

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: P179879

Luminaire Tested: **LDA6A55840D010TE LARH30NF 6LA1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179879
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: LDA6A55840D010TE 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 / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5644.6 lumens
Efficiency: N/A
Efficacy: 92.5 lumens/watt
Spacing Criteria (0/90/45): 2.58 / 0.46 / 1.37
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

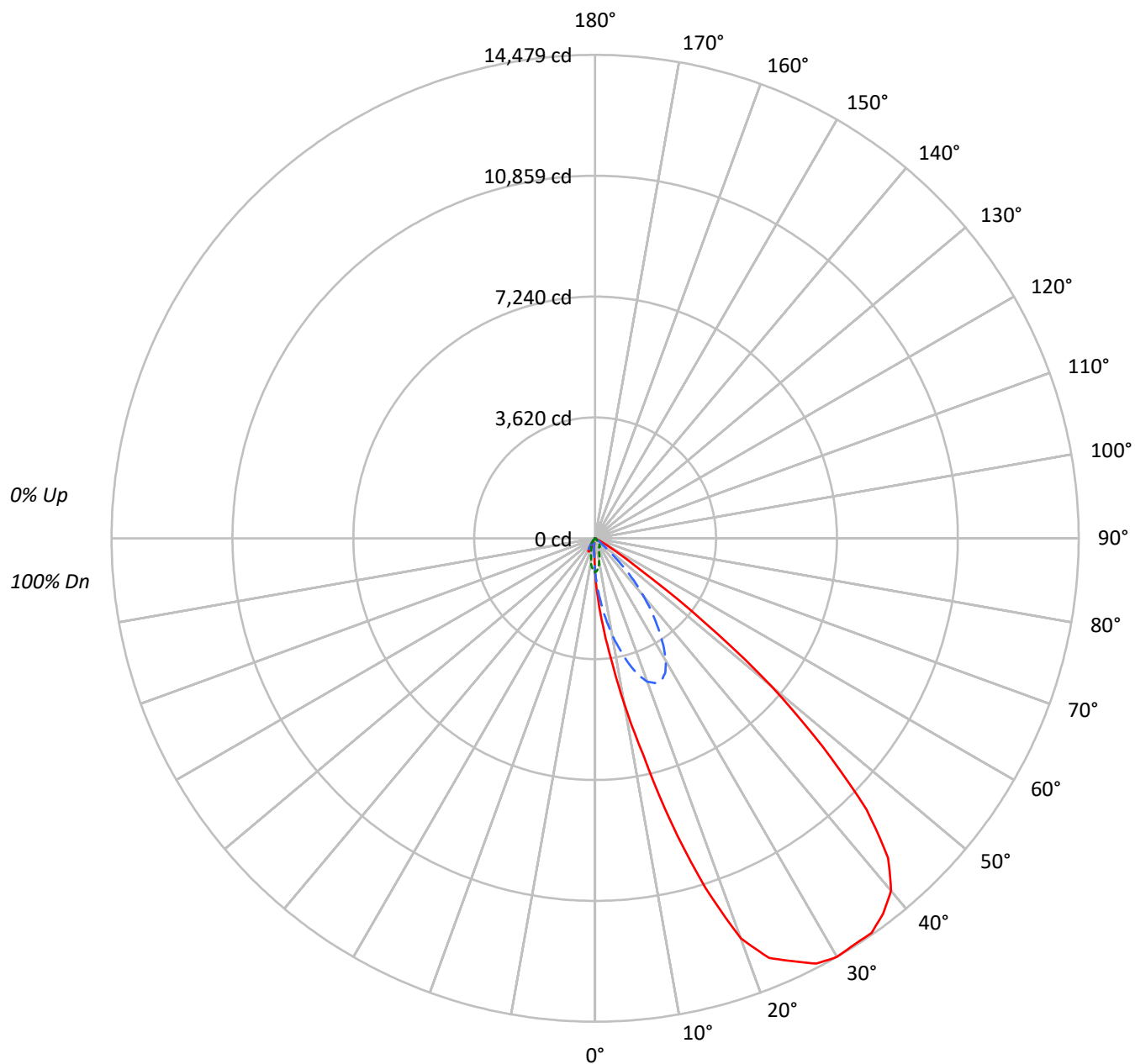
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	55818	55818	55818
5°	143181	50776	15815
10°	279097	39022	7598
15°	501013	26504	10193
20°	743850	20121	16825
25°	845504	16574	26385
30°	916540	18129	24820
35°	965412	11745	15386
40°	986291	5217	7493
45°	890813	1992	2783
50°	586394	785	785
55°	160587	688	0
60°	32070	789	0
65°	2257	1064	0
70°	337	1314	0
75°	0	1949	0
80°	0	2904	316
85°	0	5787	629



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.7	2.2
10°-20°	662.6	11.7
20°-30°	1501.8	26.6
30°-40°	1802.7	31.9
40°-50°	1270.5	22.5
50°-60°	262.1	4.6
60°-70°	9.3	0.2
70°-80°	5.5	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°	2289.1	40.6
0°-40°	4091.8	72.5
0°-60°	5624.4	99.6
0°-90°	5644.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5644.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1018	1018	1018	1018	1018	
5°	2602	1896	923	384	287	320
15°	8828	3884	467	166	180	2620
25°	13978	4698	274	384	436	6451
35°	14426	3290	176	230	230	8968
45°	11490	1128	26	35	36	8451
55°	1680	23	7	5	0	2214
65°	17	5	8	5	0	52
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°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2
2.5°	1735.6	1683.3	1703.8	1643.2	1629.9	1618.6	1629.9	1564.2	1527.2	1480.0	1442.1
5°	2601.9	2539.2	2553.6	2447.9	2399.7	2366.8	2360.7	2225.2	2123.6	2011.7	1895.7
7.5°	3622.1	3562.5	3554.3	3390.1	3290.6	3234.1	3210.5	3016.5	2841.0	2641.9	2424.3
10°	5013.8	4878.4	4836.3	4598.2	4408.3	4288.2	4140.4	3830.4	3522.5	3221.8	2944.7
12.5°	6633.5	6559.6	6454.9	6035.1	5702.5	5532.2	5311.5	4827.0	4361.1	3864.3	3400.4
