

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: P1191737

Luminaire Tested: **LDA4A25935D010TE LAR35FL 4LA1 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: P1191737
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26217)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A25935D010TE LAR35FL 4LA1 30° Tilt
Description: PORTFOLIO 4" Adjustable Reflector, Self-flanged Trim Ring, 35° Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

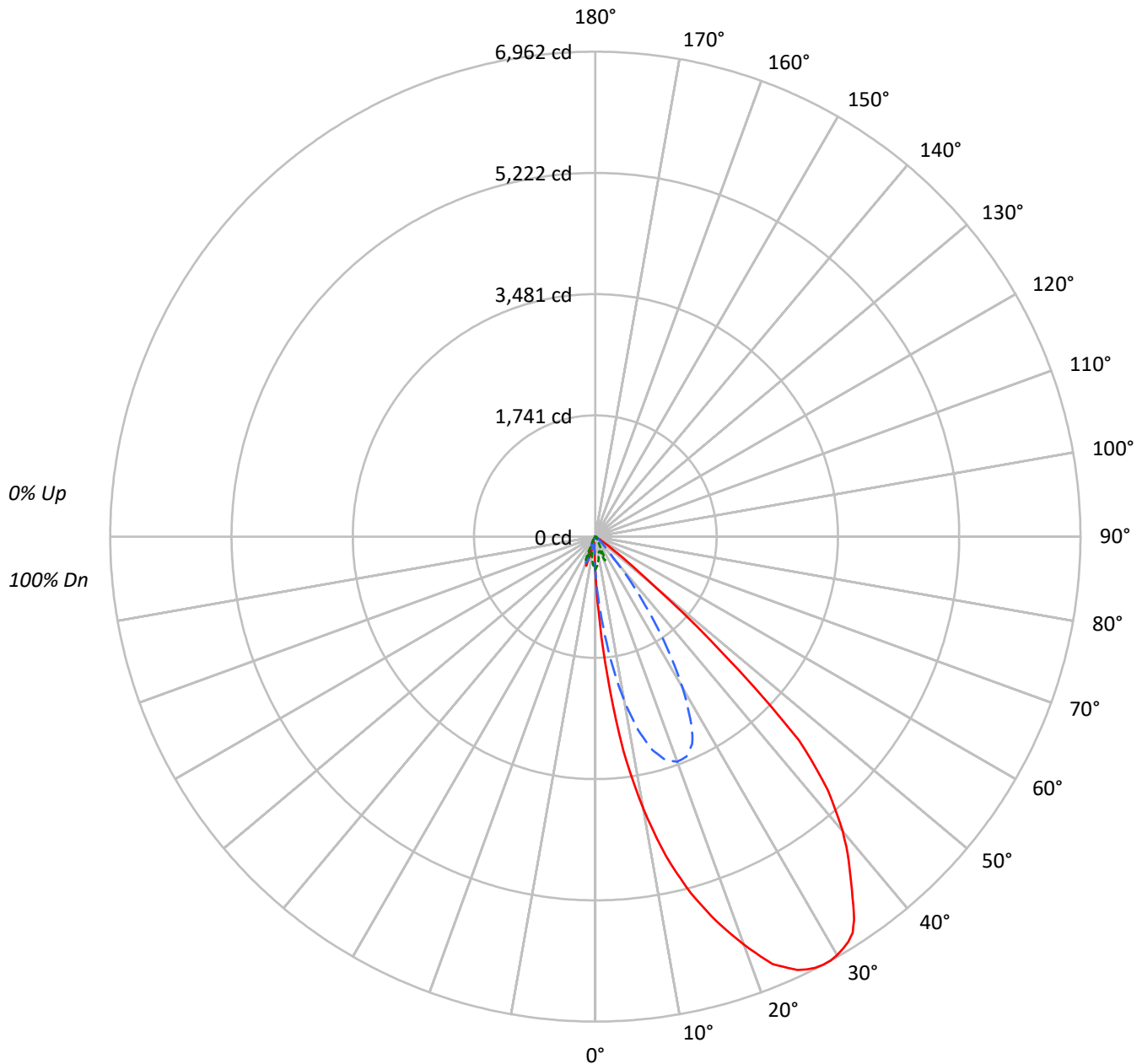
Lumens per Lamp: N/A
Luminaire Lumens: 2575.1 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94	92		
2	106	101	96	92	104	99	95	91	96	92	89	92	90	87	90	87	85	84		
3	100	92	87	82	98	91	86	81	88	84	80	86	82	79	83	80	78	76		
4	93	85	78	74	92	84	78	73	81	76	72	79	75	71	77	74	70	69		
5	88	78	71	66	86	77	71	66	75	70	65	73	68	65	72	67	64	62		
6	82	72	65	60	81	71	64	60	69	64	59	68	63	59	66	62	58	57		
7	77	66	59	54	76	66	59	54	64	58	54	63	58	54	62	57	53	52		
8	72	61	54	50	71	61	54	49	59	54	49	58	53	49	57	52	49	47		
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43		
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	58972	58972	58972
5°	247708	49329	18213
10°	497625	33930	11059
15°	676895	27544	24901
20°	818075	41833	46178
25°	934305	24865	12848
30°	987890	11708	5939
35°	971690	5165	2213
40°	889229	2560	596
45°	721280	1291	0
50°	213825	710	0
55°	38751	796	0
60°	7253	913	0
65°	1780	1080	0
70°	433	1334	0
75°	0	1763	0
80°	0	3481	0
85°	0	6935	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.9	3.4
10°-20°	449.7	17.5
20°-30°	787.6	30.6
30°-40°	791.0	30.7
40°-50°	416.7	16.2
50°-60°	34.7	1.3
60°-70°	3.5	0.1
70°-80°	2.5	0.1
80°-90°	2.3	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°	1324.3	51.4
0°-40°	2115.3	82.1
0°-60°	2566.7	99.7
