

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: P1212806

Luminaire Tested: **LDA4A30950D010TE LAR25NF 4LAL1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1212806
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: LDA4A30950D010TE 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

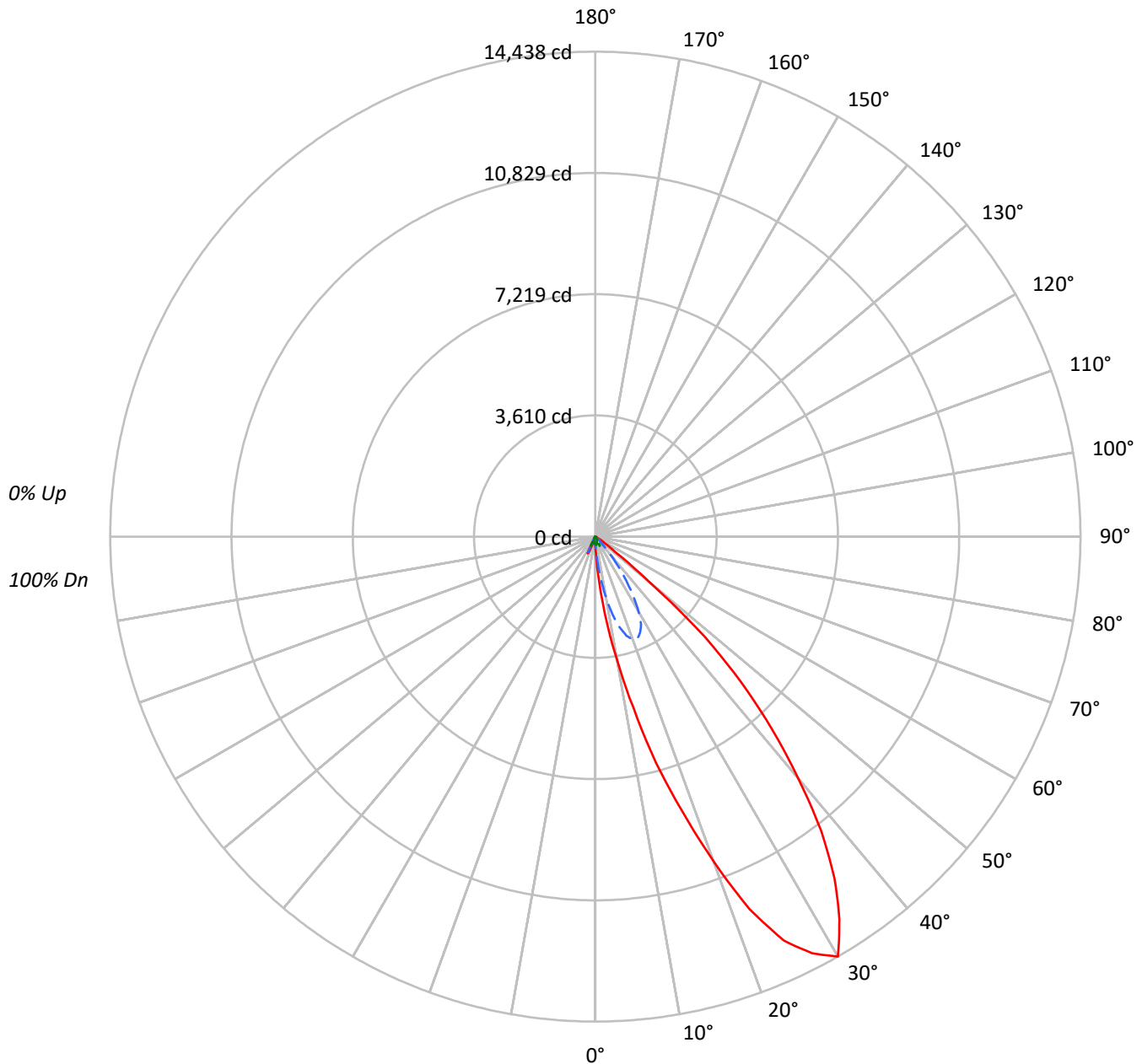
Lumens per Lamp: N/A
Luminaire Lumens: 3758.2 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1212806

