

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: P1191847

Luminaire Tested: **LDA4A30940D010TE 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: P1191847
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: LDA4A30940D010TE 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

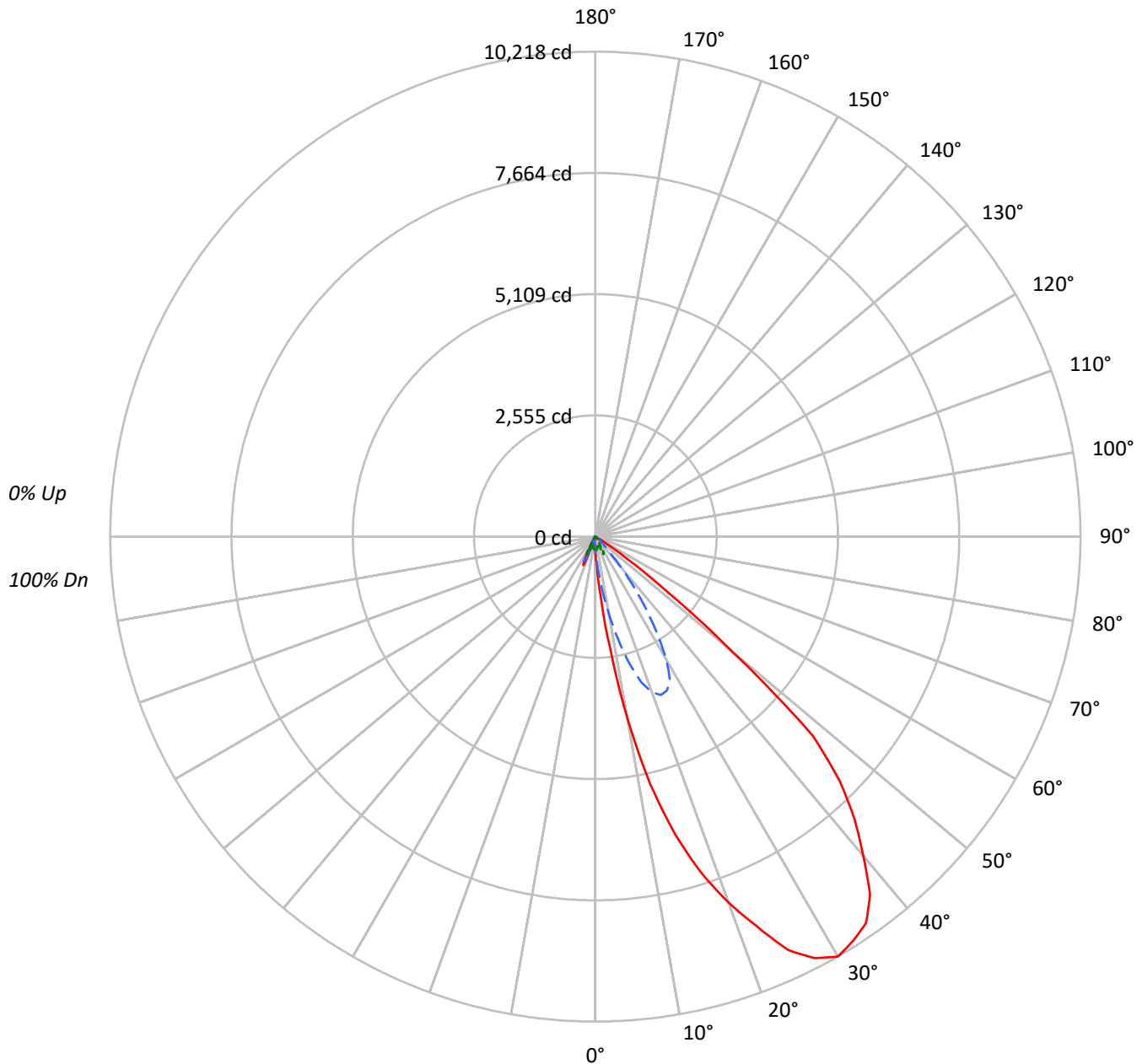
Lumens per Lamp: N/A
Luminaire Lumens: 3713.7 lumens
Efficiency: N/A
Efficacy: 94.3 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 39.4
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°	37670	37670	37670
5°	151676	35548	16653
10°	488957	29822	9569
15°	829467	23662	7432
20°	1078065	21225	22419
25°	1308231	55895	79399
30°	1455279	19669	20965
35°	1496963	11760	9848
40°	1413449	4975	3510
45°	1270338	2861	942
50°	714950	1746	0
55°	177456	1161	0
60°	27358	1332	0
65°	6363	1576	0
70°	1334	1947	0
75°	0	2573	0
80°	0	5185	0
85°	0	10331	2547

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Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.3	1.7
10°-20°	455.8	12.3
20°-30°	1052.8	28.3
30°-40°	1180.9	31.8
40°-50°	824.0	22.2
50°-60°	123.0	3.3
60°-70°	8.0	0.2
70°-80°	4.0	0.1
80°-90°	3.9	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°	1569.9	42.3
0°-40°	2750.8	74.1
0°-60°	3697.7	99.6
0°-90°	3713.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3713.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	305	305	305	305	305	
5°	1225	716	287	167	134	203
15°	6496	2764	185	71	58	1856
25°	9612	3573	411	572	583	4395
35°	9942	1857	78	65	65	6115
45°	7282	280	16	9	5	5343
55°	825	36	5	4	0	1084
65°	22	5	5	4	0	33
75°	0	4	5	5	0	1
85°	0	4	7	5	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°	305.4	305.4	305.4	305.4	305.4	305.4	305.4	305.4	305.4	305.4	305.4
2.5°	556.1	550.7	536.2	532.5	545.3	534.3	539.7	550.7	539.7	527.1	539.7
5°	1225.0	1255.8	1225.0	1219.6	1241.3	1221.3	1230.4	1250.4	1223.1	1197.7	1215.9
7.5°	2364.5	2384.5	2297.3	2328.2	2320.9	2326.3	2331.7	2331.7	2315.4	2270.0	2295.5
10°	3903.9	3918.4	3802.2	3842.1	3789.4	3842.1	3833.0	3793.1	3802.2	3740.3	3773.0
12.5°	5332.4	5379.7	5263.4	5301.5	5237.9	5297.9	5274.3	5263.4	5170.7	5170.7	5205.2
15°	6495.6	6602.8	6497.4	6537.4	6464.7	6548.4	6482.9	6512.0	6428.3	6324.8	6415.7
17.5°	7437.0	7542.5	7444.4	7493.4	7426.2	7491.6	7415.2	7477.1	7369.8	7295.3	7357.0
20°	8213.1	8291.3	8175.0	8243.9	8164.0	8229.4	8145.8	8227.6	8102.3	8047.7	8084.1
22.5°	8889.2	8920.1	8860.1	8976.4	8820.1	8889.2	8789.2	8872.8	8723.8	8654.7	8663.8
25°	9612.5	9681.7	9567.0	9610.7	9501.6	9549.0	9436.2	9514.4	9329.0	9230.8	9210.9
