

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: P489631

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2LO-40-120-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: P489631  
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-LD4-2LO-40-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

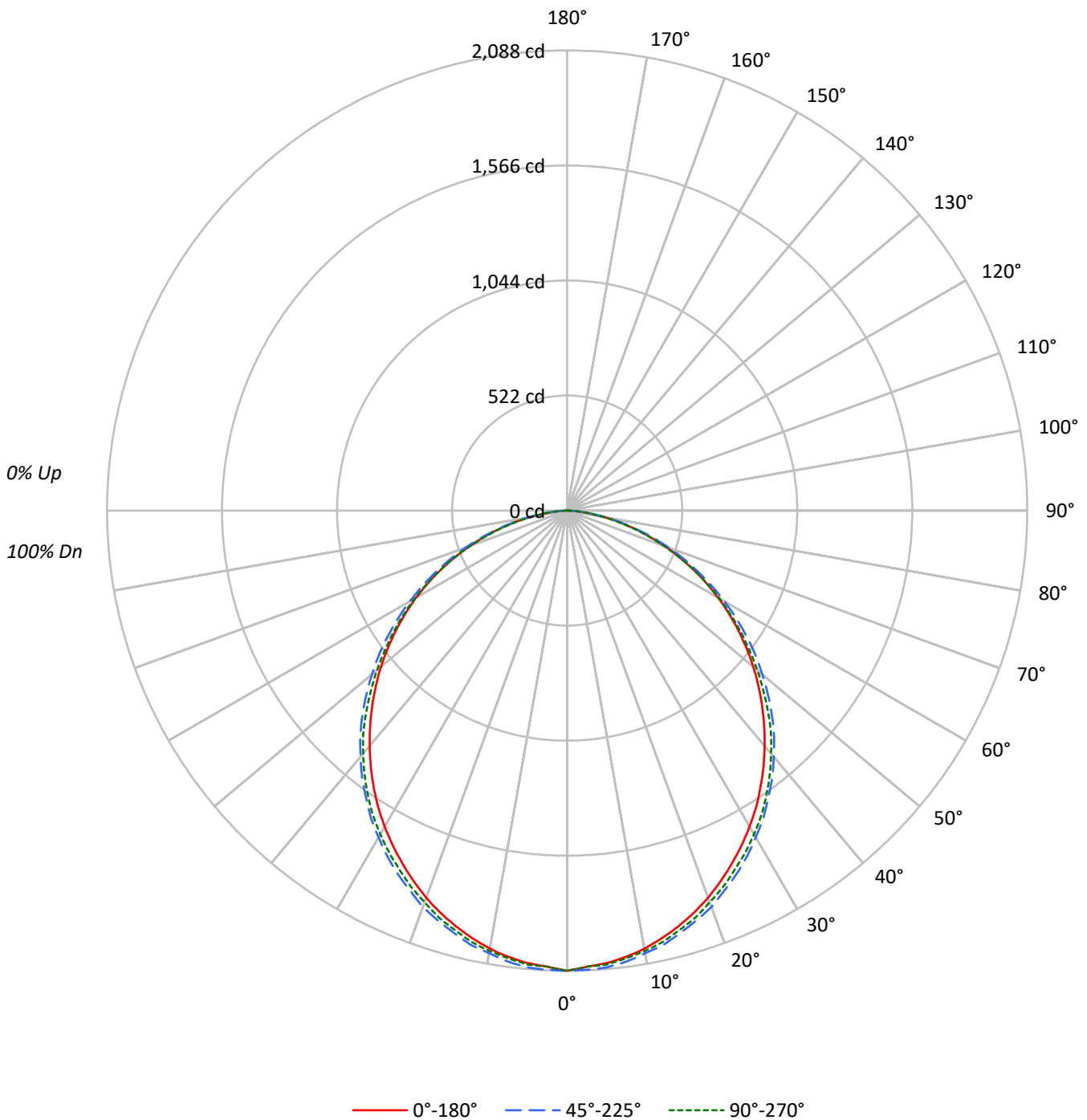
Lumens per Lamp: N/A  
Luminaire Lumens: 5489.8 lumens  
Efficiency: N/A  
Efficacy: 117.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 46.8  
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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CATALOG NUMBER: CLM-24-4-INS-A19156-LD4-2LO-40-120-EDD

