

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: P1212774

Luminaire Tested: **LDA4A20950D010TE LAR35FL 4LA1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1212774
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: LDA4A20950D010TE 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 / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

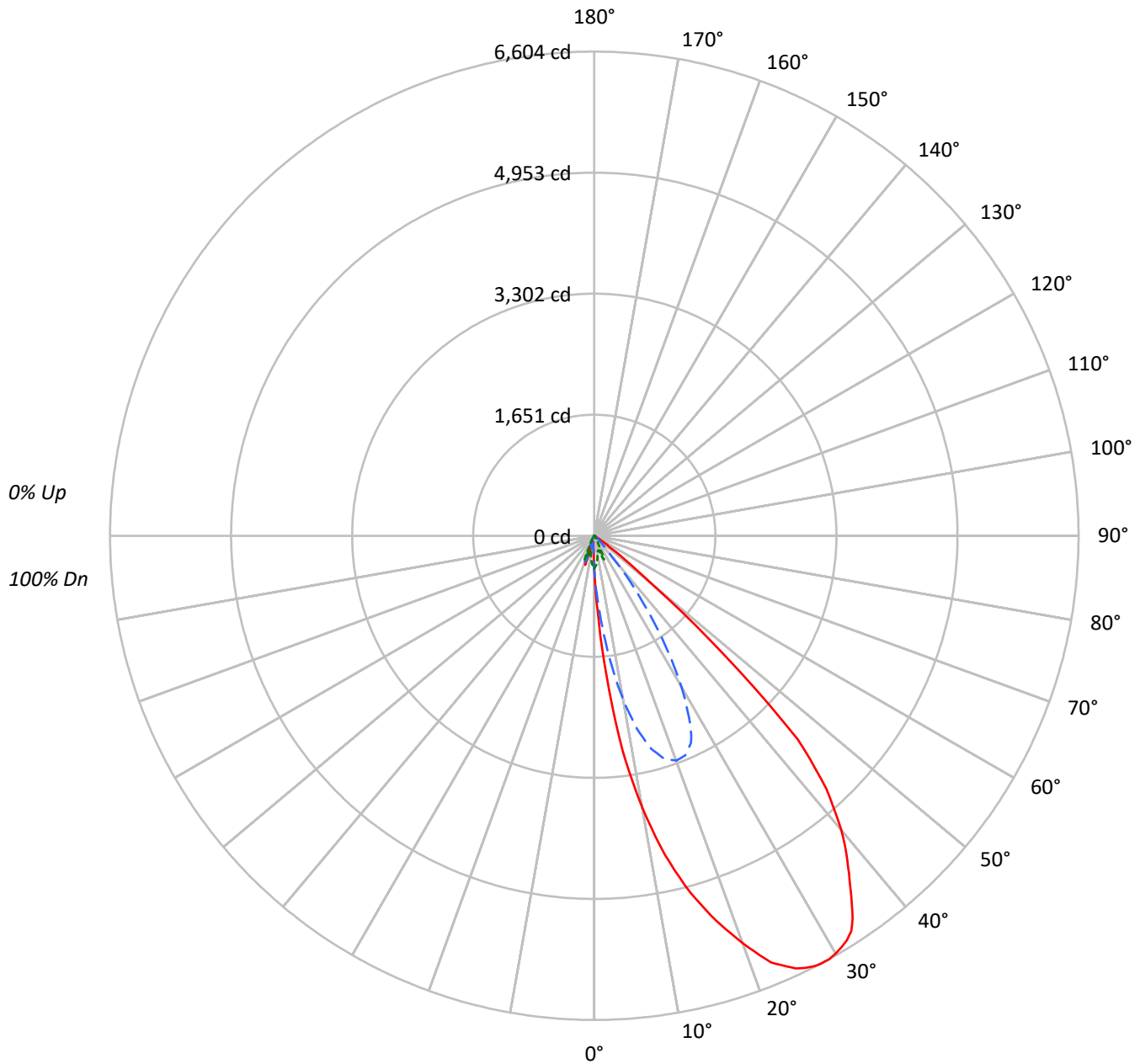
Lumens per Lamp: N/A
Luminaire Lumens: 2442.6 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

