

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: P179897

Luminaire Tested: **LDA6A55930D010TE LARH40FL 6LA1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179897
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: LDA6A55930D010TE LARH40FL 6LA1LI 30°
Description: PORTFOLIO 6" Adjustable Reflector, Angle-cut Trim, Self-flanged, 40° Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4632.4 lumens
Efficiency: N/A
Efficacy: 75.9 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

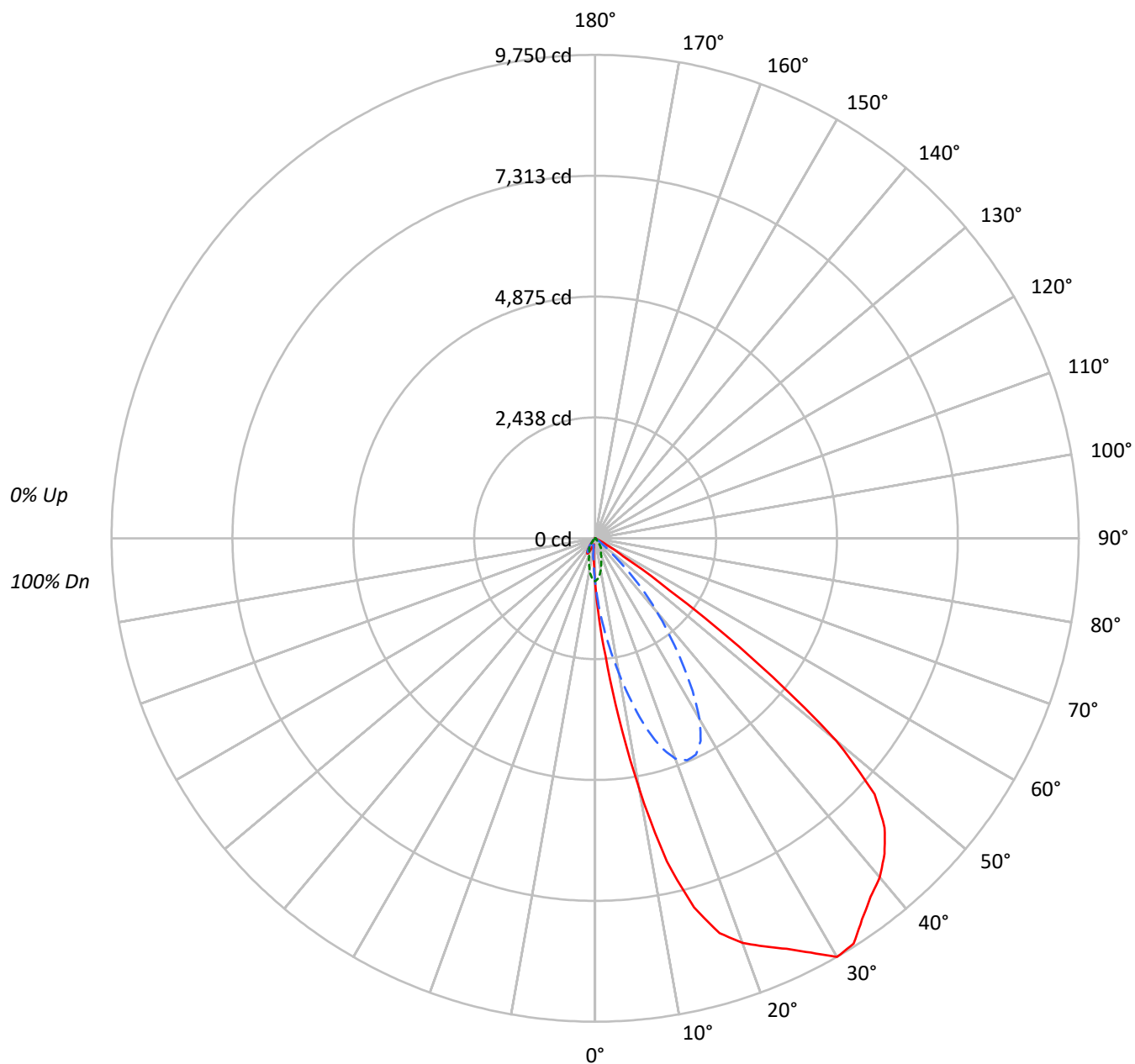
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	88	83	78	86	81	77		83	79	76		81
4	91	82	75	70	89	80	74	69	78	73	68		76	71	67		74
5	85	74	67	62	83	73	66	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	41	36		46	40	36		45

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	47595	47595	47595
5°	130635	43853	17896
10°	286273	35888	6819
15°	437278	27321	8002
20°	506628	20325	12426
25°	552667	16713	20058
30°	617158	15161	20484
35°	627919	10400	14040
40°	638954	4931	7106
45°	639997	2047	3101
50°	541057	887	955
55°	174226	612	153
60°	34602	702	0
65°	3528	830	0
70°	385	1154	0
75°	0	1525	0
80°	0	2526	253
85°	0	5032	503



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.8	2.5
10°-20°	609.5	13.2
20°-30°	1167.1	25.2
30°-40°	1375.0	29.7
40°-50°	1080.0	23.3
50°-60°	263.2	5.7
60°-70°	11.3	0.2
70°-80°	4.2	0.1
80°-90°	4.2	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°	1894.5	40.9
0°-40°	3269.5	70.6
0°-60°	4612.6	99.6
0°-90°	4632.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4632.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	868	868	868	868	868	
5°	2374	1718	797	417	325	314
15°	7705	3957	481	138	141	2151
25°	9137	4812	276	289	332	4259
35°	9383	3042	155	200	210	5883
45°	8255	940	26	37	40	6202
55°	1823	34	6	4	2	2170
65°	27	4	6	4	0	72
75°	0	4	7	5	0	0
85°	0	5	8	5	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°	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2
2.5°	1488.1	1484.9	1463.3	1483.3	1422.4	1420.0	1392.8	1380.8	1345.5	1311.9	1263.8
5°	2373.9	2321.9	2279.4	2281.0	2164.1	2142.5	2081.6	2019.9	1925.4	1837.3	1718.0
7.5°	3618.5	3556.9	3467.2	3429.5	3206.1	3140.4	3014.7	2850.5	2644.6	2439.6	2218.5
