

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: P489142

Luminaire Tested: **CLM-24-2-INS-A19156-LD4-4HI-20-120-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: P489142
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-LD4-4HI-20-120-EDD-90
Description: 2X2 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

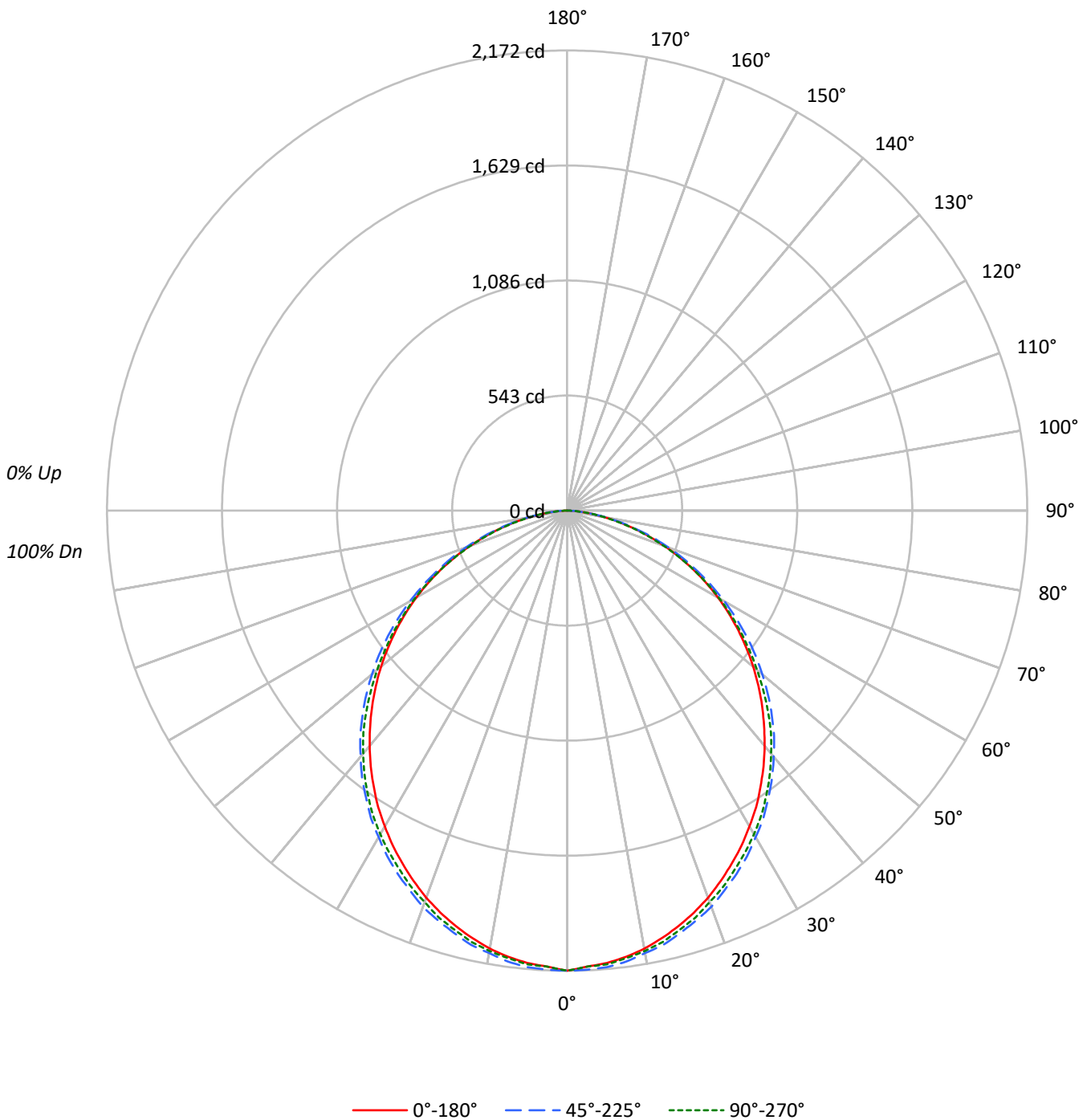
Lumens per Lamp: N/A
Luminaire Lumens: 5709.4 lumens
Efficiency: N/A
Efficacy: 66.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
Input Voltage (V): NR
Input Current (A_{in}): 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: P489142

