

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: P179851

Luminaire Tested: **LDA6A55940D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179851
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: LDA6A55940D010TE LARH40FL 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 40° Flood
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3813.9 lumens
Efficiency: N/A
Efficacy: 62.5 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

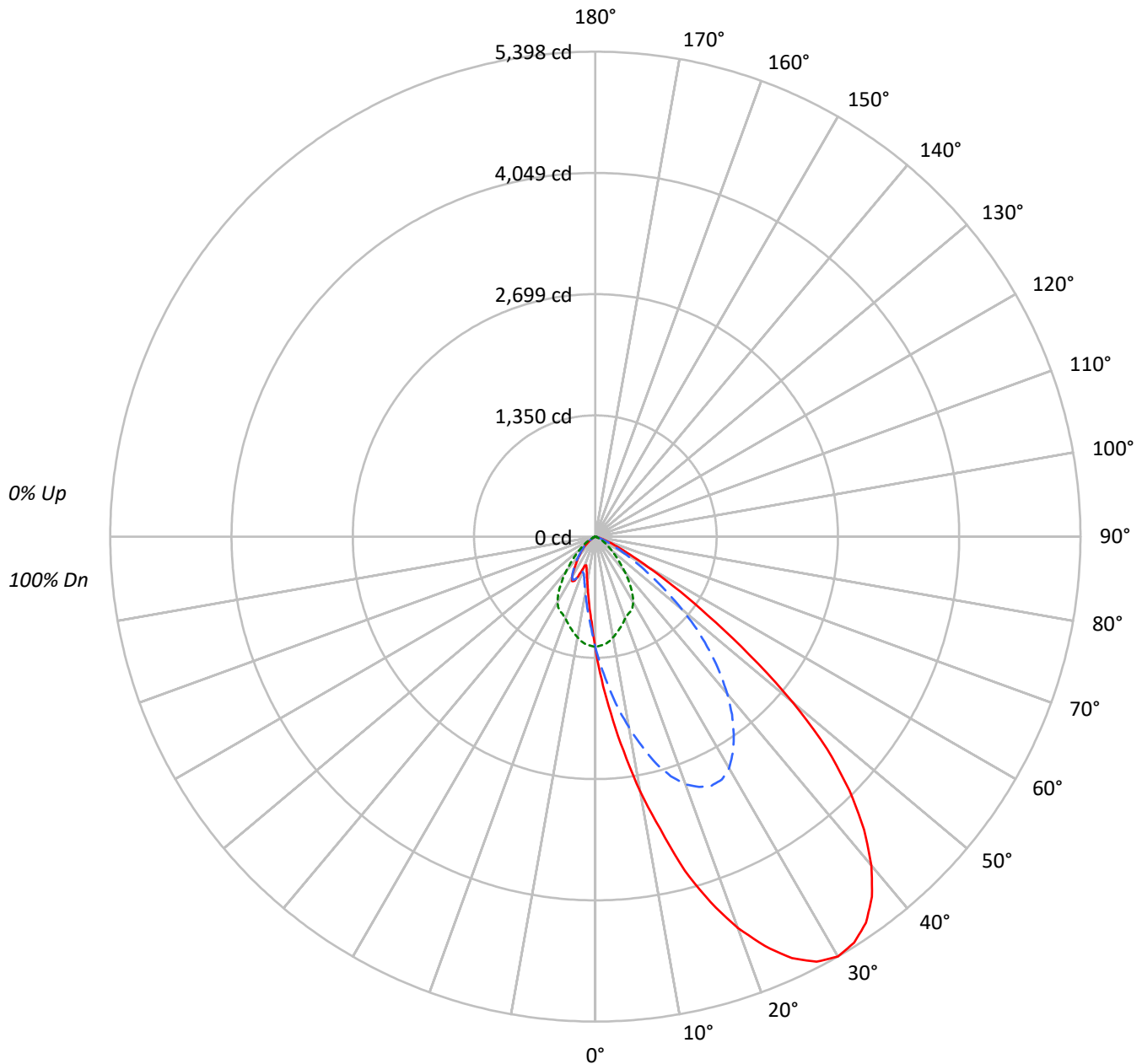
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	108	105	102	109	106	103	101	102	100	97		98	96	94		95
2	104	98	92	88	102	96	91	87	92	88	85		89	86	83		86
3	96	88	81	76	94	86	80	76	84	78	74		81	77	73		79
4	89	79	72	67	87	78	71	66	76	70	65		74	69	64		72
5	83	72	64	59	81	71	64	58	69	63	58		67	61	57		65
6	77	65	58	52	75	64	57	52	63	56	51		61	55	51		60
7	72	60	52	46	70	59	51	46	57	51	46		56	50	46		55
8	67	55	47	42	65	54	47	41	53	46	41		51	45	41		50
9	62	50	43	38	61	50	42	37	48	42	37		47	41	37		46
10	58	46	39	34	57	46	39	34	45	38	34		44	38	34		43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	67495	67495	67495
5°	108463	66162	42202
10°	160384	63376	28328
15°	218560	59949	21044
20°	270317	56571	19946
25°	313173	55697	32742
30°	341685	53356	32771
35°	351172	46110	25632
40°	341976	36297	19959
45°	310079	26848	15730
50°	244308	19837	10661
55°	145667	14126	6098
60°	74490	9396	2302
65°	35620	4994	1025
70°	16814	2244	978
75°	6863	1483	1101
80°	3315	1642	1105
85°	1635	2768	1635



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.4	3.3
10°-20°	446.5	11.7
20°-30°	840.5	22.0
30°-40°	1023.5	26.8
40°-50°	851.9	22.3
50°-60°	408.0	10.7
60°-70°	98.0	2.6
70°-80°	15.4	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°	1413.4	37.1
0°-40°	2436.9	63.9
0°-60°	3696.8	96.9
0°-90°	3813.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3813.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1231	1231	1231	1231	1231	
5°	1971	1672	1202	874	767	216
15°	3851	2616	1056	479	371	1104
25°	5178	3058	921	522	541	2378
35°	5247	2685	689	401	383	3251
45°	4000	1795	346	213	203	3029
55°	1524	741	148	83	64	1436
65°	275	160	38	12	8	314
75°	32	17	7	6	5	44
85°	3	3	4	4	3	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°	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2
2.5°	1592.3	1536.4	1553.9	1550.4	1546.9	1528.5	1515.4	1504.0	1475.2	1475.2	1438.4
