

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: P179877

Luminaire Tested: **LDA6A55830D010TE LARH30NF 6LA1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179877
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26687)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A55830D010TE LARH30NF 6LA1LI 30°
Description: PORTFOLIO 6" Adjustable Reflector, Angle-cut Trim, Self-flanged, 30°
Narrow Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5300.5 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Spacing Criteria (0/90/45): 2.58 / 0.47 / 1.37
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

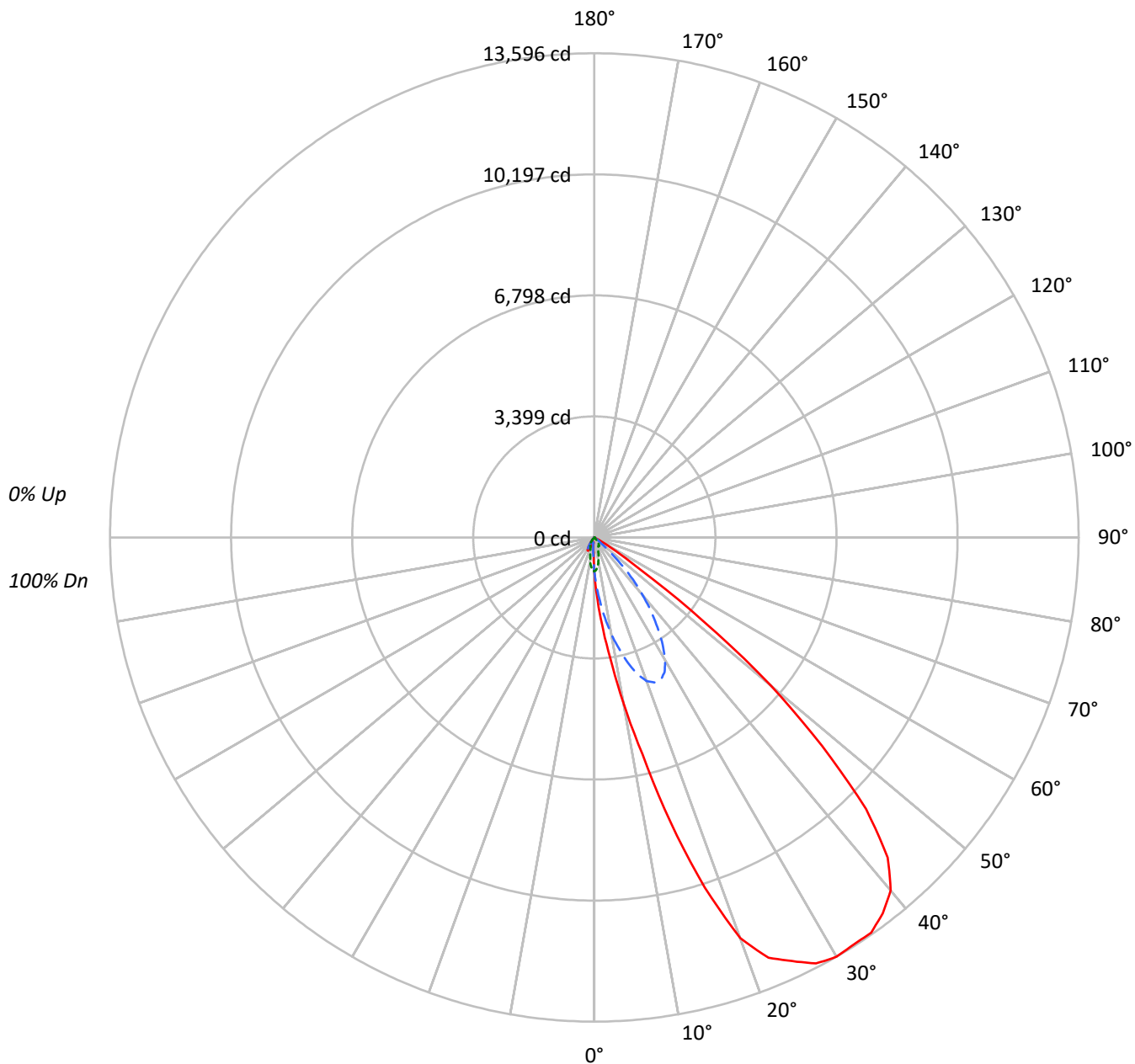
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	67		74
5	85	74	67	62	83	73	67	61	71	65	61		70	64	60		68
6	79	68	60	55	77	67	60	55	65	59	54		64	58	54		62
7	74	62	55	49	72	61	54	49	60	53	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°	52414	52414	52414
5°	134454	47683	14852
10°	262086	36645	7136
15°	470479	24887	9574
20°	698509	18890	15798
25°	793969	15563	24776
30°	860670	17022	23307
35°	906567	11029	14449
40°	926171	4895	7035
45°	836513	1868	2613
50°	550651	742	742
55°	150800	640	0
60°	30118	735	0
65°	2127	999	0
70°	305	1234	0
75°	0	1843	0
80°	0	2747	316
85°	0	5472	629



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.1	2.2
10°-20°	622.2	11.7
20°-30°	1410.2	26.6
30°-40°	1692.8	31.9
40°-50°	1193.0	22.5
50°-60°	246.2	4.6
60°-70°	8.7	0.2
70°-80°	5.2	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°	2149.6	40.6
0°-40°	3842.4	72.5
0°-60°	5281.6	99.6
0°-90°	5300.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5300.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	956	956	956	956	956	
5°	2443	1780	866	360	270	301
15°	8290	3647	438	156	169	2460
25°	13126	4411	257	360	410	6058
35°	13546	3089	165	216	216	8421
45°	10790	1059	24	33	34	7936
55°	1578	21	7	5	0	2079
65°	16	5	8	5	0	49
75°	0	5	9	6	0	0
85°	0	6	9	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°	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1
2.5°	1629.8	1580.7	1599.9	1543.1	1530.5	1519.9	1530.5	1468.9	1434.2	1389.8	1354.2
