

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: P1191490

Luminaire Tested: **LDA4A10940D010TE 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: P1191490
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: LDA4A10940D010TE LAR35FL 4LLWW1
Description: PORTFOLIO 4" Lensed Wall Wash, Self-flanged, 35° Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

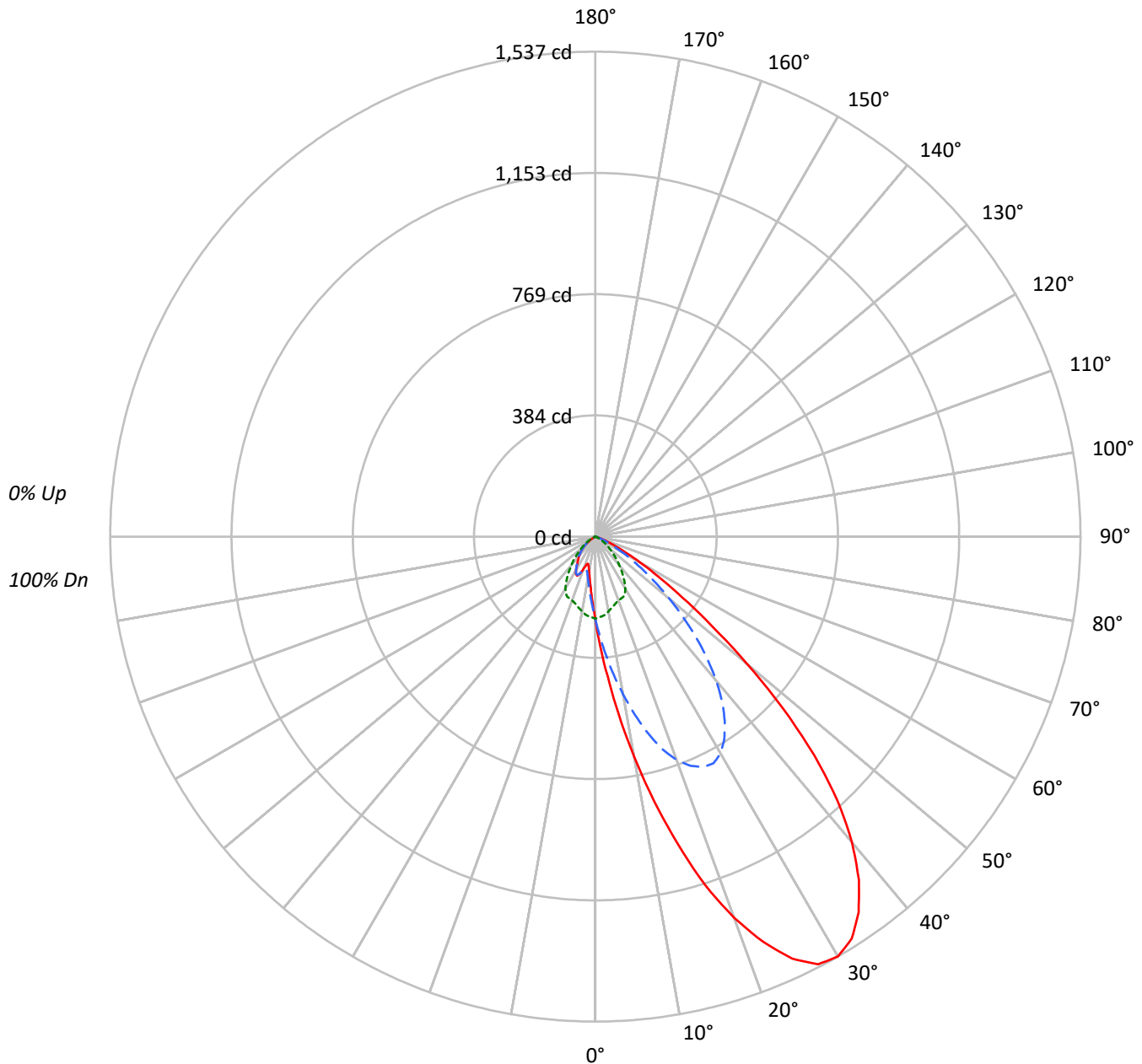
Lumens per Lamp: N/A
Luminaire Lumens: 975.6 lumens
Efficiency: N/A
Efficacy: 78.7 lumens/watt
Spacing Criteria (0/90/45): 2.19 / 1.11 / 1.55
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 12.4
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°	32132	32132	32132
5°	54838	31350	20467
10°	88638	30110	13978
15°	128769	28898	11365
20°	168645	28274	14176
25°	200852	28635	18686
30°	218882	27033	17376
35°	218924	23053	14696
40°	203734	19048	12785
45°	171123	14914	10955
50°	120105	11130	8059
55°	72277	8000	4473
60°	39865	5131	1678
65°	19234	2481	175
70°	7718	866	216
75°	2288	620	0
80°	923	923	0
85°	2547	1840	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.0	2.9
10°-20°	110.7	11.3
20°-30°	224.6	23.0
30°-40°	272.9	28.0
40°-50°	215.3	22.1
50°-60°	97.5	10.0
60°-70°	23.0	2.4
70°-80°	2.5	0.3
80°-90°	1.1	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°	363.3	37.2
0°-40°	636.1	65.2
0°-60°	949.0	97.3
0°-90°	975.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	975.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	260	260	260	260	260	
5°	443	373	253	186	165	51
15°	1008	646	226	107	89	293
25°	1476	806	210	134	137	675
35°	1454	714	153	100	98	898
45°	981	451	86	62	63	742
55°	336	184	37	25	21	317
65°	66	39	8	2	1	74
75°	5	2	1	1	0	8
85°	2	2	1	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°	260.5	260.5	260.5	260.5	260.5	260.5	260.5	260.5	260.5	260.5	260.5
2.5°	346.0	337.4	337.4	331.3	336.1	326.3	328.2	327.6	333.7	331.9	326.3
