

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: P179943

Luminaire Tested: **LDA6A55840D010TE LARH40FL 6LAL1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179943
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26691)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A55840D010TE LARH40FL 6LAL1LI 30°
Description: PORTFOLIO 6" Lensed Adjustable, Self-flanged, 40° Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5516.3 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Spacing Criteria (0/90/45): 2.62 / 0.52 / 1.36
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

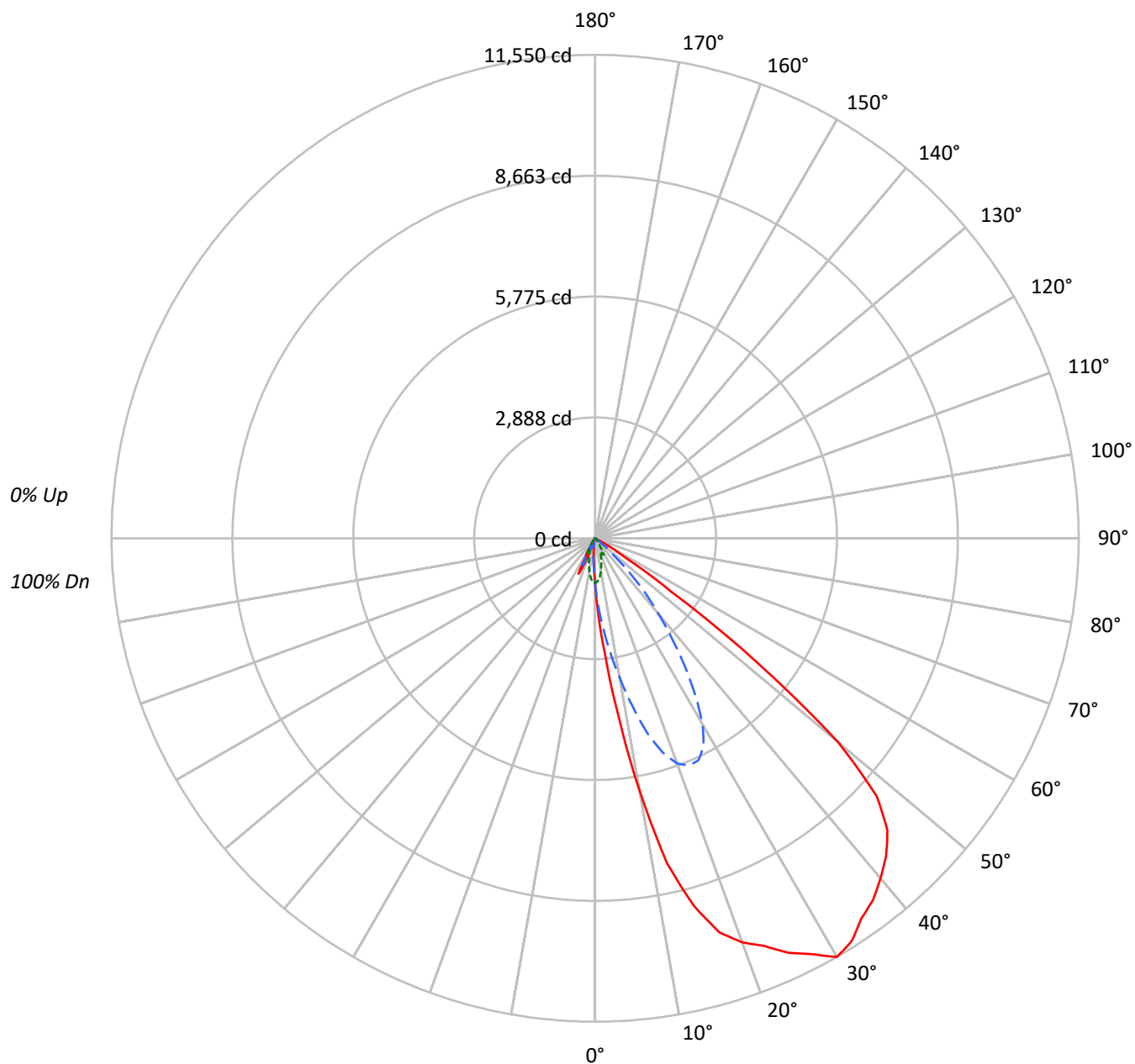
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P179943

