

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: P1191517

Luminaire Tested: **LDA4A15927D010TE 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: P1191517
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: LDA4A15927D010TE 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 / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

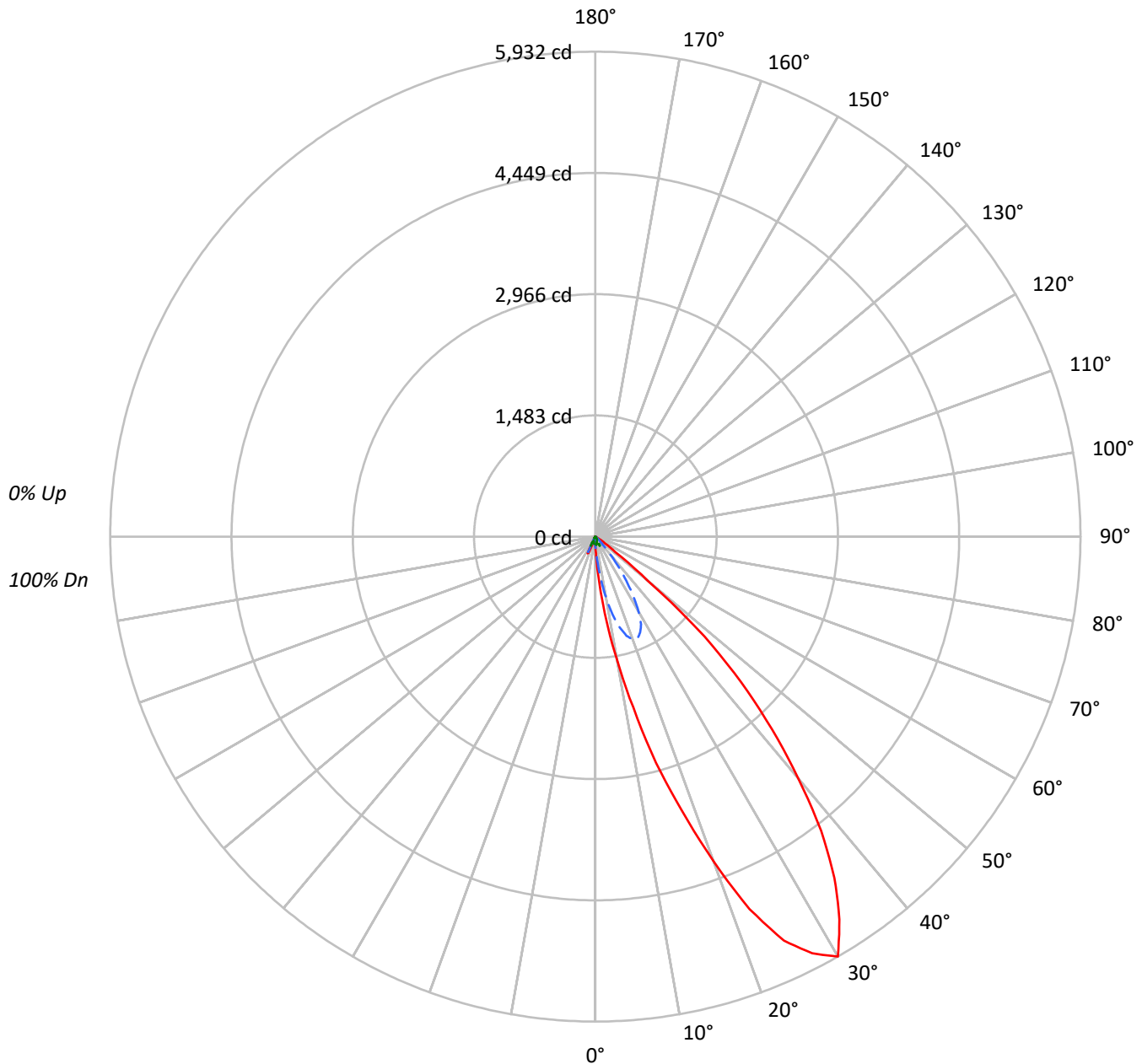
Lumens per Lamp: N/A
Luminaire Lumens: 1544.0 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 20.4
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
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°	14185	14185	14185
5°	72866	13174	6141
10°	192094	10984	3206
15°	365609	8620	2477
20°	555316	7141	6629
25°	742000	17012	30635
30°	844850	6409	6196
35°	767387	3629	2816
40°	621539	1626	1127
45°	439826	959	262
50°	160479	595	0
55°	33397	495	0
60°	8042	567	0
65°	2510	671	0
70°	829	829	0
75°	381	1096	0
80°	0	1634	0
85°	0	3255	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.0	1.7
10°-20°	194.2	12.6
20°-30°	492.5	31.9
30°-40°	527.1	34.1
40°-50°	269.4	17.5
50°-60°	28.1	1.8
60°-70°	3.2	0.2
70°-80°	1.8	0.1
80°-90°	1.6	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°	712.8	46.2
0°-40°	1239.9	80.3
0°-60°	1537.5	99.6
0°-90°	1544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1544.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	115	115	115	115	115	
5°	588	320	106	61	50	86
15°	2863	1151	68	24	19	846
25°	5452	1296	125	210	225	2477
35°	5096	657	24	19	19	3129
45°	2521	88	6	3	2	1882
55°	155	14	2	2	0	211
65°	9	3	2	2	0	11
75°	1	2	2	2	0	1
85°	0	2	2	2	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°	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0
2.5°	232.2	234.5	217.4	222.8	226.8	219.0	217.4	217.4	226.0	221.3	229.1
5°	588.5	586.2	556.8	565.4	571.5	556.8	563.7	552.8	566.0	557.6	566.0
7.5°	1028.2	1055.3	1018.1	1026.5	1032.0	1016.5	1020.4	1004.9	1019.6	1009.5	1016.5
10°	1533.7	1561.6	1518.1	1525.1	1528.9	1514.2	1515.0	1494.8	1508.0	1497.1	1501.8
12.5°	2137.8	2148.7	2127.7	2133.1	2135.5	2116.1	2079.6	2083.4	2096.6	2078.1	2082.7
15°	2863.1	2855.3	2830.5	2848.2	2830.5	2821.1	2766.0	2762.9	2770.6	2749.6	2716.2
17.5°	3502.1	3561.1	3533.2	3543.3	3521.6	3521.6	3450.8	3439.2	3440.1	3384.1	3377.9
20°	4230.6	4305.8	4237.5	4240.6	4211.9	4211.1	4124.9	4100.9	4090.8	4027.1	4009.2
22.5°	4932.6	4954.2	4953.4	4940.2	4872.7	4911.6	4803.6	4765.5	4734.4	4662.3	4626.6
25°	5452.0	5520.3	5473.8	5440.4	5381.3	5430.3	5309.1	5259.4	5212.8	5152.2	5105.6
27.5°	5745.6	5809.2	5798.3	5748.6	5688.0	5735.5	5602.7	5538.2	5472.2	5428.0	5369.7
30°	5931.8	6028.9	5997.2	5889.2	5800.7	5816.2	5667.2	5580.8	5507.9	5462.1	5388.3
32.5°	5553.7	5653.9	5644.5	5566.1	5520.3	5558.3	5428.7	5343.3	5273.3	5236.9	5154.6
35°	5096.3	5213.6	5188.0	5122.8	5089.4	5133.6	5007.0	4935.6	4864.9	4833.1	4743.0
37.5°	4536.4	4646.7	4621.1	4558.9	4526.3	4558.9	4437.8	4371.8	4305.0	4271.7	4210.4
40°	3860.1	3957.1	3930.0	3872.6	3845.3	3868.6	3763.8	3706.4	3649.6	3624.8	3543.3
42.5°	3199.2	3277.0	3252.1	3202.4	3181.4	3196.9	3110.7	3059.5	3009.8	2988.8	2940.7
45°	2521.4	2598.3	2574.1	2531.5	2512.1	2520.6	2448.4	2402.6	2359.9	2340.4	2296.9
47.5°	1809.3	1895.5	1866.0	1829.5	1809.3	1805.5	1741.8	1700.6	1704.4	1638.4	1598.0
50°	836.3	909.3	879.8	860.5	841.0	830.0	807.5	761.0	774.1	714.4	691.1
52.5°	303.7	321.5	314.5	308.3	302.0	299.7	292.0	280.4	281.9	267.1	260.2
