

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: P1191791

Luminaire Tested: **LDA4A30927D010TE LAR35FL 4LA1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1191791
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: LDA4A30927D010TE 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 / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

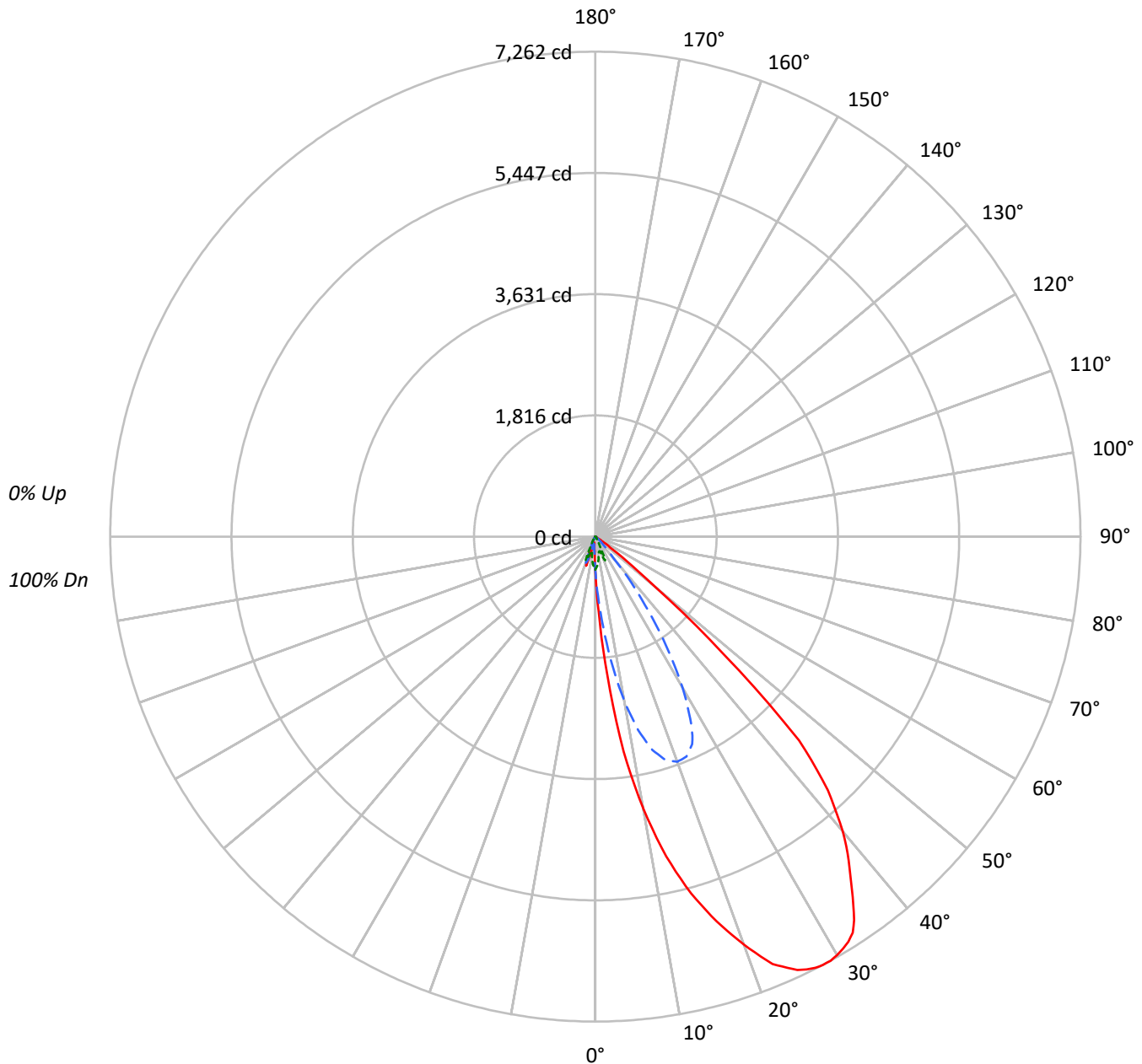
Lumens per Lamp: N/A
Luminaire Lumens: 2685.9 lumens
Efficiency: N/A
Efficacy: 68.2 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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