CATALOG NUMBER: LDA6A55840D010TE LARH40FL 6LAL1LI 30°

Luminous Intensity Polar Plot





TEST NUMBER: P179943

CATALOG NUMBER: LDA6A55840D010TE LARH40FL 6LAL1LI 30°

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
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	103	110	107	104	102		103	100	98		99	97	95		95	94	93
2	105	99	94	90	103	97	93	89		94	90	87		91	88	85		88	85	83
3	98	90	84	79	96	88	83	78		86	81	77		83	79	76		81	77	74
4	91	82	75	70	89	80	74	69		78	73	68		76	71	67		74	70	67
5	85	74	67	62	83	73	67	61		71	65	61		70	64	60		68	63	60
6	79	68	60	55	77	67	60	55		65	59	54		64	58	54		62	57	54
7	74	62	55	49	72	61	54	49		60	54	49		59	53	49		57	52	48
8	69	57	50	44	67	56	49	44		55	49	44		54	48	44		53	48	44
9	64	52	45	40	63	52	45	40		51	44	40		50	44	40		49	44	40
10	60	48	41	37	59	48	41	36		47	41	36		46	40	36		45	40	36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	58910	58910	58910
5°	156339	54617	20900
10°	341260	44165	6229
15°	515105	32270	5420
20°	599182	22157	8500
25°	660800	23899	56616
30°	731100	17996	17604
35°	741956	9202	6592
40°	759022	3743	3156
45°	765397	2310	1907
50°	644772	1578	1228
55°	212963	1080	688
60°	41861	1009	450
65°	4929	1336	532
70°	1314	1475	657
75°	212	1949	1080
80°	0	3252	1610
85°	0	6479	2579



TEST NUMBER: P179943

CATALOG NUMBER: LDA6A55840D010TE LARH40FL 6LAL1LI 30°

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.0	2.6
10°-20°	722.1	13.1
20°-30°	1425.4	25.8
30°-40°	1607.8	29.1
40°-50°	1276.4	23.1
50°-60°	312.1	5.7
60°-70°	16.7	0.3
70°-80°	7.1	0.1
80°-90°	5.9	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°	2290.5	41.5
0°-40°	3898.2	70.7
0°-60°	5486.7	99.5
0°-90°	5516.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5516.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1075	1075	1075	1075	1075	
5°	2841	2129	992	499	380	375
15°	9076	4824	569	112	96	2546
25°	10925	5847	395	715	936	5060
35°	11087	3722	138	109	98	6972
45°	9873	1160	30	31	25	7399
55°	2228	50	11	11	7	2614
65°	38	9	10	8	4	93
75°	1	5	9	8	5	3
85°	0	5	10	7	4	0
90°	0	0	0	0	0	



