

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: P179831

Luminaire Tested: **LDA6A55840D010TE LARH30NF 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179831
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: LDA6A55840D010TE LARH30NF 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 30° Narrow Flood
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4230.4 lumens
Efficiency: N/A
Efficacy: 69.4 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

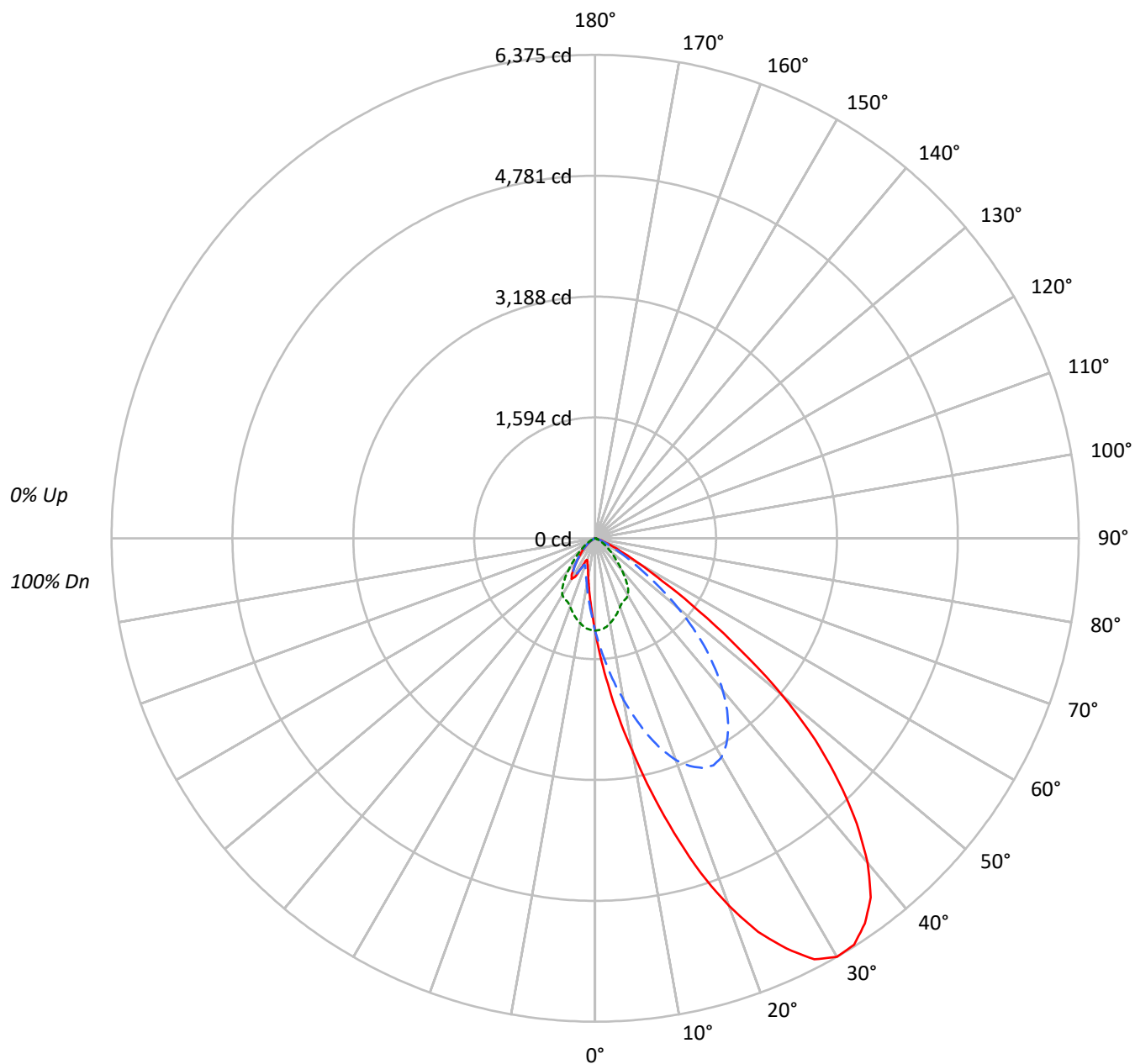
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	66733	66733	66733
5°	106020	65914	42813
10°	159065	63248	28740
15°	227947	59944	21260
20°	300892	56046	17723
25°	361152	54632	25889
30°	403549	54774	39114
35°	414896	49048	33381
40°	399806	39002	24825
45°	352362	28964	19095
50°	274780	21449	13219
55°	158924	15694	8535
60°	74270	10920	3826
65°	34751	5993	1596
70°	16125	2629	1154
75°	6736	1737	1313
80°	2904	1957	1610
85°	629	3208	2579



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.9	3.0
10°-20°	462.1	10.9
20°-30°	914.8	21.6
30°-40°	1182.8	28.0
40°-50°	971.9	23.0
50°-60°	449.3	10.6
60°-70°	102.6	2.4
70°-80°	16.8	0.4
80°-90°	4.3	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°	1502.8	35.5
0°-40°	2685.5	63.5
0°-60°	4106.8	97.1
0°-90°	4230.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4230.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1217	1217	1217	1217	1217	
5°	1927	1657	1198	866	778	213
15°	4016	2686	1056	473	375	1173
25°	5971	3342	903	443	428	2749
35°	6200	3059	733	486	499	3838
45°	4545	2065	374	248	246	3459
55°	1663	804	164	106	89	1563
65°	268	164	46	17	12	307
75°	32	18	8	7	6	42
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°	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3
2.5°	1545.8	1522.2	1536.5	1543.7	1506.8	1515.0	1519.1	1490.4	1482.1	1466.8	1421.6
5°	1926.6	1898.9	1910.2	1910.2	1855.8	1858.8	1856.8	1802.4	1772.6	1733.6	1656.6
7.5°	2375.1	2347.4	2349.5	2339.2	2262.2	2257.1	2224.2	2157.5	2099.0	2027.2	1912.2
10°	2857.5	2841.1	2830.9	2805.2	2703.6	2686.1	2637.9	2532.2	2435.7	2325.9	2163.7
12.5°	3424.1	3391.3	3361.5	3320.5	3188.1	3155.2	3087.5	2934.5	2792.9	2638.9	2424.4
15°	4016.4	3990.7	3942.5	3877.8	3708.4	3656.1	3567.8	3362.5	3186.0	2961.2	2686.1
