

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: P557504

Luminaire Tested: **FUSL-12-4-LD4-2STD-35-UNV-81-84-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: P557504  
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-81-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

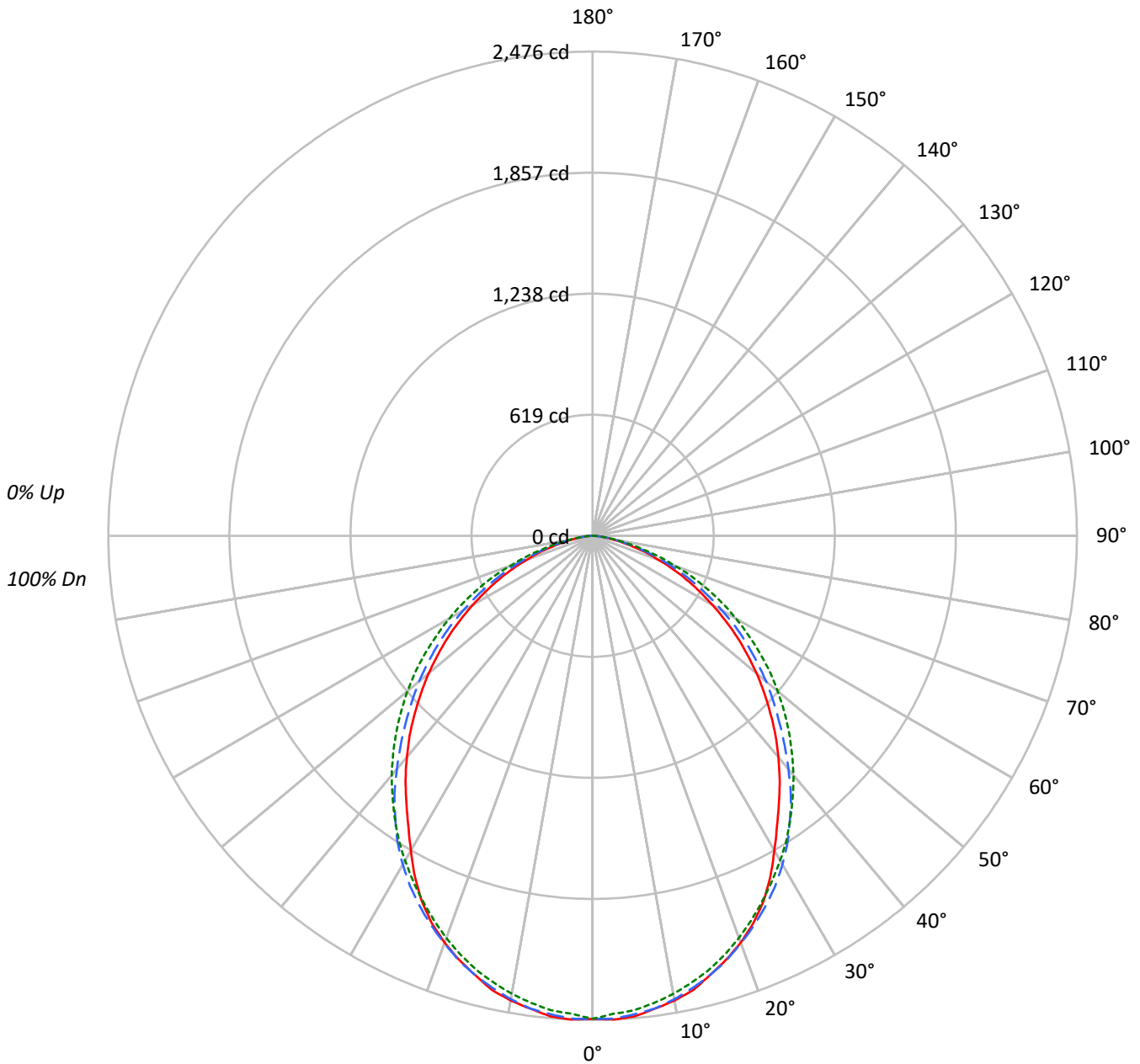
Lumens per Lamp: N/A  
Luminaire Lumens: 5711.0 lumens  
Efficiency: N/A  
Efficacy: 85.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	6646	6646	6646
5°	6664	6636	6579
10°	6593	6575	6500
15°	6476	6476	6402
20°	6339	6347	6266
25°	6130	6206	6108
30°	5773	6032	5959
35°	5455	5782	5792
40°	5190	5470	5613
45°	4893	5138	5402
50°	4580	4842	5172
55°	4225	4505	4892
60°	3805	4111	4550
65°	3359	3656	4139
70°	2799	3113	3516
75°	2200	2486	2752
80°	1573	1750	1940
85°	1025	1025	966



