

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: P1192083

Luminaire Tested: **LDA6A25935D010TE LARL20NF 6LAL1 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: P1192083
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26268)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A25935D010TE LARL20NF 6LAL1 30° Tilt
Description: PORTFOLIO 6" Lensed Adjustable, Self-flange Trim Ring, 20° Narrow Flood Optic, at 30° tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

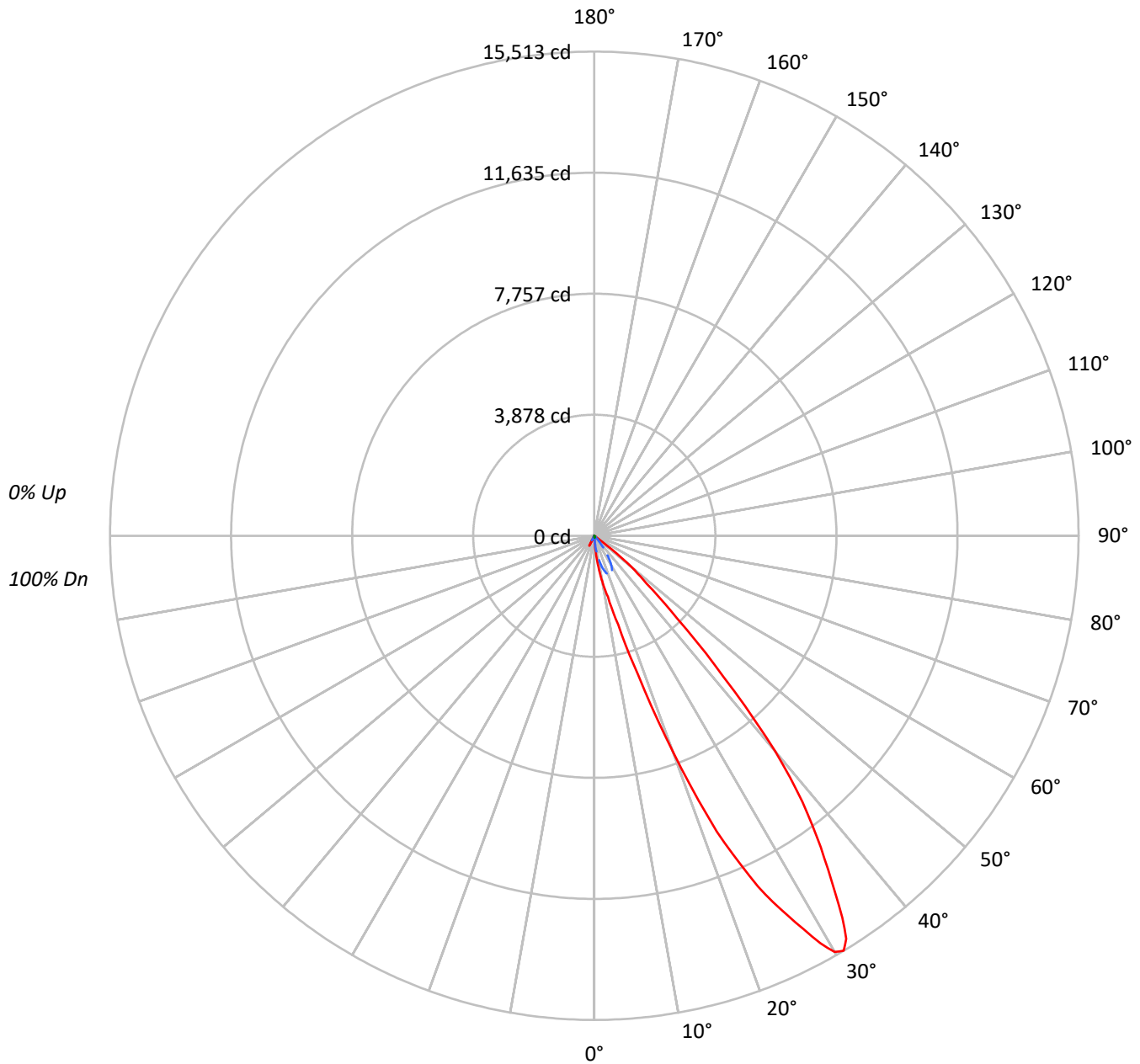
Lumens per Lamp: N/A
Luminaire Lumens: 2363.2 lumens
Efficiency: N/A
Efficacy: 75.7 lumens/watt
Spacing Criteria (0/90/45): 2.7 / 0.43 / 1.35
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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	50	73	62	55	50		61	55	50		59	54	50		58	53	49
8	69	58	50	45	68	57	50	45		56	49	45		55	49	45		54	48	44
9	65	53	46	41	63	52	45	41		51	45	40		50	44	40		49	44	40
10	60	49	41	37	59	48	41	37		47	41	37		46	41	36		45	40	36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2933	2933	2933
5°	28434	2586	1068
10°	84072	1843	668
15°	166880	1260	579
20°	430485	1015	811
25°	750261	1222	5789
30°	974555	1279	3260
35°	873226	555	308
40°	645581	200	0
45°	290728	217	0
50°	131160	239	0
55°	11699	268	0
60°	1403	307	0
65°	597	480	0
70°	449	593	0
75°	0	784	0
80°	0	1168	284
85°	0	2327	566



