

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: P557043

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-80-85-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: P557043  
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-40-UNV-80-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

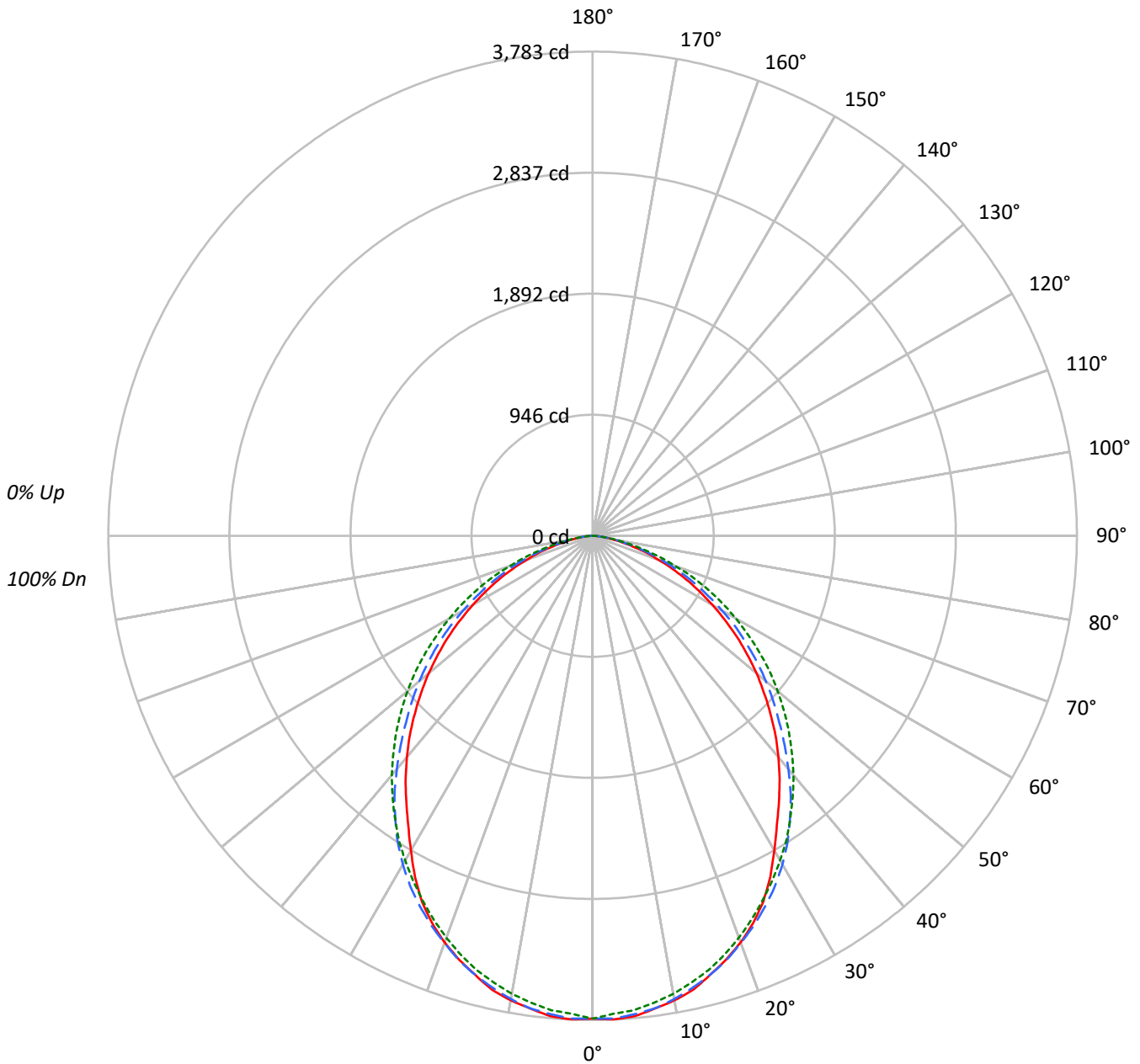
Lumens per Lamp: N/A  
Luminaire Lumens: 8723.0 lumens  
Efficiency: N/A  
Efficacy: 101.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	10152	10152	10152
5°	10179	10136	10049
10°	10071	10043	9928
15°	9892	9892	9779
20°	9683	9695	9570
25°	9364	9480	9329
30°	8818	9214	9101
35°	8332	8832	8846
40°	7927	8355	8573
45°	7473	7848	8251
50°	6996	7396	7900
55°	6453	6881	7473
60°	5811	6279	6950
65°	5131	5583	6322
70°	4276	4755	5371
75°	3360	3797	4204
80°	2404	2673	2965
85°	1565	1565	1476



