

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: P557898

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-UNV-81-94-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: P557898  
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-81-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

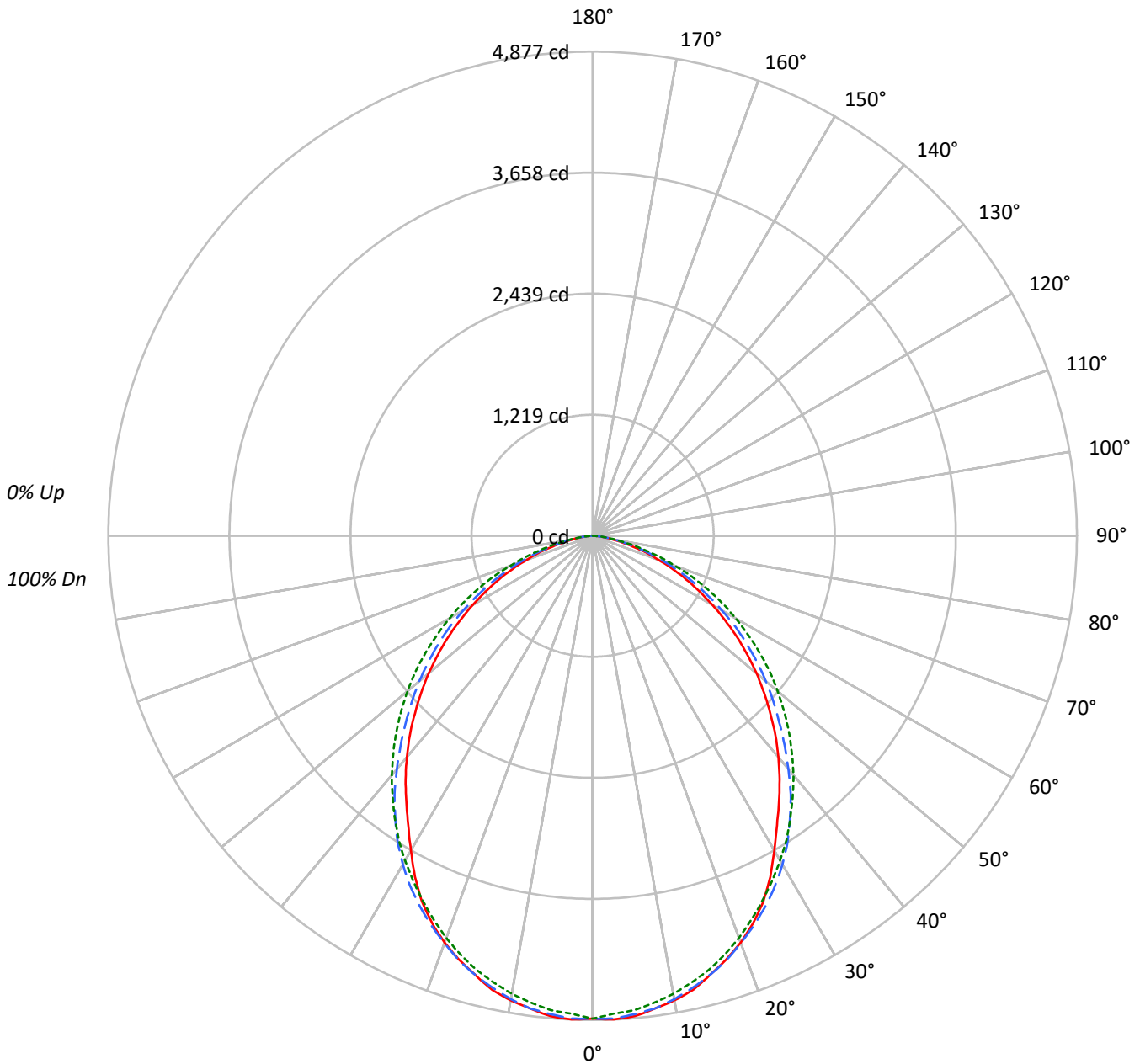
Lumens per Lamp: N/A  
Luminaire Lumens: 11247.0 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	13089	13089	13089
5°	13124	13068	12957
10°	12985	12949	12801
15°	12754	12754	12608
20°	12484	12500	12340
25°	12073	12223	12029
30°	11369	11880	11735
35°	10743	11387	11405
40°	10221	10772	11054
45°	9636	10120	10639
50°	9020	9536	10186
55°	8320	8872	9635
60°	7492	8096	8960
65°	6616	7198	8150
70°	5513	6131	6925
75°	4332	4896	5420
80°	3098	3446	3823
85°	2019	2019	1905



