

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: P557841

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-82-84-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: P557841  
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-40-UNV-82-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

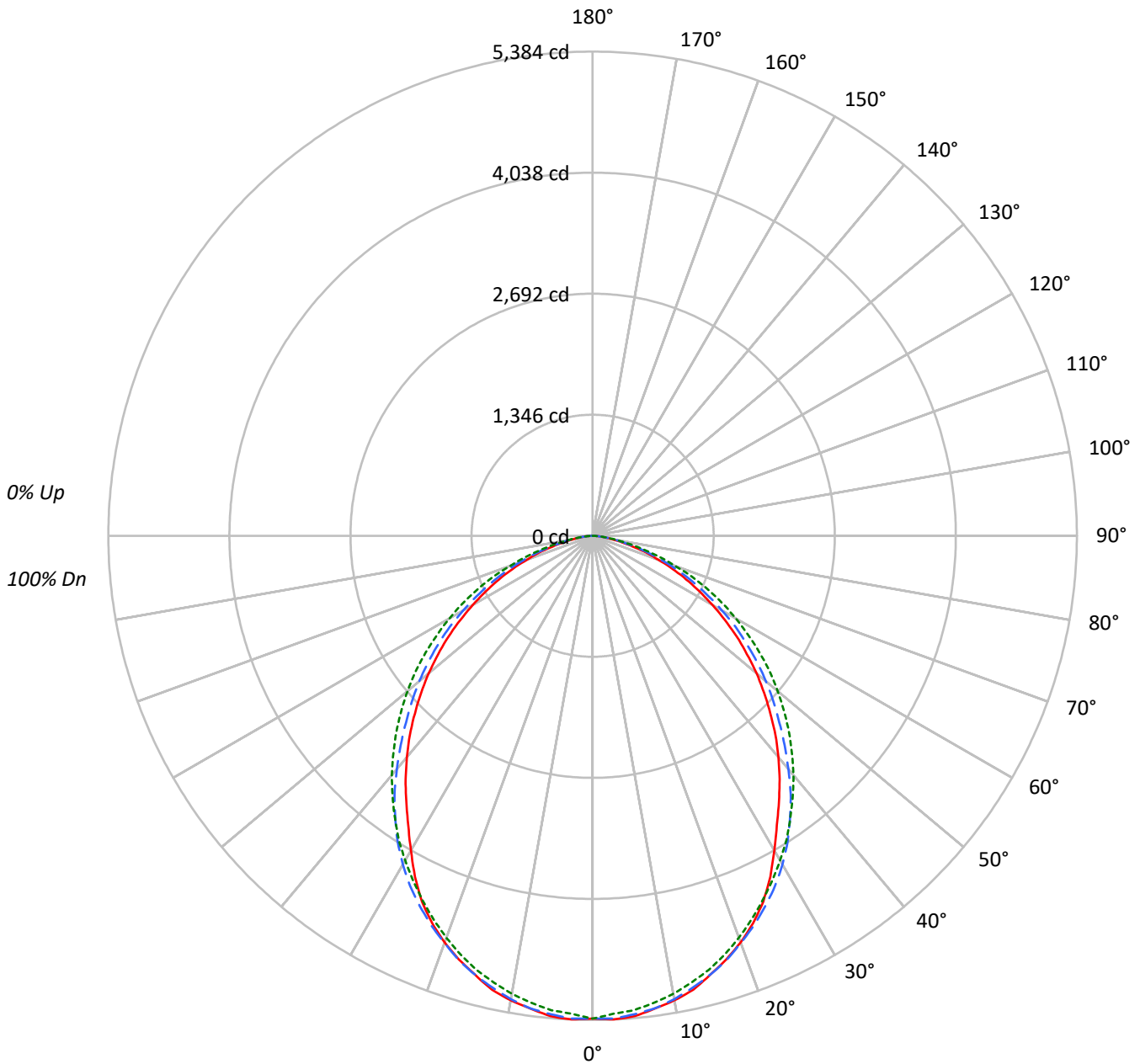
Lumens per Lamp: N/A  
Luminaire Lumens: 12415.0 lumens  
Efficiency: N/A  
Efficacy: 95.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	14448	14448	14448
5°	14487	14426	14303
10°	14333	14294	14130
15°	14079	14079	13918
20°	13781	13798	13621
25°	13327	13492	13278
30°	12549	13114	12953
35°	11858	12570	12590
40°	11282	11891	12202
45°	10636	11170	11743
50°	9957	10526	11243
55°	9184	9793	10635
60°	8270	8937	9891
65°	7303	7946	8996
70°	6086	6767	7644
75°	4783	5404	5984
80°	3420	3804	4220
85°	2229	2229	2103



