

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: P556172

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-81-96-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: P556172  
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-LD4-1HI-30-UNV-81-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

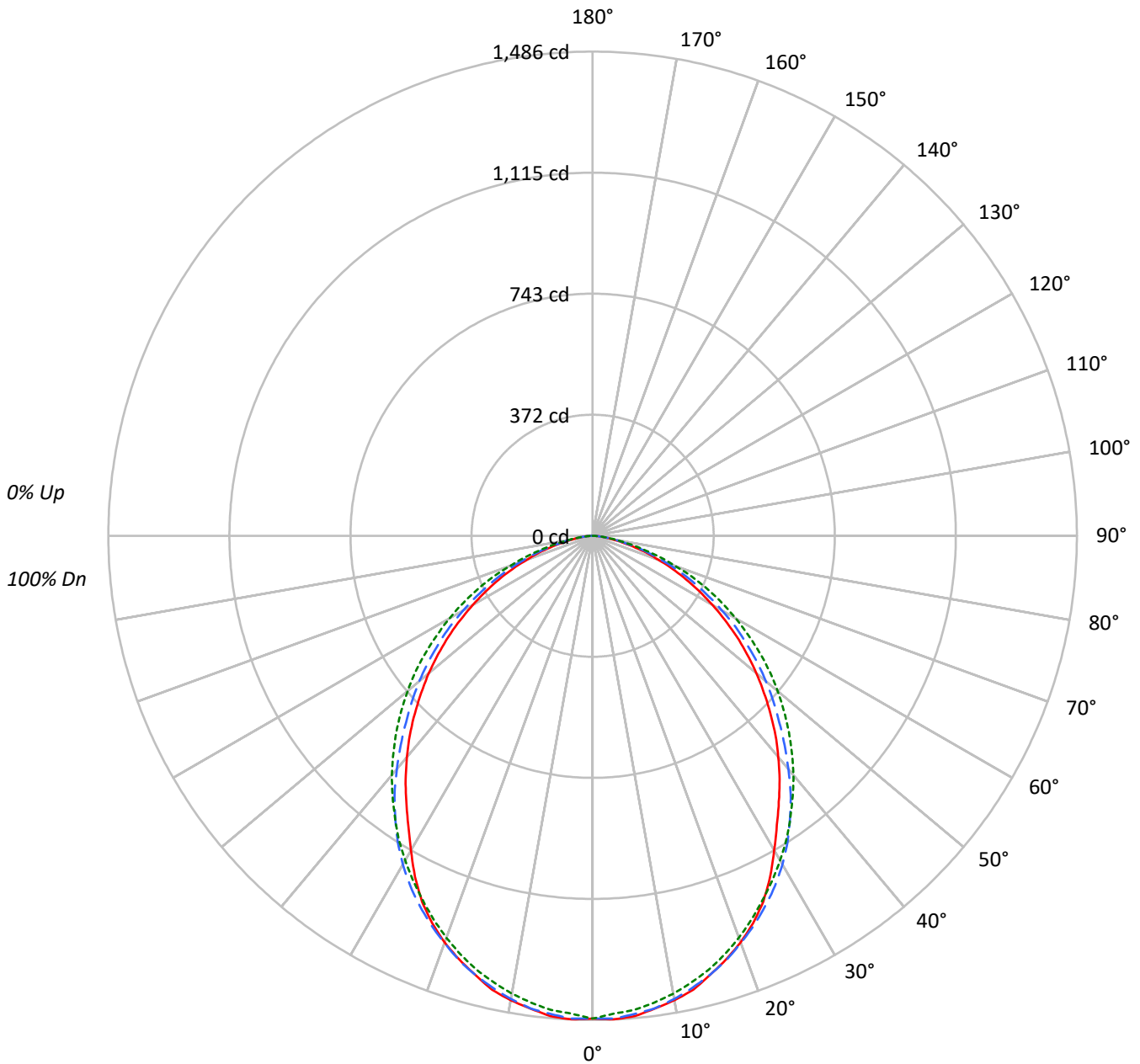
Lumens per Lamp: N/A  
Luminaire Lumens: 3426.0 lumens  
Efficiency: N/A  
Efficacy: 79.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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°	3987	3987	3987
5°	3998	3981	3947
10°	3955	3944	3899
15°	3885	3885	3841
20°	3803	3808	3759
25°	3678	3723	3664
30°	3463	3619	3575
35°	3272	3469	3474
40°	3113	3281	3367
45°	2935	3083	3240
50°	2748	2905	3103
55°	2534	2702	2935
60°	2282	2466	2730
65°	2015	2193	2483
70°	1680	1868	2109
75°	1319	1491	1651
80°	944	1049	1164
85°	614	614	580



