

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: P1191467

Luminaire Tested: **LDA4A10935D010TE 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: P1191467
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: LDA4A10935D010TE 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

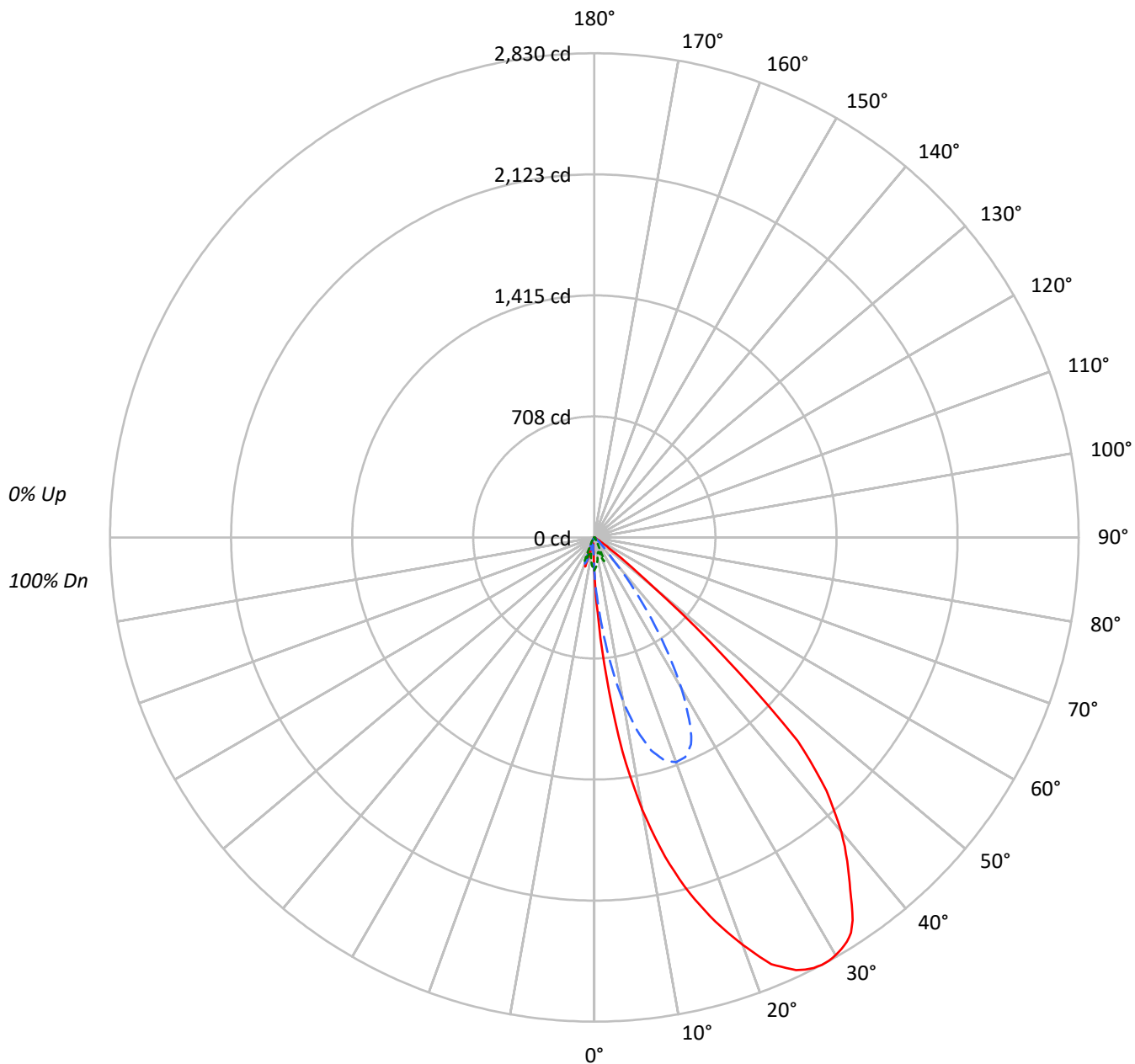
Lumens per Lamp: N/A
Luminaire Lumens: 1046.6 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 12.4
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°	23978	23978	23978
5°	100688	20046	7392
10°	202264	13790	4496
15°	275110	11186	10114
20°	332499	16998	18770
25°	379751	10112	5213
30°	401531	4757	2407
35°	394934	2108	903
40°	361417	1047	242
45°	293159	506	0
50°	86908	288	0
55°	15741	323	0
60°	2960	370	0
65°	730	438	0
70°	180	541	0
75°	0	715	0
80°	0	1421	0
85°	0	2830	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.3	3.4
10°-20°	182.8	17.5
20°-30°	320.1	30.6
30°-40°	321.5	30.7
40°-50°	169.3	16.2
50°-60°	14.1	1.3
60°-70°	1.4	0.1
70°-80°	1.0	0.1
80°-90°	0.9	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°	538.2	51.4
0°-40°	859.7	82.1
0°-60°	1043.2	99.7
0°-90°	1046.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1046.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	194	194	194	194	194	
5°	813	532	162	74	60	104
15°	2154	1290	88	59	79	615
25°	2790	1335	74	42	38	1277
35°	2623	580	14	8	6	1622
45°	1681	60	3	1	0	1152
55°	73	6	2	0	0	110
65°	2	1	2	1	0	4
75°	0	1	2	1	0	0
85°	0	1	2	1	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°	194.4	194.4	194.4	194.4	194.4	194.4	194.4	194.4	194.4	194.4	194.4
2.5°	441.0	441.5	442.0	445.4	437.4	435.5	431.9	427.0	410.5	342.8	258.6
5°	813.2	819.1	817.6	812.7	800.2	793.2	782.7	771.8	726.9	531.7	320.9
7.5°	1263.6	1275.0	1272.6	1265.1	1244.2	1234.6	1208.3	1193.9	1126.1	754.8	367.2
10°	1614.9	1645.3	1645.7	1638.8	1607.3	1594.0	1566.5	1540.6	1454.9	973.7	388.6
12.5°	1911.8	1912.3	1935.7	1930.2	1893.8	1888.0	1865.0	1826.0	1735.9	1155.9	388.6
15°	2154.4	2187.3	2181.8	2175.9	2137.5	2129.6	2107.7	2071.8	1966.7	1289.5	369.8
17.5°	2354.8	2384.2	2375.7	2369.2	2330.8	2313.4	2289.4	2246.6	2131.0	1368.8	330.3
20°	2533.1	2561.0	2544.1	2532.6	2481.3	2459.9	2425.0	2375.7	2243.7	1398.1	284.6
22.5°	2699.6	2729.0	2707.5	2691.6	2625.3	2583.9	2534.6	2472.3	2317.0	1388.6	260.1
