

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: P489577

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-1HI-27-120-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: P489577  
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-27-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

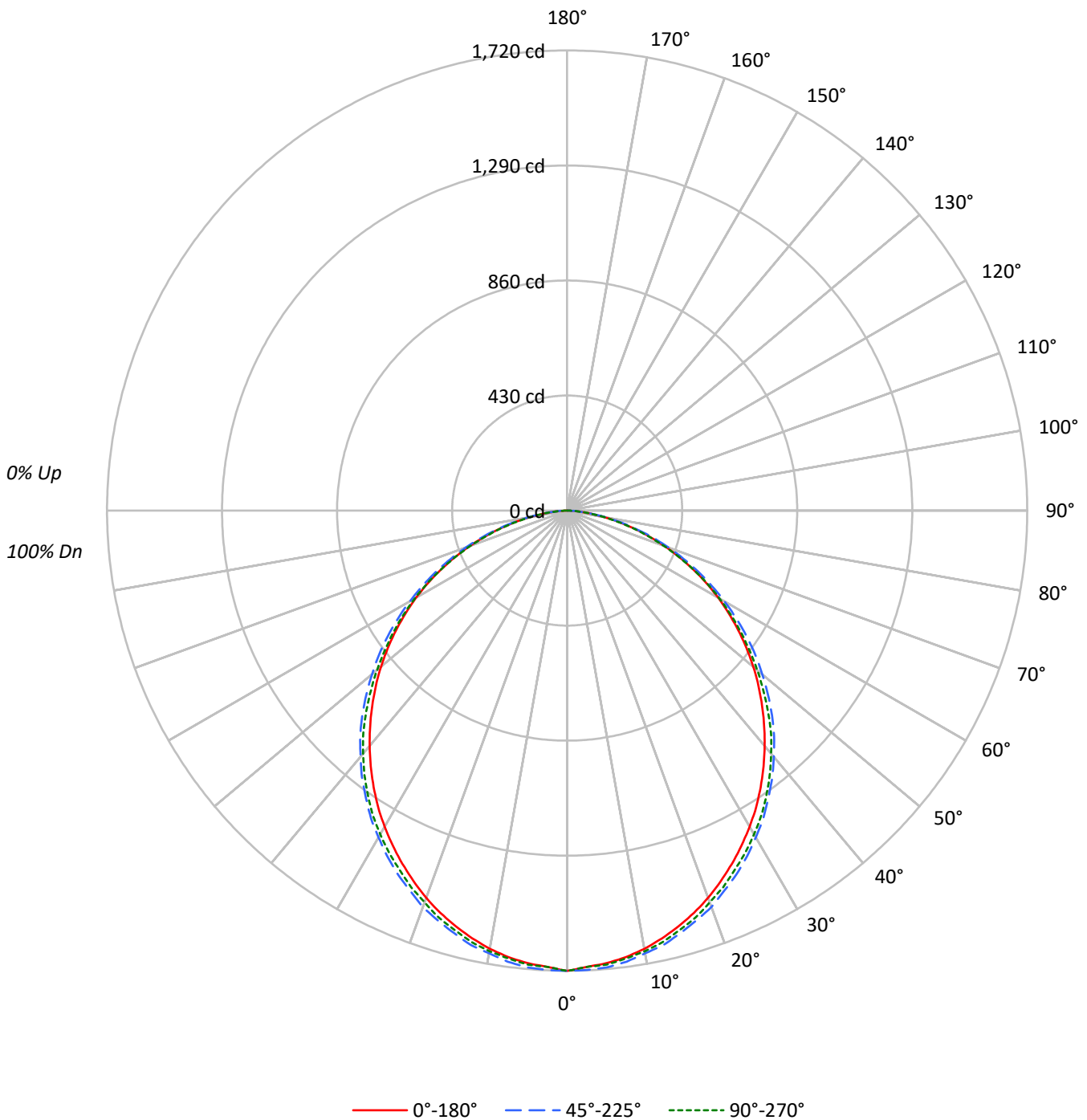
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4523.2 lumens  
Efficiency: N/A  
Efficacy: 104.7 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	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°	2315	2315	2315
5°	2294	2315	2301
10°	2272	2295	2284
15°	2241	2277	2261
20°	2206	2258	2231
25°	2163	2226	2200
30°	2119	2191	2171
35°	2071	2154	2133
40°	2017	2110	2084
45°	1961	2060	2021
50°	1902	1994	1942
55°	1833	1919	1860
60°	1755	1828	1771
65°	1654	1717	1655
70°	1522	1583	1505
75°	1340	1400	1319
80°	1089	1136	1076
85°	758	807	789



