

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: P556604

Luminaire Tested: **FUSL-12-4-LD4-1LO-50-UNV-80-96-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: P556604  
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-80-96-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

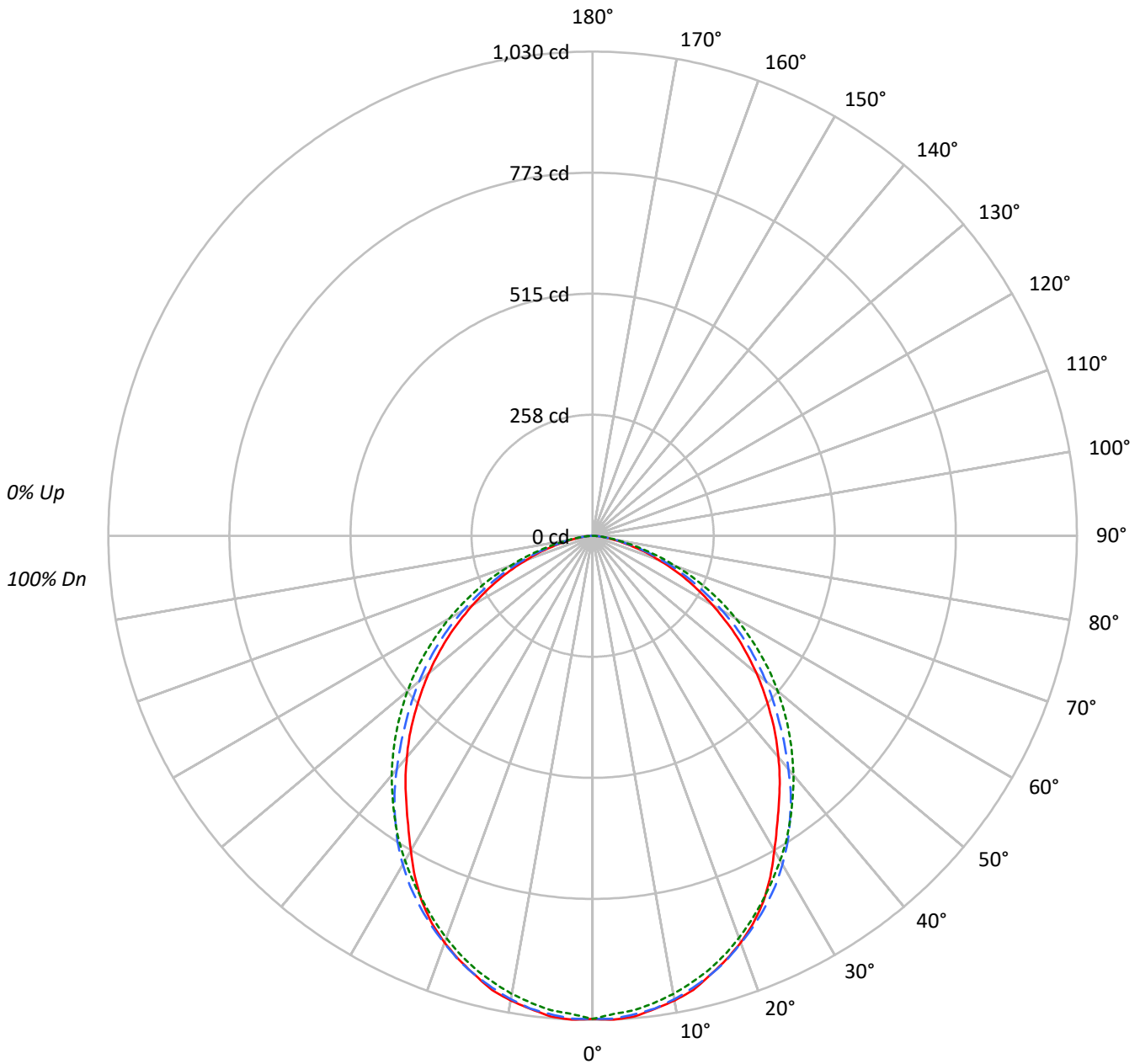
Lumens per Lamp: N/A  
Luminaire Lumens: 2376.0 lumens  
Efficiency: N/A  
Efficacy: 101.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	2765	2765	2765
5°	2773	2761	2737
10°	2743	2735	2704
15°	2695	2695	2664
20°	2637	2641	2607
25°	2551	2582	2541
30°	2402	2510	2479
35°	2269	2406	2410
40°	2159	2276	2335
45°	2036	2138	2248
50°	1906	2015	2152
55°	1757	1874	2035
60°	1583	1710	1893
65°	1398	1521	1722
70°	1164	1295	1463
75°	915	1035	1145
80°	654	728	807
85°	426	426	401



