

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: P1191472

Luminaire Tested: **LDA4A10935D010TE 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: P1191472
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: LDA4A10935D010TE 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

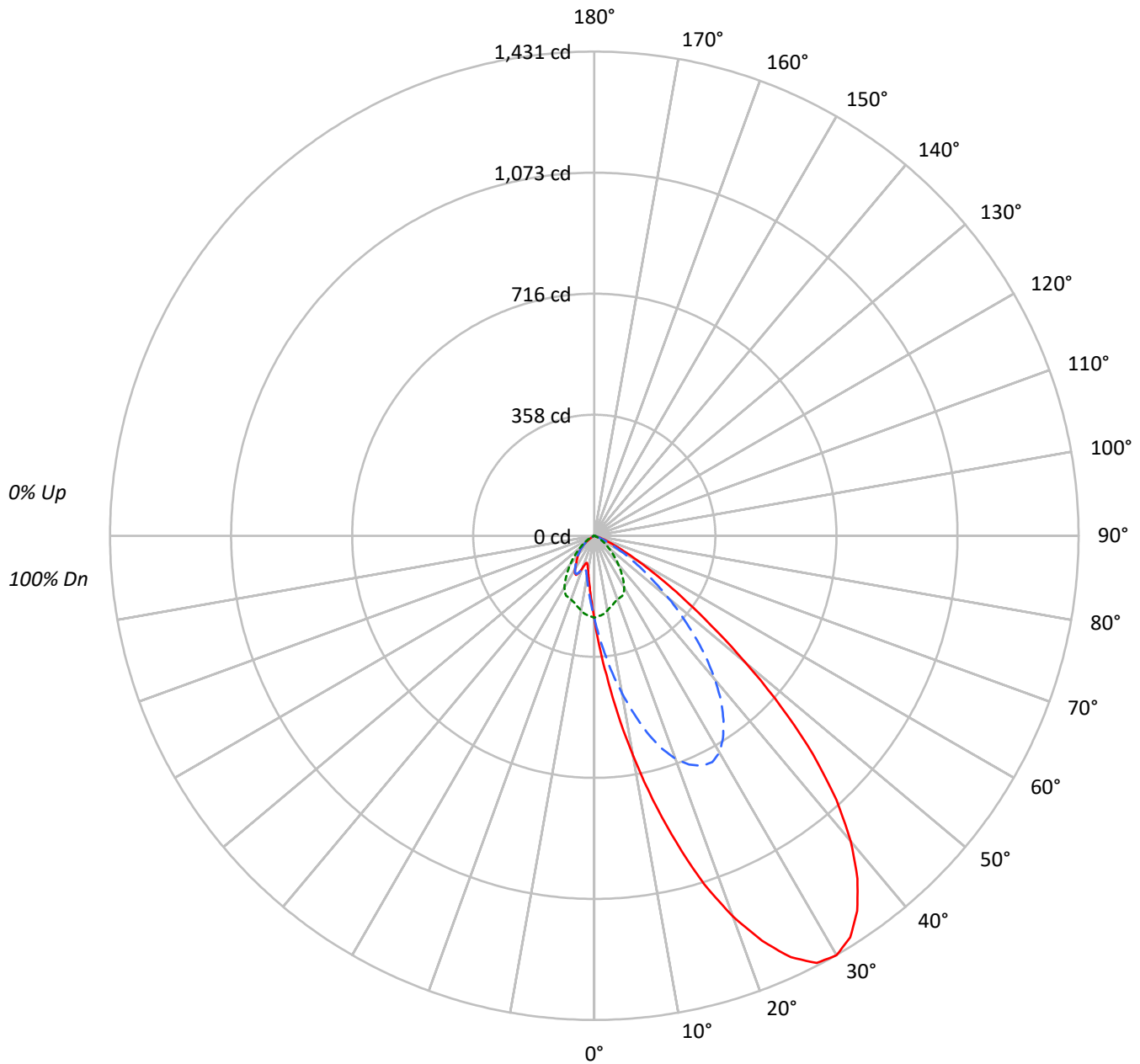
Lumens per Lamp: N/A
Luminaire Lumens: 908.5 lumens
Efficiency: N/A
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 2.19 / 1.11 / 1.55
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	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	66	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	58	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°	29924	29924	29924
5°	51087	29196	19068
10°	82564	28043	13013
15°	119946	26918	10586
20°	157068	26331	13205
25°	187065	26675	17407
30°	203856	25167	16180
35°	203882	21487	13687
40°	189758	17744	11899
45°	159383	13885	10205
50°	111873	10362	7522
55°	67331	7441	4172
60°	37152	4786	1529
65°	17920	2306	146
70°	7177	829	180
75°	2192	524	0
80°	781	781	0
85°	2406	1557	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.0	2.9
10°-20°	103.1	11.4
20°-30°	209.1	23.0
30°-40°	254.1	28.0
40°-50°	200.5	22.1
50°-60°	90.8	10.0
60°-70°	21.4	2.4
70°-80°	2.3	0.3
80°-90°	1.0	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°	338.3	37.2
0°-40°	592.5	65.2
0°-60°	883.8	97.3
0°-90°	908.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	908.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	243	243	243	243	243	
5°	413	347	236	173	154	47
15°	939	602	211	100	83	273
25°	1374	751	196	125	128	629
35°	1354	665	143	93	91	836
45°	914	420	80	58	58	691
55°	313	172	35	23	19	296
65°	61	36	8	2	0	69
75°	5	2	1	0	0	7
85°	2	2	1	0	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°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6
2.5°	322.1	314.2	314.2	308.5	313.1	304.0	305.7	305.1	310.8	309.1	304.0
