

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: P1191745

Luminaire Tested: **LDA4A25940D010TE LAR15SP 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: P1191745
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26104)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A25940D010TE LAR15SP 4LAL1 30° Tilt
Description: PORTFOLIO 4" Lensed Adjustable, Self-flanged, 15° Spot Optic, at 30° tilt. --- 27.9W
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

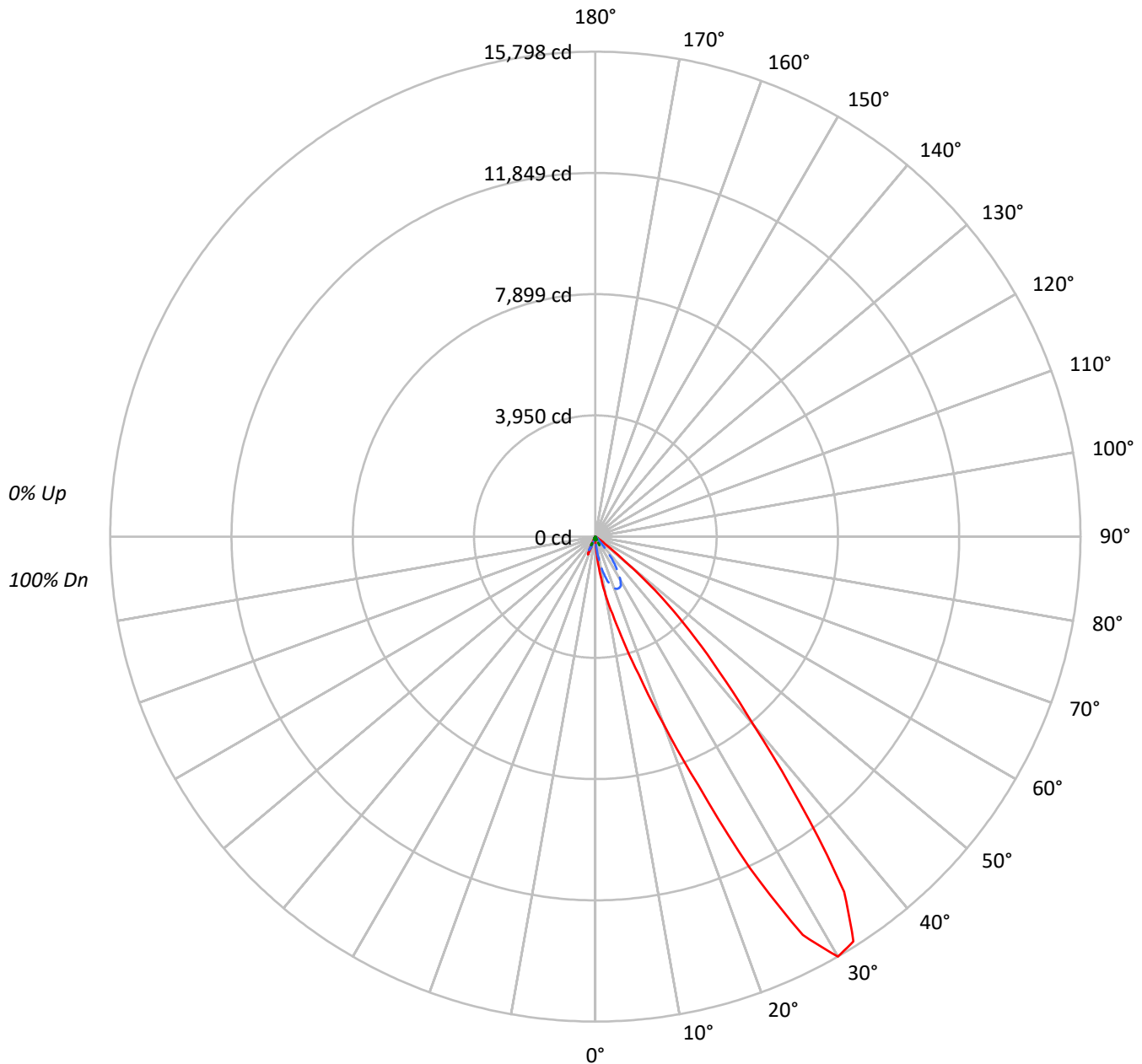
Lumens per Lamp: N/A
Luminaire Lumens: 2734.8 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Spacing Criteria (0/90/45): 2.57 / 1.16 / 1.36
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	97	96	96	94	93	91		
2	105	100	95	91	103	98	93	90	94	91	88	91	88	86	89	86	84	82		
3	99	91	85	80	96	89	84	79	87	82	78	84	80	77	82	78	76	74		
4	92	83	76	71	90	82	75	70	79	74	70	77	72	69	75	71	68	66		
5	86	75	68	63	84	74	68	63	73	67	62	71	66	62	69	65	61	59		
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53		
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48		
8	69	58	50	45	68	57	50	45	56	50	45	55	49	45	54	48	45	43		
9	65	53	46	41	64	52	46	41	51	45	41	50	45	40	49	44	40	39		
10	61	49	42	37	59	48	41	37	47	41	37	46	41	37	46	40	36	35		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	15912	15912	15912
5°	83923	15044	7974
10°	245499	12775	5260
15°	446607	10727	5938
20°	852006	12207	28930
25°	1619212	42462	63884
30°	2250109	14314	12391
35°	2126391	6550	4743
40°	1288790	2898	1675
45°	755278	1570	523
50°	250649	1151	0
55°	47740	968	0
60°	10731	740	0
65°	3035	1313	0
70°	1082	1623	0
75°	0	2145	0
80°	0	3196	0
85°	0	6369	2123



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.8	1.1
10°-20°	251.6	9.2
20°-30°	892.3	32.6
30°-40°	1057.9	38.7
40°-50°	450.1	16.5
50°-60°	40.7	1.5
60°-70°	5.0	0.2
70°-80°	3.3	0.1
80°-90°	3.0	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°	1174.7	43.0
0°-40°	2232.6	81.6
0°-60°	2723.4	99.6
0°-90°	2734.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2734.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	129	129	129	129	129	
5°	678	334	122	76	64	105
15°	3497	1473	84	46	46	1128
