

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: P179924

Luminaire Tested: **LDA6A55827D010TE LARH30NF 6LAL1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179924
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26690)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A55827D010TE LARH30NF 6LAL1LI 30°
Description: PORTFOLIO 6" Lensed Adjustable, Self-flanged, 30° Narrow Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4807.9 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Spacing Criteria (0/90/45): 2.55 / 0.46 / 1.37
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

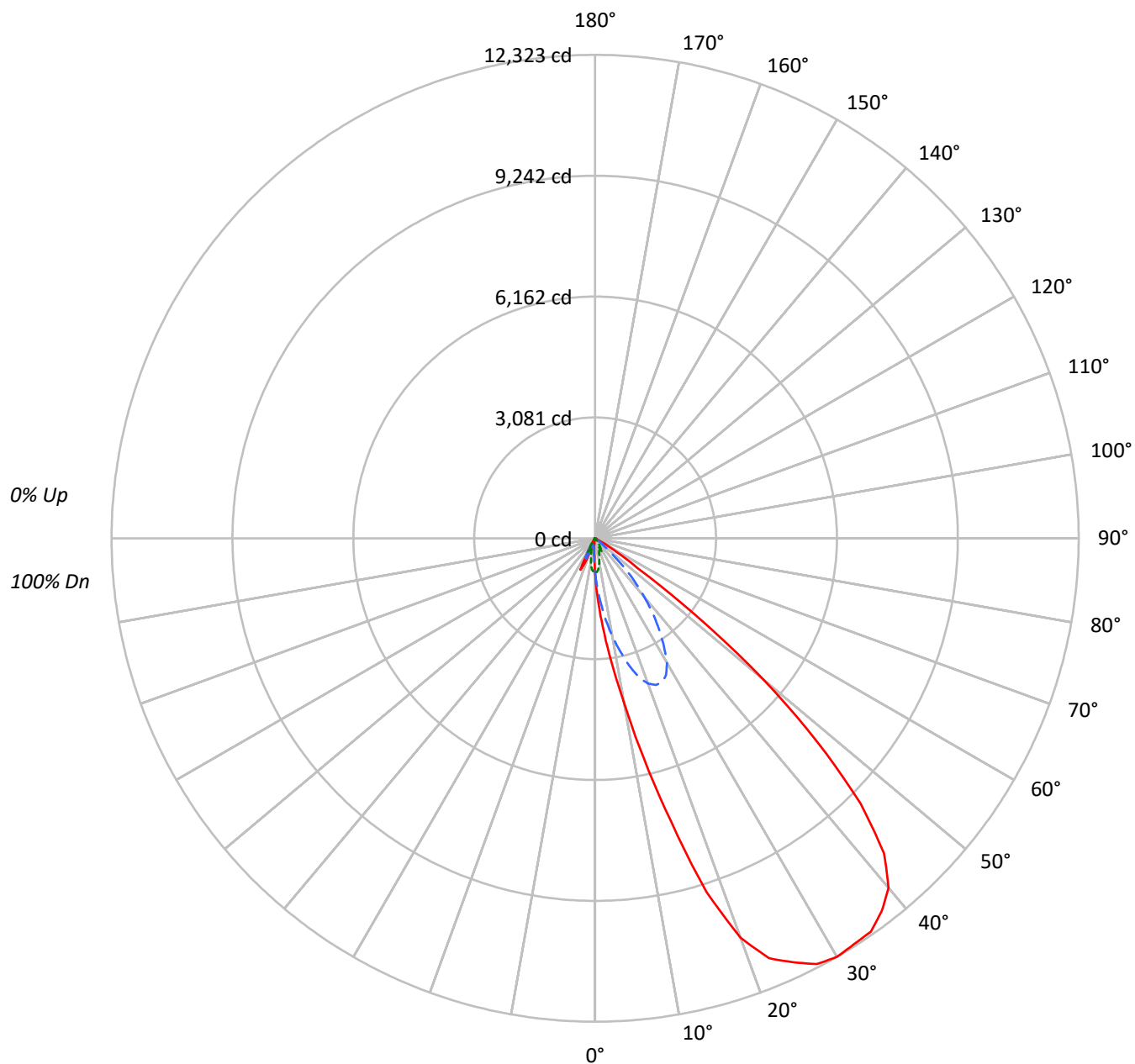
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P179924

