

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: P1191577

Luminaire Tested: **LDA4A15940D010TE 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: P1191577
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: LDA4A15940D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

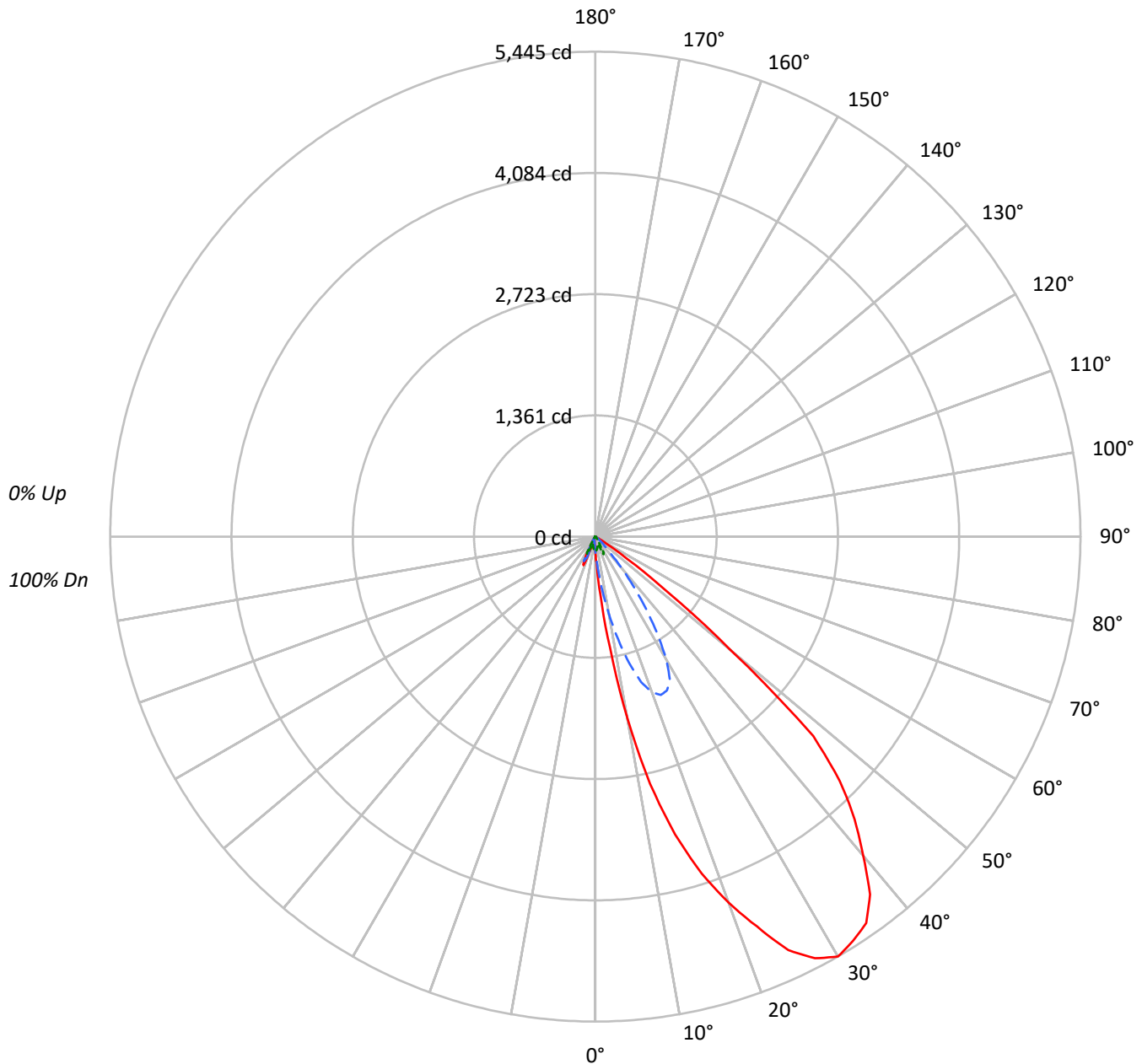
Lumens per Lamp: N/A
Luminaire Lumens: 1979.1 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	20068	20068	20068
5°	80828	18944	8878
10°	260579	15882	5085
15°	442048	12604	3959
20°	574532	11315	11958
25°	697197	29792	42313
30°	775559	10483	11166
35°	797788	6264	5255
40°	753266	2657	1868
45°	677008	1518	506
50°	381020	940	0
55°	94577	624	0
60°	14555	715	0
65°	3386	846	0
70°	685	1046	0
75°	0	1382	0
80°	0	2699	0
85°	0	5378	1415

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Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.7	1.7
10°-20°	242.9	12.3
20°-30°	561.0	28.3
30°-40°	629.3	31.8
40°-50°	439.1	22.2
50°-60°	65.5	3.3
60°-70°	4.3	0.2
70°-80°	2.1	0.1
80°-90°	2.1	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°	836.6	42.3
0°-40°	1466.0	74.1
0°-60°	1970.6	99.6
0°-90°	1979.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1979.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	163	163	163	163	163	
5°	653	382	153	89	72	108
15°	3462	1473	99	38	31	989
25°	5123	1904	219	305	311	2342
35°	5298	990	42	35	35	3259
45°	3881	149	9	5	3	2847
55°	440	19	3	2	0	578
65°	12	3	3	2	0	18
75°	0	2	3	3	0	1
85°	0	2	4	3	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1191577

