

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: P1212830

Luminaire Tested: **LDA4A35950D010TE 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: P1212830
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: LDA4A35950D010TE 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 / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

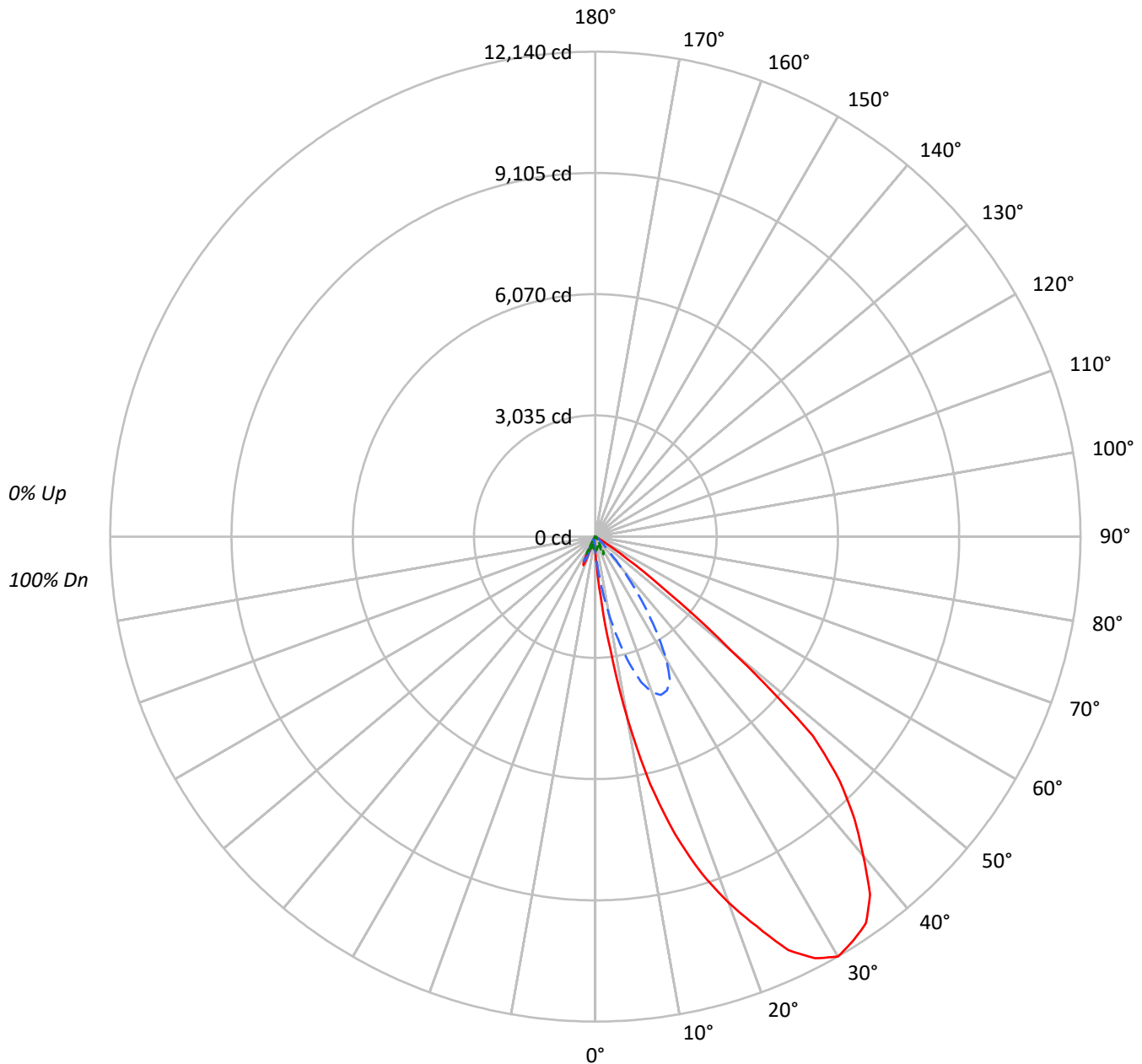
Lumens per Lamp: N/A
Luminaire Lumens: 4412.5 lumens
Efficiency: N/A
Efficacy: 93.7 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47.1
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°	44762	44762	44762
5°	180215	42246	19786
10°	580965	35433	11373
15°	985551	28119	8837
20°	1280930	25228	26633
25°	1554416	66429	94342
30°	1729124	23372	24911
35°	1778663	13974	11700
40°	1679432	5909	4170
45°	1509386	3384	1116
50°	849505	2072	0
55°	210832	1376	0
60°	32514	1579	0
65°	7559	1868	0
70°	1587	2308	0
75°	0	3050	0
80°	0	6109	0
85°	0	12171	3114



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.9	1.7
10°-20°	541.6	12.3
20°-30°	1250.9	28.3
30°-40°	1403.1	31.8
40°-50°	979.0	22.2
50°-60°	146.1	3.3
60°-70°	9.5	0.2
70°-80°	4.8	0.1
80°-90°	4.6	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°	1865.3	42.3
0°-40°	3268.4	74.1
0°-60°	4393.6	99.6
0°-90°	4412.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4412.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	363	363	363	363	363	
5°	1456	851	341	199	160	241
15°	7718	3284	220	84	69	2206
25°	11421	4245	488	680	693	5222
35°	11812	2207	93	78	78	7266
45°	8653	333	19	11	6	6348
55°	980	43	6	4	0	1288
65°	26	6	6	4	0	40
75°	0	4	6	6	0	1
85°	0	4	9	6	2	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°	362.9	362.9	362.9	362.9	362.9	362.9	362.9	362.9	362.9	362.9	362.9
2.5°	660.7	654.3	637.1	632.7	647.9	634.9	641.3	654.3	641.3	626.3	641.3
5°	1455.5	1492.2	1455.5	1449.0	1474.9	1451.1	1461.9	1485.7	1453.3	1423.0	1444.7
7.5°	2809.4	2833.2	2729.6	2766.3	2757.7	2764.1	2770.6	2770.6	2751.1	2697.1	2727.4
