

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: P488691

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2LO-30-120-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: P488691
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-30-120-EDD
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

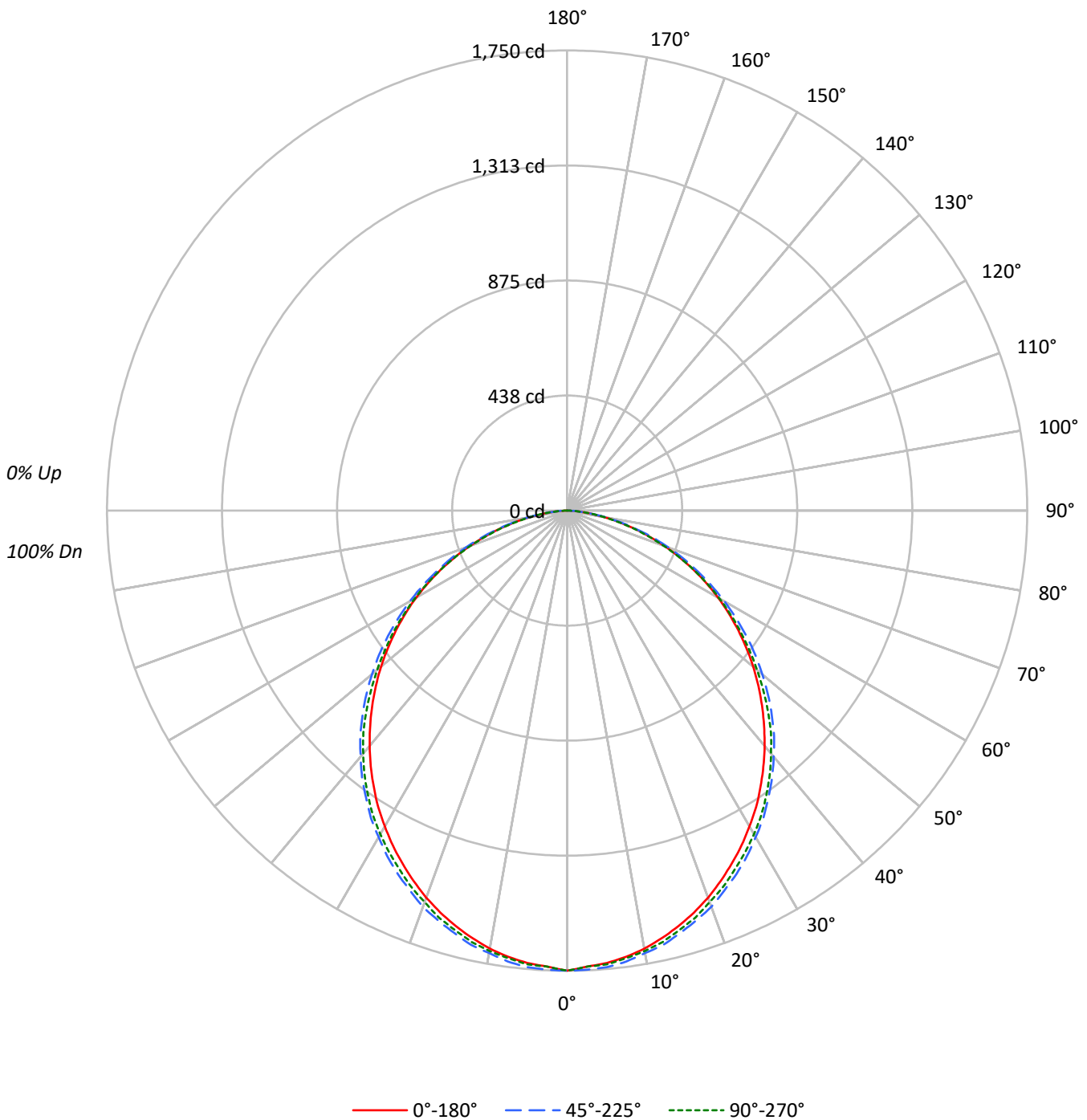
Lumens per Lamp: N/A
Luminaire Lumens: 4600.0 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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: P488691

