

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: P488690

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-2LO-30-120-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: P488690
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-90
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

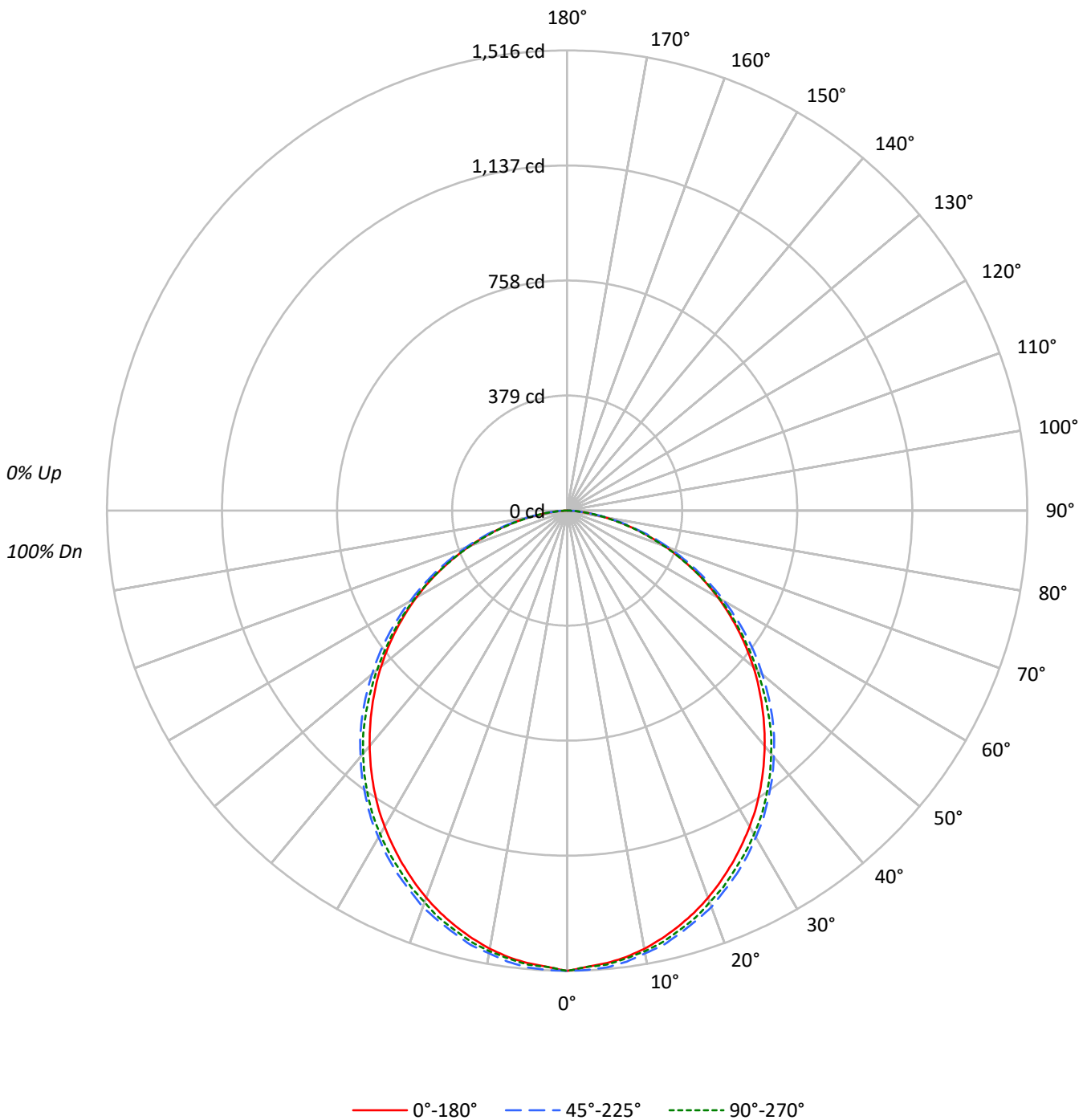
Lumens per Lamp: N/A
Luminaire Lumens: 3986.6 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	4081	4081	4081
5°	4043	4081	4056
10°	4006	4046	4027
15°	3950	4014	3986
20°	3888	3981	3932
25°	3812	3923	3878
30°	3735	3862	3827
35°	3651	3796	3761
40°	3556	3720	3673
45°	3457	3631	3562
50°	3352	3514	3423
55°	3231	3382	3278
60°	3094	3222	3122
65°	2915	3027	2918
70°	2682	2791	2652
75°	2362	2469	2326
80°	1920	2002	1897
85°	1337	1423	1389



