

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: P1191523

Luminaire Tested: **LDA4A15927D010TE 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: P1191523
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: LDA4A15927D010TE 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 / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

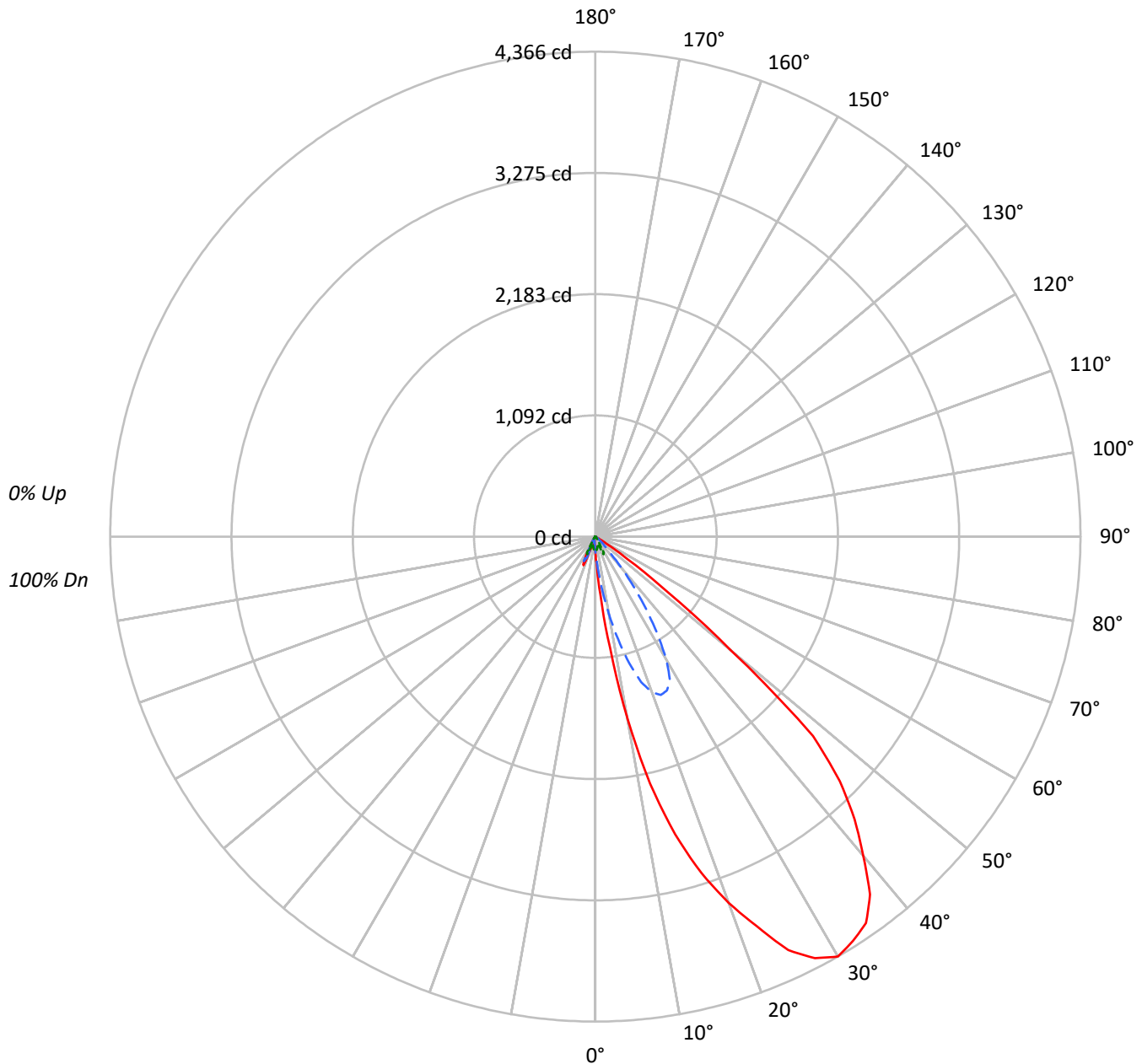
Lumens per Lamp: N/A
Luminaire Lumens: 1586.7 lumens
Efficiency: N/A
Efficacy: 77.8 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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: LDA4A15927D010TE 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°	16097	16097	16097
5°	64806	15192	7107
10°	208914	12738	4083
15°	354410	10114	3167
20°	460637	9070	9582
25°	558991	23885	33929
30°	621809	8403	8959
35°	639607	5029	4216
40°	603940	2125	1497
45°	542796	1221	401
50°	305472	729	0
55°	75804	495	0
60°	11668	567	0
65°	2714	671	0
70°	541	829	0
75°	0	1096	0
80°	0	2202	0
85°	0	4387	1132



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.2	1.7
10°-20°	194.7	12.3
20°-30°	449.8	28.3
30°-40°	504.6	31.8
40°-50°	352.1	22.2
50°-60°	52.5	3.3
60°-70°	3.4	0.2
70°-80°	1.7	0.1
80°-90°	1.7	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°	670.8	42.3
0°-40°	1175.3	74.1
0°-60°	1580.0	99.6
0°-90°	1586.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1586.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	130	130	130	130	130	
5°	523	306	123	72	57	87
15°	2775	1181	79	30	25	793
25°	4107	1527	176	245	249	1878
35°	4248	794	33	28	28	2613
45°	3112	120	7	4	2	2283
55°	352	16	2	2	0	463
65°	9	2	2	2	0	14
75°	0	2	2	2	0	0
85°	0	2	3	2	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°	130.5	130.5	130.5	130.5	130.5	130.5	130.5	130.5	130.5	130.5	130.5
2.5°	237.7	235.4	229.1	227.6	232.9	228.3	230.6	235.4	230.6	225.1	230.6
5°	523.4	536.6	523.4	521.0	530.5	521.9	525.7	534.3	522.7	511.8	519.5
7.5°	1010.3	1018.9	981.5	994.8	991.6	994.0	996.3	996.3	989.3	970.0	980.9
10°	1668.0	1674.3	1624.5	1641.7	1619.2	1641.7	1637.7	1620.7	1624.5	1598.2	1612.1
12.5°	2278.4	2298.7	2248.9	2265.3	2238.0	2263.6	2253.6	2248.9	2209.4	2209.4	2224.1
15°	2775.4	2821.2	2776.2	2793.3	2762.2	2797.9	2770.0	2782.4	2746.6	2702.5	2741.3
17.5°	3177.7	3222.7	3180.8	3201.8	3173.1	3201.0	3168.4	3194.7	3148.9	3117.1	3143.5
20°	3509.3	3542.7	3493.0	3522.6	3488.3	3516.3	3480.6	3515.5	3461.9	3438.6	3454.1
22.5°	3798.1	3811.4	3785.7	3835.5	3768.7	3798.1	3755.5	3791.2	3727.5	3698.1	3701.9
