

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: P1191793

Luminaire Tested: **LDA4A30927D010TE 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: P1191793
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: LDA4A30927D010TE 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

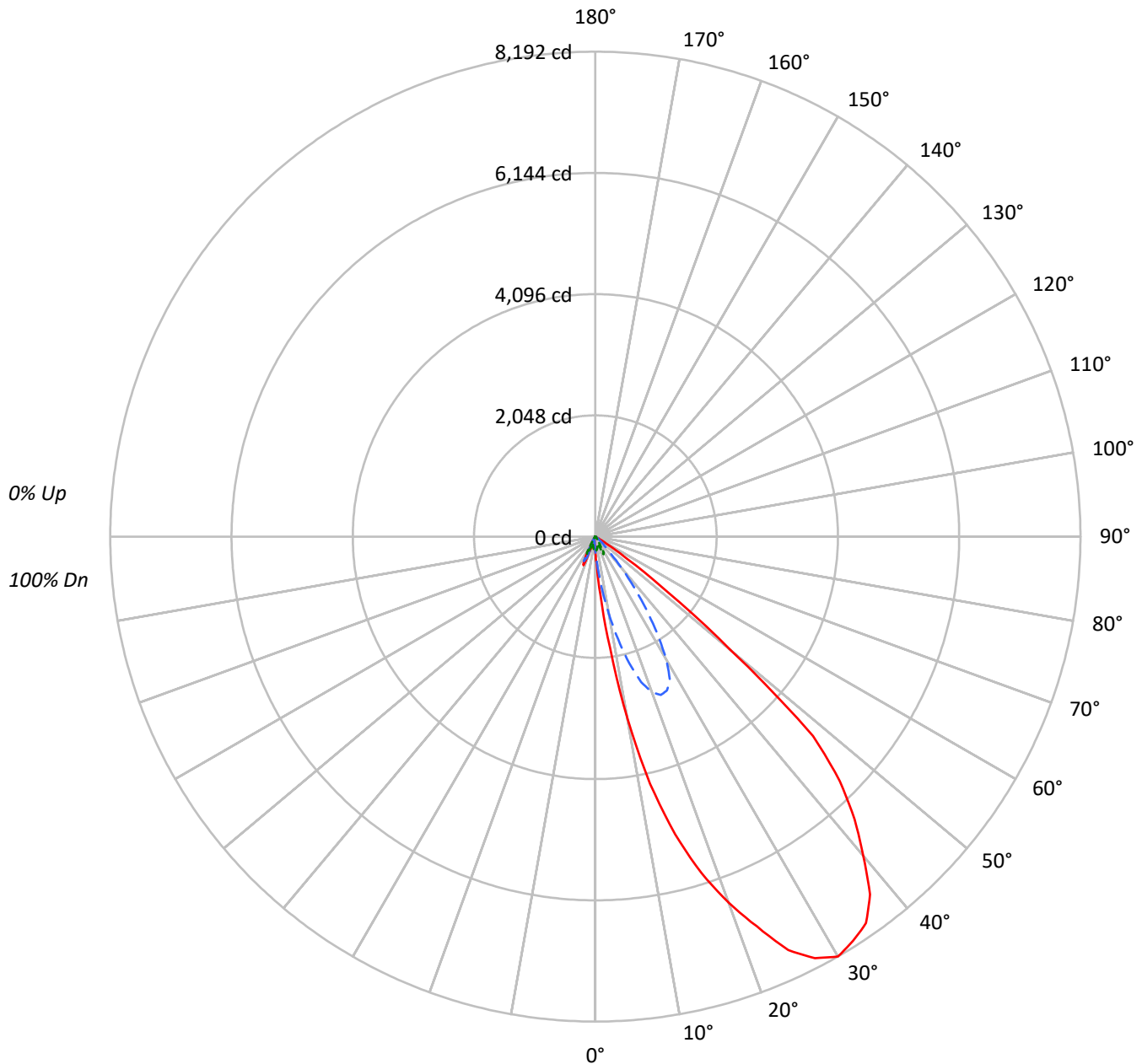
Lumens per Lamp: N/A
Luminaire Lumens: 2977.6 lumens
Efficiency: N/A
Efficacy: 75.6 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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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CATALOG NUMBER: LDA4A30927D010TE LAR35FL 4LAL1 30° Tilt

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°	30195	30195	30195
5°	121600	28503	13360
10°	392028	23910	7665
15°	665019	18989	5963
20°	864345	17025	17970
25°	1048898	44830	63652
30°	1166778	15781	16821
35°	1200191	9441	7905
40°	1133249	3993	2818
45°	1018521	2285	768
50°	573219	1401	0
55°	142275	946	0
60°	21931	1085	0
65°	5108	1284	0
70°	1046	1587	0
75°	0	2097	0
80°	0	4120	0
85°	0	8208	2123

