

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: P556995

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-81-85-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: P556995  
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-81-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187  
CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

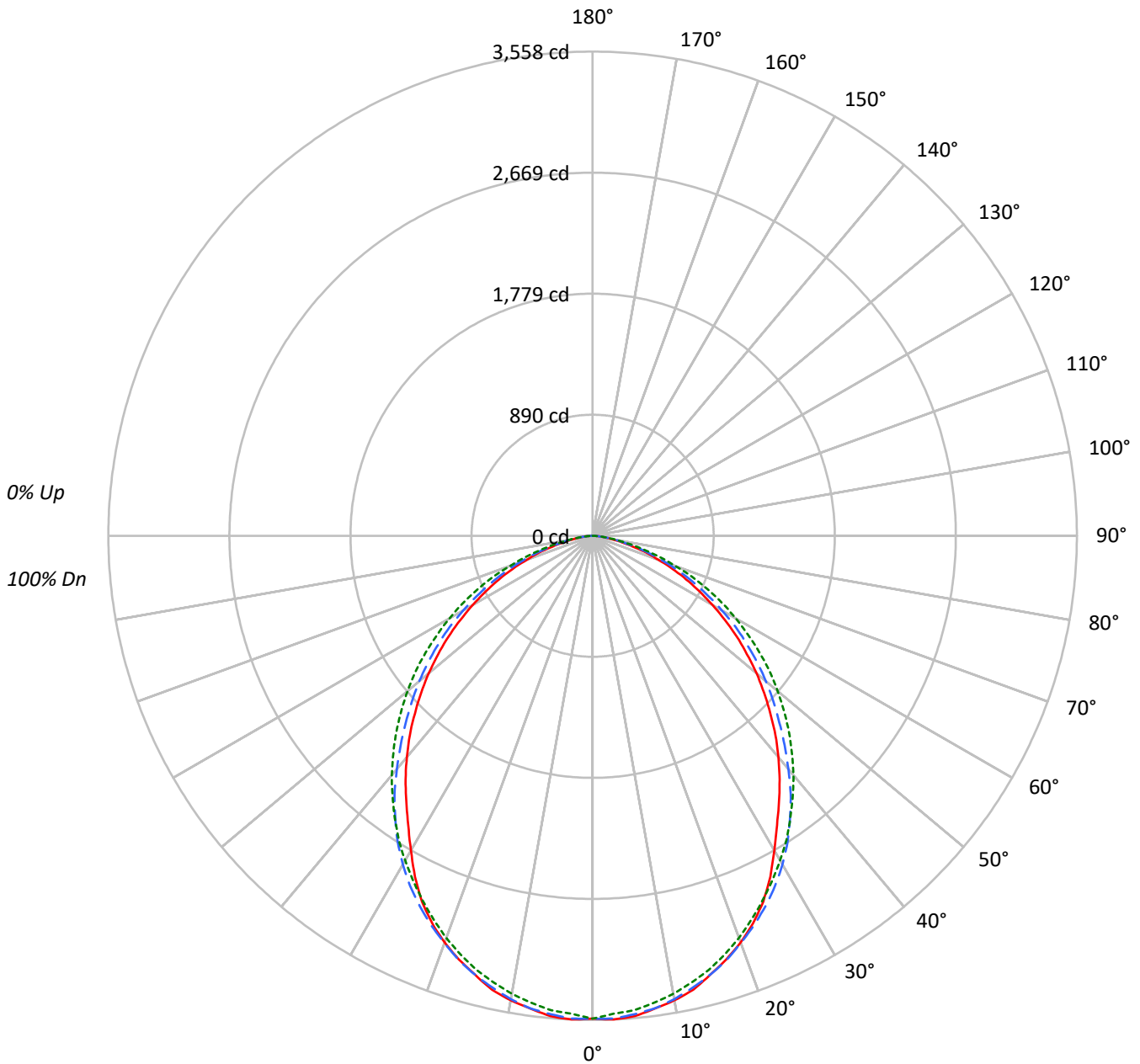
Lumens per Lamp: N/A  
Luminaire Lumens: 8205.0 lumens  
Efficiency: N/A  
Efficacy: 95.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
Input Voltage (V): NR  
Input Current (Ain): 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					20					
RC	80					70					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°	9549	9549	9549
5°	9574	9534	9453
10°	9473	9446	9339
15°	9305	9305	9198
20°	9108	9119	9002
25°	8808	8917	8775
30°	8294	8666	8561
35°	7837	8307	8321
40°	7456	7858	8064
45°	7030	7383	7761
50°	6580	6957	7430
55°	6069	6473	7029
60°	5466	5906	6537
65°	4826	5251	5946
70°	4022	4473	5052
75°	3161	3571	3954
80°	2261	2514	2788
85°	1473	1473	1389