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	355.2	4.1
10°-20°	997.8	11.4
20°-30°	1458.2	16.7
30°-40°	1655.2	19.0
40°-50°	1597.8	18.3
50°-60°	1318.1	15.1
60°-70°	877.7	10.1
70°-80°	392.8	4.5
80°-90°	70.3	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°	2811.2	32.2
0°-40°	4466.3	51.2
0°-60°	7382.2	84.6
0°-90°	8723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8723.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3772	3772	3772	3772	3772	
5°	3768	3767	3752	3732	3720	357
15°	3551	3559	3551	3535	3510	1001
25°	3154	3178	3193	3170	3142	1444
35°	2536	2571	2688	2703	2693	1589
45°	1964	1997	2062	2156	2168	1515
55°	1375	1399	1467	1548	1593	1228
65°	806	828	877	939	993	799
75°	323	341	365	383	404	353
85°	51	51	51	48	48	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3772.5	3772.5	3772.5	3772.5	3772.5
2.5°	3782.6	3784.1	3775.4	3752.2	3737.7
5°	3768.1	3766.7	3752.2	3731.9	3720.3
7.5°	3726.1	3729.0	3724.6	3695.7	3679.7
10°	3685.5	3687.0	3675.4	3652.2	3633.3
12.5°	3633.3	3631.9	3616.0	3604.4	3573.9
15°	3550.7	3559.4	3550.7	3534.8	3510.2
17.5°	3471.0	3471.0	3476.8	3449.3	3430.4
20°	3381.2	3385.5	3385.5	3363.8	3342.0
22.5°	3276.8	3289.9	3294.2	3271.0	3244.9
25°	3153.6	3178.3	3192.8	3169.6	3142.0
27.5°	3004.4	3042.0	3085.5	3068.1	3037.7
30°	2837.7	2892.8	2965.2	2950.7	2929.0
32.5°	2679.7	2734.8	2834.8	2829.0	2817.4
35°	2536.2	2571.0	2688.4	2702.9	2692.8
37.5°	2400.0	2431.9	2542.0	2575.4	2566.7
40°	2256.5	2291.3	2378.3	2437.7	2440.6
42.5°	2114.5	2147.8	2218.8	2304.4	2304.4
45°	1963.8	1997.1	2062.3	2156.5	2168.1
47.5°	1815.9	1850.7	1914.5	2008.7	2027.5
50°	1671.0	1702.9	1766.7	1858.0	1887.0
52.5°	1520.3	1555.1	1617.4	1701.5	1743.5
55°	1375.4	1398.6	1466.7	1547.8	1592.8
57.5°	1224.6	1246.4	1323.2	1392.8	1439.1
60°	1079.7	1107.2	1166.7	1237.7	1291.3
62.5°	940.6	969.6	1020.3	1082.6	1143.5
65°	805.8	827.5	876.8	939.1	992.8
67.5°	675.4	694.2	743.5	787.0	843.5
70°	543.5	568.1	604.3	646.4	682.6
72.5°	437.7	447.8	478.3	508.7	546.4
75°	323.2	340.6	365.2	382.6	404.3
77.5°	231.9	242.0	256.5	271.0	291.3
80°	155.1	159.4	172.5	175.4	191.3
82.5°	94.2	97.1	100.0	101.4	107.2
85°	50.7	50.7	50.7	47.8	47.8
87.5°	29.0	29.0	24.6	20.3	14.5
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)