

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: P557976

Luminaire Tested: **FUSL-12-4-LD4-3LO-30-UNV-82-88-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: P557976  
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-LD4-3LO-30-UNV-82-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

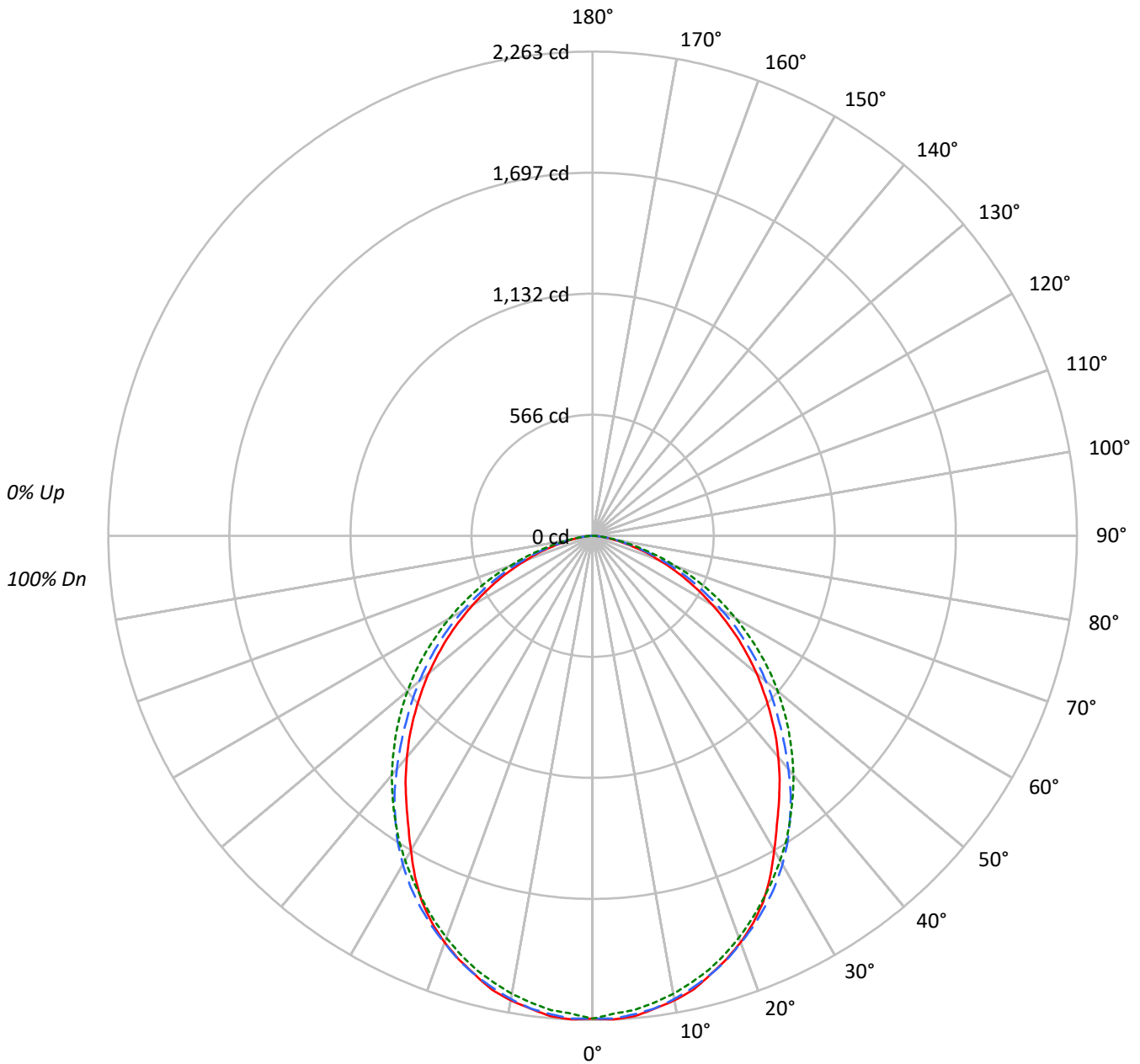
Lumens per Lamp: N/A  
Luminaire Lumens: 5218.0 lumens  
Efficiency: N/A  
Efficacy: 74.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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°	6073	6073	6073
5°	6089	6063	6011
10°	6024	6008	5939
15°	5917	5917	5850
20°	5792	5800	5725
25°	5601	5671	5581
30°	5275	5512	5444
35°	4984	5283	5292
40°	4742	4998	5128
45°	4470	4695	4936
50°	4185	4424	4726
55°	3860	4116	4470
60°	3476	3756	4157
65°	3069	3340	3782
70°	2558	2844	3212
75°	2010	2272	2515
80°	1438	1599	1773
85°	936	936	883



