

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: P179835

Luminaire Tested: **LDA6A55940D010TE LARH30NF 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179835
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26684)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A55940D010TE LARH30NF 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 30° Narrow Flood
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3604.0 lumens
Efficiency: N/A
Efficacy: 59.1 lumens/watt
Spacing Criteria (0/90/45): 2.21 / 1.07 / 1.54
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

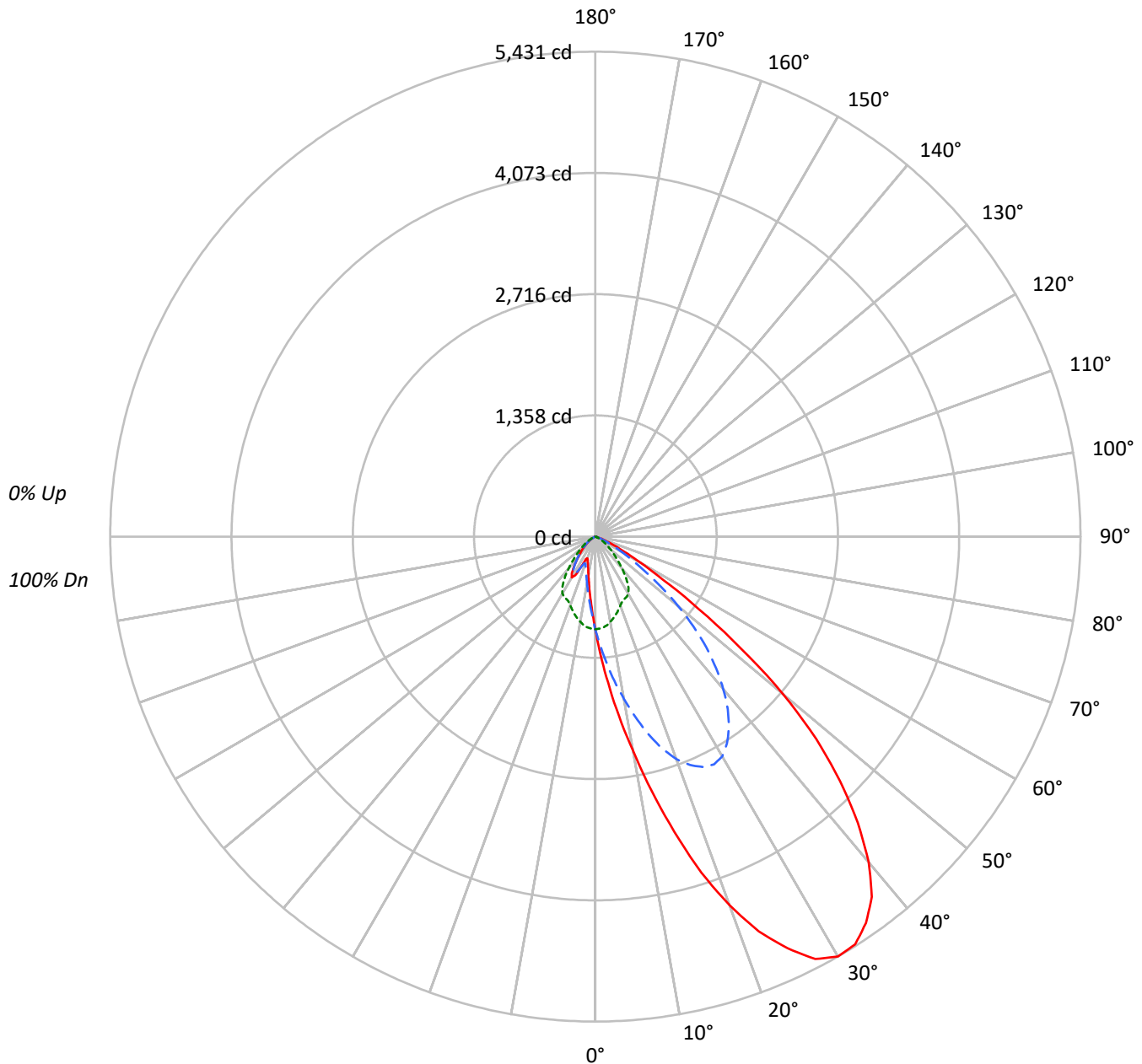
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90		
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	84	81	79		
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70		
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	61		
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54		
6	77	65	57	51	75	64	57	51	62	56	51	61	55	50	59	54	50	48		
7	71	59	51	46	70	58	51	46	57	50	45	56	50	45	54	49	45	43		
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38		
9	62	50	42	37	61	49	42	37	48	41	37	47	41	36	46	40	36	35		
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	56854	56854	56854
5°	90320	56158	36474
10°	135519	53885	24482
15°	194195	51067	18116
20°	256345	47750	15098
25°	307681	46545	22054
30°	343800	46665	33322
35°	353468	41787	28442
40°	340610	33227	21154
45°	300194	24677	16273
50°	234099	18268	11258
55°	135393	13371	7273
60°	63273	9298	3256
65°	29601	5111	1362
70°	13736	2244	978
75°	5740	1483	1101
80°	2494	1642	1389
85°	566	2768	2201



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.2	3.0
10°-20°	393.7	10.9
20°-30°	779.4	21.6
30°-40°	1007.7	28.0
40°-50°	828.0	23.0
50°-60°	382.8	10.6
60°-70°	87.4	2.4
70°-80°	14.3	0.4
80°-90°	3.6	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°	1280.3	35.5
0°-40°	2287.9	63.5
0°-60°	3498.7	97.1
0°-90°	3604.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3604.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1037	1037	1037	1037	1037	
5°	1641	1411	1020	738	663	181
15°	3422	2288	900	403	319	999
25°	5087	2847	770	378	365	2342
35°	5282	2606	624	414	425	3270
45°	3872	1759	318	212	210	2947
55°	1417	685	140	90	76	1332
65°	228	140	39	15	10	261
75°	27	16	7	6	5	36
85°	1	3	4	4	4	3
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°	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1
