

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: P557356

Luminaire Tested: **FUSL-12-4-LD4-2LO-40-UNV-93-96-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: P557356  
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-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

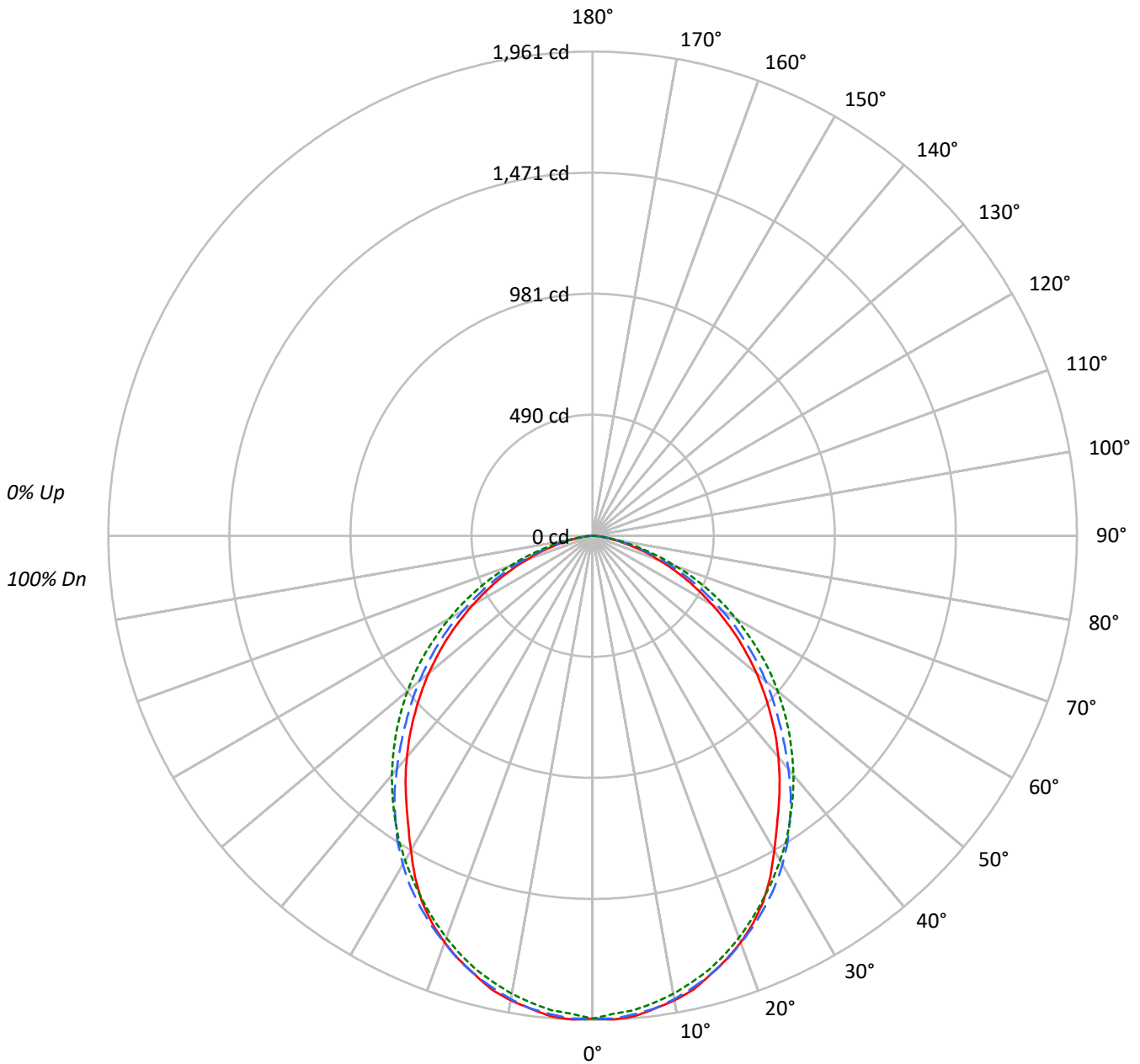
Lumens per Lamp: N/A  
Luminaire Lumens: 4522.0 lumens  
Efficiency: N/A  
Efficacy: 96.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): NR  
Input Current (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°	5262	5262	5262
5°	5277	5254	5210
10°	5221	5206	5147
15°	5128	5128	5070
20°	5019	5026	4961
25°	4854	4914	4836
30°	4571	4777	4718
35°	4319	4578	4586
40°	4109	4331	4444
45°	3874	4069	4278
50°	3627	3834	4095
55°	3345	3567	3874
60°	3012	3255	3603
65°	2660	2894	3277
70°	2216	2465	2784
75°	1742	1968	2179
80°	1246	1385	1537
85°	812	812	766



