

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: P556345

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-80-88-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: P556345  
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-80-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

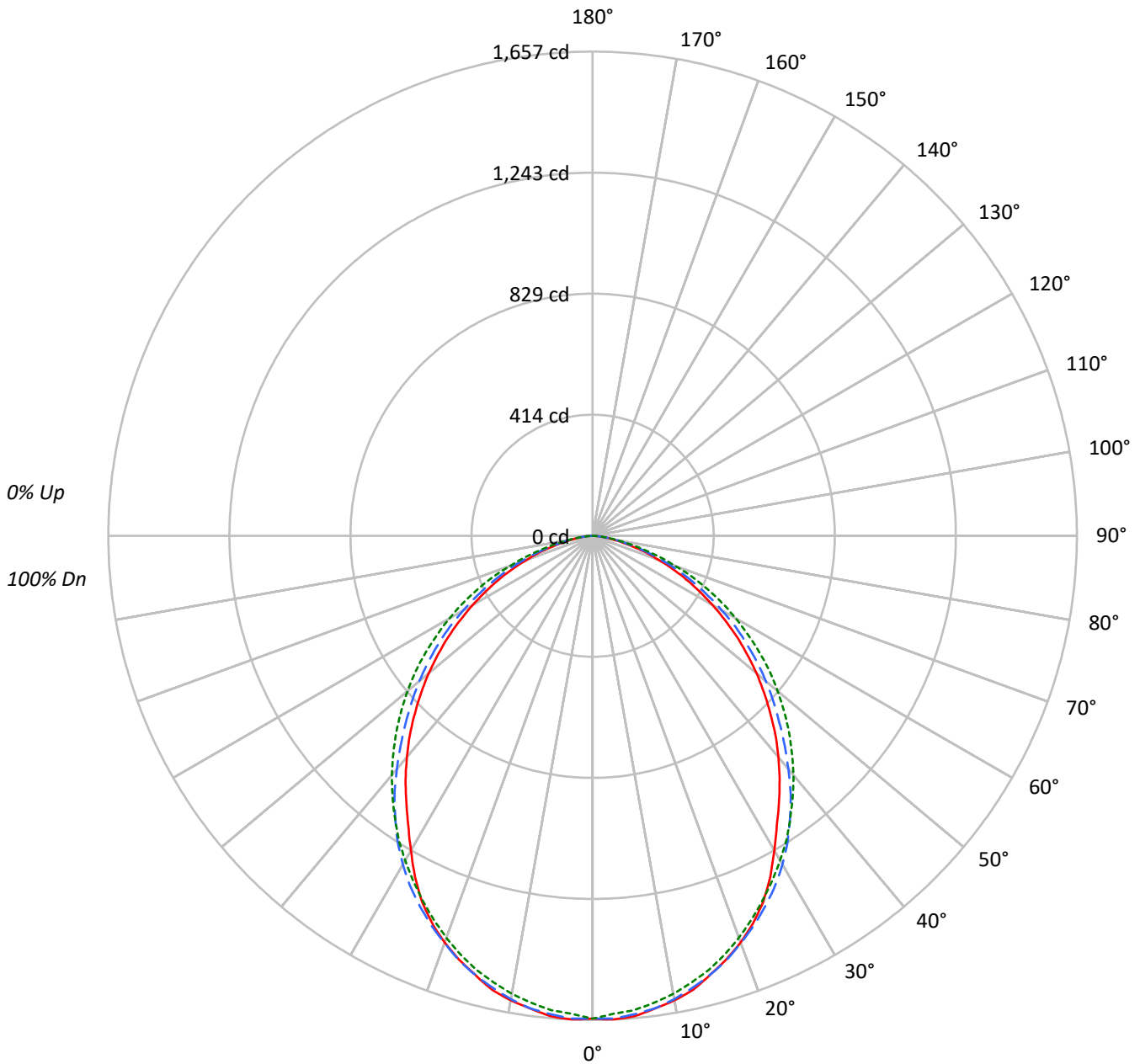
Lumens per Lamp: N/A  
Luminaire Lumens: 3821.0 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4447	4447	4447
5°	4459	4440	4402
10°	4411	4399	4349
15°	4333	4333	4284
20°	4241	4247	4192
25°	4102	4152	4086
30°	3862	4036	3987
35°	3650	3869	3875
40°	3472	3660	3756
45°	3274	3438	3614
50°	3064	3240	3460
55°	2827	3014	3273
60°	2546	2750	3044
65°	2248	2446	2769
70°	1873	2083	2353
75°	1472	1664	1841
80°	1052	1170	1299
85°	685	685	645



