

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: P1191445

Luminaire Tested: **LDA4A10930D010TE 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: P1191445
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: LDA4A10930D010TE 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

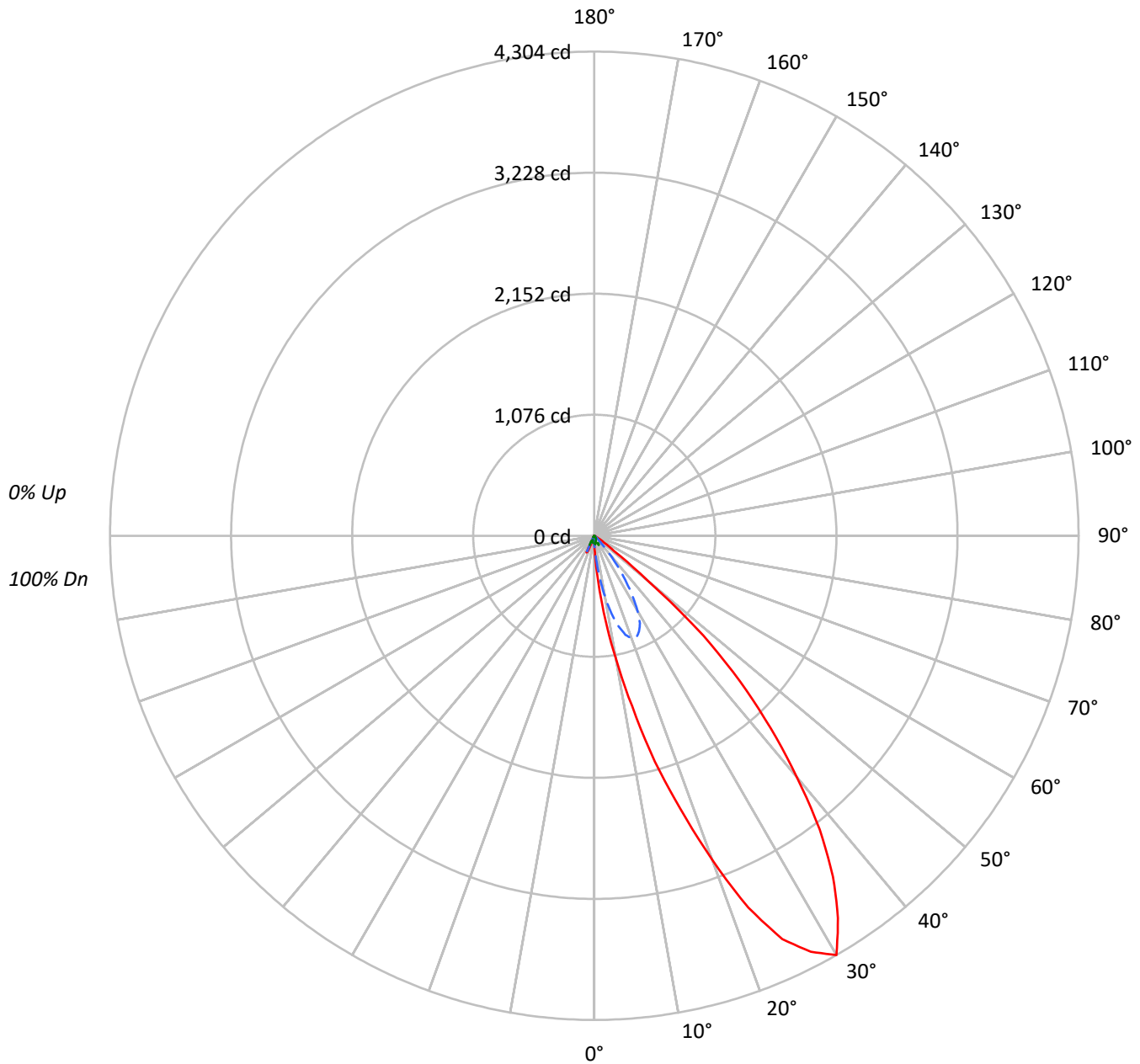
Lumens per Lamp: N/A
Luminaire Lumens: 1120.3 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 12.4
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

