

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: P557769

Luminaire Tested: **FUSL-12-4-LD4-3HI-35-UNV-81-88-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: P557769  
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-81-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

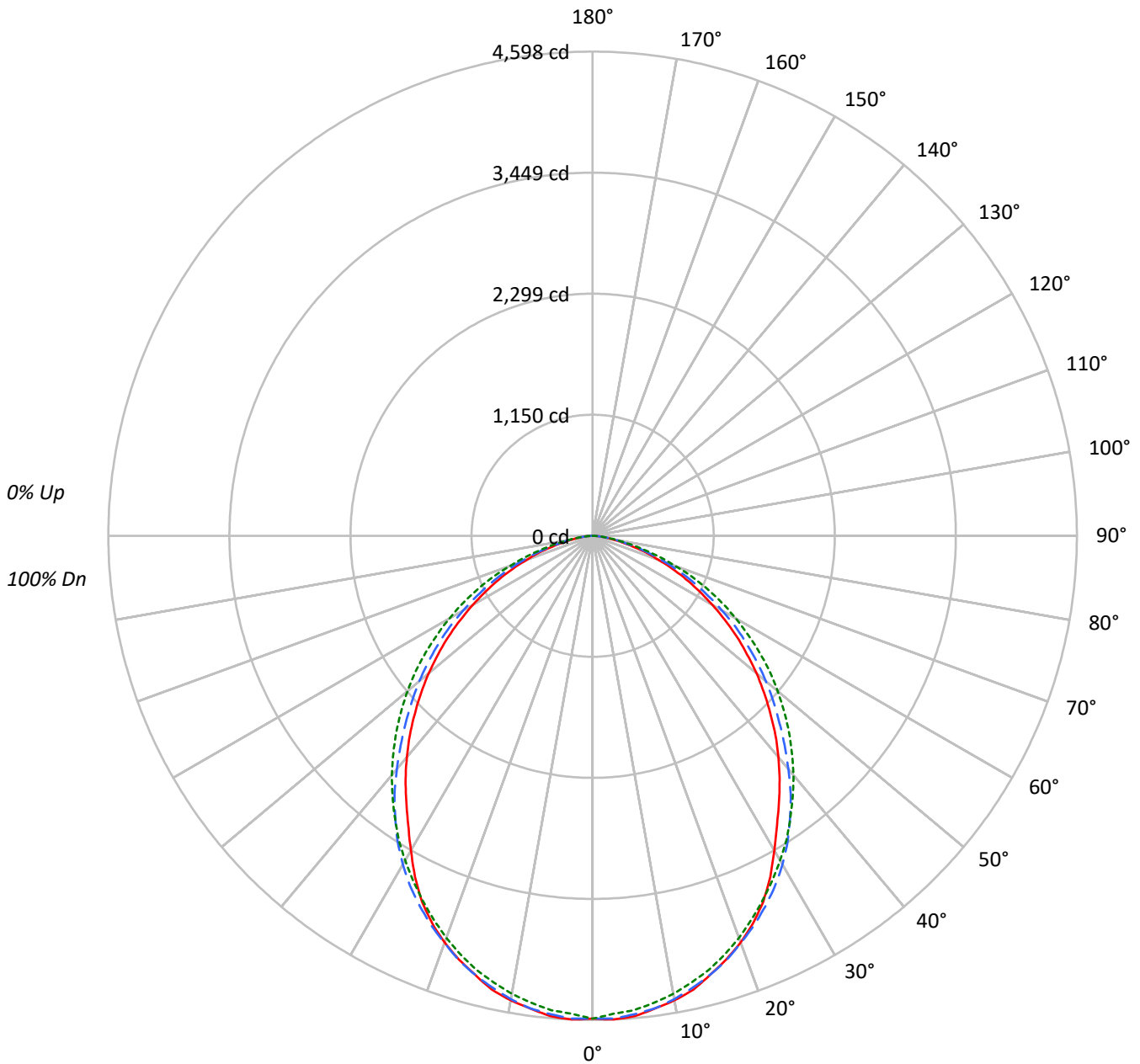
Lumens per Lamp: N/A  
Luminaire Lumens: 10603.0 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	12339	12339	12339
5°	12372	12320	12215
10°	12241	12207	12068
15°	12024	12024	11887
20°	11769	11785	11633
25°	11382	11523	11340
30°	10718	11200	11063
35°	10128	10735	10752
40°	9635	10155	10421
45°	9084	9540	10029
50°	8503	8990	9602
55°	7843	8364	9083
60°	7063	7632	8448
65°	6237	6786	7684
70°	5198	5780	6528
75°	4084	4615	5110
80°	2921	3248	3603
85°	1905	1905	1794



