

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: P489581

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1HI-35-120-EDD**

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: P489581  
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-24-4-INS-A19156-LD4-1HI-35-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

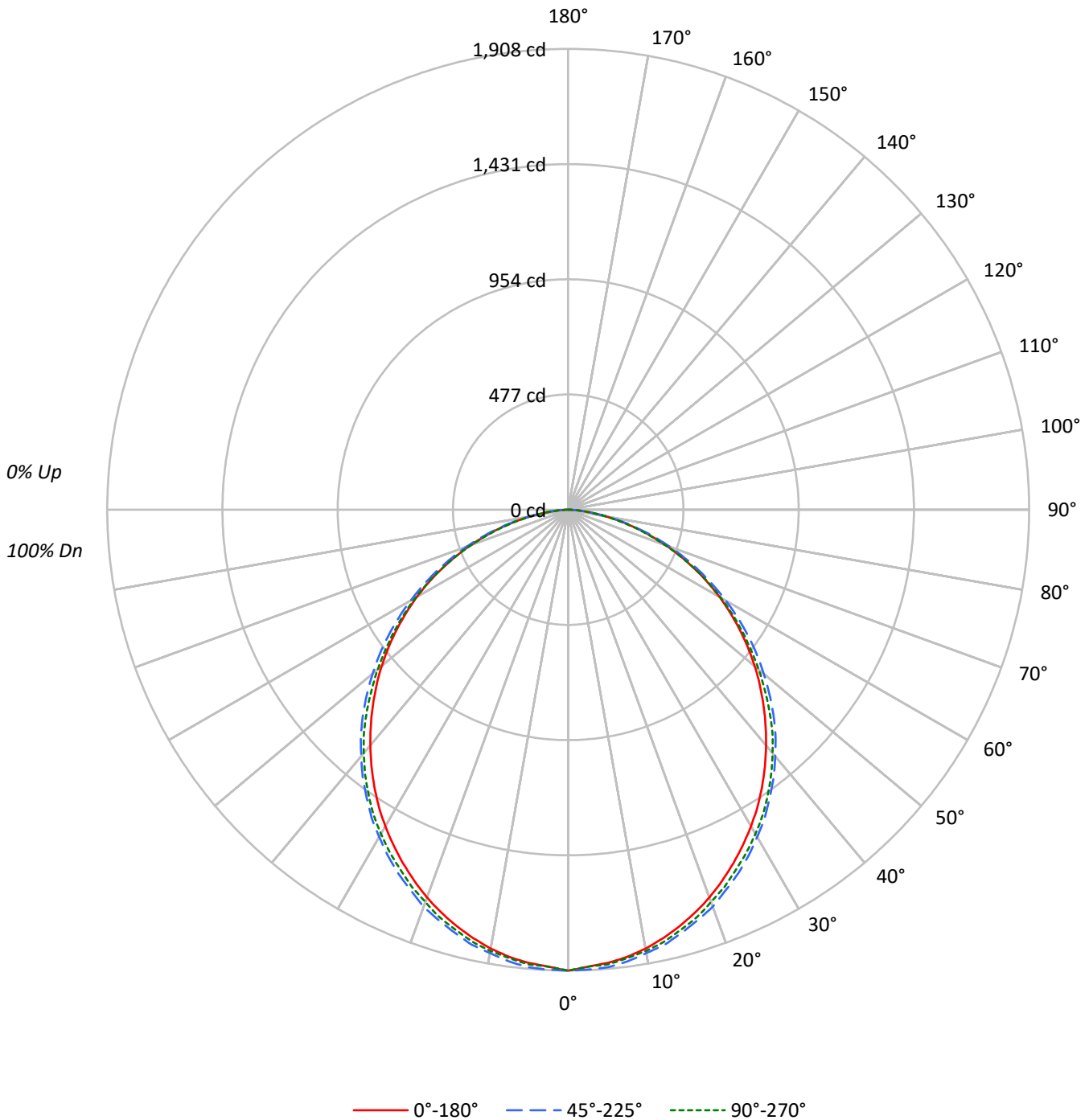
Lumens per Lamp: N/A  
Luminaire Lumens: 5017.3 lumens  
Efficiency: N/A  
Efficacy: 116.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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	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°	2568	2568	2568
5°	2544	2568	2552
10°	2521	2546	2534
15°	2486	2526	2508
20°	2447	2505	2475
25°	2399	2469	2440
30°	2350	2430	2408
35°	2298	2389	2366
40°	2238	2341	2311
45°	2175	2285	2242
50°	2110	2212	2154
55°	2033	2128	2063
60°	1947	2027	1965
65°	1834	1905	1836
70°	1688	1756	1669
75°	1486	1553	1463
80°	1208	1260	1194
85°	841	897	875



