

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: P1191541

Luminaire Tested: **LDA4A15930D010TE 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: P1191541
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: LDA4A15930D010TE 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

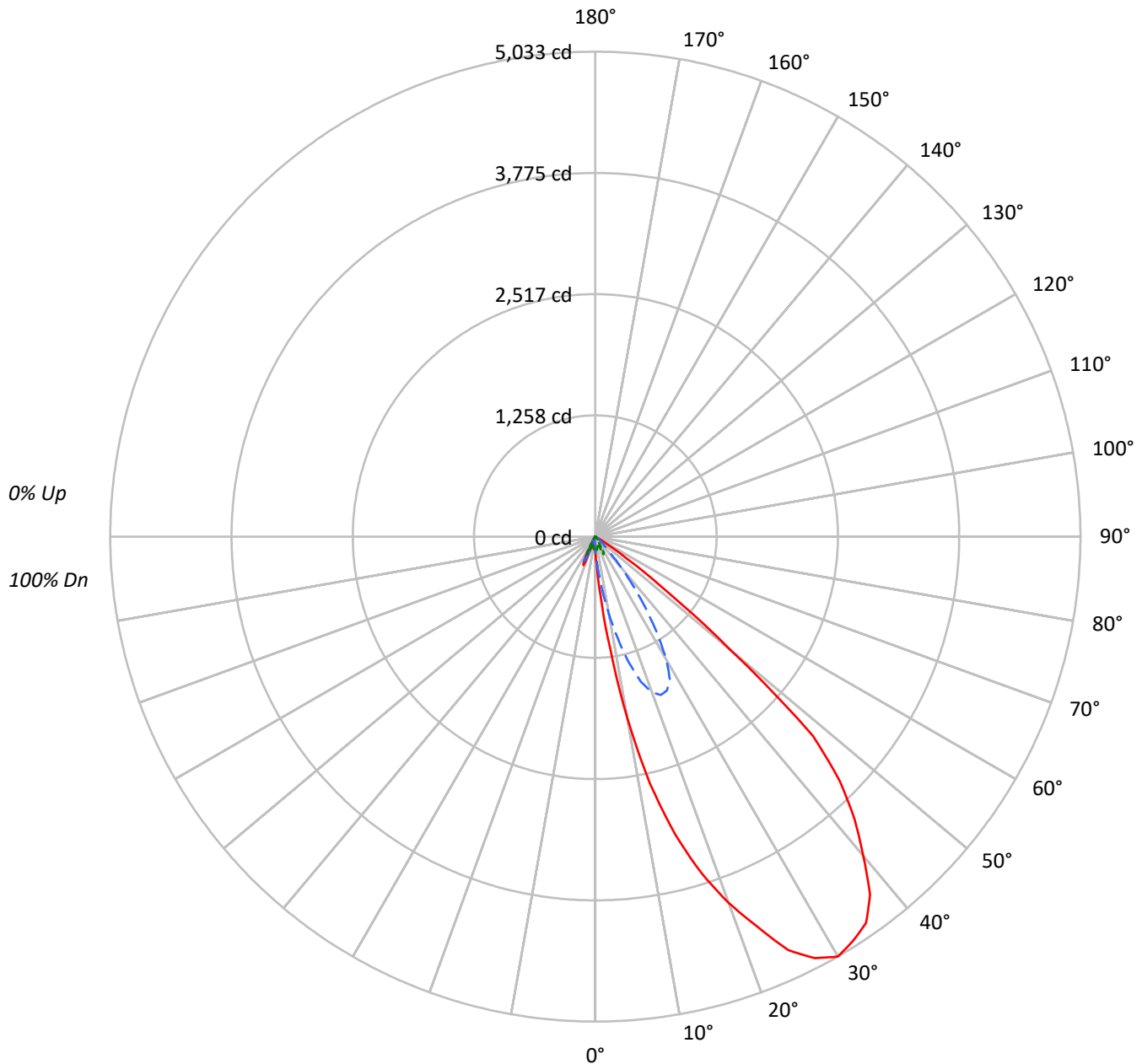
Lumens per Lamp: N/A
Luminaire Lumens: 1829.2 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20.4
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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CATALOG NUMBER: LDA4A15930D010TE LAR35FL 4LAL1 30° Tilt

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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	112	109	106	103	110	107	104	102	103	101	99	99	97	96	95	94	93	91		
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82		
3	98	90	84	79	96	89	83	79	86	81	77	84	79	76	81	78	75	73		
4	91	82	75	70	89	81	75	70	79	73	69	77	72	68	75	70	67	65		
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58		
6	79	68	61	56	78	67	60	55	66	60	55	64	59	55	63	58	54	52		
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49	47		
8	69	57	50	45	68	57	50	45	55	49	44	54	48	44	53	48	44	42		
9	64	53	45	40	63	52	45	40	51	45	40	50	44	40	49	44	40	38		
10	60	48	41	37	59	48	41	37	47	41	36	46	40	36	45	40	36	35		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	18551	18551	18551
5°	74711	17508	8209
10°	240840	14692	4709
15°	408553	11671	3652
20°	530980	10448	11039
25°	644364	27546	39101
30°	716779	9685	10326
35°	737316	5797	4849
40°	696186	2464	1739
45°	625688	1395	471
50°	352141	864	0
55°	87395	581	0
60°	13445	666	0
65°	3152	788	0
70°	649	974	0
75°	0	1287	0
80°	0	2486	0
85°	0	4953	1415



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.2	1.7
10°-20°	224.5	12.3
20°-30°	518.5	28.3
30°-40°	581.6	31.8
40°-50°	405.9	22.2
50°-60°	60.6	3.3
60°-70°	4.0	0.2
70°-80°	2.0	0.1
80°-90°	1.9	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°	773.2	42.3
0°-40°	1354.9	74.1
0°-60°	1821.3	99.6
0°-90°	1829.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1829.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	150	150	150	150	150	