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.3	0.9
10°-20°	199.0	8.4
20°-30°	785.8	33.2
30°-40°	948.2	40.1
40°-50°	368.0	15.6
50°-60°	32.4	1.4
60°-70°	3.1	0.1
70°-80°	2.9	0.1
80°-90°	2.7	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°	1006.0	42.6
0°-40°	1954.2	82.7
0°-60°	2354.5	99.6
0°-90°	2363.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2363.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	54	54	54	54	54	
5°	517	252	47	23	19	82
15°	2940	1112	22	14	10	1078
25°	12404	1316	20	64	96	5672
35°	13048	670	8	8	5	8021
45°	3750	47	3	2	0	3294
55°	122	6	3	2	0	295
65°	5	4	4	3	0	5
75°	0	4	4	4	0	1
85°	0	4	4	4	1	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°	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5
2.5°	167.7	159.4	150.1	153.8	155.7	160.3	156.6	142.7	150.9	144.6	139.0
5°	516.7	507.4	489.9	492.8	487.1	493.6	478.9	449.5	454.9	445.8	421.7
7.5°	1007.5	968.8	940.3	942.1	925.5	932.9	905.3	854.6	849.0	802.0	794.8
10°	1510.3	1490.9	1456.8	1452.2	1422.9	1426.6	1383.1	1315.9	1297.6	1243.2	1211.9
12.5°	2003.9	1971.6	1923.7	1913.7	1865.7	1866.7	1807.8	1732.1	1704.5	1648.4	1605.1
15°	2940.4	2894.5	2784.9	2743.3	2610.7	2590.5	2445.0	2273.6	2190.8	2094.2	1967.0
17.5°	4669.0	4639.4	4425.0	4306.1	4037.3	3770.2	3612.8	3242.4	3026.1	2755.3	2520.5
20°	7379.1	7433.5	7058.7	6793.5	6294.4	5730.7	5332.9	4658.8	4208.4	3741.5	3299.6
22.5°	10261.6	10284.7	9900.6	9570.1	8989.0	8214.4	7298.2	6480.3	5655.2	4853.2	4123.8
25°	12403.6	12337.3	11914.6	11517.7	10906.2	10115.2	9224.7	8132.4	7004.4	5902.9	4834.7
26°	13057.4	13021.5	12597.9	12122.7	11449.6	10646.5	9720.1	8617.8	7426.1	6240.0	5052.0
27°	13663.4	13640.4	13180.9	12652.2	11898.0	11057.3	10087.6	8986.2	7744.8	6500.7	5209.6
28°	14277.6	14251.9	13695.6	13082.4	12262.7	11349.2	10341.7	9232.1	7950.1	6653.6	5274.9
29°	14926.9	14877.1	14166.2	13398.1	12505.9	11519.6	10474.3	9344.3	8020.2	6691.2	5258.3
30°	15395.6	15318.3	14506.1	13598.0	12605.3	11572.9	10489.1	9341.7	7976.9	6613.0	5152.4
