

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: P1212752

Luminaire Tested: **LDA4A15950D010TE LAR25NF 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: P1212752
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26105)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A15950D010TE LAR25NF 4LAL1 30° Tilt
Description: PORTFOLIO 4" Lensed Adjustable, Self-flanged, 25° Narrow Flood
Optic, at 30° tilt. --- 27.9W
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

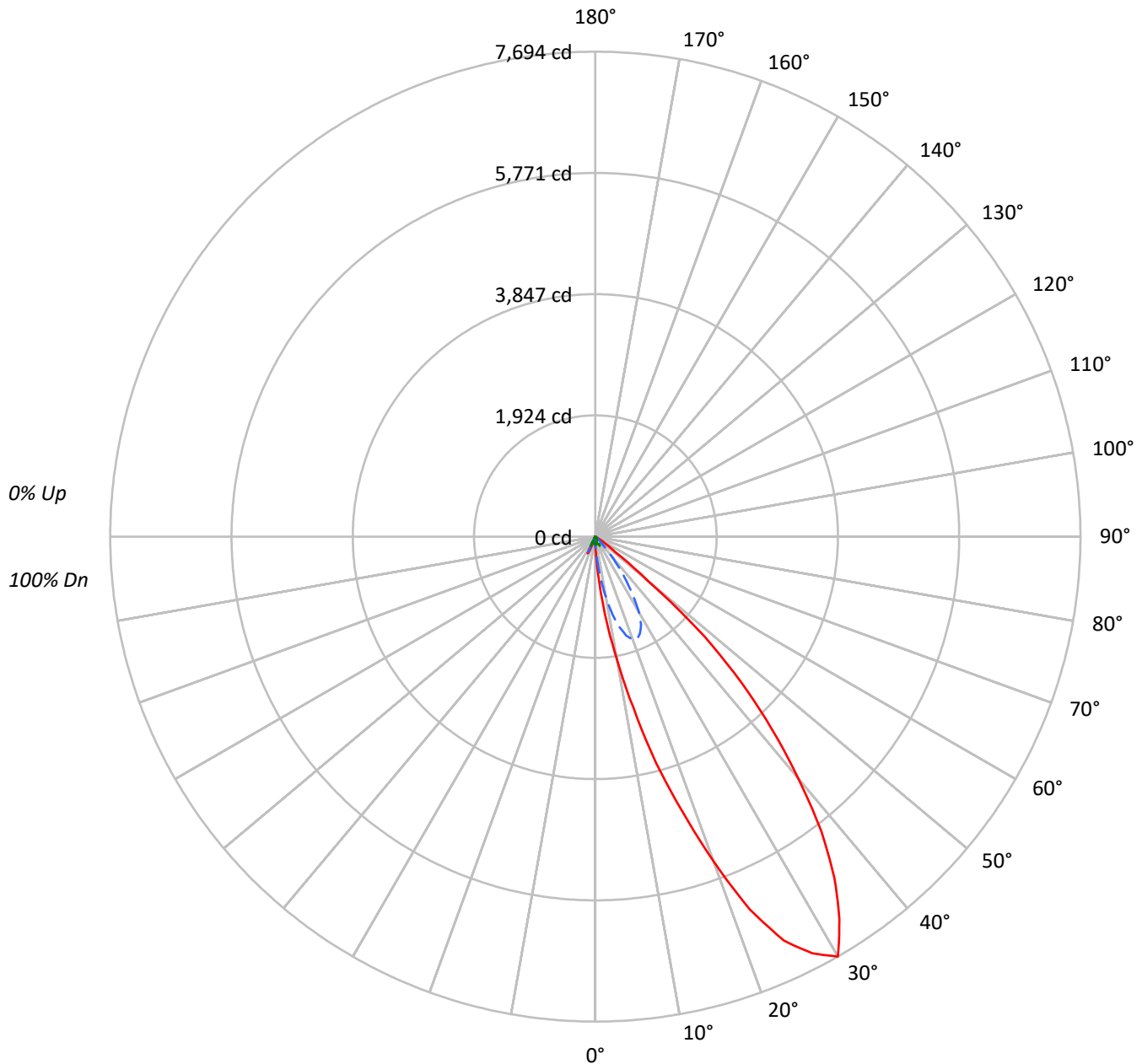
Lumens per Lamp: N/A
Luminaire Lumens: 2002.8 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20.4
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	109	106	104	110	107	104	102	103	101	99		99	98	96		96
2	106	100	95	91	103	98	94	90	95	91	88		92	89	86		89
3	99	91	85	81	97	90	84	80	87	82	79		84	81	77		82
4	92	83	77	72	90	82	76	71	80	74	70		78	73	69		76
5	86	76	69	64	84	75	69	64	73	67	63		71	66	62		70
6	80	70	63	57	79	69	62	57	67	61	57		66	60	56		64
7	75	64	57	52	74	63	56	51	62	56	51		61	55	51		59
8	70	59	52	47	69	58	51	47	57	51	46		56	50	46		55
9	66	54	47	42	64	54	47	42	53	46	42		52	46	42		51
10	62	50	43	38	60	50	43	38	49	42	38		48	42	38		47

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	18378	18378	18378
5°	94546	17087	7986
10°	249169	14266	4158
15°	474240	11199	3231
20°	720325	9254	8598
25°	962490	22075	39754
30°	1095907	8318	8047
35°	995436	4698	3629
40°	806241	2093	1449
45°	570514	1239	349
50°	208145	768	0
55°	43353	645	0
60°	10410	740	0
65°	3210	876	0
70°	1082	1082	0
75°	477	1430	0
80°	0	2131	0
85°	0	4246	0

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Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.8	1.7
10°-20°	251.9	12.6
20°-30°	638.9	31.9
30°-40°	683.8	34.1
40°-50°	349.5	17.5
50°-60°	36.5	1.8
60°-70°	4.2	0.2
70°-80°	2.3	0.1
80°-90°	2.0	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°	924.6	46.2
0°-40°	1608.4	80.3
0°-60°	1994.4	99.6
0°-90°	2002.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2002.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	149	149	149	149	149	