25°	11898	1846	312	490	469	5512
35°	14122	1090	44	33	32	8157
45°	4330	120	9	6	3	3394
55°	222	18	4	3	0	311
65°	10	4	4	3	0	15
75°	0	3	4	4	0	1
85°	0	3	4	4	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°	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0
2.5°	237.0	223.5	232.5	229.5	231.0	235.5	231.0	231.0	229.5	223.5	223.5
5°	677.8	637.3	656.9	646.4	652.4	659.9	649.4	646.4	641.9	628.4	625.4
7.5°	1262.8	1240.3	1264.2	1246.3	1262.8	1265.8	1250.7	1247.8	1240.3	1220.8	1213.3
10°	1960.1	1922.7	1945.2	1925.6	1951.2	1949.7	1925.6	1928.7	1919.6	1894.2	1882.2
12.5°	2578.1	2548.1	2570.6	2515.1	2578.1	2537.6	2542.1	2548.1	2536.1	2503.1	2488.1
15°	3497.4	3415.0	3453.9	3357.9	3453.9	3440.4	3388.0	3384.9	3353.5	3297.9	3265.0
17.5°	4718.2	4740.7	4712.2	4655.3	4782.7	4748.2	4673.2	4658.2	4598.2	4446.8	4443.7
20°	6490.9	6460.9	6508.9	6328.9	6492.4	6333.5	6312.4	6270.4	6168.4	5957.0	5923.9
22.5°	8760.0	8776.5	8691.0	8566.6	8767.5	8521.5	8446.5	8346.1	8160.1	7834.7	7732.7
25°	11897.5	11876.5	11765.5	11558.6	11773.0	11375.6	11188.1	10981.1	10634.7	10127.8	9883.3
27.5°	14631.5	14717.0	14643.5	14433.5	14576.0	14184.5	13752.6	13620.7	13151.3	12512.3	12071.5
30°	15798.3	15838.8	15807.3	15646.8	15697.8	15375.4	14947.9	14792.0	14310.6	13706.1	13134.8
32.5°	15637.9	15657.3	15663.3	15448.9	15457.8	15153.5	14706.5	14475.5	13950.6	13368.7	12686.4
35°	14121.6	14202.6	14255.1	14054.1	13854.6	13551.7	13044.7	12686.4	12134.4	11603.5	10906.2
37.5°	10936.1	11038.1	11119.1	10948.1	10853.6	10487.8	10066.3	9788.8	9407.9	9095.9	8601.0
40°	8004.1	8023.6	8073.2	7984.7	7837.7	7740.2	7498.7	7341.2	7110.2	6942.3	6613.9
42.5°	5949.5	5939.0	5973.5	5923.9	5919.5	5772.5	5619.6	5526.5	5447.1	5270.1	5039.2
45°	4329.8	4332.7	4365.8	4334.2	4250.3	4218.7	4118.3	4034.3	3929.3	3873.8	3690.9
47.5°	2944.0	2953.0	2975.5	2957.5	2881.0	2869.1	2804.5	2720.6	2719.1	2633.5	2473.1
50°	1306.2	1309.3	1336.3	1330.3	1238.8	1250.7	1208.8	1132.3	1153.3	1102.4	979.4
52.5°	433.5	434.9	439.4	436.4	421.4	421.4	410.9	409.4	397.4	385.5	358.5
55°	222.0	222.0	225.0	223.5	216.0	216.0	204.0	211.5	205.5	200.9	184.5
57.5°	94.5	94.5	96.0	96.0	91.4	96.0	91.4	91.4	88.5	87.0	81.0
