

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: P556292

Luminaire Tested: **FUSL-12-4-LD4-1HI-40-UNV-81-86-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: P556292  
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-81-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

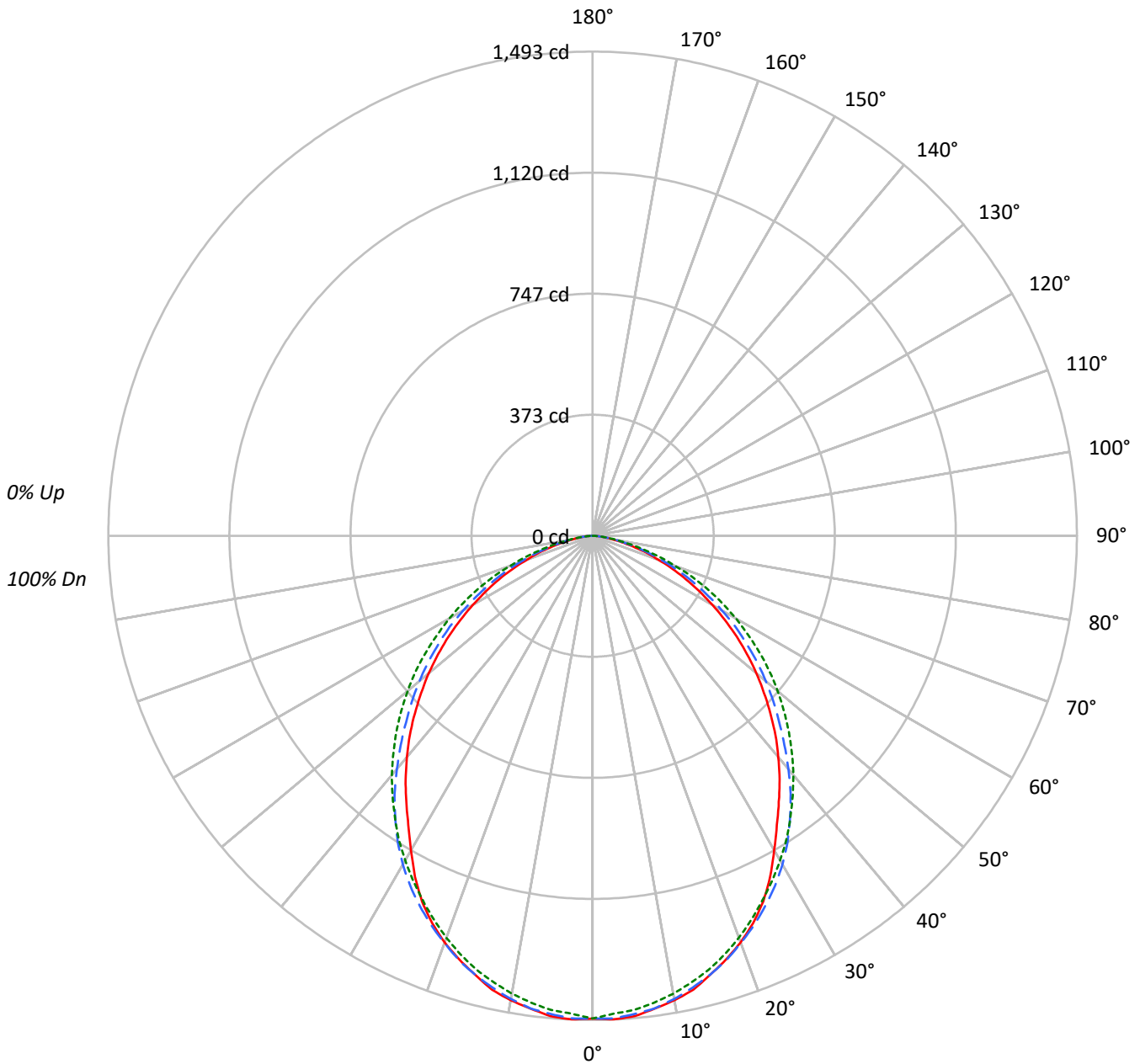
Lumens per Lamp: N/A  
Luminaire Lumens: 3442.0 lumens  
Efficiency: N/A  
Efficacy: 79.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4006	4006	4006
5°	4017	3999	3965
10°	3974	3963	3918
15°	3903	3903	3859
20°	3821	3826	3776
25°	3695	3741	3681
30°	3479	3636	3591
35°	3288	3485	3490
40°	3128	3296	3383
45°	2949	3097	3256
50°	2761	2918	3117
55°	2546	2715	2949
60°	2293	2478	2742
65°	2025	2203	2494
70°	1688	1876	2120
75°	1326	1498	1659
80°	948	1055	1170
85°	618	618	584



