

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: P179621

Luminaire Tested: **LDA6A45830D010TE LARH30NF 6LLWW1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P179621  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26668)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LDA6A45830D010TE LARH30NF 6LLWW1  
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 30° Narrow Flood  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3580.2 lumens  
Efficiency: N/A  
Efficacy: 67.6 lumens/watt  
Spacing Criteria (0/90/45): 2.16 / 1.11 / 1.51  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

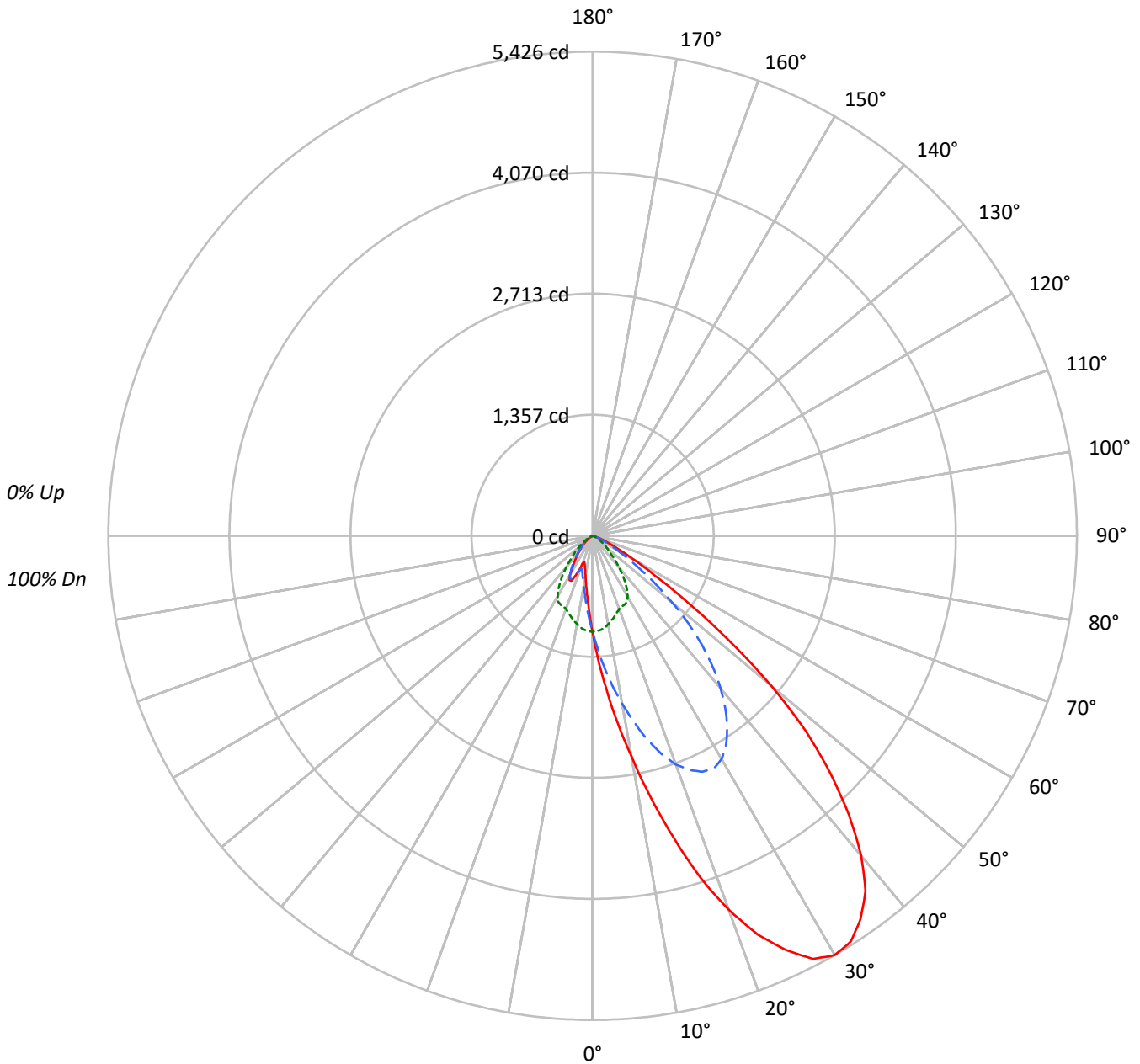
Input Watts (W): 53  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
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	101	102	100	98	98	96	95	95	93	92	90								
2	104	98	92	88	102	96	91	87	93	89	85	89	86	83	87	84	81	80								
3	97	88	82	76	94	87	81	76	84	79	75	81	77	73	79	75	72	70								
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62								
5	83	72	65	59	81	71	64	59	69	63	58	67	62	57	66	61	57	55								
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49								
7	72	60	52	47	70	59	52	46	58	51	46	56	50	46	55	50	46	44								
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	51	45	41	39								
9	63	50	43	38	61	50	43	38	49	42	37	48	42	37	47	41	37	35								
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32								

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	59107	59107	59107
5°	93963	58254	37651
10°	139849	55983	25428
15°	198713	53292	19137
20°	260131	50894	19555
25°	309732	51463	33794
30°	343502	49641	31828
35°	350429	42309	23416
40°	334949	32618	17325
45°	292116	23483	13071
50°	222705	17057	8691
55°	124316	12272	5056
60°	57177	8486	2039
65°	26955	4579	895
70°	13191	2196	946
75°	6227	1461	1038
80°	3094	1547	1231
85°	1824	2453	1258



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.1	3.1
10°-20°	406.7	11.4
20°-30°	813.6	22.7
30°-40°	999.1	27.9
40°-50°	800.3	22.4
50°-60°	352.0	9.8
60°-70°	79.4	2.2
70°-80°	14.4	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°	1331.4	37.2
0°-40°	2330.5	65.1
0°-60°	3482.8	97.3
0°-90°	3580.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3580.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1078	1078	1078	1078	1078	
5°	1708	1469	1059	784	684	188
15°	3501	2361	939	437	337	1021
25°	5121	2917	851	529	559	2356
35°	5236	2629	632	381	350	3242
45°	3768	1736	303	185	169	2865
