

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: P557656

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-82-88-EDD-90**

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: P557656  
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-LD4-2STD-50-UNV-82-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

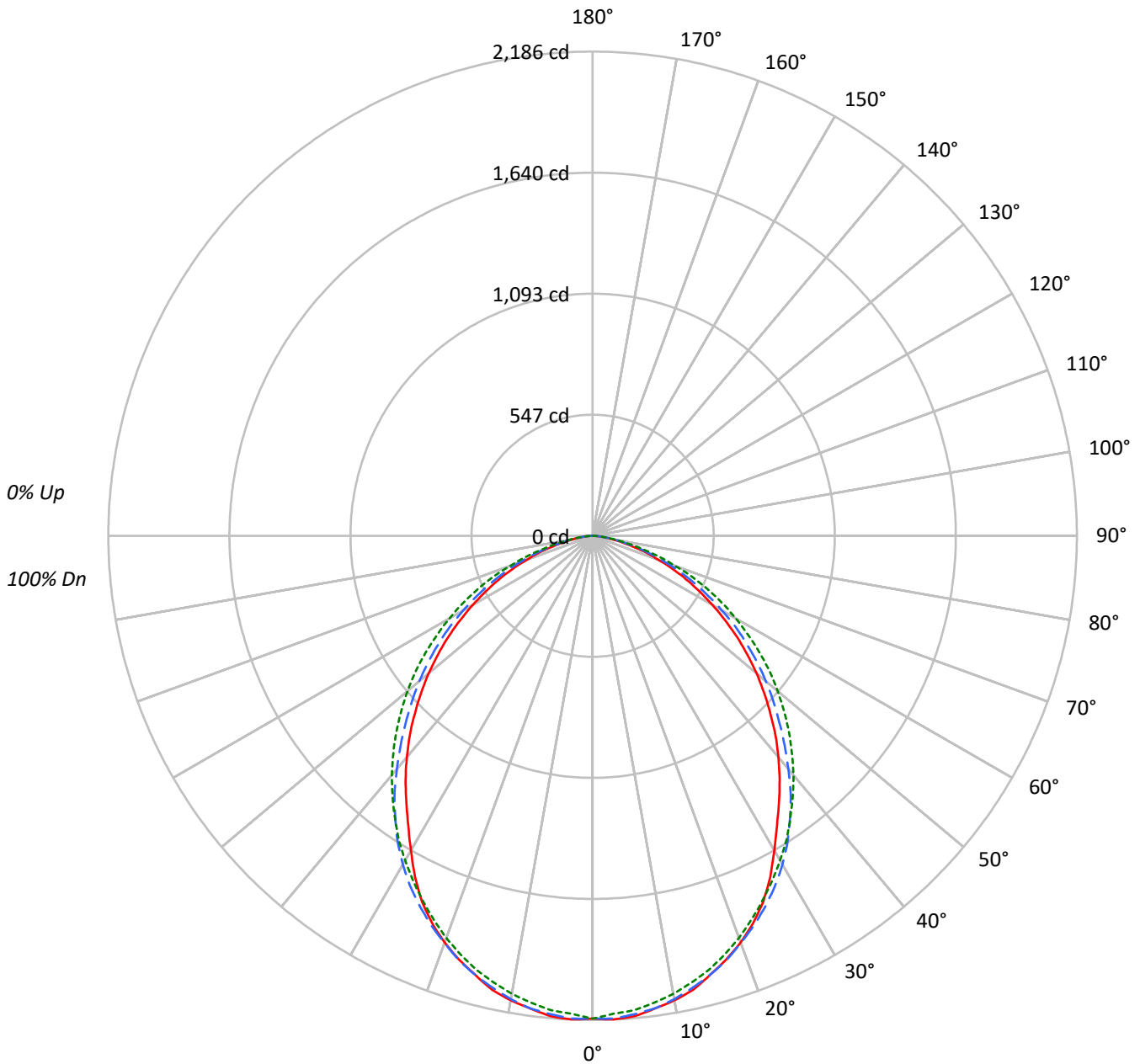
Lumens per Lamp: N/A  
Luminaire Lumens: 5041.0 lumens  
Efficiency: N/A  
Efficacy: 75.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 66.6  
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°	5867	5867	5867
5°	5882	5857	5808
10°	5820	5804	5737
15°	5717	5717	5651
20°	5596	5603	5531
25°	5411	5478	5391
30°	5096	5325	5260
35°	4815	5104	5112
40°	4581	4828	4954
45°	4319	4536	4768
50°	4043	4274	4565
55°	3729	3977	4319
60°	3358	3629	4016
65°	2965	3226	3653
70°	2471	2748	3104
75°	1942	2195	2430
80°	1389	1545	1714
85°	905	905	852



