

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: P488697

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2LO-50-120-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: P488697
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-12-4-INS-A19156-LD4-2LO-50-120-EDD
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

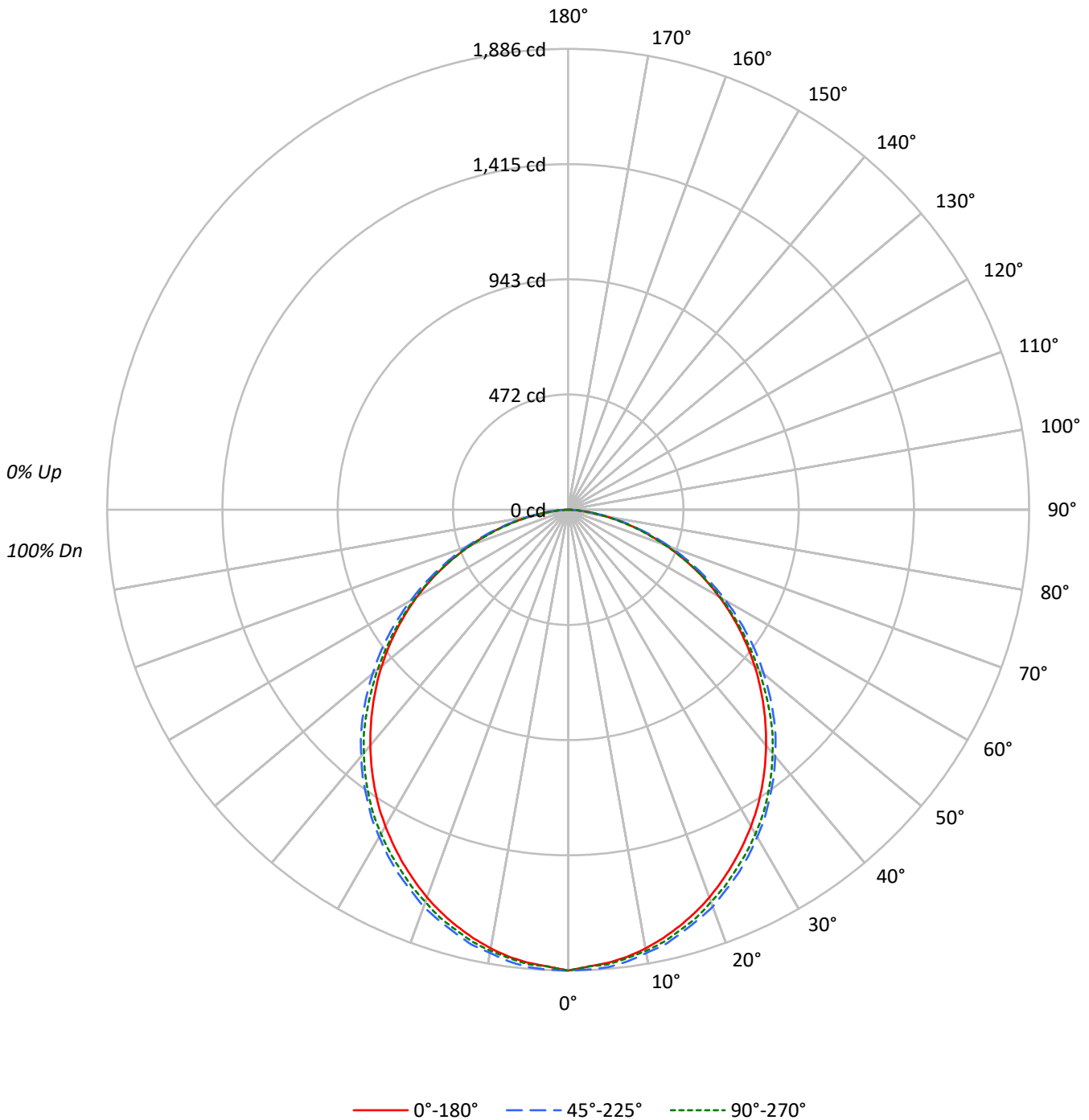
Lumens per Lamp: N/A
Luminaire Lumens: 4959.1 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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: P488697

