

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: P488736

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3STD-27-120-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: P488736  
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-LD4-3STD-27-120-EDD-90  
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

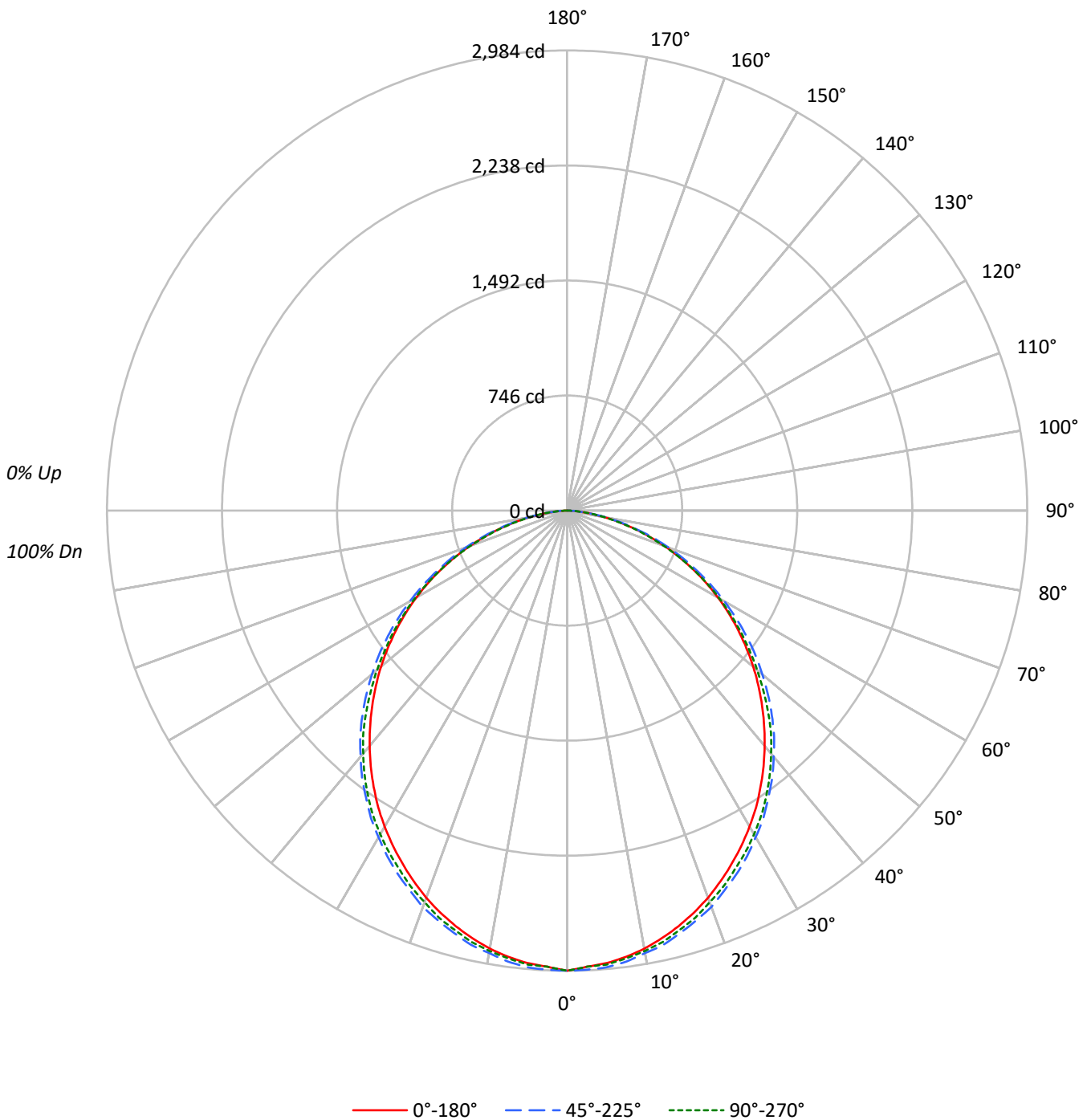
Lumens per Lamp: N/A  
Luminaire Lumens: 7845.2 lumens  
Efficiency: N/A  
Efficacy: 78.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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

