

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: P1191571

Luminaire Tested: **LDA4A15940D010TE LAR25NF 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: P1191571
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26105)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A15940D010TE LAR25NF 4LAL1 30° Tilt
Description: PORTFOLIO 4" Lensed Adjustable, Self-flanged, 25° Narrow Flood
Optic, at 30° tilt. --- 27.9W
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

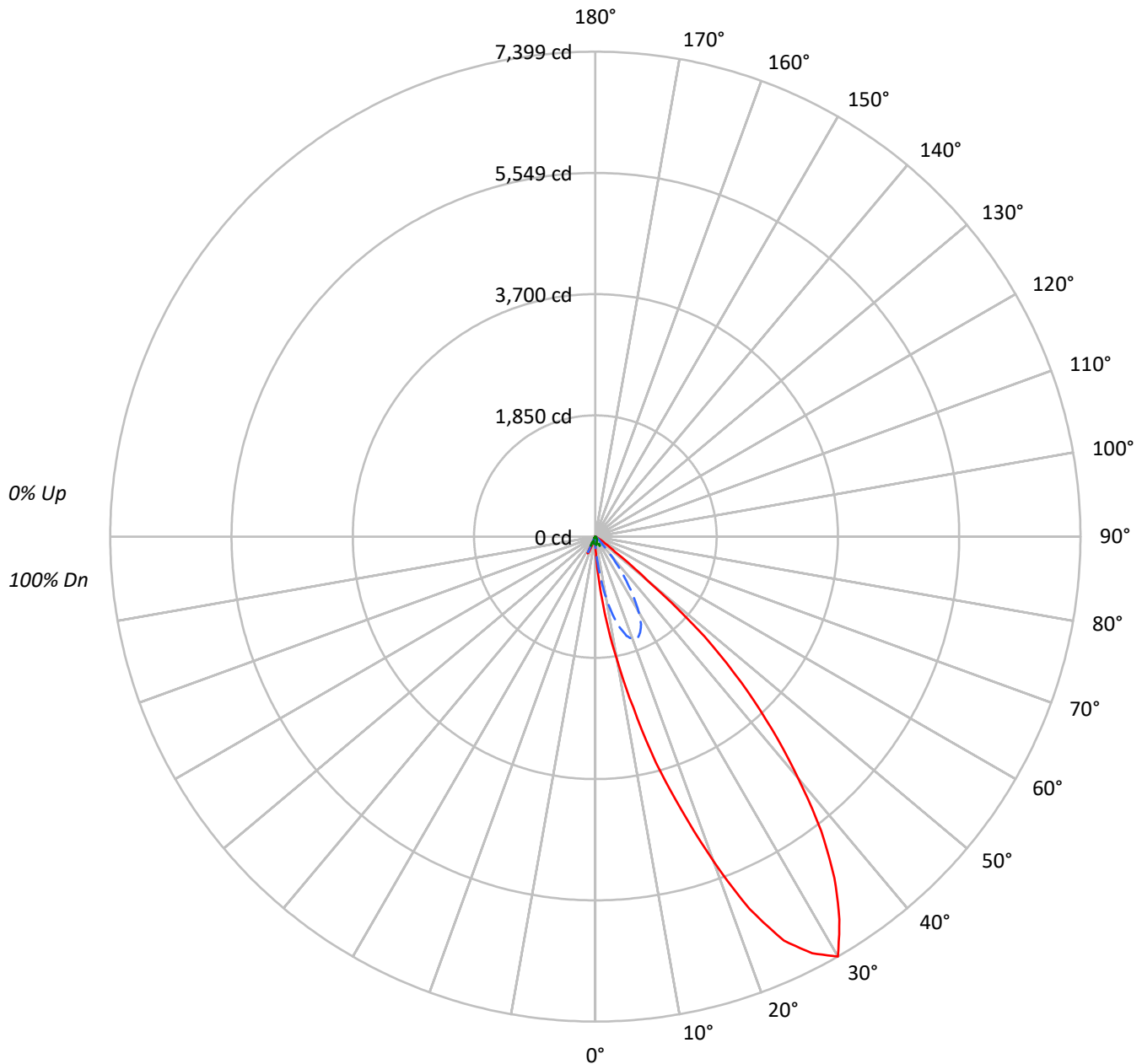
Lumens per Lamp: N/A
Luminaire Lumens: 1925.8 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20.4
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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	109	106	104	110	107	104	102	103	101	99		99	98	96		96
2	106	100	95	91	103	98	94	90	95	91	88		92	89	86		89
3	99	91	85	81	97	90	84	80	87	82	79		84	81	77		82
4	92	83	77	72	90	82	76	71	80	74	70		78	73	69		76
5	86	76	69	64	84	75	69	64	73	67	63		71	66	62		70
6	80	70	63	57	79	69	62	57	67	61	57		66	60	56		64
7	75	64	57	52	74	63	56	51	62	56	51		61	55	51		59
8	70	59	52	47	69	58	51	47	57	51	46		56	50	46		55
9	66	54	47	42	64	54	47	42	53	46	42		52	46	42		51
10	62	50	43	38	60	50	43	38	49	42	38		48	42	38		47

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17675	17675	17675
5°	90906	16430	7677
10°	239588	13715	3995
15°	456005	10765	3103
20°	692615	8900	8269
25°	925472	21231	38230
30°	1053762	8004	7734
35°	957144	4517	3493
40°	775229	2013	1401
45°	548570	1186	331
50°	200143	729	0
55°	41676	624	0
60°	10016	715	0
65°	3094	846	0
70°	1046	1046	0
75°	477	1382	0
80°	0	2060	0
85°	0	4104	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.5	1.7
10°-20°	242.2	12.6
20°-30°	614.3	31.9
30°-40°	657.5	34.1
40°-50°	336.1	17.5
50°-60°	35.1	1.8
60°-70°	4.0	0.2
70°-80°	2.2	0.1
80°-90°	1.9	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°	889.0	46.2
0°-40°	1546.5	80.3
0°-60°	1917.7	99.6
0°-90°	1925.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1925.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	143	143	143	143	143	
