

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: P1191805

Luminaire Tested: **LDA4A30930D010TE 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: P1191805
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: LDA4A30930D010TE 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

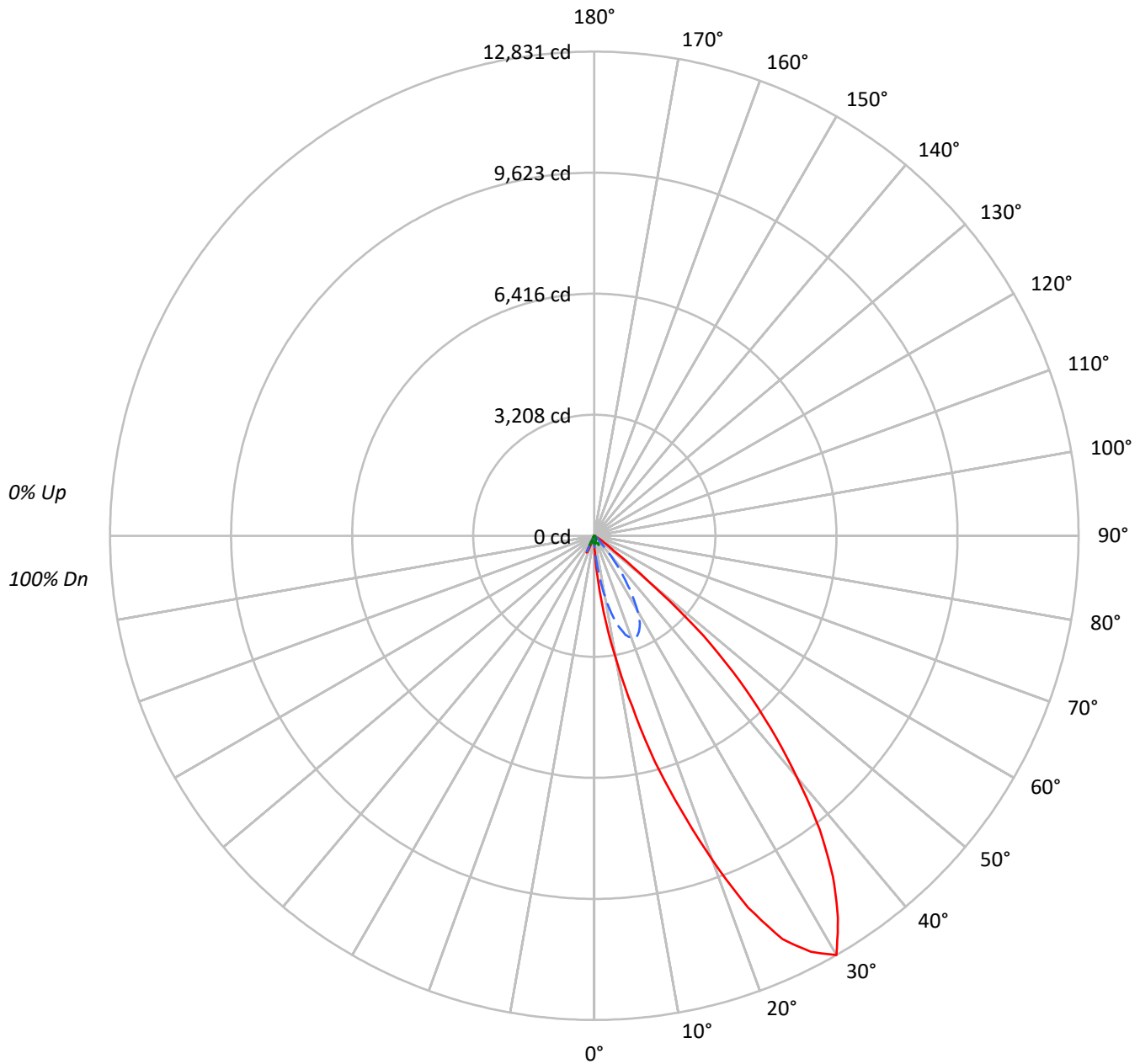
Lumens per Lamp: N/A
Luminaire Lumens: 3339.8 lumens
Efficiency: N/A
Efficacy: 84.8 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 39.4
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

