

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: P489632

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2LO-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: P489632
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-50-120-EDD-90
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

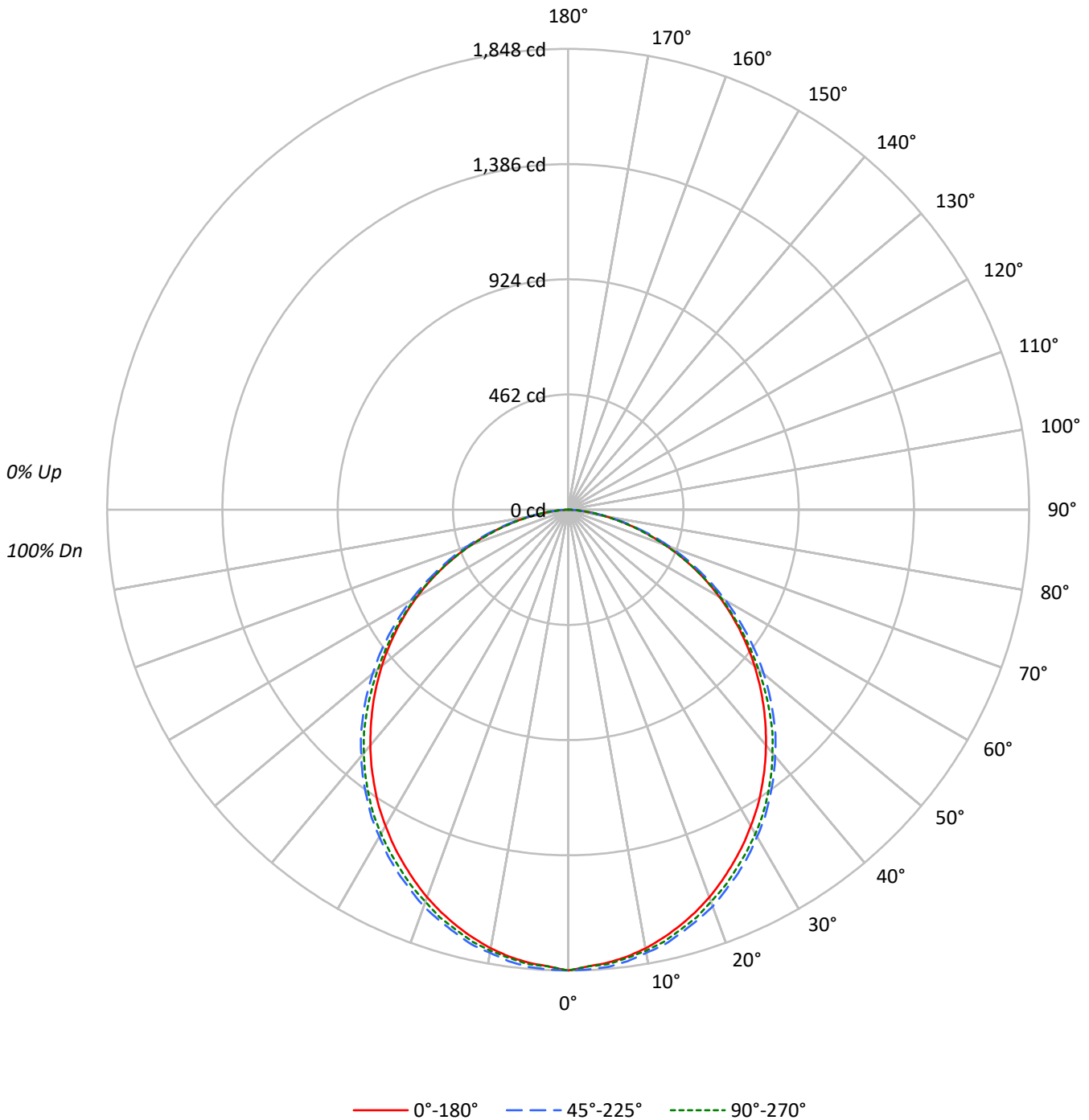
Lumens per Lamp: N/A
Luminaire Lumens: 4857.2 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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-50-120-EDD-90