17.5°	4629.1	4581.9	4511.1	4419.8	4215.5	4141.6	4031.8	3769.0	3535.0	3254.8	2922.2
20°	5157.7	5120.8	5023.3	4905.2	4671.2	4572.7	4443.4	4121.1	3834.7	3502.1	3111.1
22.5°	5616.6	5567.3	5447.2	5304.5	5042.8	4920.6	4774.9	4414.6	4065.6	3679.7	3249.6
25°	5970.7	5933.7	5791.0	5624.8	5337.4	5195.7	5034.6	4626.1	4239.1	3815.2	3342.0
27.5°	6259.1	6196.5	6037.4	5849.6	5539.6	5374.3	5203.9	4756.4	4337.6	3884.0	3376.9
30°	6375.1	6310.4	6142.1	5933.7	5605.3	5423.6	5248.1	4770.8	4330.5	3860.4	3334.8
32.5°	6353.5	6280.6	6101.0	5880.3	5544.7	5350.7	5173.1	4677.4	4227.8	3753.6	3220.9
35°	6199.6	6139.0	5953.2	5722.3	5387.7	5183.4	4997.6	4507.0	4056.4	3588.4	3058.7
37.5°	5967.6	5881.4	5707.9	5475.9	5121.8	4931.9	4748.2	4263.7	3823.4	3359.5	2856.5
40°	5586.8	5483.1	5309.7	5107.5	4770.8	4581.9	4414.6	3962.0	3528.8	3095.7	2615.3
42.5°	5107.5	5026.4	4865.2	4656.9	4347.9	4167.3	4017.4	3582.2	3198.3	2797.0	2349.5
45°	4545.0	4467.0	4329.4	4141.6	3862.4	3705.4	3567.8	3180.9	2835.0	2468.5	2065.2
47.5°	3936.3	3859.3	3739.2	3574.0	3324.6	3189.1	3069.0	2751.8	2425.4	2105.2	1751.1
50°	3221.9	3116.2	3050.5	2911.9	2703.6	2588.6	2496.2	2211.9	1970.7	1713.1	1418.5
52.5°	2404.9	2371.0	2276.6	2179.1	2032.3	1947.1	1886.6	1703.9	1503.7	1316.9	1092.1
55°	1662.8	1632.0	1574.5	1515.0	1416.5	1373.3	1328.2	1217.3	1083.9	956.6	803.7
57.5°	1051.1	1073.6	1036.7	1002.8	943.3	927.9	893.0	828.3	746.2	666.1	570.7
60°	677.4	689.8	666.1	646.6	613.8	601.5	585.1	546.1	496.8	450.6	385.9
62.5°	429.0	435.2	421.9	410.6	392.1	387.0	375.7	353.1	323.3	295.6	254.6
65°	267.9	273.0	263.8	256.6	245.3	246.3	236.1	222.7	205.3	187.8	164.2
67.5°	165.3	168.3	162.2	158.1	150.9	150.9	144.7	136.5	125.2	115.0	99.6
70°	100.6	101.6	97.5	95.5	90.3	89.3	86.2	80.1	72.9	65.7	56.5
72.5°	58.5	59.5	56.5	54.4	51.3	51.3	49.3	46.2	43.1	37.0	31.8
75°	31.8	32.8	30.8	29.8	27.7	28.7	26.7	25.7	22.6	20.5	18.5
77.5°	16.4	17.4	16.4	15.4	15.4	15.4	14.4	13.3	13.3	11.3	11.3
80°	9.2	9.2	9.2	9.2	9.2	8.2	8.2	8.2	8.2	8.2	7.2
82.5°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.1
85°	1.0	1.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.1	3.1
87.5°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	2.1	3.1
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°	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3
