

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: P179847

Luminaire Tested: **LDA6A55840D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179847
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: LDA6A55840D010TE LARH40FL 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 40° Flood
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4476.7 lumens
Efficiency: N/A
Efficacy: 73.4 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

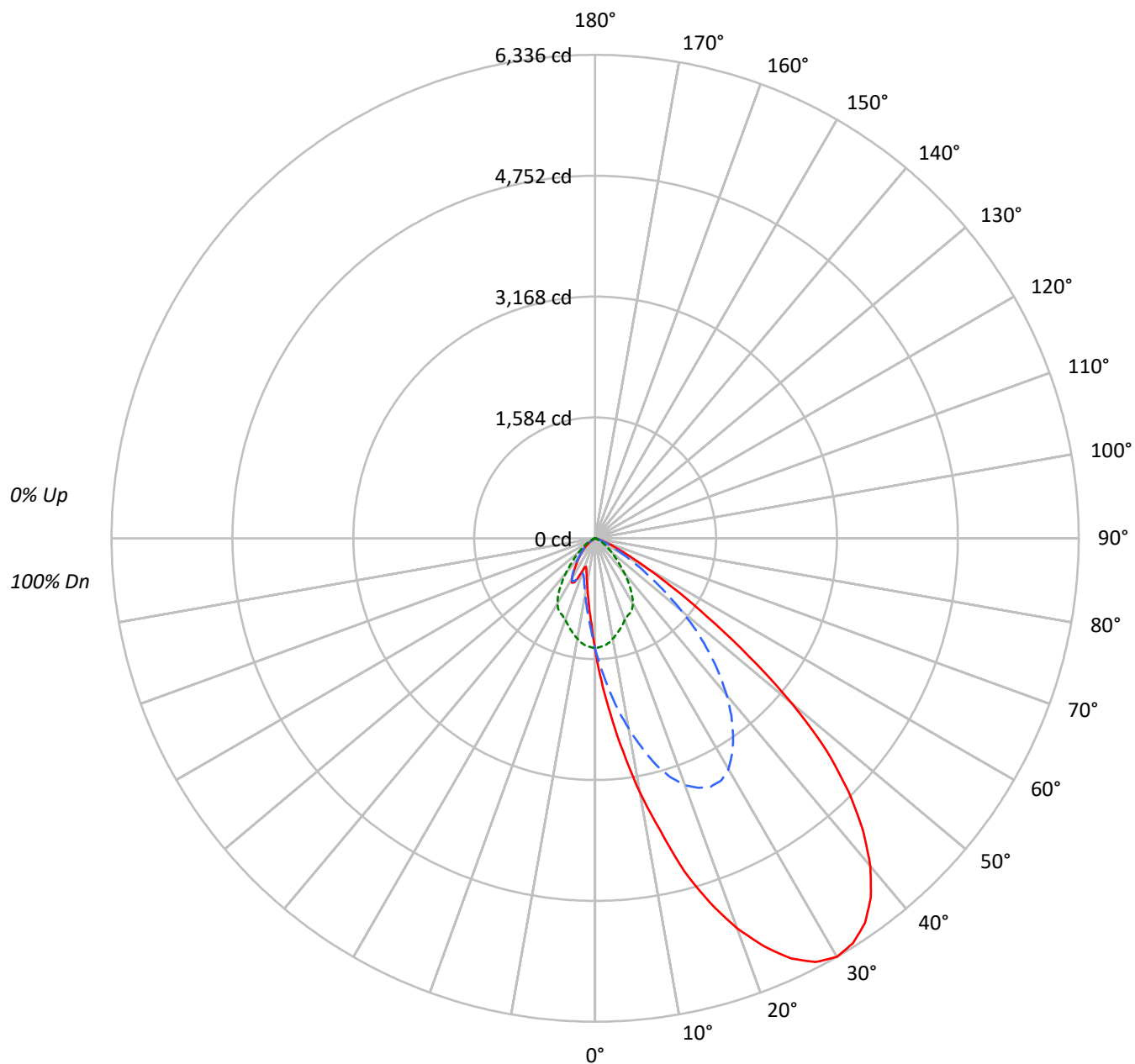
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10
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°	79226	79226	79226
5°	127311	77663	49532
10°	188262	74392	33255
15°	256540	70369	24699
20°	317291	66407	23411
25°	367600	65375	38428
30°	401068	62630	38462
35°	412206	54127	30089
40°	401409	42601	23430
45°	363968	31515	18459
50°	286771	23283	12520
55°	170986	16582	7159
60°	87438	11030	2697
65°	41807	5863	1193
70°	19747	2629	1154
75°	8049	1737	1313
80°	3883	1957	1294
85°	1950	3208	1950



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	3.3
10°-20°	524.1	11.7
20°-30°	986.5	22.0
30°-40°	1201.3	26.8
40°-50°	1000.0	22.3
50°-60°	478.9	10.7
60°-70°	115.0	2.6
70°-80°	18.1	0.4
80°-90°	4.2	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°	1659.0	37.1
0°-40°	2860.4	63.9
0°-60°	4339.3	96.9
0°-90°	4476.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4476.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1445	1445	1445	1445	1445	
5°	2314	1962	1411	1026	900	253
15°	4520	3071	1240	562	435	1296
25°	6077	3589	1081	613	635	2791
35°	6159	3152	809	471	450	3816
45°	4695	2107	406	250	238	3555
55°	1789	869	174	98	75	1685
65°	322	188	45	14	9	369
75°	38	20	8	7	6	52
85°	3	3	5	4	3	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2
2.5°	1869.1	1803.4	1823.9	1819.8	1815.7	1794.1	1778.7	1765.4	1731.5	1731.5	1688.4
5°	2313.5	2236.5	2256.0	2241.6	2223.2	2190.3	2160.6	2126.7	2064.1	2037.4	1962.5
7.5°	2821.5	2734.3	2751.8	2723.0	2684.0	2639.9	2591.6	2528.0	2428.4	2367.9	2251.9
10°	3382.0	3257.8	3268.0	3224.9	3160.3	3100.7	3054.5	2933.4	2791.8	2691.2	2529.0
12.5°	3912.6	3803.8	3806.9	3746.3	3652.9	3580.1	3510.3	3350.1	3161.3	3017.6	2804.1
15°	4520.2	4386.8	4355.0	4272.9	4150.7	4061.4	3966.0	3763.8	3526.7	3336.8	3071.0
17.5°	5009.8	4872.3	4851.8	4774.8	4600.3	4492.5	4372.4	4144.6	3843.8	3607.8	3281.4