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°	2486	2486	2486
5°	2463	2486	2471
10°	2440	2465	2453
15°	2406	2445	2428
20°	2369	2425	2396
25°	2322	2390	2362
30°	2275	2353	2331
35°	2224	2313	2291
40°	2167	2266	2237
45°	2106	2212	2170
50°	2042	2141	2085
55°	1968	2060	1997
60°	1884	1963	1902
65°	1776	1844	1777
70°	1634	1700	1616
75°	1439	1504	1417
80°	1169	1220	1156
85°	814	868	848



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.0	3.6
10°-20°	493.1	10.2
20°-30°	735.4	15.1
30°-40°	871.5	17.9
40°-50°	881.8	18.2
50°-60°	770.1	15.9
60°-70°	562.7	11.6
70°-80°	299.4	6.2
80°-90°	69.2	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°	1402.5	28.9
0°-40°	2273.9	46.8
0°-60°	3925.8	80.8
0°-90°	4857.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4857.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1848	1848	1848	1848	1848	
5°	1823	1827	1841	1845	1829	173
15°	1728	1739	1756	1766	1743	487
25°	1564	1584	1610	1616	1591	721
35°	1354	1375	1408	1418	1395	847
45°	1107	1126	1162	1163	1140	854
55°	839	856	878	866	851	750
65°	558	569	579	568	558	552
75°	277	283	289	279	273	294
85°	53	54	56	57	55	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1847.5	1847.5	1847.5	1847.5	1847.5
2.5°	1833.1	1839.0	1845.2	1847.9	1832.9
5°	1823.4	1826.9	1840.6	1844.8	1829.2
7.5°	1807.7	1812.9	1826.1	1828.1	1813.1
10°	1786.1	1795.3	1804.2	1813.8	1795.5
12.5°	1758.6	1771.1	1786.1	1787.8	1774.0
15°	1727.6	1739.1	1755.5	1766.1	1743.2
17.5°	1692.9	1704.1	1725.3	1727.2	1713.3
20°	1654.2	1668.1	1693.5	1697.9	1673.1
22.5°	1610.4	1629.0	1650.2	1654.4	1636.2
25°	1564.4	1583.6	1609.8	1615.7	1591.3
27.5°	1516.2	1534.7	1564.2	1568.4	1547.8
30°	1464.6	1482.0	1514.3	1521.4	1500.4
32.5°	1412.3	1429.6	1465.4	1471.4	1451.0
35°	1354.2	1375.3	1407.9	1417.7	1394.8
37.5°	1294.9	1315.5	1352.4	1361.3	1336.6
40°	1233.5	1253.9	1290.3	1297.6	1273.9
42.5°	1170.7	1191.1	1230.0	1231.2	1211.5
45°	1106.6	1126.3	1162.4	1163.4	1140.5
47.5°	1041.6	1061.4	1093.7	1090.1	1068.5
50°	975.7	994.6	1022.9	1015.6	996.1
52.5°	907.6	925.9	952.6	940.7	922.4
55°	839.1	856.0	878.3	865.6	851.4
57.5°	770.0	787.1	804.2	791.3	779.0
60°	700.3	715.3	729.3	716.3	706.8
62.5°	629.4	642.3	654.5	641.9	633.1
65°	557.8	569.2	579.2	567.6	558.2
67.5°	486.6	496.2	505.5	493.5	483.7
70°	415.4	423.7	432.1	419.8	410.8
72.5°	345.1	352.4	360.0	348.0	340.1
75°	276.8	283.2	289.3	278.7	272.6
77.5°	211.5	216.9	221.2	214.4	208.5
80°	150.9	155.0	157.5	154.8	149.2
82.5°	97.0	99.9	101.2	101.1	97.4
85°	52.7	53.7	56.2	56.8	54.9
87.5°	20.4	21.8	22.3	24.1	22.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)