10°	5142.7	5152.3	5036.2	4928.8	4590.9	4457.9	4254.5	3930.9	3540.9	3155.6	2764.0
12.5°	6676.4	6670.0	6531.5	6368.9	5952.4	5765.0	5494.3	5090.6	4574.0	3976.6	3363.9
15°	7704.8	7750.5	7692.0	7562.3	7206.7	6992.0	6686.9	6139.0	5509.5	4783.9	3957.3
17.5°	8350.4	8393.6	8372.8	8271.1	7957.1	7728.1	7473.4	7024.8	6296.8	5384.6	4425.1
20°	8684.3	8752.4	8742.8	8632.3	8395.2	8205.4	7924.3	7508.6	6878.3	5801.8	4727.8
22.5°	8907.0	8959.1	8973.5	8848.5	8603.5	8423.2	8217.4	7796.1	7203.5	6056.5	4848.0
25°	9136.9	9229.0	9138.5	8984.7	8759.6	8586.6	8367.2	7963.5	7358.8	6160.7	4811.9
27.5°	9418.8	9462.8	9257.8	9117.6	8867.8	8680.3	8447.3	8060.4	7386.1	6077.4	4606.1
30°	9749.6	9567.0	9423.6	9145.7	8862.2	8679.5	8442.5	7999.6	7242.7	5801.0	4207.2
32.5°	9695.1	9527.7	9365.1	9071.2	8790.9	8609.9	8345.6	7796.9	6903.9	5338.9	3657.0
35°	9382.7	9418.8	9243.4	8999.9	8682.7	8496.1	8207.8	7508.6	6328.9	4701.4	3041.9
37.5°	9119.2	9198.5	9084.0	8858.9	8537.0	8284.7	7895.4	7045.7	5578.4	3892.5	2458.8
40°	8928.6	8954.3	8892.6	8640.3	8253.5	7889.0	7438.9	6214.3	4666.9	3055.5	1940.6
42.5°	8633.1	8701.2	8592.2	8316.7	7730.5	7318.0	6666.0	5254.0	3625.0	2333.9	1460.9
45°	8255.1	8319.9	8185.4	7727.3	6911.9	6307.2	5511.9	4096.7	2681.5	1720.4	940.3
47.5°	7638.4	7678.4	7418.1	6784.6	5599.2	5029.8	4214.4	2856.1	1727.6	961.9	457.3
50°	6344.1	6324.8	5788.2	5008.9	3745.1	3147.6	2508.5	1548.2	776.1	455.7	285.9
52.5°	4088.7	4044.6	3513.6	2804.8	1896.6	1447.3	1087.6	668.0	404.5	254.7	112.9
55°	1822.9	1806.1	1478.5	1148.5	776.1	668.0	510.2	327.6	215.4	88.9	34.4
57.5°	676.0	660.8	582.3	488.6	374.8	311.6	247.5	157.0	55.3	29.6	18.4
60°	315.6	314.8	277.1	228.3	158.6	120.1	69.7	36.8	23.2	16.0	10.4
62.5°	100.9	98.5	68.9	50.5	36.0	31.2	24.8	18.4	12.0	8.8	6.4
65°	27.2	27.2	24.8	20.8	16.8	14.4	12.0	8.8	5.6	4.8	4.0
67.5°	10.4	10.4	9.6	8.8	6.4	5.6	4.8	4.0	3.2	4.0	4.0
70°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.2	3.2	4.0
72.5°	0.0	0.0	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.0
75°	0.0	0.0	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.0
77.5°	0.0	0.0	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.0