25°	2790.3	2828.6	2808.2	2795.8	2732.4	2684.0	2618.8	2538.6	2358.7	1335.3	195.8
26°	2810.1	2850.5	2831.0	2820.1	2755.9	2704.6	2634.8	2550.6	2362.3	1291.5	150.9
27°	2824.2	2869.0	2846.6	2832.6	2766.3	2711.6	2638.8	2551.1	2356.7	1232.2	120.1
28°	2829.6	2878.9	2851.5	2834.6	2765.8	2706.1	2628.8	2540.1	2342.3	1164.0	102.2
29°	2829.1	2882.9	2851.0	2832.6	2759.3	2693.1	2613.9	2524.7	2322.4	1092.6	92.2
30°	2819.2	2877.9	2846.1	2822.6	2743.9	2672.7	2592.5	2503.3	2300.0	1014.9	82.2
31°	2805.7	2865.9	2832.6	2803.7	2718.4	2641.2	2562.5	2474.4	2270.1	931.7	75.3
32°	2786.2	2846.6	2809.6	2771.8	2682.6	2601.9	2526.1	2440.5	2233.6	844.0	66.7
33°	2755.4	2808.6	2765.8	2722.0	2632.8	2557.1	2485.3	2401.1	2192.4	752.9	57.8
34°	2699.1	2746.0	2701.5	2657.2	2577.4	2507.2	2438.5	2354.8	2144.0	668.7	49.8
35°	2622.8	2662.6	2622.8	2585.5	2515.1	2449.9	2384.2	2302.4	2085.8	579.9	42.8
36°	2545.1	2580.0	2543.0	2513.7	2446.5	2388.2	2326.9	2242.2	2019.9	495.7	37.8
37°	2472.3	2503.7	2469.8	2440.5	2382.7	2323.3	2262.6	2175.9	1947.2	415.0	31.3
38°	2400.1	2428.0	2399.1	2366.2	2312.9	2252.6	2191.4	2102.7	1865.9	338.8	26.9
39°	2324.8	2347.8	2319.9	2286.5	2232.2	2172.4	2109.6	2018.0	1772.8	259.6	23.4
40°	2244.6	2266.1	2231.7	2201.8	2147.5	2086.1	2022.0	1926.8	1671.7	173.9	19.9
42.5°	2007.4	2020.4	1991.5	1950.2	1895.8	1828.6	1750.9	1644.3	1348.3	91.7	14.0
45°	1680.6	1683.1	1660.7	1585.4	1512.7	1408.5	1292.5	1132.5	783.7	59.7	8.9
47.5°	1014.4	1008.4	973.1	908.8	841.1	731.0	622.4	512.2	304.4	34.9	6.0
50°	452.9	445.9	428.5	395.1	355.8	314.9	266.6	225.7	148.0	19.0	3.9
51°	328.4	322.4	309.4	284.0	255.1	226.2	192.8	165.0	110.6	15.4	3.4
52°	230.7	227.2	218.2	200.4	184.3	161.9	139.0	121.5	83.2	12.5	2.5
53°	160.9	158.5	153.0	141.0	131.6	115.1	100.6	86.7	60.2	9.9	2.5
54°	109.2	107.6	104.2	96.2	88.1	79.2	68.8	60.8	42.3	8.0	2.0
55°	73.2	72.2	69.3	65.2	60.8	55.3	48.3	42.3	29.9	6.5	1.5
57.5°	26.9	26.9	25.9	24.5	22.9	21.4	19.5	17.5	14.0	3.9	1.5
60°	12.0	11.5	11.5	11.0	10.4	9.9	9.4	8.4	7.0	2.5	1.5
61°	8.9	8.9	8.4	8.0	8.0	7.5	7.0	6.5	5.5	2.0	1.5
62°	6.5	6.5	6.5	6.0	6.0	5.5	5.5	5.0	3.9	1.5	1.5
63°	5.0	5.0	5.0	4.5	4.5	4.5	3.9	3.9	2.9	1.5	1.5
64°	3.4	3.4	3.4	3.4	3.4	3.4	2.9	2.9	2.5	1.0	1.5
65°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.0	1.0	1.5
66°	2.0	2.0	2.0	2.0	2.0	2.0	1.5	1.5	1.5	1.0	1.5



