

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: P1191665

Luminaire Tested: **LDA4A20940D010TE 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: P1191665
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: LDA4A20940D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

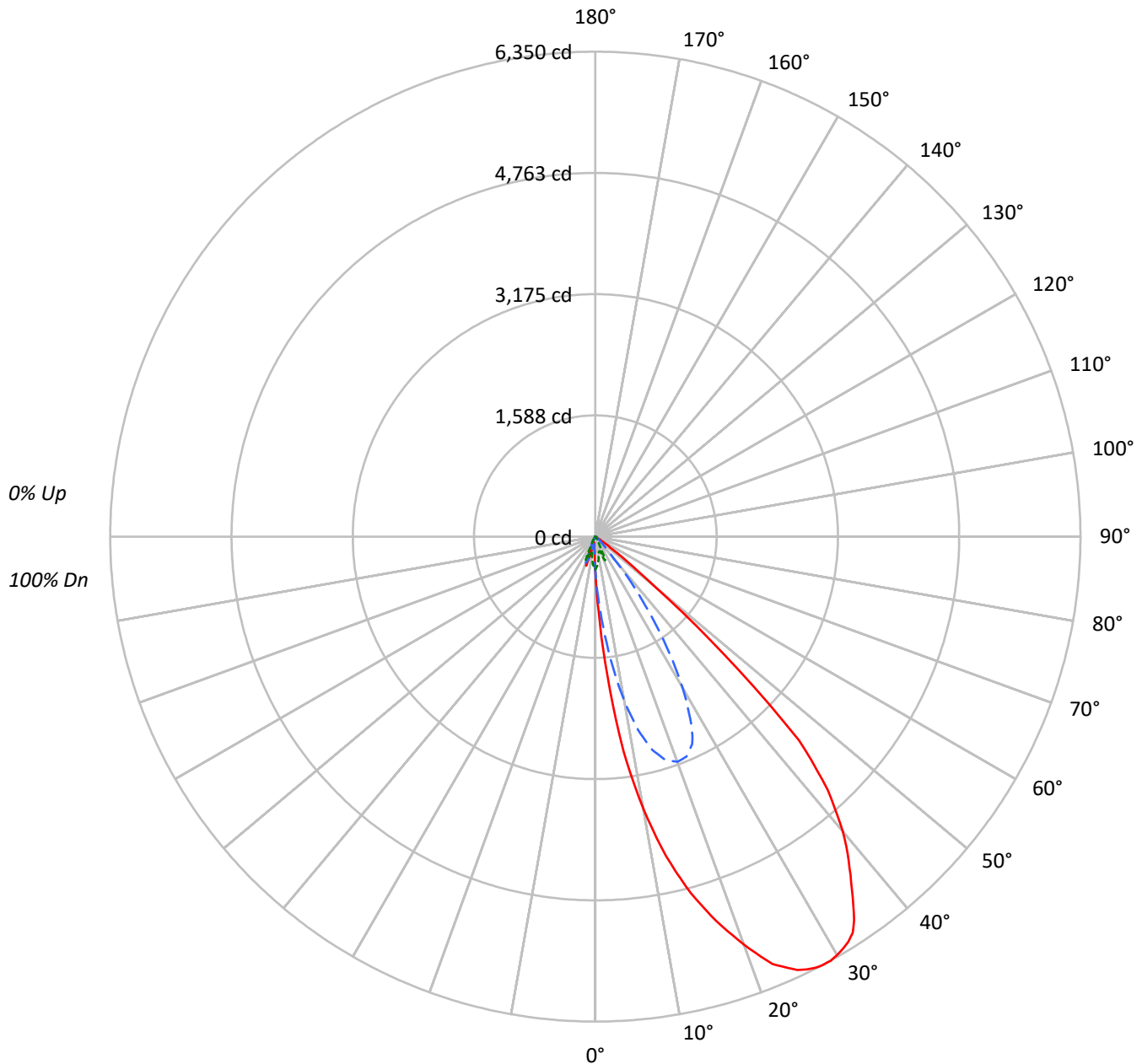
Lumens per Lamp: N/A
Luminaire Lumens: 2348.7 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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°	53791	53791	53791
5°	225953	44995	16616
10°	453900	30961	10082
15°	617414	25131	22704
20°	746196	38171	42122
25°	852211	22687	11732
30°	901095	10668	5426
35°	886313	4713	2033
40°	811103	2335	531
45°	657924	1169	0
50°	195058	633	0
55°	35332	710	0
60°	6611	814	0
65°	1634	963	0
70°	433	1190	0
75°	0	1573	0
80°	0	3196	0
85°	0	6369	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.3	3.4
10°-20°	410.2	17.5
20°-30°	718.4	30.6
30°-40°	721.5	30.7
40°-50°	380.1	16.2
50°-60°	31.7	1.3
60°-70°	3.2	0.1
70°-80°	2.3	0.1
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°	1207.9	51.4
0°-40°	1929.4	82.1
0°-60°	2341.1	99.7
0°-90°	2348.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2348.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	436	436	436	436	436	
5°	1825	1193	363	167	134	234
15°	4835	2894	197	132	178	1380
25°	6262	2997	167	95	86	2865
35°	5886	1302	31	17	14	3640
45°	3772	134	7	2	0	2585
55°	164	14	3	1	0	247
65°	6	2	3	2	0	8
75°	0	2	3	2	0	0
85°	0	2	4	2	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°	436.1	436.1	436.1	436.1	436.1	436.1	436.1	436.1	436.1	436.1	436.1
2.5°	989.6	990.7	991.9	999.7	981.7	977.2	969.4	958.3	921.4	769.3	580.4
5°	1824.9	1838.4	1834.9	1823.7	1795.8	1780.2	1756.7	1732.1	1631.5	1193.1	720.1
7.5°	2835.7	2861.5	2855.9	2839.1	2792.2	2770.9	2711.7	2679.2	2527.2	1694.0	824.1
10°	3624.0	3692.2	3693.4	3677.7	3607.2	3577.1	3515.6	3457.5	3265.1	2184.9	872.1
12.5°	4290.5	4291.6	4344.1	4331.8	4250.3	4236.8	4185.4	4098.1	3895.8	2594.2	872.1
15°	4835.0	4908.8	4896.5	4883.2	4797.0	4779.1	4730.0	4649.5	4413.5	2893.8	829.7
17.5°	5284.6	5350.5	5331.5	5317.0	5230.9	5191.8	5138.0	5041.9	4782.6	3071.6	741.4
20°	5684.8	5747.5	5709.4	5683.8	5568.5	5520.5	5442.3	5331.5	5035.2	3137.6	638.4
22.5°	6058.4	6124.3	6076.2	6040.4	5891.7	5798.9	5688.3	5548.4	5199.6	3116.4	583.7
