

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: P179944

Luminaire Tested: **LDA6A55927D010TE LARH40FL 6LAL1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179944
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: LDA6A55927D010TE LARH40FL 6LAL1LI 30°
Description: PORTFOLIO 6" Lensed Adjustable, Self-flanged, 40° Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4022.2 lumens
Efficiency: N/A
Efficacy: 65.9 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

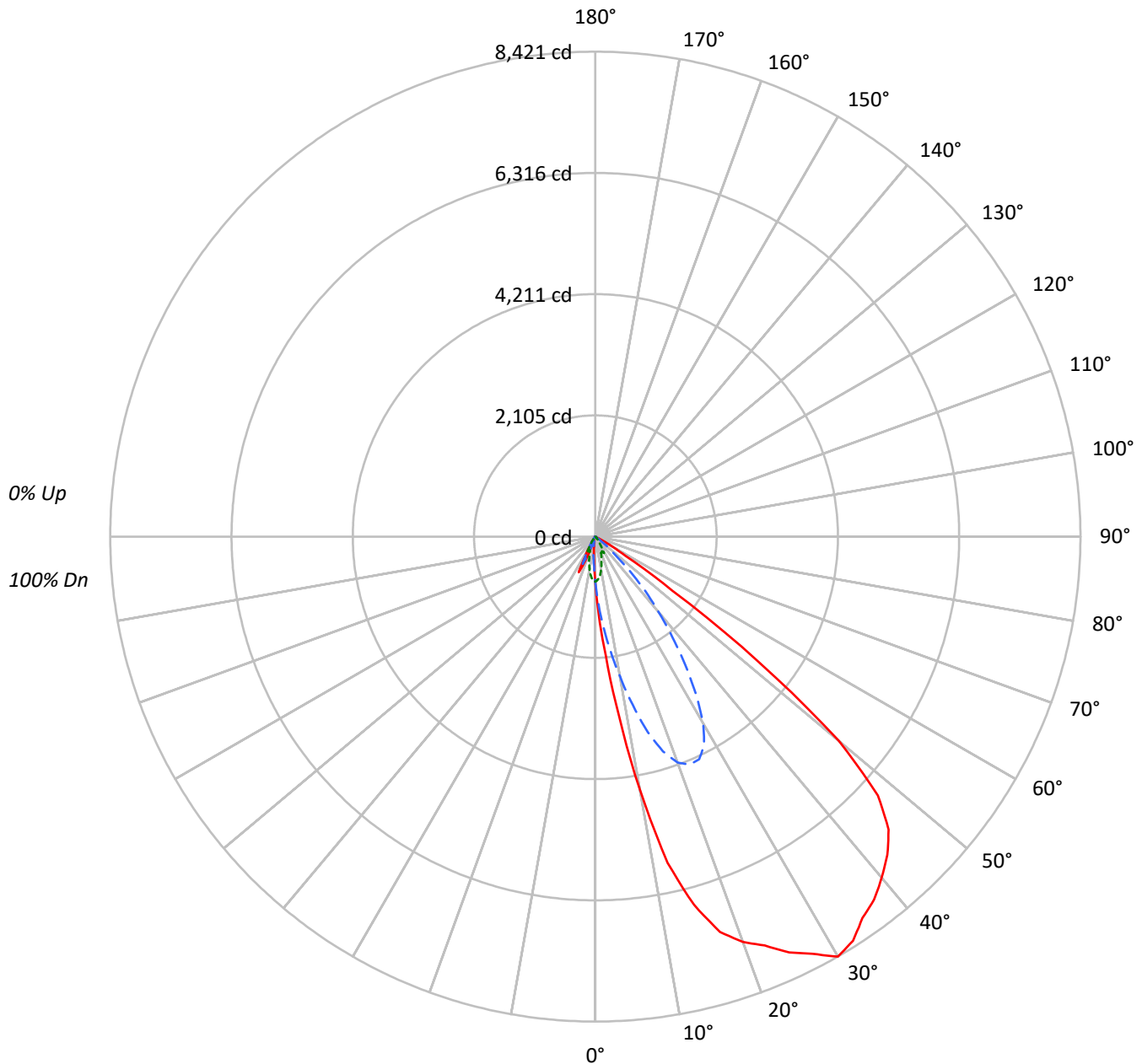
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
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°	42952	42952	42952
5°	113994	39825	15238
10°	248826	32203	4542
15°	375592	23530	3950
20°	436896	16154	6201
25°	481824	17426	41283
30°	533082	13122	12837
35°	540999	6712	4805
40°	553444	2734	2304
45°	558089	1682	1395
50°	470134	1151	895
55°	155282	784	497
60°	30524	735	329
65°	3593	973	389
70°	962	1074	481
75°	148	1419	784
80°	0	2368	1168
85°	0	4717	1887



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.3	2.6
10°-20°	526.5	13.1
20°-30°	1039.3	25.8
30°-40°	1172.3	29.1
40°-50°	930.7	23.1
50°-60°	227.5	5.7
60°-70°	12.1	0.3
70°-80°	5.2	0.1
80°-90°	4.3	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°	1670.1	41.5
0°-40°	2842.4	70.7
0°-60°	4000.6	99.5
0°-90°	4022.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4022.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	784	784	784	784	784	
5°	2072	1552	724	364	277	274
15°	6618	3517	415	82	70	1856
25°	7966	4264	288	522	682	3689
35°	8084	2714	100	79	72	5084
45°	7199	846	22	22	18	5395
55°	1625	37	8	8	5	1906
65°	28	7	8	6	3	68
75°	1	4	7	6	4	2
85°	0	4	8	5	3	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°	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5
2.5°	1359.8	1333.6	1345.6	1326.9	1273.7	1257.3	1270.7	1250.5	1189.9	1166.7	1142.8
5°	2071.5	2048.3	2055.8	2013.1	1913.6	1879.2	1876.9	1815.6	1692.8	1624.0	1552.1
7.5°	3140.9	3108.7	3099.8	2997.2	2805.7	2733.8	2698.6	2547.5	2316.2	2152.3	1991.4
10°	4470.0	4501.5	4469.3	4303.1	4002.3	3867.6	3782.3	3496.4	3079.6	2767.5	2466.6
