

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: P556347

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-80-94-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: P556347  
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-LD4-1HI-50-UNV-80-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

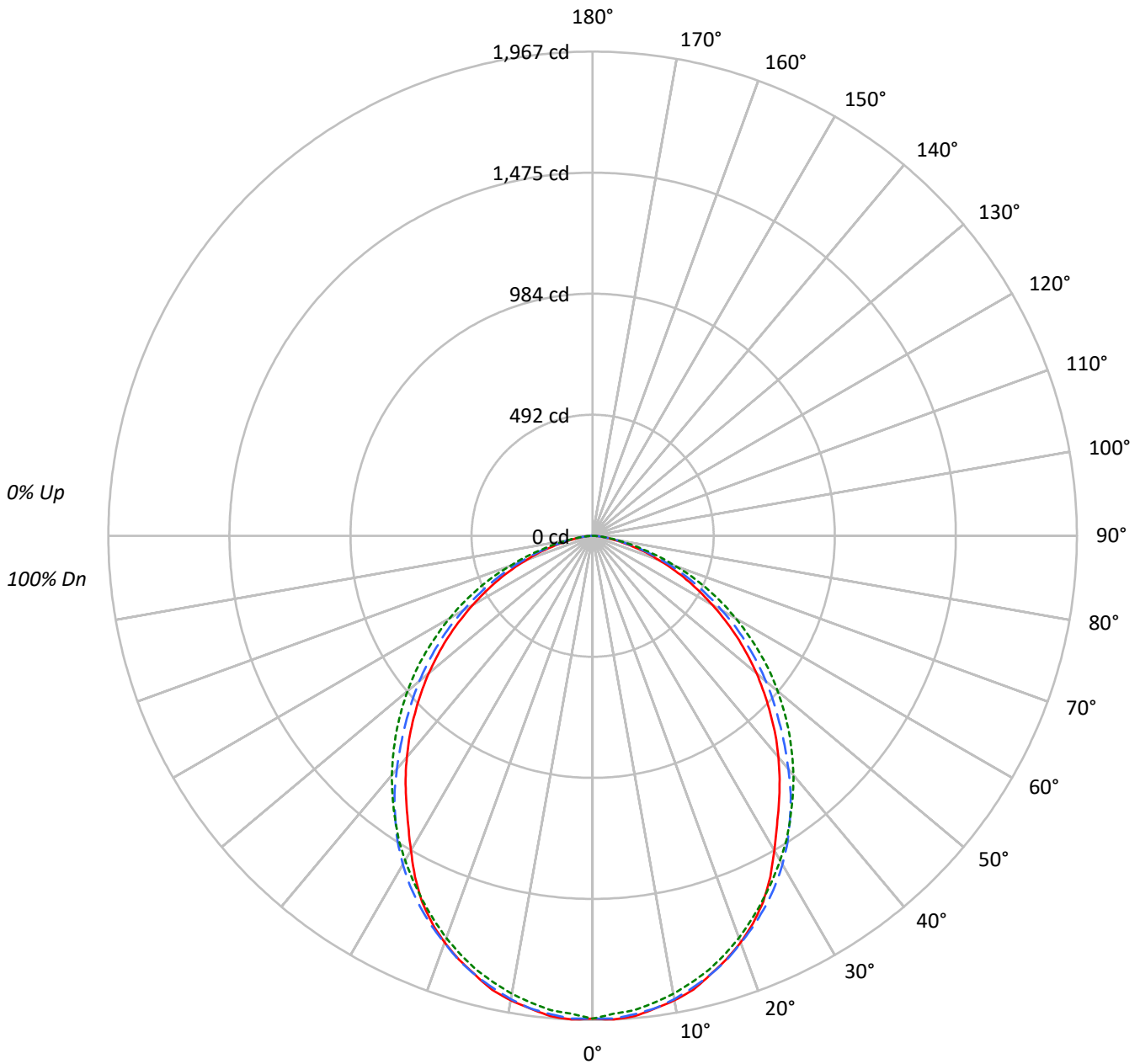
Lumens per Lamp: N/A  
Luminaire Lumens: 4536.0 lumens  
Efficiency: N/A  
Efficacy: 105.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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°	5279	5279	5279
5°	5293	5271	5226
10°	5237	5222	5163
15°	5144	5144	5085
20°	5035	5042	4977
25°	4869	4930	4851
30°	4585	4791	4733
35°	4333	4593	4600
40°	4122	4344	4458
45°	3886	4081	4290
50°	3638	3846	4108
55°	3355	3578	3886
60°	3022	3265	3614
65°	2668	2903	3287
70°	2223	2473	2793
75°	1748	1974	2187
80°	1249	1390	1542
85°	815	815	769



