

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: P1191529

Luminaire Tested: **LDA4A15930D010TE LAR15SP 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: P1191529
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26104)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A15930D010TE LAR15SP 4LAL1 30° Tilt
Description: PORTFOLIO 4" Lensed Adjustable, Self-flanged, 15° Spot Optic, at 30° tilt. --- 27.9W
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

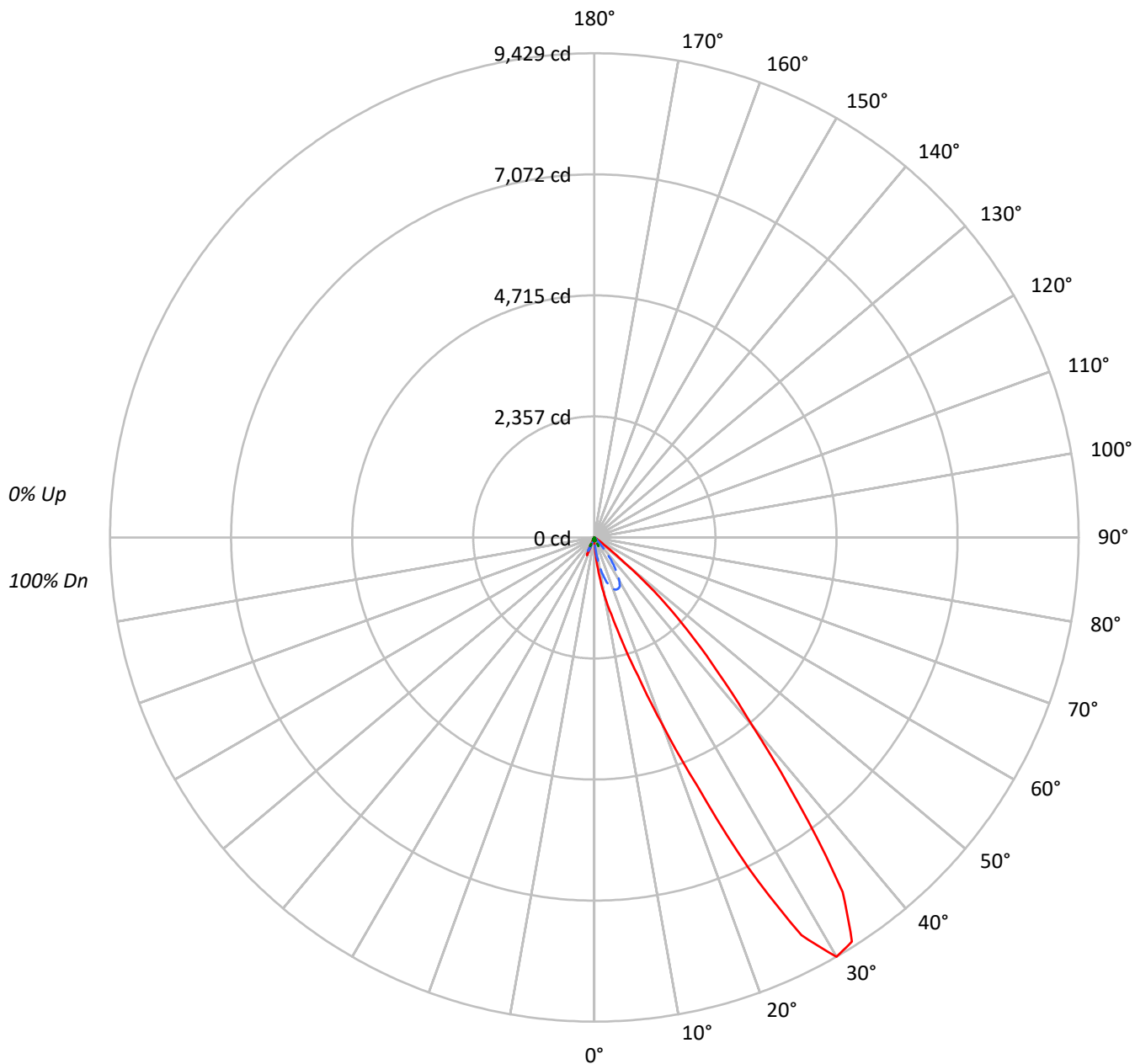
Lumens per Lamp: N/A
Luminaire Lumens: 1632.2 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Spacing Criteria (0/90/45): 2.57 / 1.16 / 1.36
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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					0
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	97	96	96	94	93	91		
2	105	100	95	91	103	98	93	90	94	91	88	91	88	86	89	86	84	82		
3	99	91	85	80	96	89	84	79	87	82	78	84	80	77	82	78	76	74		
4	92	83	76	71	90	82	75	70	79	74	70	77	72	69	75	71	68	66		
5	86	75	68	63	84	74	68	63	73	67	62	71	66	62	69	65	61	59		
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53		
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48		
8	69	58	50	45	68	57	50	45	56	50	45	55	49	45	54	48	45	43		
9	65	53	46	41	64	52	46	41	51	45	41	50	45	40	49	44	40	39		
10	61	49	42	37	59	48	41	37	47	41	37	46	41	37	46	40	36	35		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	9485	9485	9485
5°	50096	8977	4767
10°	146528	7615	3144
15°	266542	6410	3537
20°	508508	7285	17274
25°	966383	25328	38134
30°	1342932	8546	7406
35°	1269080	3900	2831
40°	769191	1739	1014
45°	450763	925	314
50°	149599	672	0
55°	28472	581	0
60°	6389	444	0
65°	1839	788	0
70°	649	974	0
75°	0	1287	0
80°	0	1918	0
85°	0	3821	1415



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.4	1.1
10°-20°	150.2	9.2
20°-30°	532.5	32.6
30°-40°	631.4	38.7
40°-50°	268.6	16.5
50°-60°	24.3	1.5
60°-70°	3.0	0.2
70°-80°	2.0	0.1
80°-90°	1.8	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°	701.1	43.0
0°-40°	1332.5	81.6
0°-60°	1625.4	99.6
