

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: P1191811

Luminaire Tested: **LDA4A30930D010TE LAR35FL 4LAL1 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: P1191811
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26106)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A30930D010TE LAR35FL 4LAL1 30° Tilt
Description: PORTFOLIO 4" Lensed Adjustable, Self-flanged, 35° Flood Optic, at 30° tilt. --- 27.9W
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

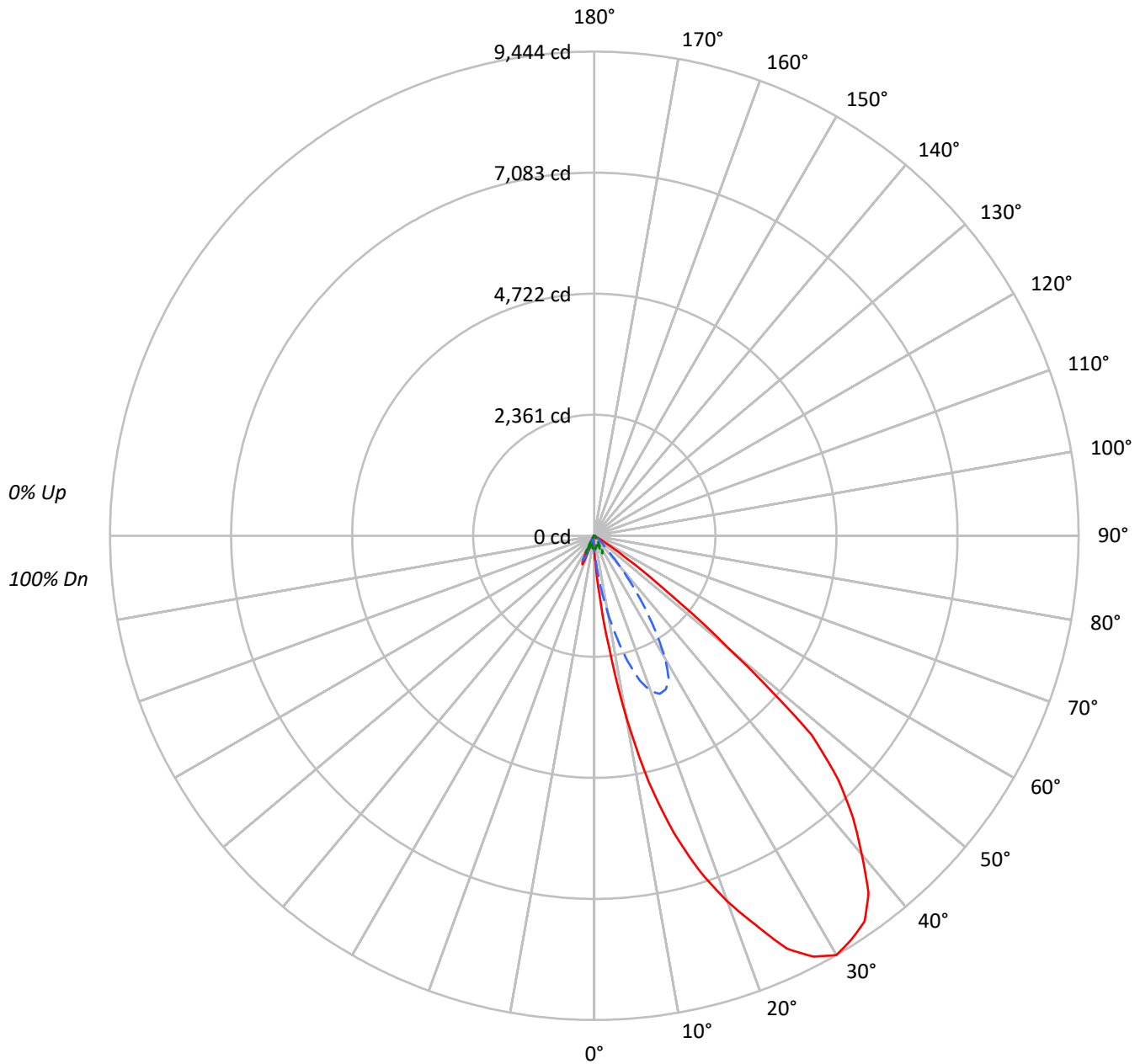
Lumens per Lamp: N/A
Luminaire Lumens: 3432.2 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	112	109	106	103	110	107	104	102	103	101	99		99	97	96		95
2	105	99	94	90	103	97	93	89	94	90	87		91	88	85		88
3	98	90	84	79	96	89	83	79	86	81	77		84	79	76		81
4	91	82	75	70	89	81	75	70	79	73	69		77	72	68		75
5	85	75	68	62	83	74	67	62	72	66	61		70	65	61		68
6	79	68	61	56	78	67	60	55	66	60	55		64	59	55		63
7	74	62	55	50	72	62	55	50	60	54	49		59	53	49		58
8	69	57	50	45	68	57	50	45	55	49	44		54	48	44		53
9	64	53	45	40	63	52	45	40	51	45	40		50	44	40		49
10	60	48	41	37	59	48	41	37	47	41	36		46	40	36		45