0°-90°	2575.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2575.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	478	478	478	478	478	
5°	2001	1308	398	183	147	256
15°	5301	3173	216	145	195	1513
25°	6865	3285	183	104	94	3141
35°	6453	1427	34	18	15	3990
45°	4135	147	7	2	0	2834
55°	180	16	4	1	0	271
65°	6	2	4	2	0	9
75°	0	2	4	2	0	0
85°	0	2	5	2	0	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
0°	478.1	478.1	478.1	478.1	478.1	478.1	478.1	478.1	478.1	478.1	478.1
2.5°	1084.9	1086.1	1087.3	1095.9	1076.3	1071.4	1062.9	1050.5	1010.2	843.4	636.3
5°	2000.6	2015.3	2011.7	1999.4	1968.7	1951.6	1925.8	1899.0	1788.6	1308.0	789.5
7.5°	3108.9	3137.1	3131.0	3112.6	3061.1	3037.8	2972.8	2937.2	2770.6	1857.3	903.5
10°	3973.1	4047.8	4049.2	4032.0	3954.8	3921.6	3854.2	3790.4	3579.6	2395.4	956.2
12.5°	4703.8	4705.0	4762.6	4749.1	4659.6	4644.9	4588.5	4492.8	4271.0	2844.0	956.2
15°	5300.8	5381.6	5368.1	5353.4	5259.1	5239.5	5185.5	5097.3	4838.6	3172.7	909.6
17.5°	5793.5	5865.9	5845.0	5829.1	5734.8	5691.9	5633.0	5527.5	5243.2	3367.5	812.8
20°	6232.4	6301.1	6259.4	6231.2	6105.0	6052.2	5966.4	5845.0	5520.2	3439.9	699.9
22.5°	6641.8	6714.2	6661.5	6622.2	6459.2	6357.5	6236.1	6082.9	5700.4	3416.6	640.0
25°	6865.0	6959.4	6909.1	6878.5	6722.8	6603.8	6443.3	6245.9	5803.3	3285.4	481.8
26°	6914.1	7013.4	6965.6	6938.6	6780.4	6654.1	6482.5	6275.3	5811.9	3177.6	371.4
27°	6948.4	7058.6	7003.6	6969.2	6806.1	6671.3	6492.3	6276.5	5798.4	3031.6	295.4
28°	6961.9	7083.2	7015.7	6974.1	6804.9	6657.8	6467.8	6249.6	5762.9	2863.7	251.3
29°	6960.6	7093.0	7014.6	6969.2	6789.0	6625.9	6431.0	6211.6	5713.9	2688.4	226.7
30°	6936.1	7080.7	7002.3	6944.7	6751.0	6575.7	6378.3	6158.9	5658.7	2497.1	202.3
31°	6903.0	7051.3	6969.2	6898.1	6688.4	6498.5	6304.7	6087.8	5585.2	2292.5	185.2
