

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: P558244

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-93-86-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: P558244  
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-30-UNV-93-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS 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**

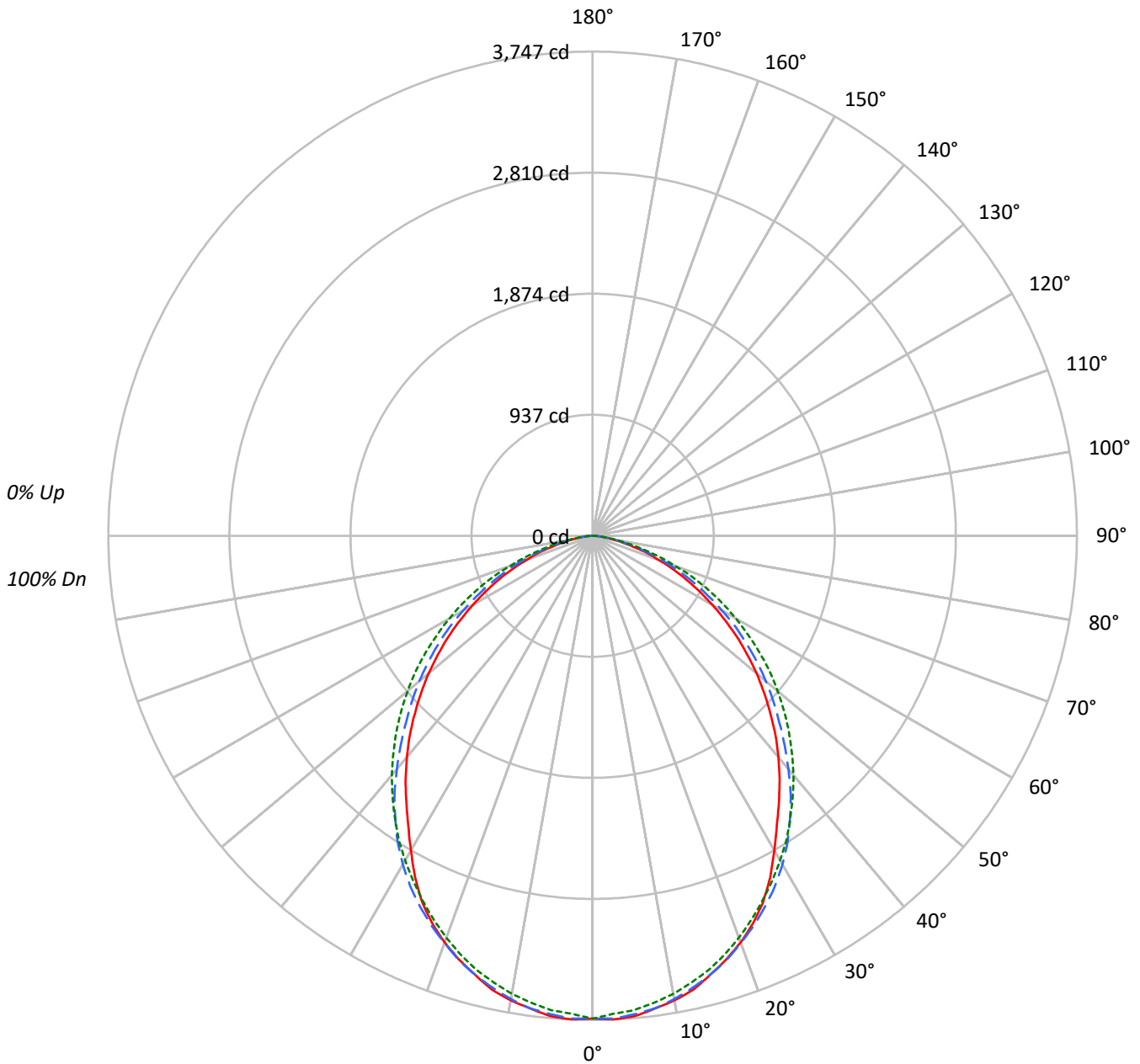
Lumens per Lamp: N/A  
Luminaire Lumens: 8640.0 lumens  
Efficiency: N/A  
Efficacy: 86.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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					
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								
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°	10055	10055	10055
5°	10082	10039	9954
10°	9975	9947	9834
15°	9798	9798	9686
20°	9590	9603	9479
25°	9274	9390	9240
30°	8734	9126	9015
35°	8252	8748	8762
40°	7852	8275	8492
45°	7402	7774	8173
50°	6929	7326	7824
55°	6391	6815	7401
60°	5755	6219	6884
65°	5082	5530	6261
70°	4235	4710	5319
75°	3328	3761	4164
80°	2380	2647	2937
85°	1550	1550	1463