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	34796	34796	34796
5°	140173	32861	15390
10°	451896	27555	8843
15°	766602	21874	6870
20°	996355	19610	20726
25°	1209098	51662	73383
30°	1345012	18188	19384
35°	1383518	10887	9095
40°	1306341	4589	3253
45°	1174066	2651	872
50°	660760	1612	0
55°	164016	1075	0
60°	25286	1233	0
65°	5896	1459	0
70°	1190	1803	0
75°	0	2383	0
80°	0	4759	0
85°	0	9482	2406



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	1.7
10°-20°	421.2	12.3
20°-30°	973.0	28.3
30°-40°	1091.4	31.8
40°-50°	761.5	22.2
50°-60°	113.7	3.3
60°-70°	7.4	0.2
70°-80°	3.7	0.1
80°-90°	3.6	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°	1450.9	42.3
0°-40°	2542.3	74.1
0°-60°	3417.5	99.6
0°-90°	3432.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3432.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	282	282	282	282	282	
5°	1132	662	265	155	124	187
15°	6003	2555	171	66	54	1716
25°	8884	3302	380	529	539	4062
35°	9188	1717	72	60	60	5652
45°	6731	259	15	8	5	4938
55°	763	34	5	3	0	1002
65°	20	5	5	3	0	31
75°	0	3	5	5	0	1
85°	0	3	7	5	2	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
0°	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1
2.5°	514.0	509.0	495.6	492.1	503.9	493.8	498.8	509.0	498.8	487.1	498.8
5°	1132.1	1160.7	1132.1	1127.1	1147.3	1128.8	1137.1	1155.7	1130.4	1106.9	1123.8
7.5°	2185.3	2203.8	2123.2	2151.7	2145.0	2150.0	2155.1	2155.1	2140.0	2098.0	2121.5
10°	3608.0	3621.5	3514.0	3550.9	3502.2	3550.9	3542.6	3505.5	3514.0	3456.9	3487.1
12.5°	4928.3	4972.0	4864.5	4899.7	4841.0	4896.4	4874.5	4864.5	4778.8	4778.8	4810.7
15°	6003.3	6102.4	6005.1	6042.0	5974.9	6052.0	5991.6	6018.5	5941.2	5845.5	5929.5
17.5°	6873.5	6970.8	6880.2	6925.5	6863.3	6923.9	6853.3	6910.4	6811.2	6742.4	6799.5
20°	7590.6	7662.9	7555.4	7619.3	7545.4	7605.8	7528.5	7604.1	7488.3	7437.8	7471.4
22.5°	8215.6	8244.1	8188.7	8296.2	8151.7	8215.6	8123.1	8200.4	8062.7	7998.9	8007.3
25°	8884.1	8947.9	8842.1	8882.3	8781.6	8825.2	8721.2	8793.3	8622.0	8531.4	8512.9
27.5°	9255.2	9346.0	9251.9	9297.3	9194.8	9231.8	9127.7	9231.8	9057.1	8968.1	8947.9
30°	9443.5	9487.1	9426.6	9456.9	9341.0	9359.4	9251.9	9364.4	9189.8	9110.8	9100.8
32.5°	9334.2	9421.6	9342.7	9381.3	9273.8	9292.3	9188.1	9309.0	9134.4	9062.1	9026.9
35°	9188.1	9277.1	9203.3	9243.5	9144.4	9157.9	9047.0	9152.9	8951.3	8862.3	8786.6
37.5°	8783.3	8867.3	8805.2	8818.5	8722.9	8712.7	8593.5	8682.5	8486.0	8410.4	8360.0
40°	8113.1	8188.7	8138.3	8166.8	8071.0	8049.3	7968.7	8051.0	7898.1	7842.7	7772.1
42.5°	7471.4	7533.5	7486.6	7531.9	7424.4	7395.8	7323.7	7427.7	7254.7	7209.4	7159.1
45°	6730.6	6769.3	6732.4	6771.0	6668.5	6623.1	6557.6	6646.6	6477.0	6435.1	6325.8
47.5°	5751.4	5709.3	5702.6	5739.7	5612.0	5517.9	5457.4	5571.6	5326.4	5244.1	5118.2
50°	3443.4	3514.0	3544.2	3519.0	3431.7	3302.4	3204.9	3344.3	3213.4	3011.7	2810.2
52.5°	1773.8	1694.8	1711.7	1720.0	1615.9	1577.3	1545.4	1577.3	1474.8	1422.7	1295.0
55°	762.7	725.6	739.0	744.1	724.0	676.9	660.2	680.3	633.3	613.1	561.0