60°	43.5	43.5	43.5	43.5	42.0	45.0	42.0	42.0	42.0	40.5	37.4
62.5°	22.5	22.5	22.5	22.5	22.5	22.5	22.5	21.0	21.0	21.0	19.5
65°	10.4	10.4	10.4	10.4	10.4	12.0	10.4	10.4	10.4	10.4	10.4
67.5°	4.5	4.5	4.5	6.0	6.0	6.0	6.0	6.0	4.5	4.5	4.5
70°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.5
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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°	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0
2.5°	225.0	217.5	227.9	219.0	225.0	219.0	211.5	214.4	172.4	144.0	127.5
5°	626.9	604.4	623.8	604.4	605.9	595.4	566.9	563.9	334.4	163.5	121.5
7.5°	1180.3	1177.3	1201.3	1175.8	1172.8	1147.3	1094.9	1073.8	605.9	192.0	112.4
10°	1874.7	1831.1	1852.2	1825.2	1816.2	1769.7	1694.7	1654.3	901.3	220.4	102.0
12.5°	2446.1	2429.6	2444.5	2419.1	2410.1	2347.1	2258.6	2204.6	1204.3	237.0	91.4
15°	3192.9	3159.9	3170.5	3118.0	3091.0	2971.0	2819.5	2720.6	1472.8	235.5	84.0
17.5°	4332.7	4268.3	4262.3	4172.3	4106.3	3888.8	3617.4	3413.4	1669.2	217.5	81.0
20°	5760.6	5643.5	5604.6	5462.1	5351.0	4991.2	4572.7	4241.3	1792.2	193.4	93.0
22.5°	7471.7	7266.2	7150.7	6922.8	6732.4	6154.9	5541.5	5045.2	1846.2	185.9	133.5
25°	9466.4	9113.9	8869.5	8511.1	8190.1	7303.8	6442.9	5747.1	1846.2	241.4	312.0
27.5°	11489.5	10933.2	10483.2	9959.8	9472.4	8215.6	7105.8	6200.0	1801.2	301.4	285.0
30°	12513.9	11830.0	11218.1	10606.2	9994.3	8484.1	7254.2	6255.4	1631.7	177.0	100.5
32.5°	12079.0	11357.6	10681.2	10088.8	9484.3	8010.1	6852.4	5888.0	1370.8	103.5	64.4
35°	10411.2	9785.9	9197.9	8755.5	8284.6	7120.8	6084.5	5244.6	1090.3	81.0	43.5
37.5°	8310.1	7884.2	7465.8	7182.3	6844.8	5970.5	5135.1	4446.8	779.8	58.5	27.0
40°	6445.9	6154.9	5862.5	5682.5	5444.1	4806.7	4155.8	3608.4	460.5	40.5	18.0
42.5°	4937.2	4736.2	4518.7	4394.2	4223.3	3747.8	3239.5	2852.5	212.9	28.5	13.5
45°	3629.4	3480.9	3314.4	3234.9	3115.0	2801.6	2464.1	2191.1	120.0	21.0	9.0
47.5°	2443.1	2311.1	2156.6	2107.1	1991.7	1717.2	1372.2	1103.8	79.5	15.0	7.5
50°	971.8	884.9	832.4	763.4	695.9	583.3	436.4	347.9	48.0	12.0	6.0
52.5°	356.9	337.4	328.4	310.5	295.4	264.0	223.5	193.4	28.5	9.0	4.5
55°	185.9	173.9	168.0	162.0	152.9	135.0	112.4	96.0	18.0	6.0	4.5
