

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: P1191823

Luminaire Tested: **LDA4A30935D010TE LAR25NF 4LAL1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1191823
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: LDA4A30935D010TE 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 / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

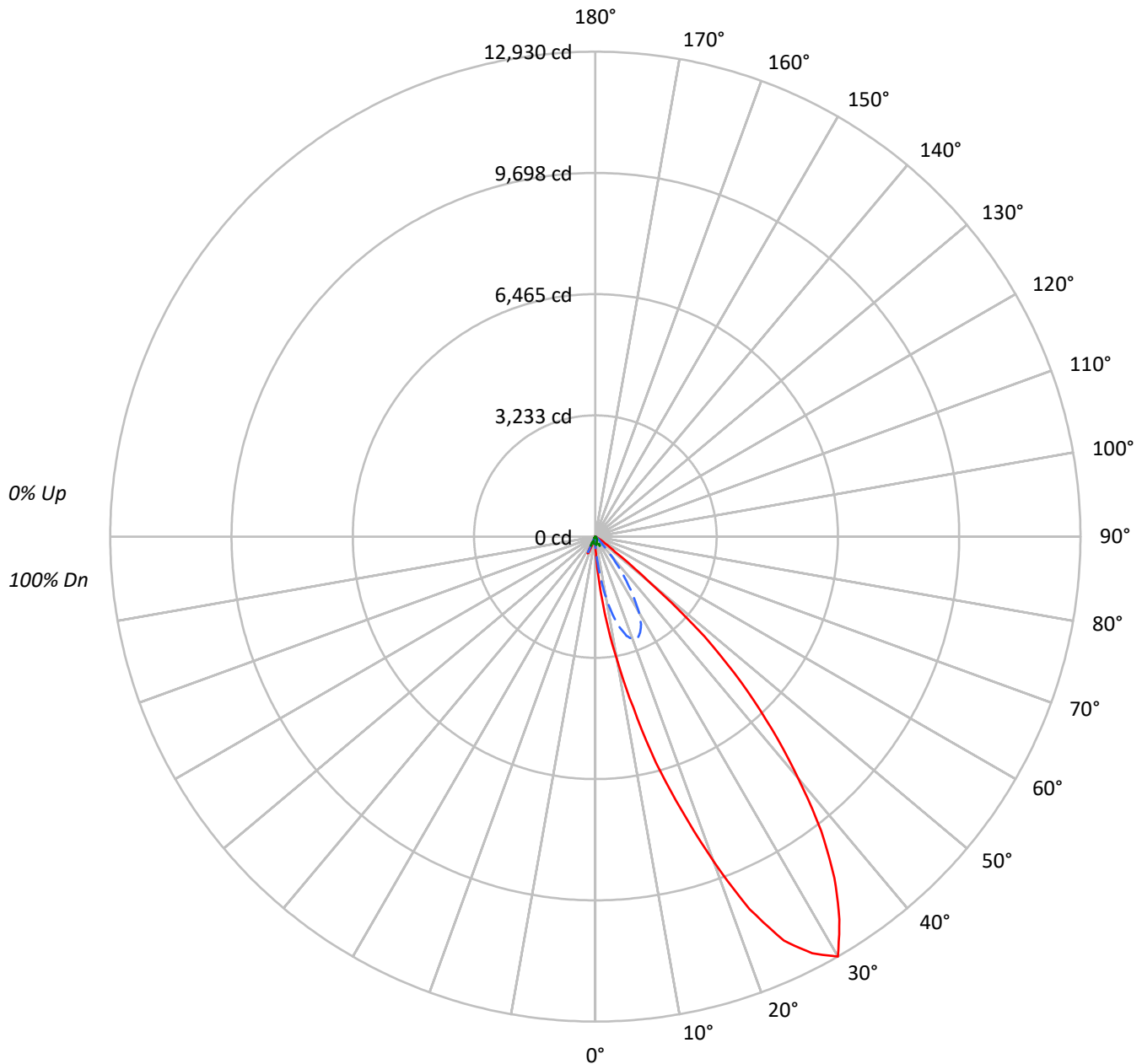
Lumens per Lamp: N/A
Luminaire Lumens: 3365.5 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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

Peachtree City, GA 30269



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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	104	110	107	104	102	103	101	99	99	98	96	96	94	93	91		
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84	83		
3	99	91	85	81	97	90	84	80	87	82	79	84	81	77	82	79	76	74		
4	92	83	77	72	90	82	76	71	80	74	70	78	73	69	76	72	69	67		
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60		
6	80	70	63	57	79	69	62	57	67	61	57	66	60	56	64	60	56	54		
7	75	64	57	52	74	63	56	51	62	56	51	61	55	51	59	54	51	49		
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44		
9	66	54	47	42	64	54	47	42	53	46	42	52	46	42	51	45	42	40		
10	62	50	43	38	60	50	43	38	49	42	38	48	42	38	47	42	38	36		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	30898	30898	30898
5°	158857	28713	13409
10°	418693	23960	6989
15°	796930	18797	5402
20°	1210430	15541	14439
25°	1617361	37086	66796
30°	1841585	13972	13502
35°	1672717	7905	6113
40°	1354791	3542	2447
45°	958689	2076	593
50°	349819	1286	0
55°	72815	1075	0
60°	17540	1233	0
65°	5429	1459	0
70°	1803	1803	0
75°	810	2383	0
80°	0	3552	0
85°	0	7076	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.7	1.7
10°-20°	423.3	12.6
20°-30°	1073.6	31.9
30°-40°	1149.0	34.1
40°-50°	587.3	17.5
50°-60°	61.3	1.8
60°-70°	7.0	0.2
70°-80°	3.8	0.1
80°-90°	3.4	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°	1553.7	46.2
0°-40°	2702.7	80.3
0°-60°	3351.3	99.6
0°-90°	3365.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3365.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	250	250	250	250	250	
5°	1283	697	232	134	108	187
