

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: P1191940

Luminaire Tested: **LDA4A35940D010TE LAR35FL 4LLWW1**

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: P1191940
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26103)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A35940D010TE LAR35FL 4LLWW1
Description: PORTFOLIO 4" Lensed Wall Wash, Self-flanged, 35° Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

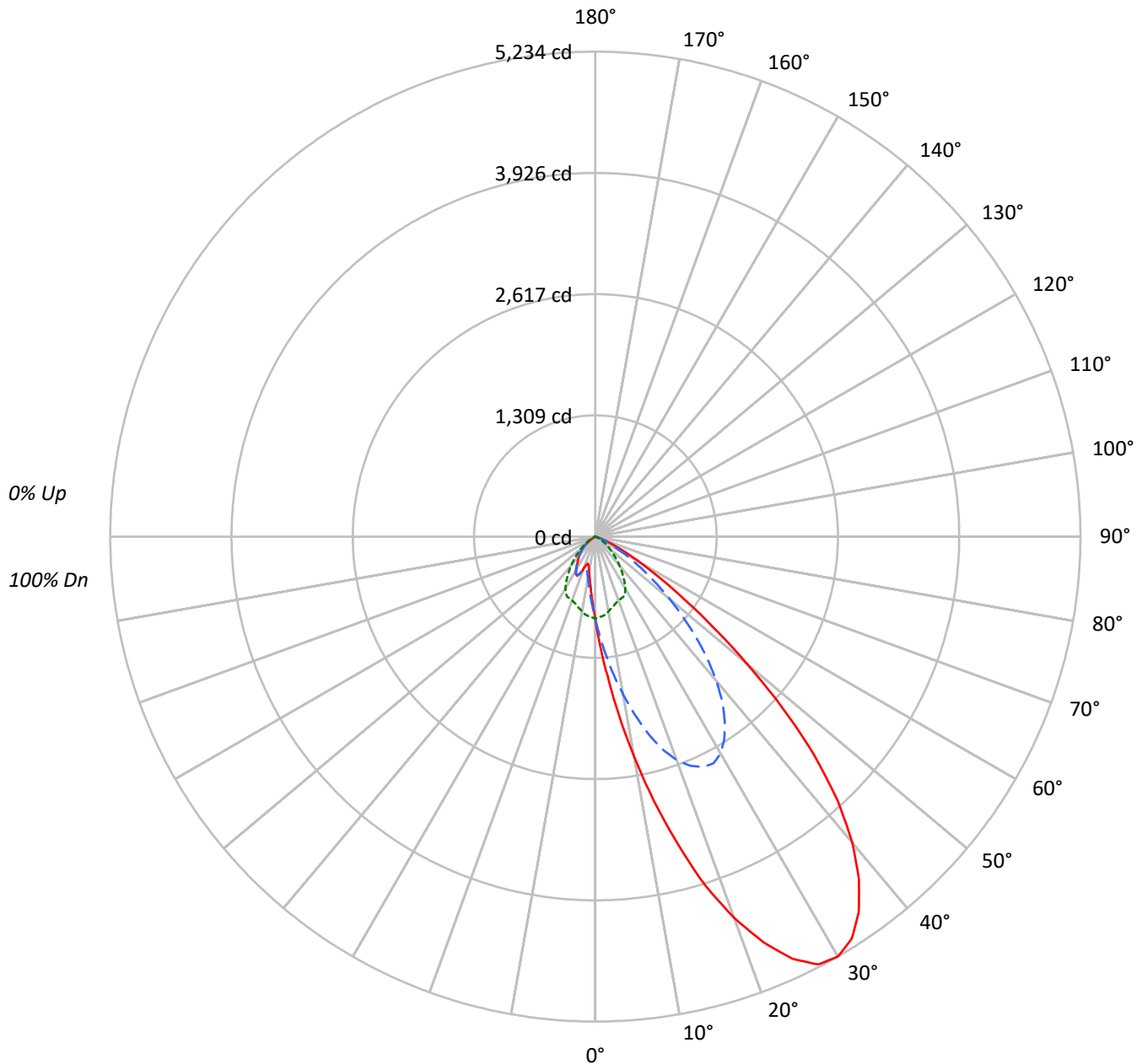
Lumens per Lamp: N/A
Luminaire Lumens: 3322.9 lumens
Efficiency: N/A
Efficacy: 70.5 lumens/watt
Spacing Criteria (0/90/45): 2.19 / 1.11 / 1.55
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 47.1
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: P1191940

