

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: P557778

Luminaire Tested: **FUSL-12-4-LD4-3HI-35-UNV-82-85-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: P557778  
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-35-UNV-82-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

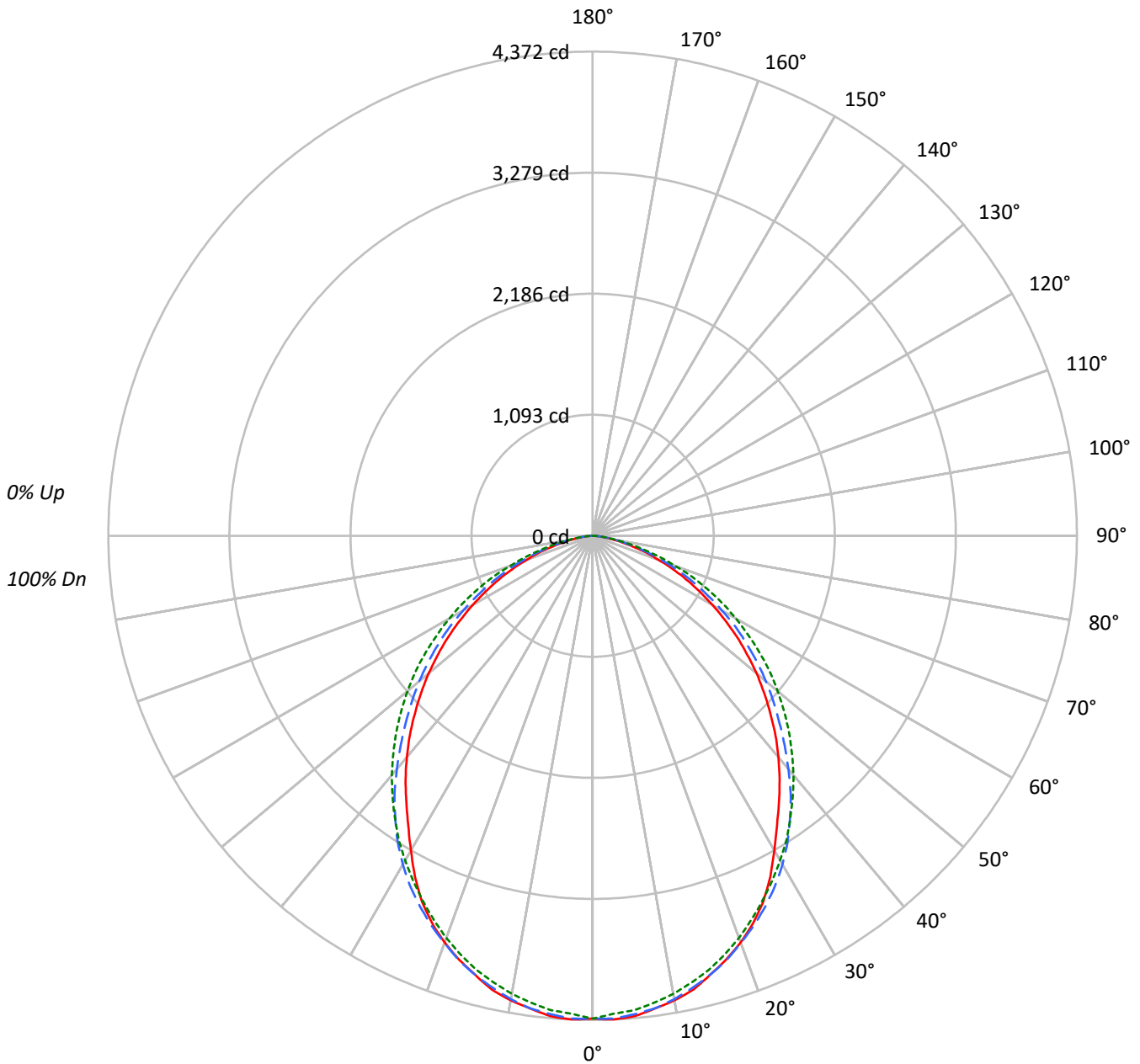
Lumens per Lamp: N/A  
Luminaire Lumens: 10082.0 lumens  
Efficiency: N/A  
Efficacy: 77.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	11733	11733	11733
5°	11765	11715	11615
10°	11640	11608	11475
15°	11433	11433	11302
20°	11191	11206	11062
25°	10823	10957	10783
30°	10191	10649	10519
35°	9630	10208	10224
40°	9162	9656	9909
45°	8638	9071	9536
50°	8086	8548	9130
55°	7458	7953	8637
60°	6716	7257	8033
65°	5930	6453	7306
70°	4943	5496	6208
75°	3883	4389	4859
80°	2777	3088	3426
85°	1809	1809	1707



