

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: P1191535

Luminaire Tested: **LDA4A15930D010TE 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: P1191535
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: LDA4A15930D010TE 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 / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

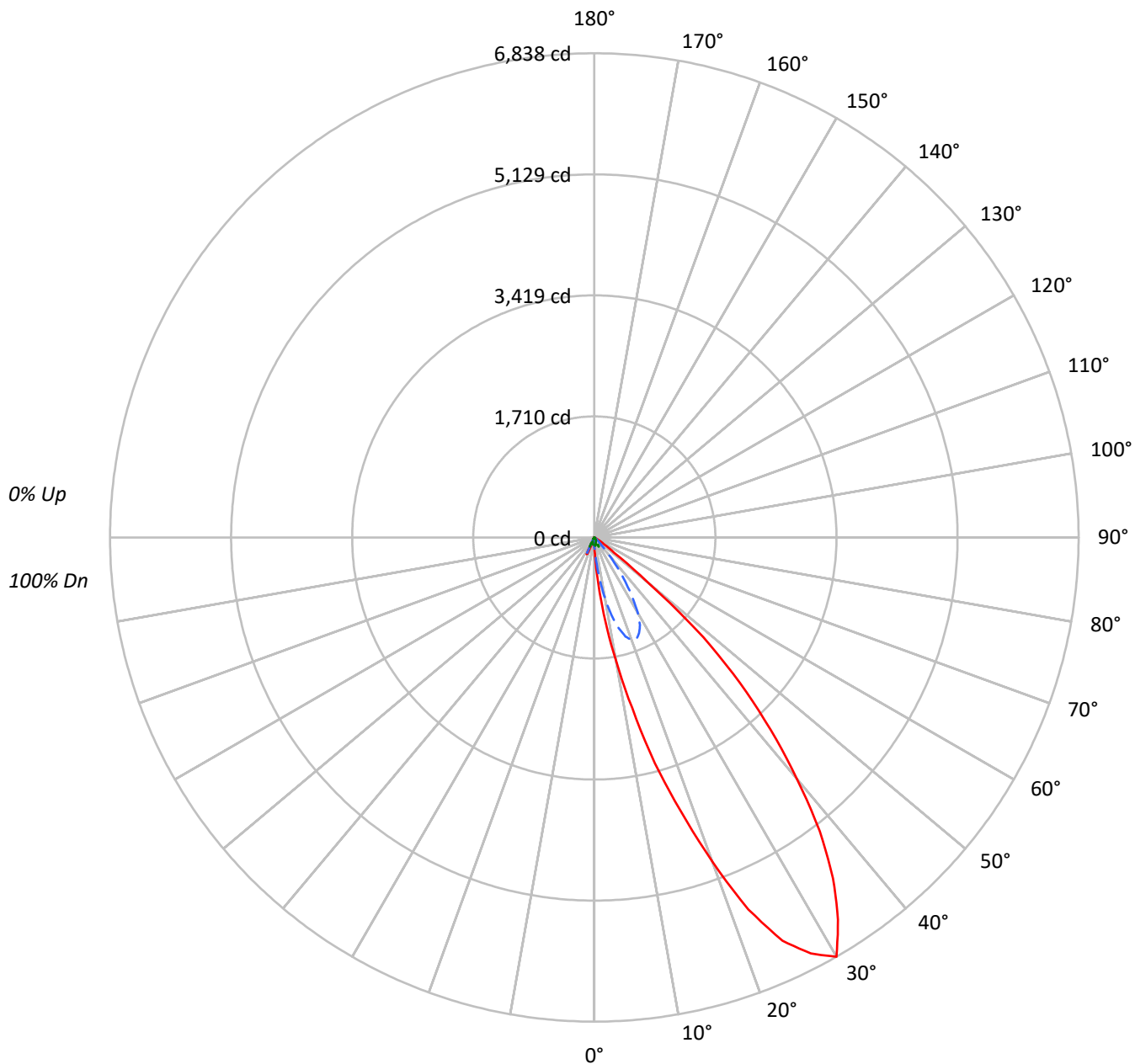
Lumens per Lamp: N/A
Luminaire Lumens: 1780.0 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	16343	16343	16343
5°	84010	15180	7095
10°	221414	12675	3707
15°	421450	9948	2860
20°	640111	8230	7639
25°	855328	19612	35331
30°	973918	7406	7150
35°	884596	4171	3237
40°	716474	1868	1288
45°	507001	1099	314
50°	185003	672	0
55°	38493	581	0
60°	9276	666	0
65°	2860	788	0
70°	974	974	0
75°	477	1287	0
80°	0	1918	0
85°	0	3821	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.0	1.7
10°-20°	223.9	12.6
20°-30°	567.8	31.9
30°-40°	607.7	34.1
40°-50°	310.6	17.4
50°-60°	32.4	1.8
60°-70°	3.8	0.2
70°-80°	2.1	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°	821.7	46.2
0°-40°	1429.3	80.3
0°-60°	1772.3	99.6
0°-90°	1780.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1780.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	132	132	132	132	132	
5°	678	369	123	71	57	99
15°	3300	1326	78	28	22	975
25°	6285	1494	144	242	260	2856
35°	5875	757	28	22	22	3607
45°	2906	101	6	4	2	2169
55°	179	16	3	2	0	243
65°	10	4	3	2	0	13
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°	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5
2.5°	267.7	270.3	250.6	256.9	261.4	252.4	250.6	250.6	260.5	255.1	264.0
5°	678.5	675.8	641.9	651.7	658.8	641.9	649.9	637.4	652.5	642.7	652.5
7.5°	1185.1	1216.5	1173.5	1183.4	1189.6	1171.8	1176.1	1158.3	1175.3	1163.7	1171.8
10°	1767.8	1800.1	1750.0	1758.0	1762.5	1745.5	1746.4	1723.1	1738.4	1725.8	1731.1
12.5°	2464.2	2476.8	2452.6	2458.9	2461.6	2439.3	2397.1	2401.6	2416.9	2395.4	2400.7
15°	3300.4	3291.4	3262.8	3283.4	3262.8	3252.0	3188.5	3184.9	3193.8	3169.6	3131.2
17.5°	4037.1	4105.1	4072.9	4084.5	4059.4	4059.4	3978.0	3964.5	3965.5	3901.0	3893.9
20°	4876.6	4963.5	4884.7	4888.4	4855.2	4854.3	4755.0	4727.2	4715.6	4642.1	4621.5
22.5°	5685.8	5710.9	5710.1	5694.8	5617.0	5661.7	5537.3	5493.4	5457.6	5374.4	5333.2
25°	6284.7	6363.6	6309.8	6271.2	6203.3	6259.7	6120.0	6062.7	6009.0	5939.2	5885.5
