

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P1191544

Luminaire Tested: **LDA4A15930D010TE LAR35FL 4LLWW1**

Issue Date: 3/3/2020

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

**Test Information**

Test Method: LM-41-14
Report Number: P1191544
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26103)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A15930D010TE LAR35FL 4LLWW1
Description: PORTFOLIO 4" Lensed Wall Wash, Self-flanged, 35° Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

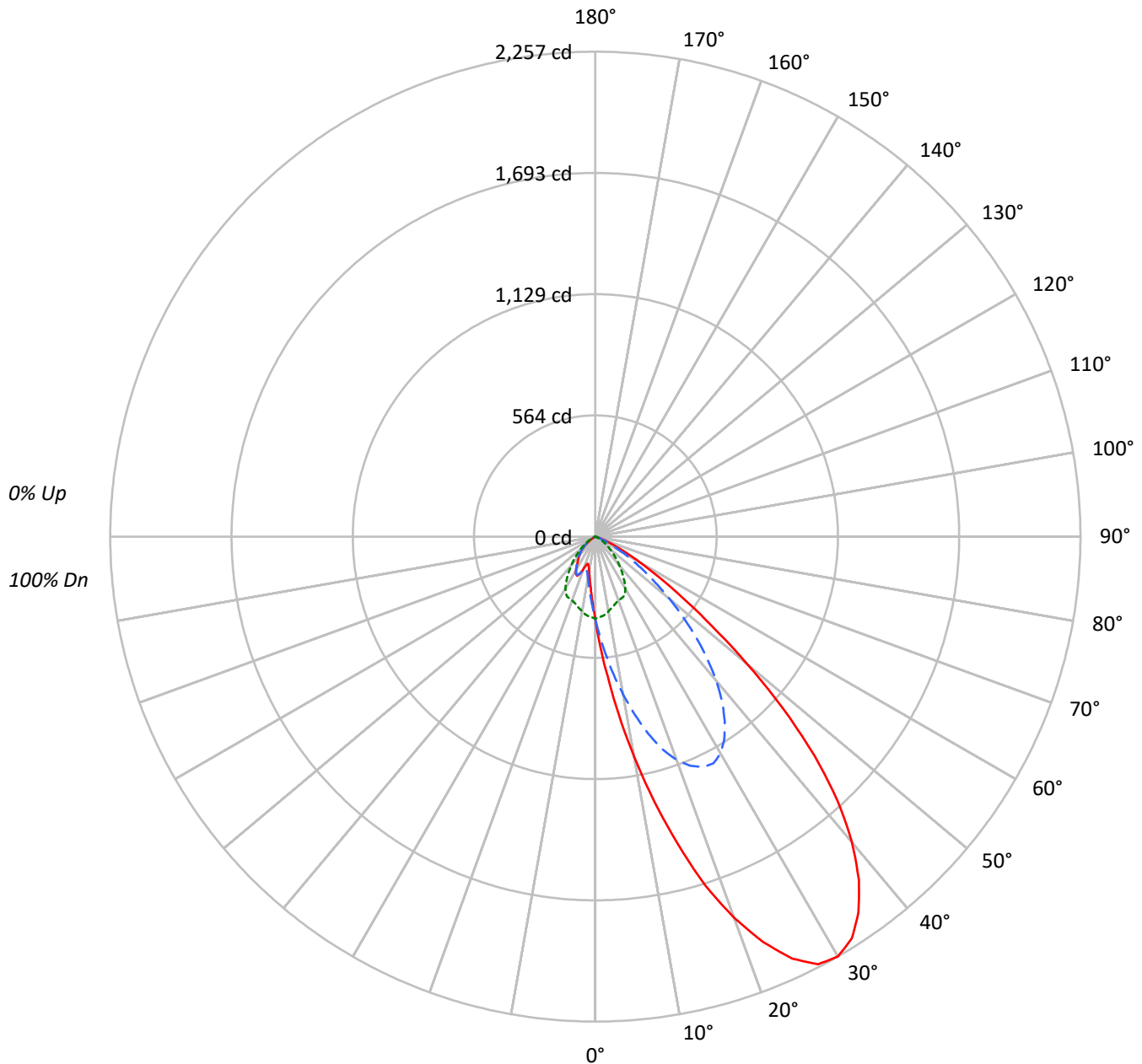
Lumens per Lamp: N/A
Luminaire Lumens: 1432.6 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 2.19 / 1.11 / 1.55
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20.4
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90		
2	104	98	92	88	102	96	91	87	93	89	85	89	86	83	87	84	81	80		
3	97	88	82	76	94	87	81	76	84	79	74	81	77	73	79	75	72	70		
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	67	64	62		
5	83	72	64	59	81	71	64	59	69	63	58	67	62	57	65	61	57	55		
6	77	65	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49		
7	72	60	52	46	70	59	52	46	57	51	46	56	50	46	55	50	45	44		
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39		
9	62	50	43	38	61	50	42	37	49	42	37	47	41	37	47	41	37	35		
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	47180	47180	47180
5°	80518	46023	30050
10°	130158	44200	20528
15°	189093	42434	16703
20°	247638	41505	20818
25°	294922	42054	27424
30°	321401	39680	25523
35°	321452	33865	21578
40°	299168	27969	18758
45°	251277	21892	16101
50°	176368	16330	11859
55°	106147	11763	6537
60°	58565	7499	2418
65°	28223	3648	292
70°	11324	1262	361
75°	3431	858	0
80°	1279	1279	0
85°	3821	2547	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.1	2.9
10°-20°	162.6	11.4
20°-30°	329.7	23.0
30°-40°	400.7	28.0
40°-50°	316.2	22.1
50°-60°	143.2	10.0
60°-70°	33.8	2.4
70°-80°	3.7	0.3
80°-90°	1.6	0.1
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°	533.4	37.2
0°-40°	934.1	65.2
0°-60°	1393.4	97.3
0°-90°	1432.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1432.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	382	382	382	382	382	