15°	8827.8	8565.1	8386.5	7779.9	7244.1	6981.4	6659.1	5918.1	5214.0	4584.8	3883.8
17.5°	10971.9	10834.4	10555.2	9768.0	8942.8	8528.1	8047.8	7040.9	6046.4	5151.4	4295.4
20°	12750.6	12621.3	12303.1	11561.1	10645.6	10033.8	9429.3	8047.8	6748.4	5603.0	4570.4
22.5°	13602.5	13520.4	13260.8	12625.4	11845.4	11263.4	10613.7	8904.8	7267.8	5898.6	4695.7
25°	13978.2	13940.2	13772.9	13272.0	12537.2	12043.5	11429.7	9511.4	7591.1	6036.1	4697.7
27.5°	14359.0	14366.2	13996.7	13600.5	12903.6	12429.4	11838.2	9780.3	7649.6	5959.1	4543.8
30°	14479.1	14403.1	14239.9	13671.3	13009.3	12505.3	11871.0	9656.1	7409.4	5643.0	4236.9
32.5°	14429.8	14400.0	14220.4	13619.0	12829.7	12274.4	11553.9	9163.5	6935.2	5191.4	3801.7
35°	14425.7	14370.3	13958.7	13442.4	12470.4	11784.8	10835.4	8367.0	6264.0	4596.1	3289.5
37.5°	14165.0	14027.5	13718.5	13022.6	11741.7	10872.4	9808.0	7394.0	5442.9	3927.9	2781.5
40°	13782.2	13597.4	13191.0	12137.9	10479.3	9477.5	8438.8	6288.6	4573.5	3269.0	2241.6
42.5°	12982.6	12703.4	12128.7	10680.5	8797.1	7893.8	7029.6	5168.8	3729.8	2663.4	1711.0
45°	11490.3	11108.4	10331.5	8741.6	7106.6	6369.7	5674.8	4158.9	2985.7	1975.8	1128.0
47.5°	9235.3	8881.2	8174.0	6958.8	5573.2	4950.2	4396.0	3093.5	2024.0	1144.4	538.8
50°	6875.7	6571.9	6019.7	4836.3	3741.1	3251.6	2777.4	1757.2	948.4	544.0	223.7
52.5°	4102.4	3951.5	3462.0	2681.9	1847.5	1591.9	1277.8	744.1	478.3	197.1	60.6
55°	1680.2	1550.9	1367.1	1097.2	803.7	681.5	583.0	367.4	148.8	41.1	22.6
57.5°	759.5	730.8	647.6	509.1	369.5	310.0	209.4	69.8	32.8	20.5	13.3
60°	292.5	263.8	225.8	122.1	52.3	44.1	35.9	23.6	16.4	11.3	8.2
62.5°	42.1	40.0	35.9	28.7	22.6	20.5	17.4	12.3	9.2	7.2	6.2
65°	17.4	17.4	15.4	12.3	10.3	9.2	8.2	6.2	5.1	5.1	5.1
67.5°	7.2	7.2	6.2	5.1	4.1	4.1	4.1	3.1	4.1	4.1	5.1
70°	2.1	2.1	2.1	2.1	2.1	2.1	3.1	3.1	4.1	4.1	5.1
72.5°	0.0	0.0	1.0	1.0	2.1	2.1	2.1	3.1	4.1	5.1	5.1
75°	0.0	0.0	1.0	1.0	2.1	2.1	2.1	3.1	4.1	5.1	5.1
77.5°	0.0	0.0	1.0	1.0	2.1	2.1	3.1	3.1	4.1	5.1	5.1
80°	0.0	0.0	1.0	1.0	2.1	2.1	3.1	3.1	4.1	5.1	6.2
82.5°	0.0	0.0	1.0	1.0	2.1	2.1	3.1	3.1	4.1	5.1	6.2
85°	0.0	0.0	1.0	1.0	2.1	2.1	3.1	3.1	4.1	5.1	6.2
87.5°	0.0	0.0	1.0	1.0	2.1	2.1	3.1	3.1	4.1	5.1	6.2
