

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: P1191433

Luminaire Tested: **LDA4A10927D010TE 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: P1191433
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: LDA4A10927D010TE 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

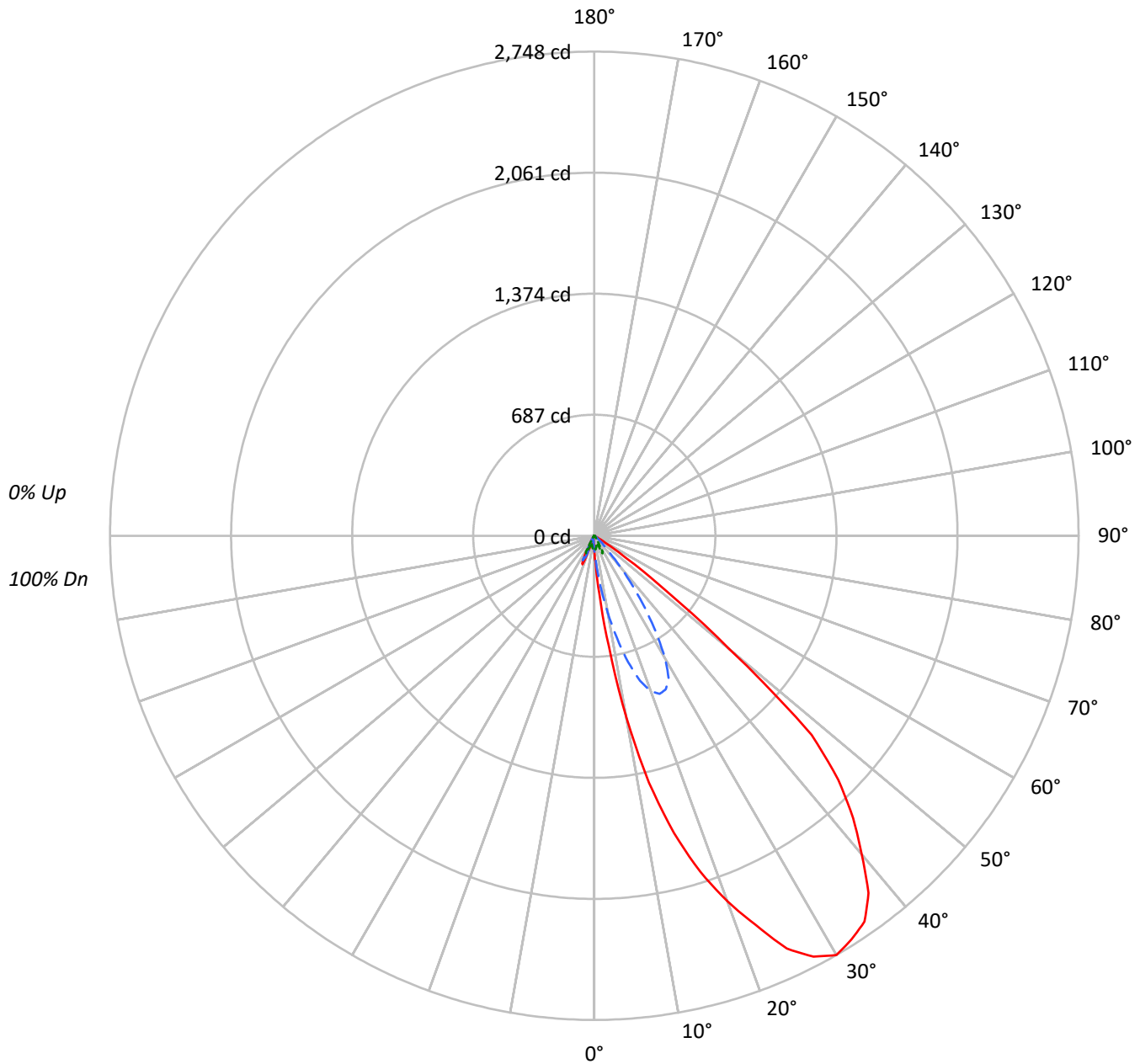
Lumens per Lamp: N/A
Luminaire Lumens: 998.8 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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
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°	10139	10139	10139
5°	40785	9559	4482
10°	131486	8028	2568
15°	223061	6359	2005
20°	289931	5723	6038
25°	351824	15025	21354
30°	391376	5298	5640
35°	402583	3162	2650
40°	380127	1336	950
45°	341635	785	262
50°	192256	461	0
55°	47719	323	0
60°	7351	370	0
65°	1722	438	0
70°	361	541	0
75°	0	715	0
80°	0	1350	0
85°	0	2689	708



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	16.5	1.7
10°-20°	122.6	12.3
20°-30°	283.1	28.3
30°-40°	317.6	31.8
40°-50°	221.6	22.2
50°-60°	33.1	3.3
60°-70°	2.2	0.2
70°-80°	1.1	0.1
80°-90°	1.1	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°	422.2	42.3
0°-40°	739.8	74.1
0°-60°	994.4	99.6
0°-90°	998.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	998.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	82	82	82	82	82	
5°	329	193	77	45	36	55
15°	1747	743	50	19	16	499
25°	2585	961	110	154	157	1182
35°	2674	500	21	18	18	1645
45°	1958	75	4	2	2	1437
55°	222	10	2	1	0	292
65°	6	2	2	1	0	9
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°	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
2.5°	149.5	148.1	144.2	143.2	146.6	143.7	145.2	148.1	145.2	141.8	145.2
5°	329.4	337.8	329.4	328.0	333.8	328.5	330.9	336.3	328.9	322.1	327.0
7.5°	635.9	641.2	617.8	626.2	624.1	625.7	627.1	627.1	622.7	610.5	617.3
10°	1049.8	1053.8	1022.6	1033.3	1019.1	1033.3	1030.8	1020.0	1022.6	1005.9	1014.7
12.5°	1434.1	1446.7	1415.5	1425.7	1408.6	1424.8	1418.4	1415.5	1390.6	1390.6	1399.9
15°	1746.8	1775.7	1747.3	1758.2	1738.5	1761.1	1743.4	1751.3	1728.7	1701.0	1725.4
17.5°	2000.0	2028.4	2002.0	2015.2	1997.1	2014.7	1994.2	2010.7	1982.0	1962.0	1978.5
20°	2208.8	2229.8	2198.5	2217.1	2195.6	2213.1	2190.7	2212.6	2178.9	2164.2	2174.0
22.5°	2390.6	2398.9	2382.8	2414.0	2372.0	2390.6	2363.7	2386.1	2346.1	2327.5	2329.9
25°	2585.1	2603.7	2572.8	2584.6	2555.3	2568.0	2537.7	2558.7	2508.9	2482.4	2477.1