5°	2443.3	2384.5	2398.0	2298.7	2253.4	2222.6	2216.8	2089.5	1994.1	1889.1	1780.2
7.5°	3401.3	3345.4	3337.7	3183.5	3090.0	3037.0	3014.8	2832.6	2667.8	2480.9	2276.5
10°	4708.2	4581.0	4541.5	4317.9	4139.6	4026.8	3888.0	3596.9	3307.8	3025.4	2765.2
12.5°	6229.1	6159.7	6061.4	5667.2	5354.9	5194.9	4987.7	4532.8	4095.2	3628.8	3193.1
15°	8289.8	8043.0	7875.3	7305.7	6802.6	6555.9	6253.2	5557.3	4896.2	4305.4	3647.1
17.5°	10303.2	10174.0	9911.8	9172.6	8397.7	8008.3	7557.3	6611.8	5677.8	4837.4	4033.6
20°	11973.4	11852.0	11553.2	10856.4	9996.7	9422.2	8854.5	7557.3	6337.1	5261.5	4291.9
22.5°	12773.4	12696.3	12452.5	11855.9	11123.4	10576.9	9966.8	8362.0	6824.8	5539.0	4409.4
25°	13126.2	13090.5	12933.4	12463.1	11773.0	11309.4	10733.0	8931.7	7128.4	5668.2	4411.4
27.5°	13483.7	13490.5	13143.5	12771.5	12117.1	11671.8	11116.6	9184.2	7183.3	5595.9	4266.8
30°	13596.5	13525.2	13371.9	12838.0	12216.3	11743.1	11147.5	9067.5	6957.8	5299.0	3978.6
32.5°	13550.2	13522.3	13353.6	12788.8	12047.7	11526.2	10849.6	8604.9	6512.5	4875.0	3570.0
35°	13546.4	13494.3	13107.9	12623.1	11710.3	11066.5	10175.0	7857.0	5882.1	4316.0	3089.0
37.5°	13301.6	13172.4	12882.3	12228.9	11026.0	10209.7	9210.2	6943.3	5111.1	3688.5	2611.9
40°	12942.1	12768.6	12386.9	11398.0	9840.5	8899.8	7924.5	5905.3	4294.7	3069.7	2105.0
42.5°	12191.3	11929.1	11389.4	10029.4	8260.8	7412.7	6601.2	4853.8	3502.5	2501.1	1606.7
45°	10789.9	10431.3	9701.7	8208.8	6673.4	5981.4	5328.9	3905.4	2803.7	1855.3	1059.2
47.5°	8672.4	8339.9	7675.8	6534.6	5233.5	4648.5	4128.0	2904.9	1900.6	1074.7	506.0
50°	6456.6	6171.3	5652.8	4541.5	3513.1	3053.4	2608.1	1650.0	890.6	510.8	210.1
52.5°	3852.4	3710.7	3250.9	2518.4	1734.9	1494.9	1199.9	698.8	449.1	185.1	56.9
55°	1577.8	1456.3	1283.8	1030.3	754.7	640.0	547.4	345.0	139.8	38.6	21.2
57.5°	713.2	686.2	608.2	478.1	347.0	291.1	196.6	65.5	30.8	19.3	12.5
60°	274.7	247.7	212.0	114.7	49.2	41.4	33.7	22.2	15.4	10.6	7.7
62.5°	39.5	37.6	33.7	27.0	21.2	19.3	16.4	11.6	8.7	6.7	5.8
65°	16.4	16.4	14.5	11.6	9.6	8.7	7.7	5.8	4.8	4.8	4.8
67.5°	6.7	6.7	5.8	4.8	3.9	3.9	3.9	2.9	3.9	3.9	4.8
70°	1.9	1.9	1.9	1.9	1.9	1.9	2.9	2.9	3.9	3.9	4.8
72.5°	0.0	0.0	1.0	1.0	1.9	1.9	1.9	2.9	3.9	4.8	4.8
