

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: P1191733

Luminaire Tested: **LDA4A25935D010TE 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: P1191733
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: LDA4A25935D010TE 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 / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

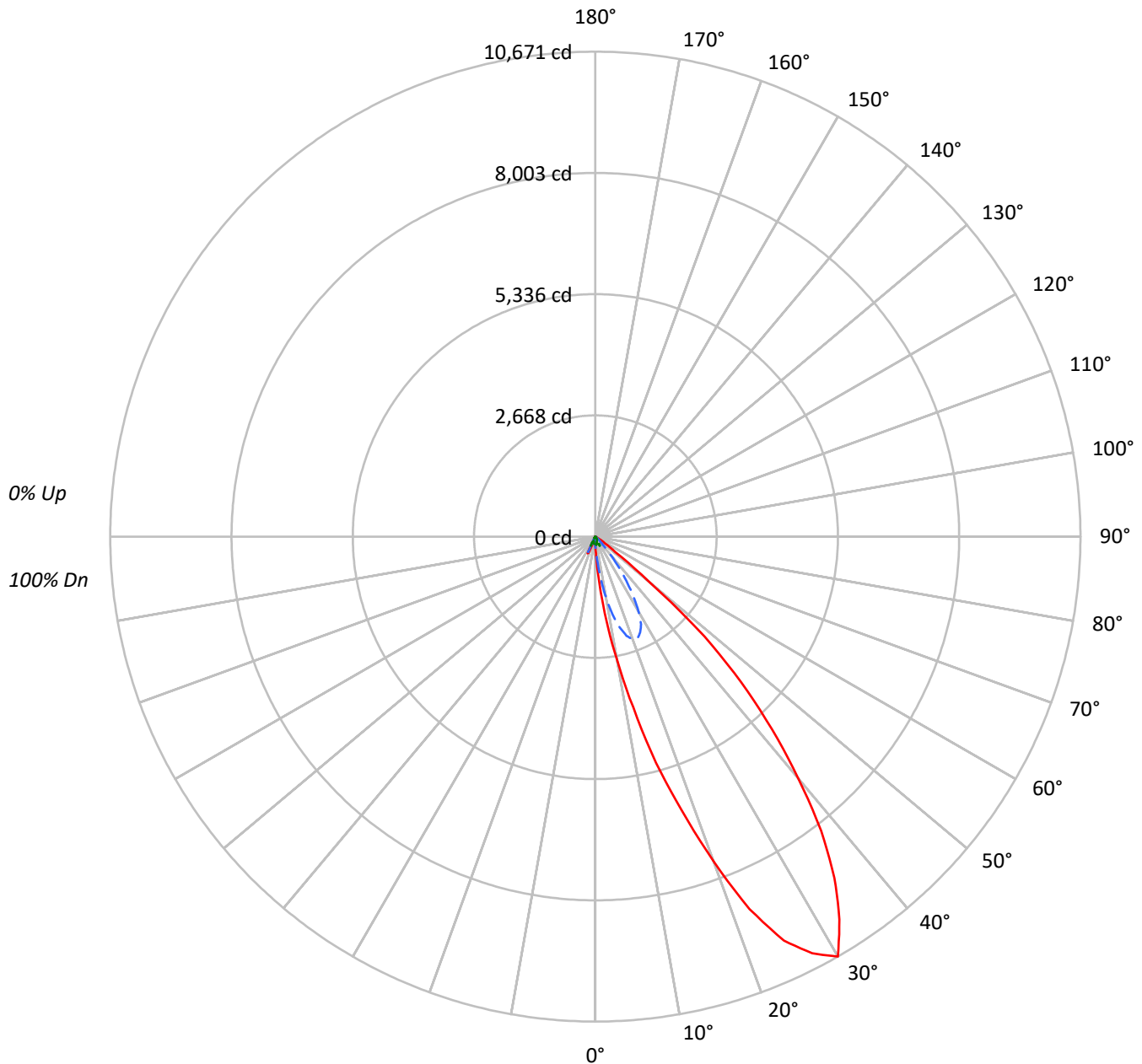
Lumens per Lamp: N/A
Luminaire Lumens: 2777.5 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 2.53 / 1.09 / 1.29
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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°	25496	25496	25496
5°	131097	23699	11069
10°	345535	19764	5761
15°	657677	15515	4457
20°	998928	12837	11919
25°	1334756	30608	55119
30°	1519799	11537	11152
35°	1380447	6520	5044
40°	1118065	2930	2013
45°	791177	1709	488
50°	288701	1075	0
55°	60084	882	0
60°	14481	1011	0
65°	4465	1197	0
70°	1479	1479	0
75°	667	1954	0
80°	0	2912	0
85°	0	5802	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.8	1.7
10°-20°	349.4	12.6
20°-30°	886.0	31.9
30°-40°	948.3	34.1
40°-50°	484.7	17.5
50°-60°	50.6	1.8
60°-70°	5.8	0.2
70°-80°	3.1	0.1
80°-90°	2.8	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°	1282.2	46.2
0°-40°	2230.5	80.3
0°-60°	2765.7	99.6
0°-90°	2777.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2777.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	207	207	207	207	207	
5°	1059	576	191	110	89	155
15°	5150	2070	122	43	35	1522
25°	9807	2331	225	377	405	4456
35°	9168	1182	43	34	34	5628
45°	4536	158	10	6	3	3385
55°	279	25	4	3	0	379
65°	15	6	4	3	0	20
75°	1	3	4	4	0	1
85°	0	3	4	4	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°	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7
2.5°	417.7	421.8	391.1	400.9	407.9	393.9	391.1	391.1	406.5	398.1	412.1
5°	1058.8	1054.7	1001.6	1016.9	1028.1	1001.6	1014.1	994.6	1018.3	1003.0	1018.3
7.5°	1849.4	1898.3	1831.3	1846.7	1856.4	1828.5	1835.5	1807.5	1834.1	1815.9	1828.5
10°	2758.8	2809.1	2730.9	2743.4	2750.4	2723.9	2725.3	2689.0	2712.8	2693.2	2701.5
12.5°	3845.6	3865.2	3827.4	3837.2	3841.3	3806.5	3740.9	3747.8	3771.6	3738.0	3746.4
15°	5150.3	5136.3	5091.6	5123.8	5091.6	5074.9	4975.6	4970.1	4984.0	4946.3	4886.2
17.5°	6299.9	6406.1	6355.8	6373.9	6334.9	6334.9	6207.7	6186.7	6188.1	6087.6	6076.3
20°	7610.2	7745.6	7622.7	7628.3	7576.7	7575.3	7420.1	7376.9	7358.7	7244.1	7212.0
22.5°	8872.9	8912.1	8910.7	8886.9	8765.4	8835.2	8641.0	8572.6	8516.7	8386.8	8322.5
25°	9807.4	9930.3	9846.5	9786.5	9680.3	9768.3	9550.4	9461.0	9377.2	9268.3	9184.4
27.5°	10335.5	10450.0	10430.4	10341.0	10232.1	10317.3	10078.5	9962.5	9843.8	9764.1	9659.4