TEST NUMBER: P179943

CATALOG NUMBER: LDA6A55840D010TE LARH40FL 6LAL1LI 30°

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6
2.5°	1864.9	1829.0	1845.4	1819.7	1746.9	1724.3	1742.8	1715.0	1631.9	1600.1	1567.3
5°	2841.0	2809.1	2819.4	2760.9	2624.4	2577.2	2574.1	2490.0	2321.6	2227.2	2128.7
7.5°	4307.6	4263.5	4251.2	4110.6	3847.8	3749.3	3701.1	3493.7	3176.6	2951.8	2731.1
10°	6130.5	6173.6	6129.4	5901.6	5489.0	5304.2	5187.2	4795.2	4223.5	3795.5	3382.9
12.5°	7958.4	7985.1	7902.0	7618.7	7094.2	6872.5	6700.1	6198.2	5444.8	4718.2	4102.4
15°	9076.1	9202.4	9124.3	8926.3	8519.8	8250.9	8095.9	7476.0	6527.7	5729.1	4823.9
17.5°	9872.6	9989.6	9924.9	9762.7	9304.0	9087.4	8986.8	8476.7	7444.2	6429.1	5363.8
20°	10270.8	10413.5	10355.0	10171.2	9834.6	9653.9	9531.8	9034.0	8103.1	6949.5	5724.0
22.5°	10540.7	10698.8	10635.2	10467.9	10125.0	9914.6	9857.2	9386.1	8448.0	7261.5	5876.9
25°	10924.6	11057.0	10877.4	10671.1	10332.4	10110.7	10075.8	9594.4	8613.2	7379.5	5847.2
27.5°	11199.6	11356.7	11051.9	10842.5	10455.5	10222.6	10177.4	9724.8	8628.6	7286.1	5606.0
30°	11549.6	11448.0	11180.1	10876.3	10463.7	10215.4	10157.9	9648.8	8474.7	6942.3	5133.9
32.5°	11411.1	11386.4	11118.6	10761.4	10376.5	10126.1	10049.1	9414.8	8051.8	6349.1	4465.7
35°	11086.7	11164.8	10941.0	10719.3	10241.0	9980.3	9873.6	9069.9	7414.4	5585.5	3721.6
37.5°	10896.9	10946.1	10804.5	10533.5	10059.4	9716.6	9514.4	8490.1	6580.0	4622.7	3004.2
40°	10606.4	10731.6	10595.1	10284.1	9737.1	9267.0	8915.0	7442.1	5480.8	3644.6	2349.3
42.5°	10288.2	10400.1	10269.8	9897.2	9124.3	8494.2	7909.1	6210.5	4291.2	2784.5	1762.3
45°	9872.6	9973.1	9739.1	9159.2	8065.1	7195.8	6611.8	4877.3	3236.1	2045.5	1159.8
47.5°	9123.3	9096.6	8765.1	7864.0	6516.4	5737.4	5057.9	3493.7	2151.3	1158.8	576.8
50°	7560.2	7310.8	6823.2	5777.4	4373.3	3531.7	3067.8	1803.3	976.1	561.4	362.3
52.5°	4896.8	4618.6	4172.2	3206.4	2099.9	1685.3	1351.7	814.9	509.1	317.1	142.7
55°	2228.2	2031.2	1745.8	1295.3	901.1	749.2	634.3	412.6	273.0	118.0	50.3
57.5°	848.8	783.1	695.9	555.3	416.7	360.3	298.7	198.1	85.2	44.1	29.8
60°	381.8	354.1	325.4	254.5	178.6	128.3	97.5	53.4	35.9	25.7	19.5
62.5°	130.3	108.8	90.3	64.7	48.2	42.1	36.9	29.8	21.6	17.4	13.3
65°	38.0	36.9	34.9	30.8	24.6	22.6	21.6	17.4	13.3	11.3	9.2
67.5°	18.5	17.4	16.4	15.4	12.3	11.3	11.3	10.3	8.2	7.2	6.2
70°	8.2	8.2	7.2	7.2	6.2	6.2	6.2	5.1	5.1	5.1	5.1
72.5°	4.1	4.1	4.1	3.1	3.1	3.1	3.1	4.1	4.1	5.1	5.1
75°	1.0	2.1	2.1	2.1	2.1	3.1	3.1	4.1	4.1	5.1	5.1
77.5°	1.0	1.0	1.0	2.1	2.1	2.1	3.1	4.1	4.1	5.1	5.1
80°	0.0	1.0	1.0	2.1	2.1	2.1	3.1	3.1	4.1	5.1	5.1
82.5°	0.0	1.0	1.0	2.1	2.1	2.1	3.1	3.1	4.1	5.1	5.1
85°	0.0	0.0	1.0	1.0	2.1	2.1	3.1	3.1	4.1	5.1	5.1
87.5°	0.0	0.0	1.0	1.0	2.1	2.1	3.1	3.1	4.1	5.1	5.1
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: P179943

