

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: P179893

Luminaire Tested: **LDA6A55830D010TE LARH40FL 6LA1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179893
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26688)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A55830D010TE LARH40FL 6LA1LI 30°
Description: PORTFOLIO 6" Adjustable Reflector, Angle-cut Trim, Self-flanged, 40° Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5574.2 lumens
Efficiency: N/A
Efficacy: 91.4 lumens/watt
Spacing Criteria (0/90/45): 2.63 / 0.54 / 1.37
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

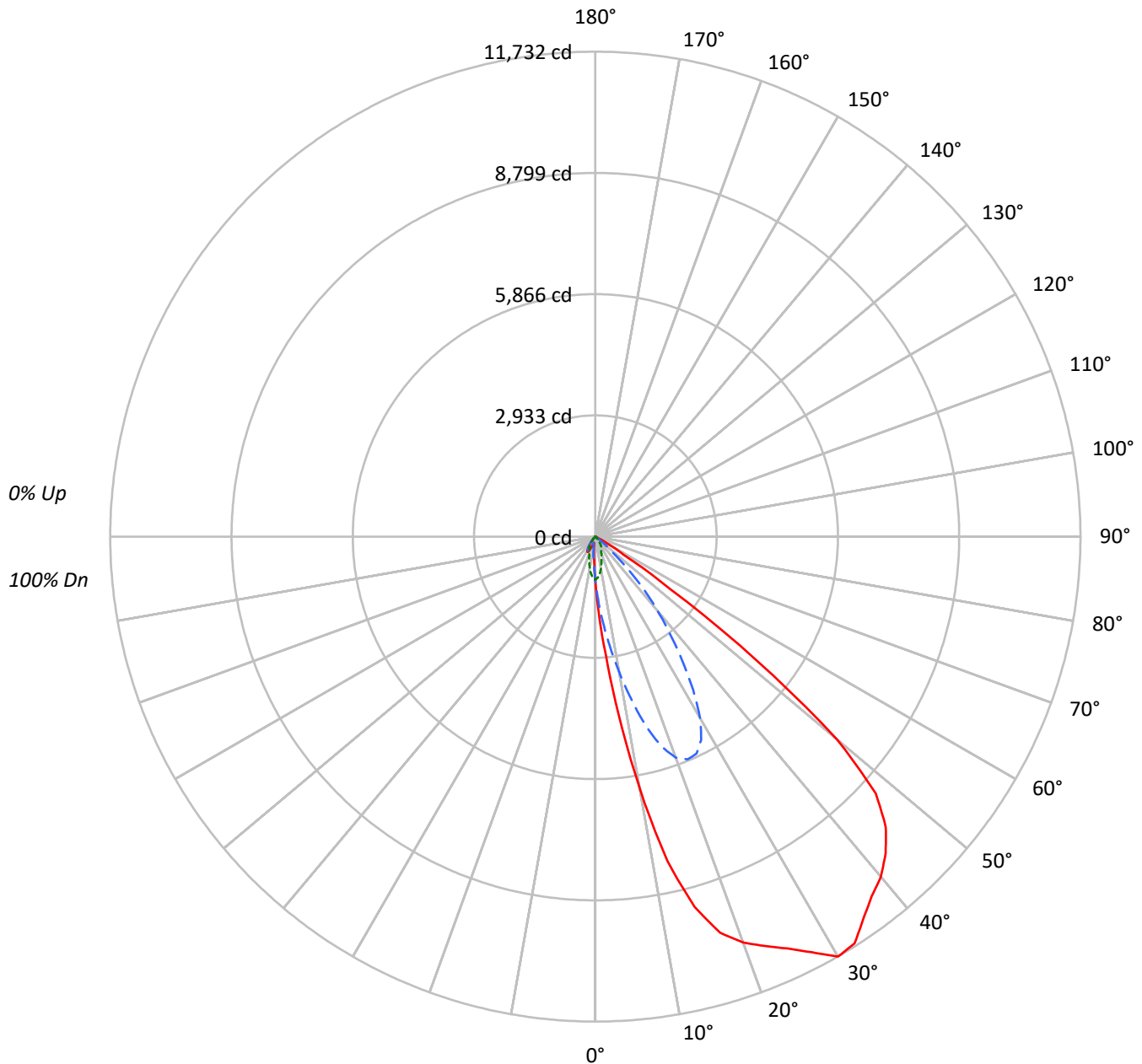
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					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	66	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	53	49		59	53	49		57	52	48
8	69	57	49	44	67	56	49	44		55	49	44		54	48	44		53	47	44
9	64	52	45	40	63	52	45	40		51	44	40		50	44	40		49	43	39
10	60	48	41	36	59	48	41	36		47	41	36		46	40	36		45	40	36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	57271	57271	57271
5°	157197	52768	21533
10°	344471	43186	8211
15°	526184	32872	9625
20°	609631	24455	14958
25°	665022	20112	24134
30°	742627	18243	24649
35°	755582	12515	16898
40°	768862	5933	8552
45°	770111	2465	3737
50°	651057	1066	1151
55°	209646	736	182
60°	41630	844	0
65°	4255	999	0
70°	465	1394	0
75°	0	1843	0
80°	0	3031	316
85°	0	6038	629



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.8	2.5
10°-20°	733.5	13.2
20°-30°	1404.3	25.2
30°-40°	1654.5	29.7
40°-50°	1299.6	23.3
50°-60°	316.7	5.7
60°-70°	13.6	0.2
70°-80°	5.1	0.1
80°-90°	5.1	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°	2279.6	40.9
0°-40°	3934.1	70.6
0°-60°	5550.4	99.6
0°-90°	5574.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5574.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1045	1045	1045	1045	1045	
5°	2857	2067	959	502	391	378
15°	9271	4762	579	166	170	2588
25°	10994	5790	332	348	399	5124
35°	11290	3660	187	241	252	7080
45°	9933	1131	32	44	48	7463
55°	2194	41	8	5	2	2611
65°	33	5	8	5	0	87
75°	0	5	9	6	0	0
85°	0	6	10	6	1	0
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°	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7
