

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: P1191886

Luminaire Tested: **LDA4A35927D010TE 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: P1191886
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: LDA4A35927D010TE LAR35FL 4LLWW1
Description: PORTFOLIO 4" Lensed Wall Wash, Self-flanged, 35° Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

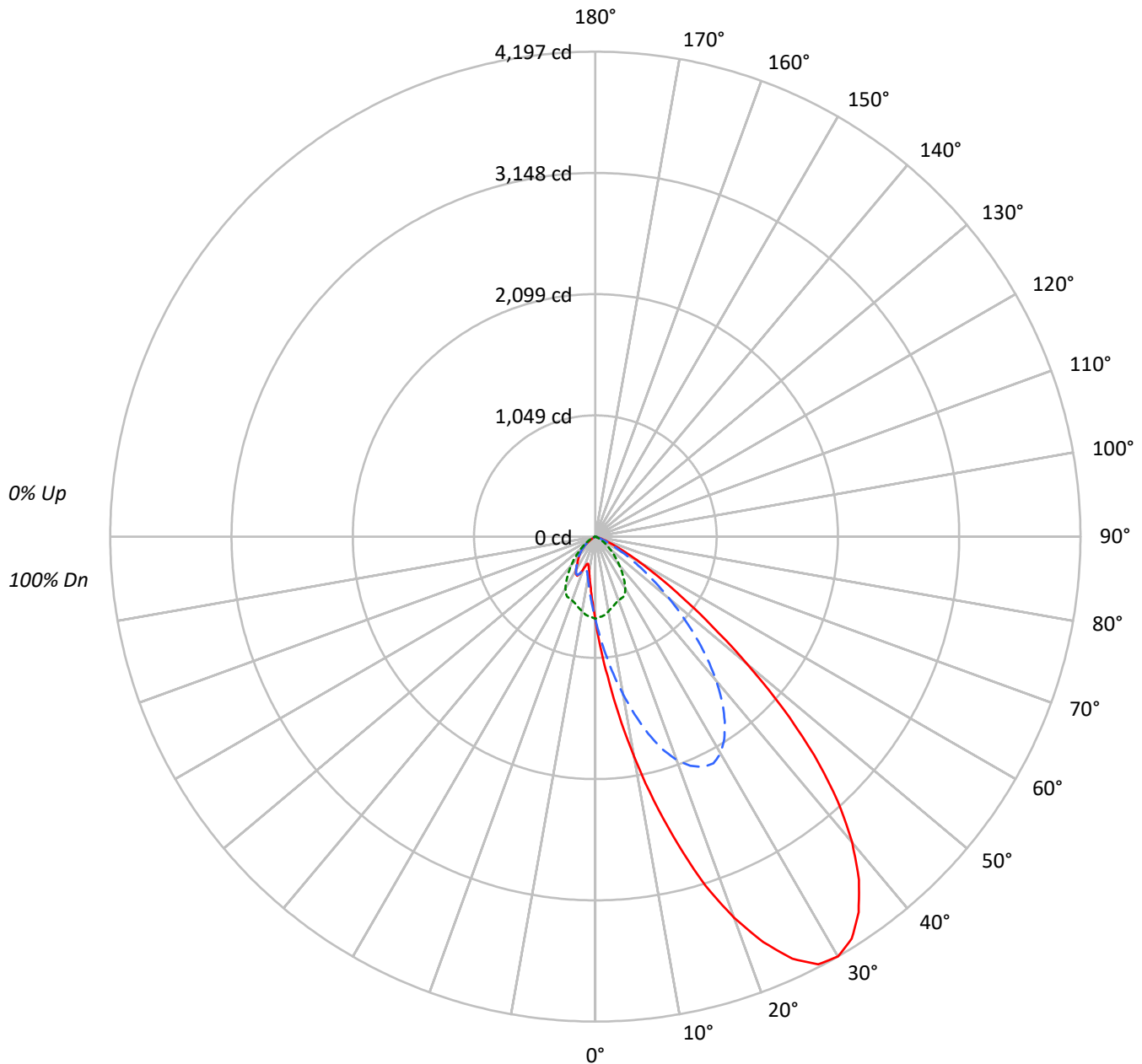
Lumens per Lamp: N/A
Luminaire Lumens: 2664.1 lumens
Efficiency: N/A
Efficacy: 56.6 lumens/watt
Spacing Criteria (0/90/45): 2.19 / 1.11 / 1.55
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

