

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: P557590

Luminaire Tested: **FUSL-12-4-LD4-2STD-40-UNV-82-87-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: P557590  
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-40-UNV-82-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

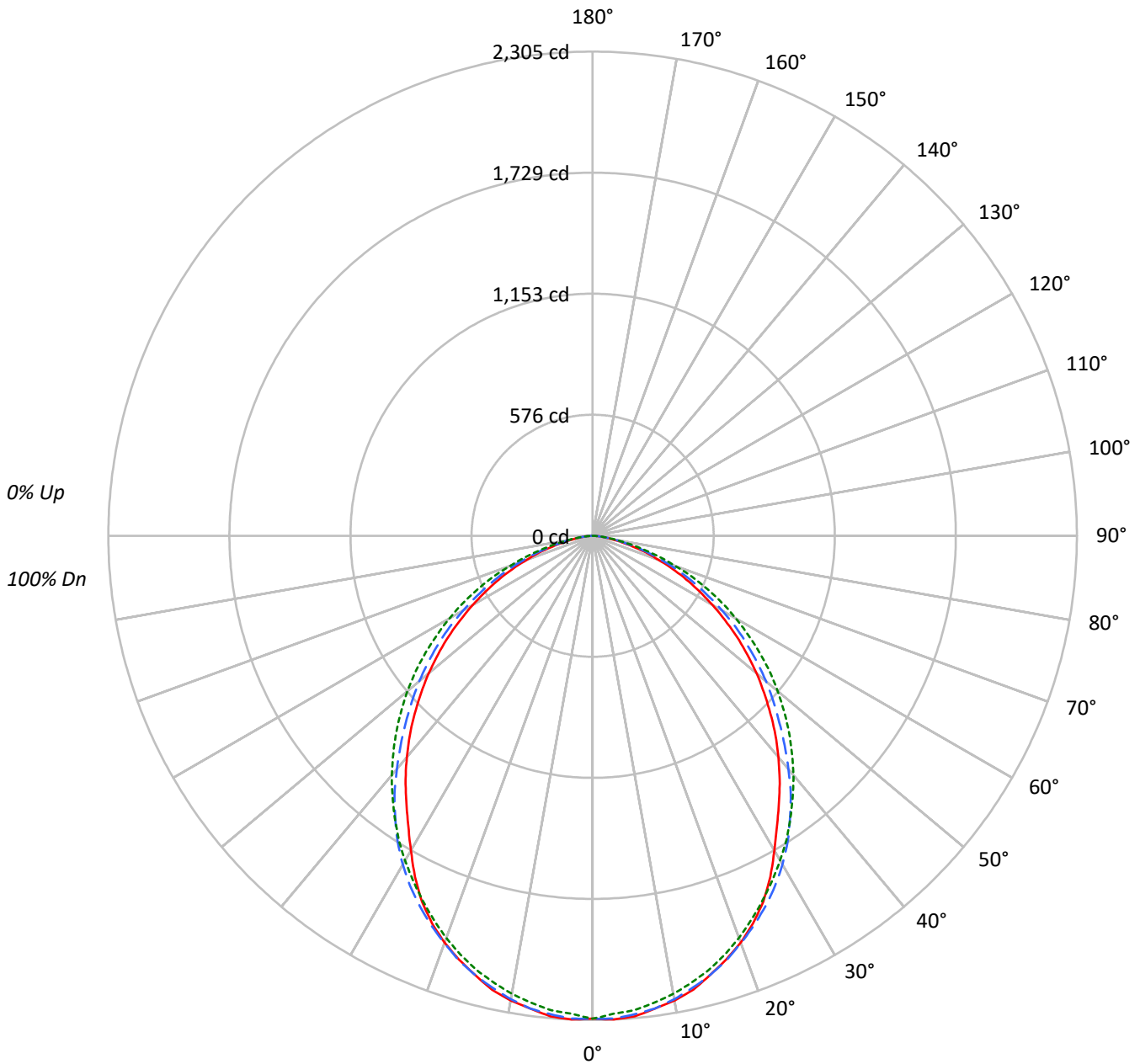
Lumens per Lamp: N/A  
Luminaire Lumens: 5316.0 lumens  
Efficiency: N/A  
Efficacy: 79.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	6187	6187	6187
5°	6203	6177	6124
10°	6137	6121	6050
15°	6028	6028	5960
20°	5901	5908	5832
25°	5706	5777	5685
30°	5374	5615	5546
35°	5077	5382	5391
40°	4831	5091	5225
45°	4555	4783	5028
50°	4263	4508	4814
55°	3932	4193	4554
60°	3541	3827	4236
65°	3127	3403	3852
70°	2606	2898	3273
75°	2048	2314	2562
80°	1464	1629	1807
85°	954	954	898



