

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: P556994

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-81-85-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: P556994  
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-35-UNV-81-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

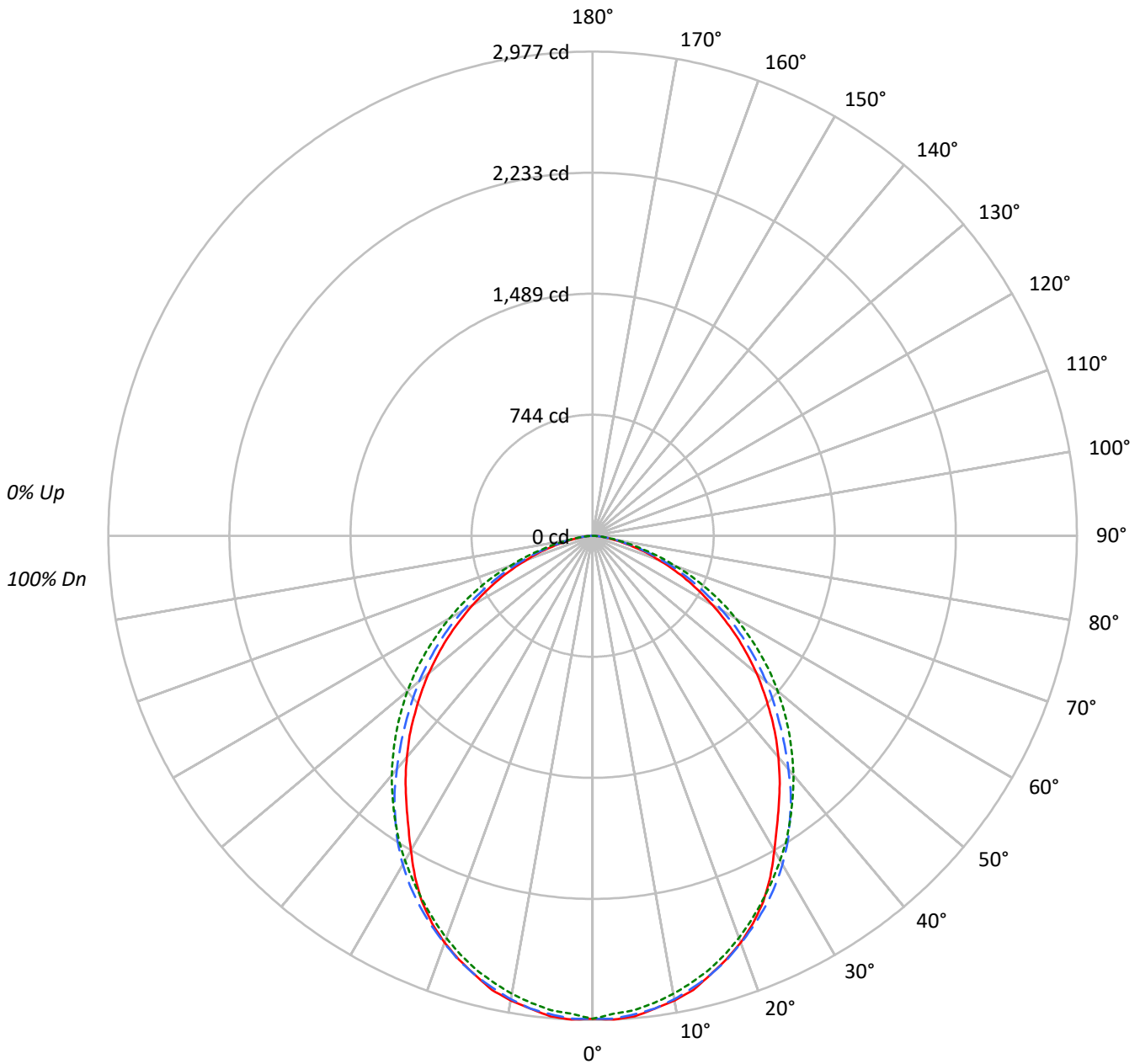
Lumens per Lamp: N/A  
Luminaire Lumens: 6866.0 lumens  
Efficiency: N/A  
Efficacy: 79.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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: P556994

CATALOG NUMBER: FUSL-12-4-LD4-2HI-35-UNV-81-85-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P556994