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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	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	75	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	66	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°	87748	87748	87748
5°	149756	85607	55903
10°	242043	82213	38188
15°	351664	78929	31056
20°	460545	77208	38709
25°	548470	78215	51009
30°	597724	73792	47457
35°	597792	62971	40144
40°	556360	52040	34860
45°	467299	40696	29933
50°	328001	30357	22068
55°	197413	21849	12193
60°	108914	13987	4539
65°	52506	6830	496
70°	21025	2380	613
75°	6338	1573	0
80°	2344	2344	0
85°	7076	4670	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.3	2.9
10°-20°	302.4	11.4
20°-30°	613.2	23.0
30°-40°	745.1	28.0
40°-50°	588.0	22.1
50°-60°	266.3	10.0
60°-70°	62.9	2.4
70°-80°	6.8	0.3
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°	992.0	37.2
0°-40°	1737.1	65.2
0°-60°	2591.4	97.3
0°-90°	2664.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2664.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	711	711	711	711	711	
5°	1210	1018	691	506	452	138
15°	2754	1764	618	293	243	801
25°	4030	2201	575	366	375	1844
35°	3970	1951	418	272	267	2451
45°	2679	1231	233	170	172	2027
55°	918	503	102	68	57	867
65°	180	107	23	5	2	203
75°	13	7	3	2	0	21
85°	5	5	3	2	0	5
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	711.4	711.4	711.4	711.4	711.4	711.4	711.4	711.4	711.4	711.4	711.4
2.5°	944.5	921.3	921.3	904.6	918.0	891.4	896.3	894.7	911.2	906.3	891.4
5°	1209.5	1189.6	1187.9	1166.2	1182.8	1147.8	1149.5	1144.5	1162.9	1144.5	1122.8
7.5°	1551.1	1516.1	1514.3	1489.5	1506.0	1461.1	1459.5	1449.4	1466.1	1431.1	1399.5
10°	1932.5	1882.6	1879.3	1849.3	1867.6	1809.2	1804.3	1787.7	1799.3	1744.3	1699.4
12.5°	2340.7	2285.7	2279.1	2247.5	2264.0	2194.1	2180.8	2159.1	2164.1	2084.1	2024.1
15°	2753.9	2707.2	2700.6	2667.3	2683.9	2597.4	2575.7	2549.0	2544.0	2437.3	2360.8
17.5°	3165.5	3070.4	3100.4	3067.1	3082.1	2980.4	2952.1	2918.8	2900.6	2768.9	2672.3
20°	3508.6	3426.9	3448.6	3418.6	3431.9	3315.4	3280.3	3238.7	3207.1	3048.8	2937.2
22.5°	3798.5	3713.6	3701.8	3701.8	3710.2	3583.5	3536.9	3490.2	3445.3	3257.1	3143.8
25°	4030.0	3936.7	3923.5	3920.2	3921.8	3788.4	3733.4	3681.9	3623.6	3417.0	3293.7
27.5°	4173.3	4075.1	4060.0	4058.3	4050.1	3913.4	3851.7	3795.2	3725.2	3513.6	3375.4
30°	4196.7	4106.7	4090.0	4090.0	4068.4	3935.1	3866.8	3806.8	3728.5	3515.2	3367.0
32.5°	4126.8	4035.1	4016.7	4018.4	3983.4	3858.5	3785.1	3723.5	3641.8	3431.9	3278.6
35°	3970.0	3881.7	3865.2	3866.8	3823.4	3706.9	3630.2	3570.2	3483.6	3283.6	3127.1
37.5°	3745.2	3661.9	3645.3	3648.6	3595.3	3490.2	3412.0	3355.4	3267.0	3082.1	2928.9
40°	3455.3	3375.4	3360.3	3362.0	3303.7	3212.0	3135.5	3082.1	2993.8	2828.8	2682.2
42.5°	3103.7	3027.1	3015.5	3013.7	2957.2	2873.9	2798.8	2753.9	2664.0	2532.3	2392.4
45°	2678.9	2613.9	2562.3	2597.4	2539.0	2472.3	2402.4	2365.7	2280.8	2187.5	2062.5
47.5°	2200.7	2144.1	2092.5	2125.8	2072.5	2022.5	1960.8	1937.6	1860.9	1812.5	1707.7
50°	1709.3	1660.9	1614.4	1642.7	1601.0	1567.7	1519.4	1507.7	1444.4	1437.8	1356.1
52.5°	1269.4	1234.5	1197.9	1219.6	1187.9	1166.2	1129.6	1126.3	1077.9	1094.5	1038.0
55°	918.0	893.0	864.7	881.3	858.1	844.6	818.0	819.6	783.0	808.0	768.1
57.5°	649.8	629.8	609.7	619.8	604.7	594.8	576.4	579.7	571.4	579.7	551.4
60°	441.5	429.8	414.9	423.1	409.9	404.8	393.2	394.8	374.8	401.4	381.6
