

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: P557152

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-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: P557152  
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-50-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 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

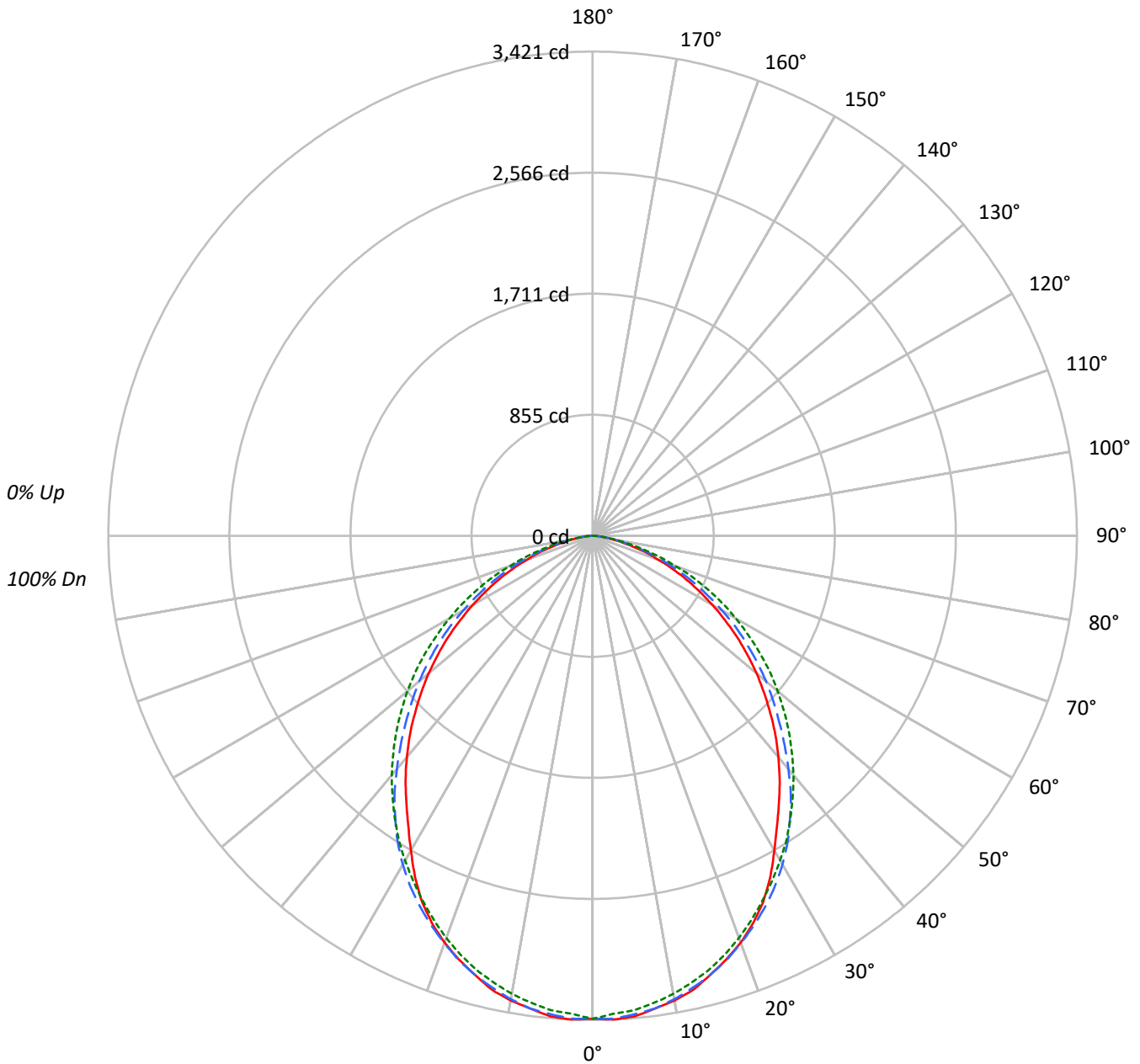
Lumens per Lamp: N/A  
Luminaire Lumens: 7890.0 lumens  
Efficiency: N/A  
Efficacy: 91.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	9182	9182	9182
5°	9207	9168	9090
10°	9109	9084	8980
15°	8947	8947	8845
20°	8758	8769	8657
25°	8470	8575	8438
30°	7975	8334	8232
35°	7536	7988	8001
40°	7170	7557	7755
45°	6760	7099	7463
50°	6327	6690	7145
55°	5836	6224	6759
60°	5256	5680	6286
65°	4641	5050	5718
70°	3868	4301	4858
75°	3039	3434	3802
80°	2174	2417	2681
85°	1417	1417	1337