2.5°	1790.6	1786.8	1760.8	1784.9	1711.6	1708.7	1676.0	1661.5	1619.1	1578.6	1520.8
5°	2856.6	2793.9	2742.8	2744.8	2604.0	2578.0	2504.8	2430.6	2316.9	2210.8	2067.2
7.5°	4354.2	4280.0	4172.1	4126.8	3857.9	3778.9	3627.5	3430.0	3182.3	2935.6	2669.6
10°	6188.2	6199.8	6060.1	5930.9	5524.2	5364.2	5119.4	4730.1	4260.7	3797.2	3325.9
12.5°	8033.8	8026.1	7859.4	7663.7	7162.6	6937.1	6611.3	6125.6	5504.0	4785.0	4047.7
15°	9271.3	9326.2	9255.8	9099.7	8671.8	8413.5	8046.3	7387.1	6629.6	5756.5	4761.9
17.5°	10048.0	10100.1	10075.0	9952.6	9574.8	9299.2	8992.7	8453.0	7577.0	6479.3	5324.7
20°	10449.9	10531.8	10520.3	10387.3	10102.0	9873.6	9535.3	9035.1	8276.7	6981.4	5689.0
22.5°	10717.8	10780.5	10797.8	10647.5	10352.6	10135.7	9888.1	9381.1	8668.0	7287.9	5833.6
25°	10994.4	11105.3	10996.4	10811.3	10540.5	10332.3	10068.3	9582.6	8854.9	7413.2	5790.2
27.5°	11333.7	11386.7	11140.0	10971.3	10670.6	10445.1	10164.7	9699.2	8887.7	7312.9	5542.5
30°	11731.7	11512.0	11339.5	11005.0	10663.9	10444.1	10158.9	9625.9	8715.2	6980.4	5062.6
32.5°	11666.2	11464.8	11269.1	10915.4	10578.1	10360.3	10042.3	9382.1	8307.5	6424.3	4400.5
35°	11290.3	11333.7	11122.6	10829.6	10448.0	10223.4	9876.5	9035.1	7615.5	5657.2	3660.3
37.5°	10973.2	11068.7	10930.8	10660.0	10272.6	9969.0	9500.6	8478.1	6712.5	4683.8	2958.7
40°	10743.9	10774.7	10700.5	10396.9	9931.4	9492.9	8951.3	7477.7	5615.8	3676.7	2335.2
42.5°	10388.2	10470.2	10339.1	10007.6	9302.1	8805.8	8021.3	6322.2	4361.9	2808.4	1757.9
45°	9933.4	10011.4	9849.5	9298.2	8317.1	7589.5	6632.5	4929.6	3226.6	2070.1	1131.4
47.5°	9191.3	9239.5	8926.2	8163.9	6737.6	6052.3	5071.2	3436.7	2078.8	1157.5	550.3
50°	7633.9	7610.7	6965.0	6027.3	4506.5	3787.5	3018.5	1862.9	933.9	548.4	344.1
52.5°	4919.9	4866.9	4228.0	3375.0	2282.2	1741.5	1308.8	803.8	486.7	306.5	135.9
55°	2193.5	2173.3	1779.1	1382.0	933.9	803.8	613.9	394.2	259.2	107.0	41.4
57.5°	813.4	795.1	700.6	587.9	451.0	374.9	297.8	188.9	66.5	35.7	22.2
60°	379.7	378.8	333.5	274.7	190.8	144.6	83.8	44.3	27.9	19.3	12.5
62.5°	121.4	118.5	82.9	60.7	43.4	37.6	29.9	22.2	14.5	10.6	7.7
65°	32.8	32.8	29.9	25.1	20.2	17.3	14.5	10.6	6.7	5.8	4.8
67.5°	12.5	12.5	11.6	10.6	7.7	6.7	5.8	4.8	3.9	4.8	4.8
70°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.9	3.9	4.8