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	458.0	4.1
10°-20°	1286.5	11.4
20°-30°	1880.1	16.7
30°-40°	2134.1	19.0
40°-50°	2060.1	18.3
50°-60°	1699.5	15.1
60°-70°	1131.7	10.1
70°-80°	506.4	4.5
80°-90°	90.6	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°	3624.6	32.2
0°-40°	5758.7	51.2
0°-60°	9518.3	84.6
0°-90°	11247.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11247.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4864	4864	4864	4864	4864	
5°	4858	4857	4838	4812	4797	460
15°	4578	4589	4578	4558	4526	1291
25°	4066	4098	4117	4087	4051	1862
35°	3270	3315	3466	3485	3472	2049
45°	2532	2575	2659	2780	2796	1954
55°	1773	1803	1891	1996	2054	1583
65°	1039	1067	1130	1211	1280	1030
75°	417	439	471	493	521	456
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°	4864.0	4864.0	4864.0	4864.0	4864.0
2.5°	4877.1	4879.0	4867.8	4837.9	4819.2
5°	4858.4	4856.6	4837.9	4811.7	4796.8
7.5°	4804.2	4808.0	4802.4	4765.0	4744.4
10°	4751.9	4753.8	4738.8	4708.9	4684.6
12.5°	4684.6	4682.8	4662.2	4647.3	4608.0
15°	4578.1	4589.3	4578.1	4557.6	4525.8
17.5°	4475.4	4475.4	4482.8	4447.3	4423.0
20°	4359.5	4365.1	4365.1	4337.1	4309.1
22.5°	4225.0	4241.8	4247.4	4217.5	4183.9
25°	4066.1	4097.9	4116.6	4086.7	4051.2
27.5°	3873.7	3922.2	3978.3	3955.9	3916.6
30°	3658.8	3729.8	3823.2	3804.5	3776.5
32.5°	3455.1	3526.1	3655.0	3647.6	3632.6
35°	3270.1	3314.9	3466.3	3485.0	3471.9
37.5°	3094.4	3135.6	3277.6	3320.6	3309.3
40°	2909.5	2954.3	3066.4	3143.0	3146.8
42.5°	2726.3	2769.3	2860.9	2971.1	2971.1
45°	2532.0	2575.0	2659.1	2780.5	2795.5
47.5°	2341.4	2386.2	2468.5	2589.9	2614.2
50°	2154.5	2195.6	2277.9	2395.6	2433.0
52.5°	1960.2	2005.0	2085.4	2193.8	2248.0
55°	1773.3	1803.2	1891.1	1995.7	2053.6
57.5°	1579.0	1607.0	1706.1	1795.8	1855.5
60°	1392.1	1427.6	1504.2	1595.8	1664.9
62.5°	1212.7	1250.1	1315.5	1395.9	1474.3
65°	1039.0	1067.0	1130.5	1210.9	1280.0
67.5°	870.8	895.1	958.6	1014.7	1087.5
70°	700.7	732.5	779.2	833.4	880.1
72.5°	564.3	577.4	616.6	655.9	704.5
75°	416.7	439.1	470.9	493.3	521.3
77.5°	299.0	312.1	330.7	349.4	375.6
80°	199.9	205.5	222.4	226.1	246.7
82.5°	121.5	125.2	128.9	130.8	138.3
85°	65.4	65.4	65.4	61.7	61.7
87.5°	37.4	37.4	31.8	26.2	18.7
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)