

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: P179849

Luminaire Tested: **LDA6A55930D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179849
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: LDA6A55930D010TE LARH40FL 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 40° Flood
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3493.5 lumens
Efficiency: N/A
Efficacy: 57.3 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

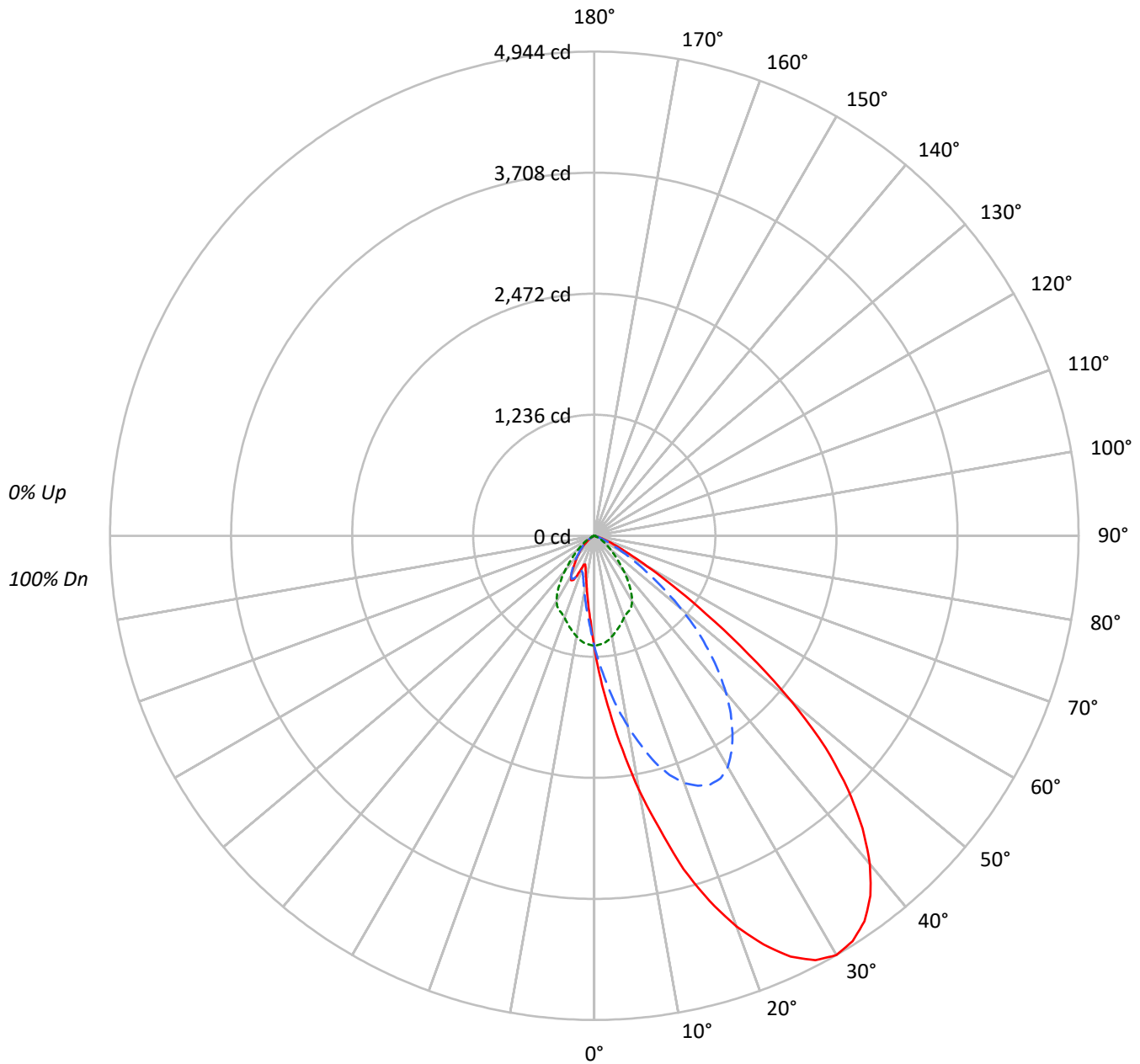
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	61826	61826	61826
5°	99350	60610	38658
10°	146913	58054	25951
15°	200200	54915	19274
20°	247612	51822	18272
25°	286867	51015	29990
30°	312991	48875	30017
35°	321679	42242	23477
40°	313258	33248	18284
45°	284037	24592	14405
50°	223788	18174	9765
55°	133434	12941	5591
60°	68240	8607	2105
65°	32623	4566	934
70°	15403	2052	898
75°	6270	1356	1017
80°	3031	1515	1010
85°	1510	2516	1510



