

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: P488678

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2HI-30-120-EDD-90**

Issue Date: 3/11/2021

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: P488678  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2101-115-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/11/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: CLM-12-4-INS-A19156-LD4-2HI-30-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

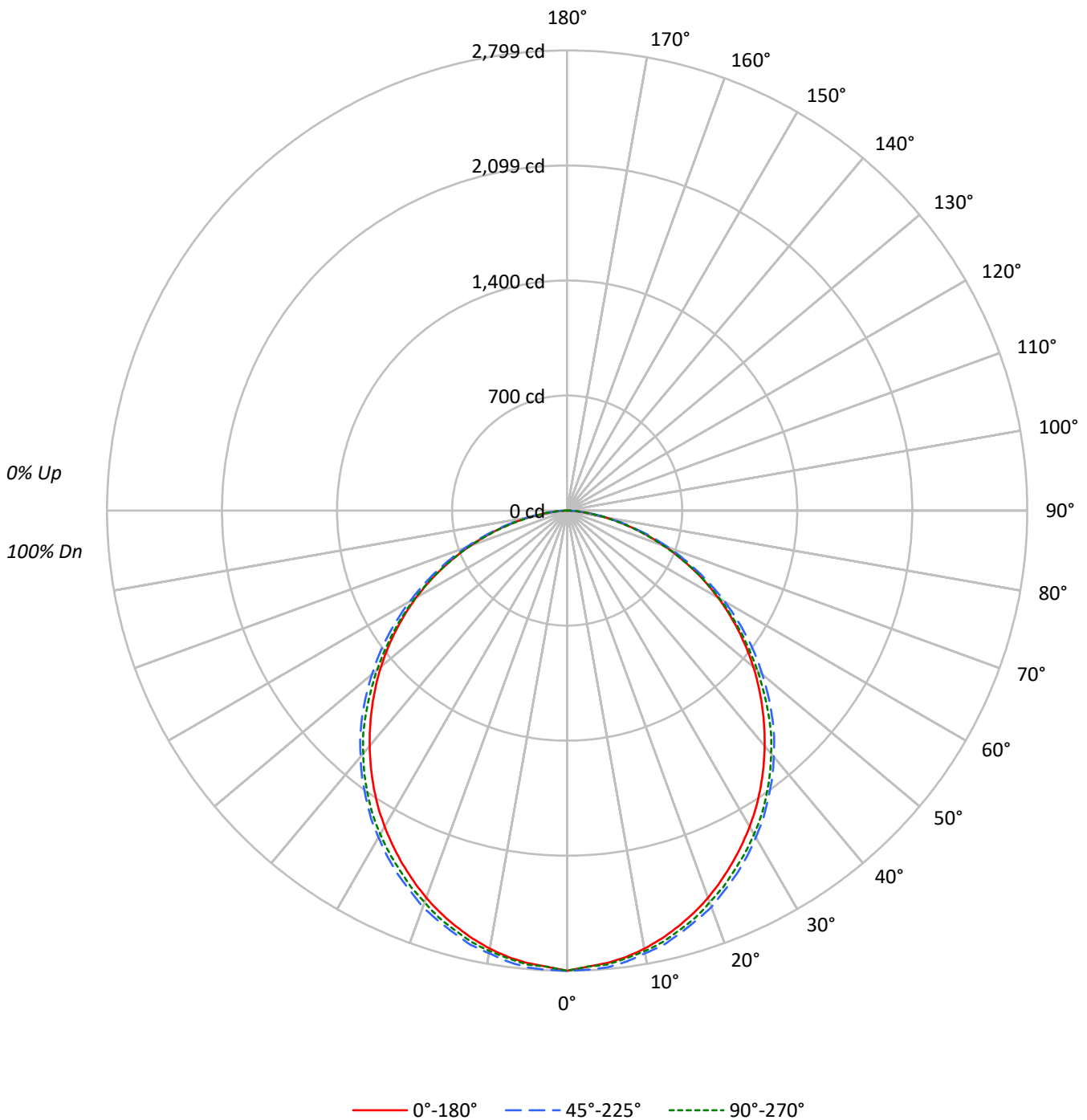
Lumens per Lamp: N/A  
Luminaire Lumens: 7359.9 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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	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	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85					85			
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51					51			
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28					28			
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

