

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: P557421

Luminaire Tested: **FUSL-12-4-LD4-2LO-50-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: P557421  
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-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

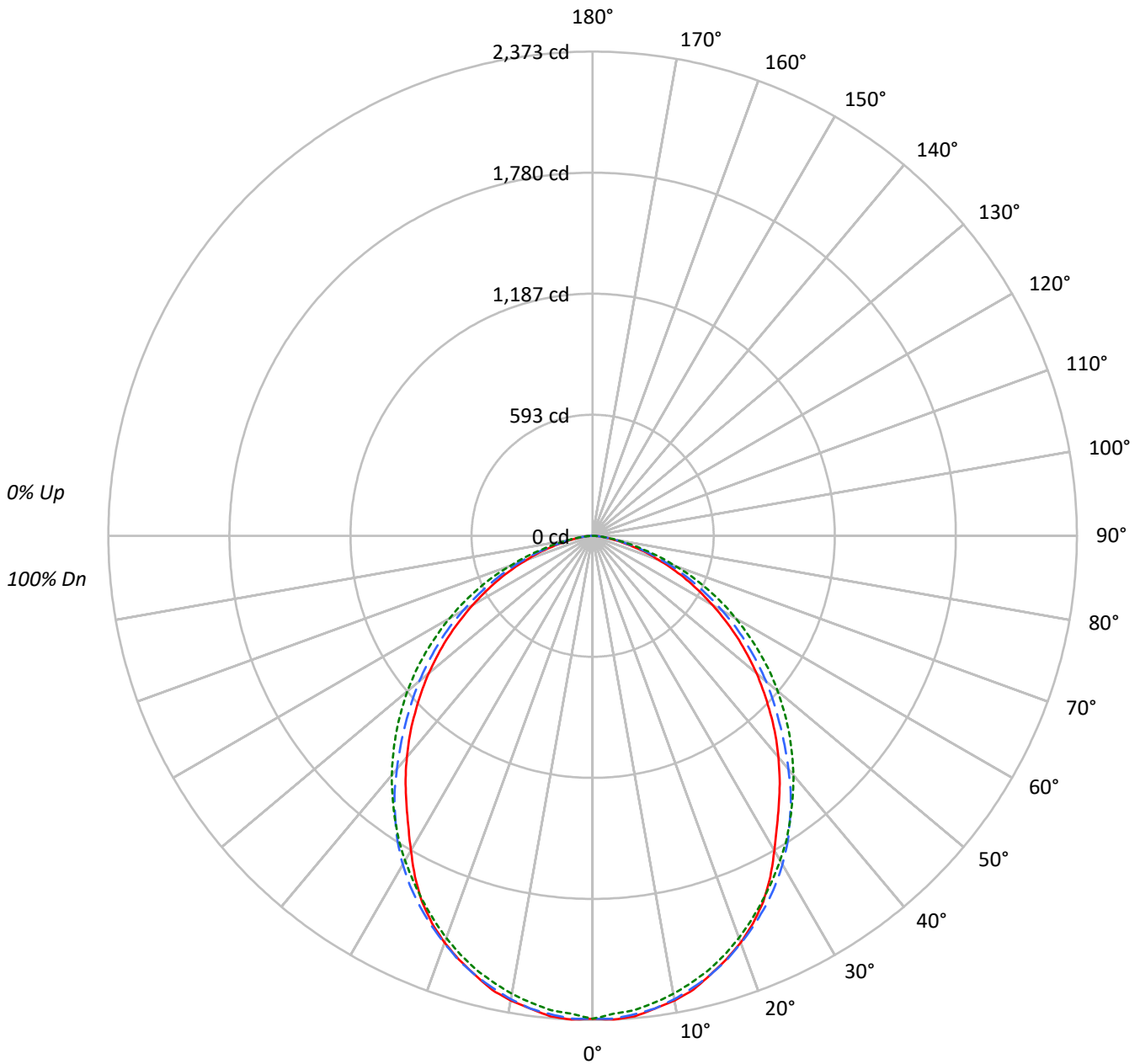
Lumens per Lamp: N/A  
Luminaire Lumens: 5473.0 lumens  
Efficiency: N/A  
Efficacy: 116.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	6369	6369	6369
5°	6386	6359	6305
10°	6319	6301	6229
15°	6206	6206	6135
20°	6075	6083	6005
25°	5875	5948	5853
30°	5532	5781	5710
35°	5228	5541	5550
40°	4973	5242	5379
45°	4689	4924	5177
50°	4389	4640	4956
55°	4048	4317	4688
60°	3646	3940	4360
65°	3219	3503	3966
70°	2683	2984	3370
75°	2109	2382	2638
80°	1508	1677	1860
85°	982	982	926