25°	6261.8	6348.0	6302.1	6274.1	6132.1	6023.6	5877.2	5697.1	5293.6	2996.8	439.5
26°	6306.6	6397.2	6353.5	6329.0	6184.7	6069.5	5913.0	5724.0	5301.4	2898.3	338.8
27°	6337.9	6438.5	6388.2	6357.0	6208.3	6085.2	5922.0	5725.1	5289.1	2765.2	269.5
28°	6350.2	6460.9	6399.4	6361.3	6207.1	6072.9	5899.5	5700.6	5256.6	2612.0	229.2
29°	6349.1	6469.9	6398.2	6357.0	6192.5	6043.8	5866.0	5665.8	5211.9	2452.2	206.9
30°	6326.7	6458.6	6387.1	6334.5	6157.9	5998.0	5817.9	5617.8	5161.5	2277.7	184.5
31°	6296.6	6431.8	6357.0	6292.1	6100.8	5927.5	5750.8	5552.9	5094.5	2091.0	168.8
32°	6252.9	6388.2	6305.4	6220.4	6020.3	5839.2	5669.2	5476.9	5012.8	1894.3	149.9
33°	6183.6	6303.2	6207.1	6108.6	5908.5	5738.5	5577.5	5388.5	4920.0	1689.5	129.7
34°	6057.2	6162.4	6062.9	5963.3	5784.4	5626.7	5472.4	5284.6	4811.5	1500.6	111.8
35°	5886.1	5975.6	5886.1	5802.2	5644.6	5498.2	5350.5	5167.2	4680.8	1301.6	96.1
36°	5711.7	5789.9	5707.3	5641.2	5490.3	5359.4	5221.9	5031.9	4533.1	1112.6	85.0
37°	5548.4	5618.9	5542.9	5476.9	5347.1	5214.1	5077.7	4883.2	4369.9	931.5	70.5
38°	5386.4	5448.9	5384.1	5310.2	5190.6	5055.4	4917.8	4718.7	4187.6	760.3	60.4
39°	5217.5	5268.9	5206.2	5131.4	5009.5	4875.2	4734.3	4528.7	3978.5	582.5	52.6
40°	5037.4	5085.5	5008.3	4941.3	4819.3	4681.9	4537.6	4324.0	3751.6	390.2	44.7
42.5°	4505.1	4534.2	4469.4	4376.5	4254.8	4103.7	3929.3	3690.1	3025.9	205.8	31.3
45°	3771.7	3777.2	3727.0	3558.1	3394.8	3161.1	2900.6	2541.7	1758.9	134.2	20.1
47.5°	2276.7	2263.2	2183.9	2039.6	1887.5	1640.4	1396.6	1149.6	683.2	78.3	13.5
50°	1016.5	1000.9	961.6	886.7	798.4	706.8	598.2	506.5	332.2	42.4	9.0
51°	736.9	723.4	694.5	637.4	572.5	507.7	432.8	370.1	248.2	34.6	7.8
52°	517.7	509.8	489.7	449.5	413.7	363.4	312.0	272.8	186.8	27.9	5.6
53°	361.1	355.6	343.3	316.4	295.2	258.3	225.9	194.6	135.2	22.3	5.6
54°	244.9	241.5	233.7	215.8	197.9	177.8	154.4	136.4	95.0	18.0	4.5
55°	164.3	162.2	155.4	146.5	136.4	124.1	108.5	95.0	67.0	14.5	3.3
57.5°	60.4	60.4	58.2	54.7	51.4	48.1	43.6	39.1	31.3	9.0	3.3
60°	26.8	25.8	25.8	24.6	23.5	22.3	21.3	19.0	15.6	5.6	3.3
61°	20.1	20.1	19.0	18.0	18.0	16.8	15.6	14.5	12.3	4.5	3.3
62°	14.5	14.5	14.5	13.5	13.5	12.3	12.3	11.1	9.0	3.3	3.3
63°	11.1	11.1	11.1	10.1	10.1	10.1	9.0	9.0	6.7	3.3	3.3
64°	7.8	7.8	7.8	7.8	7.8	7.8	6.7	6.7	5.6	2.2	3.3
65°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	4.5	2.2	3.3
66°	4.5	4.5	4.5	4.5	4.5	4.5	3.3	3.3	3.3	2.2	3.3