5°	734	399	133	76	62	107
15°	3571	1435	84	30	24	1055
25°	6800	1616	156	262	281	3090
35°	6356	819	30	23	23	3902
45°	3145	110	7	4	2	2347
55°	194	18	3	2	0	263
65°	11	4	3	2	0	14
75°	1	2	3	3	0	1
85°	0	2	3	3	0	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°	143.3	143.3	143.3	143.3	143.3	143.3	143.3	143.3	143.3	143.3	143.3
2.5°	289.6	292.5	271.2	277.9	282.8	273.1	271.2	271.2	281.9	276.0	285.7
5°	734.2	731.2	694.5	705.1	712.8	694.5	703.1	689.6	706.1	695.5	706.1
7.5°	1282.4	1316.2	1269.7	1280.5	1287.1	1267.8	1272.7	1253.3	1271.7	1259.0	1267.8
10°	1912.9	1947.7	1893.4	1902.1	1907.1	1888.6	1889.6	1864.4	1880.9	1867.4	1873.1
12.5°	2666.3	2680.0	2653.8	2660.6	2663.5	2639.2	2593.8	2598.6	2615.1	2591.7	2597.6
15°	3571.0	3561.3	3530.3	3552.6	3530.3	3518.7	3449.9	3446.1	3455.7	3429.6	3388.0
17.5°	4368.0	4441.6	4406.9	4419.4	4392.3	4392.3	4304.2	4289.6	4290.6	4220.9	4213.1
20°	5276.6	5370.6	5285.3	5289.2	5253.3	5252.3	5144.9	5114.9	5102.2	5022.8	5000.5
22.5°	6152.1	6179.2	6178.2	6161.7	6077.5	6126.0	5991.3	5943.8	5905.1	5815.1	5770.5
25°	6800.1	6885.3	6827.2	6785.5	6712.0	6772.9	6621.8	6559.9	6501.7	6426.2	6368.1
27.5°	7166.2	7245.6	7232.1	7170.0	7094.5	7153.5	6988.0	6907.5	6825.3	6770.1	6697.4
30°	7398.6	7519.7	7480.0	7345.4	7234.9	7254.3	7068.3	6960.8	6869.7	6812.6	6720.7
32.5°	6926.9	7051.9	7040.2	6942.4	6885.3	6932.7	6771.0	6664.5	6577.2	6531.8	6429.2
35°	6356.5	6502.7	6470.7	6389.3	6347.7	6403.0	6245.1	6156.0	6067.8	6028.1	5915.7
37.5°	5658.2	5795.7	5763.7	5686.2	5645.6	5686.2	5535.2	5452.8	5369.5	5327.9	5251.4
40°	4814.6	4935.7	4901.7	4830.0	4796.2	4825.2	4694.5	4622.7	4552.1	4521.1	4419.4
42.5°	3990.3	4087.2	4056.1	3994.2	3968.1	3987.4	3880.0	3816.0	3754.0	3727.9	3667.8
45°	3144.8	3240.7	3210.7	3157.4	3133.2	3143.9	3053.7	2996.6	2943.4	2919.1	2864.9
47.5°	2256.7	2364.1	2327.3	2281.9	2256.7	2251.8	2172.4	2121.1	2125.9	2043.6	1993.2
50°	1043.0	1134.1	1097.3	1073.2	1048.9	1035.4	1007.3	949.1	965.6	891.0	862.0
52.5°	378.7	400.9	392.3	384.5	376.8	373.9	364.2	349.6	351.5	333.1	324.4
55°	193.8	204.4	201.4	196.6	196.6	193.8	188.9	183.0	179.2	176.3	173.3
