

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: P1191883

Luminaire Tested: **LDA4A35927D010TE 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: P1191883
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: LDA4A35927D010TE 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 / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

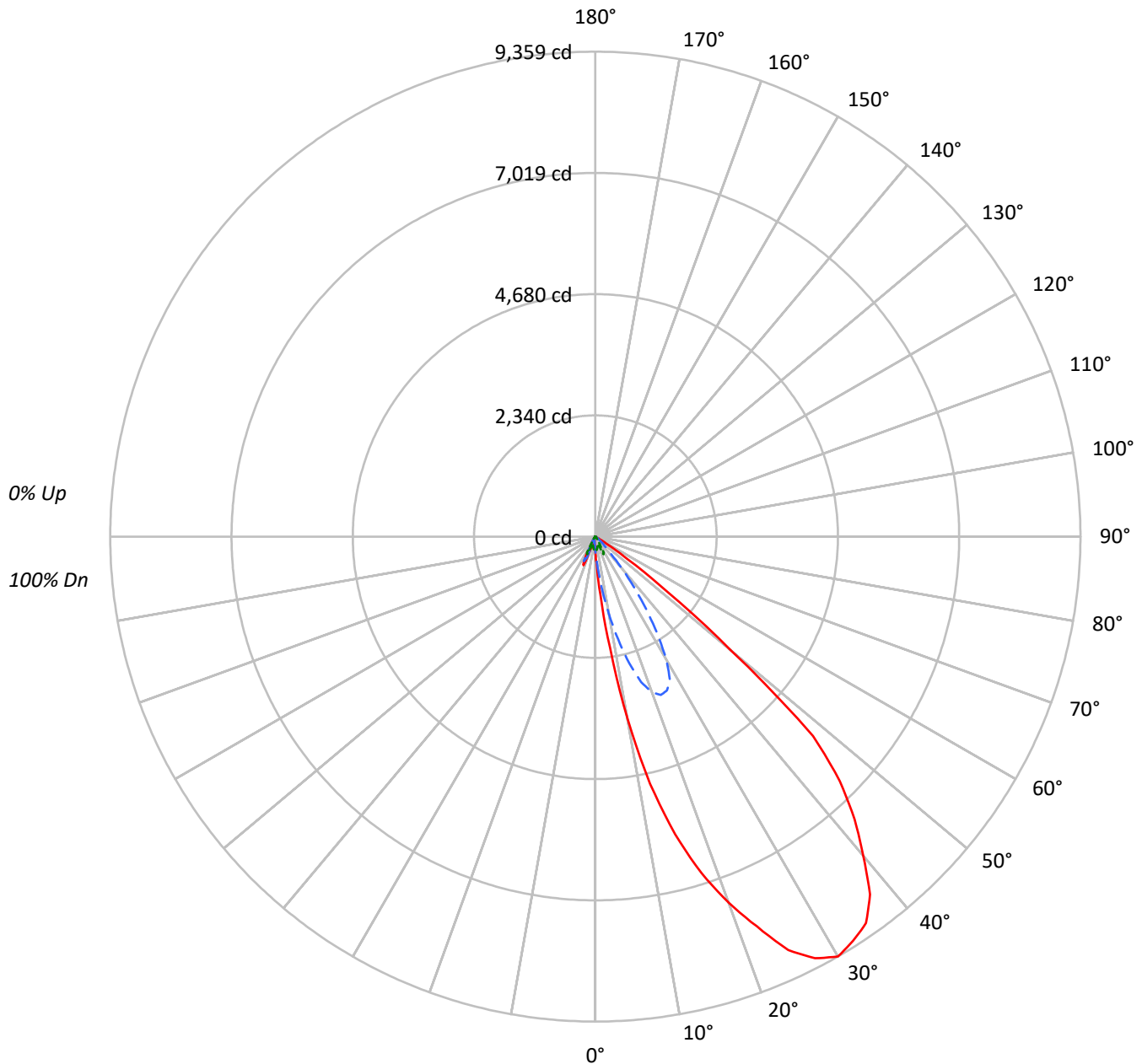
Lumens per Lamp: N/A
Luminaire Lumens: 3401.7 lumens
Efficiency: N/A
Efficacy: 72.2 lumens/watt
Spacing Criteria (0/90/45): 2.71 / 1.11 / 1.33
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	112	109	106	103		110	107	104	102		103	101	99		99	97	96		95	94	93
2	105	99	94	90		103	97	93	89		94	90	87		91	88	85		88	86	83
3	98	90	84	79		96	89	83	79		86	81	77		84	79	76		81	78	75
4	91	82	75	70		89	81	75	70		79	73	69		77	72	68		75	70	67
5	85	75	68	62		83	74	67	62		72	66	61		70	65	61		68	64	60
6	79	68	61	56		78	67	60	55		66	60	55		64	59	55		63	58	54
7	74	62	55	50		72	62	55	50		60	54	49		59	53	49		58	53	49
8	69	57	50	45		68	57	50	45		55	49	44		54	48	44		53	48	44
9	64	53	45	40		63	52	45	40		51	45	40		50	44	40		49	44	40
10	60	48	41	37		59	48	41	37		47	41	36		46	40	36		45	40	36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	34500	34500	34500
5°	138935	32564	15267
10°	447888	27317	8755
15°	759783	21683	6806
20°	987495	19440	20529
25°	1198346	51213	72730
30°	1333019	18031	19213
35°	1371201	10781	9035
40°	1294716	4557	3220
45°	1163635	2599	872
50°	654888	1593	0
55°	162554	1075	0
60°	25064	1233	0
65°	5837	1459	0
70°	1190	1803	0
75°	0	2383	0
80°	0	4688	0
85°	0	9341	2406



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.2	1.7
10°-20°	417.5	12.3
20°-30°	964.3	28.3
30°-40°	1081.7	31.8
40°-50°	754.8	22.2
50°-60°	112.7	3.3
60°-70°	7.4	0.2
70°-80°	3.7	0.1
80°-90°	3.6	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°	1438.0	42.3
0°-40°	2519.7	74.1
0°-60°	3387.1	99.6
0°-90°	3401.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3401.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	280	280	280	280	280	
5°	1122	656	263	153	123	186
15°	5950	2532	170	65	53	1700
