

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: P179830

Luminaire Tested: **LDA6A55835D010TE LARH30NF 6LLWW1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P179830  
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: LDA6A55835D010TE LARH30NF 6LLWW1  
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 30° Narrow Flood  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

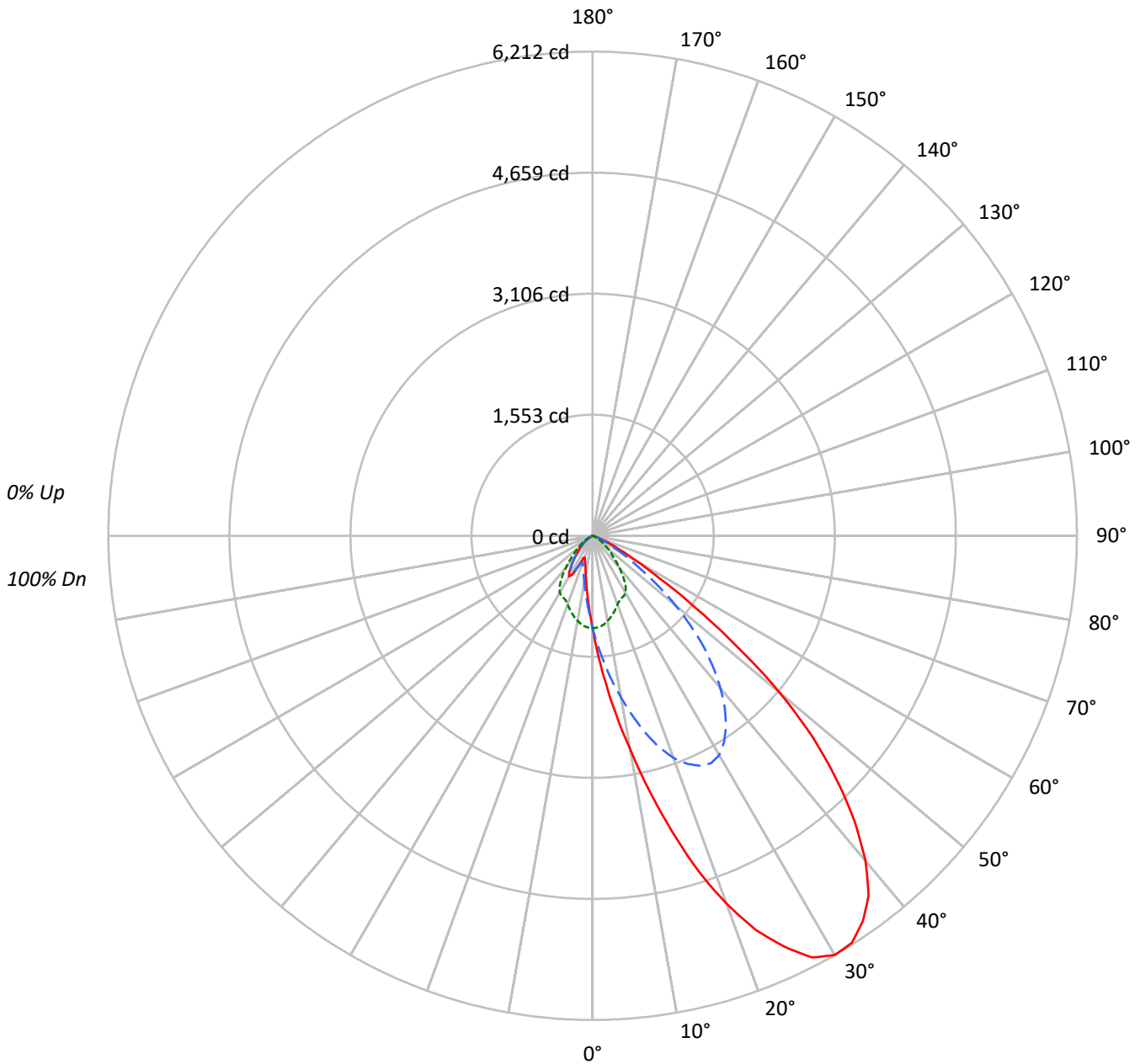
Lumens per Lamp: N/A  
Luminaire Lumens: 4122.0 lumens  
Efficiency: N/A  
Efficacy: 67.6 lumens/watt  
Spacing Criteria (0/90/45): 2.21 / 1.07 / 1.54  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