72.5°	0.0	0.0	1.0	1.0	1.9	1.9	2.9	2.9	3.9	4.8	4.8
75°	0.0	0.0	1.0	1.0	1.9	1.9	2.9	2.9	3.9	4.8	4.8
77.5°	0.0	0.0	1.0	1.0	1.9	1.9	2.9	2.9	3.9	4.8	4.8
80°	0.0	0.0	1.0	1.0	1.9	1.9	2.9	2.9	3.9	4.8	4.8
82.5°	0.0	0.0	1.0	1.9	1.9	1.9	2.9	3.9	3.9	4.8	5.8
85°	0.0	0.0	1.0	1.9	1.9	2.9	2.9	3.9	3.9	4.8	5.8
87.5°	0.0	0.0	1.0	1.9	1.9	2.9	2.9	3.9	3.9	4.8	5.8
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°	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7
2.5°	1478.4	1414.8	1327.1	1276.0	1263.5	1236.5	1189.3	1118.9	1061.1	1005.2	972.4
5°	1945.8	1795.5	1626.8	1508.3	1460.1	1395.5	1280.8	1162.3	1053.4	958.9	884.7
7.5°	2441.2	2193.5	1920.8	1701.0	1622.0	1519.8	1332.9	1156.5	1007.1	876.0	776.8
10°	2933.7	2534.7	2164.6	1846.5	1717.4	1578.6	1331.9	1103.5	928.1	775.8	666.0
12.5°	3426.1	2852.7	2343.8	1934.2	1766.6	1591.1	1292.4	1022.5	827.9	672.7	567.6
15°	3881.0	3106.2	2465.3	1964.1	1761.7	1554.5	1212.4	924.2	722.8	579.2	481.9
17.5°	4220.3	3239.2	2493.2	1918.8	1685.6	1456.2	1090.0	808.6	622.6	496.3	397.1
20°	4387.0	3260.4	2426.7	1789.7	1554.5	1316.5	956.0	697.8	536.8	419.2	335.4
22.5°	4387.0	3160.1	2282.2	1627.8	1390.7	1155.5	826.9	606.2	469.3	365.3	294.9
25°	4220.3	2960.6	2088.4	1440.8	1210.5	996.5	715.1	537.8	417.3	332.5	273.7
27.5°	3896.4	2685.0	1839.8	1232.6	1033.1	854.8	626.4	475.1	377.8	299.7	300.7
30°	3451.2	2346.7	1554.5	1012.9	851.0	702.6	527.2	398.0	302.6	288.2	296.8
32.5°	2936.5	1942.0	1231.7	785.5	659.2	553.2	400.9	281.4	240.9	242.9	252.5
35°	2408.4	1528.5	927.1	582.1	490.5	400.9	263.1	185.0	183.1	187.0	193.7
37.5°	1901.5	1144.0	670.8	426.0	329.6	246.7	141.7	127.2	127.2	131.1	134.9
40°	1424.4	811.5	461.6	252.5	160.0	112.8	89.6	82.9	81.9	82.9	87.7
42.5°	978.2	513.7	274.7	101.2	77.1	65.5	56.9	52.0	51.1	52.0	54.9
45°	549.3	316.1	107.0	54.0	46.3	41.4	35.7	32.8	31.8	31.8	33.7
47.5°	344.1	125.3	48.2	33.7	28.9	27.0	23.1	21.2	20.2	20.2	21.2
50°	132.0	49.2	29.9	22.2	19.3	17.3	15.4	13.5	12.5	12.5	13.5
52.5°	45.3	28.9	19.3	14.5	12.5	11.6	9.6	8.7	8.7	8.7	8.7
55°	25.1	17.3	11.6	8.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
57.5°	15.4	10.6	7.7	6.7	6.7	6.7	6.7	6.7	6.7	7.7	7.7
60°	8.7	6.7	5.8	5.8	5.8	5.8	6.7	6.7	6.7	7.7	7.7
62.5°	5.8	5.8	5.8	5.8	5.8	5.8	6.7	6.7	7.7	7.7	7.7
