

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: P179846

Luminaire Tested: **LDA6A55835D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179846
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26685)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A55835D010TE LARH40FL 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 40° Flood
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4362.0 lumens
Efficiency: N/A
Efficacy: 71.5 lumens/watt
Spacing Criteria (0/90/45): 2.12 / 1.05 / 1.48
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

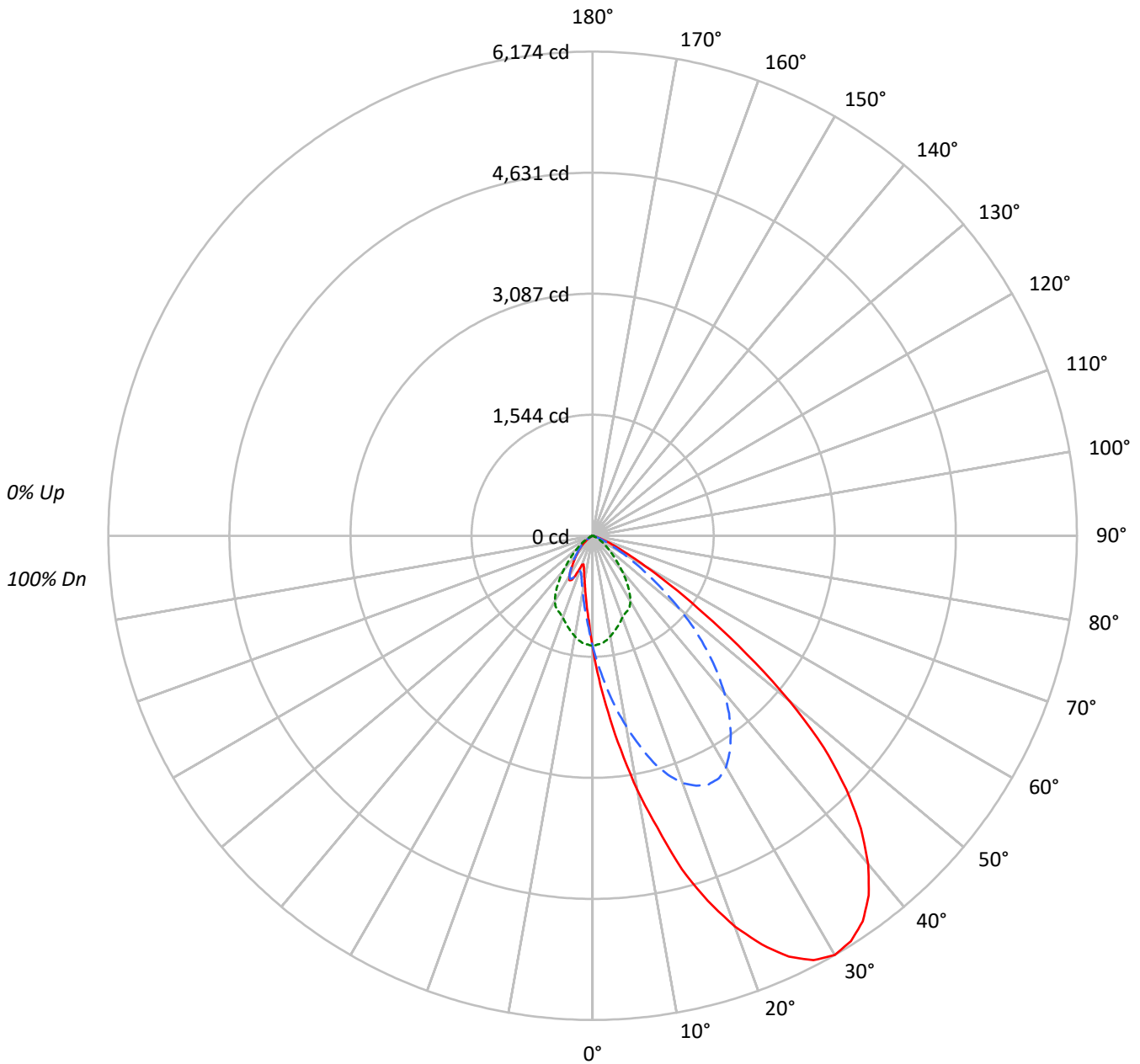
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P179846