0°-90°	1632.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1632.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	77	77	77	77	77	
5°	405	200	72	46	38	63
15°	2087	879	50	28	28	673
25°	7101	1102	186	293	280	3290
35°	8428	651	26	20	19	4869
45°	2584	72	5	4	2	2025
55°	132	11	3	2	0	185
65°	6	3	3	2	0	9
75°	0	2	3	3	0	0
85°	0	2	3	3	1	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°	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9
2.5°	141.4	133.4	138.7	136.9	137.9	140.6	137.9	137.9	136.9	133.4	133.4
5°	404.6	380.5	392.0	385.8	389.3	393.8	387.5	385.8	383.0	375.0	373.2
7.5°	753.7	740.2	754.5	743.9	753.7	755.5	746.5	744.7	740.2	728.6	724.1
10°	1169.9	1147.5	1160.9	1149.3	1164.5	1163.6	1149.3	1151.0	1145.7	1130.5	1123.4
12.5°	1538.6	1520.7	1534.2	1501.1	1538.6	1514.5	1517.2	1520.7	1513.6	1493.9	1485.0
15°	2087.3	2038.1	2061.4	2004.1	2061.4	2053.4	2022.0	2020.2	2001.4	1968.3	1948.6
17.5°	2815.9	2829.4	2812.4	2778.3	2854.4	2833.8	2789.1	2780.2	2744.3	2653.9	2652.1
20°	3874.0	3856.0	3884.6	3777.3	3874.8	3780.0	3767.5	3742.4	3681.4	3555.3	3535.6
22.5°	5228.2	5238.0	5187.0	5112.7	5232.7	5085.8	5041.1	4981.1	4870.1	4675.9	4615.1
25°	7100.7	7088.2	7021.9	6898.4	7026.4	6789.2	6677.3	6553.8	6347.1	6044.5	5898.6
27.5°	8732.5	8783.5	8739.6	8614.3	8699.3	8465.7	8207.9	8129.2	7849.0	7467.7	7204.5
30°	9428.9	9453.0	9434.2	9338.5	9368.9	9176.3	8921.3	8828.2	8540.9	8180.2	7839.2
32.5°	9333.0	9344.8	9348.3	9220.3	9225.7	9043.9	8777.2	8639.3	8326.1	7978.8	7571.5
35°	8428.1	8476.4	8507.7	8387.9	8268.8	8088.0	7785.4	7571.5	7242.2	6925.2	6509.1
37.5°	6526.9	6587.9	6636.2	6534.2	6477.7	6259.4	6007.8	5842.2	5614.9	5428.7	5133.3
40°	4777.1	4788.7	4818.3	4765.4	4677.7	4619.5	4475.5	4381.4	4243.6	4143.3	3947.3
42.5°	3550.8	3544.5	3565.1	3535.6	3532.9	3445.2	3353.9	3298.4	3250.9	3145.4	3007.5
45°	2584.1	2585.9	2605.6	2586.8	2536.6	2517.8	2458.0	2407.8	2345.2	2312.1	2202.8
47.5°	1757.1	1762.4	1775.9	1765.1	1719.4	1712.3	1673.9	1623.7	1622.7	1571.7	1476.0
50°	779.6	781.4	797.5	793.9	739.4	746.5	721.5	675.8	688.4	657.8	584.5
52.5°	258.7	259.6	262.2	260.5	251.5	251.5	245.3	244.4	237.1	230.0	214.0
55°	132.4	132.4	134.3	133.4	128.9	128.9	121.8	126.3	122.6	120.0	110.0