55°	1301	643	128	74	53	1236
65°	208	131	35	12	7	238
75°	29	17	7	6	5	37
85°	3	3	4	4	2	4
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°	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2
2.5°	1375.2	1340.0	1368.4	1343.9	1336.0	1333.1	1321.3	1313.5	1310.5	1283.1	1261.5
5°	1707.5	1666.4	1695.8	1659.5	1640.9	1631.1	1610.5	1585.0	1564.4	1512.5	1469.3
7.5°	2096.7	2052.6	2080.0	2028.1	1992.8	1975.1	1941.8	1892.8	1846.7	1763.4	1690.9
10°	2512.3	2476.0	2499.5	2427.0	2372.1	2343.7	2294.7	2231.9	2137.8	2016.3	1909.5
12.5°	2996.5	2944.6	2963.2	2866.1	2787.7	2747.5	2677.9	2579.9	2446.6	2281.0	2134.9
15°	3501.3	3452.3	3464.1	3340.6	3231.8	3175.9	3085.7	2946.5	2770.1	2553.5	2361.3
17.5°	4018.9	3952.2	3950.3	3803.2	3658.2	3587.6	3474.9	3291.6	3084.7	2800.5	2563.3
20°	4459.0	4401.2	4385.5	4232.6	4034.6	3952.2	3816.0	3588.6	3334.7	3005.3	2727.0
22.5°	4836.4	4769.7	4741.3	4561.9	4337.4	4241.4	4085.5	3810.1	3527.8	3155.3	2841.6
25°	5120.6	5065.7	5024.6	4822.6	4571.7	4463.9	4293.3	3995.3	3668.0	3260.2	2917.1
27.5°	5346.1	5272.6	5220.6	5000.1	4717.8	4604.1	4420.8	4097.3	3739.5	3302.3	2939.7
30°	5426.5	5352.9	5293.1	5057.9	4758.9	4634.4	4442.3	4099.2	3719.9	3271.0	2890.6
32.5°	5388.2	5311.8	5244.1	4998.1	4688.4	4558.0	4361.9	4014.0	3617.0	3166.1	2781.8
35°	5236.3	5175.5	5099.1	4851.1	4545.2	4403.1	4208.1	3851.3	3457.2	3002.4	2628.9
37.5°	5021.6	4927.5	4857.0	4613.9	4317.8	4172.8	3985.5	3642.5	3243.5	2806.3	2444.7
40°	4680.5	4585.4	4514.9	4280.6	4012.0	3866.0	3693.4	3366.1	2980.8	2574.0	2229.0
42.5°	4255.1	4166.9	4098.3	3880.7	3643.5	3501.3	3349.4	3046.5	2688.7	2316.2	1992.8
45°	3767.9	3682.7	3623.8	3434.7	3223.9	3098.5	2961.2	2693.6	2366.2	2028.1	1736.0
47.5°	3239.6	3152.4	3102.4	2932.8	2754.4	2640.7	2523.1	2291.7	1998.7	1708.5	1454.6
50°	2611.3	2527.0	2481.9	2339.8	2213.3	2108.4	2023.2	1837.9	1597.7	1369.4	1162.5
52.5°	1912.4	1846.7	1813.4	1715.4	1639.9	1561.5	1506.6	1377.2	1201.7	1040.0	884.2
55°	1300.7	1246.8	1231.1	1170.4	1129.2	1087.1	1047.8	972.4	853.8	746.9	643.0
57.5°	813.6	807.7	818.5	764.6	745.9	728.3	697.9	655.8	581.3	514.6	451.9
60°	521.5	515.6	510.7	491.1	482.3	469.5	454.8	430.3	384.2	345.0	303.9
62.5°	330.3	326.4	331.3	319.5	307.8	307.8	292.1	278.4	250.0	226.4	197.0
65°	207.8	206.8	209.8	201.9	196.0	193.1	185.3	177.4	159.8	145.1	131.3
67.5°	131.3	130.4	132.3	130.4	123.5	121.5	116.6	111.7	100.0	91.2	81.4
70°	82.3	81.4	82.3	80.4	76.5	74.5	71.6	67.6	63.7	53.9	49.0
72.5°	50.0	49.0	50.0	49.0	46.1	46.1	42.1	40.2	37.2	31.4	27.4