65°	4.8	4.8	4.8	5.8	5.8	5.8	6.7	6.7	7.7	7.7	7.7
67.5°	4.8	4.8	5.8	5.8	5.8	6.7	6.7	7.7	7.7	7.7	7.7
70°	4.8	5.8	5.8	6.7	6.7	6.7	7.7	7.7	7.7	8.7	8.7
72.5°	4.8	5.8	5.8	6.7	6.7	6.7	7.7	7.7	8.7	8.7	8.7
75°	5.8	5.8	5.8	6.7	6.7	6.7	7.7	8.7	8.7	8.7	8.7
77.5°	5.8	5.8	6.7	6.7	6.7	7.7	7.7	8.7	8.7	8.7	8.7
80°	5.8	5.8	6.7	6.7	7.7	7.7	8.7	8.7	8.7	9.6	9.6
82.5°	5.8	5.8	6.7	7.7	7.7	7.7	8.7	8.7	9.6	9.6	9.6
85°	5.8	6.7	6.7	7.7	7.7	7.7	8.7	8.7	9.6	9.6	9.6
87.5°	5.8	6.7	6.7	7.7	7.7	7.7	8.7	8.7	9.6	9.6	9.6
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7
2.5°	929.1	888.6	848.1	818.2	803.8	789.3	757.5	716.1	698.7	673.7	659.2
5°	809.5	741.1	687.2	651.5	630.3	602.3	565.7	525.2	502.1	476.1	458.7
7.5°	686.2	606.2	554.2	521.4	500.2	465.5	419.2	371.0	343.1	314.2	293.9
10°	578.2	502.1	443.3	405.7	378.8	338.3	292.0	258.3	234.2	209.1	188.9
12.5°	482.8	400.9	338.3	306.5	288.2	249.6	211.1	173.5	159.0	154.2	154.2
15°	391.3	317.1	264.1	237.1	217.8	176.4	168.7	166.7	165.8	164.8	166.7
17.5°	319.0	256.4	200.5	187.0	185.0	184.1	185.0	185.0	186.0	188.9	193.7
20°	267.9	210.1	206.2	207.2	207.2	211.1	215.9	219.7	223.6	228.4	237.1
22.5°	238.0	237.1	243.8	244.8	249.6	255.4	264.1	269.8	279.5	284.3	296.8
25°	274.7	281.4	293.9	297.8	305.5	315.1	328.6	336.3	347.9	353.7	368.2
27.5°	311.3	321.9	337.3	342.1	348.9	364.3	373.9	380.7	386.5	390.3	399.0
30°	308.4	318.0	333.5	334.4	344.1	354.7	360.4	366.2	370.1	369.1	373.9
32.5°	261.2	269.8	284.3	284.3	294.9	303.6	306.5	311.3	311.3	311.3	313.2
35°	200.5	206.2	215.9	218.8	227.4	233.2	235.2	240.9	240.9	239.0	239.0
37.5°	138.8	146.5	153.2	155.2	160.9	164.8	169.6	170.6	168.7	169.6	169.6
40°	90.6	95.4	100.2	101.2	106.0	108.9	113.7	113.7	114.7	113.7	115.6
42.5°	55.9	59.8	62.6	64.6	66.5	68.4	71.3	72.3	73.2	72.3	74.2
45°	34.7	36.6	38.5	39.5	40.5	41.4	44.3	44.3	44.3	44.3	45.3
47.5°	21.2	22.2	23.1	23.1	24.1	25.1	26.0	26.0	26.0	26.0	27.0
50°	12.5	13.5	13.5	13.5	14.5	14.5	15.4	15.4	15.4	14.5	15.4
52.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	7.7	8.7
55°	7.7	7.7	6.7	6.7	6.7	6.7	6.7	5.8	4.8	4.8	3.9
57.5°	6.7	6.7	6.7	6.7	6.7	5.8	5.8	4.8	4.8	3.9	2.9
60°	6.7	6.7	6.7	6.7	6.7	5.8	5.8	4.8	3.9	3.9	2.9
62.5°	7.7	6.7	6.7	6.7	6.7	5.8	5.8	4.8	3.9	3.9	2.9
65°	7.7	7.7	6.7	6.7	6.7	5.8	5.8	4.8	4.8	3.9	2.9