20°	5438.8	5302.3	5267.4	5167.9	4967.7	4844.6	4699.8	4430.9	4102.5	3812.0	3443.5
22.5°	5789.9	5640.0	5590.8	5467.6	5244.9	5106.3	4929.8	4636.2	4269.8	3945.4	3540.0
25°	6077.3	5906.9	5844.3	5704.7	5454.2	5301.3	5107.3	4778.9	4379.6	4021.4	3589.3
27.5°	6261.0	6090.6	6021.8	5861.7	5580.5	5416.3	5204.8	4849.7	4418.6	4031.7	3579.0
30°	6335.9	6159.4	6081.4	5899.7	5596.9	5423.5	5202.8	4818.9	4368.3	3957.8	3492.8
32.5°	6289.7	6116.3	6029.0	5832.0	5516.9	5330.0	5109.4	4699.8	4235.9	3811.0	3343.0
35°	6159.4	5988.0	5897.6	5687.2	5358.8	5163.8	4944.1	4520.2	4051.2	3617.0	3152.0
37.5°	5934.6	5772.4	5668.8	5460.4	5129.9	4930.8	4713.2	4285.2	3805.9	3397.4	2931.4
40°	5609.2	5455.3	5352.6	5129.9	4817.9	4616.7	4411.4	3977.3	3525.7	3127.4	2677.9
42.5°	5194.6	5052.9	4954.4	4737.8	4440.2	4242.1	4054.2	3637.5	3207.5	2828.7	2403.8
45°	4694.7	4571.5	4475.1	4295.4	4001.9	3814.1	3644.7	3267.0	2849.3	2501.3	2107.2
47.5°	4106.6	4005.0	3911.6	3748.4	3483.6	3306.0	3166.4	2820.5	2466.4	2139.0	1803.4
50°	3362.5	3289.6	3216.7	3047.4	2860.6	2705.6	2604.0	2296.0	2009.7	1753.1	1474.9
52.5°	2535.2	2491.1	2439.7	2318.6	2193.4	2103.1	2012.8	1778.7	1564.2	1373.3	1156.7
55°	1789.0	1766.4	1726.4	1677.1	1581.7	1520.1	1442.1	1323.0	1156.7	1028.4	869.4
57.5°	1209.1	1202.9	1175.2	1145.5	1093.1	1072.6	1006.9	929.9	836.5	741.1	628.2
60°	797.5	784.2	778.0	761.6	721.6	705.1	681.5	632.3	574.8	508.1	438.3
62.5°	513.2	506.0	500.9	493.7	469.1	469.1	445.5	422.9	379.8	338.7	293.5
65°	322.3	316.1	315.1	310.0	300.7	296.6	279.2	262.8	242.2	219.6	187.8
67.5°	207.3	198.1	193.0	189.9	183.7	176.5	170.4	163.2	146.8	133.4	112.9
70°	123.2	115.0	113.9	115.0	107.8	106.7	100.6	95.5	84.2	76.0	63.6
72.5°	69.8	65.7	64.7	64.7	60.6	59.5	55.4	52.3	46.2	40.0	34.9
75°	38.0	34.9	34.9	34.9	32.8	31.8	29.8	28.7	24.6	22.6	19.5
77.5°	21.6	20.5	20.5	19.5	18.5	17.4	16.4	16.4	14.4	13.3	12.3
80°	12.3	12.3	12.3	12.3	11.3	11.3	10.3	10.3	9.2	9.2	8.2
82.5°	7.2	7.2	7.2	7.2	7.2	7.2	6.2	6.2	6.2	6.2	5.1
85°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
87.5°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	2.1	3.1
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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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2
2.5°	1668.9	1638.1	1636.1	1590.9	1562.2	1538.6	1521.1	1499.6	1451.3	1424.6	1405.1