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	351.8	4.1
10°-20°	988.3	11.4
20°-30°	1444.3	16.7
30°-40°	1639.4	19.0
40°-50°	1582.6	18.3
50°-60°	1305.5	15.1
60°-70°	869.4	10.1
70°-80°	389.0	4.5
80°-90°	69.6	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°	2784.4	32.2
0°-40°	4423.8	51.2
0°-60°	7312.0	84.6
0°-90°	8640.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8640.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3737	3737	3737	3737	3737	
5°	3732	3731	3716	3696	3685	353
15°	3517	3526	3517	3501	3477	991
25°	3124	3148	3162	3139	3112	1430
35°	2512	2547	2663	2677	2667	1574
45°	1945	1978	2043	2136	2148	1501
55°	1362	1385	1453	1533	1578	1216
65°	798	820	868	930	983	791
75°	320	337	362	379	400	350
85°	50	50	50	47	47	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3736.6	3736.6	3736.6	3736.6	3736.6
2.5°	3746.6	3748.1	3739.4	3716.5	3702.1
5°	3732.3	3730.8	3716.5	3696.4	3684.9
7.5°	3690.6	3693.5	3689.2	3660.5	3644.7
10°	3650.4	3651.9	3640.4	3617.4	3598.8
12.5°	3598.8	3597.3	3581.5	3570.1	3539.9
15°	3516.9	3525.6	3516.9	3501.2	3476.8
17.5°	3438.0	3438.0	3443.7	3416.5	3397.8
20°	3349.0	3353.3	3353.3	3331.8	3310.2
22.5°	3245.6	3258.6	3262.9	3239.9	3214.1
25°	3123.6	3148.0	3162.4	3139.4	3112.1
27.5°	2975.8	3013.1	3056.2	3038.9	3008.8
30°	2810.7	2865.2	2937.0	2922.7	2901.1
32.5°	2654.2	2708.8	2807.8	2802.1	2790.6
35°	2512.1	2546.6	2662.8	2677.2	2667.1
37.5°	2377.2	2408.7	2517.8	2550.9	2542.3
40°	2235.1	2269.5	2355.6	2414.5	2417.4
42.5°	2094.4	2127.4	2197.7	2282.4	2282.4
45°	1945.1	1978.1	2042.7	2136.0	2147.5
47.5°	1798.7	1833.1	1896.3	1989.6	2008.2
50°	1655.1	1686.7	1749.9	1840.3	1869.0
52.5°	1505.8	1540.3	1602.0	1685.3	1726.9
55°	1362.3	1385.2	1452.7	1533.1	1577.6
57.5°	1213.0	1234.5	1310.6	1379.5	1425.4
60°	1069.4	1096.7	1155.6	1225.9	1279.0
62.5°	931.6	960.3	1010.6	1072.3	1132.6
65°	798.1	819.7	868.5	930.2	983.3
67.5°	668.9	687.6	736.4	779.5	835.5
70°	538.3	562.7	598.6	640.2	676.1
72.5°	433.5	443.6	473.7	503.9	541.2
75°	320.1	337.3	361.7	379.0	400.5
77.5°	229.7	239.7	254.1	268.4	288.5
80°	153.6	157.9	170.8	173.7	189.5
82.5°	93.3	96.2	99.0	100.5	106.2
85°	50.2	50.2	50.2	47.4	47.4
87.5°	28.7	28.7	24.4	20.1	14.4
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)