TEST NUMBER: P1191445

CATALOG NUMBER: LDA4A10930D010TE LAR25NF 4LAL1 30° Tilt

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191445

CATALOG NUMBER: LDA4A10930D010TE LAR25NF 4LAL1 30° Tilt

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	10287	10287	10287
5°	52882	9559	4457
10°	139364	7978	2330
15°	265252	6257	1801
20°	402895	5185	4817
25°	538345	12344	22238
30°	612964	4657	4501
35°	556774	2635	2033
40°	450942	1192	821
45°	319115	680	192
50°	116440	441	0
55°	24236	366	0
60°	5847	419	0
65°	1810	496	0
70°	613	613	0
75°	238	810	0
80°	0	1208	0
85°	0	2406	0



TEST NUMBER: P1191445

CATALOG NUMBER: LDA4A10930D010TE LAR25NF 4LAL1 30° Tilt

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.9	1.7
10°-20°	140.9	12.6
20°-30°	357.4	31.9
30°-40°	382.5	34.1
40°-50°	195.5	17.5
50°-60°	20.4	1.8
60°-70°	2.3	0.2
70°-80°	1.3	0.1
80°-90°	1.1	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°	517.1	46.2
0°-40°	899.6	80.3
0°-60°	1115.5	99.6
0°-90°	1120.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1120.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	83	83	83	83	83	
5°	427	232	77	44	36	62
15°	2077	835	49	18	14	614
25°	3956	940	91	152	163	1797
35°	3698	477	18	14	14	2270
45°	1829	64	4	2	1	1365
55°	113	10	2	1	0	153
65°	6	2	2	1	0	8
75°	0	1	2	2	0	0
85°	0	1	2	2	0	0
90°	0	0	0	0	0	

TEST NUMBER: P1191445

CATALOG NUMBER: LDA4A10930D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (FULL):