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	216.5	4.1
10°-20°	608.1	11.4
20°-30°	888.6	16.7
30°-40°	1008.7	19.0
40°-50°	973.7	18.3
50°-60°	803.3	15.1
60°-70°	534.9	10.1
70°-80°	239.4	4.5
80°-90°	42.8	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°	1713.2	32.2
0°-40°	2721.9	51.2
0°-60°	4498.9	84.6
0°-90°	5316.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5316.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2299	2299	2299	2299	2299	
5°	2296	2296	2287	2274	2267	217
15°	2164	2169	2164	2154	2139	610
25°	1922	1937	1946	1932	1915	880
35°	1546	1567	1638	1647	1641	968
45°	1197	1217	1257	1314	1321	923
55°	838	852	894	943	971	748
65°	491	504	534	572	605	487
75°	197	208	223	233	246	215
85°	31	31	31	29	29	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2299.0	2299.0	2299.0	2299.0	2299.0
2.5°	2305.2	2306.1	2300.8	2286.7	2277.8
5°	2296.4	2295.5	2286.7	2274.3	2267.2
7.5°	2270.8	2272.5	2269.9	2252.2	2242.5
10°	2246.0	2246.9	2239.9	2225.7	2214.2
12.5°	2214.2	2213.4	2203.6	2196.6	2178.0
15°	2163.9	2169.2	2163.9	2154.2	2139.2
17.5°	2115.3	2115.3	2118.9	2102.1	2090.6
20°	2060.6	2063.2	2063.2	2050.0	2036.7
22.5°	1997.0	2004.9	2007.6	1993.4	1977.5
25°	1921.9	1936.9	1945.7	1931.6	1914.8
27.5°	1830.9	1853.9	1880.4	1869.8	1851.2
30°	1729.4	1762.9	1807.1	1798.2	1785.0
32.5°	1633.1	1666.6	1727.6	1724.1	1717.0
35°	1545.6	1566.8	1638.4	1647.2	1641.0
37.5°	1462.6	1482.1	1549.2	1569.5	1564.2
40°	1375.2	1396.4	1449.4	1485.6	1487.3
42.5°	1288.6	1308.9	1352.2	1404.3	1404.3
45°	1196.8	1217.1	1256.8	1314.2	1321.3
47.5°	1106.7	1127.9	1166.7	1224.1	1235.6
50°	1018.4	1037.8	1076.7	1132.3	1150.0
52.5°	926.5	947.7	985.7	1036.9	1062.5
55°	838.2	852.3	893.8	943.3	970.7
57.5°	746.3	759.6	806.4	848.8	877.0
60°	658.0	674.8	711.0	754.3	787.0
62.5°	573.2	590.9	621.8	659.8	696.9
65°	491.1	504.3	534.4	572.3	605.0
67.5°	411.6	423.1	453.1	479.6	514.0
70°	331.2	346.2	368.3	393.9	416.0
72.5°	266.7	272.9	291.5	310.0	333.0
75°	197.0	207.6	222.6	233.2	246.4
77.5°	141.3	147.5	156.3	165.2	177.5
80°	94.5	97.2	105.1	106.9	116.6
82.5°	57.4	59.2	60.9	61.8	65.4
85°	30.9	30.9	30.9	29.1	29.1
87.5°	17.7	17.7	15.0	12.4	8.8
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)