

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: P1191937

Luminaire Tested: **LDA4A35940D010TE 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: P1191937
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: LDA4A35940D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

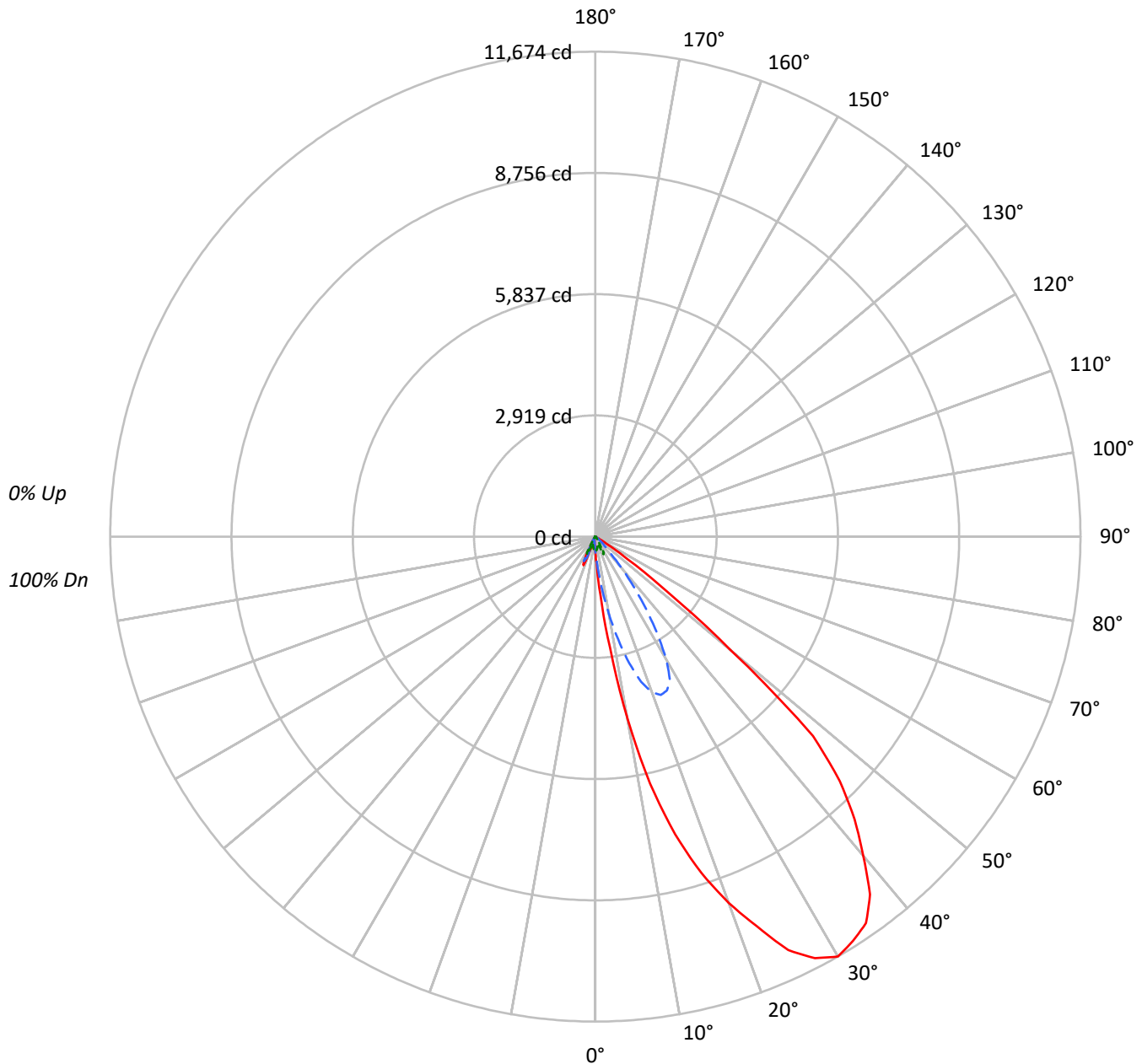
Lumens per Lamp: N/A
Luminaire Lumens: 4242.8 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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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	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	112	109	106	103	110	107	104	102	103	101	99	99	97	96	95	94	93
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83
3	98	90	84	79	96	89	83	79	86	81	77	84	79	76	81	78	75
4	91	82	75	70	89	81	75	70	79	73	69	77	72	68	75	70	67
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60
6	79	68	61	56	78	67	60	55	66	60	55	64	59	55	63	58	54
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49
8	69	57	50	45	68	57	50	45	55	49	44	54	48	44	53	48	44
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40
10	60	48	41	37	59	48	41	37	47	41	36	46	40	36	45	40	36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	43035	43035	43035
5°	173282	40624	19031
10°	558621	34068	10934
15°	947651	27033	8492
20°	1231668	24257	25609
25°	1494629	63870	90709
30°	1662625	22475	23956
35°	1710256	13431	11248
40°	1614832	5684	4009
45°	1451334	3262	1082
50°	816826	1996	0
55°	202724	1333	0
60°	31256	1529	0
65°	7267	1810	0
70°	1515	2236	0
75°	0	2955	0
80°	0	5896	0
85°	0	11746	2972

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.1	1.7
10°-20°	520.7	12.3
20°-30°	1202.8	28.3
30°-40°	1349.1	31.8
40°-50°	941.4	22.2
50°-60°	140.5	3.3
60°-70°	9.2	0.2
70°-80°	4.6	0.1
80°-90°	4.5	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°	1793.6	42.3
0°-40°	3142.7	74.1
0°-60°	4224.6	99.6
0°-90°	4242.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4242.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	349	349	349	349	349	
5°	1400	818	328	191	154	232
15°	7421	3158	212	81	66	2121
