

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: P1212798

Luminaire Tested: **LDA4A30950D010TE LAR15SP 4LA1 30° Tilt**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P1212798
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25648)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA4A30950D010TE LAR15SP 4LA1 30° Tilt
Description: PORTFOLIO 4" Adjustable Reflector, Self-flanged Trim Ring, 15° Spot
Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

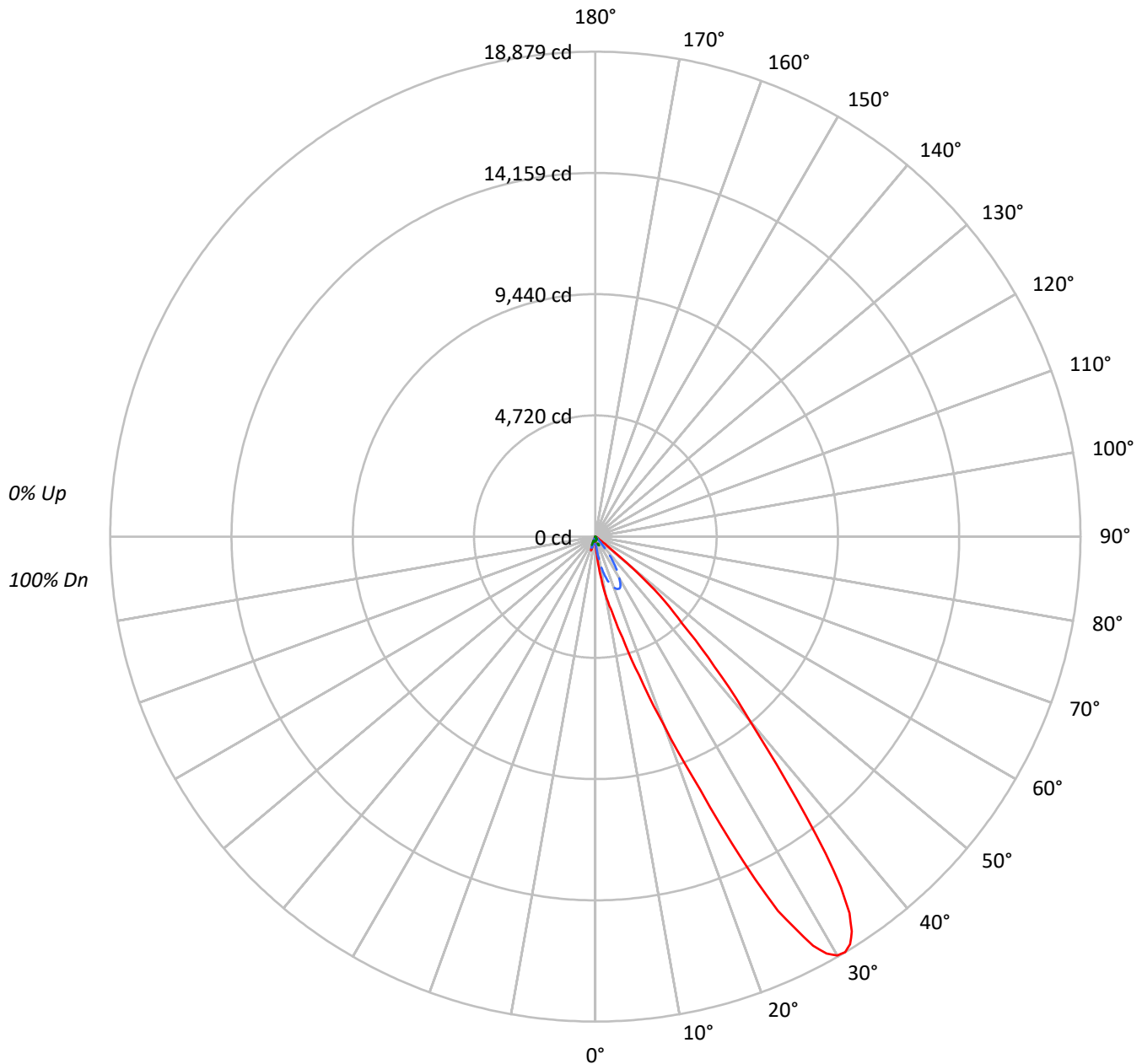
Lumens per Lamp: N/A
Luminaire Lumens: 3045.5 lumens
Efficiency: N/A
Efficacy: 77.3 lumens/watt
Spacing Criteria (0/90/45): 2.52 / 1.04 / 1.28
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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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
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	112	109	106	104	110	107	104	102		103	101	99			99	98	96			96
2	106	100	95	91	103	98	94	90		95	91	88			92	89	86			89
3	99	91	85	80	97	90	84	80		87	82	78			84	80	77			82
4	92	83	77	71	90	82	76	71		80	74	70			78	73	69			76
5	86	76	69	64	84	75	68	63		73	67	63			71	66	62			70
6	80	69	62	57	79	69	62	57		67	61	56			65	60	56			64
7	75	64	56	51	73	63	56	51		62	55	51			60	55	50			59
8	70	58	51	46	69	58	51	46		57	50	46			55	50	46			54
9	65	54	47	42	64	53	46	42		52	46	41			51	45	41			50
10	61	49	42	38	60	49	42	38		48	42	38			47	41	37			46

