

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: P1191709

Luminaire Tested: **LDA4A25930D010TE LAR15SP 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: P1191709
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26104)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A25930D010TE LAR15SP 4LAL1 30° Tilt
Description: PORTFOLIO 4" Lensed Adjustable, Self-flanged, 15° Spot Optic, at 30° tilt. --- 27.9W
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

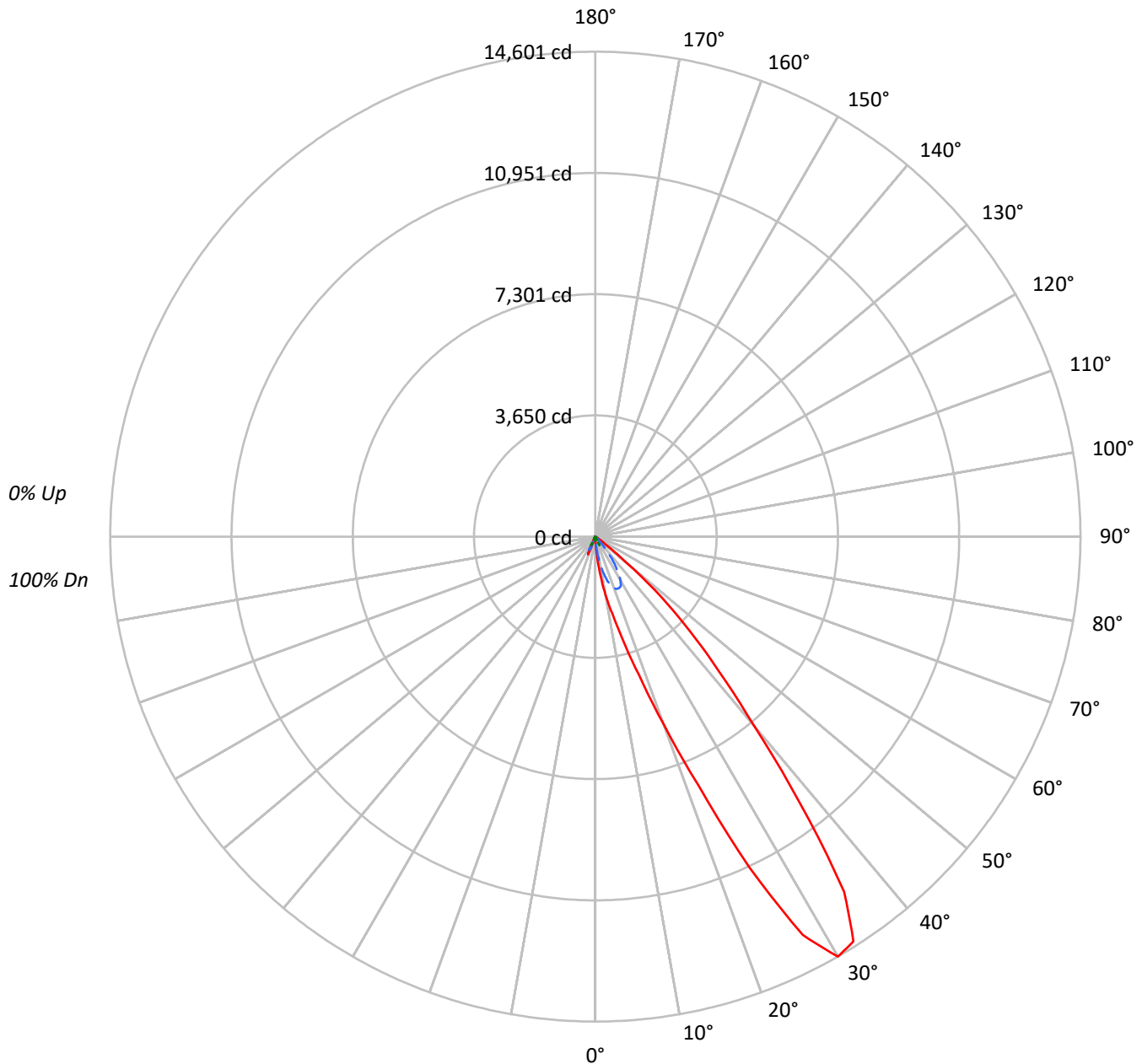
Lumens per Lamp: N/A
Luminaire Lumens: 2527.5 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 2.57 / 1.16 / 1.36
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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
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	97	96		96	94	93
2	105	100	95	91		103	98	93	90		94	91	88		91	88	86		89	86	84
3	99	91	85	80		96	89	84	79		87	82	78		84	80	77		82	78	76
4	92	83	76	71		90	82	75	70		79	74	70		77	72	69		75	71	68
5	86	75	68	63		84	74	68	63		73	67	62		71	66	62		69	65	61
6	80	69	62	56		78	68	61	56		66	60	56		65	59	55		63	59	55
7	74	63	56	51		73	62	55	50		61	55	50		60	54	50		58	53	49
8	69	58	50	45		68	57	50	45		56	50	45		55	49	45		54	48	45
9	65	53	46	41		64	52	46	41		51	45	41		50	45	40		49	44	40
10	61	49	42	37		59	48	41	37		47	41	37		46	41	37		46	40	37

