

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: P1212810

Luminaire Tested: **LDA4A30950D010TE LAR35FL 4LA1 30° Tilt**

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: P1212810
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26217)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A30950D010TE LAR35FL 4LA1 30° Tilt
Description: PORTFOLIO 4" Adjustable Reflector, Self-flanged Trim Ring, 35° Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

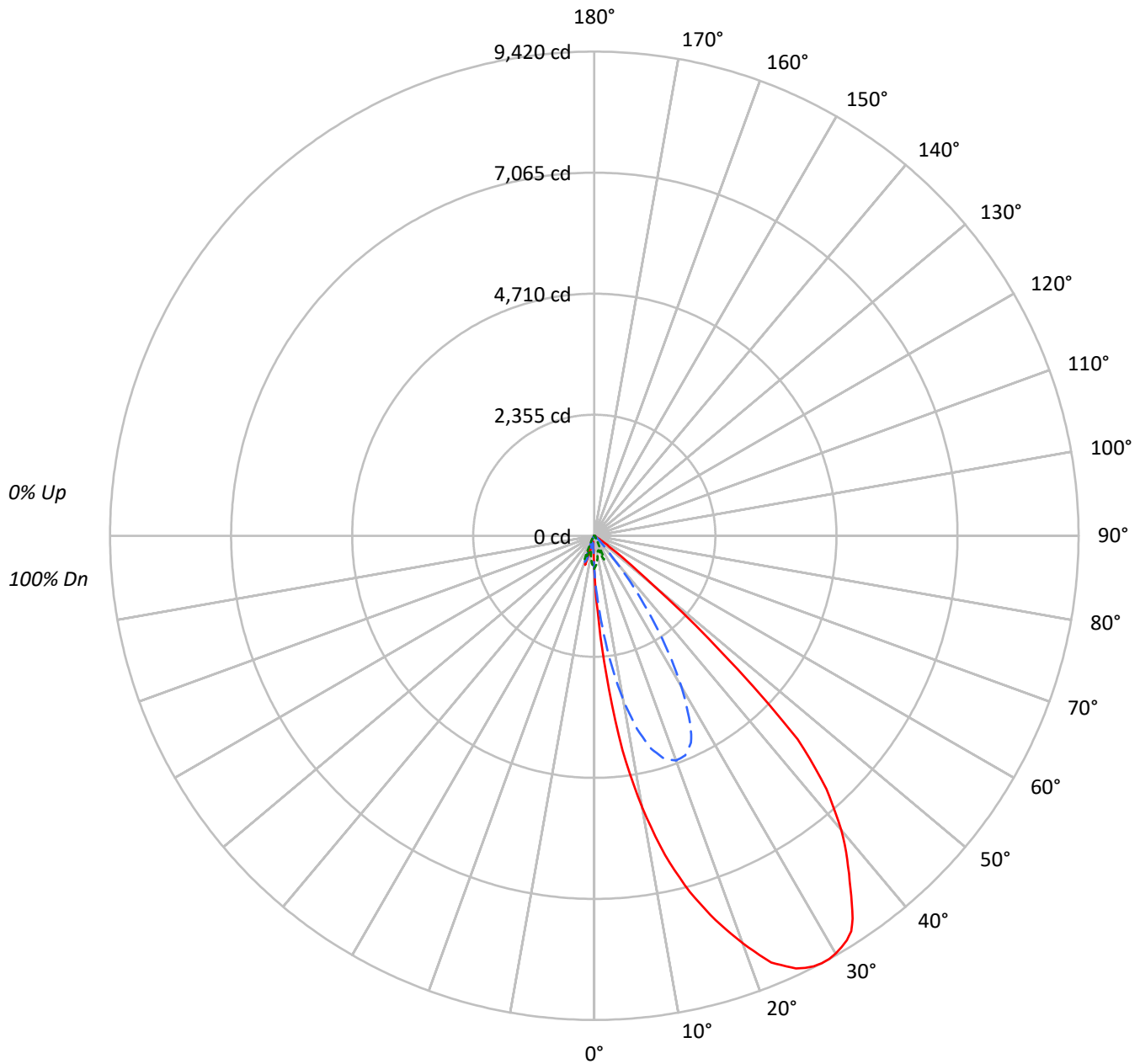
Lumens per Lamp: N/A
Luminaire Lumens: 3484.1 lumens
Efficiency: N/A
Efficacy: 88.4 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 39.4
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
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	113	110	107	104	110	107	105	103		103	101	99			100	98	96			96
2	106	101	96	92	104	99	95	91		96	92	89			92	90	87			90
3	100	92	87	82	98	91	86	81		88	84	80			86	82	79			83
4	93	85	78	74	92	84	78	73		81	76	72			79	75	71			77
5	88	78	71	66	86	77	71	66		75	70	65			73	68	65			72
6	82	72	65	60	81	71	64	60		69	64	59			68	63	59			66
7	77	66	59	54	76	66	59	54		64	58	54			63	58	54			62
8	72	61	54	50	71	61	54	49		59	54	49			58	53	49			57
9	68	57	50	45	67	56	50	45		55	49	45			54	49	45			53
10	64	53	46	42	63	52	46	42		51	46	41			51	45	41			50