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°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2
2.5°	1409.2	1343.5	1325.0	1267.6	1219.3	1195.7	1166.0	1099.2	1049.0	982.2	942.2
5°	1814.6	1690.4	1591.9	1471.8	1392.8	1341.5	1261.4	1139.3	1040.7	922.7	838.5
7.5°	2252.9	2026.1	1848.5	1650.4	1536.5	1447.2	1310.7	1135.2	990.5	833.4	703.1
10°	2675.8	2337.1	2057.9	1773.6	1623.7	1499.5	1311.7	1091.0	899.1	701.0	563.5
12.5°	3048.3	2611.1	2218.0	1852.6	1666.8	1511.8	1276.8	1012.0	780.0	576.8	455.7
15°	3359.3	2823.6	2330.9	1882.4	1669.9	1485.2	1203.9	899.1	647.6	467.0	381.8
17.5°	3595.4	2935.4	2365.8	1846.4	1610.4	1409.2	1092.1	756.4	525.5	396.2	321.3
20°	3717.5	2957.0	2315.5	1748.9	1500.6	1294.3	945.3	613.8	445.4	344.9	268.9
22.5°	3732.9	2896.4	2195.4	1609.4	1362.0	1154.7	783.1	512.2	397.2	304.8	237.1
25°	3641.6	2765.1	2024.0	1451.3	1210.1	994.6	637.4	458.8	361.3	274.0	273.0
27.5°	3446.6	2539.2	1818.7	1267.6	1026.4	808.8	540.9	414.7	322.3	290.5	308.9
30°	3171.5	2249.8	1566.2	1035.6	801.6	622.0	455.7	341.8	283.3	286.4	301.8
32.5°	2798.9	1890.6	1269.6	758.5	573.7	468.0	341.8	233.0	235.0	236.1	249.4
35°	2330.9	1516.0	948.4	510.1	403.4	329.5	193.0	171.4	174.5	175.5	184.7
37.5°	1868.0	1164.9	630.2	339.7	253.5	173.5	120.1	115.0	117.0	116.0	126.2
40°	1430.8	811.9	377.7	168.3	97.5	81.1	73.9	70.8	71.8	72.9	79.0
42.5°	1013.0	440.3	186.8	63.6	51.3	47.2	44.1	42.1	43.1	43.1	47.2
45°	514.2	208.4	63.6	34.9	31.8	28.7	26.7	25.7	25.7	25.7	27.7
47.5°	222.7	68.8	29.8	21.6	19.5	18.5	16.4	15.4	15.4	15.4	16.4
50°	69.8	27.7	18.5	14.4	12.3	11.3	10.3	10.3	10.3	9.2	10.3
52.5°	25.7	17.4	12.3	9.2	8.2	8.2	8.2	7.2	8.2	7.2	8.2
55°	15.4	11.3	8.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
57.5°	10.3	8.2	7.2	7.2	6.2	6.2	7.2	7.2	7.2	7.2	7.2
60°	7.2	7.2	6.2	6.2	6.2	6.2	7.2	7.2	7.2	7.2	7.2
62.5°	6.2	6.2	6.2	6.2	6.2	6.2	7.2	7.2	7.2	7.2	8.2
65°	5.1	6.2	6.2	6.2	6.2	6.2	7.2	7.2	8.2	8.2	8.2
67.5°	5.1	6.2	6.2	7.2	7.2	7.2	7.2	8.2	8.2	8.2	8.2
70°	6.2	6.2	7.2	7.2	7.2	7.2	8.2	8.2	8.2	8.2	9.2
72.5°	6.2	6.2	7.2	7.2	7.2	7.2	8.2	8.2	9.2	9.2	9.2
75°	6.2	7.2	7.2	7.2	7.2	8.2	8.2	8.2	9.2	9.2	9.2