5°	650	547	372	272	243	74
15°	1481	949	332	158	131	431
25°	2167	1183	309	197	202	992
35°	2135	1049	225	146	143	1318
45°	1440	662	126	91	92	1090
55°	494	270	55	37	30	466
65°	97	57	12	3	1	109
75°	7	4	2	1	0	11
85°	3	3	2	1	0	2
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	382.5	382.5	382.5	382.5	382.5	382.5	382.5	382.5	382.5	382.5	382.5
2.5°	508.0	495.4	495.4	486.4	493.6	479.3	481.9	481.1	490.0	487.4	479.3
5°	650.3	639.7	638.7	627.1	636.0	617.2	618.1	615.4	625.2	615.4	603.8
7.5°	834.0	815.2	814.4	800.9	809.9	785.6	784.8	779.3	788.3	769.5	752.5
10°	1039.2	1012.2	1010.5	994.4	1004.2	972.8	970.2	961.2	967.5	937.9	913.8
12.5°	1258.6	1229.0	1225.5	1208.5	1217.5	1179.8	1172.6	1161.0	1163.7	1120.6	1088.5
15°	1480.8	1455.7	1452.1	1434.3	1443.1	1396.6	1384.9	1370.6	1368.0	1310.6	1269.4
17.5°	1702.1	1651.0	1667.2	1649.2	1657.2	1602.7	1587.4	1569.5	1559.6	1488.8	1436.9
20°	1886.6	1842.7	1854.4	1838.2	1845.4	1782.7	1763.9	1741.5	1724.5	1639.4	1579.4
22.5°	2042.5	1996.8	1990.5	1990.5	1995.0	1927.0	1901.9	1876.8	1852.6	1751.3	1690.5
25°	2167.0	2116.9	2109.7	2107.9	2108.7	2037.1	2007.6	1979.7	1948.5	1837.4	1771.1
27.5°	2244.0	2191.2	2183.2	2182.2	2177.7	2104.4	2071.2	2040.7	2003.1	1889.3	1815.0
30°	2256.6	2208.3	2199.3	2199.3	2187.7	2116.0	2079.3	2047.0	2004.8	1890.3	1810.5
32.5°	2219.1	2169.7	2159.9	2160.7	2142.0	2074.8	2035.4	2002.2	1958.3	1845.4	1763.1
35°	2134.8	2087.3	2078.3	2079.3	2056.0	1993.2	1952.1	1919.7	1873.2	1765.6	1681.5
37.5°	2013.8	1969.1	1960.1	1961.9	1933.2	1876.8	1834.6	1804.2	1756.8	1657.2	1574.9
40°	1858.0	1815.0	1807.0	1807.8	1776.4	1727.2	1686.0	1657.2	1609.8	1521.1	1442.3
42.5°	1669.0	1627.8	1621.5	1620.5	1590.1	1545.3	1505.0	1480.8	1432.5	1361.7	1286.5
45°	1440.5	1405.5	1377.8	1396.6	1365.3	1329.4	1291.8	1272.1	1226.5	1176.3	1109.0
47.5°	1183.4	1153.0	1125.1	1143.1	1114.4	1087.5	1054.4	1041.8	1000.6	974.7	918.3
50°	919.1	893.2	868.1	883.2	860.9	843.0	817.0	810.7	776.7	773.0	729.3
52.5°	682.6	663.8	644.0	655.8	638.7	627.1	607.4	605.6	579.5	588.5	558.1
55°	493.6	480.1	465.0	473.9	461.3	454.2	439.9	440.7	421.1	434.5	413.0
