

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: P557924

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-UNV-93-86-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: P557924  
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-50-UNV-93-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

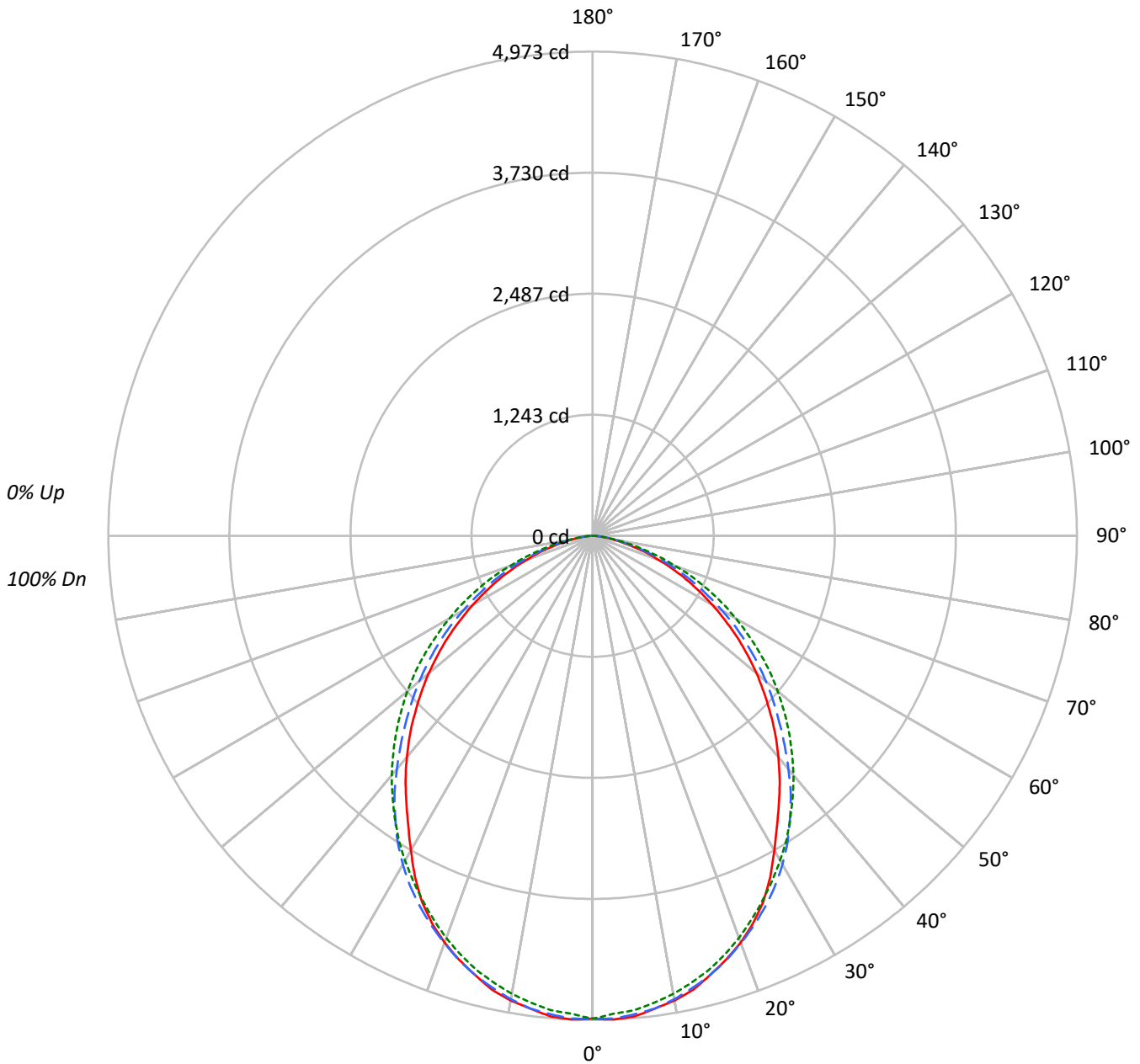
Lumens per Lamp: N/A  
Luminaire Lumens: 11469.0 lumens  
Efficiency: N/A  
Efficacy: 88.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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°	13347	13347	13347
5°	13383	13326	13213
10°	13241	13204	13053
15°	13006	13006	12857
20°	12731	12747	12583
25°	12311	12464	12266
30°	11593	12114	11966
35°	10954	11612	11630
40°	10422	10984	11272
45°	9826	10319	10848
50°	9198	9724	10387
55°	8484	9047	9825
60°	7640	8255	9137
65°	6746	7340	8311
70°	5622	6252	7061
75°	4418	4993	5527
80°	3160	3515	3897
85°	2059	2059	1942



