

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: P489160

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4LO-35-120-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: P489160
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-35-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

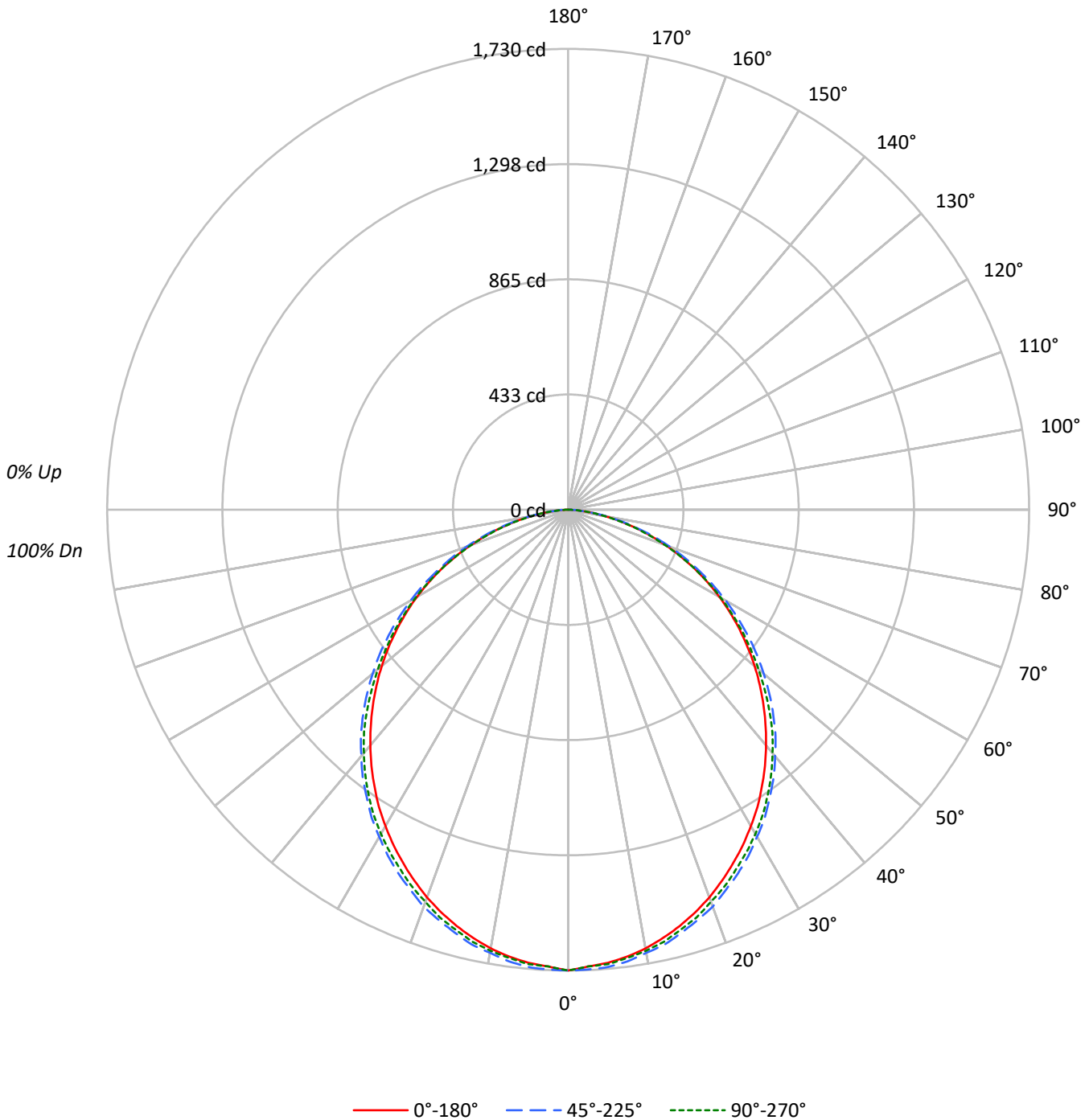
Lumens per Lamp: N/A
Luminaire Lumens: 4547.9 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4655	4655	4655
5°	4612	4655	4626
10°	4570	4616	4594
15°	4506	4579	4547
20°	4436	4541	4486
25°	4349	4475	4424
30°	4261	4406	4365
35°	4165	4330	4290
40°	4057	4244	4190
45°	3943	4142	4064
50°	3825	4009	3905
55°	3686	3858	3740
60°	3529	3675	3562
65°	3326	3453	3328
70°	3060	3183	3026
75°	2695	2817	2653
80°	2190	2284	2165
85°	1525	1624	1587



