

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: P558036

Luminaire Tested: **FUSL-12-4-LD4-3LO-35-UNV-82-86-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: P558036  
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-LD4-3LO-35-UNV-82-86-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

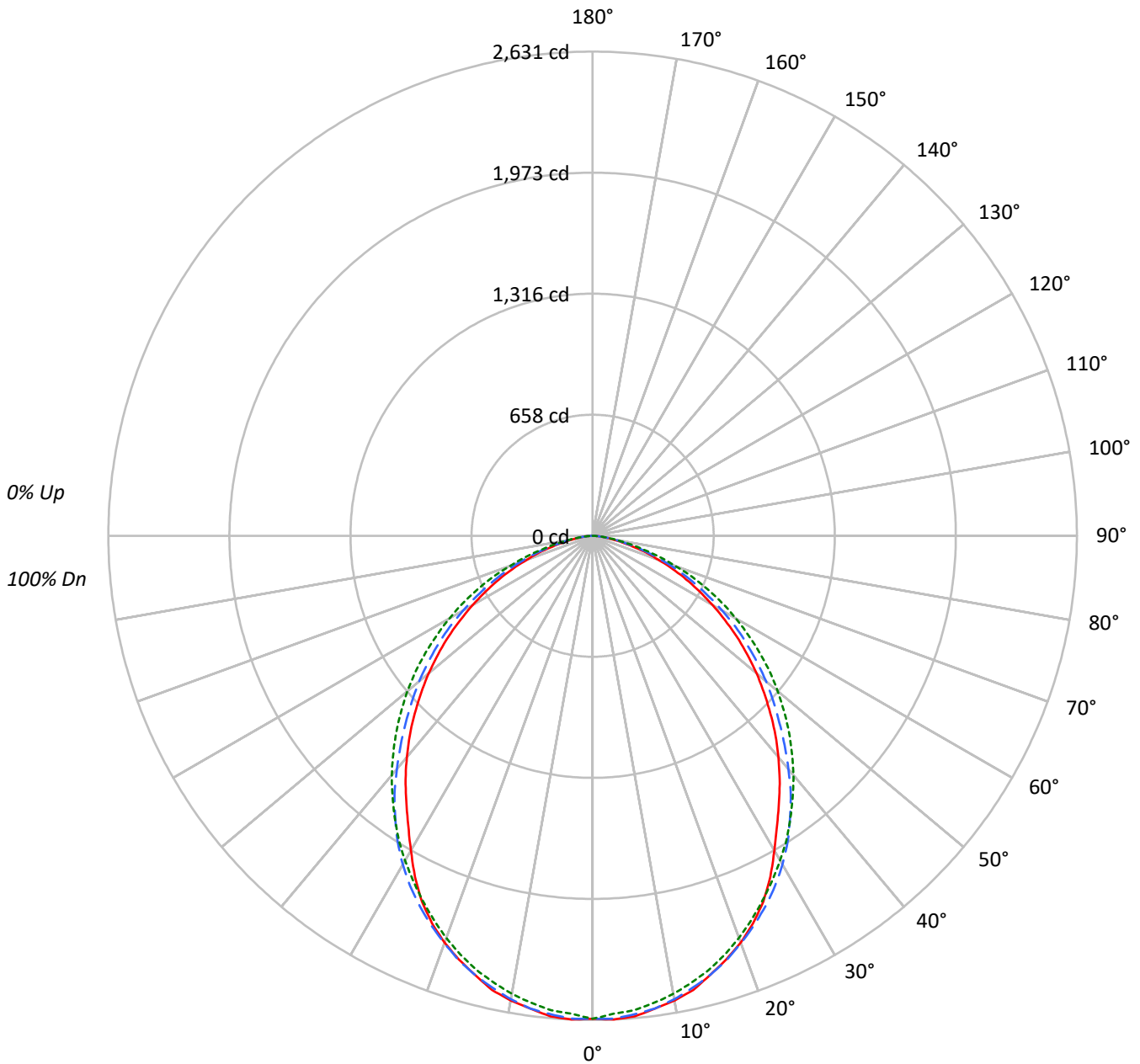
Lumens per Lamp: N/A  
Luminaire Lumens: 6068.0 lumens  
Efficiency: N/A  
Efficacy: 86.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7062	7062	7062
5°	7081	7051	6991
10°	7006	6986	6906
15°	6881	6881	6803
20°	6735	6744	6657
25°	6514	6595	6490
30°	6134	6409	6331
35°	5796	6143	6154
40°	5514	5812	5964
45°	5199	5460	5740
50°	4866	5145	5495
55°	4488	4787	5198
60°	4042	4368	4835
65°	3569	3883	4397
70°	2975	3308	3736
75°	2337	2642	2925
80°	1672	1860	2063
85°	1090	1090	1028