27.5°	2693.1	2719.5	2692.2	2705.3	2675.5	2686.3	2656.0	2686.3	2635.4	2609.5	2603.7
30°	2747.9	2760.6	2743.0	2751.8	2718.1	2723.4	2692.2	2724.9	2674.1	2651.1	2648.1
32.5°	2716.1	2741.5	2718.6	2729.8	2698.4	2703.9	2673.6	2708.8	2657.9	2636.9	2626.6
35°	2673.6	2699.5	2677.9	2689.7	2660.9	2664.8	2632.5	2663.3	2604.7	2578.7	2556.8
37.5°	2555.8	2580.2	2562.1	2566.1	2538.2	2535.3	2500.5	2526.5	2469.3	2447.3	2432.6
40°	2360.8	2382.8	2368.0	2376.4	2348.5	2342.2	2318.7	2342.7	2298.2	2282.1	2261.5
42.5°	2174.0	2192.1	2178.5	2191.6	2160.4	2152.0	2131.0	2161.3	2111.0	2097.7	2083.1
45°	1958.5	1969.7	1959.0	1970.2	1940.4	1927.2	1908.2	1934.1	1884.6	1872.5	1840.7
47.5°	1673.6	1661.4	1659.3	1670.1	1632.9	1605.6	1588.0	1621.2	1549.9	1526.0	1489.3
50°	1001.9	1022.6	1031.4	1024.0	998.6	960.9	932.5	973.1	935.1	876.3	817.7
52.5°	516.1	493.2	498.0	500.5	470.1	458.9	449.6	458.9	429.1	414.0	376.9
55°	221.9	211.2	215.0	216.5	210.7	196.9	192.1	197.9	184.3	178.5	163.3
57.5°	82.2	82.2	79.6	80.6	78.7	73.8	72.9	75.3	70.8	69.4	63.6
60°	29.8	29.8	29.8	29.8	27.4	26.9	26.9	27.9	26.4	25.9	23.9
62.5°	12.7	13.2	12.2	12.7	12.2	11.7	12.2	11.7	11.7	11.2	11.2
65°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.3	5.3
67.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.4	2.4	2.4
70°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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°	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2	82.2
2.5°	140.7	140.2	142.3	140.2	136.8	134.9	137.3	132.5	113.4	94.4	80.1
5°	318.2	315.8	312.3	313.3	304.9	298.2	298.2	284.9	192.6	109.5	77.2
7.5°	603.1	597.3	572.3	590.4	572.8	559.2	549.9	523.0	311.3	125.6	71.3
10°	996.1	985.9	968.3	971.6	942.8	919.9	892.0	847.0	447.7	139.7	64.1
12.5°	1383.7	1373.5	1326.5	1353.4	1314.8	1292.3	1245.3	1192.6	594.8	146.6	57.2
15°	1712.7	1703.9	1652.6	1677.9	1630.5	1609.5	1548.9	1490.3	743.4	144.2	49.8
17.5°	1968.3	1966.8	1907.7	1933.0	1880.8	1863.6	1792.8	1735.1	863.6	133.5	45.0
20°	2165.2	2161.8	2102.2	2127.7	2070.5	2053.8	1963.9	1903.2	939.9	118.7	43.6
22.5°	2320.6	2313.9	2249.8	2271.9	2207.8	2186.3	2087.0	2024.0	971.2	109.5	53.8
25°	2460.5	2448.3	2375.4	2392.5	2322.2	2326.5	2177.5	2108.1	960.9	123.2	110.4
27.5°	2583.7	2561.6	2488.3	2493.2	2410.6	2367.6	2239.5	2162.8	914.0	137.3	102.7
30°	2629.5	2608.1	2530.3	2533.2	2447.3	2386.6	2249.8	2164.2	801.6	86.0	37.2
32.5°	2604.2	2580.7	2499.6	2500.5	2412.1	2350.5	2214.2	2119.8	652.0	56.7	28.4
