

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: P557019

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-82-94-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: P557019  
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-82-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDES  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

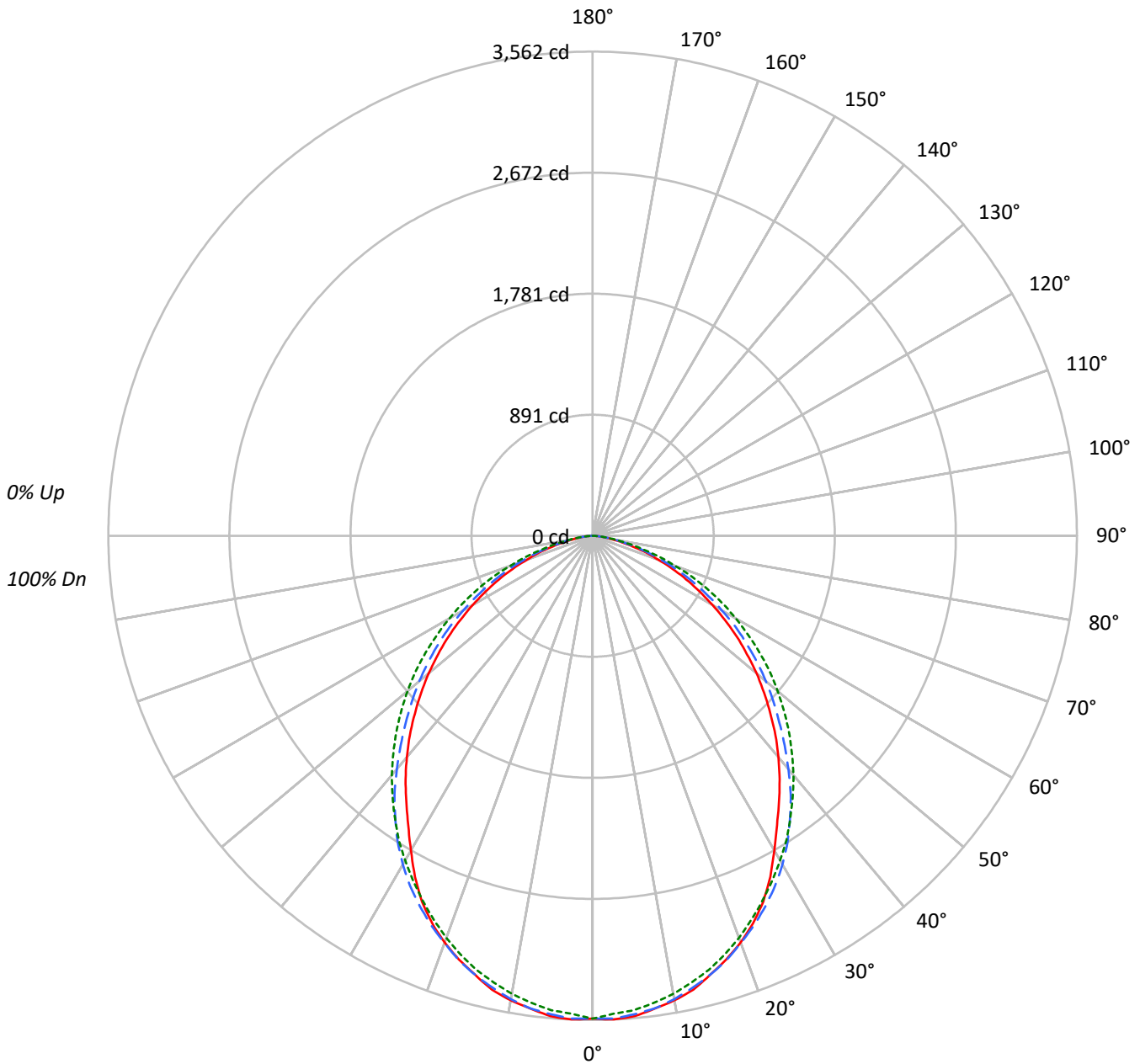
Lumens per Lamp: N/A  
Luminaire Lumens: 8214.0 lumens  
Efficiency: N/A  
Efficacy: 95.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	9559	9559	9559
5°	9585	9544	9463
10°	9483	9457	9349
15°	9315	9315	9208
20°	9118	9129	9012
25°	8817	8927	8785
30°	8303	8676	8570
35°	7845	8316	8330
40°	7464	7867	8073
45°	7037	7391	7770
50°	6587	6965	7439
55°	6076	6480	7036
60°	5472	5913	6544
65°	4832	5258	5952
70°	4027	4478	5057
75°	3164	3576	3959
80°	2263	2517	2791
85°	1476	1476	1389