80°	0.0	0.0	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.0
82.5°	0.0	0.0	0.8	1.6	1.6	1.6	2.4	3.2	3.2	4.0	4.8
85°	0.0	0.0	0.8	1.6	1.6	2.4	2.4	3.2	3.2	4.0	4.8
87.5°	0.0	0.0	0.8	1.6	1.6	2.4	2.4	3.2	3.2	4.0	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2
2.5°	1228.6	1175.7	1102.9	1060.4	1050.0	1027.6	988.3	929.9	881.8	835.4	808.1
5°	1617.1	1492.1	1351.9	1253.4	1213.4	1159.7	1064.4	965.9	875.4	796.9	735.2
7.5°	2028.7	1822.9	1596.2	1413.6	1347.9	1263.0	1107.7	961.1	837.0	728.0	645.5
10°	2438.0	2106.4	1798.9	1534.6	1427.2	1311.9	1106.9	917.1	771.3	644.7	553.4
12.5°	2847.3	2370.7	1947.8	1607.4	1468.1	1322.3	1074.0	849.8	688.0	559.0	471.7
15°	3225.3	2581.4	2048.7	1632.3	1464.1	1291.9	1007.6	768.1	600.7	481.4	400.5
17.5°	3507.2	2691.9	2072.0	1594.6	1400.8	1210.2	905.8	672.0	517.4	412.5	330.0
20°	3645.8	2709.5	2016.7	1487.3	1291.9	1094.1	794.5	579.9	446.1	348.4	278.7
22.5°	3645.8	2626.2	1896.6	1352.7	1155.7	960.3	687.2	503.8	390.0	303.5	245.1
25°	3507.2	2460.4	1735.6	1197.4	1006.0	828.1	594.3	446.9	346.8	276.3	227.5
27.5°	3238.1	2231.4	1529.0	1024.4	858.6	710.4	520.6	394.9	314.0	249.1	249.9
30°	2868.1	1950.2	1291.9	841.8	707.2	583.9	438.1	330.8	251.5	239.5	246.7
32.5°	2440.4	1613.8	1023.6	652.7	547.8	459.7	333.2	233.9	200.2	201.8	209.8
35°	2001.5	1270.3	770.5	483.8	407.7	333.2	218.7	153.8	152.2	155.4	161.0
37.5°	1580.2	950.7	557.4	354.0	273.9	205.0	117.7	105.7	105.7	108.9	112.1
40°	1183.8	674.4	383.6	209.8	133.0	93.7	74.5	68.9	68.1	68.9	72.9
42.5°	812.9	426.9	228.3	84.1	64.1	54.5	47.3	43.2	42.4	43.2	45.7
45°	456.5	262.7	88.9	44.9	38.4	34.4	29.6	27.2	26.4	26.4	28.0
47.5°	285.9	104.1	40.0	28.0	24.0	22.4	19.2	17.6	16.8	16.8	17.6
50°	109.7	40.8	24.8	18.4	16.0	14.4	12.8	11.2	10.4	10.4	11.2
52.5°	37.6	24.0	16.0	12.0	10.4	9.6	8.0	7.2	7.2	7.2	7.2
55°	20.8	14.4	9.6	7.2	6.4	6.4	6.4	6.4	6.4	6.4	6.4
57.5°	12.8	8.8	6.4	5.6	5.6	5.6	5.6	5.6	5.6	6.4	6.4
60°	7.2	5.6	4.8	4.8	4.8	4.8	5.6	5.6	5.6	6.4	6.4
62.5°	4.8	4.8	4.8	4.8	4.8	4.8	5.6	5.6	6.4	6.4	6.4
65°	4.0	4.0	4.0	4.8	4.8	4.8	5.6	5.6	6.4	6.4	6.4
67.5°	4.0	4.0	4.8	4.8	4.8	5.6	5.6	6.4	6.4	6.4	6.4
70°	4.0	4.8	4.8	5.6	5.6	5.6	6.4	6.4	6.4	7.2	7.2
72.5°	4.0	4.8	4.8	5.6	5.6	5.6	6.4	6.4	7.2	7.2	7.2
