

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: P179620

Luminaire Tested: **LDA6A45827D010TE LARH30NF 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179620
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: LDA6A45827D010TE LARH30NF 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 30° Narrow Flood
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3326.8 lumens
Efficiency: N/A
Efficacy: 62.8 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

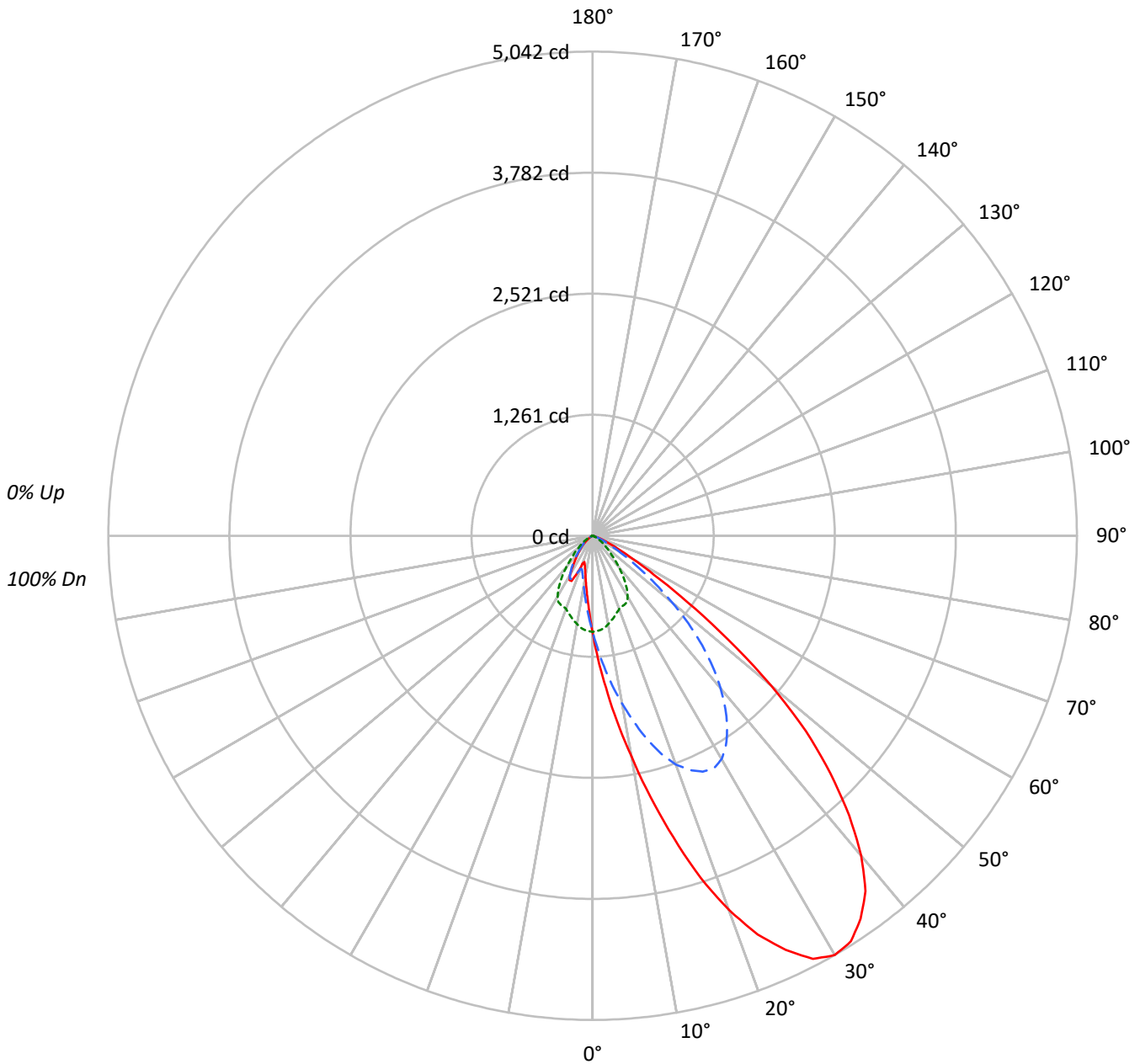
Input Watts (W): 53
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P179620

