

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: P557506

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-UNV-81-85-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: P557506  
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-35-UNV-81-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

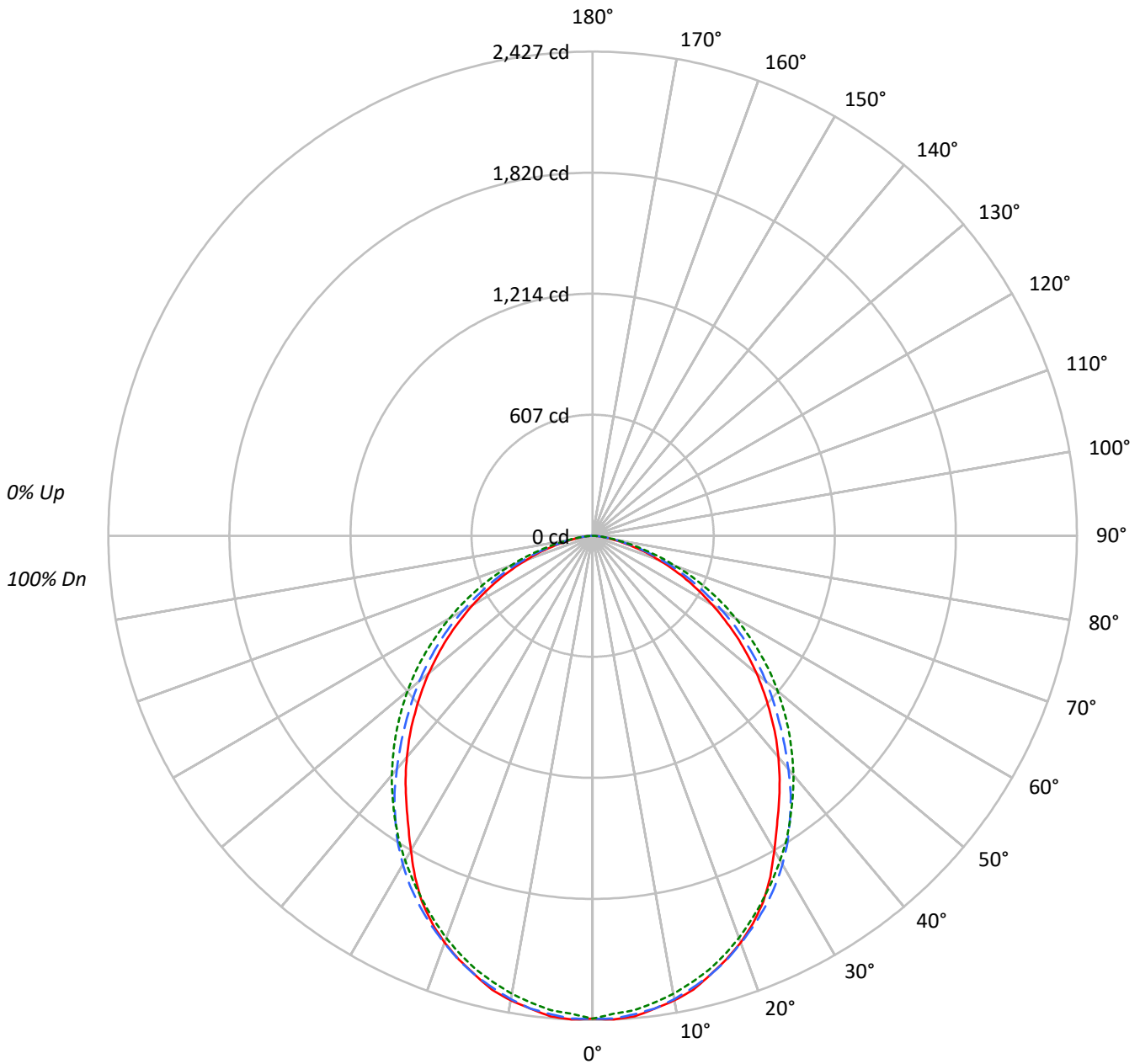
Lumens per Lamp: N/A  
Luminaire Lumens: 5597.0 lumens  
Efficiency: N/A  
Efficacy: 84.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	6514	6514	6514
5°	6531	6503	6448
10°	6462	6444	6370
15°	6347	6347	6274
20°	6213	6221	6141
25°	6008	6083	5986
30°	5658	5912	5840
35°	5346	5667	5676
40°	5086	5361	5501
45°	4795	5036	5294
50°	4489	4746	5068
55°	4140	4415	4795
60°	3729	4029	4459
65°	3292	3582	4056
70°	2744	3051	3446
75°	2156	2436	2697
80°	1542	1715	1901
85°	1003	1003	948



