

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: P558261

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-80-86-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: P558261  
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-LD4-3STD-35-UNV-80-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

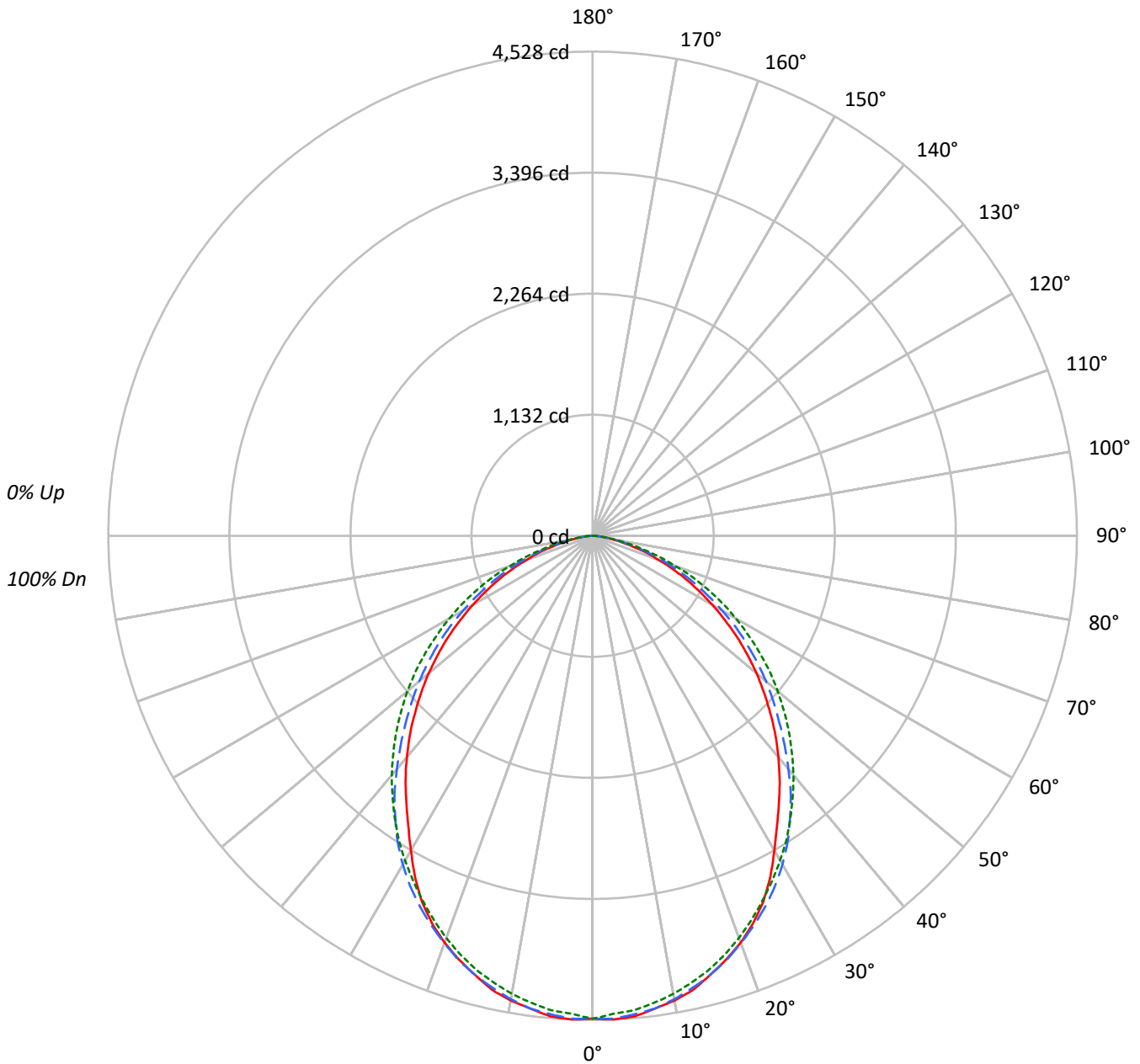
Lumens per Lamp: N/A  
Luminaire Lumens: 10443.0 lumens  
Efficiency: N/A  
Efficacy: 104.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	12153	12153	12153
5°	12186	12134	12031
10°	12056	12023	11886
15°	11843	11843	11707
20°	11592	11607	11458
25°	11210	11349	11169
30°	10556	11031	10896
35°	9974	10573	10590
40°	9490	10002	10264
45°	8947	9396	9878
50°	8375	8854	9457
55°	7725	8238	8946
60°	6957	7517	8320
65°	6143	6684	7568
70°	5119	5692	6430
75°	4023	4546	5033
80°	2878	3200	3549
85°	1874	1874	1769



