

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: P556503

Luminaire Tested: **FUSL-12-4-LD4-1LO-35-UNV-82-87-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: P556503  
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-82-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

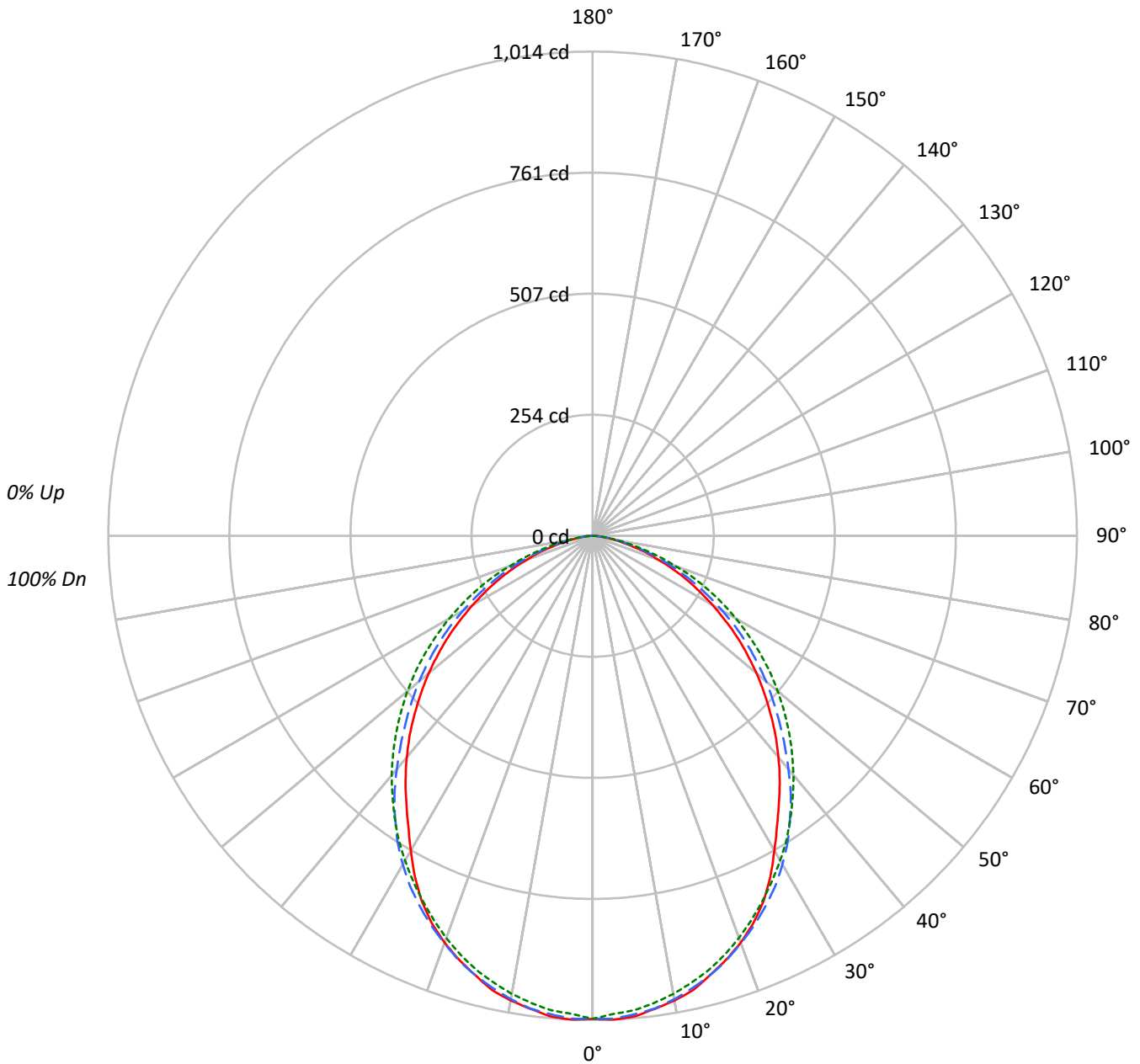
Lumens per Lamp: N/A  
Luminaire Lumens: 2339.0 lumens  
Efficiency: N/A  
Efficacy: 100.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (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°	2722	2722	2722
5°	2729	2718	2695
10°	2700	2693	2662
15°	2652	2652	2622
20°	2596	2600	2566
25°	2511	2542	2502
30°	2364	2471	2440
35°	2234	2368	2372
40°	2126	2240	2299
45°	2004	2105	2213
50°	1876	1983	2118
55°	1730	1845	2004
60°	1558	1683	1864
65°	1376	1497	1695
70°	1146	1275	1440
75°	901	1018	1127
80°	645	716	795
85°	420	420	395