5°	603	353	141	82	66	100
15°	3199	1362	91	35	29	914
25°	4735	1760	202	282	287	2165
35°	4897	915	38	32	32	3012
45°	3587	138	8	4	3	2632
55°	406	18	3	2	0	534
65°	11	3	3	2	0	16
75°	0	2	3	3	0	0
85°	0	2	4	3	1	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°	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4
2.5°	274.0	271.2	264.1	262.2	268.5	263.2	265.9	271.2	265.9	259.6	265.9
5°	603.4	618.5	603.4	600.7	611.5	601.5	606.0	615.8	602.5	589.9	598.9
7.5°	1164.7	1174.5	1131.5	1146.7	1143.1	1145.9	1148.5	1148.5	1140.4	1118.0	1130.6
10°	1922.9	1930.0	1872.7	1892.5	1866.4	1892.5	1888.0	1868.2	1872.7	1842.3	1858.4
12.5°	2626.5	2649.7	2592.4	2611.2	2579.9	2609.5	2597.7	2592.4	2546.7	2546.7	2563.8
15°	3199.4	3252.1	3200.2	3220.0	3184.1	3225.3	3193.1	3207.4	3166.2	3115.2	3160.0
17.5°	3663.0	3715.0	3666.7	3690.8	3657.7	3689.9	3652.4	3682.8	3629.9	3593.2	3623.6
20°	4045.2	4083.8	4026.6	4060.5	4021.1	4053.3	4012.2	4052.5	3990.7	3963.8	3981.7
22.5°	4378.2	4393.5	4363.9	4421.3	4344.3	4378.2	4329.0	4370.2	4296.8	4262.9	4267.2
25°	4734.6	4768.6	4712.2	4733.7	4680.0	4703.2	4647.7	4686.3	4594.9	4546.6	4536.7
27.5°	4932.4	4980.7	4930.6	4954.8	4900.2	4919.9	4864.4	4919.9	4826.7	4779.3	4768.6
30°	5032.6	5056.0	5023.8	5039.9	4978.1	4987.9	4930.6	4990.6	4897.5	4855.4	4850.1
32.5°	4974.4	5021.1	4978.9	4999.5	4942.2	4952.1	4896.6	4961.1	4867.9	4829.5	4810.6
35°	4896.6	4944.0	4904.6	4926.1	4873.4	4880.5	4821.4	4877.7	4770.4	4723.0	4682.6
37.5°	4680.8	4725.7	4692.6	4699.6	4648.6	4643.3	4579.6	4627.1	4522.4	4482.1	4455.3
40°	4323.7	4363.9	4337.1	4352.3	4301.3	4289.7	4246.6	4290.6	4209.1	4179.6	4141.9
42.5°	3981.7	4014.8	3989.7	4014.0	3956.7	3941.5	3903.0	3958.5	3866.2	3842.1	3815.2
45°	3586.9	3607.5	3587.9	3608.5	3553.8	3529.6	3494.7	3542.2	3451.8	3429.4	3371.2
47.5°	3065.1	3042.7	3039.1	3058.8	2990.7	2940.7	2908.4	2969.3	2838.6	2794.8	2727.6
50°	1835.1	1872.7	1888.8	1875.4	1828.8	1759.9	1708.0	1782.3	1712.5	1605.0	1497.7
52.5°	945.3	903.3	912.1	916.6	861.1	840.5	823.5	840.5	786.0	758.2	690.1
