

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: P557638

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-81-87-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: P557638  
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-81-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

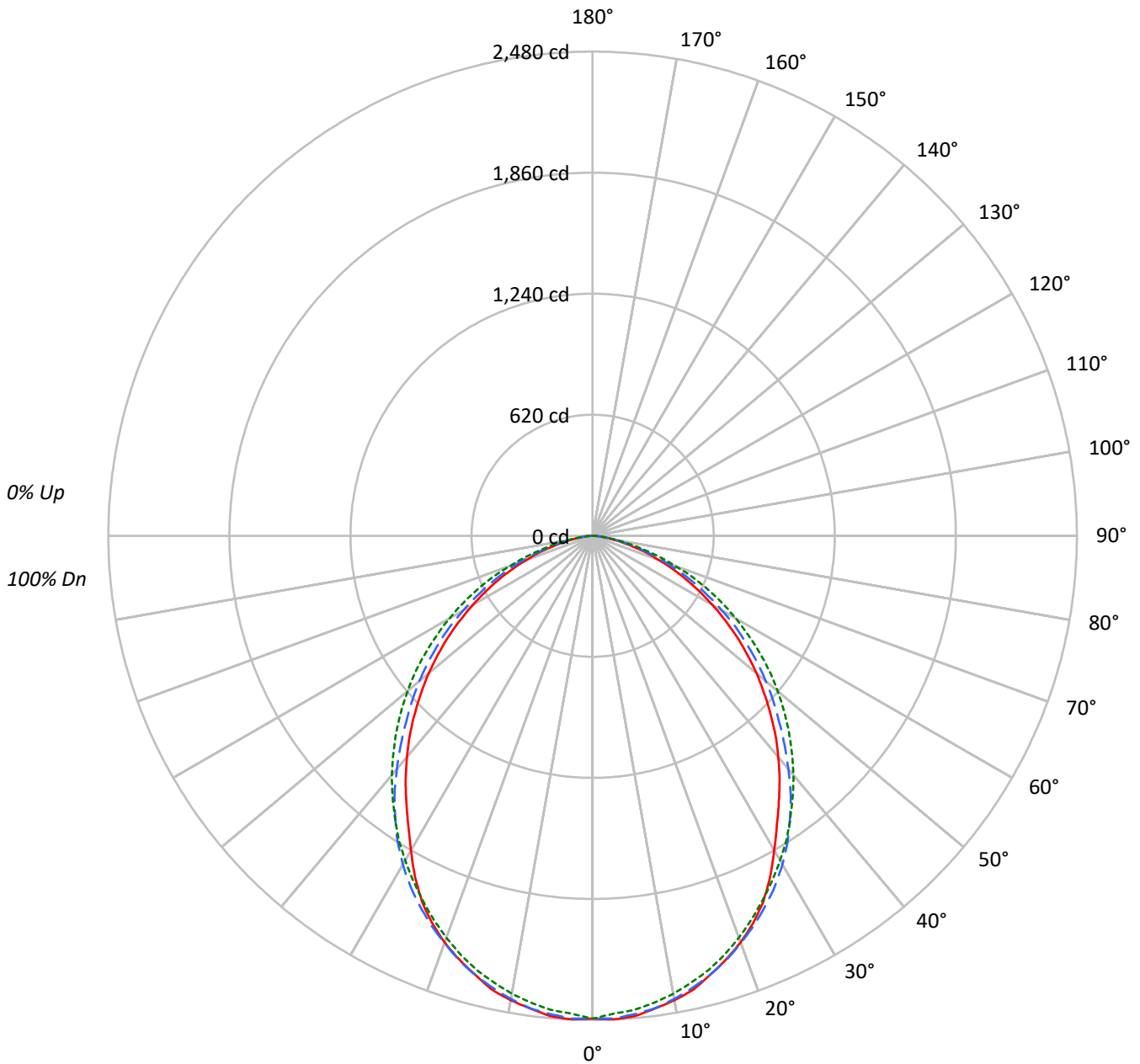
Lumens per Lamp: N/A  
Luminaire Lumens: 5718.1 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	6655	6655	6655
5°	6672	6644	6588
10°	6601	6583	6508
15°	6484	6484	6410
20°	6347	6355	6273
25°	6138	6214	6115
30°	5780	6040	5966
35°	5461	5789	5798
40°	5196	5476	5620
45°	4899	5145	5409
50°	4586	4848	5178
55°	4230	4510	4898
60°	3809	4116	4556
65°	3363	3660	4144
70°	2803	3117	3521
75°	2203	2489	2756
80°	1576	1753	1943
85°	1028	1028	969