25°	4107.3	4136.7	4087.8	4106.5	4059.8	4080.0	4031.9	4065.3	3986.1	3944.2	3935.6
27.5°	4278.8	4320.8	4277.3	4298.3	4250.9	4267.9	4219.8	4267.9	4187.2	4146.0	4136.7
30°	4365.8	4386.0	4358.1	4372.1	4318.5	4327.0	4277.3	4329.3	4248.6	4212.0	4207.4
32.5°	4315.4	4355.7	4319.2	4337.1	4287.4	4296.0	4247.7	4303.6	4222.9	4189.5	4173.3
35°	4247.7	4288.9	4254.8	4273.4	4227.6	4233.8	4182.6	4231.5	4138.2	4097.2	4062.1
37.5°	4060.6	4099.5	4070.7	4077.0	4032.7	4028.1	3972.8	4014.0	3923.2	3888.3	3865.0
40°	3750.8	3785.7	3762.4	3775.6	3731.3	3721.2	3684.0	3722.1	3651.4	3625.8	3593.2
42.5°	3454.1	3482.9	3461.2	3482.1	3432.4	3419.2	3385.8	3433.9	3354.0	3333.0	3309.7
45°	3111.7	3129.6	3112.5	3130.4	3082.9	3062.1	3031.6	3072.8	2994.4	2975.1	2924.6
47.5°	2659.0	2639.6	2636.5	2653.5	2594.5	2551.0	2523.0	2575.9	2462.5	2424.4	2366.2
50°	1591.9	1624.5	1638.5	1627.0	1586.5	1526.7	1481.7	1546.1	1485.5	1392.4	1299.1
52.5°	820.1	783.5	791.3	795.1	747.0	729.1	714.4	729.1	681.8	657.7	598.8
55°	352.5	335.5	341.7	344.0	334.6	313.0	305.2	314.5	292.8	283.5	259.4
57.5°	130.5	130.5	126.5	128.2	125.0	117.3	115.8	119.6	112.6	110.3	100.9
60°	47.3	47.3	47.3	47.3	43.5	42.7	42.7	44.3	42.0	41.2	38.0
62.5°	20.2	21.0	19.4	20.2	19.4	18.7	19.4	18.7	18.7	17.9	17.9
65°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	8.6	8.6
67.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	3.8	3.8	3.8
70°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
72.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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°	130.5	130.5	130.5	130.5	130.5	130.5	130.5	130.5	130.5	130.5	130.5
2.5°	223.6	222.8	226.0	222.8	217.5	214.4	218.2	210.4	180.1	149.9	127.4
5°	505.5	501.7	496.2	497.7	484.6	473.7	473.7	452.7	306.0	174.0	122.7
7.5°	958.2	949.0	909.4	938.0	910.1	888.4	873.7	830.9	494.7	199.6	113.3
10°	1582.6	1566.3	1538.3	1543.8	1498.0	1461.5	1417.2	1345.8	711.3	222.1	101.7
12.5°	2198.5	2182.1	2107.6	2150.3	2089.0	2053.2	1978.6	1894.8	945.1	232.9	90.8
15°	2721.1	2707.1	2625.6	2665.9	2590.6	2557.2	2461.0	2367.7	1181.2	229.1	79.2
17.5°	3127.2	3124.9	3031.0	3071.3	2988.3	2961.0	2848.4	2756.7	1372.2	212.0	71.5
20°	3440.2	3434.7	3340.0	3380.3	3289.5	3263.1	3120.3	3023.9	1493.3	188.7	69.1
22.5°	3687.1	3676.2	3574.5	3609.4	3507.7	3473.6	3316.0	3215.7	1543.1	174.0	85.4
25°	3909.3	3889.8	3774.1	3801.3	3689.5	3696.4	3459.6	3349.4	1526.7	195.7	175.5
27.5°	4105.0	4069.9	3953.5	3961.2	3830.1	3761.7	3558.1	3436.2	1452.1	218.2	163.1
30°	4177.9	4143.7	4020.3	4024.9	3888.3	3792.0	3574.5	3438.6	1273.5	136.6	59.0