15°	6241	2508	147	52	42	1844
25°	11884	2825	272	457	491	5400
35°	11109	1432	52	41	41	6820
45°	5496	191	12	7	3	4101
55°	339	30	5	3	0	459
65°	19	7	5	3	0	25
75°	2	3	5	5	0	2
85°	0	3	5	5	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°	250.5	250.5	250.5	250.5	250.5	250.5	250.5	250.5	250.5	250.5	250.5
2.5°	506.1	511.1	473.9	485.8	494.2	477.3	473.9	473.9	492.5	482.4	499.4
5°	1283.0	1278.0	1213.6	1232.2	1245.8	1213.6	1228.8	1205.2	1233.9	1215.3	1233.9
7.5°	2241.0	2300.2	2219.0	2237.7	2249.4	2215.7	2224.1	2190.2	2222.4	2200.4	2215.7
10°	3342.9	3403.8	3309.1	3324.3	3332.7	3300.6	3302.3	3258.4	3287.1	3263.4	3273.5
12.5°	4659.8	4683.5	4637.8	4649.6	4654.7	4612.4	4532.9	4541.4	4570.1	4529.5	4539.6
15°	6240.8	6223.7	6169.7	6208.6	6169.7	6149.4	6029.1	6022.3	6039.2	5993.6	5920.8
17.5°	7633.8	7762.4	7701.4	7723.5	7676.1	7676.1	7522.1	7496.6	7498.3	7376.4	7362.8
20°	9221.5	9385.5	9236.6	9243.4	9180.8	9179.1	8991.2	8938.8	8916.8	8777.9	8739.0
22.5°	10751.5	10799.0	10797.3	10768.5	10621.2	10705.9	10470.6	10387.6	10319.9	10162.4	10084.6
25°	11883.9	12032.8	11931.2	11858.6	11729.8	11836.5	11572.5	11464.2	11362.6	11230.6	11129.0
27.5°	12523.7	12662.5	12638.8	12530.5	12398.4	12501.7	12212.3	12071.8	11927.9	11831.4	11704.5
30°	12930.0	13141.6	13072.2	12836.9	12643.9	12677.8	12352.8	12164.8	12005.8	11905.9	11745.1
32.5°	12105.6	12324.0	12303.7	12132.8	12032.8	12115.8	11833.1	11647.0	11494.6	11415.1	11235.6
35°	11108.7	11364.3	11308.4	11166.2	11093.4	11190.0	10914.0	10758.4	10604.3	10534.9	10338.5
37.5°	9888.4	10128.7	10072.8	9937.4	9866.3	9937.4	9673.4	9529.5	9384.0	9311.2	9177.4
40°	8414.0	8625.7	8566.3	8441.1	8381.9	8432.7	8204.1	8078.9	7955.3	7901.1	7723.5
42.5°	6973.6	7142.8	7088.8	6980.3	6934.7	6968.6	6780.6	6668.9	6560.6	6514.9	6410.0
45°	5495.9	5663.6	5611.1	5517.9	5475.6	5494.2	5336.8	5237.0	5143.9	5101.5	5006.8
47.5°	3943.8	4131.7	4067.4	3987.8	3943.8	3935.4	3796.5	3706.8	3715.3	3571.5	3483.4
50°	1823.0	1982.1	1917.7	1875.4	1833.2	1809.4	1760.4	1658.8	1687.5	1557.2	1506.4
52.5°	661.9	700.8	685.5	672.0	658.4	653.3	636.4	611.1	614.4	582.2	567.0
55°	338.6	357.2	352.0	343.6	343.6	338.6	330.0	319.9	313.1	308.1	303.0