CATALOG NUMBER: LDA6A55827D010TE LARH30NF 6LAL1LI 30°

Luminous Intensity Polar Plot





TEST NUMBER: P179924

CATALOG NUMBER: LDA6A55827D010TE LARH30NF 6LAL1LI 30°

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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	109	106	103	110	107	104	102	103	100	98		99	97	95		95
2	105	99	94	90	103	97	93	89	94	90	87		91	88	85		88
3	98	90	84	79	96	89	83	78	86	81	77		83	79	76		81
4	91	82	75	70	89	81	74	69	78	73	68		76	71	68		74
5	85	74	67	62	83	73	67	62	72	66	61		70	64	60		68
6	79	68	60	55	77	67	60	55	65	59	55		64	58	54		62
7	74	62	55	49	72	61	54	49	60	54	49		59	53	49		57
8	69	57	49	44	67	56	49	44	55	49	44		54	48	44		53
9	64	52	45	40	63	52	45	40	51	44	40		50	44	40		49
10	60	48	41	36	59	48	41	36	47	40	36		46	40	36		45

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	48445	48445	48445
5°	125071	44899	14033
10°	237259	34262	4715
15°	424242	22270	4699
20°	632143	15150	8564
25°	721294	18896	53791
30°	780038	15787	16085
35°	819386	7683	5039
40°	832345	2762	2562
45°	741573	1822	1535
50°	476274	1288	1040
55°	125386	898	535
60°	27958	932	417
65°	2685	1103	493
70°	898	1362	609
75°	191	1800	996
80°	0	2968	1484
85°	0	5346	2390



TEST NUMBER: P179924

CATALOG NUMBER: LDA6A55827D010TE LARH30NF 6LAL1LI 30°

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.3	2.2
10°-20°	560.1	11.6
20°-30°	1314.1	27.3
30°-40°	1511.5	31.4
40°-50°	1073.7	22.3
50°-60°	218.3	4.5
60°-70°	10.9	0.2
70°-80°	6.5	0.1
80°-90°	5.4	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°	1981.5	41.2
0°-40°	3493.1	72.7
0°-60°	4785.1	99.5
0°-90°	4807.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4807.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	884	884	884	884	884	
5°	2273	1644	816	327	255	277
15°	7475	3361	392	88	83	2242
25°	11925	4048	312	682	889	5496
35°	12244	2842	115	85	75	7606
45°	9565	1011	24	25	20	7049
55°	1312	26	9	9	6	1769
65°	21	8	8	8	4	50
75°	1	5	8	8	5	2
85°	0	5	8	7	4	0
90°	0	0	0	0	0	