5°	442.9	435.6	435.0	427.1	433.2	420.3	421.0	419.1	425.8	419.1	411.2
7.5°	568.0	555.2	554.6	545.4	551.5	535.0	534.5	530.8	536.9	524.0	512.4
10°	707.7	689.4	688.2	677.1	683.9	662.5	660.7	654.6	658.9	638.8	622.2
12.5°	857.1	837.0	834.6	823.0	829.1	803.5	798.6	790.6	792.5	763.2	741.2
15°	1008.4	991.4	988.9	976.7	982.8	951.1	943.2	933.4	931.6	892.5	864.5
17.5°	1159.1	1124.3	1135.3	1123.2	1128.7	1091.5	1081.0	1068.8	1062.2	1013.9	978.5
20°	1284.8	1254.9	1262.8	1251.8	1256.8	1214.0	1201.3	1186.0	1174.4	1116.4	1075.6
22.5°	1390.9	1359.9	1355.5	1355.5	1358.6	1312.2	1295.1	1278.1	1261.6	1192.7	1151.2
25°	1475.8	1441.6	1436.7	1435.5	1436.2	1387.4	1367.1	1348.3	1326.9	1251.2	1206.1
27.5°	1528.2	1492.2	1486.7	1486.1	1483.0	1433.1	1410.6	1389.8	1364.2	1286.6	1236.0
30°	1536.8	1503.8	1497.7	1497.7	1489.8	1441.0	1416.0	1394.0	1365.3	1287.3	1233.0
32.5°	1511.2	1477.6	1470.9	1471.4	1458.7	1413.0	1386.1	1363.5	1333.6	1256.8	1200.6
35°	1453.9	1421.5	1415.4	1416.0	1400.1	1357.4	1329.4	1307.4	1275.7	1202.4	1145.1
37.5°	1371.4	1341.0	1334.9	1336.0	1316.5	1278.1	1249.4	1228.7	1196.3	1128.7	1072.5
40°	1265.3	1236.0	1230.6	1231.1	1209.8	1176.2	1148.2	1128.7	1096.3	1035.9	982.2
42.5°	1136.6	1108.5	1104.2	1103.6	1082.9	1052.4	1025.0	1008.4	975.6	927.3	876.1
45°	981.0	957.2	938.2	951.1	929.7	905.4	879.8	866.3	835.2	801.1	755.3
47.5°	805.9	785.1	766.3	778.5	758.9	740.7	718.0	709.5	681.5	663.8	625.3
50°	625.9	608.2	591.1	601.6	586.3	574.1	556.4	552.2	529.0	526.4	496.6
52.5°	464.9	452.1	438.7	446.6	435.0	427.1	413.6	412.4	394.7	400.8	380.1
55°	336.1	327.0	316.7	322.8	314.2	309.3	299.6	300.1	286.7	295.9	281.2
57.5°	237.9	230.5	223.3	227.0	221.5	217.8	211.1	212.3	209.3	212.3	201.9
60°	161.6	157.4	152.0	155.0	150.0	148.3	143.9	144.6	137.3	147.0	139.7
62.5°	106.1	103.0	103.0	101.3	97.6	96.4	94.0	94.0	89.7	97.1	92.1
65°	65.9	64.7	64.1	62.8	60.4	59.7	58.0	58.0	54.9	60.4	56.7
67.5°	39.1	38.5	37.8	37.2	35.4	34.8	34.1	33.5	31.7	35.4	33.0