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.7	4.1
10°-20°	271.8	11.4
20°-30°	397.2	16.7
30°-40°	450.8	19.0
40°-50°	435.2	18.3
50°-60°	359.0	15.1
60°-70°	239.1	10.1
70°-80°	107.0	4.5
80°-90°	19.1	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°	765.7	32.2
0°-40°	1216.5	51.2
0°-60°	2010.8	84.6
0°-90°	2376.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2376.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1028	1028	1028	1028	1028	
5°	1026	1026	1022	1016	1013	97
15°	967	970	967	963	956	273
25°	859	866	870	863	856	393
35°	691	700	732	736	734	433
45°	535	544	562	587	591	413
55°	375	381	400	422	434	334
65°	220	225	239	256	270	218
75°	88	93	100	104	110	96
85°	14	14	14	13	13	19
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1027.6	1027.6	1027.6	1027.6	1027.6
2.5°	1030.3	1030.7	1028.3	1022.0	1018.1
5°	1026.4	1026.0	1022.0	1016.5	1013.3
7.5°	1014.9	1015.7	1014.5	1006.6	1002.3
10°	1003.9	1004.3	1001.1	994.8	989.7
12.5°	989.7	989.3	984.9	981.8	973.5
15°	967.2	969.5	967.2	962.8	956.1
17.5°	945.4	945.4	947.0	939.5	934.4
20°	921.0	922.2	922.2	916.2	910.3
22.5°	892.6	896.1	897.3	891.0	883.9
25°	859.0	865.7	869.7	863.3	855.8
27.5°	818.3	828.6	840.4	835.7	827.4
30°	772.9	787.9	807.7	803.7	797.8
32.5°	729.9	744.9	772.1	770.6	767.4
35°	690.8	700.3	732.3	736.2	733.5
37.5°	653.7	662.4	692.4	701.5	699.1
40°	614.6	624.1	647.8	664.0	664.8
42.5°	576.0	585.0	604.4	627.7	627.7
45°	534.9	544.0	561.7	587.4	590.6
47.5°	494.6	504.1	521.5	547.1	552.3
50°	455.2	463.8	481.2	506.1	514.0
52.5°	414.1	423.6	440.6	463.4	474.9
55°	374.6	380.9	399.5	421.6	433.8
57.5°	333.6	339.5	360.4	379.4	392.0
60°	294.1	301.6	317.8	337.1	351.7
62.5°	256.2	264.1	277.9	294.9	311.5
65°	219.5	225.4	238.8	255.8	270.4
67.5°	184.0	189.1	202.5	214.4	229.7
70°	148.0	154.7	164.6	176.1	185.9
72.5°	119.2	122.0	130.3	138.6	148.8
75°	88.0	92.8	99.5	104.2	110.1
77.5°	63.2	65.9	69.9	73.8	79.3
80°	42.2	43.4	47.0	47.8	52.1
82.5°	25.7	26.4	27.2	27.6	29.2
85°	13.8	13.8	13.8	13.0	13.0
87.5°	7.9	7.9	6.7	5.5	3.9
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)