

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: P557808

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-80-84-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: P557808  
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-LD4-3HI-40-UNV-80-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

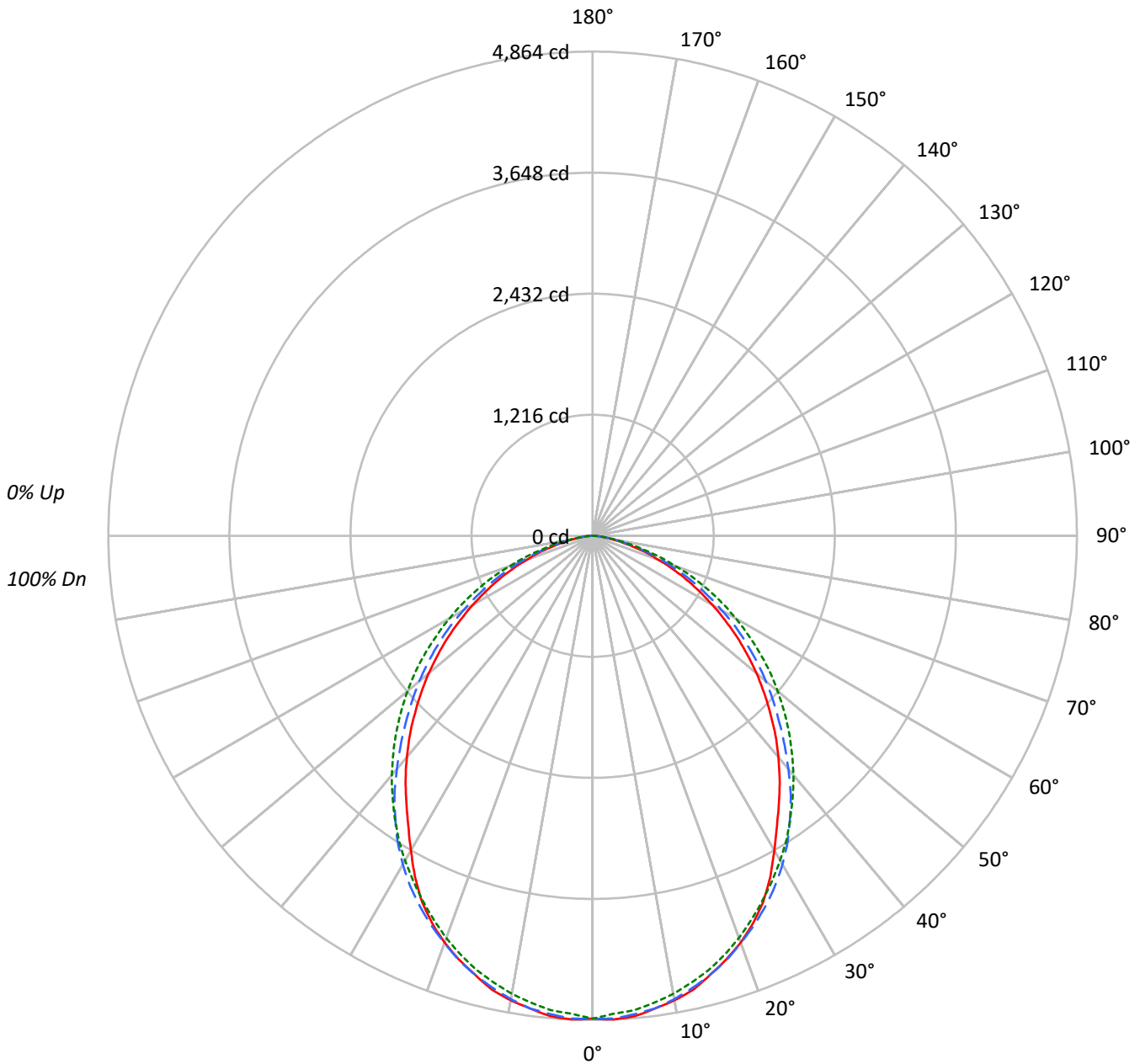
Lumens per Lamp: N/A  
Luminaire Lumens: 11217.0 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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°	13054	13054	13054
5°	13089	13034	12923
10°	12950	12914	12767
15°	12720	12720	12575
20°	12451	12467	12307
25°	12041	12190	11997
30°	11338	11848	11703
35°	10714	11357	11375
40°	10193	10743	11025
45°	9610	10093	10610
50°	8996	9511	10158
55°	8298	8848	9609
60°	7472	8074	8937
65°	6598	7179	8129
70°	5499	6114	6906
75°	4321	4882	5407
80°	3090	3437	3812
85°	2013	2013	1899



