

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: P557271

Luminaire Tested: **FUSL-12-4-LD4-2LO-35-UNV-82-87-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: P557271  
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-LD4-2LO-35-UNV-82-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

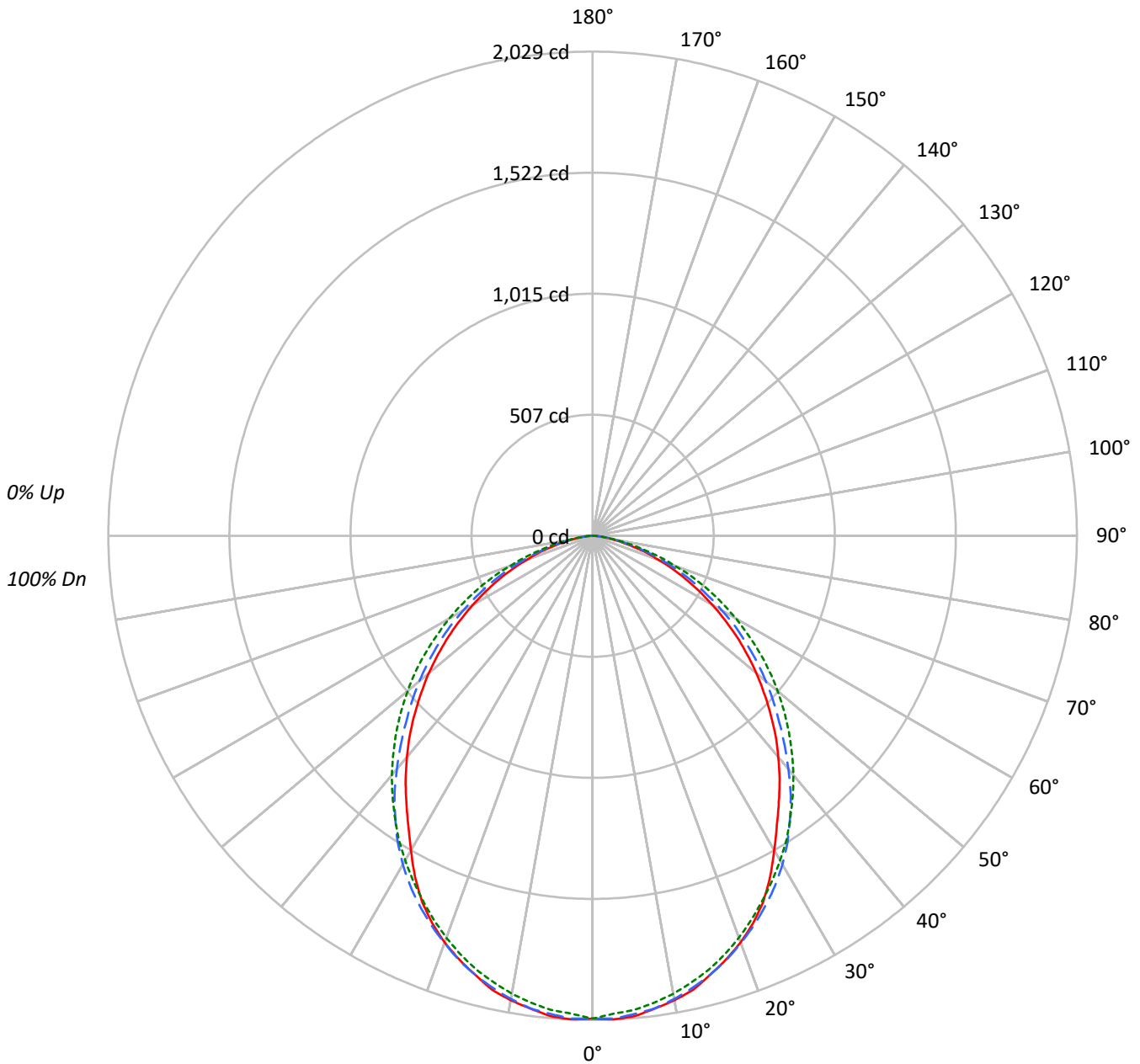
Lumens per Lamp: N/A  
Luminaire Lumens: 4678.0 lumens  
Efficiency: N/A  
Efficacy: 100.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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°	5444	5444	5444
5°	5459	5435	5389
10°	5401	5386	5324
15°	5305	5305	5244
20°	5193	5199	5133
25°	5021	5084	5003
30°	4729	4941	4881
35°	4468	4736	4744
40°	4251	4480	4598
45°	4008	4209	4425
50°	3751	3966	4236
55°	3461	3690	4008
60°	3116	3367	3727
65°	2751	2994	3390
70°	2293	2550	2880
75°	1802	2037	2254
80°	1289	1433	1590
85°	840	840	790



