

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: P557160

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-93-88-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: P557160  
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-LD4-2HI-50-UNV-93-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

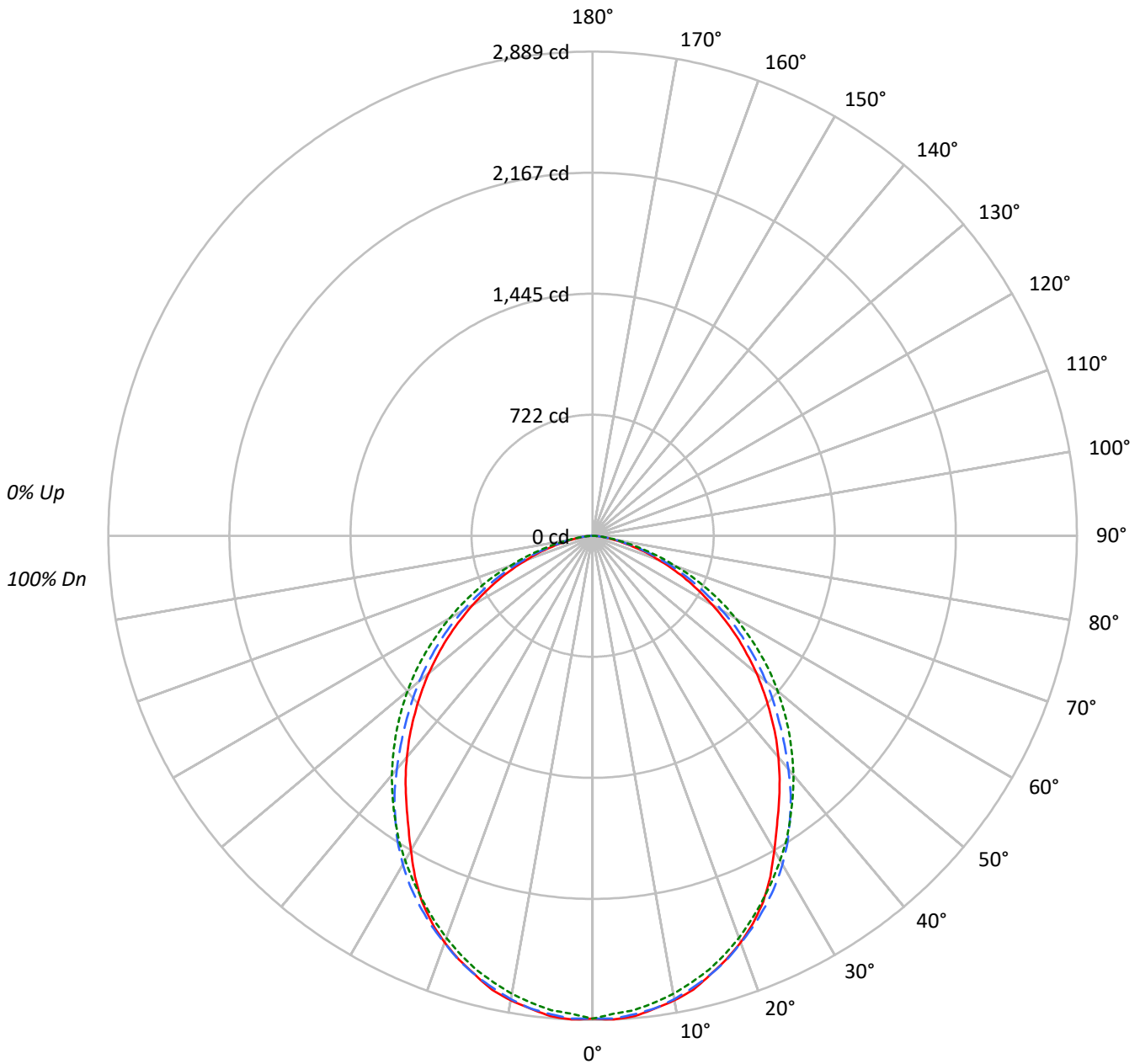
Lumens per Lamp: N/A  
Luminaire Lumens: 6662.0 lumens  
Efficiency: N/A  
Efficacy: 77.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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

TEST NUMBER: P557160

CATALOG NUMBER: FUSL-12-4-LD4-2HI-50-UNV-93-88-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P557160