25°	8805	3273	376	524	534	4025
35°	9106	1701	72	60	60	5602
45°	6671	256	15	8	5	4894
55°	756	33	5	3	0	993
65°	20	5	5	3	0	31
75°	0	3	5	5	0	1
85°	0	3	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°	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7
2.5°	509.3	504.4	491.1	487.8	499.4	489.5	494.4	504.4	494.4	482.8	494.4
5°	1122.1	1150.4	1122.1	1117.1	1137.0	1118.8	1127.0	1145.4	1120.4	1097.1	1113.8
7.5°	2165.9	2184.2	2104.3	2132.6	2126.0	2131.0	2135.9	2135.9	2120.9	2079.3	2102.6
10°	3576.0	3589.2	3482.7	3519.3	3471.1	3519.3	3511.0	3474.4	3482.7	3426.2	3456.0
12.5°	4884.4	4927.7	4821.2	4856.1	4797.9	4852.8	4831.1	4821.2	4736.3	4736.3	4768.0
15°	5949.9	6048.1	5951.5	5988.1	5921.7	5998.2	5938.2	5964.9	5888.4	5793.4	5876.6
17.5°	6812.3	6908.9	6818.9	6863.8	6802.3	6862.2	6792.2	6848.9	6750.6	6682.4	6739.0
20°	7523.1	7594.7	7488.1	7551.4	7478.2	7538.2	7461.5	7536.4	7421.5	7371.6	7405.0
22.5°	8142.4	8170.8	8115.8	8222.3	8079.2	8142.4	8050.8	8127.4	7990.9	7927.7	7936.0
25°	8805.1	8868.2	8763.3	8803.4	8703.5	8746.7	8643.5	8715.1	8545.3	8455.4	8437.1
27.5°	9172.9	9262.9	9169.6	9214.5	9112.9	9149.5	9046.3	9149.5	8976.4	8888.2	8868.2
30°	9359.3	9402.7	9342.7	9372.7	9257.7	9276.1	9169.6	9281.1	9107.9	9029.7	9019.8
32.5°	9251.1	9337.8	9259.5	9297.8	9191.3	9209.5	9106.3	9226.2	9053.1	8981.5	8946.6
35°	9106.3	9194.6	9121.4	9161.3	9063.0	9076.3	8966.4	9071.3	8871.5	8783.4	8708.5
37.5°	8705.1	8788.3	8726.7	8740.1	8645.2	8635.2	8516.9	8605.2	8410.4	8335.5	8285.6
40°	8040.9	8115.8	8065.9	8094.1	7999.3	7977.6	7897.7	7979.2	7827.8	7772.8	7702.9
42.5°	7405.0	7466.4	7419.9	7464.8	7358.2	7330.1	7258.5	7361.7	7190.2	7145.2	7095.3
45°	6670.8	6709.0	6672.4	6710.7	6609.1	6564.2	6499.3	6587.4	6419.4	6377.8	6269.5
47.5°	5700.2	5658.6	5651.9	5688.5	5562.0	5468.8	5408.9	5522.0	5279.0	5197.4	5072.5
50°	3412.8	3482.7	3512.7	3487.7	3401.2	3272.9	3176.3	3314.5	3184.8	2984.9	2785.1
52.5°	1758.0	1679.8	1696.4	1704.8	1601.6	1563.1	1531.7	1563.1	1461.7	1410.0	1283.6
55°	755.9	719.1	732.5	737.5	717.5	670.9	654.3	674.2	627.6	607.6	556.1
