

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: P557781

Luminaire Tested: **FUSL-12-4-LD4-3HI-35-UNV-82-86-EDD**

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: P557781  
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-35-UNV-82-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

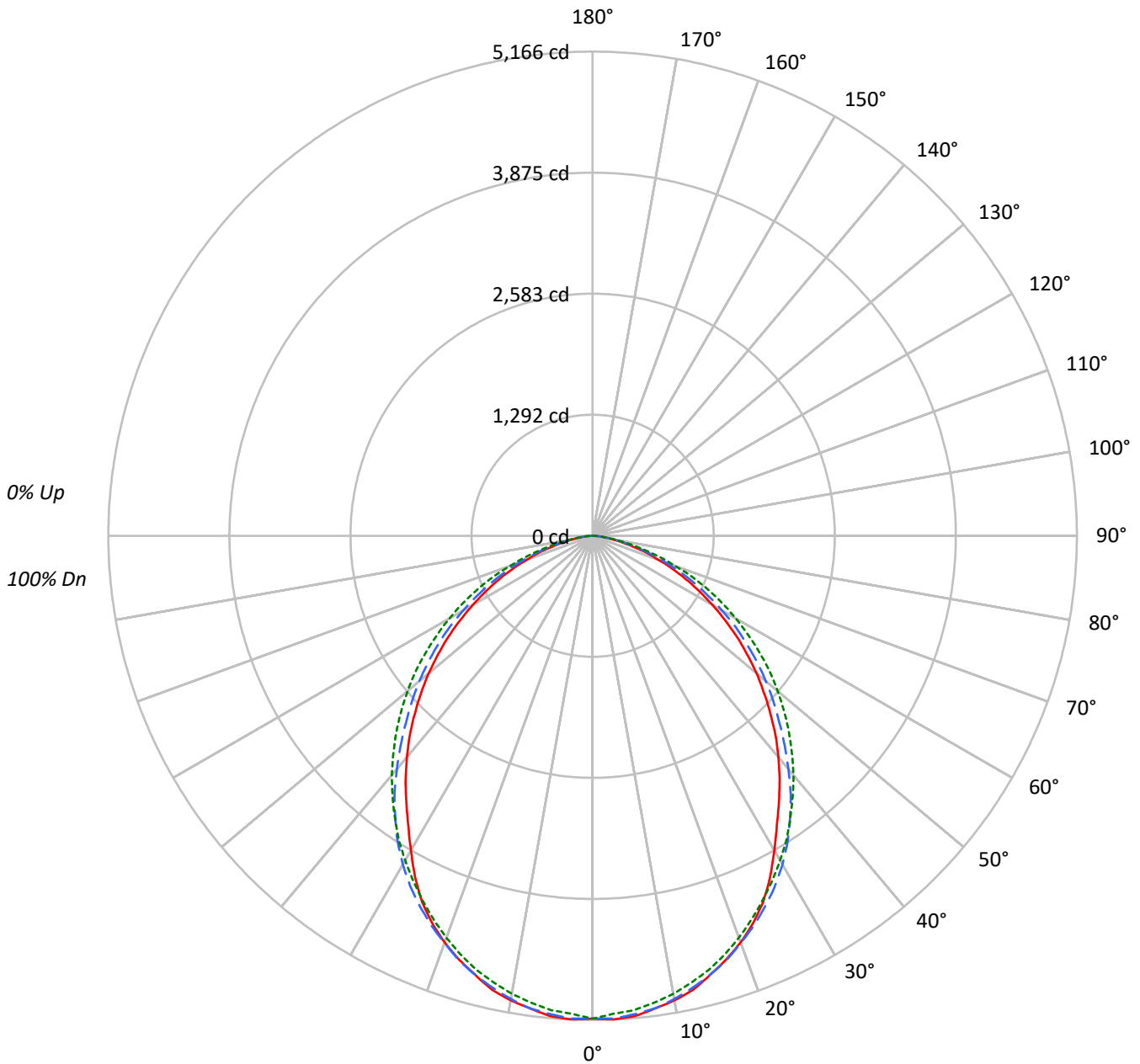
Lumens per Lamp: N/A  
Luminaire Lumens: 11912.0 lumens  
Efficiency: N/A  
Efficacy: 91.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	13863	13863	13863
5°	13900	13841	13723
10°	13752	13714	13558
15°	13508	13508	13354
20°	13222	13239	13069
25°	12787	12946	12740
30°	12041	12582	12428
35°	11378	12061	12080
40°	10825	11409	11708
45°	10206	10718	11268
50°	9553	10100	10788
55°	8812	9397	10204
60°	7935	8575	9491
65°	7007	7624	8632
70°	5840	6493	7334
75°	4588	5185	5741
80°	3282	3649	4048
85°	2140	2140	2016