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	79792	79792	79792
5°	335172	66750	24652
10°	673336	45904	14967
15°	915880	37275	33674
20°	1106917	56613	62481
25°	1264176	33643	17380
30°	1336694	15824	8033
35°	1314750	7002	2996
40°	1203210	3462	789
45°	975958	1744	0
50°	289315	940	0
55°	52428	1054	0
60°	9818	1209	0
65°	2393	1430	0
70°	613	1767	0
75°	0	2335	0
80°	0	4688	0
85°	0	9341	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.6	3.4
10°-20°	608.5	17.5
20°-30°	1065.7	30.6
30°-40°	1070.3	30.7
40°-50°	563.8	16.2
50°-60°	47.0	1.3
60°-70°	4.7	0.1
70°-80°	3.4	0.1
80°-90°	3.1	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°	1791.8	51.4
0°-40°	2862.1	82.1
0°-60°	3472.8	99.7
0°-90°	3484.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3484.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	647	647	647	647	647	
5°	2707	1770	539	247	199	347
15°	7172	4293	292	196	264	2048
25°	9289	4445	247	141	128	4250
35°	8731	1931	46	25	20	5399
45°	5595	199	10	3	0	3835
55°	244	22	5	2	0	366
65°	8	3	5	3	0	12
75°	0	3	5	3	0	1
85°	0	3	7	3	0	0
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°	22.5°	45°	67.5°
0°	646.9	646.9	646.9	646.9	646.9	646.9	646.9	646.9	646.9	646.9	646.9
2.5°	1468.0	1469.6	1471.2	1482.8	1456.4	1449.7	1438.2	1421.6	1366.9	1141.2	860.9
5°	2707.0	2727.0	2722.0	2705.5	2663.9	2640.7	2605.8	2569.3	2420.1	1769.9	1068.2
7.5°	4206.5	4244.7	4236.4	4211.5	4141.8	4110.4	4022.4	3974.3	3748.8	2513.0	1222.5
10°	5376.0	5477.1	5478.7	5455.5	5351.0	5306.3	5215.1	5128.8	4843.5	3241.1	1293.9
12.5°	6364.5	6366.2	6444.2	6426.0	6304.8	6284.9	6208.6	6079.3	5779.0	3848.2	1293.9
15°	7172.3	7281.8	7263.6	7243.6	7115.9	7089.3	7016.4	6897.0	6546.9	4292.8	1230.7
17.5°	7839.1	7937.0	7908.8	7887.3	7759.5	7701.4	7621.8	7479.2	7094.4	4556.4	1099.8
20°	8432.9	8525.8	8469.4	8431.3	8260.4	8189.1	8073.0	7908.8	7469.2	4654.4	947.0
22.5°	8986.8	9084.8	9013.5	8960.4	8739.8	8602.0	8437.9	8230.7	7713.1	4622.9	865.9
25°	9288.8	9416.5	9348.7	9307.1	9096.5	8935.6	8718.3	8451.2	7852.4	4445.4	651.9
26°	9355.2	9489.5	9424.9	9388.4	9174.4	9003.5	8771.4	8491.0	7864.0	4299.4	502.6
27°	9401.6	9550.9	9476.4	9429.8	9209.2	9026.8	8784.6	8492.6	7845.7	4102.0	399.8