	0°	1°	2°	3°	4°	5°	6°	7°	8°	9°	10°
0°	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4
2.5°	168.5	170.2	157.7	161.6	164.6	158.8	157.7	157.7	163.9	160.6	166.2
5°	427.1	425.3	403.9	410.1	414.6	403.9	409.0	401.1	410.7	404.5	410.7
7.5°	745.9	765.7	738.6	744.8	748.7	737.5	740.3	729.1	739.8	732.4	737.5
10°	1112.7	1133.0	1101.4	1106.5	1109.3	1098.6	1099.2	1084.6	1094.2	1086.3	1089.6
12.5°	1551.0	1558.9	1543.7	1547.6	1549.4	1535.3	1508.8	1511.6	1521.2	1507.6	1511.0
15°	2077.2	2071.6	2053.5	2066.5	2053.5	2046.8	2006.8	2004.6	2010.2	1994.9	1970.7
17.5°	2540.9	2583.8	2563.4	2570.8	2555.0	2555.0	2503.7	2495.3	2495.9	2455.3	2450.8
20°	3069.4	3124.0	3074.5	3076.7	3055.9	3055.3	2992.8	2975.4	2968.0	2921.7	2908.9
22.5°	3578.7	3594.5	3593.9	3584.3	3535.3	3563.4	3485.2	3457.6	3435.0	3382.7	3356.7
25°	3955.6	4005.2	3971.4	3947.2	3904.3	3939.8	3851.9	3815.9	3782.1	3738.2	3704.3
27.5°	4168.6	4214.8	4206.9	4170.9	4127.0	4161.2	4064.9	4018.2	3970.3	3938.2	3895.9
30°	4303.7	4374.2	4351.1	4272.8	4208.6	4219.8	4111.7	4049.1	3996.1	3962.9	3909.4
32.5°	4029.4	4102.1	4095.4	4038.4	4005.2	4032.8	3938.7	3876.8	3826.1	3799.6	3739.9
35°	3697.6	3782.7	3764.1	3716.8	3692.5	3724.6	3632.7	3581.0	3529.7	3506.6	3441.3
37.5°	3291.4	3371.4	3352.8	3307.7	3284.1	3307.7	3219.8	3171.9	3123.5	3099.3	3054.7
40°	2800.6	2871.0	2851.4	2809.6	2789.9	2806.8	2730.8	2689.1	2648.0	2629.9	2570.8
42.5°	2321.2	2377.6	2359.5	2323.4	2308.3	2319.5	2257.0	2219.8	2183.7	2168.6	2133.5
45°	1829.4	1885.2	1867.7	1836.6	1822.6	1828.9	1776.4	1743.1	1712.2	1698.0	1666.6
47.5°	1312.7	1375.3	1353.9	1327.4	1312.7	1309.9	1263.7	1233.9	1236.7	1188.8	1159.5
50°	606.8	659.8	638.3	624.3	610.1	602.2	585.9	552.2	561.7	518.3	501.5
52.5°	220.2	233.2	228.1	223.7	219.2	217.4	211.8	203.4	204.6	193.9	188.8
55°	112.7	118.8	117.2	114.4	114.4	112.7	109.9	106.5	104.2	102.5	100.9
57.5°	51.8	55.2	54.1	53.0	53.0	51.8	50.7	49.0	50.2	47.4	46.7
60°	23.7	25.3	24.8	24.2	24.2	24.2	23.7	23.1	23.1	22.5	22.0
62.5°	11.2	12.4	11.8	11.8	11.8	11.8	11.2	11.2	11.2	11.2	10.7
65°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	5.6	6.2	5.6	5.6
67.5°	3.4	3.4	3.4	3.4	2.8	3.4	3.4	2.8	2.8	2.8	2.8
70°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
77.5°	0.0	0.5	0.5	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5
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	0.5	0.0	0.5	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