CATALOG NUMBER: CLM-12-4-INS-A19156-LD4-2LO-30-120-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°	4708	4708	4708
5°	4665	4709	4680
10°	4622	4669	4647
15°	4558	4632	4599
20°	4487	4593	4538
25°	4399	4526	4475
30°	4310	4456	4415
35°	4213	4380	4339
40°	4104	4292	4238
45°	3988	4190	4110
50°	3869	4055	3949
55°	3728	3902	3783
60°	3569	3717	3603
65°	3364	3493	3366
70°	3095	3220	3061
75°	2725	2849	2684
80°	2214	2311	2190
85°	1541	1643	1606



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.8	3.6
10°-20°	467.0	10.2
20°-30°	696.4	15.1
30°-40°	825.3	17.9
40°-50°	835.1	18.2
50°-60°	729.3	15.9
60°-70°	533.0	11.6
70°-80°	283.6	6.2
80°-90°	65.5	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°	1328.2	28.9
0°-40°	2153.5	46.8
0°-60°	3717.9	80.8
0°-90°	4600.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4600.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1750	1750	1750	1750	1750	
5°	1727	1730	1743	1747	1732	164
15°	1636	1647	1662	1673	1651	461
25°	1482	1500	1524	1530	1507	683
35°	1282	1302	1333	1343	1321	802
45°	1048	1067	1101	1102	1080	809
55°	795	811	832	820	806	710
65°	528	539	548	538	529	523
75°	262	268	274	264	258	279
85°	50	51	53	54	52	63
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1749.7	1749.7	1749.7	1749.7	1749.7
2.5°	1736.0	1741.7	1747.5	1750.0	1735.8
5°	1726.9	1730.2	1743.1	1747.1	1732.4
7.5°	1711.9	1716.9	1729.4	1731.3	1717.0
10°	1691.5	1700.3	1708.7	1717.8	1700.5
12.5°	1665.5	1677.3	1691.5	1693.2	1680.0
15°	1636.1	1647.0	1662.5	1672.6	1650.9
17.5°	1603.3	1613.9	1633.9	1635.7	1622.6
20°	1566.7	1579.8	1603.8	1608.0	1584.5
22.5°	1525.1	1542.8	1562.8	1566.8	1549.5
25°	1481.5	1499.7	1524.5	1530.2	1507.0
27.5°	1435.9	1453.4	1481.3	1485.3	1465.8
30°	1387.1	1403.5	1434.1	1440.9	1421.0
32.5°	1337.5	1353.9	1387.8	1393.5	1374.1
35°	1282.5	1302.5	1333.3	1342.6	1320.9
37.5°	1226.3	1245.8	1280.8	1289.2	1265.9
40°	1168.2	1187.5	1221.9	1228.9	1206.4
42.5°	1108.7	1128.0	1164.9	1166.0	1147.4
45°	1048.0	1066.6	1100.9	1101.8	1080.1
47.5°	986.4	1005.2	1035.8	1032.3	1011.9
50°	924.1	941.9	968.7	961.8	943.4
52.5°	859.5	876.8	902.2	890.9	873.6
55°	794.6	810.7	831.8	819.8	806.3
57.5°	729.2	745.4	761.6	749.4	737.8
60°	663.2	677.4	690.7	678.3	669.4
62.5°	596.1	608.3	619.8	608.0	599.6
65°	528.3	539.0	548.5	537.6	528.7
67.5°	460.8	470.0	478.7	467.4	458.1
70°	393.4	401.2	409.3	397.6	389.0
72.5°	326.9	333.8	340.9	329.6	322.1
75°	262.1	268.2	274.0	264.0	258.1
77.5°	200.3	205.4	209.5	203.1	197.4
80°	142.9	146.7	149.1	146.6	141.3
82.5°	91.9	94.6	95.9	95.7	92.2
85°	49.9	50.9	53.2	53.8	52.0
87.5°	19.3	20.6	21.1	22.8	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)