32°	6855.2	7003.6	6912.8	6819.6	6600.3	6401.6	6215.2	6004.4	5495.7	2076.6	164.3
33°	6779.2	6910.4	6804.9	6697.0	6477.6	6291.3	6114.8	5907.6	5393.9	1852.4	142.2
34°	6640.6	6755.9	6646.7	6537.7	6341.5	6168.6	5999.5	5793.5	5275.1	1645.1	122.6
35°	6453.1	6551.2	6453.1	6361.1	6188.3	6027.7	5865.9	5664.9	5131.6	1427.0	105.5
36°	6261.8	6347.7	6256.9	6184.6	6019.1	5875.7	5725.0	5516.5	4969.7	1219.7	93.2
37°	6082.9	6160.2	6076.8	6004.4	5862.2	5716.4	5566.8	5353.4	4790.8	1021.2	77.2
38°	5905.1	5973.8	5902.7	5821.7	5690.6	5542.3	5391.4	5173.3	4590.9	833.6	66.2
39°	5720.1	5776.4	5707.8	5625.6	5492.0	5344.8	5190.4	4964.8	4361.7	638.6	57.6
40°	5522.6	5575.4	5490.8	5417.2	5283.6	5132.8	4974.6	4740.5	4112.8	427.8	49.0
42.5°	4939.1	4971.0	4899.8	4798.2	4664.5	4499.0	4307.8	4045.5	3317.2	225.5	34.3
45°	4134.9	4141.0	4085.9	3900.8	3721.8	3465.6	3180.0	2786.4	1928.3	147.1	22.1
47.5°	2495.9	2481.2	2394.1	2236.1	2069.3	1798.4	1531.1	1260.2	749.0	85.8	14.7
50°	1114.3	1097.1	1054.3	972.2	875.3	774.7	655.8	555.4	364.1	46.6	9.8
51°	807.9	793.1	761.3	698.7	627.7	556.6	474.4	405.8	272.1	38.0	8.6
52°	567.6	559.0	537.0	492.8	453.6	398.4	342.0	299.1	204.8	30.7	6.1
53°	396.0	389.8	376.3	346.9	323.6	283.1	247.6	213.4	148.4	24.5	6.1
54°	268.4	264.8	256.2	236.6	216.9	195.0	169.2	149.6	104.2	19.6	4.9
55°	180.2	177.8	170.4	160.6	149.6	136.1	118.9	104.2	73.6	15.9	3.7
57.5°	66.2	66.2	63.8	60.1	56.4	52.7	47.8	42.9	34.3	9.8	3.7
60°	29.4	28.2	28.2	27.0	25.7	24.5	23.3	20.8	17.2	6.1	3.7
61°	22.1	22.1	20.8	19.6	19.6	18.4	17.2	15.9	13.5	4.9	3.7
62°	15.9	15.9	15.9	14.7	14.7	13.5	13.5	12.3	9.8	3.7	3.7
63°	12.3	12.3	12.3	11.0	11.0	11.0	9.8	9.8	7.4	3.7	3.7
64°	8.6	8.6	8.6	8.6	8.6	8.6	7.4	7.4	6.1	2.5	3.7
65°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	4.9	2.5	3.7
66°	4.9	4.9	4.9	4.9	4.9	4.9	3.7	3.7	3.7	2.5	3.7