75°	0.0	0.0	1.0	1.0	1.9	1.9	1.9	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	5.8
82.5°	0.0	0.0	1.0	1.0	1.9	1.9	2.9	2.9	3.9	4.8	5.8
85°	0.0	0.0	1.0	1.0	1.9	1.9	2.9	2.9	3.9	4.8	5.8
87.5°	0.0	0.0	1.0	1.0	1.9	1.9	2.9	2.9	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°	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1
2.5°	1323.3	1261.6	1244.3	1190.3	1145.0	1122.8	1094.9	1032.2	985.0	922.4	884.8
5°	1704.0	1587.4	1494.9	1382.1	1307.9	1259.7	1184.5	1069.8	977.3	866.5	787.4
7.5°	2115.6	1902.6	1735.8	1549.8	1442.8	1359.0	1230.8	1066.0	930.1	782.6	660.2
10°	2512.7	2194.6	1932.4	1665.5	1524.8	1408.1	1231.8	1024.5	844.3	658.3	529.1
12.5°	2862.5	2451.9	2082.8	1739.7	1565.2	1419.7	1199.0	950.3	732.5	541.7	427.9
15°	3154.6	2651.4	2188.8	1767.6	1568.1	1394.6	1130.6	844.3	608.2	438.5	358.5
17.5°	3376.2	2756.5	2221.6	1733.9	1512.2	1323.3	1025.5	710.3	493.5	372.0	301.7
20°	3490.9	2776.7	2174.4	1642.3	1409.1	1215.4	887.7	576.4	418.3	323.8	252.5
22.5°	3505.4	2719.9	2061.6	1511.3	1279.0	1084.3	735.4	480.9	373.0	286.3	222.6
25°	3419.6	2596.5	1900.6	1362.8	1136.3	933.9	598.5	430.8	339.3	257.3	256.4
27.5°	3236.5	2384.5	1707.9	1190.3	963.8	759.5	507.9	389.4	302.6	272.8	290.1
30°	2978.2	2112.7	1470.8	972.5	752.7	584.1	427.9	320.9	266.0	268.9	283.4
32.5°	2628.3	1775.3	1192.2	712.3	538.8	439.5	320.9	218.8	220.7	221.7	234.2
35°	2188.8	1423.6	890.6	479.0	378.8	309.4	181.2	161.0	163.8	164.8	173.5
37.5°	1754.1	1093.9	591.8	319.0	238.1	162.9	112.8	107.9	109.9	108.9	118.5
40°	1343.6	762.4	354.7	158.1	91.6	76.1	69.4	66.5	67.5	68.4	74.2
42.5°	951.3	413.5	175.4	59.8	48.2	44.3	41.4	39.5	40.5	40.5	44.3
45°	482.9	195.7	59.8	32.8	29.9	27.0	25.1	24.1	24.1	24.1	26.0
47.5°	209.1	64.6	28.0	20.2	18.3	17.3	15.4	14.5	14.5	14.5	15.4
50°	65.5	26.0	17.3	13.5	11.6	10.6	9.6	9.6	9.6	8.7	9.6
52.5°	24.1	16.4	11.6	8.7	7.7	7.7	7.7	6.7	7.7	6.7	7.7
55°	14.5	10.6	7.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
57.5°	9.6	7.7	6.7	6.7	5.8	5.8	6.7	6.7	6.7	6.7	6.7
60°	6.7	6.7	5.8	5.8	5.8	5.8	6.7	6.7	6.7	6.7	6.7
62.5°	5.8	5.8	5.8	5.8	5.8	5.8	6.7	6.7	6.7	6.7	7.7
65°	4.8	5.8	5.8	5.8	5.8	5.8	6.7	6.7	7.7	7.7	7.7
67.5°	4.8	5.8	5.8	6.7	6.7	6.7	6.7	7.7	7.7	7.7	7.7
