

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: P556370

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-82-85-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: P556370  
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-50-UNV-82-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

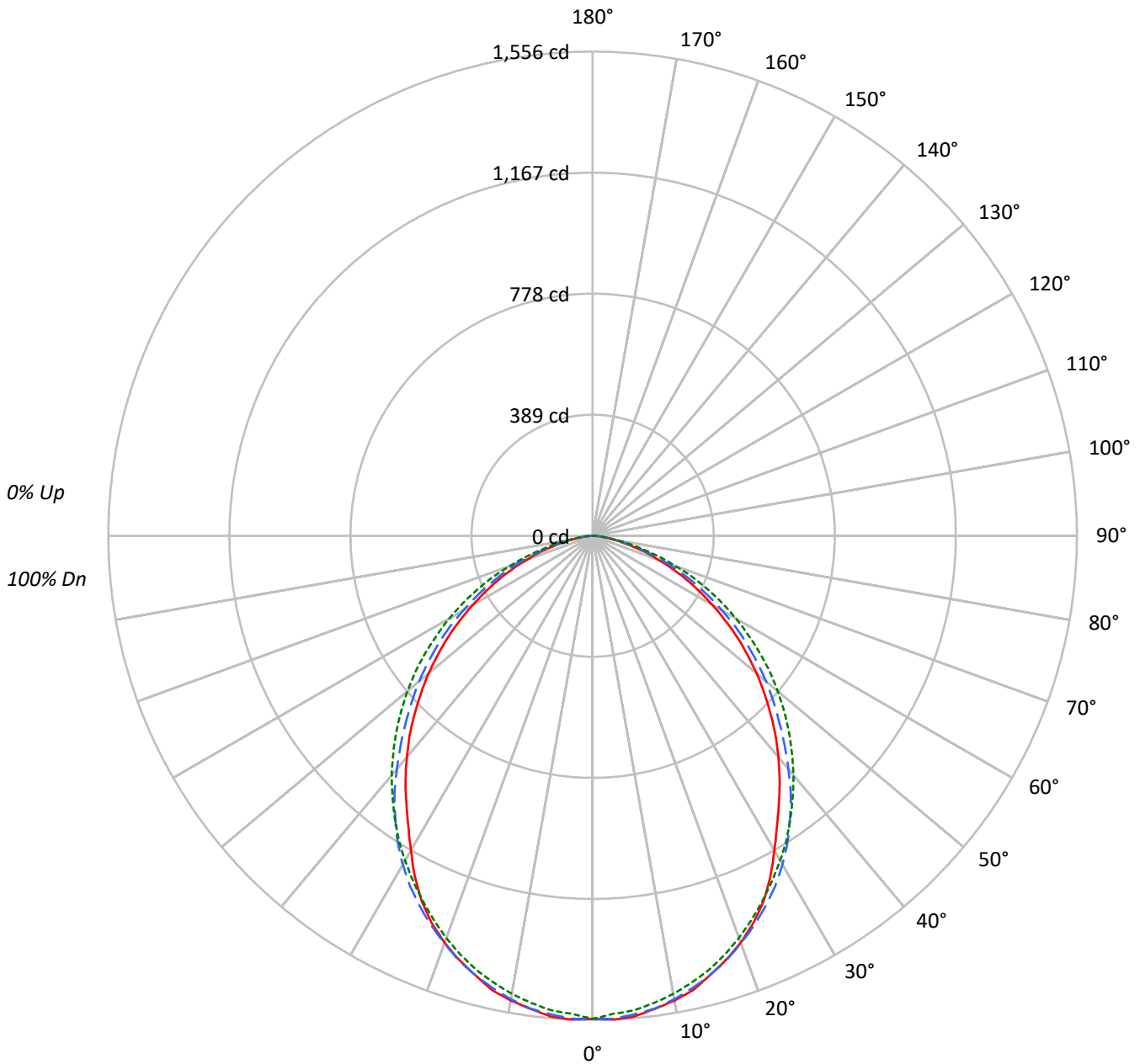
Lumens per Lamp: N/A  
Luminaire Lumens: 3589.0 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4177	4177	4177
5°	4188	4170	4135
10°	4144	4132	4085
15°	4070	4070	4023
20°	3984	3989	3938
25°	3852	3900	3839
30°	3628	3791	3745
35°	3428	3634	3640
40°	3261	3437	3528
45°	3075	3229	3395
50°	2878	3043	3250
55°	2655	2831	3074
60°	2391	2583	2859
65°	2111	2297	2601
70°	1759	1957	2210
75°	1383	1563	1730
80°	989	1100	1220
85°	645	645	608



