

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: P558251

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-93-94-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: P558251  
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-30-UNV-93-94-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

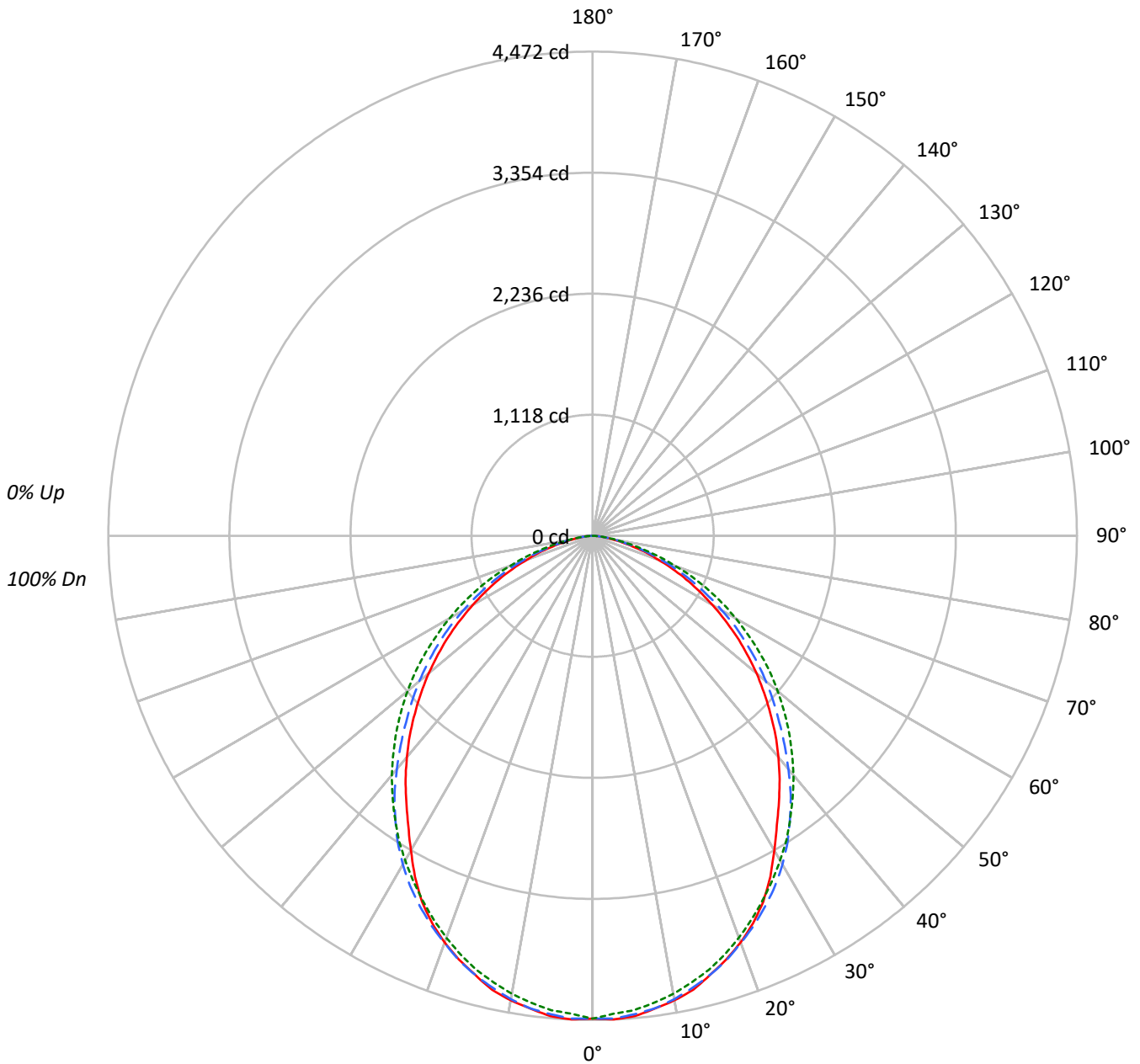
Lumens per Lamp: N/A  
Luminaire Lumens: 10312.0 lumens  
Efficiency: N/A  
Efficacy: 103.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	12001	12001	12001
5°	12033	11982	11880
10°	11905	11872	11737
15°	11694	11694	11560
20°	11446	11461	11314
25°	11069	11207	11029
30°	10424	10892	10759
35°	9849	10440	10457
40°	9371	9876	10135
45°	8835	9278	9754
50°	8270	8743	9339
55°	7628	8134	8834
60°	6870	7423	8216
65°	6066	6600	7473
70°	5055	5621	6349
75°	3973	4488	4970
80°	2841	3160	3505
85°	1853	1853	1744