5°	1971.0	1905.4	1922.0	1909.7	1894.0	1866.0	1840.7	1811.8	1758.5	1735.7	1671.9
7.5°	2403.8	2329.5	2344.3	2319.9	2286.6	2249.0	2207.9	2153.7	2068.9	2017.3	1918.5
10°	2881.2	2775.4	2784.2	2747.5	2692.4	2641.6	2602.3	2499.1	2378.4	2292.7	2154.6
12.5°	3333.3	3240.6	3243.3	3191.7	3112.1	3050.0	2990.5	2854.1	2693.2	2570.8	2388.9
15°	3851.0	3737.3	3710.2	3640.2	3536.2	3460.1	3378.8	3206.5	3004.5	2842.8	2616.3
17.5°	4268.1	4150.9	4133.4	4067.8	3919.2	3827.4	3725.1	3530.9	3274.7	3073.6	2795.5
20°	4633.6	4517.3	4487.6	4402.7	4232.2	4127.3	4004.0	3774.9	3495.1	3247.6	2933.7
22.5°	4932.6	4805.0	4763.0	4658.1	4468.3	4350.3	4199.9	3949.8	3637.6	3361.3	3015.9
25°	5177.5	5032.3	4979.0	4860.1	4646.7	4516.4	4351.1	4071.3	3731.2	3426.0	3057.9
27.5°	5334.0	5188.9	5130.3	4993.9	4754.3	4614.4	4434.2	4131.7	3764.4	3434.8	3049.1
30°	5397.8	5247.4	5181.0	5026.2	4768.3	4620.5	4432.5	4105.4	3721.6	3371.8	2975.7
32.5°	5358.5	5210.7	5136.4	4968.5	4700.0	4540.9	4352.9	4004.0	3608.8	3246.7	2848.0
35°	5247.4	5101.4	5024.5	4845.2	4565.4	4399.2	4212.1	3851.0	3451.4	3081.5	2685.4
37.5°	5055.9	4917.8	4829.5	4652.0	4370.4	4200.7	4015.4	3650.7	3242.4	2894.4	2497.4
40°	4778.7	4647.6	4560.1	4370.4	4104.6	3933.2	3758.3	3388.4	3003.7	2664.4	2281.4
42.5°	4425.5	4304.8	4220.9	4036.4	3782.8	3614.0	3454.0	3099.0	2732.6	2409.9	2047.9
45°	3999.6	3894.7	3812.5	3659.5	3409.4	3249.4	3105.1	2783.3	2427.4	2131.0	1795.2
47.5°	3498.6	3412.0	3332.4	3193.4	2967.8	2816.5	2697.6	2402.9	2101.2	1822.3	1536.4
50°	2864.6	2802.5	2740.5	2596.2	2437.0	2305.0	2218.4	1956.1	1712.1	1493.5	1256.6
52.5°	2159.8	2122.2	2078.5	1975.3	1868.7	1791.7	1714.8	1515.4	1332.6	1170.0	985.5
55°	1524.1	1504.9	1470.8	1428.8	1347.5	1295.0	1228.6	1127.1	985.5	876.2	740.6
57.5°	1030.1	1024.8	1001.2	975.9	931.3	913.8	857.8	792.2	712.7	631.3	535.1
60°	679.4	668.1	662.8	648.8	614.7	600.7	580.6	538.6	489.7	432.8	373.4
62.5°	437.2	431.1	426.7	420.6	399.6	399.6	379.5	360.3	323.5	288.6	250.1
65°	274.6	269.3	268.4	264.1	256.2	252.7	237.8	223.9	206.4	187.1	160.0
67.5°	176.6	168.8	164.4	161.8	156.5	150.4	145.2	139.0	125.0	113.7	96.2
70°	104.9	97.9	97.1	97.9	91.8	90.9	85.7	81.3	71.7	64.7	54.2
72.5°	59.5	56.0	55.1	55.1	51.6	50.7	47.2	44.6	39.3	34.1	29.7
75°	32.4	29.7	29.7	29.7	28.0	27.1	25.4	24.5	21.0	19.2	16.6
77.5°	18.4	17.5	17.5	16.6	15.7	14.9	14.0	14.0	12.2	11.4	10.5
80°	10.5	10.5	10.5	10.5	9.6	9.6	8.7	8.7	7.9	7.9	7.0