27.5°	6623.1	6696.4	6684.0	6626.6	6556.8	6611.5	6458.3	6384.2	6308.1	6256.9	6189.8
30°	6838.0	6949.8	6913.1	6788.7	6686.6	6704.6	6532.7	6433.4	6349.2	6296.3	6211.4
32.5°	6402.0	6517.5	6506.7	6416.3	6363.6	6407.3	6257.9	6159.4	6078.8	6036.8	5941.9
35°	5874.7	6010.0	5980.4	5905.2	5866.7	5917.8	5771.9	5689.5	5608.0	5571.3	5467.5
37.5°	5229.4	5356.5	5326.9	5255.3	5217.7	5255.3	5115.7	5039.6	4962.6	4924.1	4853.5
40°	4449.7	4561.6	4530.3	4464.0	4432.6	4459.5	4338.7	4272.4	4207.1	4178.5	4084.5
42.5°	3688.0	3777.4	3748.8	3691.5	3667.4	3685.2	3586.0	3526.8	3469.5	3445.4	3389.9
45°	2906.5	2995.1	2967.4	2918.2	2895.7	2905.6	2822.3	2769.6	2720.3	2698.0	2647.8
47.5°	2085.7	2185.0	2151.0	2108.9	2085.7	2081.2	2007.8	1960.4	1964.9	1888.8	1842.1
50°	964.1	1048.2	1014.1	991.8	969.4	956.9	931.0	877.2	892.5	823.5	796.6
52.5°	350.0	370.6	362.6	355.4	348.3	345.5	336.5	323.2	325.0	307.9	299.9
55°	179.0	188.9	186.1	181.8	181.8	179.0	174.5	169.2	165.5	163.0	160.2
57.5°	82.4	87.7	85.9	84.1	84.1	82.4	80.6	77.9	79.6	75.1	74.3
60°	37.6	40.2	39.4	38.5	38.5	38.5	37.6	36.7	36.7	35.9	34.9
62.5°	17.9	19.6	18.8	18.8	18.8	18.8	17.9	17.9	17.9	17.9	17.0
65°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.0	9.8	9.0	9.0
67.5°	5.3	5.3	5.3	5.3	4.5	5.3	5.3	4.5	4.5	4.5	4.5
70°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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°	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5	132.5
2.5°	243.4	249.7	256.0	254.2	245.3	244.4	240.8	242.6	188.9	153.0	128.0
5°	617.6	625.6	633.8	629.3	607.0	601.5	583.6	580.1	368.7	180.8	122.6
7.5°	1128.8	1133.2	1139.5	1134.1	1101.0	1085.7	1048.2	1011.5	620.3	218.5	113.7
10°	1682.9	1681.1	1683.7	1676.6	1635.4	1605.8	1547.7	1521.7	879.0	250.6	101.2
12.5°	2329.1	2322.0	2282.6	2301.4	2243.2	2183.2	2087.5	2006.9	1123.4	268.5	89.5
15°	3083.7	3062.2	3047.9	3026.5	2954.9	2858.2	2712.3	2622.7	1326.5	266.7	77.9
17.5°	3833.9	3799.0	3736.2	3744.3	3661.1	3526.0	3333.4	3180.4	1467.1	244.4	68.9
20°	4543.6	4491.8	4413.0	4406.7	4306.5	4128.4	3885.8	3696.0	1544.0	207.7	62.7
22.5°	5227.5	5147.1	5041.4	5008.2	4879.4	4627.0	4310.1	4079.1	1551.3	173.6	75.1
25°	5766.4	5665.2	5548.0	5490.7	5348.5	5026.1	4631.5	4347.7	1494.0	171.8	144.1
27.5°	6067.2	5952.7	5835.4	5757.6	5613.4	5248.1	4801.5	4473.8	1395.5	184.4	136.9
30°	6083.3	5954.5	5832.7	5734.2	5591.1	5200.8	4726.2	4385.2	1218.3	116.3	52.0
32.5°	5815.7	5677.8	5556.2	5445.2	5303.6	4910.7	4445.2	4119.4	991.0	81.4	36.7
