

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: P556646

Luminaire Tested: **FUSL-12-4-LD4-1LO-50-UNV-93-87-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: P556646  
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-LD4-1LO-50-UNV-93-87-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

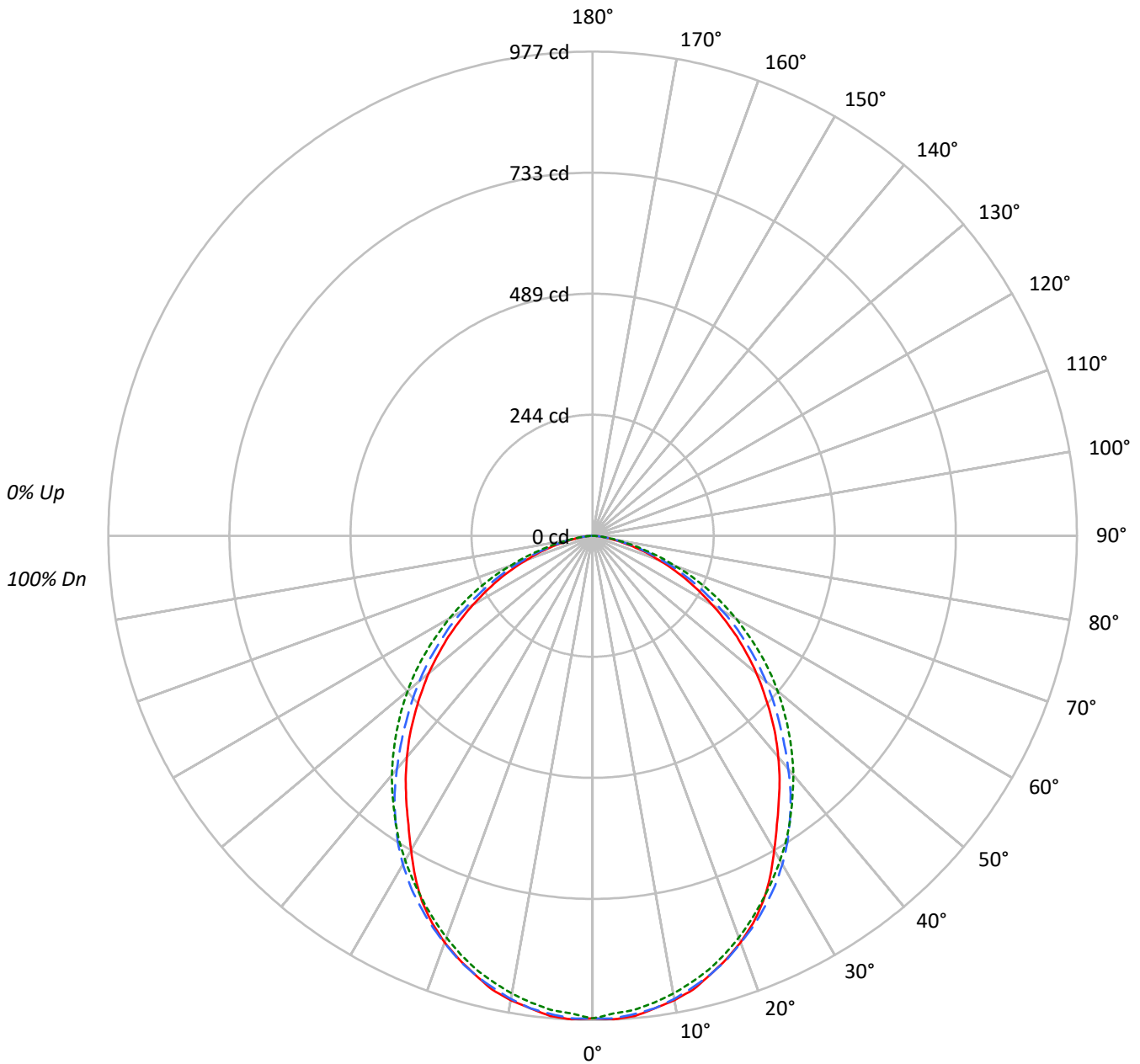
Lumens per Lamp: N/A  
Luminaire Lumens: 2252.0 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°	2621	2621	2621
5°	2628	2617	2595
10°	2600	2593	2563
15°	2554	2554	2525
20°	2500	2503	2471
25°	2417	2447	2409
30°	2276	2379	2350
35°	2151	2280	2284
40°	2047	2157	2213
45°	1929	2026	2130
50°	1806	1909	2040
55°	1666	1776	1929
60°	1500	1621	1794
65°	1324	1442	1632
70°	1104	1227	1386
75°	867	980	1085
80°	620	690	766
85°	404	404	380



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.7	4.1
10°-20°	257.6	11.4
20°-30°	376.5	16.7
30°-40°	427.3	19.0
40°-50°	412.5	18.3
50°-60°	340.3	15.1
60°-70°	226.6	10.1
70°-80°	101.4	4.5
80°-90°	18.1	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°	725.8	32.2
0°-40°	1153.1	51.2
0°-60°	1905.9	84.6
0°-90°	2252.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2252.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	974	974	974	974	974	
5°	973	972	969	964	960	92
15°	917	919	917	913	906	258
25°	814	820	824	818	811	373
35°	655	664	694	698	695	410
45°	507	516	532	557	560	391
55°	355	361	379	400	411	317
65°	208	214	226	242	256	206
75°	83	88	94	99	104	91
85°	13	13	13	12	12	18
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	973.9	973.9	973.9	973.9	973.9
2.5°	976.6	976.9	974.7	968.7	965.0
5°	972.8	972.4	968.7	963.5	960.5
7.5°	962.0	962.7	961.6	954.1	950.0
10°	951.5	951.9	948.9	942.9	938.0
12.5°	938.0	937.6	933.5	930.5	922.7
15°	916.7	918.9	916.7	912.6	906.2
17.5°	896.1	896.1	897.6	890.5	885.6
20°	872.9	874.0	874.0	868.4	862.8
22.5°	846.0	849.3	850.5	844.5	837.7
25°	814.2	820.5	824.3	818.3	811.2
27.5°	775.6	785.4	796.6	792.1	784.2
30°	732.6	746.8	765.5	761.8	756.2
32.5°	691.8	706.0	731.9	730.4	727.4
35°	654.8	663.8	694.1	697.8	695.2
37.5°	619.6	627.8	656.3	664.9	662.6
40°	582.6	591.5	614.0	629.3	630.1
42.5°	545.9	554.5	572.8	594.9	594.9
45°	507.0	515.6	532.4	556.7	559.7
47.5°	468.8	477.8	494.3	518.6	523.4
50°	431.4	439.6	456.1	479.7	487.2
52.5°	392.5	401.5	417.6	439.3	450.1
55°	355.1	361.1	378.6	399.6	411.2
57.5°	316.2	321.8	341.6	359.6	371.5
60°	278.7	285.9	301.2	319.5	333.4
62.5°	242.8	250.3	263.4	279.5	295.2
65°	208.0	213.6	226.4	242.5	256.3
67.5°	174.4	179.2	191.9	203.2	217.8
70°	140.3	146.7	156.0	166.9	176.2
72.5°	113.0	115.6	123.5	131.3	141.1
75°	83.4	87.9	94.3	98.8	104.4
77.5°	59.9	62.5	66.2	70.0	75.2
80°	40.0	41.2	44.5	45.3	49.4
82.5°	24.3	25.1	25.8	26.2	27.7
85°	13.1	13.1	13.1	12.3	12.3
87.5°	7.5	7.5	6.4	5.2	3.7
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)