

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: P557764

Luminaire Tested: **FUSL-12-4-LD4-3HI-35-UNV-81-86-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: P557764  
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-81-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

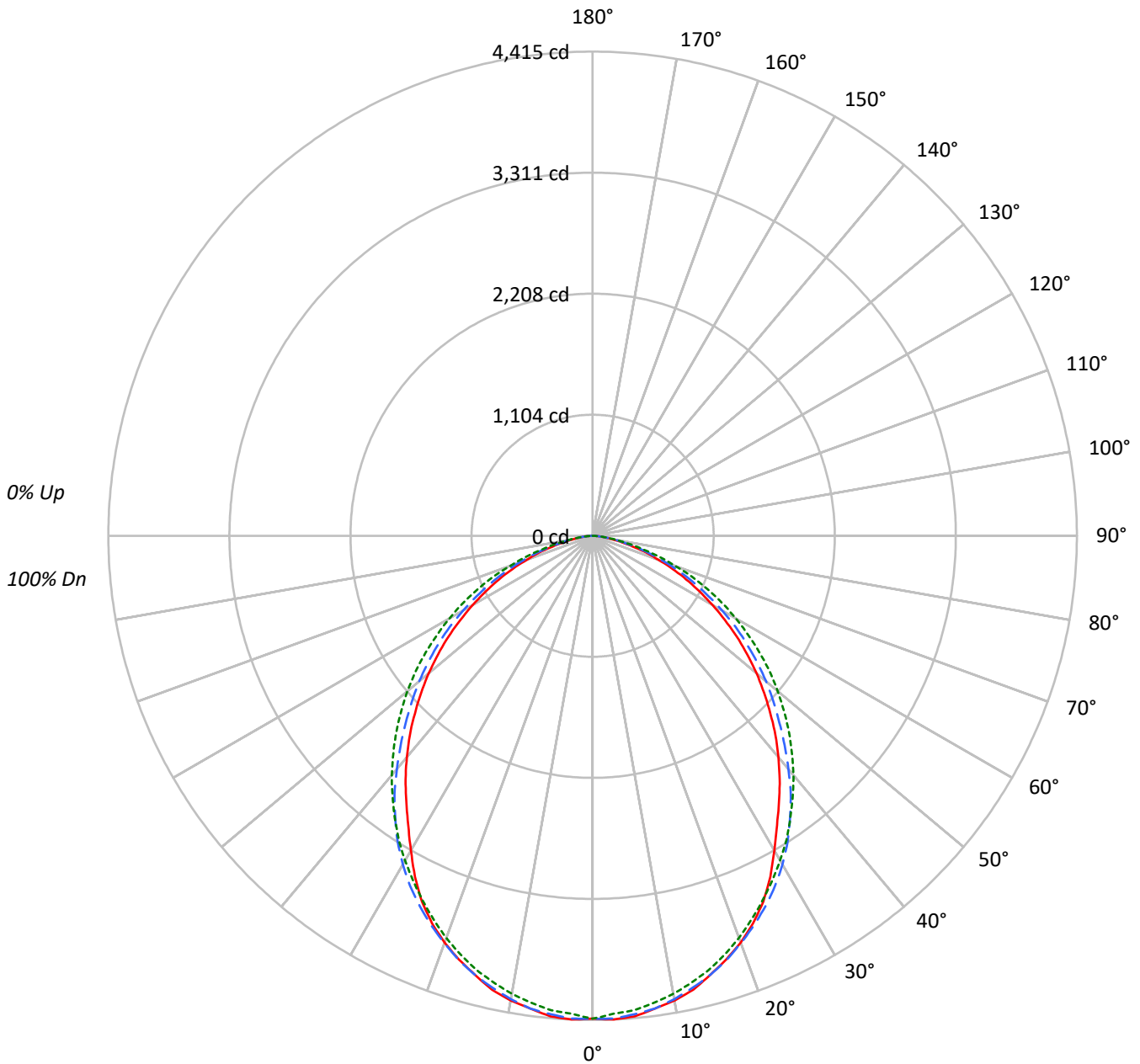
Lumens per Lamp: N/A  
Luminaire Lumens: 10182.0 lumens  
Efficiency: N/A  
Efficacy: 78.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	11850	11850	11850
5°	11881	11831	11730
10°	11755	11723	11589
15°	11546	11546	11415
20°	11302	11317	11171
25°	10930	11065	10890
30°	10292	10755	10623
35°	9725	10309	10325
40°	9253	9752	10007
45°	8723	9161	9631
50°	8166	8633	9221
55°	7532	8032	8723
60°	6783	7329	8112
65°	5989	6517	7379
70°	4991	5550	6269
75°	3922	4432	4907
80°	2805	3119	3460
85°	1828	1828	1723