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	227.9	4.1
10°-20°	640.2	11.4
20°-30°	935.6	16.7
30°-40°	1062.0	19.0
40°-50°	1025.2	18.3
50°-60°	845.7	15.1
60°-70°	563.2	10.1
70°-80°	252.0	4.5
80°-90°	45.1	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°	1803.8	32.2
0°-40°	2865.8	51.2
0°-60°	4736.7	84.6
0°-90°	5597.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5597.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2421	2421	2421	2421	2421	
5°	2418	2417	2408	2394	2387	229
15°	2278	2284	2278	2268	2252	642
25°	2024	2039	2049	2034	2016	927
35°	1627	1650	1725	1734	1728	1020
45°	1260	1281	1323	1384	1391	972
55°	882	897	941	993	1022	788
65°	517	531	563	603	637	513
75°	207	218	234	246	259	227
85°	32	32	32	31	31	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2420.6	2420.6	2420.6	2420.6	2420.6
2.5°	2427.1	2428.0	2422.4	2407.5	2398.2
5°	2417.8	2416.8	2407.5	2394.5	2387.1
7.5°	2390.8	2392.7	2389.9	2371.3	2361.0
10°	2364.8	2365.7	2358.3	2343.4	2331.3
12.5°	2331.3	2330.4	2320.1	2312.7	2293.2
15°	2278.3	2283.9	2278.3	2268.1	2252.2
17.5°	2227.1	2227.1	2230.9	2213.2	2201.1
20°	2169.5	2172.3	2172.3	2158.3	2144.4
22.5°	2102.5	2110.9	2113.7	2098.8	2082.1
25°	2023.5	2039.3	2048.6	2033.7	2016.0
27.5°	1927.7	1951.9	1979.8	1968.6	1949.1
30°	1820.8	1856.1	1902.6	1893.3	1879.3
32.5°	1719.4	1754.7	1818.9	1815.2	1807.7
35°	1627.3	1649.7	1725.0	1734.3	1727.8
37.5°	1539.9	1560.4	1631.1	1652.5	1646.9
40°	1447.9	1470.2	1526.0	1564.1	1566.0
42.5°	1356.7	1378.1	1423.7	1478.6	1478.6
45°	1260.0	1281.4	1323.3	1383.7	1391.1
47.5°	1165.2	1187.5	1228.4	1288.9	1300.9
50°	1072.2	1092.6	1133.6	1192.1	1210.7
52.5°	975.5	997.8	1037.8	1091.7	1118.7
55°	882.5	897.4	941.1	993.1	1022.0
57.5°	785.8	799.7	849.0	893.6	923.4
60°	692.8	710.5	748.6	794.1	828.6
62.5°	603.5	622.1	654.7	694.6	733.7
65°	517.0	531.0	562.6	602.6	637.0
67.5°	433.3	445.4	477.0	504.9	541.2
70°	348.7	364.5	387.8	414.7	438.0
72.5°	280.8	287.3	306.9	326.4	350.6
75°	207.4	218.5	234.3	245.5	259.4
77.5°	148.8	155.3	164.6	173.9	186.9
80°	99.5	102.3	110.7	112.5	122.7
82.5°	60.4	62.3	64.2	65.1	68.8
85°	32.5	32.5	32.5	30.7	30.7
87.5°	18.6	18.6	15.8	13.0	9.3
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)