

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: P558372

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-UNV-93-86-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: P558372  
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-40-UNV-93-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS 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**

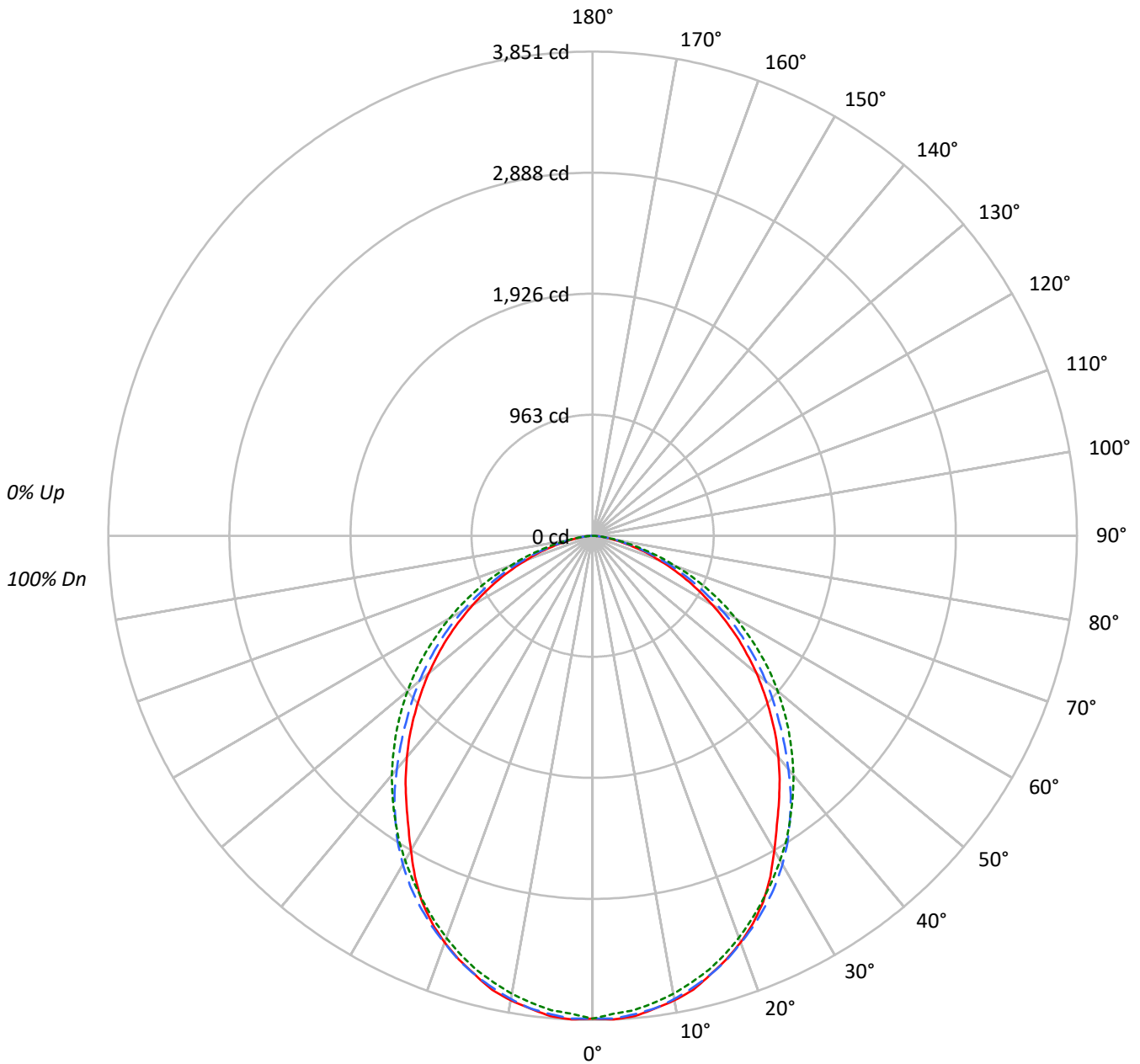
Lumens per Lamp: N/A  
Luminaire Lumens: 8880.0 lumens  
Efficiency: N/A  
Efficacy: 88.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	10334	10334	10334
5°	10362	10318	10230
10°	10252	10224	10107
15°	10070	10070	9955
20°	9857	9869	9743
25°	9532	9650	9497
30°	8976	9380	9265
35°	8482	8991	9005
40°	8069	8505	8728
45°	7608	7990	8399
50°	7122	7529	8042
55°	6569	7005	7607
60°	5915	6392	7075
65°	5223	5684	6435
70°	4353	4840	5467
75°	3421	3866	4279
80°	2447	2721	3017
85°	1593	1593	1504



