

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: P556271

Luminaire Tested: **FUSL-12-4-LD4-1HI-35-UNV-93-97-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: P556271  
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-35-UNV-93-97-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

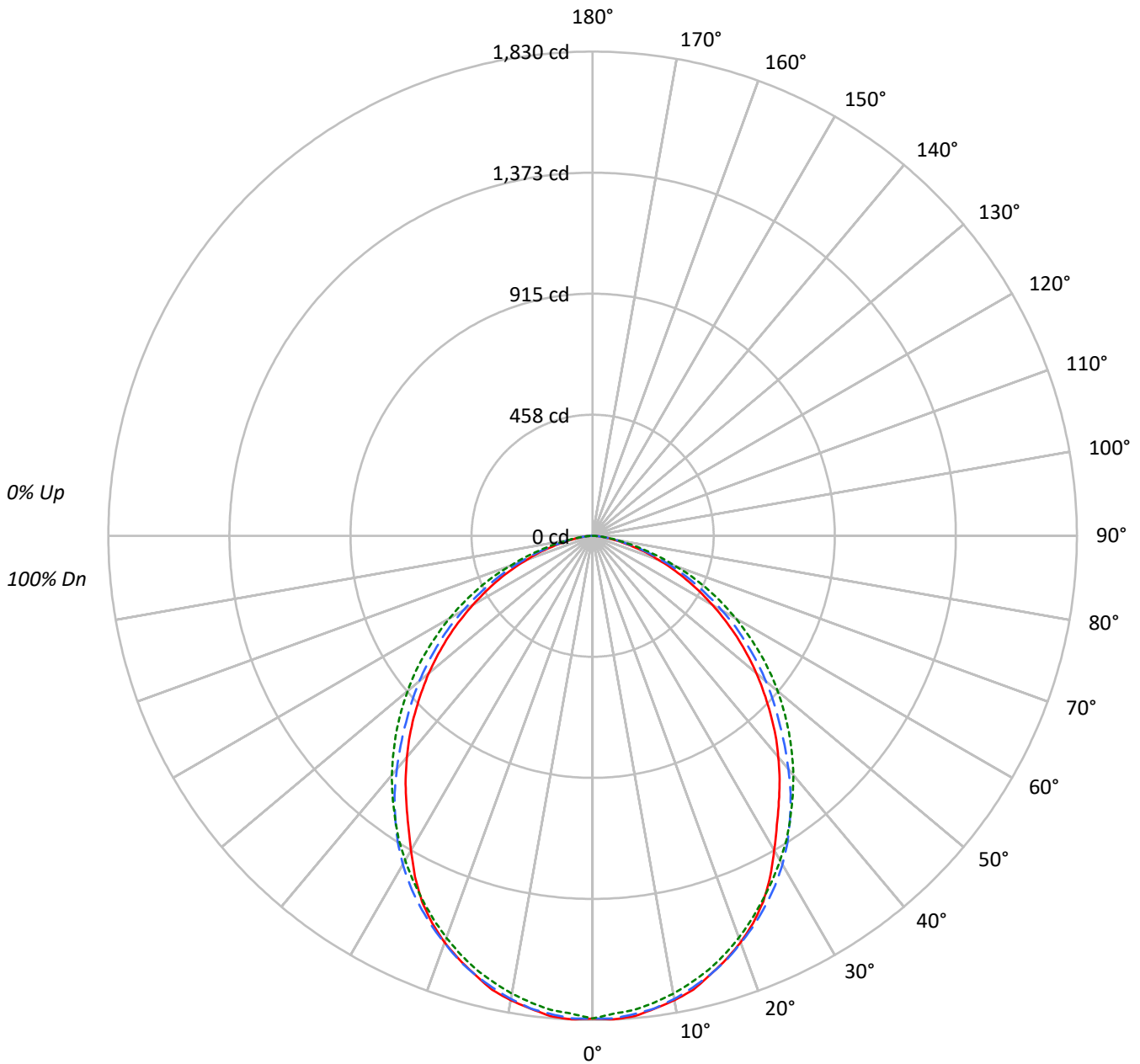
Lumens per Lamp: N/A  
Luminaire Lumens: 4219.0 lumens  
Efficiency: N/A  
Efficacy: 97.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4910	4910	4910
5°	4923	4902	4861
10°	4871	4857	4802
15°	4785	4785	4730
20°	4683	4689	4629
25°	4529	4585	4512
30°	4265	4456	4402
35°	4030	4272	4278
40°	3834	4041	4147
45°	3615	3796	3991
50°	3383	3577	3821
55°	3121	3328	3614
60°	2810	3037	3362
65°	2481	2700	3058
70°	2068	2300	2598
75°	1625	1836	2034
80°	1162	1292	1433
85°	756	756	713



