

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: P179853

Luminaire Tested: **LDA6A65830D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179853
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26685)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A65830D010TE LARH40FL 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 40° Flood
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5015.5 lumens
Efficiency: N/A
Efficacy: 64.3 lumens/watt
Spacing Criteria (0/90/45): 2.12 / 1.05 / 1.48
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

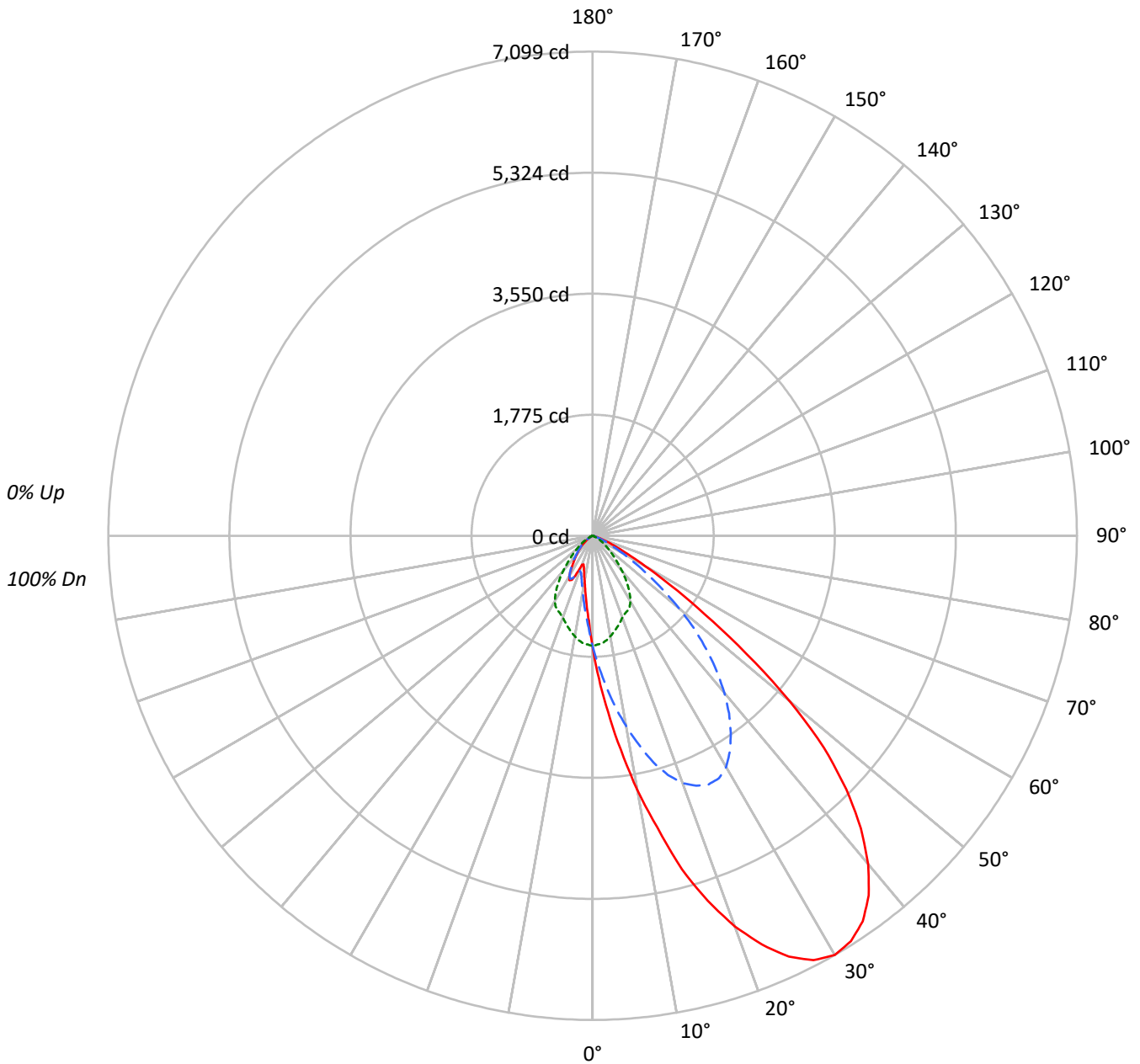
Input Watts (W): 78
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P179853

