

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: P558411

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-81-94-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: P558411
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-81-94-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

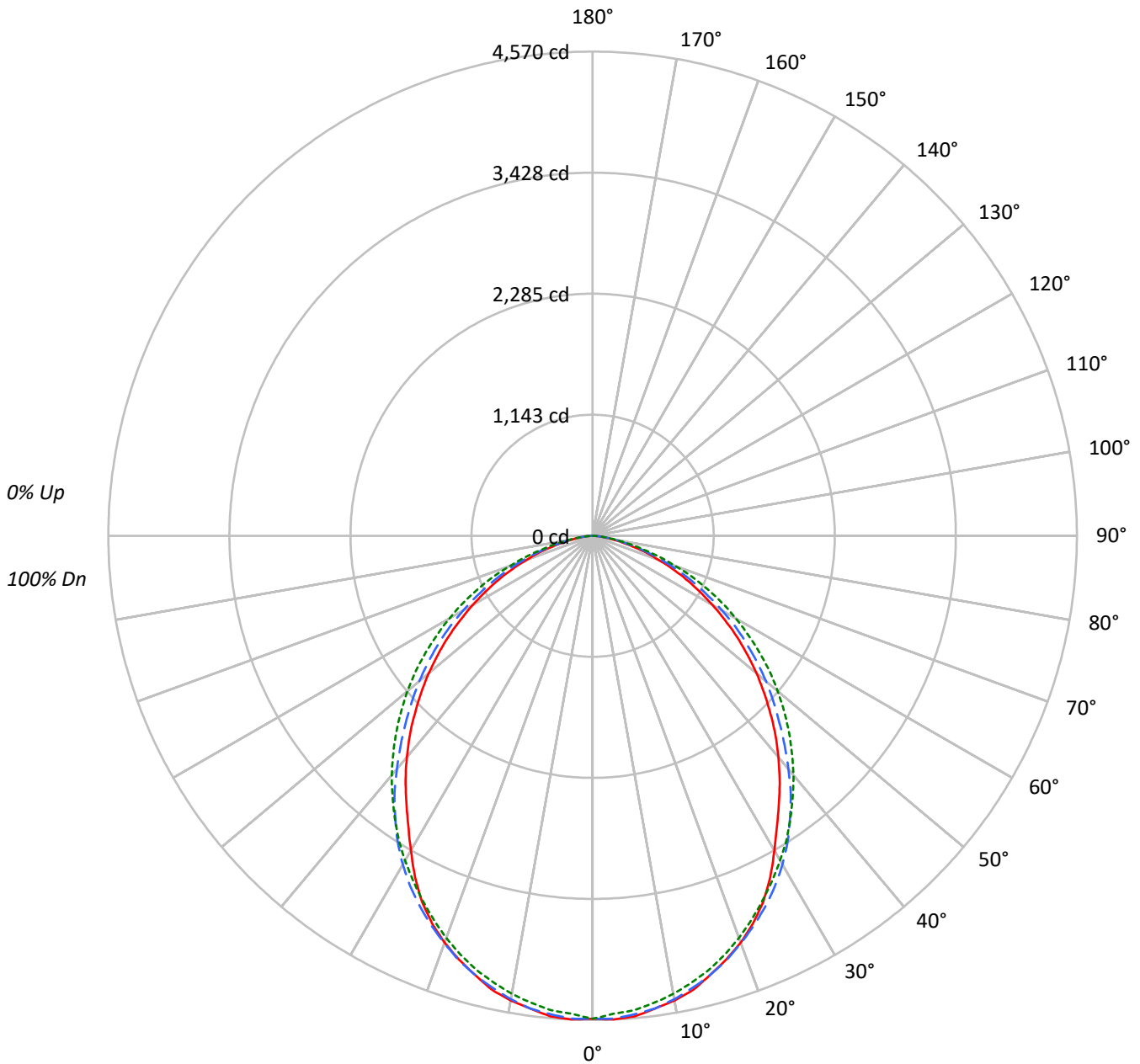
Lumens per Lamp: N/A
Luminaire Lumens: 10540.0 lumens
Efficiency: N/A
Efficacy: 105.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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									
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°	12266	12266	12266
5°	12299	12247	12143
10°	12168	12135	11996
15°	11952	11952	11816
20°	11700	11714	11564
25°	11314	11454	11272
30°	10654	11133	10997
35°	10067	10671	10689
40°	9578	10095	10359
45°	9030	9483	9970
50°	8453	8937	9545
55°	7797	8314	9029
60°	7021	7587	8397
65°	6199	6746	7638
70°	5167	5745	6489
75°	4060	4588	5080
80°	2904	3230	3583
85°	1893	1893	1785