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.1	4.1
10°-20°	410.5	11.4
20°-30°	599.9	16.7
30°-40°	681.0	19.0
40°-50°	657.4	18.3
50°-60°	542.3	15.1
60°-70°	361.1	10.1
70°-80°	161.6	4.5
80°-90°	28.9	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°	1156.6	32.2
0°-40°	1837.6	51.2
0°-60°	3037.3	84.6
0°-90°	3589.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3589.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1552	1552	1552	1552	1552	
5°	1550	1550	1544	1536	1531	147
15°	1461	1464	1461	1454	1444	412
25°	1298	1308	1314	1304	1293	594
35°	1044	1058	1106	1112	1108	654
45°	808	822	848	887	892	623
55°	566	575	603	637	655	505
65°	332	340	361	386	408	329
75°	133	140	150	157	166	145
85°	21	21	21	20	20	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1552.1	1552.1	1552.1	1552.1	1552.1
2.5°	1556.3	1556.9	1553.3	1543.8	1537.8
5°	1550.4	1549.8	1543.8	1535.5	1530.7
7.5°	1533.1	1534.3	1532.5	1520.5	1514.0
10°	1516.4	1517.0	1512.2	1502.7	1494.9
12.5°	1494.9	1494.3	1487.8	1483.0	1470.5
15°	1460.9	1464.5	1460.9	1454.4	1444.2
17.5°	1428.1	1428.1	1430.5	1419.2	1411.4
20°	1391.2	1392.9	1392.9	1384.0	1375.1
22.5°	1348.2	1353.6	1355.4	1345.8	1335.1
25°	1297.5	1307.7	1313.6	1304.1	1292.8
27.5°	1236.1	1251.6	1269.5	1262.4	1249.8
30°	1167.5	1190.2	1220.0	1214.1	1205.1
32.5°	1102.5	1125.2	1166.3	1164.0	1159.2
35°	1043.5	1057.8	1106.1	1112.1	1107.9
37.5°	987.5	1000.6	1045.9	1059.6	1056.0
40°	928.4	942.7	978.5	1003.0	1004.2
42.5°	870.0	883.7	912.9	948.1	948.1
45°	808.0	821.7	848.5	887.3	892.1
47.5°	747.2	761.5	787.7	826.5	834.2
50°	687.5	700.6	726.9	764.4	776.4
52.5°	625.5	639.8	665.5	700.0	717.3
55°	565.9	575.4	603.4	636.8	655.3
57.5°	503.9	512.8	544.4	573.0	592.1
60°	444.2	455.6	480.0	509.2	531.3
62.5°	387.0	398.9	419.8	445.4	470.5
65°	331.5	340.5	360.8	386.4	408.5
67.5°	277.9	285.6	305.9	323.8	347.0
70°	223.6	233.7	248.7	265.9	280.9
72.5°	180.1	184.3	196.8	209.3	224.8
75°	133.0	140.1	150.3	157.4	166.4
77.5°	95.4	99.6	105.5	111.5	119.9
80°	63.8	65.6	71.0	72.2	78.7
82.5°	38.8	40.0	41.1	41.7	44.1
85°	20.9	20.9	20.9	19.7	19.7
87.5°	11.9	11.9	10.1	8.3	6.0
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)