67.5°	7.7	7.7	7.7	6.7	7.7	6.7	5.8	5.8	4.8	3.9	3.9
70°	8.7	7.7	7.7	7.7	7.7	6.7	6.7	5.8	4.8	3.9	3.9
72.5°	8.7	8.7	7.7	7.7	7.7	6.7	6.7	5.8	4.8	4.8	3.9
75°	8.7	8.7	7.7	7.7	7.7	6.7	6.7	5.8	5.8	4.8	3.9
77.5°	8.7	8.7	8.7	7.7	7.7	7.7	6.7	6.7	5.8	4.8	3.9
80°	8.7	8.7	8.7	8.7	8.7	7.7	7.7	6.7	5.8	4.8	3.9
82.5°	9.6	8.7	8.7	8.7	8.7	7.7	7.7	6.7	5.8	4.8	4.8
85°	9.6	9.6	8.7	8.7	8.7	7.7	7.7	6.7	5.8	5.8	4.8
87.5°	9.6	8.7	8.7	8.7	8.7	7.7	7.7	6.7	5.8	4.8	4.8
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: P179893

CATALOG NUMBER: LDA6A55830D010TE LARH40FL 6LA1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7	1044.7
2.5°	644.7	637.0	637.0	623.5	621.6	611.0	619.7	613.9
5°	439.5	426.9	423.1	409.6	404.8	392.2	396.1	391.3
7.5°	276.6	264.1	260.2	250.6	244.8	235.2	236.1	233.2
10°	168.7	157.1	154.2	151.3	148.4	147.5	148.4	147.5
12.5°	153.2	152.3	150.3	151.3	149.4	150.3	151.3	150.3
15°	166.7	168.7	166.7	167.7	166.7	168.7	169.6	169.6
17.5°	195.6	199.5	197.6	200.5	199.5	204.3	204.3	204.3
20°	240.0	246.7	244.8	248.6	248.6	254.4	254.4	256.4
22.5°	301.7	310.3	309.4	318.0	316.1	322.9	322.9	324.8
25°	375.9	384.5	385.5	391.3	390.3	397.1	397.1	399.0
27.5°	406.7	411.5	410.6	413.4	414.4	418.3	421.2	419.2
30°	381.6	385.5	384.5	386.5	386.5	389.4	392.2	389.4
32.5°	320.9	323.8	323.8	327.7	324.8	325.7	330.6	327.7
35°	245.8	247.7	245.8	247.7	248.6	248.6	253.5	252.5
37.5°	175.4	176.4	176.4	179.3	176.4	176.4	181.2	182.1
40°	117.6	118.5	117.6	121.4	119.5	119.5	122.4	119.5
42.5°	75.2	76.1	75.2	78.1	76.1	78.1	79.0	80.0
45°	46.3	46.3	45.3	47.2	46.3	47.2	48.2	48.2
47.5°	27.0	27.0	26.0	27.9	27.0	27.0	27.0	27.9
50°	14.5	14.5	14.5	15.4	14.5	14.5	14.5	13.5
52.5°	7.7	7.7	6.7	7.7	6.7	6.7	6.7	6.7
55°	3.9	2.9	2.9	2.9	1.9	1.9	1.9	1.9
57.5°	2.9	1.9	1.9	1.0	1.0	1.0	0.0	0.0
60°	1.9	1.9	1.0	1.0	0.0	0.0	0.0	0.0
62.5°	1.9	1.9	1.0	1.0	0.0	0.0	0.0	0.0
65°	1.9	1.9	1.0	1.0	0.0	0.0	0.0	0.0
67.5°	2.9	1.9	1.9	1.0	1.0	0.0	0.0	0.0
70°	2.9	1.9	1.9	1.0	1.0	0.0	0.0	0.0
72.5°	2.9	1.9	1.9	1.9	1.0	1.0	0.0	0.0
75°	2.9	2.9	1.9	1.9	1.0	1.0	0.0	0.0
77.5°	3.9	2.9	1.9	1.9	1.0	1.0	0.0	0.0
80°	3.9	2.9	1.9	1.9	1.9	1.0	1.0	1.0
82.5°	3.9	2.9	2.9	1.9	1.9	1.0	1.0	1.0
85°	3.9	2.9	2.9	1.9	1.9	1.0	1.0	1.0
87.5°	3.9	2.9	2.9	1.9	1.9	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)