

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: P556330

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-93-94-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: P556330  
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-40-UNV-93-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

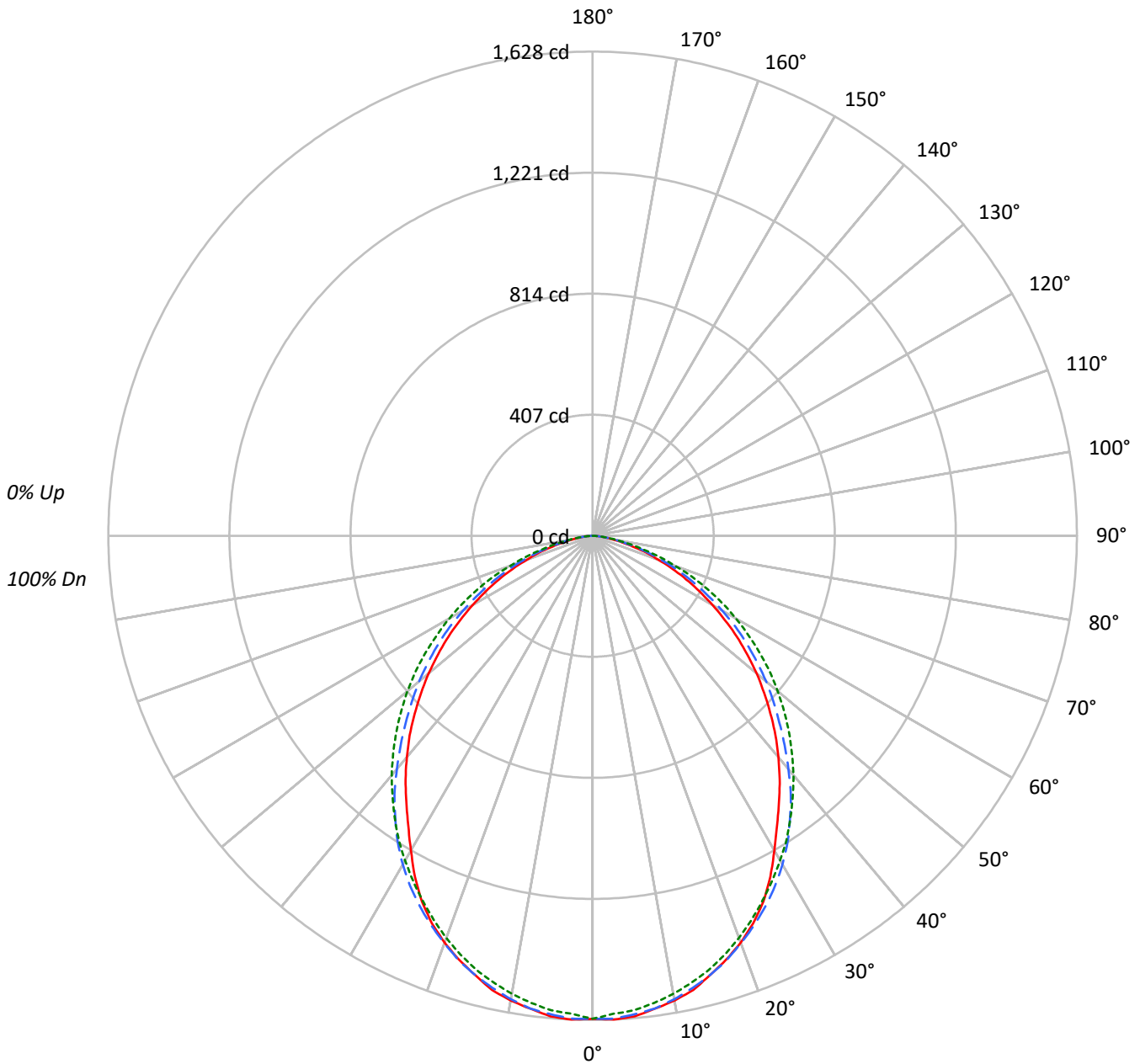
Lumens per Lamp: N/A  
Luminaire Lumens: 3755.0 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (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°	4370	4370	4370
5°	4382	4363	4326
10°	4335	4323	4274
15°	4258	4258	4210
20°	4168	4174	4120
25°	4031	4081	4016
30°	3796	3966	3918
35°	3587	3802	3808
40°	3412	3596	3691
45°	3217	3379	3552
50°	3011	3184	3401
55°	2778	2962	3217
60°	2502	2703	2992
65°	2209	2403	2721
70°	1841	2047	2312
75°	1446	1634	1810
80°	1035	1150	1277
85°	673	673	636