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

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

	0°	90°	180°
0°	65022	65022	65022
5°	103302	64225	41718
10°	154990	61628	28005
15°	222107	58406	20715
20°	293185	54611	17268
25°	351897	53235	25229
30°	393212	53369	38113
35°	404262	47790	32531
40°	389566	38007	24188
45°	343330	28220	18607
50°	267744	20895	12878
55°	154852	15292	8315
60°	72374	10635	3728
65°	33856	5837	1557
70°	15708	2565	1122
75°	6566	1694	1271
80°	2841	1894	1578
85°	629	3145	2516



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.7	3.0
10°-20°	450.2	10.9
20°-30°	891.4	21.6
30°-40°	1152.5	28.0
40°-50°	947.0	23.0
50°-60°	437.8	10.6
60°-70°	100.0	2.4
70°-80°	16.3	0.4
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°	1464.3	35.5
0°-40°	2616.8	63.5
0°-60°	4001.5	97.1
0°-90°	4122.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4122.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1186	1186	1186	1186	1186	
5°	1877	1614	1167	844	758	207
15°	3914	2617	1029	461	365	1143
25°	5818	3256	880	432	417	2679
35°	6041	2980	714	474	486	3740
45°	4428	2012	364	242	240	3370
55°	1620	783	160	103	87	1523
65°	261	160	45	17	12	299
75°	31	18	8	7	6	41
85°	1	3	5	5	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°	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1
2.5°	1506.2	1483.2	1497.2	1504.2	1468.2	1476.2	1480.2	1452.2	1444.2	1429.2	1385.2
5°	1877.2	1850.2	1861.2	1861.2	1808.2	1811.2	1809.2	1756.2	1727.2	1689.2	1614.2
7.5°	2314.3	2287.3	2289.3	2279.3	2204.3	2199.3	2167.3	2102.3	2045.2	1975.2	1863.2
10°	2784.3	2768.3	2758.3	2733.3	2634.3	2617.3	2570.3	2467.3	2373.3	2266.3	2108.3
12.5°	3336.4	3304.4	3275.4	3235.4	3106.4	3074.4	3008.4	2859.3	2721.3	2571.3	2362.3
15°	3913.5	3888.5	3841.5	3778.5	3613.4	3562.4	3476.4	3276.4	3104.4	2885.4	2617.3
17.5°	4510.6	4464.5	4395.5	4306.5	4107.5	4035.5	3928.5	3672.4	3444.4	3171.4	2847.3
20°	5025.6	4989.6	4894.6	4779.6	4551.6	4455.5	4329.5	4015.5	3736.5	3412.4	3031.4
22.5°	5472.7	5424.7	5307.6	5168.6	4913.6	4794.6	4652.6	4301.5	3961.5	3585.4	3166.4
25°	5817.7	5781.7	5642.7	5480.7	5200.6	5062.6	4905.6	4507.5	4130.5	3717.5	3256.4
27.5°	6098.7	6037.7	5882.7	5699.7	5397.7	5236.6	5070.6	4634.6	4226.5	3784.5	3290.4
30°	6211.8	6148.8	5984.7	5781.7	5461.7	5284.6	5113.6	4648.6	4219.5	3761.5	3249.4
32.5°	6190.8	6119.7	5944.7	5729.7	5402.7	5213.6	5040.6	4557.6	4119.5	3657.4	3138.4
35°	6040.7	5981.7	5800.7	5575.7	5249.6	5050.6	4869.6	4391.5	3952.5	3496.4	2980.4
37.5°	5814.7	5730.7	5561.7	5335.7	4990.6	4805.6	4626.6	4154.5	3725.5	3273.4	2783.3
40°	5443.7	5342.7	5173.6	4976.6	4648.6	4464.5	4301.5	3860.5	3438.4	3016.4	2548.3
42.5°	4976.6	4897.6	4740.6	4537.6	4236.5	4060.5	3914.5	3490.4	3116.4	2725.3	2289.3
45°	4428.5	4352.5	4218.5	4035.5	3763.5	3610.4	3476.4	3099.4	2762.3	2405.3	2012.2
47.5°	3835.5	3760.5	3643.4	3482.4	3239.4	3107.4	2990.4	2681.3	2363.3	2051.3	1706.2
50°	3139.4	3036.4	2972.4	2837.3	2634.3	2522.3	2432.3	2155.3	1920.2	1669.2	1382.2
52.5°	2343.3	2310.3	2218.3	2123.3	1980.2	1897.2	1838.2	1660.2	1465.2	1283.2	1064.1