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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°	30664	30664	30664
5°	157631	28503	13310
10°	415487	23772	6939
15°	790813	18657	5350
20°	1201149	15423	14334
25°	1604976	36801	66293
30°	1827456	13887	13388
35°	1659888	7845	6083
40°	1344422	3526	2447
45°	951345	2041	576
50°	347132	1286	0
55°	72256	1075	0
60°	17416	1233	0
65°	5399	1459	0
70°	1803	1803	0
75°	810	2383	0
80°	0	3552	0
85°	0	7076	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.3	1.7
10°-20°	420.1	12.6
20°-30°	1065.4	31.9
30°-40°	1140.2	34.1
40°-50°	582.8	17.5
50°-60°	60.8	1.8
60°-70°	7.0	0.2
70°-80°	3.8	0.1
80°-90°	3.4	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°	1541.8	46.2
0°-40°	2682.0	80.3
0°-60°	3325.6	99.6
0°-90°	3339.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3339.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	249	249	249	249	249	
5°	1273	692	230	133	108	186
15°	6193	2489	146	52	42	1830
25°	11793	2803	270	454	487	5358
35°	11024	1421	52	40	40	6768
45°	5454	190	12	7	3	4070
55°	336	30	5	3	0	456
65°	18	7	5	3	0	24
75°	2	3	5	5	0	2
85°	0	3	5	5	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°	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6
2.5°	502.3	507.3	470.4	482.1	490.4	473.7	470.4	470.4	488.8	478.7	495.6
5°	1273.1	1268.1	1204.3	1222.7	1236.2	1204.3	1219.4	1195.9	1224.4	1206.0	1224.4
7.5°	2223.9	2282.7	2202.0	2220.6	2232.3	2198.7	2207.1	2173.5	2205.4	2183.5	2198.7
10°	3317.3	3377.7	3283.7	3298.8	3307.3	3275.4	3276.9	3233.3	3261.9	3238.3	3248.5
12.5°	4624.1	4647.5	4602.3	4614.0	4619.0	4577.1	4498.1	4506.5	4535.0	4494.8	4504.8
15°	6192.9	6176.1	6122.3	6161.0	6122.3	6102.1	5982.9	5976.2	5992.9	5947.7	5875.4
17.5°	7575.2	7702.9	7642.3	7664.2	7617.2	7617.2	7464.4	7439.2	7440.8	7319.8	7306.5
20°	9150.8	9313.7	9165.8	9172.5	9110.4	9108.7	8922.3	8870.2	8848.4	8710.6	8672.0
22.5°	10669.1	10716.2	10714.5	10686.0	10539.8	10623.8	10390.4	10308.1	10240.8	10084.6	10007.3
25°	11792.9	11940.6	11839.8	11767.7	11640.0	11745.8	11483.7	11376.2	11275.4	11144.4	11043.7
27.5°	12427.7	12565.4	12541.9	12434.4	12303.5	12405.9	12118.7	11979.2	11836.5	11740.8	11614.8
30°	12830.8	13040.8	12971.9	12738.5	12547.0	12580.6	12258.1	12071.6	11913.7	11814.6	11655.0
32.5°	12012.9	12229.5	12209.4	12039.7	11940.6	12022.9	11742.5	11557.7	11406.5	11327.5	11149.5
35°	11023.5	11277.1	11221.7	11080.6	11008.5	11104.2	10830.4	10675.8	10523.1	10454.1	10259.3
37.5°	9812.5	10051.0	9995.6	9861.2	9790.6	9861.2	9599.2	9456.4	9311.9	9239.8	9107.1
40°	8349.6	8559.5	8500.8	8376.4	8317.7	8368.1	8141.2	8016.9	7894.4	7840.6	7664.2