CATALOG NUMBER: LDA6A45827D010TE LARH30NF 6LLWW1

Luminous Intensity Polar Plot





TEST NUMBER: P179620

CATALOG NUMBER: LDA6A45827D010TE LARH30NF 6LLWW1

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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°	54924	54924	54924
5°	87310	54133	34982
10°	129946	52020	23625
15°	184644	49524	17781
20°	241714	47289	18172
25°	287805	47821	31405
30°	319182	46121	29574
35°	325621	39317	21763
40°	311233	30307	16102
45°	271439	21816	12149
50°	206936	15846	8076
55°	115513	11402	4702
60°	53132	7894	1897
65°	25048	4255	830
70°	12262	2052	882
75°	5782	1356	974
80°	2873	1452	1137
85°	1698	2264	1132



TEST NUMBER: P179620

CATALOG NUMBER: LDA6A45827D010TE LARH30NF 6LLWW1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.3	3.1
10°-20°	377.9	11.4
20°-30°	756.0	22.7
30°-40°	928.3	27.9
40°-50°	743.6	22.4
50°-60°	327.1	9.8
60°-70°	73.8	2.2
70°-80°	13.4	0.4
80°-90°	3.3	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°	1237.2	37.2
0°-40°	2165.5	65.1
0°-60°	3236.2	97.3
0°-90°	3326.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3326.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1002	1002	1002	1002	1002	
5°	1587	1365	984	729	636	175
15°	3253	2194	873	406	313	949
25°	4758	2711	791	492	519	2189
35°	4866	2443	588	354	325	3012
45°	3501	1613	281	172	157	2662
55°	1209	598	119	68	49	1149
65°	193	122	33	11	6	221
75°	27	16	6	6	5	35
85°	3	3	4	4	2	3
90°	0	0	0	0	0	



TEST NUMBER: P179620

CATALOG NUMBER: LDA6A45827D010TE LARH30NF 6LLWW1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9
2.5°	1277.9	1245.1	1271.5	1248.7	1241.4	1238.7	1227.8	1220.5	1217.8	1192.3	1172.2
5°	1586.6	1548.4	1575.7	1542.0	1524.7	1515.6	1496.5	1472.8	1453.7	1405.4	1365.3
7.5°	1948.2	1907.2	1932.7	1884.5	1851.7	1835.3	1804.3	1758.8	1716.0	1638.5	1571.1
10°	2334.4	2300.7	2322.6	2255.2	2204.2	2177.8	2132.2	2073.9	1986.5	1873.5	1774.3
12.5°	2784.4	2736.1	2753.4	2663.2	2590.3	2553.0	2488.3	2397.3	2273.4	2119.5	1983.7
15°	3253.4	3207.9	3218.8	3104.0	3002.9	2951.0	2867.2	2737.9	2574.0	2372.7	2194.1
17.5°	3734.3	3672.4	3670.6	3533.9	3399.1	3333.6	3228.8	3058.5	2866.3	2602.2	2381.8
20°	4143.3	4089.5	4075.0	3932.9	3748.9	3672.4	3545.8	3334.5	3098.6	2792.5	2533.9
22.5°	4493.9	4432.0	4405.6	4238.9	4030.3	3941.1	3796.3	3540.3	3278.0	2931.9	2640.4
25°	4758.1	4707.1	4668.8	4481.2	4248.0	4147.8	3989.4	3712.5	3408.3	3029.4	2710.6
27.5°	4967.6	4899.3	4851.0	4646.0	4383.7	4278.1	4107.8	3807.2	3474.7	3068.5	2731.5
30°	5042.3	4973.9	4918.4	4699.8	4422.0	4306.3	4127.8	3809.0	3456.5	3039.4	2686.0
32.5°	5006.7	4935.7	4872.8	4644.2	4356.4	4235.3	4053.1	3729.8	3360.9	2941.9	2584.9
35°	4865.6	4809.1	4738.0	4507.6	4223.4	4091.4	3910.1	3578.6	3212.4	2789.8	2442.8
37.5°	4666.1	4578.6	4513.1	4287.2	4012.1	3877.3	3703.4	3384.6	3013.9	2607.7	2271.6
40°	4349.1	4260.8	4195.2	3977.5	3728.0	3592.2	3431.9	3127.7	2769.8	2391.8	2071.2
42.5°	3953.8	3871.9	3808.1	3605.9	3385.5	3253.4	3112.2	2830.8	2498.4	2152.2	1851.7
45°	3501.2	3421.9	3367.3	3191.5	2995.7	2879.1	2751.6	2502.9	2198.7	1884.5	1613.0
47.5°	3010.2	2929.2	2882.7	2725.1	2559.4	2453.7	2344.4	2129.5	1857.1	1587.5	1351.6
50°	2426.4	2348.1	2306.2	2174.1	2056.6	1959.2	1879.9	1707.8	1484.6	1272.4	1080.2
52.5°	1777.0	1716.0	1685.0	1593.9	1523.8	1450.9	1399.9	1279.7	1116.7	966.4	821.6
55°	1208.6	1158.6	1144.0	1087.5	1049.3	1010.1	973.7	903.5	793.3	694.0	597.5
57.5°	756.0	750.5	760.5	710.4	693.1	676.7	648.5	609.3	540.1	478.2	419.9
60°	484.6	479.1	474.5	456.3	448.1	436.3	422.6	399.8	357.0	320.6	282.4
62.5°	306.9	303.3	307.9	296.9	286.0	286.0	271.4	258.7	232.3	210.4	183.1
65°	193.1	192.2	194.9	187.6	182.2	179.4	172.1	164.9	148.5	134.8	122.0
67.5°	122.0	121.1	123.0	121.1	114.8	112.9	108.4	103.8	92.9	84.7	75.6
70°	76.5	75.6	76.5	74.7	71.0	69.2	66.5	62.8	59.2	50.1	45.5
72.5°	46.5	45.5	46.5	45.5	42.8	42.8	39.2	37.3	34.6	29.1	25.5
75°	27.3	27.3	27.3	26.4	24.6	24.6	22.8	21.9	20.0	17.3	15.5
77.5°	15.5	15.5	15.5	15.5	14.6	14.6	13.7	12.8	11.8	10.0	10.0
80°	9.1	9.1	9.1	9.1	8.2	9.1	8.2	8.2	7.3	6.4	6.4
82.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	4.6	4.6	4.6	4.6
85°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
87.5°	0.0	0.0	0.0	0.9	0.9	0.9	0.9	1.8	1.8	1.8	1.8
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: P179620