5°	764	415	138	80	64	111
15°	3714	1493	88	31	25	1097
25°	7072	1681	162	272	292	3213
35°	6611	852	31	24	24	4059
45°	3271	114	7	4	2	2441
55°	202	18	3	2	0	273
65°	11	4	3	2	0	15
75°	1	2	3	3	0	1
85°	0	2	3	3	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°	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0
2.5°	301.2	304.2	282.0	289.0	294.1	284.0	282.0	282.0	293.2	287.0	297.1
5°	763.6	760.4	722.3	733.3	741.3	722.3	731.2	717.2	734.3	723.3	734.3
7.5°	1333.7	1368.8	1320.5	1331.7	1338.6	1318.5	1323.6	1303.4	1322.6	1309.4	1318.5
10°	1989.4	2025.6	1969.1	1978.2	1983.4	1964.1	1965.2	1939.0	1956.1	1942.1	1948.0
12.5°	2773.0	2787.2	2760.0	2767.0	2770.0	2744.8	2697.6	2702.5	2719.7	2695.4	2701.5
15°	3713.8	3703.8	3671.5	3694.7	3671.5	3659.4	3587.9	3583.9	3593.9	3566.8	3523.5
17.5°	4542.7	4619.3	4583.2	4596.2	4568.0	4568.0	4476.4	4461.2	4462.2	4389.7	4381.6
20°	5487.7	5585.4	5496.7	5500.8	5463.4	5462.4	5350.7	5319.5	5306.3	5223.7	5200.5
22.5°	6398.2	6426.4	6425.3	6408.2	6320.6	6371.0	6231.0	6181.6	6141.3	6047.7	6001.3
25°	7072.1	7160.7	7100.3	7056.9	6980.5	7043.8	6886.7	6822.3	6761.8	6683.2	6622.8
27.5°	7452.8	7535.4	7521.4	7456.8	7378.3	7439.6	7267.5	7183.8	7098.3	7040.9	6965.3
30°	7694.5	7820.5	7779.2	7639.2	7524.3	7544.5	7351.0	7239.2	7144.5	7085.1	6989.5
32.5°	7204.0	7334.0	7321.8	7220.1	7160.7	7210.0	7041.8	6931.1	6840.3	6793.1	6686.4
35°	6610.8	6762.8	6729.5	6644.9	6601.6	6659.1	6494.9	6402.2	6310.5	6269.2	6152.3
37.5°	5884.5	6027.5	5994.2	5913.6	5871.4	5913.6	5756.6	5670.9	5584.3	5541.0	5461.5
40°	5007.2	5133.1	5097.8	5023.2	4988.0	5018.2	4882.3	4807.6	4734.2	4701.9	4596.2
42.5°	4149.9	4250.7	4218.3	4154.0	4126.8	4146.9	4035.2	3968.6	3904.2	3877.0	3814.5
45°	3270.6	3370.3	3339.1	3283.7	3258.5	3269.7	3175.8	3116.5	3061.1	3035.9	2979.5
47.5°	2347.0	2458.7	2420.4	2373.2	2347.0	2341.9	2259.3	2205.9	2210.9	2125.3	2072.9
50°	1084.7	1179.5	1141.2	1116.1	1090.9	1076.8	1047.6	987.1	1004.2	926.6	896.5
52.5°	393.8	416.9	408.0	399.9	391.9	388.9	378.8	363.6	365.6	346.4	337.4
