

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: P489158

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4LO-30-120-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: P489158
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-30-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

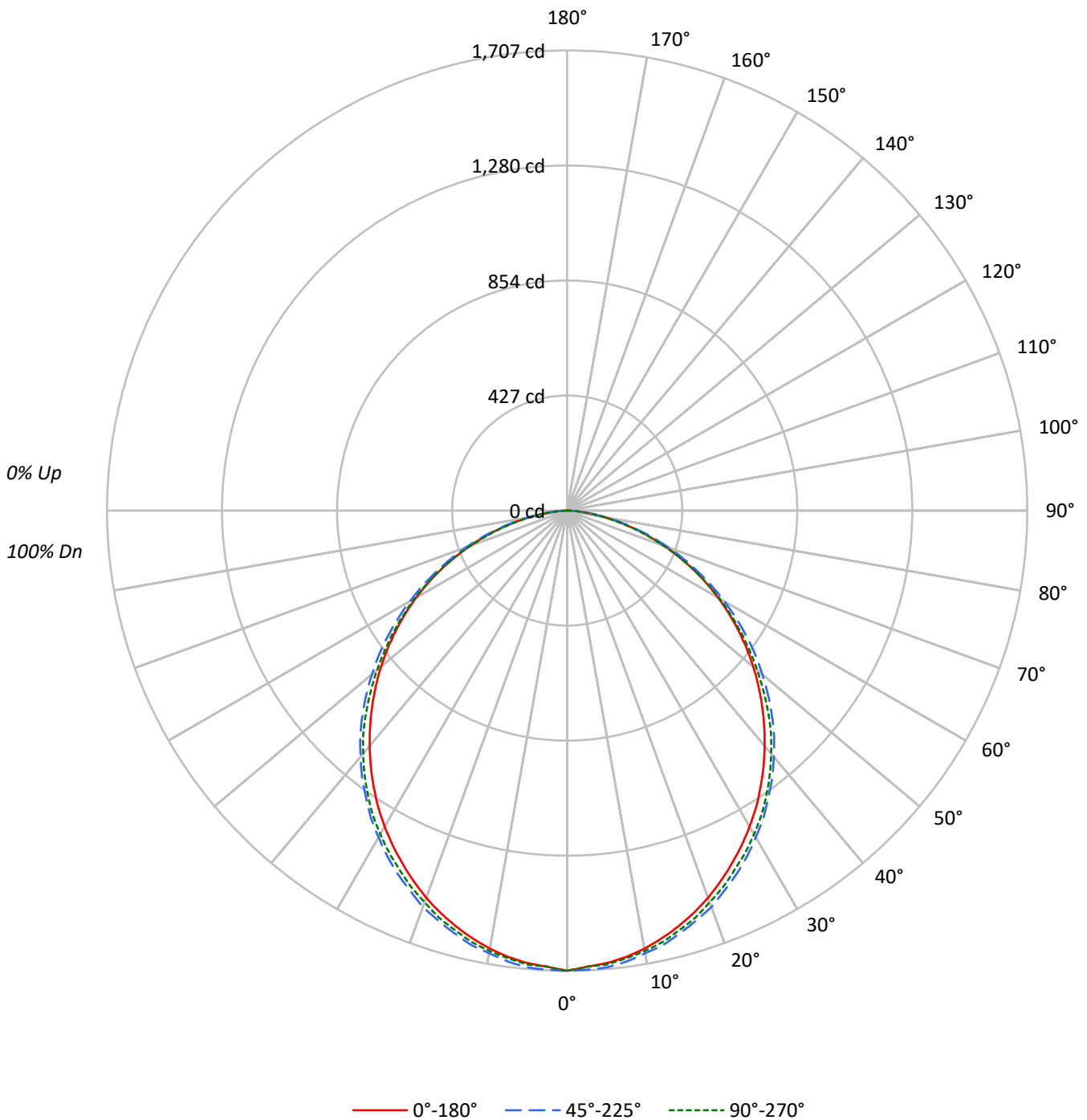
Lumens per Lamp: N/A
Luminaire Lumens: 4488.0 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4594	4594	4594
5°	4551	4594	4566
10°	4509	4555	4533
15°	4447	4519	4487
20°	4377	4481	4427
25°	4292	4416	4366
30°	4205	4348	4308
35°	4110	4273	4234
40°	4004	4188	4135
45°	3891	4088	4010
50°	3774	3957	3853
55°	3637	3808	3691
60°	3482	3627	3515
65°	3282	3408	3284
70°	3020	3142	2986
75°	2660	2779	2618
80°	2160	2255	2135
85°	1504	1602	1565



