

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: P556198

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-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: P556198  
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-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 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

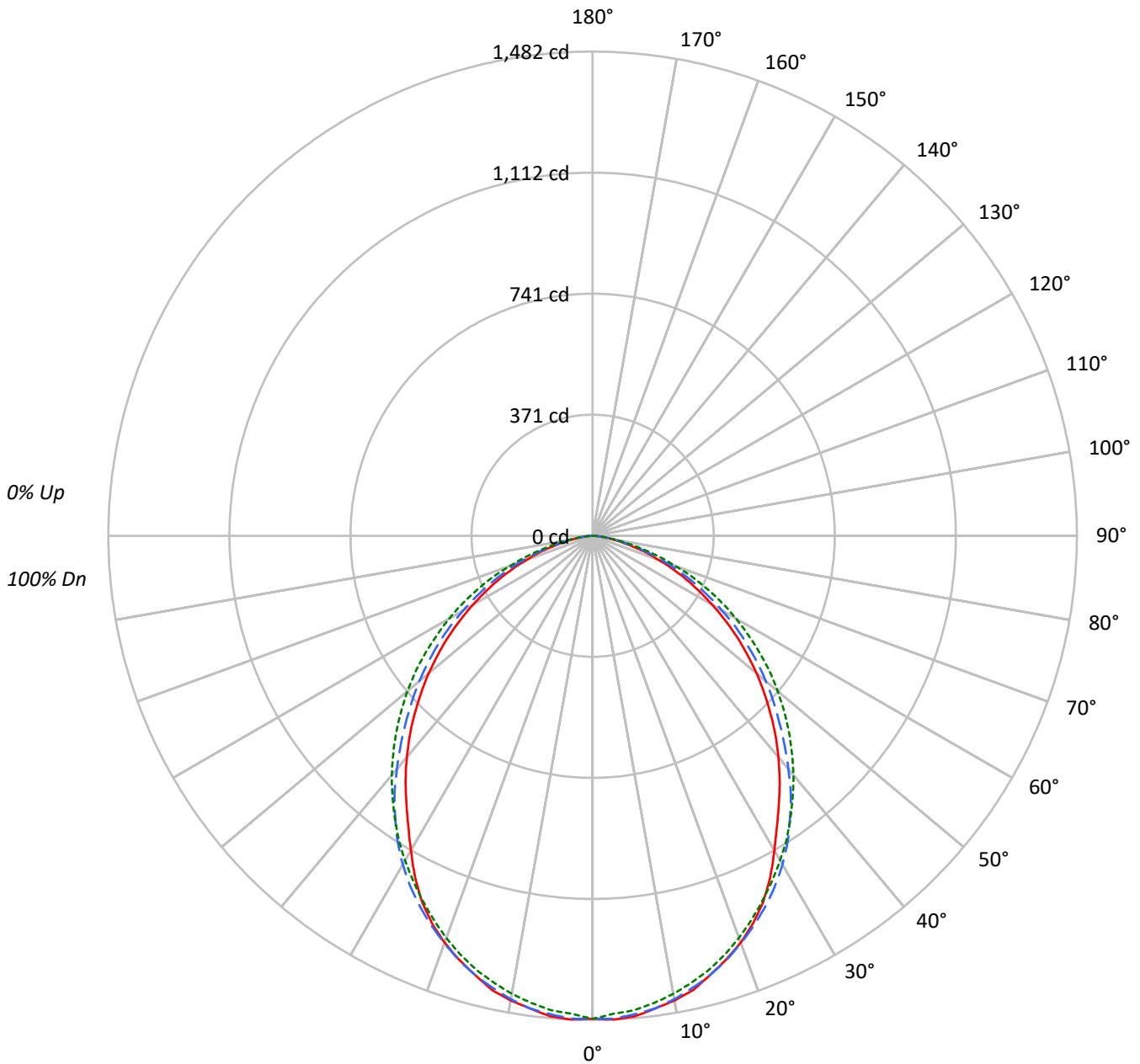
Lumens per Lamp: N/A  
Luminaire Lumens: 3418.0 lumens  
Efficiency: N/A  
Efficacy: 79.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
Input Voltage (V): NR  
Input Current (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°	3978	3978	3978
5°	3988	3971	3938
10°	3946	3935	3890
15°	3876	3876	3832
20°	3794	3799	3750
25°	3669	3714	3656
30°	3455	3610	3566
35°	3265	3461	3466
40°	3106	3274	3359
45°	2928	3075	3233
50°	2741	2898	3095
55°	2528	2696	2928
60°	2277	2460	2723
65°	2010	2188	2477
70°	1676	1863	2105
75°	1316	1488	1647
80°	942	1048	1162
85°	614	614	577



