

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: P489080

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-2HI-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: P489080
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-LD4-2HI-50-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

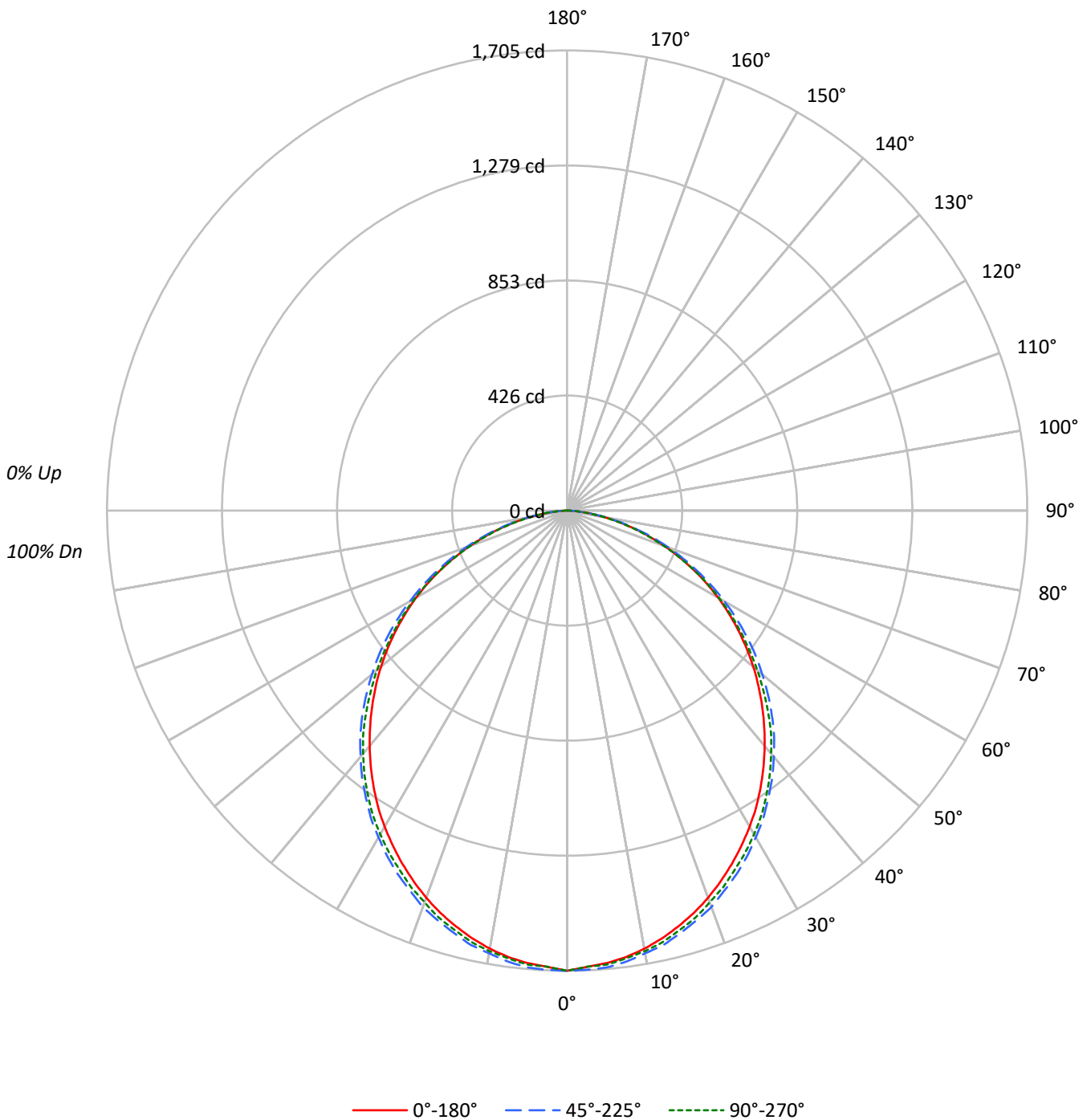
Lumens per Lamp: N/A
Luminaire Lumens: 4483.4 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	4589	4589	4589
5°	4546	4589	4561
10°	4505	4550	4529
15°	4442	4514	4483
20°	4373	4477	4423
25°	4287	4412	4361
30°	4201	4343	4304
35°	4106	4269	4229
40°	3999	4184	4131
45°	3887	4083	4006
50°	3770	3953	3849
55°	3634	3803	3687
60°	3479	3623	3511
65°	3279	3404	3281
70°	3017	3139	2984
75°	2656	2776	2616
80°	2159	2252	2134
85°	1504	1602	1562