12.5°	5802.9	5822.3	5761.7	5555.2	5172.8	5011.1	4885.4	4519.4	3970.1	3440.3	2991.2
15°	6617.9	6709.9	6653.0	6508.6	6212.2	6016.2	5903.2	5451.1	4759.7	4177.4	3517.4
17.5°	7198.6	7283.9	7236.8	7118.5	6784.0	6626.1	6552.8	6180.8	5427.9	4687.8	3911.0
20°	7489.0	7593.0	7550.3	7416.4	7170.9	7039.2	6950.1	6587.2	5908.4	5067.2	4173.7
22.5°	7685.8	7801.0	7754.6	7632.7	7382.7	7229.3	7187.4	6843.9	6159.9	5294.7	4285.2
25°	7965.7	8062.2	7931.3	7780.8	7533.9	7372.2	7346.8	6995.8	6280.3	5380.8	4263.5
27.5°	8166.2	8280.7	8058.5	7905.8	7623.7	7453.8	7420.9	7090.8	6291.6	5312.7	4087.6
30°	8421.4	8347.4	8152.0	7930.5	7629.7	7448.6	7406.6	7035.5	6179.3	5062.0	3743.4
32.5°	8320.4	8302.4	8107.1	7846.7	7566.1	7383.4	7327.3	6864.8	5871.0	4629.4	3256.2
35°	8083.9	8140.8	7977.7	7816.0	7467.3	7277.2	7199.3	6613.4	5406.2	4072.6	2713.6
37.5°	7945.5	7981.4	7878.1	7680.6	7334.8	7084.8	6937.4	6190.5	4797.8	3370.7	2190.5
40°	7733.7	7825.0	7725.5	7498.7	7099.8	6757.1	6500.4	5426.5	3996.3	2657.5	1713.0
42.5°	7501.7	7583.3	7488.2	7216.6	6653.0	6193.5	5767.0	4528.4	3128.9	2030.3	1285.0
45°	7198.6	7271.9	7101.3	6678.5	5880.7	5246.8	4821.0	3556.3	2359.6	1491.5	845.7
47.5°	6652.3	6632.8	6391.1	5734.0	4751.4	4183.4	3688.0	2547.5	1568.6	844.9	420.6
50°	5512.5	5330.7	4975.2	4212.6	3188.8	2575.2	2236.9	1314.9	711.7	409.4	264.2
52.5°	3570.5	3367.7	3042.1	2337.9	1531.2	1228.8	985.6	594.2	371.2	231.2	104.0
55°	1624.7	1481.0	1273.0	944.4	657.1	546.3	462.5	300.8	199.1	86.1	36.7
57.5°	618.9	571.0	507.4	404.9	303.8	262.7	217.8	144.4	62.1	32.2	21.7
60°	278.4	258.2	237.2	185.6	130.2	93.5	71.1	38.9	26.2	18.7	14.2
62.5°	95.0	79.3	65.9	47.1	35.2	30.7	26.9	21.7	15.7	12.7	9.7
65°	27.7	26.9	25.4	22.5	18.0	16.5	15.7	12.7	9.7	8.2	6.7
67.5°	13.5	12.7	12.0	11.2	9.0	8.2	8.2	7.5	6.0	5.2	4.5
70°	6.0	6.0	5.2	5.2	4.5	4.5	4.5	3.7	3.7	3.7	3.7
72.5°	3.0	3.0	3.0	2.2	2.2	2.2	2.2	3.0	3.0	3.7	3.7
75°	0.7	1.5	1.5	1.5	1.5	2.2	2.2	3.0	3.0	3.7	3.7
77.5°	0.7	0.7	0.7	1.5	1.5	1.5	2.2	3.0	3.0	3.7	3.7
80°	0.0	0.7	0.7	1.5	1.5	1.5	2.2	2.2	3.0	3.7	3.7
82.5°	0.0	0.7	0.7	1.5	1.5	1.5	2.2	2.2	3.0	3.7	3.7
85°	0.0	0.0	0.7	0.7	1.5	1.5	2.2	2.2	3.0	3.7	3.7
87.5°	0.0	0.0	0.7	0.7	1.5	1.5	2.2	2.2	3.0	3.7	3.7
