

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: P556590

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-93-97-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: P556590  
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-93-97-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

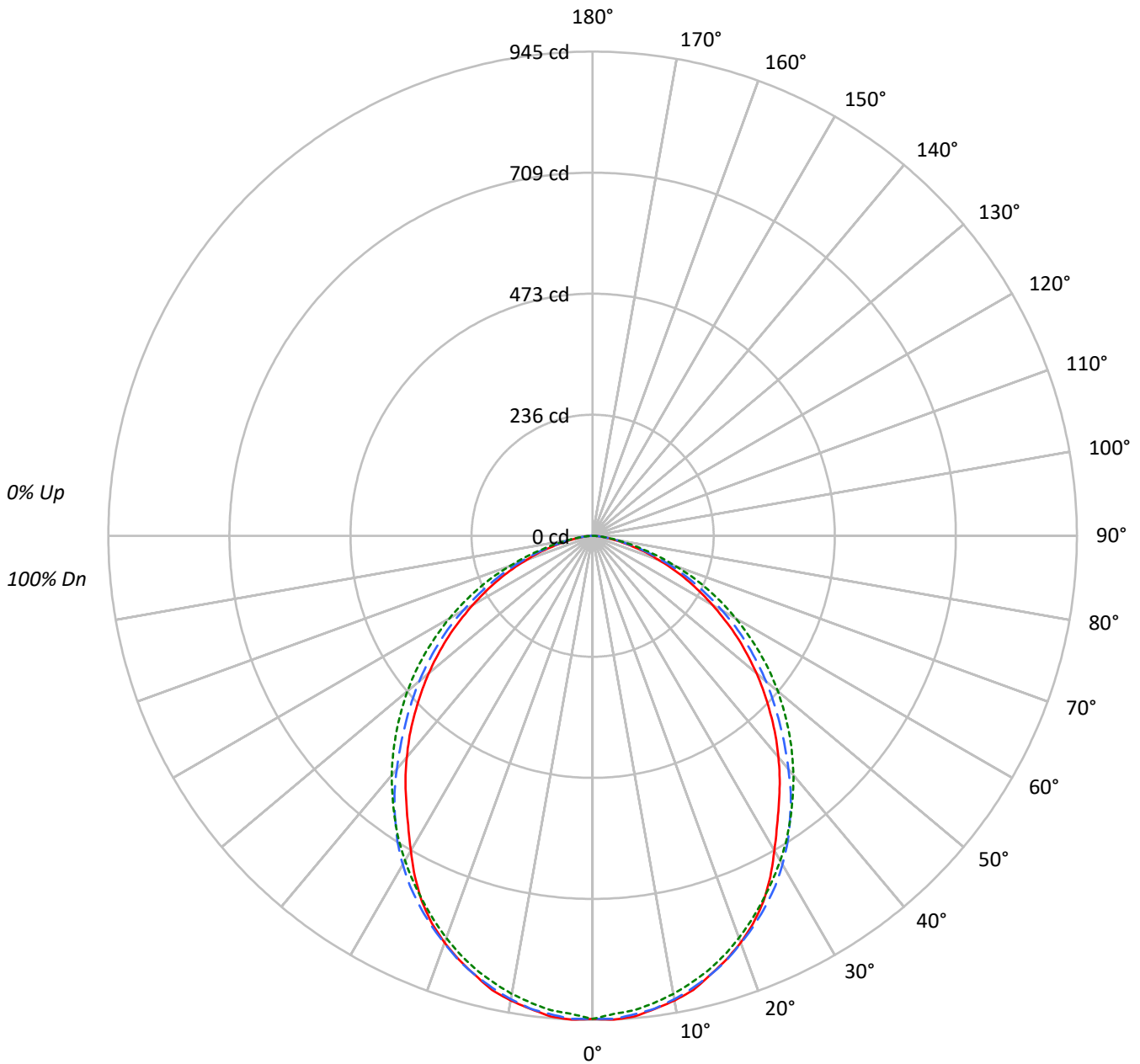
Lumens per Lamp: N/A  
Luminaire Lumens: 2180.0 lumens  
Efficiency: N/A  
Efficacy: 93.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	2537	2537	2537
5°	2544	2533	2512
10°	2517	2510	2481
15°	2472	2472	2444
20°	2420	2423	2392
25°	2340	2369	2331
30°	2204	2303	2275
35°	2082	2207	2211
40°	1981	2088	2142
45°	1868	1961	2062
50°	1748	1848	1974
55°	1612	1719	1868
60°	1452	1569	1737
65°	1282	1395	1580
70°	1068	1188	1342
75°	840	949	1051
80°	601	668	741
85°	392	392	371



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.8	4.1
10°-20°	249.4	11.4
20°-30°	364.4	16.7
30°-40°	413.7	19.0
40°-50°	399.3	18.3
50°-60°	329.4	15.1
60°-70°	219.4	10.1
70°-80°	98.2	4.5
80°-90°	17.6	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°	702.6	32.2
0°-40°	1116.2	51.2
0°-60°	1844.9	84.6
0°-90°	2180.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2180.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	943	943	943	943	943	
5°	942	941	938	933	930	89
15°	887	890	887	883	877	250
25°	788	794	798	792	785	361
35°	634	642	672	676	673	397
45°	491	499	515	539	542	379
55°	344	350	366	387	398	307
65°	201	207	219	235	248	200
75°	81	85	91	96	101	88
85°	13	13	13	12	12	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	942.8	942.8	942.8	942.8	942.8
2.5°	945.3	945.7	943.5	937.7	934.1
5°	941.7	941.3	937.7	932.7	929.8
7.5°	931.2	931.9	930.8	923.6	919.6
10°	921.1	921.4	918.5	912.7	908.0
12.5°	908.0	907.7	903.7	900.8	893.2
15°	887.4	889.6	887.4	883.4	877.2
17.5°	867.5	867.5	868.9	862.0	857.3
20°	845.0	846.1	846.1	840.7	835.2
22.5°	818.9	822.2	823.3	817.5	811.0
25°	788.1	794.3	797.9	792.1	785.2
27.5°	750.8	760.2	771.1	766.8	759.2
30°	709.2	722.9	741.1	737.4	732.0
32.5°	669.7	683.5	708.5	707.0	704.1
35°	633.8	642.5	671.9	675.5	673.0
37.5°	599.8	607.8	635.3	643.6	641.4
40°	563.9	572.6	594.4	609.2	609.9
42.5°	528.4	536.8	554.5	575.9	575.9
45°	490.8	499.1	515.4	538.9	541.8
47.5°	453.8	462.5	478.5	502.0	506.7
50°	417.6	425.6	441.5	464.3	471.6
52.5°	379.9	388.6	404.2	425.2	435.7
55°	343.7	349.5	366.5	386.8	398.1
57.5°	306.1	311.5	330.7	348.1	359.7
60°	269.8	276.7	291.6	309.3	322.7
62.5°	235.1	242.3	255.0	270.6	285.8
65°	201.4	206.8	219.1	234.7	248.1
67.5°	168.8	173.5	185.8	196.7	210.8
70°	135.8	142.0	151.0	161.5	170.6
72.5°	109.4	111.9	119.5	127.1	136.5
75°	80.8	85.1	91.3	95.6	101.1
77.5°	58.0	60.5	64.1	67.7	72.8
80°	38.8	39.8	43.1	43.8	47.8
82.5°	23.5	24.3	25.0	25.4	26.8
85°	12.7	12.7	12.7	12.0	12.0
87.5°	7.2	7.2	6.2	5.1	3.6
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)