2.5°	1316.9	1296.8	1309.1	1315.2	1283.7	1290.7	1294.2	1269.7	1262.7	1249.6	1211.1
5°	1641.3	1617.7	1627.4	1627.4	1581.0	1583.6	1581.9	1535.5	1510.2	1476.9	1411.4
7.5°	2023.5	1999.9	2001.6	1992.9	1927.3	1922.9	1894.9	1838.1	1788.2	1727.0	1629.1
10°	2434.5	2420.5	2411.7	2389.9	2303.3	2288.4	2247.3	2157.3	2075.1	1981.5	1843.3
12.5°	2917.2	2889.2	2863.8	2828.8	2716.0	2688.1	2630.3	2500.1	2379.4	2248.2	2065.4
15°	3421.7	3399.9	3358.8	3303.7	3159.4	3114.8	3039.6	2864.7	2714.3	2522.8	2288.4
17.5°	3943.8	3903.5	3843.2	3765.4	3591.4	3528.4	3434.8	3211.0	3011.6	2772.9	2489.6
20°	4394.1	4362.6	4279.6	4179.0	3979.6	3895.7	3785.5	3510.9	3266.9	2983.6	2650.5
22.5°	4785.0	4743.0	4640.7	4519.2	4296.2	4192.1	4067.9	3761.0	3463.7	3134.9	2768.5
25°	5086.7	5055.2	4933.6	4792.0	4547.1	4426.5	4289.2	3941.1	3611.5	3250.3	2847.2
27.5°	5332.4	5279.1	5143.5	4983.5	4719.4	4578.6	4433.5	4052.2	3695.4	3308.9	2876.9
30°	5431.2	5376.1	5232.7	5055.2	4775.4	4620.6	4471.1	4064.4	3689.3	3288.8	2841.1
32.5°	5412.8	5350.8	5197.7	5009.7	4723.8	4558.5	4407.2	3984.9	3601.9	3197.9	2744.0
35°	5281.7	5230.1	5071.8	4875.1	4590.0	4416.0	4257.7	3839.7	3455.8	3057.1	2605.9
37.5°	5084.0	5010.6	4862.8	4665.2	4363.5	4201.7	4045.2	3632.5	3257.3	2862.1	2433.6
40°	4759.6	4671.3	4523.5	4351.3	4064.4	3903.5	3761.0	3375.4	3006.4	2637.3	2228.1
42.5°	4351.3	4282.2	4144.9	3967.4	3704.2	3550.3	3422.6	3051.8	2724.8	2382.9	2001.6
45°	3872.1	3805.6	3688.4	3528.4	3290.6	3156.8	3039.6	2709.9	2415.2	2103.1	1759.4
47.5°	3353.5	3287.9	3185.6	3044.8	2832.3	2716.9	2614.6	2344.4	2066.3	1793.5	1491.8
50°	2744.9	2654.8	2598.9	2480.8	2303.3	2205.4	2126.7	1884.4	1678.9	1459.5	1208.5
52.5°	2048.8	2020.0	1939.5	1856.5	1731.4	1658.8	1607.2	1451.6	1281.1	1121.9	930.4
55°	1416.6	1390.4	1341.4	1290.7	1206.7	1170.0	1131.5	1037.1	923.4	815.0	684.7
57.5°	895.4	914.7	883.2	854.3	803.6	790.5	760.8	705.7	635.7	567.5	486.2
60°	577.1	587.6	567.5	550.9	522.9	512.4	498.4	465.2	423.2	383.9	328.8
62.5°	365.5	370.8	359.4	349.8	334.0	329.7	320.0	300.8	275.5	251.8	216.9
65°	228.2	232.6	224.7	218.6	209.0	209.9	201.1	189.8	174.9	160.0	139.9
67.5°	140.8	143.4	138.2	134.7	128.5	128.5	123.3	116.3	106.7	97.9	84.8
70°	85.7	86.6	83.1	81.3	77.0	76.1	73.5	68.2	62.1	56.0	48.1
72.5°	49.8	50.7	48.1	46.3	43.7	43.7	42.0	39.4	36.7	31.5	27.1
75°	27.1	28.0	26.2	25.4	23.6	24.5	22.7	21.9	19.2	17.5	15.7
