

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: P556919

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-80-87-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: P556919  
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-30-UNV-80-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND  
.375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

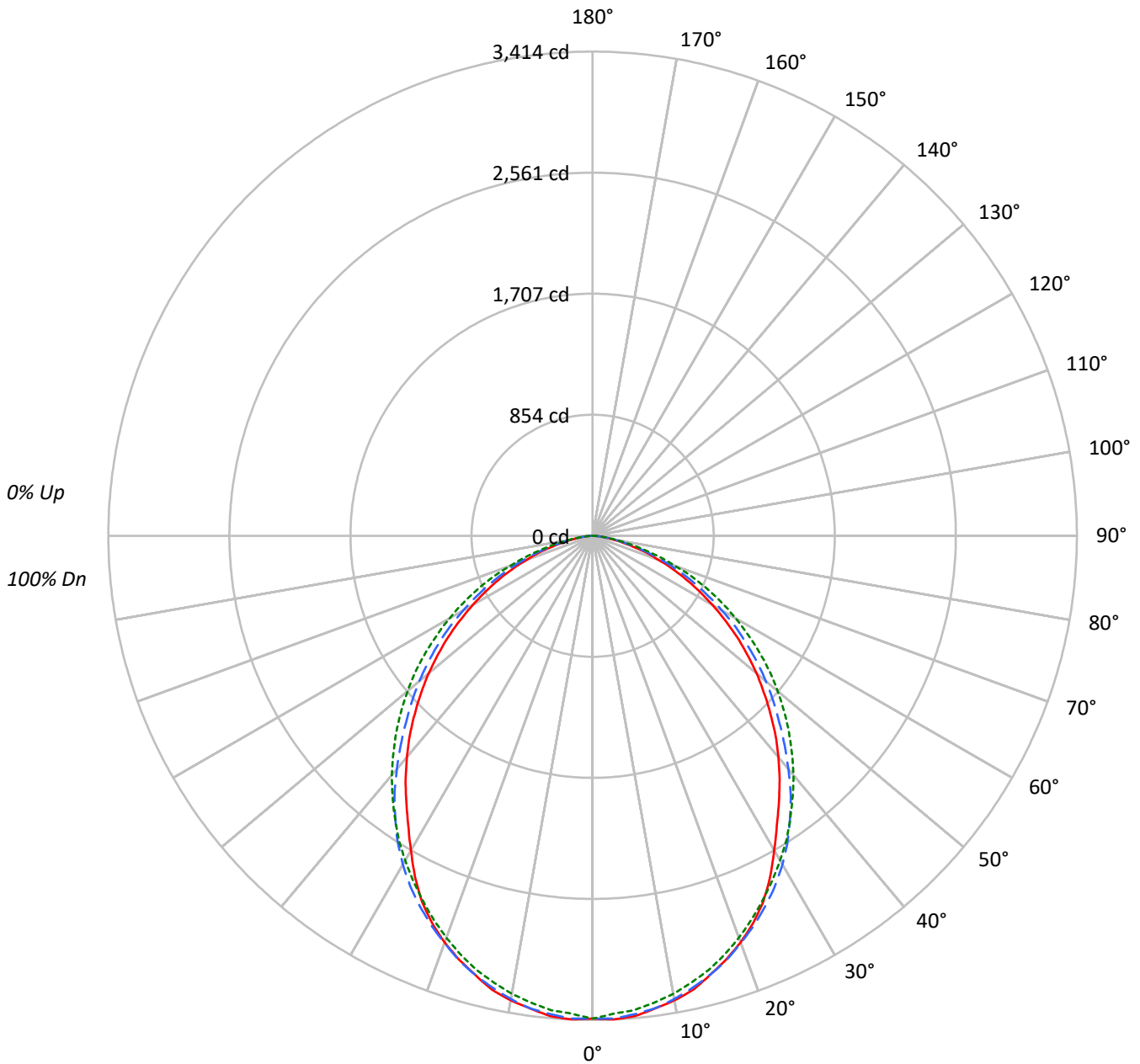
Lumens per Lamp: N/A  
Luminaire Lumens: 7872.0 lumens  
Efficiency: N/A  
Efficacy: 91.1 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
Input Voltage (V): NR  
Input Current (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