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°	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5
2.5°	1084.4	1068.7	1006.6	958.7	936.2	934.7	884.6	853.9	800.0	758.1	718.4
5°	1425.7	1356.1	1230.3	1130.8	1082.9	1058.2	959.4	888.3	795.5	723.7	652.6
7.5°	1772.9	1640.4	1463.8	1274.5	1196.6	1148.8	996.1	882.3	758.9	658.6	570.3
10°	2128.4	1894.9	1631.5	1381.5	1269.2	1188.4	992.3	838.2	696.0	578.5	482.0
12.5°	2498.8	2130.6	1763.9	1451.1	1302.9	1196.6	958.7	773.8	618.9	493.9	401.9
15°	2810.9	2313.2	1847.7	1467.6	1292.4	1163.7	886.8	692.2	536.6	414.6	330.8
17.5°	3051.9	2415.7	1863.4	1427.1	1234.1	1090.4	794.0	602.4	449.8	342.0	258.9
20°	3173.1	2431.5	1814.1	1331.4	1128.5	980.4	688.5	511.1	377.2	276.9	205.8
22.5°	3182.1	2358.1	1706.3	1207.9	1012.5	862.1	601.7	440.8	330.8	248.5	195.3
25°	3065.3	2216.7	1561.9	1081.4	893.6	758.1	539.6	422.8	333.0	288.1	264.9
27.5°	2843.8	2020.6	1403.2	954.9	791.0	686.3	514.1	422.8	360.7	325.5	333.8
30°	2537.0	1770.7	1182.4	782.8	643.6	552.3	404.1	316.6	248.5	207.3	199.8
32.5°	2138.8	1448.8	916.8	578.5	469.2	398.1	273.2	198.3	160.2	156.4	151.9
35°	1760.2	1144.3	696.0	427.3	345.7	281.4	174.4	116.7	106.3	100.3	95.8
37.5°	1390.5	856.1	499.9	310.6	237.2	178.9	89.8	75.6	65.9	59.9	54.6
40°	1045.5	615.2	352.5	187.8	124.2	77.1	53.9	46.4	41.2	38.2	36.7
42.5°	739.4	409.4	218.5	79.3	59.1	48.6	37.4	32.9	29.9	28.4	26.9
45°	429.6	254.4	88.3	46.4	37.4	33.7	27.7	24.7	23.2	21.7	21.0
47.5°	268.7	102.5	45.7	29.9	26.2	23.9	20.2	19.5	18.0	17.2	17.2
50°	108.5	45.7	28.4	21.0	18.7	18.0	15.7	15.0	13.5	13.5	13.5
52.5°	41.2	26.9	19.5	15.0	13.5	12.7	11.2	11.2	10.5	10.5	10.5
55°	23.9	18.0	13.5	10.5	9.7	9.7	9.0	9.0	8.2	8.2	8.2
57.5°	15.7	12.0	9.7	7.5	7.5	7.5	6.7	6.7	6.7	6.7	6.7
60°	10.5	8.2	6.7	6.0	6.0	6.0	6.0	6.7	6.7	6.7	6.7
62.5°	7.5	6.7	6.0	6.0	6.0	6.0	6.0	6.7	6.7	6.7	7.5
65°	6.0	5.2	5.2	5.2	5.2	6.0	6.0	6.7	6.7	7.5	7.5
67.5°	4.5	4.5	4.5	4.5	5.2	5.2	6.0	6.7	6.7	6.7	7.5
70°	3.7	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.7	6.7	7.5
72.5°	3.7	4.5	4.5	5.2	5.2	5.2	6.0	6.7	6.7	6.7	7.5
75°	3.7	4.5	4.5	5.2	5.2	5.2	6.0	6.7	6.7	6.7	7.5
77.5°	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.7	6.7	7.5	7.5