CATALOG NUMBER: LDA6A45827D010TE LARH30NF 6LLWW1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9
2.5°	1155.8	1126.7	1121.2	1090.2	1084.8	1067.5	1058.4	1042.0	1009.2	991.9	970.9
5°	1317.0	1271.5	1245.1	1189.5	1172.2	1143.1	1113.0	1072.9	1021.0	983.7	944.5
7.5°	1493.7	1419.0	1363.5	1281.5	1251.5	1208.6	1155.8	1093.0	1020.1	964.5	909.0
10°	1671.3	1554.8	1469.1	1358.9	1315.2	1258.7	1182.2	1097.5	1006.4	934.5	865.3
12.5°	1834.4	1688.6	1571.1	1430.9	1372.6	1303.4	1203.2	1097.5	989.1	903.5	822.5
15°	2012.0	1819.8	1666.8	1495.6	1423.6	1341.6	1218.7	1093.9	970.0	872.6	783.3
17.5°	2156.8	1928.2	1740.6	1541.1	1455.5	1361.7	1220.5	1079.3	945.4	838.9	746.0
20°	2263.4	2010.2	1790.7	1567.5	1471.0	1368.9	1213.2	1060.2	919.9	810.6	715.9
22.5°	2340.8	2059.3	1816.2	1576.6	1471.9	1365.3	1200.4	1043.8	902.6	796.0	705.9
25°	2387.2	2083.9	1824.4	1573.0	1464.6	1353.5	1185.9	1029.2	891.7	790.6	707.7
27.5°	2391.8	2073.9	1802.5	1545.6	1434.5	1323.4	1155.8	1001.0	868.0	775.1	695.9
30°	2339.9	2017.4	1745.1	1485.5	1373.5	1264.2	1099.3	947.2	820.6	728.6	656.7
32.5°	2239.7	1918.2	1648.6	1394.5	1284.2	1177.7	1017.4	874.4	750.5	665.8	594.8
35°	2106.7	1792.5	1523.8	1285.2	1177.7	1076.6	920.8	780.6	667.6	587.5	522.8
37.5°	1949.1	1645.8	1394.5	1164.0	1060.2	966.4	816.1	688.6	580.2	506.4	447.2
40°	1769.7	1480.1	1244.2	1025.6	932.7	841.6	705.0	588.4	487.3	423.5	373.4
42.5°	1575.7	1304.3	1086.6	883.5	798.8	715.9	592.0	486.4	398.9	347.0	307.9
45°	1362.6	1118.5	922.7	745.0	664.0	595.7	479.1	391.6	325.2	281.4	254.1
47.5°	1134.9	922.7	752.3	599.3	528.3	470.0	374.3	308.8	261.4	231.3	208.6
50°	906.3	729.6	587.5	455.4	401.7	352.5	289.6	245.0	208.6	185.8	171.2
52.5°	692.2	549.2	437.2	334.3	297.8	264.1	223.1	193.1	165.8	149.4	138.4
55°	501.9	396.2	311.5	245.0	220.4	201.3	171.2	149.4	132.1	119.3	110.2
57.5°	349.8	274.2	217.7	178.5	163.9	150.3	129.3	114.8	102.9	93.8	86.5
60°	236.8	185.8	152.1	129.3	120.2	111.1	97.5	87.4	78.3	72.0	64.7
62.5°	155.7	127.5	108.4	94.7	86.5	80.2	72.0	63.8	56.5	51.0	44.6
65°	101.1	83.8	74.7	63.8	60.1	55.6	48.3	43.7	37.3	32.8	28.2
67.5°	63.8	54.6	48.3	41.9	39.2	35.5	31.9	27.3	23.7	20.0	17.3
70°	38.3	33.7	29.1	25.5	23.7	21.9	19.1	16.4	13.7	12.8	10.9
72.5°	22.8	20.0	17.3	15.5	14.6	13.7	11.8	10.0	9.1	8.2	7.3
75°	13.7	12.8	10.9	9.1	9.1	8.2	8.2	7.3	6.4	6.4	5.5
77.5°	9.1	8.2	7.3	6.4	6.4	6.4	5.5	5.5	5.5	5.5	5.5
80°	5.5	5.5	5.5	5.5	4.6	4.6	4.6	4.6	4.6	4.6	4.6
82.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.6	4.6
85°	2.7	2.7	2.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
87.5°	2.7	2.7	2.7	2.7	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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: P179620