77.5°	6.2	7.2	7.2	8.2	8.2	8.2	8.2	9.2	9.2	9.2	9.2
80°	6.2	7.2	7.2	8.2	8.2	8.2	9.2	9.2	9.2	9.2	10.3
82.5°	6.2	7.2	7.2	8.2	8.2	8.2	9.2	9.2	9.2	9.2	10.3
85°	7.2	7.2	8.2	8.2	8.2	8.2	9.2	9.2	9.2	9.2	10.3
87.5°	7.2	7.2	8.2	8.2	8.2	8.2	9.2	9.2	10.3	9.2	10.3
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°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2
2.5°	888.8	829.3	788.3	772.9	743.1	695.9	668.2	642.5	594.3	584.0	557.3
5°	742.1	646.6	578.9	553.2	519.3	479.3	440.3	414.7	383.9	371.5	353.1
7.5°	585.0	489.6	431.1	410.5	386.9	354.1	319.2	293.5	261.7	245.3	229.9
10°	459.8	389.0	339.7	319.2	294.6	259.7	223.7	189.9	162.2	144.7	141.6
12.5°	373.6	315.1	262.8	241.2	212.5	177.6	151.9	150.9	148.8	147.8	149.9
15°	305.9	249.4	194.0	170.4	162.2	161.1	164.2	167.3	166.3	169.4	171.4
17.5°	251.5	190.9	178.6	179.6	180.6	183.7	188.9	197.1	198.1	203.2	207.3
20°	205.3	202.2	207.3	211.4	214.5	220.7	232.0	242.2	245.3	252.5	260.7
22.5°	233.0	242.2	253.5	258.6	262.8	274.0	286.4	302.8	308.9	318.2	329.5
25°	281.2	296.6	314.1	320.2	326.4	344.9	359.2	378.7	383.9	395.2	406.4
27.5°	321.3	337.7	356.2	364.4	369.5	388.0	400.3	412.6	412.6	418.8	427.0
30°	315.1	328.4	343.8	350.0	352.0	365.4	377.7	381.8	379.8	382.8	389.0
32.5°	261.7	272.0	284.3	289.4	291.5	300.7	311.0	311.0	310.0	310.0	314.1
35°	194.0	201.2	207.3	212.5	215.5	221.7	230.9	229.9	229.9	227.9	230.9
37.5°	130.3	134.5	141.6	143.7	144.7	148.8	156.0	156.0	154.0	155.0	157.0
40°	79.0	84.2	88.3	89.3	91.3	94.4	99.6	99.6	99.6	99.6	100.6
42.5°	47.2	50.3	53.4	53.4	54.4	58.5	60.6	60.6	60.6	60.6	61.6
45°	27.7	28.7	30.8	31.8	31.8	33.9	34.9	34.9	34.9	34.9	35.9
47.5°	16.4	17.4	17.4	18.5	18.5	19.5	20.5	20.5	19.5	19.5	19.5
50°	10.3	10.3	10.3	10.3	11.3	11.3	11.3	11.3	11.3	11.3	10.3
52.5°	8.2	8.2	8.2	8.2	7.2	7.2	7.2	7.2	6.2	6.2	5.1
55°	7.2	7.2	7.2	7.2	7.2	6.2	6.2	6.2	5.1	4.1	3.1
57.5°	7.2	7.2	7.2	7.2	7.2	6.2	6.2	5.1	4.1	4.1	3.1
60°	7.2	7.2	7.2	7.2	7.2	6.2	6.2	5.1	4.1	4.1	3.1
62.5°	8.2	8.2	7.2	7.2	7.2	6.2	6.2	5.1	5.1	4.1	3.1
65°	8.2	8.2	7.2	7.2	7.2	7.2	6.2	6.2	5.1	4.1	3.1
67.5°	8.2	8.2	8.2	8.2	7.2	7.2	7.2	6.2	5.1	4.1	3.1
70°	9.2	9.2	8.2	8.2	8.2	7.2	7.2	6.2	5.1	5.1	4.1