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	321.3	4.1
10°-20°	902.5	11.4
20°-30°	1318.9	16.7
30°-40°	1497.1	19.0
40°-50°	1445.2	18.3
50°-60°	1192.2	15.1
60°-70°	793.9	10.1
70°-80°	355.3	4.5
80°-90°	63.6	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°	2542.7	32.2
0°-40°	4039.8	51.2
0°-60°	6677.3	84.6
0°-90°	7890.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7890.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3412	3412	3412	3412	3412	
5°	3408	3407	3394	3376	3365	323
15°	3212	3220	3212	3197	3175	905
25°	2852	2875	2888	2867	2842	1306
35°	2294	2326	2432	2445	2436	1437
45°	1776	1806	1865	1951	1961	1370
55°	1244	1265	1327	1400	1441	1110
65°	729	748	793	850	898	723
75°	292	308	330	346	366	320
85°	46	46	46	43	43	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3412.2	3412.2	3412.2	3412.2	3412.2
2.5°	3421.4	3422.7	3414.8	3393.9	3380.8
5°	3408.3	3407.0	3393.9	3375.5	3365.0
7.5°	3370.3	3372.9	3369.0	3342.7	3328.3
10°	3333.6	3334.9	3324.4	3303.4	3286.4
12.5°	3286.4	3285.1	3270.6	3260.2	3232.6
15°	3211.7	3219.5	3211.7	3197.2	3175.0
17.5°	3139.6	3139.6	3144.8	3119.9	3102.9
20°	3058.3	3062.2	3062.2	3042.6	3022.9
22.5°	2963.9	2975.7	2979.6	2958.7	2935.1
25°	2852.5	2874.8	2887.9	2866.9	2842.0
27.5°	2717.5	2751.5	2790.9	2775.1	2747.6
30°	2566.7	2616.5	2682.1	2669.0	2649.3
32.5°	2423.8	2473.6	2564.1	2558.8	2548.4
35°	2294.0	2325.5	2431.7	2444.8	2435.6
37.5°	2170.8	2199.7	2299.3	2329.4	2321.6
40°	2041.0	2072.5	2151.2	2204.9	2207.5
42.5°	1912.6	1942.7	2007.0	2084.3	2084.3
45°	1776.2	1806.4	1865.4	1950.6	1961.1
47.5°	1642.5	1674.0	1731.7	1816.9	1833.9
50°	1511.4	1540.3	1598.0	1680.5	1706.8
52.5°	1375.1	1406.6	1462.9	1539.0	1577.0
55°	1244.0	1265.0	1326.6	1400.0	1440.7
57.5°	1107.7	1127.4	1196.8	1259.8	1301.7
60°	976.6	1001.5	1055.3	1119.5	1168.0
62.5°	850.8	877.0	922.9	979.2	1034.3
65°	728.8	748.5	793.1	849.5	898.0
67.5°	610.9	627.9	672.5	711.8	762.9
70°	491.6	513.9	546.6	584.7	617.4
72.5°	395.9	405.1	432.6	460.1	494.2
75°	292.3	308.1	330.3	346.1	365.7
77.5°	209.7	218.9	232.0	245.1	263.5
80°	140.3	144.2	156.0	158.6	173.0
82.5°	85.2	87.8	90.5	91.8	97.0
85°	45.9	45.9	45.9	43.3	43.3
87.5°	26.2	26.2	22.3	18.4	13.1
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)