CATALOG NUMBER: LDA4A30950D010TE LAR25NF 4LAL1 30° Tilt

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°	34500	34500	34500
5°	177392	32069	14982
10°	467540	26753	7816
15°	889881	20993	6027
20°	1351601	17366	16132
25°	1806032	41414	74608
30°	2056408	15610	15083
35°	1867835	8824	6836
40°	1512845	3945	2753
45°	1070520	2303	663
50°	390615	1458	0
55°	81288	1204	0
60°	19612	1381	0
65°	6071	1634	0
70°	2020	2020	0
75°	905	2669	0
80°	0	3978	0
85°	0	7925	0

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Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.4	1.7
10°-20°	472.7	12.6
20°-30°	1198.8	31.9
30°-40°	1283.1	34.1
40°-50°	655.8	17.5
50°-60°	68.5	1.8
60°-70°	7.9	0.2
70°-80°	4.3	0.1
80°-90°	3.8	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°	1734.9	46.2
0°-40°	3018.0	80.3
0°-60°	3742.3	99.6
0°-90°	3758.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3758.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	280	280	280	280	280	
5°	1433	779	259	149	121	209
15°	6969	2801	164	59	47	2059
25°	13270	3154	304	510	548	6029
35°	12404	1599	59	45	45	7616
45°	6137	214	13	8	4	4580
55°	378	34	6	4	0	513
65°	21	8	6	4	0	28
75°	2	4	6	6	0	2
85°	0	4	6	6	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°	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7
2.5°	565.1	570.8	529.3	542.4	551.8	532.9	529.3	529.3	550.0	538.7	557.6
5°	1432.7	1427.1	1355.1	1376.0	1391.1	1355.1	1372.2	1345.7	1377.8	1357.1	1377.8
7.5°	2502.3	2568.6	2477.8	2498.7	2511.8	2474.2	2483.6	2445.8	2481.6	2457.1	2474.2
10°	3732.9	3800.9	3695.1	3712.2	3721.6	3685.7	3687.6	3638.3	3670.5	3644.2	3655.4
12.5°	5203.4	5229.8	5178.9	5192.0	5197.6	5150.5	5061.6	5071.0	5103.1	5057.8	5069.1
15°	6968.7	6949.8	6889.3	6932.7	6889.3	6866.7	6732.3	6724.8	6743.8	6692.7	6611.5
17.5°	8524.2	8667.8	8599.8	8624.3	8571.5	8571.5	8399.5	8371.1	8373.0	8236.9	8221.8
20°	10297.0	10480.5	10314.1	10321.6	10251.8	10249.8	10040.0	9981.4	9956.9	9801.9	9758.3
22.5°	12005.8	12058.7	12056.7	12024.7	11860.2	11954.7	11692.0	11599.4	11523.7	11348.0	11261.0
25°	13270.2	13436.5	13323.0	13241.8	13098.2	13217.3	12922.3	12801.5	12688.1	12540.6	12427.2
27.5°	13984.7	14139.6	14113.2	13992.2	13844.7	13960.1	13636.9	13480.0	13319.4	13211.5	13069.8
30°	14438.3	14674.5	14597.0	14334.3	14118.8	14156.7	13793.7	13584.0	13406.3	13294.7	13115.2
32.5°	13517.8	13761.6	13738.9	13548.0	13436.5	13529.0	13213.4	13005.6	12835.5	12746.7	12546.2
35°	12404.5	12690.0	12627.6	12468.9	12387.5	12495.2	12187.2	12013.2	11841.2	11763.8	11544.5
