

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: P489584

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1HI-50-120-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: P489584  
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-50-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

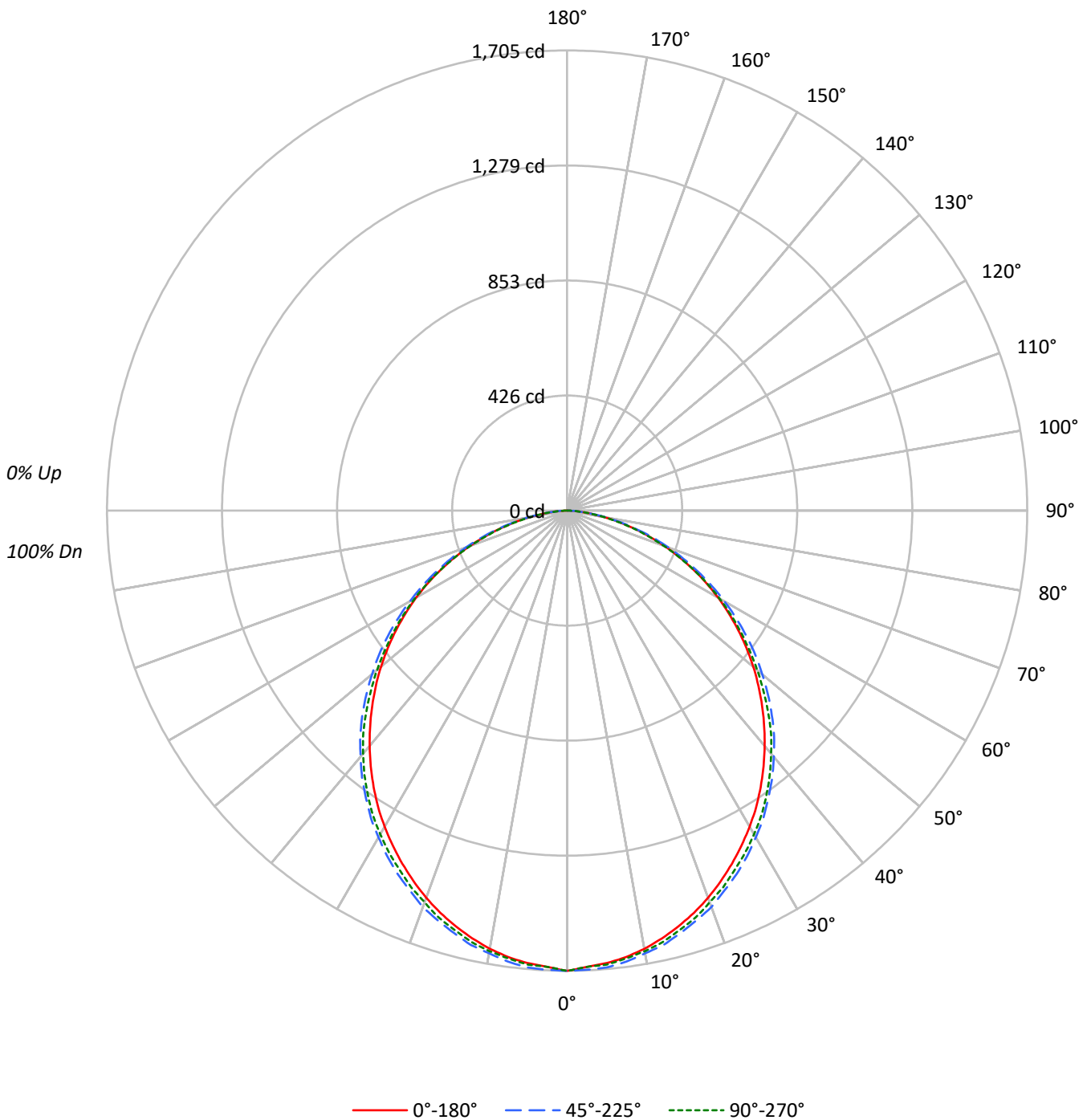
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4483.5 lumens  
Efficiency: N/A  
Efficacy: 103.8 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°	2295	2295	2295
5°	2273	2295	2281
10°	2253	2275	2264
15°	2221	2257	2241
20°	2186	2238	2211
25°	2144	2206	2181
30°	2101	2172	2152
35°	2053	2134	2115
40°	2000	2092	2065
45°	1944	2042	2003
50°	1885	1976	1925
55°	1817	1902	1844
60°	1739	1812	1756
65°	1639	1702	1641
70°	1508	1569	1492
75°	1328	1389	1308
80°	1079	1126	1067
85°	752	801	781



