

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: P1191715

Luminaire Tested: **LDA4A25930D010TE 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: P1191715
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: LDA4A25930D010TE 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 / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

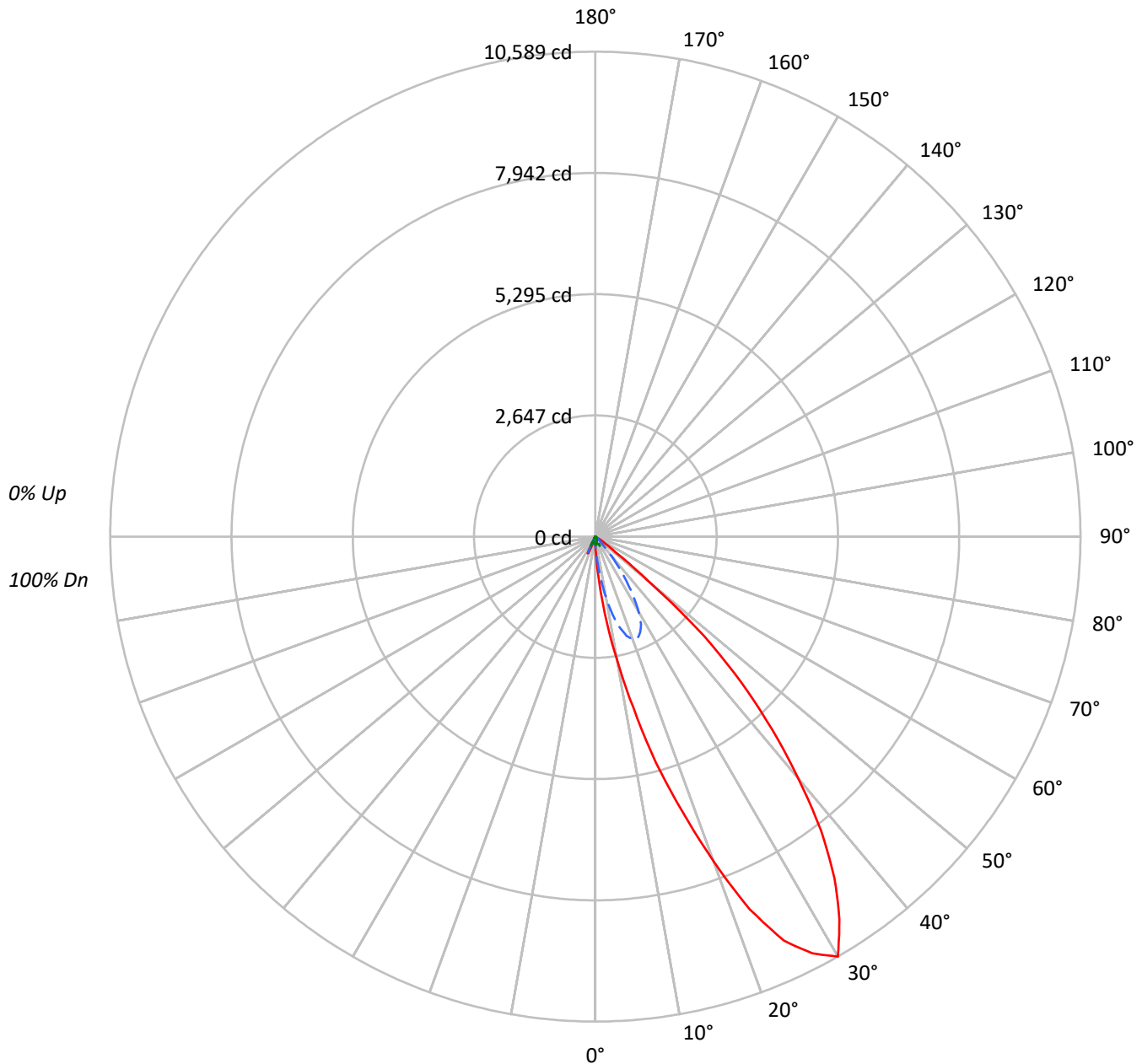
Lumens per Lamp: N/A
Luminaire Lumens: 2756.2 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	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	104	110	107	104	102	103	101	99	99	98	96	96	94	93	91		
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	86	84	83		
3	99	91	85	81	97	90	84	80	87	82	79	84	81	77	82	79	76	74		
4	92	83	77	72	90	82	76	71	80	74	70	78	73	69	76	72	69	67		
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60		
6	80	70	63	57	79	69	62	57	67	61	57	66	60	56	64	60	56	54		
7	75	64	57	52	74	63	56	51	62	56	51	61	55	51	59	54	51	49		
8	70	59	52	47	69	58	51	47	57	51	46	56	50	46	55	50	46	44		
9	66	54	47	42	64	54	47	42	53	46	42	52	46	42	51	45	42	40		
10	62	50	43	38	60	50	43	38	49	42	38	48	42	38	47	42	38	36		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	25311	25311	25311
5°	130094	23525	10983
10°	342893	19614	5724
15°	652633	15400	4418
20°	991275	12732	11827
25°	1324535	30377	54711
30°	1508148	11451	11052
35°	1369861	6475	5014
40°	1109515	2914	2013
45°	785124	1692	471
50°	286475	1075	0
55°	59632	882	0
60°	14357	1011	0
65°	4436	1197	0
70°	1479	1479	0
75°	667	1954	0
80°	0	2912	0
85°	0	5802	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.5	1.7
10°-20°	346.7	12.6
20°-30°	879.2	31.9
30°-40°	941.0	34.1
40°-50°	481.0	17.5
50°-60°	50.2	1.8
60°-70°	5.8	0.2
70°-80°	3.1	0.1
80°-90°	2.8	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°	1272.4	46.2
0°-40°	2213.4	80.3
0°-60°	2744.6	99.6
0°-90°	2756.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2756.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	205	205	205	205	205	
5°	1051	571	190	110	89	153
15°	5111	2054	121	43	35	1510