55°	1620.2	1590.2	1534.2	1476.2	1380.2	1338.2	1294.2	1186.1	1056.1	932.1	783.1
57.5°	1024.1	1046.1	1010.1	977.1	919.1	904.1	870.1	807.1	727.1	649.1	556.1
60°	660.1	672.1	649.1	630.1	598.1	586.1	570.1	532.1	484.1	439.1	376.0
62.5°	418.1	424.1	411.1	400.0	382.0	377.0	366.0	344.0	315.0	288.0	248.0
65°	261.0	266.0	257.0	250.0	239.0	240.0	230.0	217.0	200.0	183.0	160.0
67.5°	161.0	164.0	158.0	154.0	147.0	147.0	141.0	133.0	122.0	112.0	97.0
70°	98.0	99.0	95.0	93.0	88.0	87.0	84.0	78.0	71.0	64.0	55.0
72.5°	57.0	58.0	55.0	53.0	50.0	50.0	48.0	45.0	42.0	36.0	31.0
75°	31.0	32.0	30.0	29.0	27.0	28.0	26.0	25.0	22.0	20.0	18.0
77.5°	16.0	17.0	16.0	15.0	15.0	15.0	14.0	13.0	13.0	11.0	11.0
80°	9.0	9.0	9.0	9.0	9.0	8.0	8.0	8.0	8.0	8.0	7.0
82.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0
85°	1.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0
87.5°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	3.0
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°	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1
2.5°	1372.2	1371.2	1325.2	1305.2	1289.2	1264.2	1246.2	1227.1	1210.1	1179.1	1153.1
5°	1576.2	1548.2	1472.2	1424.2	1394.2	1354.2	1310.2	1266.2	1223.1	1167.1	1121.1
7.5°	1790.2	1730.2	1616.2	1536.2	1490.2	1434.2	1360.2	1291.2	1221.1	1144.1	1078.1
10°	1994.2	1896.2	1751.2	1629.2	1566.2	1494.2	1392.2	1296.2	1204.1	1107.1	1025.1
12.5°	2202.3	2062.3	1873.2	1715.2	1635.2	1546.2	1415.2	1296.2	1182.1	1070.1	973.1
15°	2408.3	2223.3	1988.2	1792.2	1695.2	1589.2	1431.2	1289.2	1155.1	1029.1	921.1
17.5°	2584.3	2355.3	2072.3	1845.2	1731.2	1611.2	1430.2	1268.2	1119.1	983.1	868.1
20°	2721.3	2450.3	2131.3	1872.2	1744.2	1613.2	1414.2	1237.2	1078.1	936.1	818.1
22.5°	2814.3	2512.3	2161.3	1877.2	1740.2	1602.2	1389.2	1206.1	1041.1	899.1	781.1
25°	2872.4	2543.3	2170.3	1870.2	1726.2	1583.2	1366.2	1179.1	1017.1	880.1	770.1
27.5°	2883.4	2534.3	2152.3	1841.2	1693.2	1549.2	1333.2	1153.1	996.1	869.1	770.1
30°	2829.3	2476.3	2091.3	1776.2	1631.2	1490.2	1278.2	1106.1	959.1	843.1	753.1
32.5°	2726.3	2369.3	1990.2	1680.2	1539.2	1407.2	1203.1	1039.1	897.1	790.1	709.1
35°	2577.3	2226.3	1859.2	1559.2	1422.2	1299.2	1098.1	948.1	813.1	714.1	639.1
37.5°	2396.3	2054.3	1706.2	1421.2	1291.2	1176.1	984.1	843.1	718.1	625.1	558.1
40°	2176.3	1868.2	1534.2	1269.2	1145.1	1041.1	864.1	728.1	610.1	531.1	470.1
42.5°	1946.2	1660.2	1351.2	1099.1	989.1	890.1	733.1	611.1	506.1	441.1	393.0
45°	1709.2	1429.2	1159.1	935.1	852.1	741.1	596.1	497.1	412.1	364.0	326.0
47.5°	1442.2	1205.1	956.1	759.1	672.1	597.1	476.1	396.0	341.0	299.0	270.0
50°	1155.1	966.1	757.1	589.1	517.1	460.1	371.0	316.0	274.0	245.0	223.0
52.5°	888.1	739.1	570.1	432.1	387.0	344.0	289.0	251.0	221.0	199.0	183.0
55°	660.1	539.1	410.1	320.0	288.0	260.0	227.0	197.0	175.0	160.0	147.0
57.5°	465.1	376.0	288.0	232.0	215.0	197.0	172.0	152.0	137.0	125.0	115.0
60°	311.0	256.0	203.0	170.0	158.0	146.0	130.0	116.0	105.0	97.0	87.0
62.5°	209.0	172.0	142.0	122.0	114.0	106.0	95.0	85.0	77.0	69.0	61.0
65°	134.0	114.0	96.0	83.0	77.0	73.0	65.0	58.0	52.0	45.0	39.0