CATALOG NUMBER: LDA4A35940D010TE LAR35FL 4LLWW1

Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191940

CATALOG NUMBER: LDA4A35940D010TE LAR35FL 4LLWW1

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	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90		
2	104	98	92	88	102	96	91	87	93	89	85	89	86	83	87	84	81	80		
3	97	88	82	76	94	87	81	76	84	79	74	81	77	73	79	75	72	70		
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	67	64	62		
5	83	72	64	59	81	71	64	59	69	63	58	67	62	57	65	61	57	55		
6	77	65	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49		
7	72	60	52	46	70	59	52	46	57	51	46	56	50	46	55	50	45	44		
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39		
9	62	50	43	38	61	50	42	37	49	42	37	47	41	37	47	41	37	35		
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	109445	109445	109445
5°	186790	106767	69721
10°	301899	102541	47619
15°	438613	98454	38730
20°	574427	96294	48278
25°	684091	97568	63639
30°	745521	92036	59193
35°	745628	78541	50052
40°	693932	64906	43507
45°	582847	50726	37330
50°	409113	37879	27498
55°	246228	27246	15204
60°	135828	17441	5649
65°	65494	8493	613
70°	26254	2993	757
75°	7911	2002	0
80°	2983	2983	0
85°	8774	5944	0



TEST NUMBER: P1191940

CATALOG NUMBER: LDA4A35940D010TE LAR35FL 4LLWW1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.2	2.9
10°-20°	377.2	11.4
20°-30°	764.9	23.0
30°-40°	929.4	28.0
40°-50°	733.4	22.1
50°-60°	332.2	10.0
60°-70°	78.4	2.4
70°-80°	8.5	0.3
80°-90°	3.8	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°	1237.3	37.2
0°-40°	2166.7	65.2
0°-60°	3232.2	97.3
0°-90°	3322.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3322.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	887	887	887	887	887	
5°	1509	1270	862	632	563	172
15°	3435	2201	771	366	303	999
25°	5026	2745	717	457	468	2300
35°	4952	2433	522	339	332	3058
45°	3341	1536	291	212	214	2528
55°	1145	628	127	85	71	1081
65°	224	133	29	6	2	253
75°	17	8	4	2	0	26
85°	6	6	4	2	0	6
90°	0	0	0	0	0	

