

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: P488723

Luminaire Tested: **CLM-12-4-INS-A19156-LD4-3LO-20-120-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: P488723
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-LD4-3LO-20-120-EDD
Description: 1X4 CLM LED LUMINAIRE WITH A19156 LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

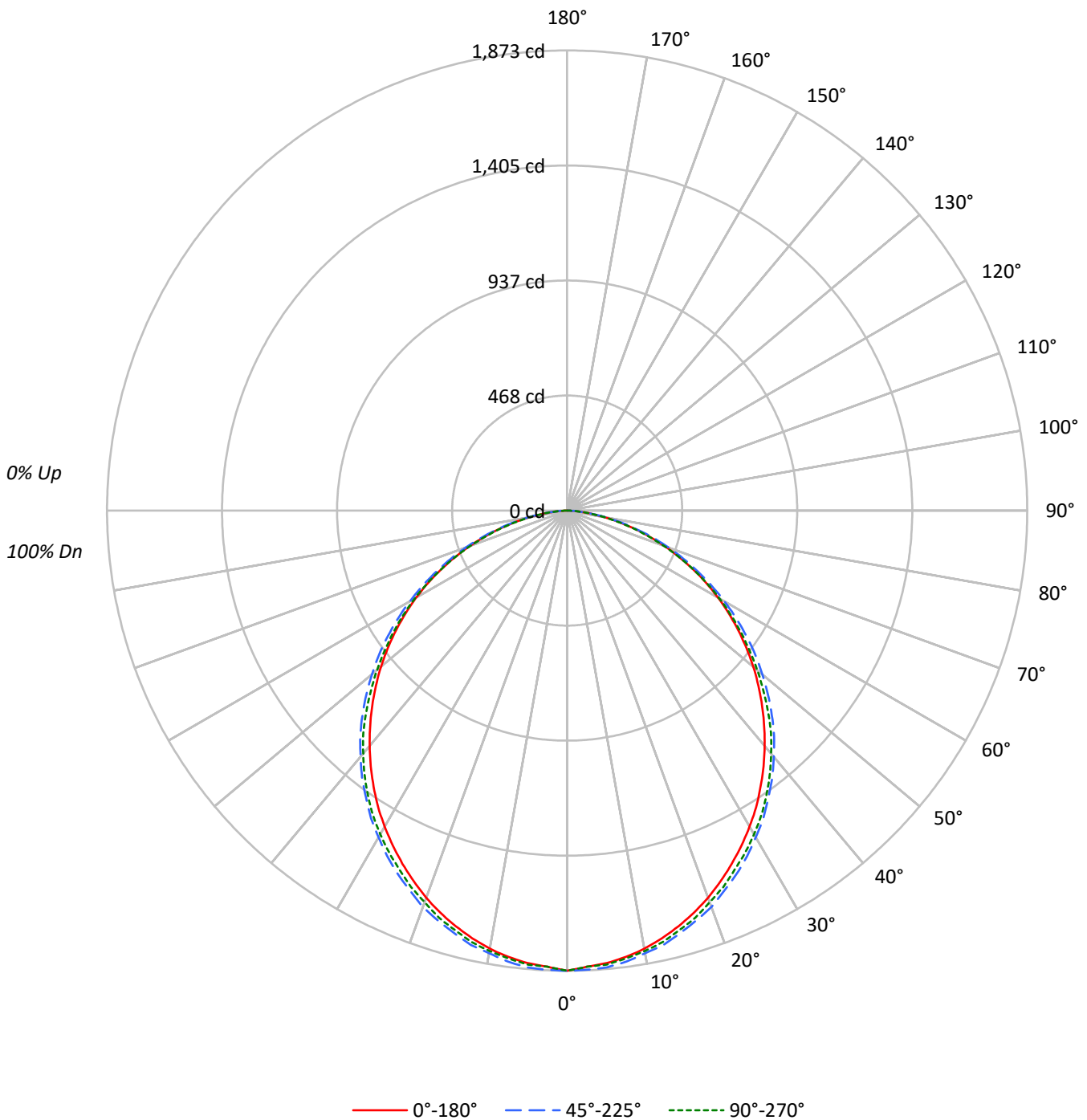
Lumens per Lamp: N/A
Luminaire Lumens: 4924.6 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	5040	5040	5040
5°	4994	5041	5010
10°	4948	4998	4974
15°	4880	4959	4924
20°	4803	4917	4858
25°	4709	4846	4790
30°	4614	4771	4727
35°	4510	4689	4645
40°	4393	4595	4537
45°	4270	4485	4400
50°	4142	4342	4228
55°	3991	4178	4050
60°	3821	3980	3857
65°	3601	3739	3604
70°	3314	3447	3277
75°	2917	3049	2873
80°	2371	2473	2343
85°	1652	1760	1717



