

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: P1191647

Luminaire Tested: **LDA4A20935D010TE LAR35FL 4LA1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1191647
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: LDA4A20935D010TE 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

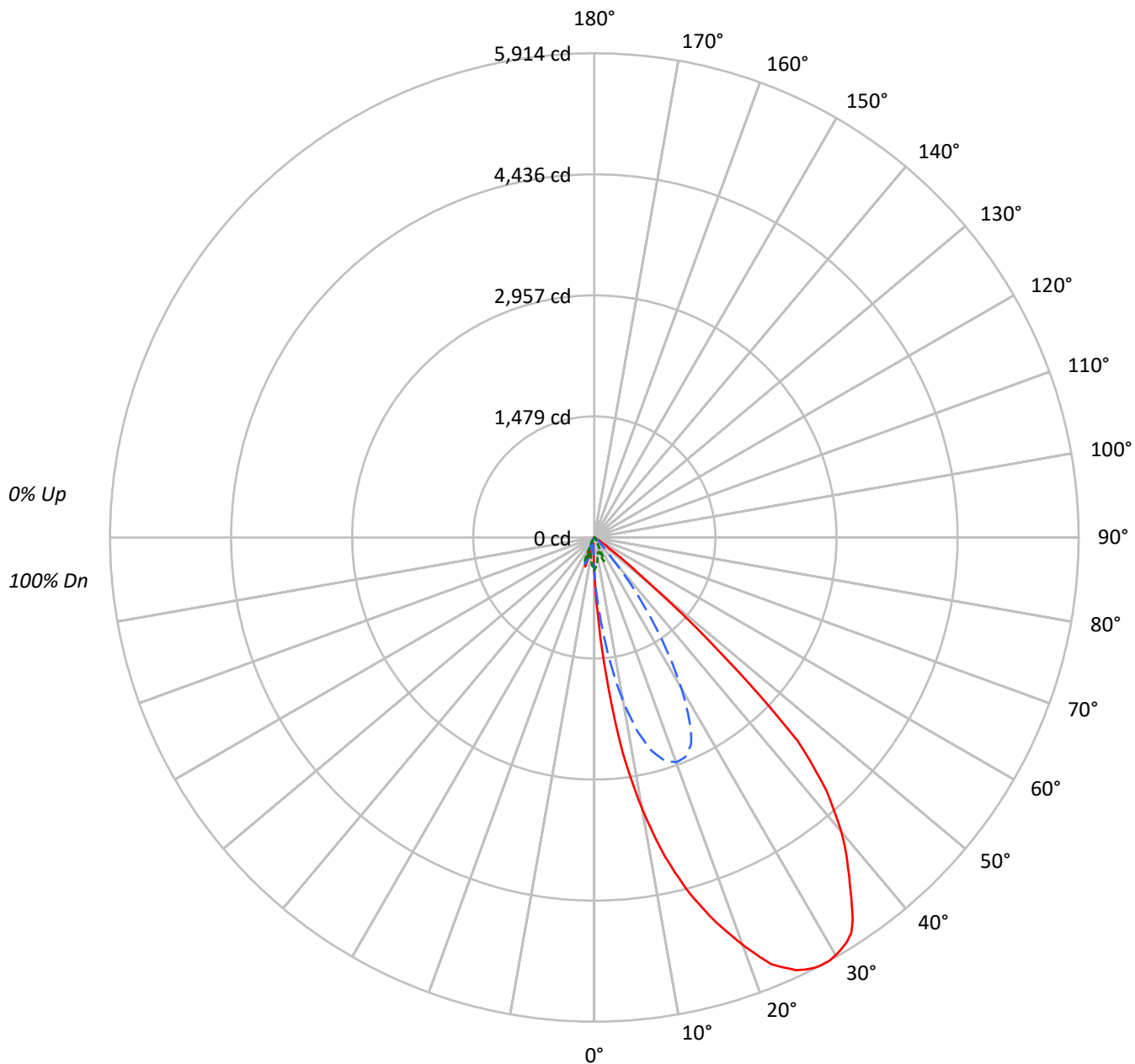
Lumens per Lamp: N/A
Luminaire Lumens: 2187.5 lumens
Efficiency: N/A
Efficacy: 76.0 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	50103	50103	50103
5°	210451	41900	15477
10°	422751	28820	9394
15°	575031	23407	21159
20°	694978	35546	39234
25°	793730	21122	10915
30°	839253	9941	5056
35°	825479	4382	1882
40°	755424	2174	515
45°	612763	1082	0
50°	181664	614	0
55°	32924	688	0
60°	6192	789	0
65°	1518	934	0
70°	361	1154	0
75°	0	1525	0
80°	0	2983	0
85°	0	5944	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.8	3.4
10°-20°	382.1	17.5
20°-30°	669.1	30.6
30°-40°	672.0	30.7
40°-50°	354.0	16.2
50°-60°	29.5	1.3
60°-70°	3.0	0.1
70°-80°	2.1	0.1
80°-90°	2.0	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°	1125.0	51.4
0°-40°	1797.0	82.1
0°-60°	2180.4	99.7
0°-90°	2187.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2187.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	406	406	406	406	406	
5°	1700	1111	338	155	125	218
15°	4503	2695	183	123	166	1286
25°	5832	2791	155	88	80	2669
35°	5482	1212	29	16	12	3390
45°	3513	125	6	2	0	2408
55°	153	14	3	1	0	230
65°	5	2	3	2	0	8
75°	0	2	3	2	0	0
85°	0	2	4	2	0	0
90°	0	0	0	0	0	