57.5°	155.8	165.9	162.5	159.1	159.1	155.8	152.3	147.2	150.6	142.2	140.5
60°	71.1	76.1	74.5	72.8	72.8	72.8	71.1	69.4	69.4	67.7	66.0
62.5°	33.9	37.2	35.5	35.5	35.5	35.5	33.9	33.9	33.9	33.9	32.2
65°	18.6	18.6	18.6	18.6	18.6	18.6	18.6	16.9	18.6	16.9	16.9
67.5°	10.2	10.2	10.2	10.2	8.4	10.2	10.2	8.4	8.4	8.4	8.4
70°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
75°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
77.5°	0.0	1.7	1.7	1.7	0.0	1.7	1.7	1.7	1.7	1.7	1.7
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	1.7	0.0	1.7	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°	250.5	250.5	250.5	250.5	250.5	250.5	250.5	250.5	250.5	250.5	250.5
2.5°	460.3	472.2	484.1	480.6	463.8	462.0	455.3	458.8	357.2	289.4	242.0
5°	1167.9	1183.2	1198.3	1189.9	1147.5	1137.4	1103.6	1096.8	697.4	341.9	231.9
7.5°	2134.4	2142.9	2154.7	2144.6	2081.9	2053.2	1982.1	1912.7	1173.0	413.0	215.0
10°	3182.1	3178.7	3183.8	3170.2	3092.4	3036.6	2926.5	2877.4	1662.2	473.9	191.3
12.5°	4404.2	4390.7	4316.2	4351.7	4241.7	4128.4	3947.1	3794.9	2124.3	507.8	169.2
15°	5831.1	5790.5	5763.4	5722.8	5587.3	5404.5	5128.7	4959.3	2508.5	504.4	147.2
17.5°	7249.5	7183.5	7065.0	7080.2	6922.8	6667.2	6303.3	6013.9	2774.3	462.0	130.3
20°	8591.8	8493.6	8344.6	8332.8	8143.2	7806.4	7347.7	6988.8	2919.8	392.7	118.4
22.5°	9884.9	9732.6	9532.9	9470.2	9226.5	8749.1	8150.0	7713.3	2933.3	328.4	142.2
25°	10903.9	10712.6	10490.9	10382.6	10113.4	9504.1	8757.6	8221.1	2824.9	325.0	272.5
27.5°	11472.6	11255.9	11034.2	10887.0	10614.5	9923.8	9079.3	8459.7	2638.8	348.7	258.9
30°	11503.1	11259.3	11029.2	10842.9	10572.1	9834.1	8937.1	8292.2	2303.7	220.0	98.1
32.5°	10997.0	10736.3	10506.0	10296.2	10028.8	9285.7	8405.5	7789.4	1873.8	154.1	69.4
35°	10111.8	9842.6	9622.6	9400.8	9150.4	8451.3	7643.9	7070.0	1431.9	121.9	52.5
37.5°	8906.6	8657.7	8463.2	8312.5	8041.6	7484.7	6746.7	6139.2	1012.2	86.3	32.2
40°	7557.5	7347.7	7188.6	7058.3	6807.7	6313.4	5568.7	5055.9	614.4	60.9	22.0
42.5°	6200.1	6003.7	5863.3	5739.7	5507.8	5071.1	4458.4	3943.8	294.5	42.3	15.2
45°	4822.3	4646.2	4527.8	4416.0	4207.9	3777.9	3292.1	2919.8	191.3	30.5	11.9