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.0	3.6
10°-20°	459.2	10.2
20°-30°	684.8	15.1
30°-40°	811.5	17.9
40°-50°	821.1	18.2
50°-60°	717.1	15.9
60°-70°	524.1	11.6
70°-80°	278.8	6.2
80°-90°	64.4	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°	1306.0	28.9
0°-40°	2117.6	46.8
0°-60°	3655.8	80.8
0°-90°	4523.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4523.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1720	1720	1720	1720	1720	
5°	1698	1701	1714	1718	1703	161
15°	1609	1620	1635	1645	1623	454
25°	1457	1475	1499	1505	1482	671
35°	1261	1281	1311	1320	1299	789
45°	1030	1049	1082	1083	1062	795
55°	781	797	818	806	793	698
65°	520	530	539	529	520	514
75°	258	264	269	260	254	274
85°	49	50	52	53	51	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1720.5	1720.5	1720.5	1720.5	1720.5
2.5°	1707.0	1712.6	1718.3	1720.8	1706.8
5°	1698.1	1701.3	1714.0	1718.0	1703.4
7.5°	1683.4	1688.2	1700.6	1702.4	1688.4
10°	1663.3	1671.9	1680.1	1689.1	1672.1
12.5°	1637.6	1649.3	1663.3	1664.9	1652.0
15°	1608.8	1619.5	1634.8	1644.6	1623.3
17.5°	1576.5	1586.9	1606.6	1608.4	1595.5
20°	1540.5	1553.4	1577.1	1581.2	1558.1
22.5°	1499.6	1517.0	1536.7	1540.7	1523.6
25°	1456.8	1474.7	1499.1	1504.6	1481.9
27.5°	1412.0	1429.2	1456.6	1460.5	1441.4
30°	1363.9	1380.1	1410.2	1416.8	1397.3
32.5°	1315.2	1331.3	1364.6	1370.2	1351.2
35°	1261.0	1280.8	1311.1	1320.2	1298.9
37.5°	1205.8	1225.0	1259.4	1267.7	1244.7
40°	1148.6	1167.6	1201.5	1208.3	1186.3
42.5°	1090.2	1109.2	1145.4	1146.5	1128.2
45°	1030.5	1048.8	1082.5	1083.4	1062.1
47.5°	969.9	988.4	1018.5	1015.1	995.0
50°	908.6	926.2	952.5	945.7	927.6
52.5°	845.2	862.2	887.1	876.0	859.0
55°	781.4	797.1	817.9	806.1	792.8
57.5°	717.0	733.0	748.9	736.9	725.4
60°	652.1	666.1	679.2	667.0	658.2
62.5°	586.2	598.2	609.5	597.8	589.6
65°	519.5	530.0	539.4	528.6	519.8
67.5°	453.2	462.1	470.7	459.6	450.5
70°	386.8	394.5	402.4	390.9	382.5
72.5°	321.4	328.2	335.2	324.1	316.7
75°	257.8	263.7	269.4	259.6	253.8
77.5°	197.0	202.0	206.0	199.7	194.1
80°	140.5	144.3	146.6	144.1	138.9
82.5°	90.3	93.0	94.3	94.1	90.7
85°	49.1	50.0	52.3	52.9	51.1
87.5°	19.0	20.3	20.8	22.4	20.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)