

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: P179850

Luminaire Tested: **LDA6A55935D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179850
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: LDA6A55935D010TE LARH40FL 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 40° Flood
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3729.3 lumens
Efficiency: N/A
Efficacy: 61.1 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

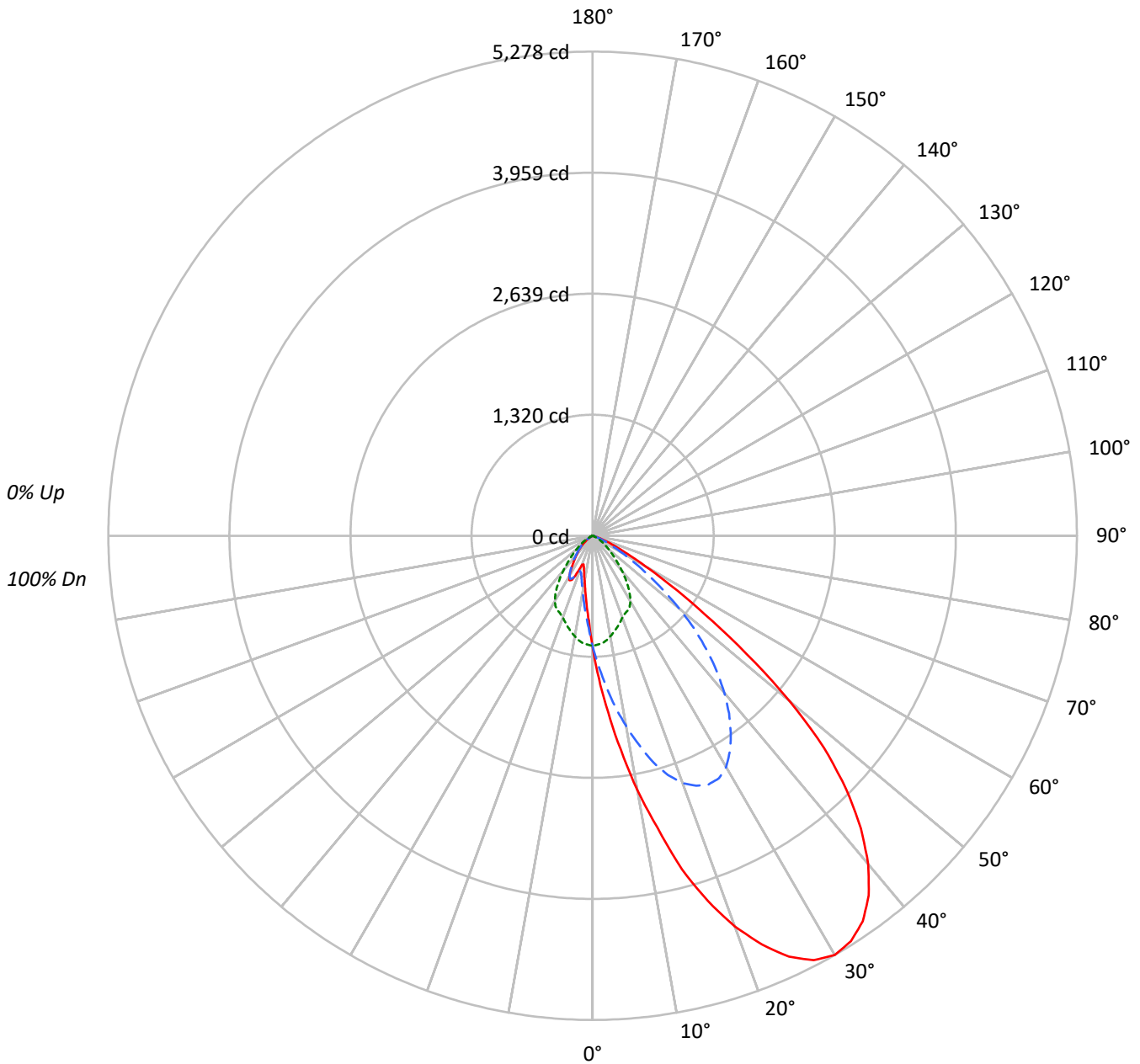
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					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°	65998	65998	65998
5°	106053	64698	41267
10°	156827	61967	27699
15°	213707	58621	20573
20°	264320	55316	19503
25°	306223	54457	32016
30°	334108	52173	32043
35°	343382	45093	25063
40°	334391	35488	19522
45°	303202	26251	15381
50°	238892	19394	10430
55°	142437	13811	5964
60°	72845	9188	2248
65°	34829	4877	999
70°	16445	2196	962
75°	6693	1440	1080
80°	3252	1610	1073
85°	1635	2705	1635



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.6	3.3
10°-20°	436.6	11.7
20°-30°	821.8	22.0
30°-40°	1000.8	26.8
40°-50°	833.0	22.3
50°-60°	399.0	10.7
60°-70°	95.8	2.6
70°-80°	15.1	0.4
80°-90°	3.5	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°	1382.0	37.1
0°-40°	2382.8	63.9
0°-60°	3614.8	96.9
0°-90°	3729.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3729.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1204	1204	1204	1204	1204	
5°	1927	1635	1176	855	750	211
15°	3766	2558	1033	469	362	1079
25°	5063	2990	900	510	529	2325
35°	5131	2626	674	392	374	3179
45°	3911	1755	339	209	198	2961
55°	1490	724	144	81	62	1404
65°	268	156	38	12	8	307
75°	32	16	7	6	5	43
85°	3	3	4	3	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°	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9
2.5°	1557.0	1502.3	1519.4	1516.0	1512.5	1494.6	1481.8	1470.6	1442.4	1442.4	1406.5
5°	1927.2	1863.1	1879.3	1867.4	1852.0	1824.6	1799.8	1771.6	1719.5	1697.2	1634.8
7.5°	2350.5	2277.8	2292.3	2268.4	2235.9	2199.1	2158.9	2105.9	2023.0	1972.5	1875.9
10°	2817.3	2713.8	2722.4	2686.5	2632.6	2583.0	2544.6	2443.7	2325.7	2241.9	2106.8
12.5°	3259.4	3168.7	3171.3	3120.8	3043.0	2982.3	2924.2	2790.8	2633.5	2513.8	2335.9
15°	3765.5	3654.4	3627.9	3559.5	3457.7	3383.3	3303.8	3135.4	2937.9	2779.7	2558.2