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	212.5	4.1
10°-20°	596.9	11.4
20°-30°	872.3	16.7
30°-40°	990.1	19.0
40°-50°	955.8	18.3
50°-60°	788.5	15.1
60°-70°	525.0	10.1
70°-80°	235.0	4.5
80°-90°	42.0	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°	1681.6	32.2
0°-40°	2671.7	51.2
0°-60°	4416.0	84.6
0°-90°	5218.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5218.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2257	2257	2257	2257	2257	
5°	2254	2253	2244	2232	2225	213
15°	2124	2129	2124	2114	2100	599
25°	1886	1901	1910	1896	1880	864
35°	1517	1538	1608	1617	1611	951
45°	1175	1195	1234	1290	1297	906
55°	823	837	877	926	953	734
65°	482	495	524	562	594	478
75°	193	204	218	229	242	211
85°	30	30	30	29	29	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2256.7	2256.7	2256.7	2256.7	2256.7
2.5°	2262.7	2263.6	2258.4	2244.5	2235.8
5°	2254.0	2253.2	2244.5	2232.4	2225.4
7.5°	2228.9	2230.6	2228.0	2210.7	2201.2
10°	2204.6	2205.5	2198.6	2184.7	2173.4
12.5°	2173.4	2172.6	2163.0	2156.1	2137.9
15°	2124.0	2129.2	2124.0	2114.5	2099.7
17.5°	2076.3	2076.3	2079.8	2063.3	2052.1
20°	2022.6	2025.2	2025.2	2012.2	1999.2
22.5°	1960.2	1968.0	1970.6	1956.7	1941.1
25°	1886.5	1901.2	1909.9	1896.0	1879.5
27.5°	1797.2	1819.7	1845.7	1835.3	1817.1
30°	1697.5	1730.4	1773.8	1765.1	1752.1
32.5°	1603.0	1635.9	1695.7	1692.3	1685.3
35°	1517.1	1538.0	1608.2	1616.8	1610.8
37.5°	1435.7	1454.7	1520.6	1540.6	1535.4
40°	1349.8	1370.6	1422.7	1458.2	1459.9
42.5°	1264.9	1284.8	1327.3	1378.4	1378.4
45°	1174.7	1194.6	1233.7	1290.0	1296.9
47.5°	1086.3	1107.1	1145.2	1201.6	1212.9
50°	999.6	1018.7	1056.8	1111.4	1128.8
52.5°	909.4	930.2	967.5	1017.8	1042.9
55°	822.7	836.6	877.3	925.9	952.8
57.5°	732.6	745.6	791.5	833.1	860.9
60°	645.9	662.3	697.9	740.4	772.4
62.5°	562.6	580.0	610.3	647.6	684.0
65°	482.0	495.0	524.5	561.8	593.9
67.5°	404.0	415.3	444.7	470.7	504.6
70°	325.1	339.8	361.5	386.7	408.3
72.5°	261.8	267.9	286.1	304.3	326.8
75°	193.3	203.7	218.5	228.9	241.9
77.5°	138.7	144.8	153.4	162.1	174.3
80°	92.8	95.4	103.2	104.9	114.4
82.5°	56.4	58.1	59.8	60.7	64.2
85°	30.3	30.3	30.3	28.6	28.6
87.5°	17.3	17.3	14.7	12.1	8.7
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)