

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: P1191613

Luminaire Tested: **LDA4A20927D010TE 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: P1191613
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: LDA4A20927D010TE 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

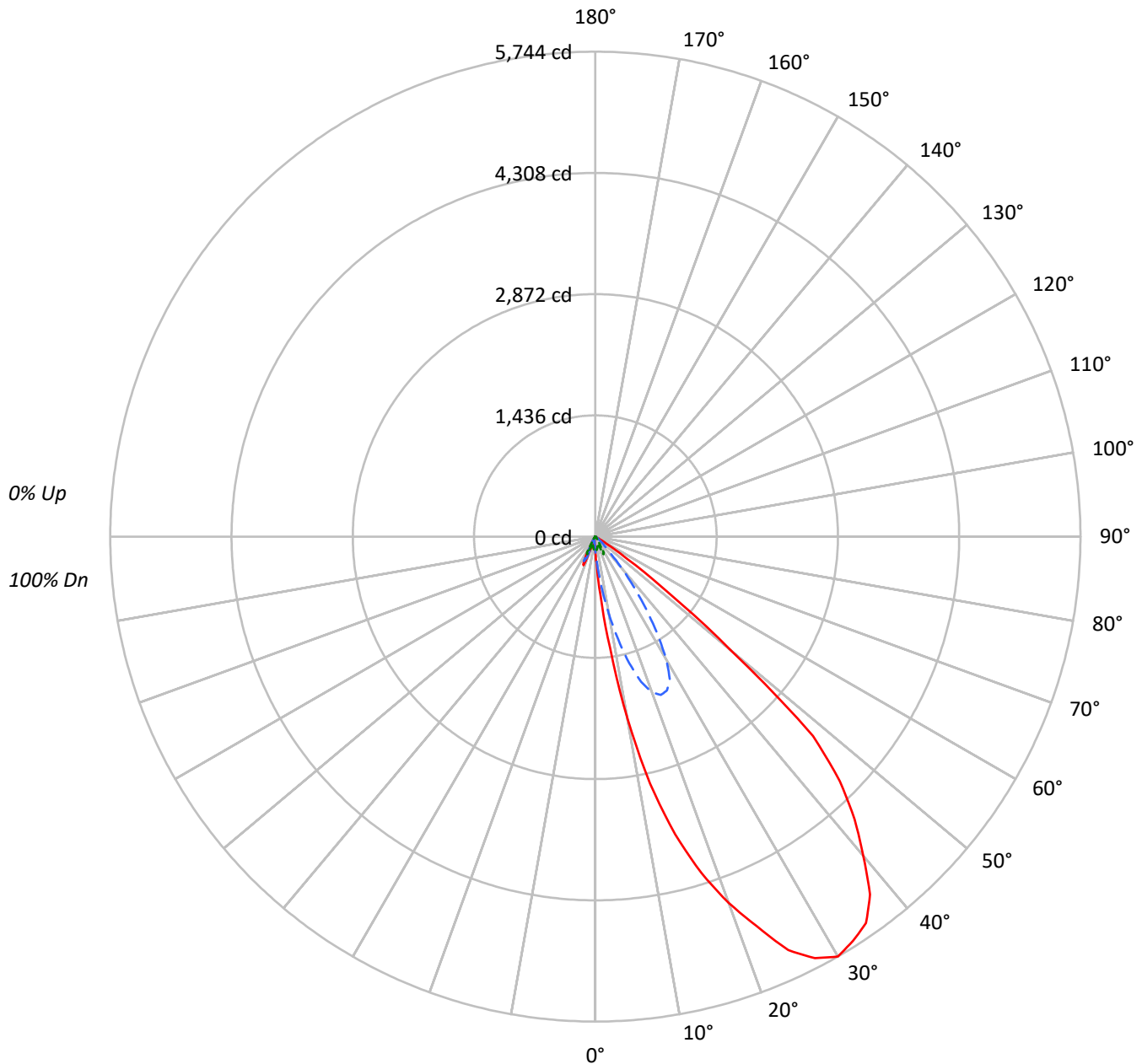
Lumens per Lamp: N/A
Luminaire Lumens: 2087.4 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 28.8
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	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	84	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°	21166	21166	21166
5°	85248	19996	9361
10°	274845	16758	5373
15°	466259	13319	4176
20°	605983	11932	12601
25°	735372	31438	44640
30°	818031	11052	11779
35°	841456	6610	5541
40°	794503	2802	1981
45°	714076	1587	523
50°	401860	979	0
55°	99739	645	0
60°	15369	740	0
65°	3590	876	0
70°	721	1082	0
75°	0	1430	0
80°	0	2912	0
85°	0	5802	1415



