

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: P557357

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-93-96-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: P557357  
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-LD4-2LO-40-UNV-93-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

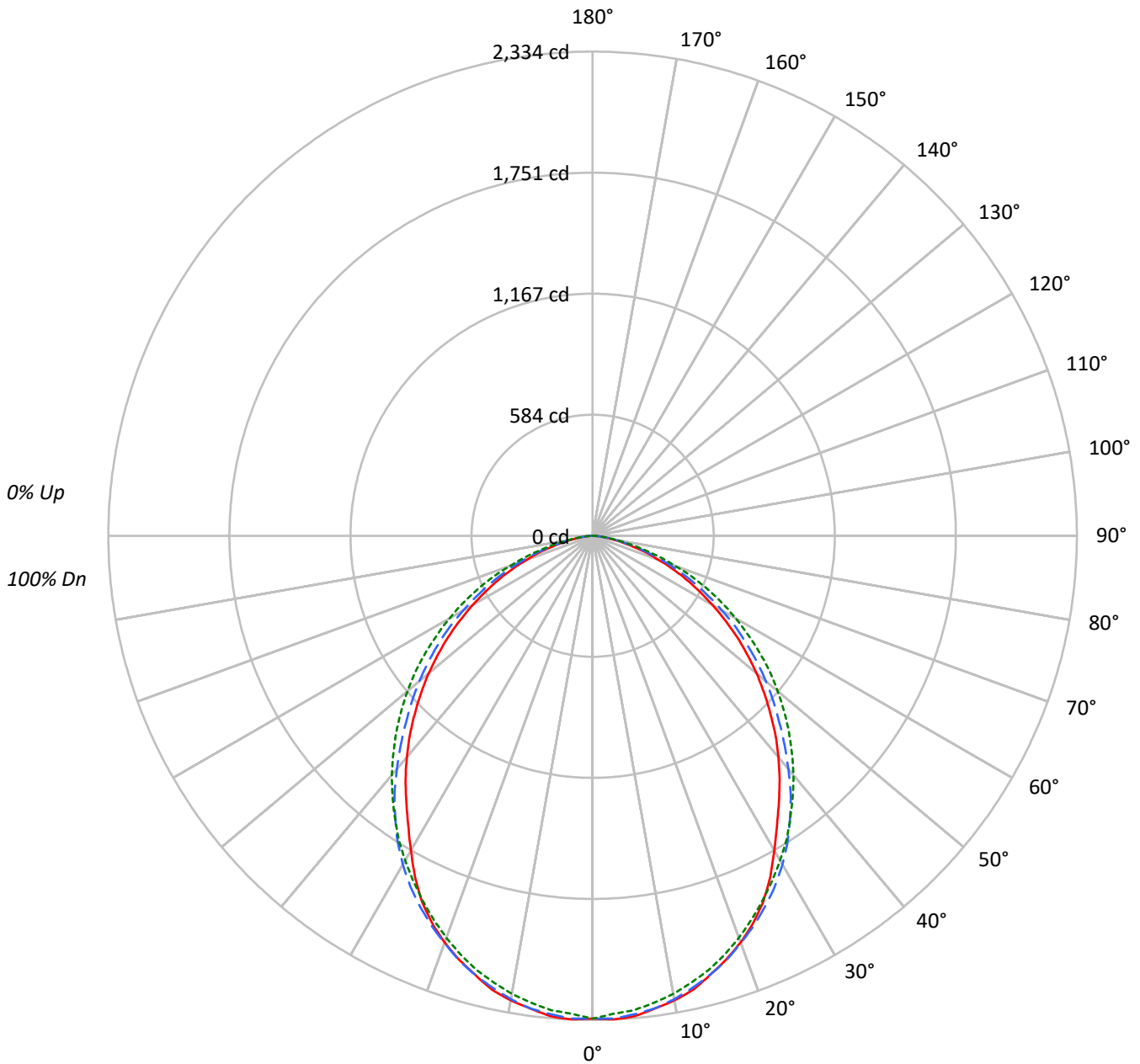
Lumens per Lamp: N/A  
Luminaire Lumens: 5382.0 lumens  
Efficiency: N/A  
Efficacy: 115.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6264	6264	6264
5°	6280	6254	6200
10°	6213	6196	6125
15°	6103	6103	6033
20°	5974	5982	5905
25°	5777	5849	5756
30°	5440	5685	5615
35°	5140	5449	5458
40°	4891	5155	5290
45°	4611	4842	5091
50°	4316	4563	4874
55°	3981	4245	4610
60°	3585	3874	4288
65°	3166	3445	3900
70°	2638	2934	3314
75°	2073	2342	2594
80°	1483	1649	1829
85°	966	966	911



