

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: P1191611

Luminaire Tested: **LDA4A20927D010TE 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: P1191611
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: LDA4A20927D010TE 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 / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

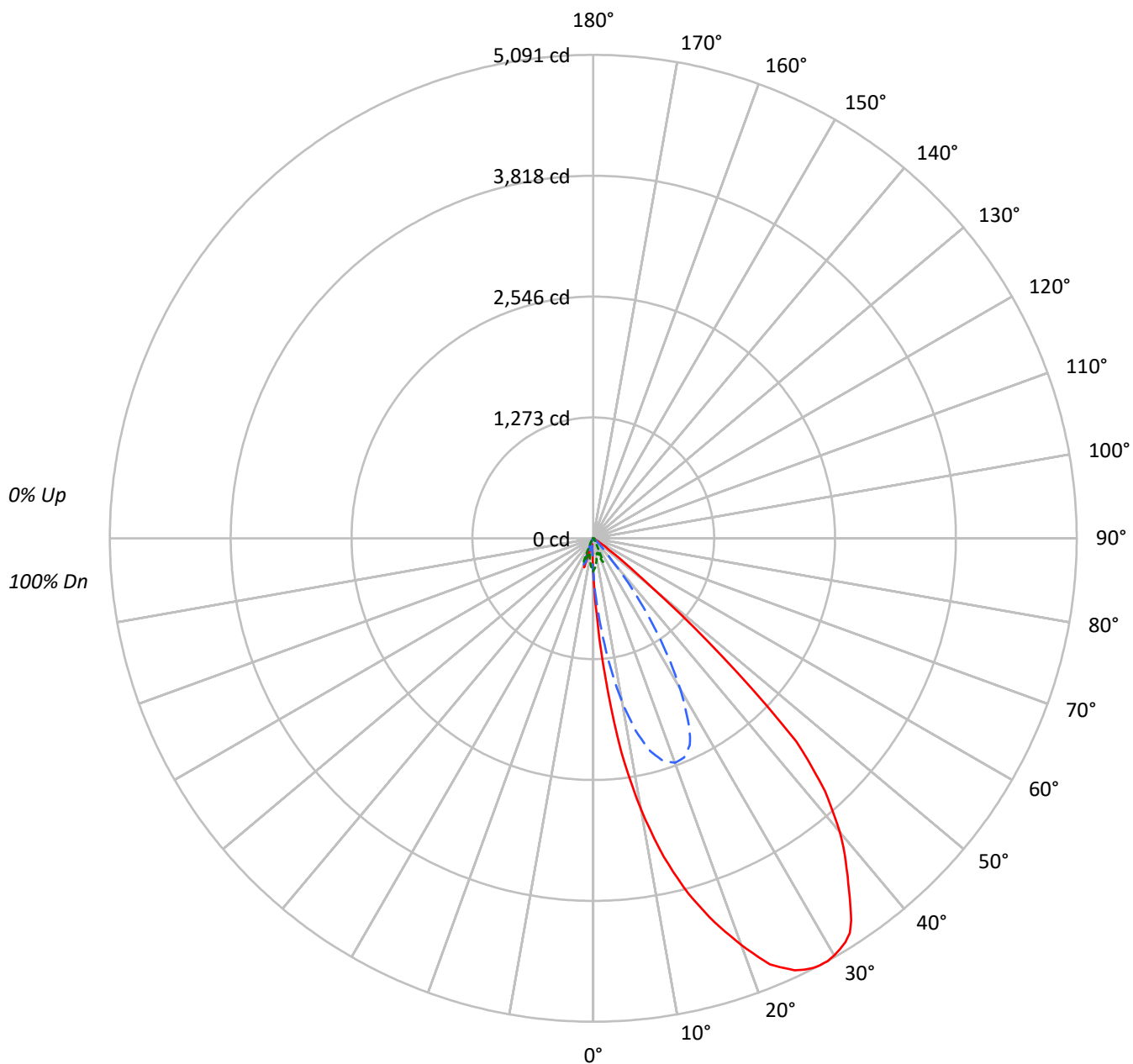
Lumens per Lamp: N/A
Luminaire Lumens: 1883.2 lumens
Efficiency: N/A
Efficacy: 65.4 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P1191611