70°	5.8	5.8	6.7	6.7	6.7	6.7	7.7	7.7	7.7	7.7	8.7
72.5°	5.8	5.8	6.7	6.7	6.7	6.7	7.7	7.7	8.7	8.7	8.7
75°	5.8	6.7	6.7	6.7	6.7	7.7	7.7	7.7	8.7	8.7	8.7
77.5°	5.8	6.7	6.7	7.7	7.7	7.7	7.7	8.7	8.7	8.7	8.7
80°	5.8	6.7	6.7	7.7	7.7	7.7	8.7	8.7	8.7	8.7	9.6
82.5°	5.8	6.7	6.7	7.7	7.7	7.7	8.7	8.7	8.7	8.7	9.6
85°	6.7	6.7	7.7	7.7	7.7	7.7	8.7	8.7	8.7	8.7	9.6
87.5°	6.7	6.7	7.7	7.7	7.7	7.7	8.7	8.7	9.6	8.7	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°	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1
2.5°	834.7	778.8	740.2	725.8	697.8	653.5	627.4	603.3	558.0	548.4	523.4
5°	696.8	607.2	543.6	519.5	487.7	450.1	413.5	389.4	360.5	348.9	331.6
7.5°	549.4	459.7	404.8	385.5	363.4	332.5	299.7	275.7	245.8	230.4	215.9
10°	431.8	365.3	319.0	299.7	276.6	243.8	210.1	178.3	152.3	135.9	133.0
12.5°	350.8	295.9	246.7	226.5	199.5	166.7	142.6	141.7	139.8	138.8	140.7
15°	287.2	234.2	182.2	160.0	152.3	151.3	154.2	157.1	156.1	159.0	161.0
17.5°	236.1	179.3	167.7	168.7	169.6	172.5	177.3	185.1	186.0	190.8	194.7
20°	192.8	189.9	194.7	198.5	201.4	207.2	217.8	227.5	230.4	237.1	244.8
22.5°	218.8	227.5	238.1	242.9	246.7	257.3	268.9	284.3	290.1	298.8	309.4
25°	264.1	278.5	294.9	300.7	306.5	323.8	337.3	355.6	360.5	371.1	381.7
27.5°	301.7	317.1	334.4	342.2	347.0	364.3	375.9	387.5	387.5	393.2	400.9
30°	295.9	308.4	322.9	328.7	330.6	343.1	354.7	358.5	356.6	359.5	365.3
32.5°	245.8	255.4	267.0	271.8	273.7	282.4	292.0	292.0	291.1	291.1	294.9
35°	182.2	188.9	194.7	199.5	202.4	208.2	216.9	215.9	215.9	214.0	216.9
37.5°	122.4	126.3	133.0	134.9	135.9	139.8	146.5	146.5	144.6	145.5	147.5
40°	74.2	79.0	82.9	83.9	85.8	88.7	93.5	93.5	93.5	93.5	94.5
42.5°	44.3	47.2	50.1	50.1	51.1	54.9	56.9	56.9	56.9	56.9	57.8
45°	26.0	27.0	28.9	29.9	29.9	31.8	32.8	32.8	32.8	32.8	33.7
47.5°	15.4	16.4	16.4	17.3	17.3	18.3	19.3	19.3	18.3	18.3	18.3
50°	9.6	9.6	9.6	9.6	10.6	10.6	10.6	10.6	10.6	10.6	9.6
52.5°	7.7	7.7	7.7	7.7	6.7	6.7	6.7	6.7	5.8	5.8	4.8
55°	6.7	6.7	6.7	6.7	6.7	5.8	5.8	5.8	4.8	3.9	2.9
57.5°	6.7	6.7	6.7	6.7	6.7	5.8	5.8	4.8	3.9	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	7.7	6.7	6.7	6.7	5.8	5.8	4.8	4.8	3.9	2.9
65°	7.7	7.7	6.7	6.7	6.7	6.7	5.8	5.8	4.8	3.9	2.9