17.5°	4173.4	4058.8	4041.7	3977.6	3832.2	3742.4	3642.4	3452.6	3202.1	3005.4	2733.5
20°	4530.8	4417.1	4388.0	4305.0	4138.3	4035.7	3915.2	3691.1	3417.5	3175.6	2868.6
22.5°	4823.2	4698.4	4657.3	4554.7	4369.2	4253.7	4106.7	3862.1	3556.9	3286.7	2949.0
25°	5062.6	4920.7	4868.5	4752.2	4543.6	4416.2	4254.6	3981.0	3648.4	3350.0	2990.0
27.5°	5215.6	5073.7	5016.4	4883.0	4648.8	4512.0	4335.8	4040.0	3680.9	3358.5	2981.5
30°	5278.1	5131.0	5066.0	4914.7	4662.4	4517.9	4334.1	4014.3	3639.0	3297.0	2909.6
32.5°	5239.6	5095.1	5022.4	4858.2	4595.8	4440.1	4256.3	3915.2	3528.7	3174.7	2784.8
35°	5131.0	4988.2	4913.0	4737.7	4464.1	4301.6	4118.6	3765.5	3374.8	3013.1	2625.8
37.5°	4943.7	4808.7	4722.3	4548.7	4273.4	4107.5	3926.3	3569.7	3170.4	2830.1	2441.9
40°	4672.7	4544.5	4458.9	4273.4	4013.5	3845.9	3674.9	3313.2	2937.0	2605.3	2230.8
42.5°	4327.3	4209.3	4127.2	3946.8	3698.8	3533.8	3377.3	3030.2	2671.9	2356.4	2002.5
45°	3910.9	3808.3	3727.9	3578.3	3333.7	3177.3	3036.2	2721.5	2373.5	2083.7	1755.4
47.5°	3420.9	3336.3	3258.5	3122.5	2902.0	2754.0	2637.7	2349.6	2054.6	1781.9	1502.3
50°	2801.1	2740.4	2679.6	2538.6	2383.0	2253.8	2169.2	1912.7	1674.1	1460.4	1228.7
52.5°	2111.9	2075.1	2032.4	1931.5	1827.2	1751.9	1676.7	1481.8	1303.1	1144.0	963.6
55°	1490.3	1471.5	1438.1	1397.1	1317.6	1266.3	1201.3	1102.1	963.6	856.7	724.2
57.5°	1007.2	1002.1	979.0	954.2	910.6	893.5	838.8	774.7	696.8	617.3	523.3
60°	664.4	653.2	648.1	634.4	601.1	587.4	567.7	526.7	478.8	423.2	365.1
62.5°	427.5	421.5	417.3	411.3	390.7	390.7	371.1	352.3	316.4	282.2	244.5
65°	268.5	263.3	262.5	258.2	250.5	247.1	232.6	218.9	201.8	183.0	156.5
67.5°	172.7	165.0	160.7	158.2	153.0	147.1	141.9	135.9	122.3	111.2	94.1
70°	102.6	95.8	94.9	95.8	89.8	88.9	83.8	79.5	70.1	63.3	53.0
72.5°	58.1	54.7	53.9	53.9	50.4	49.6	46.2	43.6	38.5	33.3	29.1
75°	31.6	29.1	29.1	29.1	27.4	26.5	24.8	23.9	20.5	18.8	16.2
77.5°	18.0	17.1	17.1	16.2	15.4	14.5	13.7	13.7	12.0	11.1	10.3
80°	10.3	10.3	10.3	10.3	9.4	9.4	8.6	8.6	7.7	7.7	6.8
82.5°	6.0	6.0	6.0	6.0	6.0	6.0	5.1	5.1	5.1	5.1	4.3
85°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
87.5°	0.0	0.0	0.9	0.9	0.9	0.9	0.9	1.7	1.7	1.7	2.6
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°	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9