10°	4638.5	4655.8	4517.7	4565.2	4502.5	4565.2	4554.4	4506.8	4517.7	4444.1	4483.0
12.5°	6335.8	6392.0	6253.8	6299.1	6223.6	6294.9	6266.8	6253.8	6143.7	6143.7	6184.7
15°	7717.9	7845.3	7720.1	7767.6	7681.2	7780.7	7702.9	7737.4	7638.0	7514.9	7623.0
17.5°	8836.5	8961.8	8845.2	8903.5	8823.6	8901.4	8810.6	8884.1	8756.7	8668.1	8741.5
20°	9758.6	9851.5	9713.3	9795.2	9700.3	9778.0	9678.7	9775.8	9627.0	9562.1	9605.3
22.5°	10561.9	10598.6	10527.3	10665.5	10479.9	10561.9	10443.2	10542.5	10365.5	10283.3	10294.1
25°	11421.4	11503.5	11367.3	11419.2	11289.6	11345.9	11211.8	11304.8	11084.4	10967.8	10944.2
27.5°	11898.6	12015.2	11894.4	11952.7	11820.8	11868.4	11734.5	11868.4	11643.8	11529.4	11503.5
30°	12140.4	12196.7	12119.0	12157.8	12008.8	12032.5	11894.4	12039.0	11814.5	11712.9	11699.9
32.5°	12000.1	12112.4	12011.0	12060.6	11922.5	11946.2	11812.3	11967.7	11743.2	11650.2	11604.9
35°	11812.3	11926.7	11831.7	11883.6	11756.2	11773.4	11630.8	11767.0	11507.8	11393.4	11296.2
37.5°	11291.8	11399.8	11319.9	11337.2	11214.1	11201.1	11047.8	11162.2	10909.6	10812.4	10747.7
40°	10430.2	10527.3	10462.6	10499.2	10376.2	10348.2	10244.4	10350.4	10153.8	10082.5	9991.8
42.5°	9605.3	9685.2	9624.8	9683.0	9544.8	9508.2	9415.2	9549.2	9326.7	9268.4	9203.7
45°	8652.9	8702.6	8655.1	8704.8	8573.0	8514.7	8430.6	8545.0	8327.0	8272.9	8132.6
47.5°	7394.0	7340.1	7331.5	7378.9	7214.7	7093.8	7016.2	7163.0	6847.7	6741.9	6579.8
50°	4427.0	4517.7	4556.6	4524.1	4411.7	4245.4	4120.2	4299.5	4131.0	3871.9	3612.8
52.5°	2280.4	2178.9	2200.5	2211.4	2077.3	2027.7	1986.7	2027.7	1896.0	1829.0	1665.0
55°	980.4	933.0	950.2	956.6	930.8	870.3	848.6	874.5	814.2	788.1	721.2
57.5°	362.9	362.9	352.0	356.4	347.6	326.1	321.8	332.6	313.1	306.7	280.7
60°	131.8	131.8	131.8	131.8	121.0	118.8	118.8	123.0	116.6	114.4	105.8
62.5°	56.1	58.3	53.9	56.1	53.9	51.9	53.9	51.9	51.9	49.7	49.7
65°	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9	23.8	23.8