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-2LO-50-120-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	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°	5076	5076	5076
5°	5029	5076	5045
10°	4983	5033	5009
15°	4914	4993	4958
20°	4837	4951	4892
25°	4742	4880	4824
30°	4647	4804	4760
35°	4542	4722	4678
40°	4424	4627	4569
45°	4300	4517	4431
50°	4171	4372	4258
55°	4019	4207	4078
60°	3848	4007	3884
65°	3626	3765	3629
70°	3337	3471	3300
75°	2938	3071	2894
80°	2388	2492	2360
85°	1661	1772	1729



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.6	3.6
10°-20°	503.4	10.2
20°-30°	750.8	15.1
30°-40°	889.7	17.9
40°-50°	900.3	18.2
50°-60°	786.3	15.9
60°-70°	574.6	11.6
70°-80°	305.7	6.2
80°-90°	70.7	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°	1431.9	28.9
0°-40°	2321.6	46.8
0°-60°	4008.2	80.8
0°-90°	4959.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4959.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1886	1886	1886	1886	1886	
5°	1862	1865	1879	1884	1868	177
15°	1764	1776	1792	1803	1780	497
25°	1597	1617	1644	1650	1625	736
35°	1383	1404	1437	1447	1424	865
45°	1130	1150	1187	1188	1164	872
55°	857	874	897	884	869	766
65°	570	581	591	580	570	564
75°	283	289	295	285	278	300
85°	54	55	57	58	56	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1886.3	1886.3	1886.3	1886.3	1886.3
2.5°	1871.5	1877.6	1883.9	1886.7	1871.3
5°	1861.7	1865.2	1879.2	1883.5	1867.6
7.5°	1845.6	1850.9	1864.5	1866.4	1851.1
10°	1823.6	1833.0	1842.0	1851.9	1833.2
12.5°	1795.5	1808.2	1823.6	1825.3	1811.2
15°	1763.8	1775.6	1792.3	1803.1	1779.7
17.5°	1728.5	1739.9	1761.5	1763.4	1749.3
20°	1689.0	1703.1	1729.0	1733.6	1708.2
22.5°	1644.1	1663.2	1684.8	1689.1	1670.5
25°	1597.2	1616.8	1643.6	1649.6	1624.7
27.5°	1548.0	1566.9	1597.0	1601.3	1580.3
30°	1495.4	1513.1	1546.1	1553.3	1531.9
32.5°	1441.9	1459.6	1496.2	1502.3	1481.4
35°	1382.6	1404.2	1437.4	1447.4	1424.0
37.5°	1322.0	1343.1	1380.8	1389.8	1364.7
40°	1259.3	1280.2	1317.3	1324.8	1300.6
42.5°	1195.3	1216.1	1255.8	1257.0	1236.9
45°	1129.8	1149.9	1186.8	1187.8	1164.4
47.5°	1063.4	1083.6	1116.7	1112.9	1090.9
50°	996.2	1015.5	1044.3	1036.9	1017.0
52.5°	926.6	945.3	972.6	960.4	941.8
55°	856.7	874.0	896.8	883.8	869.2
57.5°	786.1	803.6	821.1	807.9	795.3
60°	715.0	730.3	744.6	731.3	721.6
62.5°	642.6	655.8	668.2	655.4	646.4
65°	569.5	581.1	591.3	579.6	569.9
67.5°	496.8	506.6	516.1	503.9	493.9
70°	424.1	432.6	441.2	428.6	419.4
72.5°	352.4	359.8	367.5	355.3	347.3
75°	282.6	289.1	295.4	284.6	278.3
77.5°	216.0	221.5	225.8	218.9	212.8
80°	154.1	158.2	160.8	158.0	152.3
82.5°	99.0	102.0	103.4	103.2	99.4
85°	53.8	54.8	57.4	58.0	56.0
87.5°	20.8	22.2	22.8	24.6	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)