

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: P558194

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-80-85-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: P558194  
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-LD4-3STD-30-UNV-80-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

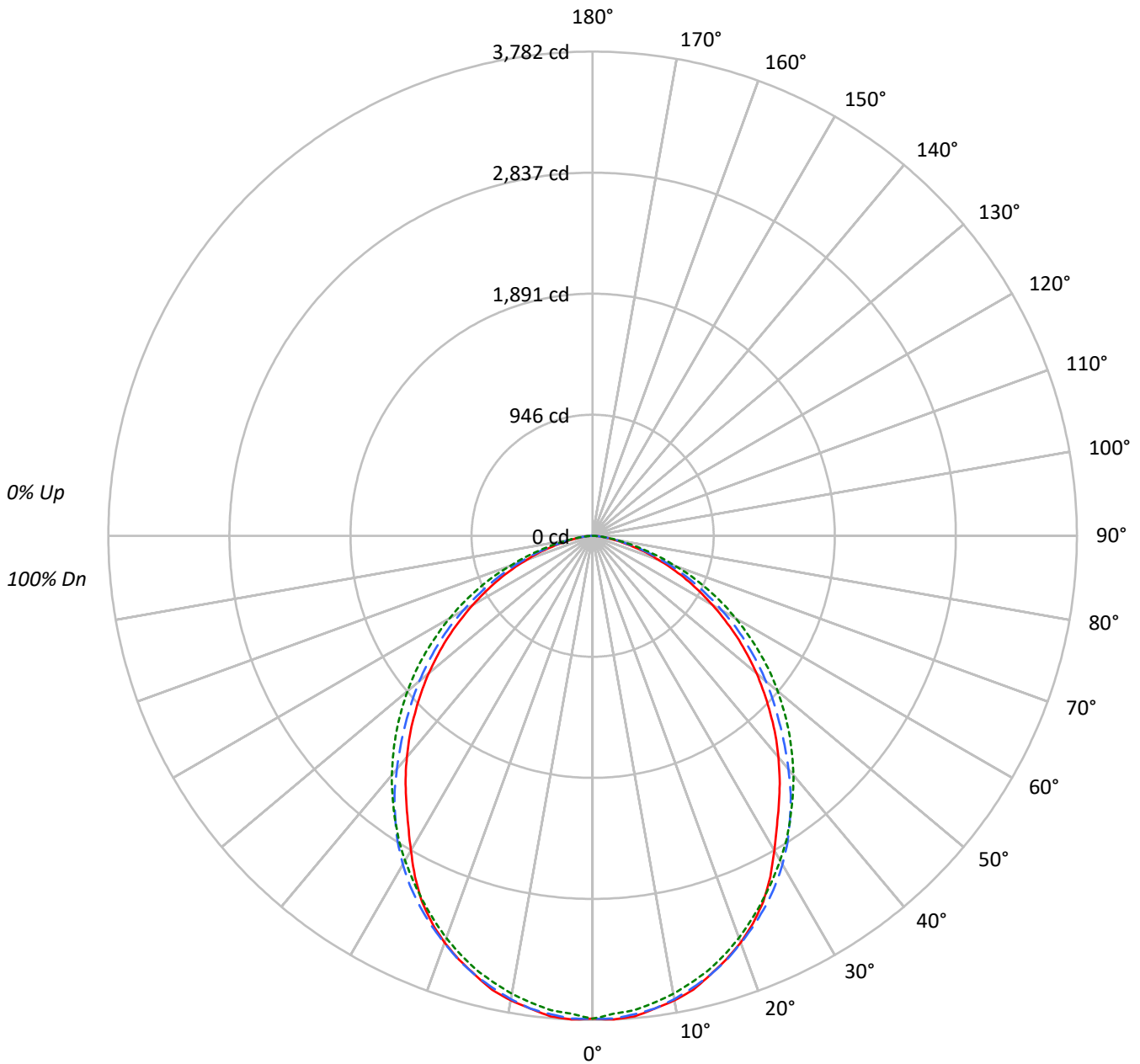
Lumens per Lamp: N/A  
Luminaire Lumens: 8722.0 lumens  
Efficiency: N/A  
Efficacy: 87.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	10150	10150	10150
5°	10178	10135	10048
10°	10070	10042	9927
15°	9891	9891	9778
20°	9682	9694	9570
25°	9363	9479	9328
30°	8817	9213	9100
35°	8331	8831	8845
40°	7926	8353	8572
45°	7472	7848	8250
50°	6995	7395	7899
55°	6452	6880	7472
60°	5810	6278	6949
65°	5130	5582	6320
70°	4275	4755	5370
75°	3360	3797	4204
80°	2404	2672	2965
85°	1565	1565	1476