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.1	4.1
10°-20°	517.3	11.4
20°-30°	755.9	16.7
30°-40°	858.0	19.0
40°-50°	828.3	18.3
50°-60°	683.3	15.1
60°-70°	455.0	10.1
70°-80°	203.6	4.5
80°-90°	36.4	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°	1457.3	32.2
0°-40°	2315.4	51.2
0°-60°	3826.9	84.6
0°-90°	4522.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4522.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1956	1956	1956	1956	1956	
5°	1953	1953	1945	1935	1929	185
15°	1841	1845	1841	1832	1820	519
25°	1635	1648	1655	1643	1629	749
35°	1315	1333	1394	1401	1396	824
45°	1018	1035	1069	1118	1124	785
55°	713	725	760	802	826	636
65°	418	429	454	487	515	414
75°	168	177	189	198	210	183
85°	26	26	26	25	25	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1955.6	1955.6	1955.6	1955.6	1955.6
2.5°	1960.9	1961.7	1957.2	1945.1	1937.6
5°	1953.4	1952.6	1945.1	1934.6	1928.6
7.5°	1931.6	1933.1	1930.9	1915.8	1907.6
10°	1910.6	1911.3	1905.3	1893.3	1883.5
12.5°	1883.5	1882.8	1874.5	1868.5	1852.7
15°	1840.7	1845.2	1840.7	1832.4	1819.7
17.5°	1799.4	1799.4	1802.4	1788.1	1778.3
20°	1752.8	1755.0	1755.0	1743.8	1732.5
22.5°	1698.7	1705.5	1707.7	1695.7	1682.2
25°	1634.8	1647.6	1655.1	1643.1	1628.8
27.5°	1557.5	1577.0	1599.5	1590.5	1574.7
30°	1471.1	1499.6	1537.2	1529.7	1518.4
32.5°	1389.2	1417.7	1469.6	1466.5	1460.5
35°	1314.8	1332.8	1393.7	1401.2	1395.9
37.5°	1244.2	1260.7	1317.8	1335.1	1330.6
40°	1169.8	1187.8	1232.9	1263.7	1265.2
42.5°	1096.2	1113.4	1150.2	1194.6	1194.6
45°	1018.0	1035.3	1069.1	1117.9	1124.0
47.5°	941.4	959.4	992.5	1041.3	1051.1
50°	866.3	882.8	915.8	963.2	978.2
52.5°	788.1	806.2	838.5	882.0	903.8
55°	713.0	725.0	760.3	802.4	825.7
57.5°	634.9	646.1	685.9	722.0	746.0
60°	559.7	574.0	604.8	641.6	669.4
62.5°	487.6	502.6	528.9	561.2	592.8
65°	417.7	429.0	454.5	486.8	514.6
67.5°	350.1	359.9	385.4	408.0	437.3
70°	281.7	294.5	313.3	335.1	353.9
72.5°	226.9	232.2	247.9	263.7	283.2
75°	167.5	176.6	189.3	198.3	209.6
77.5°	120.2	125.5	133.0	140.5	151.0
80°	80.4	82.6	89.4	90.9	99.2
82.5°	48.8	50.3	51.8	52.6	55.6
85°	26.3	26.3	26.3	24.8	24.8
87.5°	15.0	15.0	12.8	10.5	7.5
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)