CATALOG NUMBER: LDA6A65830D010TE LARH40FL 6LLWW1

Luminous Intensity Polar Plot





TEST NUMBER: P179853

CATALOG NUMBER: LDA6A65830D010TE LARH40FL 6LLWW1

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	97	98	96	94	95	93	92	90								
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79								
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70								
4	89	79	72	67	87	78	71	66	76	70	65	74	69	64	72	67	64	62								
5	83	72	64	59	81	71	64	58	69	63	58	67	61	57	65	60	57	55								
6	77	65	58	52	75	64	57	52	63	56	51	61	55	51	60	55	51	49								
7	72	60	52	46	70	59	51	46	57	51	46	56	50	46	55	49	45	44								
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	39								
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	46	41	37	35								
10	58	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°	88759	88759	88759
5°	142637	87013	55497
10°	210924	83343	37257
15°	287425	78837	27673
20°	355491	74399	26229
25°	411852	73244	43055
30°	449354	70175	43095
35°	461829	60646	33709
40°	449735	47732	26249
45°	407787	35306	20684
50°	321286	26089	14021
55°	191573	18570	8019
60°	97964	12356	3026
65°	46840	6564	1336
70°	22119	2949	1282
75°	9002	1949	1461
80°	4357	2178	1452
85°	2139	3585	2139



TEST NUMBER: P179853

CATALOG NUMBER: LDA6A65830D010TE LARH40FL 6LLWW1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	166.2	3.3
10°-20°	587.2	11.7
20°-30°	1105.3	22.0
30°-40°	1346.0	26.8
40°-50°	1120.4	22.3
50°-60°	536.6	10.7
60°-70°	128.9	2.6
70°-80°	20.3	0.4
80°-90°	4.7	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°	1858.7	37.1
0°-40°	3204.7	63.9
0°-60°	4861.7	96.9
0°-90°	5015.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5015.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1619	1619	1619	1619	1619	
5°	2592	2199	1581	1150	1008	284
15°	5064	3441	1389	630	488	1452
25°	6809	4021	1211	686	712	3127
35°	6901	3532	906	528	504	4276
45°	5260	2361	455	281	267	3983
55°	2004	974	194	109	84	1888
65°	361	210	51	16	10	413
75°	42	22	9	8	7	58
85°	3	3	6	5	3	5
90°	0	0	0	0	0	