35°	2530.3	2506.0	2425.2	2429.2	2343.7	2282.6	2149.1	2048.4	499.6	45.0	21.0
37.5°	2405.7	2388.7	2311.9	2318.7	2245.9	2180.9	2045.5	1936.5	352.4	32.2	13.2
40°	2245.4	2232.2	2157.9	2168.7	2089.5	2029.3	1884.3	1765.9	219.5	22.0	8.3
42.5°	2057.7	2043.6	1970.2	1978.5	1911.1	1825.0	1677.0	1543.0	114.9	15.7	5.9
45°	1823.6	1806.9	1732.7	1737.1	1657.4	1556.8	1403.3	1285.0	75.3	10.7	4.5
47.5°	1455.5	1425.7	1328.9	1325.1	1260.0	1095.3	877.4	710.2	49.8	7.4	2.9
50°	800.2	769.3	684.3	675.0	602.6	494.6	365.6	284.4	28.8	4.8	2.4
52.5°	364.2	348.0	308.4	302.0	271.3	224.8	173.0	142.3	16.6	3.4	1.9
55°	157.8	152.0	135.4	134.4	120.2	104.1	83.0	70.4	9.8	2.4	1.5
57.5°	62.0	60.1	56.7	54.3	48.9	43.6	36.2	30.3	6.4	1.9	1.5
60°	23.4	22.9	21.0	21.5	19.5	18.6	16.2	13.6	3.9	1.5	1.5
62.5°	10.7	10.7	10.3	10.3	9.8	8.8	7.8	7.4	2.4	1.5	1.5
65°	5.3	5.3	4.8	4.8	4.8	4.5	3.9	3.9	1.5	1.5	1.5
67.5°	2.4	2.4	2.4	2.4	2.4	1.9	1.9	1.9	1.0	1.5	1.5
70°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.5
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.0	1.5	1.5
75°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	1.0	1.5	1.5
77.5°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.0	1.5	1.9
80°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.0	1.5	1.9
82.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	1.0	1.5	1.9
85°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	1.0	1.5	1.9
87.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	1.0	1.5	1.9
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°	82.2	82.2	82.2	82.2
2.5°	68.9	61.1	54.3	52.7
5°	56.7	45.0	37.6	36.2
7.5°	46.0	32.7	27.4	26.4
10°	37.6	26.4	21.5	20.5
12.5°	31.3	21.5	17.1	16.2
15°	26.9	19.1	15.7	15.7
17.5°	25.9	21.0	20.0	20.5
20°	33.8	38.1	45.5	46.0
22.5°	78.2	127.1	168.1	175.9
25°	140.7	154.0	150.0	156.9
27.5°	74.3	58.2	59.1	60.6
30°	32.2	35.7	37.6	39.6
32.5°	26.9	27.9	28.4	29.8
35°	17.6	17.6	17.1	17.6
37.5°	10.7	10.3	9.8	9.8
40°	6.9	6.4	5.9	5.9
42.5°	4.8	3.9	3.4	3.4
45°	3.4	2.4	1.9	1.5
47.5°	2.4	1.5	1.0	0.5
50°	1.9	1.5	0.5	0.0
52.5°	1.5	1.0	0.5	0.0
55°	1.5	1.0	0.0	0.0
57.5°	1.5	1.0	0.0	0.0
60°	1.5	1.0	0.0	0.0
62.5°	1.5	1.0	0.0	0.0
65°	1.5	1.0	0.5	0.0
67.5°	1.5	1.0	0.5	0.0
70°	1.5	1.0	0.5	0.0
72.5°	1.5	1.0	0.5	0.0
75°	1.5	1.5	0.5	0.0
77.5°	1.9	1.5	0.5	0.0
80°	1.9	1.5	0.5	0.0
82.5°	1.9	1.5	0.5	0.0
85°	1.9	1.5	0.5	0.5
87.5°	1.9	1.5	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)