

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: P557689

Luminaire Tested: **FUSL-12-4-LD4-3HI-30-UNV-80-88-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: P557689  
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-80-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

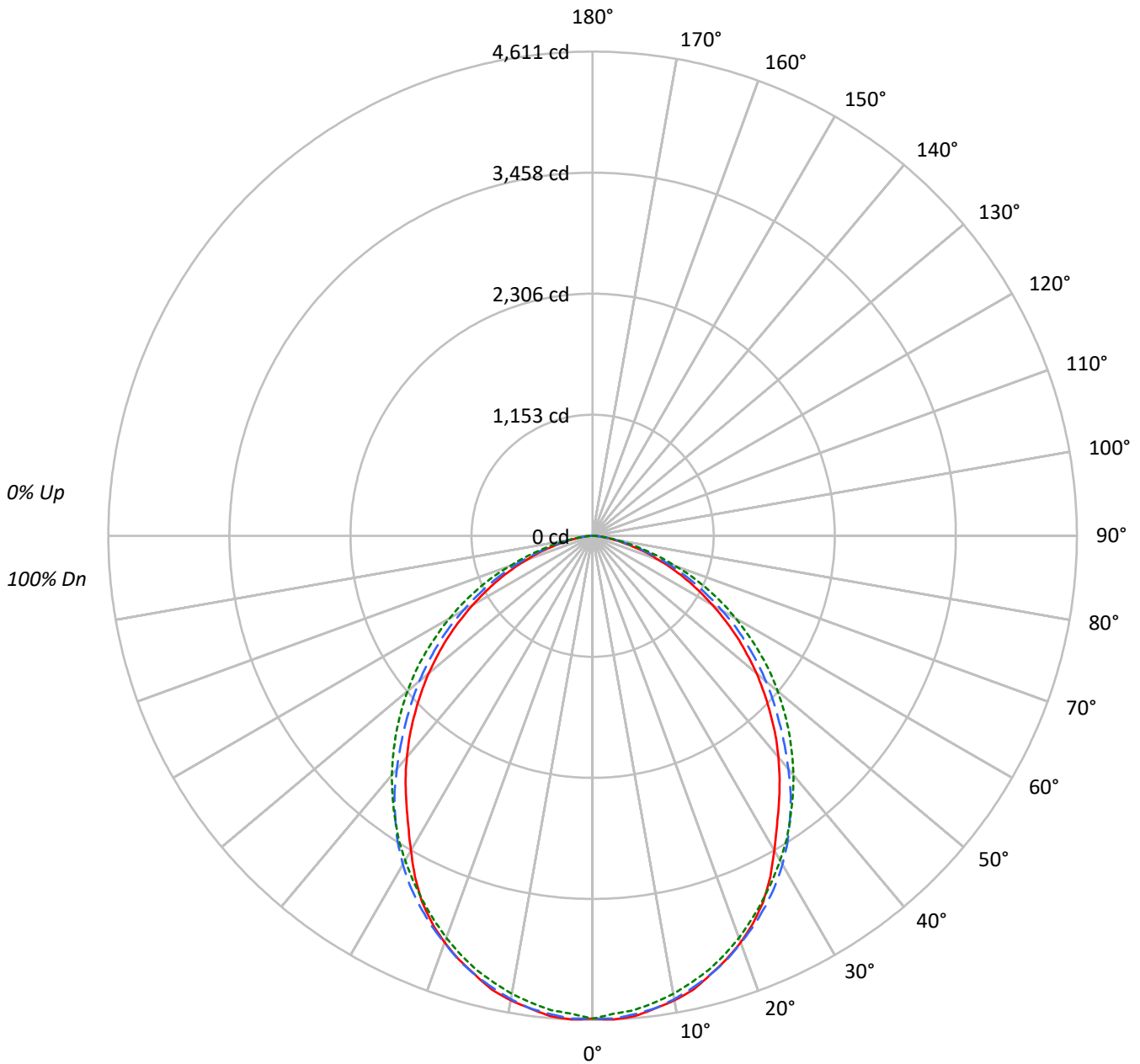
Lumens per Lamp: N/A  
Luminaire Lumens: 10633.0 lumens  
Efficiency: N/A  
Efficacy: 82.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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									
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°	12374	12374	12374
5°	12407	12355	12250
10°	12276	12242	12102
15°	12058	12058	11920
20°	11803	11818	11666
25°	11414	11556	11372
30°	10748	11231	11094
35°	10156	10766	10783
40°	9662	10184	10451
45°	9110	9567	10058
50°	8527	9015	9629
55°	7865	8388	9109
60°	7083	7654	8472
65°	6254	6805	7705
70°	5212	5796	6547
75°	4096	4629	5125
80°	2929	3257	3614
85°	1908	1908	1800