31°	15513.4	15435.2	14600.9	13595.4	12532.6	11492.0	10383.2	9210.8	7796.4	6423.3	4973.7
32°	15228.1	15156.1	14360.6	13284.8	12302.3	11296.7	10172.2	8968.7	7516.3	6139.7	4731.6
33°	14590.7	14536.4	13850.4	12876.9	11972.6	11019.5	9870.2	8624.3	7118.6	5778.7	4447.0
34°	13786.8	13747.2	13219.6	12397.1	11554.5	10639.1	9478.9	8170.2	6594.7	5369.7	4136.7
35°	13048.2	13018.9	12591.5	11862.2	11076.7	10168.5	8983.3	7611.3	6054.9	4929.5	3805.2
36°	12337.3	12312.5	11941.3	11263.5	10505.6	9617.0	8359.9	6942.6	5475.6	4472.8	3461.6
37°	11595.1	11572.9	11254.3	10609.8	9863.8	8957.7	7619.6	6230.9	4887.1	4017.0	3108.9
38°	10825.3	10806.8	10514.9	9872.1	9115.1	8151.8	6775.2	5495.0	4313.5	3572.1	2792.3
39°	9966.1	9950.4	9681.4	9007.3	8198.7	7202.3	5905.7	4777.7	3769.3	3140.2	2485.4
40°	9021.2	8999.9	8731.1	7977.8	7161.0	6225.2	5070.5	4119.2	3255.5	2736.8	2215.8
42.5°	6133.2	6110.2	5910.3	5471.9	4685.5	4084.2	3360.3	2757.2	2306.9	1994.6	1725.8
45°	3750.0	3752.6	3647.8	3377.0	2903.6	2569.4	2176.2	1887.8	1685.2	1565.5	1378.5
47.5°	2268.2	2268.2	2221.2	2083.1	1870.4	1736.9	1573.8	1439.4	1284.6	1166.7	964.2
50°	1537.9	1538.8	1467.0	1474.4	1332.6	1249.6	1094.1	930.1	778.1	606.9	432.8
51°	1138.2	1143.7	1077.5	1107.8	952.3	882.3	734.8	595.9	461.4	328.8	189.6
52°	696.1	706.3	661.1	688.9	598.7	496.3	376.7	278.1	187.0	130.7	91.1
53°	323.2	331.4	308.6	321.4	267.9	209.0	158.3	129.0	103.1	83.7	61.7
54°	171.3	173.1	165.7	162.0	147.4	129.8	107.7	89.4	70.0	56.1	41.5
55°	122.4	122.4	118.7	115.1	103.1	88.5	71.8	60.7	46.1	36.8	26.7
57.5°	37.8	37.8	37.8	35.9	31.3	26.7	21.1	18.5	14.8	13.9	11.1
60°	12.8	12.8	12.8	12.0	11.1	10.2	9.1	8.3	7.4	7.4	6.5
61°	9.1	9.1	9.1	9.1	8.3	8.3	7.4	6.5	5.5	6.5	5.5
62°	7.4	8.3	7.4	7.4	7.4	6.5	5.5	5.5	4.6	5.5	4.6
63°	6.5	6.5	6.5	6.5	5.5	5.5	4.6	4.6	3.7	4.6	4.6
64°	5.5	5.5	5.5	5.5	4.6	4.6	3.7	3.7	2.8	3.7	3.7
65°	4.6	4.6	4.6	4.6	3.7	3.7	3.7	2.8	2.8	3.7	3.7
66°	3.7	3.7	3.7	3.7	3.7	2.8	2.8	2.8	1.8	2.8	2.8