67.5°	82.0	71.0	60.0	52.0	49.0	46.0	41.0	36.0	32.0	27.0	23.0
70°	48.0	42.0	36.0	31.0	30.0	28.0	24.0	21.0	19.0	16.0	14.0
72.5°	28.0	25.0	21.0	19.0	18.0	16.0	15.0	13.0	11.0	10.0	9.0
75°	16.0	14.0	12.0	11.0	11.0	10.0	9.0	9.0	8.0	8.0	7.0
77.5°	10.0	9.0	8.0	8.0	8.0	7.0	7.0	7.0	7.0	6.0	6.0
80°	7.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
82.5°	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	6.0
85°	3.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
87.5°	3.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
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°	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1
2.5°	1138.1	1122.1	1073.1	1090.1	1059.1	1034.1	1032.1	1017.1	991.1	977.1	970.1
5°	1086.1	1050.1	990.1	994.1	958.1	919.1	898.1	878.1	844.1	823.1	809.1
7.5°	1022.1	973.1	902.1	897.1	859.1	812.1	782.1	754.1	717.1	690.1	673.1
10°	955.1	895.1	812.1	806.1	766.1	715.1	681.1	649.1	611.1	584.1	566.1
12.5°	893.1	824.1	741.1	726.1	687.1	635.1	598.1	564.1	527.1	504.1	483.1
15°	834.1	759.1	671.1	657.1	619.1	567.1	526.1	496.1	461.1	439.1	420.1
17.5°	775.1	698.1	611.1	595.1	559.1	509.1	473.1	441.1	409.0	388.0	371.0
20°	724.1	647.1	562.1	546.1	513.1	465.1	432.1	402.0	373.0	353.0	339.0
22.5°	691.1	616.1	539.1	525.1	494.1	451.1	420.1	394.0	369.0	350.0	339.0
25°	689.1	624.1	555.1	547.1	521.1	485.1	463.1	447.1	432.1	417.1	413.1
27.5°	701.1	648.1	590.1	588.1	567.1	543.1	533.1	528.1	520.1	515.1	522.1
30°	694.1	649.1	600.1	600.1	584.1	567.1	562.1	560.1	555.1	556.1	564.1
32.5°	657.1	616.1	569.1	570.1	560.1	541.1	538.1	537.1	531.1	530.1	536.1
35°	590.1	552.1	513.1	514.1	506.1	488.1	484.1	482.1	474.1	470.1	474.1
37.5°	513.1	482.1	445.1	445.1	437.1	423.1	419.1	415.1	410.1	406.0	406.0
40°	434.1	409.0	379.0	378.0	372.0	358.0	354.0	351.0	346.0	339.0	341.0
42.5°	367.0	344.0	320.0	318.0	314.0	302.0	298.0	294.0	289.0	283.0	283.0
45°	305.0	290.0	269.0	268.0	264.0	254.0	251.0	246.0	242.0	236.0	236.0
47.5°	254.0	242.0	225.0	224.0	221.0	212.0	209.0	205.0	201.0	197.0	197.0
50°	213.0	201.0	187.0	186.0	184.0	177.0	173.0	170.0	167.0	164.0	162.0
52.5°	175.0	165.0	154.0	153.0	151.0	144.0	141.0	139.0	136.0	131.0	131.0
55°	141.0	133.0	123.0	122.0	120.0	114.0	111.0	107.0	103.0	98.0	97.0
57.5°	110.0	103.0	95.0	94.0	91.0	86.0	81.0	77.0	73.0	69.0	67.0
60°	83.0	75.0	68.0	66.0	64.0	57.0	53.0	49.0	45.0	42.0	40.0
62.5°	56.0	51.0	43.0	42.0	40.0	36.0	31.0	29.0	27.0	25.0	24.0
65°	35.0	31.0	27.0	26.0	24.0	21.0	19.0	18.0	17.0	16.0	15.0
67.5°	21.0	19.0	16.0	16.0	15.0	14.0	12.0	12.0	11.0	11.0	10.0
70°	13.0	12.0	11.0	10.0	10.0	10.0	9.0	9.0	9.0	9.0	9.0
72.5°	9.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
75°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
77.5°	7.0	7.0	6.0	7.0	7.0	7.0	7.0	6.0	7.0	6.0	6.0
80°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
82.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.0	5.0	5.0	5.0
85°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.0
87.5°	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	3.0	3.0
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: P179830