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	21906	21906	21906
5°	98286	20603	13323
10°	290940	18938	17034
15°	519407	22449	48040
20°	1028895	44170	51599
25°	2002121	28798	14644
30°	2681848	10768	5127
35°	2509429	4547	1988
40°	1503763	2125	612
45°	834489	1326	0
50°	306125	1075	0
55°	46773	817	0
60°	10262	937	0
65°	3298	1109	0
70°	685	1370	0
75°	0	2669	0
80°	0	3978	0
85°	0	7925	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.0	1.3
10°-20°	329.0	10.8
20°-30°	982.0	32.2
30°-40°	1163.0	38.2
40°-50°	482.5	15.8
50°-60°	37.5	1.2
60°-70°	5.1	0.2
70°-80°	3.9	0.1
80°-90°	3.6	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°	1350.0	44.3
0°-40°	2513.0	82.5
0°-60°	3032.9	99.6
0°-90°	3045.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3045.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	178	178	178	178	178	
5°	794	401	166	115	108	126
15°	4068	1718	176	263	376	1343
25°	14711	2232	212	123	108	6719
35°	16665	1244	30	17	13	9658
45°	4784	110	8	6	0	3900
55°	218	15	4	2	0	318
65°	11	4	4	4	0	14
75°	0	4	6	4	0	0
85°	0	4	6	4	0	0
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6
2.5°	308.0	293.0	300.6	287.2	294.8	281.6	272.2	281.6	281.6	274.0	262.7
5°	793.8	790.1	805.3	769.3	778.8	739.1	705.1	714.4	706.9	682.3	638.9
7.5°	1512.1	1497.0	1514.0	1463.0	1464.9	1398.7	1347.6	1359.0	1325.0	1283.5	1207.9
10°	2322.9	2302.2	2321.1	2260.5	2249.3	2156.6	2084.8	2096.2	2018.7	1950.6	1835.3
12.5°	3026.1	3024.2	2963.7	2975.1	2952.5	2810.6	2765.3	2769.1	2663.1	2587.5	2449.6
15°	4067.5	4107.2	4118.6	4041.1	3901.4	3644.3	3530.8	3487.3	3315.3	3188.6	2990.2
17.5°	5668.5	5723.3	5536.2	5581.6	5351.0	4948.4	4723.4	4589.2	4266.1	4027.9	3668.8
20°	7838.5	7791.1	7520.9	7486.9	7093.7	6575.8	6103.2	5849.9	5352.9	5005.0	4481.6
22.5°	10639.6	10603.6	10140.5	9934.6	9112.4	8382.7	7770.4	7135.2	6396.3	5931.2	5220.6
25°	14711.0	14546.5	13654.4	13068.4	11622.4	10382.5	9361.9	8375.2	7243.0	6738.4	5834.8
26°	16209.8	16170.1	15240.3	14469.0	12726.4	11187.7	9811.8	8823.3	7575.8	6986.0	6008.8
27°	17109.6	17425.2	16559.5	15686.3	13780.9	11938.1	10342.9	9184.1	7834.6	7159.8	6120.3
28°	18043.3	18247.4	17472.5	16376.2	14625.9	12535.3	10745.5	9428.0	7993.4	7244.8	6158.0
