

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: P1191845

Luminaire Tested: **LDA4A30940D010TE LAR35FL 4LA1 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: P1191845
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: LDA4A30940D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

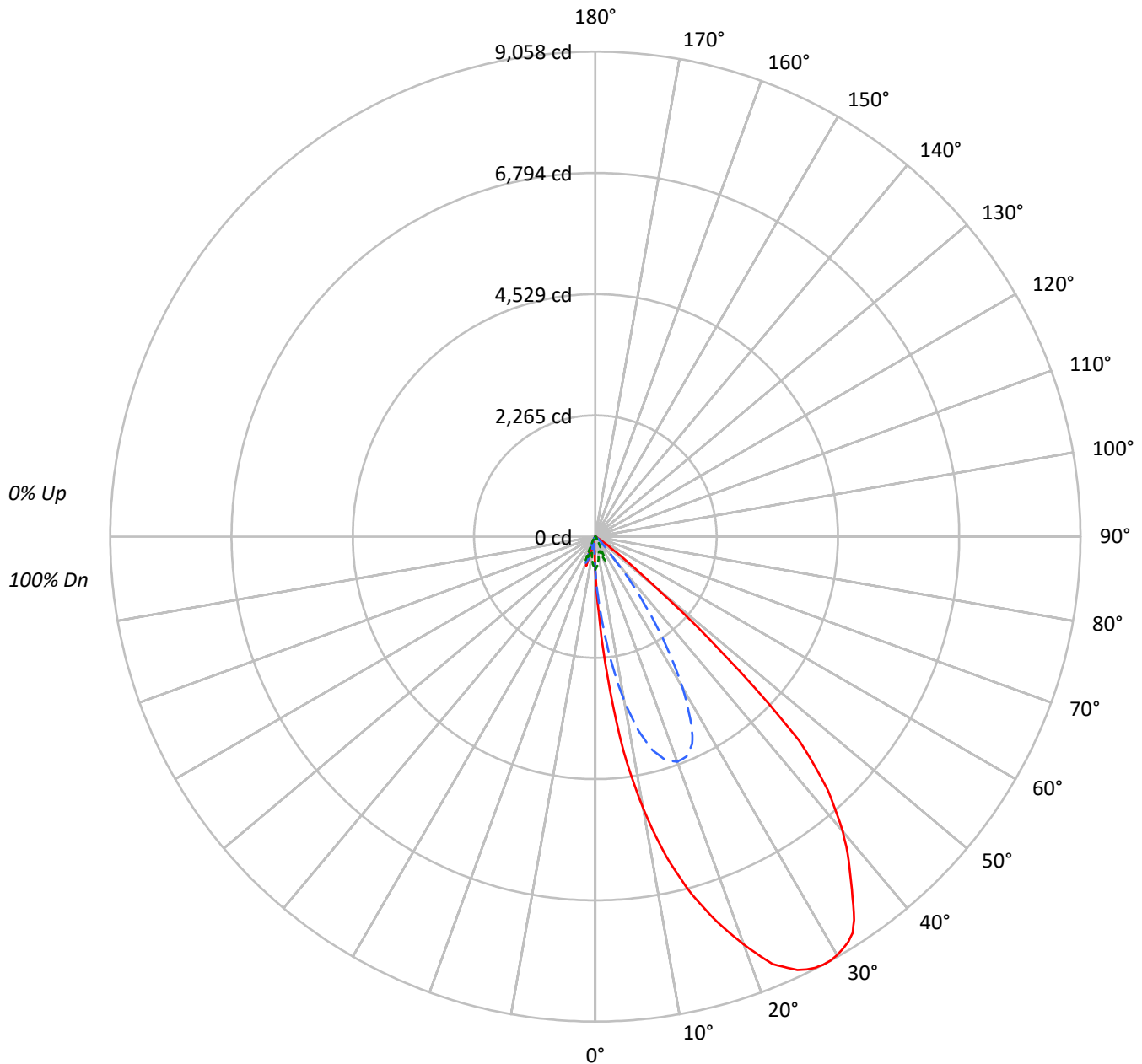
Lumens per Lamp: N/A
Luminaire Lumens: 3350.0 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 39.4
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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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	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°	76721	76721	76721
5°	322283	64187	23699
10°	647434	44138	14391
15°	880648	35844	32384
20°	1064348	54434	60078
25°	1215549	32350	16713
30°	1285278	15211	7720
35°	1264186	6731	2876
40°	1156934	3333	757
45°	938419	1675	0
50°	278185	902	0
55°	50407	1011	0
60°	9448	1159	0
65°	2306	1372	0
70°	577	1695	0
75°	0	2240	0
80°	0	4475	0
85°	0	8916	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.1	3.4
10°-20°	585.1	17.5
20°-30°	1024.7	30.6
30°-40°	1029.1	30.7
40°-50°	542.1	16.2
50°-60°	45.2	1.3
60°-70°	4.5	0.1
70°-80°	3.2	0.1
80°-90°	3.0	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°	1722.9	51.4
0°-40°	2752.0	82.1
0°-60°	3339.3	99.7
0°-90°	3350.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3350.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	622	622	622	622	622	
5°	2603	1702	518	238	191	333
15°	6896	4128	281	188	254	1969
25°	8932	4274	238	136	123	4087
35°	8396	1856	45	24	19	5191
45°	5380	191	10	3	0	3687
55°	234	21	5	2	0	352
65°	8	3	5	3	0	12
75°	0	3	5	3	0	1
85°	0	3	6	3	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°	622.0	622.0	622.0	622.0	622.0	622.0	622.0	622.0	622.0	622.0	622.0
2.5°	1411.5	1413.1	1414.6	1425.8	1400.4	1393.9	1382.9	1366.9	1314.3	1097.3	827.8
5°	2602.9	2622.1	2617.3	2601.4	2561.4	2539.1	2505.6	2470.5	2327.0	1701.8	1027.1
7.5°	4044.7	4081.4	4073.5	4049.5	3982.5	3952.3	3867.7	3821.4	3604.6	2416.3	1175.5
10°	5169.2	5266.4	5268.0	5245.7	5145.2	5102.2	5014.5	4931.5	4657.2	3116.4	1244.1
12.5°	6119.7	6121.3	6196.3	6178.8	6062.3	6043.2	5969.8	5845.5	5556.7	3700.2	1244.1
15°	6896.4	7001.7	6984.2	6965.0	6842.2	6816.6	6746.5	6631.7	6295.1	4127.7	1183.4
17.5°	7537.6	7631.7	7604.6	7583.9	7461.1	7405.2	7328.7	7191.5	6821.5	4381.2	1057.5
20°	8108.6	8197.9	8143.7	8107.0	7942.7	7874.1	7762.5	7604.6	7181.9	4475.4	910.6