57.5°	89.0	94.9	93.0	91.1	91.1	89.0	87.1	84.3	86.2	81.4	80.5
60°	40.6	43.6	42.7	41.6	41.6	41.6	40.6	39.7	39.7	38.7	37.8
62.5°	19.4	21.3	20.3	20.3	20.3	20.3	19.4	19.4	19.4	19.4	18.4
65°	10.6	10.6	10.6	10.6	10.6	10.6	10.6	9.7	10.6	9.7	9.7
67.5°	5.9	5.9	5.9	5.9	4.9	5.9	5.9	4.9	4.9	4.9	4.9
70°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	0.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
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	1.0	0.0	1.0	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°	143.3	143.3	143.3	143.3	143.3	143.3	143.3	143.3	143.3	143.3	143.3
2.5°	263.5	270.3	277.0	275.0	265.4	264.4	260.6	262.5	204.4	165.7	138.5
5°	668.3	677.0	685.8	680.9	656.7	650.9	631.5	627.5	399.0	195.7	132.7
7.5°	1221.3	1226.2	1233.0	1227.1	1191.3	1174.8	1134.1	1094.5	671.2	236.3	123.0
10°	1820.9	1819.0	1821.8	1814.1	1769.5	1737.6	1674.5	1646.5	951.1	271.2	109.5
12.5°	2520.1	2512.4	2469.7	2490.1	2427.1	2362.2	2258.6	2171.5	1215.5	290.6	96.8
15°	3336.6	3313.4	3297.8	3274.6	3197.1	3092.5	2934.7	2837.7	1435.4	288.7	84.3
17.5°	4148.2	4110.4	4042.6	4051.4	3961.2	3815.1	3606.8	3441.1	1587.4	264.4	74.6
20°	4916.2	4860.1	4774.9	4768.1	4659.6	4466.9	4204.4	3999.0	1670.7	224.7	67.8
22.5°	5656.2	5569.1	5454.8	5419.0	5279.5	5006.3	4663.5	4413.6	1678.5	187.9	81.4
25°	6239.3	6129.8	6003.0	5941.0	5787.0	5438.3	5011.2	4704.1	1616.5	186.0	156.0
27.5°	6564.7	6440.7	6313.8	6229.7	6073.7	5678.5	5195.2	4840.6	1510.0	199.5	148.2
30°	6582.2	6442.7	6310.9	6204.4	6049.4	5627.2	5113.8	4744.8	1318.2	125.9	56.2
32.5°	6292.5	6143.3	6011.6	5891.6	5738.6	5313.4	4809.7	4457.2	1072.2	88.1	39.7
35°	5786.1	5632.0	5506.1	5379.3	5235.8	4835.9	4373.9	4045.5	819.4	69.7	30.0
37.5°	5096.5	4954.0	4842.7	4756.5	4601.5	4282.8	3860.6	3512.9	579.1	49.4	18.4
40°	4324.5	4204.4	4113.3	4038.8	3895.4	3612.6	3186.4	2893.0	351.5	34.9	12.5
42.5°	3547.8	3435.4	3355.0	3284.3	3151.6	2901.7	2551.1	2256.7	168.5	24.3	8.7
45°	2759.3	2658.6	2590.8	2527.0	2407.8	2161.8	1883.7	1670.7	109.5	17.5	6.8
47.5°	1884.8	1832.5	1721.1	1651.4	1529.3	1341.4	1080.8	846.5	72.7	12.5	4.9