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	179.7	3.6
10°-20°	509.3	10.2
20°-30°	759.6	15.1
30°-40°	900.2	17.9
40°-50°	910.8	18.2
50°-60°	795.5	15.9
60°-70°	581.3	11.6
70°-80°	309.3	6.2
80°-90°	71.5	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°	1448.7	28.9
0°-40°	2348.9	46.8
0°-60°	4055.2	80.8
0°-90°	5017.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5017.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1908	1908	1908	1908	1908	
5°	1884	1887	1901	1906	1890	179
15°	1784	1796	1813	1824	1801	503
25°	1616	1636	1663	1669	1644	744
35°	1399	1421	1454	1464	1441	875
45°	1143	1163	1201	1202	1178	882
55°	867	884	907	894	879	775
65°	576	588	598	586	577	570
75°	286	292	299	288	282	304
85°	54	56	58	59	57	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1908.4	1908.4	1908.4	1908.4	1908.4
2.5°	1893.5	1899.7	1906.0	1908.8	1893.3
5°	1883.5	1887.1	1901.2	1905.6	1889.5
7.5°	1867.2	1872.6	1886.3	1888.3	1872.8
10°	1845.0	1854.5	1863.7	1873.6	1854.7
12.5°	1816.5	1829.5	1845.0	1846.8	1832.4
15°	1784.5	1796.5	1813.4	1824.3	1800.6
17.5°	1748.7	1760.3	1782.1	1784.1	1769.8
20°	1708.8	1723.1	1749.3	1753.9	1728.3
22.5°	1663.4	1682.7	1704.6	1709.0	1690.1
25°	1615.9	1635.8	1662.8	1669.0	1643.8
27.5°	1566.2	1585.3	1615.7	1620.1	1598.8
30°	1512.9	1530.8	1564.2	1571.6	1549.9
32.5°	1458.8	1476.7	1513.7	1519.9	1498.8
35°	1398.8	1420.7	1454.3	1464.4	1440.7
37.5°	1337.6	1358.8	1397.0	1406.1	1380.7
40°	1274.1	1295.2	1332.8	1340.3	1315.9
42.5°	1209.3	1230.4	1270.5	1271.7	1251.5
45°	1143.1	1163.4	1200.8	1201.7	1178.1
47.5°	1075.9	1096.4	1129.8	1126.0	1103.7
50°	1007.9	1027.4	1056.6	1049.0	1029.0
52.5°	937.5	956.4	984.0	971.7	952.8
55°	866.7	884.2	907.3	894.2	879.4
57.5°	795.3	813.0	830.7	817.4	804.7
60°	723.4	738.9	753.4	739.9	730.1
62.5°	650.2	663.5	676.0	663.1	654.0
65°	576.2	588.0	598.3	586.4	576.6
67.5°	502.7	512.6	522.1	509.8	499.7
70°	429.1	437.6	446.4	433.7	424.3
72.5°	356.5	364.1	371.8	359.5	351.3
75°	285.9	292.5	298.8	287.9	281.5
77.5°	218.5	224.1	228.5	221.5	215.3
80°	155.9	160.1	162.6	159.9	154.1
82.5°	100.2	103.2	104.6	104.4	100.6
85°	54.5	55.5	58.1	58.7	56.7
87.5°	21.1	22.5	23.1	24.9	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)