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CANDELA DISTRIBUTION (FULL):

	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
0°	162.7	162.7	162.7	162.7	162.7	162.7	162.7	162.7	162.7	162.7	162.7
2.5°	296.3	293.5	285.7	283.8	290.6	284.7	287.7	293.5	287.7	280.9	287.7
5°	652.8	669.3	652.8	649.9	661.5	650.9	655.8	666.4	651.8	638.3	648.0
7.5°	1260.1	1270.8	1224.3	1240.8	1236.8	1239.8	1242.7	1242.7	1234.0	1209.7	1223.3
10°	2080.5	2088.3	2026.2	2047.5	2019.4	2047.5	2042.7	2021.5	2026.2	1993.4	2010.8
12.5°	2841.8	2866.9	2805.0	2825.3	2791.4	2823.4	2810.9	2805.0	2755.6	2755.6	2774.1
15°	3461.7	3518.9	3462.7	3484.0	3445.2	3489.8	3454.9	3470.5	3425.9	3370.6	3419.1
17.5°	3963.4	4019.6	3967.2	3993.4	3957.6	3992.5	3951.8	3984.7	3927.6	3887.9	3920.7
20°	4377.0	4418.6	4356.7	4393.5	4350.8	4385.7	4341.1	4384.8	4318.0	4288.9	4308.3
22.5°	4737.3	4753.8	4721.7	4783.8	4700.5	4737.3	4684.0	4728.6	4649.2	4612.4	4617.1
25°	5122.8	5159.6	5098.6	5121.8	5063.7	5088.8	5028.8	5070.6	4971.7	4919.3	4908.7
27.5°	5336.9	5389.1	5335.0	5361.0	5302.0	5323.2	5263.2	5323.2	5222.6	5171.2	5159.6
30°	5445.3	5470.5	5435.6	5453.1	5386.2	5396.9	5335.0	5399.9	5299.1	5253.6	5247.7
32.5°	5382.4	5432.7	5387.2	5409.6	5347.5	5358.2	5298.2	5367.8	5267.1	5225.5	5205.2
35°	5298.2	5349.4	5306.9	5330.1	5272.9	5280.7	5216.7	5277.8	5161.5	5110.2	5066.6
37.5°	5064.7	5113.1	5077.2	5085.0	5029.8	5024.1	4955.2	5006.6	4893.3	4849.6	4820.6
40°	4678.2	4721.7	4692.7	4709.2	4654.0	4641.4	4594.9	4642.4	4554.3	4522.2	4481.6
42.5°	4308.3	4344.0	4316.9	4343.1	4281.1	4264.6	4223.1	4283.1	4183.2	4157.2	4128.0
45°	3881.1	3903.4	3882.0	3904.4	3845.2	3819.1	3781.4	3832.6	3734.9	3710.6	3647.6
47.5°	3316.4	3292.2	3288.3	3309.7	3236.1	3181.8	3146.9	3212.7	3071.3	3023.9	2951.2
50°	1985.6	2026.2	2043.7	2029.2	1978.8	1904.2	1848.0	1928.5	1852.9	1736.6	1620.4
52.5°	1022.9	977.3	987.0	991.8	931.8	909.5	891.1	909.5	850.4	820.4	746.7
55°	439.8	418.4	426.1	429.1	417.4	390.3	380.6	392.3	365.2	353.6	323.5
57.5°	162.7	162.7	157.9	159.8	156.0	146.3	144.3	149.2	140.5	137.6	125.9
60°	59.0	59.0	59.0	59.0	54.3	53.3	53.3	55.2	52.4	51.3	47.5
62.5°	25.2	26.2	24.3	25.2	24.3	23.2	24.3	23.2	23.2	22.2	22.2
65°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6	10.6	10.6
67.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	4.9	4.9	4.9
70°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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: LDA4A15940D010TE LAR35FL 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	162.7	162.7	162.7	162.7	162.7	162.7	162.7	162.7	162.7	162.7	162.7
2.5°	279.0	278.0	281.9	278.0	271.2	267.3	272.2	262.5	224.7	187.0	158.9
5°	630.5	625.6	619.0	620.9	604.4	590.9	590.9	564.7	381.7	217.0	153.0
7.5°	1195.2	1183.6	1134.1	1170.0	1135.2	1108.1	1089.7	1036.4	617.0	248.9	141.4
10°	1974.0	1953.6	1918.8	1925.6	1868.3	1822.9	1767.7	1678.5	887.2	277.0	126.8
12.5°	2742.0	2721.7	2628.7	2682.0	2605.5	2560.9	2467.9	2363.3	1178.7	290.6	113.3
15°	3393.8	3376.5	3274.8	3325.1	3231.1	3189.6	3069.4	2953.2	1473.1	285.7	98.7
17.5°	3900.4	3897.6	3780.4	3830.7	3727.1	3693.1	3552.7	3438.4	1711.5	264.4	89.0