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.5	4.1
10°-20°	653.3	11.4
20°-30°	954.7	16.7
30°-40°	1083.7	19.0
40°-50°	1046.1	18.3
50°-60°	862.9	15.1
60°-70°	574.7	10.1
70°-80°	257.1	4.5
80°-90°	46.0	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°	1840.5	32.2
0°-40°	2924.1	51.2
0°-60°	4833.2	84.6
0°-90°	5711.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5711.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2470	2470	2470	2470	2470	
5°	2467	2466	2457	2443	2436	233
15°	2325	2330	2325	2314	2298	655
25°	2065	2081	2090	2075	2057	946
35°	1660	1683	1760	1770	1763	1040
45°	1286	1308	1350	1412	1420	992
55°	900	916	960	1013	1043	804
65°	528	542	574	615	650	523
75°	212	223	239	250	265	231
85°	33	33	33	31	31	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2469.9	2469.9	2469.9	2469.9	2469.9
2.5°	2476.5	2477.5	2471.8	2456.6	2447.1
5°	2467.0	2466.1	2456.6	2443.3	2435.7
7.5°	2439.5	2441.4	2438.5	2419.6	2409.1
10°	2412.9	2413.9	2406.3	2391.1	2378.8
12.5°	2378.8	2377.8	2367.4	2359.8	2339.9
15°	2324.7	2330.4	2324.7	2314.2	2298.1
17.5°	2272.5	2272.5	2276.3	2258.3	2245.9
20°	2213.7	2216.5	2216.5	2202.3	2188.1
22.5°	2145.4	2153.9	2156.7	2141.6	2124.5
25°	2064.7	2080.8	2090.3	2075.1	2057.1
27.5°	1967.0	1991.6	2020.1	2008.7	1988.8
30°	1857.9	1893.9	1941.3	1931.9	1917.6
32.5°	1754.4	1790.5	1856.0	1852.2	1844.6
35°	1660.5	1683.3	1760.1	1769.6	1763.0
37.5°	1571.3	1592.2	1664.3	1686.1	1680.4
40°	1477.4	1500.1	1557.1	1596.0	1597.9
42.5°	1384.4	1406.2	1452.7	1508.7	1508.7
45°	1285.7	1307.5	1350.2	1411.9	1419.5
47.5°	1188.9	1211.7	1253.4	1315.1	1327.4
50°	1094.0	1114.9	1156.6	1216.4	1235.4
52.5°	995.3	1018.1	1058.9	1114.0	1141.5
55°	900.5	915.6	960.2	1013.4	1042.8
57.5°	801.8	816.0	866.3	911.8	942.2
60°	706.9	724.9	763.8	810.3	845.4
62.5°	615.8	634.8	668.0	708.8	748.6
65°	527.6	541.8	574.1	614.9	650.0
67.5°	442.2	454.5	486.8	515.2	552.2
70°	355.8	371.9	395.7	423.2	446.9
72.5°	286.6	293.2	313.1	333.0	357.7
75°	211.6	223.0	239.1	250.5	264.7
77.5°	151.8	158.5	167.9	177.4	190.7
80°	101.5	104.4	112.9	114.8	125.2
82.5°	61.7	63.6	65.5	66.4	70.2
85°	33.2	33.2	33.2	31.3	31.3
87.5°	19.0	19.0	16.1	13.3	9.5
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)