80°	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.7	6.7	7.5	7.5
82.5°	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.7	6.7	7.5	7.5
85°	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.7	6.7	7.5	7.5
87.5°	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.7	6.7	6.7	7.5
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°	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5
2.5°	699.0	664.6	627.1	615.2	603.2	580.0	565.8	540.3	521.6	502.9	487.9
5°	605.4	550.8	505.2	485.7	467.0	434.8	412.4	385.4	363.7	345.0	327.8
7.5°	508.1	445.3	399.6	380.2	361.5	326.3	297.9	264.2	238.7	217.8	200.6
10°	418.3	358.5	309.1	285.9	264.2	227.5	200.6	173.6	151.9	134.0	118.2
12.5°	340.5	276.1	226.0	208.8	187.8	157.9	132.5	103.3	90.6	85.3	81.6
15°	264.2	206.6	164.6	148.9	130.2	101.8	90.6	85.3	81.6	79.3	76.3
17.5°	201.3	153.4	112.3	101.8	95.8	89.8	86.8	83.1	80.8	80.1	77.8
20°	157.9	116.0	105.5	102.5	102.5	101.0	98.8	98.8	98.0	100.3	100.3
22.5°	162.4	162.4	171.4	170.6	182.6	194.6	203.6	232.7	249.2	284.4	308.3
25°	283.6	310.6	342.0	351.7	374.9	409.4	445.3	490.2	521.6	555.3	568.8
27.5°	354.0	358.5	354.0	365.2	350.2	341.3	344.3	349.5	349.5	351.7	360.7
30°	209.5	220.0	229.8	237.2	233.5	229.8	228.3	217.0	217.0	212.5	208.8
32.5°	142.2	140.7	139.2	142.2	139.2	139.2	137.0	137.7	133.2	130.2	128.7
35°	97.3	92.8	87.6	88.3	85.3	84.6	82.3	82.3	79.3	77.8	77.1
37.5°	53.9	53.9	51.6	52.4	51.6	51.6	51.6	52.4	51.6	51.6	52.4
40°	36.7	36.7	35.9	36.7	35.9	36.7	37.4	37.4	37.4	37.4	36.7
42.5°	27.7	27.7	26.9	27.7	26.9	27.7	28.4	28.4	28.4	28.4	28.4
45°	21.7	21.7	21.7	21.7	21.7	21.7	21.7	22.5	22.5	21.7	21.7
47.5°	17.2	18.0	17.2	17.2	17.2	17.2	18.0	18.0	17.2	17.2	17.2
50°	14.2	14.2	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
52.5°	11.2	10.5	10.5	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.0
55°	8.2	8.2	7.5	7.5	7.5	8.2	8.2	8.2	8.2	7.5	7.5
57.5°	7.5	7.5	7.5	6.7	6.7	7.5	7.5	6.7	6.7	6.7	6.0
60°	6.7	7.5	6.7	6.7	6.7	6.7	6.7	6.0	6.0	6.0	5.2
62.5°	7.5	7.5	6.7	6.7	6.7	6.7	6.0	6.0	6.0	5.2	5.2
65°	7.5	7.5	7.5	6.7	6.7	6.7	6.7	6.0	6.0	5.2	5.2
67.5°	7.5	7.5	7.5	7.5	6.7	6.7	6.7	6.0	6.0	6.0	5.2
70°	7.5	7.5	7.5	7.5	7.5	6.7	6.7	6.7	6.0	6.0	5.2