75°	29.4	29.4	29.4	28.4	26.5	26.5	24.5	23.5	21.6	18.6	16.7
77.5°	16.7	16.7	16.7	16.7	15.7	15.7	14.7	13.7	12.7	10.8	10.8
80°	9.8	9.8	9.8	9.8	8.8	9.8	8.8	8.8	7.8	6.9	6.9
82.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	4.9	4.9	4.9	4.9
85°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
87.5°	0.0	0.0	0.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0
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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2
2.5°	1243.9	1212.5	1206.6	1173.3	1167.4	1148.8	1139.0	1121.4	1086.1	1067.5	1044.9
5°	1417.4	1368.4	1340.0	1280.2	1261.5	1230.2	1197.8	1154.7	1098.8	1058.6	1016.5
7.5°	1607.5	1527.2	1467.4	1379.2	1346.8	1300.7	1243.9	1176.3	1097.8	1038.0	978.3
10°	1798.7	1673.2	1581.1	1462.5	1415.4	1354.7	1272.3	1181.2	1083.1	1005.7	931.2
12.5°	1974.1	1817.3	1690.9	1539.9	1477.2	1402.7	1294.9	1181.2	1064.5	972.4	885.1
15°	2165.3	1958.5	1793.8	1609.5	1532.1	1443.9	1311.5	1177.2	1043.9	939.0	843.0
17.5°	2321.1	2075.1	1873.2	1658.5	1566.4	1465.4	1313.5	1161.6	1017.5	902.8	802.8
20°	2435.8	2163.3	1927.1	1686.9	1583.0	1473.3	1305.6	1141.0	990.0	872.4	770.4
22.5°	2519.1	2216.3	1954.5	1696.7	1584.0	1469.3	1291.9	1123.3	971.4	856.7	759.7
25°	2569.1	2242.7	1963.4	1692.8	1576.2	1456.6	1276.2	1107.6	959.6	850.8	761.6
27.5°	2574.0	2231.9	1939.8	1663.4	1543.8	1424.2	1243.9	1077.3	934.1	834.2	748.9
30°	2518.2	2171.2	1878.1	1598.7	1478.2	1360.5	1183.1	1019.4	883.2	784.2	706.7
32.5°	2410.3	2064.3	1774.2	1500.7	1382.1	1267.4	1094.9	941.0	807.7	716.5	640.1
35°	2267.2	1929.1	1639.9	1383.1	1267.4	1158.6	991.0	840.0	718.5	632.2	562.6
37.5°	2097.7	1771.2	1500.7	1252.7	1141.0	1040.0	878.3	741.0	624.4	545.0	481.3
40°	1904.6	1592.8	1339.0	1103.7	1003.7	905.7	758.7	633.2	524.4	455.8	401.9
42.5°	1695.8	1403.7	1169.4	950.8	859.6	770.4	637.1	523.4	429.3	373.5	331.3
45°	1466.4	1203.7	993.0	801.8	714.6	641.1	515.6	421.5	349.9	302.9	273.5
47.5°	1221.3	993.0	809.7	645.0	568.5	505.8	402.9	332.3	281.3	249.0	224.5
50°	975.3	785.2	632.2	490.1	432.3	379.3	311.7	263.7	224.5	200.0	184.3
52.5°	745.0	591.1	470.5	359.7	320.5	284.3	240.2	207.8	178.4	160.8	149.0
55°	540.1	426.4	335.2	263.7	237.2	216.6	184.3	160.8	142.1	128.4	118.6
57.5°	376.4	295.0	234.3	192.1	176.4	161.7	139.2	123.5	110.8	101.0	93.1
60°	254.9	200.0	163.7	139.2	129.4	119.6	104.9	94.1	84.3	77.4	69.6
62.5°	167.6	137.2	116.6	101.9	93.1	86.3	77.4	68.6	60.8	54.9	48.0
65°	108.8	90.2	80.4	68.6	64.7	59.8	52.0	47.1	40.2	35.3	30.4