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.2	4.1
10°-20°	391.0	11.4
20°-30°	571.4	16.7
30°-40°	648.6	19.0
40°-50°	626.1	18.3
50°-60°	516.5	15.1
60°-70°	343.9	10.1
70°-80°	153.9	4.5
80°-90°	27.5	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°	1101.5	32.2
0°-40°	1750.1	51.2
0°-60°	2892.6	84.6
0°-90°	3418.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3418.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1478	1478	1478	1478	1478	
5°	1476	1476	1470	1462	1458	140
15°	1391	1395	1391	1385	1375	392
25°	1236	1245	1251	1242	1231	566
35°	994	1007	1053	1059	1055	623
45°	770	782	808	845	850	594
55°	539	548	575	606	624	481
65°	316	324	344	368	389	313
75°	127	134	143	150	158	138
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°	1478.2	1478.2	1478.2	1478.2	1478.2
2.5°	1482.2	1482.7	1479.3	1470.2	1464.6
5°	1476.5	1475.9	1470.2	1462.3	1457.8
7.5°	1460.0	1461.2	1459.5	1448.1	1441.9
10°	1444.1	1444.7	1440.1	1431.1	1423.7
12.5°	1423.7	1423.1	1416.9	1412.3	1400.4
15°	1391.3	1394.7	1391.3	1385.1	1375.4
17.5°	1360.1	1360.1	1362.3	1351.6	1344.2
20°	1324.9	1326.6	1326.6	1318.1	1309.5
22.5°	1284.0	1289.1	1290.8	1281.7	1271.5
25°	1235.7	1245.4	1251.0	1242.0	1231.2
27.5°	1177.2	1192.0	1209.0	1202.2	1190.3
30°	1111.9	1133.5	1161.9	1156.2	1147.7
32.5°	1050.0	1071.6	1110.8	1108.5	1104.0
35°	993.8	1007.4	1053.4	1059.1	1055.1
37.5°	940.4	952.9	996.1	1009.1	1005.7
40°	884.2	897.8	931.9	955.2	956.3
42.5°	828.5	841.6	869.4	902.9	902.9
45°	769.5	782.5	808.1	845.0	849.6
47.5°	711.6	725.2	750.2	787.1	794.5
50°	654.8	667.3	692.2	728.0	739.4
52.5°	595.7	609.3	633.8	666.7	683.2
55°	538.9	548.0	574.7	606.5	624.1
57.5°	479.9	488.4	518.5	545.7	563.9
60°	423.1	433.9	457.1	485.0	506.0
62.5°	368.6	379.9	399.8	424.2	448.1
65°	315.7	324.3	343.6	368.0	389.0
67.5°	264.6	272.0	291.3	308.4	330.5
70°	213.0	222.6	236.8	253.3	267.5
72.5°	171.5	175.5	187.4	199.3	214.1
75°	126.6	133.5	143.1	149.9	158.4
77.5°	90.9	94.8	100.5	106.2	114.1
80°	60.8	62.5	67.6	68.7	75.0
82.5°	36.9	38.0	39.2	39.8	42.0
85°	19.9	19.9	19.9	18.7	18.7
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)