

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: P557021

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-82-96-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: P557021  
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-35-UNV-82-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

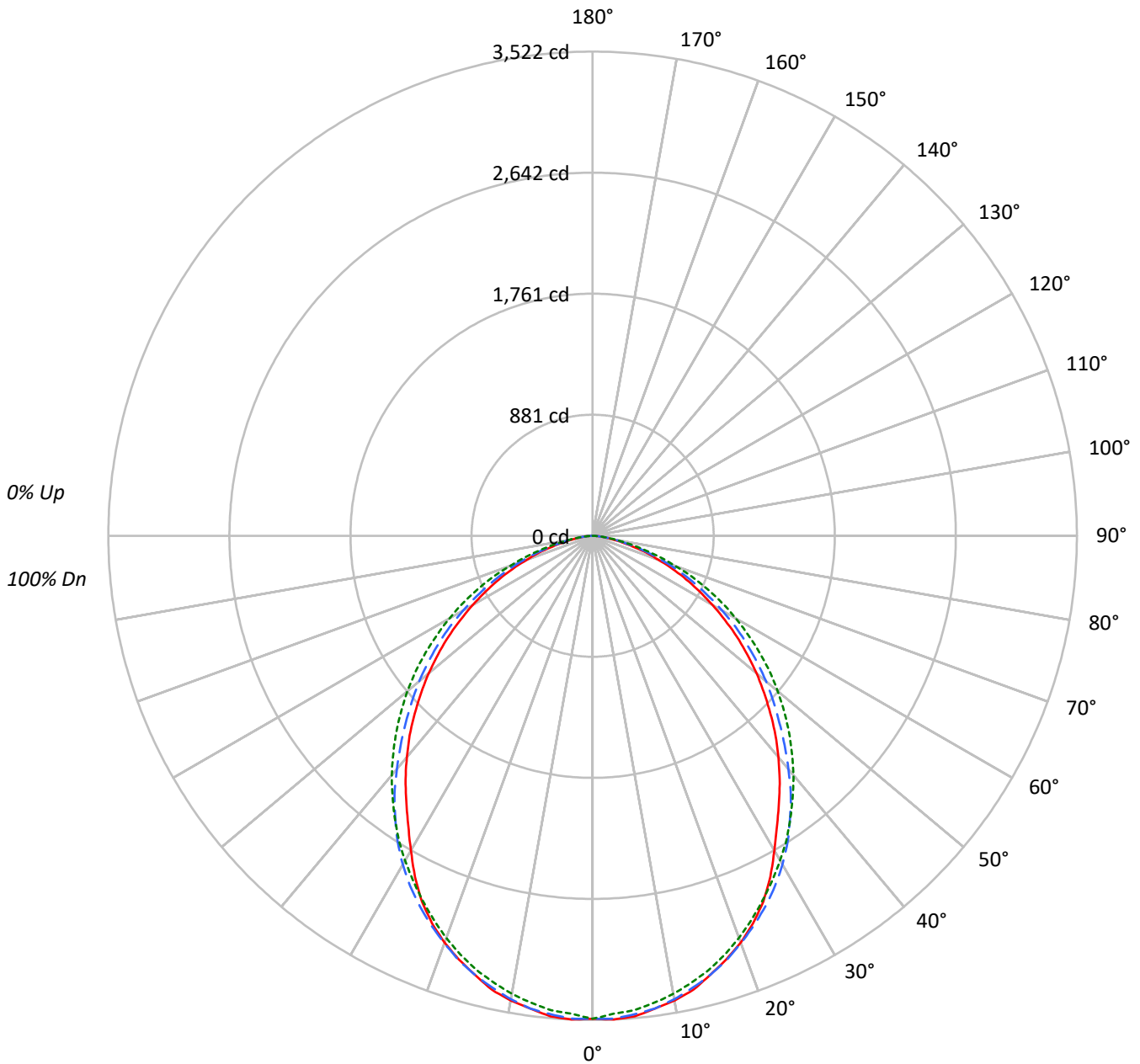
Lumens per Lamp: N/A  
Luminaire Lumens: 8123.0 lumens  
Efficiency: N/A  
Efficacy: 94.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	9453	9453	9453
5°	9478	9438	9358
10°	9378	9352	9245
15°	9212	9212	9106
20°	9017	9028	8912
25°	8720	8828	8687
30°	8211	8580	8475
35°	7759	8224	8237
40°	7381	7780	7984
45°	6959	7309	7684
50°	6514	6887	7356
55°	6009	6408	6959
60°	5411	5847	6472
65°	4778	5199	5887
70°	3982	4428	5002
75°	3130	3536	3915
80°	2238	2489	2760
85°	1457	1457	1374