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.2	1.7
10°-20°	365.4	12.3
20°-30°	844.1	28.3
30°-40°	946.8	31.8
40°-50°	660.6	22.2
50°-60°	98.6	3.3
60°-70°	6.5	0.2
70°-80°	3.2	0.1
80°-90°	3.1	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°	1258.7	42.3
0°-40°	2205.5	74.1
0°-60°	2964.7	99.6
0°-90°	2977.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2977.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	245	245	245	245	245	
5°	982	574	230	134	108	163
15°	5208	2216	149	57	47	1488
25°	7707	2865	329	459	468	3523
35°	7971	1489	63	52	52	4903
45°	5839	224	13	7	4	4284
55°	662	29	4	3	0	869
65°	18	4	4	3	0	27
75°	0	3	4	4	0	1
85°	0	3	6	4	2	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°	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8
2.5°	445.8	441.5	429.9	427.0	437.1	428.4	432.8	441.5	432.8	422.6	432.8
5°	982.1	1006.9	982.1	977.8	995.2	979.2	986.5	1002.6	980.7	960.2	974.9
7.5°	1895.8	1911.8	1841.9	1866.7	1860.9	1865.2	1869.6	1869.6	1856.4	1820.0	1840.4
10°	3130.0	3141.6	3048.4	3080.4	3038.2	3080.4	3073.2	3041.1	3048.4	2998.9	3025.0
12.5°	4275.3	4313.2	4219.9	4250.5	4199.6	4247.6	4228.6	4219.9	4145.6	4145.6	4173.3
15°	5207.8	5293.8	5209.3	5241.4	5183.2	5250.2	5197.7	5221.0	5154.0	5070.9	5143.7
17.5°	5962.7	6047.3	5968.5	6007.8	5954.0	6006.4	5945.2	5994.8	5908.8	5849.0	5898.6
20°	6584.9	6647.5	6554.3	6609.7	6545.6	6598.1	6530.9	6596.5	6496.0	6452.3	6481.5
22.5°	7127.0	7151.8	7103.7	7196.9	7071.6	7127.0	7046.8	7113.8	6994.3	6939.0	6946.3
25°	7707.0	7762.2	7670.4	7705.5	7618.1	7655.9	7565.6	7628.2	7479.6	7401.0	7384.9
27.5°	8028.9	8107.7	8026.0	8065.4	7976.4	8008.5	7918.1	8008.5	7856.9	7779.8	7762.2
30°	8192.1	8230.1	8177.6	8203.8	8103.2	8119.3	8026.0	8123.7	7972.1	7903.6	7894.9
32.5°	8097.4	8173.2	8104.8	8138.3	8045.0	8061.0	7970.6	8075.6	7924.1	7861.4	7830.8
35°	7970.6	8047.9	7983.8	8018.8	7932.8	7944.4	7848.2	7940.0	7765.1	7688.0	7622.4
37.5°	7619.5	7692.3	7638.4	7650.1	7567.0	7558.3	7454.8	7532.1	7361.5	7296.0	7252.3
40°	7038.1	7103.7	7060.0	7084.7	7001.7	6982.7	6912.8	6984.2	6851.6	6803.5	6742.3
42.5°	6481.5	6535.3	6494.5	6533.8	6440.6	6415.9	6353.3	6443.6	6293.5	6254.1	6210.4
45°	5838.9	5872.4	5840.3	5873.8	5784.9	5745.6	5688.8	5765.9	5618.9	5582.4	5487.6
47.5°	4989.3	4952.9	4947.1	4979.1	4868.3	4786.8	4734.3	4833.4	4620.6	4549.3	4439.9
50°	2987.2	3048.4	3074.6	3052.7	2977.0	2864.8	2780.2	2901.2	2787.6	2612.7	2437.8
52.5°	1538.8	1470.3	1484.8	1492.2	1401.8	1368.2	1340.6	1368.2	1279.4	1234.2	1123.5
55°	661.6	629.4	641.2	645.5	628.0	587.2	572.7	590.1	549.4	531.8	486.7
57.5°	244.8	244.8	237.6	240.5	234.7	220.0	217.1	224.4	211.3	207.0	189.4
60°	88.9	88.9	88.9	88.9	81.6	80.2	80.2	83.1	78.7	77.3	71.4
62.5°	37.9	39.3	36.4	37.9	36.4	35.0	36.4	35.0	35.0	33.5	33.5
65°	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	16.1	16.1
67.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	7.3	7.3	7.3
70°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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°	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8	244.8
2.5°	419.7	418.3	424.1	418.3	408.0	402.2	409.4	394.9	338.1	281.2	239.0
5°	948.6	941.4	931.1	934.0	909.3	888.9	888.9	849.6	574.2	326.5	230.2
7.5°	1798.1	1780.7	1706.3	1760.2	1707.9	1667.0	1639.3	1559.2	928.2	374.5	212.8