57.5°	279.7	279.7	271.4	274.7	268.1	251.4	248.0	256.3	241.4	236.4	216.4
60°	101.6	101.6	101.6	101.6	93.3	91.6	91.6	94.9	90.0	88.3	81.5
62.5°	43.2	44.9	41.6	43.2	41.6	39.9	41.6	39.9	39.9	38.3	38.3
65°	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.4	18.4
67.5°	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9	8.3	8.3	8.3
70°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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°	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7	279.7
2.5°	479.5	477.9	484.5	477.9	466.1	459.5	467.8	451.2	386.2	321.3	273.1
5°	1083.8	1075.5	1063.7	1067.1	1038.9	1015.5	1015.5	970.6	656.0	373.0	263.0
7.5°	2054.3	2034.4	1949.4	2011.0	1951.2	1904.5	1872.8	1781.4	1060.4	427.8	243.1
10°	3392.9	3357.9	3297.9	3309.5	3211.3	3133.1	3038.1	2885.0	1524.9	476.2	218.1
12.5°	4713.0	4678.0	4518.3	4609.7	4478.2	4401.6	4241.9	4062.1	2026.1	499.4	194.8
15°	5833.4	5803.4	5628.6	5715.2	5553.7	5482.1	5275.6	5075.8	2532.1	491.1	169.8
17.5°	6704.1	6699.1	6497.6	6584.1	6406.0	6347.8	6106.4	5909.9	2941.7	454.5	153.1
20°	7375.0	7363.4	7160.2	7246.7	7052.0	6995.4	6689.0	6482.6	3201.3	404.6	148.1
22.5°	7904.4	7881.0	7662.9	7737.8	7519.8	7446.5	7108.5	6893.8	3307.9	373.0	183.1
25°	8380.5	8338.8	8090.8	8149.1	7909.3	7924.4	7416.6	7180.1	3272.9	419.5	376.3
27.5°	8799.9	8725.0	8475.3	8492.1	8210.7	8064.2	7628.0	7366.7	3113.2	467.8	349.6
30°	8956.5	8883.3	8618.5	8628.6	8335.5	8129.0	7662.9	7371.6	2730.3	292.9	126.6
32.5°	8869.8	8790.0	8513.6	8516.9	8215.7	8005.9	7541.5	7220.1	2220.8	193.0	96.6
35°	8618.5	8535.3	8260.6	8273.9	7982.6	7774.5	7320.0	6977.1	1701.3	153.1	71.6
37.5°	8194.0	8135.8	7874.4	7897.7	7649.7	7428.2	6967.0	6595.9	1200.3	109.9	44.9
40°	7648.0	7603.0	7349.9	7386.6	7117.0	6912.2	6417.8	6014.8	747.4	74.9	28.3
42.5°	7008.6	6960.4	6710.7	6739.0	6509.2	6216.3	5711.9	5255.8	391.2	53.3	20.0
45°	6211.3	6154.6	5901.6	5916.5	5645.3	5302.3	4779.6	4376.8	256.3	36.6	14.9
47.5°	4957.7	4856.1	4526.5	4513.1	4291.8	3730.7	2988.3	2418.9	169.8	25.0	9.9
50°	2725.3	2620.4	2330.6	2299.0	2052.6	1684.8	1245.2	969.0	98.3	16.6	8.3