77.5°	14.0	14.9	14.0	13.1	13.1	13.1	12.2	11.4	11.4	9.6	9.6
80°	7.9	7.9	7.9	7.9	7.9	7.0	7.0	7.0	7.0	7.0	6.1
82.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	3.5
85°	0.9	0.9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	2.6	2.6
87.5°	0.0	0.0	0.9	0.9	0.9	0.9	0.9	1.7	1.7	1.7	2.6
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1
2.5°	1199.7	1198.9	1158.6	1141.2	1127.2	1105.3	1089.6	1072.9	1058.1	1031.0	1008.2
5°	1378.1	1353.6	1287.2	1245.2	1219.0	1184.0	1145.5	1107.1	1069.5	1020.5	980.3
7.5°	1565.3	1512.8	1413.1	1343.2	1302.9	1254.0	1189.3	1128.9	1067.7	1000.4	942.7
10°	1743.7	1658.0	1531.2	1424.5	1369.4	1306.4	1217.2	1133.3	1052.8	968.0	896.3
12.5°	1925.5	1803.1	1637.8	1499.7	1429.7	1351.9	1237.3	1133.3	1033.6	935.7	850.8
15°	2105.7	1943.9	1738.4	1567.0	1482.2	1389.5	1251.3	1127.2	1010.0	899.8	805.4
17.5°	2259.6	2059.3	1811.9	1613.4	1513.7	1408.7	1250.5	1108.8	978.5	859.6	759.0
20°	2379.4	2142.4	1863.5	1637.0	1525.0	1410.5	1236.5	1081.7	942.7	818.5	715.3
22.5°	2460.7	2196.6	1889.7	1641.3	1521.5	1400.9	1214.6	1054.6	910.3	786.1	682.9
25°	2511.4	2223.7	1897.6	1635.2	1509.3	1384.3	1194.5	1031.0	889.3	769.5	673.3
27.5°	2521.0	2215.9	1881.8	1609.9	1480.4	1354.5	1165.6	1008.2	871.0	759.9	673.3
30°	2473.8	2165.1	1828.5	1553.0	1426.2	1302.9	1117.5	967.1	838.6	737.2	658.5
32.5°	2383.7	2071.6	1740.2	1469.1	1345.8	1230.4	1052.0	908.6	784.4	690.8	620.0
35°	2253.5	1946.5	1625.6	1363.3	1243.5	1135.9	960.1	829.0	710.9	624.4	558.8
37.5°	2095.2	1796.1	1491.8	1242.6	1128.9	1028.4	860.5	737.2	627.9	546.5	487.9
40°	1902.8	1633.5	1341.4	1109.7	1001.2	910.3	755.5	636.6	533.4	464.3	411.0
42.5°	1701.7	1451.6	1181.4	961.0	864.8	778.3	641.0	534.3	442.5	385.6	343.7
45°	1494.4	1249.6	1013.5	817.6	745.0	648.0	521.2	434.6	360.3	318.3	285.1
47.5°	1261.0	1053.7	836.0	663.7	587.6	522.0	416.2	346.3	298.2	261.5	236.1
50°	1010.0	844.7	662.0	515.1	452.1	402.2	324.4	276.3	239.6	214.2	195.0
52.5°	776.5	646.2	498.4	377.8	338.4	300.8	252.7	219.5	193.3	174.0	160.0
55°	577.1	471.3	358.5	279.8	251.8	227.4	198.5	172.3	153.0	139.9	128.5
57.5°	406.6	328.8	251.8	202.9	188.0	172.3	150.4	132.9	119.8	109.3	100.6
60°	272.0	223.9	177.5	148.7	138.2	127.7	113.7	101.4	91.8	84.8	76.1
62.5°	182.8	150.4	124.2	106.7	99.7	92.7	83.1	74.3	67.3	60.3	53.3
65°	117.2	99.7	83.9	72.6	67.3	63.8	56.8	50.7	45.5	39.4	34.1
67.5°	71.7	62.1	52.5	45.5	42.8	40.2	35.9	31.5	28.0	23.6	20.1