70°	21.4	21.4	20.8	20.1	18.9	18.9	18.3	18.3	17.1	18.9	17.1
72.5°	10.3	10.3	9.8	9.8	9.2	9.2	8.5	8.5	7.9	9.2	7.9
75°	4.8	4.8	4.3	4.3	4.3	4.3	3.7	3.7	3.7	4.3	3.7
77.5°	2.4	2.4	2.4	2.4	1.8	1.8	1.8	1.8	1.8	1.8	1.8
80°	1.3	1.3	1.3	1.3	1.3	0.6	0.6	0.6	0.6	1.3	1.3
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	1.8	1.8	1.8	1.8	2.4	1.8	2.4	2.4	2.4	2.4	2.4
87.5°	2.4	2.4	2.4	2.4	2.4	3.1	3.1	3.1	2.4	3.1	2.4
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°	260.5	260.5	260.5	260.5	260.5	260.5	260.5	260.5	260.5	260.5	260.5
2.5°	328.2	323.3	325.2	319.7	315.4	313.6	313.6	313.0	284.3	255.6	235.5
5°	410.5	401.5	402.6	392.8	388.6	382.5	380.7	372.7	310.5	253.2	214.1
7.5°	508.2	494.7	486.8	477.7	472.2	461.2	455.7	439.8	334.9	248.3	193.4
10°	613.2	594.2	581.3	566.8	561.2	544.1	533.8	507.0	356.3	240.4	173.9
12.5°	726.5	700.9	677.8	662.0	655.2	622.2	615.6	577.1	375.8	233.1	158.1
15°	843.1	810.7	781.4	758.9	750.4	718.0	697.3	646.0	392.8	226.3	145.8
17.5°	946.8	912.0	876.7	847.4	835.2	789.5	769.9	706.4	405.7	219.6	139.1
20°	1039.0	996.8	959.6	919.4	905.4	853.5	821.8	753.4	413.1	215.4	139.7
22.5°	1109.1	1060.9	1018.2	973.0	955.3	898.6	862.6	785.8	415.5	212.3	143.9
25°	1160.4	1106.6	1059.1	1009.7	988.9	928.6	888.8	805.9	414.9	210.4	145.8
27.5°	1186.6	1129.3	1078.0	1025.0	1002.3	940.2	897.4	810.2	406.3	203.2	145.8
30°	1182.9	1122.6	1068.8	1013.9	989.6	927.9	884.0	793.7	388.0	189.8	135.4
32.5°	1150.6	1088.9	1034.0	979.1	954.8	894.4	850.5	760.2	361.7	172.1	121.4
35°	1097.0	1035.9	981.6	927.9	903.5	845.0	802.2	714.4	331.9	153.1	108.7
37.5°	1026.8	967.5	915.1	866.3	838.3	783.4	741.8	660.1	298.9	136.0	97.6
40°	939.5	883.3	833.9	788.8	758.9	708.3	670.5	596.0	264.2	118.3	87.3
42.5°	838.9	786.4	746.2	700.9	667.4	622.9	590.0	525.3	228.8	102.5	76.3
45°	724.8	678.4	643.6	604.0	569.2	531.4	503.3	450.9	192.8	85.5	65.9
47.5°	602.1	563.8	536.9	503.9	469.8	439.3	417.3	375.2	158.6	71.3	56.2
