

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: P556496

Luminaire Tested: **FUSL-12-4-LD4-1LO-35-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: P556496  
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-82-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

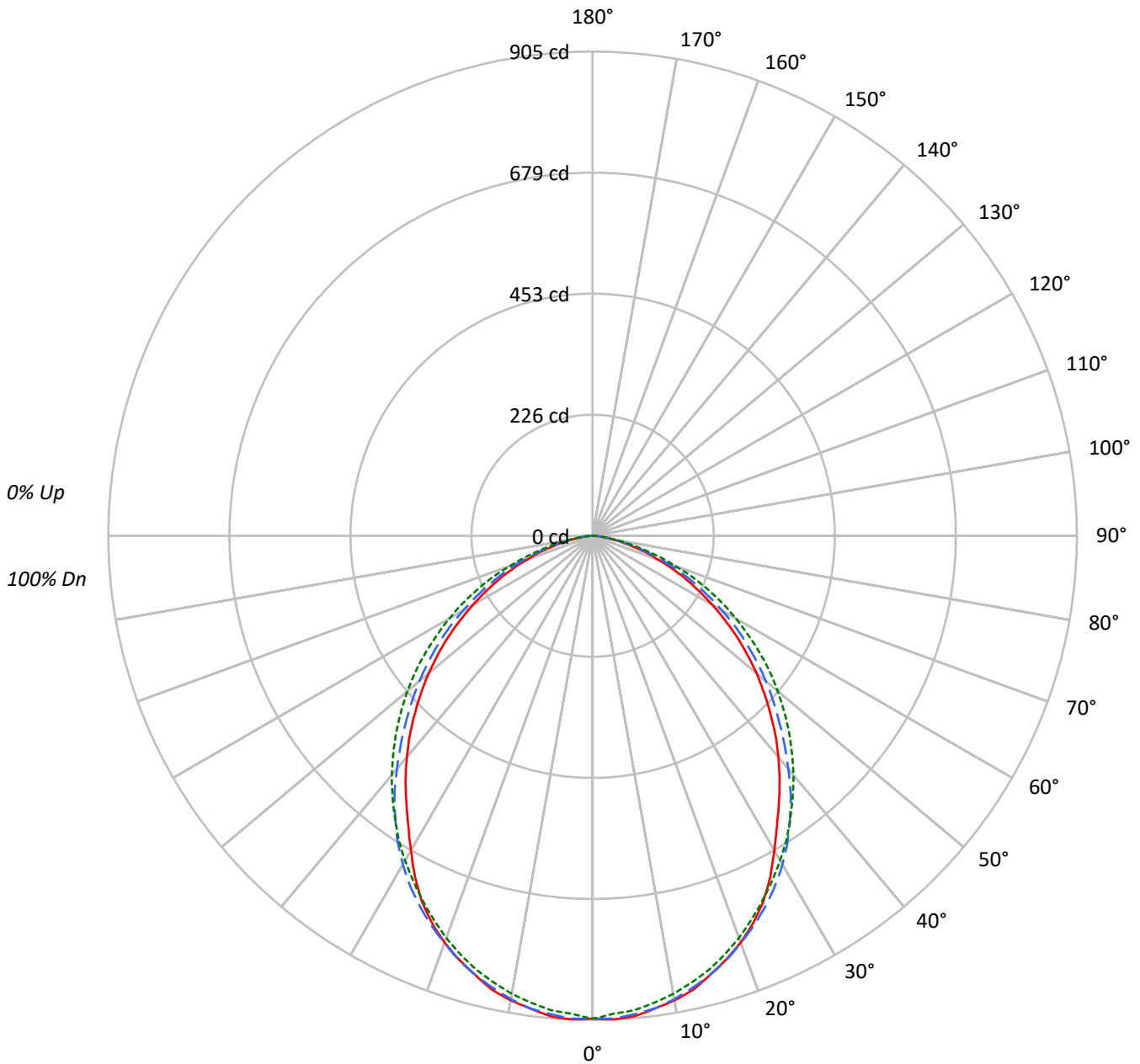
Lumens per Lamp: N/A  
Luminaire Lumens: 2087.0 lumens  
Efficiency: N/A  
Efficacy: 89.2 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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				20				
RC	80				70				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°	2429	2429	2429
5°	2435	2425	2404
10°	2410	2403	2375
15°	2367	2367	2340
20°	2317	2320	2290
25°	2240	2268	2232
30°	2110	2204	2178
35°	1993	2113	2116
40°	1897	1999	2051
45°	1788	1878	1974
50°	1674	1770	1890
55°	1544	1646	1788
60°	1390	1502	1662
65°	1228	1336	1512
70°	1023	1138	1285
75°	804	909	1005
80°	575	640	710
85°	374	374	352



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.0	4.1
10°-20°	238.7	11.4
20°-30°	348.9	16.7
30°-40°	396.0	19.0
40°-50°	382.3	18.3
50°-60°	315.4	15.1
60°-70°	210.0	10.1
70°-80°	94.0	4.5
80°-90°	16.8	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°	672.6	32.2
0°-40°	1068.6	51.2
0°-60°	1766.2	84.6
0°-90°	2087.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2087.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	903	903	903	903	903	
5°	902	901	898	893	890	85
15°	850	852	850	846	840	239
25°	754	760	764	758	752	346
35°	607	615	643	647	644	380
45°	470	478	493	516	519	363
55°	329	335	351	370	381	294
65°	193	198	210	225	238	191
75°	77	82	87	92	97	85
85°	12	12	12	11	11	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	902.6	902.6	902.6	902.6	902.6
2.5°	905.0	905.3	903.3	897.7	894.3
5°	901.5	901.2	897.7	892.9	890.1
7.5°	891.5	892.2	891.1	884.2	880.4
10°	881.8	882.1	879.3	873.8	869.3
12.5°	869.3	868.9	865.1	862.4	855.1
15°	849.5	851.6	849.5	845.7	839.8
17.5°	830.5	830.5	831.8	825.2	820.7
20°	809.0	810.0	810.0	804.8	799.6
22.5°	784.0	787.1	788.1	782.6	776.4
25°	754.5	760.4	763.9	758.3	751.7
27.5°	718.8	727.8	738.2	734.1	726.8
30°	678.9	692.1	709.4	706.0	700.8
32.5°	641.1	654.3	678.2	676.8	674.1
35°	606.8	615.1	643.2	646.7	644.2
37.5°	574.2	581.8	608.2	616.2	614.1
40°	539.9	548.2	569.0	583.2	583.9
42.5°	505.9	513.9	530.9	551.3	551.3
45°	469.8	477.8	493.4	516.0	518.7
47.5°	434.5	442.8	458.0	480.6	485.1
50°	399.8	407.4	422.7	444.5	451.5
52.5°	363.7	372.1	387.0	407.1	417.1
55°	329.1	334.6	350.9	370.3	381.1
57.5°	293.0	298.2	316.6	333.2	344.3
60°	258.3	264.9	279.1	296.1	308.9
62.5°	225.0	232.0	244.1	259.0	273.6
65°	192.8	198.0	209.8	224.7	237.5
67.5°	161.6	166.1	177.9	188.3	201.8
70°	130.0	135.9	144.6	154.6	163.3
72.5°	104.7	107.1	114.4	121.7	130.7
75°	77.3	81.5	87.4	91.5	96.7
77.5°	55.5	57.9	61.4	64.8	69.7
80°	37.1	38.1	41.3	42.0	45.8
82.5°	22.5	23.2	23.9	24.3	25.7
85°	12.1	12.1	12.1	11.4	11.4
87.5°	6.9	6.9	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)