57.5°	282.1	282.1	273.8	277.1	270.4	253.6	250.2	258.7	243.6	238.5	218.4
60°	102.5	102.5	102.5	102.5	94.0	92.3	92.3	95.8	90.7	89.0	82.3
62.5°	43.7	45.4	41.9	43.7	41.9	40.4	41.9	40.4	40.4	38.6	38.6
65°	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	18.5	18.5
67.5°	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	8.4	8.4	8.4
70°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1
2.5°	483.8	482.1	488.8	482.1	470.4	463.6	471.9	455.2	389.6	324.2	275.4
5°	1093.5	1085.1	1073.4	1076.7	1048.1	1024.6	1024.6	979.2	661.7	376.3	265.4
7.5°	2072.8	2052.6	1966.9	2029.2	1968.6	1921.7	1889.7	1797.3	1070.0	431.7	245.2
10°	3423.2	3388.0	3327.6	3339.3	3240.1	3161.3	3065.5	2910.9	1538.6	480.4	220.0
12.5°	4755.3	4720.1	4558.8	4651.2	4518.4	4441.2	4279.9	4098.6	2044.2	503.9	196.5
15°	5885.8	5855.5	5679.1	5766.4	5603.6	5531.4	5323.0	5121.5	2554.9	495.6	171.3
17.5°	6764.3	6759.3	6556.0	6643.3	6463.5	6404.8	6161.2	5963.0	2968.0	458.6	154.6
20°	7441.2	7429.5	7224.5	7311.8	7115.3	7058.2	6749.1	6540.8	3230.1	408.2	149.4
22.5°	7975.4	7951.8	7731.8	7807.4	7587.3	7513.5	7172.4	6955.8	3337.6	376.3	184.8
25°	8455.8	8413.7	8163.5	8222.3	7980.4	7995.4	7483.1	7244.7	3302.4	423.3	379.6
27.5°	8879.0	8803.5	8551.5	8568.3	8284.4	8136.6	7696.6	7432.8	3141.1	471.9	352.7
30°	9036.9	8963.1	8696.0	8706.0	8410.4	8202.1	7731.8	7437.8	2754.8	295.6	127.7
32.5°	8949.6	8869.0	8590.2	8593.5	8289.5	8077.7	7609.1	7285.0	2240.7	194.8	97.5
35°	8696.0	8611.9	8334.8	8348.3	8054.3	7844.3	7385.8	7039.7	1716.7	154.6	72.3
37.5°	8267.6	8208.9	7945.1	7968.7	7718.3	7494.9	7029.7	6655.1	1211.1	110.8	45.4
40°	7716.6	7671.4	7416.0	7452.9	7180.8	6974.3	6475.3	6068.9	754.2	75.6	28.5
42.5°	7071.6	7022.9	6771.0	6799.5	6567.7	6272.2	5763.2	5302.9	394.8	53.8	20.2
45°	6267.0	6209.9	5954.7	5969.7	5696.0	5349.9	4822.4	4416.0	258.7	36.9	15.2
47.5°	5002.2	4899.7	4567.2	4553.8	4330.3	3764.3	3015.1	2440.7	171.3	25.2	10.0
50°	2749.7	2644.0	2351.7	2319.7	2071.1	1699.9	1256.5	977.7	99.1	16.8	8.4
52.5°	1251.3	1195.9	1060.0	1038.1	932.3	772.7	594.6	488.8	57.1	11.7	6.7
55°	542.5	522.5	465.3	461.9	413.2	357.8	285.6	241.9	33.6	8.4	5.0
57.5°	213.3	206.6	194.8	186.5	167.9	149.4	124.3	104.2	21.9	6.7	5.0
60°	80.6	79.0	72.3	73.9	67.1	63.8	55.4	47.1	13.5	5.0	5.0
62.5°	36.9	36.9	35.2	35.2	33.6	30.2	26.9	25.2	8.4	5.0	5.0
65°	18.5	18.5	16.8	16.8	16.8	15.2	13.5	13.5	5.0	5.0	5.0
67.5°	8.4	8.4	8.4	8.4	8.4	6.7	6.7	6.7	3.3	5.0	5.0
70°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	5.0	5.0
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.0
75°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.0
77.5°	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	3.3	5.0	6.7
80°	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	3.3	5.0	6.7
82.5°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	3.3	5.0	6.7
85°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	3.3	5.0	6.7
87.5°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	3.3	5.0	6.7
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):