2.5°	1408.2	1407.2	1360.0	1339.5	1323.1	1297.4	1278.9	1259.4	1242.0	1210.1	1183.5
5°	1617.6	1588.9	1510.9	1461.6	1430.8	1389.8	1344.6	1299.4	1255.3	1197.8	1150.6
7.5°	1837.3	1775.7	1658.7	1576.6	1529.4	1471.9	1395.9	1325.1	1253.3	1174.2	1106.5
10°	2046.7	1946.1	1797.3	1672.0	1607.4	1533.5	1428.8	1330.2	1235.8	1136.2	1052.1
12.5°	2260.2	2116.5	1922.5	1760.3	1678.2	1586.8	1452.4	1330.2	1213.2	1098.3	998.7
15°	2471.6	2281.7	2040.5	1839.3	1739.8	1631.0	1468.8	1323.1	1185.5	1056.2	945.3
17.5°	2652.3	2417.2	2126.7	1893.7	1776.7	1653.6	1467.8	1301.5	1148.6	1009.0	890.9
20°	2792.9	2514.7	2187.3	1921.5	1790.1	1655.6	1451.4	1269.7	1106.5	960.7	839.6
22.5°	2888.3	2578.4	2218.1	1926.6	1786.0	1644.3	1425.7	1237.9	1068.5	922.7	801.6
25°	2947.9	2610.2	2227.3	1919.4	1771.6	1624.8	1402.1	1210.1	1043.9	903.2	790.3
27.5°	2959.2	2600.9	2208.8	1889.6	1737.7	1589.9	1368.2	1183.5	1022.3	892.0	790.3
30°	2903.7	2541.4	2146.2	1822.9	1674.1	1529.4	1311.8	1135.2	984.3	865.3	772.9
32.5°	2798.0	2431.6	2042.6	1724.4	1579.7	1444.2	1234.8	1066.4	920.7	810.9	727.7
35°	2645.1	2284.8	1908.1	1600.2	1459.6	1333.3	1127.0	973.0	834.5	732.9	655.9
37.5°	2459.3	2108.3	1751.1	1458.5	1325.1	1207.1	1010.0	865.3	737.0	641.5	572.7
40°	2233.5	1917.3	1574.5	1302.5	1175.2	1068.5	886.8	747.2	626.1	545.0	482.4
42.5°	1997.4	1703.9	1386.7	1128.0	1015.1	913.5	752.4	627.1	519.4	452.6	403.4
45°	1754.1	1466.8	1189.6	959.7	874.5	760.6	611.7	510.1	422.9	373.6	334.6
47.5°	1480.1	1236.8	981.3	779.1	689.8	612.8	488.6	406.5	350.0	306.9	277.1
50°	1185.5	991.5	777.0	604.6	530.7	472.2	380.8	324.3	281.2	251.5	228.9
52.5°	911.5	758.5	585.1	443.4	397.2	353.1	296.6	257.6	226.8	204.3	187.8
55°	677.4	553.2	420.8	328.5	295.6	266.9	233.0	202.2	179.6	164.2	150.9
57.5°	477.3	385.9	295.6	238.1	220.7	202.2	176.5	156.0	140.6	128.3	118.0
60°	319.2	262.8	208.4	174.5	162.2	149.9	133.4	119.1	107.8	99.6	89.3
62.5°	214.5	176.5	145.8	125.2	117.0	108.8	97.5	87.2	79.0	70.8	62.6
65°	137.5	117.0	98.5	85.2	79.0	74.9	66.7	59.5	53.4	46.2	40.0
67.5°	84.2	72.9	61.6	53.4	50.3	47.2	42.1	37.0	32.8	27.7	23.6
70°	49.3	43.1	37.0	31.8	30.8	28.7	24.6	21.6	19.5	16.4	14.4
72.5°	28.7	25.7	21.6	19.5	18.5	16.4	15.4	13.3	11.3	10.3	9.2
75°	16.4	14.4	12.3	11.3	11.3	10.3	9.2	9.2	8.2	8.2	7.2
77.5°	10.3	9.2	8.2	8.2	8.2	7.2	7.2	7.2	7.2	6.2	6.2
80°	7.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