42.5°	6920.2	7088.1	7034.4	6926.9	6881.5	6915.2	6728.7	6617.9	6510.4	6465.0	6360.8
45°	5453.8	5620.2	5568.1	5475.6	5433.7	5452.1	5296.0	5196.9	5104.4	5062.5	4968.4
47.5°	3913.6	4100.0	4036.2	3957.3	3913.6	3905.2	3767.5	3678.5	3686.8	3544.0	3456.7
50°	1809.0	1966.9	1903.1	1861.0	1819.0	1795.6	1746.9	1646.0	1674.6	1545.2	1494.8
52.5°	656.7	695.4	680.2	666.8	653.4	648.3	631.5	606.3	609.8	577.9	562.7
55°	336.0	354.4	349.4	341.0	341.0	336.0	327.5	317.5	310.8	305.7	300.6
57.5°	154.6	164.6	161.2	157.9	157.9	154.6	151.2	146.1	149.4	141.1	139.4
60°	70.6	75.6	73.9	72.3	72.3	72.3	70.6	68.9	68.9	67.1	65.6
62.5°	33.6	36.9	35.2	35.2	35.2	35.2	33.6	33.6	33.6	33.6	31.9
65°	18.5	18.5	18.5	18.5	18.5	18.5	18.5	16.8	18.5	16.8	16.8
67.5°	10.0	10.0	10.0	10.0	8.4	10.0	10.0	8.4	8.4	8.4	8.4
70°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
75°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
77.5°	0.0	1.7	1.7	1.7	0.0	1.7	1.7	1.7	1.7	1.7	1.7
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	1.7	0.0	1.7	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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CATALOG NUMBER: LDA4A30930D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6	248.6
2.5°	456.9	468.6	480.4	477.1	460.2	458.5	451.8	455.2	354.4	287.3	240.2
5°	1159.0	1174.1	1189.2	1180.8	1138.8	1128.7	1095.2	1088.4	692.0	339.2	230.2
7.5°	2118.1	2126.4	2138.2	2128.1	2066.0	2037.5	1966.9	1898.1	1164.0	409.8	213.3
10°	3157.7	3154.4	3159.4	3146.0	3068.7	3013.3	2904.1	2855.4	1649.4	470.4	189.8
12.5°	4370.4	4357.0	4283.1	4318.4	4209.2	4096.7	3916.9	3765.8	2107.9	503.9	167.9
15°	5786.4	5746.1	5719.2	5678.9	5544.5	5363.1	5089.4	4921.4	2489.2	500.6	146.1
17.5°	7193.9	7128.5	7010.8	7026.0	6869.8	6616.2	6255.0	5967.7	2752.9	458.5	129.4
20°	8525.9	8428.5	8280.6	8268.9	8080.8	7746.5	7291.4	6935.2	2897.3	389.6	117.5
22.5°	9809.2	9657.9	9459.8	9397.7	9155.8	8682.1	8087.5	7654.2	2910.8	325.8	141.1
25°	10820.2	10630.6	10410.4	10302.9	10036.0	9431.2	8690.6	8158.1	2803.3	322.5	270.4
27.5°	11384.6	11169.6	10949.6	10803.5	10533.1	9847.7	9009.6	8394.8	2618.6	346.0	256.9
30°	11414.8	11173.1	10944.6	10759.8	10491.1	9758.7	8868.5	8228.6	2286.0	218.3	97.5
32.5°	10912.7	10654.0	10425.6	10217.3	9951.9	9214.6	8341.2	7729.8	1859.4	152.9	68.9
35°	10034.2	9767.1	9548.8	9328.8	9080.2	8386.5	7585.2	7015.9	1421.0	121.0	52.1
37.5°	8838.3	8591.4	8398.3	8248.7	7980.0	7427.3	6695.0	6092.1	1004.4	85.6	31.9
40°	7499.6	7291.4	7133.5	7004.1	6755.6	6265.0	5526.0	5017.1	609.8	60.4	21.9