5°	412.6	405.7	405.2	397.8	403.4	391.6	392.1	390.4	396.6	390.4	383.0
7.5°	529.0	517.0	516.5	508.0	513.7	498.3	497.8	494.3	500.1	488.1	477.3
10°	659.2	642.1	641.0	630.8	637.0	617.0	615.3	609.6	613.7	594.8	579.6
12.5°	798.3	779.5	777.2	766.5	772.1	748.3	743.7	736.4	738.1	710.8	690.4
15°	939.3	923.3	921.0	909.7	915.3	885.8	878.4	869.3	867.7	831.2	805.1
17.5°	1079.6	1047.1	1057.5	1046.0	1051.2	1016.5	1006.9	995.4	989.2	944.4	911.4
20°	1196.6	1168.8	1176.2	1166.0	1170.4	1130.7	1118.7	1104.6	1093.8	1039.8	1001.7
22.5°	1295.5	1266.5	1262.5	1262.5	1265.3	1222.2	1206.2	1190.3	1175.0	1110.8	1072.2
25°	1374.5	1342.7	1338.1	1336.9	1337.6	1292.1	1273.4	1255.7	1235.8	1165.4	1123.3
27.5°	1423.3	1389.8	1384.7	1384.2	1381.3	1334.6	1313.6	1294.4	1270.4	1198.3	1151.2
30°	1431.3	1400.6	1394.9	1394.9	1387.5	1342.0	1318.8	1298.3	1271.6	1198.9	1148.3
32.5°	1407.4	1376.2	1369.9	1370.4	1358.6	1315.9	1290.9	1269.9	1242.0	1170.4	1118.2
35°	1354.0	1323.9	1318.2	1318.8	1304.1	1264.2	1238.1	1217.7	1188.2	1119.9	1066.5
37.5°	1277.3	1248.9	1243.2	1244.3	1226.1	1190.3	1163.7	1144.3	1114.3	1051.2	998.9
40°	1178.5	1151.2	1146.0	1146.6	1126.8	1095.4	1069.3	1051.2	1021.0	964.7	914.8
42.5°	1058.5	1032.4	1028.4	1027.9	1008.6	980.2	954.5	939.3	908.6	863.6	816.0
45°	913.7	891.5	873.9	885.8	865.9	843.2	819.3	806.8	777.9	746.0	703.4
47.5°	750.6	731.3	713.7	725.0	706.8	689.7	668.7	660.8	634.7	618.2	582.4
50°	583.0	566.4	550.6	560.2	546.1	534.7	518.2	514.2	492.7	490.4	462.5
52.5°	432.9	421.0	408.5	415.9	405.2	397.8	385.2	384.2	367.6	373.3	354.0
55°	313.1	304.6	294.9	300.6	292.6	288.1	279.0	279.6	267.1	275.5	261.9
57.5°	221.6	214.8	208.0	211.3	206.2	202.9	196.5	197.7	194.9	197.7	188.1
60°	150.6	146.6	141.5	144.3	139.7	138.1	134.1	134.6	127.9	136.9	130.2
62.5°	98.8	96.0	96.0	94.3	90.9	89.8	87.5	87.5	83.6	90.3	85.9
65°	61.4	60.2	59.6	58.5	56.3	55.7	54.0	54.0	51.1	56.3	52.9
67.5°	36.3	35.8	35.3	34.6	33.0	32.4	31.8	31.2	29.6	33.0	30.7