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	247.1	4.1
10°-20°	694.1	11.4
20°-30°	1014.3	16.7
30°-40°	1151.4	19.0
40°-50°	1111.5	18.3
50°-60°	916.9	15.1
60°-70°	610.6	10.1
70°-80°	273.2	4.5
80°-90°	48.9	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°	1955.5	32.2
0°-40°	3106.9	51.2
0°-60°	5135.3	84.6
0°-90°	6068.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6068.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2624	2624	2624	2624	2624	
5°	2621	2620	2610	2596	2588	248
15°	2470	2476	2470	2459	2442	696
25°	2194	2211	2221	2205	2186	1005
35°	1764	1788	1870	1880	1873	1105
45°	1366	1389	1435	1500	1508	1054
55°	957	973	1020	1077	1108	854
65°	560	576	610	653	691	556
75°	225	237	254	266	281	246
85°	35	35	35	33	33	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2624.3	2624.3	2624.3	2624.3	2624.3
2.5°	2631.3	2632.3	2626.3	2610.1	2600.1
5°	2621.2	2620.2	2610.1	2596.0	2588.0
7.5°	2592.0	2594.0	2591.0	2570.8	2559.7
10°	2563.8	2564.8	2556.7	2540.6	2527.5
12.5°	2527.5	2526.5	2515.4	2507.3	2486.1
15°	2470.0	2476.1	2470.0	2458.9	2441.8
17.5°	2414.6	2414.6	2418.6	2399.4	2386.3
20°	2352.0	2355.1	2355.1	2340.0	2324.8
22.5°	2279.5	2288.5	2291.6	2275.4	2257.3
25°	2193.8	2210.9	2221.0	2204.9	2185.7
27.5°	2089.9	2116.1	2146.4	2134.3	2113.1
30°	1974.0	2012.3	2062.7	2052.6	2037.5
32.5°	1864.1	1902.4	1972.0	1967.9	1959.9
35°	1764.3	1788.5	1870.1	1880.2	1873.2
37.5°	1669.5	1691.7	1768.3	1791.5	1785.5
40°	1569.7	1593.9	1654.4	1695.7	1697.7
42.5°	1470.9	1494.1	1543.5	1603.0	1603.0
45°	1366.1	1389.3	1434.6	1500.1	1508.2
47.5°	1263.2	1287.4	1331.8	1397.3	1410.4
50°	1162.4	1184.6	1229.0	1292.5	1312.6
52.5°	1057.6	1081.8	1125.1	1183.6	1212.8
55°	956.7	972.9	1020.3	1076.7	1108.0
57.5°	851.9	867.0	920.5	968.8	1001.1
60°	751.1	770.2	811.6	861.0	898.3
62.5°	654.3	674.5	709.7	753.1	795.4
65°	560.5	575.7	609.9	653.3	690.6
67.5°	469.8	482.9	517.2	547.4	586.8
70°	378.1	395.2	420.4	449.6	474.8
72.5°	304.5	311.5	332.7	353.9	380.1
75°	224.8	236.9	254.1	266.2	281.3
77.5°	161.3	168.4	178.4	188.5	202.6
80°	107.9	110.9	120.0	122.0	133.1
82.5°	65.5	67.5	69.6	70.6	74.6
85°	35.3	35.3	35.3	33.3	33.3
87.5°	20.2	20.2	17.1	14.1	10.1
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)