

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: P556560

Luminaire Tested: **FUSL-12-4-LD4-1LO-40-UNV-82-84-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: P556560  
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-40-UNV-82-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

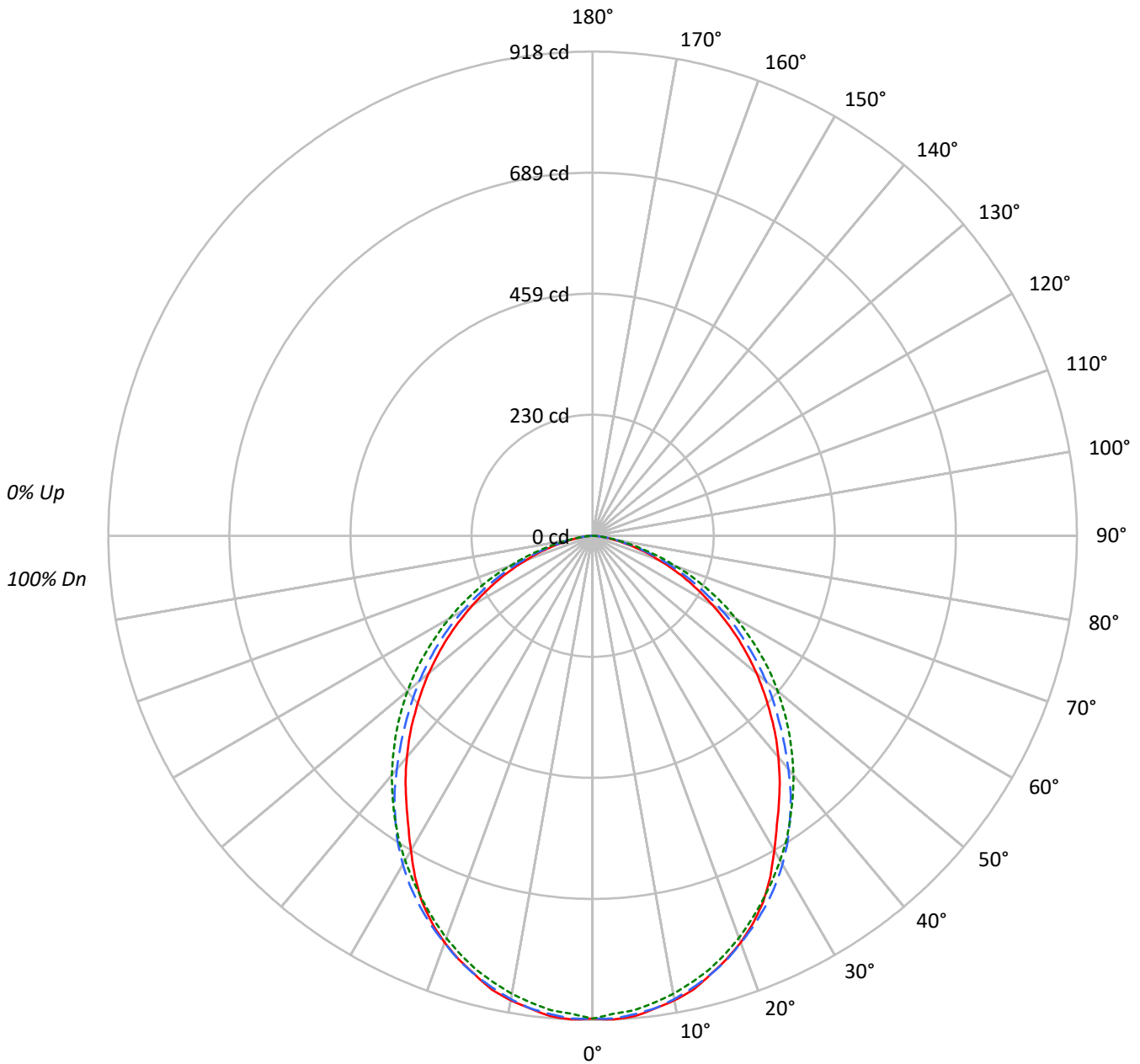
Lumens per Lamp: N/A  
Luminaire Lumens: 2117.0 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 23.4  
Input Voltage (V): NR  
Input Current (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°	2464	2464	2464
5°	2470	2460	2439
10°	2444	2437	2410
15°	2401	2401	2373
20°	2350	2353	2323
25°	2273	2301	2264
30°	2140	2236	2209
35°	2022	2144	2147
40°	1924	2028	2081
45°	1814	1905	2003
50°	1698	1795	1917
55°	1566	1670	1813
60°	1410	1524	1687
65°	1245	1355	1534
70°	1038	1154	1304
75°	815	921	1020
80°	583	649	719
85°	380	380	358



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.2	4.1
10°-20°	242.2	11.4
20°-30°	353.9	16.7
30°-40°	401.7	19.0
40°-50°	387.8	18.3
50°-60°	319.9	15.1
60°-70°	213.0	10.1
70°-80°	95.3	4.5
80°-90°	17.1	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°	682.2	32.2
0°-40°	1083.9	51.2
0°-60°	1791.6	84.6
0°-90°	2117.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2117.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	914	914	911	906	903	87
15°	862	864	862	858	852	243
25°	765	771	775	769	762	351
35°	616	624	652	656	654	386
45°	477	485	500	523	526	368
55°	334	339	356	376	386	298
65°	196	201	213	228	241	194
75°	78	83	89	93	98	86
85°	12	12	12	12	12	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	915.5	915.5	915.5	915.5	915.5
2.5°	918.0	918.4	916.3	910.6	907.1
5°	914.5	914.1	910.6	905.7	902.9
7.5°	904.3	905.0	903.9	896.9	893.0
10°	894.4	894.8	892.0	886.4	881.8
12.5°	881.8	881.4	877.6	874.7	867.4
15°	861.7	863.8	861.7	857.9	851.9
17.5°	842.4	842.4	843.8	837.1	832.5
20°	820.6	821.6	821.6	816.4	811.1
22.5°	795.3	798.4	799.5	793.8	787.5
25°	765.4	771.3	774.9	769.2	762.5
27.5°	729.1	738.3	748.8	744.6	737.2
30°	688.7	702.0	719.6	716.1	710.8
32.5°	650.3	663.7	688.0	686.6	683.8
35°	615.5	624.0	652.5	656.0	653.5
37.5°	582.5	590.2	616.9	625.0	622.9
40°	547.6	556.1	577.2	591.6	592.3
42.5°	513.2	521.3	538.5	559.2	559.2
45°	476.6	484.7	500.5	523.4	526.2
47.5°	440.7	449.2	464.6	487.5	492.1
50°	405.5	413.3	428.8	450.9	457.9
52.5°	369.0	377.4	392.5	412.9	423.1
55°	333.8	339.4	355.9	375.6	386.5
57.5°	297.2	302.5	321.1	338.0	349.3
60°	262.0	268.7	283.1	300.4	313.4
62.5°	228.3	235.3	247.6	262.7	277.5
65°	195.6	200.8	212.8	227.9	240.9
67.5°	163.9	168.5	180.4	191.0	204.7
70°	131.9	137.9	146.7	156.9	165.7
72.5°	106.2	108.7	116.1	123.5	132.6
75°	78.4	82.7	88.6	92.9	98.1
77.5°	56.3	58.7	62.3	65.8	70.7
80°	37.6	38.7	41.9	42.6	46.4
82.5°	22.9	23.6	24.3	24.6	26.0
85°	12.3	12.3	12.3	11.6	11.6
87.5°	7.0	7.0	6.0	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)