75°	4.8	4.8	4.8	5.6	5.6	5.6	6.4	7.2	7.2	7.2	7.2
77.5°	4.8	4.8	5.6	5.6	5.6	6.4	6.4	7.2	7.2	7.2	7.2
80°	4.8	4.8	5.6	5.6	6.4	6.4	7.2	7.2	7.2	8.0	8.0
82.5°	4.8	4.8	5.6	6.4	6.4	6.4	7.2	7.2	8.0	8.0	8.0
85°	4.8	5.6	5.6	6.4	6.4	6.4	7.2	7.2	8.0	8.0	8.0
87.5°	4.8	5.6	5.6	6.4	6.4	6.4	7.2	7.2	8.0	8.0	8.0
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°	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2
2.5°	772.1	738.4	704.8	680.0	668.0	656.0	629.5	595.1	580.7	559.8	547.8
5°	672.8	615.9	571.1	541.4	523.8	500.6	470.1	436.5	417.3	395.7	381.2
7.5°	570.3	503.8	460.5	433.3	415.7	386.8	348.4	308.4	285.1	261.1	244.3
10°	480.6	417.3	368.4	337.2	314.8	281.1	242.7	214.6	194.6	173.8	157.0
12.5°	401.3	333.2	281.1	254.7	239.5	207.4	175.4	144.2	132.2	128.1	128.1
15°	325.2	263.5	219.5	197.0	181.0	146.6	140.2	138.6	137.8	137.0	138.6
17.5°	265.1	213.0	166.6	155.4	153.8	153.0	153.8	153.8	154.6	157.0	161.0
20°	222.7	174.6	171.4	172.2	172.2	175.4	179.4	182.6	185.8	189.8	197.0
22.5°	197.8	197.0	202.6	203.4	207.4	212.2	219.5	224.3	232.3	236.3	246.7
25°	228.3	233.9	244.3	247.5	253.9	261.9	273.1	279.5	289.1	293.9	306.0
27.5°	258.7	267.5	280.3	284.3	289.9	302.7	310.8	316.4	321.2	324.4	331.6
30°	256.3	264.3	277.1	277.9	285.9	294.7	299.5	304.3	307.6	306.8	310.8
32.5°	217.0	224.3	236.3	236.3	245.1	252.3	254.7	258.7	258.7	258.7	260.3
35°	166.6	171.4	179.4	181.8	189.0	193.8	195.4	200.2	200.2	198.6	198.6
37.5°	115.3	121.7	127.3	128.9	133.8	137.0	141.0	141.8	140.2	141.0	141.0
40°	75.3	79.3	83.3	84.1	88.1	90.5	94.5	94.5	95.3	94.5	96.1
42.5°	46.5	49.7	52.1	53.7	55.3	56.9	59.3	60.1	60.9	60.1	61.7
45°	28.8	30.4	32.0	32.8	33.6	34.4	36.8	36.8	36.8	36.8	37.6
47.5°	17.6	18.4	19.2	19.2	20.0	20.8	21.6	21.6	21.6	21.6	22.4
50°	10.4	11.2	11.2	11.2	12.0	12.0	12.8	12.8	12.8	12.0	12.8
52.5°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	6.4	7.2
55°	6.4	6.4	5.6	5.6	5.6	5.6	5.6	4.8	4.0	4.0	3.2
57.5°	5.6	5.6	5.6	5.6	5.6	4.8	4.8	4.0	4.0	3.2	2.4
60°	5.6	5.6	5.6	5.6	5.6	4.8	4.8	4.0	3.2	3.2	2.4
62.5°	6.4	5.6	5.6	5.6	5.6	4.8	4.8	4.0	3.2	3.2	2.4
65°	6.4	6.4	5.6	5.6	5.6	4.8	4.8	4.0	4.0	3.2	2.4
67.5°	6.4	6.4	6.4	5.6	6.4	5.6	4.8	4.8	4.0	3.2	3.2
70°	7.2	6.4	6.4	6.4	6.4	5.6	5.6	4.8	4.0	3.2	3.2
