

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: P1191451

Luminaire Tested: **LDA4A10930D010TE 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: P1191451
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: LDA4A10930D010TE 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

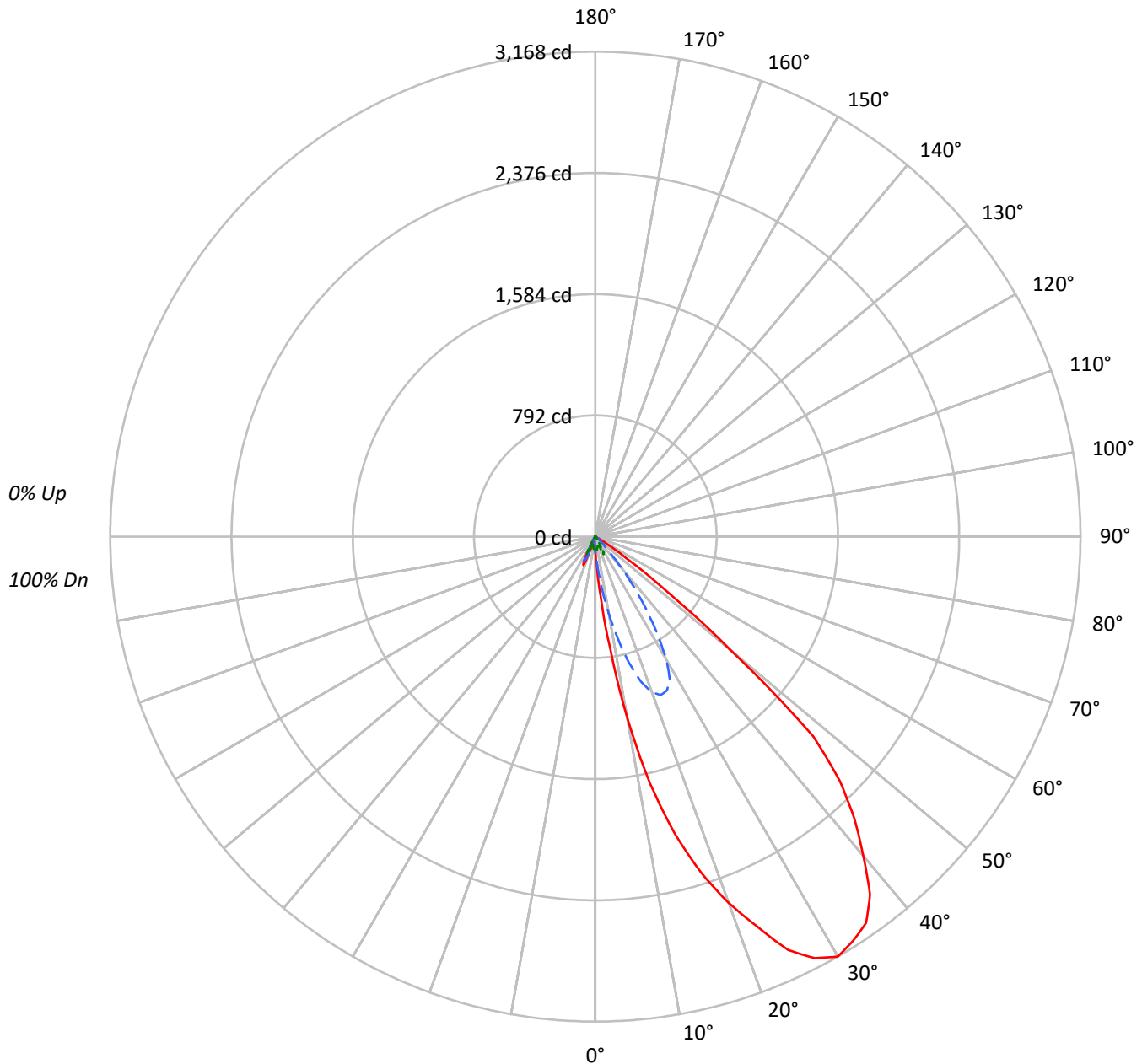
Lumens per Lamp: N/A
Luminaire Lumens: 1151.2 lumens
Efficiency: N/A
Efficacy: 92.8 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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				0			
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0			
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°	11668	11668	11668
5°	47013	11020	5163
10°	151576	9243	2968
15°	257143	7330	2311
20°	334205	6589	6957
25°	405555	17339	24620
30°	451153	6096	6495
35°	464079	3644	3057
40°	438190	1546	1095
45°	393809	890	297
50°	221635	537	0
55°	55009	366	0
60°	8486	419	0
65°	1985	496	0
70°	397	613	0
75°	0	810	0
80°	0	1634	0
85°	0	3255	708