5°	1910.1	1846.5	1813.6	1731.5	1686.4	1646.3	1597.1	1545.7	1466.7	1411.3	1366.1
7.5°	2160.6	2054.8	1985.0	1862.9	1801.3	1738.7	1655.6	1572.4	1464.7	1381.5	1312.8
10°	2393.5	2243.7	2132.8	1968.6	1888.6	1806.4	1689.4	1577.6	1443.1	1336.4	1246.0
12.5°	2622.4	2425.4	2272.4	2064.1	1966.6	1865.0	1715.1	1574.5	1416.4	1288.1	1182.4
15°	2841.1	2593.7	2398.7	2147.2	2033.3	1911.1	1731.5	1565.2	1385.6	1239.9	1119.8
17.5°	3015.5	2722.0	2488.0	2198.5	2070.2	1931.7	1725.4	1538.6	1343.5	1188.6	1057.2
20°	3135.6	2804.1	2537.2	2219.1	2078.4	1929.6	1701.8	1501.6	1299.4	1138.3	1004.8
22.5°	3200.3	2841.1	2550.6	2212.9	2066.1	1910.1	1673.0	1467.7	1264.5	1103.4	976.1
25°	3223.9	2844.1	2536.2	2186.2	2038.4	1879.3	1639.1	1435.9	1236.8	1080.8	961.7
27.5°	3196.2	2801.0	2483.9	2130.8	1980.9	1823.9	1584.7	1390.8	1195.7	1047.9	936.1
30°	3101.8	2700.4	2381.2	2032.3	1885.5	1734.6	1498.5	1307.6	1129.0	989.4	882.7
32.5°	2951.9	2552.6	2236.5	1896.8	1755.1	1610.4	1384.6	1202.9	1036.7	905.3	809.8
35°	2766.1	2376.1	2068.2	1738.7	1605.3	1468.8	1254.2	1082.8	926.8	808.8	715.4
37.5°	2555.7	2180.1	1882.4	1579.6	1444.1	1315.8	1107.5	960.7	810.8	703.1	617.9
40°	2319.6	1955.3	1684.3	1389.7	1270.7	1153.7	960.7	827.3	690.8	595.3	521.4
42.5°	2067.2	1727.4	1477.0	1212.2	1093.1	986.4	812.9	692.8	571.7	492.7	434.2
45°	1799.3	1499.6	1259.4	1022.3	914.5	822.1	664.1	555.3	467.0	406.5	362.3
47.5°	1519.1	1254.2	1040.8	834.5	739.0	658.9	531.7	448.5	378.7	334.6	300.7
50°	1236.8	1000.7	831.4	655.9	573.8	510.1	415.7	358.2	306.9	273.0	247.4
52.5°	966.9	773.9	636.4	494.7	432.1	388.0	324.3	284.3	245.3	219.6	200.1
55°	714.4	583.0	465.0	359.2	322.3	294.6	249.4	220.7	193.0	173.5	159.1
57.5°	516.3	417.7	331.5	263.8	239.1	220.7	187.8	168.3	148.8	134.5	123.2
60°	362.3	288.4	234.0	193.0	175.5	163.2	139.6	127.3	112.9	100.6	89.3
62.5°	238.1	194.0	163.2	136.5	126.2	117.0	100.6	91.3	79.0	70.8	60.6
65°	155.0	127.3	108.8	91.3	83.1	79.0	67.7	60.6	52.3	45.2	39.0
67.5°	94.4	79.0	68.8	57.5	53.4	49.3	42.1	37.0	31.8	26.7	23.6
70°	52.3	46.2	40.0	33.9	30.8	28.7	24.6	22.6	18.5	16.4	13.3
72.5°	30.8	26.7	23.6	19.5	18.5	17.4	14.4	13.3	11.3	10.3	9.2
75°	18.5	15.4	14.4	12.3	11.3	11.3	10.3	9.2	8.2	8.2	7.2
77.5°	11.3	10.3	9.2	8.2	8.2	8.2	7.2	7.2	7.2	6.2	6.2
80°	7.2	7.2	7.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
