

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: P557720

Luminaire Tested: **FUSL-12-4-LD4-3HI-30-UNV-82-88-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: P557720  
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-LD4-3HI-30-UNV-82-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

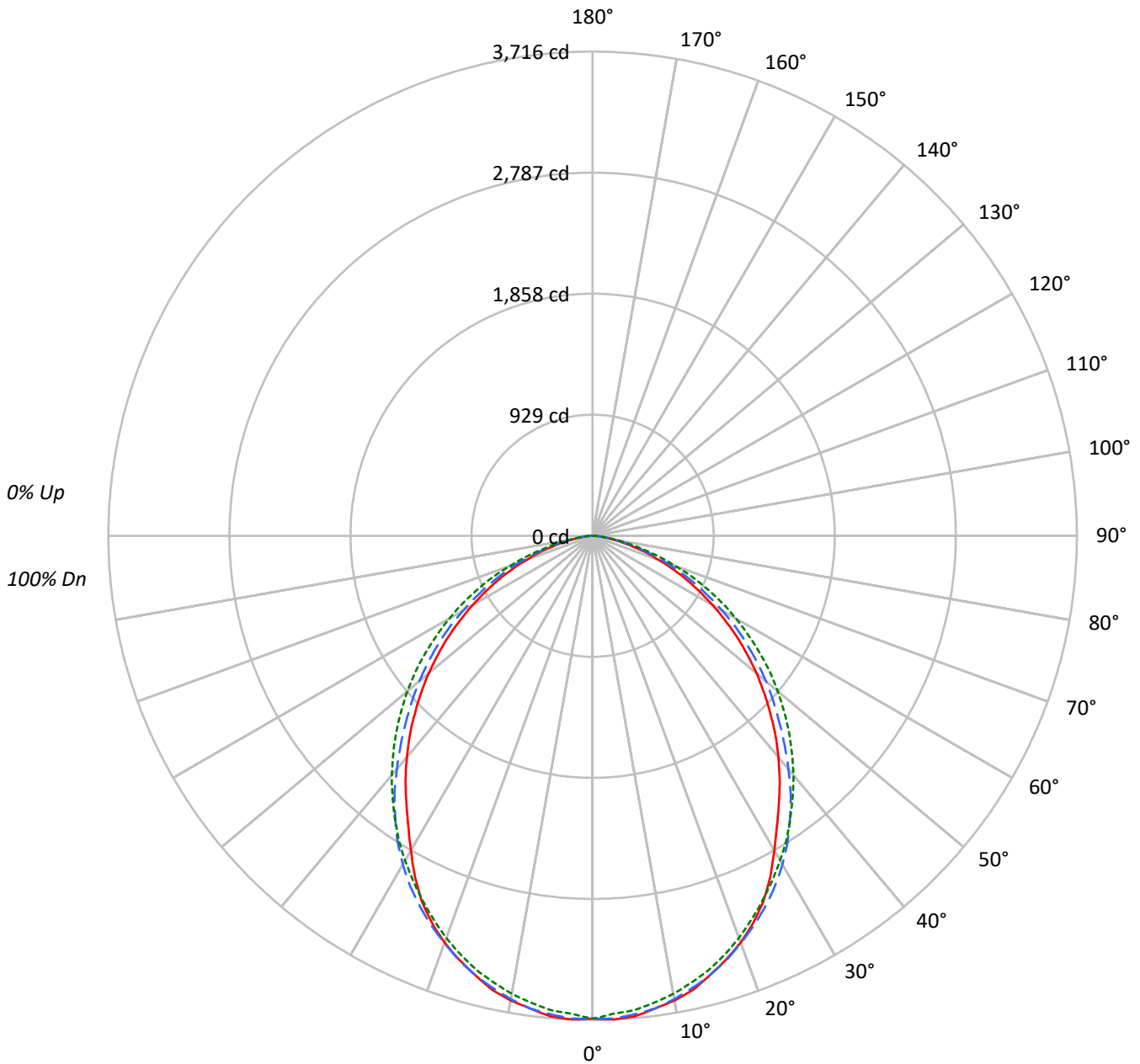
Lumens per Lamp: N/A  
Luminaire Lumens: 8570.0 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9974	9974	9974
5°	10000	9958	9873
10°	9894	9867	9754
15°	9719	9719	9607
20°	9513	9525	9403
25°	9199	9314	9166
30°	8663	9052	8941
35°	8186	8677	8691
40°	7788	8208	8423
45°	7342	7711	8106
50°	6873	7266	7761
55°	6339	6760	7341
60°	5709	6169	6828
65°	5041	5485	6210
70°	4201	4671	5276
75°	3301	3730	4131
80°	2362	2625	2912
85°	1538	1538	1451



