

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: P1191652

Luminaire Tested: **LDA4A20935D010TE 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: P1191652
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: LDA4A20935D010TE LAR35FL 4LLWW1
Description: PORTFOLIO 4" Lensed Wall Wash, Self-flanged, 35° Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

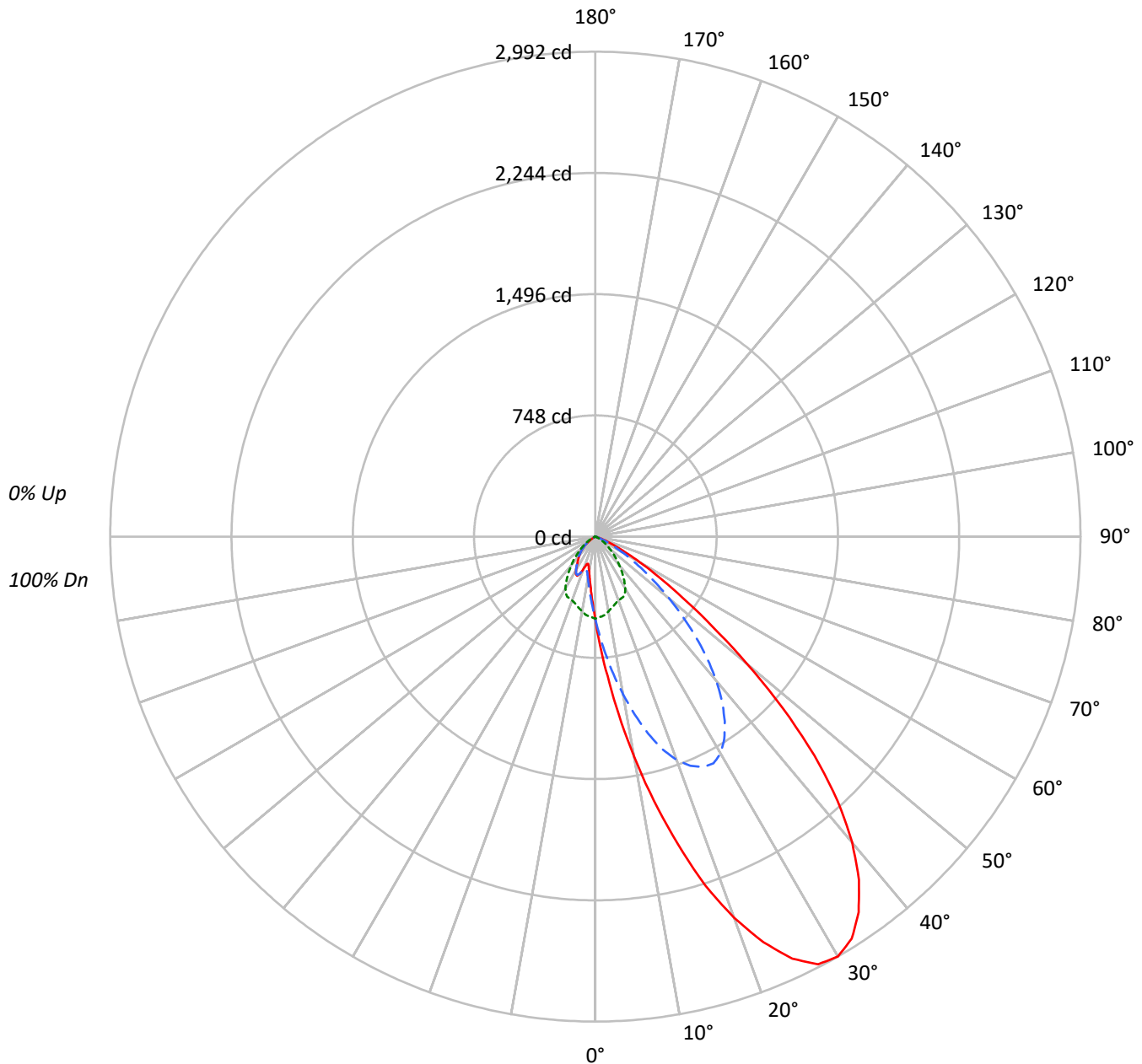
Lumens per Lamp: N/A
Luminaire Lumens: 1899.1 lumens
Efficiency: N/A
Efficacy: 65.9 lumens/watt
Spacing Criteria (0/90/45): 2.19 / 1.11 / 1.55
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 28.8
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
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	75	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	66	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°	62549	62549	62549
5°	106767	61029	39857
10°	172542	58616	27216
15°	250694	56263	22130
20°	328299	55025	27591
25°	390979	55772	36365
30°	426071	52613	33826
35°	426149	44887	28610
40°	396615	37098	24861
45°	333140	28991	21351
50°	233820	21645	15735
55°	140705	15569	8688
60°	77609	9966	3207
65°	37446	4874	350
70°	15003	1731	433
75°	4575	1096	0
80°	1634	1634	0
85°	5095	3255	0

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Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	2.9
10°-20°	215.6	11.4
20°-30°	437.1	23.0
30°-40°	531.2	28.0
40°-50°	419.1	22.1
50°-60°	189.9	10.0
60°-70°	44.8	2.4
70°-80°	4.8	0.3
80°-90°	2.1	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°	707.1	37.2
0°-40°	1238.3	65.2
0°-60°	1847.3	97.3
0°-90°	1899.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1899.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	507	507	507	507	507	
5°	862	726	493	361	322	98
15°	1963	1258	441	209	173	571
25°	2873	1569	410	261	267	1315
35°	2830	1391	298	194	190	1748
45°	1910	878	166	121	122	1445
55°	654	359	72	49	40	618
65°	128	76	17	4	1	144
75°	10	5	2	1	0	15
85°	4	4	2	1	0	3
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°	507.1	507.1	507.1	507.1	507.1	507.1	507.1	507.1	507.1	507.1	507.1