82.5°	6.1	6.1	6.1	6.1	6.1	6.1	5.2	5.2	5.2	5.2	4.4
85°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
87.5°	0.0	0.0	0.9	0.9	0.9	0.9	0.9	1.7	1.7	1.7	2.6
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°	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2
2.5°	1421.8	1395.6	1393.8	1355.4	1330.9	1310.8	1295.9	1277.5	1236.4	1213.7	1197.1
5°	1627.3	1573.1	1545.1	1475.2	1436.7	1402.6	1360.6	1316.9	1249.6	1202.3	1163.9
7.5°	1840.7	1750.6	1691.1	1587.1	1534.6	1481.3	1410.5	1339.6	1247.8	1177.0	1118.4
10°	2039.2	1911.5	1817.1	1677.2	1608.9	1539.0	1439.3	1344.0	1229.4	1138.5	1061.6
12.5°	2234.2	2066.3	1936.0	1758.5	1675.4	1588.8	1461.2	1341.4	1206.7	1097.4	1007.3
15°	2420.4	2209.7	2043.5	1829.3	1732.2	1628.2	1475.2	1333.5	1180.5	1056.3	954.0
17.5°	2569.1	2319.0	2119.6	1873.0	1763.7	1645.7	1469.9	1310.8	1144.6	1012.6	900.7
20°	2671.4	2388.9	2161.6	1890.5	1770.7	1643.9	1449.8	1279.3	1107.0	969.7	856.1
22.5°	2726.5	2420.4	2173.0	1885.3	1760.2	1627.3	1425.3	1250.4	1077.3	940.0	831.6
25°	2746.6	2423.0	2160.7	1862.5	1736.6	1601.1	1396.5	1223.3	1053.7	920.8	819.3
27.5°	2723.0	2386.3	2116.1	1815.3	1687.6	1553.9	1350.1	1184.8	1018.7	892.8	797.5
30°	2642.5	2300.6	2028.7	1731.4	1606.3	1477.8	1276.7	1114.0	961.9	842.9	752.0
32.5°	2514.9	2174.7	1905.4	1615.9	1495.3	1372.0	1179.6	1024.8	883.2	771.2	689.9
35°	2356.6	2024.3	1762.0	1481.3	1367.6	1251.3	1068.6	922.5	789.6	689.0	609.5
37.5°	2177.3	1857.3	1603.7	1345.7	1230.3	1121.0	943.5	818.5	690.8	599.0	526.4
40°	1976.2	1665.8	1434.9	1184.0	1082.5	982.9	818.5	704.8	588.5	507.2	444.2
42.5°	1761.1	1471.7	1258.3	1032.7	931.3	840.3	692.5	590.2	487.1	419.7	369.9
45°	1532.9	1277.5	1072.9	870.9	779.1	700.4	565.8	473.1	397.9	346.3	308.7
47.5°	1294.2	1068.6	886.7	710.9	629.6	561.4	453.0	382.1	322.7	285.1	256.2
50°	1053.7	852.6	708.3	558.8	488.8	434.6	354.1	305.2	261.5	232.6	210.7
52.5°	823.7	659.3	542.1	421.5	368.1	330.5	276.3	242.2	209.0	187.1	170.5
55°	608.6	496.7	396.1	306.0	274.6	251.0	212.5	188.0	164.4	147.8	135.5
57.5°	439.8	355.9	282.4	224.7	203.7	188.0	160.0	143.4	126.8	114.5	104.9
60°	308.7	245.7	199.4	164.4	149.5	139.0	118.9	108.4	96.2	85.7	76.1
62.5°	202.9	165.3	139.0	116.3	107.6	99.7	85.7	77.8	67.3	60.3	51.6
65°	132.0	108.4	92.7	77.8	70.8	67.3	57.7	51.6	44.6	38.5	33.2
67.5°	80.4	67.3	58.6	49.0	45.5	42.0	35.9	31.5	27.1	22.7	20.1
70°	44.6	39.3	34.1	28.9	26.2	24.5	21.0	19.2	15.7	14.0	11.4