TEST NUMBER: P179853

CATALOG NUMBER: LDA6A65830D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1
2.5°	2094.1	2020.5	2043.5	2038.9	2034.3	2010.1	1992.9	1977.9	1940.0	1940.0	1891.7
5°	2592.0	2505.7	2527.6	2511.5	2490.8	2454.0	2420.7	2382.7	2312.6	2282.7	2198.7
7.5°	3161.2	3063.5	3083.0	3050.8	3007.1	2957.7	2903.6	2832.3	2720.8	2652.9	2523.0
10°	3789.1	3650.0	3661.5	3613.2	3540.7	3474.0	3422.3	3286.6	3127.9	3015.2	2833.5
12.5°	4383.6	4261.7	4265.2	4197.3	4092.7	4011.0	3932.8	3753.4	3541.9	3380.9	3141.7
15°	5064.4	4914.9	4879.3	4787.3	4650.4	4550.4	4443.4	4216.9	3951.2	3738.5	3440.7
17.5°	5612.9	5458.8	5435.8	5349.6	5154.1	5033.3	4898.8	4643.5	4306.6	4042.1	3676.4
20°	6093.6	5940.7	5901.6	5790.0	5565.8	5427.8	5265.6	4964.3	4596.4	4270.9	3858.1
22.5°	6486.9	6319.0	6263.8	6125.8	5876.3	5721.0	5523.2	5194.3	4783.8	4420.4	3966.2
25°	6808.9	6618.0	6547.8	6391.4	6110.9	5939.5	5722.2	5354.2	4906.8	4505.5	4021.4
27.5°	7014.7	6823.8	6746.8	6567.4	6252.3	6068.3	5831.4	5433.5	4950.5	4517.0	4009.9
30°	7098.7	6900.9	6813.5	6609.9	6270.7	6076.4	5829.1	5399.0	4894.2	4434.2	3913.3
32.5°	7046.9	6852.6	6754.8	6534.0	6181.0	5971.7	5724.5	5265.6	4745.9	4269.8	3745.4
35°	6900.9	6708.8	6607.6	6371.9	6003.9	5785.4	5539.3	5064.4	4538.9	4052.4	3531.5
37.5°	6649.0	6467.3	6351.2	6117.8	5747.5	5524.4	5280.6	4801.1	4264.0	3806.3	3284.3
40°	6284.5	6112.0	5997.0	5747.5	5397.9	5172.5	4942.5	4456.1	3950.1	3503.9	3000.2
42.5°	5819.9	5661.2	5550.8	5308.2	4974.7	4752.8	4542.3	4075.4	3593.6	3169.3	2693.2
45°	5259.9	5121.9	5013.8	4812.6	4483.7	4273.2	4083.5	3660.3	3192.3	2802.4	2360.9
47.5°	4601.0	4487.1	4382.5	4199.6	3902.9	3704.0	3547.6	3160.1	2763.3	2396.5	2020.5
50°	3767.2	3685.6	3604.0	3414.2	3204.9	3031.3	2917.4	2572.4	2251.6	1964.1	1652.5
52.5°	2840.4	2790.9	2733.4	2597.7	2457.4	2356.3	2255.1	1992.9	1752.5	1538.6	1296.0
55°	2004.4	1979.1	1934.2	1879.0	1772.1	1703.1	1615.7	1482.3	1296.0	1152.3	974.0
57.5°	1354.6	1347.7	1316.7	1283.3	1224.7	1201.7	1128.1	1041.9	937.2	830.3	703.8
60°	893.5	878.6	871.7	853.3	808.4	790.0	763.6	708.4	644.0	569.2	491.0
62.5°	575.0	566.9	561.2	553.1	525.5	525.5	499.1	473.8	425.5	379.5	328.9
65°	361.1	354.2	353.0	347.3	336.9	332.3	312.8	294.4	271.4	246.1	210.4
67.5°	232.3	221.9	216.2	212.7	205.8	197.8	190.9	182.8	164.4	149.5	126.5
70°	138.0	128.8	127.6	128.8	120.7	119.6	112.7	106.9	94.3	85.1	71.3
72.5°	78.2	73.6	72.4	72.4	67.8	66.7	62.1	58.6	51.7	44.8	39.1
75°	42.5	39.1	39.1	39.1	36.8	35.6	33.3	32.2	27.6	25.3	21.8
77.5°	24.1	23.0	23.0	21.8	20.7	19.5	18.4	18.4	16.1	14.9	13.8
80°	13.8	13.8	13.8	13.8	12.6	12.6	11.5	11.5	10.3	10.3	9.2
82.5°	8.0	8.0	8.0	8.0	8.0	8.0	6.9	6.9	6.9	6.9	5.7
85°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
87.5°	0.0	0.0	1.1	1.1	1.1	1.1	1.1	2.3	2.3	2.3	3.4
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: P179853