25°	10982	4082	469	654	666	5021
35°	11358	2122	89	75	75	6987
45°	8320	320	19	10	6	6104
55°	943	42	6	4	0	1239
65°	25	6	6	4	0	38
75°	0	4	6	6	0	1
85°	0	4	8	6	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°	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9
2.5°	635.3	629.1	612.6	608.4	623.0	610.5	616.6	629.1	616.6	602.2	616.6
5°	1399.5	1434.8	1399.5	1393.3	1418.2	1395.3	1405.7	1428.6	1397.4	1368.3	1389.1
7.5°	2701.3	2724.2	2624.6	2659.9	2651.6	2657.8	2664.0	2664.0	2645.3	2593.4	2622.5
10°	4460.1	4476.7	4343.9	4389.6	4329.3	4389.6	4379.2	4333.5	4343.9	4273.2	4310.6
12.5°	6092.1	6146.2	6013.3	6056.8	5984.2	6052.8	6025.8	6013.3	5907.4	5907.4	5946.8
15°	7421.1	7543.6	7423.2	7468.8	7385.8	7481.4	7406.6	7439.8	7344.2	7225.9	7329.8
17.5°	8496.6	8617.1	8505.0	8561.1	8484.2	8559.0	8471.7	8542.4	8419.9	8334.7	8405.3
20°	9383.3	9472.6	9339.7	9418.5	9327.2	9401.9	9306.4	9399.8	9256.7	9194.3	9235.9
22.5°	10155.7	10191.0	10122.4	10255.3	10076.8	10155.7	10041.5	10137.0	9966.8	9887.8	9898.2
25°	10982.1	11061.1	10930.1	10980.0	10855.4	10909.5	10780.6	10870.0	10658.1	10546.0	10523.3
27.5°	11441.0	11553.1	11436.9	11493.0	11366.2	11411.9	11283.2	11411.9	11196.0	11086.0	11061.1
30°	11673.5	11727.6	11652.9	11690.2	11546.9	11569.7	11436.9	11576.0	11360.1	11262.4	11249.9
32.5°	11538.6	11646.5	11549.0	11596.7	11463.9	11486.7	11358.0	11507.4	11291.5	11202.1	11158.6
35°	11358.0	11468.0	11376.6	11426.5	11304.0	11320.6	11183.5	11314.4	11065.2	10955.2	10861.7
37.5°	10857.5	10961.3	10884.5	10901.2	10782.8	10770.3	10622.9	10732.9	10490.0	10396.5	10334.3
40°	10029.0	10122.4	10060.2	10095.4	9977.1	9950.2	9850.4	9952.3	9763.3	9694.7	9607.5
42.5°	9235.9	9312.7	9254.6	9310.6	9177.7	9142.5	9053.1	9181.9	8968.0	8911.9	8849.7
45°	8320.1	8367.9	8322.2	8370.0	8243.3	8187.2	8106.3	8216.3	8006.7	7954.7	7819.8
47.5°	7109.6	7057.8	7049.5	7095.1	6937.2	6821.0	6746.3	6887.5	6584.3	6482.6	6326.7
50°	4256.7	4343.9	4381.3	4350.1	4242.0	4082.1	3961.7	4134.1	3972.1	3723.0	3473.8
52.5°	2192.7	2095.1	2115.9	2126.3	1997.4	1949.7	1910.3	1949.7	1823.1	1758.7	1601.0