72.5°	7.5	7.5	7.5	6.7	6.7	6.7	6.7	6.7	6.0	6.0	5.2
75°	7.5	7.5	7.5	6.7	6.7	6.7	6.7	6.0	6.0	6.0	5.2
77.5°	7.5	7.5	7.5	6.7	6.7	6.7	6.7	6.0	6.0	6.0	5.2
80°	7.5	7.5	7.5	6.7	6.7	6.7	6.7	6.0	6.0	6.0	5.2
82.5°	7.5	7.5	7.5	6.7	6.7	6.7	6.7	6.0	6.0	5.2	5.2
85°	7.5	7.5	6.7	6.7	6.7	6.7	6.0	6.0	5.2	5.2	4.5
87.5°	6.7	6.7	6.7	6.7	6.0	6.0	6.0	5.2	4.5	4.5	3.7
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: P179944

CATALOG NUMBER: LDA6A55927D010TE LARH40FL 6LAL1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	783.5	783.5	783.5	783.5	783.5	783.5	783.5	783.5
2.5°	470.0	467.0	464.7	469.2	467.7	449.0	451.3	450.5
5°	308.3	301.6	296.4	298.6	292.6	284.4	278.4	276.9
7.5°	183.4	175.9	171.4	166.9	165.4	154.9	150.4	153.4
10°	101.0	90.6	89.8	87.6	84.6	82.3	80.8	81.6
12.5°	77.8	77.1	75.6	74.8	73.3	72.6	71.8	71.1
15°	74.1	73.3	72.6	71.8	71.1	70.3	69.6	69.6
17.5°	76.3	76.3	75.6	74.8	74.8	75.6	74.8	74.1
20°	99.5	99.5	101.0	103.3	103.3	105.5	108.5	106.3
22.5°	323.3	339.8	360.0	366.0	401.1	429.6	482.0	458.8
25°	591.2	628.6	637.6	650.3	669.8	679.5	669.8	682.5
27.5°	359.2	371.9	373.4	374.2	378.7	377.9	368.2	374.2
30°	208.8	213.3	211.8	211.0	209.5	201.3	199.8	202.8
32.5°	131.0	129.5	128.7	128.0	128.0	123.5	125.7	124.2
35°	74.8	77.1	76.3	75.6	73.3	72.6	72.6	71.8
37.5°	50.1	50.9	50.1	49.4	47.9	47.1	46.4	45.7
40°	35.9	36.7	35.9	35.2	34.4	33.7	32.9	32.2
42.5°	26.9	27.7	26.9	26.9	25.4	24.7	23.9	23.2
45°	21.0	20.2	20.2	20.2	19.5	18.7	18.0	18.0
47.5°	17.2	17.2	17.2	16.5	15.7	15.7	15.7	15.0
50°	12.7	13.5	12.7	12.7	12.0	11.2	11.2	10.5
52.5°	9.0	9.0	8.2	8.2	7.5	6.7	6.7	6.7
55°	6.7	6.7	6.7	6.0	6.0	5.2	5.2	5.2
57.5°	6.0	5.2	5.2	5.2	4.5	4.5	3.7	3.7
60°	5.2	4.5	4.5	3.7	3.7	3.0	3.0	3.0
62.5°	4.5	3.7	3.7	3.7	3.0	3.0	3.0	3.0
65°	4.5	3.7	3.7	3.7	3.0	3.0	3.0	3.0
67.5°	4.5	4.5	3.7	3.7	3.7	3.0	3.0	3.0
70°	4.5	4.5	4.5	3.7	3.7	3.7	3.0	3.0
72.5°	5.2	4.5	4.5	4.5	3.7	3.7	3.7	3.7
75°	5.2	4.5	4.5	4.5	3.7	3.7	3.7	3.7
77.5°	5.2	4.5	4.5	4.5	3.7	3.7	3.7	3.7
80°	4.5	4.5	4.5	3.7	3.7	3.7	3.7	3.7
82.5°	4.5	4.5	4.5	4.5	3.7	3.7	3.7	3.7
85°	4.5	3.7	3.7	3.7	3.0	3.0	3.0	3.0
87.5°	3.7	3.0	3.0	2.2	2.2	2.2	1.5	1.5
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)