37.5°	11041.8	11310.1	11247.8	11096.7	11017.2	11096.7	10801.8	10641.1	10478.5	10397.3	10248.0
40°	9395.6	9631.8	9565.6	9425.7	9359.6	9416.4	9161.3	9021.3	8883.3	8822.8	8624.3
42.5°	7787.1	7976.2	7915.6	7794.7	7743.6	7781.4	7571.6	7446.9	7326.0	7274.9	7157.6
45°	6137.0	6324.1	6265.6	6161.6	6114.4	6135.1	5959.4	5847.8	5743.9	5696.7	5590.8
47.5°	4403.8	4613.6	4541.8	4453.1	4403.8	4394.4	4239.5	4139.3	4148.7	3988.0	3889.8
50°	2035.6	2213.2	2141.5	2094.1	2046.9	2020.5	1965.6	1852.3	1884.4	1738.9	1682.2
52.5°	739.0	782.5	765.4	750.4	735.3	729.5	710.7	682.3	686.2	650.2	633.3
55°	378.0	398.7	393.1	383.7	383.7	378.0	368.6	357.2	349.6	344.0	338.3
57.5°	174.0	185.2	181.5	177.6	177.6	174.0	170.1	164.4	168.2	158.7	156.9
60°	79.5	85.1	83.1	81.2	81.2	81.2	79.5	77.5	77.5	75.6	73.6
62.5°	37.9	41.6	39.6	39.6	39.6	39.6	37.9	37.9	37.9	37.9	36.0
65°	20.8	20.8	20.8	20.8	20.8	20.8	20.8	18.9	20.8	18.9	18.9
67.5°	11.3	11.3	11.3	11.3	9.5	11.3	11.3	9.5	9.5	9.5	9.5
70°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
72.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
75°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
77.5°	0.0	1.9	1.9	1.9	0.0	1.9	1.9	1.9	1.9	1.9	1.9
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	1.9	0.0	1.9	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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CATALOG NUMBER: LDA4A30950D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7
2.5°	514.2	527.3	540.6	536.7	517.8	515.9	508.4	512.2	398.7	323.2	270.2
5°	1304.2	1321.1	1338.2	1328.7	1281.5	1270.2	1232.3	1224.7	778.8	381.8	259.0
7.5°	2383.3	2392.7	2406.0	2394.7	2324.7	2292.7	2213.2	2135.8	1309.8	461.2	240.0
10°	3553.3	3549.6	3555.2	3540.2	3453.1	3390.7	3268.0	3213.1	1856.0	529.3	213.6
12.5°	4918.0	4902.9	4819.7	4859.4	4736.5	4609.8	4407.6	4237.6	2372.0	566.9	189.1
15°	6511.2	6466.0	6435.6	6390.3	6239.1	6035.0	5726.9	5537.8	2801.0	563.3	164.4
17.5°	8095.3	8021.4	7889.2	7906.2	7730.3	7445.0	7038.5	6715.4	3097.8	515.9	145.5
20°	9594.0	9484.4	9318.0	9304.9	9093.0	8717.1	8204.9	7804.2	3260.4	438.6	132.3
22.5°	11037.9	10867.9	10644.8	10574.9	10302.9	9769.8	9100.7	8613.1	3275.5	366.7	158.7
25°	12175.8	11962.3	11714.7	11593.6	11293.0	10612.7	9779.2	9180.0	3154.5	362.9	304.3
27.5°	12810.8	12569.0	12321.4	12156.9	11852.7	11081.4	10138.3	9446.5	2946.5	389.3	289.1
30°	12844.8	12572.7	12315.8	12107.8	11805.4	10981.3	9979.6	9259.4	2572.3	245.6	109.6
32.5°	12279.8	11988.7	11731.6	11497.4	11198.7	10368.9	9386.1	8698.1	2092.4	172.0	77.5
35°	11291.3	10990.7	10745.1	10497.4	10217.8	9437.1	8535.6	7894.8	1598.9	136.0	58.6