55°	942.7	897.1	913.7	919.8	895.0	836.8	816.0	840.9	782.9	757.8	693.5
57.5°	348.9	348.9	338.5	342.7	334.2	313.6	309.4	319.8	301.1	294.9	269.9
60°	126.7	126.7	126.7	126.7	116.3	114.2	114.2	118.3	112.1	110.0	101.7
62.5°	53.9	56.1	51.8	53.9	51.8	49.9	51.8	49.9	49.9	47.8	47.8
65°	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	24.9	22.9	22.9
67.5°	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	10.4	10.4	10.4
70°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
72.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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°	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9
2.5°	598.0	596.0	604.3	596.0	581.4	573.1	583.5	562.7	481.8	400.7	340.6
5°	1351.7	1341.3	1326.9	1330.9	1295.7	1266.6	1266.6	1210.5	818.1	465.0	328.1
7.5°	2562.3	2537.4	2431.4	2508.3	2433.6	2375.4	2335.9	2221.7	1322.6	533.6	303.2
10°	4231.8	4188.1	4113.3	4128.0	4005.4	3907.8	3789.5	3598.4	1902.1	593.9	272.0
12.5°	5878.3	5834.7	5635.4	5749.6	5585.5	5490.1	5290.7	5066.5	2527.0	623.0	242.9
15°	7275.7	7238.3	7020.4	7128.3	6927.0	6837.6	6580.2	6331.0	3158.2	612.6	211.7
17.5°	8361.7	8355.5	8104.2	8212.2	7989.9	7917.3	7616.2	7371.2	3668.9	566.9	191.1
20°	9198.5	9183.9	8930.6	9038.6	8795.7	8725.0	8343.0	8085.5	3992.9	504.5	184.8
22.5°	9858.7	9829.8	9557.8	9651.2	9379.2	9287.7	8866.2	8598.4	4125.9	465.0	228.5
25°	10452.6	10400.7	10091.4	10164.0	9865.0	9883.7	9250.4	8955.6	4082.1	523.2	469.3
27.5°	10975.9	10882.5	10571.0	10591.7	10240.9	10058.1	9514.1	9188.1	3882.9	583.5	436.1
30°	11171.1	11079.8	10749.6	10762.0	10396.5	10139.1	9557.8	9194.3	3405.2	365.4	157.8
32.5°	11063.0	10963.4	10618.8	10622.9	10247.0	9985.4	9406.2	9005.3	2769.9	240.8	120.4
35°	10749.6	10645.8	10303.1	10319.7	9956.4	9696.9	9129.9	8702.3	2122.1	191.1	89.2
37.5°	10220.1	10147.4	9821.3	9850.4	9541.0	9265.0	8689.8	8226.7	1497.1	137.0	56.1
40°	9539.1	9483.0	9167.3	9213.0	8876.6	8621.2	8004.6	7502.0	932.3	93.4	35.3
42.5°	8741.6	8681.5	8370.0	8405.3	8118.8	7753.4	7124.2	6555.2	487.9	66.5	24.9
45°	7747.0	7676.5	7360.8	7379.5	7041.0	6613.4	5961.3	5458.9	319.8	45.7	18.7
