

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: P489579

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1HI-30-120-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: P489579  
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-30-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

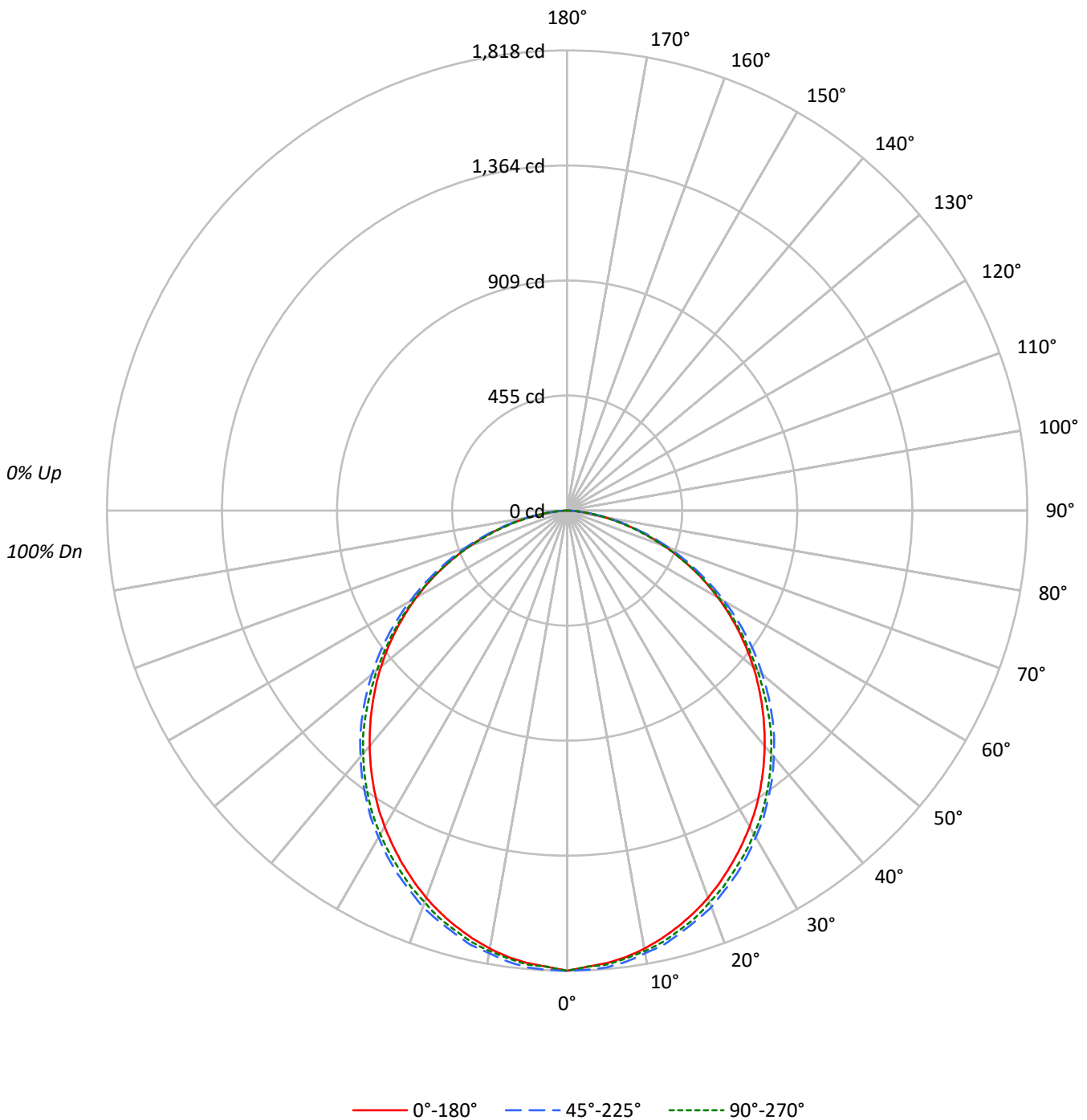
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4780.3 lumens  
Efficiency: N/A  
Efficacy: 110.7 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	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°	2447	2447	2447
5°	2424	2447	2432
10°	2402	2426	2414
15°	2368	2407	2390
20°	2331	2386	2358
25°	2286	2352	2325
30°	2240	2315	2294
35°	2189	2276	2255
40°	2132	2230	2202
45°	2072	2177	2136
50°	2010	2107	2052
55°	1937	2028	1966
60°	1855	1932	1872
65°	1748	1815	1749
70°	1608	1673	1590
75°	1416	1480	1394
80°	1151	1201	1137
85°	801	854	834