CATALOG NUMBER: FUSL-12-4-LD4-2HI-50-UNV-93-88-EDD-90

**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°	7753	7753	7753
5°	7774	7741	7675
10°	7691	7670	7582
15°	7555	7555	7468
20°	7395	7404	7309
25°	7151	7240	7125
30°	6734	7037	6951
35°	6363	6745	6756
40°	6054	6380	6548
45°	5708	5994	6302
50°	5343	5649	6033
55°	4928	5255	5707
60°	4438	4795	5308
65°	3918	4264	4828
70°	3266	3632	4102
75°	2566	2900	3211
80°	1835	2041	2264
85°	1195	1195	1127



TEST NUMBER: P557160

CATALOG NUMBER: FUSL-12-4-LD4-2HI-50-UNV-93-88-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	271.3	4.1
10°-20°	762.1	11.4
20°-30°	1113.6	16.7
30°-40°	1264.1	19.0
40°-50°	1220.3	18.3
50°-60°	1006.7	15.1
60°-70°	670.3	10.1
70°-80°	300.0	4.5
80°-90°	53.7	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°	2147.0	32.2
0°-40°	3411.1	51.2
0°-60°	5638.0	84.6
0°-90°	6662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6662.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2881	2881	2881	2881	2881	
5°	2878	2877	2866	2850	2841	272
15°	2712	2718	2712	2700	2681	764
25°	2408	2427	2438	2421	2400	1103
35°	1937	1964	2053	2064	2056	1214
45°	1500	1525	1575	1647	1656	1157
55°	1050	1068	1120	1182	1216	938
65°	615	632	670	717	758	610
75°	247	260	279	292	309	270
85°	39	39	39	36	36	52
90°	0	0	0	0	0	



TEST NUMBER: P557160

CATALOG NUMBER: FUSL-12-4-LD4-2HI-50-UNV-93-88-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2881.1	2881.1	2881.1	2881.1	2881.1
2.5°	2888.9	2890.0	2883.4	2865.6	2854.6
5°	2877.8	2876.7	2865.6	2850.2	2841.3
7.5°	2845.7	2847.9	2844.6	2822.5	2810.3
10°	2814.7	2815.8	2807.0	2789.3	2774.9
12.5°	2774.9	2773.8	2761.6	2752.7	2729.5
15°	2711.8	2718.4	2711.8	2699.6	2680.8
17.5°	2650.9	2650.9	2655.3	2634.3	2619.9
20°	2582.3	2585.6	2585.6	2569.0	2552.4
22.5°	2502.6	2512.6	2515.9	2498.2	2478.2
25°	2408.5	2427.3	2438.4	2420.7	2399.7
27.5°	2294.5	2323.3	2356.5	2343.2	2320.0
30°	2167.2	2209.3	2264.6	2253.6	2237.0
32.5°	2046.6	2088.6	2165.0	2160.6	2151.7
35°	1937.0	1963.6	2053.2	2064.3	2056.5
37.5°	1833.0	1857.3	1941.4	1966.9	1960.2
40°	1723.4	1749.9	1816.3	1861.7	1863.9
42.5°	1614.9	1640.4	1694.6	1759.9	1759.9
45°	1499.8	1525.2	1575.1	1647.0	1655.9
47.5°	1386.9	1413.5	1462.2	1534.1	1548.5
50°	1276.2	1300.6	1349.3	1419.0	1441.1
52.5°	1161.1	1187.7	1235.2	1299.4	1331.5
55°	1050.4	1068.1	1120.1	1182.1	1216.4
57.5°	935.3	951.9	1010.6	1063.7	1099.1
60°	824.6	845.6	891.0	945.3	986.2
62.5°	718.3	740.5	779.2	826.8	873.3
65°	615.4	632.0	669.6	717.2	758.2
67.5°	515.8	530.2	567.8	601.0	644.2
70°	415.1	433.9	461.6	493.7	521.3
72.5°	334.3	342.0	365.3	388.5	417.3
75°	246.8	260.1	278.9	292.2	308.8
77.5°	177.1	184.8	195.9	207.0	222.5
80°	118.4	121.8	131.7	133.9	146.1
82.5°	71.9	74.2	76.4	77.5	81.9
85°	38.7	38.7	38.7	36.5	36.5
87.5°	22.1	22.1	18.8	15.5	11.1
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)