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	414.6	4.1
10°-20°	1164.7	11.4
20°-30°	1702.0	16.7
30°-40°	1932.0	19.0
40°-50°	1865.1	18.3
50°-60°	1538.5	15.1
60°-70°	1024.5	10.1
70°-80°	458.5	4.5
80°-90°	82.0	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°	3281.4	32.2
0°-40°	5213.4	51.2
0°-60°	8617.0	84.6
0°-90°	10182.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10182.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4404	4404	4404	4404	4404	
5°	4398	4397	4380	4356	4343	416
15°	4145	4155	4145	4126	4097	1168
25°	3681	3710	3727	3700	3668	1686
35°	2960	3001	3138	3155	3143	1855
45°	2292	2331	2407	2517	2531	1769
55°	1605	1632	1712	1807	1859	1433
65°	941	966	1024	1096	1159	933
75°	377	398	426	447	472	413
85°	59	59	59	56	56	80
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4403.5	4403.5	4403.5	4403.5	4403.5
2.5°	4415.3	4417.0	4406.8	4379.8	4362.9
5°	4398.4	4396.7	4379.8	4356.1	4342.6
7.5°	4349.3	4352.7	4347.6	4313.8	4295.2
10°	4302.0	4303.6	4290.1	4263.0	4241.1
12.5°	4241.1	4239.4	4220.8	4207.2	4171.7
15°	4144.6	4154.8	4144.6	4126.0	4097.3
17.5°	4051.6	4051.6	4058.3	4026.2	4004.2
20°	3946.7	3951.8	3951.8	3926.4	3901.0
22.5°	3824.9	3840.1	3845.2	3818.1	3787.7
25°	3681.1	3709.9	3726.8	3699.7	3667.6
27.5°	3506.9	3550.8	3601.6	3581.3	3545.8
30°	3312.3	3376.6	3461.2	3444.3	3418.9
32.5°	3127.9	3192.2	3308.9	3302.2	3288.6
35°	2960.4	3001.0	3138.1	3155.0	3143.1
37.5°	2801.4	2838.6	2967.2	3006.1	2996.0
40°	2634.0	2674.6	2776.1	2845.4	2848.8
42.5°	2468.2	2507.1	2590.0	2689.8	2689.8
45°	2292.2	2331.1	2407.3	2517.2	2530.8
47.5°	2119.7	2160.3	2234.7	2344.7	2366.7
50°	1950.5	1987.7	2062.2	2168.7	2202.6
52.5°	1774.6	1815.2	1887.9	1986.0	2035.1
55°	1605.4	1632.5	1712.0	1806.7	1859.2
57.5°	1429.5	1454.8	1544.5	1625.7	1679.8
60°	1260.3	1292.4	1361.8	1444.7	1507.3
62.5°	1097.9	1131.7	1190.9	1263.7	1334.7
65°	940.6	966.0	1023.5	1096.2	1158.8
67.5°	788.3	810.3	867.8	918.6	984.6
70°	634.4	663.1	705.4	754.5	796.8
72.5°	510.9	522.7	558.3	593.8	637.8
75°	377.2	397.5	426.3	446.6	472.0
77.5°	270.7	282.5	299.4	316.3	340.0
80°	181.0	186.1	201.3	204.7	223.3
82.5°	110.0	113.3	116.7	118.4	125.2
85°	59.2	59.2	59.2	55.8	55.8
87.5°	33.8	33.8	28.8	23.7	16.9
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)