70°	42.0	36.7	31.5	27.1	26.2	24.5	21.0	18.4	16.6	14.0	12.2
72.5°	24.5	21.9	18.4	16.6	15.7	14.0	13.1	11.4	9.6	8.7	7.9
75°	14.0	12.2	10.5	9.6	9.6	8.7	7.9	7.9	7.0	7.0	6.1
77.5°	8.7	7.9	7.0	7.0	7.0	6.1	6.1	6.1	6.1	5.2	5.2
80°	6.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
82.5°	3.5	3.5	3.5	3.5	3.5	4.4	4.4	4.4	4.4	4.4	5.2
85°	2.6	3.5	3.5	3.5	3.5	3.5	4.4	4.4	4.4	4.4	4.4
87.5°	2.6	3.5	3.5	3.5	3.5	3.5	4.4	4.4	4.4	4.4	4.4
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°	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1
2.5°	995.1	981.1	938.3	953.1	926.0	904.2	902.4	889.3	866.6	854.3	848.2
5°	949.7	918.2	865.7	869.2	837.7	803.6	785.3	767.8	738.0	719.7	707.4
7.5°	893.7	850.8	788.8	784.4	751.2	710.1	683.8	659.3	627.0	603.4	588.5
10°	835.1	782.6	710.1	704.8	669.8	625.2	595.5	567.5	534.3	510.7	494.9
12.5°	780.9	720.5	648.0	634.9	600.7	555.3	522.9	493.2	460.8	440.7	422.4
15°	729.3	663.7	586.8	574.5	541.3	495.8	460.0	433.7	403.1	383.9	367.3
17.5°	677.7	610.4	534.3	520.3	488.8	445.1	413.6	385.6	357.6	339.3	324.4
20°	633.1	565.8	491.4	477.4	448.6	406.6	377.8	351.5	326.2	308.7	296.4
22.5°	604.2	538.7	471.3	459.1	432.0	394.4	367.3	344.5	322.7	306.1	296.4
25°	602.5	545.7	485.3	478.3	455.6	424.1	404.9	390.9	377.8	364.6	361.1
27.5°	613.0	566.6	515.9	514.2	495.8	474.8	466.1	461.7	454.7	450.3	456.5
30°	606.9	567.5	524.7	524.7	510.7	495.8	491.4	489.7	485.3	486.2	493.2
32.5°	574.5	538.7	497.6	498.4	489.7	473.1	470.5	469.6	464.3	463.5	468.7
35°	515.9	482.7	448.6	449.5	442.5	426.7	423.2	421.5	414.5	411.0	414.5
37.5°	448.6	421.5	389.1	389.1	382.1	369.9	366.4	362.9	358.5	355.0	355.0
40°	379.5	357.6	331.4	330.5	325.3	313.1	309.6	306.9	302.6	296.4	298.2
42.5°	320.9	300.8	279.8	278.1	274.6	264.1	260.6	257.1	252.7	247.5	247.5
45°	266.7	253.6	235.2	234.4	230.9	222.1	219.5	215.1	211.6	206.4	206.4
47.5°	222.1	211.6	196.8	195.9	193.3	185.4	182.8	179.3	175.8	172.3	172.3
50°	186.3	175.8	163.5	162.6	160.9	154.8	151.3	148.7	146.0	143.4	141.7
52.5°	153.0	144.3	134.7	133.8	132.0	125.9	123.3	121.5	118.9	114.6	114.6
55°	123.3	116.3	107.6	106.7	104.9	99.7	97.1	93.6	90.1	85.7	84.8
57.5°	96.2	90.1	83.1	82.2	79.6	75.2	70.8	67.3	63.8	60.3	58.6
60°	72.6	65.6	59.5	57.7	56.0	49.8	46.3	42.8	39.4	36.7	35.0
62.5°	49.0	44.6	37.6	36.7	35.0	31.5	27.1	25.4	23.6	21.9	21.0
65°	30.6	27.1	23.6	22.7	21.0	18.4	16.6	15.7	14.9	14.0	13.1
67.5°	18.4	16.6	14.0	14.0	13.1	12.2	10.5	10.5	9.6	9.6	8.7