CATALOG NUMBER: LDA6A55840D010TE LARH40FL 6LAL1LI 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6
2.5°	1487.2	1465.6	1380.5	1314.8	1284.0	1281.9	1213.2	1171.1	1097.2	1039.7	985.3
5°	1955.2	1859.8	1687.3	1550.8	1485.1	1451.3	1315.8	1218.3	1091.0	992.5	895.0
7.5°	2431.4	2249.8	2007.6	1747.9	1641.2	1575.5	1366.1	1210.1	1040.7	903.2	782.1
10°	2919.0	2598.7	2237.5	1894.7	1740.7	1629.9	1361.0	1149.5	954.5	793.4	661.0
12.5°	3427.0	2922.0	2419.1	1990.1	1786.9	1641.2	1314.8	1061.3	848.8	677.4	551.2
15°	3855.0	3172.5	2534.1	2012.7	1772.5	1596.0	1216.2	949.4	735.9	568.6	453.7
17.5°	4185.5	3313.1	2555.6	1957.3	1692.5	1495.4	1089.0	826.2	616.8	469.0	355.1
20°	4351.8	3334.6	2487.9	1825.9	1547.8	1344.5	944.3	701.0	517.3	379.8	282.2
22.5°	4364.1	3234.1	2340.1	1656.5	1388.7	1182.4	825.2	604.5	453.7	340.8	267.9
25°	4204.0	3040.1	2142.0	1483.1	1225.5	1039.7	740.0	579.9	456.7	395.1	363.3
27.5°	3900.2	2771.2	1924.4	1309.6	1084.9	941.2	705.1	579.9	494.7	446.5	457.8
30°	3479.4	2428.4	1621.6	1073.6	882.7	757.5	554.2	434.2	340.8	284.3	274.0
32.5°	2933.3	1987.0	1257.3	793.4	643.5	546.0	374.6	272.0	219.6	214.5	208.4
35°	2414.0	1569.3	954.5	586.1	474.2	385.9	239.1	160.1	145.7	137.5	131.4
37.5°	1907.0	1174.2	685.6	425.9	325.4	245.3	123.2	103.7	90.3	82.1	74.9
40°	1433.8	843.7	483.4	257.6	170.4	105.7	73.9	63.6	56.4	52.3	50.3
42.5°	1014.0	561.4	299.7	108.8	81.1	66.7	51.3	45.2	41.1	39.0	36.9
45°	589.1	349.0	121.1	63.6	51.3	46.2	38.0	33.9	31.8	29.8	28.7
47.5°	368.5	140.6	62.6	41.1	35.9	32.8	27.7	26.7	24.6	23.6	23.6
50°	148.8	62.6	39.0	28.7	25.7	24.6	21.6	20.5	18.5	18.5	18.5
52.5°	56.4	36.9	26.7	20.5	18.5	17.4	15.4	15.4	14.4	14.4	14.4
55°	32.8	24.6	18.5	14.4	13.3	13.3	12.3	12.3	11.3	11.3	11.3
57.5°	21.6	16.4	13.3	10.3	10.3	10.3	9.2	9.2	9.2	9.2	9.2
60°	14.4	11.3	9.2	8.2	8.2	8.2	8.2	9.2	9.2	9.2	9.2
62.5°	10.3	9.2	8.2	8.2	8.2	8.2	8.2	9.2	9.2	9.2	10.3
65°	8.2	7.2	7.2	7.2	7.2	8.2	8.2	9.2	9.2	10.3	10.3
67.5°	6.2	6.2	6.2	6.2	7.2	7.2	8.2	9.2	9.2	9.2	10.3
70°	5.1	6.2	6.2	7.2	7.2	7.2	8.2	8.2	9.2	9.2	10.3
72.5°	5.1	6.2	6.2	7.2	7.2	7.2	8.2	9.2	9.2	9.2	10.3
75°	5.1	6.2	6.2	7.2	7.2	7.2	8.2	9.2	9.2	9.2	10.3
77.5°	6.2	6.2	7.2	7.2	7.2	8.2	8.2	9.2	9.2	10.3	10.3
80°	6.2	6.2	7.2	7.2	7.2	8.2	8.2	9.2	9.2	10.3	10.3
82.5°	6.2	6.2	7.2	7.2	7.2	8.2	8.2	9.2	9.2	10.3	10.3
85°	6.2	6.2	7.2	7.2	7.2	8.2	8.2	9.2	9.2	10.3	10.3
87.5°	6.2	6.2	7.2	7.2	7.2	8.2	8.2	9.2	9.2	9.2	10.3
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: P179943