25°	9732	2314	223	374	402	4422
35°	9097	1173	43	33	33	5585
45°	4501	157	10	6	3	3359
55°	277	25	4	3	0	376
65°	15	6	4	3	0	20
75°	1	3	4	4	0	1
85°	0	3	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°	205.2	205.2	205.2	205.2	205.2	205.2	205.2	205.2	205.2	205.2	205.2
2.5°	414.5	418.7	388.2	397.9	404.7	390.9	388.2	388.2	403.4	395.0	409.0
5°	1050.7	1046.5	993.8	1009.1	1020.2	993.8	1006.4	987.0	1010.5	995.3	1010.5
7.5°	1835.3	1883.8	1817.2	1832.6	1842.2	1814.5	1821.5	1793.7	1820.0	1802.0	1814.5
10°	2737.7	2787.5	2709.9	2722.4	2729.4	2703.1	2704.4	2668.3	2692.0	2672.5	2680.9
12.5°	3816.1	3835.5	3798.1	3807.8	3812.0	3777.3	3712.1	3719.1	3742.6	3709.4	3717.7
15°	5110.8	5097.0	5052.6	5084.5	5052.6	5035.9	4937.5	4932.0	4945.8	4908.4	4848.8
17.5°	6251.6	6357.0	6307.0	6325.1	6286.2	6286.2	6160.2	6139.4	6140.7	6040.9	6029.9
20°	7551.9	7686.3	7564.3	7569.8	7518.5	7517.1	7363.3	7320.3	7302.4	7188.6	7156.7
22.5°	8804.9	8843.7	8842.3	8818.8	8698.2	8767.5	8574.9	8506.9	8451.4	8322.5	8258.8
25°	9732.3	9854.2	9771.1	9711.5	9606.1	9693.4	9477.2	9388.4	9305.3	9197.2	9114.0
27.5°	10256.2	10369.9	10350.5	10261.8	10153.7	10238.3	10001.2	9886.1	9768.3	9689.3	9585.4
30°	10588.9	10762.2	10705.4	10512.7	10354.6	10382.4	10116.2	9962.3	9832.0	9750.3	9618.6
32.5°	9913.9	10092.6	10076.1	9936.0	9854.2	9922.2	9690.7	9538.2	9413.5	9348.3	9201.3
35°	9097.4	9306.7	9261.0	9144.5	9085.0	9164.0	8938.0	8810.4	8684.4	8627.4	8466.7
37.5°	8098.0	8294.8	8249.1	8138.1	8079.9	8138.1	7922.0	7804.1	7684.9	7625.3	7515.8
40°	6890.7	7063.9	7015.4	6912.8	6864.3	6905.9	6718.7	6616.1	6515.0	6470.6	6325.1
42.5°	5711.0	5849.6	5805.3	5716.6	5679.1	5706.9	5553.0	5461.5	5372.8	5335.4	5249.4
45°	4500.9	4638.2	4595.2	4518.9	4484.2	4499.5	4370.6	4288.8	4212.5	4177.9	4100.3
47.5°	3229.8	3383.6	3330.9	3265.8	3229.8	3222.8	3109.2	3035.7	3042.6	2924.8	2852.7
50°	1492.9	1623.2	1570.5	1535.8	1501.2	1481.8	1441.7	1358.4	1382.0	1275.2	1233.6
52.5°	542.0	573.9	561.4	550.3	539.3	535.0	521.2	500.4	503.2	476.9	464.4
55°	277.3	292.5	288.4	281.4	281.4	277.3	270.3	262.0	256.5	252.3	248.1