CATALOG NUMBER: LDA6A55835D010TE LARH40FL 6LLWW1

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	112	108	105	102	109	106	103	101	102	100	97	98	96	94	95	93	92	90																			
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79																			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70																			
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62																			
5	83	72	64	59	81	71	64	58	69	63	58	67	61	57	65	60	57	55																			
6	77	65	58	52	75	64	57	52	63	56	51	61	55	51	60	55	51	49																			
7	72	60	52	46	70	59	51	46	57	51	46	56	50	46	55	49	45	44																			
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	39																			
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	77192	77192	77192
5°	124048	75671	48266
10°	183436	72483	32403
15°	249967	68565	24064
20°	309164	64703	22810
25°	358182	63699	37448
30°	390794	61028	37480
35°	401645	52742	29312
40°	391126	41513	22828
45°	354641	30701	17986
50°	279419	22686	12196
55°	166608	16152	6977
60°	85202	10745	2631
65°	40731	5707	1167
70°	19234	2565	1122
75°	7837	1694	1271
80°	3788	1894	1263
85°	1887	3145	1887



TEST NUMBER: P179846

CATALOG NUMBER: LDA6A55835D010TE LARH40FL 6LLWW1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.5	3.3
10°-20°	510.7	11.7
20°-30°	961.3	22.0
30°-40°	1170.6	26.8
40°-50°	974.4	22.3
50°-60°	466.7	10.7
60°-70°	112.1	2.6
70°-80°	17.7	0.4
80°-90°	4.1	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°	1616.5	37.1
0°-40°	2787.1	63.9
0°-60°	4228.1	96.9
0°-90°	4362.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4362.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1408	1408	1408	1408	1408	
5°	2254	1912	1375	1000	877	247
15°	4404	2992	1208	548	424	1262
25°	5922	3497	1053	597	619	2720
35°	6002	3071	788	459	438	3719
45°	4574	2053	396	244	232	3464
55°	1743	847	169	95	73	1642
65°	314	183	44	14	9	359
75°	37	19	8	7	6	50
85°	3	3	5	4	3	4
90°	0	0	0	0	0	



TEST NUMBER: P179846

CATALOG NUMBER: LDA6A55835D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1
2.5°	1821.2	1757.2	1777.2	1773.2	1769.2	1748.2	1733.2	1720.2	1687.2	1687.2	1645.2
5°	2254.2	2179.2	2198.2	2184.2	2166.2	2134.2	2105.2	2072.2	2011.2	1985.2	1912.2
7.5°	2749.3	2664.3	2681.3	2653.3	2615.3	2572.2	2525.2	2463.2	2366.2	2307.2	2194.2
10°	3295.3	3174.3	3184.3	3142.3	3079.3	3021.3	2976.3	2858.3	2720.3	2622.3	2464.2
12.5°	3812.4	3706.4	3709.4	3650.4	3559.3	3488.3	3420.3	3264.3	3080.3	2940.3	2732.3
15°	4404.4	4274.4	4243.4	4163.4	4044.4	3957.4	3864.4	3667.4	3436.3	3251.3	2992.3
17.5°	4881.5	4747.5	4727.5	4652.4	4482.4	4377.4	4260.4	4038.4	3745.4	3515.3	3197.3
20°	5299.5	5166.5	5132.5	5035.5	4840.5	4720.5	4579.4	4317.4	3997.4	3714.4	3355.3
22.5°	5641.5	5495.5	5447.5	5327.5	5110.5	4975.5	4803.5	4517.4	4160.4	3844.4	3449.3
25°	5921.6	5755.6	5694.6	5558.5	5314.5	5165.5	4976.5	4656.5	4267.4	3918.4	3497.3
27.5°	6100.6	5934.6	5867.6	5711.6	5437.5	5277.5	5071.5	4725.5	4305.4	3928.4	3487.3
30°	6173.6	6001.6	5925.6	5748.6	5453.5	5284.5	5069.5	4695.5	4256.4	3856.4	3403.3
32.5°	6128.6	5959.6	5874.6	5682.5	5375.5	5193.5	4978.5	4579.4	4127.4	3713.4	3257.3
35°	6001.6	5834.6	5746.6	5541.5	5221.5	5031.5	4817.5	4404.4	3947.4	3524.3	3071.3
37.5°	5782.6	5624.5	5523.5	5320.5	4998.5	4804.5	4592.4	4175.4	3708.4	3310.3	2856.3
40°	5465.5	5315.5	5215.5	4998.5	4694.5	4498.4	4298.4	3875.4	3435.3	3047.3	2609.3
42.5°	5061.5	4923.5	4827.5	4616.4	4326.4	4133.4	3950.4	3544.3	3125.3	2756.3	2342.2
45°	4574.4	4454.4	4360.4	4185.4	3899.4	3716.4	3551.3	3183.3	2776.3	2437.2	2053.2
47.5°	4001.4	3902.4	3811.4	3652.4	3394.3	3221.3	3085.3	2748.3	2403.2	2084.2	1757.2
50°	3276.3	3205.3	3134.3	2969.3	2787.3	2636.3	2537.2	2237.2	1958.2	1708.2	1437.1
52.5°	2470.2	2427.2	2377.2	2259.2	2137.2	2049.2	1961.2	1733.2	1524.1	1338.1	1127.1
55°	1743.2	1721.2	1682.2	1634.2	1541.1	1481.1	1405.1	1289.1	1127.1	1002.1	847.1
57.5°	1178.1	1172.1	1145.1	1116.1	1065.1	1045.1	981.1	906.1	815.1	722.1	612.1
60°	777.1	764.1	758.1	742.1	703.1	687.1	664.1	616.1	560.1	495.0	427.0
62.5°	500.0	493.0	488.0	481.0	457.0	457.0	434.0	412.0	370.0	330.0	286.0
65°	314.0	308.0	307.0	302.0	293.0	289.0	272.0	256.0	236.0	214.0	183.0
67.5°	202.0	193.0	188.0	185.0	179.0	172.0	166.0	159.0	143.0	130.0	110.0
70°	120.0	112.0	111.0	112.0	105.0	104.0	98.0	93.0	82.0	74.0	62.0
72.5°	68.0	64.0	63.0	63.0	59.0	58.0	54.0	51.0	45.0	39.0	34.0
75°	37.0	34.0	34.0	34.0	32.0	31.0	29.0	28.0	24.0	22.0	19.0
77.5°	21.0	20.0	20.0	19.0	18.0	17.0	16.0	16.0	14.0	13.0	12.0
80°	12.0	12.0	12.0	12.0	11.0	11.0	10.0	10.0	9.0	9.0	8.0
82.5°	7.0	7.0	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0	5.0
85°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
87.5°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	3.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P179846

