

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: P558123

Luminaire Tested: **FUSL-12-4-LD4-3LO-40-UNV-93-94-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: P558123  
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-LD4-3LO-40-UNV-93-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

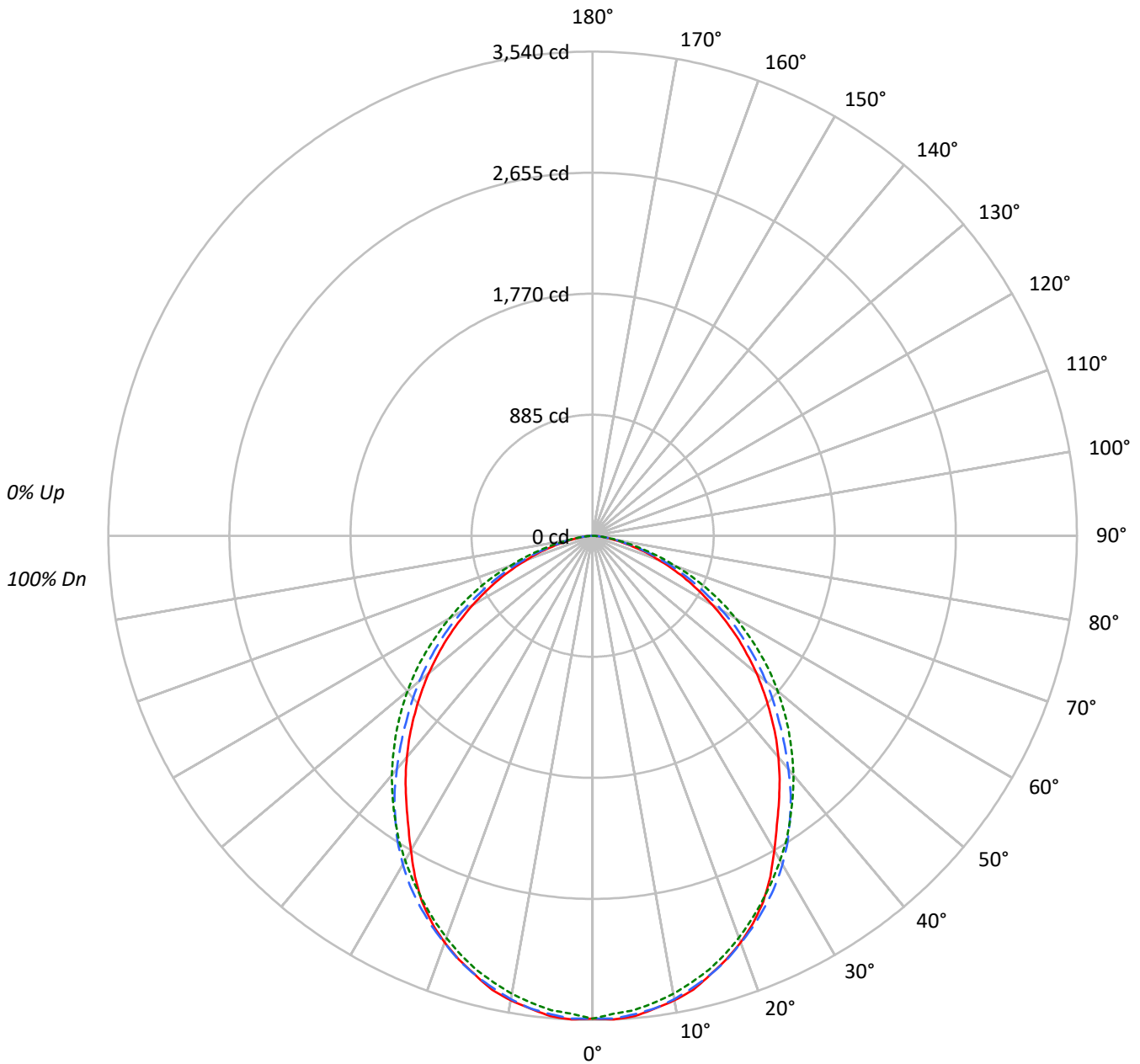
Lumens per Lamp: N/A  
Luminaire Lumens: 8163.0 lumens  
Efficiency: N/A  
Efficacy: 116.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°	9500	9500	9500
5°	9525	9485	9404
10°	9424	9398	9291
15°	9257	9257	9151
20°	9061	9073	8956
25°	8763	8871	8730
30°	8251	8622	8517
35°	7797	8265	8278
40°	7418	7818	8023
45°	6994	7344	7721
50°	6546	6921	7392
55°	6039	6439	6993
60°	5438	5876	6504
65°	4802	5224	5915
70°	4002	4450	5026
75°	3144	3554	3934
80°	2249	2501	2774
85°	1467	1467	1383