67.5°	7.7	7.7	7.7	7.7	6.7	6.7	6.7	5.8	4.8	3.9	2.9
70°	8.7	8.7	7.7	7.7	7.7	6.7	6.7	5.8	4.8	4.8	3.9
72.5°	8.7	8.7	7.7	7.7	7.7	7.7	6.7	5.8	5.8	4.8	3.9
75°	8.7	8.7	8.7	8.7	7.7	7.7	6.7	6.7	5.8	4.8	3.9
77.5°	8.7	8.7	8.7	8.7	7.7	7.7	7.7	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	9.6	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	9.6	8.7	8.7	8.7	7.7	7.7	6.7	5.8	5.8	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: P179877

CATALOG NUMBER: LDA6A55830D010TE LARH30NF 6LA1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	956.1	956.1	956.1	956.1	956.1	956.1	956.1	956.1
2.5°	507.9	479.0	469.4	476.1	468.4	462.6	454.9	451.1
5°	318.1	296.9	290.1	292.0	285.3	279.5	271.8	269.9
7.5°	195.7	175.4	167.7	167.7	160.0	153.2	148.4	145.5
10°	131.1	127.2	128.2	129.2	128.2	129.2	126.3	128.2
12.5°	140.7	138.8	140.7	141.7	141.7	143.6	139.8	142.6
15°	163.8	161.9	164.8	166.7	166.7	169.6	165.8	168.7
17.5°	200.5	199.5	204.3	206.3	207.2	212.0	207.2	211.1
20°	253.5	252.5	259.3	262.2	261.2	270.8	264.1	270.8
22.5°	321.9	320.0	329.6	332.5	333.5	346.0	340.2	345.0
25°	390.3	392.3	397.1	401.9	402.9	413.5	404.8	409.6
27.5°	404.8	401.9	404.8	410.6	411.5	416.4	408.7	412.5
30°	366.2	361.4	362.4	369.1	371.1	373.0	366.2	368.2
32.5°	297.8	290.1	290.1	296.9	298.8	301.7	290.1	294.9
35°	219.7	213.0	213.0	217.8	218.8	220.7	212.0	215.9
37.5°	150.4	144.6	146.5	148.4	149.4	151.3	150.4	149.4
40°	96.4	92.5	95.4	95.4	96.4	97.3	97.3	98.3
42.5°	58.8	55.9	57.8	57.8	58.8	58.8	58.8	59.8
45°	33.7	32.8	32.8	33.7	33.7	33.7	32.8	33.7
47.5°	18.3	17.3	18.3	18.3	18.3	18.3	18.3	18.3
50°	9.6	8.7	8.7	8.7	8.7	8.7	8.7	8.7
52.5°	4.8	3.9	3.9	3.9	2.9	3.9	2.9	2.9
55°	2.9	1.9	1.9	1.9	1.0	1.0	0.0	0.0
57.5°	1.9	1.0	1.0	1.0	0.0	0.0	0.0	0.0
60°	1.9	1.0	1.0	1.0	0.0	0.0	0.0	0.0
62.5°	1.9	1.0	1.0	1.0	0.0	0.0	0.0	0.0
65°	1.9	1.0	1.0	1.0	0.0	0.0	0.0	0.0
67.5°	2.9	1.9	1.0	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	1.9	1.9	1.9	1.0	1.0	0.0	0.0
77.5°	2.9	2.9	1.9	1.9	1.0	1.0	1.0	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	1.9	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



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)