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	456.7	4.1
10°-20°	1283.1	11.4
20°-30°	1875.1	16.7
30°-40°	2128.4	19.0
40°-50°	2054.6	18.3
50°-60°	1694.9	15.1
60°-70°	1128.7	10.1
70°-80°	505.1	4.5
80°-90°	90.4	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°	3614.9	32.2
0°-40°	5743.3	51.2
0°-60°	9492.9	84.6
0°-90°	11217.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11217.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4851	4851	4851	4851	4851	
5°	4846	4844	4825	4799	4784	459
15°	4566	4577	4566	4545	4514	1287
25°	4055	4087	4106	4076	4040	1857
35°	3261	3306	3457	3476	3463	2043
45°	2525	2568	2652	2773	2788	1948
55°	1769	1798	1886	1990	2048	1579
65°	1036	1064	1128	1208	1277	1027
75°	416	438	470	492	520	454
85°	65	65	65	62	62	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4851.1	4851.1	4851.1	4851.1	4851.1
2.5°	4864.1	4866.0	4854.8	4825.0	4806.3
5°	4845.5	4843.6	4825.0	4798.9	4784.0
7.5°	4791.4	4795.2	4789.6	4752.3	4731.8
10°	4739.2	4741.1	4726.2	4696.4	4672.2
12.5°	4672.2	4670.3	4649.8	4634.9	4595.7
15°	4565.9	4577.1	4565.9	4545.4	4513.7
17.5°	4463.4	4463.4	4470.9	4435.5	4411.2
20°	4347.9	4353.5	4353.5	4325.5	4297.6
22.5°	4213.7	4230.5	4236.1	4206.2	4172.7
25°	4055.3	4087.0	4105.6	4075.8	4040.4
27.5°	3863.3	3911.8	3967.7	3945.3	3906.2
30°	3649.0	3719.8	3813.0	3794.4	3766.4
32.5°	3445.9	3516.7	3645.3	3637.8	3622.9
35°	3261.4	3306.1	3457.1	3475.7	3462.6
37.5°	3086.2	3127.2	3268.8	3311.7	3300.5
40°	2901.7	2946.4	3058.2	3134.6	3138.4
42.5°	2719.1	2761.9	2853.2	2963.2	2963.2
45°	2525.2	2568.1	2652.0	2773.1	2788.0
47.5°	2335.1	2379.9	2461.9	2583.0	2607.2
50°	2148.8	2189.8	2271.8	2389.2	2426.5
52.5°	1955.0	1999.7	2079.8	2187.9	2242.0
55°	1768.6	1798.4	1886.0	1990.4	2048.1
57.5°	1574.8	1602.7	1701.5	1791.0	1850.6
60°	1388.4	1423.8	1500.2	1591.6	1660.5
62.5°	1209.5	1246.8	1312.0	1392.1	1470.4
65°	1036.2	1064.1	1127.5	1207.6	1276.6
67.5°	868.5	892.7	956.0	1012.0	1084.6
70°	698.9	730.5	777.1	831.2	877.8
72.5°	562.8	575.9	615.0	654.1	702.6
75°	415.6	438.0	469.6	492.0	520.0
77.5°	298.2	311.2	329.9	348.5	374.6
80°	199.4	205.0	221.8	225.5	246.0
82.5°	121.1	124.9	128.6	130.5	137.9
85°	65.2	65.2	65.2	61.5	61.5
87.5°	37.3	37.3	31.7	26.1	18.6
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)