

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: P1191707

Luminaire Tested: **LDA4A25930D010TE LAR15SP 4LA1 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: P1191707
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: LDA4A25930D010TE 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 / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

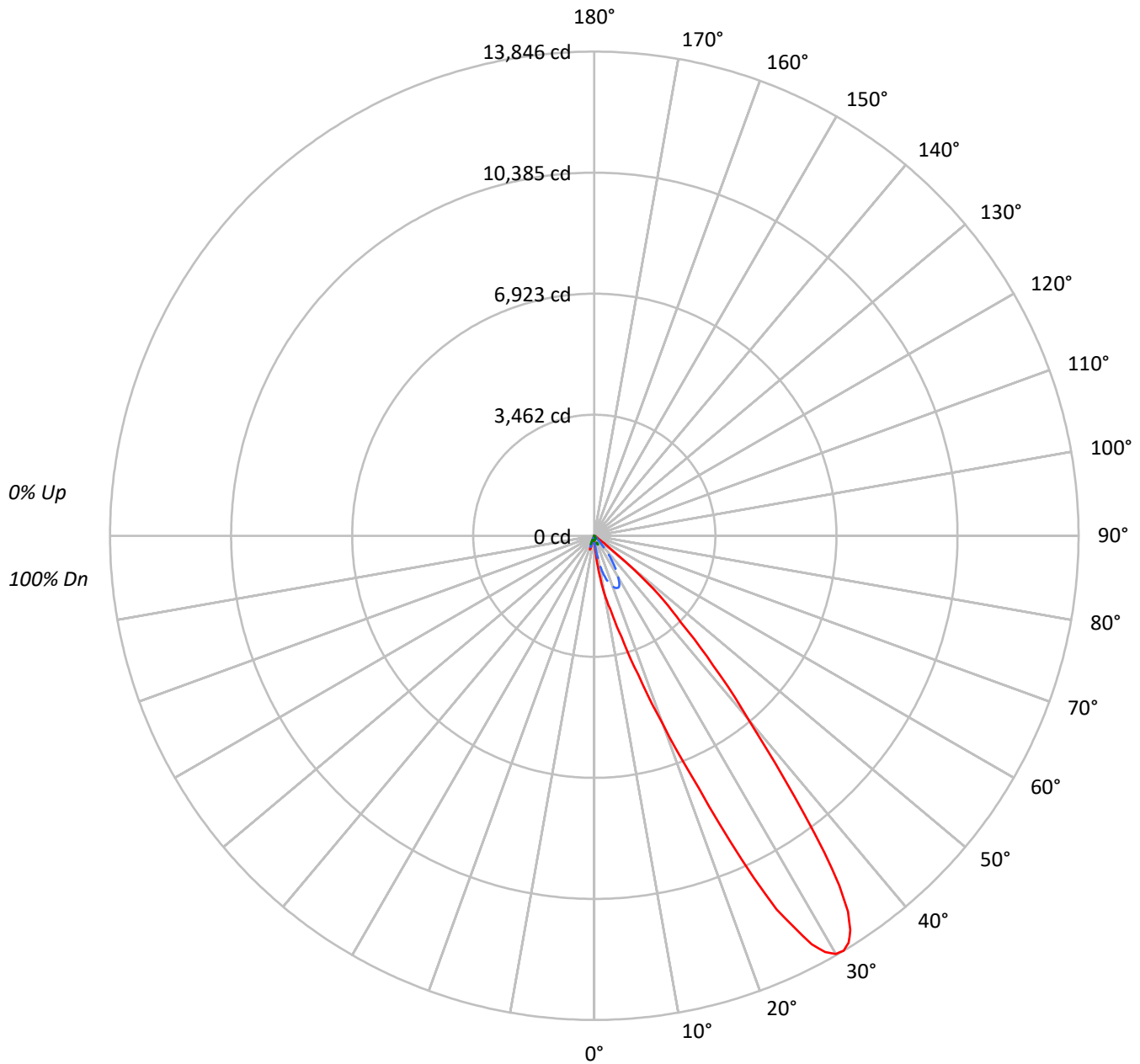
Lumens per Lamp: N/A
Luminaire Lumens: 2233.5 lumens
Efficiency: N/A
Efficacy: 72.3 lumens/watt
Spacing Criteria (0/90/45): 2.52 / 1.04 / 1.28
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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
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°	16072	16072	16072
5°	72099	15106	9782
10°	213386	13890	12500
15°	380932	16460	35219
20°	754584	32395	37856
25°	1468349	21122	10752
30°	1966835	7890	3746
35°	1840385	3343	1461
40°	1102849	1562	435
45°	612012	977	0
50°	224513	787	0
55°	34278	581	0
60°	7524	666	0
65°	2422	788	0
70°	505	974	0
75°	0	1954	0
80°	0	2912	0
85°	0	5802	0