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.9	3.6
10°-20°	461.7	10.2
20°-30°	688.6	15.1
30°-40°	816.0	17.9
40°-50°	825.6	18.2
50°-60°	721.1	15.9
60°-70°	526.9	11.6
70°-80°	280.4	6.2
80°-90°	64.8	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°	1313.2	28.9
0°-40°	2129.1	46.8
0°-60°	3675.8	80.8
0°-90°	4547.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4547.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1730	1730	1730	1730	1730	
5°	1707	1711	1723	1727	1713	162
15°	1618	1628	1644	1654	1632	456
25°	1465	1483	1507	1513	1490	675
35°	1268	1288	1318	1327	1306	793
45°	1036	1054	1088	1089	1068	799
55°	786	802	822	810	797	702
65°	522	533	542	532	523	517
75°	259	265	271	261	255	276
85°	49	50	53	53	51	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1729.9	1729.9	1729.9	1729.9	1729.9
2.5°	1716.3	1721.9	1727.7	1730.2	1716.2
5°	1707.3	1710.6	1723.4	1727.3	1712.7
7.5°	1692.6	1697.4	1709.9	1711.7	1697.6
10°	1672.4	1681.0	1689.3	1698.3	1681.2
12.5°	1646.6	1658.3	1672.4	1674.0	1661.0
15°	1617.6	1628.4	1643.7	1653.6	1632.2
17.5°	1585.1	1595.6	1615.4	1617.2	1604.2
20°	1548.9	1561.9	1585.7	1589.8	1566.6
22.5°	1507.8	1525.3	1545.1	1549.1	1532.0
25°	1464.7	1482.8	1507.3	1512.9	1490.0
27.5°	1419.7	1437.0	1464.6	1468.5	1449.2
30°	1371.4	1387.6	1417.9	1424.5	1404.9
32.5°	1322.4	1338.6	1372.1	1377.7	1358.6
35°	1267.9	1287.8	1318.2	1327.4	1306.0
37.5°	1212.4	1231.7	1266.3	1274.6	1251.5
40°	1154.9	1174.0	1208.1	1214.9	1192.8
42.5°	1096.2	1115.3	1151.7	1152.8	1134.4
45°	1036.1	1054.5	1088.4	1089.3	1067.9
47.5°	975.2	993.8	1024.1	1020.6	1000.5
50°	913.6	931.3	957.7	950.9	932.7
52.5°	849.8	866.9	892.0	880.8	863.7
55°	785.6	801.5	822.4	810.5	797.2
57.5°	720.9	737.0	753.0	740.9	729.4
60°	655.7	669.7	682.9	670.6	661.8
62.5°	589.4	601.4	612.8	601.1	592.8
65°	522.3	532.9	542.3	531.5	522.7
67.5°	455.6	464.6	473.3	462.1	452.9
70°	388.9	396.7	404.6	393.1	384.6
72.5°	323.2	330.0	337.0	325.9	318.5
75°	259.2	265.1	270.9	261.0	255.2
77.5°	198.1	203.1	207.1	200.8	195.2
80°	141.3	145.1	147.4	144.9	139.7
82.5°	90.8	93.5	94.8	94.6	91.2
85°	49.4	50.3	52.6	53.2	51.4
87.5°	19.1	20.4	20.9	22.5	20.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)