29°	18557.4	18754.0	18033.8	17005.6	15179.7	12922.9	10983.6	9535.8	8052.0	7243.0	6124.0
30°	18829.6	19012.9	18309.8	17311.7	15408.4	13043.9	11034.6	9492.3	7995.2	7156.1	6027.7
31°	18878.7	19031.8	18338.1	17302.3	15321.5	12894.5	10891.0	9312.7	7844.1	6995.4	5882.1
32°	18712.3	18831.5	18126.5	17022.6	14930.2	12516.4	10592.4	9034.9	7613.4	6795.0	5695.0
33°	18323.0	18536.6	17676.7	16457.4	14249.8	11957.1	10168.9	8671.9	7326.2	6534.1	5466.2
34°	17678.4	17814.7	16924.3	15572.9	13342.6	11276.6	9649.1	8250.5	6997.2	6226.1	5207.4
35°	16665.4	16786.3	15801.6	14378.3	12308.6	10509.1	9055.6	7785.4	6628.6	5880.3	4920.0
36°	15262.8	15378.3	14348.0	13051.5	11265.3	9709.6	8430.0	7278.9	6229.9	5509.7	4615.7
37°	13624.1	13724.3	12807.5	11749.1	10240.8	8900.7	7796.9	6764.8	5808.4	5131.8	4326.6
38°	12040.2	12131.0	11390.0	10528.0	9252.2	8110.5	7165.6	6231.8	5373.7	4751.9	4022.2
39°	10611.2	10690.6	10093.3	9382.7	8311.1	7352.7	6536.1	5702.6	4937.0	4371.8	3708.4
40°	9339.2	9407.2	8915.8	8331.8	7456.5	6643.9	5923.7	5190.3	4509.9	4003.4	3415.5
42.5°	6855.6	6870.7	6577.7	6233.8	5553.2	5086.4	4574.1	4045.0	3547.9	3200.1	2825.7
45°	4783.9	4971.0	4780.3	4551.4	4063.7	3770.8	3443.9	3124.4	2837.1	2502.6	2132.1
47.5°	3440.0	3447.7	3334.2	3190.6	2805.0	2604.6	2336.3	1948.8	1663.3	1188.9	882.8
50°	1595.3	1506.4	1512.1	1413.9	1260.7	1001.8	837.3	597.3	476.3	340.2	274.0
51°	948.9	882.8	892.2	822.2	720.2	561.3	476.3	381.8	330.7	257.1	211.6
52°	553.8	531.1	529.3	497.1	423.3	389.3	344.0	287.2	251.5	198.5	164.4
53°	402.6	387.5	387.5	366.7	315.6	293.0	260.7	221.1	192.7	151.2	124.7
54°	300.6	289.1	289.1	276.0	255.1	219.2	196.6	164.4	143.6	117.1	92.6
55°	217.5	209.8	209.8	200.4	185.2	158.7	141.8	119.1	105.9	85.1	68.0
57.5°	90.7	86.9	86.9	83.1	79.5	68.0	64.2	54.9	47.2	41.6	34.0
60°	41.6	39.6	41.6	39.6	36.0	37.9	32.1	28.4	26.5	22.7	18.9
61°	32.1	30.2	30.2	30.2	26.5	26.5	24.5	22.7	20.8	17.1	15.1
62°	24.5	22.7	22.7	22.7	20.8	20.8	18.9	17.1	17.1	13.2	11.3
63°	18.9	17.1	17.1	17.1	15.1	15.1	15.1	13.2	13.2	11.3	9.5
64°	13.2	13.2	13.2	13.2	13.2	11.3	11.3	11.3	9.5	7.6	7.6
65°	11.3	9.5	11.3	9.5	9.5	9.5	9.5	9.5	7.6	5.6	5.6
66°	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	5.6	3.8