2.5°	673.3	656.8	656.8	644.9	654.3	635.4	639.0	637.7	649.6	646.1	635.4
5°	862.3	847.9	846.8	831.3	843.2	818.3	819.4	815.9	829.0	815.9	800.4
7.5°	1105.7	1080.8	1079.5	1061.7	1073.5	1041.5	1040.4	1033.3	1045.2	1020.1	997.7
10°	1377.6	1342.0	1339.7	1318.3	1331.3	1289.7	1286.2	1274.4	1282.6	1243.4	1211.4
12.5°	1668.7	1629.4	1624.6	1602.1	1613.9	1564.1	1554.6	1539.2	1542.7	1485.6	1442.9
15°	1963.2	1929.9	1925.1	1901.4	1913.2	1851.5	1836.1	1817.1	1813.5	1737.4	1682.9
17.5°	2256.4	2188.8	2210.2	2186.5	2197.0	2124.6	2104.5	2080.8	2067.6	1973.8	1905.0
20°	2501.1	2442.9	2458.4	2437.0	2446.5	2363.4	2338.4	2308.7	2286.2	2173.3	2093.8
22.5°	2707.7	2647.2	2638.8	2638.8	2644.8	2554.5	2521.2	2488.1	2455.9	2321.9	2241.1
25°	2872.8	2806.3	2796.8	2794.5	2795.6	2700.6	2661.4	2624.6	2583.1	2435.8	2347.9
27.5°	2975.0	2905.0	2894.2	2893.1	2887.1	2789.7	2745.8	2705.4	2655.5	2504.7	2406.1
30°	2991.5	2927.5	2915.7	2915.7	2900.2	2805.2	2756.4	2713.7	2657.9	2505.9	2400.2
32.5°	2941.7	2876.4	2863.4	2864.6	2839.7	2750.5	2698.3	2654.3	2596.1	2446.5	2337.2
35°	2830.1	2767.1	2755.2	2756.4	2725.6	2642.4	2587.8	2545.1	2483.3	2340.8	2229.2
37.5°	2669.8	2610.4	2598.6	2600.9	2562.9	2488.1	2432.2	2391.8	2328.9	2197.0	2087.9
40°	2463.2	2406.1	2395.4	2396.6	2355.0	2289.7	2235.1	2197.0	2134.2	2016.6	1912.1
42.5°	2212.5	2157.9	2149.5	2148.4	2108.0	2048.6	1995.2	1963.2	1899.0	1805.2	1705.4
45°	1909.8	1863.4	1826.5	1851.5	1810.0	1762.5	1712.5	1686.5	1625.8	1559.3	1470.3
47.5°	1568.9	1528.5	1491.7	1515.5	1477.4	1441.8	1397.9	1381.2	1326.5	1292.2	1217.3
50°	1218.5	1184.0	1150.9	1171.0	1141.3	1117.6	1083.1	1074.8	1029.7	1024.9	966.7
52.5°	905.0	880.1	853.9	869.4	846.8	831.3	805.2	802.8	768.4	780.3	739.9
55°	654.3	636.5	616.4	628.3	611.6	602.1	583.1	584.3	558.2	576.0	547.5
57.5°	463.2	448.9	434.7	441.8	431.1	424.0	410.9	413.3	407.3	413.3	393.1
60°	314.6	306.4	295.7	301.6	292.2	288.6	280.3	281.5	267.2	286.3	271.9
62.5°	206.6	200.7	200.7	197.2	190.0	187.7	182.9	182.9	174.6	188.8	179.3
65°	128.3	125.8	124.7	122.4	117.6	116.4	112.8	112.8	106.9	117.6	110.5