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	425.2	4.1
10°-20°	1194.6	11.4
20°-30°	1745.7	16.7
30°-40°	1981.5	19.0
40°-50°	1912.9	18.3
50°-60°	1578.0	15.1
60°-70°	1050.8	10.1
70°-80°	470.2	4.5
80°-90°	84.1	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°	3365.5	32.2
0°-40°	5347.0	51.2
0°-60°	8837.9	84.6
0°-90°	10443.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10443.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4516	4516	4516	4516	4516	
5°	4511	4509	4492	4468	4454	427
15°	4251	4261	4251	4232	4202	1198
25°	3776	3805	3822	3794	3762	1729
35°	3036	3078	3218	3236	3224	1902
45°	2351	2391	2469	2582	2596	1814
55°	1647	1674	1756	1853	1907	1470
65°	965	991	1050	1124	1188	957
75°	387	408	437	458	484	423
85°	61	61	61	57	57	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4516.3	4516.3	4516.3	4516.3	4516.3
2.5°	4528.5	4530.2	4519.8	4492.0	4474.7
5°	4511.1	4509.4	4492.0	4467.7	4453.9
7.5°	4460.8	4464.3	4459.1	4424.4	4405.3
10°	4412.2	4414.0	4400.1	4372.3	4349.8
12.5°	4349.8	4348.0	4328.9	4315.1	4278.6
15°	4250.9	4261.3	4250.9	4231.8	4202.3
17.5°	4155.4	4155.4	4162.4	4129.4	4106.9
20°	4047.9	4053.1	4053.1	4027.0	4001.0
22.5°	3922.9	3938.6	3943.8	3916.0	3884.8
25°	3775.5	3805.0	3822.3	3794.5	3761.6
27.5°	3596.8	3641.9	3693.9	3673.1	3636.7
30°	3397.2	3463.2	3549.9	3532.6	3506.5
32.5°	3208.1	3274.0	3393.8	3386.8	3372.9
35°	3036.3	3078.0	3218.5	3235.9	3223.7
37.5°	2873.2	2911.4	3043.3	3083.2	3072.8
40°	2701.5	2743.1	2847.2	2918.3	2921.8
42.5°	2531.4	2571.3	2656.4	2758.7	2758.7
45°	2351.0	2390.9	2469.0	2581.8	2595.6
47.5°	2174.0	2215.7	2292.0	2404.8	2427.3
50°	2000.5	2038.7	2115.0	2224.3	2259.0
52.5°	1820.1	1861.7	1936.3	2036.9	2087.3
55°	1646.6	1674.3	1755.9	1853.0	1906.8
57.5°	1466.1	1492.1	1584.1	1667.4	1722.9
60°	1292.6	1325.6	1396.7	1481.7	1545.9
62.5°	1126.0	1160.7	1221.5	1296.1	1369.0
65°	964.7	990.7	1049.7	1124.3	1188.5
67.5°	808.5	831.1	890.1	942.1	1009.8
70°	650.6	680.1	723.5	773.8	817.2
72.5°	524.0	536.1	572.6	609.0	654.1
75°	386.9	407.7	437.2	458.1	484.1
77.5°	277.6	289.8	307.1	324.5	348.7
80°	185.7	190.9	206.5	209.9	229.0
82.5°	112.8	116.2	119.7	121.5	128.4
85°	60.7	60.7	60.7	57.3	57.3
87.5°	34.7	34.7	29.5	24.3	17.4
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)