TEST NUMBER: P179924

CATALOG NUMBER: LDA6A55827D010TE LARH30NF 6LAL1LI 30°

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7
2.5°	1522.7	1476.6	1454.0	1453.1	1387.2	1408.8	1387.2	1370.2	1309.1	1283.7	1241.3
5°	2272.8	2216.3	2171.1	2151.4	2038.4	2014.0	2002.7	1945.3	1817.3	1742.9	1644.1
7.5°	3157.4	3098.1	3023.8	2964.5	2800.7	2754.6	2724.5	2625.7	2436.5	2286.9	2102.4
10°	4262.2	4227.4	4107.0	3997.8	3749.3	3653.3	3563.0	3332.4	3084.9	2784.7	2546.6
12.5°	5750.1	5668.2	5453.7	5235.3	4845.7	4702.7	4553.0	4184.1	3805.8	3335.3	2941.9
15°	7475.1	7405.5	7075.2	6719.4	6165.1	5929.9	5695.5	5114.9	4533.3	3927.2	3360.7
17.5°	9460.9	9329.1	9000.7	8399.3	7623.8	7254.0	6817.3	6077.6	5238.2	4414.7	3710.8
20°	10835.8	10757.7	10480.1	9903.2	9020.4	8532.0	7989.9	6974.5	5826.3	4805.3	3940.4
22.5°	11587.8	11509.6	11301.7	10792.5	10068.8	9578.5	8948.9	7700.1	6270.5	5067.8	4048.6
25°	11924.7	11873.8	11760.0	11344.9	10674.9	10233.5	9637.8	8201.7	6548.2	5187.3	4047.7
27.5°	12236.2	12249.3	11968.0	11626.3	11009.0	10565.7	10001.1	8427.5	6602.7	5127.1	3917.8
30°	12322.7	12289.8	12166.5	11685.6	11110.6	10627.8	10022.7	8308.0	6390.1	4860.8	3659.9
32.5°	12269.1	12270.0	12154.3	11643.3	10967.6	10427.4	9747.0	7879.8	5976.0	4442.9	3259.0
35°	12243.7	12235.2	11935.0	11486.1	10627.8	9992.6	9135.2	7192.8	5401.9	3909.3	2842.1
37.5°	11991.5	11940.7	11724.2	11115.3	9992.6	9180.4	8257.2	6352.4	4695.1	3354.1	2414.9
40°	11631.0	11567.0	11215.1	10341.7	8906.6	8000.3	7082.7	5401.0	3955.4	2801.7	1938.7
42.5°	10892.3	10786.9	10253.3	9094.8	7508.1	6664.9	5904.5	4448.6	3233.6	2274.6	1488.8
45°	9565.3	9393.1	8654.3	7444.1	6060.7	5399.1	4756.3	3565.8	2589.0	1694.0	1010.7
47.5°	7680.3	7492.1	6822.0	5849.9	4745.0	4208.6	3662.8	2625.7	1751.4	987.2	507.3
50°	5584.5	5454.6	4862.7	4043.0	3137.6	2687.8	2269.0	1464.3	840.4	477.1	208.0
52.5°	3217.6	3124.4	2712.2	2127.8	1543.4	1292.1	1039.0	639.0	428.2	189.2	66.8
55°	1311.9	1258.2	1077.6	912.9	685.1	592.0	494.1	319.0	144.0	45.2	26.4
57.5°	641.8	635.2	529.8	424.4	312.4	252.2	190.1	64.0	34.8	22.6	16.9
60°	255.0	245.6	168.5	97.9	54.6	44.2	37.6	26.4	19.8	15.1	12.2
62.5°	44.2	43.3	36.7	31.1	25.4	22.6	20.7	16.0	13.2	10.4	9.4
65°	20.7	20.7	18.8	16.9	14.1	13.2	12.2	10.4	8.5	7.5	7.5
67.5°	10.4	10.4	9.4	8.5	7.5	7.5	6.6	6.6	5.6	5.6	5.6
70°	5.6	5.6	5.6	4.7	4.7	4.7	4.7	4.7	3.8	4.7	4.7
72.5°	3.8	3.8	3.8	2.8	1.9	2.8	2.8	2.8	3.8	4.7	4.7
75°	0.9	0.9	0.9	1.9	1.9	1.9	2.8	2.8	3.8	4.7	4.7
77.5°	0.9	0.9	0.9	0.9	1.9	1.9	1.9	2.8	3.8	4.7	4.7
80°	0.0	0.9	0.9	0.9	1.9	1.9	1.9	2.8	3.8	4.7	4.7
82.5°	0.0	0.0	0.9	0.9	1.9	1.9	1.9	2.8	3.8	4.7	4.7
85°	0.0	0.0	0.9	0.9	1.9	1.9	1.9	2.8	3.8	4.7	4.7
87.5°	0.0	0.0	0.9	0.9	1.9	1.9	1.9	2.8	3.8	4.7	4.7
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: P179924