72.5°	26.2	22.7	20.1	16.6	15.7	14.9	12.2	11.4	9.6	8.7	7.9
75°	15.7	13.1	12.2	10.5	9.6	9.6	8.7	7.9	7.0	7.0	6.1
77.5°	9.6	8.7	7.9	7.0	7.0	7.0	6.1	6.1	6.1	5.2	5.2
80°	6.1	6.1	6.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
82.5°	4.4	4.4	4.4	3.5	4.4	3.5	4.4	4.4	4.4	4.4	4.4
85°	2.6	2.6	3.5	3.5	3.5	3.5	3.5	4.4	4.4	4.4	4.4
87.5°	2.6	2.6	3.5	3.5	3.5	3.5	3.5	4.4	4.4	4.4	3.5
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°	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2
2.5°	1177.9	1145.5	1121.9	1104.4	1110.5	1079.9	1070.3	1037.1	1024.8	1024.8	1007.3
5°	1124.5	1072.9	1032.7	1007.3	1005.6	961.9	939.1	897.2	874.4	857.8	841.2
7.5°	1060.7	994.2	940.9	910.3	901.5	849.9	819.3	777.4	743.3	721.4	701.3
10°	992.5	912.9	852.6	817.6	804.5	748.5	708.3	669.8	633.1	610.4	589.4
12.5°	926.9	840.3	773.9	738.0	721.4	663.7	622.6	582.4	547.4	523.8	502.8
15°	866.6	774.7	704.8	668.9	650.6	593.7	552.6	513.3	479.2	457.3	438.1
17.5°	809.7	716.2	646.2	611.2	591.1	538.6	499.3	460.8	430.2	410.1	392.6
20°	766.9	674.2	609.5	578.9	558.8	509.8	475.7	442.5	417.1	402.2	385.6
22.5°	748.5	662.8	607.7	579.7	565.8	526.4	502.8	479.2	462.6	459.9	449.5
25°	745.9	670.7	625.2	601.6	592.9	563.1	549.1	534.3	522.0	525.5	527.3
27.5°	734.5	664.6	627.0	606.9	599.9	575.4	564.9	550.9	542.1	546.5	548.3
30°	695.2	630.5	595.5	578.9	571.9	547.4	538.6	522.9	515.9	516.8	515.9
32.5°	634.0	572.7	540.4	525.5	517.7	495.8	486.2	472.2	461.7	460.8	459.1
35°	559.6	504.5	474.8	461.7	453.8	435.5	426.7	413.6	401.4	400.5	398.7
37.5°	483.6	434.6	409.2	397.9	390.9	376.0	365.5	356.8	348.9	345.4	344.5
40°	410.1	366.4	348.0	339.3	334.0	318.3	313.0	304.3	298.2	294.7	293.8
42.5°	341.0	310.4	295.6	287.7	283.3	271.9	265.8	258.8	252.7	249.2	248.3
45°	289.4	264.1	250.1	244.0	240.5	230.0	225.6	218.6	213.4	210.7	209.9
47.5°	241.3	221.2	211.6	204.6	203.7	195.0	188.9	183.6	178.4	175.8	174.9
50°	197.6	181.0	173.1	168.8	167.9	159.1	154.8	150.4	146.0	143.4	141.7
52.5°	162.6	146.9	141.7	135.5	134.7	126.8	123.3	118.9	114.5	111.1	108.4
55°	128.5	116.3	111.1	105.8	104.9	96.2	92.7	87.4	83.1	79.6	76.1
57.5°	97.9	88.3	83.1	77.8	76.9	70.8	64.7	60.3	56.0	51.6	49.0
60°	71.7	62.1	56.0	53.3	50.7	44.6	40.2	36.7	33.2	30.6	28.0
62.5°	47.2	40.2	35.9	32.4	30.6	26.2	23.6	21.0	19.2	18.4	17.5
65°	28.9	24.5	21.0	19.2	19.2	16.6	14.9	13.1	12.2	12.2	11.4
67.5°	17.5	14.9	13.1	12.2	11.4	10.5	9.6	9.6	8.7	8.7	7.9