22.5°	8641.2	8735.4	8666.8	8615.8	8403.7	8271.2	8113.4	7914.1	7416.4	4445.1	832.6
25°	8931.5	9054.3	8989.1	8949.1	8746.6	8591.9	8383.0	8126.2	7550.4	4274.4	626.8
26°	8995.4	9124.5	9062.4	9027.3	8821.5	8657.2	8434.0	8164.4	7561.5	4134.0	483.3
27°	9040.0	9183.6	9111.9	9067.1	8855.0	8679.6	8446.7	8166.0	7543.9	3944.2	384.4
28°	9057.5	9215.5	9127.8	9073.5	8853.5	8662.1	8414.8	8130.9	7497.8	3725.7	327.0
29°	9055.9	9228.2	9126.1	9067.1	8832.8	8620.5	8367.0	8081.4	7433.9	3497.6	295.1
30°	9024.1	9212.2	9110.1	9035.2	8783.3	8555.2	8298.4	8012.9	7362.2	3248.9	263.1
31°	8981.0	9174.0	9067.1	8974.7	8701.9	8454.7	8202.7	7920.4	7266.4	2982.5	240.9
32°	8918.7	9111.9	8993.8	8872.6	8587.0	8328.6	8086.3	7812.0	7150.1	2701.9	213.7
33°	8820.0	8990.6	8853.5	8713.1	8427.6	8185.1	7955.5	7685.9	7017.7	2410.0	185.1
34°	8639.6	8789.6	8647.7	8505.8	8250.5	8025.6	7805.5	7537.6	6862.9	2140.4	159.5
35°	8395.6	8523.3	8395.6	8276.0	8051.2	7842.2	7631.7	7370.1	6676.3	1856.5	137.2
36°	8146.9	8258.5	8140.5	8046.4	7831.1	7644.5	7448.3	7177.1	6465.8	1586.9	121.2
37°	7914.1	8014.4	7906.0	7812.0	7626.9	7437.1	7242.6	6965.0	6233.0	1328.5	100.5
38°	7682.7	7772.0	7679.5	7574.3	7403.6	7210.6	7014.5	6730.5	5973.0	1084.5	86.1
39°	7441.9	7515.3	7426.0	7319.1	7145.2	6953.8	6752.9	6459.5	5674.8	831.0	74.9
40°	7185.2	7253.8	7143.6	7048.0	6874.2	6677.9	6472.3	6167.6	5351.0	556.6	63.8
42.5°	6426.0	6467.4	6374.9	6242.5	6068.6	5853.4	5604.6	5263.2	4315.8	293.5	44.7
45°	5379.7	5387.6	5315.9	5075.0	4842.2	4508.9	4137.2	3625.3	2508.8	191.4	28.8
47.5°	3247.3	3228.1	3114.8	2909.1	2692.2	2339.8	1992.1	1639.5	974.5	111.6	19.1
50°	1449.7	1427.4	1371.6	1264.8	1138.8	1008.0	853.3	722.6	473.7	60.5	12.8
51°	1051.1	1031.9	990.4	909.1	816.6	724.1	617.3	527.9	354.0	49.5	11.2
52°	738.5	727.3	698.5	641.2	590.1	518.4	445.0	389.1	266.3	39.8	7.9
53°	515.2	507.2	489.6	451.4	421.0	368.4	322.2	277.5	193.0	31.9	7.9
54°	349.3	344.5	333.3	307.9	282.3	253.6	220.1	194.6	135.6	25.5	6.3
55°	234.4	231.2	221.7	208.9	194.6	177.0	154.7	135.6	95.8	20.7	4.7
57.5°	86.1	86.1	83.0	78.1	73.3	68.6	62.3	55.8	44.7	12.8	4.7
60°	38.3	36.7	36.7	35.1	33.5	31.9	30.3	27.2	22.3	7.9	4.7
61°	28.8	28.8	27.2	25.5	25.5	23.9	22.3	20.7	17.5	6.3	4.7
62°	20.7	20.7	20.7	19.1	19.1	17.5	17.5	16.0	12.8	4.7	4.7
63°	16.0	16.0	16.0	14.4	14.4	14.4	12.8	12.8	9.6	4.7	4.7
64°	11.2	11.2	11.2	11.2	11.2	11.2	9.6	9.6	7.9	3.2	4.7
65°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	6.3	3.2	4.7
66°	6.3	6.3	6.3	6.3	6.3	6.3	4.7	4.7	4.7	3.2	4.7