62.5°	289.9	281.5	281.5	276.5	266.6	263.3	256.6	256.6	244.9	264.9	251.5
65°	179.9	176.6	175.0	171.6	164.9	163.2	158.2	158.2	149.9	164.9	154.9
67.5°	106.7	104.9	103.2	101.6	96.6	94.9	93.3	91.6	86.6	96.6	90.0
70°	58.3	58.3	56.7	55.0	51.7	51.7	50.0	50.0	46.7	51.7	46.7
72.5°	28.3	28.3	26.7	26.7	25.0	25.0	23.4	23.4	21.7	25.0	21.7
75°	13.3	13.3	11.6	11.6	11.6	11.6	9.9	9.9	9.9	11.6	9.9
77.5°	6.6	6.6	6.6	6.6	5.0	5.0	5.0	5.0	5.0	5.0	5.0
80°	3.3	3.3	3.3	3.3	3.3	1.7	1.7	1.7	1.7	3.3	3.3
82.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
85°	5.0	5.0	5.0	5.0	6.6	5.0	6.6	6.6	6.6	6.6	6.6
87.5°	6.6	6.6	6.6	6.6	6.6	8.3	8.3	8.3	6.6	8.3	6.6
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):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	711.4	711.4	711.4	711.4	711.4	711.4	711.4	711.4	711.4	711.4	711.4
2.5°	896.3	882.9	888.0	873.0	861.4	856.4	856.4	854.6	776.4	698.0	643.0
5°	1121.2	1096.3	1099.6	1072.9	1061.2	1044.6	1039.6	1017.9	848.0	691.4	584.7
7.5°	1387.7	1351.1	1329.4	1304.4	1289.5	1259.5	1244.4	1201.2	914.6	678.1	528.2
10°	1674.4	1622.7	1587.7	1547.8	1532.7	1486.1	1457.8	1384.4	972.9	656.4	474.8
12.5°	1984.2	1914.3	1851.0	1807.6	1789.3	1699.4	1681.0	1576.1	1026.2	636.4	431.4
15°	2302.5	2214.1	2134.1	2072.5	2049.1	1960.8	1904.2	1764.3	1072.9	618.1	398.1
17.5°	2585.6	2490.7	2394.1	2314.1	2280.8	2155.8	2102.5	1929.2	1107.9	599.8	379.9
20°	2837.3	2722.3	2620.6	2510.7	2472.3	2330.8	2244.1	2057.6	1127.9	588.2	381.6
22.5°	3028.8	2897.2	2780.6	2657.3	2609.0	2454.1	2355.8	2145.9	1134.6	579.7	393.2
25°	3168.8	3022.2	2892.1	2757.2	2700.6	2535.7	2427.4	2200.7	1132.9	574.7	398.1
27.5°	3240.4	3083.8	2943.8	2798.8	2737.2	2567.4	2450.7	2212.5	1109.6	554.7	398.1
30°	3230.4	3065.4	2918.8	2768.9	2702.2	2533.9	2414.0	2167.4	1059.5	518.1	369.8
32.5°	3142.1	2973.8	2823.9	2673.9	2607.3	2442.3	2322.3	2075.8	987.9	469.9	331.5
35°	2995.5	2828.8	2680.5	2533.9	2467.3	2307.4	2190.8	1950.9	906.3	418.2	296.6
37.5°	2803.8	2642.3	2499.0	2365.7	2289.0	2139.1	2025.9	1802.6	816.3	371.5	266.6
40°	2565.7	2412.3	2277.4	2154.2	2072.5	1934.2	1830.9	1627.6	721.4	323.2	238.2
42.5°	2290.7	2147.5	2037.5	1914.3	1822.6	1701.0	1611.1	1434.5	624.8	279.8	208.3
45°	1979.2	1852.6	1757.7	1649.3	1554.4	1451.0	1374.5	1231.2	526.5	233.3	179.9
47.5°	1644.4	1539.3	1466.1	1376.1	1282.9	1199.5	1139.5	1024.6	433.1	194.8	153.3
50°	1314.5	1231.2	1177.8	1109.6	1024.6	961.3	914.6	838.0	343.1	158.2	128.2
52.5°	1011.3	951.3	914.6	864.7	789.6	746.4	713.1	659.7	261.6	128.2	103.2
55°	754.7	711.4	688.1	653.1	588.2	558.2	536.5	503.2	194.8	101.6	80.0
57.5°	544.8	516.4	501.5	478.2	424.8	406.6	391.5	371.5	141.7	78.4	58.3
60°	379.9	359.9	351.6	336.5	293.3	281.5	261.6	261.6	99.9	56.7	39.9
62.5°	251.5	238.2	234.9	223.2	189.9	183.2	178.3	175.0	68.3	38.3	23.4
65°	156.6	146.6	145.0	138.3	115.0	111.7	106.7	106.7	43.2	23.4	11.6
67.5°	90.0	85.0	83.3	80.0	63.3	61.6	58.3	61.6	25.0	11.6	5.0
70°	48.4	43.2	43.2	41.6	31.6	30.0	28.3	30.0	13.3	6.6	3.3
72.5°	23.4	20.0	20.0	18.4	13.3	13.3	11.6	14.9	6.6	3.3	3.3
75°	9.9	9.9	8.3	8.3	5.0	5.0	5.0	6.6	3.3	3.3	3.3
77.5°	5.0	5.0	5.0	5.0	1.7	1.7	1.7	3.3	3.3	3.3	3.3
80°	3.3	3.3	3.3	3.3	0.0	0.0	0.0	3.3	3.3	3.3	3.3
82.5°	3.3	1.7	1.7	1.7	0.0	0.0	0.0	1.7	3.3	3.3	3.3
85°	5.0	5.0	5.0	5.0	3.3	3.3	3.3	5.0	3.3	3.3	3.3
87.5°	6.6	6.6	6.6	6.6	5.0	5.0	5.0	8.3	5.0	3.3	3.3
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):