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.6	1.3
10°-20°	241.3	10.8
20°-30°	720.2	32.2
30°-40°	852.9	38.2
40°-50°	353.8	15.8
50°-60°	27.5	1.2
60°-70°	3.7	0.2
70°-80°	2.8	0.1
80°-90°	2.6	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°	990.1	44.3
0°-40°	1843.0	82.5
0°-60°	2224.3	99.6
0°-90°	2233.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2233.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	130	130	130	130	130	
5°	582	294	122	85	79	92
15°	2983	1260	129	193	276	985
25°	10789	1637	155	90	79	4928
35°	12222	912	22	12	10	7083
45°	3508	80	6	4	0	2860
55°	159	11	3	1	0	234
65°	8	3	3	3	0	10
75°	0	3	4	3	0	0
85°	0	3	4	3	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°	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3
2.5°	226.0	214.9	220.4	210.7	216.3	206.5	199.6	206.5	206.5	201.1	192.7
5°	582.3	579.4	590.5	564.2	571.2	542.0	517.1	524.0	518.5	500.4	468.5
7.5°	1109.0	1097.9	1110.3	1073.0	1074.3	1025.8	988.4	996.7	971.7	941.3	885.7
10°	1703.7	1688.4	1702.3	1658.0	1649.6	1581.6	1529.0	1537.3	1480.5	1430.6	1346.0
12.5°	2219.3	2217.9	2173.6	2181.9	2165.3	2061.3	2028.1	2030.8	1953.2	1897.8	1796.5
15°	2983.1	3012.2	3020.6	2963.8	2861.1	2672.6	2589.4	2557.5	2431.5	2338.5	2193.0
17.5°	4157.2	4197.4	4060.3	4093.5	3924.4	3629.1	3464.2	3365.8	3128.7	2954.1	2690.7
20°	5748.7	5714.0	5515.7	5490.8	5202.5	4822.7	4476.1	4290.4	3925.7	3670.7	3286.7
22.5°	7803.0	7776.6	7437.0	7285.9	6683.0	6147.9	5698.7	5232.9	4691.0	4349.9	3828.7
25°	10789.0	10668.3	10014.0	9584.3	8523.8	7614.4	6866.0	6142.3	5312.0	4941.9	4279.3
26°	11888.2	11859.1	11177.0	10611.5	9333.4	8205.0	7195.9	6470.8	5555.9	5123.4	4406.7
27°	12548.0	12779.6	12144.6	11504.2	10106.9	8755.3	7585.4	6735.7	5745.9	5251.0	4488.6
28°	13232.8	13382.5	12814.2	12010.2	10726.6	9193.4	7880.6	6914.4	5862.3	5313.4	4516.2
29°	13609.9	13754.0	13225.9	12471.8	11132.7	9477.6	8055.3	6993.4	5905.3	5312.0	4491.3
30°	13809.4	13944.0	13428.2	12696.4	11300.5	9566.3	8092.8	6961.5	5863.7	5248.2	4420.7
