.9	1485.9	1577.4	1660.4	1715.6
60°	1287.2	1320.0	1390.8	1475.5	1539.4
62.5°	1121.3	1155.9	1216.3	1290.6	1363.2
65°	960.6	986.5	1045.3	1119.6	1183.5
67.5°	805.1	827.6	886.3	938.2	1005.5
70°	647.9	677.3	720.5	770.6	813.8
72.5°	521.8	533.9	570.2	606.4	651.4
75°	385.3	406.0	435.4	456.1	482.0
77.5°	276.4	288.5	305.8	323.1	347.3
80°	184.9	190.1	205.6	209.1	228.1
82.5°	112.3	115.8	119.2	120.9	127.9
85°	60.5	60.5	60.5	57.0	57.0
87.5°	34.6	34.6	29.4	24.2	17.3
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)