

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: P556492

Luminaire Tested: **FUSL-12-4-LD4-1LO-35-UNV-81-96-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: P556492  
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-LD4-1LO-35-UNV-81-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

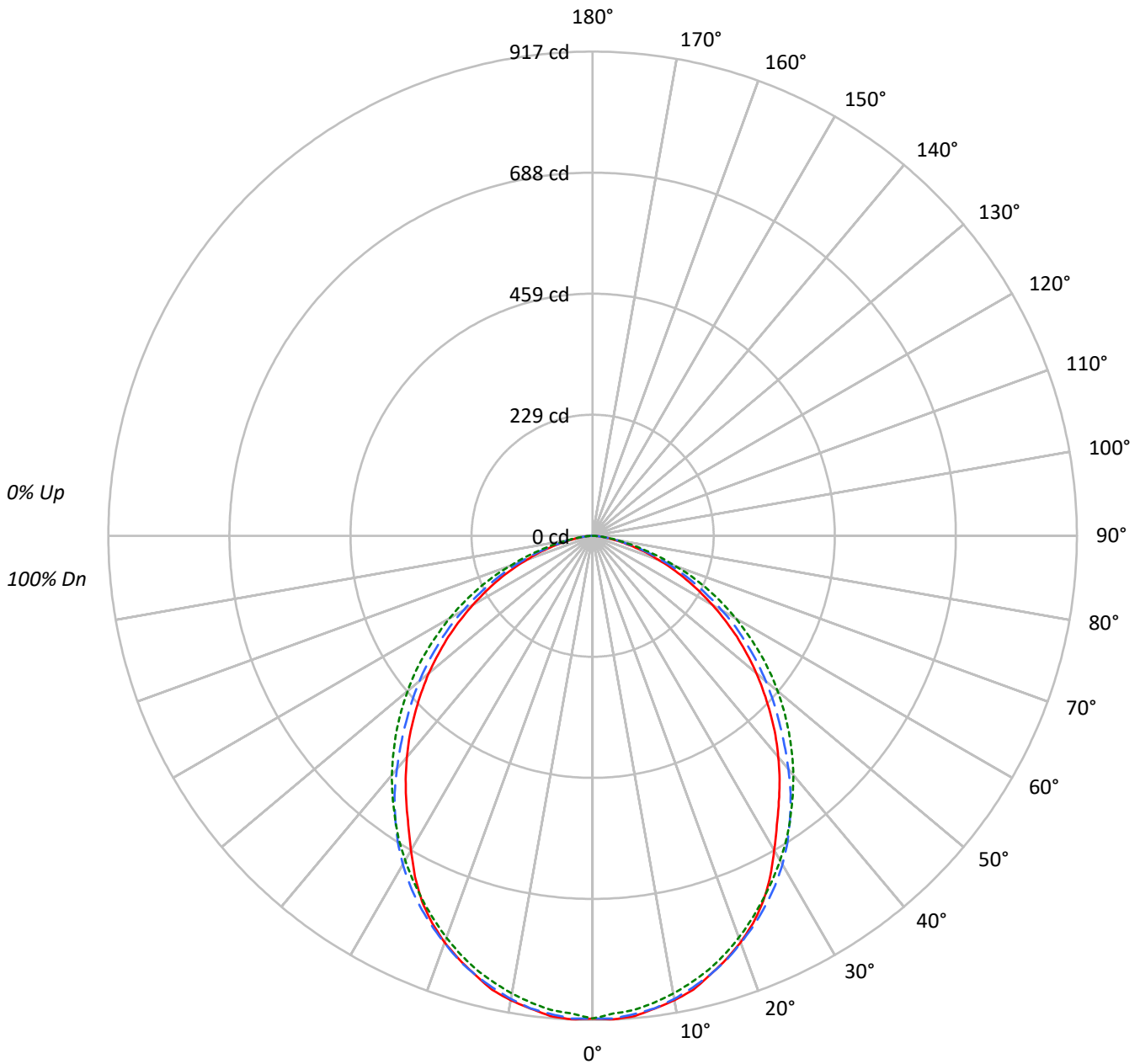
Lumens per Lamp: N/A  
Luminaire Lumens: 2114.0 lumens  
Efficiency: N/A  
Efficacy: 90.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°	2460	2460	2460
5°	2467	2456	2435
10°	2441	2434	2406
15°	2397	2397	2370
20°	2346	2350	2319
25°	2269	2298	2261
30°	2137	2233	2206
35°	2019	2140	2144
40°	1921	2025	2078
45°	1811	1902	1999
50°	1696	1792	1914
55°	1564	1667	1811
60°	1408	1521	1684
65°	1244	1353	1532
70°	1036	1153	1301
75°	814	920	1019
80°	583	648	719
85°	380	380	358



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.1	4.1
10°-20°	241.8	11.4
20°-30°	353.4	16.7
30°-40°	401.1	19.0
40°-50°	387.2	18.3
50°-60°	319.4	15.1
60°-70°	212.7	10.1
70°-80°	95.2	4.5
80°-90°	17.0	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°	681.3	32.2
0°-40°	1082.4	51.2
0°-60°	1789.1	84.6
0°-90°	2114.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2114.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	913	913	909	904	902	86
15°	860	863	860	857	851	243
25°	764	770	774	768	762	350
35°	615	623	652	655	653	385
45°	476	484	500	523	525	367
55°	333	339	355	375	386	297
65°	195	201	212	228	241	194
75°	78	82	88	93	98	86
85°	12	12	12	12	12	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	914.3	914.3	914.3	914.3	914.3
2.5°	916.7	917.1	915.0	909.3	905.8
5°	913.2	912.8	909.3	904.4	901.6
7.5°	903.0	903.7	902.7	895.6	891.8
10°	893.2	893.5	890.7	885.1	880.5
12.5°	880.5	880.2	876.3	873.5	866.1
15°	860.5	862.6	860.5	856.6	850.7
17.5°	841.2	841.2	842.6	835.9	831.4
20°	819.4	820.5	820.5	815.2	809.9
22.5°	794.1	797.3	798.3	792.7	786.4
25°	764.3	770.2	773.8	768.1	761.5
27.5°	728.1	737.2	747.8	743.6	736.2
30°	687.7	701.1	718.6	715.1	709.8
32.5°	649.4	662.8	687.0	685.6	682.8
35°	614.7	623.1	651.5	655.0	652.6
37.5°	581.6	589.4	616.1	624.1	622.0
40°	546.9	555.3	576.4	590.8	591.5
42.5°	512.4	520.5	537.7	558.5	558.5
45°	475.9	484.0	499.8	522.6	525.4
47.5°	440.1	448.5	464.0	486.8	491.4
50°	405.0	412.7	428.1	450.3	457.3
52.5°	368.4	376.9	392.0	412.3	422.5
55°	333.3	338.9	355.4	375.1	386.0
57.5°	296.8	302.1	320.7	337.5	348.8
60°	261.7	268.3	282.7	299.9	312.9
62.5°	227.9	235.0	247.3	262.4	277.1
65°	195.3	200.6	212.5	227.6	240.6
67.5°	163.7	168.2	180.2	190.7	204.4
70°	131.7	137.7	146.5	156.6	165.4
72.5°	106.1	108.5	115.9	123.3	132.4
75°	78.3	82.5	88.5	92.7	98.0
77.5°	56.2	58.7	62.2	65.7	70.6
80°	37.6	38.6	41.8	42.5	46.4
82.5°	22.8	23.5	24.2	24.6	26.0
85°	12.3	12.3	12.3	11.6	11.6
87.5°	7.0	7.0	6.0	4.9	3.5
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)