57.5°	349.4	338.6	327.8	333.3	325.2	319.8	310.0	311.7	307.2	311.7	296.5
60°	237.4	231.1	223.1	227.6	220.4	217.6	211.4	212.3	201.5	215.9	205.1
62.5°	155.9	151.4	151.4	148.8	143.3	141.5	138.0	138.0	131.7	142.5	135.3
65°	96.7	94.9	94.1	92.3	88.6	87.8	85.1	85.1	80.6	88.6	83.3
67.5°	57.3	56.5	55.5	54.7	52.0	51.0	50.2	49.2	46.6	52.0	48.4
70°	31.4	31.4	30.4	29.6	27.8	27.8	26.9	26.9	25.1	27.8	25.1
72.5°	15.3	15.3	14.3	14.3	13.5	13.5	12.5	12.5	11.6	13.5	11.6
75°	7.2	7.2	6.3	6.3	6.3	6.3	5.3	5.3	5.3	6.3	5.3
77.5°	3.5	3.5	3.5	3.5	2.7	2.7	2.7	2.7	2.7	2.7	2.7
80°	1.8	1.8	1.8	1.8	1.8	1.0	1.0	1.0	1.0	1.8	1.8
82.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
85°	2.7	2.7	2.7	2.7	3.5	2.7	3.5	3.5	3.5	3.5	3.5
87.5°	3.5	3.5	3.5	3.5	3.5	4.5	4.5	4.5	3.5	4.5	3.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	382.5	382.5	382.5	382.5	382.5	382.5	382.5	382.5	382.5	382.5	382.5
2.5°	481.9	474.8	477.5	469.4	463.1	460.5	460.5	459.5	417.4	375.4	345.8
5°	602.9	589.5	591.3	577.0	570.7	561.7	559.0	547.4	456.0	371.7	314.5
7.5°	746.2	726.5	714.8	701.5	693.4	677.2	669.1	646.0	491.9	364.6	284.0
10°	900.3	872.6	853.8	832.2	824.2	799.1	783.8	744.4	523.2	352.9	255.3
12.5°	1066.9	1029.3	995.3	972.0	962.2	913.8	904.0	847.5	551.9	342.3	232.0
15°	1238.0	1190.6	1147.5	1114.4	1101.8	1054.4	1024.0	948.7	577.0	332.3	214.1
17.5°	1390.4	1339.2	1287.3	1244.3	1226.5	1159.2	1130.6	1037.3	595.8	322.5	204.3
20°	1525.6	1463.7	1409.2	1350.0	1329.4	1253.3	1206.7	1106.3	606.5	316.2	205.1
22.5°	1628.6	1557.8	1495.1	1428.8	1402.9	1319.6	1266.7	1153.8	610.1	311.7	211.4
25°	1703.9	1625.0	1555.2	1482.5	1452.1	1363.5	1305.3	1183.4	609.1	309.0	214.1
27.5°	1742.5	1658.2	1582.9	1505.0	1471.9	1380.5	1317.8	1189.6	596.6	298.4	214.1
30°	1737.0	1648.4	1569.5	1488.8	1453.1	1362.5	1298.0	1165.5	569.7	278.6	198.8
32.5°	1689.5	1599.0	1518.4	1437.8	1402.0	1313.3	1248.8	1116.3	531.3	252.7	178.2
35°	1610.7	1521.1	1441.4	1362.5	1326.7	1240.8	1178.0	1049.0	487.4	224.9	159.4
37.5°	1507.6	1420.8	1343.7	1272.1	1230.8	1150.2	1089.3	969.3	439.0	199.8	143.3
40°	1379.6	1297.2	1224.5	1158.3	1114.4	1040.0	984.5	875.2	388.0	173.7	128.0