CATALOG NUMBER: LDA6A65830D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1
2.5°	1869.8	1835.3	1833.0	1782.4	1750.2	1723.8	1704.2	1680.1	1626.0	1596.1	1574.3
5°	2140.1	2068.8	2032.0	1940.0	1889.4	1844.5	1789.3	1731.8	1643.3	1581.2	1530.6
7.5°	2420.7	2302.2	2224.0	2087.2	2018.2	1948.0	1854.9	1761.7	1641.0	1547.8	1470.8
10°	2681.7	2513.8	2389.6	2205.6	2115.9	2023.9	1892.8	1767.5	1616.8	1497.2	1396.0
12.5°	2938.1	2717.3	2546.0	2312.6	2203.3	2089.5	1921.6	1764.0	1586.9	1443.2	1324.7
15°	3183.1	2905.9	2687.4	2405.7	2278.1	2141.2	1940.0	1753.7	1552.4	1389.1	1254.6
17.5°	3378.6	3049.7	2787.5	2463.2	2319.5	2164.2	1933.1	1723.8	1505.3	1331.6	1184.5
20°	3513.1	3141.7	2842.7	2486.2	2328.7	2161.9	1906.6	1682.4	1455.8	1275.3	1125.8
22.5°	3585.6	3183.1	2857.6	2479.3	2314.9	2140.1	1874.4	1644.4	1416.7	1236.2	1093.6
25°	3612.0	3186.5	2841.5	2449.4	2283.8	2105.6	1836.5	1608.8	1385.7	1210.9	1077.5
27.5°	3581.0	3138.2	2782.9	2387.3	2219.4	2043.5	1775.5	1558.2	1339.7	1174.1	1048.8
30°	3475.2	3025.5	2667.9	2276.9	2112.5	1943.4	1678.9	1465.0	1264.9	1108.6	989.0
32.5°	3307.3	2859.9	2505.7	2125.1	1966.4	1804.3	1551.3	1347.7	1161.5	1014.3	907.3
35°	3099.1	2662.1	2317.2	1948.0	1798.5	1645.6	1405.2	1213.2	1038.4	906.2	801.5
37.5°	2863.4	2442.5	2109.0	1769.8	1618.0	1474.2	1240.8	1076.4	908.5	787.7	692.3
40°	2598.9	2190.7	1887.1	1557.0	1423.6	1292.5	1076.4	926.9	773.9	667.0	584.2
42.5°	2316.0	1935.4	1654.8	1358.1	1224.7	1105.1	910.8	776.2	640.5	552.0	486.4
45°	2015.9	1680.1	1411.0	1145.4	1024.6	921.1	744.0	622.1	523.2	455.4	405.9
47.5°	1701.9	1405.2	1166.1	934.9	828.0	738.3	595.7	502.5	424.3	374.9	336.9
50°	1385.7	1121.2	931.5	734.8	642.8	571.5	465.7	401.3	343.8	305.9	277.1
52.5°	1083.3	867.1	713.0	554.3	484.1	434.7	363.4	318.5	274.8	246.1	224.2
55°	800.4	653.2	520.9	402.5	361.1	330.0	279.4	247.2	216.2	194.3	178.2
57.5°	578.4	468.0	371.4	295.5	267.9	247.2	210.4	188.6	166.7	150.6	138.0
60°	405.9	323.1	262.2	216.2	196.6	182.8	156.4	142.6	126.5	112.7	100.0
62.5°	266.8	217.3	182.8	152.9	141.4	131.1	112.7	102.3	88.5	79.3	67.8
65°	173.6	142.6	121.9	102.3	93.1	88.5	75.9	67.8	58.6	50.6	43.7
67.5°	105.8	88.5	77.0	64.4	59.8	55.2	47.1	41.4	35.6	29.9	26.4
70°	58.6	51.7	44.8	37.9	34.5	32.2	27.6	25.3	20.7	18.4	14.9
72.5°	34.5	29.9	26.4	21.8	20.7	19.5	16.1	14.9	12.6	11.5	10.3
75°	20.7	17.2	16.1	13.8	12.6	12.6	11.5	10.3	9.2	9.2	8.0
77.5°	12.6	11.5	10.3	9.2	9.2	9.2	8.0	8.0	8.0	6.9	6.9
80°	8.0	8.0	8.0	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
82.5°	5.7	5.7	5.7	4.6	5.7	4.6	5.7	5.7	5.7	5.7	5.7
85°	3.4	3.4	4.6	4.6	4.6	4.6	4.6	5.7	5.7	5.7	5.7
87.5°	3.4	3.4	4.6	4.6	4.6	4.6	4.6	5.7	5.7	5.7	4.6
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: P179853