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.6	3.6
10°-20°	455.1	10.2
20°-30°	678.8	15.1
30°-40°	804.4	17.9
40°-50°	813.9	18.2
50°-60°	710.8	15.9
60°-70°	519.5	11.6
70°-80°	276.4	6.2
80°-90°	63.9	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°	1294.6	28.9
0°-40°	2099.0	46.8
0°-60°	3623.7	80.8
0°-90°	4483.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4483.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1705	1705	1705	1705	1705	
5°	1683	1686	1699	1703	1688	160
15°	1595	1605	1620	1630	1609	450
25°	1444	1462	1486	1491	1469	665
35°	1250	1270	1300	1309	1288	782
45°	1022	1040	1073	1074	1053	788
55°	774	790	811	799	786	692
65°	515	525	535	524	515	510
75°	256	261	267	257	252	272
85°	49	50	52	52	51	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1705.4	1705.4	1705.4	1705.4	1705.4
2.5°	1692.0	1697.5	1703.2	1705.7	1691.9
5°	1683.2	1686.4	1699.0	1702.9	1688.5
7.5°	1668.6	1673.4	1685.6	1687.4	1673.6
10°	1648.7	1657.2	1665.4	1674.3	1657.4
12.5°	1623.3	1634.8	1648.7	1650.3	1637.5
15°	1594.7	1605.3	1620.4	1630.2	1609.1
17.5°	1562.7	1573.0	1592.5	1594.3	1581.5
20°	1527.0	1539.8	1563.2	1567.3	1544.4
22.5°	1486.5	1503.7	1523.2	1527.2	1510.3
25°	1444.0	1461.8	1485.9	1491.4	1468.9
27.5°	1399.6	1416.6	1443.8	1447.7	1428.7
30°	1352.0	1368.0	1397.8	1404.4	1385.0
32.5°	1303.6	1319.6	1352.7	1358.2	1339.3
35°	1250.0	1269.5	1299.5	1308.6	1287.5
37.5°	1195.2	1214.3	1248.4	1256.5	1233.8
40°	1138.6	1157.4	1191.0	1197.7	1175.9
42.5°	1080.6	1099.5	1135.4	1136.4	1118.3
45°	1021.5	1039.6	1073.0	1073.9	1052.7
47.5°	961.4	979.7	1009.6	1006.2	986.3
50°	900.7	918.1	944.2	937.4	919.5
52.5°	837.8	854.6	879.3	868.3	851.4
55°	774.5	790.1	810.7	799.0	785.9
57.5°	710.7	726.5	742.3	730.4	719.1
60°	646.4	660.3	673.2	661.1	652.4
62.5°	581.0	592.9	604.1	592.6	584.4
65°	514.9	525.4	534.6	524.0	515.3
67.5°	449.2	458.1	466.6	455.6	446.5
70°	383.4	391.1	398.9	387.5	379.2
72.5°	318.6	325.3	332.3	321.2	314.0
75°	255.5	261.4	267.1	257.3	251.6
77.5°	195.3	200.2	204.2	197.9	192.4
80°	139.3	143.0	145.3	142.9	137.7
82.5°	89.6	92.2	93.5	93.3	89.9
85°	48.7	49.6	51.9	52.4	50.6
87.5°	18.8	20.1	20.6	22.2	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)