20°	4290.8	4284.0	4165.8	4216.2	4102.9	4069.9	3891.7	3771.7	1862.6	235.4	86.2
22.5°	4598.7	4585.2	4458.4	4501.9	4375.1	4332.4	4135.8	4010.9	1924.5	217.0	106.5
25°	4875.8	4851.6	4707.3	4741.2	4601.7	4610.5	4315.0	4177.5	1904.2	244.1	218.9
27.5°	5119.9	5076.3	4931.1	4940.7	4777.0	4691.7	4438.0	4285.9	1811.2	272.2	203.5
30°	5210.9	5168.3	5014.4	5020.1	4849.6	4729.5	4458.4	4288.9	1588.5	170.5	73.6
32.5°	5160.6	5114.1	4953.3	4955.2	4780.0	4657.9	4387.6	4200.7	1292.0	112.4	56.2
35°	5014.4	4965.8	4806.0	4813.8	4644.3	4523.2	4258.8	4059.3	989.9	89.0	41.6
37.5°	4767.3	4733.5	4581.4	4594.9	4450.6	4321.8	4053.6	3837.6	698.3	64.0	26.2
40°	4449.7	4423.5	4276.2	4297.5	4140.7	4021.5	3733.9	3499.5	434.9	43.6	16.5
42.5°	4077.7	4049.6	3904.4	3920.7	3787.1	3616.6	3323.2	3057.8	227.6	31.0	11.6
45°	3613.8	3580.8	3433.6	3442.4	3284.5	3085.0	2780.7	2546.3	149.2	21.3	8.7
47.5°	2884.4	2825.3	2633.6	2625.8	2497.0	2170.6	1738.6	1407.3	98.7	14.6	5.9
50°	1585.5	1524.5	1356.0	1337.6	1194.3	980.2	724.5	563.7	57.1	9.7	4.9
52.5°	721.6	689.6	611.2	598.6	537.5	445.5	342.8	281.9	32.9	6.8	3.8
55°	312.8	301.2	268.2	266.3	238.2	206.3	164.6	139.5	19.4	4.9	2.9
57.5°	123.0	119.2	112.4	107.5	96.8	86.2	71.7	60.0	12.5	3.8	2.9
60°	46.5	45.5	41.6	42.7	38.7	36.8	31.9	27.1	7.8	2.9	2.9
62.5°	21.3	21.3	20.3	20.3	19.4	17.5	15.5	14.6	4.9	2.9	2.9
65°	10.6	10.6	9.7	9.7	9.7	8.7	7.8	7.8	2.9	2.9	2.9
67.5°	4.9	4.9	4.9	4.9	4.9	3.8	3.8	3.8	1.9	2.9	2.9
70°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.9	2.9
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	2.9
75°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	2.9
77.5°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.9	2.9	3.8
80°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.9	2.9	3.8
82.5°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	3.8
85°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	3.8
87.5°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	3.8
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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CATALOG NUMBER: LDA4A15940D010TE LAR35FL 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	162.7	162.7	162.7	162.7
2.5°	136.6	121.1	107.5	104.6
5°	112.4	89.0	74.6	71.7
7.5°	91.1	64.9	54.3	52.4
10°	74.6	52.4	42.7	40.6
12.5°	62.0	42.7	34.0	31.9
15°	53.3	37.8	31.0	31.0
17.5°	51.3	41.6	39.7	40.6
20°	66.8	75.5	90.1	91.1
22.5°	154.9	251.9	333.1	348.7
25°	279.0	305.0	297.4	310.9
27.5°	147.3	115.2	117.1	120.1
30°	64.0	70.8	74.6	78.4
32.5°	53.3	55.2	56.2	59.0
35°	34.9	34.9	34.0	34.9
37.5°	21.3	20.3	19.4	19.4
40°	13.5	12.5	11.6	11.6
42.5°	9.7	7.8	6.8	6.8
45°	6.8	4.9	3.8	2.9
47.5°	4.9	2.9	1.9	1.0
50°	3.8	2.9	1.0	0.0
52.5°	2.9	1.9	1.0	0.0
55°	2.9	1.9	0.0	0.0
57.5°	2.9	1.9	0.0	0.0
60°	2.9	1.9	0.0	0.0
62.5°	2.9	1.9	0.0	0.0
65°	2.9	1.9	1.0	0.0
67.5°	2.9	1.9	1.0	0.0
70°	2.9	1.9	1.0	0.0
72.5°	2.9	1.9	1.0	0.0
75°	2.9	2.9	1.0	0.0
77.5°	3.8	2.9	1.0	0.0
80°	3.8	2.9	1.0	0.0
82.5°	3.8	2.9	1.0	0.0
85°	3.8	2.9	1.0	1.0
87.5°	3.8	2.9	1.0	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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