55°	201.6	212.6	209.5	204.5	204.5	201.6	196.5	190.3	186.4	183.4	180.2
57.5°	92.6	98.7	96.7	94.7	94.7	92.6	90.6	87.7	89.6	84.7	83.7
60°	42.2	45.3	44.4	43.3	43.3	43.3	42.2	41.3	41.3	40.2	39.3
62.5°	20.2	22.2	21.1	21.1	21.1	21.1	20.2	20.2	20.2	20.2	19.1
65°	11.0	11.0	11.0	11.0	11.0	11.0	11.0	10.1	11.0	10.1	10.1
67.5°	6.1	6.1	6.1	6.1	5.1	6.1	6.1	5.1	5.1	5.1	5.1
70°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
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	1.0	0.0	1.0	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°	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0	149.0
2.5°	274.0	281.1	288.1	286.0	276.0	275.0	271.0	273.0	212.6	172.3	144.0
5°	695.0	704.1	713.2	708.1	683.0	676.9	656.8	652.6	415.0	203.5	138.0
7.5°	1270.2	1275.2	1282.3	1276.2	1239.0	1221.8	1179.5	1138.3	698.0	245.8	127.9
10°	1893.7	1891.8	1894.7	1886.7	1840.3	1807.1	1741.5	1712.4	989.1	282.0	113.9
12.5°	2620.9	2612.9	2568.5	2589.7	2524.2	2456.7	2348.9	2258.4	1264.1	302.2	100.7
15°	3470.1	3445.9	3429.7	3405.6	3325.0	3216.2	3052.1	2951.2	1492.8	300.2	87.7
17.5°	4314.1	4274.8	4204.3	4213.5	4119.6	3967.7	3751.1	3578.7	1650.9	275.0	77.6
20°	5112.8	5054.5	4965.9	4958.8	4846.0	4645.6	4372.6	4159.0	1737.5	233.7	70.5
22.5°	5882.4	5791.9	5673.0	5635.8	5490.7	5206.6	4850.0	4590.1	1745.6	195.4	84.7
25°	6488.9	6375.0	6243.1	6178.6	6018.5	5655.8	5211.6	4892.3	1681.2	193.4	162.2
27.5°	6827.3	6698.3	6566.4	6478.9	6316.6	5905.6	5403.0	5034.2	1570.4	207.5	154.1
30°	6845.5	6700.4	6563.3	6452.6	6291.4	5852.3	5318.4	4934.6	1370.9	130.9	58.4
32.5°	6544.2	6389.0	6252.1	6127.3	5968.1	5525.9	5002.1	4635.5	1115.1	91.6	41.3
35°	6017.5	5857.3	5726.3	5594.5	5445.2	5029.3	4548.9	4207.3	852.2	72.5	31.2
37.5°	5300.4	5152.2	5036.4	4946.8	4785.6	4454.1	4015.0	3653.4	602.3	51.4	19.1
40°	4497.5	4372.6	4277.8	4200.4	4051.2	3757.1	3313.9	3008.7	365.6	36.3	13.0
42.5°	3689.7	3572.8	3489.2	3415.7	3277.7	3017.8	2653.1	2347.0	175.2	25.3	9.0
45°	2869.7	2764.9	2694.4	2628.1	2504.1	2248.3	1959.0	1737.5	113.9	18.2	7.1