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	222.9	4.1
10°-20°	626.1	11.4
20°-30°	914.9	16.7
30°-40°	1038.5	19.0
40°-50°	1002.5	18.3
50°-60°	827.0	15.1
60°-70°	550.7	10.1
70°-80°	246.4	4.5
80°-90°	44.1	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°	1763.8	32.2
0°-40°	2802.3	51.2
0°-60°	4631.8	84.6
0°-90°	5473.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5473.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2367	2367	2367	2367	2367	
5°	2364	2363	2354	2342	2334	224
15°	2228	2233	2228	2218	2202	628
25°	1979	1994	2003	1989	1971	906
35°	1591	1613	1687	1696	1690	997
45°	1232	1253	1294	1353	1360	951
55°	863	878	920	971	999	770
65°	506	519	550	589	623	501
75°	203	214	229	240	254	222
85°	32	32	32	30	30	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2366.9	2366.9	2366.9	2366.9	2366.9
2.5°	2373.3	2374.2	2368.7	2354.2	2345.1
5°	2364.2	2363.3	2354.2	2341.5	2334.2
7.5°	2337.8	2339.7	2336.9	2318.7	2308.7
10°	2312.4	2313.3	2306.0	2291.5	2279.6
12.5°	2279.6	2278.7	2268.7	2261.5	2242.4
15°	2227.8	2233.3	2227.8	2217.8	2202.3
17.5°	2177.8	2177.8	2181.4	2164.2	2152.3
20°	2121.4	2124.1	2124.1	2110.5	2096.9
22.5°	2055.9	2064.1	2066.9	2052.3	2035.9
25°	1978.7	1994.1	2003.2	1988.7	1971.4
27.5°	1885.0	1908.6	1935.9	1925.0	1905.9
30°	1780.4	1815.0	1860.4	1851.4	1837.7
32.5°	1681.3	1715.9	1778.6	1775.0	1767.7
35°	1591.3	1613.1	1686.8	1695.9	1689.5
37.5°	1505.8	1525.8	1594.9	1615.8	1610.4
40°	1415.8	1437.6	1492.2	1529.5	1531.3
42.5°	1326.7	1347.6	1392.2	1445.8	1445.8
45°	1232.1	1253.0	1293.9	1353.1	1360.3
47.5°	1139.4	1161.2	1201.2	1260.3	1272.1
50°	1048.4	1068.4	1108.4	1165.7	1183.9
52.5°	953.9	975.7	1014.8	1067.5	1093.9
55°	862.9	877.5	920.2	971.1	999.3
57.5°	768.4	782.0	830.2	873.8	902.9
60°	677.4	694.7	732.0	776.5	810.2
62.5°	590.1	608.3	640.2	679.3	717.4
65°	505.6	519.2	550.1	589.2	622.9
67.5°	423.7	435.6	466.5	493.8	529.2
70°	341.0	356.4	379.2	405.6	428.3
72.5°	274.6	281.0	300.1	319.2	342.8
75°	202.8	213.7	229.1	240.1	253.7
77.5°	145.5	151.9	160.9	170.0	182.8
80°	97.3	100.0	108.2	110.0	120.0
82.5°	59.1	60.9	62.7	63.7	67.3
85°	31.8	31.8	31.8	30.0	30.0
87.5°	18.2	18.2	15.5	12.7	9.1
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)