

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: P558445

Luminaire Tested: **FUSL-12-4-LD4-3STD-50-UNV-93-96-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: P558445  
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-LD4-3STD-50-UNV-93-96-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

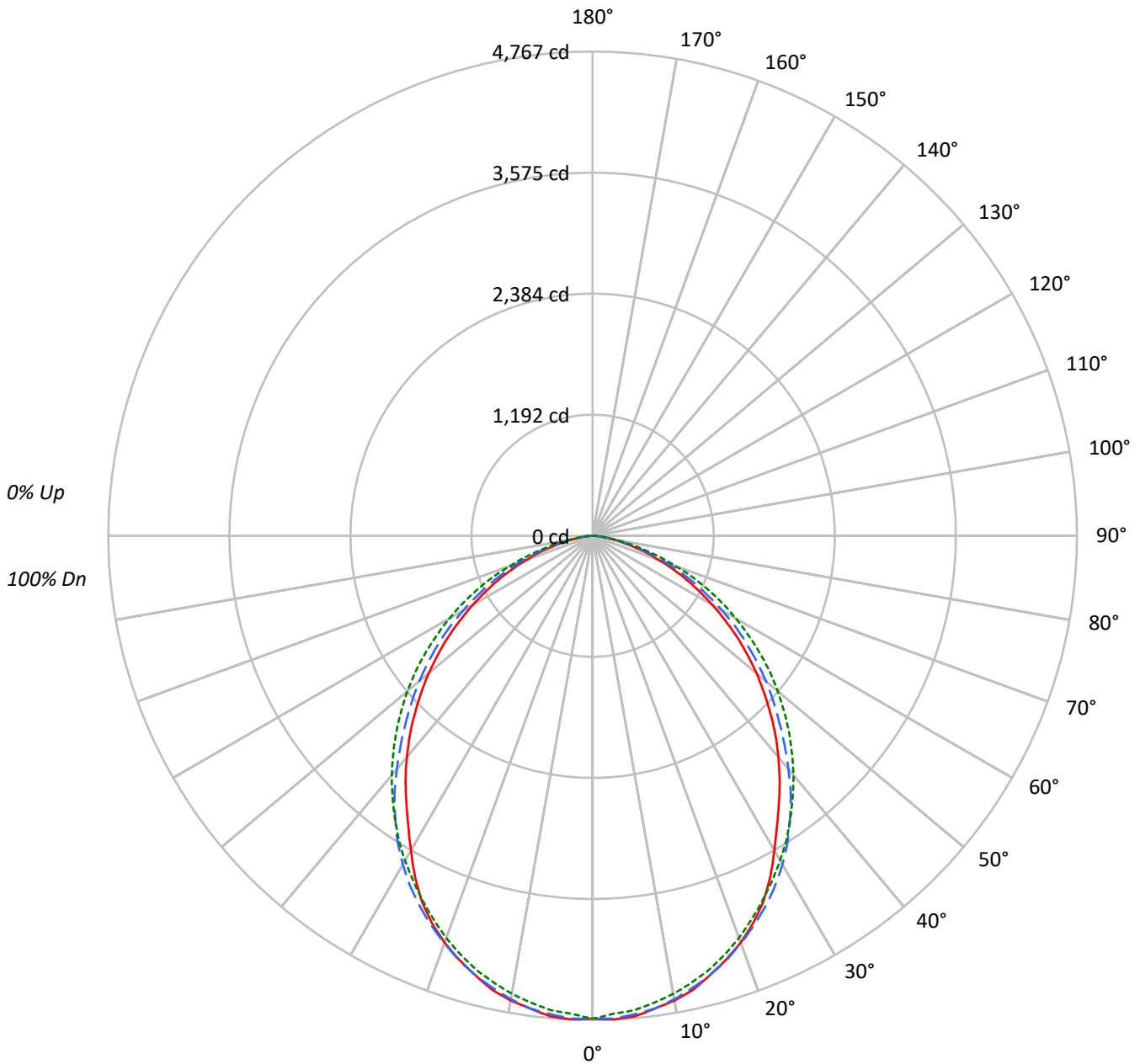
Lumens per Lamp: N/A  
Luminaire Lumens: 10994.0 lumens  
Efficiency: N/A  
Efficacy: 110.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	12795	12795	12795
5°	12829	12774	12666
10°	12692	12657	12513
15°	12467	12467	12325
20°	12203	12219	12062
25°	11802	11948	11758
30°	11113	11613	11471
35°	10501	11131	11149
40°	9990	10529	10805
45°	9419	9892	10399
50°	8817	9321	9956
55°	8132	8672	9418
60°	7324	7914	8759
65°	6467	7037	7967
70°	5390	5993	6769
75°	4235	4786	5298
80°	3028	3369	3736
85°	1973	1973	1862