72.5°	9.2	9.2	8.2	8.2	8.2	8.2	7.2	6.2	6.2	5.1	4.1
75°	9.2	9.2	9.2	9.2	8.2	8.2	7.2	7.2	6.2	5.1	4.1
77.5°	9.2	9.2	9.2	9.2	8.2	8.2	8.2	7.2	6.2	5.1	4.1
80°	9.2	9.2	9.2	9.2	9.2	8.2	8.2	7.2	6.2	5.1	4.1
82.5°	10.3	10.3	9.2	9.2	9.2	8.2	8.2	7.2	6.2	5.1	5.1
85°	10.3	10.3	9.2	9.2	9.2	8.2	8.2	7.2	6.2	6.2	5.1
87.5°	10.3	10.3	9.2	9.2	9.2	8.2	8.2	7.2	6.2	6.2	5.1
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: P179879

CATALOG NUMBER: LDA6A55840D010TE LARH30NF 6LA1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2	1018.2
2.5°	540.9	510.1	499.8	507.0	498.8	492.7	484.4	480.3
5°	338.7	316.1	308.9	311.0	303.8	297.6	289.4	287.4
7.5°	208.4	186.8	178.6	178.6	170.4	163.2	158.1	155.0
10°	139.6	135.5	136.5	137.5	136.5	137.5	134.5	136.5
12.5°	149.9	147.8	149.9	150.9	150.9	152.9	148.8	151.9
15°	174.5	172.4	175.5	177.6	177.6	180.6	176.5	179.6
17.5°	213.5	212.5	217.6	219.6	220.7	225.8	220.7	224.8
20°	269.9	268.9	276.1	279.2	278.1	288.4	281.2	288.4
22.5°	342.8	340.8	351.0	354.1	355.1	368.5	362.3	367.4
25°	415.7	417.7	422.9	428.0	429.0	440.3	431.1	436.2
27.5°	431.1	428.0	431.1	437.2	438.3	443.4	435.2	439.3
30°	390.0	384.9	385.9	393.1	395.2	397.2	390.0	392.1
32.5°	317.1	308.9	308.9	316.1	318.2	321.3	308.9	314.1
35°	234.0	226.8	226.8	232.0	233.0	235.0	225.8	229.9
37.5°	160.1	154.0	156.0	158.1	159.1	161.1	160.1	159.1
40°	102.6	98.5	101.6	101.6	102.6	103.7	103.7	104.7
42.5°	62.6	59.5	61.6	61.6	62.6	62.6	62.6	63.6
45°	35.9	34.9	34.9	35.9	35.9	35.9	34.9	35.9
47.5°	19.5	18.5	19.5	19.5	19.5	19.5	19.5	19.5
50°	10.3	9.2	9.2	9.2	9.2	9.2	9.2	9.2
52.5°	5.1	4.1	4.1	4.1	3.1	4.1	3.1	3.1
55°	3.1	2.1	2.1	2.1	1.0	1.0	0.0	0.0
57.5°	2.1	1.0	1.0	1.0	0.0	0.0	0.0	0.0
60°	2.1	1.0	1.0	1.0	0.0	0.0	0.0	0.0
62.5°	2.1	1.0	1.0	1.0	0.0	0.0	0.0	0.0
65°	2.1	1.0	1.0	1.0	0.0	0.0	0.0	0.0
67.5°	3.1	2.1	1.0	1.0	1.0	0.0	0.0	0.0
70°	3.1	2.1	2.1	1.0	1.0	0.0	0.0	0.0
72.5°	3.1	2.1	2.1	2.1	1.0	1.0	0.0	0.0
75°	3.1	2.1	2.1	2.1	1.0	1.0	0.0	0.0
77.5°	3.1	3.1	2.1	2.1	1.0	1.0	1.0	0.0
80°	4.1	3.1	2.1	2.1	2.1	1.0	1.0	1.0
82.5°	4.1	3.1	2.1	2.1	2.1	1.0	1.0	1.0
85°	4.1	3.1	3.1	2.1	2.1	1.0	1.0	1.0
87.5°	4.1	3.1	3.1	2.1	2.1	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)