

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: P489623

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-2LO-20-120-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: P489623
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-20-120-EDD
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

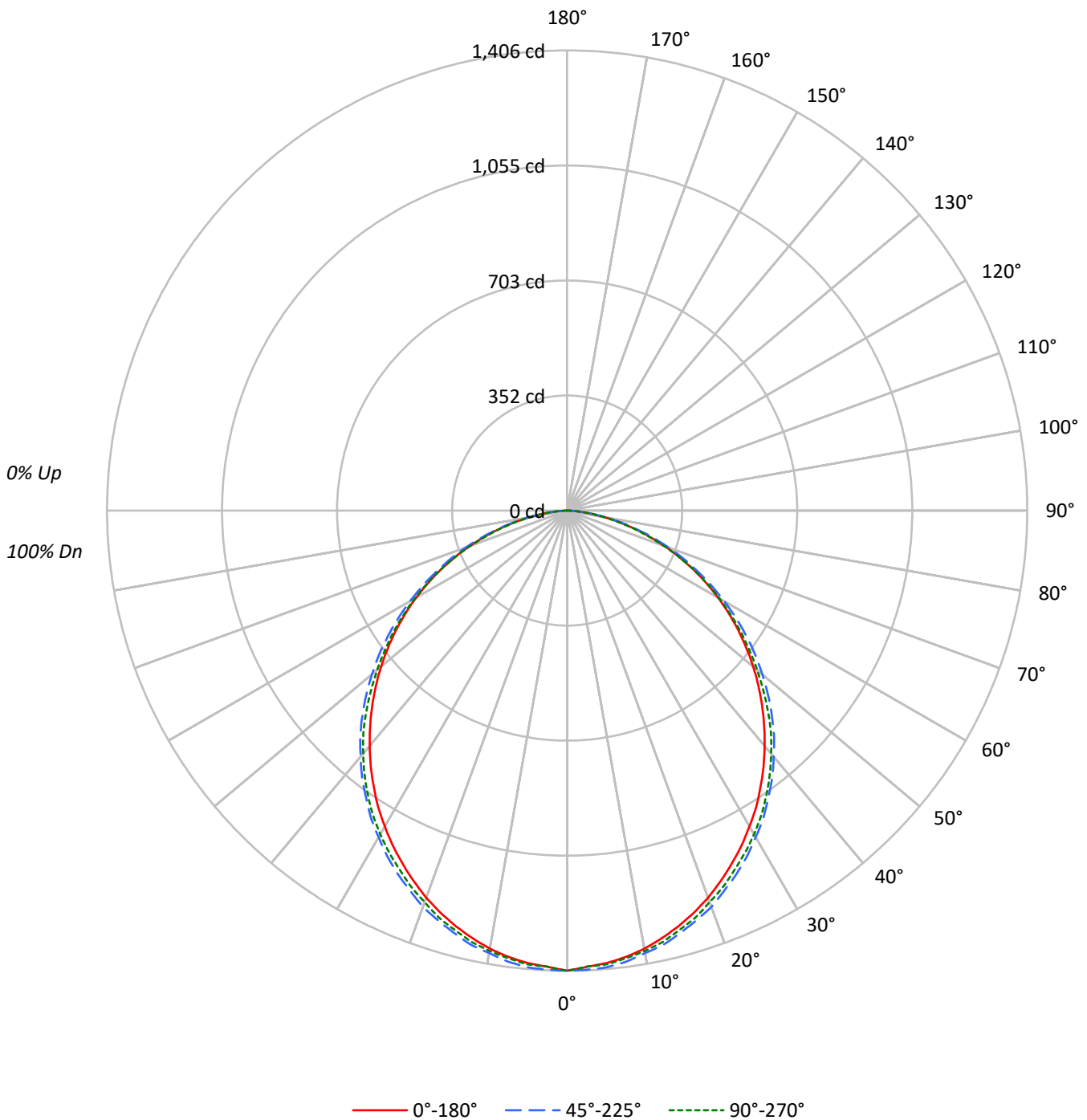
Lumens per Lamp: N/A
Luminaire Lumens: 3696.1 lumens
Efficiency: N/A
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	1892	1892	1892
5°	1874	1892	1880
10°	1857	1876	1867
15°	1831	1861	1848
20°	1802	1845	1823
25°	1767	1819	1798
30°	1732	1790	1774
35°	1693	1760	1743
40°	1649	1724	1703
45°	1602	1683	1651
50°	1554	1629	1587
55°	1498	1568	1520
60°	1434	1493	1447
65°	1351	1403	1352
70°	1244	1293	1230
75°	1095	1145	1078
80°	890	928	879
85°	619	661	644