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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°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.2	4.7
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	3.2	4.7
77.5°	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	3.2	4.7
80°	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	1.6	3.2	4.7
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	3.2	4.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	3.2	4.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	1.6	3.2	4.7
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: LDA4A30940D010TE LAR35FL 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	622.0	622.0	622.0	622.0	622.0
2.5°	572.6	400.3	318.9	288.7	279.1
5°	518.4	299.8	237.7	204.2	191.4
7.5°	435.4	247.2	178.6	148.4	138.8
10°	352.4	204.2	145.1	121.2	114.9
12.5°	301.4	177.0	135.6	126.0	126.0
15°	280.7	186.6	188.2	226.5	253.6
17.5°	288.7	291.9	456.1	555.0	572.6
20°	414.7	524.7	520.0	472.1	457.7
22.5°	480.1	346.1	261.6	215.3	207.3
25°	237.7	157.9	135.6	124.4	122.8
26°	180.2	132.4	118.1	111.6	108.4
27°	150.0	116.5	105.3	97.3	94.0
28°	134.0	103.7	90.9	83.0	79.8
29°	121.2	89.3	76.5	68.6	67.0
30°	106.8	74.9	63.8	55.8	54.2
31°	90.9	62.3	51.0	46.3	43.0
32°	76.5	51.0	41.4	36.7	33.5
33°	63.8	41.4	35.1	30.3	27.2
34°	54.2	35.1	28.8	23.9	22.3
35°	44.7	28.8	23.9	20.7	19.1
36°	38.3	25.5	19.1	16.0	14.4
37°	33.5	20.7	16.0	12.8	12.8
38°	28.8	17.5	14.4	9.6	9.6
39°	23.9	14.4	11.2	7.9	7.9
40°	20.7	12.8	9.6	6.3	4.7
42.5°	14.4	7.9	6.3	3.2	1.6
45°	9.6	6.3	3.2	1.6	0.0
47.5°	6.3	4.7	3.2	1.6	0.0
50°	4.7	4.7	3.2	0.0	0.0
51°	4.7	3.2	3.2	0.0	0.0
52°	4.7	3.2	1.6	0.0	0.0
53°	4.7	3.2	1.6	0.0	0.0
54°	4.7	3.2	1.6	0.0	0.0
55°	4.7	3.2	1.6	0.0	0.0
57.5°	4.7	3.2	1.6	0.0	0.0
60°	4.7	3.2	3.2	0.0	0.0
61°	4.7	4.7	3.2	0.0	0.0
62°	4.7	4.7	3.2	0.0	0.0
63°	4.7	4.7	3.2	0.0	0.0
64°	4.7	4.7	3.2	1.6	0.0
65°	4.7	4.7	3.2	1.6	0.0
66°	4.7	4.7	3.2	1.6	0.0

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	4.7	4.7	3.2	1.6	0.0
75°	4.7	4.7	3.2	1.6	0.0
77.5°	6.3	4.7	3.2	1.6	0.0
80°	6.3	4.7	3.2	1.6	0.0
82.5°	6.3	4.7	3.2	1.6	0.0
85°	6.3	4.7	3.2	1.6	0.0
87.5°	6.3	4.7	3.2	1.6	0.0
90°	0.0	0.0	0.0	0.0	0.0

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Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269



— 0°-180° - - 45°-225° - - - 90°-270°

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Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

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67.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	4.7
70°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	3.2	4.7

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Peachtree City, GA 30269

Scaled Data Report



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Peachtree City, GA 30269

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67.5°	4.7	4.7	3.2	1.6	0.0
70°	4.7	4.7	3.2	1.6	0.0

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(END OF REPORT)