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



TEST NUMBER: P1191940

CATALOG NUMBER: LDA4A35940D010TE LAR35FL 4LLWW1

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	887.3	887.3	887.3	887.3	887.3	887.3	887.3	887.3	887.3	887.3	887.3
2.5°	1178.1	1149.0	1149.0	1128.2	1145.0	1111.7	1118.0	1115.9	1136.7	1130.4	1111.7
5°	1508.6	1483.6	1481.6	1454.5	1475.3	1431.7	1433.9	1427.5	1450.4	1427.5	1400.6
7.5°	1934.6	1890.9	1888.8	1857.6	1878.4	1822.3	1820.2	1807.9	1828.5	1785.0	1745.5
10°	2410.4	2348.1	2343.9	2306.5	2329.4	2256.6	2250.5	2229.7	2244.1	2175.6	2119.5
12.5°	2919.5	2851.0	2842.7	2803.2	2823.9	2736.6	2720.0	2693.1	2699.2	2599.5	2524.7
15°	3434.8	3376.6	3368.3	3326.7	3347.5	3239.5	3212.5	3179.2	3173.0	3040.1	2944.4
17.5°	3948.0	3829.6	3867.1	3825.5	3844.2	3717.5	3682.1	3640.6	3617.7	3453.6	3333.0
20°	4376.2	4274.3	4301.4	4263.9	4280.6	4135.0	4091.5	4039.5	4000.0	3802.6	3663.4
22.5°	4737.7	4631.7	4617.1	4617.1	4627.5	4469.6	4411.4	4353.2	4297.2	4062.4	3921.1
25°	5026.5	4910.2	4893.5	4889.4	4891.5	4725.2	4656.6	4592.2	4519.5	4261.9	4108.1
27.5°	5205.3	5082.6	5063.9	5061.8	5051.4	4881.1	4804.1	4733.6	4646.2	4382.3	4209.9
30°	5234.4	5122.1	5101.3	5101.3	5074.3	4908.1	4823.0	4748.1	4650.4	4384.4	4199.5
32.5°	5147.1	5032.7	5010.0	5011.9	4968.4	4812.6	4721.1	4644.2	4542.4	4280.6	4089.4
35°	4951.8	4841.6	4820.9	4823.0	4768.9	4623.4	4527.9	4453.0	4345.0	4095.6	3900.3
37.5°	4671.2	4567.4	4546.6	4550.7	4484.2	4353.2	4255.6	4184.9	4074.8	3844.2	3653.0
40°	4309.7	4209.9	4191.3	4193.2	4120.6	4006.2	3910.7	3844.2	3734.0	3528.3	3345.6
42.5°	3871.2	3775.6	3761.0	3759.1	3688.4	3584.4	3491.0	3434.8	3322.7	3158.4	2983.9
45°	3341.3	3260.3	3195.9	3239.5	3166.8	3083.7	2996.4	2950.7	2844.7	2728.3	2572.5
47.5°	2744.9	2674.4	2609.9	2651.5	2585.0	2522.6	2445.8	2416.7	2321.0	2260.9	2129.9
50°	2132.0	2071.7	2013.6	2048.8	1996.8	1955.4	1895.1	1880.5	1801.5	1793.3	1691.4
52.5°	1583.3	1539.8	1494.0	1521.1	1481.6	1454.5	1408.8	1404.6	1344.5	1365.1	1294.6
55°	1145.0	1113.8	1078.5	1099.2	1070.1	1053.5	1020.2	1022.3	976.6	1007.8	958.0
57.5°	810.4	785.4	760.6	773.1	754.2	741.9	719.0	723.2	712.8	723.2	687.8
60°	550.6	536.2	517.3	527.7	511.2	505.0	490.4	492.5	467.6	500.8	475.9
62.5°	361.5	351.1	351.1	344.9	332.4	328.4	320.1	320.1	305.5	330.3	313.7
65°	224.4	220.3	218.2	214.0	205.7	203.6	197.4	197.4	187.0	205.7	193.2
67.5°	133.1	131.0	128.8	126.7	120.6	118.4	116.3	114.2	108.0	120.6	112.3
70°	72.8	72.8	70.7	68.6	64.3	64.3	62.4	62.4	58.2	64.3	58.2
72.5°	35.3	35.3	33.3	33.3	31.2	31.2	29.1	29.1	27.0	31.2	27.0
75°	16.6	16.6	14.6	14.6	14.6	14.6	12.5	12.5	12.5	14.6	12.5
77.5°	8.3	8.3	8.3	8.3	6.2	6.2	6.2	6.2	6.2	6.2	6.2
80°	4.2	4.2	4.2	4.2	4.2	2.1	2.1	2.1	2.1	4.2	4.2
82.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
85°	6.2	6.2	6.2	6.2	8.3	6.2	8.3	8.3	8.3	8.3	8.3
87.5°	8.3	8.3	8.3	8.3	8.3	10.4	10.4	10.4	8.3	10.4	8.3
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: P1191940

