

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: P489624

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2LO-27-120-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: P489624  
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-27-120-EDD-90  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

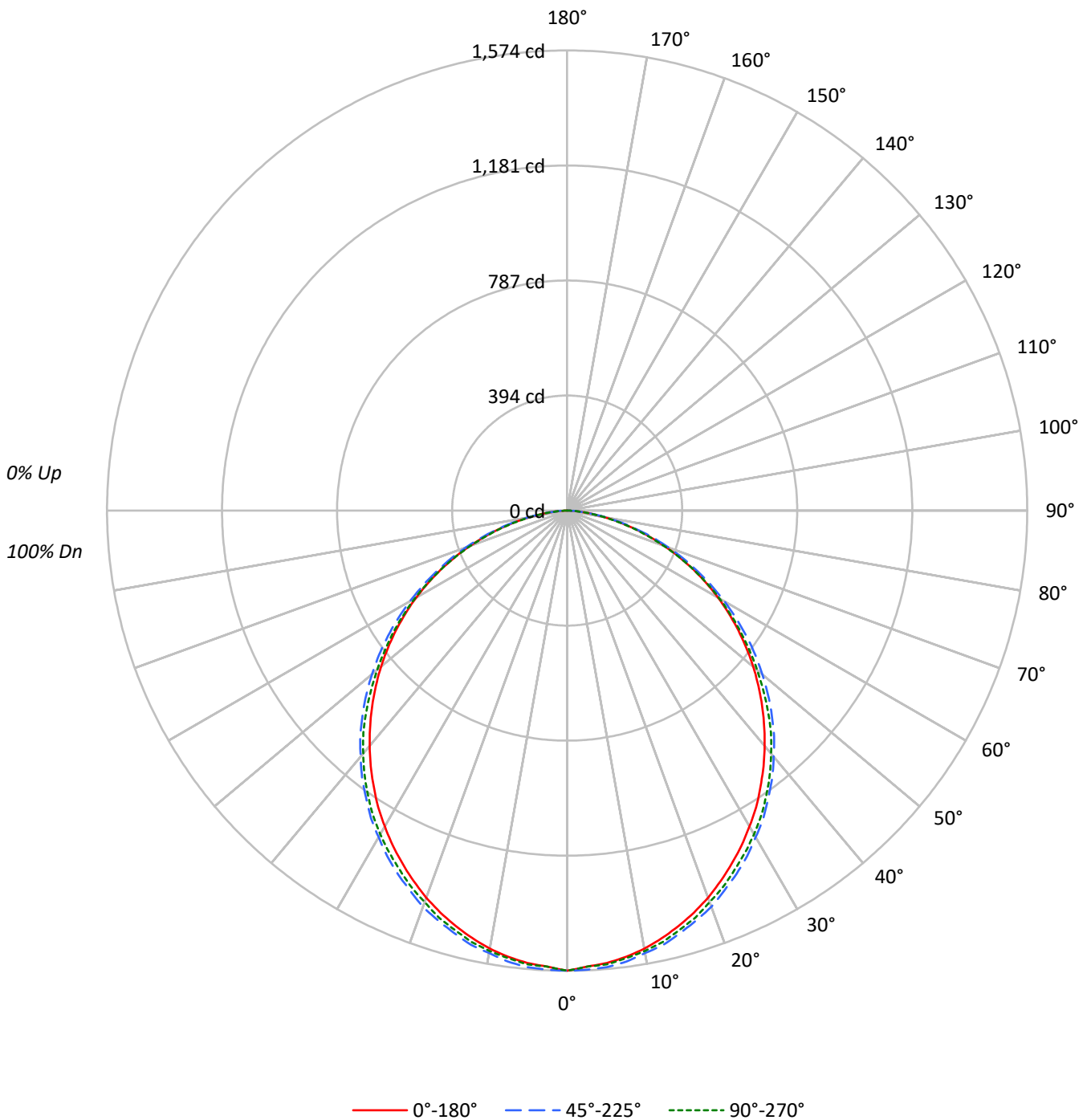
Lumens per Lamp: N/A  
Luminaire Lumens: 4137.6 lumens  
Efficiency: N/A  
Efficacy: 88.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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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### 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°	2118	2118	2118
5°	2098	2118	2105
10°	2079	2100	2090
15°	2050	2083	2068
20°	2018	2066	2041
25°	1978	2036	2013
30°	1938	2004	1986
35°	1895	1970	1952
40°	1845	1930	1906
45°	1794	1884	1849
50°	1740	1824	1776
55°	1677	1755	1701
60°	1605	1672	1620
65°	1513	1571	1514
70°	1392	1448	1376
75°	1226	1281	1207
80°	996	1039	985
85°	693	739	721