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	447.7	4.1
10°-20°	1257.6	11.4
20°-30°	1837.8	16.7
30°-40°	2086.1	19.0
40°-50°	2013.8	18.3
50°-60°	1661.2	15.1
60°-70°	1106.2	10.1
70°-80°	495.0	4.5
80°-90°	88.6	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°	3543.0	32.2
0°-40°	5629.1	51.2
0°-60°	9304.1	84.6
0°-90°	10994.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10994.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4755	4755	4755	4755	4755	
5°	4749	4747	4729	4704	4689	450
15°	4475	4486	4475	4455	4424	1262
25°	3975	4006	4024	3995	3960	1820
35°	3196	3240	3388	3407	3394	2003
45°	2475	2517	2599	2718	2733	1910
55°	1733	1763	1848	1951	2007	1547
65°	1016	1043	1105	1184	1251	1007
75°	407	429	460	482	510	445
85°	64	64	64	60	60	86
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4754.6	4754.6	4754.6	4754.6	4754.6
2.5°	4767.4	4769.2	4758.3	4729.0	4710.8
5°	4749.1	4747.3	4729.0	4703.5	4688.9
7.5°	4696.2	4699.8	4694.3	4657.8	4637.7
10°	4645.0	4646.9	4632.2	4603.0	4579.3
12.5°	4579.3	4577.4	4557.3	4542.7	4504.4
15°	4475.2	4486.1	4475.2	4455.1	4424.0
17.5°	4374.7	4374.7	4382.0	4347.3	4323.5
20°	4261.4	4266.9	4266.9	4239.5	4212.1
22.5°	4129.9	4146.4	4151.8	4122.6	4089.7
25°	3974.7	4005.7	4024.0	3994.8	3960.1
27.5°	3786.5	3834.0	3888.8	3866.9	3828.5
30°	3576.5	3645.9	3737.2	3718.9	3691.5
32.5°	3377.4	3446.8	3572.8	3565.5	3550.9
35°	3196.5	3240.4	3388.3	3406.6	3393.8
37.5°	3024.8	3065.0	3203.8	3245.9	3234.9
40°	2844.0	2887.8	2997.4	3072.3	3076.0
42.5°	2665.0	2707.0	2796.5	2904.3	2904.3
45°	2475.0	2517.0	2599.2	2718.0	2732.6
47.5°	2288.7	2332.6	2412.9	2531.7	2555.4
50°	2106.1	2146.2	2226.6	2341.7	2378.2
52.5°	1916.1	1959.9	2038.5	2144.4	2197.4
55°	1733.4	1762.7	1848.5	1950.8	2007.4
57.5°	1543.5	1570.9	1667.7	1755.4	1813.8
60°	1360.8	1395.5	1470.4	1559.9	1627.5
62.5°	1185.5	1222.0	1285.9	1364.5	1441.2
65°	1015.6	1043.0	1105.1	1183.6	1251.2
67.5°	851.2	874.9	937.0	991.8	1063.1
70°	685.0	716.0	761.7	814.7	860.3
72.5°	551.6	564.4	602.8	641.1	688.6
75°	407.3	429.2	460.3	482.2	509.6
77.5°	292.3	305.0	323.3	341.6	367.1
80°	195.4	200.9	217.4	221.0	241.1
82.5°	118.7	122.4	126.0	127.9	135.2
85°	63.9	63.9	63.9	60.3	60.3
87.5°	36.5	36.5	31.1	25.6	18.3
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)