

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: P557000

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-81-88-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: P557000  
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-LD4-2HI-35-UNV-81-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

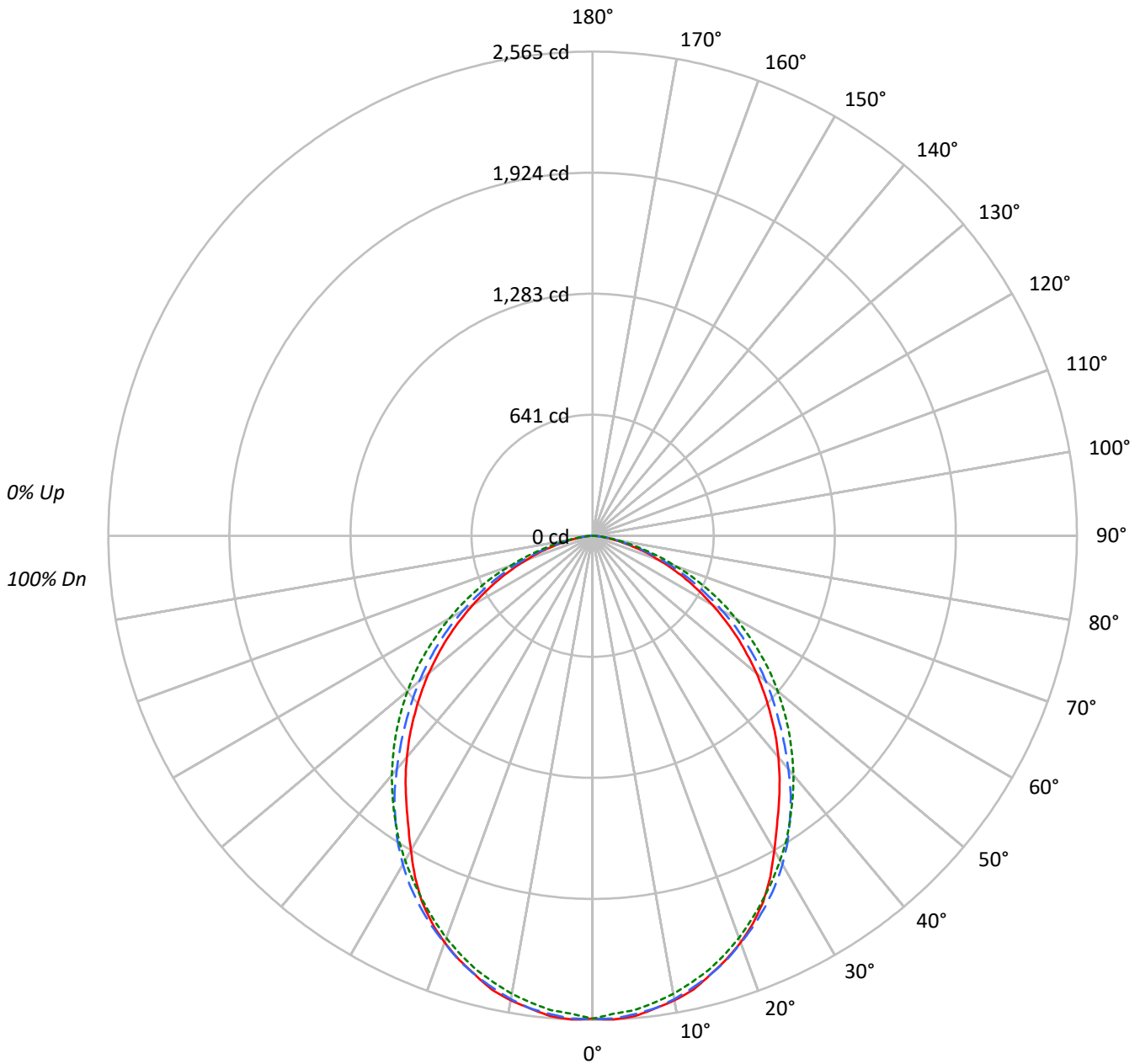
Lumens per Lamp: N/A  
Luminaire Lumens: 5915.0 lumens  
Efficiency: N/A  
Efficacy: 68.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	6884	6884	6884
5°	6902	6873	6814
10°	6829	6810	6732
15°	6708	6708	6631
20°	6566	6574	6490
25°	6350	6428	6326
30°	5979	6248	6171
35°	5650	5989	5998
40°	5375	5665	5813
45°	5068	5322	5595
50°	4744	5015	5357
55°	4375	4666	5067
60°	3940	4258	4712
65°	3479	3786	4287
70°	2899	3224	3642
75°	2279	2575	2851
80°	1630	1812	2010
85°	1062	1062	1000