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.2	4.1
10°-20°	267.6	11.4
20°-30°	391.0	16.7
30°-40°	443.8	19.0
40°-50°	428.4	18.3
50°-60°	353.4	15.1
60°-70°	235.4	10.1
70°-80°	105.3	4.5
80°-90°	18.8	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°	753.8	32.2
0°-40°	1197.6	51.2
0°-60°	1979.5	84.6
0°-90°	2339.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2339.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1012	1012	1012	1012	1012	
5°	1010	1010	1006	1001	998	96
15°	952	954	952	948	941	268
25°	846	852	856	850	842	387
35°	680	689	721	725	722	426
45°	527	536	553	578	581	406
55°	369	375	393	415	427	329
65°	216	222	235	252	266	214
75°	87	91	98	103	108	95
85°	14	14	14	13	13	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1011.6	1011.6	1011.6	1011.6	1011.6
2.5°	1014.3	1014.7	1012.3	1006.1	1002.2
5°	1010.4	1010.0	1006.1	1000.7	997.6
7.5°	999.1	999.9	998.7	991.0	986.7
10°	988.2	988.6	985.5	979.3	974.3
12.5°	974.3	973.9	969.6	966.5	958.3
15°	952.1	954.4	952.1	947.8	941.2
17.5°	930.7	930.7	932.3	924.9	919.8
20°	906.6	907.8	907.8	902.0	896.1
22.5°	878.7	882.1	883.3	877.1	870.1
25°	845.6	852.2	856.1	849.9	842.5
27.5°	805.6	815.7	827.4	822.7	814.5
30°	760.9	775.7	795.1	791.2	785.4
32.5°	718.5	733.3	760.1	758.6	755.5
35°	680.1	689.4	720.9	724.8	722.0
37.5°	643.5	652.1	681.6	690.6	688.2
40°	605.1	614.4	637.7	653.6	654.4
42.5°	567.0	575.9	595.0	617.9	617.9
45°	526.6	535.5	553.0	578.3	581.4
47.5°	486.9	496.3	513.4	538.6	543.7
50°	448.1	456.6	473.7	498.2	506.0
52.5°	407.7	417.0	433.7	456.2	467.5
55°	368.8	375.0	393.3	415.0	427.1
57.5°	328.4	334.2	354.8	373.5	385.9
60°	289.5	296.9	312.8	331.9	346.3
62.5°	252.2	260.0	273.6	290.3	306.6
65°	216.1	221.9	235.1	251.8	266.2
67.5°	181.1	186.1	199.4	211.0	226.2
70°	145.7	152.3	162.1	173.3	183.0
72.5°	117.4	120.1	128.2	136.4	146.5
75°	86.7	91.3	97.9	102.6	108.4
77.5°	62.2	64.9	68.8	72.7	78.1
80°	41.6	42.7	46.2	47.0	51.3
82.5°	25.3	26.0	26.8	27.2	28.8
85°	13.6	13.6	13.6	12.8	12.8
87.5°	7.8	7.8	6.6	5.4	3.9
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)