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	361.6	4.1
10°-20°	1015.8	11.4
20°-30°	1484.4	16.7
30°-40°	1685.0	19.0
40°-50°	1626.6	18.3
50°-60°	1341.8	15.1
60°-70°	893.5	10.1
70°-80°	399.8	4.5
80°-90°	71.5	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°	2861.8	32.2
0°-40°	4546.7	51.2
0°-60°	7515.1	84.6
0°-90°	8880.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8880.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3840	3840	3840	3840	3840	
5°	3836	3834	3820	3799	3787	363
15°	3615	3624	3615	3598	3573	1019
25°	3210	3236	3250	3227	3199	1470
35°	2582	2617	2737	2752	2741	1618
45°	1999	2033	2099	2195	2207	1542
55°	1400	1424	1493	1576	1621	1250
65°	820	842	893	956	1011	813
75°	329	347	372	390	412	360
85°	52	52	52	49	49	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3840.4	3840.4	3840.4	3840.4	3840.4
2.5°	3850.7	3852.2	3843.3	3819.7	3805.0
5°	3835.9	3834.5	3819.7	3799.1	3787.3
7.5°	3793.2	3796.1	3791.7	3762.2	3745.9
10°	3751.8	3753.3	3741.5	3717.9	3698.7
12.5°	3698.7	3697.3	3681.0	3669.2	3638.2
15°	3614.6	3623.5	3614.6	3598.4	3573.3
17.5°	3533.5	3533.5	3539.4	3511.4	3492.2
20°	3442.0	3446.4	3446.4	3424.3	3402.2
22.5°	3335.8	3349.1	3353.5	3329.9	3303.3
25°	3210.4	3235.5	3250.2	3226.6	3198.6
27.5°	3058.4	3096.8	3141.0	3123.3	3092.4
30°	2888.8	2944.8	3018.6	3003.8	2981.7
32.5°	2727.9	2784.0	2885.8	2879.9	2868.1
35°	2581.9	2617.3	2736.8	2751.6	2741.2
37.5°	2443.2	2475.7	2587.8	2621.7	2612.9
40°	2297.1	2332.5	2421.1	2481.6	2484.5
42.5°	2152.6	2186.5	2258.8	2345.8	2345.8
45°	1999.1	2033.1	2099.4	2195.3	2207.1
47.5°	1848.6	1884.0	1949.0	2044.9	2064.0
50°	1701.1	1733.6	1798.5	1891.4	1920.9
52.5°	1547.7	1583.1	1646.5	1732.1	1774.9
55°	1400.1	1423.7	1493.1	1575.7	1621.4
57.5°	1246.7	1268.8	1347.0	1417.8	1465.0
60°	1099.1	1127.2	1187.7	1260.0	1314.5
62.5°	957.5	987.0	1038.7	1102.1	1164.1
65°	820.3	842.4	892.6	956.0	1010.6
67.5°	687.5	706.7	756.9	801.1	858.7
70°	553.3	578.3	615.2	658.0	694.9
72.5°	445.6	455.9	486.9	517.9	556.2
75°	329.0	346.7	371.8	389.5	411.6
77.5°	236.1	246.4	261.1	275.9	296.5
80°	157.9	162.3	175.6	178.5	194.7
82.5°	95.9	98.8	101.8	103.3	109.2
85°	51.6	51.6	51.6	48.7	48.7
87.5°	29.5	29.5	25.1	20.7	14.8
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)