57.5°	81.0	76.5	77.9	72.0	67.5	61.5	54.0	46.5	12.0	6.0	4.5
60°	39.0	36.0	37.4	34.5	33.0	31.5	28.5	23.9	7.5	4.5	3.0
62.5°	19.5	19.5	19.5	18.0	18.0	16.5	15.0	13.5	6.0	4.5	4.5
65°	10.4	9.0	10.4	9.0	9.0	9.0	7.5	7.5	4.5	4.5	4.5
67.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.0	4.5	4.5
70°	3.0	3.0	3.0	3.0	3.0	3.0	1.5	3.0	3.0	4.5	4.5
72.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	4.5	4.5
75°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	3.0	4.5	4.5
77.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	3.0	4.5	4.5
80°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	3.0	4.5	4.5
82.5°	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	3.0	4.5	4.5
85°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	3.0	4.5	4.5
87.5°	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	3.0	4.5	4.5
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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CATALOG NUMBER: LDA4A25940D010TE LAR15SP 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	129.0	129.0	129.0	129.0
2.5°	108.0	96.0	87.0	85.5
5°	91.4	76.5	66.0	64.4
7.5°	77.9	61.5	52.5	50.9
10°	69.0	52.5	43.5	42.0
12.5°	61.5	46.5	40.5	39.0
15°	57.0	46.5	45.0	46.5
17.5°	61.5	63.0	69.0	76.5
20°	102.0	145.4	189.0	220.4
22.5°	229.5	424.4	562.4	628.4
25°	433.5	490.4	491.9	469.4
27.5°	235.5	187.4	168.0	158.9
30°	93.0	88.5	88.5	87.0
32.5°	61.5	57.0	55.5	54.0
35°	37.4	33.0	31.5	31.5
37.5°	23.9	21.0	19.5	18.0
40°	16.5	13.5	12.0	10.4
42.5°	12.0	9.0	6.0	6.0
45°	9.0	6.0	3.0	3.0
47.5°	7.5	4.5	1.5	1.5
50°	6.0	3.0	1.5	0.0
52.5°	4.5	3.0	0.0	0.0
55°	4.5	3.0	0.0	0.0
57.5°	4.5	3.0	0.0	0.0
60°	4.5	3.0	0.0	0.0
62.5°	4.5	3.0	0.0	0.0
65°	4.5	3.0	1.5	0.0
67.5°	6.0	3.0	1.5	0.0
70°	6.0	3.0	1.5	0.0
72.5°	6.0	3.0	1.5	0.0
75°	6.0	4.5	1.5	0.0
77.5°	6.0	4.5	1.5	0.0
80°	6.0	4.5	1.5	0.0
82.5°	6.0	4.5	1.5	0.0
85°	6.0	4.5	1.5	1.5
87.5°	6.0	4.5	1.5	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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Peachtree City, GA 30269



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Scaled Data Report



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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)