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	14703	14703	14703
5°	77584	13892	7392
10°	226913	11811	4872
15°	412754	9909	5491
20°	787426	11275	26751
25°	1496507	39250	59052
30°	2079580	13231	11451
35°	1965243	6053	4382
40°	1191134	2689	1562
45°	698045	1448	471
50°	231671	1075	0
55°	44128	882	0
60°	9917	666	0
65°	2831	1197	0
70°	974	1479	0
75°	0	1954	0
80°	0	2912	0
85°	0	5802	1981

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Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.5	1.1
10°-20°	232.6	9.2
20°-30°	824.7	32.6
30°-40°	977.8	38.7
40°-50°	416.0	16.5
50°-60°	37.6	1.5
60°-70°	4.6	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°	1085.7	43.0
0°-40°	2063.4	81.6
0°-60°	2517.0	99.6
0°-90°	2527.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2527.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	119	119	119	119	119	
5°	627	309	112	71	60	97
15°	3232	1361	78	43	43	1043
25°	10996	1706	288	453	434	5095
35°	13051	1008	40	30	29	7539
45°	4002	111	8	6	3	3136
55°	205	17	4	3	0	287
65°	10	4	4	3	0	14
75°	0	3	4	4	0	1
85°	0	3	4	4	1	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°	119.2	119.2	119.2	119.2	119.2	119.2	119.2	119.2	119.2	119.2	119.2
2.5°	219.0	206.5	214.9	212.0	213.5	217.6	213.5	213.5	212.0	206.5	206.5
5°	626.6	589.1	607.1	597.4	602.9	609.9	600.2	597.4	593.3	580.7	578.0
7.5°	1167.1	1146.3	1168.4	1151.9	1167.1	1169.9	1156.0	1153.2	1146.3	1128.3	1121.3
10°	1811.7	1776.9	1797.7	1779.8	1803.3	1802.0	1779.8	1782.5	1774.2	1750.6	1739.6
12.5°	2382.7	2354.9	2375.7	2324.5	2382.7	2345.3	2349.4	2354.9	2343.8	2313.4	2299.5
15°	3232.3	3156.1	3192.1	3103.4	3192.1	3179.7	3131.2	3128.4	3099.3	3048.0	3017.5
17.5°	4360.7	4381.5	4355.1	4302.5	4420.2	4388.3	4319.1	4305.2	4249.8	4109.8	4107.0
20°	5998.9	5971.3	6015.6	5849.3	6000.4	5853.4	5834.0	5795.3	5701.0	5505.5	5475.0
22.5°	8096.1	8111.4	8032.3	7917.4	8103.1	7875.8	7806.5	7713.6	7541.7	7241.0	7146.7
25°	10995.9	10976.4	10873.9	10682.6	10880.8	10513.4	10340.3	10149.0	9828.8	9360.2	9134.4
27.5°	13522.7	13601.7	13533.8	13339.7	13471.4	13109.6	12710.4	12588.4	12154.6	11564.1	11156.7
30°	14601.0	14638.5	14609.4	14461.0	14508.2	14210.2	13815.2	13671.0	13226.1	12667.4	12139.4
32.5°	14452.8	14470.7	14476.3	14278.2	14286.4	14005.0	13591.9	13378.6	12893.4	12355.6	11724.9
35°	13051.4	13126.3	13174.8	12989.0	12804.7	12524.7	12056.2	11724.9	11214.9	10724.2	10079.7
37.5°	10107.4	10201.6	10276.5	10118.4	10031.1	9692.9	9303.4	9047.0	8694.9	8406.7	7949.2