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	155.6	4.1
10°-20°	437.1	11.4
20°-30°	638.7	16.7
30°-40°	725.0	19.0
40°-50°	699.9	18.3
50°-60°	577.4	15.1
60°-70°	384.5	10.1
70°-80°	172.0	4.5
80°-90°	30.8	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°	1231.4	32.2
0°-40°	1956.4	51.2
0°-60°	3233.7	84.6
0°-90°	3821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3821.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1652	1652	1652	1652	1652	
5°	1651	1650	1644	1635	1630	156
15°	1555	1559	1555	1548	1538	438
25°	1381	1392	1398	1388	1376	633
35°	1111	1126	1178	1184	1180	696
45°	860	875	903	945	950	664
55°	602	613	642	678	698	538
65°	353	362	384	411	435	350
75°	142	149	160	168	177	155
85°	22	22	22	21	21	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1652.5	1652.5	1652.5	1652.5	1652.5
2.5°	1656.9	1657.6	1653.8	1643.6	1637.2
5°	1650.6	1649.9	1643.6	1634.7	1629.6
7.5°	1632.2	1633.4	1631.5	1618.8	1611.9
10°	1614.4	1615.0	1609.9	1599.8	1591.5
12.5°	1591.5	1590.9	1583.9	1578.8	1565.5
15°	1555.4	1559.2	1555.4	1548.4	1537.6
17.5°	1520.4	1520.4	1523.0	1510.9	1502.7
20°	1481.1	1483.0	1483.0	1473.5	1463.9
22.5°	1435.4	1441.1	1443.0	1432.8	1421.4
25°	1381.4	1392.2	1398.5	1388.4	1376.3
27.5°	1316.0	1332.5	1351.6	1344.0	1330.6
30°	1243.0	1267.1	1298.9	1292.5	1283.0
32.5°	1173.8	1197.9	1241.7	1239.2	1234.1
35°	1111.0	1126.2	1177.6	1184.0	1179.5
37.5°	1051.3	1065.3	1113.5	1128.1	1124.3
40°	988.4	1003.7	1041.8	1067.8	1069.1
42.5°	926.2	940.8	971.9	1009.4	1009.4
45°	860.2	874.8	903.4	944.6	949.7
47.5°	795.5	810.7	838.6	879.9	888.1
50°	732.0	745.9	773.9	813.9	826.6
52.5°	665.9	681.2	708.5	745.3	763.7
55°	602.5	612.6	642.5	678.0	697.7
57.5°	536.4	546.0	579.6	610.1	630.4
60°	473.0	485.0	511.0	542.2	565.6
62.5°	412.0	424.7	446.9	474.2	500.9
65°	353.0	362.5	384.1	411.4	434.9
67.5°	295.8	304.1	325.7	344.7	369.5
70°	238.1	248.9	264.7	283.1	299.0
72.5°	191.7	196.2	209.5	222.8	239.3
75°	141.6	149.2	160.0	167.6	177.1
77.5°	101.6	106.0	112.4	118.7	127.6
80°	67.9	69.8	75.5	76.8	83.8
82.5°	41.3	42.5	43.8	44.4	47.0
85°	22.2	22.2	22.2	20.9	20.9
87.5°	12.7	12.7	10.8	8.9	6.3
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)