CATALOG NUMBER: LDA6A55840D010TE LARH40FL 6LAL1LI 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6
2.5°	958.6	911.4	860.1	843.7	827.2	795.4	775.9	741.0	715.4	689.7	669.2
5°	830.3	755.4	692.8	666.1	640.4	596.3	565.5	528.6	498.8	473.2	449.5
7.5°	696.9	610.7	548.1	521.4	495.7	447.5	408.5	362.3	327.4	298.7	275.1
10°	573.7	491.6	423.9	392.1	362.3	312.0	275.1	238.1	208.4	183.7	162.2
12.5°	467.0	378.7	310.0	286.4	257.6	216.6	181.7	141.6	124.2	117.0	111.9
15°	362.3	283.3	225.8	204.2	178.6	139.6	124.2	117.0	111.9	108.8	104.7
17.5°	276.1	210.4	154.0	139.6	131.4	123.2	119.1	113.9	110.8	109.8	106.7
20°	216.6	159.1	144.7	140.6	140.6	138.6	135.5	135.5	134.5	137.5	137.5
22.5°	222.7	222.7	235.0	234.0	250.4	266.9	279.2	319.2	341.8	390.0	422.9
25°	389.0	425.9	469.0	482.4	514.2	561.4	610.7	672.3	715.4	761.6	780.0
27.5°	485.5	491.6	485.5	500.9	480.3	468.0	472.1	479.3	479.3	482.4	494.7
30°	287.4	301.8	315.1	325.4	320.2	315.1	313.0	297.6	297.6	291.5	286.4
32.5°	195.0	193.0	190.9	195.0	190.9	190.9	187.8	188.9	182.7	178.6	176.5
35°	133.4	127.3	120.1	121.1	117.0	116.0	112.9	112.9	108.8	106.7	105.7
37.5°	73.9	73.9	70.8	71.8	70.8	70.8	70.8	71.8	70.8	70.8	71.8
40°	50.3	50.3	49.3	50.3	49.3	50.3	51.3	51.3	51.3	51.3	50.3
42.5°	38.0	38.0	36.9	38.0	36.9	38.0	39.0	39.0	39.0	39.0	39.0
45°	29.8	29.8	29.8	29.8	29.8	29.8	29.8	30.8	30.8	29.8	29.8
47.5°	23.6	24.6	23.6	23.6	23.6	23.6	24.6	24.6	23.6	23.6	23.6
50°	19.5	19.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
52.5°	15.4	14.4	14.4	13.3	13.3	13.3	13.3	13.3	13.3	13.3	12.3
55°	11.3	11.3	10.3	10.3	10.3	11.3	11.3	11.3	11.3	10.3	10.3
57.5°	10.3	10.3	10.3	9.2	9.2	10.3	10.3	9.2	9.2	9.2	8.2
60°	9.2	10.3	9.2	9.2	9.2	9.2	9.2	8.2	8.2	8.2	7.2
62.5°	10.3	10.3	9.2	9.2	9.2	9.2	8.2	8.2	8.2	7.2	7.2
65°	10.3	10.3	10.3	9.2	9.2	9.2	9.2	8.2	8.2	7.2	7.2
67.5°	10.3	10.3	10.3	10.3	9.2	9.2	9.2	8.2	8.2	8.2	7.2
70°	10.3	10.3	10.3	10.3	10.3	9.2	9.2	9.2	8.2	8.2	7.2
72.5°	10.3	10.3	10.3	9.2	9.2	9.2	9.2	9.2	8.2	8.2	7.2
75°	10.3	10.3	10.3	9.2	9.2	9.2	9.2	8.2	8.2	8.2	7.2
77.5°	10.3	10.3	10.3	9.2	9.2	9.2	9.2	8.2	8.2	8.2	7.2
80°	10.3	10.3	10.3	9.2	9.2	9.2	9.2	8.2	8.2	8.2	7.2
82.5°	10.3	10.3	10.3	9.2	9.2	9.2	9.2	8.2	8.2	7.2	7.2
85°	10.3	10.3	9.2	9.2	9.2	9.2	8.2	8.2	7.2	7.2	6.2
87.5°	9.2	9.2	9.2	9.2	8.2	8.2	8.2	7.2	6.2	6.2	5.1
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: P179943

