

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: P556967

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-93-87-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: P556967  
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-93-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

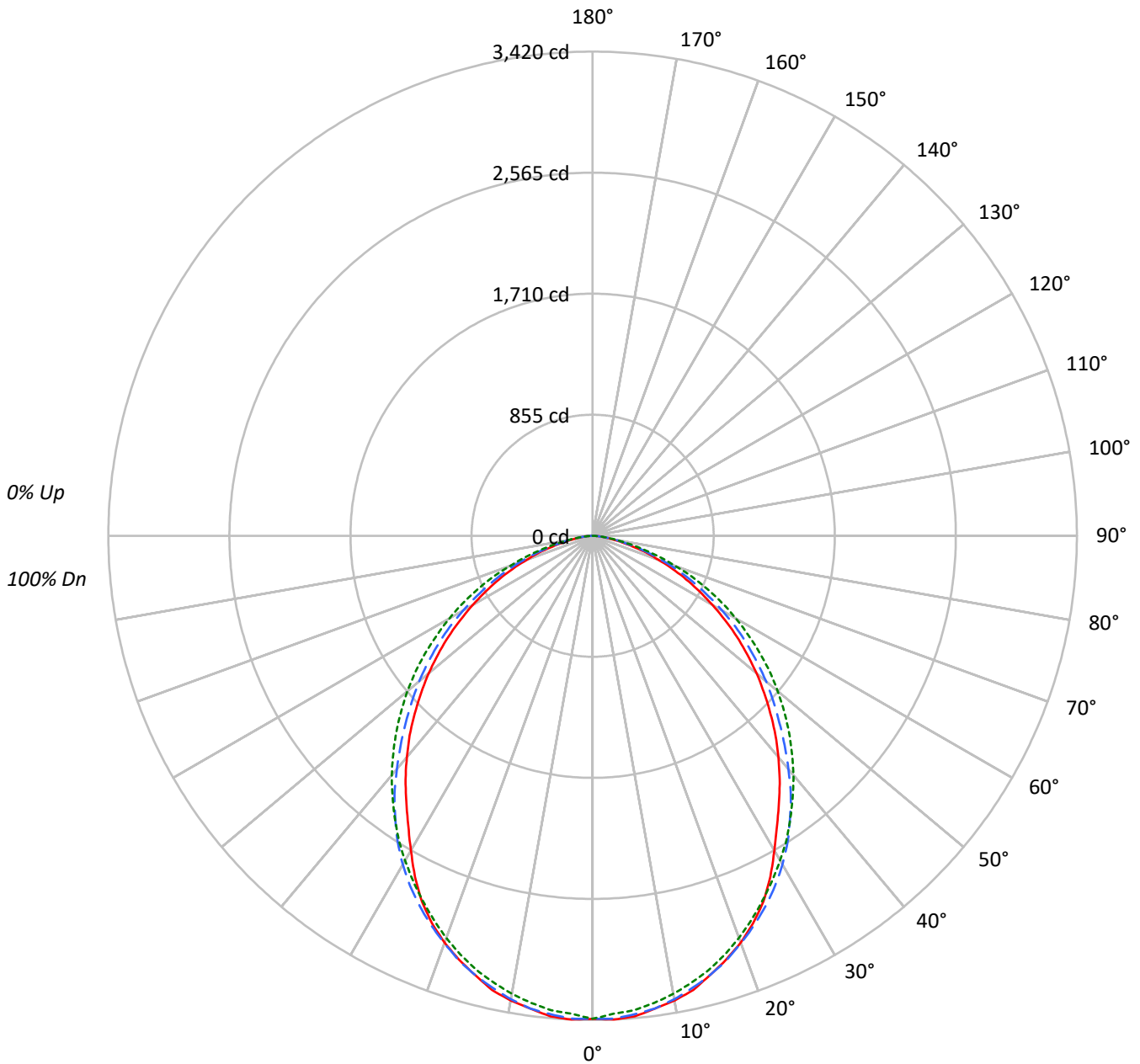
Lumens per Lamp: N/A  
Luminaire Lumens: 7888.0 lumens  
Efficiency: N/A  
Efficacy: 91.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	9180	9180	9180
5°	9204	9165	9088
10°	9107	9081	8978
15°	8945	8945	8843
20°	8756	8767	8654
25°	8467	8572	8436
30°	7974	8332	8230
35°	7534	7986	7999
40°	7168	7555	7753
45°	6758	7097	7461
50°	6326	6688	7143
55°	5835	6222	6757
60°	5255	5678	6285
65°	4640	5049	5716
70°	3867	4300	4857
75°	3039	3434	3801
80°	2173	2417	2681
85°	1417	1417	1334



