

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: P556929

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-81-84-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: P556929  
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-81-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

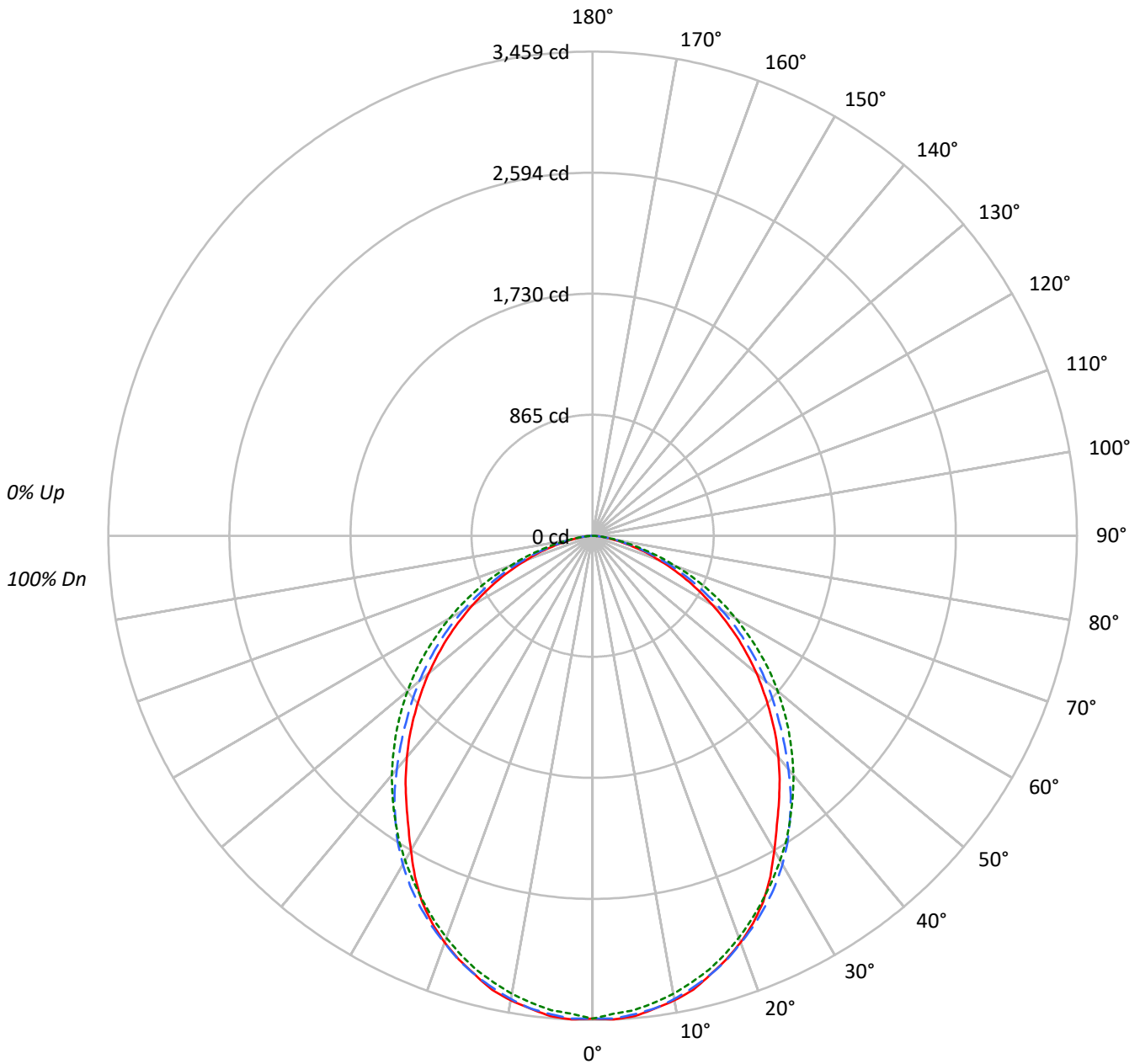
Lumens per Lamp: N/A  
Luminaire Lumens: 7976.0 lumens  
Efficiency: N/A  
Efficacy: 92.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
Input Voltage (V): NR  
Input Current (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°	9282	9282	9282
5°	9307	9268	9189
10°	9208	9183	9078
15°	9045	9045	8942
20°	8853	8865	8751
25°	8562	8668	8530
30°	8062	8425	8322
35°	7618	8075	8089
40°	7248	7639	7839
45°	6833	7176	7545
50°	6396	6763	7223
55°	5900	6292	6833
60°	5314	5741	6354
65°	4691	5105	5780
70°	3910	4348	4911
75°	3072	3472	3844
80°	2197	2444	2710
85°	1433	1433	1349