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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	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°	55937	55937	55937
5°	234992	46790	17285
10°	472061	32201	10483
15°	642111	26140	23611
20°	776045	39694	43802
25°	886303	23599	12194
30°	937143	11095	5640
35°	921758	4909	2108
40°	843548	2431	547
45°	684247	1221	0
50°	202868	652	0
55°	36751	731	0
60°	6883	839	0
65°	1693	992	0
70°	433	1226	0
75°	0	1620	0
80°	0	3339	0
85°	0	6652	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.4	3.4
10°-20°	426.6	17.5
20°-30°	747.2	30.6
30°-40°	750.4	30.7
40°-50°	395.3	16.2
50°-60°	32.9	1.3
60°-70°	3.3	0.1
70°-80°	2.4	0.1
80°-90°	2.2	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°	1256.2	51.4
0°-40°	2006.6	82.1
0°-60°	2434.8	99.7
0°-90°	2442.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2442.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	454	454	454	454	454	
5°	1898	1241	378	173	140	243
15°	5028	3010	205	137	185	1436
25°	6512	3117	173	99	90	2980
35°	6122	1354	33	18	14	3785
45°	3923	140	7	2	0	2689
55°	171	15	3	1	0	257
65°	6	2	3	2	0	9
75°	0	2	3	2	0	0
85°	0	2	5	2	0	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	453.5	453.5	453.5	453.5	453.5	453.5	453.5	453.5	453.5	453.5	453.5
2.5°	1029.2	1030.3	1031.6	1039.7	1021.0	1016.3	1008.2	996.6	958.3	800.1	603.6
5°	1897.9	1911.9	1908.3	1896.6	1867.6	1851.4	1827.0	1801.4	1696.8	1240.8	748.9
7.5°	2949.1	2976.0	2970.1	2952.7	2903.9	2881.7	2820.2	2786.4	2628.3	1761.8	857.1
10°	3769.0	3839.9	3841.1	3824.8	3751.5	3720.2	3656.2	3595.8	3395.7	2272.3	907.0
12.5°	4462.1	4463.3	4517.9	4505.1	4420.3	4406.3	4352.8	4262.0	4051.6	2698.0	907.0
15°	5028.4	5105.2	5092.4	5078.5	4988.9	4970.3	4919.2	4835.5	4590.0	3009.6	862.9
17.5°	5496.0	5564.5	5544.8	5529.7	5440.1	5399.5	5343.5	5243.6	4973.9	3194.5	771.1
20°	5912.2	5977.4	5937.8	5911.2	5791.2	5741.3	5660.0	5544.8	5236.6	3263.1	663.9
22.5°	6300.7	6369.3	6319.2	6282.0	6127.4	6030.9	5915.8	5770.3	5407.6	3241.1	607.0
25°	6512.3	6601.9	6554.2	6525.1	6377.4	6264.5	6112.3	5925.0	5505.3	3116.7	457.1
26°	6558.9	6653.1	6607.6	6582.2	6432.1	6312.3	6149.5	5953.0	5513.5	3014.2	352.4
27°	6591.4	6696.0	6643.7	6611.3	6456.6	6328.6	6158.9	5954.1	5500.7	2875.8	280.3
28°	6604.2	6719.3	6655.4	6615.8	6455.4	6315.8	6135.5	5928.6	5466.9	2716.5	238.4
29°	6603.1	6728.7	6654.1	6611.3	6440.2	6285.6	6100.6	5892.4	5420.4	2550.3	215.2
30°	6579.8	6716.9	6642.6	6587.9	6404.2	6237.9	6050.6	5842.5	5368.0	2368.8	191.9
31°	6548.5	6689.1	6611.3	6543.8	6344.8	6164.6	5980.8	5775.0	5298.3	2174.6	175.6
32°	6503.0	6643.7	6557.6	6469.2	6261.1	6072.8	5896.0	5696.0	5213.3	1970.1	155.9
33°	6430.9	6555.3	6455.4	6352.9	6144.8	5968.0	5800.6	5604.0	5116.8	1757.1	134.9
34°	6299.5	6408.9	6305.4	6201.8	6015.8	5851.8	5691.3	5496.0	5004.0	1560.6	116.3
35°	6121.5	6214.6	6121.5	6034.3	5870.4	5718.1	5564.5	5373.9	4868.0	1353.7	99.9
36°	5940.2	6021.5	5935.6	5866.8	5709.9	5573.8	5430.8	5233.2	4714.4	1157.1	88.4
37°	5770.3	5843.7	5764.6	5696.0	5561.0	5422.7	5280.8	5078.5	4544.7	968.8	73.3
38°	5601.9	5666.9	5599.5	5522.6	5398.2	5257.6	5114.5	4907.4	4355.1	790.7	62.8
39°	5426.2	5479.7	5414.4	5336.7	5209.9	5070.2	4923.7	4709.8	4137.6	605.8	54.7
40°	5238.9	5288.9	5208.6	5139.0	5012.1	4869.2	4719.1	4497.0	3901.7	405.8	46.5
42.5°	4685.3	4715.6	4648.2	4551.6	4425.0	4267.8	4086.5	3837.7	3146.9	214.0	32.6
45°	3922.6	3928.3	3876.1	3700.4	3530.6	3287.5	3016.6	2643.4	1829.3	139.6	20.9
47.5°	2367.8	2353.7	2271.3	2121.2	1963.0	1706.0	1452.5	1195.6	710.5	81.4	14.0
50°	1057.2	1040.9	1000.1	922.2	830.3	735.1	622.1	526.8	345.5	44.1	9.4
51°	766.4	752.3	722.3	662.9	595.4	528.0	450.1	384.9	258.1	36.0	8.1
52°	538.4	530.2	509.3	467.5	430.2	377.9	324.5	283.7	194.3	29.0	5.8
53°	375.5	369.8	357.0	329.1	307.0	268.6	234.9	202.4	140.6	23.2	5.8
54°	254.7	251.2	243.0	224.4	205.8	184.9	160.6	141.9	98.8	18.7	4.7
55°	170.9	168.7	161.6	152.4	141.9	129.1	112.8	98.8	69.7	15.1	3.4
57.5°	62.8	62.8	60.5	56.9	53.5	50.0	45.3	40.7	32.6	9.4	3.4
60°	27.9	26.8	26.8	25.6	24.4	23.2	22.2	19.8	16.2	5.8	3.4
61°	20.9	20.9	19.8	18.7	18.7	17.5	16.2	15.1	12.8	4.7	3.4
62°	15.1	15.1	15.1	14.0	14.0	12.8	12.8	11.5	9.4	3.4	3.4
63°	11.5	11.5	11.5	10.5	10.5	10.5	9.4	9.4	7.0	3.4	3.4
64°	8.1	8.1	8.1	8.1	8.1	8.1	7.0	7.0	5.8	2.3	3.4
65°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	4.7	2.3	3.4
66°	4.7	4.7	4.7	4.7	4.7	4.7	3.4	3.4	3.4	2.3	3.4