42.5°	1231.8	1154.7	1095.5	1029.3	980.0	914.6	866.3	771.3	336.0	150.5	112.0
45°	1064.2	996.1	945.1	886.9	835.8	780.3	739.1	662.0	283.1	125.5	96.7
47.5°	884.2	827.7	788.3	739.9	689.7	645.0	612.7	550.9	232.9	104.9	82.4
50°	706.8	662.0	633.4	596.6	550.9	517.0	491.9	450.5	184.5	85.1	69.0
52.5°	543.8	511.5	491.9	465.0	424.6	401.3	383.5	354.7	140.6	69.0	55.5
55°	405.8	382.5	370.0	351.1	316.2	300.1	288.4	270.5	104.9	54.7	43.0
57.5°	292.9	277.8	269.6	257.0	228.4	218.6	210.5	199.8	76.1	42.1	31.4
60°	204.3	193.5	189.0	181.0	157.6	151.4	140.6	140.6	53.7	30.4	21.5
62.5°	135.3	128.0	126.3	120.0	102.1	98.6	95.9	94.1	36.7	20.6	12.5
65°	84.3	78.8	78.0	74.3	61.8	60.0	57.3	57.3	23.3	12.5	6.3
67.5°	48.4	45.7	44.7	43.0	34.1	33.1	31.4	33.1	13.5	6.3	2.7
70°	26.0	23.3	23.3	22.4	17.0	16.1	15.3	16.1	7.2	3.5	1.8
72.5°	12.5	10.8	10.8	9.8	7.2	7.2	6.3	8.0	3.5	1.8	1.8
75°	5.3	5.3	4.5	4.5	2.7	2.7	2.7	3.5	1.8	1.8	1.8
77.5°	2.7	2.7	2.7	2.7	1.0	1.0	1.0	1.8	1.8	1.8	1.8
80°	1.8	1.8	1.8	1.8	0.0	0.0	0.0	1.8	1.8	1.8	1.8
82.5°	1.8	1.0	1.0	1.0	0.0	0.0	0.0	1.0	1.8	1.8	1.8
85°	2.7	2.7	2.7	2.7	1.8	1.8	1.8	2.7	1.8	1.8	1.8
87.5°	3.5	3.5	3.5	3.5	2.7	2.7	2.7	4.5	2.7	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	382.5	382.5	382.5
2.5°	320.7	301.9	303.7
5°	272.3	245.5	242.7
7.5°	230.2	201.5	198.0
10°	197.0	168.4	163.9
12.5°	172.9	146.9	142.5
15°	157.6	134.3	130.8
17.5°	155.0	137.0	135.3
20°	165.7	156.8	158.6
22.5°	184.5	181.9	186.3
25°	197.0	196.2	201.5
27.5°	194.5	192.5	196.2
30°	180.0	177.4	179.2
32.5°	163.1	158.6	160.4
35°	146.0	142.5	143.3
37.5°	131.7	129.0	129.0
40°	119.2	116.5	116.5
42.5°	105.7	103.9	104.9
45°	91.4	90.5	92.3
47.5°	77.0	76.1	78.0
50°	63.5	61.8	61.8
52.5°	50.2	47.5	45.7
55°	36.7	32.2	30.4
57.5°	25.1	20.6	18.8
60°	14.3	11.6	9.8
62.5°	7.2	4.5	3.5
65°	2.7	1.8	1.0
67.5°	1.8	1.0	1.0
70°	1.8	1.0	1.0
72.5°	1.0	1.0	1.0
75°	1.0	1.0	0.0
77.5°	1.0	1.0	1.0
80°	1.0	1.0	0.0
82.5°	1.0	1.0	0.0
85°	1.0	1.0	0.0
87.5°	1.0	1.0	0.0
90°	0.0	0.0	0.0

Classified

Scaled Data Report

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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)