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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TEST NUMBER: P1192083

CATALOG NUMBER: LDA6A25935D010TE LARL20NF 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
72.5°	1.8	1.8	1.8	1.8	0.9	0.9	0.9	0.9	0.9	1.8	1.8
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9
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°	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5	53.5
2.5°	133.5	124.4	122.4	122.4	103.1	106.8	100.5	95.7	67.2	51.5	38.7
5°	408.0	374.9	361.0	349.0	296.6	291.9	259.7	252.3	90.2	47.0	29.6
7.5°	760.7	710.0	677.8	646.5	561.7	538.7	483.4	469.7	122.4	39.6	23.0
10°	1162.1	1089.5	1033.2	958.6	849.0	801.2	720.2	690.7	149.2	33.1	22.2
12.5°	1539.7	1456.8	1380.5	1282.0	1133.6	1057.1	950.3	912.7	159.4	27.6	20.2
15°	1865.7	1755.2	1660.4	1554.5	1388.7	1292.0	1161.3	1112.4	150.9	22.2	17.4
17.5°	2279.3	2092.3	1927.4	1779.1	1598.6	1480.7	1328.9	1249.6	122.4	19.4	15.7
20°	2890.8	2514.1	2224.0	1984.6	1734.1	1587.7	1419.2	1323.3	88.5	17.4	15.7
22.5°	3466.2	2928.4	2483.7	2141.2	1804.1	1629.0	1454.2	1348.3	62.6	17.4	18.5
25°	3935.9	3240.7	2663.3	2244.3	1842.8	1637.3	1441.2	1315.9	48.7	20.2	35.9
26°	4067.7	3318.1	2698.3	2252.5	1837.2	1625.4	1419.2	1286.5	43.3	27.6	67.2
27°	4149.5	3352.9	2699.2	2239.7	1816.9	1601.4	1385.9	1246.9	37.8	42.4	113.3
28°	4166.2	3336.4	2667.9	2203.8	1781.9	1569.2	1349.2	1199.1	35.0	53.5	129.0
29°	4121.0	3277.5	2610.7	2151.2	1739.5	1530.5	1305.0	1146.5	30.4	40.5	83.7
30°	4019.7	3179.8	2527.0	2084.0	1694.5	1487.3	1250.6	1083.9	24.8	20.2	37.8
31°	3867.8	3045.4	2423.9	2004.8	1643.8	1432.0	1185.2	1013.8	21.1	13.9	22.2
32°	3675.4	2884.3	2308.6	1923.7	1586.7	1364.8	1108.8	935.6	19.4	11.1	18.5
33°	3454.3	2714.8	2189.9	1841.7	1518.6	1284.6	1026.9	851.8	17.4	12.0	18.5
34°	3213.1	2541.7	2055.5	1756.2	1439.4	1197.2	939.3	753.3	15.7	11.1	13.9
35°	2951.5	2362.1	1934.8	1680.6	1350.0	1102.3	850.1	669.6	13.9	8.3	9.1
36°	2725.9	2187.1	1817.8	1584.9	1252.4	1004.7	757.9	579.3	12.0	5.5	6.5
37°	2480.0	2023.3	1709.3	1485.5	1147.4	904.2	665.9	489.9	11.1	3.7	5.5
38°	2250.8	1872.2	1600.6	1371.1	1039.7	803.1	571.9	402.5	10.2	3.7	4.6
39°	2042.6	1735.0	1499.2	1249.6	926.4	697.2	477.1	315.8	9.1	2.8	4.6
40°	1863.9	1612.5	1377.7	1121.7	809.4	592.2	382.1	234.0	8.3	2.8	4.6
42.5°	1515.8	1293.9	1039.7	792.9	524.1	335.1	171.3	85.7	6.5	2.8	3.7
45°	1158.5	921.0	686.1	477.1	269.9	129.8	63.5	47.0	5.5	2.8	3.7
47.5°	752.4	552.6	368.4	208.1	90.2	52.4	33.1	23.9	4.6	2.8	3.7
50°	278.1	153.8	81.1	50.7	35.0	22.2	14.8	13.9	4.6	2.8	3.7
51°	114.2	74.6	50.7	34.1	22.2	15.7	12.0	12.0	4.6	2.8	3.7
52°	68.1	47.0	34.1	24.8	16.5	12.0	9.1	10.2	4.6	2.8	3.7
53°	45.0	32.2	24.8	19.4	12.8	9.1	6.5	7.4	4.6	2.8	3.7
54°	30.4	23.0	18.5	14.8	9.1	7.4	3.7	6.5	3.7	2.8	3.7
55°	21.1	16.5	13.9	11.1	6.5	4.6	2.8	5.5	3.7	2.8	3.7
57.5°	9.1	8.3	7.4	6.5	2.8	1.8	0.9	4.6	3.7	2.8	3.7
60°	6.5	5.5	4.6	4.6	0.9	0.9	0.0	3.7	3.7	2.8	3.7
61°	5.5	4.6	4.6	3.7	0.9	0.9	0.0	3.7	4.6	2.8	3.7
62°	4.6	4.6	3.7	3.7	0.9	0.0	0.0	3.7	4.6	2.8	4.6
63°	3.7	3.7	3.7	3.7	0.9	0.0	0.0	3.7	4.6	2.8	4.6
64°	3.7	3.7	3.7	3.7	0.0	0.0	0.0	3.7	4.6	2.8	4.6
65°	3.7	2.8	2.8	2.8	0.0	0.0	0.0	3.7	4.6	3.7	4.6
66°	2.8	2.8	2.8	2.8	0.0	0.0	0.0	3.7	4.6	3.7	4.6