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	332.4	4.1
10°-20°	933.8	11.4
20°-30°	1364.5	16.7
30°-40°	1548.9	19.0
40°-50°	1495.2	18.3
50°-60°	1233.5	15.1
60°-70°	821.4	10.1
70°-80°	367.6	4.5
80°-90°	65.8	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°	2630.7	32.2
0°-40°	4179.6	51.2
0°-60°	6908.3	84.6
0°-90°	8163.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8163.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3530	3530	3530	3530	3530	
5°	3526	3525	3511	3492	3482	334
15°	3323	3331	3323	3308	3285	937
25°	2951	2974	2988	2966	2940	1352
35°	2373	2406	2516	2529	2520	1487
45°	1838	1869	1930	2018	2029	1418
55°	1287	1309	1372	1448	1490	1149
65°	754	774	820	879	929	748
75°	302	319	342	358	378	331
85°	48	48	48	45	45	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3530.3	3530.3	3530.3	3530.3	3530.3
2.5°	3539.8	3541.1	3533.0	3511.3	3497.7
5°	3526.2	3524.9	3511.3	3492.3	3481.5
7.5°	3486.9	3489.6	3485.5	3458.4	3443.5
10°	3448.9	3450.3	3439.4	3417.7	3400.1
12.5°	3400.1	3398.7	3383.8	3373.0	3344.5
15°	3322.8	3330.9	3322.8	3307.9	3284.8
17.5°	3248.2	3248.2	3253.6	3227.8	3210.2
20°	3164.1	3168.2	3168.2	3147.8	3127.5
22.5°	3066.5	3078.7	3082.7	3061.0	3036.6
25°	2951.2	2974.2	2987.8	2966.1	2940.3
27.5°	2811.5	2846.7	2887.4	2871.2	2842.7
30°	2655.5	2707.1	2774.9	2761.3	2741.0
32.5°	2507.7	2559.2	2652.8	2647.4	2636.5
35°	2373.4	2406.0	2515.8	2529.4	2519.9
37.5°	2245.9	2275.8	2378.8	2410.0	2401.9
40°	2111.7	2144.2	2225.6	2281.2	2283.9
42.5°	1978.8	2009.9	2076.4	2156.4	2156.4
45°	1837.7	1868.9	1929.9	2018.1	2028.9
47.5°	1699.4	1731.9	1791.6	1879.7	1897.4
50°	1563.7	1593.6	1653.3	1738.7	1765.8
52.5°	1422.7	1455.2	1513.6	1592.2	1631.6
55°	1287.1	1308.8	1372.5	1448.5	1490.5
57.5°	1146.0	1166.4	1238.2	1303.3	1346.7
60°	1010.4	1036.2	1091.8	1158.2	1208.4
62.5°	880.2	907.3	954.8	1013.1	1070.1
65°	754.1	774.4	820.5	878.8	929.0
67.5°	632.0	649.6	695.7	736.4	789.3
70°	508.6	531.6	565.6	604.9	638.8
72.5°	409.6	419.1	447.6	476.0	511.3
75°	302.4	318.7	341.8	358.0	378.4
77.5°	217.0	226.5	240.1	253.6	272.6
80°	145.1	149.2	161.4	164.1	179.0
82.5°	88.2	90.9	93.6	94.9	100.4
85°	47.5	47.5	47.5	44.8	44.8
87.5°	27.1	27.1	23.1	19.0	13.6
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)