

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: P1191841

Luminaire Tested: **LDA4A30940D010TE 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: P1191841
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: LDA4A30940D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

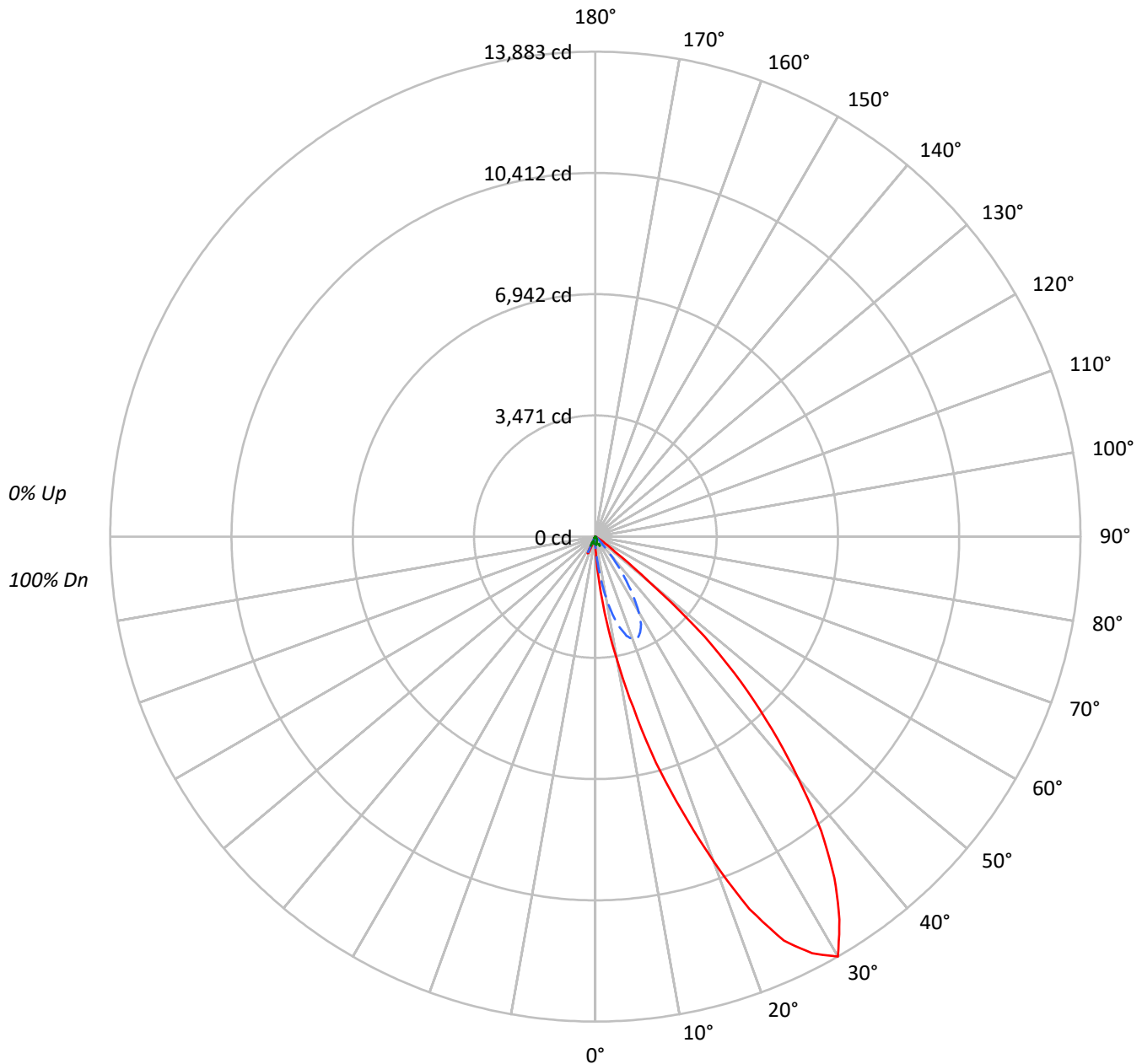
Lumens per Lamp: N/A
Luminaire Lumens: 3613.7 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: LDA4A30940D010TE LAR25NF 4LAL1 30° Tilt

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°	33168	33168	33168
5°	170570	30830	14400
10°	449554	25726	7515
15°	855658	20189	5797
20°	1299622	16696	15515
25°	1736568	39822	71737
30°	1977318	15012	14499
35°	1795995	8477	6580
40°	1454653	3800	2641
45°	1029353	2215	645
50°	375590	1401	0
55°	78169	1161	0
60°	18847	1332	0
65°	5837	1576	0
70°	1947	1947	0
75°	858	2573	0
80°	0	3836	0
85°	0	7642	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.9	1.7
10°-20°	454.5	12.6
20°-30°	1152.7	31.9
30°-40°	1233.7	34.1
40°-50°	630.6	17.5
50°-60°	65.9	1.8
60°-70°	7.6	0.2
70°-80°	4.1	0.1
80°-90°	3.7	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°	1668.2	46.2
0°-40°	2901.9	80.3
0°-60°	3598.4	99.6
0°-90°	3613.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3613.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	269	269	269	269	269	
5°	1378	749	249	144	116	201
15°	6701	2693	158	56	45	1980
25°	12760	3033	293	491	527	5798
35°	11927	1537	56	44	44	7323
45°	5901	205	13	7	4	4404
55°	364	33	5	4	0	493
65°	20	7	5	4	0	26
75°	2	4	5	5	0	2
85°	0	4	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°	268.9	268.9	268.9	268.9	268.9	268.9	268.9	268.9	268.9	268.9	268.9
2.5°	543.4	548.8	508.9	521.5	530.6	512.4	508.9	508.9	528.8	518.0	536.2
5°	1377.6	1372.2	1303.0	1323.1	1337.6	1303.0	1319.4	1293.9	1324.8	1304.9	1324.8
7.5°	2406.1	2469.8	2382.5	2402.6	2415.2	2379.0	2388.1	2351.7	2386.2	2362.6	2379.0
10°	3589.3	3654.7	3553.0	3569.4	3578.5	3543.9	3545.8	3498.4	3529.3	3504.0	3514.8
12.5°	5003.3	5028.7	4979.7	4992.3	4997.7	4952.4	4866.9	4876.0	4906.8	4863.3	4874.1
