

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: P557922

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-UNV-93-85-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: P557922  
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-50-UNV-93-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

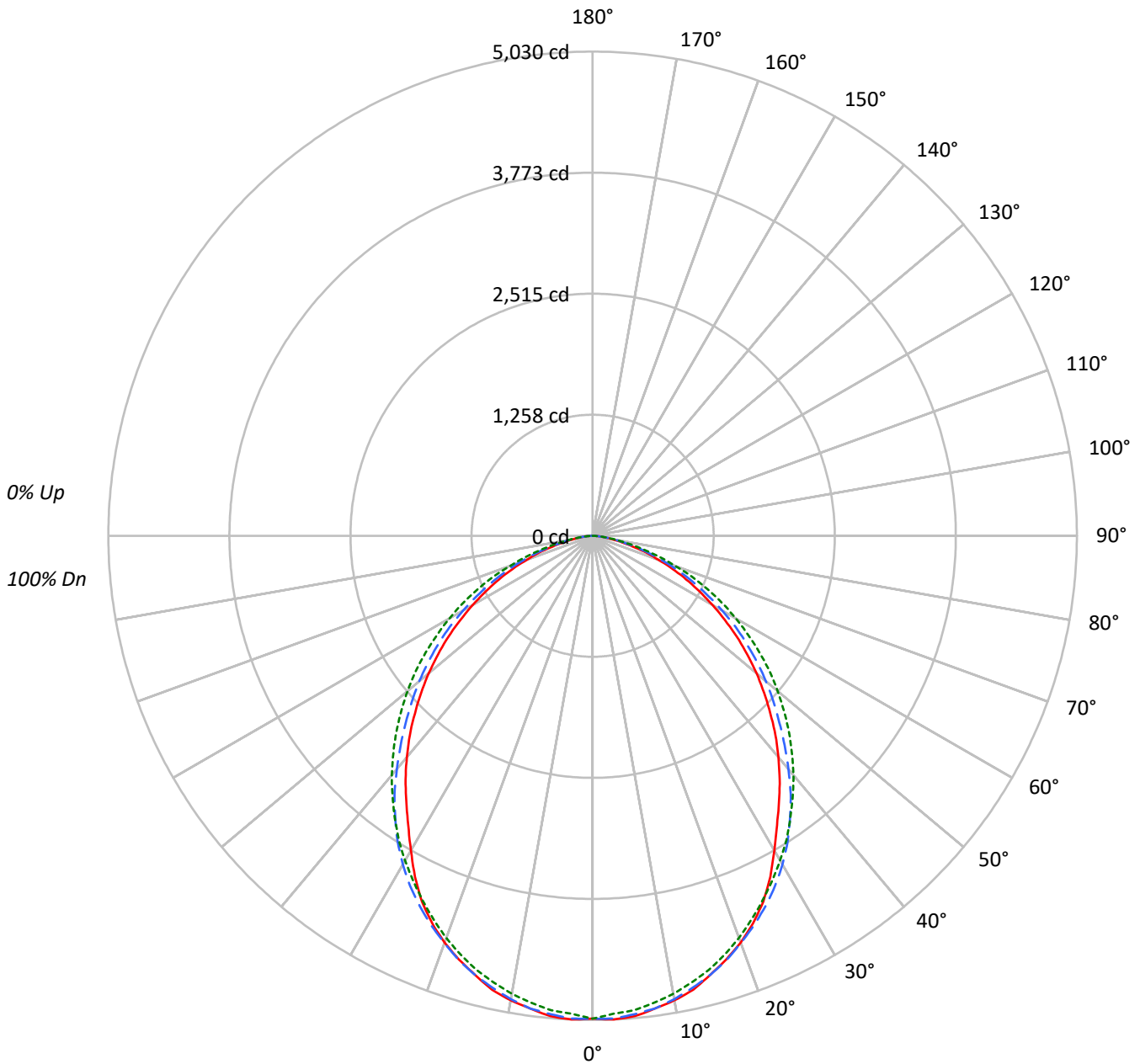
Lumens per Lamp: N/A  
Luminaire Lumens: 11600.0 lumens  
Efficiency: N/A  
Efficacy: 89.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
Input Voltage (V): NR  
Input Current (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									
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°	13500	13500	13500
5°	13536	13478	13364
10°	13392	13355	13203
15°	13154	13154	13004
20°	12876	12893	12727
25°	12452	12606	12406
30°	11726	12253	12103
35°	11080	11744	11764
40°	10541	11110	11401
45°	9938	10437	10972
50°	9303	9835	10505
55°	8581	9150	9937
60°	7727	8350	9242
65°	6823	7424	8406
70°	5686	6323	7142
75°	4469	5050	5591
80°	3195	3553	3942
85°	2084	2084	1964