32.5°	4137.6	4100.2	3971.3	3972.8	3832.4	3734.5	3517.8	3367.9	1036.0	90.1	45.0
35°	4020.3	3981.4	3853.2	3859.5	3723.6	3626.6	3414.6	3254.6	793.6	71.5	33.4
37.5°	3822.3	3795.0	3673.1	3684.0	3568.4	3465.0	3250.0	3076.8	559.9	51.3	21.0
40°	3567.6	3546.6	3428.5	3445.6	3319.8	3224.3	2993.6	2805.7	348.7	34.9	13.2
42.5°	3269.3	3246.8	3130.4	3143.5	3036.4	2899.6	2664.4	2451.6	182.5	24.8	9.3
45°	2897.3	2871.0	2752.9	2759.9	2633.3	2473.4	2229.6	2041.6	119.6	17.0	7.0
47.5°	2312.6	2265.3	2111.5	2105.3	2002.0	1740.3	1393.9	1128.4	79.2	11.6	4.6
50°	1271.2	1222.4	1087.2	1072.4	957.5	785.9	580.9	451.9	45.8	7.8	3.8
52.5°	578.6	553.0	490.0	479.9	431.0	357.3	274.9	226.0	26.5	5.5	3.1
55°	250.8	241.5	215.0	213.5	191.0	165.4	132.0	111.8	15.5	3.8	2.3
57.5°	98.6	95.5	90.1	86.2	77.6	69.1	57.4	48.1	10.1	3.1	2.3
60°	37.2	36.5	33.4	34.2	31.1	29.5	25.6	21.7	6.3	2.3	2.3
62.5°	17.0	17.0	16.4	16.4	15.5	14.0	12.4	11.6	3.8	2.3	2.3
65°	8.6	8.6	7.8	7.8	7.8	7.0	6.3	6.3	2.3	2.3	2.3
67.5°	3.8	3.8	3.8	3.8	3.8	3.1	3.1	3.1	1.5	2.3	2.3
70°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.3	2.3
72.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5	2.3	2.3
75°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.5	2.3	2.3
77.5°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.5	2.3	3.1
80°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.5	2.3	3.1
82.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.5	2.3	3.1
85°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.5	2.3	3.1
87.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.5	2.3	3.1
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°	130.5	130.5	130.5	130.5
2.5°	109.5	97.1	86.2	83.9
5°	90.1	71.5	59.7	57.4
7.5°	73.0	52.1	43.5	42.0
10°	59.7	42.0	34.2	32.6
12.5°	49.6	34.2	27.1	25.6
15°	42.7	30.3	24.8	24.8
17.5°	41.2	33.4	31.8	32.6
20°	53.6	60.5	72.3	73.0
22.5°	124.2	202.0	267.1	279.5
25°	223.6	244.6	238.4	249.3
27.5°	118.1	92.5	94.0	96.3
30°	51.3	56.7	59.7	62.9
32.5°	42.7	44.3	45.0	47.3
35°	28.0	28.0	27.1	28.0
37.5°	17.0	16.4	15.5	15.5
40°	10.9	10.1	9.3	9.3
42.5°	7.8	6.3	5.5	5.5
45°	5.5	3.8	3.1	2.3
47.5°	3.8	2.3	1.5	0.8
50°	3.1	2.3	0.8	0.0
52.5°	2.3	1.5	0.8	0.0
55°	2.3	1.5	0.0	0.0
57.5°	2.3	1.5	0.0	0.0
60°	2.3	1.5	0.0	0.0
62.5°	2.3	1.5	0.0	0.0
65°	2.3	1.5	0.8	0.0
67.5°	2.3	1.5	0.8	0.0
70°	2.3	1.5	0.8	0.0
72.5°	2.3	1.5	0.8	0.0
75°	2.3	2.3	0.8	0.0
77.5°	3.1	2.3	0.8	0.0
80°	3.1	2.3	0.8	0.0
82.5°	3.1	2.3	0.8	0.0
85°	3.1	2.3	0.8	0.8
87.5°	3.1	2.3	0.8	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)