

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: P556150

Luminaire Tested: **FUSL-12-4-LD4-1HI-30-UNV-80-87-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: P556150  
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-80-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC 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**

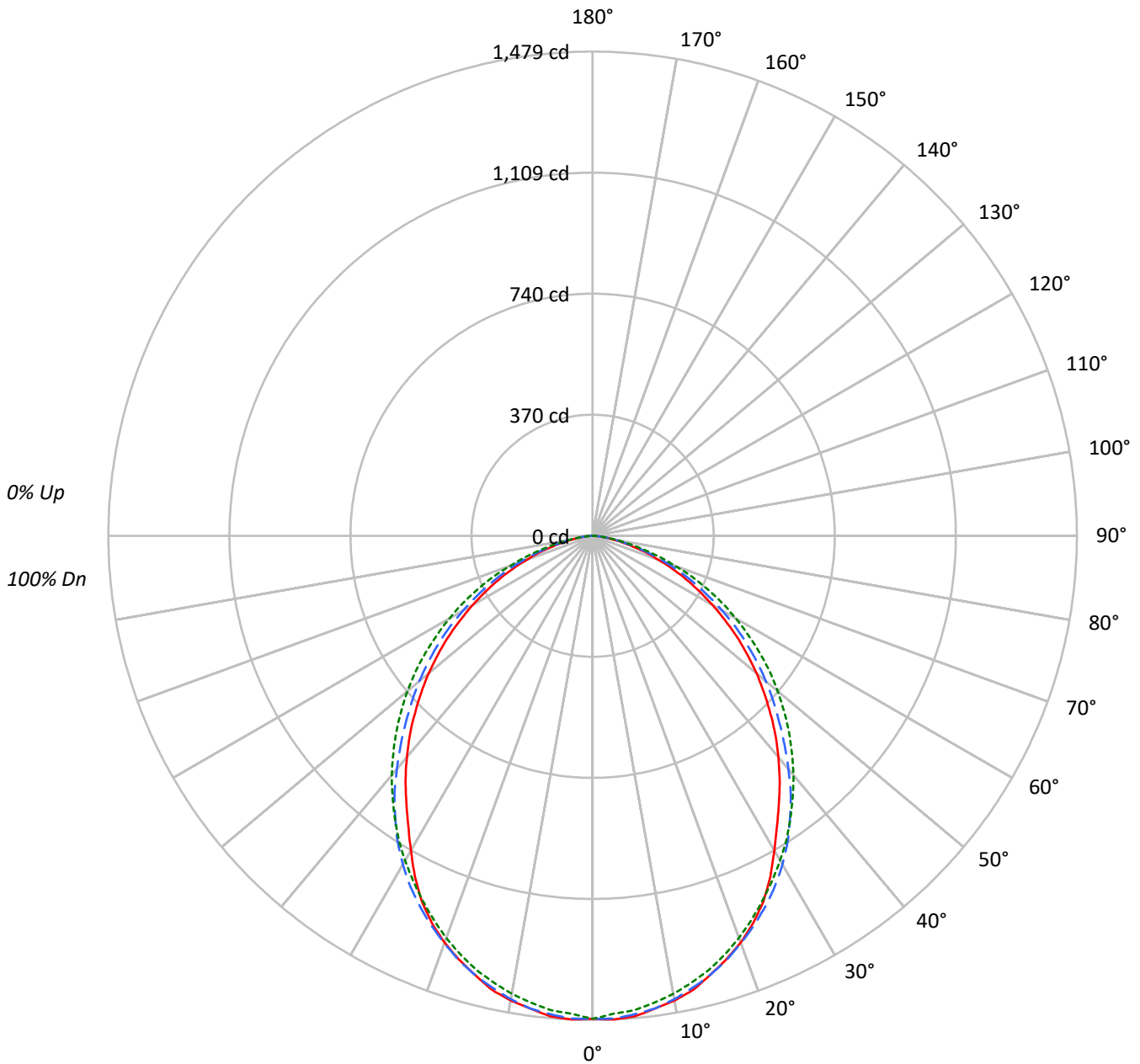
Lumens per Lamp: N/A  
Luminaire Lumens: 3411.0 lumens  
Efficiency: N/A  
Efficacy: 79.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	3970	3970	3970
5°	3980	3963	3930
10°	3938	3927	3882
15°	3868	3868	3824
20°	3786	3791	3743
25°	3662	3707	3648
30°	3448	3603	3559
35°	3258	3454	3459
40°	3100	3267	3353
45°	2922	3069	3226
50°	2735	2892	3089
55°	2523	2691	2922
60°	2272	2455	2717
65°	2006	2183	2472
70°	1672	1859	2100
75°	1314	1485	1644
80°	939	1044	1159
85°	611	611	577



