

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: P557281

Luminaire Tested: **FUSL-12-4-LD4-2LO-35-UNV-93-84-EDD**

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: P557281  
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-LD4-2LO-35-UNV-93-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

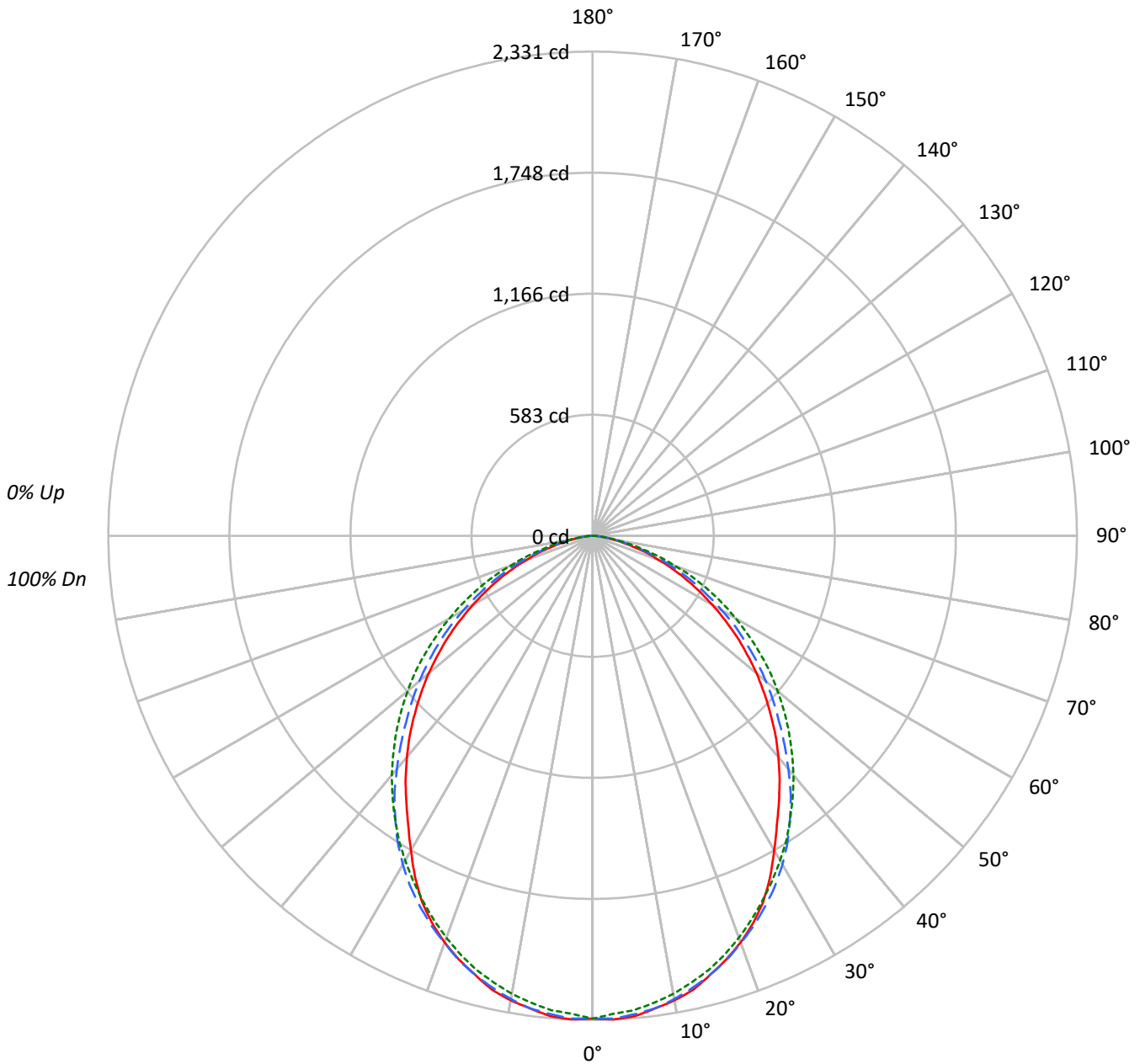
Lumens per Lamp: N/A  
Luminaire Lumens: 5375.0 lumens  
Efficiency: N/A  
Efficacy: 114.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	6255	6255	6255
5°	6272	6245	6192
10°	6205	6188	6118
15°	6095	6095	6026
20°	5966	5974	5897
25°	5770	5841	5749
30°	5433	5677	5608
35°	5134	5442	5451
40°	4884	5148	5283
45°	4605	4836	5084
50°	4311	4557	4868
55°	3976	4240	4604
60°	3581	3869	4282
65°	3161	3440	3895
70°	2635	2930	3309
75°	2070	2339	2591
80°	1481	1647	1827
85°	966	966	911