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	410.5	4.1
10°-20°	1153.3	11.4
20°-30°	1685.3	16.7
30°-40°	1913.0	19.0
40°-50°	1846.7	18.3
50°-60°	1523.4	15.1
60°-70°	1014.5	10.1
70°-80°	454.0	4.5
80°-90°	81.2	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°	3249.1	32.2
0°-40°	5162.2	51.2
0°-60°	8532.3	84.6
0°-90°	10082.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10082.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4360	4360	4360	4360	4360	
5°	4355	4354	4337	4313	4300	412
15°	4104	4114	4104	4086	4057	1157
25°	3645	3673	3690	3663	3632	1669
35°	2931	2972	3107	3124	3112	1837
45°	2270	2308	2384	2492	2506	1751
55°	1590	1616	1695	1789	1841	1419
65°	931	956	1013	1085	1147	923
75°	374	394	422	442	467	408
85°	59	59	59	55	55	79
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4360.2	4360.2	4360.2	4360.2	4360.2
2.5°	4371.9	4373.6	4363.6	4336.8	4320.0
5°	4355.2	4353.5	4336.8	4313.3	4299.9
7.5°	4306.6	4310.0	4304.9	4271.4	4253.0
10°	4259.7	4261.4	4248.0	4221.2	4199.4
12.5°	4199.4	4197.7	4179.3	4165.9	4130.7
15°	4103.9	4114.0	4103.9	4085.5	4057.0
17.5°	4011.8	4011.8	4018.5	3986.7	3964.9
20°	3907.9	3913.0	3913.0	3887.8	3862.7
22.5°	3787.3	3802.4	3807.4	3780.6	3750.5
25°	3645.0	3673.4	3690.2	3663.4	3631.5
27.5°	3472.4	3516.0	3566.2	3546.1	3510.9
30°	3279.8	3343.4	3427.2	3410.4	3385.3
32.5°	3097.2	3160.9	3276.4	3269.7	3256.3
35°	2931.4	2971.6	3107.3	3124.0	3112.3
37.5°	2773.9	2810.8	2938.1	2976.6	2966.5
40°	2608.1	2648.3	2748.8	2817.5	2820.8
42.5°	2443.9	2482.5	2564.5	2663.4	2663.4
45°	2269.7	2308.2	2383.6	2492.5	2505.9
47.5°	2098.9	2139.1	2212.8	2321.6	2343.4
50°	1931.4	1968.2	2041.9	2147.4	2180.9
52.5°	1757.1	1797.3	1869.4	1966.5	2015.1
55°	1589.6	1616.4	1695.2	1789.0	1840.9
57.5°	1415.4	1440.6	1529.3	1609.7	1663.3
60°	1247.9	1279.8	1348.4	1430.5	1492.5
62.5°	1087.1	1120.6	1179.2	1251.3	1321.6
65°	931.3	956.5	1013.4	1085.4	1147.4
67.5°	780.6	802.4	859.3	909.6	974.9
70°	628.2	656.6	698.5	747.1	789.0
72.5°	505.9	517.6	552.8	587.9	631.5
75°	373.5	393.6	422.1	442.2	467.3
77.5°	268.0	279.7	296.5	313.2	336.7
80°	179.2	184.3	199.3	202.7	221.1
82.5°	108.9	112.2	115.6	117.3	124.0
85°	58.6	58.6	58.6	55.3	55.3
87.5°	33.5	33.5	28.5	23.5	16.8
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)