CATALOG NUMBER: LDA6A45827D010TE LARH30NF 6LLWW1

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9
2.5°	961.8	934.5	923.6	907.2	890.8	889.9	870.7	860.7	853.4	840.7	827.9
5°	918.1	876.2	850.7	828.8	807.9	793.3	765.1	746.0	728.6	710.4	686.8
7.5°	867.1	813.4	776.9	749.6	725.0	702.2	667.6	642.1	620.3	603.0	573.8
10°	812.4	750.5	705.0	674.9	649.4	616.6	582.9	554.7	531.0	511.9	483.6
12.5°	761.4	693.1	642.1	611.2	584.7	549.2	514.6	485.5	460.0	441.7	416.2
15°	714.1	642.1	587.5	556.5	529.2	493.7	459.0	429.9	406.2	387.1	364.3
17.5°	672.2	596.6	542.8	514.6	486.4	453.6	419.0	391.6	368.0	350.7	332.4
20°	643.9	572.0	520.1	493.7	469.1	438.1	410.8	388.9	366.1	352.5	341.6
22.5°	639.4	575.6	531.0	509.1	490.0	467.2	450.9	439.9	424.4	418.1	418.1
25°	648.5	593.8	558.3	541.0	525.5	512.8	504.6	497.3	491.8	492.7	492.7
27.5°	643.0	593.8	564.7	548.3	534.6	526.4	518.3	513.7	508.2	511.0	511.0
30°	607.5	560.1	535.6	518.3	505.5	498.2	486.4	480.9	474.5	475.4	472.7
32.5°	548.3	503.7	480.0	463.6	449.9	442.7	429.9	423.5	415.3	415.3	409.9
35°	479.1	437.2	415.3	400.8	388.0	380.7	368.9	362.5	354.3	349.8	347.0
37.5°	406.2	369.8	349.8	338.8	328.8	321.5	310.6	306.0	297.8	294.2	290.5
40°	338.8	312.4	293.3	284.2	276.0	269.6	259.6	255.9	248.7	245.9	242.3
42.5°	280.5	260.5	245.0	237.7	228.6	225.0	217.7	214.0	207.7	204.9	201.3
45°	234.1	217.7	204.9	198.6	193.1	188.5	181.3	178.5	172.1	169.4	167.6
47.5°	193.1	180.3	170.3	164.9	162.1	156.7	150.3	147.6	143.0	140.3	137.5
50°	158.5	148.5	140.3	135.7	133.9	128.4	123.0	121.1	116.6	114.8	112.0
52.5°	129.3	121.1	113.9	110.2	106.6	102.9	98.4	96.5	92.0	89.3	85.6
55°	103.8	95.6	89.3	86.5	84.7	79.2	74.7	72.0	68.3	63.8	61.0
57.5°	80.2	72.9	67.4	63.8	62.8	57.4	53.7	49.2	44.6	41.9	39.2
60°	59.2	52.8	47.4	43.7	42.8	37.3	32.8	30.1	26.4	24.6	23.7
62.5°	39.2	34.6	30.1	28.2	26.4	22.8	20.0	18.2	16.4	15.5	14.6
65°	24.6	20.9	18.2	17.3	15.5	13.7	12.8	11.8	10.9	10.0	9.1
67.5°	14.6	12.8	10.9	10.9	10.0	9.1	9.1	8.2	7.3	7.3	7.3
70°	9.1	8.2	7.3	7.3	7.3	7.3	7.3	6.4	6.4	6.4	6.4
72.5°	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	5.5	5.5
75°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
77.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	4.6	4.6	4.6	4.6
80°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
82.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	3.6	3.6	3.6
85°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	2.7
87.5°	3.6	3.6	3.6	3.6	3.6	2.7	2.7	2.7	2.7	2.7	1.8
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: P179620