82.5°	4.1	4.1	4.1	4.1	4.1	5.1	5.1	5.1	5.1	5.1	6.2
85°	3.1	4.1	4.1	4.1	4.1	4.1	5.1	5.1	5.1	5.1	5.1
87.5°	3.1	4.1	4.1	4.1	4.1	4.1	5.1	5.1	5.1	5.1	5.1
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°	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3
2.5°	1168.1	1151.6	1101.3	1118.8	1087.0	1061.3	1059.3	1043.9	1017.2	1002.8	995.6
5°	1114.7	1077.7	1016.2	1020.3	983.3	943.3	921.7	901.2	866.3	844.7	830.4
7.5°	1049.0	998.7	925.8	920.7	881.7	833.5	802.7	773.9	735.9	708.2	690.8
10°	980.2	918.6	833.5	827.3	786.2	733.9	699.0	666.1	627.1	599.4	581.0
12.5°	916.6	845.8	760.6	745.2	705.1	651.8	613.8	578.9	540.9	517.3	495.8
15°	856.0	779.1	688.7	674.4	635.4	582.0	539.9	509.1	473.2	450.6	431.1
17.5°	795.5	716.4	627.1	610.7	573.8	522.4	485.5	452.6	419.8	398.2	380.8
20°	743.1	664.1	576.8	560.4	526.6	477.3	443.4	412.6	382.9	362.3	348.0
22.5°	709.3	632.3	553.2	538.9	507.1	462.9	431.1	404.4	378.7	359.2	348.0
25°	707.2	640.5	569.7	561.5	534.8	497.8	475.2	458.8	443.4	428.0	423.9
27.5°	719.5	665.1	605.6	603.5	582.0	557.3	547.1	541.9	533.7	528.6	535.8
30°	712.3	666.1	615.9	615.9	599.4	582.0	576.8	574.8	569.7	570.7	578.9
32.5°	674.4	632.3	584.0	585.1	574.8	555.3	552.2	551.2	545.0	544.0	550.2
35°	605.6	566.6	526.6	527.6	519.4	500.9	496.8	494.7	486.5	482.4	486.5
37.5°	526.6	494.7	456.8	456.8	448.5	434.2	430.1	426.0	420.8	416.7	416.7
40°	445.5	419.8	389.0	388.0	381.8	367.5	363.4	360.3	355.1	348.0	350.0
42.5°	376.7	353.1	328.5	326.4	322.3	310.0	305.9	301.8	296.6	290.5	290.5
45°	313.1	297.7	276.1	275.1	271.0	260.7	257.6	252.5	248.4	242.2	242.2
47.5°	260.7	248.4	230.9	229.9	226.8	217.6	214.5	210.4	206.3	202.2	202.2
50°	218.6	206.3	191.9	190.9	188.9	181.7	177.6	174.5	171.4	168.3	166.3
52.5°	179.6	169.4	158.1	157.0	155.0	147.8	144.7	142.7	139.6	134.5	134.5
55°	144.7	136.5	126.2	125.2	123.2	117.0	113.9	109.8	105.7	100.6	99.6
57.5°	112.9	105.7	97.5	96.5	93.4	88.3	83.1	79.0	74.9	70.8	68.8
60°	85.2	77.0	69.8	67.7	65.7	58.5	54.4	50.3	46.2	43.1	41.1
62.5°	57.5	52.3	44.1	43.1	41.1	37.0	31.8	29.8	27.7	25.7	24.6
65°	35.9	31.8	27.7	26.7	24.6	21.6	19.5	18.5	17.4	16.4	15.4
67.5°	21.6	19.5	16.4	16.4	15.4	14.4	12.3	12.3	11.3	11.3	10.3
70°	13.3	12.3	11.3	10.3	10.3	10.3	9.2	9.2	9.2	9.2	9.2
72.5°	9.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