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	324.8	4.1
10°-20°	912.4	11.4
20°-30°	1333.3	16.7
30°-40°	1513.4	19.0
40°-50°	1461.0	18.3
50°-60°	1205.2	15.1
60°-70°	802.6	10.1
70°-80°	359.1	4.5
80°-90°	64.3	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°	2570.4	32.2
0°-40°	4083.8	51.2
0°-60°	6750.0	84.6
0°-90°	7976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7976.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3449	3449	3449	3449	3449	
5°	3445	3444	3431	3412	3402	326
15°	3247	3255	3247	3232	3210	915
25°	2884	2906	2919	2898	2873	1321
35°	2319	2351	2458	2471	2462	1453
45°	1796	1826	1886	1972	1982	1385
55°	1258	1279	1341	1415	1456	1122
65°	737	757	802	859	908	731
75°	296	311	334	350	370	323
85°	46	46	46	44	44	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3449.4	3449.4	3449.4	3449.4	3449.4
2.5°	3458.7	3460.0	3452.1	3430.9	3417.6
5°	3445.4	3444.1	3430.9	3412.3	3401.7
7.5°	3407.0	3409.7	3405.7	3379.2	3364.6
10°	3369.9	3371.2	3360.6	3339.4	3322.2
12.5°	3322.2	3320.9	3306.3	3295.7	3267.9
15°	3246.7	3254.6	3246.7	3232.1	3209.6
17.5°	3173.8	3173.8	3179.1	3153.9	3136.7
20°	3091.6	3095.6	3095.6	3075.7	3055.8
22.5°	2996.2	3008.1	3012.1	2990.9	2967.1
25°	2883.6	2906.1	2919.3	2898.1	2873.0
27.5°	2747.1	2781.5	2821.3	2805.4	2777.6
30°	2594.7	2645.0	2711.3	2698.0	2678.2
32.5°	2450.2	2500.6	2592.0	2586.7	2576.1
35°	2319.0	2350.8	2458.2	2471.4	2462.2
37.5°	2194.5	2223.6	2324.3	2354.8	2346.9
40°	2063.3	2095.1	2174.6	2228.9	2231.6
42.5°	1933.4	1963.9	2028.8	2107.0	2107.0
45°	1795.6	1826.1	1885.7	1971.9	1982.5
47.5°	1660.4	1692.2	1750.5	1836.7	1853.9
50°	1527.9	1557.1	1615.4	1698.9	1725.4
52.5°	1390.1	1421.9	1478.9	1555.7	1594.2
55°	1257.6	1278.8	1341.1	1415.3	1456.4
57.5°	1119.8	1139.6	1209.9	1273.5	1315.9
60°	987.3	1012.4	1066.8	1131.7	1180.7
62.5°	860.0	886.5	932.9	989.9	1045.6
65°	736.8	756.7	801.7	858.7	907.7
67.5°	617.5	634.8	679.8	719.6	771.2
70°	496.9	519.5	552.6	591.0	624.2
72.5°	400.2	409.5	437.3	465.1	499.6
75°	295.5	311.4	333.9	349.8	369.7
77.5°	212.0	221.3	234.6	247.8	266.4
80°	141.8	145.8	157.7	160.3	174.9
82.5°	86.1	88.8	91.4	92.8	98.1
85°	46.4	46.4	46.4	43.7	43.7
87.5°	26.5	26.5	22.5	18.6	13.3
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)