30°	10670.7	10845.3	10788.1	10593.9	10434.6	10462.6	10194.4	10039.3	9908.0	9825.6	9692.9
32.5°	9990.4	10170.7	10153.9	10012.8	9930.3	9998.8	9765.5	9611.9	9486.2	9420.6	9272.4
35°	9167.7	9378.6	9332.5	9215.1	9155.1	9234.7	9007.0	8878.6	8751.4	8694.2	8532.1
37.5°	8160.6	8358.9	8312.7	8201.1	8142.4	8201.1	7983.1	7864.4	7744.3	7684.2	7573.8
40°	6943.8	7118.5	7069.5	6966.2	6917.3	6959.3	6770.6	6667.3	6565.3	6520.6	6373.9
42.5°	5755.1	5894.8	5850.1	5760.7	5723.0	5751.0	5595.9	5503.7	5414.3	5376.5	5290.0
45°	4535.6	4674.0	4630.6	4553.8	4518.9	4534.2	4404.3	4321.9	4245.1	4210.1	4132.0
47.5°	3254.7	3409.7	3356.7	3291.0	3254.7	3247.8	3133.1	3059.1	3066.1	2947.4	2874.7
50°	1504.5	1635.7	1582.6	1547.7	1512.9	1493.3	1452.8	1368.9	1392.7	1285.1	1243.2
52.5°	546.2	578.3	565.7	554.6	543.4	539.2	525.2	504.3	507.0	480.5	468.0
55°	279.4	294.8	290.5	283.6	283.6	279.4	272.4	264.0	258.4	254.3	250.0
57.5°	128.6	136.9	134.1	131.3	131.3	128.6	125.7	121.5	124.3	117.3	115.9
60°	58.7	62.8	61.5	60.1	60.1	60.1	58.7	57.3	57.3	55.8	54.4
62.5°	28.0	30.7	29.3	29.3	29.3	29.3	28.0	28.0	28.0	28.0	26.6
65°	15.3	15.3	15.3	15.3	15.3	15.3	15.3	13.9	15.3	13.9	13.9
67.5°	8.4	8.4	8.4	8.4	7.0	8.4	8.4	7.0	7.0	7.0	7.0
70°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
75°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	0.0	1.4	1.4	1.4	0.0	1.4	1.4	1.4	1.4	1.4	1.4
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	1.4	0.0	1.4	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°	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7	206.7
2.5°	379.9	389.7	399.5	396.7	382.7	381.3	375.8	378.6	294.8	238.8	199.7
5°	963.8	976.4	988.9	982.0	947.0	938.6	910.8	905.1	575.5	282.1	191.4
7.5°	1761.5	1768.4	1778.2	1769.9	1718.2	1694.4	1635.7	1578.5	968.0	340.8	177.4
10°	2626.1	2623.3	2627.5	2616.3	2552.1	2506.0	2415.1	2374.7	1371.8	391.1	157.8
12.5°	3634.6	3623.5	3562.0	3591.3	3500.5	3407.0	3257.5	3131.8	1753.1	419.1	139.7
15°	4812.2	4778.7	4756.4	4722.8	4611.1	4460.2	4232.6	4092.8	2070.2	416.3	121.5
17.5°	5982.8	5928.3	5830.5	5843.1	5713.2	5502.2	5201.9	4963.1	2289.5	381.3	107.5
20°	7090.5	7009.5	6886.5	6876.9	6720.3	6442.4	6063.8	5767.6	2409.6	324.1	97.8
22.5°	8157.7	8032.0	7867.2	7815.5	7614.3	7220.4	6726.0	6365.6	2420.8	271.0	117.3
25°	8998.6	8840.8	8657.8	8568.4	8346.3	7843.5	7227.4	6784.7	2331.3	268.2	224.9
27.5°	9468.0	9289.2	9106.2	8984.7	8759.8	8189.8	7492.9	6981.6	2177.7	287.8	213.7
30°	9493.2	9292.0	9102.0	8948.3	8724.9	8115.8	7375.5	6843.3	1901.1	181.6	81.0
32.5°	9075.5	8860.4	8670.3	8497.1	8276.5	7663.2	6936.8	6428.4	1546.4	127.1	57.3