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	472.3	4.1
10°-20°	1326.9	11.4
20°-30°	1939.1	16.7
30°-40°	2201.1	19.0
40°-50°	2124.8	18.3
50°-60°	1752.8	15.1
60°-70°	1167.2	10.1
70°-80°	522.3	4.5
80°-90°	93.4	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°	3738.3	32.2
0°-40°	5939.4	51.2
0°-60°	9817.0	84.6
0°-90°	11600.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11600.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5017	5017	5017	5017	5017	
5°	5011	5009	4990	4963	4947	474
15°	4722	4733	4722	4701	4668	1331
25°	4194	4226	4246	4215	4178	1921
35°	3373	3419	3575	3594	3581	2113
45°	2612	2656	2742	2868	2883	2015
55°	1829	1860	1950	2058	2118	1632
65°	1072	1100	1166	1249	1320	1063
75°	430	453	486	509	538	470
85°	68	68	68	64	64	91
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5016.7	5016.7	5016.7	5016.7	5016.7
2.5°	5030.2	5032.1	5020.6	4989.7	4970.4
5°	5010.9	5009.0	4989.7	4962.7	4947.3
7.5°	4955.0	4958.9	4953.1	4914.6	4893.4
10°	4901.1	4903.0	4887.6	4856.7	4831.7
12.5°	4831.7	4829.8	4808.6	4793.1	4752.7
15°	4721.8	4733.4	4721.8	4700.6	4667.9
17.5°	4615.8	4615.8	4623.5	4586.9	4561.9
20°	4496.3	4502.1	4502.1	4473.2	4444.3
22.5°	4357.6	4374.9	4380.7	4349.9	4315.2
25°	4193.8	4226.5	4245.8	4215.0	4178.3
27.5°	3995.2	4045.4	4103.2	4080.0	4039.6
30°	3773.6	3846.8	3943.2	3923.9	3895.0
32.5°	3563.5	3636.8	3769.8	3762.0	3746.6
35°	3372.7	3419.0	3575.1	3594.4	3580.9
37.5°	3191.6	3234.0	3380.4	3424.8	3413.2
40°	3000.8	3047.0	3162.7	3241.7	3245.5
42.5°	2811.9	2856.2	2950.7	3064.4	3064.4
45°	2611.5	2655.8	2742.5	2867.8	2883.2
47.5°	2414.9	2461.1	2545.9	2671.2	2696.3
50°	2222.1	2264.5	2349.3	2470.8	2509.3
52.5°	2021.7	2068.0	2150.8	2262.6	2318.5
55°	1829.0	1859.8	1950.4	2058.3	2118.1
57.5°	1628.5	1657.5	1759.6	1852.1	1913.8
60°	1435.8	1472.4	1551.5	1645.9	1717.2
62.5°	1250.8	1289.3	1356.8	1439.7	1520.6
65°	1071.6	1100.5	1166.0	1248.9	1320.2
67.5°	898.1	923.2	988.7	1046.5	1121.7
70°	722.7	755.5	803.7	859.6	907.7
72.5°	582.0	595.5	636.0	676.5	726.6
75°	429.8	452.9	485.7	508.8	537.7
77.5°	308.4	321.9	341.1	360.4	387.4
80°	206.2	212.0	229.3	233.2	254.4
82.5°	125.3	129.1	133.0	134.9	142.6
85°	67.5	67.5	67.5	63.6	63.6
87.5°	38.5	38.5	32.8	27.0	19.3
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)