

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: P1191917

Luminaire Tested: **LDA4A35935D010TE LAR35FL 4LA1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1191917
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: LDA4A35935D010TE 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 / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

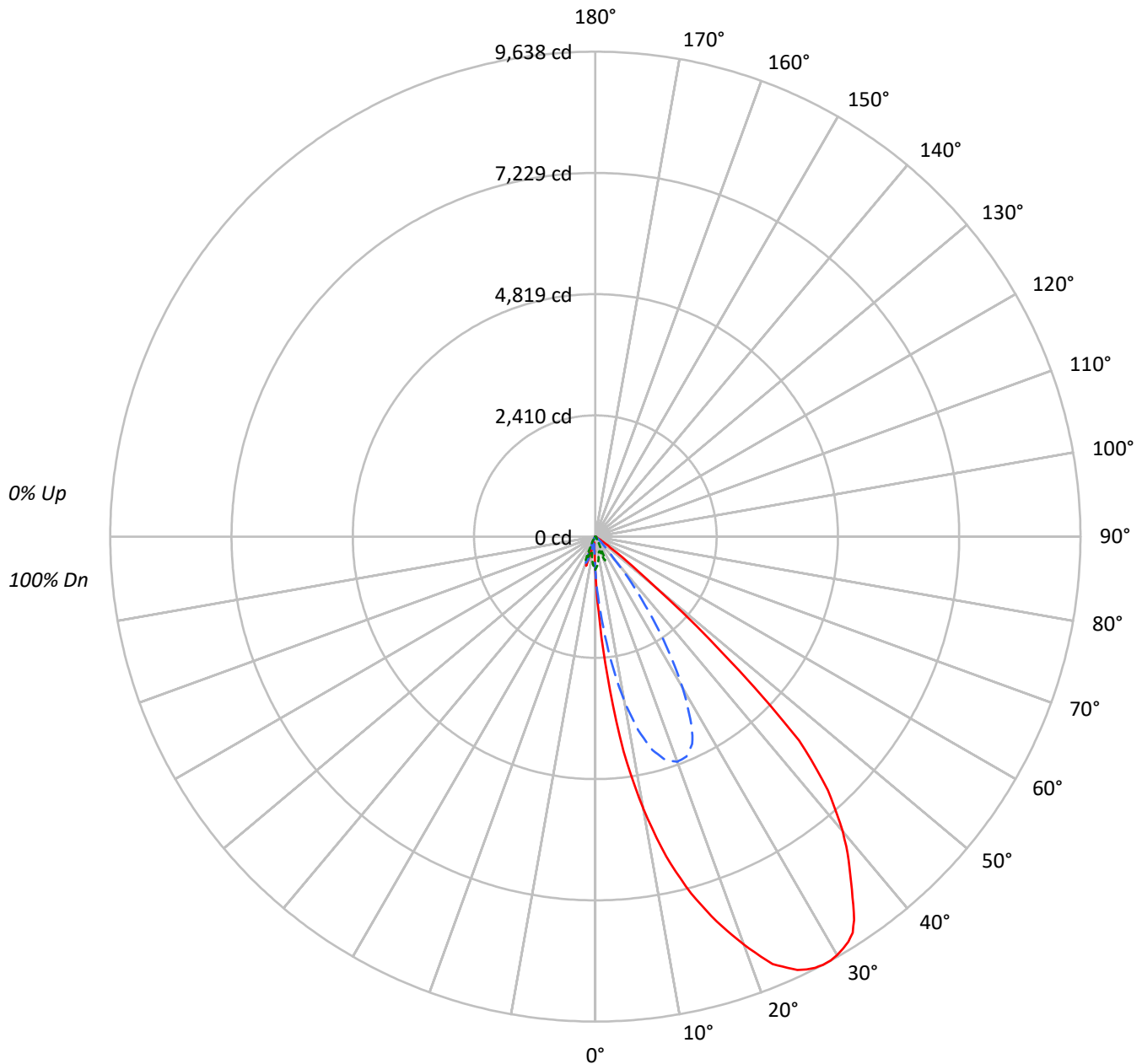
Lumens per Lamp: N/A
Luminaire Lumens: 3564.8 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47.1
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: P1191917

CATALOG NUMBER: LDA4A35935D010TE LAR35FL 4LA1 30° Tilt

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191917

CATALOG NUMBER: LDA4A35935D010TE 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
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°	81630	81630	81630
5°	342923	68285	25209
10°	688891	46981	15305
15°	937065	38143	34465
20°	1132526	57913	63924
25°	1293424	34419	17788
30°	1367601	16208	8218
35°	1345166	7152	3057
40°	1231018	3542	821
45°	998530	1779	0
50°	296031	979	0
55°	53633	1097	0
60°	10040	1258	0
65°	2452	1488	0
70°	613	1839	0
75°	0	2431	0
80°	0	4830	0
85°	0	9624	0



