

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: P557812

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-80-86-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: P557812  
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-40-UNV-80-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

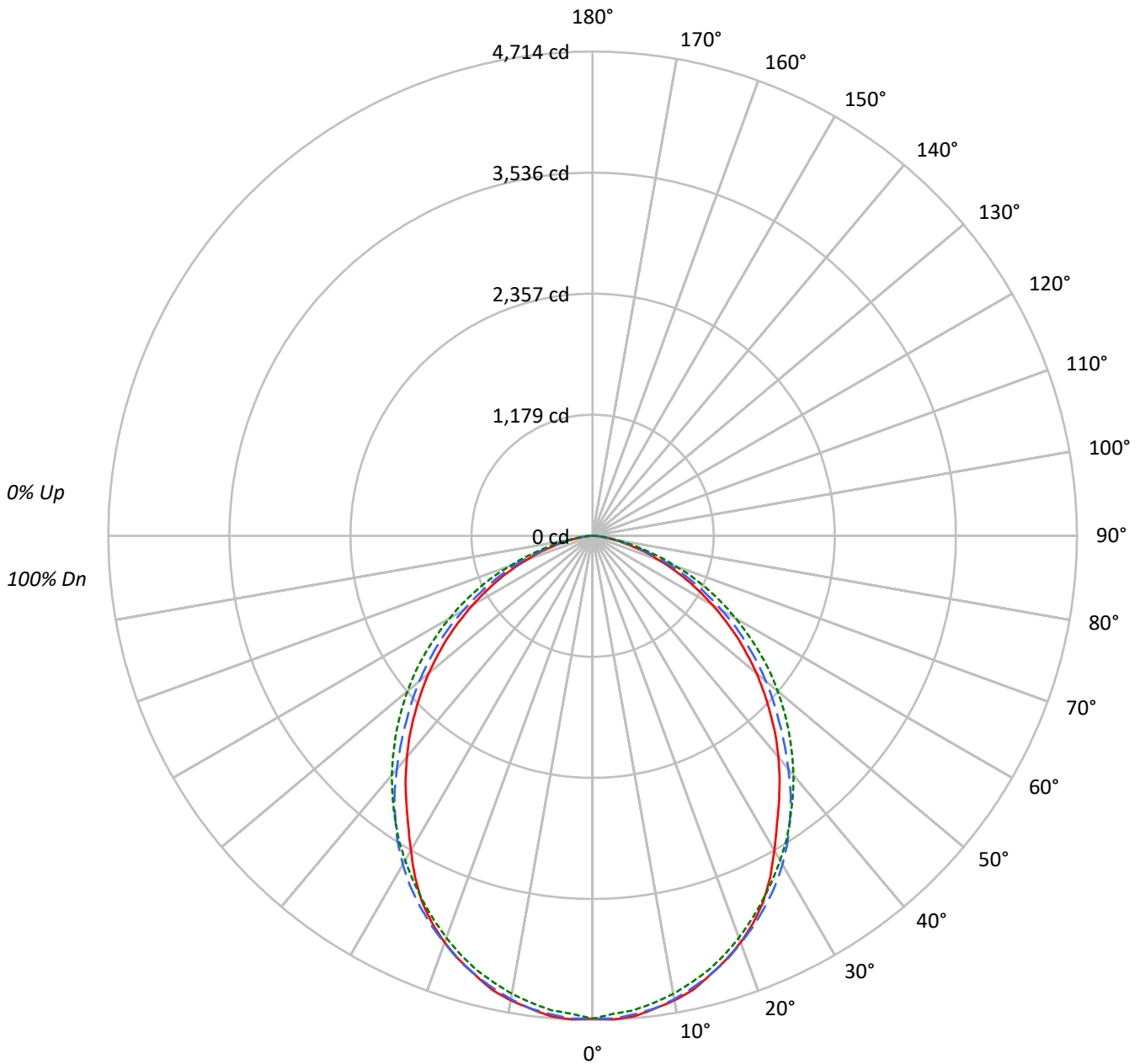
Lumens per Lamp: N/A  
Luminaire Lumens: 10870.0 lumens  
Efficiency: N/A  
Efficacy: 83.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P557812

