

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: P1191827

Luminaire Tested: **LDA4A30935D010TE LAR35FL 4LA1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1191827
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: LDA4A30935D010TE 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

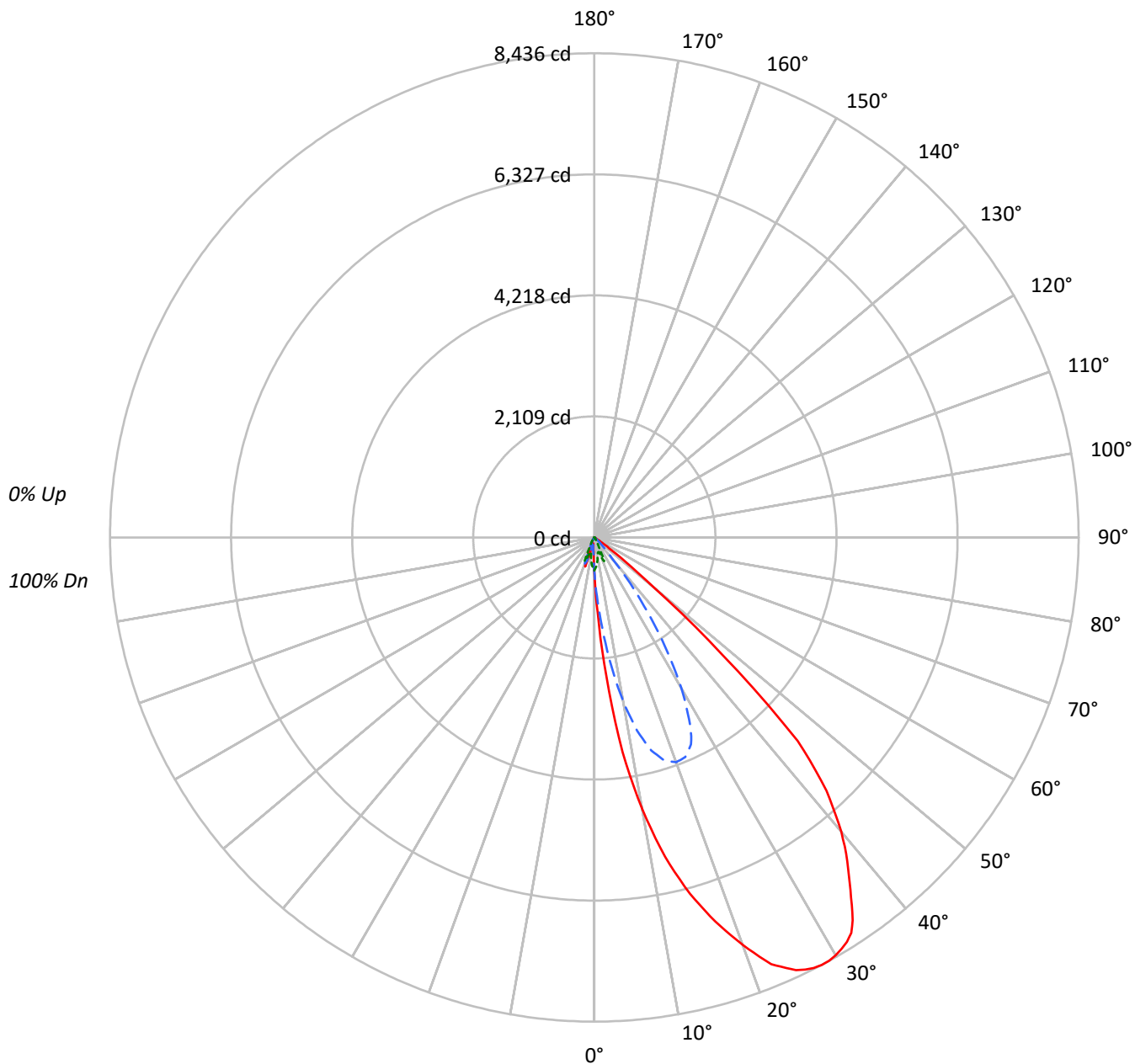
Lumens per Lamp: N/A
Luminaire Lumens: 3120.3 lumens
Efficiency: N/A
Efficacy: 79.2 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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°	71454	71454	71454
5°	300157	59779	22064
10°	602984	41119	13402
15°	820209	33380	30162
20°	991288	50693	55957
25°	1132122	30118	15569
30°	1197044	14186	7193
35°	1177423	6249	2680
40°	1077505	3108	725
45°	873999	1570	0
50°	259111	864	0
55°	46945	968	0
60°	8782	1110	0
65°	2160	1313	0
70°	541	1623	0
75°	0	2145	0
80°	0	4191	0
85°	0	8350	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.3	3.4
10°-20°	545.0	17.5
20°-30°	954.4	30.6
30°-40°	958.5	30.7
40°-50°	504.9	16.2
50°-60°	42.1	1.3
60°-70°	4.3	0.1
70°-80°	3.1	0.1
80°-90°	2.8	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°	1604.6	51.4
0°-40°	2563.1	82.1
0°-60°	3110.1	99.7
0°-90°	3120.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3120.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	579	579	579	579	579	
5°	2424	1585	483	221	178	310
15°	6423	3844	261	175	236	1834
25°	8318	3981	221	126	114	3806
35°	7819	1729	42	22	18	4835
45°	5010	178	9	3	0	3434
55°	218	19	4	2	0	328
65°	7	3	4	3	0	11
75°	0	3	4	3	0	1
85°	0	3	6	3	0	0
90°	0	0	0	0	0	