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.7	4.1
10°-20°	518.9	11.4
20°-30°	758.2	16.7
30°-40°	860.7	19.0
40°-50°	830.9	18.3
50°-60°	685.4	15.1
60°-70°	456.4	10.1
70°-80°	204.3	4.5
80°-90°	36.6	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°	1461.8	32.2
0°-40°	2322.5	51.2
0°-60°	3838.8	84.6
0°-90°	4536.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4536.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1962	1962	1962	1962	1962	
5°	1959	1959	1951	1941	1935	185
15°	1846	1851	1846	1838	1825	521
25°	1640	1653	1660	1648	1634	751
35°	1319	1337	1398	1406	1400	826
45°	1021	1038	1072	1121	1127	788
55°	715	727	763	805	828	638
65°	419	430	456	488	516	415
75°	168	177	190	199	210	184
85°	26	26	26	25	25	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1961.7	1961.7	1961.7	1961.7	1961.7
2.5°	1967.0	1967.7	1963.2	1951.2	1943.6
5°	1959.4	1958.7	1951.2	1940.6	1934.6
7.5°	1937.6	1939.1	1936.8	1921.8	1913.5
10°	1916.5	1917.2	1911.2	1899.2	1889.4
12.5°	1889.4	1888.6	1880.3	1874.3	1858.5
15°	1846.4	1850.9	1846.4	1838.1	1825.3
17.5°	1804.9	1804.9	1808.0	1793.6	1783.8
20°	1758.2	1760.5	1760.5	1749.2	1737.9
22.5°	1704.0	1710.7	1713.0	1700.9	1687.4
25°	1639.9	1652.7	1660.3	1648.2	1633.9
27.5°	1562.3	1581.9	1604.5	1595.4	1579.6
30°	1475.6	1504.2	1541.9	1534.4	1523.1
32.5°	1393.5	1422.1	1474.1	1471.1	1465.1
35°	1318.9	1336.9	1398.0	1405.5	1400.2
37.5°	1248.0	1264.6	1321.9	1339.2	1334.7
40°	1173.4	1191.5	1236.7	1267.6	1269.1
42.5°	1099.5	1116.9	1153.8	1198.3	1198.3
45°	1021.2	1038.5	1072.4	1121.4	1127.4
47.5°	944.3	962.4	995.5	1044.5	1054.3
50°	868.9	885.5	918.7	966.2	981.2
52.5°	790.6	808.6	841.1	884.8	906.6
55°	715.2	727.3	762.7	804.9	828.2
57.5°	636.8	648.1	688.1	724.2	748.4
60°	561.5	575.8	606.7	643.6	671.5
62.5°	489.1	504.2	530.6	563.0	594.6
65°	419.0	430.3	455.9	488.4	516.2
67.5°	351.2	361.0	386.6	409.2	438.6
70°	282.6	295.4	314.3	336.1	355.0
72.5°	227.6	232.9	248.7	264.5	284.1
75°	168.1	177.1	189.9	199.0	210.3
77.5°	120.6	125.9	133.4	140.9	151.5
80°	80.6	82.9	89.7	91.2	99.5
82.5°	49.0	50.5	52.0	52.8	55.8
85°	26.4	26.4	26.4	24.9	24.9
87.5°	15.1	15.1	12.8	10.6	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)