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	429.2	4.1
10°-20°	1205.7	11.4
20°-30°	1761.9	16.7
30°-40°	1999.9	19.0
40°-50°	1930.6	18.3
50°-60°	1592.6	15.1
60°-70°	1060.6	10.1
70°-80°	474.6	4.5
80°-90°	84.9	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°	3396.7	32.2
0°-40°	5396.7	51.2
0°-60°	8919.9	84.6
0°-90°	10540.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10540.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4558	4558	4558	4558	4558	
5°	4553	4551	4534	4509	4495	431
15°	4290	4301	4290	4271	4241	1209
25°	3810	3840	3858	3830	3796	1745
35°	3064	3107	3248	3266	3254	1920
45°	2373	2413	2492	2606	2620	1831
55°	1662	1690	1772	1870	1924	1483
65°	974	1000	1060	1135	1200	965
75°	390	412	441	462	489	427
85°	61	61	61	58	58	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4558.3	4558.3	4558.3	4558.3	4558.3
2.5°	4570.5	4572.3	4561.8	4533.8	4516.2
5°	4553.0	4551.3	4533.8	4509.2	4495.2
7.5°	4502.2	4505.7	4500.5	4465.5	4446.2
10°	4453.2	4455.0	4440.9	4412.9	4390.2
12.5°	4390.2	4388.4	4369.2	4355.1	4318.4
15°	4290.3	4300.9	4290.3	4271.1	4241.3
17.5°	4194.0	4194.0	4201.0	4167.8	4145.0
20°	4085.5	4090.7	4090.7	4064.4	4038.2
22.5°	3959.4	3975.1	3980.4	3952.4	3920.9
25°	3810.5	3840.3	3857.8	3829.8	3796.5
27.5°	3630.2	3675.7	3728.2	3707.2	3670.4
30°	3428.8	3495.3	3582.9	3565.4	3539.1
32.5°	3237.9	3304.4	3425.3	3418.3	3404.3
35°	3064.5	3106.6	3248.4	3265.9	3253.7
37.5°	2899.9	2938.5	3071.5	3111.8	3101.3
40°	2726.6	2768.6	2873.7	2945.5	2949.0
42.5°	2554.9	2595.2	2681.0	2784.3	2784.3
45°	2372.8	2413.1	2491.9	2605.7	2619.7
47.5°	2194.2	2236.2	2313.3	2427.1	2449.9
50°	2019.1	2057.6	2134.7	2245.0	2280.0
52.5°	1837.0	1879.0	1954.3	2055.9	2106.6
55°	1661.9	1689.9	1772.2	1870.2	1924.5
57.5°	1479.7	1506.0	1598.8	1682.9	1738.9
60°	1304.6	1337.9	1409.7	1495.5	1560.3
62.5°	1136.5	1171.5	1232.8	1308.1	1381.7
65°	973.6	999.9	1059.5	1134.8	1199.5
67.5°	816.0	838.8	898.3	950.9	1019.2
70°	656.7	686.5	730.2	781.0	824.8
72.5°	528.9	541.1	577.9	614.7	660.2
75°	390.5	411.5	441.3	462.3	488.6
77.5°	280.2	292.4	310.0	327.5	352.0
80°	187.4	192.6	208.4	211.9	231.2
82.5°	113.8	117.3	120.8	122.6	129.6
85°	61.3	61.3	61.3	57.8	57.8
87.5°	35.0	35.0	29.8	24.5	17.5
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)