67.5°	68.6	58.8	52.0	45.1	42.1	38.2	34.3	29.4	25.5	21.6	18.6
70°	41.2	36.3	31.4	27.4	25.5	23.5	20.6	17.6	14.7	13.7	11.8
72.5°	24.5	21.6	18.6	16.7	15.7	14.7	12.7	10.8	9.8	8.8	7.8
75°	14.7	13.7	11.8	9.8	9.8	8.8	8.8	7.8	6.9	6.9	5.9
77.5°	9.8	8.8	7.8	6.9	6.9	6.9	5.9	5.9	5.9	5.9	5.9
80°	5.9	5.9	5.9	5.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
82.5°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	4.9	4.9
85°	2.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
87.5°	2.9	2.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
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°	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2
2.5°	1035.1	1005.7	993.9	976.3	958.6	957.7	937.1	926.3	918.5	904.7	891.0
5°	988.1	943.0	915.5	892.0	869.4	853.8	823.4	802.8	784.2	764.6	739.1
7.5°	933.2	875.3	836.1	806.7	780.2	755.7	718.5	691.0	667.5	648.9	617.5
10°	874.3	807.7	758.7	726.3	698.9	663.6	627.3	596.9	571.5	550.9	520.5
12.5°	819.5	745.9	691.0	657.7	629.3	591.1	553.8	522.5	495.0	475.4	448.0
15°	768.5	691.0	632.2	598.9	569.5	531.3	494.0	462.7	437.2	416.6	392.1
17.5°	723.4	642.0	584.2	553.8	523.4	488.1	450.9	421.5	396.0	377.4	357.8
20°	693.0	615.6	559.7	531.3	504.8	471.5	442.1	418.6	394.0	379.3	367.6
22.5°	688.1	619.5	571.5	547.9	527.4	502.8	485.2	473.4	456.8	449.9	449.9
25°	697.9	639.1	600.9	582.2	565.6	551.9	543.0	535.2	529.3	530.3	530.3
27.5°	692.0	639.1	607.7	590.1	575.4	566.6	557.7	552.8	547.0	549.9	549.9
30°	653.8	602.8	576.4	557.7	544.0	536.2	523.4	517.6	510.7	511.7	508.7
32.5°	590.1	542.1	516.6	498.9	484.2	476.4	462.7	455.8	447.0	447.0	441.1
35°	515.6	470.5	447.0	431.3	417.6	409.7	397.0	390.1	381.3	376.4	373.5
37.5°	437.2	398.0	376.4	364.6	353.9	346.0	334.3	329.4	320.5	316.6	312.7
40°	364.6	336.2	315.6	305.8	297.0	290.1	279.4	275.4	267.6	264.7	260.7
42.5°	301.9	280.3	263.7	255.8	246.0	242.1	234.3	230.3	223.5	220.5	216.6
45°	251.9	234.3	220.5	213.7	207.8	202.9	195.1	192.1	185.3	182.3	180.4
47.5°	207.8	194.1	183.3	177.4	174.5	168.6	161.7	158.8	153.9	151.0	148.0
50°	170.6	159.8	151.0	146.1	144.1	138.2	132.3	130.4	125.5	123.5	120.6
52.5°	139.2	130.4	122.5	118.6	114.7	110.8	105.9	103.9	99.0	96.1	92.1
55°	111.7	102.9	96.1	93.1	91.2	85.3	80.4	77.4	73.5	68.6	65.7
57.5°	86.3	78.4	72.5	68.6	67.6	61.8	57.8	52.9	48.0	45.1	42.1
60°	63.7	56.9	51.0	47.1	46.1	40.2	35.3	32.3	28.4	26.5	25.5
62.5°	42.1	37.2	32.3	30.4	28.4	24.5	21.6	19.6	17.6	16.7	15.7
65°	26.5	22.5	19.6	18.6	16.7	14.7	13.7	12.7	11.8	10.8	9.8
67.5°	15.7	13.7	11.8	11.8	10.8	9.8	9.8	8.8	7.8	7.8	7.8