31°	13845.6	13957.8	13449.0	12689.4	11236.7	9456.8	7987.4	6829.9	5752.8	5130.4	4313.9
32°	13723.6	13810.9	13293.8	12484.2	10949.7	9179.5	7768.4	6626.2	5583.7	4983.4	4176.6
33°	13438.0	13594.7	12963.9	12069.7	10450.6	8769.2	7457.8	6360.0	5372.9	4792.2	4009.0
34°	12965.3	13065.1	12412.2	11421.1	9785.3	8270.2	7076.6	6050.9	5131.8	4566.2	3819.0
35°	12222.2	12311.0	11588.8	10544.9	9027.0	7707.4	6641.4	5709.8	4861.4	4312.5	3608.3
36°	11193.7	11278.3	10522.8	9571.9	8261.8	7121.0	6182.5	5338.3	4568.9	4040.8	3385.1
37°	9991.8	10065.3	9393.0	8616.8	7510.5	6527.6	5718.1	4961.2	4259.9	3763.6	3173.1
38°	8830.2	8896.7	8353.3	7721.2	6785.5	5948.2	5255.1	4570.3	3941.1	3485.0	2949.8
39°	7782.2	7840.4	7402.4	6881.2	6095.2	5392.4	4793.5	4182.2	3620.8	3206.3	2719.7
40°	6849.3	6899.2	6538.8	6110.4	5468.6	4872.5	4344.4	3806.5	3307.5	2936.0	2504.8
42.5°	5027.9	5038.9	4824.1	4571.8	4072.7	3730.3	3354.7	2966.5	2601.9	2346.9	2072.4
45°	3508.5	3645.7	3505.8	3338.0	2980.3	2765.5	2525.7	2291.4	2080.7	1835.4	1563.7
47.5°	2522.9	2528.5	2445.3	2339.9	2057.1	1910.2	1713.4	1429.1	1219.8	871.9	647.4
50°	1170.0	1104.9	1109.0	1036.9	924.6	734.7	614.0	438.0	349.3	249.5	201.1
51°	695.9	647.4	654.3	603.1	528.2	411.7	349.3	280.0	242.6	188.5	155.2
52°	406.1	389.5	388.2	364.6	310.6	285.5	252.3	210.7	184.4	145.5	120.6
53°	295.2	284.2	284.2	269.0	231.5	214.9	191.3	162.2	141.4	110.9	91.4
54°	220.4	212.0	212.0	202.4	187.1	160.8	144.1	120.6	105.4	86.0	67.9
55°	159.4	153.9	153.9	147.0	135.8	116.5	104.0	87.3	77.6	62.4	49.9
57.5°	66.5	63.8	63.8	61.0	58.2	49.9	47.1	40.2	34.6	30.5	24.9
60°	30.5	29.1	30.5	29.1	26.3	27.8	23.5	20.8	19.4	16.7	13.8
61°	23.5	22.2	22.2	22.2	19.4	19.4	18.1	16.7	15.2	12.5	11.1
62°	18.1	16.7	16.7	16.7	15.2	15.2	13.8	12.5	12.5	9.7	8.3
63°	13.8	12.5	12.5	12.5	11.1	11.1	11.1	9.7	9.7	8.3	7.0
64°	9.7	9.7	9.7	9.7	9.7	8.3	8.3	8.3	7.0	5.6	5.6
65°	8.3	7.0	8.3	7.0	7.0	7.0	7.0	7.0	5.6	4.1	4.1
66°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	4.1	2.7



