

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: P556506

Luminaire Tested: **FUSL-12-4-LD4-1LO-35-UNV-82-94-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: P556506  
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-LD4-1LO-35-UNV-82-94-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

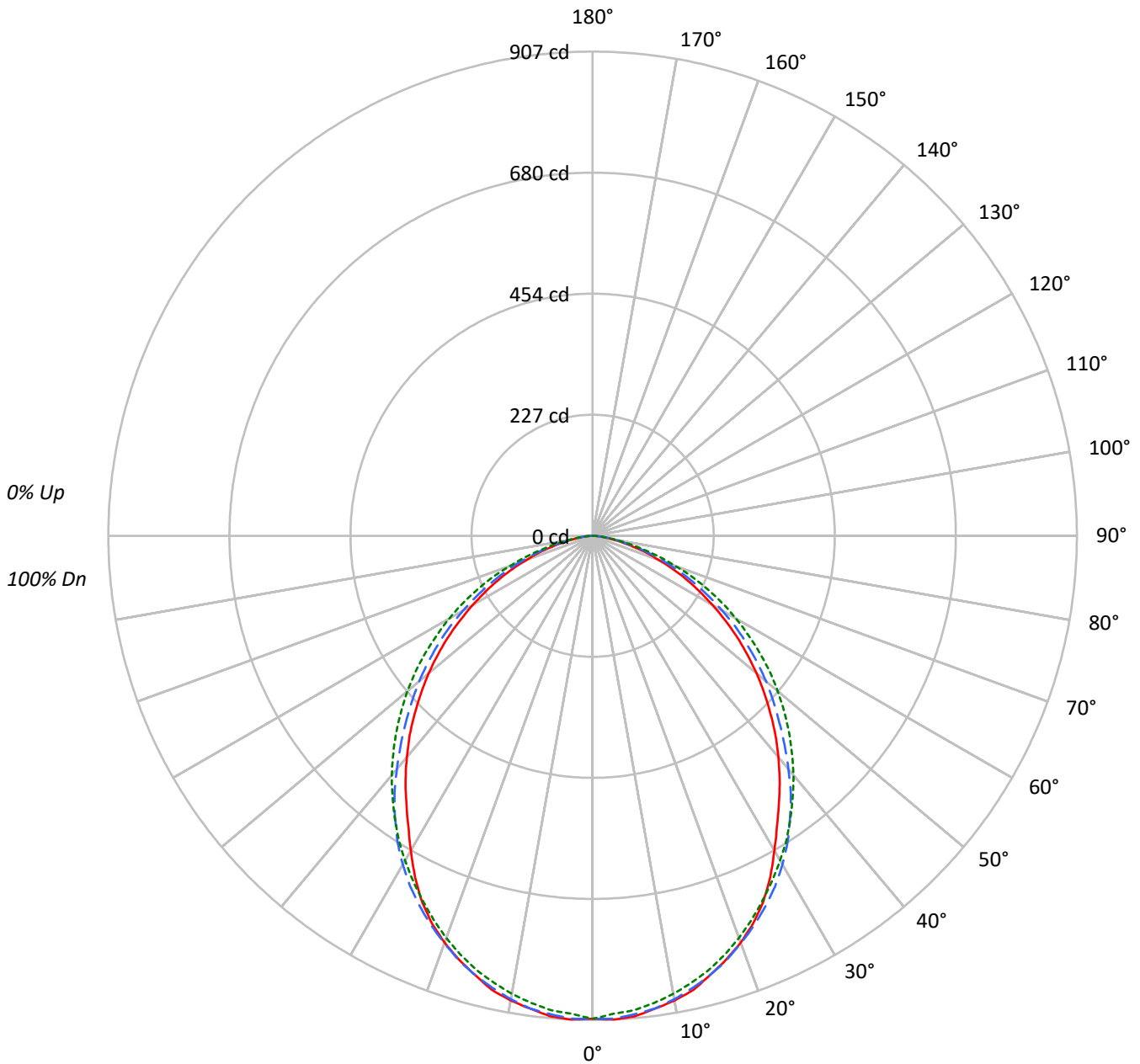
Lumens per Lamp: N/A  
Luminaire Lumens: 2092.0 lumens  
Efficiency: N/A  
Efficacy: 89.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
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°	2435	2435	2435
5°	2441	2431	2410
10°	2415	2408	2381
15°	2372	2372	2345
20°	2322	2325	2295
25°	2246	2273	2237
30°	2115	2210	2183
35°	1998	2118	2122
40°	1901	2004	2056
45°	1792	1882	1979
50°	1678	1774	1894
55°	1547	1650	1792
60°	1393	1506	1667
65°	1231	1339	1516
70°	1025	1140	1288
75°	806	911	1009
80°	576	642	711
85°	377	377	355



