

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: P556585

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-93-88-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: P556585  
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-40-UNV-93-88-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

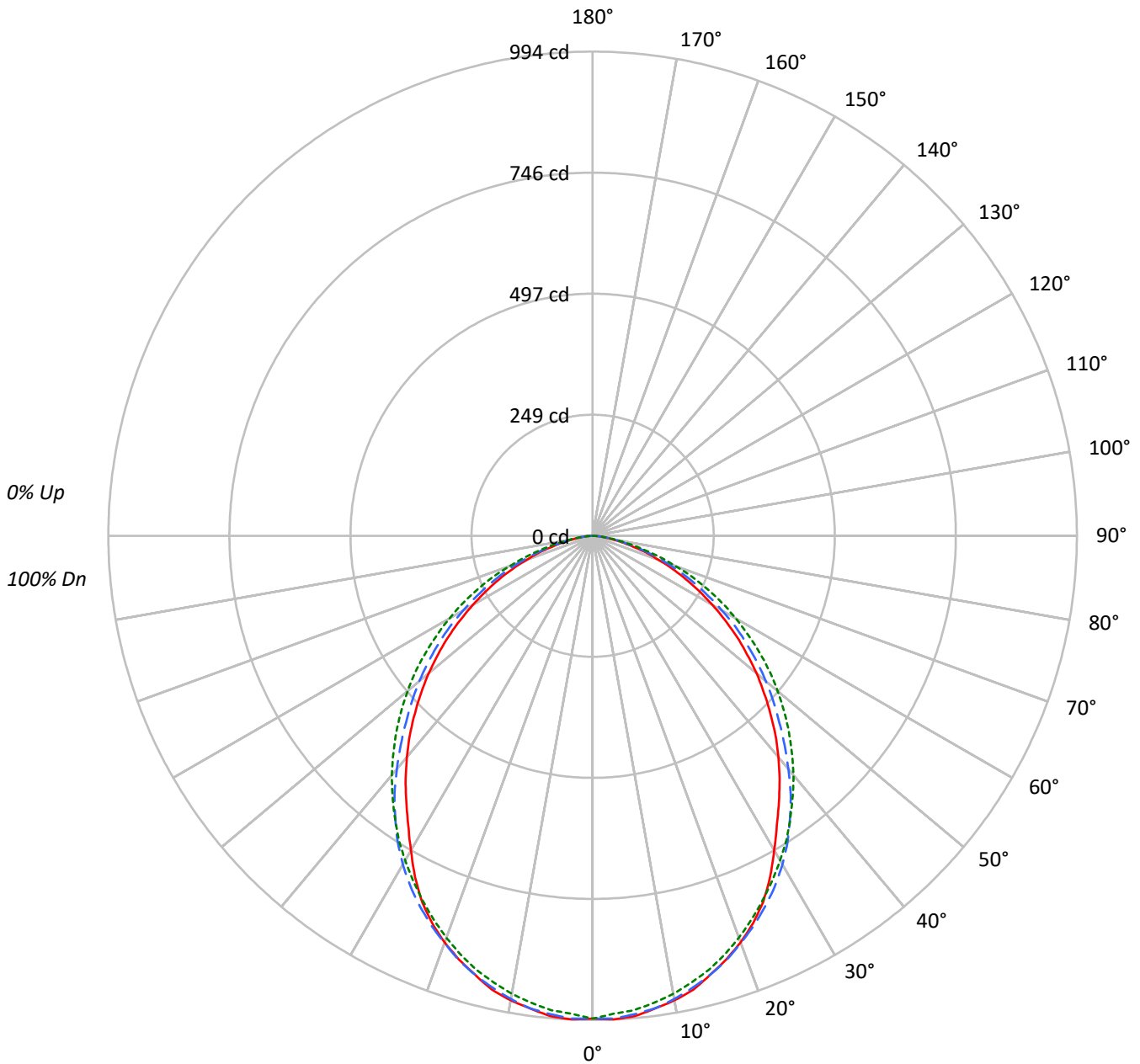
Lumens per Lamp: N/A  
Luminaire Lumens: 2292.0 lumens  
Efficiency: N/A  
Efficacy: 97.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (Ain): 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: P556585