57.5°	127.6	135.8	133.0	130.3	130.3	127.6	124.7	120.6	123.3	116.5	115.1
60°	58.2	62.4	61.0	59.7	59.7	59.7	58.2	56.8	56.8	55.4	54.1
62.5°	27.8	30.5	29.1	29.1	29.1	29.1	27.8	27.8	27.8	27.8	26.3
65°	15.2	15.2	15.2	15.2	15.2	15.2	15.2	13.8	15.2	13.8	13.8
67.5°	8.3	8.3	8.3	8.3	7.0	8.3	8.3	7.0	7.0	7.0	7.0
70°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
75°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	0.0	1.4	1.4	1.4	0.0	1.4	1.4	1.4	1.4	1.4	1.4
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	1.4	0.0	1.4	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°	205.2	205.2	205.2	205.2	205.2	205.2	205.2	205.2	205.2	205.2	205.2
2.5°	377.1	386.8	396.4	393.7	379.8	378.4	372.8	375.7	292.5	237.1	198.2
5°	956.5	968.9	981.4	974.5	939.8	931.5	903.8	898.3	571.0	280.0	190.0
7.5°	1748.0	1754.8	1764.6	1756.3	1705.0	1681.5	1623.2	1566.4	960.6	338.2	176.0
10°	2606.0	2603.2	2607.4	2596.3	2532.5	2486.8	2396.6	2356.5	1361.2	388.2	156.6
12.5°	3606.8	3595.7	3534.7	3563.9	3473.7	3380.9	3232.5	3107.8	1739.6	415.8	138.6
15°	4775.3	4742.1	4719.9	4686.6	4575.7	4426.0	4200.1	4061.5	2054.3	413.1	120.6
17.5°	5936.9	5882.9	5785.8	5798.3	5669.4	5460.1	5162.1	4925.0	2271.9	378.4	106.8
20°	7036.2	6955.8	6833.7	6824.1	6668.8	6393.0	6017.3	5723.4	2391.1	321.6	97.0
22.5°	8095.3	7970.4	7806.9	7755.6	7556.0	7165.1	6674.4	6316.8	2402.2	268.9	116.5
25°	8929.6	8773.1	8591.4	8502.7	8282.4	7783.3	7172.1	6732.6	2313.5	266.1	223.2
27.5°	9395.4	9218.0	9036.4	8915.8	8692.6	8127.0	7435.4	6928.0	2161.1	285.5	212.0
30°	9420.3	9220.8	9032.3	8879.8	8658.0	8053.6	7318.9	6790.9	1886.5	180.2	80.4
32.5°	9005.9	8792.5	8603.9	8432.0	8213.0	7604.5	6883.7	6379.2	1534.5	126.2	56.8
35°	8281.0	8060.5	7880.4	7698.8	7493.6	6921.2	6259.9	5790.1	1172.7	99.8	43.0
37.5°	7294.0	7090.2	6930.8	6807.4	6585.7	6129.6	5525.2	5027.6	828.9	70.6	26.3
40°	6189.2	6017.3	5887.0	5780.3	5575.2	5170.3	4560.4	4140.5	503.2	49.9	18.1
42.5°	5077.5	4916.7	4801.7	4700.5	4510.6	4153.0	3651.2	3229.8	241.2	34.6	12.5
45°	3949.2	3805.0	3708.0	3616.5	3446.0	3094.0	2696.1	2391.1	156.6	24.9	9.7
