

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: P489164

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4LO-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: P489164
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-24-2-INS-A19156-LD4-4LO-50-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

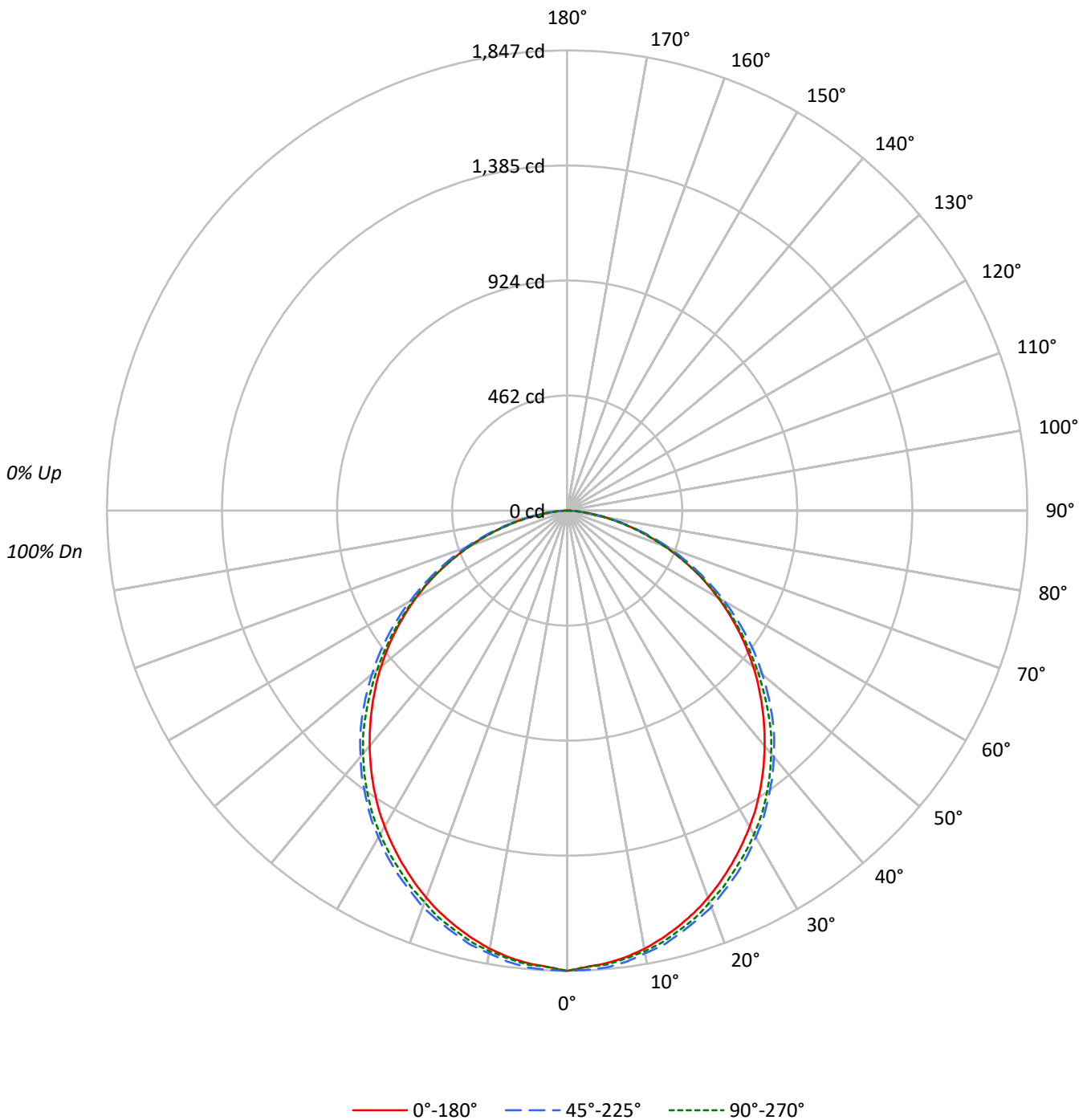
Lumens per Lamp: N/A
Luminaire Lumens: 4857.0 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4971	4971	4971
5°	4925	4972	4941
10°	4880	4930	4906
15°	4813	4890	4856
20°	4737	4849	4791
25°	4645	4779	4725
30°	4551	4705	4662
35°	4448	4625	4582
40°	4333	4532	4475
45°	4211	4424	4340
50°	4085	4282	4170
55°	3936	4121	3994
60°	3768	3925	3804
65°	3552	3688	3554
70°	3268	3400	3232
75°	2878	3008	2834
80°	2338	2439	2312
85°	1627	1735	1695



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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°	871.4	17.9
40°-50°	881.7	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°	1402.4	28.9
0°-40°	2273.8	46.8
0°-60°	3925.6	80.8
0°-90°	4857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1847	1847	1847	1847	1847	
5°	1823	1827	1840	1845	1829	173
15°	1728	1739	1755	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°	1847.4	1847.4	1847.4	1847.4	1847.4
2.5°	1833.0	1839.0	1845.1	1847.8	1832.8
5°	1823.4	1826.8	1840.5	1844.7	1829.1
7.5°	1807.6	1812.8	1826.1	1828.0	1813.0
10°	1786.0	1795.3	1804.1	1813.7	1795.5
12.5°	1758.5	1771.0	1786.0	1787.8	1773.9
15°	1727.5	1739.1	1755.4	1766.0	1743.1
17.5°	1692.9	1704.0	1725.2	1727.1	1713.3
20°	1654.2	1668.0	1693.4	1697.9	1673.0
22.5°	1610.3	1629.0	1650.1	1654.4	1636.1
25°	1564.3	1583.5	1609.7	1615.7	1591.2
27.5°	1516.2	1534.6	1564.1	1568.3	1547.7
30°	1464.6	1481.9	1514.2	1521.4	1500.4
32.5°	1412.2	1429.6	1465.4	1471.3	1450.9
35°	1354.1	1375.3	1407.8	1417.6	1394.7
37.5°	1294.8	1315.4	1352.4	1361.2	1336.6
40°	1233.4	1253.8	1290.2	1297.5	1273.8
42.5°	1170.7	1191.1	1230.0	1231.1	1211.5
45°	1106.6	1126.2	1162.4	1163.4	1140.4
47.5°	1041.5	1061.3	1093.7	1090.0	1068.5
50°	975.7	994.5	1022.8	1015.5	996.1
52.5°	907.5	925.8	952.6	940.7	922.4
55°	839.0	856.0	878.3	865.6	851.3
57.5°	769.9	787.1	804.2	791.3	779.0
60°	700.2	715.3	729.3	716.2	706.8
62.5°	629.4	642.3	654.4	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	359.9	348.0	340.1
75°	276.8	283.1	289.3	278.7	272.6
77.5°	211.5	216.9	221.2	214.4	208.5
80°	150.9	154.9	157.4	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)