

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: P489157

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4LO-27-120-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: P489157
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-27-120-EDD
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

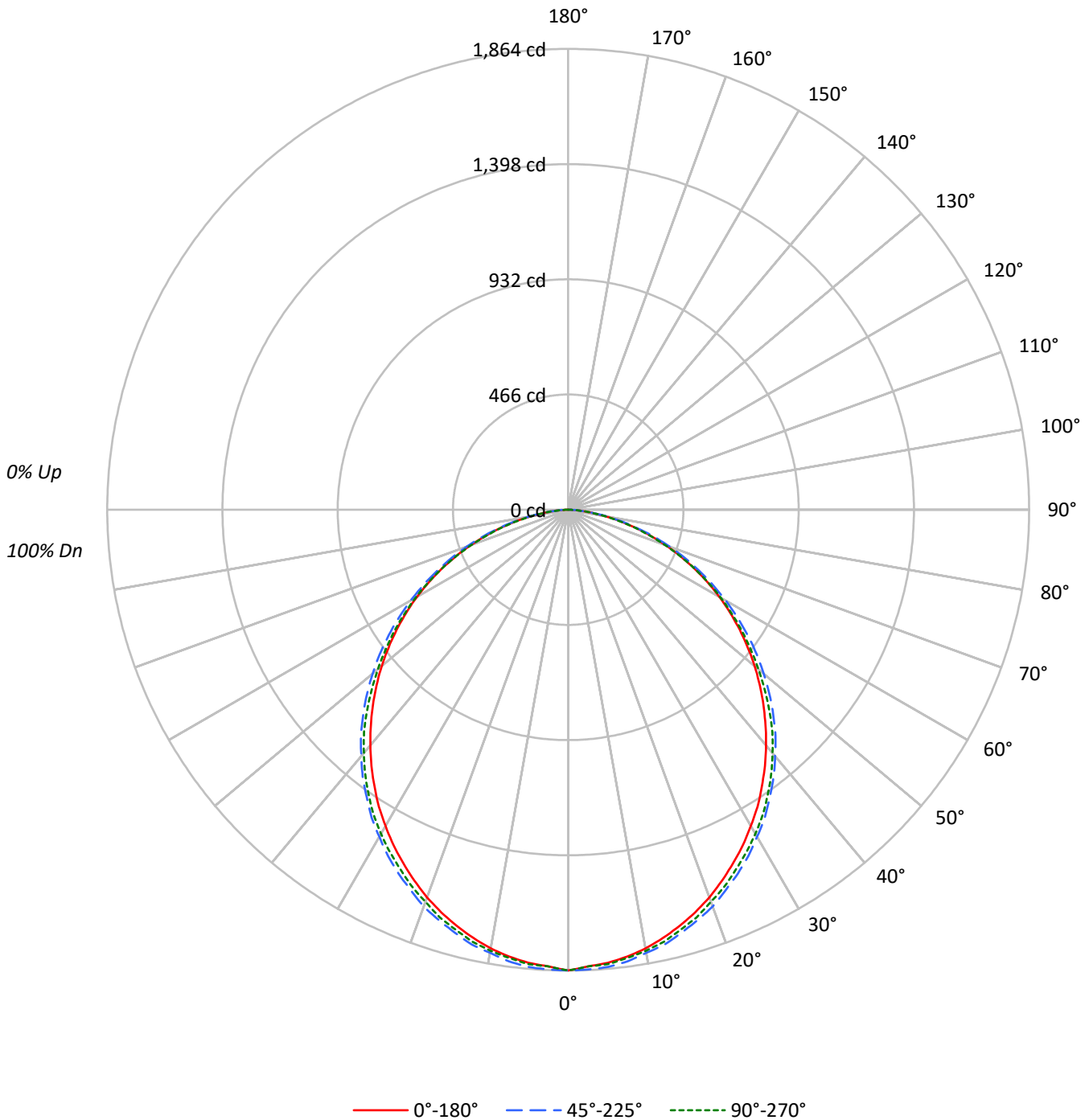
Lumens per Lamp: N/A
Luminaire Lumens: 4899.9 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P489157