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	419.9	4.1
10°-20°	1179.6	11.4
20°-30°	1723.8	16.7
30°-40°	1956.7	19.0
40°-50°	1888.9	18.3
50°-60°	1558.2	15.1
60°-70°	1037.6	10.1
70°-80°	464.3	4.5
80°-90°	83.1	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°	3323.3	32.2
0°-40°	5279.9	51.2
0°-60°	8727.0	84.6
0°-90°	10312.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10312.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4460	4460	4460	4460	4460	
5°	4454	4453	4436	4412	4398	422
15°	4198	4208	4198	4179	4150	1183
25°	3728	3757	3774	3747	3714	1707
35°	2998	3039	3178	3195	3183	1879
45°	2322	2361	2438	2549	2563	1791
55°	1626	1653	1734	1830	1883	1451
65°	953	978	1036	1110	1174	945
75°	382	403	432	452	478	418
85°	60	60	60	56	56	81
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4459.7	4459.7	4459.7	4459.7	4459.7
2.5°	4471.7	4473.4	4463.1	4435.7	4418.6
5°	4454.5	4452.8	4435.7	4411.7	4398.0
7.5°	4404.8	4408.3	4403.1	4368.9	4350.0
10°	4356.9	4358.6	4344.9	4317.5	4295.2
12.5°	4295.2	4293.5	4274.6	4260.9	4225.0
15°	4197.5	4207.8	4197.5	4178.7	4149.6
17.5°	4103.3	4103.3	4110.2	4077.6	4055.3
20°	3997.1	4002.2	4002.2	3976.5	3950.8
22.5°	3873.7	3889.2	3894.3	3866.9	3836.0
25°	3728.1	3757.2	3774.4	3746.9	3714.4
27.5°	3551.6	3596.2	3647.6	3627.0	3591.0
30°	3354.6	3419.7	3505.4	3488.2	3462.5
32.5°	3167.9	3233.0	3351.2	3344.3	3330.6
35°	2998.2	3039.4	3178.1	3195.3	3183.3
37.5°	2837.2	2874.9	3005.1	3044.5	3034.2
40°	2667.6	2708.7	2811.5	2881.7	2885.2
42.5°	2499.7	2539.1	2623.0	2724.1	2724.1
45°	2321.5	2360.9	2438.0	2549.4	2563.1
47.5°	2146.7	2187.9	2263.2	2374.6	2396.9
50°	1975.4	2013.1	2088.5	2196.4	2230.7
52.5°	1797.2	1838.4	1912.0	2011.4	2061.1
55°	1625.9	1653.3	1733.8	1829.8	1882.9
57.5°	1447.7	1473.4	1564.2	1646.5	1701.3
60°	1276.4	1308.9	1379.2	1463.1	1526.5
62.5°	1111.9	1146.2	1206.2	1279.8	1351.8
65°	952.6	978.3	1036.5	1110.2	1173.6
67.5°	798.4	820.7	878.9	930.3	997.1
70°	642.5	671.6	714.4	764.1	807.0
72.5°	517.4	529.4	565.4	601.4	645.9
75°	382.1	402.6	431.7	452.3	478.0
77.5°	274.1	286.1	303.3	320.4	344.4
80°	183.3	188.5	203.9	207.3	226.2
82.5°	111.4	114.8	118.2	119.9	126.8
85°	60.0	60.0	60.0	56.5	56.5
87.5°	34.3	34.3	29.1	24.0	17.1
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)