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CATALOG NUMBER: LDA4A30935D010TE 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°	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3	579.3
2.5°	1314.7	1316.1	1317.6	1328.0	1304.2	1298.3	1287.9	1273.0	1224.0	1022.0	771.0
5°	2424.2	2442.0	2437.7	2422.8	2385.6	2364.9	2333.6	2301.0	2167.3	1584.9	956.7
7.5°	3767.1	3801.3	3793.9	3771.6	3709.2	3681.0	3602.2	3559.1	3357.1	2250.5	1094.8
10°	4814.3	4904.9	4906.5	4885.6	4792.1	4751.9	4670.2	4592.9	4337.4	2902.6	1158.6
12.5°	5699.7	5701.2	5770.9	5754.6	5646.2	5628.3	5560.0	5444.1	5175.3	3446.2	1158.6
15°	6423.1	6521.1	6504.7	6486.9	6372.5	6348.8	6283.4	6176.5	5863.0	3844.4	1102.2
17.5°	7020.2	7107.9	7082.6	7063.3	6948.9	6897.0	6825.6	6697.8	6353.3	4080.5	984.9
20°	7552.0	7635.2	7584.7	7550.5	7397.5	7333.6	7229.6	7082.6	6689.0	4168.2	848.1
22.5°	8048.1	8135.8	8071.9	8024.3	7826.7	7703.5	7556.5	7370.8	6907.3	4140.0	775.4
25°	8318.5	8432.8	8371.9	8334.8	8146.2	8002.0	7807.5	7568.3	7032.0	3981.0	583.8
26°	8378.0	8498.2	8440.3	8407.6	8216.0	8063.0	7855.0	7604.0	7042.5	3850.3	450.0
27°	8419.5	8553.1	8486.4	8444.7	8247.1	8083.8	7866.8	7605.4	7026.1	3673.4	358.0
28°	8435.9	8582.9	8501.2	8450.6	8245.7	8067.5	7837.2	7572.8	6983.1	3470.1	304.6
29°	8434.3	8594.8	8499.7	8444.7	8226.4	8028.8	7792.6	7526.8	6923.6	3257.6	274.7
30°	8404.6	8579.9	8484.8	8415.0	8180.4	7967.9	7728.7	7462.8	6856.7	3025.8	245.1
31°	8364.5	8544.3	8444.7	8358.6	8104.5	7874.4	7639.6	7376.7	6767.7	2777.8	224.4
32°	8306.6	8486.4	8376.4	8263.5	7997.7	7757.0	7531.2	7275.7	6659.3	2516.3	199.0
33°	8214.5	8373.5	8245.7	8114.9	7849.0	7623.4	7409.4	7158.4	6536.0	2244.6	172.3
34°	8046.6	8186.3	8054.0	7921.8	7684.2	7474.7	7269.7	7020.2	6391.9	1993.4	148.5
35°	7819.4	7938.2	7819.4	7707.9	7498.6	7303.9	7107.9	6864.3	6218.1	1729.1	127.8
36°	7587.6	7691.7	7581.7	7494.1	7293.5	7119.8	6937.1	6684.5	6021.9	1478.0	112.9
37°	7370.8	7464.4	7363.4	7275.7	7103.4	6926.6	6745.4	6486.9	5805.1	1237.4	93.5
38°	7155.4	7238.6	7152.5	7054.3	6895.4	6715.7	6532.9	6268.6	5562.9	1010.1	80.2
39°	6931.1	6999.5	6916.2	6816.6	6654.8	6476.5	6289.3	6016.0	5285.1	773.9	69.8
40°	6691.9	6755.8	6653.4	6564.2	6402.2	6219.5	6027.9	5744.2	4983.6	518.4	59.4
42.5°	5984.9	6023.5	5937.3	5814.1	5652.1	5451.6	5219.9	4902.0	4019.6	273.3	41.5
45°	5010.4	5017.8	4951.0	4726.7	4509.8	4199.3	3853.2	3376.4	2336.6	178.2	26.8
47.5°	3024.4	3006.6	2901.0	2709.5	2507.4	2179.1	1855.3	1527.0	907.6	103.9	17.8
50°	1350.3	1329.4	1277.5	1178.0	1060.6	938.7	794.7	673.0	441.2	56.5	11.9
51°	979.0	961.0	922.5	846.7	760.5	674.4	574.8	491.7	329.8	46.0	10.4
52°	687.7	677.3	650.7	597.1	549.6	482.8	414.4	362.5	248.1	37.2	7.4
53°	479.9	472.3	456.0	420.4	392.1	343.1	300.1	258.5	179.8	29.7	7.4
54°	325.3	320.9	310.5	286.8	262.9	236.2	205.0	181.2	126.2	23.7	5.9
55°	218.3	215.4	206.4	194.6	181.2	164.9	144.0	126.2	89.2	19.3	4.5
57.5°	80.2	80.2	77.3	72.8	68.3	63.8	57.9	52.0	41.5	11.9	4.5
60°	35.6	34.2	34.2	32.7	31.1	29.7	28.2	25.2	20.8	7.4	4.5
61°	26.8	26.8	25.2	23.7	23.7	22.3	20.8	19.3	16.4	5.9	4.5
62°	19.3	19.3	19.3	17.8	17.8	16.4	16.4	14.9	11.9	4.5	4.5
63°	14.9	14.9	14.9	13.3	13.3	13.3	11.9	11.9	9.0	4.5	4.5
64°	10.4	10.4	10.4	10.4	10.4	10.4	9.0	9.0	7.4	3.0	4.5
65°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	5.9	3.0	4.5
66°	5.9	5.9	5.9	5.9	5.9	5.9	4.5	4.5	4.5	3.0	4.5



