

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: P1191697

Luminaire Tested: **LDA4A25927D010TE 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: P1191697
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: LDA4A25927D010TE 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 / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

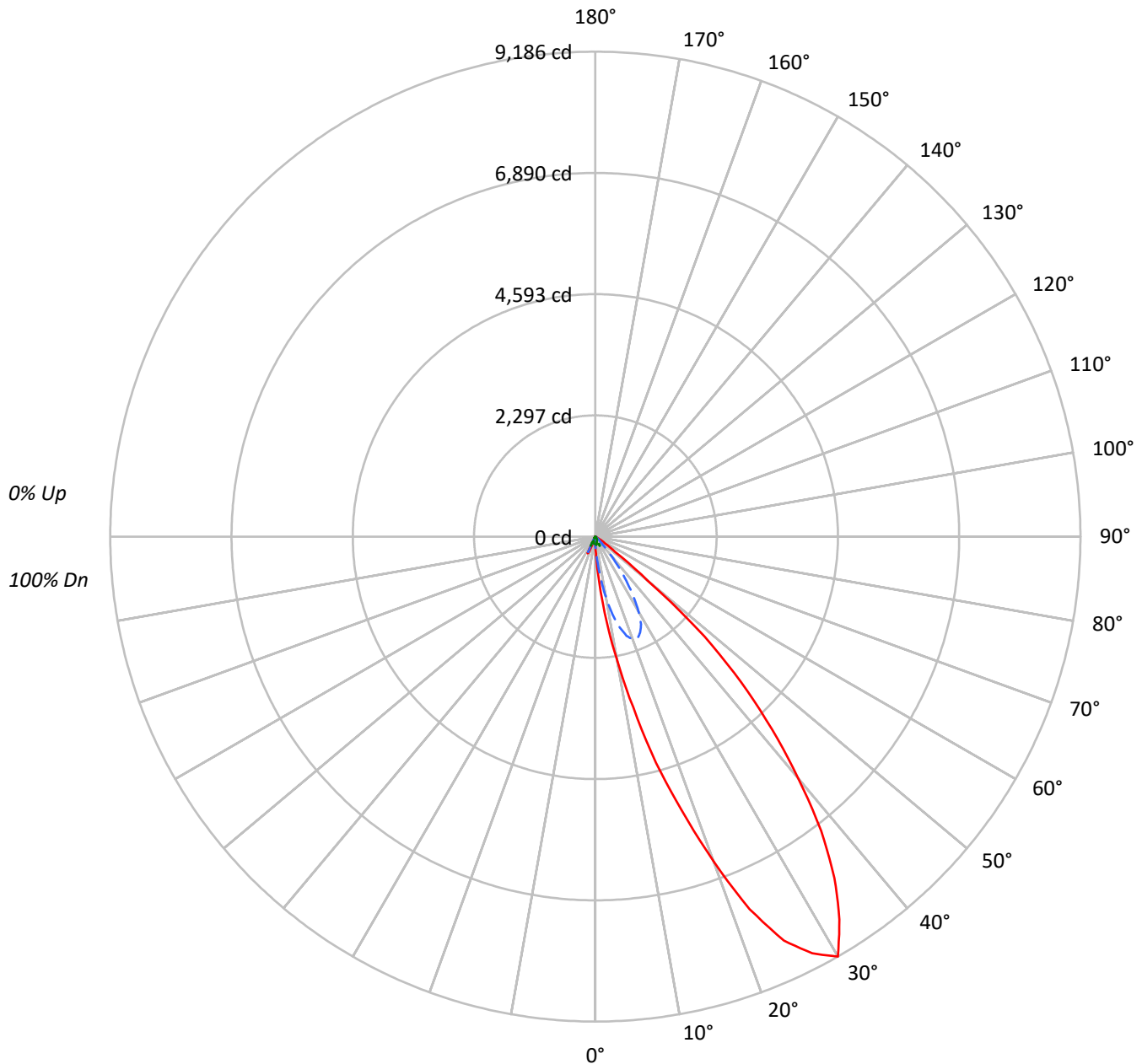
Lumens per Lamp: N/A
Luminaire Lumens: 2391.1 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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°	21956	21956	21956
5°	112859	20393	9534
10°	297465	17009	4972
15°	566156	13357	3831
20°	859921	11039	10265
25°	1149025	26362	47471
30°	1308323	9941	9600
35°	1188355	5601	4337
40°	962491	2528	1739
45°	681089	1465	419
50°	248500	921	0
55°	51719	774	0
60°	12458	888	0
65°	3882	1051	0
70°	1298	1298	0
75°	572	1716	0
80°	0	2557	0
85°	0	5095	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.3	1.7
10°-20°	300.7	12.6
20°-30°	762.7	31.9
30°-40°	816.3	34.1
40°-50°	417.2	17.5
50°-60°	43.6	1.8
60°-70°	5.0	0.2
70°-80°	2.7	0.1
80°-90°	2.4	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°	1103.8	46.2
0°-40°	1920.1	80.3
0°-60°	2380.9	99.6
0°-90°	2391.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2391.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	178	178	178	178	178	
5°	912	495	165	95	77	133
15°	4434	1782	105	37	30	1310
25°	8443	2007	194	325	349	3836
35°	7892	1017	37	29	29	4845
45°	3904	136	8	5	2	2914
55°	240	22	4	2	0	326
65°	13	5	4	2	0	18
75°	1	2	4	4	0	1
85°	0	2	4	4	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°	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0
2.5°	359.5	363.1	336.7	345.1	351.2	339.1	336.7	336.7	350.0	342.7	354.8
5°	911.5	907.8	862.2	875.4	885.0	862.2	873.0	856.1	876.6	863.4	876.6
7.5°	1592.1	1634.2	1576.4	1589.7	1598.1	1574.0	1580.1	1556.1	1578.9	1563.3	1574.0
10°	2375.0	2418.2	2350.9	2361.7	2367.7	2344.8	2346.0	2314.8	2335.2	2318.4	2325.7
12.5°	3310.5	3327.3	3294.8	3303.3	3306.9	3276.8	3220.3	3226.3	3246.8	3217.8	3225.1
15°	4433.6	4421.5	4383.1	4410.8	4383.1	4368.6	4283.3	4278.5	4290.5	4258.0	4206.3
17.5°	5423.2	5514.7	5471.3	5487.0	5453.4	5453.4	5343.9	5325.9	5327.1	5240.4	5230.9
20°	6551.2	6667.9	6562.0	6566.8	6522.3	6521.1	6387.7	6350.4	6334.8	6236.1	6208.5
22.5°	7638.3	7671.9	7670.7	7650.3	7545.7	7605.7	7438.6	7379.8	7331.6	7219.7	7164.4
25°	8442.7	8548.5	8476.4	8424.6	8333.3	8409.1	8221.4	8144.5	8072.4	7978.6	7906.4
27.5°	8897.3	8995.9	8979.0	8902.1	8808.2	8881.6	8676.0	8576.2	8474.0	8405.5	8315.2