TEST NUMBER: P1191707

CATALOG NUMBER: LDA4A25930D010TE 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	1.4	1.4	1.4	1.4	1.4	1.4	1.4
75°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
80°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
85°	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4	1.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.4	1.4	1.4	1.4
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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CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	67.5°	90°	112.5°
0°	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3	130.3
2.5°	188.5	194.1	190.0	178.8	184.4	181.6	176.0	171.9	147.0	127.6	108.1
5°	445.0	449.1	425.6	383.9	370.1	347.9	316.0	293.9	166.3	122.0	95.7
7.5°	841.4	813.7	791.5	713.9	680.7	629.4	568.3	525.3	190.0	115.1	88.7
10°	1273.9	1229.6	1183.8	1070.1	1010.6	931.6	844.2	794.3	214.9	110.9	88.7
12.5°	1702.3	1642.7	1559.4	1434.7	1350.2	1243.4	1124.2	1035.5	232.8	113.6	102.5
15°	2073.8	2001.7	1910.2	1768.8	1670.4	1537.3	1382.0	1260.1	241.2	128.9	142.8
17.5°	2478.6	2348.2	2197.1	2017.0	1908.9	1754.9	1580.2	1432.0	241.2	163.6	228.7
20°	2944.3	2705.9	2463.3	2211.0	2058.5	1897.8	1710.6	1551.2	250.9	246.8	314.7
22.5°	3378.2	3049.7	2707.3	2378.8	2166.6	1992.0	1802.1	1619.1	291.1	271.7	209.3
25°	3715.1	3297.8	2894.4	2495.2	2255.3	2061.3	1857.5	1637.2	266.1	155.2	113.6
26°	3802.4	3351.8	2931.9	2509.1	2259.5	2060.0	1851.9	1617.7	223.2	123.3	91.4
27°	3848.1	3369.9	2934.6	2496.6	2242.9	2036.3	1821.5	1577.5	178.8	99.8	74.9
28°	3848.1	3349.1	2905.5	2462.0	2199.9	1992.0	1768.8	1513.7	145.5	81.7	59.7
29°	3809.3	3295.0	2847.3	2409.3	2141.7	1929.7	1696.7	1438.9	123.3	67.9	48.5
30°	3734.5	3216.0	2769.7	2341.3	2066.8	1858.9	1617.7	1361.2	106.8	55.4	38.9
31°	3629.1	3127.3	2674.0	2267.9	1997.6	1793.8	1545.6	1282.3	92.9	44.4	31.9
32°	3502.9	3016.5	2575.6	2191.6	1940.6	1732.7	1470.7	1199.0	80.4	37.4	27.8
33°	3357.4	2891.6	2473.1	2116.8	1885.2	1663.5	1389.0	1109.0	69.3	30.5	23.5
34°	3196.6	2754.4	2367.7	2036.3	1817.3	1576.1	1293.3	1013.3	59.7	26.3	19.4
35°	3022.0	2600.5	2259.5	1954.6	1741.1	1479.1	1190.8	912.1	51.3	22.2	16.7
36°	2833.5	2456.4	2154.2	1872.7	1646.9	1373.7	1078.5	808.1	44.4	18.1	15.2
37°	2644.9	2320.5	2050.3	1785.4	1537.3	1254.5	960.6	700.0	38.9	15.2	12.5
38°	2466.1	2188.8	1947.6	1684.3	1409.8	1122.8	838.6	591.9	33.3	13.8	11.1
39°	2298.3	2061.3	1842.2	1563.7	1278.1	995.3	720.8	479.6	29.1	12.5	9.7
40°	2147.3	1940.6	1727.2	1429.1	1142.2	865.0	601.6	357.7	24.9	9.7	8.3
42.5°	1828.4	1609.4	1328.0	996.7	772.1	501.8	280.0	133.1	18.1	7.0	7.0
45°	1207.4	928.7	630.7	375.7	253.6	152.5	113.6	80.4	13.8	5.6	5.6
47.5°	403.4	256.5	187.1	134.4	115.1	91.4	73.5	49.9	9.7	4.1	4.1
50°	153.9	124.7	102.5	77.6	69.3	55.4	44.4	29.1	7.0	4.1	4.1
51°	120.6	98.4	80.4	61.0	55.4	44.4	36.0	24.9	5.6	4.1	4.1
52°	92.9	76.2	62.4	47.1	44.4	36.0	30.5	20.8	5.6	2.7	4.1
53°	70.6	58.2	47.1	36.0	34.6	29.1	24.9	16.7	4.1	2.7	4.1
54°	52.7	44.4	37.4	29.1	29.1	24.9	20.8	13.8	4.1	2.7	4.1
55°	40.2	33.3	29.1	22.2	23.5	20.8	18.1	11.1	4.1	2.7	4.1
57.5°	20.8	19.4	16.7	13.8	15.2	13.8	12.5	7.0	4.1	2.7	4.1
60°	12.5	11.1	9.7	8.3	9.7	9.7	9.7	4.1	4.1	2.7	4.1
61°	9.7	8.3	7.0	7.0	8.3	8.3	8.3	4.1	4.1	2.7	4.1
62°	7.0	7.0	5.6	5.6	8.3	7.0	7.0	4.1	4.1	2.7	4.1
63°	5.6	5.6	5.6	4.1	7.0	7.0	7.0	4.1	4.1	2.7	4.1
64°	4.1	4.1	4.1	4.1	5.6	7.0	7.0	2.7	4.1	2.7	4.1
65°	4.1	4.1	2.7	2.7	5.6	5.6	5.6	2.7	4.1	2.7	4.1
66°	2.7	2.7	2.7	2.7	5.6	5.6	5.6	2.7	4.1	2.7	4.1



