

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: P1191755

Luminaire Tested: **LDA4A25940D010TE 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: P1191755
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: LDA4A25940D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

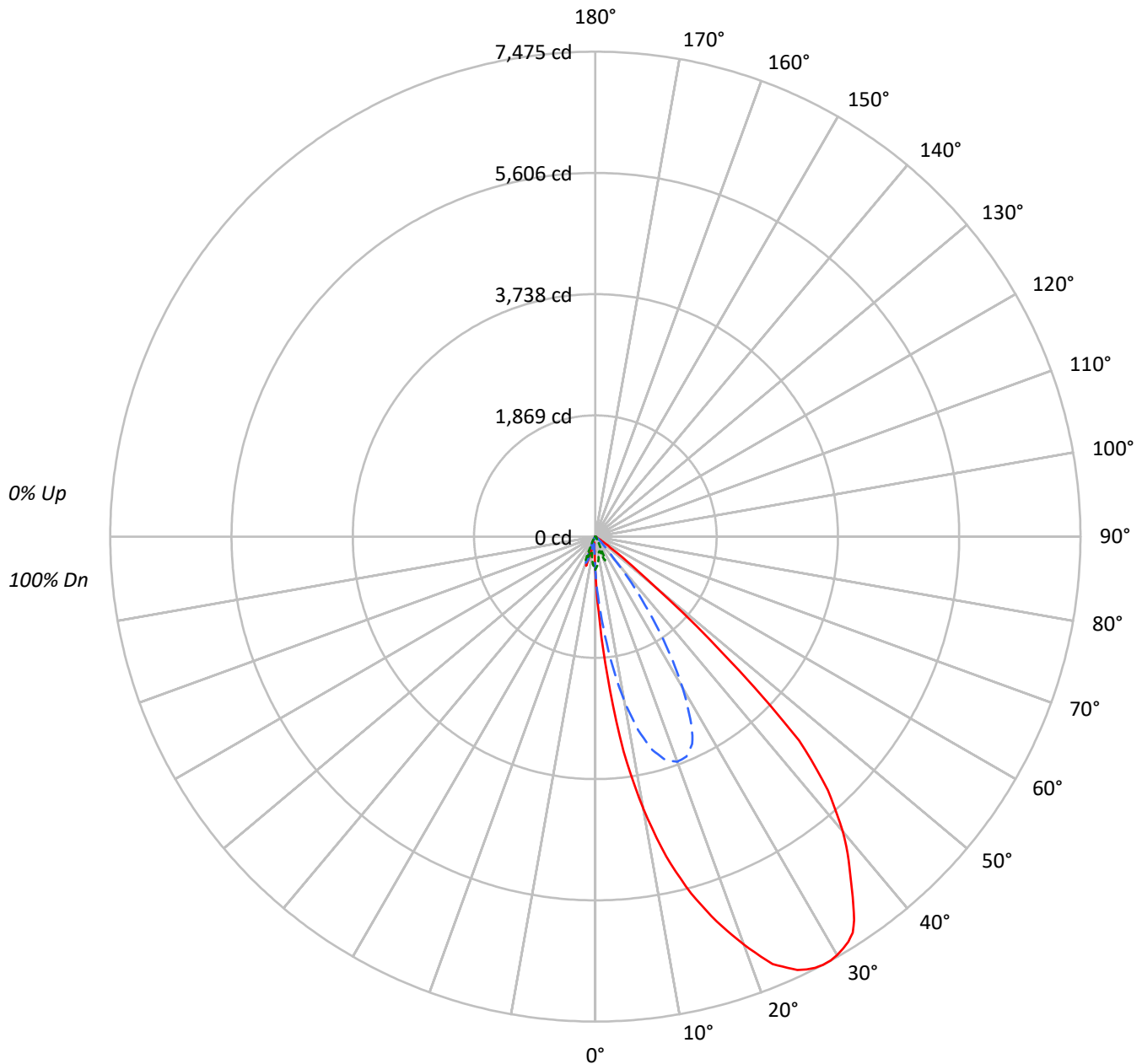
Lumens per Lamp: N/A
Luminaire Lumens: 2764.7 lumens
Efficiency: N/A
Efficacy: 89.5 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 0.86 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	63326	63326	63326
5°	265971	52969	19551
10°	534310	36435	11874
15°	726774	29575	26727
20°	878377	44918	49578
25°	1003156	26702	13787
30°	1060713	12562	6366
35°	1043304	5556	2379
40°	954778	2753	628
45°	774448	1378	0
50°	229579	748	0
55°	41590	839	0
60°	7795	962	0
65°	1897	1138	0
70°	469	1406	0
75°	0	1859	0
80°	0	3694	0
85°	0	7359	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.3	3.4
10°-20°	482.9	17.5
20°-30°	845.7	30.6
30°-40°	849.3	30.7
40°-50°	447.4	16.2
50°-60°	37.3	1.3
60°-70°	3.7	0.1
70°-80°	2.7	0.1
80°-90°	2.5	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°	1421.9	51.4
0°-40°	2271.1	82.1
0°-60°	2755.8	99.7
0°-90°	2764.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2764.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	513	513	513	513	513	
5°	2148	1404	428	196	158	275
15°	5691	3406	232	155	209	1625
25°	7371	3528	196	112	101	3373
35°	6929	1532	37	20	16	4284
45°	4440	158	8	3	0	3043
55°	193	17	4	1	0	291
65°	6	3	4	3	0	10
75°	0	3	4	3	0	1
85°	0	3	5	3	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°	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4	513.4
2.5°	1164.8	1166.2	1167.5	1176.7	1155.7	1150.4	1141.2	1128.1	1084.6	905.6	683.2
5°	2148.1	2163.9	2160.0	2146.8	2113.8	2095.4	2067.8	2038.8	1920.4	1404.4	847.6
7.5°	3338.0	3368.3	3361.7	3341.9	3286.6	3261.7	3191.9	3153.7	2974.8	1994.1	970.1
10°	4266.0	4346.2	4347.5	4329.1	4246.2	4210.7	4138.3	4069.8	3843.4	2571.9	1026.7
12.5°	5050.4	5051.7	5113.6	5099.2	5003.0	4987.3	4926.7	4824.1	4585.8	3053.7	1026.7
15°	5691.4	5778.3	5763.8	5748.0	5646.7	5625.6	5567.7	5473.0	5195.2	3406.5	976.6
17.5°	6220.6	6298.2	6275.9	6258.8	6157.4	6111.3	6048.1	5934.9	5629.6	3615.7	872.7
20°	6691.8	6765.5	6720.8	6690.5	6554.9	6498.3	6406.2	6275.9	5927.0	3693.4	751.5
22.5°	7131.4	7209.1	7152.5	7110.3	6935.3	6826.0	6695.7	6531.2	6120.5	3668.4	687.1