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CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	22.5°	45°	67.5°
72.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.5	3.7
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.5	3.7
77.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	2.5	3.7
80°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	2.5	3.7
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.5	3.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.5	3.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.5	3.7
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):

	90°	112.5°	135°	157.5°	180°
0°	478.1	478.1	478.1	478.1	478.1
2.5°	440.1	307.7	245.1	221.8	214.6
5°	398.4	230.4	182.7	157.0	147.1
7.5°	334.6	190.1	137.3	114.0	106.7
10°	270.9	157.0	111.6	93.2	88.3
12.5°	231.6	136.1	104.2	96.9	96.9
15°	215.7	143.5	144.7	174.1	195.0
17.5°	221.8	224.3	350.6	426.6	440.1
20°	318.7	403.3	399.6	362.8	351.8
22.5°	369.0	266.0	201.1	165.5	159.4
25°	182.7	121.4	104.2	95.6	94.4
26°	138.6	101.8	90.7	85.8	83.4
27°	115.3	89.5	80.9	74.8	72.3
28°	103.0	79.7	69.9	63.8	61.3
29°	93.2	68.7	58.9	52.7	51.5
30°	82.2	57.6	49.0	42.9	41.7
31°	69.9	47.8	39.2	35.6	33.1
32°	58.9	39.2	31.9	28.2	25.7
33°	49.0	31.9	27.0	23.3	20.8
34°	41.7	27.0	22.1	18.4	17.2
35°	34.3	22.1	18.4	15.9	14.7
36°	29.4	19.6	14.7	12.3	11.0
37°	25.7	15.9	12.3	9.8	9.8
38°	22.1	13.5	11.0	7.4	7.4
39°	18.4	11.0	8.6	6.1	6.1
40°	15.9	9.8	7.4	4.9	3.7
42.5°	11.0	6.1	4.9	2.5	1.2
45°	7.4	4.9	2.5	1.2	0.0
47.5°	4.9	3.7	2.5	1.2	0.0
50°	3.7	3.7	2.5	0.0	0.0
51°	3.7	2.5	2.5	0.0	0.0
52°	3.7	2.5	1.2	0.0	0.0
53°	3.7	2.5	1.2	0.0	0.0
54°	3.7	2.5	1.2	0.0	0.0
55°	3.7	2.5	1.2	0.0	0.0
57.5°	3.7	2.5	1.2	0.0	0.0
60°	3.7	2.5	2.5	0.0	0.0
61°	3.7	3.7	2.5	0.0	0.0
62°	3.7	3.7	2.5	0.0	0.0
63°	3.7	3.7	2.5	0.0	0.0
64°	3.7	3.7	2.5	1.2	0.0
65°	3.7	3.7	2.5	1.2	0.0
66°	3.7	3.7	2.5	1.2	0.0

Classified

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	3.7	3.7	2.5	1.2	0.0
75°	3.7	3.7	2.5	1.2	0.0
77.5°	4.9	3.7	2.5	1.2	0.0
80°	4.9	3.7	2.5	1.2	0.0
82.5°	4.9	3.7	2.5	1.2	0.0
85°	4.9	3.7	2.5	1.2	0.0
87.5°	4.9	3.7	2.5	1.2	0.0
90°	0.0	0.0	0.0	0.0	0.0

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— 0°-180° - - 45°-225° - - - 90°-270°

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67.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.7
70°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.5	3.7

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67.5°	3.7	3.7	2.5	1.2	0.0
70°	3.7	3.7	2.5	1.2	0.0

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(END OF REPORT)