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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°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	4.5
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	3.0	4.5
77.5°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	3.0	4.5
80°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	3.0	4.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	3.0	4.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	3.0	4.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	3.0	4.5
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°	579.3	579.3	579.3	579.3	579.3
2.5°	533.3	372.9	297.0	268.8	260.0
5°	482.8	279.2	221.3	190.2	178.2
7.5°	405.5	230.3	166.3	138.1	129.3
10°	328.3	190.2	135.2	112.9	107.0
12.5°	280.7	164.9	126.2	117.4	117.4
15°	261.4	173.8	175.3	210.9	236.2
17.5°	268.8	271.8	424.9	516.9	533.3
20°	386.2	488.7	484.2	439.6	426.3
22.5°	447.1	322.4	243.6	200.5	193.1
25°	221.3	147.1	126.2	115.8	114.4
26°	167.9	123.3	109.9	103.9	101.0
27°	139.7	108.4	98.0	90.6	87.6
28°	124.8	96.6	84.7	77.3	74.3
29°	112.9	83.2	71.4	63.8	62.4
30°	99.6	69.8	59.4	52.0	50.5
31°	84.7	57.9	47.5	43.1	40.1
32°	71.4	47.5	38.6	34.2	31.1
33°	59.4	38.6	32.7	28.2	25.2
34°	50.5	32.7	26.8	22.3	20.8
35°	41.5	26.8	22.3	19.3	17.8
36°	35.6	23.7	17.8	14.9	13.3
37°	31.1	19.3	14.9	11.9	11.9
38°	26.8	16.4	13.3	9.0	9.0
39°	22.3	13.3	10.4	7.4	7.4
40°	19.3	11.9	9.0	5.9	4.5
42.5°	13.3	7.4	5.9	3.0	1.5
45°	9.0	5.9	3.0	1.5	0.0
47.5°	5.9	4.5	3.0	1.5	0.0
50°	4.5	4.5	3.0	0.0	0.0
51°	4.5	3.0	3.0	0.0	0.0
52°	4.5	3.0	1.5	0.0	0.0
53°	4.5	3.0	1.5	0.0	0.0
54°	4.5	3.0	1.5	0.0	0.0
55°	4.5	3.0	1.5	0.0	0.0
57.5°	4.5	3.0	1.5	0.0	0.0
60°	4.5	3.0	3.0	0.0	0.0
61°	4.5	4.5	3.0	0.0	0.0
62°	4.5	4.5	3.0	0.0	0.0
63°	4.5	4.5	3.0	0.0	0.0
64°	4.5	4.5	3.0	1.5	0.0
65°	4.5	4.5	3.0	1.5	0.0
66°	4.5	4.5	3.0	1.5	0.0



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	4.5	4.5	3.0	1.5	0.0
75°	4.5	4.5	3.0	1.5	0.0
77.5°	5.9	4.5	3.0	1.5	0.0
80°	5.9	4.5	3.0	1.5	0.0
82.5°	5.9	4.5	3.0	1.5	0.0
85°	5.9	4.5	3.0	1.5	0.0
87.5°	5.9	4.5	3.0	1.5	0.0
90°	0.0	0.0	0.0	0.0	0.0

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— 0°-180° - - 45°-225° - - - 90°-270°

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67.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.5
70°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	4.5

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67.5°	4.5	4.5	3.0	1.5	0.0
70°	4.5	4.5	3.0	1.5	0.0

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(END OF REPORT)