70°	19.9	19.9	19.4	18.7	17.6	17.6	17.1	17.1	15.9	17.6	15.9
72.5°	9.7	9.7	9.0	9.0	8.5	8.5	7.9	7.9	7.4	8.5	7.4
75°	4.6	4.6	3.9	3.9	3.9	3.9	3.4	3.4	3.4	3.9	3.4
77.5°	2.3	2.3	2.3	2.3	1.7	1.7	1.7	1.7	1.7	1.7	1.7
80°	1.1	1.1	1.1	1.1	1.1	0.5	0.5	0.5	0.5	1.1	1.1
82.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
85°	1.7	1.7	1.7	1.7	2.3	1.7	2.3	2.3	2.3	2.3	2.3
87.5°	2.3	2.3	2.3	2.3	2.3	2.8	2.8	2.8	2.3	2.8	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):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6	242.6
2.5°	305.7	301.1	302.9	297.7	293.7	292.1	292.1	291.4	264.8	238.1	219.3
5°	382.4	373.8	375.0	365.9	362.0	356.3	354.6	347.2	289.3	235.8	199.5
7.5°	473.3	460.8	453.5	444.9	439.8	429.5	424.4	409.6	311.9	231.3	180.1
10°	571.0	553.4	541.5	527.8	522.7	506.8	497.1	472.2	331.8	223.9	161.9
12.5°	676.7	652.8	631.3	616.5	610.3	579.6	573.3	537.5	350.0	217.0	147.1
15°	785.3	755.1	727.8	706.8	698.9	668.7	649.5	601.7	365.9	210.8	135.8
17.5°	881.8	849.5	816.5	789.2	777.9	735.2	717.1	658.0	377.8	204.6	129.5
20°	967.7	928.4	893.8	856.2	843.2	794.9	765.4	701.7	384.7	200.6	130.2
22.5°	1033.0	988.0	948.3	906.3	889.8	837.0	803.5	731.9	387.0	197.7	134.1
25°	1080.6	1030.7	986.4	940.4	921.0	864.7	827.8	750.6	386.3	196.0	135.8
27.5°	1105.1	1051.7	1004.0	954.5	933.5	875.6	835.8	754.6	378.4	189.2	135.8
30°	1101.8	1045.5	995.4	944.4	921.6	864.2	823.4	739.3	361.4	176.7	126.1
32.5°	1071.6	1014.3	963.1	912.0	889.2	833.0	792.0	708.0	336.9	160.2	113.1
35°	1021.7	964.7	914.2	864.2	841.4	786.9	747.2	665.4	309.1	142.7	101.1
37.5°	956.3	901.2	852.3	806.8	780.7	729.6	690.9	614.8	278.4	126.7	90.9
40°	875.1	822.7	776.7	734.7	706.8	659.7	624.4	555.1	246.1	110.2	81.3
42.5°	781.3	732.4	695.0	652.8	621.6	580.1	549.5	489.2	213.1	95.4	71.1
45°	675.0	631.8	599.4	562.5	530.1	494.9	468.7	420.0	179.6	79.6	61.4
47.5°	560.8	525.0	500.1	469.4	437.5	409.1	388.6	349.4	147.8	66.5	52.2
