

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: P558306

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-93-85-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: P558306  
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-35-UNV-93-85-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS 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**

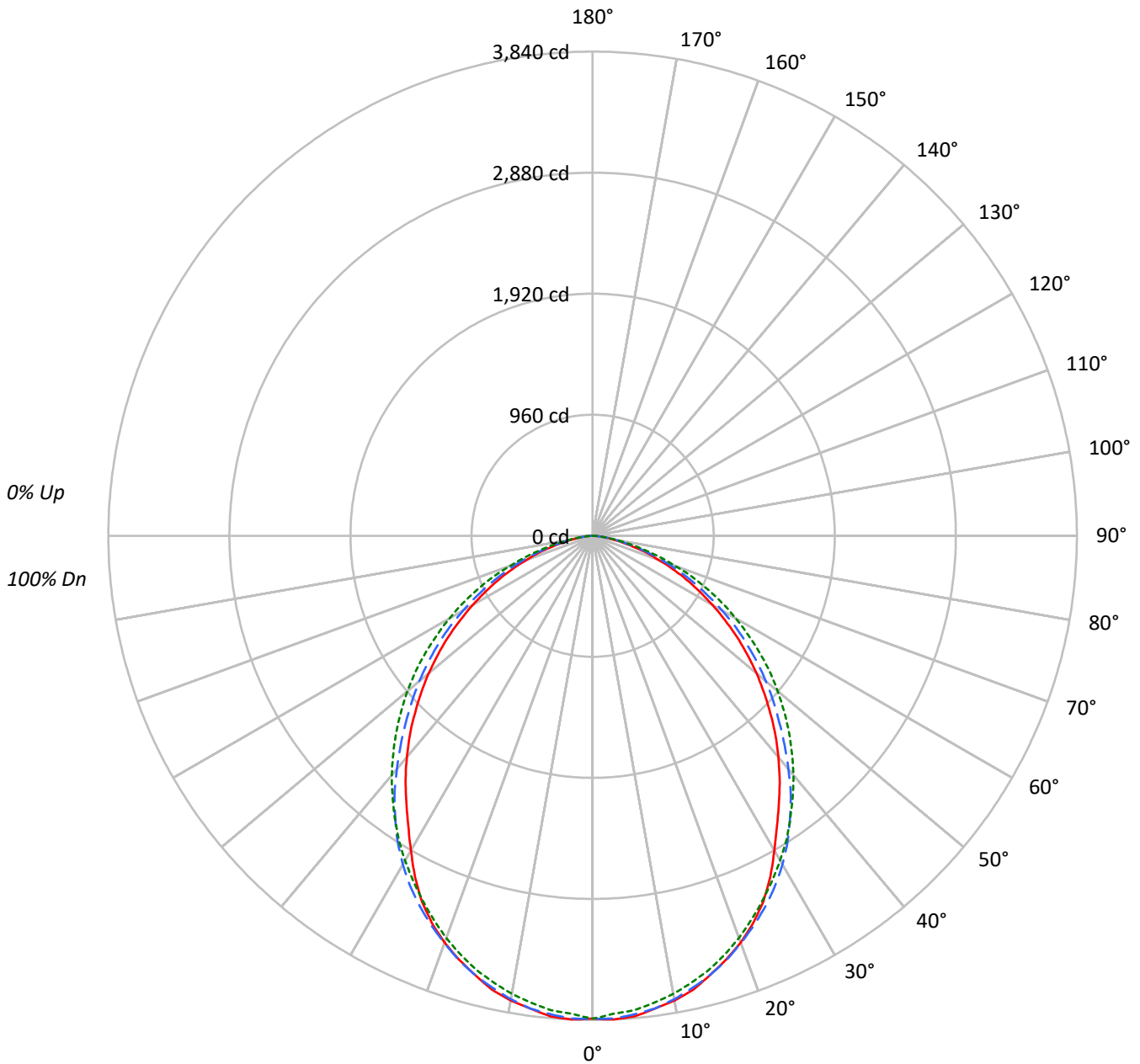
Lumens per Lamp: N/A  
Luminaire Lumens: 8856.0 lumens  
Efficiency: N/A  
Efficacy: 88.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (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