47.5°	1960.2	1905.8	1789.9	1717.5	1590.5	1395.1	1124.0	880.4	75.6	13.0	5.1
50°	814.8	786.7	710.1	660.7	588.2	488.6	354.5	297.1	46.4	9.0	4.0
52.5°	316.3	309.2	290.2	278.9	260.9	234.7	195.4	174.3	28.2	7.1	4.0
55°	170.1	168.2	158.1	152.0	142.0	129.0	105.8	92.6	18.2	5.1	3.0
57.5°	78.5	77.6	72.5	72.5	65.5	60.4	50.3	45.3	11.0	4.0	3.0
60°	37.3	37.3	35.4	35.4	32.2	30.2	25.3	23.1	7.1	3.0	3.0
62.5°	18.2	18.2	18.2	18.2	17.2	16.1	14.0	13.0	5.1	3.0	3.0
65°	10.1	10.1	10.1	10.1	9.0	9.0	8.1	7.1	4.0	3.0	3.0
67.5°	5.1	5.1	5.1	5.1	5.1	5.1	4.0	4.0	3.0	3.0	3.0
70°	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0	2.0	3.0	3.0
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	3.0
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	3.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	3.0
80°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	3.0
82.5°	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	3.0
85°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	3.0	3.0
87.5°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	3.0
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):

	112.5°	135°	157.5°	180°
0°	149.0	149.0	149.0	149.0
2.5°	124.0	107.7	99.7	97.8
5°	101.7	79.6	68.5	64.5
7.5°	82.6	57.4	48.4	44.4
10°	65.5	45.3	36.3	33.2
12.5°	54.5	36.3	29.2	27.2
15°	46.4	31.2	26.2	25.3
17.5°	42.2	33.2	31.2	32.2
20°	51.4	54.5	63.4	65.5
22.5°	108.8	188.3	255.8	271.0
25°	226.6	272.0	282.0	292.1
27.5°	125.9	97.8	95.7	99.7
30°	51.4	52.3	54.5	56.5
32.5°	38.3	38.3	37.3	38.3
35°	26.2	24.1	23.1	24.1
37.5°	16.1	15.2	14.0	14.0
40°	11.0	10.1	9.0	9.0
42.5°	8.1	6.1	5.1	5.1
45°	6.1	4.0	3.0	2.0
47.5°	5.1	3.0	1.0	1.0
50°	4.0	2.0	1.0	0.0
52.5°	3.0	2.0	1.0	0.0
55°	3.0	2.0	0.0	0.0
57.5°	3.0	2.0	0.0	0.0
60°	3.0	2.0	1.0	0.0
62.5°	3.0	2.0	1.0	1.0
65°	3.0	2.0	1.0	0.0
67.5°	3.0	2.0	1.0	0.0
70°	3.0	2.0	1.0	0.0
72.5°	4.0	2.0	1.0	0.0
75°	4.0	3.0	1.0	0.0
77.5°	4.0	3.0	1.0	0.0
80°	4.0	3.0	1.0	0.0
82.5°	4.0	3.0	1.0	0.0
85°	4.0	3.0	1.0	0.0
87.5°	4.0	3.0	1.0	0.0
90°	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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