30°	9185.9	9336.2	9286.9	9119.7	8982.6	9006.7	8775.8	8642.4	8529.3	8458.4	8344.1
32.5°	8600.2	8755.3	8741.0	8619.5	8548.5	8607.4	8406.7	8274.3	8166.1	8109.6	7982.2
35°	7892.0	8073.6	8033.9	7932.8	7881.1	7949.7	7753.7	7643.1	7533.7	7484.4	7344.8
37.5°	7025.0	7195.7	7156.1	7059.8	7009.3	7059.8	6872.3	6770.1	6666.7	6614.9	6519.9
40°	5977.6	6127.9	6085.8	5996.9	5954.7	5990.8	5828.5	5739.5	5651.7	5613.3	5487.0
42.5°	4954.3	5074.6	5036.0	4959.1	4926.6	4950.7	4817.2	4737.9	4660.9	4628.4	4553.8
45°	3904.5	4023.6	3986.2	3920.2	3890.1	3903.3	3791.5	3720.5	3654.3	3624.3	3557.0
47.5°	2801.8	2935.2	2889.6	2833.0	2801.8	2795.8	2697.2	2633.5	2639.5	2537.3	2474.7
50°	1295.0	1408.1	1362.4	1332.4	1302.3	1285.5	1250.6	1178.5	1198.9	1106.3	1070.3
52.5°	470.1	497.8	487.0	477.4	467.7	464.2	452.2	434.1	436.5	413.6	402.9
55°	240.5	253.7	250.1	244.2	244.2	240.5	234.5	227.3	222.5	218.9	215.2
57.5°	110.6	117.9	115.4	113.0	113.0	110.6	108.2	104.6	107.0	101.0	99.8
60°	50.5	54.1	52.9	51.7	51.7	51.7	50.5	49.3	49.3	48.1	46.9
62.5°	24.1	26.5	25.3	25.3	25.3	25.3	24.1	24.1	24.1	24.1	22.9
65°	13.3	13.3	13.3	13.3	13.3	13.3	13.3	12.0	13.3	12.0	12.0
67.5°	7.2	7.2	7.2	7.2	6.0	7.2	7.2	6.0	6.0	6.0	6.0
70°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
72.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
75°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
77.5°	0.0	1.2	1.2	1.2	0.0	1.2	1.2	1.2	1.2	1.2	1.2
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	1.2	0.0	1.2	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°	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0	178.0
2.5°	327.1	335.5	343.9	341.5	329.5	328.3	323.5	325.9	253.7	205.6	172.0
5°	829.7	840.6	851.3	845.4	815.3	808.0	784.1	779.2	495.4	242.9	164.7
7.5°	1516.3	1522.3	1530.8	1523.5	1479.1	1458.6	1408.1	1358.8	833.3	293.4	152.7
10°	2260.7	2258.3	2261.9	2252.3	2197.0	2157.3	2079.1	2044.3	1180.8	336.7	135.8
12.5°	3128.9	3119.3	3066.4	3091.6	3013.4	2932.9	2804.2	2696.0	1509.2	360.7	120.3
15°	4142.5	4113.7	4094.5	4065.6	3969.5	3839.6	3643.6	3523.3	1782.0	358.3	104.6
17.5°	5150.3	5103.4	5019.3	5030.0	4918.2	4736.7	4478.1	4272.5	1970.9	328.3	92.6
20°	6103.9	6034.1	5928.3	5919.9	5785.2	5545.9	5220.0	4965.2	2074.3	279.0	84.1
22.5°	7022.6	6914.3	6772.5	6727.9	6554.8	6215.7	5790.1	5479.8	2083.9	233.3	101.0
25°	7746.5	7610.6	7453.0	7376.1	7184.9	6752.0	6221.7	5840.6	2006.9	230.9	193.7
27.5°	8150.6	7996.6	7839.1	7734.4	7540.9	7050.3	6450.1	6010.0	1874.7	247.8	184.0
30°	8172.2	7999.0	7835.4	7703.2	7510.8	6986.5	6349.1	5891.1	1636.6	156.3	69.8