47.5°	2697.5	2622.6	2463.3	2363.4	2188.7	1919.9	1546.9	1211.5	104.0	18.1	7.0
50°	1121.4	1082.6	977.3	909.4	809.5	672.3	487.9	409.0	63.8	12.5	5.6
52.5°	435.3	425.5	399.2	383.9	359.0	323.0	268.9	239.8	38.9	9.7	5.6
55°	234.3	231.5	217.6	209.3	195.5	177.4	145.5	127.6	24.9	7.0	4.1
57.5°	108.1	106.8	99.8	99.8	90.1	83.2	69.3	62.4	15.2	5.6	4.1
60°	51.3	51.3	48.5	48.5	44.3	41.6	34.6	31.9	9.7	4.1	4.1
62.5°	24.9	24.9	24.9	24.9	23.5	22.2	19.4	18.1	7.0	4.1	4.1
65°	13.8	13.8	13.8	13.8	12.5	12.5	11.1	9.7	5.6	4.1	4.1
67.5°	7.0	7.0	7.0	7.0	7.0	7.0	5.6	5.6	4.1	4.1	4.1
70°	4.1	4.1	4.1	4.1	4.1	2.7	2.7	2.7	2.7	4.1	4.1
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.7	4.1	4.1
75°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.7	4.1	4.1
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.7	4.1	4.1
80°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	2.7	4.1	4.1
82.5°	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.7	4.1	4.1
85°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	2.7	4.1	4.1
87.5°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	2.7	4.1	4.1
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°	205.2	205.2	205.2	205.2
2.5°	170.5	148.4	137.3	134.4
5°	140.0	109.5	94.3	88.7
7.5°	113.6	79.0	66.5	61.0
10°	90.1	62.4	49.9	45.7
12.5°	74.9	49.9	40.2	37.4
15°	63.8	43.0	36.0	34.6
17.5°	58.2	45.7	43.0	44.3
20°	70.6	74.9	87.3	90.1
22.5°	149.7	259.2	352.0	372.8
25°	311.9	374.2	388.2	402.0
27.5°	173.3	134.4	131.7	137.3
30°	70.6	72.1	74.9	77.6
32.5°	52.7	52.7	51.3	52.7
35°	36.0	33.3	31.9	33.3
37.5°	22.2	20.8	19.4	19.4
40°	15.2	13.8	12.5	12.5
42.5°	11.1	8.3	7.0	7.0
45°	8.3	5.6	4.1	2.7
47.5°	7.0	4.1	1.4	1.4
50°	5.6	2.7	1.4	0.0
52.5°	4.1	2.7	1.4	0.0
55°	4.1	2.7	0.0	0.0
57.5°	4.1	2.7	0.0	0.0
60°	4.1	2.7	1.4	0.0
62.5°	4.1	2.7	1.4	1.4
65°	4.1	2.7	1.4	0.0
67.5°	4.1	2.7	1.4	0.0
70°	4.1	2.7	1.4	0.0
72.5°	5.6	2.7	1.4	0.0
75°	5.6	4.1	1.4	0.0
77.5°	5.6	4.1	1.4	0.0
80°	5.6	4.1	1.4	0.0
82.5°	5.6	4.1	1.4	0.0
85°	5.6	4.1	1.4	0.0
87.5°	5.6	4.1	1.4	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)