

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: P556584

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-93-88-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: P556584  
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-93-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

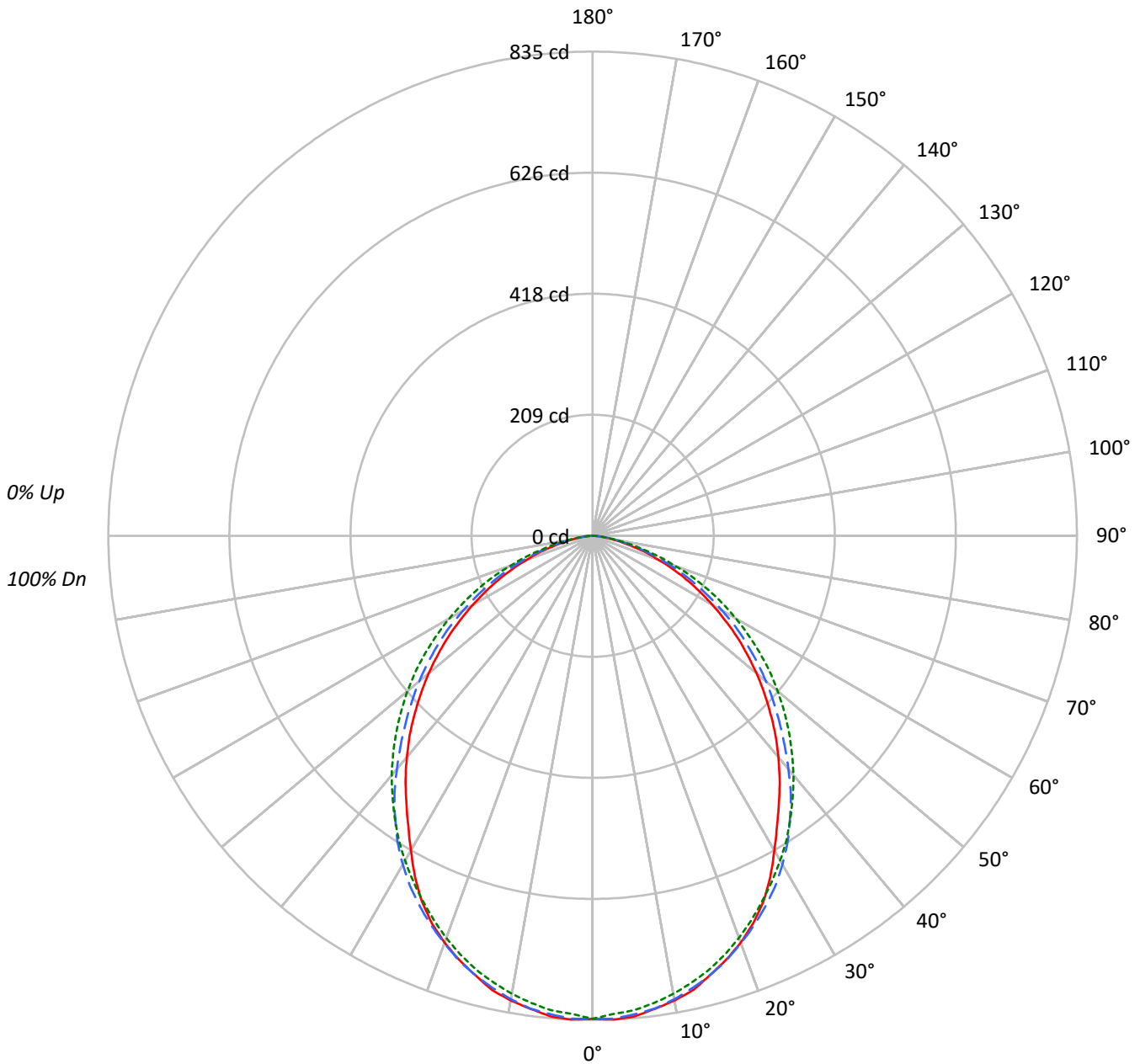
Lumens per Lamp: N/A  
Luminaire Lumens: 1926.0 lumens  
Efficiency: N/A  
Efficacy: 82.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	2241	2241	2241
5°	2247	2238	2219
10°	2223	2217	2192
15°	2184	2184	2159
20°	2138	2141	2113
25°	2067	2093	2060
30°	1947	2034	2009
35°	1840	1950	1953
40°	1750	1845	1893
45°	1650	1733	1822
50°	1545	1633	1744
55°	1425	1519	1650
60°	1283	1386	1534
65°	1133	1233	1396
70°	944	1050	1186
75°	742	838	928
80°	530	590	654
85°	346	346	327



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.4	4.1
10°-20°	220.3	11.4
20°-30°	321.9	16.7
30°-40°	365.5	19.0
40°-50°	352.8	18.3
50°-60°	291.0	15.1
60°-70°	193.8	10.1
70°-80°	86.7	4.5
80°-90°	15.5	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°	620.7	32.2
0°-40°	986.1	51.2
0°-60°	1630.0	84.6
0°-90°	1926.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1926.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	833	833	833	833	833	
5°	832	832	828	824	821	79
15°	784	786	784	780	775	221
25°	696	702	705	700	694	319
35°	560	568	594	597	594	351
45°	434	441	455	476	479	335
55°	304	309	324	342	352	271
65°	178	183	194	207	219	176
75°	71	75	81	84	89	78
85°	11	11	11	11	11	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	832.9	832.9	832.9	832.9	832.9
2.5°	835.2	835.5	833.6	828.5	825.3
5°	832.0	831.7	828.5	824.0	821.4
7.5°	822.7	823.3	822.4	816.0	812.5
10°	813.7	814.1	811.5	806.4	802.2
12.5°	802.2	801.9	798.4	795.8	789.1
15°	784.0	785.9	784.0	780.5	775.0
17.5°	766.4	766.4	767.7	761.6	757.4
20°	746.5	747.5	747.5	742.7	737.9
22.5°	723.5	726.4	727.3	722.2	716.5
25°	696.3	701.7	704.9	699.8	693.7
27.5°	663.3	671.7	681.3	677.4	670.7
30°	626.5	638.7	654.7	651.5	646.7
32.5°	591.7	603.8	625.9	624.6	622.1
35°	560.0	567.7	593.6	596.8	594.5
37.5°	529.9	537.0	561.3	568.6	566.7
40°	498.2	505.9	525.1	538.2	538.9
42.5°	466.9	474.2	489.9	508.8	508.8
45°	433.6	441.0	455.4	476.2	478.7
47.5°	401.0	408.6	422.7	443.5	447.7
50°	369.0	376.0	390.1	410.2	416.6
52.5°	335.7	343.4	357.1	375.7	385.0
55°	303.7	308.8	323.8	341.8	351.7
57.5°	270.4	275.2	292.2	307.5	317.8
60°	238.4	244.5	257.6	273.3	285.1
62.5°	207.7	214.1	225.3	239.0	252.5
65°	177.9	182.7	193.6	207.4	219.2
67.5°	149.1	153.3	164.2	173.8	186.2
70°	120.0	125.4	133.4	142.7	150.7
72.5°	96.6	98.9	105.6	112.3	120.6
75°	71.4	75.2	80.6	84.5	89.3
77.5°	51.2	53.4	56.6	59.8	64.3
80°	34.2	35.2	38.1	38.7	42.2
82.5°	20.8	21.4	22.1	22.4	23.7
85°	11.2	11.2	11.2	10.6	10.6
87.5°	6.4	6.4	5.4	4.5	3.2
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)