	0°	45°	90°
0°	8030	8030	8030
5°	7956	8030	7981
10°	7883	7963	7924
15°	7774	7899	7844
20°	7651	7833	7739
25°	7502	7720	7631
30°	7351	7600	7530
35°	7185	7470	7401
40°	6999	7321	7228
45°	6802	7145	7010
50°	6598	6916	6736
55°	6358	6655	6451
60°	6088	6340	6144
65°	5737	5957	5741
70°	5279	5492	5220
75°	4649	4859	4577
80°	3777	3941	3733
85°	2631	2803	2736



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	281.0	3.6
10°-20°	796.4	10.2
20°-30°	1187.8	15.1
30°-40°	1407.5	17.9
40°-50°	1424.2	18.2
50°-60°	1243.8	15.9
60°-70°	909.0	11.6
70°-80°	483.6	6.2
80°-90°	111.8	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°	2265.2	28.9
0°-40°	3672.8	46.8
0°-60°	6340.8	80.8
0°-90°	7845.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7845.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2984	2984	2984	2984	2984	
5°	2945	2951	2973	2980	2954	279
15°	2790	2809	2835	2852	2816	787
25°	2527	2558	2600	2610	2570	1164
35°	2187	2221	2274	2290	2253	1368
45°	1787	1819	1878	1879	1842	1379
55°	1355	1383	1419	1398	1375	1211
65°	901	919	936	917	902	892
75°	447	457	467	450	440	475
85°	85	87	91	92	89	108
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2984.0	2984.0	2984.0	2984.0	2984.0
2.5°	2960.7	2970.4	2980.3	2984.7	2960.4
5°	2945.2	2950.8	2972.8	2979.7	2954.5
7.5°	2919.7	2928.1	2949.5	2952.6	2928.4
10°	2884.9	2899.8	2914.1	2929.6	2900.1
12.5°	2840.4	2860.6	2884.9	2887.7	2865.3
15°	2790.3	2809.0	2835.4	2852.5	2815.5
17.5°	2734.4	2752.4	2786.6	2789.7	2767.3
20°	2671.9	2694.3	2735.3	2742.5	2702.4
22.5°	2601.0	2631.2	2665.4	2672.2	2642.7
25°	2526.7	2557.8	2600.1	2609.7	2570.2
27.5°	2449.0	2478.8	2526.4	2533.2	2500.0
30°	2365.7	2393.6	2445.9	2457.4	2423.5
32.5°	2281.1	2309.1	2366.9	2376.5	2343.6
35°	2187.2	2221.4	2273.9	2289.8	2252.8
37.5°	2091.4	2124.7	2184.4	2198.7	2158.9
40°	1992.3	2025.2	2084.0	2095.8	2057.5
42.5°	1890.9	1923.9	1986.7	1988.5	1956.8
45°	1787.4	1819.1	1877.5	1879.1	1842.1
47.5°	1682.3	1714.3	1766.5	1760.6	1725.8
50°	1576.0	1606.4	1652.1	1640.3	1608.9
52.5°	1465.9	1495.4	1538.7	1519.4	1489.8
55°	1355.2	1382.6	1418.6	1398.1	1375.1
57.5°	1243.6	1271.3	1298.9	1278.1	1258.2
60°	1131.1	1155.3	1178.0	1156.9	1141.6
62.5°	1016.6	1037.5	1057.1	1036.9	1022.6
65°	901.0	919.3	935.5	916.8	901.6
67.5°	786.0	801.5	816.4	797.2	781.3
70°	670.9	684.3	698.0	678.1	663.5
72.5°	557.4	569.3	581.4	562.1	549.4
75°	447.1	457.3	467.3	450.2	440.2
77.5°	341.7	350.4	357.2	346.3	336.7
80°	243.7	250.3	254.3	250.0	240.9
82.5°	156.7	161.4	163.5	163.2	157.3
85°	85.2	86.7	90.8	91.7	88.6
87.5°	33.0	35.1	36.1	38.9	35.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)