CATALOG NUMBER: FUSL-12-4-LD4-3HI-40-UNV-80-86-EDD-90

### Luminous Intensity Polar Plot





TEST NUMBER: P557812

CATALOG NUMBER: FUSL-12-4-LD4-3HI-40-UNV-80-86-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°	12650	12650	12650
5°	12684	12630	12523
10°	12549	12515	12372
15°	12327	12327	12186
20°	12066	12081	11926
25°	11668	11813	11625
30°	10988	11482	11341
35°	10382	11005	11023
40°	9878	10411	10684
45°	9313	9780	10282
50°	8717	9216	9844
55°	8041	8575	9312
60°	7241	7824	8660
65°	6394	6957	7877
70°	5328	5925	6692
75°	4187	4732	5239
80°	2994	3330	3694
85°	1951	1951	1840



TEST NUMBER: P557812

CATALOG NUMBER: FUSL-12-4-LD4-3HI-40-UNV-80-86-EDD-90

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	442.6	4.1
10°-20°	1243.4	11.4
20°-30°	1817.1	16.7
30°-40°	2062.6	19.0
40°-50°	1991.1	18.3
50°-60°	1642.5	15.1
60°-70°	1093.8	10.1
70°-80°	489.5	4.5
80°-90°	87.6	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°	3503.1	32.2
0°-40°	5565.6	51.2
0°-60°	9199.2	84.6
0°-90°	10870.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10870.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4701	4701	4701	4701	4701	
5°	4696	4694	4676	4650	4636	444
15°	4425	4436	4425	4405	4374	1247
25°	3930	3960	3979	3950	3915	1800
35°	3160	3204	3350	3368	3356	1980
45°	2447	2489	2570	2687	2702	1888
55°	1714	1743	1828	1929	1985	1530
65°	1004	1031	1093	1170	1237	996
75°	403	424	455	477	504	440
85°	63	63	63	60	60	85
90°	0	0	0	0	0	



TEST NUMBER: P557812

CATALOG NUMBER: FUSL-12-4-LD4-3HI-40-UNV-80-86-EDD-90

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4701.0	4701.0	4701.0	4701.0	4701.0
2.5°	4713.6	4715.4	4704.6	4675.7	4657.7
5°	4695.6	4693.8	4675.7	4650.4	4636.0
7.5°	4643.2	4646.8	4641.4	4605.3	4585.4
10°	4592.6	4594.4	4580.0	4551.1	4527.6
12.5°	4527.6	4525.8	4505.9	4491.5	4453.6
15°	4424.7	4435.5	4424.7	4404.8	4374.1
17.5°	4325.3	4325.3	4332.6	4298.3	4274.8
20°	4213.4	4218.8	4218.8	4191.7	4164.6
22.5°	4083.3	4099.6	4105.0	4076.1	4043.6
25°	3929.8	3960.5	3978.6	3949.7	3915.4
27.5°	3743.8	3790.8	3845.0	3823.3	3785.4
30°	3536.1	3604.8	3695.1	3677.0	3649.9
32.5°	3339.3	3407.9	3532.5	3525.3	3510.8
35°	3160.5	3203.8	3350.1	3368.2	3355.5
37.5°	2990.7	3030.5	3167.7	3209.2	3198.4
40°	2811.9	2855.3	2963.6	3037.7	3041.3
42.5°	2634.9	2676.5	2765.0	2871.5	2871.5
45°	2447.1	2488.7	2569.9	2687.3	2701.8
47.5°	2262.9	2306.3	2385.7	2503.1	2526.6
50°	2082.3	2122.0	2201.5	2315.3	2351.4
52.5°	1894.5	1937.8	2015.5	2120.2	2172.6
55°	1713.9	1742.8	1827.7	1928.8	1984.8
57.5°	1526.1	1553.2	1648.9	1735.6	1793.3
60°	1345.5	1379.8	1453.8	1542.3	1609.1
62.5°	1172.1	1208.2	1271.4	1349.1	1424.9
65°	1004.1	1031.2	1092.6	1170.3	1237.1
67.5°	841.6	865.1	926.5	980.7	1051.1
70°	677.2	707.9	753.1	805.5	850.6
72.5°	545.4	558.1	596.0	633.9	680.9
75°	402.7	424.4	455.1	476.8	503.9
77.5°	289.0	301.6	319.7	337.7	363.0
80°	193.2	198.7	214.9	218.5	238.4
82.5°	117.4	121.0	124.6	126.4	133.6
85°	63.2	63.2	63.2	59.6	59.6
87.5°	36.1	36.1	30.7	25.3	18.1
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)