

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: P557862

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-93-87-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: P557862
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-40-UNV-93-87-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

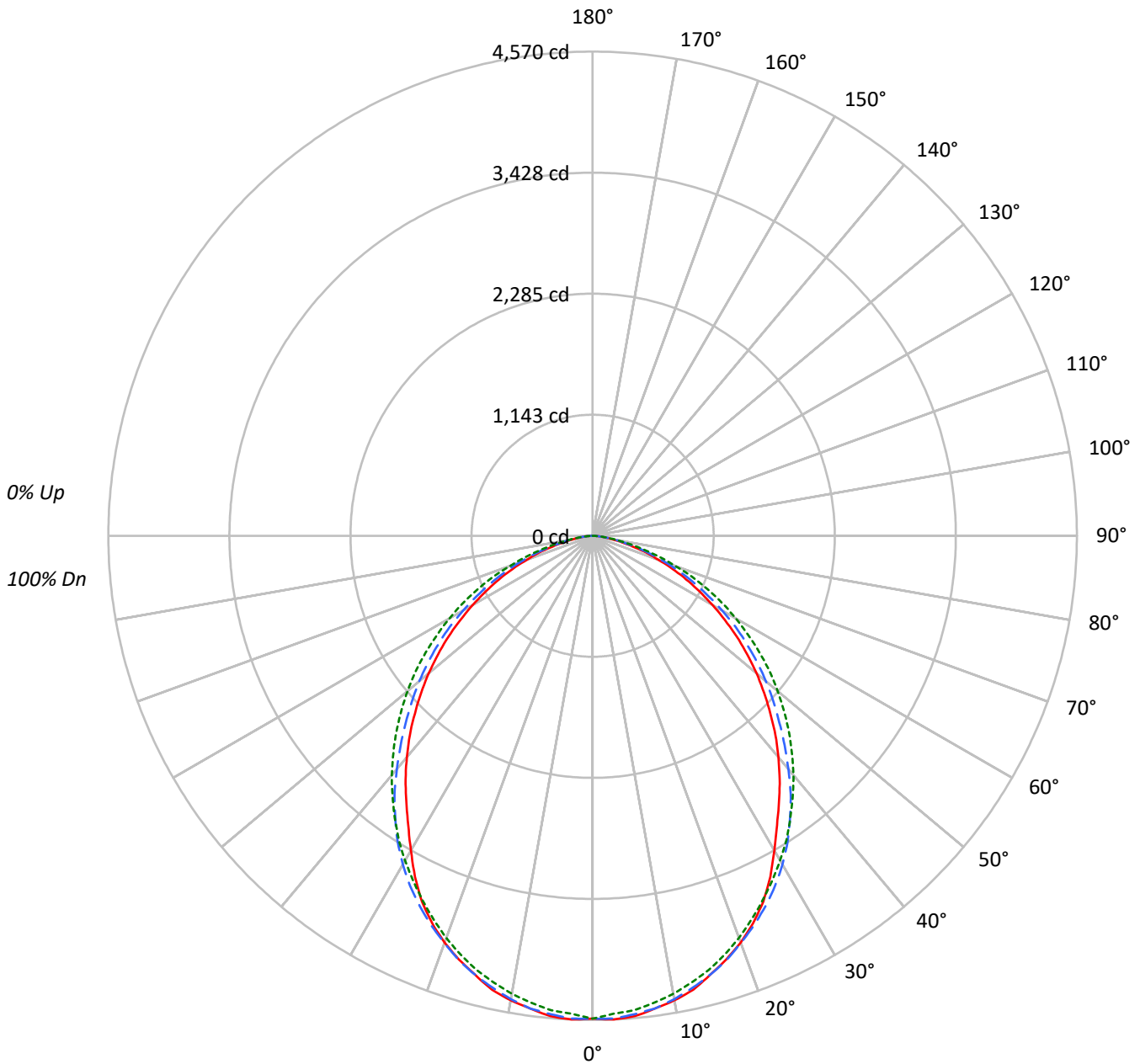
Lumens per Lamp: N/A
Luminaire Lumens: 10539.0 lumens
Efficiency: N/A
Efficacy: 81.3 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
Input Voltage (V): NR
Input Current (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°	12265	12265	12265
5°	12298	12246	12142
10°	12167	12134	11995
15°	11951	11951	11815
20°	11698	11713	11563
25°	11313	11453	11272
30°	10653	11132	10996
35°	10066	10670	10688
40°	9577	10094	10358
45°	9029	9482	9969
50°	8452	8936	9544
55°	7796	8313	9028
60°	7021	7586	8396
65°	6199	6746	7637
70°	5166	5745	6489
75°	4060	4588	5079
80°	2904	3230	3581
85°	1893	1893	1785