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	218.9	4.1
10°-20°	614.8	11.4
20°-30°	898.5	16.7
30°-40°	1019.9	19.0
40°-50°	984.6	18.3
50°-60°	812.2	15.1
60°-70°	540.9	10.1
70°-80°	242.0	4.5
80°-90°	43.3	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°	1732.2	32.2
0°-40°	2752.1	51.2
0°-60°	4548.8	84.6
0°-90°	5375.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5375.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2324	2324	2324	2324	2324	
5°	2322	2321	2312	2300	2292	220
15°	2188	2193	2188	2178	2163	617
25°	1943	1958	1967	1953	1936	890
35°	1563	1584	1657	1666	1659	979
45°	1210	1231	1271	1329	1336	934
55°	848	862	904	954	981	756
65°	496	510	540	579	612	492
75°	199	210	225	236	249	218
85°	31	31	31	30	30	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2324.5	2324.5	2324.5	2324.5	2324.5
2.5°	2330.8	2331.7	2326.3	2312.0	2303.1
5°	2321.9	2321.0	2312.0	2299.5	2292.4
7.5°	2296.0	2297.8	2295.1	2277.2	2267.4
10°	2271.0	2271.9	2264.7	2250.4	2238.8
12.5°	2238.8	2237.9	2228.1	2221.0	2202.2
15°	2187.9	2193.3	2187.9	2178.1	2162.9
17.5°	2138.8	2138.8	2142.4	2125.4	2113.8
20°	2083.4	2086.1	2086.1	2072.7	2059.3
22.5°	2019.1	2027.2	2029.8	2015.6	1999.5
25°	1943.2	1958.4	1967.3	1953.0	1936.1
27.5°	1851.2	1874.5	1901.3	1890.5	1871.8
30°	1748.5	1782.5	1827.1	1818.2	1804.8
32.5°	1651.2	1685.1	1746.8	1743.2	1736.0
35°	1562.8	1584.2	1656.6	1665.5	1659.2
37.5°	1478.9	1498.5	1566.4	1586.9	1581.6
40°	1390.4	1411.9	1465.5	1502.1	1503.9
42.5°	1302.9	1323.5	1367.2	1419.9	1419.9
45°	1210.1	1230.6	1270.8	1328.8	1336.0
47.5°	1119.0	1140.4	1179.7	1237.7	1249.3
50°	1029.7	1049.3	1088.6	1144.9	1162.7
52.5°	936.8	958.2	996.6	1048.4	1074.3
55°	847.5	861.8	903.7	953.8	981.4
57.5°	754.6	768.0	815.3	858.2	886.8
60°	665.3	682.3	718.9	762.6	795.7
62.5°	579.6	597.4	628.7	667.1	704.6
65°	496.5	509.9	540.3	578.7	611.7
67.5°	416.2	427.8	458.1	484.9	519.7
70°	334.9	350.1	372.4	398.3	420.6
72.5°	269.7	275.9	294.7	313.5	336.7
75°	199.1	209.9	225.0	235.8	249.2
77.5°	142.9	149.1	158.1	167.0	179.5
80°	95.6	98.2	106.3	108.1	117.9
82.5°	58.0	59.8	61.6	62.5	66.1
85°	31.3	31.3	31.3	29.5	29.5
87.5°	17.9	17.9	15.2	12.5	8.9
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)