CATALOG NUMBER: LDA6A55835D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1
2.5°	1626.2	1596.2	1594.2	1550.1	1522.1	1499.1	1482.1	1461.1	1414.1	1388.1	1369.1
5°	1861.2	1799.2	1767.2	1687.2	1643.2	1604.2	1556.2	1506.1	1429.1	1375.1	1331.1
7.5°	2105.2	2002.2	1934.2	1815.2	1755.2	1694.2	1613.2	1532.1	1427.1	1346.1	1279.1
10°	2332.2	2186.2	2078.2	1918.2	1840.2	1760.2	1646.2	1537.1	1406.1	1302.1	1214.1
12.5°	2555.2	2363.2	2214.2	2011.2	1916.2	1817.2	1671.2	1534.1	1380.1	1255.1	1152.1
15°	2768.3	2527.2	2337.2	2092.2	1981.2	1862.2	1687.2	1525.1	1350.1	1208.1	1091.1
17.5°	2938.3	2652.3	2424.2	2142.2	2017.2	1882.2	1681.2	1499.1	1309.1	1158.1	1030.1
20°	3055.3	2732.3	2472.2	2162.2	2025.2	1880.2	1658.2	1463.1	1266.1	1109.1	979.1
22.5°	3118.3	2768.3	2485.2	2156.2	2013.2	1861.2	1630.2	1430.1	1232.1	1075.1	951.1
25°	3141.3	2771.3	2471.2	2130.2	1986.2	1831.2	1597.2	1399.1	1205.1	1053.1	937.1
27.5°	3114.3	2729.3	2420.2	2076.2	1930.2	1777.2	1544.1	1355.1	1165.1	1021.1	912.1
30°	3022.3	2631.3	2320.2	1980.2	1837.2	1690.2	1460.1	1274.1	1100.1	964.1	860.1
32.5°	2876.3	2487.2	2179.2	1848.2	1710.2	1569.2	1349.1	1172.1	1010.1	882.1	789.1
35°	2695.3	2315.2	2015.2	1694.2	1564.2	1431.1	1222.1	1055.1	903.1	788.1	697.1
37.5°	2490.2	2124.2	1834.2	1539.1	1407.1	1282.1	1079.1	936.1	790.1	685.1	602.1
40°	2260.2	1905.2	1641.2	1354.1	1238.1	1124.1	936.1	806.1	673.1	580.1	508.0
42.5°	2014.2	1683.2	1439.1	1181.1	1065.1	961.1	792.1	675.1	557.1	480.0	423.0
45°	1753.2	1461.1	1227.1	996.1	891.1	801.1	647.1	541.1	455.0	396.0	353.0
47.5°	1480.1	1222.1	1014.1	813.1	720.1	642.1	518.1	437.0	369.0	326.0	293.0
50°	1205.1	975.1	810.1	639.1	559.1	497.0	405.0	349.0	299.0	266.0	241.0
52.5°	942.1	754.1	620.1	482.0	421.0	378.0	316.0	277.0	239.0	214.0	195.0
55°	696.1	568.1	453.0	350.0	314.0	287.0	243.0	215.0	188.0	169.0	155.0
57.5°	503.0	407.0	323.0	257.0	233.0	215.0	183.0	164.0	145.0	131.0	120.0
60°	353.0	281.0	228.0	188.0	171.0	159.0	136.0	124.0	110.0	98.0	87.0
62.5°	232.0	189.0	159.0	133.0	123.0	114.0	98.0	89.0	77.0	69.0	59.0
65°	151.0	124.0	106.0	89.0	81.0	77.0	66.0	59.0	51.0	44.0	38.0
67.5°	92.0	77.0	67.0	56.0	52.0	48.0	41.0	36.0	31.0	26.0	23.0
70°	51.0	45.0	39.0	33.0	30.0	28.0	24.0	22.0	18.0	16.0	13.0
72.5°	30.0	26.0	23.0	19.0	18.0	17.0	14.0	13.0	11.0	10.0	9.0
75°	18.0	15.0	14.0	12.0	11.0	11.0	10.0	9.0	8.0	8.0	7.0
77.5°	11.0	10.0	9.0	8.0	8.0	8.0	7.0	7.0	7.0	6.0	6.0
80°	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
82.5°	5.0	5.0	5.0	4.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0
85°	3.0	3.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
87.5°	3.0	3.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	4.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P179846