50°	448.4	420.0	401.7	378.4	349.4	327.9	311.9	285.8	117.1	54.0	43.7
52.5°	344.9	324.4	311.9	294.9	269.3	254.5	243.2	224.9	89.2	43.7	35.3
55°	257.4	242.6	234.6	222.8	200.6	190.3	182.9	171.6	66.5	34.6	27.3
57.5°	185.8	176.2	171.1	163.0	145.0	138.6	133.5	126.7	48.3	26.7	19.9
60°	129.5	122.8	119.9	114.8	100.0	96.0	89.2	89.2	34.1	19.4	13.6
62.5°	85.9	81.3	80.1	76.2	64.8	62.5	60.8	59.6	23.3	13.1	7.9
65°	53.4	50.1	49.4	47.1	39.2	38.1	36.3	36.3	14.8	7.9	3.9
67.5°	30.7	29.0	28.4	27.3	21.7	21.0	19.9	21.0	8.5	3.9	1.7
70°	16.4	14.8	14.8	14.3	10.8	10.2	9.7	10.2	4.6	2.3	1.1
72.5°	7.9	6.9	6.9	6.2	4.6	4.6	3.9	5.1	2.3	1.1	1.1
75°	3.4	3.4	2.8	2.8	1.7	1.7	1.7	2.3	1.1	1.1	1.1
77.5°	1.7	1.7	1.7	1.7	0.5	0.5	0.5	1.1	1.1	1.1	1.1
80°	1.1	1.1	1.1	1.1	0.0	0.0	0.0	1.1	1.1	1.1	1.1
82.5°	1.1	0.5	0.5	0.5	0.0	0.0	0.0	0.5	1.1	1.1	1.1
85°	1.7	1.7	1.7	1.7	1.1	1.1	1.1	1.7	1.1	1.1	1.1
87.5°	2.3	2.3	2.3	2.3	1.7	1.7	1.7	2.8	1.7	1.1	1.1
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°	242.6	242.6	242.6
2.5°	203.4	191.4	192.6
5°	172.7	155.7	154.0
7.5°	146.0	127.9	125.6
10°	125.0	106.9	103.9
12.5°	109.7	93.2	90.3
15°	100.0	85.2	82.9
17.5°	98.3	87.0	85.9
20°	105.1	99.5	100.6
22.5°	117.1	115.4	118.2
25°	125.0	124.4	127.9
27.5°	123.3	122.2	124.4
30°	114.3	112.5	113.6
32.5°	103.4	100.6	101.6
35°	92.6	90.3	90.9
37.5°	83.6	81.8	81.8
40°	75.5	73.9	73.9
42.5°	67.0	65.9	66.5
45°	58.0	57.4	58.5
47.5°	48.9	48.3	49.4
50°	40.4	39.2	39.2
52.5°	31.8	30.1	29.0
55°	23.3	20.5	19.4
57.5°	15.9	13.1	12.0
60°	9.0	7.4	6.2
62.5°	4.6	2.8	2.3
65°	1.7	1.1	0.5
67.5°	1.1	0.5	0.5
70°	1.1	0.5	0.5
72.5°	0.5	0.5	0.5
75°	0.5	0.5	0.0
77.5°	0.5	0.5	0.5
80°	0.5	0.5	0.0
82.5°	0.5	0.5	0.0
85°	0.5	0.5	0.0
87.5°	0.5	0.5	0.0
90°	0.0	0.0	0.0

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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— 0°-180° - - 45°-225° - - - 90°-270°

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