TEST NUMBER: P1212798

CATALOG NUMBER: LDA4A30950D010TE LAR15SP 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
72.5°	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9
75°	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9	1.9
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9
80°	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9
85°	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9	1.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9
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):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6	177.6
2.5°	257.1	264.6	259.0	243.8	251.5	247.6	240.0	234.4	200.4	174.0	147.5
5°	606.7	612.4	580.2	523.6	504.7	474.3	431.0	400.7	226.7	166.4	130.4
7.5°	1147.3	1109.5	1079.3	973.4	928.0	858.2	774.9	716.4	259.0	156.9	121.0
10°	1737.1	1676.6	1614.2	1459.1	1377.9	1270.2	1151.1	1083.1	293.0	151.2	121.0
12.5°	2321.1	2239.8	2126.4	1956.2	1841.0	1695.5	1533.0	1412.0	317.6	155.0	139.9
15°	2827.7	2729.4	2604.6	2411.9	2277.6	2096.2	1884.4	1718.2	329.0	175.8	194.7
17.5°	3379.6	3201.8	2995.8	2750.2	2602.7	2392.9	2154.8	1952.6	329.0	223.1	311.9
20°	4014.6	3689.5	3358.8	3014.8	2807.0	2587.5	2332.4	2115.2	342.2	336.5	429.1
22.5°	4606.3	4158.2	3691.5	3243.4	2954.2	2716.1	2457.1	2207.7	397.0	370.6	285.5
25°	5065.5	4496.6	3946.6	3402.3	3075.3	2810.6	2532.8	2232.3	363.0	211.6	155.0
26°	5184.6	4570.3	3997.7	3421.2	3080.9	2808.7	2525.3	2205.8	304.3	168.2	124.7
27°	5247.0	4594.9	4001.5	3404.2	3058.2	2776.6	2483.6	2150.9	243.8	136.0	102.0
28°	5247.0	4566.6	3961.7	3356.8	2999.7	2716.1	2411.9	2064.0	198.5	111.5	81.2
29°	5194.1	4492.8	3882.4	3285.2	2920.2	2631.1	2313.5	1961.9	168.2	92.6	66.1
30°	5092.0	4385.2	3776.4	3192.4	2818.2	2534.6	2205.8	1856.2	145.5	75.6	52.9
31°	4948.4	4264.1	3646.0	3092.2	2723.7	2445.9	2107.5	1748.3	126.6	60.5	43.5
32°	4776.4	4113.0	3511.9	2988.2	2646.2	2362.8	2005.4	1635.0	109.6	51.1	37.9
33°	4577.9	3942.8	3372.0	2886.2	2570.6	2268.2	1893.8	1512.1	94.5	41.6	32.1
34°	4358.6	3755.8	3228.4	2776.6	2478.0	2149.2	1763.5	1381.6	81.2	36.0	26.5
35°	4120.5	3545.9	3080.9	2665.1	2374.0	2016.8	1623.6	1243.6	70.0	30.2	22.7
36°	3863.5	3349.3	2937.3	2553.5	2245.5	1873.1	1470.6	1102.0	60.5	24.5	20.8
37°	3606.4	3164.1	2795.5	2434.4	2096.2	1710.6	1309.9	954.5	52.9	20.8	17.1
38°	3362.6	2984.6	2655.6	2296.5	1922.2	1531.0	1143.5	807.1	45.4	18.9	15.1
39°	3133.8	2810.6	2512.0	2132.1	1742.7	1357.1	982.9	654.0	39.6	17.1	13.2
40°	2927.8	2646.2	2355.1	1948.8	1557.5	1179.5	820.4	487.7	34.0	13.2	11.3
42.5°	2493.1	2194.4	1810.7	1359.0	1052.8	684.2	381.8	181.5	24.5	9.5	9.5
45°	1646.2	1266.4	860.0	512.2	346.0	208.0	155.0	109.6	18.9	7.6	7.6
47.5°	550.1	349.6	255.1	183.5	156.9	124.7	100.2	68.0	13.2	5.6	5.6
50°	209.8	170.1	139.9	105.9	94.5	75.6	60.5	39.6	9.5	5.6	5.6
51°	164.4	134.2	109.6	83.1	75.6	60.5	49.1	34.0	7.6	5.6	5.6
52°	126.6	104.0	85.1	64.2	60.5	49.1	41.6	28.4	7.6	3.8	5.6
53°	96.4	79.5	64.2	49.1	47.2	39.6	34.0	22.7	5.6	3.8	5.6
54°	71.9	60.5	51.1	39.6	39.6	34.0	28.4	18.9	5.6	3.8	5.6
55°	54.9	45.4	39.6	30.2	32.1	28.4	24.5	15.1	5.6	3.8	5.6
57.5°	28.4	26.5	22.7	18.9	20.8	18.9	17.1	9.5	5.6	3.8	5.6
60°	17.1	15.1	13.2	11.3	13.2	13.2	13.2	5.6	5.6	3.8	5.6
61°	13.2	11.3	9.5	9.5	11.3	11.3	11.3	5.6	5.6	3.8	5.6
62°	9.5	9.5	7.6	7.6	11.3	9.5	9.5	5.6	5.6	3.8	5.6
63°	7.6	7.6	7.6	5.6	9.5	9.5	9.5	5.6	5.6	3.8	5.6
64°	5.6	5.6	5.6	5.6	7.6	9.5	9.5	3.8	5.6	3.8	5.6
65°	5.6	5.6	3.8	3.8	7.6	7.6	7.6	3.8	5.6	3.8	5.6
66°	3.8	3.8	3.8	3.8	7.6	7.6	7.6	3.8	5.6	3.8	5.6