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	1.7
10°-20°	256.2	12.3
20°-30°	591.8	28.3
30°-40°	663.8	31.8
40°-50°	463.2	22.2
50°-60°	69.1	3.3
60°-70°	4.5	0.2
70°-80°	2.2	0.1
80°-90°	2.2	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°	882.4	42.3
0°-40°	1546.2	74.1
0°-60°	2078.5	99.6
0°-90°	2087.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2087.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	172	172	172	172	172	
5°	688	402	162	94	76	114
15°	3651	1554	104	40	33	1043
25°	5403	2008	231	322	328	2470
35°	5588	1044	44	37	37	3437
45°	4094	157	9	5	3	3003
55°	464	20	3	2	0	610
65°	12	3	3	2	0	19
75°	0	2	3	3	0	1
85°	0	2	4	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°	171.6	171.6	171.6	171.6	171.6	171.6	171.6	171.6	171.6	171.6	171.6
2.5°	312.6	309.6	301.3	299.3	306.5	300.3	303.4	309.6	303.4	296.3	303.4
5°	688.5	705.9	688.5	685.5	697.8	686.5	691.6	702.9	687.5	673.2	683.5
7.5°	1329.1	1340.4	1291.3	1308.7	1304.6	1307.7	1310.7	1310.7	1301.5	1276.0	1290.3
10°	2194.4	2202.5	2137.2	2159.7	2130.0	2159.7	2154.6	2132.0	2137.2	2102.5	2120.9
12.5°	2997.3	3024.0	2958.5	2980.0	2944.2	2977.9	2964.8	2958.5	2906.4	2906.4	2925.8
15°	3651.3	3711.5	3652.3	3674.7	3633.9	3680.8	3644.0	3660.4	3613.5	3555.2	3606.2
17.5°	4180.3	4239.7	4184.5	4212.1	4174.3	4211.0	4168.2	4202.9	4142.6	4100.7	4135.5
20°	4616.6	4660.5	4595.2	4634.0	4589.1	4625.9	4578.8	4624.7	4554.4	4523.7	4544.1
22.5°	4996.7	5014.1	4980.4	5045.7	4957.9	4996.7	4940.5	4987.5	4903.8	4864.8	4870.0
25°	5403.3	5442.1	5377.7	5402.3	5340.9	5367.6	5304.1	5348.2	5243.9	5188.7	5177.4
27.5°	5629.1	5684.2	5627.0	5654.5	5592.3	5614.7	5551.4	5614.7	5508.4	5454.3	5442.1
30°	5743.5	5770.1	5733.3	5751.7	5681.2	5692.3	5627.0	5695.4	5589.2	5541.2	5535.1
32.5°	5677.0	5730.1	5682.2	5705.7	5640.2	5651.5	5588.2	5661.8	5555.5	5511.6	5490.1
35°	5588.2	5642.4	5597.4	5621.8	5561.6	5569.8	5502.4	5566.8	5444.2	5390.0	5344.0
37.5°	5341.9	5393.0	5355.2	5363.4	5305.1	5299.1	5226.5	5280.7	5161.2	5115.2	5084.5
40°	4934.3	4980.4	4949.7	4967.0	4908.8	4895.5	4846.4	4896.5	4803.6	4769.8	4727.0
42.5°	4544.1	4581.9	4553.3	4580.9	4515.6	4498.2	4454.2	4517.6	4412.3	4384.7	4354.1
45°	4093.6	4117.1	4094.6	4118.1	4055.8	4028.2	3988.3	4042.5	3939.3	3913.8	3847.3
47.5°	3497.9	3472.4	3468.4	3490.8	3413.2	3356.0	3319.2	3388.7	3239.4	3189.5	3112.9
50°	2094.2	2137.2	2155.6	2140.3	2087.1	2008.5	1949.3	2034.0	1954.4	1831.7	1709.2
52.5°	1078.8	1030.8	1041.0	1046.2	982.8	959.3	939.9	959.3	897.0	865.3	787.7
55°	463.8	441.3	449.5	452.6	440.3	411.7	401.5	413.7	385.2	372.9	341.1
57.5°	171.6	171.6	166.5	168.5	164.5	154.2	152.2	157.4	148.1	145.1	132.8
60°	62.3	62.3	62.3	62.3	57.2	56.2	56.2	58.2	55.2	54.2	50.1
62.5°	26.5	27.5	25.5	26.5	25.5	24.5	25.5	24.5	24.5	23.5	23.5
65°	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	11.3	11.3
67.5°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	5.1	5.1	5.1
70°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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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CATALOG NUMBER: LDA4A20927D010TE LAR35FL 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	171.6	171.6	171.6	171.6	171.6	171.6	171.6	171.6	171.6	171.6	171.6
2.5°	294.2	293.2	297.3	293.2	286.0	281.9	287.1	276.9	237.0	197.2	167.5
5°	665.1	660.0	652.8	654.8	637.5	623.2	623.2	595.6	402.5	228.8	161.5