82.5°	5.1	5.1	5.1	4.1	5.1	4.1	5.1	5.1	5.1	5.1	5.1
85°	3.1	3.1	4.1	4.1	4.1	4.1	4.1	5.1	5.1	5.1	5.1
87.5°	3.1	3.1	4.1	4.1	4.1	4.1	4.1	5.1	5.1	5.1	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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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2
2.5°	1382.5	1344.6	1316.9	1296.3	1303.5	1267.6	1256.3	1217.3	1202.9	1202.9	1182.4
5°	1319.9	1259.4	1212.2	1182.4	1180.3	1129.0	1102.3	1053.1	1026.4	1006.9	987.4
7.5°	1245.0	1167.0	1104.4	1068.5	1058.2	997.7	961.7	912.5	872.4	846.8	823.2
10°	1165.0	1071.6	1000.7	959.7	944.3	878.6	831.4	786.2	743.1	716.4	691.8
12.5°	1088.0	986.4	908.4	866.3	846.8	779.0	730.8	683.6	642.5	614.8	590.2
15°	1017.2	909.4	827.3	785.2	763.6	696.9	648.7	602.5	562.5	536.8	514.2
17.5°	950.4	840.6	758.5	717.4	693.8	632.3	586.1	540.9	505.0	481.4	460.8
20°	900.1	791.3	715.4	679.5	655.9	598.4	558.4	519.4	489.6	472.1	452.6
22.5°	878.6	778.0	713.3	680.5	664.1	617.9	590.2	562.5	543.0	539.9	527.6
25°	875.5	787.2	733.9	706.2	695.9	661.0	644.6	627.1	612.8	616.9	618.9
27.5°	862.2	780.1	735.9	712.3	704.1	675.4	663.0	646.6	636.4	641.5	643.5
30°	816.0	740.0	699.0	679.5	671.3	642.5	632.3	613.8	605.6	606.6	605.6
32.5°	744.1	672.3	634.3	616.9	607.6	582.0	570.7	554.3	541.9	540.9	538.9
35°	656.9	592.2	557.3	541.9	532.7	511.1	500.9	485.5	471.1	470.1	468.0
37.5°	567.6	510.1	480.4	467.0	458.8	441.3	429.0	418.8	409.5	405.4	404.4
40°	481.4	430.1	408.5	398.2	392.1	373.6	367.4	357.2	350.0	345.9	344.9
42.5°	400.3	364.4	346.9	337.7	332.6	319.2	312.0	303.8	296.6	292.5	291.5
45°	339.7	310.0	293.5	286.4	282.3	269.9	264.8	256.6	250.4	247.4	246.3
47.5°	283.3	259.7	248.4	240.2	239.1	228.9	221.7	215.5	209.4	206.3	205.3
50°	232.0	212.5	203.2	198.1	197.1	186.8	181.7	176.5	171.4	168.3	166.3
52.5°	190.9	172.4	166.3	159.1	158.1	148.8	144.7	139.6	134.5	130.4	127.3
55°	150.9	136.5	130.4	124.2	123.2	112.9	108.8	102.6	97.5	93.4	89.3
57.5°	115.0	103.7	97.5	91.3	90.3	83.1	76.0	70.8	65.7	60.6	57.5
60°	84.2	72.9	65.7	62.6	59.5	52.3	47.2	43.1	39.0	35.9	32.8
62.5°	55.4	47.2	42.1	38.0	35.9	30.8	27.7	24.6	22.6	21.6	20.5
65°	33.9	28.7	24.6	22.6	22.6	19.5	17.4	15.4	14.4	14.4	13.3
67.5°	20.5	17.4	15.4	14.4	13.3	12.3	11.3	11.3	10.3	10.3	9.2
70°	12.3	11.3	10.3	9.2	9.2	9.2	9.2	9.2	8.2	8.2	8.2
72.5°	9.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	7.2	7.2	7.2