27.5°	10014.2	10112.3	10010.6	10059.7	9948.8	9988.7	9876.1	9988.7	9799.7	9703.4	9681.7
30°	10217.7	10265.1	10199.6	10232.4	10106.9	10126.8	10010.6	10132.4	9943.4	9857.9	9846.9
32.5°	10099.7	10194.1	10108.8	10150.4	10034.2	10054.2	9941.5	10072.4	9883.3	9805.1	9767.0
35°	9941.5	10037.8	9957.9	10001.5	9894.3	9908.8	9788.8	9903.4	9685.2	9588.9	9507.2
37.5°	9503.5	9594.3	9527.1	9541.7	9438.0	9427.1	9298.1	9394.4	9181.8	9100.0	9045.5
40°	8778.3	8860.1	8805.6	8836.4	8732.9	8709.3	8622.0	8711.1	8545.7	8485.7	8409.3
42.5°	8084.1	8151.3	8100.4	8149.5	8033.2	8002.3	7924.1	8036.9	7849.6	7800.5	7746.0
45°	7282.5	7324.3	7284.4	7326.2	7215.2	7166.2	7095.4	7191.6	7008.2	6962.7	6844.6
47.5°	6223.0	6177.6	6170.3	6210.3	6072.1	5970.4	5904.9	6028.5	5763.2	5674.1	5537.7
50°	3725.8	3802.2	3834.9	3807.6	3713.0	3573.1	3467.7	3618.6	3476.8	3258.7	3040.6
52.5°	1919.3	1833.8	1852.0	1861.1	1748.3	1706.5	1672.1	1706.5	1595.7	1539.4	1401.3
55°	825.2	785.2	799.7	805.1	783.4	732.4	714.2	736.0	685.2	663.3	607.0
57.5°	305.4	305.4	296.2	299.9	292.6	274.5	270.8	279.9	263.5	258.1	236.2
60°	110.9	110.9	110.9	110.9	101.8	100.0	100.0	103.5	98.1	96.3	89.0
62.5°	47.2	49.1	45.4	47.2	45.4	43.7	45.4	43.7	43.7	41.8	41.8
65°	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	21.8	20.0	20.0
67.5°	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	9.1	9.1	9.1
70°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
72.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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°	305.4	305.4	305.4	305.4	305.4	305.4	305.4	305.4	305.4	305.4	305.4
2.5°	523.4	521.7	528.9	521.7	508.9	501.6	510.7	492.5	421.7	350.7	298.1
5°	1183.2	1174.1	1161.4	1164.9	1134.1	1108.6	1108.6	1059.6	716.1	407.0	287.1
7.5°	2242.7	2220.9	2128.2	2195.5	2130.1	2079.2	2044.6	1944.6	1157.7	467.1	265.4
10°	3704.0	3665.8	3600.4	3613.2	3505.9	3420.5	3316.9	3149.7	1664.9	519.8	238.1
12.5°	5145.2	5107.1	4932.6	5032.6	4888.9	4805.4	4630.9	4434.6	2211.8	545.3	212.6
15°	6368.3	6335.6	6144.9	6239.3	6063.1	5984.9	5759.6	5541.4	2764.4	536.2	185.3
17.5°	7318.9	7313.5	7093.5	7188.1	6993.5	6929.9	6666.4	6451.9	3211.4	496.2	167.3
20°	8051.4	8038.6	7816.8	7911.4	7698.8	7636.9	7302.6	7077.1	3495.0	441.6	161.7
22.5°	8629.2	8603.9	8365.8	8447.6	8209.5	8129.5	7760.5	7526.1	3611.3	407.0	200.0
25°	9149.0	9103.7	8832.9	8896.5	8634.8	8651.1	8096.7	7838.7	3573.1	458.0	410.7
27.5°	9607.1	9525.4	9252.7	9270.8	8963.7	8803.7	8327.6	8042.3	3398.7	510.7	381.7
30°	9778.0	9698.0	9409.0	9419.8	9100.0	8874.7	8365.8	8047.7	2980.6	319.9	138.1
32.5°	9683.4	9596.2	9294.5	9298.1	8969.1	8740.2	8233.1	7882.3	2424.5	210.8	105.4