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.2	4.1
10°-20°	239.3	11.4
20°-30°	349.7	16.7
30°-40°	397.0	19.0
40°-50°	383.2	18.3
50°-60°	316.1	15.1
60°-70°	210.5	10.1
70°-80°	94.2	4.5
80°-90°	16.9	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°	674.2	32.2
0°-40°	1071.1	51.2
0°-60°	1770.4	84.6
0°-90°	2092.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2092.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	905	905	905	905	905	
5°	904	903	900	895	892	86
15°	852	854	852	848	842	240
25°	756	762	766	760	754	346
35°	608	617	645	648	646	381
45°	471	479	495	517	520	363
55°	330	335	352	371	382	294
65°	193	198	210	225	238	192
75°	78	82	88	92	97	85
85°	12	12	12	12	12	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	904.7	904.7	904.7	904.7	904.7
2.5°	907.2	907.5	905.4	899.9	896.4
5°	903.7	903.3	899.9	895.0	892.2
7.5°	893.6	894.3	893.3	886.3	882.5
10°	883.9	884.2	881.4	875.9	871.4
12.5°	871.4	871.0	867.2	864.4	857.1
15°	851.6	853.6	851.6	847.7	841.8
17.5°	832.4	832.4	833.8	827.2	822.7
20°	810.9	811.9	811.9	806.7	801.5
22.5°	785.9	789.0	790.0	784.5	778.2
25°	756.3	762.2	765.7	760.1	753.5
27.5°	720.5	729.6	740.0	735.8	728.5
30°	680.6	693.8	711.1	707.7	702.4
32.5°	642.7	655.9	679.9	678.5	675.7
35°	608.3	616.6	644.8	648.2	645.8
37.5°	575.6	583.2	609.6	617.6	615.6
40°	541.2	549.5	570.4	584.6	585.3
42.5°	507.1	515.1	532.1	552.6	552.6
45°	471.0	479.0	494.6	517.2	520.0
47.5°	435.5	443.9	459.1	481.7	486.3
50°	400.8	408.4	423.7	445.6	452.5
52.5°	364.6	372.9	387.9	408.1	418.1
55°	329.8	335.4	351.7	371.2	382.0
57.5°	293.7	298.9	317.3	334.0	345.1
60°	258.9	265.5	279.8	296.8	309.7
62.5°	225.6	232.5	244.7	259.6	274.2
65°	193.3	198.5	210.3	225.2	238.1
67.5°	162.0	166.5	178.3	188.7	202.3
70°	130.3	136.2	144.9	155.0	163.7
72.5°	105.0	107.4	114.7	122.0	131.0
75°	77.5	81.7	87.6	91.8	97.0
77.5°	55.6	58.0	61.5	65.0	69.9
80°	37.2	38.2	41.4	42.1	45.9
82.5°	22.6	23.3	24.0	24.3	25.7
85°	12.2	12.2	12.2	11.5	11.5
87.5°	7.0	7.0	5.9	4.9	3.5
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)