CATALOG NUMBER: LDA4A20927D010TE LAR35FL 4LA1 30° Tilt

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191611

CATALOG NUMBER: LDA4A20927D010TE LAR35FL 4LA1 30° Tilt

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	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92		
2	106	101	96	92	104	99	95	91	96	92	89	92	90	87	90	87	85	84		
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76		
4	93	85	78	74	92	84	78	73	81	76	72	79	75	71	77	74	70	69		
5	88	78	71	66	86	77	71	66	75	70	65	73	68	65	72	67	64	62		
6	82	72	65	60	81	71	64	60	69	64	59	68	63	59	66	62	58	57		
7	77	66	59	54	76	66	59	54	64	58	54	63	58	54	62	57	53	52		
8	72	61	54	50	71	61	54	49	59	54	49	58	53	49	57	52	49	47		
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43		
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	43134	43134	43134
5°	181144	36068	13323
10°	363934	24812	8091
15°	495029	20151	18197
20°	598264	30597	33774
25°	683274	18183	9404
30°	722462	8560	4358
35°	710619	3779	1611
40°	650329	1868	451
45°	527498	942	0
50°	156373	537	0
55°	28343	602	0
60°	5329	691	0
65°	1313	817	0
70°	325	1010	0
75°	0	1334	0
80°	0	2557	0
85°	0	5095	0

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191611

CATALOG NUMBER: LDA4A20927D010TE LAR35FL 4LA1 30° Tilt

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.6	3.4
10°-20°	328.9	17.5
20°-30°	576.0	30.6
30°-40°	578.5	30.7
40°-50°	304.7	16.2
50°-60°	25.4	1.3
60°-70°	2.6	0.1
70°-80°	1.9	0.1
80°-90°	1.7	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°	968.5	51.4
0°-40°	1546.9	82.1
0°-60°	1877.0	99.7
0°-90°	1883.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1883.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	350	350	350	350	350	
5°	1463	956	291	134	108	187
15°	3877	2320	158	106	142	1107
25°	5020	2403	134	76	69	2297
35°	4719	1044	25	14	11	2918
45°	3024	108	5	2	0	2073
55°	132	12	3	1	0	198
65°	4	2	3	2	0	7
75°	0	2	3	2	0	0
85°	0	2	4	2	0	0
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191611