40°	7397.6	7415.6	7461.3	7379.5	7243.7	7153.6	6930.4	6784.9	6571.4	6416.2	6112.7
42.5°	5498.7	5489.0	5520.7	5475.0	5470.9	5335.0	5193.6	5107.8	5034.3	4870.7	4657.2
45°	4001.7	4004.4	4034.9	4005.8	3928.2	3899.0	3806.2	3728.6	3631.6	3580.3	3411.2
47.5°	2720.9	2729.2	2750.0	2733.3	2662.7	2651.6	2592.0	2514.4	2513.0	2434.0	2285.7
50°	1207.3	1210.0	1235.1	1229.5	1144.9	1156.0	1117.2	1046.5	1065.9	1018.8	905.1
52.5°	400.6	402.0	406.1	403.3	389.5	389.5	379.8	378.4	367.3	356.3	331.2
55°	205.2	205.2	207.9	206.5	199.6	199.6	188.5	195.4	189.8	185.7	170.5
57.5°	87.3	87.3	88.7	88.7	84.6	88.7	84.6	84.6	81.7	80.4	74.9
60°	40.2	40.2	40.2	40.2	38.9	41.6	38.9	38.9	38.9	37.4	34.6
62.5°	20.8	20.8	20.8	20.8	20.8	20.8	20.8	19.4	19.4	19.4	18.1
65°	9.7	9.7	9.7	9.7	9.7	11.1	9.7	9.7	9.7	9.7	9.7
67.5°	4.1	4.1	4.1	5.6	5.6	5.6	5.6	5.6	4.1	4.1	4.1
70°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.4
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°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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	0.0	0.0	0.0	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: LDA4A25930D010TE LAR15SP 4LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	11°	12°	13°	14°	15°	17.5°	20°	22.5°	45°	67.5°	90°
0°	119.2	119.2	119.2	119.2	119.2	119.2	119.2	119.2	119.2	119.2	119.2
2.5°	207.9	200.9	210.6	202.4	207.9	202.4	195.4	198.2	159.4	133.0	117.8
5°	579.4	558.6	576.6	558.6	559.9	550.3	523.9	521.2	309.1	151.1	112.2
7.5°	1090.8	1088.1	1110.3	1086.7	1084.0	1060.3	1011.8	992.4	559.9	177.4	104.0
10°	1732.6	1692.5	1711.8	1686.9	1678.5	1635.6	1566.3	1528.9	833.1	203.8	94.3
12.5°	2260.7	2245.4	2259.4	2235.8	2227.5	2169.2	2087.5	2037.5	1113.0	219.0	84.6
15°	2951.0	2920.4	2930.2	2881.7	2856.8	2745.8	2605.9	2514.4	1361.1	217.6	77.6
17.5°	4004.4	3944.8	3939.3	3856.2	3795.1	3594.1	3343.2	3154.7	1542.7	200.9	74.9
20°	5323.9	5215.8	5179.8	5048.1	4945.6	4612.9	4226.1	3919.8	1656.4	178.8	85.9
22.5°	6905.5	6715.6	6608.9	6398.2	6222.2	5688.5	5121.6	4662.8	1706.3	171.9	123.3
25°	8749.0	8423.2	8197.4	7866.0	7569.5	6750.3	5954.6	5311.5	1706.3	223.2	288.4
27.5°	10618.8	10104.6	9688.8	9205.0	8754.6	7593.0	6567.3	5730.1	1664.7	278.6	263.3
30°	11565.5	10933.5	10367.9	9802.4	9236.9	7841.1	6704.5	5781.3	1508.1	163.6	92.9
32.5°	11163.5	10496.9	9871.8	9324.2	8765.7	7403.2	6333.0	5441.8	1266.8	95.7	59.7
35°	9622.3	9044.2	8500.8	8092.0	7656.8	6581.2	5623.4	4847.2	1007.7	74.9	40.2