CATALOG NUMBER: FUSL-12-4-LD4-2HI-35-UNV-81-85-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°	7991	7991	7991
5°	8012	7978	7910
10°	7927	7905	7815
15°	7786	7786	7697
20°	7621	7631	7533
25°	7370	7462	7343
30°	6940	7252	7164
35°	6558	6952	6963
40°	6239	6576	6748
45°	5882	6178	6495
50°	5506	5822	6218
55°	5079	5416	5882
60°	4574	4942	5470
65°	4039	4395	4975
70°	3366	3743	4227
75°	2645	2989	3309
80°	1892	2103	2334
85°	1232	1232	1161



TEST NUMBER: P556994

CATALOG NUMBER: FUSL-12-4-LD4-2HI-35-UNV-81-85-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	279.6	4.1
10°-20°	785.4	11.4
20°-30°	1147.7	16.7
30°-40°	1302.8	19.0
40°-50°	1257.7	18.3
50°-60°	1037.5	15.1
60°-70°	690.9	10.1
70°-80°	309.2	4.5
80°-90°	55.3	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°	2212.7	32.2
0°-40°	3515.5	51.2
0°-60°	5810.7	84.6
0°-90°	6866.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6866.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2969	2969	2969	2969	2969	
5°	2966	2965	2953	2937	2928	281
15°	2795	2802	2795	2782	2763	788
25°	2482	2502	2513	2495	2473	1137
35°	1996	2024	2116	2128	2120	1251
45°	1546	1572	1623	1697	1707	1193
55°	1083	1101	1154	1218	1254	966
65°	634	651	690	739	781	629
75°	254	268	288	301	318	278
85°	40	40	40	38	38	54
90°	0	0	0	0	0	



TEST NUMBER: P556994

CATALOG NUMBER: FUSL-12-4-LD4-2HI-35-UNV-81-85-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2969.4	2969.4	2969.4	2969.4	2969.4
2.5°	2977.4	2978.5	2971.6	2953.4	2942.0
5°	2965.9	2964.8	2953.4	2937.4	2928.3
7.5°	2932.9	2935.1	2931.7	2908.9	2896.4
10°	2900.9	2902.1	2892.9	2874.7	2859.9
12.5°	2859.9	2858.7	2846.2	2837.0	2813.1
15°	2794.8	2801.7	2794.8	2782.3	2762.9
17.5°	2732.1	2732.1	2736.7	2715.0	2700.2
20°	2661.4	2664.8	2664.8	2647.7	2630.6
22.5°	2579.2	2589.5	2592.9	2574.7	2554.1
25°	2482.3	2501.7	2513.1	2494.8	2473.1
27.5°	2364.8	2394.4	2428.7	2415.0	2391.0
30°	2233.6	2276.9	2334.0	2322.6	2305.5
32.5°	2109.2	2152.6	2231.3	2226.7	2217.6
35°	1996.3	2023.7	2116.1	2127.5	2119.5
37.5°	1889.1	1914.2	2000.9	2027.1	2020.3
40°	1776.1	1803.5	1872.0	1918.7	1921.0
42.5°	1664.4	1690.6	1746.5	1813.8	1813.8
45°	1545.7	1572.0	1623.3	1697.4	1706.6
47.5°	1429.4	1456.7	1506.9	1581.1	1595.9
50°	1315.3	1340.4	1390.6	1462.4	1485.3
52.5°	1196.6	1224.0	1273.1	1339.2	1372.3
55°	1082.6	1100.8	1154.4	1218.3	1253.7
57.5°	963.9	981.0	1041.5	1096.3	1132.8
60°	849.9	871.5	918.3	974.2	1016.4
62.5°	740.3	763.2	803.1	852.1	900.1
65°	634.3	651.4	690.2	739.2	781.4
67.5°	531.6	546.4	585.2	619.4	663.9
70°	427.8	447.2	475.7	508.8	537.3
72.5°	344.5	352.5	376.4	400.4	430.1
75°	254.4	268.1	287.5	301.2	318.3
77.5°	182.5	190.5	201.9	213.3	229.3
80°	122.1	125.5	135.7	138.0	150.6
82.5°	74.1	76.4	78.7	79.9	84.4
85°	39.9	39.9	39.9	37.6	37.6
87.5°	22.8	22.8	19.4	16.0	11.4
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)