67.5°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	10.8	10.8	10.8
70°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
72.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
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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CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	362.9	362.9	362.9	362.9	362.9	362.9	362.9	362.9	362.9	362.9	362.9
2.5°	621.9	619.8	628.5	619.8	604.7	596.0	606.8	585.2	501.1	416.7	354.2
5°	1405.8	1395.0	1380.0	1384.1	1347.5	1317.3	1317.3	1258.9	850.8	483.6	341.2
7.5°	2664.8	2638.9	2528.7	2608.6	2530.9	2470.4	2429.3	2310.6	1375.5	554.9	315.3
10°	4401.1	4355.6	4277.8	4293.1	4165.6	4064.1	3941.1	3742.3	1978.2	617.7	282.9
12.5°	6113.4	6068.1	5860.8	5979.6	5808.9	5709.7	5502.3	5269.2	2628.1	647.9	252.6
15°	7566.7	7527.8	7301.2	7413.4	7204.1	7111.1	6843.4	6584.2	3284.5	637.1	220.2
17.5°	8696.2	8689.7	8428.4	8540.7	8309.5	8234.0	7920.8	7666.0	3815.7	589.6	198.7
20°	9566.4	9551.3	9287.8	9400.1	9147.5	9074.0	8676.7	8408.9	4152.6	524.7	192.2
22.5°	10253.0	10223.0	9940.1	10037.2	9754.4	9659.2	9220.8	8942.3	4290.9	483.6	237.6
25°	10870.7	10816.7	10495.1	10570.6	10259.6	10279.0	9620.4	9313.8	4245.4	544.1	488.1
27.5°	11414.9	11317.8	10993.8	11015.4	10650.5	10460.4	9894.7	9555.6	4038.2	606.8	453.5
30°	11617.9	11523.0	11179.6	11192.5	10812.4	10544.7	9940.1	9562.1	3541.4	380.0	164.1
32.5°	11505.5	11401.9	11043.6	11047.8	10656.9	10384.8	9782.4	9365.5	2880.7	250.4	125.2
35°	11179.6	11071.6	10715.2	10732.5	10354.7	10084.8	9495.1	9050.4	2207.0	198.7	92.8
37.5°	10628.9	10553.3	10214.2	10244.4	9922.6	9635.6	9037.4	8555.8	1557.0	142.5	58.3
40°	9920.7	9862.3	9534.0	9581.5	9231.7	8966.0	8324.8	7802.1	969.6	97.1	36.7
42.5°	9091.3	9028.8	8704.8	8741.5	8443.6	8063.5	7409.2	6817.4	507.4	69.2	25.9
45°	8056.9	7983.6	7655.2	7674.7	7322.6	6877.9	6199.8	5677.3	332.6	47.5	19.4
47.5°	6430.9	6299.1	5871.6	5854.4	5567.1	4839.4	3876.2	3137.7	220.2	32.4	13.0