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	240.9	4.1
10°-20°	676.6	11.4
20°-30°	988.8	16.7
30°-40°	1122.3	19.0
40°-50°	1083.5	18.3
50°-60°	893.8	15.1
60°-70°	595.2	10.1
70°-80°	266.3	4.5
80°-90°	47.6	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°	1906.2	32.2
0°-40°	3028.6	51.2
0°-60°	5005.8	84.6
0°-90°	5915.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5915.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2558	2558	2558	2558	2558	
5°	2555	2554	2544	2531	2523	242
15°	2408	2414	2408	2397	2380	679
25°	2138	2155	2165	2149	2131	979
35°	1720	1743	1823	1833	1826	1078
45°	1332	1354	1398	1462	1470	1027
55°	933	948	994	1050	1080	832
65°	546	561	595	637	673	542
75°	219	231	248	259	274	240
85°	34	34	34	32	32	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2558.1	2558.1	2558.1	2558.1	2558.1
2.5°	2565.0	2565.9	2560.1	2544.3	2534.5
5°	2555.1	2554.2	2544.3	2530.6	2522.7
7.5°	2526.6	2528.6	2525.7	2506.0	2495.2
10°	2499.1	2500.1	2492.2	2476.5	2463.7
12.5°	2463.7	2462.8	2451.9	2444.1	2423.4
15°	2407.7	2413.6	2407.7	2396.9	2380.2
17.5°	2353.7	2353.7	2357.6	2338.9	2326.2
20°	2292.7	2295.7	2295.7	2281.0	2266.2
22.5°	2222.0	2230.8	2233.8	2218.1	2200.4
25°	2138.5	2155.2	2165.0	2149.3	2130.6
27.5°	2037.2	2062.8	2092.3	2080.5	2059.8
30°	1924.2	1961.6	2010.7	2000.9	1986.1
32.5°	1817.1	1854.4	1922.2	1918.3	1910.5
35°	1719.8	1743.4	1823.0	1832.8	1825.9
37.5°	1627.4	1649.0	1723.7	1746.3	1740.4
40°	1530.1	1553.7	1612.7	1653.0	1654.9
42.5°	1433.8	1456.4	1504.6	1562.6	1562.6
45°	1331.6	1354.2	1398.4	1462.3	1470.2
47.5°	1231.4	1255.0	1298.2	1362.1	1374.9
50°	1133.1	1154.7	1198.0	1259.9	1279.5
52.5°	1030.9	1054.5	1096.7	1153.7	1182.2
55°	932.6	948.3	994.5	1049.6	1080.0
57.5°	830.4	845.2	897.2	944.4	975.9
60°	732.1	750.8	791.1	839.3	875.6
62.5°	637.8	657.5	691.9	734.1	775.4
65°	546.4	561.1	594.6	636.8	673.2
67.5°	458.0	470.7	504.1	533.6	572.0
70°	368.5	385.2	409.8	438.3	462.9
72.5°	296.8	303.7	324.3	344.9	370.5
75°	219.2	230.9	247.7	259.4	274.2
77.5°	157.2	164.1	173.9	183.8	197.5
80°	105.2	108.1	116.9	118.9	129.7
82.5°	63.9	65.8	67.8	68.8	72.7
85°	34.4	34.4	34.4	32.4	32.4
87.5°	19.7	19.7	16.7	13.8	9.8
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)