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	330.8	4.1
10°-20°	929.2	11.4
20°-30°	1357.9	16.7
30°-40°	1541.3	19.0
40°-50°	1487.9	18.3
50°-60°	1227.4	15.1
60°-70°	817.4	10.1
70°-80°	365.8	4.5
80°-90°	65.4	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°	2617.8	32.2
0°-40°	4159.1	51.2
0°-60°	6874.5	84.6
0°-90°	8123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8123.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3513	3513	3513	3513	3513	
5°	3509	3508	3494	3475	3464	332
15°	3306	3315	3306	3292	3269	932
25°	2937	2960	2973	2952	2926	1345
35°	2362	2394	2504	2517	2508	1480
45°	1829	1860	1920	2008	2019	1411
55°	1281	1302	1366	1441	1483	1143
65°	750	771	816	874	924	744
75°	301	317	340	356	376	329
85°	47	47	47	44	44	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3513.0	3513.0	3513.0	3513.0	3513.0
2.5°	3522.4	3523.8	3515.7	3494.1	3480.6
5°	3508.9	3507.6	3494.1	3475.2	3464.4
7.5°	3469.8	3472.5	3468.5	3441.5	3426.6
10°	3432.0	3433.4	3422.6	3401.0	3383.4
12.5°	3383.4	3382.1	3367.2	3356.4	3328.1
15°	3306.5	3314.6	3306.5	3291.7	3268.7
17.5°	3232.3	3232.3	3237.7	3212.0	3194.5
20°	3148.6	3152.6	3152.6	3132.4	3112.2
22.5°	3051.4	3063.6	3067.6	3046.0	3021.7
25°	2936.7	2959.7	2973.2	2951.6	2925.9
27.5°	2797.7	2832.8	2873.3	2857.1	2828.7
30°	2642.5	2693.8	2761.3	2747.8	2727.5
32.5°	2495.4	2546.7	2639.8	2634.4	2623.6
35°	2361.8	2394.2	2503.5	2517.0	2507.5
37.5°	2234.9	2264.6	2367.2	2398.2	2390.1
40°	2101.3	2133.7	2214.7	2270.0	2272.7
42.5°	1969.1	2000.1	2066.2	2145.9	2145.9
45°	1828.7	1859.7	1920.5	2008.2	2019.0
47.5°	1691.0	1723.4	1782.8	1870.5	1888.1
50°	1556.1	1585.8	1645.2	1730.2	1757.2
52.5°	1415.7	1448.1	1506.1	1584.4	1623.6
55°	1280.8	1302.4	1365.8	1441.4	1483.2
57.5°	1140.4	1160.6	1232.2	1297.0	1340.1
60°	1005.4	1031.1	1086.4	1152.6	1202.5
62.5°	875.9	902.9	950.1	1008.1	1064.8
65°	750.4	770.6	816.5	874.5	924.5
67.5°	628.9	646.5	692.3	732.8	785.5
70°	506.1	529.0	562.8	601.9	635.7
72.5°	407.6	417.0	445.4	473.7	508.8
75°	301.0	317.2	340.1	356.3	376.5
77.5°	215.9	225.4	238.9	252.4	271.3
80°	144.4	148.5	160.6	163.3	178.1
82.5°	87.7	90.4	93.1	94.5	99.9
85°	47.2	47.2	47.2	44.5	44.5
87.5°	27.0	27.0	22.9	18.9	13.5
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)