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	433.0	4.1
10°-20°	1216.3	11.4
20°-30°	1777.4	16.7
30°-40°	2017.6	19.0
40°-50°	1947.7	18.3
50°-60°	1606.7	15.1
60°-70°	1069.9	10.1
70°-80°	478.8	4.5
80°-90°	85.6	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°	3426.7	32.2
0°-40°	5444.3	51.2
0°-60°	8998.6	84.6
0°-90°	10633.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10633.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4598	4598	4598	4598	4598	
5°	4593	4591	4574	4549	4535	435
15°	4328	4339	4328	4309	4279	1220
25°	3844	3874	3892	3864	3830	1760
35°	3092	3134	3277	3295	3282	1937
45°	2394	2434	2514	2629	2643	1847
55°	1676	1705	1788	1887	1942	1496
65°	982	1009	1069	1145	1210	974
75°	394	415	445	466	493	431
85°	62	62	62	58	58	83
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4598.5	4598.5	4598.5	4598.5	4598.5
2.5°	4610.9	4612.6	4602.0	4573.8	4556.1
5°	4593.2	4591.4	4573.8	4549.0	4534.9
7.5°	4542.0	4545.5	4540.2	4504.9	4485.4
10°	4492.5	4494.3	4480.1	4451.9	4428.9
12.5°	4428.9	4427.1	4407.7	4393.6	4356.5
15°	4328.2	4338.8	4328.2	4308.8	4278.7
17.5°	4231.0	4231.0	4238.1	4204.5	4181.6
20°	4121.5	4126.8	4126.8	4100.3	4073.8
22.5°	3994.3	4010.2	4015.5	3987.2	3955.5
25°	3844.2	3874.2	3891.9	3863.6	3830.0
27.5°	3662.2	3708.1	3761.1	3739.9	3702.8
30°	3459.0	3526.2	3614.5	3596.8	3570.3
32.5°	3266.5	3333.6	3455.5	3448.4	3434.3
35°	3091.6	3134.0	3277.1	3294.7	3282.4
37.5°	2925.5	2964.4	3098.6	3139.3	3128.7
40°	2750.6	2793.0	2899.0	2971.4	2975.0
42.5°	2577.5	2618.1	2704.7	2808.9	2808.9
45°	2393.8	2434.4	2513.9	2628.7	2642.9
47.5°	2213.6	2256.0	2333.7	2448.5	2471.5
50°	2036.9	2075.8	2153.5	2264.8	2300.1
52.5°	1853.2	1895.6	1971.5	2074.0	2125.2
55°	1676.5	1704.8	1787.8	1886.7	1941.5
57.5°	1492.8	1519.3	1612.9	1697.7	1754.2
60°	1316.1	1349.7	1422.1	1508.7	1574.1
62.5°	1146.5	1181.9	1243.7	1319.7	1393.9
65°	982.2	1008.7	1068.8	1144.8	1210.1
67.5°	823.2	846.2	906.3	959.3	1028.2
70°	662.5	692.5	736.7	787.9	832.1
72.5°	533.5	545.9	583.0	620.1	666.0
75°	394.0	415.2	445.2	466.4	492.9
77.5°	282.7	295.0	312.7	330.4	355.1
80°	189.0	194.3	210.2	213.8	233.2
82.5°	114.8	118.4	121.9	123.7	130.7
85°	61.8	61.8	61.8	58.3	58.3
87.5°	35.3	35.3	30.0	24.7	17.7
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)