

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: P556957

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-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: P556957  
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-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 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

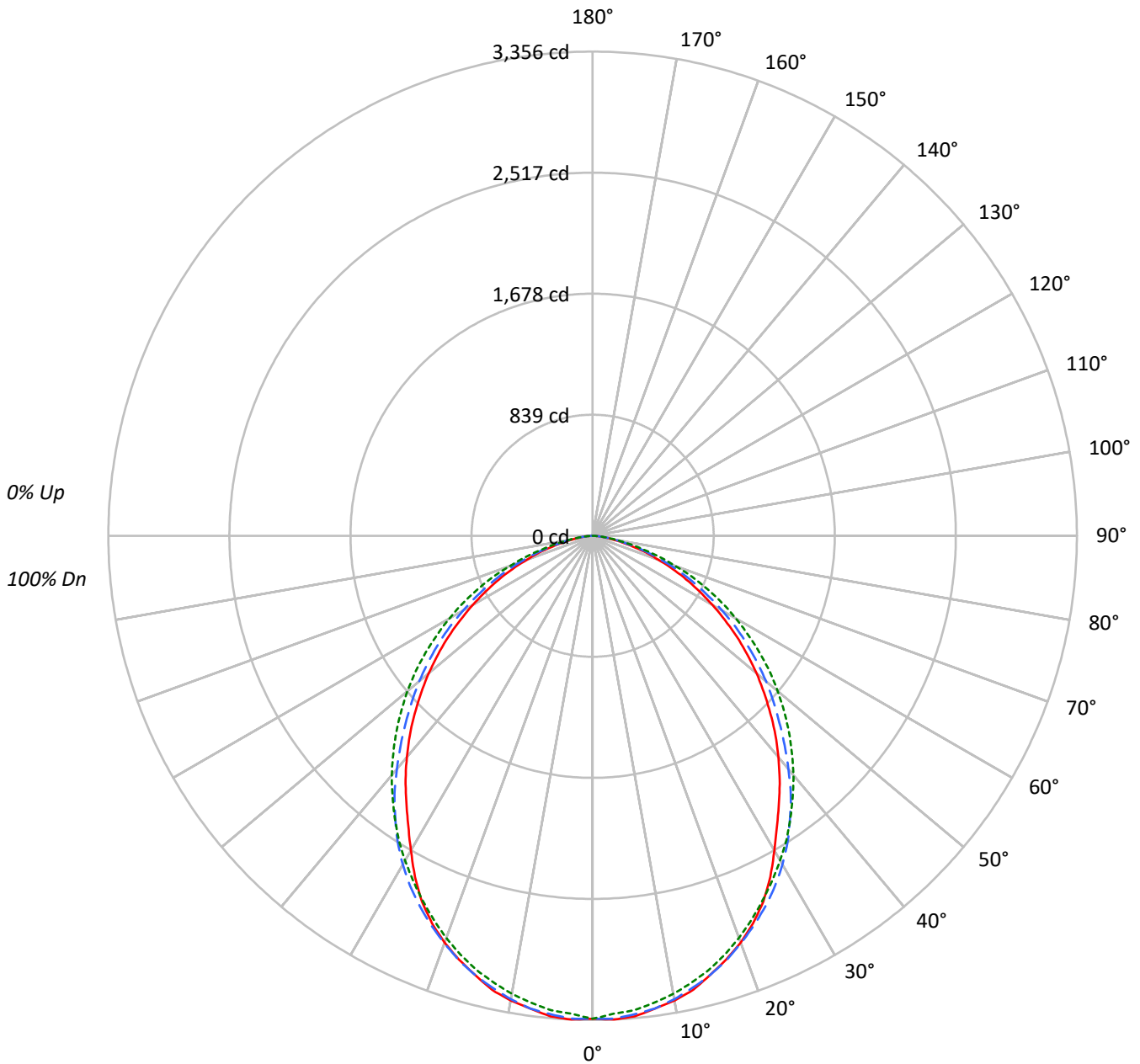
Lumens per Lamp: N/A  
Luminaire Lumens: 7740.0 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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				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				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°	9008	9008	9008
5°	9032	8993	8917
10°	8936	8911	8809
15°	8777	8777	8677
20°	8591	8602	8492
25°	8308	8412	8278
30°	7824	8176	8075
35°	7393	7837	7849
40°	7033	7413	7607
45°	6631	6964	7321
50°	6207	6563	7009
55°	5726	6106	6631
60°	5156	5571	6167
65°	4553	4954	5609
70°	3794	4219	4766
75°	2982	3370	3730
80°	2132	2371	2630
85°	1389	1389	1309