CATALOG NUMBER: LDA6A65830D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1
2.5°	1549.0	1506.4	1475.4	1452.4	1460.4	1420.2	1407.5	1363.8	1347.7	1347.7	1324.7
5°	1478.8	1411.0	1358.1	1324.7	1322.4	1264.9	1235.0	1179.9	1150.0	1128.1	1106.3
7.5°	1394.9	1307.5	1237.3	1197.1	1185.6	1117.8	1077.5	1022.3	977.5	948.7	922.3
10°	1305.2	1200.6	1121.2	1075.2	1058.0	984.4	931.5	880.9	832.6	802.7	775.1
12.5°	1219.0	1105.1	1017.7	970.6	948.7	872.8	818.8	765.9	719.9	688.8	661.2
15°	1139.6	1018.9	926.9	879.7	855.6	780.8	726.8	675.0	630.2	601.4	576.1
17.5°	1064.9	941.8	849.8	803.8	777.4	708.4	656.6	606.0	565.8	539.3	516.3
20°	1008.5	886.6	801.5	761.3	734.8	670.4	625.6	581.9	548.5	529.0	507.1
22.5°	984.4	871.7	799.2	762.4	744.0	692.3	661.2	630.2	608.3	604.9	591.1
25°	980.9	882.0	822.2	791.2	779.7	740.6	722.2	702.6	686.5	691.1	693.4
27.5°	966.0	874.0	824.5	798.1	788.9	756.7	742.9	724.5	713.0	718.7	721.0
30°	914.2	829.1	783.1	761.3	752.1	719.9	708.4	687.7	678.5	679.6	678.5
32.5°	833.7	753.2	710.7	691.1	680.8	652.0	639.4	621.0	607.2	606.0	603.7
35°	736.0	663.5	624.4	607.2	596.8	572.7	561.2	543.9	527.8	526.7	524.4
37.5°	635.9	571.5	538.2	523.2	514.0	494.5	480.7	469.2	458.8	454.2	453.1
40°	539.3	481.8	457.7	446.2	439.3	418.6	411.7	400.2	392.1	387.5	386.4
42.5°	448.5	408.2	388.7	378.3	372.6	357.6	349.6	340.4	332.3	327.7	326.6
45°	380.6	347.3	328.9	320.8	316.2	302.4	296.7	287.5	280.6	277.1	276.0
47.5°	317.4	290.9	278.3	269.1	267.9	256.4	248.4	241.5	234.6	231.1	230.0
50°	259.9	238.0	227.7	221.9	220.8	209.3	203.5	197.8	192.0	188.6	186.3
52.5°	213.9	193.2	186.3	178.2	177.1	166.7	162.1	156.4	150.6	146.0	142.6
55°	169.0	152.9	146.0	139.1	138.0	126.5	121.9	115.0	109.2	104.6	100.0
57.5°	128.8	116.1	109.2	102.3	101.2	93.1	85.1	79.3	73.6	67.8	64.4
60°	94.3	81.6	73.6	70.1	66.7	58.6	52.9	48.3	43.7	40.2	36.8
62.5°	62.1	52.9	47.1	42.5	40.2	34.5	31.0	27.6	25.3	24.1	23.0
65°	37.9	32.2	27.6	25.3	25.3	21.8	19.5	17.2	16.1	16.1	14.9
67.5°	23.0	19.5	17.2	16.1	14.9	13.8	12.6	12.6	11.5	11.5	10.3
70°	13.8	12.6	11.5	10.3	10.3	10.3	10.3	10.3	9.2	9.2	9.2
72.5°	10.3	9.2	9.2	9.2	9.2	9.2	9.2	9.2	8.0	8.0	8.0
75°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	6.9
77.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
80°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	5.7	5.7	5.7
82.5°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
85°	5.7	5.7	5.7	5.7	5.7	5.7	4.6	4.6	4.6	4.6	4.6
87.5°	5.7	4.6	4.6	4.6	4.6	4.6	3.4	3.4	3.4	3.4	2.3
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: P179853