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	355.1	4.1
10°-20°	997.7	11.4
20°-30°	1458.0	16.7
30°-40°	1655.0	19.0
40°-50°	1597.6	18.3
50°-60°	1317.9	15.1
60°-70°	877.6	10.1
70°-80°	392.7	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°	2810.8	32.2
0°-40°	4465.8	51.2
0°-60°	7381.4	84.6
0°-90°	8722.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8722.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3772	3772	3772	3772	3772	
5°	3768	3766	3752	3732	3720	357
15°	3550	3559	3550	3534	3510	1001
25°	3153	3178	3192	3169	3142	1444
35°	2536	2571	2688	2703	2692	1589
45°	1964	1997	2062	2156	2168	1515
55°	1375	1398	1466	1548	1593	1227
65°	806	827	877	939	993	799
75°	323	340	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°	3772.0	3772.0	3772.0	3772.0	3772.0
2.5°	3782.2	3783.6	3774.9	3751.8	3737.3
5°	3767.7	3766.2	3751.8	3731.5	3719.9
7.5°	3725.7	3728.6	3724.2	3695.2	3679.3
10°	3685.1	3686.5	3674.9	3651.8	3632.9
12.5°	3632.9	3631.5	3615.5	3603.9	3573.5
15°	3550.3	3559.0	3550.3	3534.4	3509.8
17.5°	3470.6	3470.6	3476.4	3448.9	3430.0
20°	3380.8	3385.1	3385.1	3363.4	3341.7
22.5°	3276.4	3289.5	3293.8	3270.6	3244.6
25°	3153.3	3177.9	3192.4	3169.2	3141.7
27.5°	3004.0	3041.7	3085.2	3067.8	3037.3
30°	2837.4	2892.4	2964.9	2950.4	2928.7
32.5°	2679.4	2734.5	2834.5	2828.7	2817.1
35°	2535.9	2570.7	2688.1	2702.6	2692.5
37.5°	2399.7	2431.6	2541.7	2575.1	2566.4
40°	2256.3	2291.0	2378.0	2437.4	2440.3
42.5°	2114.3	2147.6	2218.6	2304.1	2304.1
45°	1963.5	1996.9	2062.1	2156.3	2167.9
47.5°	1815.7	1850.5	1914.3	2008.5	2027.3
50°	1670.8	1702.7	1766.5	1857.8	1886.7
52.5°	1520.1	1554.9	1617.2	1701.3	1743.3
55°	1375.2	1398.4	1466.5	1547.7	1592.6
57.5°	1224.5	1246.2	1323.0	1392.6	1439.0
60°	1079.6	1107.1	1166.5	1237.5	1291.2
62.5°	940.5	969.5	1020.2	1082.5	1143.3
65°	805.7	827.4	876.7	939.0	992.6
67.5°	675.3	694.1	743.4	786.9	843.4
70°	543.4	568.1	604.3	646.3	682.5
72.5°	437.6	447.8	478.2	508.6	546.3
75°	323.2	340.5	365.2	382.6	404.3
77.5°	231.9	242.0	256.5	271.0	291.3
80°	155.1	159.4	172.4	175.3	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)