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.8	3.6
10°-20°	404.7	10.2
20°-30°	603.6	15.1
30°-40°	715.3	17.9
40°-50°	723.7	18.2
50°-60°	632.1	15.9
60°-70°	461.9	11.6
70°-80°	245.8	6.2
80°-90°	56.8	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°	1151.1	28.9
0°-40°	1866.3	46.8
0°-60°	3222.2	80.8
0°-90°	3986.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3986.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1516	1516	1516	1516	1516	
5°	1497	1500	1511	1514	1501	142
15°	1418	1427	1441	1450	1431	400
25°	1284	1300	1321	1326	1306	592
35°	1111	1129	1156	1164	1145	695
45°	908	924	954	955	936	701
55°	689	703	721	710	699	616
65°	458	467	475	466	458	453
75°	227	232	238	229	224	242
85°	43	44	46	47	45	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1516.4	1516.4	1516.4	1516.4	1516.4
2.5°	1504.5	1509.4	1514.5	1516.7	1504.4
5°	1496.6	1499.5	1510.7	1514.1	1501.4
7.5°	1483.7	1487.9	1498.8	1500.4	1488.1
10°	1466.0	1473.5	1480.8	1488.7	1473.7
12.5°	1443.4	1453.6	1466.0	1467.4	1456.0
15°	1417.9	1427.4	1440.8	1449.5	1430.7
17.5°	1389.5	1398.7	1416.0	1417.6	1406.2
20°	1357.7	1369.1	1390.0	1393.6	1373.2
22.5°	1321.7	1337.0	1354.4	1357.9	1342.9
25°	1284.0	1299.8	1321.2	1326.1	1306.1
27.5°	1244.5	1259.6	1283.8	1287.3	1270.4
30°	1202.1	1216.3	1242.9	1248.7	1231.5
32.5°	1159.2	1173.4	1202.8	1207.7	1190.9
35°	1111.4	1128.8	1155.5	1163.6	1144.8
37.5°	1062.8	1079.7	1110.0	1117.3	1097.1
40°	1012.4	1029.1	1059.0	1065.0	1045.6
42.5°	960.9	977.6	1009.5	1010.5	994.4
45°	908.3	924.4	954.1	954.9	936.1
47.5°	854.9	871.1	897.7	894.7	877.0
50°	800.8	816.3	839.5	833.5	817.6
52.5°	744.9	759.9	781.9	772.1	757.1
55°	688.7	702.6	720.9	710.5	698.8
57.5°	631.9	646.0	660.1	649.5	639.4
60°	574.8	587.1	598.6	587.9	580.1
62.5°	516.6	527.2	537.2	526.9	519.6
65°	457.8	467.2	475.4	465.9	458.2
67.5°	399.4	407.3	414.9	405.1	397.0
70°	340.9	347.7	354.7	344.6	337.1
72.5°	283.3	289.3	295.4	285.6	279.2
75°	227.2	232.4	237.5	228.8	223.7
77.5°	173.6	178.1	181.5	176.0	171.1
80°	123.9	127.2	129.2	127.0	122.4
82.5°	79.6	82.0	83.1	82.9	79.9
85°	43.3	44.1	46.1	46.6	45.0
87.5°	16.7	17.9	18.3	19.7	18.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)