CATALOG NUMBER: LDA6A45827D010TE LARH30NF 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9	1001.9
2.5°	817.9	802.4	800.6	797.0	793.3	797.9	795.1	787.9
5°	678.6	659.4	655.8	650.3	644.9	646.7	642.1	635.7
7.5°	562.0	541.9	538.3	531.9	526.4	525.5	521.0	514.6
10°	467.2	451.8	448.1	441.7	435.4	434.5	429.0	424.4
12.5°	399.8	385.3	381.6	375.3	369.8	368.0	363.4	359.8
15°	349.8	336.1	332.4	327.0	320.6	320.6	317.0	313.3
17.5°	318.8	306.9	302.4	297.8	292.4	291.5	289.6	286.9
20°	331.5	320.6	318.8	313.3	314.2	314.2	312.4	311.5
22.5°	413.5	409.9	417.2	411.7	421.7	425.3	427.2	427.2
25°	496.4	497.3	504.6	501.9	511.0	518.3	521.9	519.2
27.5°	511.0	511.9	514.6	513.7	521.0	525.5	528.3	521.9
30°	469.1	468.2	467.2	466.3	470.9	472.7	473.6	467.2
32.5°	404.4	401.7	402.6	398.0	399.8	399.8	403.5	394.4
35°	339.7	336.1	336.1	331.5	331.5	331.5	334.3	325.2
37.5°	285.1	281.4	280.5	276.0	275.1	273.2	276.0	267.8
40°	237.7	234.1	235.0	229.5	230.4	229.5	229.5	225.0
42.5°	196.7	194.0	193.1	191.3	192.2	192.2	194.9	191.3
45°	163.0	160.3	159.4	158.5	159.4	159.4	160.3	156.7
47.5°	135.7	132.1	131.2	129.3	129.3	126.6	126.6	123.0
50°	109.3	103.8	102.9	100.2	99.3	97.5	97.5	94.7
52.5°	82.9	78.3	76.5	74.7	73.8	72.0	72.0	70.1
55°	58.3	53.7	52.8	51.9	51.0	50.1	51.0	49.2
57.5°	36.4	34.6	33.7	32.8	31.9	31.0	31.0	30.1
60°	21.9	20.0	20.0	19.1	18.2	17.3	17.3	17.3
62.5°	13.7	12.8	12.8	11.8	11.8	10.9	10.9	10.9
65°	9.1	8.2	8.2	7.3	7.3	6.4	6.4	6.4
67.5°	6.4	6.4	6.4	6.4	5.5	5.5	5.5	5.5
70°	6.4	5.5	5.5	5.5	5.5	5.5	5.5	5.5
72.5°	5.5	5.5	5.5	5.5	4.6	4.6	4.6	4.6
75°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
77.5°	4.6	4.6	4.6	4.6	3.6	3.6	3.6	3.6
80°	4.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
82.5°	3.6	3.6	3.6	3.6	3.6	2.7	2.7	2.7
85°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1.8
87.5°	1.8	1.8	1.8	1.8	0.9	0.9	0.9	0.9
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)