67.5°	76.0	74.9	73.7	72.4	68.9	67.8	66.5	65.3	61.7	68.9	64.1
70°	41.6	41.6	40.4	39.2	36.8	36.8	35.6	35.6	33.3	36.8	33.3
72.5°	20.1	20.1	19.0	19.0	17.8	17.8	16.7	16.7	15.5	17.8	15.5
75°	9.6	9.6	8.3	8.3	8.3	8.3	7.1	7.1	7.1	8.3	7.1
77.5°	4.8	4.8	4.8	4.8	3.6	3.6	3.6	3.6	3.6	3.6	3.6
80°	2.3	2.3	2.3	2.3	2.3	1.2	1.2	1.2	1.2	2.3	2.3
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
85°	3.6	3.6	3.6	3.6	4.8	3.6	4.8	4.8	4.8	4.8	4.8
87.5°	4.8	4.8	4.8	4.8	4.8	5.9	5.9	5.9	4.8	5.9	4.8
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):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	507.1	507.1	507.1	507.1	507.1	507.1	507.1	507.1	507.1	507.1	507.1
2.5°	639.0	629.4	633.1	622.3	613.9	610.5	610.5	609.3	553.4	497.7	458.4
5°	799.3	781.5	783.8	764.8	756.6	744.7	741.1	725.6	604.5	492.9	416.9
7.5°	989.3	963.2	947.7	929.9	919.2	897.9	887.2	856.3	652.0	483.3	376.5
10°	1193.6	1156.8	1131.7	1103.4	1092.7	1059.3	1039.2	986.9	693.6	468.0	338.5
12.5°	1414.4	1364.6	1319.4	1288.6	1275.5	1211.4	1198.4	1123.5	731.5	453.7	307.6
15°	1641.3	1578.3	1521.4	1477.4	1460.7	1397.9	1357.5	1257.7	764.8	440.6	283.8
17.5°	1843.1	1775.5	1706.6	1649.6	1625.8	1536.8	1498.8	1375.3	789.7	427.6	270.8
20°	2022.6	1940.6	1868.1	1789.7	1762.5	1661.4	1599.7	1466.7	804.1	419.2	271.9
22.5°	2159.1	2065.3	1982.2	1894.3	1859.8	1749.3	1679.2	1529.7	808.7	413.3	280.3
25°	2258.9	2154.3	2061.6	1965.5	1925.1	1807.5	1730.3	1568.9	807.5	409.8	283.8
27.5°	2310.0	2198.3	2098.6	1995.2	1951.3	1830.1	1747.0	1577.2	790.9	395.4	283.8
30°	2302.7	2185.2	2080.8	1973.8	1926.3	1806.4	1720.8	1545.2	755.3	369.4	263.7
32.5°	2239.9	2119.9	2013.0	1906.1	1858.6	1741.1	1655.5	1479.7	704.3	334.9	236.3
35°	2135.4	2016.6	1910.9	1806.4	1758.9	1644.9	1561.7	1390.6	646.1	298.1	211.4
37.5°	1998.8	1883.5	1781.5	1686.5	1631.7	1524.9	1444.1	1284.9	581.9	264.8	190.0
40°	1829.0	1719.6	1623.5	1535.6	1477.4	1378.8	1305.2	1160.3	514.2	230.4	169.8
42.5°	1633.0	1530.8	1452.5	1364.6	1299.3	1212.5	1148.4	1022.6	445.4	199.5	148.4
45°	1410.9	1320.6	1252.9	1175.8	1108.0	1034.4	979.9	877.6	375.3	166.2	128.3