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	315.2	4.1
10°-20°	885.4	11.4
20°-30°	1293.8	16.7
30°-40°	1468.6	19.0
40°-50°	1417.8	18.3
50°-60°	1169.5	15.1
60°-70°	778.8	10.1
70°-80°	348.5	4.5
80°-90°	62.3	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°	2494.4	32.2
0°-40°	3963.0	51.2
0°-60°	6550.3	84.6
0°-90°	7740.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7740.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3347	3347	3347	3347	3347	
5°	3344	3342	3329	3311	3301	316
15°	3151	3158	3151	3136	3115	888
25°	2798	2820	2833	2812	2788	1281
35°	2250	2281	2386	2398	2389	1410
45°	1742	1772	1830	1914	1924	1344
55°	1220	1241	1301	1373	1413	1089
65°	715	734	778	833	881	709
75°	287	302	324	340	359	314
85°	45	45	45	42	42	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3347.4	3347.4	3347.4	3347.4	3347.4
2.5°	3356.4	3357.6	3349.9	3329.3	3316.5
5°	3343.5	3342.2	3329.3	3311.3	3301.1
7.5°	3306.2	3308.8	3304.9	3279.2	3265.0
10°	3270.2	3271.5	3261.2	3240.6	3223.9
12.5°	3223.9	3222.6	3208.5	3198.2	3171.2
15°	3150.6	3158.3	3150.6	3136.5	3114.6
17.5°	3079.9	3079.9	3085.0	3060.6	3043.9
20°	3000.1	3004.0	3004.0	2984.7	2965.4
22.5°	2907.6	2919.1	2923.0	2902.4	2879.3
25°	2798.2	2820.1	2833.0	2812.4	2788.0
27.5°	2665.8	2699.2	2737.8	2722.4	2695.4
30°	2517.9	2566.8	2631.1	2618.2	2598.9
32.5°	2377.7	2426.6	2515.3	2510.2	2499.9
35°	2250.4	2281.3	2385.5	2398.3	2389.3
37.5°	2129.5	2157.8	2255.6	2285.1	2277.4
40°	2002.2	2033.1	2110.3	2163.0	2165.6
42.5°	1876.2	1905.8	1968.8	2044.7	2044.7
45°	1742.5	1772.1	1829.9	1913.5	1923.8
47.5°	1611.3	1642.2	1698.8	1782.3	1799.1
50°	1482.7	1511.0	1567.6	1648.6	1674.3
52.5°	1349.0	1379.8	1435.1	1509.7	1547.0
55°	1220.4	1241.0	1301.4	1373.4	1413.3
57.5°	1086.6	1105.9	1174.1	1235.8	1277.0
60°	958.0	982.5	1035.2	1098.2	1145.8
62.5°	834.6	860.3	905.3	960.6	1014.6
65°	715.0	734.3	778.0	833.3	880.9
67.5°	599.3	616.0	659.7	698.3	748.4
70°	482.2	504.1	536.2	573.5	605.7
72.5°	388.4	397.4	424.4	451.4	484.8
75°	286.8	302.2	324.1	339.5	358.8
77.5°	205.8	214.8	227.6	240.5	258.5
80°	137.6	141.5	153.0	155.6	169.7
82.5°	83.6	86.2	88.7	90.0	95.2
85°	45.0	45.0	45.0	42.4	42.4
87.5°	25.7	25.7	21.9	18.0	12.9
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)