CATALOG NUMBER: LDA6A65830D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1	1619.1
2.5°	1313.2	1322.4	1308.6	1299.4	1290.2	1297.1	1264.9	1251.1
5°	1085.6	1075.2	1068.3	1060.3	1046.5	1048.8	1021.2	1008.5
7.5°	898.1	891.2	874.0	864.8	851.0	851.0	825.7	815.3
10°	749.8	739.4	723.3	715.3	702.6	692.3	679.6	669.3
12.5°	637.1	625.6	611.8	604.9	592.2	584.2	571.5	573.8
15°	553.1	541.6	529.0	522.1	511.7	503.7	493.3	487.6
17.5°	494.5	484.1	473.8	466.9	458.8	451.9	442.7	441.6
20°	489.9	481.8	476.1	471.5	464.6	460.0	455.4	449.6
22.5°	586.5	587.6	588.8	588.8	589.9	589.9	591.1	579.6
25°	692.3	704.9	704.9	708.4	718.7	718.7	716.4	711.8
27.5°	719.9	732.5	729.1	731.4	741.7	744.0	736.0	737.1
30°	673.9	685.4	678.5	679.6	686.5	686.5	676.2	680.8
32.5°	596.8	603.7	594.5	594.5	600.3	599.1	592.2	592.2
35°	515.2	518.6	510.6	514.0	514.0	510.6	503.7	503.7
37.5°	445.0	446.2	438.1	439.3	439.3	435.8	428.9	428.9
40°	378.3	381.8	374.9	377.2	374.9	371.4	368.0	366.8
42.5°	319.7	322.0	316.2	319.7	318.5	318.5	317.4	318.5
45°	269.1	271.4	266.8	269.1	270.2	269.1	265.6	266.8
47.5°	223.1	225.4	225.4	223.1	221.9	216.2	212.7	212.7
50°	180.5	179.4	178.2	174.8	171.3	167.9	164.4	164.4
52.5°	135.7	133.4	132.2	128.8	127.6	124.2	124.2	120.7
55°	93.1	92.0	92.0	88.5	88.5	85.1	83.9	83.9
57.5°	58.6	56.3	57.5	55.2	54.0	50.6	50.6	49.4
60°	33.3	32.2	32.2	31.0	29.9	27.6	27.6	27.6
62.5°	21.8	20.7	20.7	19.5	19.5	18.4	18.4	17.2
65°	13.8	12.6	12.6	11.5	11.5	10.3	10.3	10.3
67.5°	10.3	9.2	9.2	9.2	9.2	9.2	8.0	8.0
70°	9.2	9.2	8.0	8.0	8.0	8.0	8.0	8.0
72.5°	8.0	8.0	8.0	8.0	6.9	6.9	6.9	6.9
75°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
77.5°	6.9	5.7	5.7	5.7	5.7	5.7	5.7	5.7
80°	5.7	5.7	5.7	5.7	5.7	5.7	4.6	4.6
82.5°	5.7	4.6	4.6	4.6	4.6	4.6	4.6	4.6
85°	4.6	3.4	3.4	3.4	3.4	3.4	3.4	3.4
87.5°	2.3	2.3	2.3	2.3	1.1	1.1	1.1	1.1
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)