37.5°	9945.6	9667.7	9450.4	9282.1	8979.8	8358.0	7533.8	6855.3	1130.2	96.4	36.0
40°	8439.1	8204.9	8027.2	7881.6	7601.8	7050.0	6218.4	5645.6	686.2	68.0	24.5
42.5°	6923.3	6704.2	6547.2	6409.2	6150.4	5662.7	4978.5	4403.8	328.8	47.2	17.1
45°	5384.7	5188.1	5056.0	4931.3	4698.7	4218.7	3676.2	3260.4	213.6	34.0	13.2
47.5°	3678.2	3576.0	3358.7	3222.5	2984.4	2617.8	2109.3	1651.9	141.8	24.5	9.5
50°	1529.1	1476.2	1332.6	1240.0	1103.9	916.7	665.3	557.6	86.9	17.1	7.6
52.5°	593.4	580.2	544.3	523.6	489.6	440.3	366.7	327.1	52.9	13.2	7.6
55°	319.5	315.6	296.7	285.5	266.6	242.0	198.5	174.0	34.0	9.5	5.6
57.5°	147.5	145.5	136.0	136.0	122.9	113.5	94.5	85.1	20.8	7.6	5.6
60°	70.0	70.0	66.1	66.1	60.5	56.7	47.2	43.5	13.2	5.6	5.6
62.5°	34.0	34.0	34.0	34.0	32.1	30.2	26.5	24.5	9.5	5.6	5.6
65°	18.9	18.9	18.9	18.9	17.1	17.1	15.1	13.2	7.6	5.6	5.6
67.5°	9.5	9.5	9.5	9.5	9.5	9.5	7.6	7.6	5.6	5.6	5.6
70°	5.6	5.6	5.6	5.6	5.6	3.8	3.8	3.8	3.8	5.6	5.6
72.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	3.8	5.6	5.6
75°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	3.8	5.6	5.6
77.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	3.8	5.6	5.6
80°	0.0	0.0	1.9	1.9	1.9	1.9	1.9	1.9	3.8	5.6	5.6
82.5°	0.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	3.8	5.6	5.6
85°	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	3.8	5.6	5.6
87.5°	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9	3.8	5.6	5.6
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°	279.7	279.7	279.7	279.7
2.5°	232.5	202.2	187.1	183.2
5°	190.9	149.2	128.5	121.0
7.5°	155.0	107.6	90.7	83.1
10°	122.9	85.1	68.0	62.4
12.5°	102.0	68.0	54.9	51.1
15°	86.9	58.6	49.1	47.2
17.5°	79.5	62.4	58.6	60.5
20°	96.4	102.0	119.1	122.9
22.5°	204.2	353.5	480.2	508.4
25°	425.3	510.3	529.3	548.2
27.5°	236.2	183.2	179.6	187.1
30°	96.4	98.2	102.0	105.9
32.5°	71.9	71.9	70.0	71.9
35°	49.1	45.4	43.5	45.4
37.5°	30.2	28.4	26.5	26.5
40°	20.8	18.9	17.1	17.1
42.5°	15.1	11.3	9.5	9.5
45°	11.3	7.6	5.6	3.8
47.5°	9.5	5.6	1.9	1.9
50°	7.6	3.8	1.9	0.0
52.5°	5.6	3.8	1.9	0.0
55°	5.6	3.8	0.0	0.0
57.5°	5.6	3.8	0.0	0.0
60°	5.6	3.8	1.9	0.0
62.5°	5.6	3.8	1.9	1.9
65°	5.6	3.8	1.9	0.0
67.5°	5.6	3.8	1.9	0.0
70°	5.6	3.8	1.9	0.0
72.5°	7.6	3.8	1.9	0.0
75°	7.6	5.6	1.9	0.0
77.5°	7.6	5.6	1.9	0.0
80°	7.6	5.6	1.9	0.0
82.5°	7.6	5.6	1.9	0.0
85°	7.6	5.6	1.9	0.0
87.5°	7.6	5.6	1.9	0.0
90°	0.0	0.0	0.0	0.0

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— 0°-180° - - 45°-225° - - - 90°-270°

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