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	171.8	4.1
10°-20°	482.6	11.4
20°-30°	705.3	16.7
30°-40°	800.5	19.0
40°-50°	772.8	18.3
50°-60°	637.5	15.1
60°-70°	424.5	10.1
70°-80°	190.0	4.5
80°-90°	34.0	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°	1359.7	32.2
0°-40°	2160.2	51.2
0°-60°	3570.5	84.6
0°-90°	4219.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4219.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1825	1825	1825	1825	1825	
5°	1822	1822	1815	1805	1799	172
15°	1717	1722	1717	1710	1698	484
25°	1525	1537	1544	1533	1520	699
35°	1227	1244	1300	1307	1302	769
45°	950	966	998	1043	1049	733
55°	665	676	709	749	770	594
65°	390	400	424	454	480	386
75°	156	165	177	185	196	171
85°	24	24	24	23	23	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1824.6	1824.6	1824.6	1824.6	1824.6
2.5°	1829.5	1830.2	1826.0	1814.8	1807.8
5°	1822.5	1821.8	1814.8	1805.0	1799.4
7.5°	1802.2	1803.6	1801.5	1787.5	1779.7
10°	1782.6	1783.3	1777.6	1766.4	1757.3
12.5°	1757.3	1756.6	1748.9	1743.3	1728.6
15°	1717.4	1721.6	1717.4	1709.7	1697.7
17.5°	1678.8	1678.8	1681.6	1668.3	1659.2
20°	1635.3	1637.5	1637.5	1626.9	1616.4
22.5°	1584.9	1591.2	1593.3	1582.1	1569.5
25°	1525.3	1537.2	1544.2	1533.0	1519.7
27.5°	1453.1	1471.3	1492.4	1483.9	1469.2
30°	1372.5	1399.1	1434.2	1427.2	1416.6
32.5°	1296.1	1322.7	1371.1	1368.3	1362.7
35°	1226.7	1243.5	1300.3	1307.3	1302.4
37.5°	1160.8	1176.2	1229.5	1245.6	1241.4
40°	1091.4	1108.2	1150.3	1179.0	1180.4
42.5°	1022.7	1038.8	1073.2	1114.5	1114.5
45°	949.8	965.9	997.5	1043.0	1048.6
47.5°	878.3	895.1	926.0	971.5	980.6
50°	808.2	823.6	854.5	898.6	912.7
52.5°	735.3	752.1	782.3	822.9	843.3
55°	665.2	676.4	709.4	748.6	770.4
57.5°	592.3	602.8	640.0	673.6	696.1
60°	522.2	535.5	564.3	598.6	624.6
62.5°	454.9	468.9	493.5	523.6	553.1
65°	389.7	400.3	424.1	454.2	480.2
67.5°	326.6	335.8	359.6	380.6	408.0
70°	262.9	274.8	292.3	312.6	330.2
72.5°	211.7	216.6	231.3	246.0	264.3
75°	156.3	164.7	176.6	185.1	195.6
77.5°	112.2	117.1	124.1	131.1	140.9
80°	75.0	77.1	83.4	84.8	92.5
82.5°	45.6	47.0	48.4	49.1	51.9
85°	24.5	24.5	24.5	23.1	23.1
87.5°	14.0	14.0	11.9	9.8	7.0
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)