35°	9409.0	9318.1	9018.2	9032.7	8714.7	8487.6	7991.4	7617.0	1857.4	167.3	78.1
37.5°	8945.5	8881.9	8596.5	8622.0	8351.2	8109.5	7606.1	7200.7	1310.4	119.9	49.1
40°	8349.5	8300.4	8024.1	8064.0	7769.6	7546.1	7006.3	6566.4	816.1	81.8	30.9
42.5°	7651.4	7598.8	7326.2	7357.0	7106.3	6786.4	6235.8	5737.7	427.1	58.2	21.8
45°	6780.9	6719.2	6442.8	6459.2	6162.9	5788.6	5217.9	4778.1	279.9	40.0	16.4
47.5°	5412.4	5301.5	4941.7	4927.2	4685.4	4073.0	3262.3	2640.8	185.3	27.3	10.9
50°	2975.2	2860.7	2544.5	2509.9	2240.9	1839.2	1359.5	1057.7	107.2	18.2	9.1
52.5°	1354.0	1294.1	1146.9	1123.1	1008.6	836.0	643.4	528.9	61.7	12.7	7.3
55°	587.1	565.2	503.5	499.8	447.1	387.1	308.9	261.7	36.4	9.1	5.4
57.5°	230.8	223.6	210.8	201.7	181.8	161.7	134.5	112.6	23.6	7.3	5.4
60°	87.2	85.5	78.1	79.9	72.7	69.1	60.0	50.9	14.5	5.4	5.4
62.5°	40.0	40.0	38.1	38.1	36.4	32.7	29.0	27.3	9.1	5.4	5.4
65°	20.0	20.0	18.2	18.2	18.2	16.4	14.5	14.5	5.4	5.4	5.4
67.5°	9.1	9.1	9.1	9.1	9.1	7.3	7.3	7.3	3.7	5.4	5.4
70°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	5.4	5.4
72.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.7	5.4	5.4
75°	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	3.7	5.4	5.4
77.5°	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	3.7	5.4	7.3
80°	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	3.7	5.4	7.3
82.5°	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	3.7	5.4	7.3
85°	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	3.7	5.4	7.3
87.5°	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	3.7	5.4	7.3
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°	305.4	305.4	305.4	305.4
2.5°	256.3	227.1	201.7	196.3
5°	210.8	167.3	139.9	134.5
7.5°	170.8	121.7	101.8	98.1
10°	139.9	98.1	79.9	76.4
12.5°	116.3	79.9	63.6	60.0
15°	100.0	70.8	58.2	58.2
17.5°	96.3	78.1	74.5	76.4
20°	125.4	141.8	169.0	170.8
22.5°	290.8	472.6	625.2	654.2
25°	523.4	572.5	557.9	583.4
27.5°	276.2	216.3	219.9	225.4
30°	119.9	132.7	139.9	147.2
32.5°	100.0	103.5	105.4	110.9
35°	65.4	65.4	63.6	65.4
37.5°	40.0	38.1	36.4	36.4
40°	25.5	23.6	21.8	21.8
42.5°	18.2	14.5	12.7	12.7
45°	12.7	9.1	7.3	5.4
47.5°	9.1	5.4	3.7	1.8
50°	7.3	5.4	1.8	0.0
52.5°	5.4	3.7	1.8	0.0
55°	5.4	3.7	0.0	0.0
57.5°	5.4	3.7	0.0	0.0
60°	5.4	3.7	0.0	0.0
62.5°	5.4	3.7	0.0	0.0
65°	5.4	3.7	1.8	0.0
67.5°	5.4	3.7	1.8	0.0
70°	5.4	3.7	1.8	0.0
72.5°	5.4	3.7	1.8	0.0
75°	5.4	5.4	1.8	0.0
77.5°	7.3	5.4	1.8	0.0
80°	7.3	5.4	1.8	0.0
82.5°	7.3	5.4	1.8	0.0
85°	7.3	5.4	1.8	1.8
87.5°	7.3	5.4	1.8	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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