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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°	10306	10306	10306
5°	10334	10290	10203
10°	10224	10196	10079
15°	10043	10043	9928
20°	9830	9843	9716
25°	9506	9624	9471
30°	8952	9354	9240
35°	8459	8966	8981
40°	8048	8482	8704
45°	7587	7968	8377
50°	7102	7509	8020
55°	6551	6986	7586
60°	5900	6375	7056
65°	5209	5668	6418
70°	4342	4828	5452
75°	3411	3855	4268
80°	2439	2713	3009
85°	1590	1590	1501



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	360.6	4.1
10°-20°	1013.0	11.4
20°-30°	1480.4	16.7
30°-40°	1680.4	19.0
40°-50°	1622.2	18.3
50°-60°	1338.2	15.1
60°-70°	891.1	10.1
70°-80°	398.8	4.5
80°-90°	71.3	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°	2854.0	32.2
0°-40°	4534.4	51.2
0°-60°	7494.8	84.6
0°-90°	8856.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8856.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3830	3830	3830	3830	3830	
5°	3826	3824	3809	3789	3777	362
15°	3605	3614	3605	3589	3564	1016
25°	3202	3227	3241	3218	3190	1466
35°	2575	2610	2729	2744	2734	1613
45°	1994	2028	2094	2189	2201	1538
55°	1396	1420	1489	1571	1617	1246
65°	818	840	890	954	1008	811
75°	328	346	371	388	410	359
85°	52	52	52	49	49	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3830.0	3830.0	3830.0	3830.0	3830.0
2.5°	3840.3	3841.8	3832.9	3809.4	3794.7
5°	3825.6	3824.1	3809.4	3788.8	3777.0
7.5°	3782.9	3785.9	3781.4	3752.0	3735.8
10°	3741.7	3743.2	3731.4	3707.9	3688.7
12.5°	3688.7	3687.3	3671.1	3659.3	3628.4
15°	3604.9	3613.7	3604.9	3588.7	3563.7
17.5°	3523.9	3523.9	3529.8	3501.9	3482.7
20°	3432.7	3437.1	3437.1	3415.1	3393.0
22.5°	3326.8	3340.0	3344.4	3320.9	3294.4
25°	3201.7	3226.7	3241.4	3217.9	3189.9
27.5°	3050.2	3088.4	3132.6	3114.9	3084.0
30°	2881.0	2936.9	3010.4	2995.7	2973.7
32.5°	2720.6	2776.5	2878.0	2872.1	2860.4
35°	2574.9	2610.2	2729.4	2744.1	2733.8
37.5°	2436.6	2469.0	2580.8	2614.6	2605.8
40°	2290.9	2326.2	2414.5	2474.9	2477.8
42.5°	2146.7	2180.6	2252.7	2339.5	2339.5
45°	1993.7	2027.6	2093.8	2189.4	2201.2
47.5°	1843.6	1878.9	1943.7	2039.3	2058.5
50°	1696.5	1728.9	1793.6	1886.3	1915.7
52.5°	1543.5	1578.8	1642.1	1727.4	1770.1
55°	1396.3	1419.9	1489.0	1571.4	1617.0
57.5°	1243.3	1265.4	1343.4	1414.0	1461.1
60°	1096.2	1124.1	1184.5	1256.6	1311.0
62.5°	954.9	984.4	1035.8	1099.1	1160.9
65°	818.1	840.2	890.2	953.5	1007.9
67.5°	685.7	704.8	754.8	799.0	856.3
70°	551.8	576.8	613.6	656.2	693.0
72.5°	444.4	454.7	485.6	516.5	554.7
75°	328.1	345.8	370.8	388.4	410.5
77.5°	235.4	245.7	260.4	275.1	295.7
80°	157.4	161.9	175.1	178.0	194.2
82.5°	95.6	98.6	101.5	103.0	108.9
85°	51.5	51.5	51.5	48.6	48.6
87.5°	29.4	29.4	25.0	20.6	14.7
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)