75°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	6.2
77.5°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
80°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	5.1	5.1	5.1
82.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
85°	5.1	5.1	5.1	5.1	5.1	5.1	4.1	4.1	4.1	4.1	4.1
87.5°	5.1	4.1	4.1	4.1	4.1	4.1	3.1	3.1	3.1	3.1	2.1
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: P179847

CATALOG NUMBER: LDA6A55840D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2	1445.2
2.5°	1172.1	1180.3	1168.0	1159.8	1151.6	1157.8	1129.0	1116.7
5°	968.9	959.7	953.5	946.3	934.0	936.1	911.4	900.1
7.5°	801.6	795.5	780.1	771.8	759.5	759.5	736.9	727.7
10°	669.2	660.0	645.6	638.4	627.1	617.9	606.6	597.4
12.5°	568.6	558.4	546.0	539.9	528.6	521.4	510.1	512.2
15°	493.7	483.4	472.1	466.0	456.7	449.6	440.3	435.2
17.5°	441.3	432.1	422.9	416.7	409.5	403.4	395.2	394.1
20°	437.2	430.1	424.9	420.8	414.7	410.6	406.5	401.3
22.5°	523.5	524.5	525.5	525.5	526.5	526.5	527.6	517.3
25°	617.9	629.2	629.2	632.3	641.5	641.5	639.4	635.3
27.5°	642.5	653.8	650.7	652.8	662.0	664.1	656.9	657.9
30°	601.5	611.7	605.6	606.6	612.8	612.8	603.5	607.6
32.5°	532.7	538.9	530.6	530.6	535.8	534.7	528.6	528.6
35°	459.8	462.9	455.7	458.8	458.8	455.7	449.6	449.6
37.5°	397.2	398.2	391.1	392.1	392.1	389.0	382.8	382.8
40°	337.7	340.8	334.6	336.7	334.6	331.5	328.4	327.4
42.5°	285.3	287.4	282.3	285.3	284.3	284.3	283.3	284.3
45°	240.2	242.2	238.1	240.2	241.2	240.2	237.1	238.1
47.5°	199.1	201.2	201.2	199.1	198.1	193.0	189.9	189.9
50°	161.1	160.1	159.1	156.0	152.9	149.9	146.8	146.8
52.5°	121.1	119.1	118.0	115.0	113.9	110.9	110.9	107.8
55°	83.1	82.1	82.1	79.0	79.0	76.0	74.9	74.9
57.5°	52.3	50.3	51.3	49.3	48.2	45.2	45.2	44.1
60°	29.8	28.7	28.7	27.7	26.7	24.6	24.6	24.6
62.5°	19.5	18.5	18.5	17.4	17.4	16.4	16.4	15.4
65°	12.3	11.3	11.3	10.3	10.3	9.2	9.2	9.2
67.5°	9.2	8.2	8.2	8.2	8.2	8.2	7.2	7.2
70°	8.2	8.2	7.2	7.2	7.2	7.2	7.2	7.2
72.5°	7.2	7.2	7.2	7.2	6.2	6.2	6.2	6.2
75°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
77.5°	6.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1
80°	5.1	5.1	5.1	5.1	5.1	5.1	4.1	4.1
82.5°	5.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
85°	4.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
87.5°	2.1	2.1	2.1	2.1	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)