25°	7370.9	7472.3	7418.4	7385.4	7218.3	7090.6	6918.2	6706.3	6231.1	3527.5	517.3
26°	7423.6	7530.2	7478.9	7450.0	7280.2	7144.5	6960.3	6737.8	6240.3	3411.7	398.8
27°	7460.4	7579.0	7519.7	7482.8	7307.8	7163.0	6970.8	6739.2	6225.8	3255.1	317.2
28°	7474.9	7605.3	7532.9	7488.1	7306.5	7148.6	6944.4	6710.2	6187.7	3074.7	269.8
29°	7473.6	7615.8	7531.5	7482.8	7289.4	7114.3	6905.0	6669.4	6135.0	2886.5	243.5
30°	7447.4	7602.6	7518.3	7456.5	7248.6	7060.4	6848.4	6612.8	6075.8	2681.2	217.2
31°	7411.8	7571.0	7482.8	7406.5	7181.4	6977.4	6769.4	6536.5	5996.8	2461.4	198.8
32°	7360.4	7519.7	7422.3	7322.3	7086.6	6873.4	6673.4	6447.0	5900.8	2229.8	176.3
33°	7278.8	7419.7	7306.5	7190.7	6955.0	6754.9	6565.4	6342.9	5791.5	1988.9	152.7
34°	7130.0	7253.8	7136.7	7019.6	6808.9	6623.3	6441.7	6220.6	5663.8	1766.4	131.6
35°	6928.7	7034.0	6928.7	6829.9	6644.4	6471.9	6298.2	6082.3	5509.8	1532.1	113.2
36°	6723.4	6815.5	6718.1	6640.4	6462.8	6308.7	6146.9	5923.1	5336.0	1309.6	100.0
37°	6531.2	6614.1	6524.6	6447.0	6294.3	6137.6	5977.1	5748.0	5143.9	1096.4	82.9
38°	6340.3	6414.0	6337.7	6250.8	6110.0	5950.7	5788.9	5554.5	4929.3	895.0	71.1
39°	6141.5	6202.2	6128.5	6040.2	5896.7	5738.8	5573.0	5330.8	4683.2	685.8	61.8
40°	5929.7	5986.3	5895.4	5816.5	5673.0	5511.1	5341.4	5089.9	4416.0	459.4	52.7
42.5°	5303.1	5337.3	5261.0	5151.7	5008.3	4830.6	4625.3	4343.6	3561.7	242.2	36.9
45°	4439.7	4446.3	4387.0	4188.3	3996.1	3721.1	3414.3	2991.9	2070.4	157.9	23.7
47.5°	2679.9	2664.1	2570.6	2400.8	2221.8	1931.0	1644.0	1353.1	804.2	92.1	15.8
50°	1196.4	1178.0	1132.0	1043.8	939.8	831.9	704.2	596.3	390.9	50.0	10.6
51°	867.5	851.6	817.4	750.2	673.9	597.6	509.4	435.6	292.2	40.8	9.3
52°	609.5	600.2	576.5	529.1	487.0	427.8	367.3	321.1	219.8	32.9	6.5
53°	425.2	418.5	404.1	372.5	347.5	304.0	265.9	229.0	159.3	26.3	6.5
54°	288.2	284.3	275.1	254.1	232.9	209.3	181.7	160.6	111.9	21.0	5.2
55°	193.4	190.8	183.0	172.4	160.6	146.1	127.7	111.9	79.0	17.1	3.9
57.5°	71.1	71.1	68.5	64.4	60.5	56.6	51.4	46.0	36.9	10.6	3.9
60°	31.6	30.3	30.3	29.0	27.6	26.3	25.0	22.4	18.4	6.5	3.9
61°	23.7	23.7	22.4	21.0	21.0	19.7	18.4	17.1	14.5	5.2	3.9
62°	17.1	17.1	17.1	15.8	15.8	14.5	14.5	13.2	10.6	3.9	3.9
63°	13.2	13.2	13.2	11.9	11.9	11.9	10.6	10.6	7.9	3.9	3.9
64°	9.3	9.3	9.3	9.3	9.3	9.3	7.9	7.9	6.5	2.6	3.9
65°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	5.2	2.6	3.9
66°	5.2	5.2	5.2	5.2	5.2	5.2	3.9	3.9	3.9	2.6	3.9