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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°	1.4	1.4	1.4	1.4	4.1	4.1	5.6	2.7	4.1	4.1	4.1
75°	1.4	1.4	1.4	1.4	4.1	4.1	5.6	2.7	4.1	4.1	4.1
77.5°	1.4	1.4	1.4	1.4	4.1	4.1	5.6	2.7	4.1	4.1	5.6
80°	1.4	1.4	1.4	1.4	4.1	4.1	5.6	2.7	4.1	4.1	5.6
82.5°	1.4	1.4	1.4	1.4	4.1	4.1	5.6	2.7	4.1	4.1	5.6
85°	1.4	1.4	1.4	1.4	4.1	4.1	5.6	2.7	4.1	4.1	5.6
87.5°	1.4	1.4	1.4	1.4	4.1	4.1	5.6	2.7	4.1	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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CATALOG NUMBER: LDA4A25930D010TE LAR15SP 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
0°	130.3	130.3	130.3
2.5°	98.4	94.3	91.4
5°	84.6	80.4	79.0
7.5°	79.0	77.6	79.0
10°	87.3	92.9	99.8
12.5°	116.5	137.3	148.4
15°	192.7	250.9	275.8
17.5°	339.6	386.8	414.5
20°	299.5	273.1	288.4
22.5°	162.2	141.4	145.5
25°	90.1	77.6	79.0
26°	72.1	62.4	62.4
27°	58.2	49.9	49.9
28°	47.1	40.2	40.2
29°	37.4	31.9	31.9
30°	30.5	26.3	26.3
31°	24.9	20.8	20.8
32°	20.8	18.1	16.7
33°	18.1	15.2	13.8
34°	15.2	12.5	11.1
35°	12.5	9.7	9.7
36°	11.1	8.3	8.3
37°	9.7	7.0	7.0
38°	8.3	5.6	5.6
39°	7.0	5.6	4.1
40°	5.6	4.1	2.7
42.5°	4.1	2.7	1.4
45°	4.1	1.4	0.0
47.5°	2.7	1.4	0.0
50°	2.7	0.0	0.0
51°	2.7	0.0	0.0
52°	2.7	0.0	0.0
53°	1.4	0.0	0.0
54°	2.7	0.0	0.0
55°	1.4	0.0	0.0
57.5°	2.7	0.0	0.0
60°	2.7	0.0	0.0
61°	2.7	0.0	0.0
62°	2.7	0.0	0.0
63°	2.7	0.0	0.0
64°	2.7	1.4	0.0
65°	2.7	1.4	0.0
66°	2.7	1.4	0.0



TEST NUMBER: P1191707

CATALOG NUMBER: LDA4A25930D010TE LAR15SP 4LA1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
72.5°	2.7	1.4	0.0
75°	2.7	1.4	0.0
77.5°	2.7	1.4	0.0
80°	2.7	1.4	0.0
82.5°	2.7	1.4	0.0
85°	2.7	1.4	0.0
87.5°	2.7	1.4	0.0
90°	0.0	0.0	0.0

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180° - - 45°-225° - - - 90°-270°

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67.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	2.7	2.7
70°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.7	2.7	1.4	1.4

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67.5°	2.7	1.4	2.7	2.7	4.1	5.6	5.6	2.7	4.1	2.7	4.1
70°	1.4	1.4	1.4	1.4	4.1	4.1	5.6	2.7	4.1	2.7	4.1

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67.5°	2.7	1.4	0.0
70°	2.7	1.4	0.0

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Scaled Data Report



(END OF REPORT)