50°	783.5	756.4	682.8	635.3	565.6	469.8	340.9	285.7	44.6	8.7	3.8
52.5°	304.1	297.3	279.0	268.2	250.9	225.7	187.9	167.6	27.1	6.8	3.8
55°	163.6	161.7	152.0	146.2	136.5	124.0	101.7	89.0	17.5	4.9	2.9
57.5°	75.5	74.6	69.7	69.7	63.0	58.1	48.4	43.6	10.6	3.8	2.9
60°	35.9	35.9	34.0	34.0	31.0	29.0	24.3	22.2	6.8	2.9	2.9
62.5°	17.5	17.5	17.5	17.5	16.5	15.5	13.5	12.5	4.9	2.9	2.9
65°	9.7	9.7	9.7	9.7	8.7	8.7	7.8	6.8	3.8	2.9	2.9
67.5°	4.9	4.9	4.9	4.9	4.9	4.9	3.8	3.8	2.9	2.9	2.9
70°	2.9	2.9	2.9	2.9	2.9	1.9	1.9	1.9	1.9	2.9	2.9
72.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	2.9
75°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	2.9
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	2.9
80°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	2.9
82.5°	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	2.9
85°	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.9	2.9	2.9
87.5°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9	2.9
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):

	112.5°	135°	157.5°	180°
0°	143.3	143.3	143.3	143.3
2.5°	119.2	103.6	95.9	94.0
5°	97.8	76.5	65.9	62.0
7.5°	79.4	55.2	46.5	42.7
10°	63.0	43.6	34.9	31.9
12.5°	52.4	34.9	28.1	26.2
15°	44.6	30.0	25.2	24.3
17.5°	40.6	31.9	30.0	31.0
20°	49.4	52.4	61.0	63.0
22.5°	104.6	181.1	246.0	260.6
25°	217.9	261.5	271.2	280.9
27.5°	121.1	94.0	92.0	95.9
30°	49.4	50.3	52.4	54.3
32.5°	36.8	36.8	35.9	36.8
35°	25.2	23.2	22.2	23.2
37.5°	15.5	14.6	13.5	13.5
40°	10.6	9.7	8.7	8.7
42.5°	7.8	5.9	4.9	4.9
45°	5.9	3.8	2.9	1.9
47.5°	4.9	2.9	1.0	1.0
50°	3.8	1.9	1.0	0.0
52.5°	2.9	1.9	1.0	0.0
55°	2.9	1.9	0.0	0.0
57.5°	2.9	1.9	0.0	0.0
60°	2.9	1.9	1.0	0.0
62.5°	2.9	1.9	1.0	1.0
65°	2.9	1.9	1.0	0.0
67.5°	2.9	1.9	1.0	0.0
70°	2.9	1.9	1.0	0.0
72.5°	3.8	1.9	1.0	0.0
75°	3.8	2.9	1.0	0.0
77.5°	3.8	2.9	1.0	0.0
80°	3.8	2.9	1.0	0.0
82.5°	3.8	2.9	1.0	0.0
85°	3.8	2.9	1.0	0.0
87.5°	3.8	2.9	1.0	0.0
90°	0.0	0.0	0.0	0.0

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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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