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	205.3	4.1
10°-20°	576.6	11.4
20°-30°	842.7	16.7
30°-40°	956.5	19.0
40°-50°	923.4	18.3
50°-60°	761.7	15.1
60°-70°	507.2	10.1
70°-80°	227.0	4.5
80°-90°	40.6	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°	1624.6	32.2
0°-40°	2581.1	51.2
0°-60°	4266.2	84.6
0°-90°	5041.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5041.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2180	2180	2180	2180	2180	
5°	2178	2177	2168	2157	2150	206
15°	2052	2057	2052	2043	2028	578
25°	1822	1837	1845	1832	1816	835
35°	1466	1486	1554	1562	1556	918
45°	1135	1154	1192	1246	1253	876
55°	795	808	848	894	920	709
65°	466	478	507	543	574	462
75°	187	197	211	221	234	204
85°	29	29	29	28	28	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2180.1	2180.1	2180.1	2180.1	2180.1
2.5°	2186.0	2186.8	2181.8	2168.4	2160.0
5°	2177.6	2176.8	2168.4	2156.7	2150.0
7.5°	2153.3	2155.0	2152.5	2135.7	2126.5
10°	2129.9	2130.7	2124.0	2110.6	2099.7
12.5°	2099.7	2098.9	2089.6	2082.9	2065.4
15°	2052.0	2057.0	2052.0	2042.7	2028.5
17.5°	2005.9	2005.9	2009.2	1993.3	1982.4
20°	1954.0	1956.5	1956.5	1943.9	1931.4
22.5°	1893.7	1901.2	1903.7	1890.3	1875.2
25°	1822.5	1836.7	1845.1	1831.7	1815.8
27.5°	1736.2	1758.0	1783.1	1773.1	1755.5
30°	1639.9	1671.7	1713.6	1705.2	1692.7
32.5°	1548.6	1580.4	1638.2	1634.9	1628.2
35°	1465.7	1485.8	1553.6	1562.0	1556.1
37.5°	1387.0	1405.4	1469.0	1488.3	1483.3
40°	1304.0	1324.1	1374.4	1408.7	1410.4
42.5°	1222.0	1241.2	1282.3	1331.7	1331.7
45°	1134.9	1154.1	1191.8	1246.3	1253.0
47.5°	1049.4	1069.5	1106.4	1160.8	1171.7
50°	965.7	984.1	1021.0	1073.7	1090.5
52.5°	878.6	898.7	934.7	983.3	1007.6
55°	794.8	808.2	847.6	894.5	920.5
57.5°	707.7	720.3	764.7	804.9	831.7
60°	624.0	639.9	674.2	715.3	746.2
62.5°	543.6	560.3	589.6	625.6	660.8
65°	465.7	478.2	506.7	542.7	573.7
67.5°	390.3	401.2	429.7	454.8	487.4
70°	314.1	328.3	349.3	373.5	394.5
72.5°	252.9	258.8	276.4	294.0	315.8
75°	186.8	196.8	211.1	221.1	233.7
77.5°	134.0	139.9	148.2	156.6	168.3
80°	89.6	92.1	99.7	101.3	110.6
82.5°	54.4	56.1	57.8	58.6	62.0
85°	29.3	29.3	29.3	27.6	27.6
87.5°	16.8	16.8	14.2	11.7	8.4
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)