15°	6700.7	6682.5	6624.3	6666.1	6624.3	6602.6	6473.4	6466.2	6484.4	6435.3	6357.2
17.5°	8196.3	8334.4	8269.0	8292.6	8241.8	8241.8	8076.4	8049.1	8051.0	7920.1	7905.6
20°	9901.0	10077.4	9917.4	9924.6	9857.5	9855.6	9653.8	9597.5	9573.9	9424.9	9383.0
22.5°	11544.0	11594.9	11593.0	11562.2	11404.0	11494.9	11242.3	11153.3	11080.5	10911.5	10827.9
25°	12759.8	12919.7	12810.6	12732.5	12594.4	12708.9	12425.3	12309.1	12200.1	12058.3	11949.2
27.5°	13446.8	13595.8	13570.4	13454.0	13312.2	13423.2	13112.4	12961.5	12807.1	12703.4	12567.1
30°	13883.0	14110.1	14035.6	13783.0	13575.8	13612.2	13263.2	13061.5	12890.7	12783.4	12610.8
32.5°	12997.9	13232.3	13210.5	13026.9	12919.7	13008.7	12705.2	12505.4	12341.8	12256.4	12063.7
35°	11927.4	12201.9	12141.9	11989.3	11911.1	12014.6	11718.5	11551.2	11385.8	11311.3	11100.5
37.5°	10617.1	10875.1	10815.2	10669.9	10593.5	10669.9	10386.3	10231.8	10075.5	9997.4	9853.8
40°	9034.2	9261.3	9197.7	9063.2	8999.6	9054.2	8808.9	8674.3	8541.6	8483.5	8292.6
42.5°	7487.6	7669.4	7611.2	7494.9	7445.8	7482.1	7280.4	7160.5	7044.2	6995.1	6882.3
45°	5901.0	6080.9	6024.6	5924.6	5879.2	5899.1	5730.2	5622.9	5523.0	5477.6	5375.8
47.5°	4234.4	4436.2	4367.1	4281.8	4234.4	4225.4	4076.4	3980.1	3989.1	3834.6	3740.2
50°	1957.3	2128.1	2059.1	2013.6	1968.2	1942.8	1890.0	1781.1	1811.9	1672.0	1617.5
52.5°	710.6	752.4	736.0	721.5	707.0	701.4	683.4	656.1	659.8	625.2	608.9
55°	363.5	383.4	378.0	368.9	368.9	363.5	354.4	343.5	336.2	330.8	325.3
57.5°	167.3	178.1	174.5	170.8	170.8	167.3	163.6	158.1	161.7	152.6	150.9
60°	76.4	81.8	79.9	78.1	78.1	78.1	76.4	74.5	74.5	72.7	70.8
62.5°	36.4	40.0	38.1	38.1	38.1	38.1	36.4	36.4	36.4	36.4	34.6
65°	20.0	20.0	20.0	20.0	20.0	20.0	20.0	18.2	20.0	18.2	18.2
67.5°	10.9	10.9	10.9	10.9	9.1	10.9	10.9	9.1	9.1	9.1	9.1
70°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
72.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
75°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
77.5°	0.0	1.8	1.8	1.8	0.0	1.8	1.8	1.8	1.8	1.8	1.8