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	431.7	4.1
10°-20°	1212.9	11.4
20°-30°	1772.4	16.7
30°-40°	2011.9	19.0
40°-50°	1942.2	18.3
50°-60°	1602.2	15.1
60°-70°	1066.9	10.1
70°-80°	477.4	4.5
80°-90°	85.4	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°	3417.1	32.2
0°-40°	5428.9	51.2
0°-60°	8973.3	84.6
0°-90°	10603.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10603.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4586	4586	4586	4586	4586	
5°	4580	4578	4561	4536	4522	434
15°	4316	4327	4316	4297	4267	1217
25°	3833	3863	3881	3853	3819	1755
35°	3083	3125	3268	3285	3273	1932
45°	2387	2428	2507	2621	2635	1842
55°	1672	1700	1783	1881	1936	1492
65°	980	1006	1066	1142	1207	971
75°	393	414	444	465	492	430
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°	4585.5	4585.5	4585.5	4585.5	4585.5
2.5°	4597.9	4599.6	4589.0	4560.9	4543.2
5°	4580.2	4578.5	4560.9	4536.2	4522.1
7.5°	4529.2	4532.7	4527.4	4492.2	4472.8
10°	4479.8	4481.6	4467.5	4439.3	4416.4
12.5°	4416.4	4414.6	4395.3	4381.2	4344.2
15°	4316.0	4326.6	4316.0	4296.6	4266.7
17.5°	4219.1	4219.1	4226.2	4192.7	4169.8
20°	4109.9	4115.2	4115.2	4088.7	4062.3
22.5°	3983.0	3998.9	4004.2	3976.0	3944.3
25°	3833.3	3863.3	3880.9	3852.7	3819.2
27.5°	3651.9	3697.7	3750.5	3729.4	3692.4
30°	3449.3	3516.2	3604.3	3586.7	3560.3
32.5°	3257.3	3324.2	3445.7	3438.7	3424.6
35°	3082.9	3125.1	3267.8	3285.4	3273.1
37.5°	2917.3	2956.0	3089.9	3130.4	3119.8
40°	2742.9	2785.1	2890.8	2963.1	2966.6
42.5°	2570.2	2610.7	2697.1	2801.0	2801.0
45°	2387.0	2427.5	2506.8	2621.3	2635.4
47.5°	2207.3	2249.6	2327.1	2441.6	2464.5
50°	2031.2	2069.9	2147.4	2258.4	2293.6
52.5°	1848.0	1890.2	1966.0	2068.2	2119.2
55°	1671.8	1700.0	1782.8	1881.4	1936.0
57.5°	1488.6	1515.0	1608.4	1692.9	1749.3
60°	1312.4	1345.9	1418.1	1504.4	1569.6
62.5°	1143.3	1178.5	1240.2	1315.9	1389.9
65°	979.5	1005.9	1065.8	1141.5	1206.7
67.5°	820.9	843.8	903.7	956.6	1025.3
70°	660.6	690.6	734.6	785.7	829.7
72.5°	532.0	544.3	581.3	618.3	664.1
75°	392.8	414.0	443.9	465.1	491.5
77.5°	281.9	294.2	311.8	329.4	354.1
80°	188.5	193.8	209.6	213.2	232.5
82.5°	114.5	118.0	121.6	123.3	130.4
85°	61.7	61.7	61.7	58.1	58.1
87.5°	35.2	35.2	29.9	24.7	17.6
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)