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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°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.5
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	1.0	1.5
77.5°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.0	1.5
80°	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.0	1.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	1.0	1.5
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	1.0	1.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	1.0	1.5
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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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
0°	194.4	194.4	194.4	194.4	194.4
2.5°	178.8	125.1	99.6	90.2	87.3
5°	161.9	93.6	74.3	63.8	59.7
7.5°	136.0	77.2	55.8	46.4	43.3
10°	110.1	63.8	45.3	37.8	35.9
12.5°	94.1	55.3	42.3	39.4	39.4
15°	87.6	58.3	58.8	70.7	79.2
17.5°	90.2	91.2	142.5	173.4	178.8
20°	129.5	163.9	162.4	147.5	143.0
22.5°	149.9	108.1	81.8	67.3	64.8
25°	74.3	49.3	42.3	38.8	38.3
26°	56.3	41.4	36.8	34.9	33.9
27°	46.9	36.4	32.9	30.4	29.4
28°	41.9	32.4	28.4	25.9	25.0
29°	37.8	27.9	23.9	21.4	20.9
30°	33.4	23.4	19.9	17.5	16.9
31°	28.4	19.5	15.9	14.4	13.5
32°	23.9	15.9	13.0	11.5	10.4
33°	19.9	13.0	11.0	9.4	8.4
34°	16.9	11.0	8.9	7.5	7.0
35°	14.0	8.9	7.5	6.5	6.0
36°	12.0	8.0	6.0	5.0	4.5
37°	10.4	6.5	5.0	3.9	3.9
38°	8.9	5.5	4.5	2.9	2.9
39°	7.5	4.5	3.4	2.5	2.5
40°	6.5	3.9	2.9	2.0	1.5
42.5°	4.5	2.5	2.0	1.0	0.5
45°	2.9	2.0	1.0	0.5	0.0
47.5°	2.0	1.5	1.0	0.5	0.0
50°	1.5	1.5	1.0	0.0	0.0
51°	1.5	1.0	1.0	0.0	0.0
52°	1.5	1.0	0.5	0.0	0.0
53°	1.5	1.0	0.5	0.0	0.0
54°	1.5	1.0	0.5	0.0	0.0
55°	1.5	1.0	0.5	0.0	0.0
57.5°	1.5	1.0	0.5	0.0	0.0
60°	1.5	1.0	1.0	0.0	0.0
61°	1.5	1.5	1.0	0.0	0.0
62°	1.5	1.5	1.0	0.0	0.0
63°	1.5	1.5	1.0	0.0	0.0
64°	1.5	1.5	1.0	0.5	0.0
65°	1.5	1.5	1.0	0.5	0.0
66°	1.5	1.5	1.0	0.5	0.0



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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	1.5	1.5	1.0	0.5	0.0
75°	1.5	1.5	1.0	0.5	0.0
77.5°	2.0	1.5	1.0	0.5	0.0
80°	2.0	1.5	1.0	0.5	0.0
82.5°	2.0	1.5	1.0	0.5	0.0
85°	2.0	1.5	1.0	0.5	0.0
87.5°	2.0	1.5	1.0	0.5	0.0
90°	0.0	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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— 0°-180° - - 45°-225° - - - 90°-270°

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67.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5
70°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.5

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67.5°	1.5	1.5	1.0	0.5	0.0
70°	1.5	1.5	1.0	0.5	0.0

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(END OF REPORT)