CATALOG NUMBER: LDA6A55840D010TE LARH40FL 6LAL1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6	1074.6
2.5°	644.6	640.4	637.4	643.5	641.5	615.8	618.9	617.9
5°	422.9	413.6	406.4	409.5	401.3	390.0	381.8	379.8
7.5°	251.5	241.2	235.0	228.9	226.8	212.5	206.3	210.4
10°	138.6	124.2	123.2	120.1	116.0	112.9	110.8	111.9
12.5°	106.7	105.7	103.7	102.6	100.6	99.6	98.5	97.5
15°	101.6	100.6	99.6	98.5	97.5	96.5	95.5	95.5
17.5°	104.7	104.7	103.7	102.6	102.6	103.7	102.6	101.6
20°	136.5	136.5	138.6	141.6	141.6	144.7	148.8	145.7
22.5°	443.4	466.0	493.7	501.9	550.1	589.1	661.0	629.2
25°	810.8	862.1	874.5	891.9	918.6	931.9	918.6	936.0
27.5°	492.7	510.1	512.2	513.2	519.3	518.3	505.0	513.2
30°	286.4	292.5	290.5	289.4	287.4	276.1	274.0	278.1
32.5°	179.6	177.6	176.5	175.5	175.5	169.3	172.4	170.4
35°	102.6	105.7	104.7	103.7	100.6	99.6	99.6	98.5
37.5°	68.8	69.8	68.8	67.7	65.7	64.7	63.6	62.6
40°	49.3	50.3	49.3	48.2	47.2	46.2	45.2	44.1
42.5°	36.9	38.0	36.9	36.9	34.9	33.9	32.8	31.8
45°	28.7	27.7	27.7	27.7	26.7	25.7	24.6	24.6
47.5°	23.6	23.6	23.6	22.6	21.6	21.6	21.6	20.5
50°	17.4	18.5	17.4	17.4	16.4	15.4	15.4	14.4
52.5°	12.3	12.3	11.3	11.3	10.3	9.2	9.2	9.2
55°	9.2	9.2	9.2	8.2	8.2	7.2	7.2	7.2
57.5°	8.2	7.2	7.2	7.2	6.2	6.2	5.1	5.1
60°	7.2	6.2	6.2	5.1	5.1	4.1	4.1	4.1
62.5°	6.2	5.1	5.1	5.1	4.1	4.1	4.1	4.1
65°	6.2	5.1	5.1	5.1	4.1	4.1	4.1	4.1
67.5°	6.2	6.2	5.1	5.1	5.1	4.1	4.1	4.1
70°	6.2	6.2	6.2	5.1	5.1	5.1	4.1	4.1
72.5°	7.2	6.2	6.2	6.2	5.1	5.1	5.1	5.1
75°	7.2	6.2	6.2	6.2	5.1	5.1	5.1	5.1
77.5°	7.2	6.2	6.2	6.2	5.1	5.1	5.1	5.1
80°	6.2	6.2	6.2	5.1	5.1	5.1	5.1	5.1
82.5°	6.2	6.2	6.2	6.2	5.1	5.1	5.1	5.1
85°	6.2	5.1	5.1	5.1	4.1	4.1	4.1	4.1
87.5°	5.1	4.1	4.1	3.1	3.1	3.1	2.1	2.1
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)