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.4	3.6
10°-20°	499.9	10.2
20°-30°	745.6	15.1
30°-40°	883.6	17.9
40°-50°	894.0	18.2
50°-60°	780.8	15.9
60°-70°	570.6	11.6
70°-80°	303.6	6.2
80°-90°	70.2	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°	1421.9	28.9
0°-40°	2305.5	46.8
0°-60°	3980.3	80.8
0°-90°	4924.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4924.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1873	1873	1873	1873	1873	
5°	1849	1852	1866	1870	1855	175
15°	1752	1763	1780	1791	1767	494
25°	1586	1606	1632	1638	1613	731
35°	1373	1394	1427	1437	1414	859
45°	1122	1142	1179	1180	1156	866
55°	851	868	890	878	863	760
65°	566	577	587	576	566	560
75°	281	287	293	283	276	298
85°	54	54	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°	1873.1	1873.1	1873.1	1873.1	1873.1
2.5°	1858.5	1864.6	1870.8	1873.5	1858.3
5°	1848.7	1852.3	1866.1	1870.4	1854.6
7.5°	1832.7	1838.0	1851.5	1853.4	1838.2
10°	1810.9	1820.3	1829.2	1839.0	1820.4
12.5°	1783.0	1795.7	1810.9	1812.6	1798.6
15°	1751.6	1763.3	1779.9	1790.6	1767.4
17.5°	1716.4	1727.7	1749.2	1751.2	1737.1
20°	1677.2	1691.3	1717.0	1721.5	1696.3
22.5°	1632.7	1651.6	1673.1	1677.4	1658.9
25°	1586.1	1605.6	1632.1	1638.2	1613.4
27.5°	1537.3	1556.0	1585.9	1590.2	1569.3
30°	1485.0	1502.5	1535.3	1542.5	1521.3
32.5°	1431.9	1449.5	1485.8	1491.8	1471.1
35°	1372.9	1394.4	1427.4	1437.4	1414.1
37.5°	1312.8	1333.7	1371.2	1380.2	1355.2
40°	1250.6	1271.3	1308.2	1315.6	1291.6
42.5°	1187.0	1207.6	1247.1	1248.2	1228.3
45°	1122.0	1141.9	1178.6	1179.5	1156.3
47.5°	1056.0	1076.1	1108.9	1105.2	1083.3
50°	989.3	1008.4	1037.1	1029.7	1010.0
52.5°	920.2	938.7	965.8	953.7	935.2
55°	850.7	867.9	890.5	877.6	863.2
57.5°	780.6	798.0	815.4	802.3	789.8
60°	710.0	725.2	739.5	726.2	716.6
62.5°	638.2	651.2	663.5	650.9	641.9
65°	565.6	577.1	587.2	575.5	566.0
67.5°	493.4	503.1	512.5	500.4	490.4
70°	421.2	429.5	438.1	425.6	416.5
72.5°	349.9	357.3	364.9	352.8	344.8
75°	280.6	287.1	293.3	282.6	276.3
77.5°	214.5	219.9	224.2	217.4	211.4
80°	153.0	157.1	159.6	156.9	151.2
82.5°	98.4	101.3	102.7	102.5	98.8
85°	53.5	54.4	57.0	57.6	55.6
87.5°	20.7	22.1	22.6	24.4	22.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)