28°	9419.8	9584.1	9492.9	9436.4	9207.6	9008.6	8751.4	8456.1	7797.7	3874.7	340.1
29°	9418.1	9597.3	9491.1	9429.8	9186.1	8965.3	8701.7	8404.7	7731.3	3637.5	306.9
30°	9385.1	9580.7	9474.5	9396.6	9134.6	8897.4	8630.3	8333.4	7656.7	3378.9	273.6
31°	9340.2	9541.0	9429.8	9333.7	9050.0	8792.9	8530.8	8237.2	7557.1	3101.8	250.5
32°	9275.4	9476.4	9353.6	9227.5	8930.5	8661.7	8409.8	8124.5	7436.1	2810.0	222.2
33°	9172.8	9350.2	9207.6	9061.6	8764.7	8512.5	8273.7	7993.3	7298.4	2506.4	192.5
34°	8985.2	9141.2	8993.6	8846.0	8580.5	8346.6	8117.7	7839.1	7137.4	2226.0	165.9
35°	8731.4	8864.2	8731.4	8607.0	8373.2	8155.9	7937.0	7664.9	6943.4	1930.8	142.7
36°	8472.8	8588.8	8466.1	8368.3	8144.3	7950.3	7746.2	7464.2	6724.4	1650.4	126.0
37°	8230.7	8335.0	8222.2	8124.5	7932.0	7734.6	7532.3	7243.6	6482.3	1381.6	104.5
38°	7990.0	8082.9	7986.7	7877.3	7699.7	7499.0	7295.1	6999.7	6211.9	1127.9	89.5
39°	7739.6	7815.9	7723.0	7611.9	7431.0	7232.0	7023.0	6717.9	5901.8	864.2	77.9
40°	7472.6	7544.0	7429.3	7329.9	7149.2	6945.0	6731.2	6414.3	5565.0	578.9	66.4
42.5°	6683.0	6726.1	6629.9	6492.2	6311.3	6087.5	5828.8	5473.7	4488.4	305.2	46.5
45°	5594.9	5603.1	5528.5	5278.0	5035.9	4689.3	4302.7	3770.3	2609.2	199.1	30.0
47.5°	3377.2	3357.2	3239.4	3025.5	2799.9	2433.4	2071.8	1705.1	1013.5	116.1	19.9
50°	1507.7	1484.5	1426.5	1315.4	1184.4	1048.3	887.4	751.5	492.6	62.9	13.3
51°	1093.1	1073.2	1030.0	945.5	849.3	753.1	642.0	549.0	368.2	51.5	11.6
52°	768.0	756.4	726.4	666.8	613.7	539.1	462.8	404.7	277.0	41.4	8.2
53°	535.8	527.5	509.2	469.5	437.8	383.1	335.1	288.6	200.7	33.2	8.2
54°	363.3	358.3	346.6	320.2	293.6	263.7	228.9	202.4	141.0	26.5	6.6
55°	243.8	240.4	230.6	217.3	202.4	184.1	160.9	141.0	99.6	21.5	4.9
57.5°	89.5	89.5	86.3	81.2	76.2	71.3	64.8	58.0	46.5	13.3	4.9
60°	39.8	38.2	38.2	36.5	34.8	33.2	31.5	28.3	23.2	8.2	4.9
61°	30.0	30.0	28.3	26.5	26.5	24.9	23.2	21.5	18.2	6.6	4.9
62°	21.5	21.5	21.5	19.9	19.9	18.2	18.2	16.6	13.3	4.9	4.9
63°	16.6	16.6	16.6	15.0	15.0	15.0	13.3	13.3	10.0	4.9	4.9
64°	11.6	11.6	11.6	11.6	11.6	11.6	10.0	10.0	8.2	3.3	4.9
65°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	6.6	3.3	4.9
66°	6.6	6.6	6.6	6.6	6.6	6.6	4.9	4.9	4.9	3.3	4.9