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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°	9161	9161	9161
5°	9186	9147	9069
10°	9088	9063	8960
15°	8927	8927	8825
20°	8738	8749	8637
25°	8450	8555	8419
30°	7957	8315	8213
35°	7519	7970	7983
40°	7154	7539	7737
45°	6744	7083	7446
50°	6313	6674	7129
55°	5823	6210	6744
60°	5244	5667	6272
65°	4630	5039	5705
70°	3859	4291	4847
75°	3033	3427	3794
80°	2168	2411	2675
85°	1414	1414	1334



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	320.5	4.1
10°-20°	900.5	11.4
20°-30°	1315.9	16.7
30°-40°	1493.7	19.0
40°-50°	1441.9	18.3
50°-60°	1189.5	15.1
60°-70°	792.1	10.1
70°-80°	354.5	4.5
80°-90°	63.4	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°	2536.9	32.2
0°-40°	4030.6	51.2
0°-60°	6662.0	84.6
0°-90°	7872.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7872.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3404	3404	3404	3404	3404	
5°	3400	3399	3386	3368	3357	322
15°	3204	3212	3204	3190	3168	903
25°	2846	2868	2881	2860	2836	1303
35°	2289	2320	2426	2439	2430	1434
45°	1772	1802	1861	1946	1957	1367
55°	1241	1262	1324	1397	1437	1108
65°	727	747	791	848	896	721
75°	292	307	330	345	365	319
85°	46	46	46	43	43	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3404.4	3404.4	3404.4	3404.4	3404.4
2.5°	3413.6	3414.9	3407.1	3386.1	3373.0
5°	3400.5	3399.2	3386.1	3367.8	3357.4
7.5°	3362.6	3365.2	3361.3	3335.1	3320.7
10°	3326.0	3327.3	3316.8	3295.9	3278.9
12.5°	3278.9	3277.6	3263.2	3252.7	3225.3
15°	3204.3	3212.2	3204.3	3189.9	3167.7
17.5°	3132.4	3132.4	3137.6	3112.8	3095.8
20°	3051.3	3055.2	3055.2	3035.6	3016.0
22.5°	2957.1	2968.9	2972.8	2951.9	2928.4
25°	2846.0	2868.2	2881.3	2860.4	2835.5
27.5°	2711.3	2745.3	2784.5	2768.8	2741.3
30°	2560.8	2610.5	2675.9	2662.9	2643.2
32.5°	2418.3	2468.0	2558.2	2553.0	2542.5
35°	2288.8	2320.2	2426.1	2439.2	2430.1
37.5°	2165.9	2194.6	2294.0	2324.1	2316.3
40°	2036.4	2067.8	2146.2	2199.9	2202.5
42.5°	1908.2	1938.3	2002.4	2079.5	2079.5
45°	1772.2	1802.3	1861.1	1946.1	1956.6
47.5°	1638.8	1670.2	1727.7	1812.7	1829.7
50°	1508.0	1536.8	1594.3	1676.7	1702.9
52.5°	1372.0	1403.4	1459.6	1535.5	1573.4
55°	1241.2	1262.1	1323.6	1396.8	1437.4
57.5°	1105.2	1124.8	1194.1	1256.9	1298.7
60°	974.4	999.2	1052.9	1116.9	1165.3
62.5°	848.8	875.0	920.8	977.0	1031.9
65°	727.2	746.8	791.3	847.5	895.9
67.5°	609.5	626.5	670.9	710.2	761.2
70°	490.5	512.7	545.4	583.3	616.0
72.5°	395.0	404.1	431.6	459.1	493.1
75°	291.7	307.4	329.6	345.3	364.9
77.5°	209.3	218.4	231.5	244.6	262.9
80°	139.9	143.9	155.6	158.3	172.6
82.5°	85.0	87.6	90.2	91.6	96.8
85°	45.8	45.8	45.8	43.2	43.2
87.5°	26.2	26.2	22.2	18.3	13.1
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)