50°	3535.1	3399.0	3023.3	2982.3	2662.5	2185.4	1615.3	1256.7	127.4	21.6	10.8
52.5°	1608.8	1537.6	1362.7	1334.5	1198.5	993.3	764.5	628.5	73.3	15.1	8.6
55°	697.5	671.5	598.2	593.8	531.3	460.0	367.0	311.0	43.3	10.8	6.4
57.5°	274.2	265.6	250.4	239.6	216.0	192.2	159.8	133.8	28.1	8.6	6.4
60°	103.6	101.5	92.8	95.0	86.3	82.2	71.3	60.5	17.3	6.4	6.4
62.5°	47.5	47.5	45.3	45.3	43.3	38.9	34.5	32.4	10.8	6.4	6.4
65°	23.8	23.8	21.6	21.6	21.6	19.4	17.3	17.3	6.4	6.4	6.4
67.5°	10.8	10.8	10.8	10.8	10.8	8.6	8.6	8.6	4.4	6.4	6.4
70°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	6.4	6.4
72.5°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	4.4	6.4	6.4
75°	0.0	0.0	0.0	2.2	2.2	2.2	2.2	2.2	4.4	6.4	6.4
77.5°	0.0	0.0	0.0	0.0	2.2	2.2	2.2	2.2	4.4	6.4	8.6
80°	0.0	0.0	0.0	0.0	2.2	2.2	2.2	2.2	4.4	6.4	8.6
82.5°	0.0	0.0	0.0	2.2	2.2	2.2	2.2	2.2	4.4	6.4	8.6
85°	0.0	0.0	0.0	2.2	2.2	2.2	2.2	2.2	4.4	6.4	8.6
87.5°	0.0	0.0	0.0	2.2	2.2	2.2	2.2	2.2	4.4	6.4	8.6
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°	362.9	362.9	362.9	362.9
2.5°	304.5	269.9	239.6	233.2
5°	250.4	198.7	166.3	159.8
7.5°	202.9	144.7	121.0	116.6
10°	166.3	116.6	95.0	90.8
12.5°	138.2	95.0	75.5	71.3
15°	118.8	84.1	69.2	69.2
17.5°	114.4	92.8	88.5	90.8
20°	149.0	168.5	200.7	202.9
22.5°	345.6	561.5	742.9	777.3
25°	621.9	680.2	662.9	693.2
27.5°	328.2	257.0	261.2	267.8
30°	142.5	157.7	166.3	174.9
32.5°	118.8	123.0	125.2	131.8
35°	77.7	77.7	75.5	77.7
37.5°	47.5	45.3	43.3	43.3
40°	30.3	28.1	25.9	25.9
42.5°	21.6	17.3	15.1	15.1
45°	15.1	10.8	8.6	6.4
47.5°	10.8	6.4	4.4	2.2
50°	8.6	6.4	2.2	0.0
52.5°	6.4	4.4	2.2	0.0
55°	6.4	4.4	0.0	0.0
57.5°	6.4	4.4	0.0	0.0
60°	6.4	4.4	0.0	0.0
62.5°	6.4	4.4	0.0	0.0
65°	6.4	4.4	2.2	0.0
67.5°	6.4	4.4	2.2	0.0
70°	6.4	4.4	2.2	0.0
72.5°	6.4	4.4	2.2	0.0
75°	6.4	6.4	2.2	0.0
77.5°	8.6	6.4	2.2	0.0
80°	8.6	6.4	2.2	0.0
82.5°	8.6	6.4	2.2	0.0
85°	8.6	6.4	2.2	2.2
87.5°	8.6	6.4	2.2	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)