	135°	157.5°	180°
0°	711.4	711.4	711.4
2.5°	596.4	561.5	564.8
5°	506.5	456.5	451.5
7.5°	428.1	374.8	368.1
10°	366.5	313.1	304.9
12.5°	321.6	273.2	264.9
15°	293.3	249.9	243.2
17.5°	288.3	254.8	251.5
20°	308.2	291.6	294.9
22.5°	343.1	338.2	346.6
25°	366.5	364.8	374.8
27.5°	361.5	358.2	364.8
30°	334.8	329.9	333.2
32.5°	303.2	294.9	298.2
35°	271.6	264.9	266.6
37.5°	244.9	239.9	239.9
40°	221.5	216.5	216.5
42.5°	196.7	193.2	194.8
45°	170.0	168.3	171.6
47.5°	143.3	141.7	145.0
50°	118.3	115.0	115.0
52.5°	93.3	88.3	85.0
55°	68.3	60.0	56.7
57.5°	46.7	38.3	35.0
60°	26.7	21.7	18.4
62.5°	13.3	8.3	6.6
65°	5.0	3.3	1.7
67.5°	3.3	1.7	1.7
70°	3.3	1.7	1.7
72.5°	1.7	1.7	1.7
75°	1.7	1.7	0.0
77.5°	1.7	1.7	1.7
80°	1.7	1.7	0.0
82.5°	1.7	1.7	0.0
85°	1.7	1.7	0.0
87.5°	1.7	1.7	0.0
90°	0.0	0.0	0.0

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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Scaled Data Report



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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)