10°	2969.8	2939.1	2886.7	2896.8	2810.8	2742.4	2659.3	2525.2	1334.7	416.8	190.9
12.5°	4125.2	4094.6	3954.8	4034.9	3919.7	3852.7	3712.9	3555.5	1773.4	437.1	170.5
15°	5105.9	5079.6	4926.6	5002.5	4861.1	4798.4	4617.7	4442.8	2216.3	429.9	148.7
17.5°	5868.0	5863.7	5687.3	5763.0	5607.1	5556.2	5344.9	5172.9	2574.8	397.8	134.0
20°	6455.2	6445.1	6267.3	6343.0	6172.6	6123.0	5854.8	5674.1	2802.1	354.2	129.7
22.5°	6918.6	6898.2	6707.3	6772.9	6582.0	6517.9	6222.0	6034.1	2895.4	326.5	160.3
25°	7335.4	7298.9	7081.8	7132.8	6923.0	6936.1	6491.6	6284.7	2864.8	367.2	329.4
27.5°	7702.5	7636.9	7418.4	7433.0	7186.8	7058.6	6676.7	6448.0	2724.9	409.4	306.0
30°	7839.5	7775.4	7543.7	7552.5	7296.0	7115.3	6707.3	6452.3	2389.8	256.4	110.8
32.5°	7763.7	7693.8	7451.9	7454.8	7191.1	7007.5	6601.0	6319.6	1943.8	169.0	84.5
35°	7543.7	7470.9	7230.4	7242.0	6987.1	6804.9	6407.1	6107.0	1489.2	134.0	62.7
37.5°	7172.1	7121.2	6892.4	6912.8	6695.7	6501.8	6098.2	5773.3	1050.6	96.2	39.3
40°	6694.2	6654.8	6433.3	6465.4	6229.4	6050.2	5617.4	5264.7	654.2	65.6	24.8
42.5°	6134.6	6092.4	5873.8	5898.6	5697.5	5441.0	4999.6	4600.3	342.4	46.7	17.5
45°	5436.7	5387.1	5165.6	5178.7	4941.3	4641.1	4183.5	3830.9	224.4	32.1	13.1
47.5°	4339.4	4250.5	3962.0	3950.3	3756.5	3265.5	2615.6	2117.3	148.7	21.9	8.7
50°	2385.4	2293.6	2040.0	2012.3	1796.6	1474.7	1089.9	848.1	86.0	14.5	7.3
52.5°	1085.5	1037.5	919.5	900.5	808.7	670.3	515.9	424.1	49.6	10.2	5.8
55°	470.6	453.2	403.6	400.7	358.5	310.4	247.7	209.9	29.2	7.3	4.4
57.5°	185.1	179.3	169.0	161.7	145.8	129.7	107.9	90.4	19.0	5.8	4.4
60°	69.9	68.5	62.7	64.1	58.3	55.4	48.1	40.8	11.6	4.4	4.4
62.5°	32.1	32.1	30.6	30.6	29.2	26.2	23.3	21.9	7.3	4.4	4.4
65°	16.1	16.1	14.5	14.5	14.5	13.1	11.6	11.6	4.4	4.4	4.4
67.5°	7.3	7.3	7.3	7.3	7.3	5.8	5.8	5.8	2.9	4.4	4.4
70°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	4.4	4.4
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.9	4.4	4.4
75°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	2.9	4.4	4.4
77.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	2.9	4.4	5.8
80°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	2.9	4.4	5.8
82.5°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	2.9	4.4	5.8
85°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	2.9	4.4	5.8
87.5°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	2.9	4.4	5.8
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°	244.8	244.8	244.8	244.8
2.5°	205.5	182.2	161.7	157.4
5°	169.0	134.0	112.2	107.9
7.5°	136.9	97.6	81.6	78.7
10°	112.2	78.7	64.1	61.2
12.5°	93.3	64.1	51.0	48.1
15°	80.2	56.8	46.7	46.7
17.5°	77.3	62.7	59.8	61.2
20°	100.5	113.7	135.5	136.9
22.5°	233.2	378.8	501.2	524.6
25°	419.7	459.0	447.4	467.7
27.5°	221.5	173.4	176.4	180.7
30°	96.2	106.3	112.2	118.1
32.5°	80.2	83.1	84.5	88.9
35°	52.5	52.5	51.0	52.5
37.5°	32.1	30.6	29.2	29.2
40°	20.4	19.0	17.5	17.5
42.5°	14.5	11.6	10.2	10.2
45°	10.2	7.3	5.8	4.4
47.5°	7.3	4.4	2.9	1.5
50°	5.8	4.4	1.5	0.0
52.5°	4.4	2.9	1.5	0.0
55°	4.4	2.9	0.0	0.0
57.5°	4.4	2.9	0.0	0.0
60°	4.4	2.9	0.0	0.0
62.5°	4.4	2.9	0.0	0.0
65°	4.4	2.9	1.5	0.0
67.5°	4.4	2.9	1.5	0.0
70°	4.4	2.9	1.5	0.0
72.5°	4.4	2.9	1.5	0.0
75°	4.4	4.4	1.5	0.0
77.5°	5.8	4.4	1.5	0.0
80°	5.8	4.4	1.5	0.0
82.5°	5.8	4.4	1.5	0.0
85°	5.8	4.4	1.5	1.5
87.5°	5.8	4.4	1.5	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)