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.2	4.1
10°-20°	393.7	11.4
20°-30°	575.4	16.7
30°-40°	653.1	19.0
40°-50°	630.5	18.3
50°-60°	520.1	15.1
60°-70°	346.3	10.1
70°-80°	155.0	4.5
80°-90°	27.7	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°	1109.3	32.2
0°-40°	1762.4	51.2
0°-60°	2912.9	84.6
0°-90°	3442.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3442.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1489	1489	1489	1489	1489	
5°	1487	1486	1481	1473	1468	141
15°	1401	1404	1401	1395	1385	395
25°	1244	1254	1260	1251	1240	570
35°	1001	1014	1061	1066	1062	627
45°	775	788	814	851	856	598
55°	543	552	579	611	628	484
65°	318	326	346	371	392	315
75°	128	134	144	151	160	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°	1488.6	1488.6	1488.6	1488.6	1488.6
2.5°	1492.6	1493.2	1489.7	1480.6	1474.9
5°	1486.9	1486.3	1480.6	1472.6	1468.0
7.5°	1470.3	1471.4	1469.7	1458.3	1452.0
10°	1454.3	1454.8	1450.3	1441.1	1433.7
12.5°	1433.7	1433.1	1426.8	1422.2	1410.2
15°	1401.1	1404.5	1401.1	1394.8	1385.1
17.5°	1369.6	1369.6	1371.9	1361.0	1353.6
20°	1334.2	1335.9	1335.9	1327.3	1318.7
22.5°	1293.0	1298.1	1299.9	1290.7	1280.4
25°	1244.4	1254.1	1259.8	1250.7	1239.8
27.5°	1185.5	1200.4	1217.5	1210.6	1198.6
30°	1119.7	1141.5	1170.0	1164.3	1155.7
32.5°	1057.4	1079.1	1118.6	1116.3	1111.7
35°	1000.8	1014.5	1060.8	1066.5	1062.5
37.5°	947.0	959.6	1003.1	1016.2	1012.8
40°	890.4	904.1	938.4	961.9	963.0
42.5°	834.4	847.5	875.5	909.3	909.3
45°	774.9	788.0	813.8	850.9	855.5
47.5°	716.6	730.3	755.4	792.6	800.0
50°	659.4	671.9	697.1	733.1	744.6
52.5°	599.9	613.6	638.2	671.4	688.0
55°	542.7	551.9	578.7	610.8	628.5
57.5°	483.2	491.8	522.1	549.6	567.9
60°	426.0	436.9	460.4	488.4	509.5
62.5°	371.1	382.6	402.6	427.2	451.2
65°	318.0	326.5	346.0	370.6	391.7
67.5°	266.5	273.9	293.4	310.5	332.8
70°	214.5	224.2	238.5	255.1	269.4
72.5°	172.7	176.7	188.7	200.7	215.6
75°	127.5	134.4	144.1	151.0	159.6
77.5°	91.5	95.5	101.2	106.9	114.9
80°	61.2	62.9	68.1	69.2	75.5
82.5°	37.2	38.3	39.5	40.0	42.3
85°	20.0	20.0	20.0	18.9	18.9
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)