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	171.2	3.6
10°-20°	485.3	10.2
20°-30°	723.8	15.1
30°-40°	857.7	17.9
40°-50°	867.8	18.2
50°-60°	757.9	15.9
60°-70°	553.9	11.6
70°-80°	294.7	6.2
80°-90°	68.1	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°	1380.3	28.9
0°-40°	2237.9	46.8
0°-60°	3863.6	80.8
0°-90°	4780.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4780.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1818	1818	1818	1818	1818	
5°	1795	1798	1811	1816	1800	170
15°	1700	1712	1728	1738	1716	479
25°	1540	1558	1584	1590	1566	709
35°	1333	1354	1386	1395	1373	833
45°	1089	1108	1144	1145	1122	840
55°	826	842	864	852	838	738
65°	549	560	570	559	549	543
75°	272	279	285	274	268	290
85°	52	53	55	56	54	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1818.3	1818.3	1818.3	1818.3	1818.3
2.5°	1804.0	1809.9	1816.0	1818.6	1803.9
5°	1794.6	1798.0	1811.4	1815.6	1800.3
7.5°	1779.0	1784.2	1797.2	1799.1	1784.3
10°	1757.8	1766.9	1775.6	1785.1	1767.1
12.5°	1730.7	1743.0	1757.8	1759.5	1745.9
15°	1700.2	1711.6	1727.7	1738.1	1715.6
17.5°	1666.1	1677.1	1698.0	1699.9	1686.2
20°	1628.1	1641.7	1666.7	1671.1	1646.6
22.5°	1584.9	1603.2	1624.1	1628.2	1610.2
25°	1539.6	1558.5	1584.3	1590.2	1566.1
27.5°	1492.2	1510.4	1539.4	1543.6	1523.3
30°	1441.5	1458.5	1490.3	1497.3	1476.7
32.5°	1389.9	1407.0	1442.2	1448.1	1428.0
35°	1332.7	1353.6	1385.6	1395.2	1372.7
37.5°	1274.4	1294.6	1331.0	1339.7	1315.5
40°	1213.9	1234.0	1269.8	1277.0	1253.7
42.5°	1152.2	1172.3	1210.5	1211.7	1192.3
45°	1089.1	1108.4	1144.0	1145.0	1122.4
47.5°	1025.1	1044.6	1076.4	1072.8	1051.6
50°	960.3	978.8	1006.7	999.5	980.4
52.5°	893.2	911.2	937.5	925.8	907.8
55°	825.8	842.4	864.4	851.9	837.9
57.5°	757.8	774.6	791.5	778.8	766.7
60°	689.2	704.0	717.8	704.9	695.6
62.5°	619.5	632.2	644.1	631.8	623.1
65°	549.0	560.2	570.0	558.7	549.4
67.5°	478.9	488.4	497.5	485.7	476.1
70°	408.8	417.0	425.3	413.2	404.3
72.5°	339.7	346.9	354.3	342.5	334.7
75°	272.4	278.7	284.7	274.3	268.2
77.5°	208.2	213.5	217.7	211.0	205.2
80°	148.5	152.5	155.0	152.3	146.8
82.5°	95.5	98.3	99.6	99.5	95.9
85°	51.9	52.9	55.3	55.9	54.0
87.5°	20.1	21.4	22.0	23.7	21.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)