55°	406.4	386.7	393.8	396.5	385.8	360.8	351.8	362.6	337.5	326.7	299.0
57.5°	150.4	150.4	145.9	147.7	144.1	135.1	133.4	137.9	129.8	127.1	116.3
60°	54.5	54.5	54.5	54.5	50.2	49.2	49.2	51.0	48.3	47.5	43.9
62.5°	23.3	24.1	22.4	23.3	22.4	21.5	22.4	21.5	21.5	20.6	20.6
65°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	9.8	9.8
67.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	4.5	4.5	4.5
70°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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°	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4
2.5°	257.9	256.9	260.5	256.9	250.6	247.1	251.6	242.6	207.7	172.8	146.9
5°	582.8	578.3	572.0	573.8	558.5	546.0	546.0	521.9	352.6	200.5	141.4
7.5°	1104.7	1093.9	1048.2	1081.4	1049.2	1024.1	1007.0	957.8	570.3	230.0	130.6
10°	1824.4	1805.6	1773.3	1779.6	1726.8	1684.8	1633.6	1551.3	820.0	256.0	117.3
12.5°	2534.2	2515.5	2429.5	2478.7	2408.1	2366.9	2281.0	2184.3	1089.4	268.5	104.7
15°	3136.6	3120.6	3026.6	3073.1	2986.2	2947.8	2836.8	2729.3	1361.6	264.1	91.4
17.5°	3604.9	3602.2	3493.9	3540.4	3444.7	3413.3	3283.5	3177.8	1581.8	244.4	82.4
20°	3965.6	3959.3	3850.1	3896.7	3792.0	3761.5	3596.9	3485.9	1721.5	217.5	79.6
22.5°	4250.3	4237.8	4120.5	4160.7	4043.5	4004.1	3822.4	3706.9	1778.7	200.5	98.5
25°	4506.3	4483.9	4350.6	4381.9	4252.9	4261.0	3988.0	3860.9	1759.9	225.5	202.4
27.5°	4731.8	4691.6	4557.3	4566.3	4415.1	4336.2	4101.7	3961.1	1674.0	251.6	188.0
30°	4816.1	4776.7	4634.3	4639.6	4482.1	4371.1	4120.5	3963.8	1468.1	157.5	68.0
32.5°	4769.5	4726.5	4577.9	4579.6	4417.6	4304.9	4055.2	3882.4	1194.1	103.8	52.0
35°	4634.3	4589.6	4441.9	4449.0	4292.3	4180.5	3936.1	3751.6	914.9	82.4	38.5
37.5°	4406.1	4374.7	4234.2	4246.6	4113.3	3994.2	3746.3	3546.7	645.4	59.0	24.1
40°	4112.5	4088.3	3952.2	3971.9	3826.9	3716.7	3451.0	3234.3	402.0	40.2	15.3
42.5°	3768.7	3742.8	3608.5	3623.6	3500.2	3342.6	3071.3	2826.0	210.4	28.6	10.8
45°	3340.0	3309.4	3173.3	3181.5	3035.6	2851.1	2570.1	2353.4	137.9	19.6	8.0
47.5°	2665.8	2611.2	2434.0	2426.9	2307.8	2006.1	1606.8	1300.6	91.4	13.4	5.3