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°	61512	61512	61512
5°	258393	51458	18993
10°	519092	35408	11535
15°	706074	28732	25961
20°	853345	43645	48160
25°	974576	25940	13392
30°	1030490	12206	6196
35°	1013580	5376	2304
40°	927583	2673	612
45°	752382	1343	0
50°	223036	729	0
55°	40429	817	0
60°	7573	937	0
65°	1839	1109	0
70°	469	1370	0
75°	0	1811	0
80°	0	3623	0
85°	0	7218	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.7	3.4
10°-20°	469.1	17.5
20°-30°	821.6	30.6
30°-40°	825.1	30.7
40°-50°	434.6	16.2
50°-60°	36.2	1.3
60°-70°	3.6	0.1
70°-80°	2.6	0.1
80°-90°	2.4	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°	1381.4	51.4
0°-40°	2206.4	82.1
0°-60°	2677.3	99.7
0°-90°	2685.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2685.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	499	499	499	499	499	
5°	2087	1364	416	191	153	267
15°	5529	3309	225	151	203	1579
25°	7161	3427	191	109	98	3277
35°	6731	1488	36	19	15	4162
45°	4313	153	8	2	0	2956
55°	188	17	4	1	0	283
65°	6	2	4	2	0	9
75°	0	2	4	2	0	1
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°	498.7	498.7	498.7	498.7	498.7	498.7	498.7	498.7	498.7	498.7	498.7
2.5°	1131.7	1133.0	1134.2	1143.2	1122.7	1117.6	1108.6	1095.8	1053.6	879.8	663.7
5°	2086.9	2102.2	2098.4	2085.6	2053.7	2035.8	2008.9	1980.8	1865.7	1364.4	823.5
7.5°	3242.9	3272.3	3265.9	3246.7	3193.1	3168.7	3101.0	3063.9	2890.0	1937.2	942.4
10°	4144.5	4222.4	4223.7	4205.8	4125.2	4090.6	4020.3	3953.9	3734.0	2498.6	997.4
12.5°	4906.6	4907.8	4967.9	4953.8	4860.6	4845.1	4786.3	4686.6	4455.1	2966.7	997.4
15°	5529.3	5613.7	5599.6	5584.3	5485.8	5465.3	5409.1	5317.1	5047.2	3309.4	948.8
17.5°	6043.3	6118.8	6097.0	6080.4	5982.0	5937.3	5875.8	5765.8	5469.1	3512.7	847.9
20°	6501.1	6572.8	6529.2	6499.8	6368.2	6313.2	6223.6	6097.0	5758.1	3588.1	730.2
22.5°	6928.2	7003.7	6948.7	6907.8	6737.6	6631.6	6505.0	6345.1	5946.1	3563.8	667.6
25°	7160.9	7259.4	7206.9	7175.0	7012.6	6888.5	6721.0	6515.2	6053.6	3427.1	502.5
26°	7212.1	7315.6	7265.8	7237.7	7072.7	6941.0	6762.0	6545.9	6062.6	3314.5	387.4
27°	7248.0	7363.0	7305.5	7269.6	7099.6	6959.0	6772.2	6547.2	6048.5	3162.3	308.1
28°	7261.9	7388.6	7318.3	7274.7	7098.3	6944.9	6746.6	6519.1	6011.4	2987.2	262.1
29°	7260.8	7398.9	7316.9	7269.6	7081.6	6911.6	6708.2	6479.4	5960.2	2804.2	236.6
30°	7235.2	7386.1	7304.1	7244.1	7042.1	6859.1	6653.4	6424.4	5902.7	2604.8	211.0
31°	7200.6	7355.3	7269.6	7195.5	6976.8	6778.7	6576.6	6350.2	5825.9	2391.2	193.1
32°	7150.7	7305.5	7210.8	7113.7	6884.7	6677.6	6483.2	6263.3	5732.5	2166.2	171.3
33°	7071.5	7208.3	7098.3	6985.7	6756.9	6562.5	6378.3	6162.3	5626.5	1932.2	148.4
34°	6926.9	7047.2	6933.4	6819.5	6615.0	6434.7	6258.2	6043.3	5502.4	1716.0	127.8
35°	6731.3	6833.7	6731.3	6635.4	6455.1	6287.6	6118.8	5909.0	5352.8	1488.5	110.0
36°	6531.9	6621.3	6526.7	6451.3	6278.6	6129.0	5971.7	5754.3	5184.0	1272.3	97.2
37°	6345.1	6425.7	6338.8	6263.3	6114.9	5962.7	5806.8	5584.3	4997.3	1065.2	80.6
38°	6159.6	6231.3	6157.1	6072.7	5935.9	5781.2	5623.9	5396.3	4788.9	869.5	69.1
39°	5966.7	6025.4	5953.9	5868.1	5728.7	5575.3	5414.1	5179.0	4549.8	666.2	60.1
40°	5760.8	5815.8	5727.5	5650.8	5511.4	5354.1	5189.1	4944.8	4290.2	446.2	51.2
42.5°	5152.1	5185.3	5111.2	5005.0	4865.6	4693.0	4493.5	4219.9	3460.3	235.3	35.7
45°	4313.2	4319.6	4262.0	4069.0	3882.2	3615.0	3317.0	2906.6	2011.5	153.4	23.1
47.5°	2603.5	2588.2	2497.4	2332.4	2158.6	1875.9	1597.2	1314.5	781.2	89.6	15.3
50°	1162.3	1144.5	1099.7	1014.1	913.0	808.2	684.2	579.3	379.7	48.5	10.3
51°	842.7	827.3	794.0	728.9	654.8	580.5	494.9	423.3	283.9	39.7	9.0
52°	592.1	583.1	560.1	514.0	473.1	415.6	356.8	312.1	213.5	31.9	6.3
53°	413.0	406.7	392.5	361.9	337.5	295.3	258.3	222.5	154.7	25.6	6.3
54°	280.0	276.2	267.2	246.8	226.3	203.3	176.5	156.0	108.7	20.4	5.1
55°	188.0	185.5	177.8	167.5	156.0	141.9	124.0	108.7	76.8	16.6	3.8
57.5°	69.1	69.1	66.5	62.7	58.8	55.0	49.9	44.7	35.7	10.3	3.8
60°	30.7	29.4	29.4	28.1	26.9	25.6	24.3	21.8	17.9	6.3	3.8
61°	23.1	23.1	21.8	20.4	20.4	19.1	17.9	16.6	14.1	5.1	3.8
62°	16.6	16.6	16.6	15.3	15.3	14.1	14.1	12.8	10.3	3.8	3.8
63°	12.8	12.8	12.8	11.5	11.5	11.5	10.3	10.3	7.7	3.8	3.8
64°	9.0	9.0	9.0	9.0	9.0	9.0	7.7	7.7	6.3	2.5	3.8
65°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	5.1	2.5	3.8
66°	5.1	5.1	5.1	5.1	5.1	5.1	3.8	3.8	3.8	2.5	3.8