37.5°	7680.3	7286.7	6899.9	6638.0	6326.2	5518.0	4745.9	4109.8	720.7	54.1	24.9
40°	5957.4	5688.5	5418.2	5251.9	5031.6	4442.4	3840.8	3335.0	425.5	37.4	16.7
42.5°	4563.1	4377.2	4176.3	4061.2	3903.2	3463.8	2993.9	2636.3	196.8	26.3	12.5
45°	3354.3	3217.1	3063.3	2989.8	2878.9	2589.2	2277.3	2025.1	110.9	19.4	8.3
47.5°	2258.0	2135.9	1993.2	1947.5	1840.7	1587.1	1268.3	1020.2	73.5	13.8	7.0
50°	898.2	817.8	769.3	705.5	643.1	539.2	403.3	321.6	44.3	11.1	5.6
52.5°	329.9	311.9	303.6	286.9	273.0	243.9	206.5	178.8	26.3	8.3	4.1
55°	171.9	160.8	155.2	149.7	141.4	124.7	104.0	88.7	16.7	5.6	4.1
57.5°	74.9	70.6	72.1	66.5	62.4	56.8	49.9	43.0	11.1	5.6	4.1
60°	36.0	33.3	34.6	31.9	30.5	29.1	26.3	22.2	7.0	4.1	2.7
62.5°	18.1	18.1	18.1	16.7	16.7	15.2	13.8	12.5	5.6	4.1	4.1
65°	9.7	8.3	9.7	8.3	8.3	8.3	7.0	7.0	4.1	4.1	4.1
67.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	2.7	4.1	4.1
70°	2.7	2.7	2.7	2.7	2.7	2.7	1.4	2.7	2.7	4.1	4.1
72.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.7	4.1	4.1
75°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	2.7	4.1	4.1
77.5°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	2.7	4.1	4.1
80°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	2.7	4.1	4.1
82.5°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	2.7	4.1	4.1
85°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	2.7	4.1	4.1
87.5°	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	2.7	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°	119.2	119.2	119.2	119.2
2.5°	99.8	88.7	80.4	79.0
5°	84.6	70.6	61.0	59.7
7.5°	72.1	56.8	48.5	47.1
10°	63.8	48.5	40.2	38.9
12.5°	56.8	43.0	37.4	36.0
15°	52.7	43.0	41.6	43.0
17.5°	56.8	58.2	63.8	70.6
20°	94.3	134.4	174.6	203.8
22.5°	212.0	392.3	519.8	580.7
25°	400.6	453.3	454.7	433.9
27.5°	217.6	173.3	155.2	147.0
30°	85.9	81.7	81.7	80.4
32.5°	56.8	52.7	51.3	49.9
35°	34.6	30.5	29.1	29.1
37.5°	22.2	19.4	18.1	16.7
40°	15.2	12.5	11.1	9.7
42.5°	11.1	8.3	5.6	5.6
45°	8.3	5.6	2.7	2.7
47.5°	7.0	4.1	1.4	1.4
50°	5.6	2.7	1.4	0.0
52.5°	4.1	2.7	0.0	0.0
55°	4.1	2.7	0.0	0.0
57.5°	4.1	2.7	0.0	0.0
60°	4.1	2.7	0.0	0.0
62.5°	4.1	2.7	0.0	0.0
65°	4.1	2.7	1.4	0.0
67.5°	5.6	2.7	1.4	0.0
70°	5.6	2.7	1.4	0.0
72.5°	5.6	2.7	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	1.4
87.5°	5.6	4.1	1.4	0.0
90°	0.0	0.0	0.0	0.0

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— 0°-180° - - 45°-225° - - - 90°-270°

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