75°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
77.5°	7.2	7.2	6.2	7.2	7.2	7.2	7.2	6.2	7.2	6.2	6.2
80°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
82.5°	6.2	6.2	6.2	6.2	6.2	6.2	6.2	5.1	5.1	5.1	5.1
85°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.1
87.5°	5.1	5.1	5.1	5.1	5.1	4.1	4.1	4.1	4.1	3.1	3.1
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: P179831

CATALOG NUMBER: LDA6A55840D010TE LARH30NF 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3	1217.3
2.5°	997.7	968.9	980.2	963.8	958.7	954.6	948.4	967.9
5°	824.2	793.4	800.6	784.2	777.0	769.8	762.6	778.0
7.5°	680.5	650.7	653.8	639.5	632.3	624.1	616.9	629.2
10°	568.6	540.9	541.9	528.6	521.4	513.2	507.1	516.3
12.5°	483.4	457.8	457.8	447.5	441.4	432.1	427.0	434.2
15°	418.8	396.2	396.2	385.9	380.8	372.6	367.5	374.6
17.5°	369.5	349.0	349.0	341.8	336.7	329.5	325.4	331.5
20°	336.7	319.2	320.2	313.1	309.0	300.7	298.7	303.8
22.5°	339.7	323.3	325.4	320.2	316.1	310.0	307.9	315.1
25°	424.9	412.6	419.8	419.8	421.9	412.6	416.7	428.0
27.5°	546.1	539.9	551.2	547.1	555.3	555.3	559.4	573.8
30°	590.2	585.1	597.4	596.3	604.6	602.5	604.6	617.9
32.5°	558.4	553.2	563.5	562.5	568.6	563.5	564.5	575.8
35°	490.6	485.5	492.7	491.7	495.8	489.6	492.7	498.8
37.5°	418.8	413.6	417.8	416.7	417.8	410.6	414.7	417.8
40°	352.1	345.9	352.1	348.0	349.0	341.8	342.8	346.9
42.5°	294.6	287.4	292.5	292.5	292.5	287.4	288.4	292.5
45°	245.3	240.2	243.3	242.2	243.3	239.2	242.2	246.3
47.5°	203.2	199.1	201.2	200.2	200.2	196.0	197.1	197.1
50°	167.3	163.2	164.2	163.2	160.1	155.0	154.0	155.0
52.5°	132.4	127.3	127.3	125.2	123.2	119.1	119.1	120.1
55°	97.5	93.4	93.4	92.4	90.3	87.2	87.2	89.3
57.5°	65.7	62.6	63.6	62.6	62.6	58.5	60.6	60.6
60°	40.0	38.0	38.0	37.0	34.9	33.9	32.8	34.9
62.5°	23.6	22.6	22.6	21.6	21.6	20.5	20.5	20.5
65°	15.4	14.4	14.4	13.3	13.3	12.3	11.3	12.3
67.5°	10.3	9.2	9.2	9.2	9.2	8.2	8.2	8.2
70°	9.2	8.2	8.2	8.2	8.2	7.2	7.2	7.2
72.5°	8.2	7.2	8.2	7.2	7.2	7.2	7.2	7.2
75°	7.2	7.2	7.2	6.2	6.2	6.2	6.2	6.2
77.5°	6.2	6.2	6.2	6.2	6.2	5.1	5.1	5.1
80°	6.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1
82.5°	5.1	5.1	5.1	5.1	5.1	4.1	4.1	4.1
85°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
87.5°	3.1	3.1	3.1	3.1	3.1	2.1	2.1	2.1
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)