CATALOG NUMBER: LDA6A55835D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1
2.5°	1347.1	1310.1	1283.1	1263.1	1270.1	1235.1	1224.1	1186.1	1172.1	1172.1	1152.1
5°	1286.1	1227.1	1181.1	1152.1	1150.1	1100.1	1074.1	1026.1	1000.1	981.1	962.1
7.5°	1213.1	1137.1	1076.1	1041.1	1031.1	972.1	937.1	889.1	850.1	825.1	802.1
10°	1135.1	1044.1	975.1	935.1	920.1	856.1	810.1	766.1	724.1	698.1	674.1
12.5°	1060.1	961.1	885.1	844.1	825.1	759.1	712.1	666.1	626.1	599.1	575.1
15°	991.1	886.1	806.1	765.1	744.1	679.1	632.1	587.1	548.1	523.1	501.0
17.5°	926.1	819.1	739.1	699.1	676.1	616.1	571.1	527.1	492.0	469.0	449.0
20°	877.1	771.1	697.1	662.1	639.1	583.1	544.1	506.0	477.0	460.0	441.0
22.5°	856.1	758.1	695.1	663.1	647.1	602.1	575.1	548.1	529.1	526.1	514.0
25°	853.1	767.1	715.1	688.1	678.1	644.1	628.1	611.1	597.1	601.1	603.1
27.5°	840.1	760.1	717.1	694.1	686.1	658.1	646.1	630.1	620.1	625.1	627.1
30°	795.1	721.1	681.1	662.1	654.1	626.1	616.1	598.1	590.1	591.1	590.1
32.5°	725.1	655.1	618.1	601.1	592.1	567.1	556.1	540.1	528.1	527.1	525.1
35°	640.1	577.1	543.1	528.1	519.1	498.0	488.0	473.0	459.0	458.0	456.0
37.5°	553.1	497.0	468.0	455.0	447.0	430.0	418.0	408.0	399.0	395.0	394.0
40°	469.0	419.0	398.0	388.0	382.0	364.0	358.0	348.0	341.0	337.0	336.0
42.5°	390.0	355.0	338.0	329.0	324.0	311.0	304.0	296.0	289.0	285.0	284.0
45°	331.0	302.0	286.0	279.0	275.0	263.0	258.0	250.0	244.0	241.0	240.0
47.5°	276.0	253.0	242.0	234.0	233.0	223.0	216.0	210.0	204.0	201.0	200.0
50°	226.0	207.0	198.0	193.0	192.0	182.0	177.0	172.0	167.0	164.0	162.0
52.5°	186.0	168.0	162.0	155.0	154.0	145.0	141.0	136.0	131.0	127.0	124.0
55°	147.0	133.0	127.0	121.0	120.0	110.0	106.0	100.0	95.0	91.0	87.0
57.5°	112.0	101.0	95.0	89.0	88.0	81.0	74.0	69.0	64.0	59.0	56.0
60°	82.0	71.0	64.0	61.0	58.0	51.0	46.0	42.0	38.0	35.0	32.0
62.5°	54.0	46.0	41.0	37.0	35.0	30.0	27.0	24.0	22.0	21.0	20.0
65°	33.0	28.0	24.0	22.0	22.0	19.0	17.0	15.0	14.0	14.0	13.0
67.5°	20.0	17.0	15.0	14.0	13.0	12.0	11.0	11.0	10.0	10.0	9.0
70°	12.0	11.0	10.0	9.0	9.0	9.0	9.0	9.0	8.0	8.0	8.0
72.5°	9.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	7.0	7.0	7.0
75°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	6.0
77.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
80°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.0	5.0	5.0
82.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
85°	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
87.5°	5.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	2.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P179846