CATALOG NUMBER: LDA4A20927D010TE LAR35FL 4LA1 30° Tilt

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	349.7	349.7	349.7	349.7	349.7	349.7	349.7	349.7	349.7	349.7	349.7
2.5°	793.4	794.4	795.2	801.5	787.1	783.5	777.3	768.3	738.8	616.8	465.2
5°	1463.0	1473.9	1471.2	1462.2	1439.7	1427.3	1408.5	1388.8	1308.0	956.5	577.3
7.5°	2273.6	2294.2	2289.7	2276.2	2238.6	2221.5	2174.0	2148.1	2026.2	1358.2	660.7
10°	2905.7	2960.3	2961.1	2948.7	2892.2	2867.9	2818.7	2772.0	2617.8	1751.8	699.2
12.5°	3440.0	3440.9	3483.0	3473.1	3407.7	3396.8	3355.7	3285.8	3123.5	2079.9	699.2
15°	3876.6	3935.6	3925.8	3915.1	3846.0	3831.7	3792.3	3727.7	3538.6	2320.1	665.2
17.5°	4237.0	4289.8	4274.6	4262.9	4194.0	4162.5	4119.5	4042.4	3834.4	2462.7	594.4
20°	4557.8	4608.1	4577.7	4557.0	4464.6	4426.1	4363.4	4274.6	4037.0	2515.6	511.9
22.5°	4857.3	4910.3	4871.6	4842.9	4723.8	4649.4	4560.6	4448.5	4168.8	2498.7	468.0
25°	5020.5	5089.5	5052.8	5030.3	4916.5	4829.5	4712.0	4567.7	4244.1	2402.6	352.3
26°	5056.4	5128.9	5094.0	5074.3	4958.6	4866.3	4740.7	4589.3	4250.4	2323.7	271.6
27°	5081.4	5162.1	5121.8	5096.6	4977.5	4878.9	4748.0	4590.1	4240.6	2217.0	216.0
28°	5091.3	5180.0	5130.8	5100.3	4976.6	4869.0	4730.0	4570.4	4214.5	2094.2	183.7
29°	5090.4	5187.3	5129.9	5096.6	4964.9	4845.7	4703.1	4542.6	4178.6	1966.1	165.8
30°	5072.5	5178.3	5121.0	5078.8	4937.1	4808.9	4664.6	4504.1	4138.4	1826.2	148.0
31°	5048.3	5156.7	5096.6	5044.7	4891.5	4752.4	4610.8	4452.1	4084.5	1676.5	135.4
32°	5013.4	5121.8	5055.5	4987.3	4826.9	4681.6	4545.4	4391.2	4019.0	1518.7	120.2
33°	4957.8	5053.6	4976.6	4897.7	4737.2	4601.0	4471.8	4320.4	3944.6	1354.6	104.0
34°	4856.4	4940.7	4860.9	4781.1	4637.6	4511.2	4387.6	4237.0	3857.7	1203.1	89.6
35°	4719.3	4791.0	4719.3	4652.0	4525.5	4408.1	4289.8	4142.8	3752.8	1043.6	77.0
36°	4579.4	4642.1	4575.8	4522.9	4401.9	4297.1	4186.7	4034.4	3634.5	892.1	68.2
37°	4448.5	4505.0	4444.0	4391.2	4287.2	4180.5	4071.0	3915.1	3503.6	746.7	56.5
38°	4318.5	4368.7	4316.7	4257.5	4161.7	4053.2	3942.9	3783.3	3357.5	609.6	48.4
39°	4183.1	4224.4	4174.1	4114.2	4016.4	3908.8	3795.9	3630.8	3189.8	467.1	42.1
40°	4038.9	4077.4	4015.6	3961.7	3864.0	3753.8	3638.1	3466.8	3007.8	312.9	35.9
42.5°	3612.0	3635.3	3583.3	3508.9	3411.2	3290.3	3150.4	2958.5	2426.0	164.9	25.1
45°	3024.0	3028.5	2988.1	2852.7	2721.8	2534.4	2325.6	2037.8	1410.2	107.6	16.1
47.5°	1825.3	1814.6	1750.9	1635.2	1513.3	1315.2	1119.7	921.6	547.8	62.7	10.7
50°	814.9	802.3	771.1	711.0	640.2	566.6	479.6	406.2	266.3	34.0	7.2
51°	590.8	580.1	556.8	511.0	459.0	407.0	346.9	296.7	199.1	27.8	6.2
52°	415.1	408.8	392.7	360.4	331.7	291.3	250.1	218.8	149.7	22.4	4.5
53°	289.6	285.1	275.3	253.7	236.7	207.1	181.1	155.9	108.5	18.0	4.5
54°	196.3	193.6	187.4	173.0	158.7	142.5	123.7	109.3	76.2	14.3	3.6
55°	131.8	130.0	124.7	117.4	109.3	99.5	87.0	76.2	53.7	11.6	2.8
57.5°	48.4	48.4	46.6	43.9	41.3	38.5	34.9	31.4	25.1	7.2	2.8
60°	21.6	20.6	20.6	19.7	18.8	18.0	17.1	15.2	12.6	4.5	2.8
61°	16.1	16.1	15.2	14.3	14.3	13.5	12.6	11.6	9.8	3.6	2.8
62°	11.6	11.6	11.6	10.7	10.7	9.8	9.8	9.0	7.2	2.8	2.8
63°	9.0	9.0	9.0	8.1	8.1	8.1	7.2	7.2	5.4	2.8	2.8
64°	6.2	6.2	6.2	6.2	6.2	6.2	5.4	5.4	4.5	1.7	2.8
65°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.6	1.7	2.8
66°	3.6	3.6	3.6	3.6	3.6	3.6	2.8	2.8	2.8	1.7	2.8