TEST NUMBER: P1191445

CATALOG NUMBER: LDA4A10930D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4	83.4
2.5°	153.2	157.2	161.1	160.0	154.4	153.9	151.6	152.7	118.8	96.3	80.6
5°	388.7	393.8	398.9	396.0	382.0	378.6	367.3	365.1	232.1	113.7	77.2
7.5°	710.5	713.3	717.2	713.8	692.9	683.4	659.8	636.6	390.4	137.4	71.6
10°	1059.3	1058.1	1059.8	1055.3	1029.3	1010.7	974.2	957.7	553.3	157.7	63.7
12.5°	1466.0	1461.5	1436.7	1448.5	1411.8	1374.1	1313.9	1263.2	707.1	169.0	56.3
15°	1940.9	1927.4	1918.4	1904.9	1859.8	1798.9	1707.1	1650.8	834.9	167.9	49.0
17.5°	2413.0	2391.1	2351.6	2356.7	2304.3	2219.3	2098.1	2001.7	923.5	153.9	43.4
20°	2859.8	2827.1	2777.5	2773.6	2710.5	2598.4	2445.7	2326.2	971.9	130.7	39.5
22.5°	3290.2	3239.5	3173.0	3152.3	3071.1	2912.2	2712.7	2567.4	976.3	109.3	47.4
25°	3629.4	3565.7	3492.0	3455.9	3366.3	3163.5	2915.0	2736.4	940.3	108.1	90.7
27.5°	3818.7	3746.6	3672.9	3623.8	3533.1	3303.2	3022.1	2815.9	878.4	116.0	86.2
30°	3828.9	3747.8	3671.1	3609.2	3519.0	3273.3	2974.7	2760.1	766.8	73.2	32.7
32.5°	3660.4	3573.6	3497.0	3427.2	3338.1	3090.8	2797.8	2592.7	623.6	51.3	23.1
35°	3365.8	3276.2	3203.0	3129.1	3045.8	2813.1	2544.3	2353.3	476.6	40.5	17.5
37.5°	2964.7	2881.7	2817.0	2766.8	2676.7	2491.3	2245.7	2043.5	336.9	28.8	10.7
40°	2515.5	2445.7	2392.7	2349.4	2266.0	2101.4	1853.6	1682.9	204.6	20.3	7.4
42.5°	2063.7	1998.4	1951.6	1910.5	1833.3	1688.0	1484.0	1312.7	98.1	14.1	5.1
45°	1605.2	1546.6	1507.1	1469.9	1400.6	1257.4	1095.8	971.9	63.7	10.2	3.9
47.5°	1096.3	1066.0	1001.2	960.5	889.6	780.3	628.7	492.4	42.3	7.4	2.8
50°	455.7	440.0	397.2	369.6	329.0	273.2	198.3	166.2	25.9	5.1	2.3
52.5°	176.9	173.0	162.3	156.0	146.0	131.3	109.3	97.4	15.8	3.9	2.3
55°	95.3	94.1	88.4	85.1	79.5	72.1	59.1	51.8	10.2	2.8	1.7
57.5°	43.9	43.4	40.5	40.5	36.7	33.8	28.1	25.3	6.2	2.3	1.7
60°	20.9	20.9	19.7	19.7	18.1	16.9	14.1	13.0	3.9	1.7	1.7
62.5°	10.2	10.2	10.2	10.2	9.6	9.0	7.9	7.4	2.8	1.7	1.7
65°	5.6	5.6	5.6	5.6	5.1	5.1	4.5	3.9	2.3	1.7	1.7
67.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.3	2.3	1.7	1.7	1.7
70°	1.7	1.7	1.7	1.7	1.7	1.1	1.1	1.1	1.1	1.7	1.7
72.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.1	1.7	1.7
75°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.1	1.7	1.7
77.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.1	1.7	1.7
80°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	1.1	1.7	1.7
82.5°	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.1	1.7	1.7
85°	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.5	1.1	1.7	1.7
87.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	1.1	1.7	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191445

CATALOG NUMBER: LDA4A10930D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	83.4	83.4	83.4	83.4
2.5°	69.3	60.2	55.8	54.6
5°	56.9	44.5	38.3	36.0
7.5°	46.2	32.1	27.0	24.8
10°	36.7	25.3	20.3	18.6
12.5°	30.4	20.3	16.3	15.2
15°	25.9	17.5	14.6	14.1
17.5°	23.7	18.6	17.5	18.1
20°	28.8	30.4	35.5	36.7
22.5°	60.9	105.3	143.0	151.6
25°	126.7	152.1	157.7	163.4
27.5°	70.4	54.6	53.5	55.8
30°	28.8	29.3	30.4	31.6
32.5°	21.4	21.4	20.9	21.4
35°	14.6	13.5	13.0	13.5
37.5°	9.0	8.4	7.9	7.9
40°	6.2	5.6	5.1	5.1
42.5°	4.5	3.4	2.8	2.8
45°	3.4	2.3	1.7	1.1
47.5°	2.8	1.7	0.5	0.5
50°	2.3	1.1	0.5	0.0
52.5°	1.7	1.1	0.5	0.0
55°	1.7	1.1	0.0	0.0
57.5°	1.7	1.1	0.0	0.0
60°	1.7	1.1	0.5	0.0
62.5°	1.7	1.1	0.5	0.5
65°	1.7	1.1	0.5	0.0
67.5°	1.7	1.1	0.5	0.0
70°	1.7	1.1	0.5	0.0
72.5°	2.3	1.1	0.5	0.0
75°	2.3	1.7	0.5	0.0
77.5°	2.3	1.7	0.5	0.0
80°	2.3	1.7	0.5	0.0
82.5°	2.3	1.7	0.5	0.0
85°	2.3	1.7	0.5	0.0
87.5°	2.3	1.7	0.5	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



Report Generated By 670245859 / DESKTOP-T8S5UU9

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - 90°-270°

Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



(END OF REPORT)