CATALOG NUMBER: LDA6A55835D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1	1408.1
2.5°	1142.1	1150.1	1138.1	1130.1	1122.1	1128.1	1100.1	1088.1
5°	944.1	935.1	929.1	922.1	910.1	912.1	888.1	877.1
7.5°	781.1	775.1	760.1	752.1	740.1	740.1	718.1	709.1
10°	652.1	643.1	629.1	622.1	611.1	602.1	591.1	582.1
12.5°	554.1	544.1	532.1	526.1	515.0	508.0	497.0	499.0
15°	481.0	471.0	460.0	454.0	445.0	438.0	429.0	424.0
17.5°	430.0	421.0	412.0	406.0	399.0	393.0	385.0	384.0
20°	426.0	419.0	414.0	410.0	404.0	400.0	396.0	391.0
22.5°	510.0	511.0	512.0	512.0	513.0	513.0	514.0	504.0
25°	602.1	613.1	613.1	616.1	625.1	625.1	623.1	619.1
27.5°	626.1	637.1	634.1	636.1	645.1	647.1	640.1	641.1
30°	586.1	596.1	590.1	591.1	597.1	597.1	588.1	592.1
32.5°	519.1	525.1	517.0	517.0	522.1	521.1	515.0	515.0
35°	448.0	451.0	444.0	447.0	447.0	444.0	438.0	438.0
37.5°	387.0	388.0	381.0	382.0	382.0	379.0	373.0	373.0
40°	329.0	332.0	326.0	328.0	326.0	323.0	320.0	319.0
42.5°	278.0	280.0	275.0	278.0	277.0	277.0	276.0	277.0
45°	234.0	236.0	232.0	234.0	235.0	234.0	231.0	232.0
47.5°	194.0	196.0	196.0	194.0	193.0	188.0	185.0	185.0
50°	157.0	156.0	155.0	152.0	149.0	146.0	143.0	143.0
52.5°	118.0	116.0	115.0	112.0	111.0	108.0	108.0	105.0
55°	81.0	80.0	80.0	77.0	77.0	74.0	73.0	73.0
57.5°	51.0	49.0	50.0	48.0	47.0	44.0	44.0	43.0
60°	29.0	28.0	28.0	27.0	26.0	24.0	24.0	24.0
62.5°	19.0	18.0	18.0	17.0	17.0	16.0	16.0	15.0
65°	12.0	11.0	11.0	10.0	10.0	9.0	9.0	9.0
67.5°	9.0	8.0	8.0	8.0	8.0	8.0	7.0	7.0
70°	8.0	8.0	7.0	7.0	7.0	7.0	7.0	7.0
72.5°	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0
75°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
77.5°	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
80°	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0
82.5°	5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
85°	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
87.5°	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)