7.5°	1260.6	1248.5	1196.3	1234.1	1197.3	1168.7	1149.3	1093.1	650.7	262.5	149.1
10°	2082.1	2060.6	2023.9	2031.0	1970.7	1922.6	1864.4	1770.5	935.8	292.2	133.8
12.5°	2892.2	2870.6	2772.6	2828.8	2748.1	2701.1	2603.1	2492.7	1243.2	306.5	119.5
15°	3579.7	3561.3	3454.0	3507.2	3408.1	3364.1	3237.4	3114.9	1553.8	301.3	104.3
17.5°	4114.0	4111.0	3987.3	4040.5	3931.1	3895.4	3747.3	3626.6	1805.2	278.9	94.0
20°	4525.7	4518.6	4393.9	4447.1	4327.5	4292.9	4104.8	3978.1	1964.5	248.2	90.9
22.5°	4850.6	4836.3	4702.5	4748.4	4614.6	4569.7	4362.2	4230.4	2029.9	228.8	112.4
25°	5142.8	5117.2	4965.0	5000.8	4853.7	4862.8	4551.3	4406.2	2008.5	257.5	231.0
27.5°	5400.1	5354.2	5201.0	5211.2	5038.6	4948.7	4681.1	4520.6	1910.3	287.1	214.6
30°	5496.3	5451.2	5288.8	5295.0	5115.2	4988.5	4702.5	4523.7	1675.5	179.8	77.6
32.5°	5443.1	5394.1	5224.5	5226.5	5041.6	4912.9	4627.9	4430.7	1362.8	118.4	59.2
35°	5288.8	5237.8	5069.3	5077.4	4898.6	4770.8	4492.0	4281.6	1044.1	94.0	43.9
37.5°	5028.3	4992.5	4832.2	4846.4	4694.2	4558.4	4275.5	4047.6	736.6	67.5	27.5
40°	4693.2	4665.7	4510.3	4532.9	4367.4	4241.7	3938.2	3691.1	458.7	45.9	17.4
42.5°	4301.0	4271.3	4118.1	4135.5	3994.4	3814.7	3505.1	3225.3	240.1	32.7	12.3
45°	3811.5	3776.9	3621.6	3630.8	3464.3	3253.8	2933.0	2685.7	157.4	22.4	9.1
47.5°	3042.4	2980.0	2777.7	2769.6	2633.7	2289.4	1833.7	1484.3	104.3	15.3	6.1
50°	1672.4	1608.0	1430.2	1410.8	1259.6	1033.9	764.1	594.5	60.2	10.3	5.1
52.5°	761.1	727.3	644.6	631.3	567.0	469.9	361.7	297.3	34.8	7.1	4.1
55°	330.0	317.7	282.9	280.9	251.4	217.6	173.6	147.1	20.4	5.1	3.0
57.5°	129.7	125.7	118.4	113.4	102.2	90.9	75.6	63.3	13.3	4.1	3.0
60°	49.1	48.1	43.9	44.9	40.8	38.8	33.7	28.7	8.1	3.0	3.0
62.5°	22.4	22.4	21.4	21.4	20.4	18.4	16.4	15.3	5.1	3.0	3.0
65°	11.3	11.3	10.3	10.3	10.3	9.1	8.1	8.1	3.0	3.0	3.0
67.5°	5.1	5.1	5.1	5.1	5.1	4.1	4.1	4.1	2.0	3.0	3.0
70°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	3.0
75°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	3.0
77.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	3.0	4.1
80°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	3.0	4.1
82.5°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	4.1
85°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	4.1
87.5°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	4.1
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°	171.6	171.6	171.6	171.6
2.5°	144.1	127.7	113.4	110.3
5°	118.4	94.0	78.6	75.6
7.5°	96.0	68.5	57.2	55.2
10°	78.6	55.2	44.9	42.9
12.5°	65.4	44.9	35.8	33.7
15°	56.2	39.8	32.7	32.7
17.5°	54.2	43.9	41.8	42.9
20°	70.5	79.6	95.0	96.0
22.5°	163.5	265.6	351.4	367.8
25°	294.2	321.7	313.6	328.0
27.5°	155.2	121.6	123.7	126.7
30°	67.5	74.6	78.6	82.7
32.5°	56.2	58.2	59.2	62.3
35°	36.8	36.8	35.8	36.8
37.5°	22.4	21.4	20.4	20.4
40°	14.3	13.3	12.3	12.3
42.5°	10.3	8.1	7.1	7.1
45°	7.1	5.1	4.1	3.0
47.5°	5.1	3.0	2.0	1.0
50°	4.1	3.0	1.0	0.0
52.5°	3.0	2.0	1.0	0.0
55°	3.0	2.0	0.0	0.0
57.5°	3.0	2.0	0.0	0.0
60°	3.0	2.0	0.0	0.0
62.5°	3.0	2.0	0.0	0.0
65°	3.0	2.0	1.0	0.0
67.5°	3.0	2.0	1.0	0.0
70°	3.0	2.0	1.0	0.0
72.5°	3.0	2.0	1.0	0.0
75°	3.0	3.0	1.0	0.0
77.5°	4.1	3.0	1.0	0.0
80°	4.1	3.0	1.0	0.0
82.5°	4.1	3.0	1.0	0.0
85°	4.1	3.0	1.0	1.0
87.5°	4.1	3.0	1.0	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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Scaled Data Report



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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)