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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°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.2	3.3
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.2	3.3
77.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	2.2	3.3
80°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	2.2	3.3
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.2	3.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.2	3.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.2	3.3
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):

	90°	112.5°	135°	157.5°	180°
0°	436.1	436.1	436.1	436.1	436.1
2.5°	401.4	280.6	223.6	202.4	195.6
5°	363.4	210.2	166.7	143.1	134.2
7.5°	305.2	173.3	125.3	104.0	97.3
10°	247.2	143.1	101.8	85.0	80.5
12.5°	211.4	124.1	95.0	88.3	88.3
15°	196.8	130.9	131.9	158.8	177.8
17.5°	202.4	204.6	319.9	389.1	401.4
20°	290.8	367.9	364.5	331.0	320.9
22.5°	336.5	242.7	183.3	151.0	145.4
25°	166.7	110.8	95.0	87.2	86.2
26°	126.4	92.8	82.7	78.3	76.0
27°	105.1	81.7	73.8	68.2	66.0
28°	94.0	72.7	63.7	58.2	55.9
29°	85.0	62.6	53.7	48.1	46.9
30°	74.9	52.6	44.7	39.1	38.1
31°	63.7	43.6	35.8	32.4	30.3
32°	53.7	35.8	29.1	25.8	23.5
33°	44.7	29.1	24.6	21.3	19.0
34°	38.1	24.6	20.1	16.8	15.6
35°	31.3	20.1	16.8	14.5	13.5
36°	26.8	18.0	13.5	11.1	10.1
37°	23.5	14.5	11.1	9.0	9.0
38°	20.1	12.3	10.1	6.7	6.7
39°	16.8	10.1	7.8	5.6	5.6
40°	14.5	9.0	6.7	4.5	3.3
42.5°	10.1	5.6	4.5	2.2	1.2
45°	6.7	4.5	2.2	1.2	0.0
47.5°	4.5	3.3	2.2	1.2	0.0
50°	3.3	3.3	2.2	0.0	0.0
51°	3.3	2.2	2.2	0.0	0.0
52°	3.3	2.2	1.2	0.0	0.0
53°	3.3	2.2	1.2	0.0	0.0
54°	3.3	2.2	1.2	0.0	0.0
55°	3.3	2.2	1.2	0.0	0.0
57.5°	3.3	2.2	1.2	0.0	0.0
60°	3.3	2.2	2.2	0.0	0.0
61°	3.3	3.3	2.2	0.0	0.0
62°	3.3	3.3	2.2	0.0	0.0
63°	3.3	3.3	2.2	0.0	0.0
64°	3.3	3.3	2.2	1.2	0.0
65°	3.3	3.3	2.2	1.2	0.0
66°	3.3	3.3	2.2	1.2	0.0

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	3.3	3.3	2.2	1.2	0.0
75°	3.3	3.3	2.2	1.2	0.0
77.5°	4.5	3.3	2.2	1.2	0.0
80°	4.5	3.3	2.2	1.2	0.0
82.5°	4.5	3.3	2.2	1.2	0.0
85°	4.5	3.3	2.2	1.2	0.0
87.5°	4.5	3.3	2.2	1.2	0.0
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report



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Peachtree City, GA 30269

Scaled Data Report



— 0°-180° - - 45°-225° - - - 90°-270°

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67.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.3
70°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.2	3.3

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67.5°	3.3	3.3	2.2	1.2	0.0
70°	3.3	3.3	2.2	1.2	0.0

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(END OF REPORT)