70°	9.8	8.8	7.8	7.8	7.8	7.8	7.8	6.9	6.9	6.9	6.9
72.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	5.9	5.9
75°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
77.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	4.9	4.9	4.9	4.9
80°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
82.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	3.9	3.9	3.9
85°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	2.9
87.5°	3.9	3.9	3.9	3.9	3.9	2.9	2.9	2.9	2.9	2.9	2.0
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: P179621

CATALOG NUMBER: LDA6A45830D010TE LARH30NF 6LLWW1

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2	1078.2
2.5°	880.2	863.6	861.6	857.7	853.8	858.7	855.7	847.9
5°	730.3	709.7	705.8	699.9	694.0	696.0	691.0	684.2
7.5°	604.8	583.2	579.3	572.4	566.6	565.6	560.7	553.8
10°	502.8	486.2	482.3	475.4	468.5	467.6	461.7	456.8
12.5°	430.3	414.6	410.7	403.8	398.0	396.0	391.1	387.2
15°	376.4	361.7	357.8	351.9	345.0	345.0	341.1	337.2
17.5°	343.1	330.3	325.4	320.5	314.6	313.7	311.7	308.8
20°	356.8	345.0	343.1	337.2	338.2	338.2	336.2	335.2
22.5°	445.0	441.1	448.9	443.1	453.8	457.8	459.7	459.7
25°	534.2	535.2	543.0	540.1	549.9	557.7	561.7	558.7
27.5°	549.9	550.9	553.8	552.8	560.7	565.6	568.5	561.7
30°	504.8	503.8	502.8	501.9	506.8	508.7	509.7	502.8
32.5°	435.2	432.3	433.3	428.4	430.3	430.3	434.2	424.4
35°	365.6	361.7	361.7	356.8	356.8	356.8	359.7	349.9
37.5°	306.8	302.9	301.9	297.0	296.0	294.1	297.0	288.2
40°	255.8	251.9	252.9	247.0	248.0	247.0	247.0	242.1
42.5°	211.7	208.8	207.8	205.8	206.8	206.8	209.8	205.8
45°	175.5	172.5	171.5	170.6	171.5	171.5	172.5	168.6
47.5°	146.1	142.1	141.2	139.2	139.2	136.2	136.2	132.3
50°	117.6	111.7	110.8	107.8	106.8	104.9	104.9	101.9
52.5°	89.2	84.3	82.3	80.4	79.4	77.4	77.4	75.5
55°	62.7	57.8	56.9	55.9	54.9	53.9	54.9	52.9
57.5°	39.2	37.2	36.3	35.3	34.3	33.3	33.3	32.3
60°	23.5	21.6	21.6	20.6	19.6	18.6	18.6	18.6
62.5°	14.7	13.7	13.7	12.7	12.7	11.8	11.8	11.8
65°	9.8	8.8	8.8	7.8	7.8	6.9	6.9	6.9
67.5°	6.9	6.9	6.9	6.9	5.9	5.9	5.9	5.9
70°	6.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
72.5°	5.9	5.9	5.9	5.9	4.9	4.9	4.9	4.9
75°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
77.5°	4.9	4.9	4.9	4.9	3.9	3.9	3.9	3.9
80°	4.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
82.5°	3.9	3.9	3.9	3.9	3.9	2.9	2.9	2.9
85°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.0
87.5°	2.0	2.0	2.0	2.0	1.0	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)