57.5°	56.5	56.5	57.3	57.3	54.5	57.3	54.5	54.5	52.8	52.0	48.3
60°	25.9	25.9	25.9	25.9	25.1	26.9	25.1	25.1	25.1	24.1	22.4
62.5°	13.4	13.4	13.4	13.4	13.4	13.4	13.4	12.5	12.5	12.5	11.6
65°	6.3	6.3	6.3	6.3	6.3	7.2	6.3	6.3	6.3	6.3	6.3
67.5°	2.7	2.7	2.7	3.5	3.5	3.5	3.5	3.5	2.7	2.7	2.7
70°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.0
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°	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°	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9	76.9
2.5°	134.3	129.8	136.1	130.6	134.3	130.6	126.3	128.0	103.0	85.9	76.1
5°	374.2	360.7	372.4	360.7	361.6	355.4	338.3	336.5	199.6	97.5	72.5
7.5°	704.5	702.7	717.0	701.7	700.0	684.7	653.5	640.9	361.6	114.5	67.1
10°	1118.9	1093.0	1105.4	1089.3	1084.0	1056.1	1011.4	987.3	538.0	131.6	60.8
12.5°	1459.9	1450.1	1459.0	1443.8	1438.4	1400.9	1348.0	1315.8	718.8	141.4	54.5
15°	1905.7	1885.9	1892.2	1860.8	1844.7	1773.1	1682.7	1623.7	879.0	140.6	50.2
17.5°	2585.9	2547.4	2543.9	2490.1	2450.7	2320.9	2158.9	2037.3	996.3	129.8	48.3
20°	3438.0	3368.2	3344.9	3259.9	3193.6	2978.9	2729.1	2531.3	1069.6	115.5	55.5
22.5°	4459.4	4336.6	4267.8	4131.7	4018.1	3673.4	3307.4	3011.1	1101.8	111.0	79.6
25°	5649.8	5439.4	5293.5	5079.6	4888.1	4359.0	3845.3	3430.0	1101.8	144.1	186.1
27.5°	6857.2	6525.2	6256.7	5944.2	5653.4	4903.2	4240.9	3700.2	1075.0	179.9	170.0
30°	7468.7	7060.4	6695.2	6330.0	5964.8	5063.5	4329.6	3733.4	973.9	105.7	60.0
32.5°	7209.0	6778.5	6374.7	6021.3	5660.5	4780.6	4089.7	3514.1	818.0	61.8	38.5
35°	6213.7	5840.5	5489.6	5225.5	4944.4	4249.9	3631.4	3130.1	650.7	48.3	25.9
37.5°	4959.7	4705.5	4455.7	4286.6	4085.2	3563.3	3064.8	2653.9	465.4	34.9	16.1
40°	3847.1	3673.4	3498.8	3391.5	3249.1	2868.7	2480.3	2153.6	274.8	24.1	10.8
42.5°	2946.6	2826.7	2696.9	2622.6	2520.6	2236.8	1933.4	1702.5	127.1	17.0	8.0
45°	2166.1	2077.5	1978.1	1930.6	1859.1	1672.0	1470.7	1307.7	71.6	12.5	5.3
47.5°	1458.1	1379.3	1287.1	1257.5	1188.7	1024.9	819.0	658.8	47.5	9.0	4.5
50°	580.0	528.1	496.8	455.6	415.4	348.1	260.5	207.7	28.6	7.2	3.5
52.5°	213.0	201.4	196.1	185.3	176.3	157.5	133.4	115.5	17.0	5.3	2.7