CATALOG NUMBER: LDA6A55827D010TE LARH30NF 6LAL1LI 30°

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7
2.5°	1222.5	1173.6	1141.6	1085.1	1061.6	1051.2	999.4	949.6	901.6	866.8	813.1
5°	1568.8	1490.7	1371.2	1259.2	1210.3	1179.2	1077.6	983.4	894.0	815.9	722.8
7.5°	1941.5	1780.6	1593.3	1413.5	1328.8	1272.4	1115.2	977.8	849.8	731.2	604.2
10°	2299.1	2045.9	1773.0	1516.1	1401.3	1316.6	1111.4	935.5	768.9	615.5	479.0
12.5°	2604.0	2276.5	1914.2	1581.0	1431.4	1323.2	1076.6	862.0	659.7	495.0	376.4
15°	2860.9	2453.4	2007.4	1602.7	1422.9	1295.0	1008.9	761.3	540.2	392.4	304.0
17.5°	3041.6	2539.1	2029.0	1566.0	1363.7	1215.9	906.3	632.4	424.4	317.2	240.0
20°	3147.0	2550.4	1976.3	1476.6	1260.1	1103.9	777.3	496.9	344.4	259.7	186.3
22.5°	3163.0	2494.9	1872.8	1356.1	1140.6	990.0	647.5	416.0	313.4	242.8	182.6
25°	3085.9	2384.7	1738.2	1238.5	1032.4	878.0	560.0	420.7	352.0	312.4	324.7
27.5°	2936.2	2203.1	1583.9	1118.0	919.5	763.2	528.9	440.4	384.0	390.6	413.1
30°	2706.6	1947.1	1361.8	913.8	703.9	581.6	420.7	317.2	263.5	249.4	250.3
32.5°	2368.7	1626.2	1069.1	634.3	473.4	392.4	266.3	176.9	177.9	164.7	163.8
35°	1982.9	1309.1	799.9	425.4	327.5	272.9	157.2	124.2	119.5	114.8	108.2
37.5°	1600.8	1011.7	532.7	290.8	208.9	151.5	79.1	64.9	60.2	56.5	56.5
40°	1218.7	707.7	329.4	152.5	84.7	62.1	47.1	39.5	38.6	38.6	37.6
42.5°	884.6	417.8	178.8	60.2	47.1	41.4	32.9	29.2	29.2	29.2	29.2
45°	470.5	212.7	68.7	37.6	31.1	29.2	24.5	22.6	22.6	23.5	23.5
47.5°	217.4	80.0	34.8	25.4	21.6	21.6	18.8	17.9	17.9	18.8	18.8
50°	78.1	32.9	22.6	17.9	16.0	16.9	15.1	14.1	15.1	15.1	15.1
52.5°	30.1	20.7	16.0	14.1	12.2	13.2	11.3	11.3	12.2	12.2	12.2
55°	18.8	15.1	12.2	10.4	9.4	10.4	9.4	9.4	9.4	9.4	9.4
57.5°	13.2	11.3	9.4	8.5	7.5	8.5	8.5	8.5	8.5	8.5	8.5
60°	10.4	8.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	8.5	8.5
62.5°	8.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	8.5	8.5	8.5
65°	7.5	6.6	7.5	7.5	6.6	7.5	7.5	7.5	8.5	8.5	9.4
67.5°	5.6	5.6	5.6	6.6	6.6	6.6	7.5	7.5	8.5	8.5	8.5
70°	5.6	5.6	6.6	6.6	6.6	6.6	7.5	7.5	8.5	8.5	8.5
72.5°	5.6	5.6	6.6	6.6	6.6	7.5	7.5	7.5	8.5	8.5	8.5
75°	5.6	5.6	6.6	6.6	6.6	7.5	7.5	7.5	8.5	8.5	8.5
77.5°	5.6	5.6	6.6	6.6	6.6	7.5	7.5	8.5	8.5	8.5	8.5
80°	5.6	6.6	6.6	7.5	7.5	7.5	7.5	8.5	8.5	9.4	9.4
82.5°	5.6	6.6	6.6	7.5	7.5	7.5	7.5	8.5	8.5	9.4	9.4
85°	5.6	6.6	6.6	7.5	7.5	7.5	7.5	8.5	8.5	8.5	8.5
87.5°	5.6	6.6	6.6	7.5	7.5	7.5	7.5	7.5	8.5	8.5	8.5
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: P179924