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	190.5	4.1
10°-20°	535.1	11.4
20°-30°	782.0	16.7
30°-40°	887.6	19.0
40°-50°	856.9	18.3
50°-60°	706.9	15.1
60°-70°	470.7	10.1
70°-80°	210.6	4.5
80°-90°	37.7	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°	1507.6	32.2
0°-40°	2395.2	51.2
0°-60°	3959.0	84.6
0°-90°	4678.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4678.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2023	2023	2023	2023	2023	
5°	2021	2020	2012	2001	1995	191
15°	1904	1909	1904	1896	1882	537
25°	1691	1704	1712	1700	1685	775
35°	1360	1379	1442	1450	1444	852
45°	1053	1071	1106	1156	1163	813
55°	738	750	787	830	854	658
65°	432	444	470	504	532	428
75°	173	183	196	205	217	190
85°	27	27	27	26	26	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2023.1	2023.1	2023.1	2023.1	2023.1
2.5°	2028.6	2029.3	2024.7	2012.2	2004.5
5°	2020.8	2020.0	2012.2	2001.4	1995.1
7.5°	1998.2	1999.8	1997.5	1981.9	1973.4
10°	1976.5	1977.3	1971.0	1958.6	1948.5
12.5°	1948.5	1947.7	1939.2	1933.0	1916.6
15°	1904.2	1908.9	1904.2	1895.6	1882.4
17.5°	1861.5	1861.5	1864.6	1849.8	1839.7
20°	1813.3	1815.6	1815.6	1803.9	1792.3
22.5°	1757.3	1764.3	1766.6	1754.2	1740.2
25°	1691.2	1704.5	1712.2	1699.8	1685.0
27.5°	1611.2	1631.4	1654.7	1645.4	1629.1
30°	1521.8	1551.3	1590.2	1582.4	1570.8
32.5°	1437.1	1466.6	1520.3	1517.1	1510.9
35°	1360.1	1378.8	1441.8	1449.5	1444.1
37.5°	1287.1	1304.2	1363.3	1381.1	1376.5
40°	1210.1	1228.8	1275.4	1307.3	1308.8
42.5°	1134.0	1151.8	1189.9	1235.8	1235.8
45°	1053.1	1071.0	1106.0	1156.5	1162.7
47.5°	973.9	992.5	1026.7	1077.2	1087.3
50°	896.1	913.2	947.4	996.4	1011.9
52.5°	815.3	834.0	867.4	912.5	935.0
55°	737.6	750.0	786.6	830.1	854.2
57.5°	656.8	668.4	709.6	746.9	771.8
60°	579.0	593.8	625.7	663.7	692.5
62.5°	504.4	520.0	547.2	580.6	613.2
65°	432.1	443.8	470.2	503.6	532.4
67.5°	362.2	372.3	398.7	422.0	452.3
70°	291.5	304.7	324.1	346.6	366.1
72.5°	234.7	240.2	256.5	272.8	293.0
75°	173.3	182.6	195.9	205.2	216.8
77.5°	124.4	129.8	137.6	145.3	156.2
80°	83.2	85.5	92.5	94.0	102.6
82.5°	50.5	52.1	53.6	54.4	57.5
85°	27.2	27.2	27.2	25.6	25.6
87.5°	15.5	15.5	13.2	10.9	7.8
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)