	112.5°	135°	157.5°	180°
0°	282.1	282.1	282.1	282.1
2.5°	236.9	210.0	186.5	181.4
5°	194.8	154.6	129.4	124.3
7.5°	157.9	112.5	94.0	90.7
10°	129.4	90.7	73.9	70.6
12.5°	107.5	73.9	58.8	55.4
15°	92.3	65.6	53.8	53.8
17.5°	89.0	72.3	68.9	70.6
20°	115.9	131.0	156.2	157.9
22.5°	268.8	436.7	577.9	604.8
25°	483.8	529.1	515.7	539.2
27.5°	255.4	199.8	203.3	208.3
30°	110.8	122.7	129.4	136.1
32.5°	92.3	95.8	97.5	102.5
35°	60.4	60.4	58.8	60.4
37.5°	36.9	35.2	33.6	33.6
40°	23.5	21.9	20.2	20.2
42.5°	16.8	13.5	11.7	11.7
45°	11.7	8.4	6.7	5.0
47.5°	8.4	5.0	3.3	1.7
50°	6.7	5.0	1.7	0.0
52.5°	5.0	3.3	1.7	0.0
55°	5.0	3.3	0.0	0.0
57.5°	5.0	3.3	0.0	0.0
60°	5.0	3.3	0.0	0.0
62.5°	5.0	3.3	0.0	0.0
65°	5.0	3.3	1.7	0.0
67.5°	5.0	3.3	1.7	0.0
70°	5.0	3.3	1.7	0.0
72.5°	5.0	3.3	1.7	0.0
75°	5.0	5.0	1.7	0.0
77.5°	6.7	5.0	1.7	0.0
80°	6.7	5.0	1.7	0.0
82.5°	6.7	5.0	1.7	0.0
85°	6.7	5.0	1.7	1.7
87.5°	6.7	5.0	1.7	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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Scaled Data Report



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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)