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.1	4.1
10°-20°	615.6	11.4
20°-30°	899.7	16.7
30°-40°	1021.2	19.0
40°-50°	985.8	18.3
50°-60°	813.2	15.1
60°-70°	541.5	10.1
70°-80°	242.3	4.5
80°-90°	43.4	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°	1734.5	32.2
0°-40°	2755.7	51.2
0°-60°	4554.8	84.6
0°-90°	5382.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5382.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2328	2328	2328	2328	2328	
5°	2325	2324	2315	2302	2295	220
15°	2191	2196	2191	2181	2166	618
25°	1946	1961	1970	1956	1939	891
35°	1565	1586	1659	1668	1661	980
45°	1212	1232	1272	1331	1338	935
55°	849	863	905	955	983	757
65°	497	511	541	579	612	493
75°	199	210	225	236	250	218
85°	31	31	31	30	30	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2327.6	2327.6	2327.6	2327.6	2327.6
2.5°	2333.8	2334.7	2329.4	2315.1	2306.1
5°	2324.9	2324.0	2315.1	2302.5	2295.4
7.5°	2299.0	2300.8	2298.1	2280.2	2270.3
10°	2273.9	2274.8	2267.7	2253.4	2241.7
12.5°	2241.7	2240.8	2231.0	2223.8	2205.1
15°	2190.8	2196.1	2190.8	2180.9	2165.7
17.5°	2141.6	2141.6	2145.2	2128.2	2116.5
20°	2086.1	2088.8	2088.8	2075.4	2062.0
22.5°	2021.8	2029.8	2032.5	2018.2	2002.1
25°	1945.8	1961.0	1969.9	1955.6	1938.6
27.5°	1853.7	1876.9	1903.7	1893.0	1874.2
30°	1750.8	1784.8	1829.5	1820.6	1807.2
32.5°	1653.4	1687.3	1749.0	1745.5	1738.3
35°	1564.8	1586.3	1658.7	1667.7	1661.4
37.5°	1480.8	1500.5	1568.4	1589.0	1583.6
40°	1392.3	1413.7	1467.4	1504.0	1505.8
42.5°	1304.6	1325.2	1369.0	1421.8	1421.8
45°	1211.6	1232.2	1272.4	1330.6	1337.7
47.5°	1120.4	1141.9	1181.2	1239.3	1251.0
50°	1031.0	1050.7	1090.0	1146.4	1164.2
52.5°	938.0	959.5	997.9	1049.8	1075.7
55°	848.6	862.9	904.9	955.0	982.7
57.5°	755.6	769.0	816.4	859.3	887.9
60°	666.2	683.2	719.8	763.6	796.7
62.5°	580.3	598.2	629.5	668.0	705.5
65°	497.2	510.6	541.0	579.4	612.5
67.5°	416.7	428.3	458.7	485.5	520.4
70°	335.3	350.5	372.9	398.8	421.2
72.5°	270.0	276.3	295.1	313.9	337.1
75°	199.4	210.1	225.3	236.1	249.5
77.5°	143.1	149.3	158.3	167.2	179.7
80°	95.7	98.4	106.4	108.2	118.0
82.5°	58.1	59.9	61.7	62.6	66.2
85°	31.3	31.3	31.3	29.5	29.5
87.5°	17.9	17.9	15.2	12.5	8.9
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)