55°	111.0	103.8	100.2	96.7	91.4	80.6	67.1	57.3	10.8	3.5	2.7
57.5°	48.3	45.7	46.5	43.0	40.2	36.7	32.2	27.7	7.2	3.5	2.7
60°	23.3	21.5	22.4	20.6	19.6	18.8	17.0	14.3	4.5	2.7	1.8
62.5°	11.6	11.6	11.6	10.8	10.8	9.8	9.0	8.0	3.5	2.7	2.7
65°	6.3	5.3	6.3	5.3	5.3	5.3	4.5	4.5	2.7	2.7	2.7
67.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.8	2.7	2.7
70°	1.8	1.8	1.8	1.8	1.8	1.8	1.0	1.8	1.8	2.7	2.7
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.8	2.7	2.7
75°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.8	2.7	2.7
77.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.8	2.7	2.7
80°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.8	2.7	2.7
82.5°	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.8	2.7	2.7
85°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.8	2.7	2.7
87.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.8	2.7	2.7
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: LDA4A15930D010TE LAR15SP 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	76.9	76.9	76.9	76.9
2.5°	64.5	57.3	52.0	51.0
5°	54.5	45.7	39.4	38.5
7.5°	46.5	36.7	31.4	30.4
10°	41.2	31.4	25.9	25.1
12.5°	36.7	27.7	24.1	23.3
15°	34.0	27.7	26.9	27.7
17.5°	36.7	37.6	41.2	45.7
20°	60.8	86.9	112.8	131.6
22.5°	136.9	253.4	335.6	375.0
25°	258.7	292.6	293.6	280.2
27.5°	140.6	111.8	100.2	94.9
30°	55.5	52.8	52.8	52.0
32.5°	36.7	34.0	33.1	32.2
35°	22.4	19.6	18.8	18.8
37.5°	14.3	12.5	11.6	10.8
40°	9.8	8.0	7.2	6.3
42.5°	7.2	5.3	3.5	3.5
45°	5.3	3.5	1.8	1.8
47.5°	4.5	2.7	1.0	1.0
50°	3.5	1.8	1.0	0.0
52.5°	2.7	1.8	0.0	0.0
55°	2.7	1.8	0.0	0.0
57.5°	2.7	1.8	0.0	0.0
60°	2.7	1.8	0.0	0.0
62.5°	2.7	1.8	0.0	0.0
65°	2.7	1.8	1.0	0.0
67.5°	3.5	1.8	1.0	0.0
70°	3.5	1.8	1.0	0.0
72.5°	3.5	1.8	1.0	0.0
75°	3.5	2.7	1.0	0.0
77.5°	3.5	2.7	1.0	0.0
80°	3.5	2.7	1.0	0.0
82.5°	3.5	2.7	1.0	0.0
85°	3.5	2.7	1.0	1.0
87.5°	3.5	2.7	1.0	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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Scaled Data Report



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— 0°-180° - - 45°-225° - - - 90°-270°

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