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-4LO-27-120-EDD

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	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°	5015	5015	5015
5°	4969	5016	4985
10°	4923	4973	4949
15°	4855	4934	4899
20°	4779	4892	4833
25°	4686	4822	4766
30°	4591	4747	4703
35°	4488	4665	4622
40°	4371	4572	4514
45°	4248	4463	4378
50°	4121	4320	4207
55°	3971	4157	4030
60°	3802	3960	3837
65°	3583	3720	3585
70°	3297	3430	3260
75°	2903	3035	2859
80°	2359	2461	2332
85°	1643	1751	1707



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.5	3.6
10°-20°	497.4	10.2
20°-30°	741.9	15.1
30°-40°	879.1	17.9
40°-50°	889.5	18.2
50°-60°	776.9	15.9
60°-70°	567.7	11.6
70°-80°	302.1	6.2
80°-90°	69.8	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°	1414.8	28.9
0°-40°	2293.9	46.8
0°-60°	3960.3	80.8
0°-90°	4899.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4899.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1864	1864	1864	1864	1864	
5°	1840	1843	1857	1861	1845	174
15°	1743	1754	1771	1782	1758	491
25°	1578	1598	1624	1630	1605	727
35°	1366	1387	1420	1430	1407	854
45°	1116	1136	1173	1174	1150	861
55°	846	864	886	873	859	757
65°	563	574	584	573	563	557
75°	279	286	292	281	275	297
85°	53	54	57	57	55	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1863.7	1863.7	1863.7	1863.7	1863.7
2.5°	1849.2	1855.2	1861.4	1864.1	1849.0
5°	1839.5	1843.0	1856.8	1861.0	1845.3
7.5°	1823.6	1828.8	1842.2	1844.1	1829.0
10°	1801.8	1811.1	1820.1	1829.8	1811.3
12.5°	1774.0	1786.7	1801.8	1803.6	1789.6
15°	1742.8	1754.4	1770.9	1781.6	1758.5
17.5°	1707.8	1719.1	1740.4	1742.4	1728.4
20°	1668.8	1682.8	1708.4	1712.9	1687.8
22.5°	1624.5	1643.4	1664.7	1669.0	1650.5
25°	1578.1	1597.5	1623.9	1630.0	1605.3
27.5°	1529.6	1548.2	1577.9	1582.2	1561.4
30°	1477.5	1495.0	1527.6	1534.8	1513.6
32.5°	1424.7	1442.2	1478.3	1484.3	1463.7
35°	1366.1	1387.4	1420.2	1430.1	1407.0
37.5°	1306.3	1327.0	1364.3	1373.2	1348.4
40°	1244.3	1264.9	1301.6	1309.0	1285.1
42.5°	1181.0	1201.6	1240.8	1242.0	1222.2
45°	1116.3	1136.2	1172.7	1173.6	1150.5
47.5°	1050.7	1070.7	1103.3	1099.6	1077.9
50°	984.3	1003.3	1031.9	1024.5	1004.9
52.5°	915.6	934.0	961.0	949.0	930.5
55°	846.4	863.5	886.0	873.2	858.9
57.5°	776.7	794.0	811.3	798.3	785.8
60°	706.4	721.6	735.8	722.5	713.0
62.5°	635.0	648.0	660.2	647.6	638.7
65°	562.7	574.2	584.3	572.6	563.1
67.5°	490.9	500.6	509.9	497.9	488.0
70°	419.0	427.4	435.9	423.5	414.4
72.5°	348.2	355.5	363.1	351.1	343.1
75°	279.2	285.6	291.9	281.2	275.0
77.5°	213.4	218.8	223.1	216.3	210.3
80°	152.2	156.3	158.8	156.1	150.5
82.5°	97.9	100.8	102.1	101.9	98.3
85°	53.2	54.2	56.7	57.3	55.3
87.5°	20.6	21.9	22.5	24.3	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)