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	321.2	4.1
10°-20°	902.3	11.4
20°-30°	1318.6	16.7
30°-40°	1496.7	19.0
40°-50°	1444.9	18.3
50°-60°	1191.9	15.1
60°-70°	793.7	10.1
70°-80°	355.2	4.5
80°-90°	63.5	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°	2542.1	32.2
0°-40°	4038.8	51.2
0°-60°	6675.6	84.6
0°-90°	7888.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7888.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3411	3411	3411	3411	3411	
5°	3407	3406	3393	3375	3364	323
15°	3211	3219	3211	3196	3174	905
25°	2852	2874	2887	2866	2841	1306
35°	2294	2325	2431	2444	2435	1437
45°	1776	1806	1865	1950	1961	1370
55°	1244	1265	1326	1400	1440	1110
65°	729	748	793	849	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°	3411.4	3411.4	3411.4	3411.4	3411.4
2.5°	3420.5	3421.8	3414.0	3393.0	3379.9
5°	3407.4	3406.1	3393.0	3374.7	3364.2
7.5°	3369.4	3372.0	3368.1	3341.9	3327.5
10°	3332.7	3334.0	3323.5	3302.6	3285.5
12.5°	3285.5	3284.2	3269.8	3259.3	3231.8
15°	3210.8	3218.7	3210.8	3196.4	3174.1
17.5°	3138.8	3138.8	3144.0	3119.1	3102.1
20°	3057.5	3061.4	3061.4	3041.8	3022.1
22.5°	2963.1	2974.9	2978.9	2957.9	2934.3
25°	2851.8	2874.0	2887.1	2866.2	2841.3
27.5°	2716.8	2750.8	2790.2	2774.4	2746.9
30°	2566.1	2615.9	2681.4	2668.3	2648.6
32.5°	2423.2	2473.0	2563.4	2558.2	2547.7
35°	2293.5	2324.9	2431.1	2444.2	2435.0
37.5°	2170.3	2199.1	2298.7	2328.8	2321.0
40°	2040.5	2072.0	2150.6	2204.3	2207.0
42.5°	1912.1	1942.2	2006.4	2083.8	2083.8
45°	1775.8	1805.9	1864.9	1950.1	1960.6
47.5°	1642.1	1673.6	1731.2	1816.4	1833.5
50°	1511.1	1539.9	1597.6	1680.1	1706.3
52.5°	1374.8	1406.2	1462.6	1538.6	1576.6
55°	1243.7	1264.7	1326.3	1399.7	1440.3
57.5°	1107.4	1127.1	1196.5	1259.4	1301.4
60°	976.4	1001.3	1055.0	1119.2	1167.7
62.5°	850.5	876.8	922.6	979.0	1034.0
65°	728.7	748.3	792.9	849.2	897.7
67.5°	610.7	627.8	672.3	711.6	762.7
70°	491.5	513.7	546.5	584.5	617.3
72.5°	395.8	405.0	432.5	460.0	494.1
75°	292.3	308.0	330.3	346.0	365.6
77.5°	209.7	218.9	232.0	245.1	263.4
80°	140.2	144.2	156.0	158.6	173.0
82.5°	85.2	87.8	90.4	91.7	97.0
85°	45.9	45.9	45.9	43.2	43.2
87.5°	26.2	26.2	22.3	18.3	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)