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.0	1.7
10°-20°	141.3	12.3
20°-30°	326.4	28.3
30°-40°	366.1	31.8
40°-50°	255.4	22.2
50°-60°	38.1	3.3
60°-70°	2.5	0.2
70°-80°	1.2	0.1
80°-90°	1.2	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°	486.7	42.3
0°-40°	852.8	74.1
0°-60°	1146.3	99.6
0°-90°	1151.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1151.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	95	95	95	95	95	
5°	380	222	89	52	42	63
15°	2014	857	57	22	18	575
25°	2980	1108	127	177	181	1362
35°	3082	576	24	20	20	1896
45°	2258	87	5	3	2	1656
55°	256	11	2	1	0	336
65°	7	2	2	1	0	10
75°	0	1	2	2	0	0
85°	0	1	2	2	0	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°	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6
2.5°	172.5	170.7	166.2	165.1	169.0	165.6	167.4	170.7	167.4	163.4	167.4
5°	379.7	389.4	379.7	378.0	384.8	378.6	381.5	387.6	379.2	371.3	376.9
7.5°	733.0	739.2	712.2	721.7	719.5	721.2	722.9	722.9	717.8	703.7	711.6
10°	1210.2	1214.8	1178.7	1191.1	1174.8	1191.1	1188.3	1175.9	1178.7	1159.5	1169.7
12.5°	1653.1	1667.7	1631.7	1643.5	1623.8	1642.4	1635.1	1631.7	1602.9	1602.9	1613.6
15°	2013.7	2046.9	2014.2	2026.7	2004.1	2030.0	2009.7	2018.8	1992.8	1960.7	1988.8
17.5°	2305.5	2338.2	2307.8	2322.9	2302.2	2322.4	2298.7	2318.0	2284.7	2261.5	2280.8
20°	2546.1	2570.3	2534.3	2555.7	2530.9	2551.2	2525.2	2550.7	2511.7	2494.9	2506.1
22.5°	2755.8	2765.3	2746.7	2782.8	2734.4	2755.8	2724.7	2750.7	2704.4	2683.0	2685.8
25°	2979.9	3001.3	2965.9	2979.4	2945.5	2960.2	2925.3	2949.5	2892.0	2861.6	2855.5
27.5°	3104.5	3135.0	3103.4	3118.5	3084.1	3096.6	3061.7	3096.6	3038.0	3008.1	3001.3
30°	3167.6	3182.2	3162.0	3172.0	3133.2	3139.4	3103.4	3141.1	3082.5	3056.0	3052.7
32.5°	3131.0	3160.3	3133.8	3146.7	3110.6	3116.9	3082.0	3122.5	3063.9	3039.7	3027.8
35°	3082.0	3111.8	3087.1	3100.6	3067.3	3071.8	3034.6	3070.1	3002.5	2972.7	2947.3
37.5°	2946.2	2974.3	2953.4	2958.0	2925.8	2922.5	2882.5	2912.3	2846.4	2821.1	2804.2
40°	2721.4	2746.7	2729.8	2739.3	2707.2	2700.0	2672.8	2700.5	2649.3	2630.7	2607.0
42.5°	2506.1	2527.0	2511.2	2526.4	2490.3	2480.8	2456.6	2491.5	2433.4	2418.2	2401.3
45°	2257.6	2270.6	2258.2	2271.2	2236.8	2221.5	2199.6	2229.4	2172.5	2158.5	2121.8
47.5°	1929.2	1915.1	1912.8	1925.3	1882.3	1850.9	1830.5	1868.8	1786.6	1759.0	1716.8
50°	1155.0	1178.7	1188.8	1180.4	1151.1	1107.7	1075.0	1121.8	1077.8	1010.2	942.6
52.5°	595.0	568.5	574.1	577.0	542.0	529.1	518.3	529.1	494.7	477.3	434.3
55°	255.8	243.4	247.9	249.7	242.8	227.1	221.4	228.1	212.5	205.7	188.1
57.5°	94.6	94.6	91.8	93.0	90.7	85.1	83.9	86.7	81.6	80.0	73.2
60°	34.4	34.4	34.4	34.4	31.6	31.0	31.0	32.1	30.4	29.8	27.6
62.5°	14.6	15.2	14.1	14.6	14.1	13.5	14.1	13.5	13.5	13.0	13.0
65°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.2	6.2
67.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	2.8	2.8	2.8
70°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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°	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6
2.5°	162.3	161.8	163.9	161.8	157.8	155.5	158.3	152.7	130.7	108.8	92.3
5°	366.8	363.9	360.1	361.1	351.6	343.7	343.7	328.5	222.0	126.2	89.0
7.5°	695.2	688.5	659.8	680.6	660.3	644.5	633.8	602.9	358.9	144.8	82.3
10°	1148.3	1136.4	1116.2	1120.1	1086.9	1060.4	1028.3	976.5	516.1	161.1	73.8