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	467.0	4.1
10°-20°	1311.9	11.4
20°-30°	1917.2	16.7
30°-40°	2176.2	19.0
40°-50°	2100.8	18.3
50°-60°	1733.0	15.1
60°-70°	1154.0	10.1
70°-80°	516.4	4.5
80°-90°	92.4	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°	3696.1	32.2
0°-40°	5872.3	51.2
0°-60°	9706.1	84.6
0°-90°	11469.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11469.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4960	4960	4960	4960	4960	
5°	4954	4952	4933	4907	4891	469
15°	4668	4680	4668	4648	4615	1316
25°	4146	4179	4198	4167	4131	1899
35°	3335	3380	3535	3554	3540	2089
45°	2582	2626	2712	2835	2851	1992
55°	1808	1839	1928	2035	2094	1614
65°	1060	1088	1153	1235	1305	1051
75°	425	448	480	503	532	465
85°	67	67	67	63	63	90
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4960.0	4960.0	4960.0	4960.0	4960.0
2.5°	4973.4	4975.3	4963.9	4933.4	4914.3
5°	4954.3	4952.4	4933.4	4906.7	4891.4
7.5°	4899.1	4902.9	4897.2	4859.1	4838.1
10°	4845.7	4847.6	4832.4	4801.9	4777.1
12.5°	4777.1	4775.2	4754.3	4739.0	4699.0
15°	4668.5	4679.9	4668.5	4647.5	4615.1
17.5°	4563.7	4563.7	4571.3	4535.1	4510.3
20°	4445.6	4451.3	4451.3	4422.7	4394.1
22.5°	4308.4	4325.5	4331.2	4300.7	4266.4
25°	4146.4	4178.8	4197.8	4167.4	4131.1
27.5°	3950.1	3999.7	4056.8	4034.0	3994.0
30°	3731.0	3803.4	3898.7	3879.6	3851.0
32.5°	3523.3	3595.7	3727.2	3719.6	3704.3
35°	3334.6	3380.4	3534.7	3553.8	3540.4
37.5°	3155.5	3197.4	3342.3	3386.1	3374.7
40°	2966.9	3012.6	3126.9	3205.1	3208.9
42.5°	2780.1	2824.0	2917.3	3029.8	3029.8
45°	2582.0	2625.8	2711.5	2835.4	2850.6
47.5°	2387.6	2433.3	2517.2	2641.0	2665.8
50°	2197.1	2239.0	2322.8	2442.9	2481.0
52.5°	1998.9	2044.6	2126.6	2237.1	2292.3
55°	1808.3	1838.8	1928.4	2035.1	2094.2
57.5°	1610.2	1638.7	1739.7	1831.2	1892.2
60°	1419.6	1455.8	1533.9	1627.3	1697.8
62.5°	1236.7	1274.8	1341.5	1423.4	1503.4
65°	1059.5	1088.0	1152.8	1234.8	1305.3
67.5°	888.0	912.7	977.5	1034.7	1109.0
70°	714.6	747.0	794.6	849.9	897.5
72.5°	575.5	588.8	628.8	668.8	718.4
75°	424.9	447.8	480.2	503.1	531.6
77.5°	304.9	318.2	337.3	356.3	383.0
80°	203.9	209.6	226.8	230.6	251.5
82.5°	123.9	127.7	131.5	133.4	141.0
85°	66.7	66.7	66.7	62.9	62.9
87.5°	38.1	38.1	32.4	26.7	19.1
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)