47.5°	3293.8	3202.4	3007.7	2885.9	2672.7	2344.3	1889.0	1479.4	126.9	22.0	8.4
50°	1369.4	1321.9	1193.3	1110.3	988.5	821.0	595.8	499.4	77.8	15.2	6.7
52.5°	531.4	519.7	487.5	468.9	438.4	394.4	328.4	292.8	47.4	11.9	6.7
55°	286.1	282.7	265.8	255.6	238.6	216.7	177.7	155.8	30.5	8.4	5.0
57.5°	132.0	130.3	121.9	121.9	110.0	101.6	84.7	76.1	18.6	6.7	5.0
60°	62.7	62.7	59.2	59.2	54.2	50.8	42.3	38.9	11.9	5.0	5.0
62.5°	30.5	30.5	30.5	30.5	28.8	27.0	23.7	22.0	8.4	5.0	5.0
65°	16.9	16.9	16.9	16.9	15.2	15.2	13.6	11.9	6.7	5.0	5.0
67.5°	8.4	8.4	8.4	8.4	8.4	8.4	6.7	6.7	5.0	5.0	5.0
70°	5.0	5.0	5.0	5.0	5.0	3.4	3.4	3.4	3.4	5.0	5.0
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.4	5.0	5.0
75°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.4	5.0	5.0
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.4	5.0	5.0
80°	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	3.4	5.0	5.0
82.5°	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.4	5.0	5.0
85°	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	3.4	5.0	5.0
87.5°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	3.4	5.0	5.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

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CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	250.5	250.5	250.5	250.5
2.5°	208.1	181.1	167.5	164.2
5°	170.9	133.7	115.1	108.3
7.5°	138.8	96.4	81.3	74.5
10°	110.0	76.1	60.9	55.8
12.5°	91.4	60.9	49.1	45.6
15°	77.8	52.5	44.1	42.3
17.5°	71.1	55.8	52.5	54.2
20°	86.3	91.4	106.6	110.0
22.5°	182.8	316.6	429.9	455.3
25°	380.8	457.0	473.9	490.8
27.5°	211.6	164.2	160.8	167.5
30°	86.3	88.0	91.4	94.8
32.5°	64.4	64.4	62.7	64.4
35°	44.1	40.6	38.9	40.6
37.5°	27.0	25.3	23.7	23.7
40°	18.6	16.9	15.2	15.2
42.5°	13.6	10.2	8.4	8.4
45°	10.2	6.7	5.0	3.4
47.5°	8.4	5.0	1.7	1.7
50°	6.7	3.4	1.7	0.0
52.5°	5.0	3.4	1.7	0.0
55°	5.0	3.4	0.0	0.0
57.5°	5.0	3.4	0.0	0.0
60°	5.0	3.4	1.7	0.0
62.5°	5.0	3.4	1.7	1.7
65°	5.0	3.4	1.7	0.0
67.5°	5.0	3.4	1.7	0.0
70°	5.0	3.4	1.7	0.0
72.5°	6.7	3.4	1.7	0.0
75°	6.7	5.0	1.7	0.0
77.5°	6.7	5.0	1.7	0.0
80°	6.7	5.0	1.7	0.0
82.5°	6.7	5.0	1.7	0.0
85°	6.7	5.0	1.7	0.0
87.5°	6.7	5.0	1.7	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)