12.5°	1595.1	1583.3	1529.1	1560.1	1515.6	1489.7	1435.6	1374.8	685.7	169.0	66.0
15°	1974.2	1964.1	1904.9	1934.2	1879.5	1855.3	1785.5	1717.9	857.0	166.2	57.4
17.5°	2268.9	2267.3	2199.0	2228.3	2168.0	2148.3	2066.7	2000.2	995.6	153.9	51.8
20°	2495.9	2492.0	2423.3	2452.6	2386.6	2367.5	2263.8	2194.0	1083.5	136.9	50.2
22.5°	2675.1	2667.2	2593.5	2618.8	2545.0	2520.2	2405.9	2333.1	1119.5	126.2	62.0
25°	2836.3	2822.2	2738.3	2757.9	2676.8	2681.9	2510.1	2430.1	1107.7	142.0	127.4
27.5°	2978.3	2952.9	2868.4	2874.1	2778.8	2729.3	2581.6	2493.1	1053.6	158.3	118.3
30°	3031.3	3006.4	2916.9	2920.2	2821.1	2751.2	2593.5	2494.9	924.0	99.2	42.8
32.5°	3002.0	2974.8	2881.3	2882.5	2780.5	2709.5	2552.3	2443.6	751.6	65.3	32.7
35°	2916.9	2888.7	2795.8	2800.2	2701.6	2631.2	2477.3	2361.3	575.9	51.8	24.2
37.5°	2773.2	2753.5	2664.9	2672.8	2588.9	2514.0	2358.0	2232.2	406.2	37.2	15.2
40°	2588.4	2573.1	2487.5	2499.9	2408.7	2339.4	2172.0	2035.7	253.0	25.3	9.6
42.5°	2372.0	2355.7	2271.2	2280.8	2203.0	2103.9	1933.2	1778.8	132.3	18.1	6.8
45°	2102.2	2083.0	1997.4	2002.5	1910.6	1794.5	1617.5	1481.2	86.7	12.4	5.1
47.5°	1677.9	1643.5	1531.9	1527.5	1452.5	1262.7	1011.4	818.6	57.4	8.4	3.4
50°	922.3	886.8	788.8	778.1	694.7	570.1	421.5	327.9	33.2	5.6	2.8
52.5°	419.7	401.1	355.5	348.2	312.7	259.2	199.5	163.9	19.1	3.9	2.3
55°	182.0	175.3	156.0	154.9	138.6	120.0	95.8	81.1	11.2	2.8	1.7
57.5°	71.6	69.3	65.3	62.5	56.3	50.2	41.7	34.9	7.4	2.3	1.7
60°	27.0	26.5	24.2	24.8	22.5	21.4	18.6	15.8	4.5	1.7	1.7
62.5°	12.4	12.4	11.8	11.8	11.2	10.2	9.0	8.4	2.8	1.7	1.7
65°	6.2	6.2	5.6	5.6	5.6	5.1	4.5	4.5	1.7	1.7	1.7
67.5°	2.8	2.8	2.8	2.8	2.8	2.3	2.3	2.3	1.1	1.7	1.7
70°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.7	1.7
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.1	1.7	1.7
75°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	1.1	1.7	1.7
77.5°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.1	1.7	2.3
80°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.1	1.7	2.3
82.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	1.1	1.7	2.3
85°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	1.1	1.7	2.3
87.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	1.1	1.7	2.3
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°	94.6	94.6	94.6	94.6
2.5°	79.5	70.4	62.5	60.9
5°	65.3	51.8	43.4	41.7
7.5°	53.0	37.7	31.6	30.4
10°	43.4	30.4	24.8	23.7
12.5°	36.0	24.8	19.7	18.6
15°	31.0	22.0	18.1	18.1
17.5°	29.8	24.2	23.1	23.7
20°	38.8	43.9	52.4	53.0
22.5°	90.2	146.5	193.9	202.8
25°	162.3	177.4	173.0	180.9
27.5°	85.6	67.0	68.1	69.8
30°	37.2	41.1	43.4	45.6
32.5°	31.0	32.1	32.7	34.4
35°	20.3	20.3	19.7	20.3
37.5°	12.4	11.8	11.2	11.2
40°	7.9	7.4	6.8	6.8
42.5°	5.6	4.5	3.9	3.9
45°	3.9	2.8	2.3	1.7
47.5°	2.8	1.7	1.1	0.5
50°	2.3	1.7	0.5	0.0
52.5°	1.7	1.1	0.5	0.0
55°	1.7	1.1	0.0	0.0
57.5°	1.7	1.1	0.0	0.0
60°	1.7	1.1	0.0	0.0
62.5°	1.7	1.1	0.0	0.0
65°	1.7	1.1	0.5	0.0
67.5°	1.7	1.1	0.5	0.0
70°	1.7	1.1	0.5	0.0
72.5°	1.7	1.1	0.5	0.0
75°	1.7	1.7	0.5	0.0
77.5°	2.3	1.7	0.5	0.0
80°	2.3	1.7	0.5	0.0
82.5°	2.3	1.7	0.5	0.0
85°	2.3	1.7	0.5	0.5
87.5°	2.3	1.7	0.5	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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Peachtree City, GA 30269



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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)