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.4	3.6
10°-20°	375.2	10.2
20°-30°	559.6	15.1
30°-40°	663.1	17.9
40°-50°	671.0	18.2
50°-60°	586.0	15.9
60°-70°	428.2	11.6
70°-80°	227.9	6.2
80°-90°	52.7	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°	1067.2	28.9
0°-40°	1730.3	46.8
0°-60°	2987.4	80.8
0°-90°	3696.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3696.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1406	1406	1406	1406	1406	
5°	1388	1390	1401	1404	1392	132
15°	1315	1323	1336	1344	1326	371
25°	1190	1205	1225	1230	1211	548
35°	1030	1047	1071	1079	1061	644
45°	842	857	885	885	868	650
55°	638	651	668	659	648	571
65°	424	433	441	432	425	420
75°	211	216	220	212	207	224
85°	40	41	43	43	42	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1405.9	1405.9	1405.9	1405.9	1405.9
2.5°	1394.9	1399.4	1404.1	1406.2	1394.7
5°	1387.6	1390.2	1400.6	1403.8	1391.9
7.5°	1375.5	1379.5	1389.6	1391.1	1379.6
10°	1359.1	1366.2	1372.9	1380.2	1366.3
12.5°	1338.2	1347.7	1359.1	1360.5	1349.9
15°	1314.6	1323.4	1335.8	1343.9	1326.5
17.5°	1288.2	1296.7	1312.9	1314.3	1303.8
20°	1258.8	1269.4	1288.7	1292.1	1273.2
22.5°	1225.4	1239.6	1255.7	1259.0	1245.0
25°	1190.4	1205.0	1225.0	1229.5	1210.9
27.5°	1153.8	1167.8	1190.3	1193.5	1177.8
30°	1114.5	1127.7	1152.3	1157.7	1141.8
32.5°	1074.7	1087.9	1115.1	1119.7	1104.1
35°	1030.5	1046.6	1071.3	1078.8	1061.4
37.5°	985.3	1001.0	1029.1	1035.9	1017.1
40°	938.6	954.1	981.8	987.4	969.4
42.5°	890.9	906.4	936.0	936.9	921.9
45°	842.1	857.0	884.6	885.3	867.9
47.5°	792.6	807.7	832.3	829.5	813.1
50°	742.5	756.8	778.4	772.8	758.0
52.5°	690.6	704.5	724.9	715.8	701.9
55°	638.5	651.4	668.4	658.7	647.9
57.5°	585.9	598.9	612.0	602.2	592.8
60°	532.9	544.3	555.0	545.0	537.9
62.5°	479.0	488.8	498.0	488.5	481.8
65°	424.5	433.1	440.7	432.0	424.8
67.5°	370.3	377.6	384.6	375.6	368.1
70°	316.1	322.4	328.8	319.5	312.6
72.5°	262.6	268.2	273.9	264.8	258.8
75°	210.6	215.5	220.2	212.1	207.4
77.5°	161.0	165.1	168.3	163.2	158.6
80°	114.8	117.9	119.8	117.8	113.5
82.5°	73.8	76.0	77.0	76.9	74.1
85°	40.1	40.9	42.8	43.2	41.7
87.5°	15.5	16.6	17.0	18.3	16.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)