32.5°	7812.6	7627.4	7463.9	7314.8	7124.8	6596.9	5971.6	5533.9	1331.2	109.4	49.3
35°	7183.7	6992.6	6836.1	6678.6	6500.7	6004.1	5430.5	5022.9	1017.3	86.5	37.2
37.5°	6327.6	6150.8	6012.4	5905.4	5713.1	5317.4	4793.2	4361.5	719.1	61.3	22.9
40°	5369.1	5220.0	5107.0	5014.4	4836.5	4485.3	3956.2	3591.9	436.5	43.3	15.7
42.5°	4404.8	4265.2	4165.4	4077.7	3913.0	3602.6	3167.3	2801.8	209.2	30.0	10.8
45°	3426.0	3300.9	3216.6	3137.3	2989.5	2684.0	2338.8	2074.3	135.8	21.7	8.4
47.5°	2340.0	2275.2	2136.8	2050.3	1898.7	1665.5	1342.0	1051.0	90.2	15.7	6.0
50°	972.8	939.2	847.8	788.9	702.2	583.2	423.2	354.8	55.3	10.8	4.8
52.5°	377.6	369.1	346.3	333.1	311.4	280.2	233.3	208.0	33.6	8.4	4.8
55°	203.2	200.8	188.8	181.6	169.6	153.9	126.3	110.6	21.7	6.0	3.6
57.5°	93.8	92.6	86.5	86.5	78.2	72.2	60.1	54.1	13.3	4.8	3.6
60°	44.5	44.5	42.1	42.1	38.4	36.0	30.0	27.6	8.4	3.6	3.6
62.5°	21.7	21.7	21.7	21.7	20.5	19.3	16.9	15.7	6.0	3.6	3.6
65°	12.0	12.0	12.0	12.0	10.8	10.8	9.6	8.4	4.8	3.6	3.6
67.5°	6.0	6.0	6.0	6.0	6.0	6.0	4.8	4.8	3.6	3.6	3.6
70°	3.6	3.6	3.6	3.6	3.6	2.4	2.4	2.4	2.4	3.6	3.6
72.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.4	3.6	3.6
75°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.4	3.6	3.6
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.4	3.6	3.6
80°	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	2.4	3.6	3.6
82.5°	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.4	3.6	3.6
85°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	2.4	3.6	3.6
87.5°	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	2.4	3.6	3.6
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°	178.0	178.0	178.0	178.0
2.5°	147.9	128.7	119.1	116.7
5°	121.5	95.0	81.7	77.0
7.5°	98.6	68.6	57.7	52.9
10°	78.2	54.1	43.3	39.7
12.5°	65.0	43.3	34.8	32.4
15°	55.3	37.2	31.2	30.0
17.5°	50.5	39.7	37.2	38.4
20°	61.3	65.0	75.8	78.2
22.5°	129.9	224.9	305.4	323.5
25°	270.6	324.7	336.7	348.8
27.5°	150.3	116.7	114.2	119.1
30°	61.3	62.5	65.0	67.4
32.5°	45.7	45.7	44.5	45.7
35°	31.2	28.8	27.6	28.8
37.5°	19.3	18.1	16.9	16.9
40°	13.3	12.0	10.8	10.8
42.5°	9.6	7.2	6.0	6.0
45°	7.2	4.8	3.6	2.4
47.5°	6.0	3.6	1.2	1.2
50°	4.8	2.4	1.2	0.0
52.5°	3.6	2.4	1.2	0.0
55°	3.6	2.4	0.0	0.0
57.5°	3.6	2.4	0.0	0.0
60°	3.6	2.4	1.2	0.0
62.5°	3.6	2.4	1.2	1.2
65°	3.6	2.4	1.2	0.0
67.5°	3.6	2.4	1.2	0.0
70°	3.6	2.4	1.2	0.0
72.5°	4.8	2.4	1.2	0.0
75°	4.8	3.6	1.2	0.0
77.5°	4.8	3.6	1.2	0.0
80°	4.8	3.6	1.2	0.0
82.5°	4.8	3.6	1.2	0.0
85°	4.8	3.6	1.2	0.0
87.5°	4.8	3.6	1.2	0.0
90°	0.0	0.0	0.0	0.0

Classified

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Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)