

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: P556960

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-93-84-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: P556960  
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-LD4-2HI-30-UNV-93-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

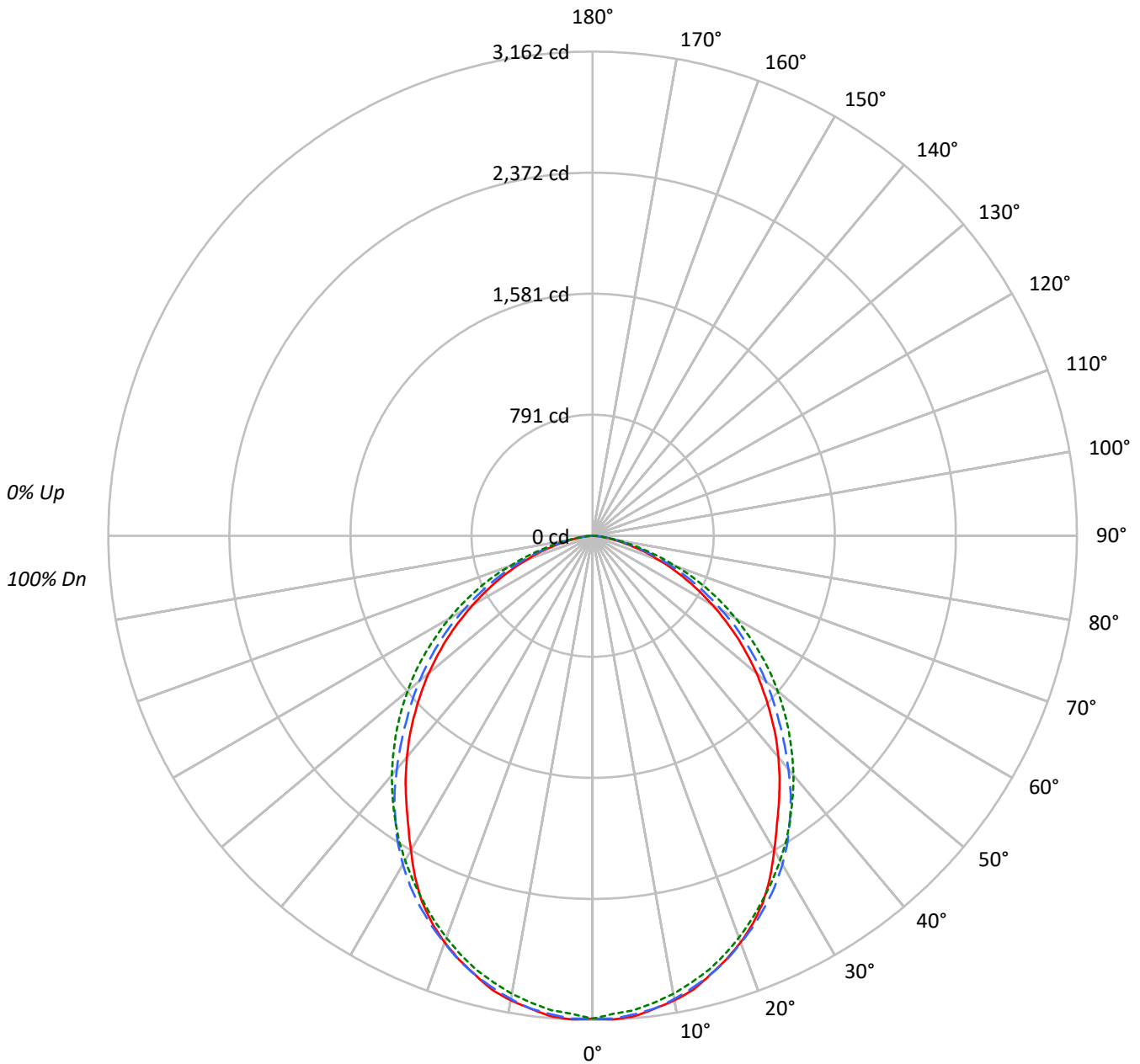
Lumens per Lamp: N/A  
Luminaire Lumens: 7291.0 lumens  
Efficiency: N/A  
Efficacy: 84.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	8485	8485	8485
5°	8508	8472	8400
10°	8417	8394	8298
15°	8268	8268	8174
20°	8093	8103	7999
25°	7826	7924	7798
30°	7370	7701	7607
35°	6964	7382	7394
40°	6626	6983	7166
45°	6247	6560	6897
50°	5847	6182	6603
55°	5393	5751	6246
60°	4857	5248	5809
65°	4288	4667	5284
70°	3574	3974	4489
75°	2808	3174	3514
80°	2008	2235	2478
85°	1309	1309	1235