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.8	3.6
10°-20°	455.6	10.2
20°-30°	679.5	15.1
30°-40°	805.2	17.9
40°-50°	814.8	18.2
50°-60°	711.6	15.9
60°-70°	520.0	11.6
70°-80°	276.7	6.2
80°-90°	63.9	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°	1295.9	28.9
0°-40°	2101.1	46.8
0°-60°	3627.4	80.8
0°-90°	4488.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4488.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1707	1707	1707	1707	1707	
5°	1685	1688	1701	1705	1690	160
15°	1596	1607	1622	1632	1611	450
25°	1445	1463	1487	1493	1470	666
35°	1251	1271	1301	1310	1289	782
45°	1022	1041	1074	1075	1054	789
55°	775	791	812	800	787	693
65°	515	526	535	524	516	510
75°	256	262	267	258	252	272
85°	49	50	52	52	51	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1707.1	1707.1	1707.1	1707.1	1707.1
2.5°	1693.7	1699.2	1704.9	1707.4	1693.6
5°	1684.8	1688.0	1700.7	1704.6	1690.2
7.5°	1670.3	1675.1	1687.3	1689.1	1675.2
10°	1650.3	1658.9	1667.1	1676.0	1659.1
12.5°	1624.9	1636.5	1650.3	1651.9	1639.1
15°	1596.3	1606.9	1622.1	1631.8	1610.7
17.5°	1564.3	1574.6	1594.1	1595.9	1583.1
20°	1528.5	1541.3	1564.8	1568.9	1545.9
22.5°	1488.0	1505.2	1524.8	1528.7	1511.8
25°	1445.4	1463.2	1487.4	1492.9	1470.3
27.5°	1401.0	1418.1	1445.3	1449.2	1430.2
30°	1353.3	1369.3	1399.2	1405.8	1386.4
32.5°	1304.9	1320.9	1354.0	1359.5	1340.7
35°	1251.2	1270.8	1300.8	1309.9	1288.8
37.5°	1196.4	1215.5	1249.6	1257.8	1235.0
40°	1139.7	1158.6	1192.2	1198.9	1177.1
42.5°	1081.7	1100.6	1136.5	1137.6	1119.4
45°	1022.5	1040.6	1074.1	1075.0	1053.8
47.5°	962.4	980.7	1010.6	1007.2	987.3
50°	901.6	919.0	945.1	938.4	920.4
52.5°	838.6	855.5	880.2	869.2	852.3
55°	775.3	790.9	811.6	799.8	786.7
57.5°	711.4	727.3	743.1	731.2	719.8
60°	647.0	660.9	673.9	661.8	653.1
62.5°	581.6	593.5	604.7	593.2	585.0
65°	515.4	525.9	535.2	524.5	515.8
67.5°	449.6	458.5	467.1	456.0	447.0
70°	383.8	391.5	399.3	387.9	379.5
72.5°	318.9	325.7	332.6	321.6	314.3
75°	255.8	261.6	267.3	257.5	251.8
77.5°	195.5	200.4	204.4	198.1	192.6
80°	139.4	143.2	145.5	143.0	137.8
82.5°	89.6	92.3	93.6	93.4	90.0
85°	48.7	49.6	51.9	52.5	50.7
87.5°	18.9	20.1	20.6	22.2	20.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)