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.6	3.6
10°-20°	455.1	10.2
20°-30°	678.8	15.1
30°-40°	804.4	17.9
40°-50°	813.9	18.2
50°-60°	710.8	15.9
60°-70°	519.5	11.6
70°-80°	276.4	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°	1294.5	28.9
0°-40°	2098.9	46.8
0°-60°	3623.7	80.8
0°-90°	4483.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4483.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1705	1705	1705	1705	1705	
5°	1683	1686	1699	1703	1688	160
15°	1595	1605	1620	1630	1609	450
25°	1444	1462	1486	1491	1469	665
35°	1250	1270	1300	1309	1287	782
45°	1022	1040	1073	1074	1053	788
55°	774	790	811	799	786	692
65°	515	525	535	524	515	510
75°	256	261	267	257	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°	1705.3	1705.3	1705.3	1705.3	1705.3
2.5°	1692.0	1697.5	1703.2	1705.7	1691.8
5°	1683.1	1686.3	1698.9	1702.8	1688.4
7.5°	1668.5	1673.3	1685.6	1687.4	1673.5
10°	1648.6	1657.2	1665.3	1674.2	1657.4
12.5°	1623.2	1634.8	1648.6	1650.2	1637.5
15°	1594.6	1605.3	1620.4	1630.2	1609.0
17.5°	1562.7	1573.0	1592.5	1594.3	1581.5
20°	1526.9	1539.7	1563.2	1567.3	1544.4
22.5°	1486.4	1503.7	1523.2	1527.1	1510.2
25°	1444.0	1461.7	1485.9	1491.4	1468.8
27.5°	1399.5	1416.6	1443.8	1447.7	1428.7
30°	1351.9	1367.9	1397.8	1404.3	1385.0
32.5°	1303.6	1319.6	1352.6	1358.1	1339.3
35°	1249.9	1269.5	1299.5	1308.6	1287.4
37.5°	1195.2	1214.2	1248.3	1256.5	1233.8
40°	1138.5	1157.4	1191.0	1197.7	1175.9
42.5°	1080.6	1099.5	1135.3	1136.4	1118.3
45°	1021.5	1039.6	1073.0	1073.9	1052.7
47.5°	961.4	979.7	1009.6	1006.2	986.3
50°	900.6	918.0	944.2	937.4	919.5
52.5°	837.7	854.6	879.3	868.3	851.4
55°	774.5	790.1	810.7	799.0	785.9
57.5°	710.7	726.5	742.3	730.4	719.1
60°	646.4	660.2	673.2	661.1	652.4
62.5°	581.0	592.9	604.1	592.5	584.4
65°	514.9	525.4	534.6	524.0	515.3
67.5°	449.2	458.0	466.6	455.6	446.5
70°	383.4	391.1	398.9	387.5	379.2
72.5°	318.6	325.3	332.3	321.2	314.0
75°	255.5	261.4	267.0	257.3	251.6
77.5°	195.3	200.2	204.1	197.9	192.4
80°	139.3	143.0	145.3	142.9	137.7
82.5°	89.5	92.2	93.5	93.3	89.9
85°	48.7	49.6	51.9	52.4	50.6
87.5°	18.8	20.1	20.6	22.2	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)