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	296.9	4.1
10°-20°	834.0	11.4
20°-30°	1218.8	16.7
30°-40°	1383.4	19.0
40°-50°	1335.5	18.3
50°-60°	1101.7	15.1
60°-70°	733.7	10.1
70°-80°	328.3	4.5
80°-90°	58.7	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°	2349.7	32.2
0°-40°	3733.1	51.2
0°-60°	6170.3	84.6
0°-90°	7291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7291.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3153	3153	3153	3153	3153	
5°	3150	3148	3136	3119	3110	298
15°	2968	2975	2968	2954	2934	837
25°	2636	2656	2669	2649	2626	1207
35°	2120	2149	2247	2259	2251	1328
45°	1641	1669	1724	1802	1812	1266
55°	1150	1169	1226	1294	1331	1026
65°	674	692	733	785	830	668
75°	270	285	305	320	338	295
85°	42	42	42	40	40	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3153.2	3153.2	3153.2	3153.2	3153.2
2.5°	3161.6	3162.9	3155.6	3136.2	3124.1
5°	3149.5	3148.3	3136.2	3119.3	3109.6
7.5°	3114.4	3116.8	3113.2	3089.0	3075.6
10°	3080.5	3081.7	3072.0	3052.6	3036.9
12.5°	3036.9	3035.7	3022.3	3012.7	2987.2
15°	2967.8	2975.1	2967.8	2954.5	2933.9
17.5°	2901.2	2901.2	2906.1	2883.0	2867.3
20°	2826.1	2829.7	2829.7	2811.6	2793.4
22.5°	2738.9	2749.8	2753.4	2734.0	2712.2
25°	2635.9	2656.5	2668.6	2649.2	2626.2
27.5°	2511.1	2542.6	2579.0	2564.4	2539.0
30°	2371.8	2417.9	2478.4	2466.3	2448.2
32.5°	2239.8	2285.8	2369.4	2364.6	2354.9
35°	2119.9	2149.0	2247.1	2259.2	2250.7
37.5°	2006.0	2032.7	2124.7	2152.6	2145.3
40°	1886.1	1915.2	1987.8	2037.5	2039.9
42.5°	1767.4	1795.2	1854.6	1926.1	1926.1
45°	1641.4	1669.3	1723.8	1802.5	1812.2
47.5°	1517.8	1546.9	1600.2	1678.9	1694.7
50°	1396.7	1423.3	1476.6	1553.0	1577.2
52.5°	1270.7	1299.8	1351.9	1422.1	1457.3
55°	1149.6	1169.0	1225.9	1293.7	1331.3
57.5°	1023.6	1041.8	1106.0	1164.1	1202.9
60°	902.5	925.5	975.1	1034.5	1079.3
62.5°	786.2	810.4	852.8	904.9	955.8
65°	673.5	691.7	732.9	785.0	829.8
67.5°	564.5	580.2	621.4	657.8	705.0
70°	454.3	474.9	505.1	540.3	570.6
72.5°	365.8	374.3	399.7	425.2	456.7
75°	270.1	284.7	305.3	319.8	338.0
77.5°	193.8	202.3	214.4	226.5	243.5
80°	129.6	133.2	144.2	146.6	159.9
82.5°	78.7	81.2	83.6	84.8	89.6
85°	42.4	42.4	42.4	40.0	40.0
87.5°	24.2	24.2	20.6	17.0	12.1
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)