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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°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	3.8
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	2.5	3.8
77.5°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	2.5	3.8
80°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	2.5	3.8
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	2.5	3.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	2.5	3.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	2.5	3.8
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°	498.7	498.7	498.7	498.7	498.7
2.5°	459.0	320.9	255.8	231.5	223.8
5°	415.6	240.5	190.6	163.7	153.4
7.5°	349.1	198.2	143.2	119.0	111.2
10°	282.7	163.7	116.3	97.2	92.1
12.5°	241.6	141.9	108.7	101.0	101.0
15°	225.0	149.6	150.9	181.6	203.3
17.5°	231.5	234.0	365.8	445.0	459.0
20°	332.5	420.8	416.8	378.6	366.9
22.5°	384.9	277.5	209.7	172.7	166.2
25°	190.6	126.6	108.7	99.7	98.4
26°	144.6	106.2	94.6	89.6	86.9
27°	120.2	93.4	84.4	78.0	75.4
28°	107.4	83.1	72.9	66.5	64.0
29°	97.2	71.6	61.3	55.0	53.7
30°	85.7	60.1	51.2	44.7	43.5
31°	72.9	49.9	40.9	37.1	34.6
32°	61.3	40.9	33.2	29.4	26.9
33°	51.2	33.2	28.1	24.3	21.8
34°	43.5	28.1	23.1	19.1	17.9
35°	35.7	23.1	19.1	16.6	15.3
36°	30.7	20.4	15.3	12.8	11.5
37°	26.9	16.6	12.8	10.3	10.3
38°	23.1	14.1	11.5	7.7	7.7
39°	19.1	11.5	9.0	6.3	6.3
40°	16.6	10.3	7.7	5.1	3.8
42.5°	11.5	6.3	5.1	2.5	1.3
45°	7.7	5.1	2.5	1.3	0.0
47.5°	5.1	3.8	2.5	1.3	0.0
50°	3.8	3.8	2.5	0.0	0.0
51°	3.8	2.5	2.5	0.0	0.0
52°	3.8	2.5	1.3	0.0	0.0
53°	3.8	2.5	1.3	0.0	0.0
54°	3.8	2.5	1.3	0.0	0.0
55°	3.8	2.5	1.3	0.0	0.0
57.5°	3.8	2.5	1.3	0.0	0.0
60°	3.8	2.5	2.5	0.0	0.0
61°	3.8	3.8	2.5	0.0	0.0
62°	3.8	3.8	2.5	0.0	0.0
63°	3.8	3.8	2.5	0.0	0.0
64°	3.8	3.8	2.5	1.3	0.0
65°	3.8	3.8	2.5	1.3	0.0
66°	3.8	3.8	2.5	1.3	0.0

Classified

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	3.8	3.8	2.5	1.3	0.0
75°	3.8	3.8	2.5	1.3	0.0
77.5°	5.1	3.8	2.5	1.3	0.0
80°	5.1	3.8	2.5	1.3	0.0
82.5°	5.1	3.8	2.5	1.3	0.0
85°	5.1	3.8	2.5	1.3	0.0
87.5°	5.1	3.8	2.5	1.3	0.0
90°	0.0	0.0	0.0	0.0	0.0

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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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67.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.8
70°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	3.8

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67.5°	3.8	3.8	2.5	1.3	0.0
70°	3.8	3.8	2.5	1.3	0.0

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(END OF REPORT)