42.5°	6152.5	5957.7	5818.3	5695.7	5465.6	5032.3	4424.2	3913.6	292.3	41.9	15.2
45°	4785.4	4610.6	4493.1	4382.1	4175.6	3749.0	3266.9	2897.3	189.8	30.2	11.7
47.5°	3268.6	3177.9	2984.8	2863.8	2652.1	2326.3	1874.4	1468.1	126.0	21.9	8.4
50°	1358.8	1311.8	1184.2	1101.9	980.9	814.6	591.2	495.6	77.3	15.2	6.7
52.5°	527.5	515.6	483.7	465.2	435.0	391.4	325.8	290.6	47.1	11.7	6.7
55°	283.9	280.6	263.7	253.6	236.9	215.0	176.4	154.6	30.2	8.4	5.0
57.5°	131.0	129.4	121.0	121.0	109.2	100.8	84.0	75.6	18.5	6.7	5.0
60°	62.1	62.1	58.8	58.8	53.7	50.4	41.9	38.6	11.7	5.0	5.0
62.5°	30.2	30.2	30.2	30.2	28.5	26.9	23.5	21.9	8.4	5.0	5.0
65°	16.8	16.8	16.8	16.8	15.2	15.2	13.5	11.7	6.7	5.0	5.0
67.5°	8.4	8.4	8.4	8.4	8.4	8.4	6.7	6.7	5.0	5.0	5.0
70°	5.0	5.0	5.0	5.0	5.0	3.3	3.3	3.3	3.3	5.0	5.0
72.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.0
75°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.0
77.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.0
80°	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.0
82.5°	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.0
85°	0.0	0.0	0.0	0.0	1.7	1.7	1.7	1.7	3.3	5.0	5.0
87.5°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	3.3	5.0	5.0
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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CATALOG NUMBER: LDA4A30930D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	248.6	248.6	248.6	248.6
2.5°	206.6	179.8	166.3	162.9
5°	169.6	132.7	114.2	107.5
7.5°	137.7	95.8	80.6	73.9
10°	109.2	75.6	60.4	55.4
12.5°	90.7	60.4	48.7	45.4
15°	77.3	52.1	43.7	41.9
17.5°	70.6	55.4	52.1	53.7
20°	85.6	90.7	105.8	109.2
22.5°	181.4	314.1	426.6	451.8
25°	377.9	453.5	470.4	487.1
27.5°	210.0	162.9	159.6	166.3
30°	85.6	87.3	90.7	94.0
32.5°	63.8	63.8	62.1	63.8
35°	43.7	40.4	38.6	40.4
37.5°	26.9	25.2	23.5	23.5
40°	18.5	16.8	15.2	15.2
42.5°	13.5	10.0	8.4	8.4
45°	10.0	6.7	5.0	3.3
47.5°	8.4	5.0	1.7	1.7
50°	6.7	3.3	1.7	0.0
52.5°	5.0	3.3	1.7	0.0
55°	5.0	3.3	0.0	0.0
57.5°	5.0	3.3	0.0	0.0
60°	5.0	3.3	1.7	0.0
62.5°	5.0	3.3	1.7	1.7
65°	5.0	3.3	1.7	0.0
67.5°	5.0	3.3	1.7	0.0
70°	5.0	3.3	1.7	0.0
72.5°	6.7	3.3	1.7	0.0
75°	6.7	5.0	1.7	0.0
77.5°	6.7	5.0	1.7	0.0
80°	6.7	5.0	1.7	0.0
82.5°	6.7	5.0	1.7	0.0
85°	6.7	5.0	1.7	0.0
87.5°	6.7	5.0	1.7	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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Scaled Data Report



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Cooper Lighting Solutions Photometric Lab

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Peachtree City, GA 30269



— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)