CATALOG NUMBER: LDA6A55827D010TE LARH30NF 6LAL1LI 30°

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7
2.5°	777.3	731.2	685.1	662.5	642.8	614.5	578.8	549.6	518.5	502.5	465.8
5°	649.4	570.3	503.5	471.5	447.0	413.1	376.4	350.1	326.6	313.4	289.9
7.5°	502.5	427.3	368.9	344.4	326.6	292.7	265.4	238.1	213.6	195.7	172.2
10°	388.7	330.3	282.3	258.8	239.0	203.3	170.3	144.9	118.6	100.7	93.2
12.5°	308.7	254.1	205.2	181.6	160.9	124.2	99.8	95.1	90.3	88.5	85.6
15°	237.2	187.3	135.5	112.0	103.5	98.8	93.2	92.2	88.5	88.5	85.6
17.5°	177.9	122.3	103.5	101.6	100.7	98.8	96.0	95.1	94.1	94.1	93.2
20°	128.0	118.6	115.8	117.6	118.6	120.5	119.5	119.5	123.3	131.8	129.9
22.5°	179.7	194.8	210.8	216.5	237.2	257.9	276.7	300.2	355.7	419.7	434.8
25°	355.7	400.9	442.3	464.9	498.8	544.9	589.1	643.7	682.3	714.3	751.0
27.5°	442.3	459.3	452.7	455.5	451.7	445.1	447.0	458.3	452.7	435.7	442.3
30°	261.6	274.8	267.3	271.0	260.7	260.7	257.9	263.5	259.7	253.2	251.3
32.5°	170.3	177.9	176.9	176.9	173.2	171.3	164.7	162.8	156.2	144.0	141.2
35°	102.6	97.9	93.2	90.3	88.5	88.5	87.5	87.5	84.7	81.9	80.9
37.5°	55.5	56.5	56.5	56.5	56.5	58.3	57.4	57.4	57.4	55.5	55.5
40°	38.6	40.5	40.5	40.5	41.4	41.4	41.4	42.3	41.4	41.4	41.4
42.5°	30.1	31.1	30.1	30.1	31.1	31.1	31.1	32.0	32.0	32.0	31.1
45°	24.5	24.5	23.5	24.5	24.5	25.4	25.4	25.4	25.4	24.5	24.5
47.5°	19.8	19.8	19.8	19.8	20.7	20.7	20.7	20.7	20.7	20.7	20.7
50°	16.0	16.0	16.0	16.9	16.9	16.9	16.0	16.9	16.9	16.9	16.0
52.5°	12.2	12.2	12.2	12.2	12.2	11.3	11.3	11.3	11.3	11.3	10.4
55°	9.4	9.4	9.4	9.4	9.4	10.4	9.4	10.4	9.4	9.4	8.5
57.5°	8.5	8.5	8.5	8.5	9.4	9.4	8.5	8.5	8.5	7.5	7.5
60°	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	7.5	6.6	6.6
62.5°	9.4	9.4	8.5	8.5	8.5	8.5	7.5	7.5	7.5	6.6	6.6
65°	9.4	9.4	8.5	9.4	9.4	8.5	8.5	7.5	7.5	6.6	6.6
67.5°	9.4	9.4	9.4	9.4	9.4	9.4	8.5	8.5	7.5	7.5	6.6
70°	9.4	9.4	9.4	9.4	9.4	9.4	8.5	8.5	7.5	7.5	6.6
72.5°	9.4	9.4	9.4	9.4	9.4	9.4	8.5	8.5	8.5	7.5	6.6
75°	9.4	9.4	9.4	9.4	9.4	8.5	8.5	8.5	7.5	7.5	6.6
77.5°	9.4	9.4	9.4	9.4	9.4	8.5	8.5	8.5	7.5	7.5	6.6
80°	9.4	9.4	9.4	9.4	9.4	9.4	8.5	8.5	7.5	7.5	6.6
82.5°	9.4	9.4	9.4	9.4	9.4	8.5	8.5	8.5	7.5	7.5	6.6
85°	9.4	8.5	8.5	8.5	8.5	8.5	7.5	7.5	6.6	6.6	5.6
87.5°	8.5	8.5	8.5	8.5	8.5	7.5	7.5	6.6	5.6	4.7	4.7
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: P179924