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CATALOG NUMBER: LDA4A20935D010TE 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°	406.2	406.2	406.2	406.2	406.2	406.2	406.2	406.2	406.2	406.2	406.2
2.5°	921.6	922.7	923.8	931.1	914.4	910.2	903.0	892.5	858.1	716.5	540.5
5°	1699.7	1712.1	1709.1	1698.6	1672.6	1657.9	1636.1	1613.2	1519.5	1111.2	670.7
7.5°	2641.1	2665.0	2659.8	2644.2	2600.4	2580.6	2525.4	2495.3	2353.7	1577.7	767.6
10°	3375.3	3438.8	3439.8	3425.2	3359.6	3331.5	3274.2	3220.0	3040.9	2035.0	812.3
12.5°	3996.0	3997.0	4046.0	4034.5	3958.5	3946.1	3898.1	3816.9	3628.4	2416.1	812.3
15°	4503.1	4571.9	4560.4	4548.0	4467.8	4451.1	4405.2	4330.2	4110.6	2695.3	772.8
17.5°	4921.9	4983.3	4965.6	4952.0	4871.8	4835.4	4785.3	4695.8	4454.2	2860.8	690.4
20°	5294.6	5352.9	5317.6	5293.6	5186.3	5141.5	5068.7	4965.6	4689.6	2922.3	594.7
22.5°	5642.5	5703.9	5659.2	5625.9	5487.3	5400.9	5297.8	5167.6	4842.7	2902.5	543.6
25°	5832.1	5912.3	5869.6	5843.5	5711.2	5610.2	5473.8	5306.2	4930.1	2791.0	409.3
26°	5873.6	5958.0	5917.4	5894.5	5760.1	5653.0	5507.1	5331.1	4937.5	2699.3	315.5
27°	5902.9	5996.6	5949.6	5920.5	5782.0	5667.4	5515.4	5332.1	4925.9	2575.4	250.9
28°	5914.3	6017.4	5960.1	5924.7	5781.0	5656.0	5494.5	5309.2	4895.8	2432.8	213.4
29°	5913.3	6025.7	5959.1	5920.5	5767.5	5628.9	5463.4	5276.9	4854.1	2283.9	192.7
30°	5892.5	6015.4	5948.6	5899.7	5735.2	5586.2	5418.5	5232.2	4807.3	2121.5	171.9
31°	5864.4	5990.3	5920.5	5860.2	5682.1	5520.6	5356.1	5171.8	4744.8	1947.5	157.3
32°	5823.7	5949.6	5872.6	5793.6	5607.1	5438.4	5280.1	5101.0	4668.8	1764.2	139.6
33°	5759.1	5870.6	5781.0	5689.3	5502.9	5344.7	5194.7	5018.7	4582.3	1573.7	120.8
34°	5641.5	5739.4	5646.6	5553.9	5387.4	5240.4	5096.8	4921.9	4481.2	1397.6	104.1
35°	5482.1	5565.3	5482.1	5404.0	5257.2	5120.7	4983.3	4812.4	4359.5	1212.3	89.6
36°	5319.6	5392.6	5315.4	5254.0	5113.4	4991.7	4863.5	4686.4	4221.9	1036.2	79.2
37°	5167.6	5233.2	5162.4	5101.0	4980.1	4856.3	4729.1	4548.0	4069.9	867.5	65.6
38°	5016.6	5074.9	5014.5	4945.8	4834.4	4708.3	4580.3	4394.8	3900.2	708.2	56.2
39°	4859.3	4907.2	4848.9	4779.1	4665.6	4540.6	4409.4	4217.9	3705.4	542.6	48.9
40°	4691.6	4736.4	4664.6	4602.1	4488.6	4360.5	4226.1	4027.3	3494.0	363.4	41.7
42.5°	4196.0	4223.1	4162.5	4076.2	3962.7	3822.1	3659.6	3436.7	2818.1	191.6	29.1
45°	3512.8	3517.9	3471.1	3313.9	3161.8	2944.2	2701.5	2367.2	1638.1	125.0	18.7
47.5°	2120.3	2107.8	2034.0	1899.6	1758.0	1527.8	1300.7	1070.6	636.2	72.8	12.5
50°	946.7	932.1	895.6	825.8	743.5	658.3	557.2	471.8	309.3	39.5	8.4
51°	686.3	673.7	646.7	593.7	533.1	472.8	403.0	344.8	231.2	32.3	7.2
52°	482.2	474.9	456.1	418.6	385.3	338.4	290.6	254.1	173.9	26.1	5.2
53°	336.4	331.2	319.7	294.7	275.0	240.5	210.4	181.1	126.0	20.9	5.2
54°	228.1	225.0	217.6	201.0	184.3	165.7	143.8	127.0	88.5	16.7	4.2
55°	153.1	151.0	144.8	136.4	127.0	115.5	101.1	88.5	62.6	13.5	3.2
57.5°	56.2	56.2	54.2	51.0	47.9	44.7	40.5	36.5	29.1	8.4	3.2
60°	25.1	23.9	23.9	22.9	21.9	20.9	19.8	17.7	14.6	5.2	3.2
61°	18.7	18.7	17.7	16.7	16.7	15.6	14.6	13.5	11.4	4.2	3.2
62°	13.5	13.5	13.5	12.5	12.5	11.4	11.4	10.4	8.4	3.2	3.2
63°	10.4	10.4	10.4	9.4	9.4	9.4	8.4	8.4	6.2	3.2	3.2
64°	7.2	7.2	7.2	7.2	7.2	7.2	6.2	6.2	5.2	2.0	3.2
65°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	4.2	2.0	3.2
66°	4.2	4.2	4.2	4.2	4.2	4.2	3.2	3.2	3.2	2.0	3.2