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.5	4.1
10°-20°	391.9	11.4
20°-30°	572.7	16.7
30°-40°	650.1	19.0
40°-50°	627.5	18.3
50°-60°	517.7	15.1
60°-70°	344.7	10.1
70°-80°	154.3	4.5
80°-90°	27.6	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°	1104.1	32.2
0°-40°	1754.2	51.2
0°-60°	2899.4	84.6
0°-90°	3426.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3426.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1482	1482	1482	1482	1482	
5°	1480	1479	1474	1466	1461	140
15°	1395	1398	1395	1388	1379	393
25°	1239	1248	1254	1245	1234	567
35°	996	1010	1056	1062	1058	624
45°	771	784	810	847	852	595
55°	540	549	576	608	626	482
65°	316	325	344	369	390	314
75°	127	134	143	150	159	139
85°	20	20	20	19	19	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1481.7	1481.7	1481.7	1481.7	1481.7
2.5°	1485.6	1486.2	1482.8	1473.7	1468.0
5°	1479.9	1479.4	1473.7	1465.7	1461.2
7.5°	1463.4	1464.6	1462.9	1451.5	1445.2
10°	1447.5	1448.1	1443.5	1434.4	1427.0
12.5°	1427.0	1426.4	1420.2	1415.6	1403.7
15°	1394.6	1398.0	1394.6	1388.3	1378.6
17.5°	1363.3	1363.3	1365.5	1354.7	1347.3
20°	1328.0	1329.7	1329.7	1321.1	1312.6
22.5°	1287.0	1292.1	1293.8	1284.7	1274.5
25°	1238.6	1248.3	1254.0	1244.9	1234.0
27.5°	1180.0	1194.8	1211.9	1205.0	1193.1
30°	1114.5	1136.1	1164.6	1158.9	1150.4
32.5°	1052.5	1074.1	1113.4	1111.1	1106.5
35°	996.1	1009.8	1055.9	1061.6	1057.6
37.5°	942.6	955.1	998.4	1011.5	1008.1
40°	886.3	899.9	934.1	957.4	958.6
42.5°	830.5	843.6	871.5	905.0	905.0
45°	771.3	784.4	810.0	847.0	851.5
47.5°	713.2	726.9	751.9	788.9	796.3
50°	656.3	668.8	693.9	729.7	741.1
52.5°	597.1	610.8	635.2	668.3	684.8
55°	540.2	549.3	576.0	607.9	625.6
57.5°	481.0	489.5	519.7	547.0	565.2
60°	424.1	434.9	458.2	486.1	507.2
62.5°	369.4	380.8	400.7	425.2	449.1
65°	316.5	325.0	344.4	368.8	389.9
67.5°	265.3	272.7	292.0	309.1	331.3
70°	213.5	223.1	237.4	253.9	268.1
72.5°	171.9	175.9	187.8	199.8	214.6
75°	126.9	133.8	143.4	150.3	158.8
77.5°	91.1	95.1	100.8	106.4	114.4
80°	60.9	62.6	67.7	68.9	75.1
82.5°	37.0	38.1	39.3	39.8	42.1
85°	19.9	19.9	19.9	18.8	18.8
87.5°	11.4	11.4	9.7	8.0	5.7
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)