52.5°	1240.2	1185.4	1050.5	1028.8	923.9	765.8	589.4	484.5	56.7	11.6	6.6
55°	537.7	517.8	461.1	457.8	409.6	354.6	283.0	239.8	33.3	8.3	5.0
57.5°	211.4	204.8	193.0	184.8	166.5	148.1	123.3	103.2	21.7	6.6	5.0
60°	79.9	78.2	71.6	73.2	66.6	63.3	55.0	46.6	13.3	5.0	5.0
62.5°	36.6	36.6	35.0	35.0	33.3	30.0	26.7	25.0	8.3	5.0	5.0
65°	18.4	18.4	16.6	16.6	16.6	14.9	13.3	13.3	5.0	5.0	5.0
67.5°	8.3	8.3	8.3	8.3	8.3	6.6	6.6	6.6	3.3	5.0	5.0
70°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	5.0	5.0
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.0
75°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.0
77.5°	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	3.3	5.0	6.6
80°	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	3.3	5.0	6.6
82.5°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	3.3	5.0	6.6
85°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	3.3	5.0	6.6
87.5°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	3.3	5.0	6.6
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°	279.7	279.7	279.7	279.7
2.5°	234.8	208.1	184.8	179.8
5°	193.0	153.1	128.2	123.3
7.5°	156.4	111.5	93.3	90.0
10°	128.2	90.0	73.2	69.9
12.5°	106.5	73.2	58.3	55.0
15°	91.6	64.9	53.3	53.3
17.5°	88.3	71.6	68.3	69.9
20°	114.8	129.9	154.8	156.4
22.5°	266.4	432.8	572.6	599.3
25°	479.5	524.4	511.2	534.4
27.5°	253.0	198.2	201.5	206.5
30°	109.9	121.5	128.2	134.9
32.5°	91.6	94.9	96.6	101.6
35°	60.0	60.0	58.3	60.0
37.5°	36.6	35.0	33.3	33.3
40°	23.4	21.7	20.0	20.0
42.5°	16.6	13.3	11.6	11.6
45°	11.6	8.3	6.6	5.0
47.5°	8.3	5.0	3.3	1.7
50°	6.6	5.0	1.7	0.0
52.5°	5.0	3.3	1.7	0.0
55°	5.0	3.3	0.0	0.0
57.5°	5.0	3.3	0.0	0.0
60°	5.0	3.3	0.0	0.0
62.5°	5.0	3.3	0.0	0.0
65°	5.0	3.3	1.7	0.0
67.5°	5.0	3.3	1.7	0.0
70°	5.0	3.3	1.7	0.0
72.5°	5.0	3.3	1.7	0.0
75°	5.0	5.0	1.7	0.0
77.5°	6.6	5.0	1.7	0.0
80°	6.6	5.0	1.7	0.0
82.5°	6.6	5.0	1.7	0.0
85°	6.6	5.0	1.7	1.7
87.5°	6.6	5.0	1.7	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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Scaled Data Report



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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)