

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: P556379

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-82-94-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: P556379  
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-82-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC 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**

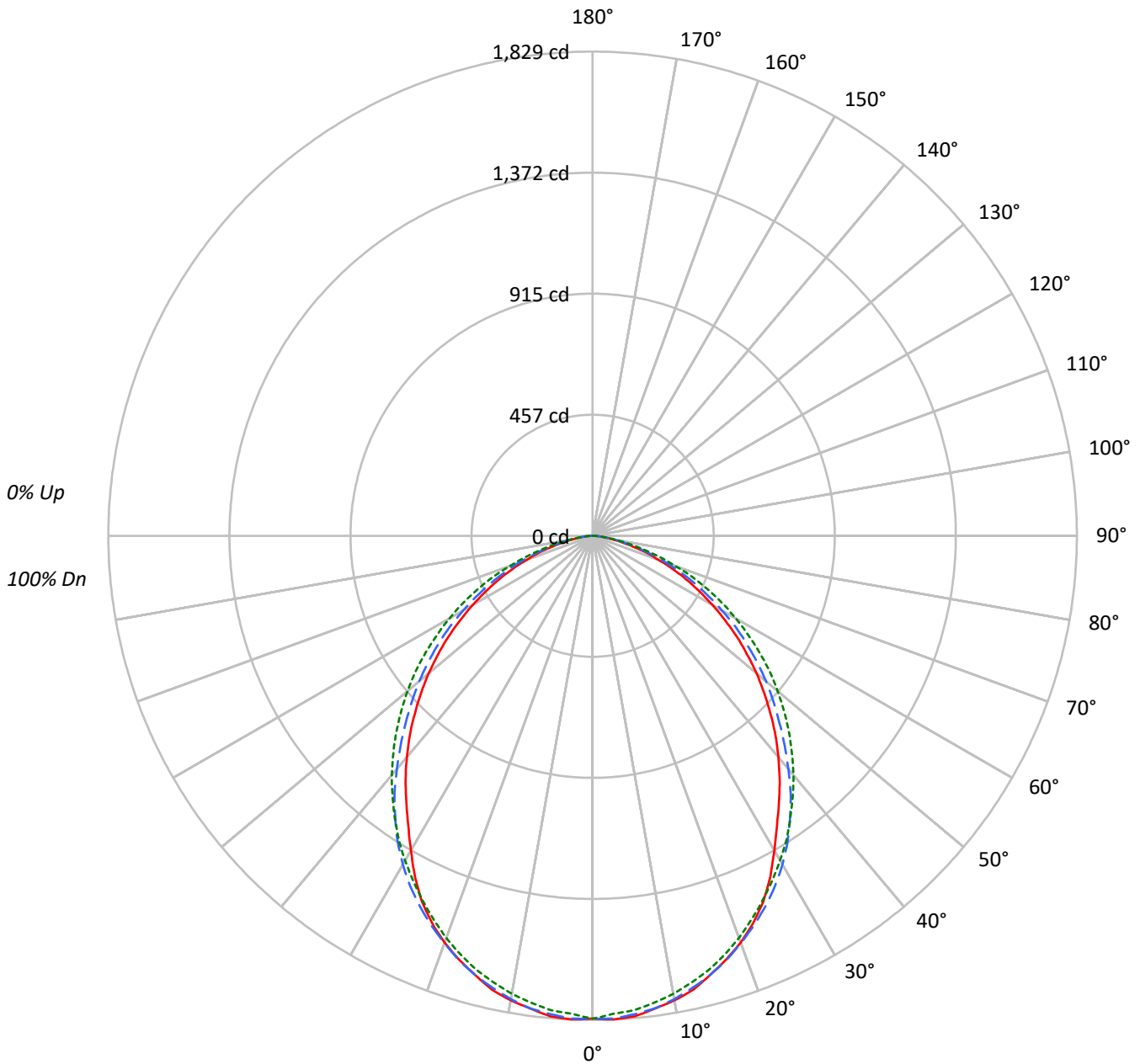
Lumens per Lamp: N/A  
Luminaire Lumens: 4218.0 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	4909	4909	4909
5°	4922	4901	4859
10°	4870	4856	4801
15°	4783	4783	4729
20°	4682	4688	4628
25°	4528	4584	4511
30°	4264	4455	4401
35°	4029	4271	4278
40°	3833	4040	4145
45°	3614	3795	3990
50°	3383	3576	3820
55°	3120	3327	3613
60°	2810	3036	3360
65°	2481	2700	3056
70°	2068	2299	2597
75°	1625	1836	2033
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°	482.5	11.4
20°-30°	705.1	16.7
30°-40°	800.4	19.0
40°-50°	772.6	18.3
50°-60°	637.4	15.1
60°-70°	424.4	10.1
70°-80°	189.9	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°	1359.3	32.2
0°-40°	2159.7	51.2
0°-60°	3569.7	84.6
0°-90°	4218.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4218.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1824	1824	1824	1824	1824	
5°	1822	1821	1814	1805	1799	172
15°	1717	1721	1717	1709	1697	484
25°	1525	1537	1544	1533	1519	698
35°	1226	1243	1300	1307	1302	768
45°	950	966	997	1043	1048	733
55°	665	676	709	748	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°	1824.2	1824.2	1824.2	1824.2	1824.2
2.5°	1829.1	1829.8	1825.6	1814.4	1807.4
5°	1822.1	1821.4	1814.4	1804.6	1798.9
7.5°	1801.8	1803.2	1801.0	1787.0	1779.3
10°	1782.1	1782.8	1777.2	1766.0	1756.9
12.5°	1756.9	1756.2	1748.5	1742.9	1728.2
15°	1717.0	1721.2	1717.0	1709.2	1697.3
17.5°	1678.4	1678.4	1681.2	1667.9	1658.8
20°	1635.0	1637.1	1637.1	1626.6	1616.0
22.5°	1584.5	1590.8	1592.9	1581.7	1569.1
25°	1524.9	1536.8	1543.9	1532.6	1519.3
27.5°	1452.8	1471.0	1492.0	1483.6	1468.9
30°	1372.2	1398.8	1433.8	1426.8	1416.3
32.5°	1295.8	1322.4	1370.8	1368.0	1362.4
35°	1226.4	1243.2	1300.0	1307.0	1302.1
37.5°	1160.5	1175.9	1229.2	1245.3	1241.1
40°	1091.1	1108.0	1150.0	1178.7	1180.1
42.5°	1022.5	1038.6	1072.9	1114.3	1114.3
45°	949.6	965.7	997.2	1042.8	1048.4
47.5°	878.1	894.9	925.8	971.3	980.4
50°	808.0	823.4	854.3	898.4	912.4
52.5°	735.1	752.0	782.1	822.7	843.1
55°	665.1	676.3	709.2	748.5	770.2
57.5°	592.2	602.7	639.8	673.5	695.9
60°	522.1	535.4	564.1	598.5	624.4
62.5°	454.8	468.8	493.4	523.5	552.9
65°	389.6	400.2	424.0	454.1	480.0
67.5°	326.6	335.7	359.5	380.5	407.9
70°	262.8	274.7	292.2	312.6	330.1
72.5°	211.6	216.5	231.3	246.0	264.2
75°	156.3	164.7	176.6	185.0	195.5
77.5°	112.1	117.0	124.0	131.0	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)