2.5°	1390.3	1364.6	1362.9	1325.3	1301.3	1281.7	1267.1	1249.2	1209.0	1186.8	1170.5
5°	1591.2	1538.2	1510.8	1442.4	1404.8	1371.5	1330.4	1287.7	1221.8	1175.7	1138.0
7.5°	1799.8	1711.8	1653.6	1551.9	1500.6	1448.4	1379.2	1309.9	1220.1	1150.9	1093.6
10°	1993.9	1869.1	1776.7	1639.9	1573.2	1504.8	1407.4	1314.2	1202.2	1113.2	1038.0
12.5°	2184.6	2020.4	1893.0	1719.5	1638.2	1553.6	1428.7	1311.6	1179.9	1073.1	985.0
15°	2366.7	2160.6	1998.2	1788.7	1693.8	1592.1	1442.4	1303.9	1154.3	1032.9	932.8
17.5°	2512.1	2267.5	2072.6	1831.5	1724.6	1609.2	1437.3	1281.7	1119.2	990.1	880.7
20°	2612.1	2335.9	2113.6	1848.6	1731.4	1607.4	1417.6	1250.9	1082.5	948.2	837.1
22.5°	2666.0	2366.7	2124.7	1843.4	1721.2	1591.2	1393.7	1222.7	1053.4	919.2	813.1
25°	2685.6	2369.3	2112.8	1821.2	1698.1	1565.5	1365.5	1196.2	1030.3	900.3	801.2
27.5°	2662.5	2333.4	2069.2	1775.0	1650.2	1519.4	1320.2	1158.6	996.1	873.0	779.8
30°	2583.9	2249.6	1983.7	1692.9	1570.7	1445.0	1248.3	1089.3	940.5	824.2	735.3
32.5°	2459.0	2126.4	1863.1	1580.1	1462.1	1341.5	1153.4	1002.1	863.6	754.1	674.6
35°	2304.3	1979.4	1722.9	1448.4	1337.3	1223.5	1044.8	902.1	772.1	673.8	596.0
37.5°	2129.0	1816.1	1568.1	1315.9	1203.0	1096.1	922.6	800.3	675.5	585.7	514.7
40°	1932.4	1628.8	1403.1	1157.7	1058.5	961.0	800.3	689.1	575.4	495.9	434.4
42.5°	1722.0	1439.0	1230.4	1009.8	910.6	821.7	677.2	577.1	476.2	410.4	361.7
45°	1498.9	1249.2	1049.1	851.6	761.8	684.9	553.2	462.6	389.0	338.6	301.8
47.5°	1265.4	1044.8	867.0	695.1	615.6	548.9	442.9	373.6	315.5	278.7	250.5
50°	1030.3	833.6	692.6	546.4	478.0	424.9	346.3	298.4	255.7	227.4	206.1
52.5°	805.4	644.7	530.1	412.1	360.0	323.2	270.2	236.8	204.4	183.0	166.7
55°	595.1	485.7	387.3	299.3	268.5	245.4	207.8	183.8	160.7	144.5	132.5
57.5°	430.1	348.0	276.2	219.7	199.2	183.8	156.5	140.2	124.0	112.0	102.6
60°	301.8	240.3	194.9	160.7	146.2	135.9	116.3	106.0	94.1	83.8	74.4
62.5°	198.4	161.6	135.9	113.7	105.2	97.5	83.8	76.1	65.8	59.0	50.4
65°	129.1	106.0	90.6	76.1	69.3	65.8	56.4	50.4	43.6	37.6	32.5
67.5°	78.7	65.8	57.3	47.9	44.5	41.0	35.1	30.8	26.5	22.2	19.7
70°	43.6	38.5	33.3	28.2	25.7	23.9	20.5	18.8	15.4	13.7	11.1
72.5°	25.7	22.2	19.7	16.2	15.4	14.5	12.0	11.1	9.4	8.6	7.7
75°	15.4	12.8	12.0	10.3	9.4	9.4	8.6	7.7	6.8	6.8	6.0
77.5°	9.4	8.6	7.7	6.8	6.8	6.8	6.0	6.0	6.0	5.1	5.1