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-93-88-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P556585

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-93-88-EDD

**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°	2667	2667	2667
5°	2675	2663	2640
10°	2646	2639	2609
15°	2599	2599	2569
20°	2544	2548	2515
25°	2460	2491	2451
30°	2317	2421	2391
35°	2189	2321	2324
40°	2083	2195	2253
45°	1964	2062	2168
50°	1838	1943	2076
55°	1696	1808	1963
60°	1527	1650	1826
65°	1348	1467	1661
70°	1124	1249	1412
75°	883	998	1104
80°	631	702	779
85°	411	411	389



TEST NUMBER: P556585

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-93-88-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.3	4.1
10°-20°	262.2	11.4
20°-30°	383.1	16.7
30°-40°	434.9	19.0
40°-50°	419.8	18.3
50°-60°	346.3	15.1
60°-70°	230.6	10.1
70°-80°	103.2	4.5
80°-90°	18.5	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°	738.6	32.2
0°-40°	1173.5	51.2
0°-60°	1939.7	84.6
0°-90°	2292.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2292.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	991	991	991	991	991	
5°	990	990	986	981	978	94
15°	933	935	933	929	922	263
25°	829	835	839	833	826	379
35°	666	676	706	710	708	418
45°	516	525	542	567	570	398
55°	361	368	385	407	418	323
65°	212	217	230	247	261	210
75°	85	90	96	100	106	93
85°	13	13	13	13	13	18
90°	0	0	0	0	0	



TEST NUMBER: P556585

CATALOG NUMBER: FUSL-12-4-LD4-1LO-40-UNV-93-88-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	991.2	991.2	991.2	991.2	991.2
2.5°	993.9	994.3	992.0	985.9	982.1
5°	990.1	989.7	985.9	980.6	977.5
7.5°	979.0	979.8	978.7	971.0	966.9
10°	968.4	968.8	965.7	959.6	954.7
12.5°	954.7	954.3	950.1	947.1	939.1
15°	933.0	935.3	933.0	928.8	922.3
17.5°	912.0	912.0	913.5	906.3	901.4
20°	888.4	889.6	889.6	883.8	878.1
22.5°	861.0	864.4	865.6	859.5	852.6
25°	828.6	835.1	838.9	832.8	825.6
27.5°	789.4	799.3	810.7	806.2	798.2
30°	745.6	760.1	779.1	775.3	769.6
32.5°	704.1	718.6	744.9	743.3	740.3
35°	666.4	675.5	706.4	710.2	707.5
37.5°	630.6	639.0	667.9	676.7	674.4
40°	592.9	602.0	624.9	640.5	641.3
42.5°	555.6	564.4	583.0	605.5	605.5
45°	516.0	524.7	541.9	566.6	569.7
47.5°	477.1	486.3	503.0	527.8	532.7
50°	439.1	447.4	464.2	488.2	495.8
52.5°	399.5	408.6	425.0	447.1	458.1
55°	361.4	367.5	385.4	406.7	418.5
57.5°	321.8	327.5	347.7	366.0	378.1
60°	283.7	290.9	306.5	325.2	339.3
62.5°	247.1	254.8	268.1	284.5	300.5
65°	211.7	217.4	230.4	246.8	260.9
67.5°	177.5	182.4	195.4	206.8	221.6
70°	142.8	149.3	158.8	169.8	179.4
72.5°	115.0	117.7	125.7	133.7	143.6
75°	84.9	89.5	96.0	100.5	106.2
77.5°	60.9	63.6	67.4	71.2	76.5
80°	40.7	41.9	45.3	46.1	50.3
82.5°	24.8	25.5	26.3	26.7	28.2
85°	13.3	13.3	13.3	12.6	12.6
87.5°	7.6	7.6	6.5	5.3	3.8
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)