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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°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.3	3.4
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.3	3.4
77.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	2.3	3.4
80°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	2.3	3.4
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.3	3.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.3	3.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.3	3.4
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°	453.5	453.5	453.5	453.5	453.5
2.5°	417.5	291.8	232.5	210.5	203.4
5°	377.9	218.6	173.4	148.8	139.6
7.5°	317.4	180.2	130.3	108.2	101.2
10°	257.1	148.8	105.9	88.4	83.7
12.5°	219.9	129.1	98.8	91.8	91.8
15°	204.7	136.1	137.2	165.2	184.9
17.5°	210.5	212.8	332.7	404.7	417.5
20°	302.4	382.6	379.1	344.2	333.7
22.5°	350.0	252.4	190.6	157.0	151.2
25°	173.4	115.2	98.8	90.7	89.6
26°	131.5	96.5	86.0	81.4	79.0
27°	109.3	85.0	76.8	70.9	68.6
28°	97.8	75.6	66.2	60.5	58.1
29°	88.4	65.1	55.8	50.0	48.8
30°	77.9	54.7	46.5	40.7	39.6
31°	66.2	45.3	37.2	33.7	31.5
32°	55.8	37.2	30.3	26.8	24.4
33°	46.5	30.3	25.6	22.2	19.8
34°	39.6	25.6	20.9	17.5	16.2
35°	32.6	20.9	17.5	15.1	14.0
36°	27.9	18.7	14.0	11.5	10.5
37°	24.4	15.1	11.5	9.4	9.4
38°	20.9	12.8	10.5	7.0	7.0
39°	17.5	10.5	8.1	5.8	5.8
40°	15.1	9.4	7.0	4.7	3.4
42.5°	10.5	5.8	4.7	2.3	1.2
45°	7.0	4.7	2.3	1.2	0.0
47.5°	4.7	3.4	2.3	1.2	0.0
50°	3.4	3.4	2.3	0.0	0.0
51°	3.4	2.3	2.3	0.0	0.0
52°	3.4	2.3	1.2	0.0	0.0
53°	3.4	2.3	1.2	0.0	0.0
54°	3.4	2.3	1.2	0.0	0.0
55°	3.4	2.3	1.2	0.0	0.0
57.5°	3.4	2.3	1.2	0.0	0.0
60°	3.4	2.3	2.3	0.0	0.0
61°	3.4	3.4	2.3	0.0	0.0
62°	3.4	3.4	2.3	0.0	0.0
63°	3.4	3.4	2.3	0.0	0.0
64°	3.4	3.4	2.3	1.2	0.0
65°	3.4	3.4	2.3	1.2	0.0
66°	3.4	3.4	2.3	1.2	0.0

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	3.4	3.4	2.3	1.2	0.0
75°	3.4	3.4	2.3	1.2	0.0
77.5°	4.7	3.4	2.3	1.2	0.0
80°	4.7	3.4	2.3	1.2	0.0
82.5°	4.7	3.4	2.3	1.2	0.0
85°	4.7	3.4	2.3	1.2	0.0
87.5°	4.7	3.4	2.3	1.2	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°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.4
70°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.3	3.4

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67.5°	3.4	3.4	2.3	1.2	0.0
70°	3.4	3.4	2.3	1.2	0.0

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(END OF REPORT)