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	429.1	4.1
10°-20°	1205.6	11.4
20°-30°	1761.7	16.7
30°-40°	1999.7	19.0
40°-50°	1930.5	18.3
50°-60°	1592.5	15.1
60°-70°	1060.5	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°	3396.4	32.2
0°-40°	5396.2	51.2
0°-60°	8919.1	84.6
0°-90°	10539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4558	4558	4558	4558	4558	
5°	4553	4551	4533	4509	4495	431
15°	4290	4300	4290	4271	4241	1209
25°	3810	3840	3857	3829	3796	1745
35°	3064	3106	3248	3266	3253	1920
45°	2373	2413	2492	2606	2620	1831
55°	1662	1690	1772	1870	1924	1483
65°	974	1000	1059	1135	1199	965
75°	390	412	441	462	488	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°	4557.8	4557.8	4557.8	4557.8	4557.8
2.5°	4570.1	4571.9	4561.3	4533.3	4515.8
5°	4552.6	4550.8	4533.3	4508.8	4494.8
7.5°	4501.8	4505.3	4500.1	4465.0	4445.8
10°	4452.8	4454.5	4440.5	4412.5	4389.7
12.5°	4389.7	4388.0	4368.7	4354.7	4318.0
15°	4289.9	4300.4	4289.9	4270.7	4240.9
17.5°	4193.6	4193.6	4200.6	4167.4	4144.6
20°	4085.1	4090.3	4090.3	4064.1	4037.8
22.5°	3959.0	3974.8	3980.0	3952.0	3920.5
25°	3810.2	3839.9	3857.4	3829.4	3796.2
27.5°	3629.8	3675.3	3727.9	3706.9	3670.1
30°	3428.5	3495.0	3582.5	3565.0	3538.8
32.5°	3237.6	3304.1	3425.0	3417.9	3403.9
35°	3064.2	3106.3	3248.1	3265.6	3253.4
37.5°	2899.7	2938.2	3071.2	3111.5	3101.0
40°	2726.3	2768.3	2873.4	2945.2	2948.7
42.5°	2554.7	2595.0	2680.8	2784.1	2784.1
45°	2372.6	2412.9	2491.7	2605.5	2619.5
47.5°	2194.0	2236.0	2313.1	2426.9	2449.6
50°	2018.9	2057.4	2134.5	2244.8	2279.8
52.5°	1836.8	1878.8	1954.1	2055.7	2106.4
55°	1661.7	1689.7	1772.0	1870.1	1924.3
57.5°	1479.6	1505.9	1598.7	1682.7	1738.7
60°	1304.5	1337.8	1409.6	1495.4	1560.1
62.5°	1136.4	1171.4	1232.7	1308.0	1381.5
65°	973.6	999.8	1059.4	1134.6	1199.4
67.5°	816.0	838.7	898.3	950.8	1019.1
70°	656.6	686.4	730.2	780.9	824.7
72.5°	528.8	541.1	577.8	614.6	660.1
75°	390.5	411.5	441.3	462.3	488.5
77.5°	280.2	292.4	309.9	327.4	352.0
80°	187.4	192.6	208.4	211.9	231.1
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)