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	1.8	0.0	1.8	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: LDA4A30940D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	268.9	268.9	268.9	268.9	268.9	268.9	268.9	268.9	268.9	268.9	268.9
2.5°	494.4	507.0	519.8	516.1	497.9	496.1	488.8	492.5	383.4	310.8	259.8
5°	1254.0	1270.3	1286.7	1277.6	1232.2	1221.3	1184.9	1177.6	748.8	367.1	249.0
7.5°	2291.6	2300.7	2313.5	2302.6	2235.3	2204.5	2128.1	2053.7	1259.4	443.5	230.8
10°	3416.6	3413.1	3418.5	3404.0	3320.3	3260.3	3142.3	3089.5	1784.6	508.9	205.4
12.5°	4728.8	4714.3	4634.3	4672.5	4554.3	4432.5	4238.1	4074.6	2280.8	545.1	181.8
15°	6260.8	6217.3	6188.1	6144.5	5999.1	5802.9	5506.6	5324.8	2693.3	541.6	158.1
17.5°	7783.9	7712.9	7585.8	7602.1	7433.0	7158.7	6767.8	6457.1	2978.7	496.1	139.9
20°	9225.0	9119.6	8959.6	8947.0	8743.3	8381.8	7889.3	7504.0	3135.0	421.7	127.2
22.5°	10613.4	10449.9	10235.4	10168.2	9906.6	9394.0	8750.7	8281.8	3149.5	352.6	152.6
25°	11707.5	11502.2	11264.1	11147.7	10858.7	10204.5	9403.1	8826.9	3033.2	348.9	292.6
27.5°	12318.1	12085.6	11847.5	11689.3	11396.8	10655.2	9748.4	9083.2	2833.2	374.3	278.0
30°	12350.8	12089.1	11842.1	11642.1	11351.3	10558.9	9595.8	8903.3	2473.4	236.2	105.4
32.5°	11807.5	11527.6	11280.4	11055.2	10768.0	9970.1	9025.1	8363.6	2011.9	165.4	74.5
35°	10857.0	10568.0	10331.8	10093.7	9824.8	9074.1	8207.3	7591.2	1537.4	130.8	56.3
37.5°	9563.1	9295.9	9086.9	8925.1	8634.4	8036.5	7244.0	6591.6	1086.7	92.7	34.6
40°	8114.5	7889.3	7718.5	7578.5	7309.4	6778.8	5979.2	5428.5	659.8	65.4	23.6
42.5°	6657.0	6446.3	6295.4	6162.7	5913.8	5444.9	4787.0	4234.4	316.2	45.4	16.4
45°	5177.6	4988.6	4861.5	4741.6	4518.0	4056.4	3534.8	3135.0	205.4	32.7	12.7
47.5°	3536.7	3438.5	3229.5	3098.6	2869.6	2517.1	2028.2	1588.4	136.3	23.6	9.1
50°	1470.3	1419.4	1281.3	1192.3	1061.4	881.4	639.7	536.2	83.6	16.4	7.3
52.5°	570.6	557.9	523.4	503.5	470.8	423.4	352.6	314.5	50.9	12.7	7.3
55°	307.2	303.5	285.3	274.5	256.3	232.7	190.9	167.3	32.7	9.1	5.4
57.5°	141.8	139.9	130.8	130.8	118.2	109.1	90.9	81.8	20.0	7.3	5.4