70°	11.4	10.5	9.6	8.7	8.7	8.7	7.9	7.9	7.9	7.9	7.9
72.5°	7.9	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
75°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
77.5°	6.1	6.1	5.2	6.1	6.1	6.1	6.1	5.2	6.1	5.2	5.2
80°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
82.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	4.4	4.4	4.4	4.4
85°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	3.5
87.5°	4.4	4.4	4.4	4.4	4.4	3.5	3.5	3.5	3.5	2.6	2.6
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: P179835

CATALOG NUMBER: LDA6A55940D010TE LARH30NF 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1	1037.1
2.5°	850.0	825.5	835.1	821.1	816.7	813.2	808.0	824.6
5°	702.2	675.9	682.1	668.1	662.0	655.8	649.7	662.8
7.5°	579.8	554.4	557.0	544.8	538.7	531.7	525.5	536.0
10°	484.4	460.8	461.7	450.3	444.2	437.2	432.0	439.8
12.5°	411.9	390.0	390.0	381.3	376.0	368.1	363.8	369.9
15°	356.8	337.5	337.5	328.8	324.4	317.4	313.1	319.2
17.5°	314.8	297.3	297.3	291.2	286.8	280.7	277.2	282.4
20°	286.8	272.0	272.8	266.7	263.2	256.2	254.5	258.8
22.5°	289.4	275.5	277.2	272.8	269.3	264.1	262.3	268.5
25°	362.0	351.5	357.6	357.6	359.4	351.5	355.0	364.6
27.5°	465.2	460.0	469.6	466.1	473.1	473.1	476.6	488.8
30°	502.8	498.4	508.9	508.1	515.1	513.3	515.1	526.4
32.5°	475.7	471.3	480.1	479.2	484.4	480.1	480.9	490.6
35°	418.0	413.6	419.7	418.9	422.4	417.1	419.7	425.0
37.5°	356.8	352.4	355.9	355.0	355.9	349.8	353.3	355.9
40°	299.9	294.7	299.9	296.4	297.3	291.2	292.1	295.6
42.5°	251.0	244.8	249.2	249.2	249.2	244.8	245.7	249.2
45°	209.0	204.6	207.2	206.4	207.2	203.7	206.4	209.9
47.5°	173.1	169.6	171.4	170.5	170.5	167.0	167.9	167.9
50°	142.5	139.0	139.9	139.0	136.4	132.0	131.2	132.0
52.5°	112.8	108.4	108.4	106.7	104.9	101.4	101.4	102.3
55°	83.1	79.6	79.6	78.7	77.0	74.3	74.3	76.1
57.5°	56.0	53.3	54.2	53.3	53.3	49.8	51.6	51.6
60°	34.1	32.4	32.4	31.5	29.7	28.9	28.0	29.7
62.5°	20.1	19.2	19.2	18.4	18.4	17.5	17.5	17.5
65°	13.1	12.2	12.2	11.4	11.4	10.5	9.6	10.5
67.5°	8.7	7.9	7.9	7.9	7.9	7.0	7.0	7.0
70°	7.9	7.0	7.0	7.0	7.0	6.1	6.1	6.1
72.5°	7.0	6.1	7.0	6.1	6.1	6.1	6.1	6.1
75°	6.1	6.1	6.1	5.2	5.2	5.2	5.2	5.2
77.5°	5.2	5.2	5.2	5.2	5.2	4.4	4.4	4.4
80°	5.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4
82.5°	4.4	4.4	4.4	4.4	4.4	3.5	3.5	3.5
85°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
87.5°	2.6	2.6	2.6	2.6	2.6	1.7	1.7	1.7
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)