50°	1465.4	1409.0	1253.2	1236.3	1103.7	905.9	669.5	521.0	52.8	9.0	4.5
52.5°	667.0	637.4	564.8	553.2	496.8	411.8	316.9	260.5	30.4	6.3	3.5
55°	289.1	278.5	247.9	246.1	220.2	190.6	152.2	128.9	17.9	4.5	2.7
57.5°	113.7	110.0	103.8	99.4	89.5	79.6	66.3	55.5	11.6	3.5	2.7
60°	43.0	42.1	38.5	39.4	35.9	34.0	29.6	25.1	7.2	2.7	2.7
62.5°	19.6	19.6	18.8	18.8	17.9	16.1	14.3	13.4	4.5	2.7	2.7
65°	9.8	9.8	9.0	9.0	9.0	8.0	7.2	7.2	2.7	2.7	2.7
67.5°	4.5	4.5	4.5	4.5	4.5	3.5	3.5	3.5	1.8	2.7	2.7
70°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.7	2.7
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.8	2.7	2.7
75°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.8	2.7	2.7
77.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.8	2.7	3.5
80°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.8	2.7	3.5
82.5°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.8	2.7	3.5
85°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.8	2.7	3.5
87.5°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.8	2.7	3.5
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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CATALOG NUMBER: LDA4A15930D010TE LAR35FL 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	150.4	150.4	150.4	150.4
2.5°	126.3	112.0	99.4	96.7
5°	103.8	82.4	68.9	66.3
7.5°	84.1	60.0	50.2	48.3
10°	68.9	48.3	39.4	37.6
12.5°	57.3	39.4	31.4	29.6
15°	49.2	34.9	28.6	28.6
17.5°	47.5	38.5	36.7	37.6
20°	61.8	69.8	83.3	84.1
22.5°	143.2	232.8	307.9	322.2
25°	257.9	282.0	274.8	287.3
27.5°	136.1	106.5	108.3	111.0
30°	59.0	65.3	68.9	72.5
32.5°	49.2	51.0	52.0	54.5
35°	32.2	32.2	31.4	32.2
37.5°	19.6	18.8	17.9	17.9
40°	12.5	11.6	10.8	10.8
42.5°	9.0	7.2	6.3	6.3
45°	6.3	4.5	3.5	2.7
47.5°	4.5	2.7	1.8	1.0
50°	3.5	2.7	1.0	0.0
52.5°	2.7	1.8	1.0	0.0
55°	2.7	1.8	0.0	0.0
57.5°	2.7	1.8	0.0	0.0
60°	2.7	1.8	0.0	0.0
62.5°	2.7	1.8	0.0	0.0
65°	2.7	1.8	1.0	0.0
67.5°	2.7	1.8	1.0	0.0
70°	2.7	1.8	1.0	0.0
72.5°	2.7	1.8	1.0	0.0
75°	2.7	2.7	1.0	0.0
77.5°	3.5	2.7	1.0	0.0
80°	3.5	2.7	1.0	0.0
82.5°	3.5	2.7	1.0	0.0
85°	3.5	2.7	1.0	1.0
87.5°	3.5	2.7	1.0	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)