72.5°	7.2	7.2	6.4	6.4	6.4	5.6	5.6	4.8	4.0	4.0	3.2
75°	7.2	7.2	6.4	6.4	6.4	5.6	5.6	4.8	4.8	4.0	3.2
77.5°	7.2	7.2	7.2	6.4	6.4	6.4	5.6	5.6	4.8	4.0	3.2
80°	7.2	7.2	7.2	7.2	7.2	6.4	6.4	5.6	4.8	4.0	3.2
82.5°	8.0	7.2	7.2	7.2	7.2	6.4	6.4	5.6	4.8	4.0	4.0
85°	8.0	8.0	7.2	7.2	7.2	6.4	6.4	5.6	4.8	4.8	4.0
87.5°	8.0	7.2	7.2	7.2	7.2	6.4	6.4	5.6	4.8	4.0	4.0
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: P179897

CATALOG NUMBER: LDA6A55930D010TE LARH40FL 6LA1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	868.2	868.2	868.2	868.2	868.2	868.2	868.2	868.2
2.5°	535.8	529.4	529.4	518.2	516.6	507.8	515.0	510.2
5°	365.2	354.8	351.6	340.4	336.4	326.0	329.2	325.2
7.5°	229.9	219.5	216.2	208.2	203.4	195.4	196.2	193.8
10°	140.2	130.5	128.1	125.7	123.3	122.5	123.3	122.5
12.5°	127.3	126.5	124.9	125.7	124.1	124.9	125.7	124.9
15°	138.6	140.2	138.6	139.4	138.6	140.2	141.0	141.0
17.5°	162.6	165.8	164.2	166.6	165.8	169.8	169.8	169.8
20°	199.4	205.0	203.4	206.6	206.6	211.4	211.4	213.0
22.5°	250.7	257.9	257.1	264.3	262.7	268.3	268.3	269.9
25°	312.4	319.6	320.4	325.2	324.4	330.0	330.0	331.6
27.5°	338.0	342.0	341.2	343.6	344.4	347.6	350.0	348.4
30°	317.2	320.4	319.6	321.2	321.2	323.6	326.0	323.6
32.5°	266.7	269.1	269.1	272.3	269.9	270.7	274.7	272.3
35°	204.2	205.8	204.2	205.8	206.6	206.6	210.6	209.8
37.5°	145.8	146.6	146.6	149.0	146.6	146.6	150.6	151.4
40°	97.7	98.5	97.7	100.9	99.3	99.3	101.7	99.3
42.5°	62.5	63.3	62.5	64.9	63.3	64.9	65.7	66.5
45°	38.4	38.4	37.6	39.2	38.4	39.2	40.0	40.0
47.5°	22.4	22.4	21.6	23.2	22.4	22.4	22.4	23.2
50°	12.0	12.0	12.0	12.8	12.0	12.0	12.0	11.2
52.5°	6.4	6.4	5.6	6.4	5.6	5.6	5.6	5.6
55°	3.2	2.4	2.4	2.4	1.6	1.6	1.6	1.6
57.5°	2.4	1.6	1.6	0.8	0.8	0.8	0.0	0.0
60°	1.6	1.6	0.8	0.8	0.0	0.0	0.0	0.0
62.5°	1.6	1.6	0.8	0.8	0.0	0.0	0.0	0.0
65°	1.6	1.6	0.8	0.8	0.0	0.0	0.0	0.0
67.5°	2.4	1.6	1.6	0.8	0.8	0.0	0.0	0.0
70°	2.4	1.6	1.6	0.8	0.8	0.0	0.0	0.0
72.5°	2.4	1.6	1.6	1.6	0.8	0.8	0.0	0.0
75°	2.4	2.4	1.6	1.6	0.8	0.8	0.0	0.0
77.5°	3.2	2.4	1.6	1.6	0.8	0.8	0.0	0.0
80°	3.2	2.4	1.6	1.6	1.6	0.8	0.8	0.8
82.5°	3.2	2.4	2.4	1.6	1.6	0.8	0.8	0.8
85°	3.2	2.4	2.4	1.6	1.6	0.8	0.8	0.8
87.5°	3.2	2.4	2.4	1.6	1.6	0.8	0.8	0.8
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)