55°	155.3	163.9	161.5	157.6	157.6	155.3	151.4	146.7	143.6	141.3	139.0
57.5°	71.5	76.1	74.6	73.0	73.0	71.5	70.0	67.5	69.1	65.2	64.5
60°	32.6	34.9	34.2	33.4	33.4	33.4	32.6	31.8	31.8	31.1	30.3
62.5°	15.5	17.0	16.4	16.4	16.4	16.4	15.5	15.5	15.5	15.5	14.7
65°	8.6	8.6	8.6	8.6	8.6	8.6	8.6	7.8	8.6	7.8	7.8
67.5°	4.6	4.6	4.6	4.6	3.8	4.6	4.6	3.8	3.8	3.8	3.8
70°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
72.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
75°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
77.5°	0.0	0.8	0.8	0.8	0.0	0.8	0.8	0.8	0.8	0.8	0.8
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	0.8	0.0	0.8	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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CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0	115.0
2.5°	211.2	216.7	222.1	220.5	212.7	212.0	208.9	210.4	163.9	132.8	111.0
5°	535.8	542.7	549.8	545.9	526.5	521.9	506.3	503.2	319.9	156.8	106.4
7.5°	979.2	983.0	988.5	983.9	955.1	941.9	909.3	877.5	538.1	189.4	98.6
10°	1459.9	1458.3	1460.6	1454.5	1418.7	1393.1	1342.6	1320.1	762.5	217.4	87.7
12.5°	2020.5	2014.4	1980.1	1996.5	1945.9	1894.0	1810.9	1741.0	974.6	232.9	77.6
15°	2675.2	2656.5	2644.1	2625.4	2563.4	2479.5	2352.8	2275.2	1150.8	231.4	67.5
17.5°	3325.9	3295.6	3241.2	3248.2	3176.1	3058.8	2891.7	2759.1	1272.7	212.0	59.7
20°	3941.6	3896.6	3828.3	3822.8	3735.8	3581.3	3370.9	3206.3	1339.5	180.1	54.4
22.5°	4534.9	4465.0	4373.5	4344.7	4232.9	4013.9	3739.0	3538.6	1345.8	150.7	65.2
25°	5002.4	4914.7	4813.0	4763.2	4639.8	4360.2	4017.7	3771.6	1296.0	149.0	125.0
27.5°	5263.2	5164.0	5062.2	4994.6	4869.6	4552.8	4165.2	3881.1	1210.6	160.0	118.8
30°	5277.3	5165.5	5059.8	4974.4	4850.2	4511.6	4100.1	3804.1	1056.8	100.9	45.0
32.5°	5045.1	4925.5	4819.9	4723.6	4600.9	4260.0	3856.2	3573.6	859.6	70.6	31.8
35°	4639.0	4515.6	4414.5	4312.8	4198.0	3877.2	3506.7	3243.6	657.0	55.9	24.1
37.5°	4086.1	3971.9	3882.7	3813.6	3689.3	3433.8	3095.2	2816.5	464.3	39.5	14.7
40°	3467.2	3370.9	3298.0	3238.1	3123.1	2896.5	2554.8	2319.6	281.9	28.0	10.1
42.5°	2844.4	2754.3	2689.9	2633.2	2526.8	2326.5	2045.3	1809.3	135.1	19.4	7.0
45°	2212.4	2131.5	2077.2	2026.0	1930.5	1733.2	1510.4	1339.5	87.7	14.0	5.5
47.5°	1511.2	1469.2	1379.9	1324.0	1226.2	1075.5	866.6	678.7	58.2	10.1	3.8
50°	628.2	606.4	547.5	509.5	453.5	376.6	273.3	229.1	35.7	7.0	3.1
52.5°	243.8	238.4	223.6	215.0	201.1	181.0	150.7	134.3	21.7	5.5	3.1
55°	131.2	129.7	121.9	117.3	109.5	99.4	81.5	71.5	14.0	3.8	2.3
57.5°	60.5	59.7	55.9	55.9	50.5	46.6	38.9	34.9	8.6	3.1	2.3
60°	28.8	28.8	27.1	27.1	24.8	23.3	19.4	17.9	5.5	2.3	2.3
62.5°	14.0	14.0	14.0	14.0	13.2	12.4	10.9	10.1	3.8	2.3	2.3
65°	7.8	7.8	7.8	7.8	7.0	7.0	6.3	5.5	3.1	2.3	2.3
67.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.1	3.1	2.3	2.3	2.3
70°	2.3	2.3	2.3	2.3	2.3	1.5	1.5	1.5	1.5	2.3	2.3
72.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5	2.3	2.3
75°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5	2.3	2.3
77.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5	2.3	2.3
80°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	1.5	2.3	2.3
82.5°	0.0	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5	2.3	2.3
85°	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.5	2.3	2.3
87.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.5	2.3	2.3
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):