35°	8345.0	8122.8	7941.2	7758.2	7551.5	6974.6	6308.3	5834.7	1181.7	100.6	43.3
37.5°	7350.4	7145.0	6984.4	6860.1	6636.5	6176.9	5567.9	5066.5	835.3	71.2	26.6
40°	6237.0	6063.8	5932.5	5825.0	5618.2	5210.3	4595.7	4172.5	507.0	50.3	18.2
42.5°	5116.8	4954.7	4838.8	4736.8	4545.4	4185.0	3679.4	3254.7	243.1	34.9	12.5
45°	3979.7	3834.4	3736.6	3644.4	3472.7	3117.8	2716.9	2409.6	157.8	25.1	9.8
47.5°	2718.3	2642.9	2482.2	2381.6	2205.7	1934.7	1558.9	1220.9	104.7	18.2	7.0
50°	1130.1	1090.9	984.8	916.3	815.8	677.5	491.7	412.1	64.2	12.5	5.6
52.5°	438.6	428.9	402.3	387.0	361.8	325.5	271.0	241.7	39.1	9.8	5.6
55°	236.1	233.3	219.3	211.0	196.9	178.8	146.6	128.6	25.1	7.0	4.1
57.5°	109.0	107.5	100.6	100.6	90.8	83.8	69.9	62.8	15.3	5.6	4.1
60°	51.7	51.7	48.9	48.9	44.7	41.9	34.9	32.1	9.8	4.1	4.1
62.5°	25.1	25.1	25.1	25.1	23.7	22.3	19.6	18.2	7.0	4.1	4.1
65°	13.9	13.9	13.9	13.9	12.5	12.5	11.2	9.8	5.6	4.1	4.1
67.5°	7.0	7.0	7.0	7.0	7.0	7.0	5.6	5.6	4.1	4.1	4.1
70°	4.1	4.1	4.1	4.1	4.1	2.8	2.8	2.8	2.8	4.1	4.1
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	4.1	4.1
75°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	4.1	4.1
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	4.1	4.1
80°	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4	2.8	4.1	4.1
82.5°	0.0	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.8	4.1	4.1
85°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	2.8	4.1	4.1
87.5°	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	2.8	4.1	4.1
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°	206.7	206.7	206.7	206.7
2.5°	171.8	149.5	138.2	135.5
5°	141.1	110.4	95.0	89.4
7.5°	114.5	79.6	67.1	61.5
10°	90.8	62.8	50.3	46.0
12.5°	75.4	50.3	40.5	37.7
15°	64.2	43.3	36.4	34.9
17.5°	58.7	46.0	43.3	44.7
20°	71.2	75.4	88.0	90.8
22.5°	150.9	261.2	354.8	375.8
25°	314.3	377.2	391.1	405.0
27.5°	174.6	135.5	132.7	138.2
30°	71.2	72.6	75.4	78.3
32.5°	53.1	53.1	51.7	53.1
35°	36.4	33.5	32.1	33.5
37.5°	22.3	20.9	19.6	19.6
40°	15.3	13.9	12.5	12.5
42.5°	11.2	8.4	7.0	7.0
45°	8.4	5.6	4.1	2.8
47.5°	7.0	4.1	1.4	1.4
50°	5.6	2.8	1.4	0.0
52.5°	4.1	2.8	1.4	0.0
55°	4.1	2.8	0.0	0.0
57.5°	4.1	2.8	0.0	0.0
60°	4.1	2.8	1.4	0.0
62.5°	4.1	2.8	1.4	1.4
65°	4.1	2.8	1.4	0.0
67.5°	4.1	2.8	1.4	0.0
70°	4.1	2.8	1.4	0.0
72.5°	5.6	2.8	1.4	0.0
75°	5.6	4.1	1.4	0.0
77.5°	5.6	4.1	1.4	0.0
80°	5.6	4.1	1.4	0.0
82.5°	5.6	4.1	1.4	0.0
85°	5.6	4.1	1.4	0.0
87.5°	5.6	4.1	1.4	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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— 0°-180° - - 45°-225° - - - 90°-270°

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(END OF REPORT)