60°	67.3	67.3	63.6	63.6	58.2	54.5	45.4	41.8	12.7	5.4	5.4
62.5°	32.7	32.7	32.7	32.7	30.9	29.0	25.5	23.6	9.1	5.4	5.4
65°	18.2	18.2	18.2	18.2	16.4	16.4	14.5	12.7	7.3	5.4	5.4
67.5°	9.1	9.1	9.1	9.1	9.1	9.1	7.3	7.3	5.4	5.4	5.4
70°	5.4	5.4	5.4	5.4	5.4	3.7	3.7	3.7	3.7	5.4	5.4
72.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.7	5.4	5.4
75°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.7	5.4	5.4
77.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.7	5.4	5.4
80°	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8	3.7	5.4	5.4
82.5°	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.7	5.4	5.4
85°	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	3.7	5.4	5.4
87.5°	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	3.7	5.4	5.4
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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TEST NUMBER: P1191841

CATALOG NUMBER: LDA4A30940D010TE LAR25NF 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	112.5°	135°	157.5°	180°
0°	268.9	268.9	268.9	268.9
2.5°	223.6	194.4	179.9	176.2
5°	183.6	143.5	123.6	116.3
7.5°	149.0	103.5	87.2	79.9
10°	118.2	81.8	65.4	60.0
12.5°	98.1	65.4	52.8	49.1
15°	83.6	56.3	47.2	45.4
17.5°	76.4	60.0	56.3	58.2
20°	92.7	98.1	114.5	118.2
22.5°	196.3	339.9	461.7	488.8
25°	408.9	490.7	508.9	527.1
27.5°	227.1	176.2	172.7	179.9
30°	92.7	94.4	98.1	101.8
32.5°	69.1	69.1	67.3	69.1
35°	47.2	43.7	41.8	43.7
37.5°	29.0	27.3	25.5	25.5
40°	20.0	18.2	16.4	16.4
42.5°	14.5	10.9	9.1	9.1
45°	10.9	7.3	5.4	3.7
47.5°	9.1	5.4	1.8	1.8
50°	7.3	3.7	1.8	0.0
52.5°	5.4	3.7	1.8	0.0
55°	5.4	3.7	0.0	0.0
57.5°	5.4	3.7	0.0	0.0
60°	5.4	3.7	1.8	0.0
62.5°	5.4	3.7	1.8	1.8
65°	5.4	3.7	1.8	0.0
67.5°	5.4	3.7	1.8	0.0
70°	5.4	3.7	1.8	0.0
72.5°	7.3	3.7	1.8	0.0
75°	7.3	5.4	1.8	0.0
77.5°	7.3	5.4	1.8	0.0
80°	7.3	5.4	1.8	0.0
82.5°	7.3	5.4	1.8	0.0
85°	7.3	5.4	1.8	0.0
87.5°	7.3	5.4	1.8	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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Peachtree City, GA 30269



— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)