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	505.5	4.1
10°-20°	1420.2	11.4
20°-30°	2075.3	16.7
30°-40°	2355.7	19.0
40°-50°	2274.1	18.3
50°-60°	1876.0	15.1
60°-70°	1249.2	10.1
70°-80°	559.0	4.5
80°-90°	100.0	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°	4001.0	32.2
0°-40°	6356.7	51.2
0°-60°	10506.8	84.6
0°-90°	12415.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12415.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5369	5369	5369	5369	5369	
5°	5363	5361	5340	5311	5295	508
15°	5054	5066	5054	5031	4996	1425
25°	4488	4524	4544	4511	4472	2055
35°	3610	3659	3826	3847	3832	2262
45°	2795	2842	2935	3069	3086	2156
55°	1958	1990	2087	2203	2267	1747
65°	1147	1178	1248	1337	1413	1137
75°	460	485	520	544	576	503
85°	72	72	72	68	68	97
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5369.2	5369.2	5369.2	5369.2	5369.2
2.5°	5383.6	5385.7	5373.3	5340.3	5319.7
5°	5363.0	5360.9	5340.3	5311.4	5294.9
7.5°	5303.2	5307.3	5301.1	5259.8	5237.2
10°	5245.4	5247.5	5231.0	5198.0	5171.1
12.5°	5171.1	5169.1	5146.4	5129.9	5086.6
15°	5053.6	5066.0	5053.6	5030.9	4995.8
17.5°	4940.1	4940.1	4948.4	4909.2	4882.4
20°	4812.2	4818.4	4818.4	4787.5	4756.5
22.5°	4663.7	4682.3	4688.5	4655.5	4618.3
25°	4488.4	4523.5	4544.1	4511.1	4471.9
27.5°	4275.9	4329.6	4391.5	4366.7	4323.4
30°	4038.7	4117.1	4220.3	4199.6	4168.7
32.5°	3813.9	3892.3	4034.6	4026.4	4009.9
35°	3609.7	3659.2	3826.3	3846.9	3832.5
37.5°	3415.8	3461.2	3617.9	3665.4	3653.0
40°	3211.6	3261.1	3384.9	3469.4	3473.6
42.5°	3009.5	3056.9	3158.0	3279.7	3279.7
45°	2794.9	2842.4	2935.2	3069.3	3085.8
47.5°	2584.5	2634.0	2724.8	2858.9	2885.7
50°	2378.3	2423.7	2514.4	2644.4	2685.6
52.5°	2163.8	2213.3	2302.0	2421.6	2481.4
55°	1957.5	1990.5	2087.4	2202.9	2266.9
57.5°	1743.0	1773.9	1883.2	1982.2	2048.2
60°	1536.7	1575.9	1660.5	1761.5	1837.9
62.5°	1338.7	1379.9	1452.1	1540.8	1627.5
65°	1146.9	1177.8	1247.9	1336.6	1412.9
67.5°	961.2	988.0	1058.2	1120.0	1200.5
70°	773.5	808.6	860.1	920.0	971.5
72.5°	622.9	637.4	680.7	724.0	777.6
75°	460.0	484.7	519.8	544.5	575.5
77.5°	330.0	344.5	365.1	385.7	414.6
80°	220.7	226.9	245.5	249.6	272.3
82.5°	134.1	138.2	142.3	144.4	152.6
85°	72.2	72.2	72.2	68.1	68.1
87.5°	41.3	41.3	35.1	28.9	20.6
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)