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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°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.6	3.9
75°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	2.6	3.9
77.5°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	2.6	3.9
80°	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	2.6	3.9
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	2.6	3.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	2.6	3.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	2.6	3.9
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°	513.4	513.4	513.4	513.4	513.4
2.5°	472.5	330.4	263.2	238.3	230.3
5°	427.8	247.4	196.2	168.5	157.9
7.5°	359.3	204.0	147.4	122.5	114.5
10°	290.9	168.5	119.7	100.0	94.8
12.5°	248.7	146.1	111.9	104.0	104.0
15°	231.6	154.0	155.3	186.9	209.3
17.5°	238.3	240.9	376.4	458.1	472.5
20°	342.2	433.0	429.1	389.6	377.7
22.5°	396.2	285.6	215.9	177.6	171.1
25°	196.2	130.3	111.9	102.6	101.3
26°	148.7	109.3	97.4	92.1	89.5
27°	123.8	96.1	86.9	80.3	77.6
28°	110.6	85.6	75.0	68.5	65.9
29°	100.0	73.7	63.1	56.6	55.3
30°	88.2	61.8	52.7	46.0	44.7
31°	75.0	51.4	42.1	38.2	35.5
32°	63.1	42.1	34.2	30.3	27.6
33°	52.7	34.2	29.0	25.0	22.4
34°	44.7	29.0	23.7	19.7	18.4
35°	36.9	23.7	19.7	17.1	15.8
36°	31.6	21.0	15.8	13.2	11.9
37°	27.6	17.1	13.2	10.6	10.6
38°	23.7	14.5	11.9	7.9	7.9
39°	19.7	11.9	9.3	6.5	6.5
40°	17.1	10.6	7.9	5.2	3.9
42.5°	11.9	6.5	5.2	2.6	1.3
45°	7.9	5.2	2.6	1.3	0.0
47.5°	5.2	3.9	2.6	1.3	0.0
50°	3.9	3.9	2.6	0.0	0.0
51°	3.9	2.6	2.6	0.0	0.0
52°	3.9	2.6	1.3	0.0	0.0
53°	3.9	2.6	1.3	0.0	0.0
54°	3.9	2.6	1.3	0.0	0.0
55°	3.9	2.6	1.3	0.0	0.0
57.5°	3.9	2.6	1.3	0.0	0.0
60°	3.9	2.6	2.6	0.0	0.0
61°	3.9	3.9	2.6	0.0	0.0
62°	3.9	3.9	2.6	0.0	0.0
63°	3.9	3.9	2.6	0.0	0.0
64°	3.9	3.9	2.6	1.3	0.0
65°	3.9	3.9	2.6	1.3	0.0
66°	3.9	3.9	2.6	1.3	0.0

Classified

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CANDELA DISTRIBUTION (continued):

	90°	112.5°	135°	157.5°	180°
72.5°	3.9	3.9	2.6	1.3	0.0
75°	3.9	3.9	2.6	1.3	0.0
77.5°	5.2	3.9	2.6	1.3	0.0
80°	5.2	3.9	2.6	1.3	0.0
82.5°	5.2	3.9	2.6	1.3	0.0
85°	5.2	3.9	2.6	1.3	0.0
87.5°	5.2	3.9	2.6	1.3	0.0
90°	0.0	0.0	0.0	0.0	0.0

Classified

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— 0°-180° - - 45°-225° - - - 90°-270°

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67.5°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	3.9
70°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.6	3.9

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67.5°	3.9	3.9	2.6	1.3	0.0
70°	3.9	3.9	2.6	1.3	0.0

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(END OF REPORT)