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-4HI-20-120-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P489142

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-4HI-20-120-EDD-90

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°	5844	5844	5844
5°	5790	5844	5808
10°	5737	5795	5767
15°	5657	5749	5708
20°	5568	5700	5632
25°	5460	5618	5554
30°	5349	5531	5480
35°	5229	5436	5386
40°	5093	5328	5260
45°	4950	5200	5102
50°	4801	5034	4902
55°	4627	4844	4695
60°	4430	4614	4471
65°	4175	4335	4178
70°	3842	3997	3799
75°	3383	3536	3331
80°	2749	2868	2718
85°	1914	2041	1991



TEST NUMBER: P489142

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-4HI-20-120-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	204.5	3.6
10°-20°	579.6	10.2
20°-30°	864.4	15.1
30°-40°	1024.3	17.9
40°-50°	1036.5	18.2
50°-60°	905.2	15.9
60°-70°	661.5	11.6
70°-80°	352.0	6.2
80°-90°	81.3	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°	1648.5	28.9
0°-40°	2672.9	46.8
0°-60°	4614.6	80.8
0°-90°	5709.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5709.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2172	2172	2172	2172	2172	
5°	2143	2147	2164	2168	2150	203
15°	2031	2044	2064	2076	2049	572
25°	1839	1861	1892	1899	1870	847
35°	1592	1617	1655	1666	1640	995
45°	1301	1324	1366	1368	1341	1003
55°	986	1006	1032	1018	1001	882
65°	656	669	681	667	656	649
75°	325	333	340	328	320	346
85°	62	63	66	67	64	79
90°	0	0	0	0	0	



TEST NUMBER: P489142

CATALOG NUMBER: CLM-24-2-INS-A19156-LD4-4HI-20-120-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2171.7	2171.7	2171.7	2171.7	2171.7
2.5°	2154.7	2161.7	2168.9	2172.1	2154.5
5°	2143.4	2147.4	2163.5	2168.5	2150.2
7.5°	2124.8	2130.9	2146.5	2148.8	2131.2
10°	2099.5	2110.3	2120.7	2132.1	2110.6
12.5°	2067.1	2081.8	2099.5	2101.5	2085.2
15°	2030.7	2044.3	2063.5	2075.9	2049.0
17.5°	1990.0	2003.1	2028.0	2030.2	2013.9
20°	1944.5	1960.8	1990.6	1995.8	1966.7
22.5°	1892.9	1914.8	1939.7	1944.7	1923.2
25°	1838.8	1861.4	1892.2	1899.2	1870.5
27.5°	1782.3	1804.0	1838.6	1843.6	1819.4
30°	1721.6	1742.0	1780.0	1788.4	1763.7
32.5°	1660.1	1680.4	1722.5	1729.5	1705.6
35°	1591.7	1616.6	1654.9	1666.4	1639.5
37.5°	1522.1	1546.3	1589.7	1600.1	1571.2
40°	1449.9	1473.9	1516.6	1525.2	1497.4
42.5°	1376.1	1400.1	1445.8	1447.2	1424.1
45°	1300.8	1323.9	1366.4	1367.5	1340.6
47.5°	1224.3	1247.6	1285.6	1281.3	1256.0
50°	1146.9	1169.1	1202.4	1193.8	1170.9
52.5°	1066.8	1088.3	1119.8	1105.7	1084.2
55°	986.3	1006.2	1032.4	1017.5	1000.8
57.5°	905.0	925.2	945.3	930.2	915.7
60°	823.1	840.8	857.3	841.9	830.8
62.5°	739.9	755.0	769.3	754.6	744.2
65°	655.7	669.1	680.8	667.2	656.2
67.5°	572.0	583.3	594.2	580.1	568.6
70°	488.3	498.0	508.0	493.5	482.8
72.5°	405.7	414.3	423.1	409.1	399.8
75°	325.4	332.8	340.1	327.6	320.4
77.5°	248.7	255.0	260.0	252.1	245.0
80°	177.4	182.1	185.1	181.9	175.4
82.5°	114.0	117.4	119.0	118.8	114.5
85°	62.0	63.1	66.1	66.7	64.5
87.5°	24.0	25.6	26.2	28.3	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)