50°	481.4	450.9	431.3	406.3	375.2	352.1	334.9	306.8	125.7	58.0	47.0
52.5°	370.3	348.4	334.9	316.7	289.1	273.3	261.1	241.6	95.8	47.0	37.8
55°	276.4	260.5	251.9	239.2	215.4	204.4	196.4	184.2	71.3	37.2	29.3
57.5°	199.5	189.2	183.7	175.1	155.5	148.9	143.4	136.0	51.8	28.7	21.4
60°	139.1	131.8	128.8	123.2	107.4	103.0	95.8	95.8	36.6	20.8	14.6
62.5°	92.1	87.3	86.0	81.8	69.5	67.1	65.2	64.1	25.0	14.0	8.5
65°	57.3	53.6	53.1	50.7	42.0	40.9	39.1	39.1	15.9	8.5	4.3
67.5°	33.0	31.1	30.4	29.3	23.2	22.5	21.4	22.5	9.2	4.3	1.8
70°	17.7	15.9	15.9	15.3	11.6	11.0	10.3	11.0	4.8	2.4	1.3
72.5°	8.5	7.3	7.3	6.8	4.8	4.8	4.3	5.5	2.4	1.3	1.3
75°	3.7	3.7	3.1	3.1	1.8	1.8	1.8	2.4	1.3	1.3	1.3
77.5°	1.8	1.8	1.8	1.8	0.6	0.6	0.6	1.3	1.3	1.3	1.3
80°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	1.3	1.3	1.3	1.3
82.5°	1.3	0.6	0.6	0.6	0.0	0.0	0.0	0.6	1.3	1.3	1.3
85°	1.8	1.8	1.8	1.8	1.3	1.3	1.3	1.8	1.3	1.3	1.3
87.5°	2.4	2.4	2.4	2.4	1.8	1.8	1.8	3.1	1.8	1.3	1.3
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°	260.5	260.5	260.5
2.5°	218.4	205.6	206.9
5°	185.5	167.1	165.3
7.5°	156.8	137.3	134.8
10°	134.3	114.6	111.6
12.5°	117.7	100.0	97.1
15°	107.4	91.5	89.0
17.5°	105.6	93.4	92.1
20°	112.9	106.7	108.0
22.5°	125.7	123.8	126.9
25°	134.3	133.6	137.3
27.5°	132.3	131.2	133.6
30°	122.7	120.8	122.0
32.5°	111.1	108.0	109.2
35°	99.5	97.1	97.6
37.5°	89.7	87.9	87.9
40°	81.1	79.4	79.4
42.5°	72.0	70.8	71.3
45°	62.3	61.6	62.8
47.5°	52.5	51.8	53.1
50°	43.3	42.0	42.0
52.5°	34.1	32.4	31.1
55°	25.0	21.9	20.8
57.5°	17.1	14.0	12.9
60°	9.8	7.9	6.8
62.5°	4.8	3.1	2.4
65°	1.8	1.3	0.6
67.5°	1.3	0.6	0.6
70°	1.3	0.6	0.6
72.5°	0.6	0.6	0.6
75°	0.6	0.6	0.0
77.5°	0.6	0.6	0.6
80°	0.6	0.6	0.0
82.5°	0.6	0.6	0.0
85°	0.6	0.6	0.0
87.5°	0.6	0.6	0.0
90°	0.0	0.0	0.0

Classified

Scaled Data Report

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— 0°-180° - - 45°-225° - - - 90°-270°

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