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.2	3.6
10°-20°	420.0	10.2
20°-30°	626.4	15.1
30°-40°	742.3	17.9
40°-50°	751.1	18.2
50°-60°	656.0	15.9
60°-70°	479.4	11.6
70°-80°	255.1	6.2
80°-90°	58.9	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°	1194.7	28.9
0°-40°	1937.0	46.8
0°-60°	3344.2	80.8
0°-90°	4137.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4137.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1574	1574	1574	1574	1574	
5°	1553	1556	1568	1572	1558	147
15°	1472	1482	1495	1504	1485	415
25°	1333	1349	1371	1376	1356	614
35°	1154	1172	1199	1208	1188	721
45°	943	959	990	991	972	727
55°	715	729	748	737	725	639
65°	475	485	493	484	476	470
75°	236	241	246	237	232	251
85°	45	46	48	48	47	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1573.8	1573.8	1573.8	1573.8	1573.8
2.5°	1561.5	1566.6	1571.8	1574.1	1561.3
5°	1553.3	1556.3	1567.9	1571.5	1558.2
7.5°	1539.9	1544.3	1555.6	1557.2	1544.4
10°	1521.5	1529.4	1536.9	1545.1	1529.5
12.5°	1498.0	1508.7	1521.5	1523.0	1511.2
15°	1471.6	1481.5	1495.4	1504.4	1484.9
17.5°	1442.1	1451.6	1469.7	1471.3	1459.5
20°	1409.2	1421.0	1442.6	1446.4	1425.2
22.5°	1371.8	1387.7	1405.7	1409.3	1393.8
25°	1332.6	1349.0	1371.3	1376.4	1355.6
27.5°	1291.6	1307.3	1332.4	1336.0	1318.5
30°	1247.7	1262.4	1290.0	1296.0	1278.2
32.5°	1203.1	1217.8	1248.3	1253.4	1236.0
35°	1153.5	1171.6	1199.3	1207.6	1188.1
37.5°	1103.0	1120.6	1152.1	1159.6	1138.6
40°	1050.7	1068.1	1099.1	1105.3	1085.2
42.5°	997.3	1014.7	1047.8	1048.8	1032.0
45°	942.7	959.4	990.2	991.0	971.5
47.5°	887.2	904.1	931.7	928.6	910.2
50°	831.2	847.2	871.3	865.1	848.6
52.5°	773.1	788.7	811.5	801.3	785.8
55°	714.8	729.2	748.2	737.4	725.2
57.5°	655.9	670.5	685.1	674.1	663.6
60°	596.5	609.3	621.3	610.1	602.1
62.5°	536.2	547.2	557.5	546.8	539.3
65°	475.2	484.9	493.4	483.6	475.5
67.5°	414.5	422.7	430.6	420.4	412.1
70°	353.8	360.9	368.1	357.6	349.9
72.5°	294.0	300.2	306.6	296.5	289.7
75°	235.8	241.2	246.4	237.4	232.2
77.5°	180.2	184.8	188.4	182.7	177.6
80°	128.6	132.0	134.1	131.8	127.1
82.5°	82.6	85.1	86.2	86.1	83.0
85°	44.9	45.7	47.9	48.4	46.7
87.5°	17.4	18.5	19.0	20.5	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)