47.5°	1172.1	1097.3	1045.2	981.0	914.4	855.0	812.3	730.4	308.7	139.0	109.3
50°	937.0	877.6	839.7	790.9	730.4	685.2	652.0	597.4	244.7	112.8	91.5
52.5°	721.0	678.1	652.0	616.4	563.0	532.0	508.2	470.3	186.5	91.5	73.7
55°	537.9	507.1	490.4	465.5	419.2	397.9	382.4	358.7	139.0	72.4	57.1
57.5°	388.4	368.2	357.5	340.9	302.8	289.7	279.0	264.8	100.9	55.7	41.6
60°	270.8	256.6	250.6	239.9	209.1	200.7	186.5	186.5	71.2	40.4	28.5
62.5°	179.3	169.8	167.4	159.1	135.4	130.6	127.1	124.7	48.7	27.4	16.7
65°	111.6	104.5	103.4	98.6	82.0	79.6	76.0	76.0	30.8	16.7	8.3
67.5°	64.1	60.5	59.4	57.1	45.2	43.9	41.6	43.9	17.8	8.3	3.6
70°	34.5	30.8	30.8	29.7	22.6	21.4	20.1	21.4	9.6	4.8	2.3
72.5°	16.7	14.2	14.2	13.0	9.6	9.6	8.3	10.7	4.8	2.3	2.3
75°	7.1	7.1	5.9	5.9	3.6	3.6	3.6	4.8	2.3	2.3	2.3
77.5°	3.6	3.6	3.6	3.6	1.2	1.2	1.2	2.3	2.3	2.3	2.3
80°	2.3	2.3	2.3	2.3	0.0	0.0	0.0	2.3	2.3	2.3	2.3
82.5°	2.3	1.2	1.2	1.2	0.0	0.0	0.0	1.2	2.3	2.3	2.3
85°	3.6	3.6	3.6	3.6	2.3	2.3	2.3	3.6	2.3	2.3	2.3
87.5°	4.8	4.8	4.8	4.8	3.6	3.6	3.6	5.9	3.6	2.3	2.3
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°	507.1	507.1	507.1
2.5°	425.1	400.2	402.5
5°	361.0	325.4	321.9
7.5°	305.2	267.2	262.5
10°	261.2	223.3	217.3
12.5°	229.2	194.8	188.8
15°	209.1	178.1	173.3
17.5°	205.5	181.7	179.3
20°	219.7	207.8	210.2
22.5°	244.7	241.1	247.0
25°	261.2	260.1	267.2
27.5°	257.7	255.3	260.1
30°	238.8	235.2	237.5
32.5°	216.2	210.2	212.6
35°	193.6	188.8	190.0
37.5°	174.6	171.0	171.0
40°	158.0	154.4	154.4
42.5°	140.2	137.7	139.0
45°	121.2	119.9	122.4
47.5°	102.1	100.9	103.4
50°	84.3	82.0	82.0
52.5°	66.5	63.0	60.5
55°	48.7	42.7	40.4
57.5°	33.3	27.4	24.9
60°	19.0	15.5	13.0
62.5°	9.6	5.9	4.8
65°	3.6	2.3	1.2
67.5°	2.3	1.2	1.2
70°	2.3	1.2	1.2
72.5°	1.2	1.2	1.2
75°	1.2	1.2	0.0
77.5°	1.2	1.2	1.2
80°	1.2	1.2	0.0
82.5°	1.2	1.2	0.0
85°	1.2	1.2	0.0
87.5°	1.2	1.2	0.0
90°	0.0	0.0	0.0

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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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Peachtree City, GA 30269

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