

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: P556567

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-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: P556567  
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-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

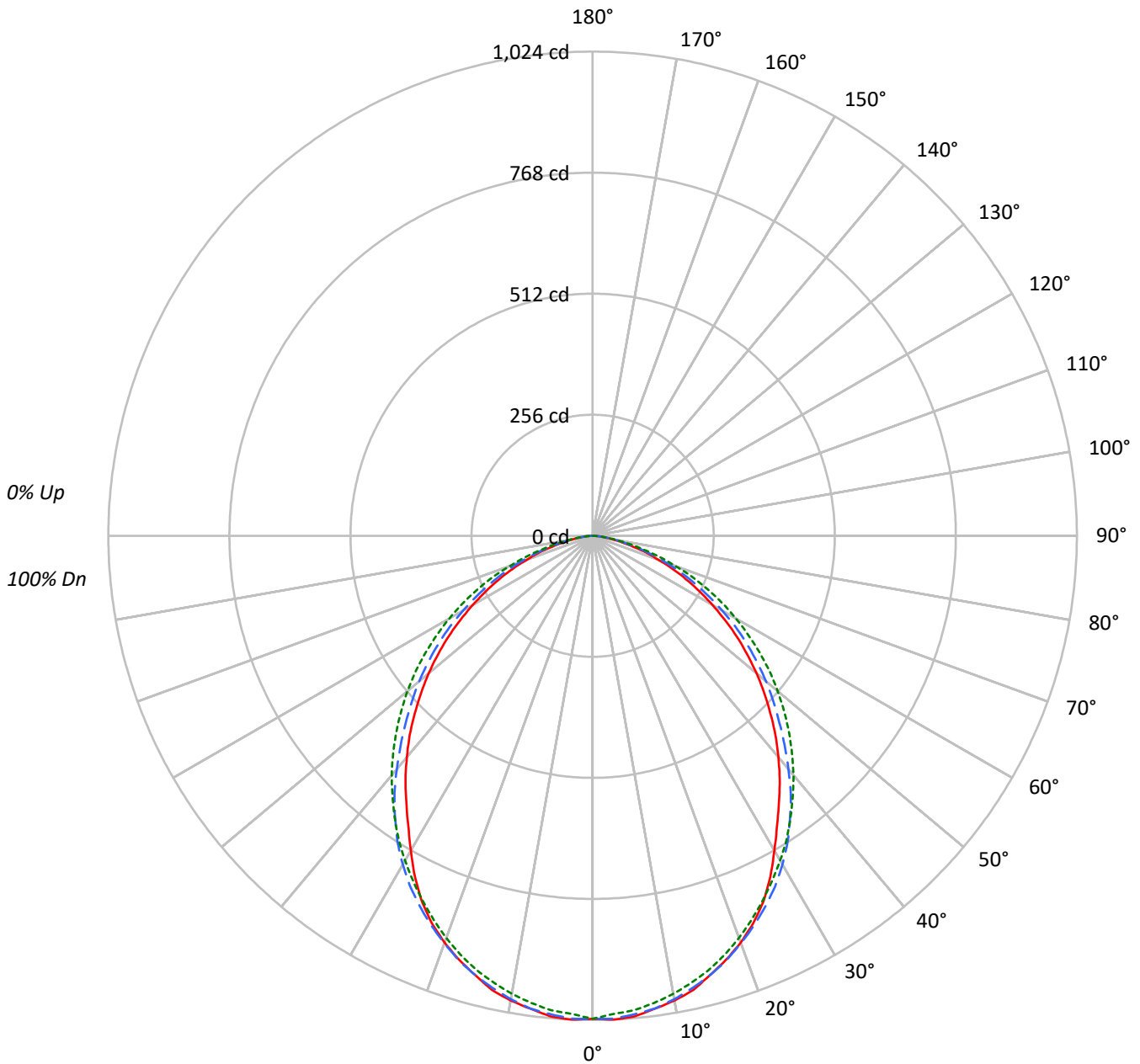
Lumens per Lamp: N/A  
Luminaire Lumens: 2362.0 lumens  
Efficiency: N/A  
Efficacy: 100.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	2749	2749	2749
5°	2756	2744	2721
10°	2727	2719	2688
15°	2679	2679	2648
20°	2622	2625	2592
25°	2535	2567	2526
30°	2388	2495	2464
35°	2256	2392	2395
40°	2146	2262	2322
45°	2023	2125	2234
50°	1894	2003	2139
55°	1747	1863	2023
60°	1574	1700	1882
65°	1389	1512	1712
70°	1158	1287	1454
75°	910	1028	1138
80°	651	724	803
85°	423	423	401



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.2	4.1
10°-20°	270.2	11.4
20°-30°	394.8	16.7
30°-40°	448.2	19.0
40°-50°	432.6	18.3
50°-60°	356.9	15.1
60°-70°	237.7	10.1
70°-80°	106.4	4.5
80°-90°	19.0	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°	761.2	32.2
0°-40°	1209.4	51.2
0°-60°	1998.9	84.6
0°-90°	2362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2362.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1022	1022	1022	1022	1022	
5°	1020	1020	1016	1010	1007	97
15°	962	964	962	957	950	271
25°	854	861	864	858	851	391
35°	687	696	728	732	729	430
45°	532	541	558	584	587	410
55°	372	379	397	419	431	332
65°	218	224	237	254	269	216
75°	88	92	99	104	110	96
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°	1021.5	1021.5	1021.5	1021.5	1021.5
2.5°	1024.3	1024.6	1022.3	1016.0	1012.1
5°	1020.3	1019.9	1016.0	1010.5	1007.4
7.5°	1008.9	1009.7	1008.6	1000.7	996.4
10°	998.0	998.4	995.2	988.9	983.8
12.5°	983.8	983.4	979.1	976.0	967.7
15°	961.5	963.8	961.5	957.1	950.5
17.5°	939.9	939.9	941.4	934.0	928.9
20°	915.5	916.7	916.7	910.8	905.0
22.5°	887.3	890.8	892.0	885.7	878.7
25°	853.9	860.6	864.5	858.3	850.8
27.5°	813.5	823.7	835.5	830.8	822.5
30°	768.4	783.3	802.9	799.0	793.1
32.5°	725.6	740.5	767.6	766.0	762.9
35°	686.8	696.2	728.0	731.9	729.1
37.5°	649.9	658.5	688.3	697.4	695.0
40°	611.0	620.4	644.0	660.1	660.9
42.5°	572.6	581.6	600.8	624.0	624.0
45°	531.7	540.8	558.4	583.9	587.1
47.5°	491.7	501.1	518.4	543.9	549.0
50°	452.5	461.1	478.4	503.1	510.9
52.5°	411.7	421.1	438.0	460.7	472.1
55°	372.4	378.7	397.1	419.1	431.3
57.5°	331.6	337.5	358.3	377.1	389.7
60°	292.4	299.8	315.9	335.1	349.7
62.5°	254.7	262.5	276.3	293.1	309.6
65°	218.2	224.1	237.4	254.3	268.8
67.5°	182.9	188.0	201.3	213.1	228.4
70°	147.2	153.8	163.6	175.0	184.8
72.5°	118.5	121.3	129.5	137.7	147.9
75°	87.5	92.2	98.9	103.6	109.5
77.5°	62.8	65.5	69.5	73.4	78.9
80°	42.0	43.2	46.7	47.5	51.8
82.5°	25.5	26.3	27.1	27.5	29.0
85°	13.7	13.7	13.7	13.0	13.0
87.5°	7.8	7.8	6.7	5.5	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)