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	232.8	4.1
10°-20°	654.1	11.4
20°-30°	955.8	16.7
30°-40°	1085.0	19.0
40°-50°	1047.4	18.3
50°-60°	864.0	15.1
60°-70°	575.4	10.1
70°-80°	257.5	4.5
80°-90°	46.1	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°	1842.7	32.2
0°-40°	2927.7	51.2
0°-60°	4839.1	84.6
0°-90°	5718.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5718.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2473	2473	2473	2473	2473	
5°	2470	2469	2460	2446	2439	234
15°	2328	2333	2328	2317	2301	656
25°	2067	2083	2093	2078	2060	947
35°	1662	1685	1762	1772	1765	1042
45°	1287	1309	1352	1414	1421	993
55°	902	917	961	1015	1044	805
65°	528	542	575	616	651	524
75°	212	223	239	251	265	232
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°	2472.9	2472.9	2472.9	2472.9	2472.9
2.5°	2479.5	2480.5	2474.8	2459.6	2450.1
5°	2470.0	2469.1	2459.6	2446.3	2438.7
7.5°	2442.5	2444.4	2441.5	2422.5	2412.1
10°	2415.9	2416.8	2409.2	2394.0	2381.7
12.5°	2381.7	2380.7	2370.3	2362.7	2342.7
15°	2327.5	2333.2	2327.5	2317.1	2300.9
17.5°	2275.3	2275.3	2279.1	2261.0	2248.7
20°	2216.4	2219.2	2219.2	2205.0	2190.7
22.5°	2148.0	2156.5	2159.4	2144.2	2127.1
25°	2067.2	2083.4	2092.9	2077.7	2059.6
27.5°	1969.4	1994.1	2022.6	2011.2	1991.2
30°	1860.1	1896.2	1943.7	1934.2	1920.0
32.5°	1756.6	1792.7	1858.2	1854.4	1846.8
35°	1662.5	1685.3	1762.3	1771.8	1765.1
37.5°	1573.2	1594.1	1666.3	1688.2	1682.5
40°	1479.2	1502.0	1559.0	1597.9	1599.8
42.5°	1386.1	1407.9	1454.5	1510.5	1510.5
45°	1287.3	1309.1	1351.9	1413.6	1421.2
47.5°	1190.4	1213.2	1255.0	1316.7	1329.1
50°	1095.4	1116.3	1158.1	1217.9	1236.9
52.5°	996.6	1019.4	1060.2	1115.3	1142.9
55°	901.6	916.8	961.4	1014.6	1044.1
57.5°	802.8	817.0	867.4	913.0	943.4
60°	707.8	725.8	764.8	811.3	846.5
62.5°	616.6	635.6	668.8	709.7	749.6
65°	528.2	542.5	574.8	615.6	650.8
67.5°	442.7	455.1	487.4	515.9	552.9
70°	356.3	372.4	396.2	423.7	447.5
72.5°	286.9	293.6	313.5	333.5	358.2
75°	211.9	223.3	239.4	250.8	265.1
77.5°	152.0	158.7	168.2	177.7	191.0
80°	101.7	104.5	113.1	115.0	125.4
82.5°	61.8	63.7	65.6	66.5	70.3
85°	33.3	33.3	33.3	31.4	31.4
87.5°	19.0	19.0	16.2	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)