CATALOG NUMBER: LDA6A55835D010TE LARH30NF 6LLWW1

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1	1186.1
2.5°	972.1	944.1	955.1	939.1	934.1	930.1	924.1	943.1
5°	803.1	773.1	780.1	764.1	757.1	750.1	743.1	758.1
7.5°	663.1	634.1	637.1	623.1	616.1	608.1	601.1	613.1
10°	554.1	527.1	528.1	515.1	508.1	500.1	494.1	503.1
12.5°	471.1	446.1	446.1	436.1	430.1	421.1	416.1	423.1
15°	408.0	386.0	386.0	376.0	371.0	363.0	358.0	365.0
17.5°	360.0	340.0	340.0	333.0	328.0	321.0	317.0	323.0
20°	328.0	311.0	312.0	305.0	301.0	293.0	291.0	296.0
22.5°	331.0	315.0	317.0	312.0	308.0	302.0	300.0	307.0
25°	414.1	402.0	409.0	409.0	411.1	402.0	406.0	417.1
27.5°	532.1	526.1	537.1	533.1	541.1	541.1	545.1	559.1
30°	575.1	570.1	582.1	581.1	589.1	587.1	589.1	602.1
32.5°	544.1	539.1	549.1	548.1	554.1	549.1	550.1	561.1
35°	478.1	473.1	480.1	479.1	483.1	477.1	480.1	486.1
37.5°	408.0	403.0	407.0	406.0	407.0	400.0	404.0	407.0
40°	343.0	337.0	343.0	339.0	340.0	333.0	334.0	338.0
42.5°	287.0	280.0	285.0	285.0	285.0	280.0	281.0	285.0
45°	239.0	234.0	237.0	236.0	237.0	233.0	236.0	240.0
47.5°	198.0	194.0	196.0	195.0	195.0	191.0	192.0	192.0
50°	163.0	159.0	160.0	159.0	156.0	151.0	150.0	151.0
52.5°	129.0	124.0	124.0	122.0	120.0	116.0	116.0	117.0
55°	95.0	91.0	91.0	90.0	88.0	85.0	85.0	87.0
57.5°	64.0	61.0	62.0	61.0	61.0	57.0	59.0	59.0
60°	39.0	37.0	37.0	36.0	34.0	33.0	32.0	34.0
62.5°	23.0	22.0	22.0	21.0	21.0	20.0	20.0	20.0
65°	15.0	14.0	14.0	13.0	13.0	12.0	11.0	12.0
67.5°	10.0	9.0	9.0	9.0	9.0	8.0	8.0	8.0
70°	9.0	8.0	8.0	8.0	8.0	7.0	7.0	7.0
72.5°	8.0	7.0	8.0	7.0	7.0	7.0	7.0	7.0
75°	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0
77.5°	6.0	6.0	6.0	6.0	6.0	5.0	5.0	5.0
80°	6.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
82.5°	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0
85°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
87.5°	3.0	3.0	3.0	3.0	3.0	2.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180°    - - 45°-225°    - - - - 90°-270°















(END OF REPORT)