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	485.0	4.1
10°-20°	1362.6	11.4
20°-30°	1991.2	16.7
30°-40°	2260.3	19.0
40°-50°	2181.9	18.3
50°-60°	1799.9	15.1
60°-70°	1198.6	10.1
70°-80°	536.4	4.5
80°-90°	96.0	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°	3838.9	32.2
0°-40°	6099.2	51.2
0°-60°	10081.1	84.6
0°-90°	11912.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11912.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5152	5152	5152	5152	5152	
5°	5146	5144	5124	5096	5080	487
15°	4849	4861	4849	4827	4793	1367
25°	4307	4340	4360	4328	4291	1972
35°	3463	3511	3671	3691	3677	2170
45°	2682	2727	2816	2945	2961	2069
55°	1878	1910	2003	2114	2175	1676
65°	1100	1130	1197	1282	1356	1091
75°	441	465	499	522	552	483
85°	69	69	69	65	65	93
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5151.6	5151.6	5151.6	5151.6	5151.6
2.5°	5165.5	5167.5	5155.6	5123.9	5104.1
5°	5145.7	5143.7	5123.9	5096.2	5080.4
7.5°	5088.3	5092.3	5086.3	5046.7	5025.0
10°	5032.9	5034.9	5019.0	4987.4	4961.6
12.5°	4961.6	4959.7	4937.9	4922.1	4880.5
15°	4848.8	4860.7	4848.8	4827.1	4793.4
17.5°	4740.0	4740.0	4747.9	4710.3	4684.6
20°	4617.3	4623.2	4623.2	4593.5	4563.8
22.5°	4474.8	4492.6	4498.5	4466.9	4431.2
25°	4306.6	4340.2	4360.0	4328.3	4290.7
27.5°	4102.7	4154.2	4213.5	4189.8	4148.2
30°	3875.1	3950.3	4049.3	4029.5	3999.8
32.5°	3659.4	3734.6	3871.1	3863.2	3847.4
35°	3463.4	3510.9	3671.3	3691.0	3677.2
37.5°	3277.4	3321.0	3471.4	3516.9	3505.0
40°	3081.5	3129.0	3247.7	3328.9	3332.8
42.5°	2887.5	2933.0	3030.0	3146.8	3146.8
45°	2681.7	2727.2	2816.3	2944.9	2960.8
47.5°	2479.8	2527.3	2614.4	2743.1	2768.8
50°	2281.9	2325.5	2412.5	2537.2	2576.8
52.5°	2076.1	2123.6	2208.7	2323.5	2380.9
55°	1878.2	1909.8	2002.9	2113.7	2175.0
57.5°	1672.4	1702.0	1806.9	1901.9	1965.3
60°	1474.4	1512.0	1593.2	1690.2	1763.4
62.5°	1284.4	1324.0	1393.3	1478.4	1561.5
65°	1100.4	1130.1	1197.4	1282.5	1355.7
67.5°	922.3	948.0	1015.3	1074.7	1151.8
70°	742.2	775.8	825.3	882.7	932.2
72.5°	597.7	611.5	653.1	694.7	746.1
75°	441.3	465.1	498.7	522.5	552.2
77.5°	316.7	330.5	350.3	370.1	397.8
80°	211.8	217.7	235.5	239.5	261.2
82.5°	128.6	132.6	136.6	138.5	146.5
85°	69.3	69.3	69.3	65.3	65.3
87.5°	39.6	39.6	33.6	27.7	19.8
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)