	112.5°	135°	157.5°	180°
0°	115.0	115.0	115.0	115.0
2.5°	95.5	83.0	76.9	75.3
5°	78.4	61.4	52.8	49.6
7.5°	63.7	44.3	37.2	34.2
10°	50.5	34.9	28.0	25.6
12.5°	42.0	28.0	22.5	21.0
15°	35.7	24.1	20.2	19.4
17.5°	32.6	25.6	24.1	24.8
20°	39.5	42.0	49.0	50.5
22.5°	83.9	145.2	197.2	208.9
25°	174.7	209.7	217.4	225.1
27.5°	97.1	75.3	73.8	76.9
30°	39.5	40.4	42.0	43.5
32.5°	29.5	29.5	28.8	29.5
35°	20.2	18.7	17.9	18.7
37.5°	12.4	11.6	10.9	10.9
40°	8.6	7.8	7.0	7.0
42.5°	6.3	4.6	3.8	3.8
45°	4.6	3.1	2.3	1.5
47.5°	3.8	2.3	0.8	0.8
50°	3.1	1.5	0.8	0.0
52.5°	2.3	1.5	0.8	0.0
55°	2.3	1.5	0.0	0.0
57.5°	2.3	1.5	0.0	0.0
60°	2.3	1.5	0.8	0.0
62.5°	2.3	1.5	0.8	0.8
65°	2.3	1.5	0.8	0.0
67.5°	2.3	1.5	0.8	0.0
70°	2.3	1.5	0.8	0.0
72.5°	3.1	1.5	0.8	0.0
75°	3.1	2.3	0.8	0.0
77.5°	3.1	2.3	0.8	0.0
80°	3.1	2.3	0.8	0.0
82.5°	3.1	2.3	0.8	0.0
85°	3.1	2.3	0.8	0.0
87.5°	3.1	2.3	0.8	0.0
90°	0.0	0.0	0.0	0.0

Classified

Scaled Data Report

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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)