CATALOG NUMBER: LDA6A55827D010TE LARH30NF 6LAL1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	883.7	883.7	883.7	883.7	883.7	883.7	883.7	883.7
2.5°	465.8	457.4	453.6	447.0	441.4	438.6	428.2	440.4
5°	285.2	274.8	272.0	266.3	259.7	256.0	248.5	255.0
7.5°	162.8	150.6	144.9	140.2	133.6	128.0	121.4	125.2
10°	91.3	87.5	88.5	85.6	84.7	83.8	82.8	84.7
12.5°	84.7	81.9	82.8	80.9	80.0	80.0	79.1	80.0
15°	85.6	82.8	84.7	82.8	81.9	81.9	80.9	82.8
17.5°	93.2	91.3	93.2	91.3	92.2	91.3	92.2	93.2
20°	130.8	133.6	139.3	135.5	138.3	142.1	146.8	146.8
22.5°	460.2	520.4	528.0	558.1	635.2	632.4	684.2	686.1
25°	803.7	807.5	841.3	830.0	831.0	870.5	866.8	889.3
27.5°	462.1	461.1	467.7	455.5	459.3	462.1	451.7	464.0
30°	257.9	253.2	256.0	249.4	249.4	251.3	248.5	254.1
32.5°	143.0	139.3	139.3	134.6	133.6	132.7	129.9	132.7
35°	81.9	79.1	80.0	78.1	76.2	75.3	74.3	75.3
37.5°	56.5	54.6	55.5	53.6	51.8	50.8	49.9	50.8
40°	41.4	40.5	40.5	38.6	37.6	36.7	35.8	35.8
42.5°	31.1	30.1	30.1	28.2	27.3	26.4	25.4	26.4
45°	23.5	22.6	22.6	21.6	20.7	19.8	19.8	19.8
47.5°	20.7	19.8	20.7	19.8	18.8	18.8	18.8	18.8
50°	16.0	16.0	16.0	15.1	14.1	14.1	13.2	12.2
52.5°	10.4	9.4	9.4	8.5	8.5	7.5	7.5	7.5
55°	8.5	7.5	7.5	6.6	6.6	5.6	5.6	5.6
57.5°	6.6	6.6	5.6	5.6	4.7	4.7	4.7	4.7
60°	5.6	5.6	5.6	4.7	4.7	3.8	3.8	3.8
62.5°	5.6	4.7	4.7	4.7	3.8	3.8	3.8	3.8
65°	5.6	4.7	4.7	4.7	3.8	3.8	3.8	3.8
67.5°	5.6	4.7	4.7	4.7	3.8	3.8	3.8	3.8
70°	6.6	5.6	5.6	4.7	4.7	4.7	3.8	3.8
72.5°	6.6	5.6	5.6	5.6	4.7	4.7	4.7	4.7
75°	6.6	5.6	5.6	5.6	4.7	4.7	4.7	4.7
77.5°	6.6	5.6	5.6	5.6	4.7	4.7	4.7	4.7
80°	6.6	5.6	5.6	5.6	4.7	4.7	4.7	4.7
82.5°	5.6	5.6	5.6	4.7	4.7	4.7	4.7	4.7
85°	5.6	4.7	4.7	4.7	3.8	3.8	3.8	3.8
87.5°	3.8	3.8	2.8	2.8	2.8	1.9	1.9	1.9
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)