### 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°	2810	2810	2810
5°	2784	2810	2792
10°	2758	2786	2773
15°	2720	2764	2744
20°	2677	2741	2708
25°	2625	2701	2670
30°	2572	2659	2635
35°	2514	2614	2589
40°	2449	2561	2529
45°	2380	2500	2453
50°	2308	2420	2357
55°	2225	2329	2257
60°	2130	2218	2150
65°	2007	2084	2009
70°	1847	1921	1827
75°	1626	1700	1602
80°	1322	1379	1306
85°	920	980	957



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	196.7	3.6
10°-20°	557.3	10.2
20°-30°	831.2	15.1
30°-40°	985.0	17.9
40°-50°	996.6	18.2
50°-60°	870.4	15.9
60°-70°	636.0	11.6
70°-80°	338.4	6.2
80°-90°	78.2	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°	1585.1	28.9
0°-40°	2570.1	46.8
0°-60°	4437.1	80.8
0°-90°	5489.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5489.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2088	2088	2088	2088	2088	
5°	2061	2065	2080	2085	2068	195
15°	1953	1966	1984	1996	1970	550
25°	1768	1790	1819	1826	1799	815
35°	1530	1554	1591	1602	1576	957
45°	1251	1273	1314	1315	1289	965
55°	948	968	993	978	962	848
65°	630	643	655	642	631	624
75°	313	320	327	315	308	333
85°	60	61	64	64	62	75
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2088.1	2088.1	2088.1	2088.1	2088.1
2.5°	2071.8	2078.6	2085.5	2088.6	2071.6
5°	2060.9	2064.8	2080.3	2085.1	2067.5
7.5°	2043.1	2049.0	2064.0	2066.2	2049.2
10°	2018.7	2029.2	2039.2	2050.1	2029.4
12.5°	1987.6	2001.8	2018.7	2020.7	2005.0
15°	1952.6	1965.6	1984.1	1996.1	1970.2
17.5°	1913.4	1926.0	1950.0	1952.2	1936.5
20°	1869.7	1885.4	1914.1	1919.1	1891.0
22.5°	1820.1	1841.2	1865.1	1869.9	1849.2
25°	1768.1	1789.9	1819.4	1826.2	1798.6
27.5°	1713.7	1734.6	1767.9	1772.7	1749.4
30°	1655.4	1675.0	1711.5	1719.6	1695.9
32.5°	1596.2	1615.8	1656.3	1663.0	1640.0
35°	1530.5	1554.5	1591.2	1602.3	1576.4
37.5°	1463.5	1486.8	1528.6	1538.6	1510.7
40°	1394.1	1417.2	1458.3	1466.6	1439.8
42.5°	1323.2	1346.3	1390.2	1391.5	1369.3
45°	1250.7	1272.9	1313.8	1314.9	1289.0
47.5°	1177.2	1199.6	1236.2	1232.0	1207.7
50°	1102.8	1124.1	1156.1	1147.8	1125.9
52.5°	1025.8	1046.5	1076.7	1063.2	1042.5
55°	948.3	967.5	992.7	978.4	962.3
57.5°	870.2	889.6	909.0	894.4	880.5
60°	791.5	808.4	824.3	809.5	798.9
62.5°	711.4	726.0	739.7	725.6	715.5
65°	630.5	643.3	654.6	641.6	630.9
67.5°	550.0	560.9	571.3	557.8	546.7
70°	469.5	478.8	488.4	474.5	464.3
72.5°	390.1	398.3	406.8	393.3	384.4
75°	312.8	320.0	327.0	315.0	308.1
77.5°	239.1	245.2	250.0	242.4	235.6
80°	170.6	175.1	178.0	174.9	168.6
82.5°	109.6	112.9	114.4	114.2	110.1
85°	59.6	60.7	63.5	64.2	62.0
87.5°	23.1	24.6	25.2	27.2	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)