TEST NUMBER: P1191917

CATALOG NUMBER: LDA4A35935D010TE LAR35FL 4LA1 30° Tilt

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.3	3.4
10°-20°	622.6	17.5
20°-30°	1090.4	30.6
30°-40°	1095.0	30.7
40°-50°	576.8	16.2
50°-60°	48.1	1.3
60°-70°	4.9	0.1
70°-80°	3.5	0.1
80°-90°	3.2	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°	1833.3	51.4
0°-40°	2928.3	82.1
0°-60°	3553.2	99.7
0°-90°	3564.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3564.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	662	662	662	662	662	
5°	2770	1811	552	253	204	355
15°	7338	4392	299	200	270	2095
25°	9504	4548	253	144	131	4349
35°	8933	1975	48	26	20	5524
45°	5724	204	10	4	0	3923
55°	249	22	5	2	0	375
65°	8	4	5	4	0	12
75°	0	4	5	4	0	1
85°	0	4	7	4	0	0
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191917

CATALOG NUMBER: LDA4A35935D010TE 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°	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8	661.8
2.5°	1502.0	1503.6	1505.3	1517.2	1490.1	1483.3	1471.4	1454.3	1398.4	1167.6	880.8
5°	2769.6	2789.9	2785.0	2767.9	2725.5	2701.8	2666.1	2628.9	2476.1	1810.7	1093.0
7.5°	4303.8	4342.9	4334.4	4308.9	4237.7	4205.4	4115.5	4066.2	3835.5	2571.1	1250.8
10°	5500.2	5603.7	5605.5	5581.7	5474.9	5428.9	5335.6	5247.3	4955.4	3316.2	1323.7
12.5°	6511.8	6513.4	6593.2	6574.5	6450.6	6430.3	6352.2	6219.7	5912.6	3937.2	1323.7
15°	7338.2	7450.2	7431.5	7411.1	7280.5	7253.4	7178.6	7056.5	6698.3	4392.1	1259.2
17.5°	8020.4	8120.6	8091.7	8069.7	7939.0	7879.6	7798.1	7652.1	7258.5	4661.9	1125.2
20°	8628.0	8723.1	8665.4	8626.3	8451.5	8378.4	8259.7	8091.7	7642.0	4762.1	969.0
22.5°	9194.7	9295.0	9222.0	9167.6	8941.9	8801.1	8633.1	8420.9	7891.4	4729.8	885.9
25°	9503.7	9634.3	9564.7	9522.4	9306.9	9142.2	8919.9	8646.7	8033.9	4548.2	667.0
26°	9571.6	9709.1	9642.9	9605.5	9386.6	9211.8	8974.1	8687.4	8045.9	4398.9	514.2
27°	9619.1	9771.8	9695.5	9647.9	9422.1	9235.6	8987.7	8689.0	8027.2	4196.8	409.0
28°	9637.8	9805.8	9712.4	9654.7	9420.5	9216.9	8953.8	8651.8	7978.0	3964.5	348.0
29°	9636.0	9819.4	9710.7	9647.9	9398.5	9172.7	8902.9	8599.2	7910.1	3721.7	313.9
30°	9602.1	9802.3	9693.7	9614.0	9345.9	9103.1	8829.9	8526.1	7833.7	3456.9	280.0
31°	9556.3	9761.7	9647.9	9549.5	9259.2	8996.3	8728.0	8427.7	7732.0	3173.6	256.3
32°	9490.1	9695.5	9569.8	9440.8	9137.2	8862.2	8604.2	8312.3	7608.1	2874.8	227.4
33°	9384.9	9566.5	9420.5	9271.1	8967.3	8709.5	8465.1	8178.3	7467.2	2564.4	196.8
34°	9193.1	9352.7	9201.5	9050.5	8779.0	8539.7	8305.5	8020.4	7302.6	2277.4	169.7
35°	8933.4	9069.2	8933.4	8806.1	8567.0	8344.5	8120.6	7842.3	7104.0	1975.4	146.0
36°	8668.7	8787.6	8661.9	8561.8	8332.6	8134.2	7925.4	7636.9	6879.9	1688.5	129.0
37°	8420.9	8527.9	8412.5	8312.3	8115.5	7913.5	7706.5	7411.1	6632.2	1413.7	106.8
38°	8174.8	8269.9	8171.5	8059.4	7877.8	7672.6	7463.7	7161.7	6355.5	1154.0	91.6
39°	7918.7	7996.7	7901.6	7787.9	7603.0	7399.2	7185.4	6873.2	6038.2	884.1	79.7
40°	7645.3	7718.4	7601.3	7499.4	7314.4	7105.7	6886.7	6562.6	5693.7	592.2	67.8
42.5°	6837.6	6881.7	6783.2	6642.4	6457.4	6228.3	5963.6	5600.4	4592.2	312.2	47.5
45°	5724.3	5732.7	5656.4	5400.1	5152.4	4797.6	4402.2	3857.5	2669.5	203.6	30.6
47.5°	3455.3	3434.9	3314.4	3095.6	2864.7	2489.6	2119.7	1744.6	1036.9	118.7	20.3
50°	1542.7	1518.8	1459.5	1345.8	1211.7	1072.5	907.9	768.8	504.1	64.5	13.6
51°	1118.5	1098.0	1054.0	967.3	868.9	770.5	656.7	561.8	376.7	52.6	11.9
52°	785.7	773.8	743.4	682.2	627.9	551.5	473.5	414.1	283.5	42.5	8.4
53°	548.2	539.6	520.9	480.3	448.0	392.0	342.8	295.4	205.4	33.9	8.4
54°	371.6	366.6	354.7	327.6	300.3	269.9	234.2	207.1	144.2	27.1	6.8
55°	249.4	246.1	235.8	222.3	207.1	188.4	164.6	144.2	101.9	22.0	5.1
57.5°	91.6	91.6	88.3	83.2	78.1	72.9	66.2	59.4	47.5	13.6	5.1
60°	40.7	39.0	39.0	37.4	35.6	33.9	32.2	28.8	23.8	8.4	5.1
61°	30.6	30.6	28.8	27.1	27.1	25.5	23.8	22.0	18.7	6.8	5.1
62°	22.0	22.0	22.0	20.3	20.3	18.7	18.7	17.0	13.6	5.1	5.1
63°	17.0	17.0	17.0	15.2	15.2	15.2	13.6	13.6	10.2	5.1	5.1
64°	11.9	11.9	11.9	11.9	11.9	11.9	10.2	10.2	8.4	3.5	5.1
65°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	6.8	3.5	5.1
66°	6.8	6.8	6.8	6.8	6.8	6.8	5.1	5.1	5.1	3.5	5.1