47.5°	6183.6	6056.8	5645.8	5629.2	5353.0	4653.3	3727.1	3017.0	211.7	31.2	12.5
50°	3399.1	3268.3	2907.0	2867.6	2560.1	2101.3	1553.2	1208.4	122.5	20.8	10.4
52.5°	1546.9	1478.5	1310.3	1283.2	1152.4	955.1	735.1	604.3	70.5	14.5	8.3
55°	670.7	645.7	575.2	571.0	510.9	442.3	352.9	299.0	41.6	10.4	6.2
57.5°	263.7	255.4	240.8	230.4	207.7	184.8	153.7	128.7	27.0	8.3	6.2
60°	99.6	97.6	89.2	91.3	83.0	79.0	68.6	58.2	16.6	6.2	6.2
62.5°	45.7	45.7	43.6	43.6	41.6	37.4	33.2	31.2	10.4	6.2	6.2
65°	22.9	22.9	20.8	20.8	20.8	18.7	16.6	16.6	6.2	6.2	6.2
67.5°	10.4	10.4	10.4	10.4	10.4	8.3	8.3	8.3	4.2	6.2	6.2
70°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	6.2	6.2
72.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	4.2	6.2	6.2
75°	0.0	0.0	0.0	2.1	2.1	2.1	2.1	2.1	4.2	6.2	6.2
77.5°	0.0	0.0	0.0	0.0	2.1	2.1	2.1	2.1	4.2	6.2	8.3
80°	0.0	0.0	0.0	0.0	2.1	2.1	2.1	2.1	4.2	6.2	8.3
82.5°	0.0	0.0	0.0	2.1	2.1	2.1	2.1	2.1	4.2	6.2	8.3
85°	0.0	0.0	0.0	2.1	2.1	2.1	2.1	2.1	4.2	6.2	8.3
87.5°	0.0	0.0	0.0	2.1	2.1	2.1	2.1	2.1	4.2	6.2	8.3
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):

	112.5°	135°	157.5°	180°
0°	348.9	348.9	348.9	348.9
2.5°	292.8	259.5	230.4	224.2
5°	240.8	191.1	159.9	153.7
7.5°	195.1	139.1	116.3	112.1
10°	159.9	112.1	91.3	87.3
12.5°	132.9	91.3	72.6	68.6
15°	114.2	80.9	66.5	66.5
17.5°	110.0	89.2	85.1	87.3
20°	143.3	162.0	193.0	195.1
22.5°	332.3	539.9	714.3	747.4
25°	598.0	654.0	637.4	666.5
27.5°	315.6	247.1	251.2	257.5
30°	137.0	151.6	159.9	168.2
32.5°	114.2	118.3	120.4	126.7
35°	74.7	74.7	72.6	74.7
37.5°	45.7	43.6	41.6	41.6
40°	29.1	27.0	24.9	24.9
42.5°	20.8	16.6	14.5	14.5
45°	14.5	10.4	8.3	6.2
47.5°	10.4	6.2	4.2	2.1
50°	8.3	6.2	2.1	0.0
52.5°	6.2	4.2	2.1	0.0
55°	6.2	4.2	0.0	0.0
57.5°	6.2	4.2	0.0	0.0
60°	6.2	4.2	0.0	0.0
62.5°	6.2	4.2	0.0	0.0
65°	6.2	4.2	2.1	0.0
67.5°	6.2	4.2	2.1	0.0
70°	6.2	4.2	2.1	0.0
72.5°	6.2	4.2	2.1	0.0
75°	6.2	6.2	2.1	0.0
77.5°	8.3	6.2	2.1	0.0
80°	8.3	6.2	2.1	0.0
82.5°	8.3	6.2	2.1	0.0
85°	8.3	6.2	2.1	2.1
87.5°	8.3	6.2	2.1	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)