80°	6.0	6.0	6.0	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
82.5°	4.3	4.3	4.3	3.4	4.3	4.3	4.3	4.3	4.3	4.3	4.3
85°	2.6	2.6	3.4	3.4	3.4	3.4	3.4	4.3	4.3	4.3	4.3
87.5°	2.6	2.6	3.4	3.4	3.4	3.4	3.4	4.3	4.3	4.3	3.4
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9
2.5°	1151.7	1120.1	1097.0	1079.9	1085.9	1056.0	1046.5	1014.1	1002.1	1002.1	985.0
5°	1099.6	1049.1	1009.8	985.0	983.3	940.5	918.3	877.3	855.0	838.8	822.5
7.5°	1037.1	972.2	920.0	890.1	881.5	831.1	801.2	760.1	726.8	705.4	685.7
10°	970.5	892.6	833.6	799.4	786.6	731.9	692.6	654.9	619.0	596.8	576.3
12.5°	906.3	821.7	756.7	721.6	705.4	649.0	608.8	569.4	535.2	512.2	491.6
15°	847.3	757.6	689.1	654.1	636.1	580.6	540.4	501.9	468.6	447.2	428.4
17.5°	791.8	700.3	631.9	597.7	578.0	526.7	488.2	450.6	420.7	401.0	383.9
20°	749.9	659.2	596.0	566.0	546.4	498.5	465.1	432.6	407.8	393.3	377.1
22.5°	731.9	648.1	594.2	566.9	553.2	514.7	491.6	468.6	452.3	449.7	439.5
25°	729.3	655.8	611.3	588.3	579.7	550.6	537.0	522.4	510.4	513.9	515.6
27.5°	718.2	649.8	613.1	593.4	586.5	562.6	552.3	538.7	530.1	534.4	536.1
30°	679.7	616.5	582.3	566.0	559.2	535.2	526.7	511.3	504.5	505.3	504.5
32.5°	619.9	560.0	528.4	513.9	506.2	484.8	475.4	461.7	451.5	450.6	448.9
35°	547.2	493.3	464.3	451.5	443.8	425.8	417.3	404.4	392.5	391.6	389.9
37.5°	472.8	424.9	400.2	389.0	382.2	367.7	357.4	348.8	341.2	337.7	336.9
40°	401.0	358.3	340.3	331.7	326.6	311.2	306.1	297.5	291.6	288.1	287.3
42.5°	333.5	303.5	289.0	281.3	277.0	265.9	259.9	253.1	247.1	243.7	242.8
45°	283.0	258.2	244.5	238.6	235.1	224.9	220.6	213.8	208.6	206.1	205.2
47.5°	236.0	216.3	206.9	200.1	199.2	190.7	184.7	179.6	174.4	171.9	171.0
50°	193.2	177.0	169.3	165.0	164.2	155.6	151.3	147.1	142.8	140.2	138.5
52.5°	159.0	143.6	138.5	132.5	131.7	124.0	120.6	116.3	112.0	108.6	106.0
55°	125.7	113.7	108.6	103.5	102.6	94.1	90.6	85.5	81.2	77.8	74.4
57.5°	95.8	86.4	81.2	76.1	75.2	69.3	63.3	59.0	54.7	50.4	47.9
60°	70.1	60.7	54.7	52.2	49.6	43.6	39.3	35.9	32.5	29.9	27.4
62.5°	46.2	39.3	35.1	31.6	29.9	25.7	23.1	20.5	18.8	18.0	17.1
65°	28.2	23.9	20.5	18.8	18.8	16.2	14.5	12.8	12.0	12.0	11.1
67.5°	17.1	14.5	12.8	12.0	11.1	10.3	9.4	9.4	8.6	8.6	7.7
70°	10.3	9.4	8.6	7.7	7.7	7.7	7.7	7.7	6.8	6.8	6.8
72.5°	7.7	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.0	6.0	6.0