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CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	4.9
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	3.3	4.9
77.5°	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	3.3	4.9
80°	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	3.3	4.9
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	3.3	4.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	3.3	4.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	3.3	4.9
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):

	90°	112.5°	135°	157.5°	180°
0°	646.9	646.9	646.9	646.9	646.9
2.5°	595.5	416.3	331.7	300.2	290.3
5°	539.1	311.8	247.2	212.4	199.1
7.5°	452.8	257.1	185.7	154.3	144.4
10°	366.5	212.4	150.9	126.0	119.5
12.5°	313.5	184.1	141.0	131.0	131.0
15°	291.9	194.1	195.7	235.6	263.7
17.5°	300.2	303.6	474.3	577.2	595.5
20°	431.3	545.7	540.8	491.0	476.0
22.5°	499.3	359.9	272.1	223.9	215.6
25°	247.2	164.2	141.0	129.4	127.7
26°	187.4	137.7	122.8	116.1	112.7
27°	156.0	121.2	109.5	101.2	97.8
28°	139.4	107.8	94.5	86.3	83.0
29°	126.0	92.9	79.6	71.3	69.7
30°	111.1	77.9	66.4	58.0	56.4
31°	94.5	64.8	53.0	48.2	44.7
32°	79.6	53.0	43.1	38.2	34.8
33°	66.4	43.1	36.5	31.5	28.3
34°	56.4	36.5	30.0	24.9	23.2
35°	46.5	30.0	24.9	21.5	19.9
36°	39.8	26.5	19.9	16.6	15.0
37°	34.8	21.5	16.6	13.3	13.3
38°	30.0	18.2	15.0	10.0	10.0
39°	24.9	15.0	11.6	8.2	8.2
40°	21.5	13.3	10.0	6.6	4.9
42.5°	15.0	8.2	6.6	3.3	1.7
45°	10.0	6.6	3.3	1.7	0.0
47.5°	6.6	4.9	3.3	1.7	0.0
50°	4.9	4.9	3.3	0.0	0.0
51°	4.9	3.3	3.3	0.0	0.0
52°	4.9	3.3	1.7	0.0	0.0
53°	4.9	3.3	1.7	0.0	0.0
54°	4.9	3.3	1.7	0.0	0.0
55°	4.9	3.3	1.7	0.0	0.0
57.5°	4.9	3.3	1.7	0.0	0.0
60°	4.9	3.3	3.3	0.0	0.0
61°	4.9	4.9	3.3	0.0	0.0
62°	4.9	4.9	3.3	0.0	0.0
63°	4.9	4.9	3.3	0.0	0.0
64°	4.9	4.9	3.3	1.7	0.0
65°	4.9	4.9	3.3	1.7	0.0
66°	4.9	4.9	3.3	1.7	0.0

Classified

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	4.9	4.9	3.3	1.7	0.0
75°	4.9	4.9	3.3	1.7	0.0
77.5°	6.6	4.9	3.3	1.7	0.0
80°	6.6	4.9	3.3	1.7	0.0
82.5°	6.6	4.9	3.3	1.7	0.0
85°	6.6	4.9	3.3	1.7	0.0
87.5°	6.6	4.9	3.3	1.7	0.0
90°	0.0	0.0	0.0	0.0	0.0

Classified

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1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report



— 0°-180° - - 45°-225° - - - 90°-270°

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1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

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67.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	4.9
70°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	4.9

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1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



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

Scaled Data Report



67.5°	4.9	4.9	3.3	1.7	0.0
70°	4.9	4.9	3.3	1.7	0.0

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Peachtree City, GA 30269

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(END OF REPORT)