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.9	4.1
10°-20°	390.2	11.4
20°-30°	570.2	16.7
30°-40°	647.2	19.0
40°-50°	624.8	18.3
50°-60°	515.4	15.1
60°-70°	343.2	10.1
70°-80°	153.6	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°	1099.3	32.2
0°-40°	1746.5	51.2
0°-60°	2886.7	84.6
0°-90°	3411.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3411.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1475	1475	1475	1475	1475	
5°	1474	1473	1467	1459	1455	139
15°	1388	1392	1388	1382	1373	391
25°	1233	1243	1248	1239	1229	565
35°	992	1005	1051	1057	1053	621
45°	768	781	806	843	848	592
55°	538	547	574	605	623	480
65°	315	324	343	367	388	312
75°	126	133	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°	1475.2	1475.2	1475.2	1475.2	1475.2
2.5°	1479.1	1479.7	1476.3	1467.2	1461.6
5°	1473.5	1472.9	1467.2	1459.3	1454.8
7.5°	1457.0	1458.2	1456.5	1445.1	1438.9
10°	1441.2	1441.7	1437.2	1428.1	1420.8
12.5°	1420.8	1420.2	1414.0	1409.4	1397.5
15°	1388.5	1391.9	1388.5	1382.2	1372.6
17.5°	1357.3	1357.3	1359.6	1348.8	1341.4
20°	1322.2	1323.9	1323.9	1315.4	1306.9
22.5°	1281.4	1286.5	1288.2	1279.1	1268.9
25°	1233.2	1242.8	1248.5	1239.4	1228.6
27.5°	1174.8	1189.5	1206.5	1199.7	1187.8
30°	1109.6	1131.2	1159.5	1153.8	1145.3
32.5°	1047.9	1069.4	1108.5	1106.2	1101.7
35°	991.8	1005.4	1051.3	1056.9	1053.0
37.5°	938.5	951.0	994.0	1007.1	1003.7
40°	882.4	896.0	930.0	953.2	954.4
42.5°	826.8	839.9	867.6	901.1	901.1
45°	767.9	780.9	806.4	843.3	847.8
47.5°	710.1	723.7	748.6	785.5	792.8
50°	653.4	665.9	690.8	726.5	737.9
52.5°	594.5	608.1	632.5	665.3	681.8
55°	537.8	546.9	573.5	605.3	622.8
57.5°	478.9	487.4	517.4	544.6	562.8
60°	422.2	433.0	456.2	484.0	504.9
62.5°	367.8	379.1	399.0	423.3	447.1
65°	315.1	323.6	342.9	367.2	388.2
67.5°	264.1	271.5	290.7	307.7	329.8
70°	212.5	222.2	236.3	252.8	266.9
72.5°	171.1	175.1	187.0	198.9	213.7
75°	126.4	133.2	142.8	149.6	158.1
77.5°	90.7	94.6	100.3	106.0	113.9
80°	60.6	62.3	67.4	68.6	74.8
82.5°	36.8	38.0	39.1	39.7	41.9
85°	19.8	19.8	19.8	18.7	18.7
87.5°	11.3	11.3	9.6	7.9	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)