TEST NUMBER: P1191917

CATALOG NUMBER: LDA4A35935D010TE 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°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.5	5.1
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	3.5	5.1
77.5°	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	3.5	5.1
80°	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	3.5	5.1
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	3.5	5.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	3.5	5.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.7	1.7	1.7	3.5	5.1
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: P1191917

CATALOG NUMBER: LDA4A35935D010TE LAR35FL 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	661.8	661.8	661.8	661.8	661.8
2.5°	609.3	426.0	339.4	307.1	297.0
5°	551.5	319.0	252.9	217.3	203.6
7.5°	463.2	263.1	190.0	157.8	147.7
10°	375.1	217.3	154.5	129.0	122.2
12.5°	320.7	188.4	144.2	134.1	134.1
15°	298.7	198.6	200.3	241.0	269.9
17.5°	307.1	310.6	485.4	590.6	609.3
20°	441.2	558.3	553.2	502.3	487.0
22.5°	510.9	368.3	278.3	229.1	220.6
25°	252.9	168.0	144.2	132.3	130.7
26°	191.8	140.9	125.5	118.7	115.4
27°	159.6	123.9	112.0	103.5	100.1
28°	142.6	110.3	96.7	88.3	84.8
29°	129.0	95.1	81.5	72.9	71.3
30°	113.8	79.7	67.8	59.4	57.7
31°	96.7	66.2	54.2	49.3	45.8
32°	81.5	54.2	44.2	39.0	35.6
33°	67.8	44.2	37.4	32.2	28.8
34°	57.7	37.4	30.6	25.5	23.8
35°	47.5	30.6	25.5	22.0	20.3
36°	40.7	27.1	20.3	17.0	15.2
37°	35.6	22.0	17.0	13.6	13.6
38°	30.6	18.7	15.2	10.2	10.2
39°	25.5	15.2	11.9	8.4	8.4
40°	22.0	13.6	10.2	6.8	5.1
42.5°	15.2	8.4	6.8	3.5	1.7
45°	10.2	6.8	3.5	1.7	0.0
47.5°	6.8	5.1	3.5	1.7	0.0
50°	5.1	5.1	3.5	0.0	0.0
51°	5.1	3.5	3.5	0.0	0.0
52°	5.1	3.5	1.7	0.0	0.0
53°	5.1	3.5	1.7	0.0	0.0
54°	5.1	3.5	1.7	0.0	0.0
55°	5.1	3.5	1.7	0.0	0.0
57.5°	5.1	3.5	1.7	0.0	0.0
60°	5.1	3.5	3.5	0.0	0.0
61°	5.1	5.1	3.5	0.0	0.0
62°	5.1	5.1	3.5	0.0	0.0
63°	5.1	5.1	3.5	0.0	0.0
64°	5.1	5.1	3.5	1.7	0.0
65°	5.1	5.1	3.5	1.7	0.0
66°	5.1	5.1	3.5	1.7	0.0



TEST NUMBER: P1191917

CATALOG NUMBER: LDA4A35935D010TE LAR35FL 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	5.1	5.1	3.5	1.7	0.0
75°	5.1	5.1	3.5	1.7	0.0
77.5°	6.8	5.1	3.5	1.7	0.0
80°	6.8	5.1	3.5	1.7	0.0
82.5°	6.8	5.1	3.5	1.7	0.0
85°	6.8	5.1	3.5	1.7	0.0
87.5°	6.8	5.1	3.5	1.7	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





— 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





67.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	5.1
70°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.5	5.1

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°	5.1	5.1	3.5	1.7	0.0
70°	5.1	5.1	3.5	1.7	0.0

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)