TEST NUMBER: P1191611

CATALOG NUMBER: LDA4A20927D010TE LAR35FL 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
72.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	2.8
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.7	2.8
77.5°	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	1.7	2.8
80°	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	1.7	2.8
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.7	2.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.7	2.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.7	2.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191611

CATALOG NUMBER: LDA4A20927D010TE LAR35FL 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	349.7	349.7	349.7	349.7	349.7
2.5°	321.9	225.0	179.3	162.3	157.0
5°	291.3	168.5	133.6	114.8	107.6
7.5°	244.7	139.0	100.3	83.4	78.0
10°	198.1	114.8	81.5	68.2	64.6
12.5°	169.4	99.5	76.2	70.8	70.8
15°	157.8	104.8	105.8	127.3	142.5
17.5°	162.3	164.1	256.4	312.0	321.9
20°	233.1	295.0	292.2	265.4	257.3
22.5°	269.9	194.6	147.0	121.1	116.6
25°	133.6	88.8	76.2	69.9	69.1
26°	101.4	74.4	66.3	62.7	61.0
27°	84.3	65.4	59.2	54.7	52.9
28°	75.3	58.2	51.1	46.6	44.9
29°	68.2	50.2	43.0	38.5	37.6
30°	60.1	42.1	35.9	31.4	30.6
31°	51.1	34.9	28.7	26.1	24.2
32°	43.0	28.7	23.3	20.6	18.8
33°	35.9	23.3	19.7	17.1	15.2
34°	30.6	19.7	16.1	13.5	12.6
35°	25.1	16.1	13.5	11.6	10.7
36°	21.6	14.3	10.7	9.0	8.1
37°	18.8	11.6	9.0	7.2	7.2
38°	16.1	9.8	8.1	5.4	5.4
39°	13.5	8.1	6.2	4.5	4.5
40°	11.6	7.2	5.4	3.6	2.8
42.5°	8.1	4.5	3.6	1.7	0.9
45°	5.4	3.6	1.7	0.9	0.0
47.5°	3.6	2.8	1.7	0.9	0.0
50°	2.8	2.8	1.7	0.0	0.0
51°	2.8	1.7	1.7	0.0	0.0
52°	2.8	1.7	0.9	0.0	0.0
53°	2.8	1.7	0.9	0.0	0.0
54°	2.8	1.7	0.9	0.0	0.0
55°	2.8	1.7	0.9	0.0	0.0
57.5°	2.8	1.7	0.9	0.0	0.0
60°	2.8	1.7	1.7	0.0	0.0
61°	2.8	2.8	1.7	0.0	0.0
62°	2.8	2.8	1.7	0.0	0.0
63°	2.8	2.8	1.7	0.0	0.0
64°	2.8	2.8	1.7	0.9	0.0
65°	2.8	2.8	1.7	0.9	0.0
66°	2.8	2.8	1.7	0.9	0.0



TEST NUMBER: P1191611

CATALOG NUMBER: LDA4A20927D010TE LAR35FL 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	2.8	2.8	1.7	0.9	0.0
75°	2.8	2.8	1.7	0.9	0.0
77.5°	3.6	2.8	1.7	0.9	0.0
80°	3.6	2.8	1.7	0.9	0.0
82.5°	3.6	2.8	1.7	0.9	0.0
85°	3.6	2.8	1.7	0.9	0.0
87.5°	3.6	2.8	1.7	0.9	0.0
90°	0.0	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



Report Generated By 670245859 / DESKTOP-T8S5UU9

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



— 0°-180° - - 45°-225° - - - 90°-270°

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



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

Scaled Data Report



67.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.8
70°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	1.7	2.8

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



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

Scaled Data Report



67.5°	2.8	2.8	1.7	0.9	0.0
70°	2.8	2.8	1.7	0.9	0.0

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

Scaled Data Report



(END OF REPORT)