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.9	4.1
10°-20°	429.5	11.4
20°-30°	627.7	16.7
30°-40°	712.5	19.0
40°-50°	687.8	18.3
50°-60°	567.4	15.1
60°-70°	377.8	10.1
70°-80°	169.1	4.5
80°-90°	30.2	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°	1210.1	32.2
0°-40°	1922.6	51.2
0°-60°	3177.8	84.6
0°-90°	3755.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3755.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1624	1624	1624	1624	1624	
5°	1622	1621	1615	1606	1602	154
15°	1528	1532	1528	1522	1511	431
25°	1358	1368	1374	1364	1353	622
35°	1092	1107	1157	1164	1159	684
45°	845	860	888	928	933	652
55°	592	602	631	666	686	528
65°	347	356	377	404	427	344
75°	139	147	157	165	174	152
85°	22	22	22	21	21	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1623.9	1623.9	1623.9	1623.9	1623.9
2.5°	1628.3	1628.9	1625.2	1615.2	1609.0
5°	1622.1	1621.4	1615.2	1606.5	1601.5
7.5°	1604.0	1605.2	1603.4	1590.9	1584.0
10°	1586.5	1587.1	1582.1	1572.2	1564.0
12.5°	1564.0	1563.4	1556.6	1551.6	1538.5
15°	1528.5	1532.2	1528.5	1521.6	1511.0
17.5°	1494.2	1494.2	1496.7	1484.8	1476.7
20°	1455.5	1457.4	1457.4	1448.0	1438.7
22.5°	1410.6	1416.2	1418.1	1408.1	1396.9
25°	1357.5	1368.2	1374.4	1364.4	1352.6
27.5°	1293.3	1309.5	1328.2	1320.7	1307.6
30°	1221.5	1245.2	1276.4	1270.2	1260.8
32.5°	1153.5	1177.2	1220.3	1217.8	1212.8
35°	1091.8	1106.8	1157.3	1163.5	1159.2
37.5°	1033.1	1046.9	1094.3	1108.6	1104.9
40°	971.4	986.3	1023.8	1049.4	1050.6
42.5°	910.2	924.6	955.1	992.0	992.0
45°	845.3	859.7	887.8	928.3	933.3
47.5°	781.7	796.7	824.1	864.7	872.8
50°	719.3	733.1	760.5	799.8	812.3
52.5°	654.4	669.4	696.2	732.4	750.5
55°	592.1	602.0	631.4	666.3	685.6
57.5°	527.2	536.5	569.6	599.5	619.5
60°	464.8	476.6	502.2	532.8	555.9
62.5°	404.9	417.4	439.2	466.0	492.2
65°	346.9	356.2	377.4	404.3	427.4
67.5°	290.7	298.8	320.0	338.8	363.1
70°	234.0	244.6	260.2	278.2	293.8
72.5°	188.4	192.8	205.9	219.0	235.2
75°	139.1	146.6	157.2	164.7	174.1
77.5°	99.8	104.2	110.4	116.7	125.4
80°	66.8	68.6	74.2	75.5	82.4
82.5°	40.6	41.8	43.0	43.7	46.2
85°	21.8	21.8	21.8	20.6	20.6
87.5°	12.5	12.5	10.6	8.7	6.2
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)