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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°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.2
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	3.2
77.5°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	3.2
80°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	3.2
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	3.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	3.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	3.2
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°	406.2	406.2	406.2	406.2	406.2
2.5°	373.9	261.4	208.2	188.5	182.3
5°	338.4	195.8	155.2	133.4	125.0
7.5°	284.2	161.5	116.7	96.9	90.6
10°	230.1	133.4	94.7	79.2	75.0
12.5°	196.8	115.5	88.5	82.2	82.2
15°	183.3	121.8	122.9	147.8	165.7
17.5°	188.5	190.6	297.9	362.4	373.9
20°	270.8	342.6	339.6	308.3	298.9
22.5°	313.5	226.0	170.9	140.6	135.4
25°	155.2	103.1	88.5	81.2	80.2
26°	117.7	86.4	77.0	72.8	70.8
27°	97.9	76.0	68.8	63.6	61.4
28°	87.5	67.6	59.4	54.2	52.1
29°	79.2	58.4	50.0	44.7	43.7
30°	69.8	48.9	41.7	36.5	35.5
31°	59.4	40.5	33.3	30.3	28.1
32°	50.0	33.3	27.1	23.9	21.9
33°	41.7	27.1	22.9	19.8	17.7
34°	35.5	22.9	18.7	15.6	14.6
35°	29.1	18.7	15.6	13.5	12.5
36°	25.1	16.7	12.5	10.4	9.4
37°	21.9	13.5	10.4	8.4	8.4
38°	18.7	11.4	9.4	6.2	6.2
39°	15.6	9.4	7.2	5.2	5.2
40°	13.5	8.4	6.2	4.2	3.2
42.5°	9.4	5.2	4.2	2.0	1.0
45°	6.2	4.2	2.0	1.0	0.0
47.5°	4.2	3.2	2.0	1.0	0.0
50°	3.2	3.2	2.0	0.0	0.0
51°	3.2	2.0	2.0	0.0	0.0
52°	3.2	2.0	1.0	0.0	0.0
53°	3.2	2.0	1.0	0.0	0.0
54°	3.2	2.0	1.0	0.0	0.0
55°	3.2	2.0	1.0	0.0	0.0
57.5°	3.2	2.0	1.0	0.0	0.0
60°	3.2	2.0	2.0	0.0	0.0
61°	3.2	3.2	2.0	0.0	0.0
62°	3.2	3.2	2.0	0.0	0.0
63°	3.2	3.2	2.0	0.0	0.0
64°	3.2	3.2	2.0	1.0	0.0
65°	3.2	3.2	2.0	1.0	0.0
66°	3.2	3.2	2.0	1.0	0.0

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	3.2	3.2	2.0	1.0	0.0
75°	3.2	3.2	2.0	1.0	0.0
77.5°	4.2	3.2	2.0	1.0	0.0
80°	4.2	3.2	2.0	1.0	0.0
82.5°	4.2	3.2	2.0	1.0	0.0
85°	4.2	3.2	2.0	1.0	0.0
87.5°	4.2	3.2	2.0	1.0	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°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.2
70°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.2

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67.5°	3.2	3.2	2.0	1.0	0.0
70°	3.2	3.2	2.0	1.0	0.0

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(END OF REPORT)