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CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
72.5°	1.9	1.9	1.9	1.9	5.6	5.6	7.6	3.8	5.6	5.6	5.6
75°	1.9	1.9	1.9	1.9	5.6	5.6	7.6	3.8	5.6	5.6	5.6
77.5°	1.9	1.9	1.9	1.9	5.6	5.6	7.6	3.8	5.6	5.6	7.6
80°	1.9	1.9	1.9	1.9	5.6	5.6	7.6	3.8	5.6	5.6	7.6
82.5°	1.9	1.9	1.9	1.9	5.6	5.6	7.6	3.8	5.6	5.6	7.6
85°	1.9	1.9	1.9	1.9	5.6	5.6	7.6	3.8	5.6	5.6	7.6
87.5°	1.9	1.9	1.9	1.9	5.6	5.6	7.6	3.8	5.6	5.6	5.6
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):

	135°	157.5°	180°
0°	177.6	177.6	177.6
2.5°	134.2	128.5	124.7
5°	115.3	109.6	107.6
7.5°	107.6	105.9	107.6
10°	119.1	126.6	136.0
12.5°	158.7	187.1	202.2
15°	262.7	342.2	376.2
17.5°	463.1	527.3	565.1
20°	408.2	372.3	393.1
22.5°	221.1	192.7	198.5
25°	122.9	105.9	107.6
26°	98.2	85.1	85.1
27°	79.5	68.0	68.0
28°	64.2	54.9	54.9
29°	51.1	43.5	43.5
30°	41.6	36.0	36.0
31°	34.0	28.4	28.4
32°	28.4	24.5	22.7
33°	24.5	20.8	18.9
34°	20.8	17.1	15.1
35°	17.1	13.2	13.2
36°	15.1	11.3	11.3
37°	13.2	9.5	9.5
38°	11.3	7.6	7.6
39°	9.5	7.6	5.6
40°	7.6	5.6	3.8
42.5°	5.6	3.8	1.9
45°	5.6	1.9	0.0
47.5°	3.8	1.9	0.0
50°	3.8	0.0	0.0
51°	3.8	0.0	0.0
52°	3.8	0.0	0.0
53°	1.9	0.0	0.0
54°	3.8	0.0	0.0
55°	1.9	0.0	0.0
57.5°	3.8	0.0	0.0
60°	3.8	0.0	0.0
61°	3.8	0.0	0.0
62°	3.8	0.0	0.0
63°	3.8	0.0	0.0
64°	3.8	1.9	0.0
65°	3.8	1.9	0.0
66°	3.8	1.9	0.0



TEST NUMBER: P1212798

CATALOG NUMBER: LDA4A30950D010TE LAR15SP 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
72.5°	3.8	1.9	0.0
75°	3.8	1.9	0.0
77.5°	3.8	1.9	0.0
80°	3.8	1.9	0.0
82.5°	3.8	1.9	0.0
85°	3.8	1.9	0.0
87.5°	3.8	1.9	0.0
90°	0.0	0.0	0.0

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Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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— 0°-180° - - 45°-225° - - - 90°-270°

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67.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	3.8	3.8
70°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	3.8	3.8	1.9	1.9

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67.5°	3.8	1.9	3.8	3.8	5.6	7.6	7.6	3.8	5.6	3.8	5.6
70°	1.9	1.9	1.9	1.9	5.6	5.6	7.6	3.8	5.6	3.8	5.6

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67.5°	3.8	1.9	0.0
70°	3.8	1.9	0.0

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(END OF REPORT)