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	349.0	4.1
10°-20°	980.3	11.4
20°-30°	1432.6	16.7
30°-40°	1626.1	19.0
40°-50°	1569.8	18.3
50°-60°	1295.0	15.1
60°-70°	862.3	10.1
70°-80°	385.9	4.5
80°-90°	69.0	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°	2761.9	32.2
0°-40°	4388.0	51.2
0°-60°	7252.7	84.6
0°-90°	8570.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8570.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3706	3706	3706	3706	3706	
5°	3702	3701	3686	3666	3655	350
15°	3488	3497	3488	3473	3449	983
25°	3098	3122	3137	3114	3087	1419
35°	2492	2526	2641	2656	2646	1561
45°	1929	1962	2026	2119	2130	1489
55°	1351	1374	1441	1521	1565	1206
65°	792	813	861	923	975	785
75°	318	335	359	376	397	347
85°	50	50	50	47	47	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3706.3	3706.3	3706.3	3706.3	3706.3
2.5°	3716.3	3717.7	3709.2	3686.4	3672.1
5°	3702.0	3700.6	3686.4	3666.4	3655.0
7.5°	3660.7	3663.6	3659.3	3630.8	3615.2
10°	3620.9	3622.3	3610.9	3588.1	3569.6
12.5°	3569.6	3568.2	3552.5	3541.1	3511.2
15°	3488.5	3497.0	3488.5	3472.8	3448.6
17.5°	3410.1	3410.1	3415.8	3388.8	3370.3
20°	3321.9	3326.1	3326.1	3304.8	3283.4
22.5°	3219.3	3232.2	3236.4	3213.6	3188.0
25°	3098.3	3122.5	3136.8	3114.0	3086.9
27.5°	2951.7	2988.7	3031.4	3014.3	2984.4
30°	2787.9	2842.0	2913.2	2899.0	2877.6
32.5°	2632.7	2686.8	2785.1	2779.4	2768.0
35°	2491.8	2525.9	2641.3	2655.5	2645.5
37.5°	2357.9	2389.2	2497.4	2530.2	2521.7
40°	2216.9	2251.1	2336.6	2394.9	2397.8
42.5°	2077.4	2110.2	2179.9	2263.9	2263.9
45°	1929.3	1962.1	2026.2	2118.7	2130.1
47.5°	1784.1	1818.3	1880.9	1973.5	1992.0
50°	1641.7	1673.0	1735.7	1825.4	1853.9
52.5°	1493.6	1527.8	1589.0	1671.6	1712.9
55°	1351.2	1374.0	1440.9	1520.7	1564.8
57.5°	1203.2	1224.5	1300.0	1368.3	1413.9
60°	1060.8	1087.8	1146.2	1216.0	1268.7
62.5°	924.1	952.6	1002.4	1063.6	1123.4
65°	791.7	813.0	861.4	922.7	975.3
67.5°	663.5	682.0	730.4	773.2	828.7
70°	533.9	558.2	593.7	635.0	670.6
72.5°	430.0	440.0	469.9	499.8	536.8
75°	317.5	334.6	358.8	375.9	397.3
77.5°	227.8	237.8	252.0	266.3	286.2
80°	152.4	156.6	169.4	172.3	187.9
82.5°	92.6	95.4	98.2	99.7	105.4
85°	49.8	49.8	49.8	47.0	47.0
87.5°	28.5	28.5	24.2	19.9	14.2
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)