75°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.1
77.5°	5.1	5.1	5.1	5.1	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	5.1	5.1	4.3	4.3	4.3
82.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
85°	4.3	4.3	4.3	4.3	4.3	4.3	3.4	3.4	3.4	3.4	3.4
87.5°	4.3	3.4	3.4	3.4	3.4	3.4	2.6	2.6	2.6	2.6	1.7
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: P179850

CATALOG NUMBER: LDA6A55935D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9	1203.9
2.5°	976.4	983.3	973.0	966.2	959.3	964.5	940.5	930.3
5°	807.1	799.4	794.3	788.3	778.1	779.8	759.3	749.9
7.5°	667.8	662.6	649.8	643.0	632.7	632.7	613.9	606.2
10°	557.5	549.8	537.8	531.8	522.4	514.7	505.3	497.6
12.5°	473.7	465.1	454.9	449.7	440.3	434.4	424.9	426.7
15°	411.3	402.7	393.3	388.2	380.5	374.5	366.8	362.5
17.5°	367.7	360.0	352.3	347.1	341.2	336.0	329.2	328.3
20°	364.2	358.3	354.0	350.6	345.4	342.0	338.6	334.3
22.5°	436.1	436.9	437.8	437.8	438.6	438.6	439.5	430.9
25°	514.7	524.1	524.1	526.7	534.4	534.4	532.7	529.3
27.5°	535.2	544.7	542.1	543.8	551.5	553.2	547.2	548.1
30°	501.0	509.6	504.5	505.3	510.4	510.4	502.8	506.2
32.5°	443.8	448.9	442.0	442.0	446.3	445.5	440.3	440.3
35°	383.1	385.6	379.6	382.2	382.2	379.6	374.5	374.5
37.5°	330.9	331.7	325.8	326.6	326.6	324.1	318.9	318.9
40°	281.3	283.9	278.7	280.4	278.7	276.2	273.6	272.8
42.5°	237.7	239.4	235.1	237.7	236.8	236.8	236.0	236.8
45°	200.1	201.8	198.4	200.1	200.9	200.1	197.5	198.4
47.5°	165.9	167.6	167.6	165.9	165.0	160.7	158.2	158.2
50°	134.2	133.4	132.5	130.0	127.4	124.8	122.3	122.3
52.5°	100.9	99.2	98.3	95.8	94.9	92.3	92.3	89.8
55°	69.3	68.4	68.4	65.8	65.8	63.3	62.4	62.4
57.5°	43.6	41.9	42.8	41.0	40.2	37.6	37.6	36.8
60°	24.8	23.9	23.9	23.1	22.2	20.5	20.5	20.5
62.5°	16.2	15.4	15.4	14.5	14.5	13.7	13.7	12.8
65°	10.3	9.4	9.4	8.6	8.6	7.7	7.7	7.7
67.5°	7.7	6.8	6.8	6.8	6.8	6.8	6.0	6.0
70°	6.8	6.8	6.0	6.0	6.0	6.0	6.0	6.0
72.5°	6.0	6.0	6.0	6.0	5.1	5.1	5.1	5.1
75°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
77.5°	5.1	4.3	4.3	4.3	4.3	4.3	4.3	4.3
80°	4.3	4.3	4.3	4.3	4.3	4.3	3.4	3.4
82.5°	4.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4
85°	3.4	2.6	2.6	2.6	2.6	2.6	2.6	2.6
87.5°	1.7	1.7	1.7	1.7	0.9	0.9	0.9	0.9
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)