TEST NUMBER: P1192083

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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°	1.8	1.8	1.8	1.8	0.0	0.0	0.0	2.8	4.6	3.7	5.5
75°	0.9	1.8	1.8	1.8	0.0	0.0	0.0	3.7	4.6	3.7	5.5
77.5°	0.9	1.8	1.8	1.8	0.0	0.0	0.0	3.7	4.6	3.7	5.5
80°	0.9	1.8	1.8	1.8	0.0	0.0	0.0	3.7	4.6	3.7	5.5
82.5°	0.9	1.8	1.8	1.8	0.0	0.0	0.0	3.7	4.6	3.7	5.5
85°	0.9	1.8	1.8	1.8	0.0	0.0	0.0	3.7	4.6	3.7	5.5
87.5°	0.9	1.8	1.8	1.8	0.0	0.0	0.0	3.7	4.6	3.7	5.5
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°	53.5	53.5	53.5
2.5°	32.2	29.6	27.6
5°	23.0	21.1	19.4
7.5°	19.4	16.5	15.7
10°	17.4	12.8	12.0
12.5°	14.8	11.1	10.2
15°	13.9	11.1	10.2
17.5°	13.9	11.1	10.2
20°	14.8	13.9	13.9
22.5°	21.1	23.0	23.9
25°	64.4	82.9	95.7
26°	150.9	226.6	303.8
27°	229.2	334.3	356.4
28°	206.4	239.4	232.9
29°	99.4	112.4	102.2
30°	44.2	52.4	51.5
31°	28.5	32.2	31.3
32°	23.9	22.2	21.1
33°	19.4	15.7	12.8
34°	12.8	10.2	8.3
35°	8.3	5.5	4.6
36°	5.5	2.8	1.8
37°	3.7	1.8	0.9
38°	3.7	0.9	0.0
39°	2.8	0.9	0.0
40°	2.8	0.9	0.0
42.5°	2.8	0.0	0.0
45°	1.8	0.0	0.0
47.5°	1.8	0.0	0.0
50°	2.8	0.9	0.0
51°	2.8	0.0	0.0
52°	2.8	0.0	0.0
53°	1.8	0.0	0.0
54°	1.8	0.0	0.0
55°	1.8	0.0	0.0
57.5°	1.8	0.0	0.0
60°	1.8	0.0	0.0
61°	2.8	0.0	0.0
62°	2.8	0.0	0.0
63°	2.8	0.0	0.0
64°	2.8	0.9	0.0
65°	2.8	0.9	0.0
66°	2.8	0.9	0.0

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Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



TEST NUMBER: P1192083

CATALOG NUMBER: LDA6A25935D010TE LARL20NF 6LAL1 30° Tilt

CANDELA DISTRIBUTION (continued):

	135°	157.5°	180°
72.5°	3.7	0.9	0.0
75°	3.7	0.9	0.0
77.5°	3.7	0.9	0.0
80°	3.7	1.8	0.9
82.5°	3.7	1.8	0.9
85°	3.7	1.8	0.9
87.5°	3.7	1.8	0.9
90°	0.0	0.0	0.0

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Scaled Data Report

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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°	2.8	2.8	2.8	2.8	2.8	2.8	1.8	1.8	1.8	2.8	2.8
70°	2.8	2.8	1.8	1.8	1.8	1.8	1.8	0.9	0.9	2.8	2.8

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67.5°	2.8	2.8	2.8	2.8	0.0	0.0	0.0	3.7	4.6	3.7	4.6
70°	2.8	2.8	2.8	2.8	0.0	0.0	0.0	3.7	4.6	3.7	5.5

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67.5°	3.7	0.9	0.0
70°	3.7	0.9	0.0

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(END OF REPORT)