35°	5347.5	5205.2	5088.8	4971.6	4839.1	4469.5	4042.4	3739.0	757.2	64.5	27.7
37.5°	4710.1	4578.6	4475.6	4396.0	4252.8	3958.2	3568.0	3246.7	535.2	45.7	17.0
40°	3996.8	3885.8	3801.7	3732.7	3600.3	3338.9	2945.1	2673.8	325.0	32.2	11.6
42.5°	3278.9	3175.1	3100.8	3035.5	2912.7	2681.9	2357.7	2085.7	155.7	22.4	8.0
45°	2550.3	2457.1	2394.4	2335.4	2225.3	1997.9	1741.1	1544.0	101.2	16.1	6.3
47.5°	1741.9	1693.6	1590.7	1526.2	1413.4	1239.8	999.0	782.3	67.1	11.6	4.5
50°	724.2	699.1	631.1	587.2	522.8	434.2	315.1	264.0	41.2	8.0	3.5
52.5°	281.0	274.8	257.9	247.9	231.8	208.5	173.6	154.9	25.1	6.3	3.5
55°	151.2	149.5	140.6	135.1	126.3	114.5	94.0	82.4	16.1	4.5	2.7
57.5°	69.8	68.9	64.5	64.5	58.2	53.7	44.7	40.2	9.8	3.5	2.7
60°	33.1	33.1	31.4	31.4	28.6	26.9	22.4	20.6	6.3	2.7	2.7
62.5°	16.1	16.1	16.1	16.1	15.3	14.3	12.5	11.6	4.5	2.7	2.7
65°	9.0	9.0	9.0	9.0	8.0	8.0	7.2	6.3	3.5	2.7	2.7
67.5°	4.5	4.5	4.5	4.5	4.5	4.5	3.5	3.5	2.7	2.7	2.7
70°	2.7	2.7	2.7	2.7	2.7	1.8	1.8	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°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.8	2.7	2.7
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.8	2.7	2.7
80°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.8	2.7	2.7
82.5°	0.0	1.0	1.0	1.0	1.0	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	1.0	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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CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	132.5	132.5	132.5	132.5
2.5°	110.0	95.7	88.6	86.9
5°	90.4	70.8	60.8	57.3
7.5°	73.4	51.0	43.0	39.4
10°	58.2	40.2	32.2	29.6
12.5°	48.3	32.2	25.9	24.1
15°	41.2	27.7	23.3	22.4
17.5°	37.6	29.6	27.7	28.6
20°	45.7	48.3	56.5	58.2
22.5°	96.7	167.5	227.3	240.8
25°	201.4	241.6	250.6	259.6
27.5°	112.0	86.9	85.1	88.6
30°	45.7	46.5	48.3	50.2
32.5°	34.0	34.0	33.1	34.0
35°	23.3	21.5	20.6	21.5
37.5°	14.3	13.4	12.5	12.5
40°	9.8	9.0	8.0	8.0
42.5°	7.2	5.3	4.5	4.5
45°	5.3	3.5	2.7	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	1.0	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	1.0	0.0
62.5°	2.7	1.8	1.0	1.0
65°	2.7	1.8	1.0	0.0
67.5°	2.7	1.8	1.0	0.0
70°	2.7	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	0.0
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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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)