70°	10.5	9.6	8.7	7.9	7.9	7.9	7.9	7.9	7.0	7.0	7.0
72.5°	7.9	7.0	7.0	7.0	7.0	7.0	7.0	7.0	6.1	6.1	6.1
75°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	5.2
77.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
80°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	4.4	4.4	4.4
82.5°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
85°	4.4	4.4	4.4	4.4	4.4	4.4	3.5	3.5	3.5	3.5	3.5
87.5°	4.4	3.5	3.5	3.5	3.5	3.5	2.6	2.6	2.6	2.6	1.7
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: P179851

CATALOG NUMBER: LDA6A55940D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2	1231.2
2.5°	998.6	1005.6	995.1	988.1	981.1	986.4	961.9	951.4
5°	825.5	817.6	812.3	806.2	795.7	797.5	776.5	766.9
7.5°	682.9	677.7	664.6	657.6	647.1	647.1	627.8	620.0
10°	570.1	562.3	550.0	543.9	534.3	526.4	516.8	508.9
12.5°	484.4	475.7	465.2	459.9	450.3	444.2	434.6	436.3
15°	420.6	411.9	402.2	397.0	389.1	383.0	375.1	370.8
17.5°	376.0	368.1	360.3	355.0	348.9	343.6	336.7	335.8
20°	372.5	366.4	362.0	358.5	353.3	349.8	346.3	341.9
22.5°	446.0	446.8	447.7	447.7	448.6	448.6	449.5	440.7
25°	526.4	536.0	536.0	538.6	546.5	546.5	544.8	541.3
27.5°	547.4	557.0	554.4	556.1	564.0	565.8	559.6	560.5
30°	512.4	521.2	515.9	516.8	522.0	522.0	514.2	517.7
32.5°	453.8	459.1	452.1	452.1	456.5	455.6	450.3	450.3
35°	391.7	394.4	388.2	390.9	390.9	388.2	383.0	383.0
37.5°	338.4	339.3	333.2	334.0	334.0	331.4	326.2	326.2
40°	287.7	290.3	285.1	286.8	285.1	282.4	279.8	278.9
42.5°	243.1	244.8	240.5	243.1	242.2	242.2	241.3	242.2
45°	204.6	206.4	202.9	204.6	205.5	204.6	202.0	202.9
47.5°	169.6	171.4	171.4	169.6	168.8	164.4	161.8	161.8
50°	137.3	136.4	135.5	132.9	130.3	127.7	125.0	125.0
52.5°	103.2	101.4	100.6	97.9	97.1	94.4	94.4	91.8
55°	70.8	70.0	70.0	67.3	67.3	64.7	63.8	63.8
57.5°	44.6	42.8	43.7	42.0	41.1	38.5	38.5	37.6
60°	25.4	24.5	24.5	23.6	22.7	21.0	21.0	21.0
62.5°	16.6	15.7	15.7	14.9	14.9	14.0	14.0	13.1
65°	10.5	9.6	9.6	8.7	8.7	7.9	7.9	7.9
67.5°	7.9	7.0	7.0	7.0	7.0	7.0	6.1	6.1
70°	7.0	7.0	6.1	6.1	6.1	6.1	6.1	6.1
72.5°	6.1	6.1	6.1	6.1	5.2	5.2	5.2	5.2
75°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
77.5°	5.2	4.4	4.4	4.4	4.4	4.4	4.4	4.4
80°	4.4	4.4	4.4	4.4	4.4	4.4	3.5	3.5
82.5°	4.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5
85°	3.5	2.6	2.6	2.6	2.6	2.6	2.6	2.6
87.5°	1.7	1.7	1.7	1.7	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)