CATALOG NUMBER: LDA4A35940D010TE LAR35FL 4LLWW1

CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	887.3	887.3	887.3	887.3	887.3	887.3	887.3	887.3	887.3	887.3	887.3
2.5°	1118.0	1101.3	1107.6	1088.9	1074.3	1068.1	1068.1	1066.0	968.4	870.7	802.1
5°	1398.4	1367.2	1371.5	1338.2	1323.7	1302.9	1296.6	1269.6	1057.7	862.3	729.4
7.5°	1730.9	1685.2	1658.2	1627.0	1608.4	1571.0	1552.1	1498.2	1140.8	845.7	658.7
10°	2088.3	2024.0	1980.3	1930.4	1911.7	1853.5	1818.1	1726.8	1213.5	818.7	592.2
12.5°	2474.8	2387.6	2308.6	2254.5	2231.8	2119.5	2096.6	1965.8	1280.0	793.7	538.1
15°	2871.8	2761.6	2661.9	2585.0	2555.9	2445.8	2375.1	2200.6	1338.2	771.0	496.7
17.5°	3225.0	3106.6	2986.0	2886.2	2844.7	2688.8	2622.4	2406.3	1381.9	748.0	473.8
20°	3538.7	3395.3	3268.6	3131.4	3083.7	2907.0	2799.0	2566.3	1406.7	733.6	475.9
22.5°	3777.7	3613.5	3468.1	3314.4	3254.1	3060.7	2938.2	2676.3	1415.0	723.2	490.4
25°	3952.3	3769.3	3607.3	3439.0	3368.3	3162.6	3027.6	2744.9	1413.1	716.9	496.7
27.5°	4041.6	3846.3	3671.7	3491.0	3414.1	3202.1	3056.7	2759.5	1384.0	692.0	496.7
30°	4029.1	3823.4	3640.6	3453.6	3370.4	3160.5	3010.9	2703.5	1321.6	646.2	461.3
32.5°	3918.9	3709.2	3522.2	3335.2	3252.0	3046.3	2896.6	2589.1	1232.2	586.0	413.5
35°	3736.2	3528.3	3343.4	3160.5	3077.5	2878.0	2732.5	2433.3	1130.4	521.6	369.8
37.5°	3497.2	3295.7	3117.0	2950.7	2855.0	2668.0	2526.8	2248.4	1018.2	463.4	332.4
40°	3200.0	3008.9	2840.6	2686.7	2585.0	2412.5	2283.6	2030.1	899.8	403.1	297.2
42.5°	2857.2	2678.4	2541.3	2387.6	2273.2	2121.6	2009.4	1789.0	779.2	349.2	259.8
45°	2468.5	2310.7	2192.3	2057.1	1938.7	1809.8	1714.3	1535.6	656.6	290.8	224.4
47.5°	2050.9	1920.0	1828.5	1716.4	1600.1	1496.1	1421.3	1277.9	540.2	243.1	191.2
50°	1639.6	1535.6	1469.1	1384.0	1277.9	1198.9	1140.8	1045.2	428.1	197.4	160.0
52.5°	1261.3	1186.6	1140.8	1078.5	984.9	931.0	889.4	822.8	326.3	160.0	128.8
55°	941.2	887.3	858.2	814.5	733.6	696.1	669.1	627.5	243.1	126.7	99.8
57.5°	679.5	644.2	625.5	596.3	529.8	507.1	488.2	463.4	176.6	97.6	72.8
60°	473.8	448.8	438.5	419.7	365.7	351.1	326.3	326.3	124.6	70.7	49.9
62.5°	313.7	297.2	292.9	278.5	236.9	228.6	222.3	218.2	85.1	47.8	29.1
65°	195.3	182.8	180.8	172.4	143.3	139.2	133.1	133.1	54.1	29.1	14.6
67.5°	112.3	105.9	103.8	99.8	79.0	76.9	72.8	76.9	31.2	14.6	6.2
70°	60.3	54.1	54.1	52.0	39.5	37.4	35.3	37.4	16.6	8.3	4.2
72.5°	29.1	24.9	24.9	22.9	16.6	16.6	14.6	18.7	8.3	4.2	4.2
75°	12.5	12.5	10.4	10.4	6.2	6.2	6.2	8.3	4.2	4.2	4.2
77.5°	6.2	6.2	6.2	6.2	2.1	2.1	2.1	4.2	4.2	4.2	4.2
80°	4.2	4.2	4.2	4.2	0.0	0.0	0.0	4.2	4.2	4.2	4.2
82.5°	4.2	2.1	2.1	2.1	0.0	0.0	0.0	2.1	4.2	4.2	4.2
85°	6.2	6.2	6.2	6.2	4.2	4.2	4.2	6.2	4.2	4.2	4.2
87.5°	8.3	8.3	8.3	8.3	6.2	6.2	6.2	10.4	6.2	4.2	4.2
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: P1191940

CATALOG NUMBER: LDA4A35940D010TE LAR35FL 4LLWW1

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	887.3	887.3	887.3
2.5°	744.0	700.3	704.5
5°	631.7	569.3	563.1
7.5°	534.1	467.6	459.2
10°	457.2	390.6	380.2
12.5°	401.0	340.7	330.3
15°	365.7	311.6	303.3
17.5°	359.6	318.0	313.7
20°	384.4	363.6	367.8
22.5°	428.1	421.8	432.2
25°	457.2	455.1	467.6
27.5°	450.9	446.8	455.1
30°	417.7	411.4	415.6
32.5°	378.2	367.8	371.9
35°	338.8	330.3	332.4
37.5°	305.5	299.3	299.3
40°	276.4	270.2	270.2
42.5°	245.2	241.1	243.1
45°	211.9	209.9	214.0
47.5°	178.7	176.6	180.8
50°	147.5	143.3	143.3
52.5°	116.3	110.2	105.9
55°	85.1	74.7	70.7
57.5°	58.2	47.8	43.7
60°	33.3	27.0	22.9
62.5°	16.6	10.4	8.3
65°	6.2	4.2	2.1
67.5°	4.2	2.1	2.1
70°	4.2	2.1	2.1
72.5°	2.1	2.1	2.1
75°	2.1	2.1	0.0
77.5°	2.1	2.1	2.1
80°	2.1	2.1	0.0
82.5°	2.1	2.1	0.0
85°	2.1	2.1	0.0
87.5°	2.1	2.1	0.0
90°	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



Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



— 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

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)