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	334.1	4.1
10°-20°	938.6	11.4
20°-30°	1371.6	16.7
30°-40°	1556.9	19.0
40°-50°	1502.9	18.3
50°-60°	1239.8	15.1
60°-70°	825.6	10.1
70°-80°	369.5	4.5
80°-90°	66.1	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°	2644.2	32.2
0°-40°	4201.1	51.2
0°-60°	6943.9	84.6
0°-90°	8205.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8205.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3548	3548	3548	3548	3548	
5°	3544	3543	3529	3510	3499	335
15°	3340	3348	3340	3325	3302	942
25°	2966	2990	3003	2981	2956	1358
35°	2386	2418	2529	2542	2533	1495
45°	1847	1878	1940	2028	2039	1425
55°	1294	1316	1380	1456	1498	1155
65°	758	778	825	883	934	752
75°	304	320	344	360	380	332
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°	3548.5	3548.5	3548.5	3548.5	3548.5
2.5°	3558.0	3559.4	3551.2	3529.4	3515.7
5°	3544.4	3543.0	3529.4	3510.3	3499.4
7.5°	3504.8	3507.6	3503.5	3476.2	3461.2
10°	3466.7	3468.0	3457.1	3435.3	3417.6
12.5°	3417.6	3416.2	3401.2	3390.3	3361.7
15°	3339.9	3348.1	3339.9	3324.9	3301.7
17.5°	3264.9	3264.9	3270.4	3244.5	3226.7
20°	3180.4	3184.5	3184.5	3164.0	3143.6
22.5°	3082.2	3094.5	3098.6	3076.8	3052.2
25°	2966.4	2989.5	3003.2	2981.4	2955.5
27.5°	2825.9	2861.4	2902.3	2885.9	2857.3
30°	2669.2	2721.0	2789.1	2775.5	2755.1
32.5°	2520.6	2572.4	2666.5	2661.0	2650.1
35°	2385.6	2418.3	2528.8	2542.4	2532.9
37.5°	2257.5	2287.5	2391.1	2422.4	2414.3
40°	2122.5	2155.2	2237.0	2292.9	2295.7
42.5°	1988.9	2020.3	2087.1	2167.5	2167.5
45°	1847.2	1878.5	1939.9	2028.5	2039.4
47.5°	1708.1	1740.8	1800.8	1889.4	1907.1
50°	1571.8	1601.8	1661.8	1747.6	1774.9
52.5°	1430.0	1462.7	1521.3	1600.4	1639.9
55°	1293.7	1315.5	1379.6	1455.9	1498.2
57.5°	1151.9	1172.4	1244.6	1310.1	1353.7
60°	1015.6	1041.5	1097.4	1164.2	1214.6
62.5°	884.7	912.0	959.7	1018.3	1075.6
65°	757.9	778.4	824.7	883.4	933.8
67.5°	635.3	653.0	699.3	740.2	793.4
70°	511.2	534.4	568.5	608.0	642.1
72.5°	411.7	421.2	449.9	478.5	513.9
75°	304.0	320.4	343.5	359.9	380.3
77.5°	218.1	227.7	241.3	254.9	274.0
80°	145.9	150.0	162.2	164.9	179.9
82.5°	88.6	91.3	94.1	95.4	100.9
85°	47.7	47.7	47.7	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)