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

	0°	45°	90°
0°	7533	7533	7533
5°	7464	7534	7487
10°	7395	7470	7434
15°	7293	7411	7359
20°	7178	7348	7260
25°	7038	7242	7159
30°	6896	7130	7065
35°	6741	7008	6943
40°	6565	6868	6781
45°	6381	6703	6576
50°	6190	6489	6319
55°	5965	6244	6053
60°	5711	5948	5764
65°	5382	5588	5386
70°	4952	5152	4897
75°	4361	4558	4294
80°	3544	3698	3502
85°	2467	2631	2566



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	263.7	3.6
10°-20°	747.1	10.2
20°-30°	1114.3	15.1
30°-40°	1320.5	17.9
40°-50°	1336.1	18.2
50°-60°	1166.9	15.9
60°-70°	852.7	11.6
70°-80°	453.7	6.2
80°-90°	104.9	1.4
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°	2125.1	28.9
0°-40°	3445.6	46.8
0°-60°	5948.6	80.8
0°-90°	7359.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7359.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2799	2799	2799	2799	2799	
5°	2763	2768	2789	2795	2772	262
15°	2618	2635	2660	2676	2641	738
25°	2370	2400	2439	2448	2411	1092
35°	2052	2084	2133	2148	2113	1283
45°	1677	1707	1761	1763	1728	1294
55°	1271	1297	1331	1312	1290	1137
65°	845	862	878	860	846	836
75°	419	429	438	422	413	446
85°	80	81	85	86	83	101
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2799.4	2799.4	2799.4	2799.4	2799.4
2.5°	2777.6	2786.6	2795.9	2800.0	2777.3
5°	2763.0	2768.2	2788.9	2795.4	2771.7
7.5°	2739.1	2746.9	2767.1	2770.0	2747.2
10°	2706.4	2720.4	2733.8	2748.4	2720.7
12.5°	2664.7	2683.7	2706.4	2709.0	2688.0
15°	2617.7	2635.2	2660.0	2676.1	2641.4
17.5°	2565.2	2582.2	2614.2	2617.2	2596.2
20°	2506.6	2527.6	2566.1	2572.8	2535.2
22.5°	2440.1	2468.4	2500.5	2506.9	2479.2
25°	2370.4	2399.6	2439.2	2448.3	2411.2
27.5°	2297.5	2325.5	2370.1	2376.5	2345.3
30°	2219.3	2245.6	2294.6	2305.4	2273.6
32.5°	2140.0	2166.2	2220.5	2229.5	2198.6
35°	2051.9	2084.0	2133.3	2148.1	2113.4
37.5°	1962.1	1993.3	2049.3	2062.7	2025.4
40°	1869.0	1899.9	1955.1	1966.1	1930.3
42.5°	1773.9	1804.9	1863.8	1865.5	1835.8
45°	1676.8	1706.6	1761.4	1762.9	1728.1
47.5°	1578.2	1608.3	1657.3	1651.7	1619.1
50°	1478.5	1507.1	1549.9	1538.8	1509.4
52.5°	1375.2	1402.9	1443.5	1425.4	1397.7
55°	1271.4	1297.1	1330.9	1311.6	1290.1
57.5°	1166.7	1192.6	1218.6	1199.1	1180.4
60°	1061.1	1083.8	1105.1	1085.3	1071.0
62.5°	953.8	973.3	991.7	972.7	959.3
65°	845.3	862.5	877.6	860.1	845.8
67.5°	737.3	751.9	765.9	747.8	733.0
70°	629.4	642.0	654.8	636.1	622.4
72.5°	523.0	534.0	545.4	527.3	515.4
75°	419.4	429.0	438.4	422.3	413.0
77.5°	320.5	328.7	335.1	324.9	315.9
80°	228.7	234.8	238.6	234.5	226.0
82.5°	147.0	151.4	153.4	153.1	147.6
85°	79.9	81.4	85.2	86.0	83.1
87.5°	30.9	33.0	33.8	36.5	33.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)