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	334.5	4.1
10°-20°	939.6	11.4
20°-30°	1373.1	16.7
30°-40°	1558.6	19.0
40°-50°	1504.6	18.3
50°-60°	1241.2	15.1
60°-70°	826.5	10.1
70°-80°	369.9	4.5
80°-90°	66.2	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°	2647.1	32.2
0°-40°	4205.7	51.2
0°-60°	6951.5	84.6
0°-90°	8214.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8214.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3552	3552	3552	3552	3552	
5°	3548	3547	3533	3514	3503	336
15°	3344	3352	3344	3328	3305	943
25°	2970	2993	3006	2985	2959	1360
35°	2388	2421	2532	2545	2536	1496
45°	1849	1881	1942	2031	2042	1427
55°	1295	1317	1381	1458	1500	1156
65°	759	779	826	884	935	752
75°	304	321	344	360	381	333
85°	48	48	48	45	45	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3552.3	3552.3	3552.3	3552.3	3552.3
2.5°	3561.9	3563.3	3555.1	3533.2	3519.6
5°	3548.2	3546.9	3533.2	3514.1	3503.2
7.5°	3508.7	3511.4	3507.3	3480.0	3465.0
10°	3470.5	3471.8	3460.9	3439.1	3421.3
12.5°	3421.3	3420.0	3405.0	3394.0	3365.4
15°	3343.5	3351.7	3343.5	3328.5	3305.3
17.5°	3268.5	3268.5	3273.9	3248.0	3230.3
20°	3183.9	3188.0	3188.0	3167.5	3147.0
22.5°	3085.6	3097.9	3102.0	3080.2	3055.6
25°	2969.6	2992.8	3006.5	2984.6	2958.7
27.5°	2829.0	2864.5	2905.5	2889.1	2860.4
30°	2672.1	2724.0	2792.2	2778.6	2758.1
32.5°	2523.4	2575.2	2669.4	2663.9	2653.0
35°	2388.2	2421.0	2531.5	2545.2	2535.6
37.5°	2260.0	2290.0	2393.7	2425.1	2416.9
40°	2124.9	2157.6	2239.5	2295.4	2298.2
42.5°	1991.1	2022.5	2089.4	2169.9	2169.9
45°	1849.2	1880.6	1942.0	2030.7	2041.6
47.5°	1710.0	1742.7	1802.8	1891.5	1909.2
50°	1573.5	1603.5	1663.6	1749.6	1776.9
52.5°	1431.6	1464.3	1523.0	1602.2	1641.7
55°	1295.1	1316.9	1381.1	1457.5	1499.8
57.5°	1153.2	1173.7	1246.0	1311.5	1355.2
60°	1016.7	1042.6	1098.6	1165.5	1216.0
62.5°	885.7	913.0	960.8	1019.4	1076.8
65°	758.8	779.3	825.7	884.3	934.8
67.5°	636.0	653.7	700.1	741.0	794.3
70°	511.8	535.0	569.1	608.7	642.8
72.5°	412.1	421.7	450.4	479.0	514.5
75°	304.3	320.7	343.9	360.3	380.8
77.5°	218.4	227.9	241.6	255.2	274.3
80°	146.0	150.1	162.4	165.1	180.1
82.5°	88.7	91.4	94.2	95.5	101.0
85°	47.8	47.8	47.8	45.0	45.0
87.5°	27.3	27.3	23.2	19.1	13.6
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)