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.8	3.3
10°-20°	409.0	11.7
20°-30°	769.9	22.0
30°-40°	937.5	26.8
40°-50°	780.4	22.3
50°-60°	373.8	10.7
60°-70°	89.8	2.6
70°-80°	14.1	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°	1294.7	37.1
0°-40°	2232.2	63.9
0°-60°	3386.3	96.9
0°-90°	3493.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3493.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1128	1128	1128	1128	1128	
5°	1805	1532	1101	801	702	198
15°	3528	2396	968	439	340	1011
25°	4743	2801	843	478	496	2178
35°	4807	2460	631	368	351	2978
45°	3664	1644	317	195	186	2774
55°	1396	678	135	76	58	1315
65°	252	147	35	11	7	288
75°	30	15	6	6	5	40
85°	2	2	4	3	2	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°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8
2.5°	1458.6	1407.3	1423.3	1420.1	1416.9	1400.1	1388.1	1377.7	1351.3	1351.3	1317.6
5°	1805.4	1745.3	1760.6	1749.3	1734.9	1709.3	1686.1	1659.6	1610.8	1590.0	1531.5
7.5°	2201.9	2133.8	2147.4	2125.0	2094.6	2060.1	2022.5	1972.8	1895.1	1847.9	1757.4
10°	2639.2	2542.3	2550.3	2516.7	2466.2	2419.8	2383.7	2289.2	2178.7	2100.2	1973.6
12.5°	3053.4	2968.4	2970.8	2923.6	2850.7	2793.8	2739.4	2614.4	2467.0	2354.9	2188.3
15°	3527.5	3423.4	3398.6	3334.5	3239.2	3169.5	3095.0	2937.2	2752.2	2604.0	2396.5
17.5°	3909.6	3802.3	3786.3	3726.2	3590.0	3505.9	3412.2	3234.4	2999.7	2815.5	2560.7
20°	4244.4	4137.9	4110.7	4033.0	3876.8	3780.6	3667.7	3457.8	3201.5	2974.9	2687.3
22.5°	4518.4	4401.4	4363.0	4266.8	4093.0	3984.9	3847.1	3618.0	3332.1	3079.0	2762.6
25°	4742.6	4609.7	4560.8	4451.9	4256.4	4137.1	3985.7	3729.4	3417.8	3138.3	2801.0
27.5°	4886.0	4753.0	4699.4	4574.4	4355.0	4226.8	4061.8	3784.6	3448.2	3146.3	2793.0
30°	4944.5	4806.7	4745.8	4604.1	4367.8	4232.4	4060.2	3760.6	3409.0	3088.6	2725.7
32.5°	4908.4	4773.1	4705.0	4551.2	4305.3	4159.5	3987.3	3667.7	3305.7	2974.1	2608.8
35°	4806.7	4672.9	4602.5	4438.3	4181.9	4029.8	3858.3	3527.5	3161.5	2822.7	2459.8
37.5°	4631.3	4504.7	4423.8	4261.2	4003.3	3847.9	3678.1	3344.1	2970.0	2651.3	2287.6
40°	4377.4	4257.2	4177.1	4003.3	3759.8	3602.8	3442.6	3103.8	2751.4	2440.6	2089.8
42.5°	4053.8	3943.2	3866.3	3697.3	3465.1	3310.5	3163.9	2838.7	2503.1	2207.5	1875.9
45°	3663.7	3567.6	3492.3	3352.1	3123.0	2976.5	2844.3	2549.5	2223.5	1952.0	1644.4
47.5°	3204.7	3125.4	3052.6	2925.2	2718.5	2580.0	2471.0	2201.1	1924.8	1669.3	1407.3
50°	2624.0	2567.2	2510.3	2378.1	2232.3	2111.4	2032.1	1791.8	1568.3	1368.1	1151.0
52.5°	1978.4	1944.0	1903.9	1809.4	1711.7	1641.2	1570.7	1388.1	1220.7	1071.7	902.7
55°	1396.1	1378.5	1347.3	1308.8	1234.3	1186.3	1125.4	1032.5	902.7	802.6	678.4
57.5°	943.6	938.8	917.1	893.9	853.0	837.0	785.8	725.7	652.8	578.3	490.2
60°	622.4	612.0	607.1	594.3	563.1	550.3	531.9	493.4	448.6	396.5	342.0
62.5°	400.5	394.9	390.9	385.3	366.0	366.0	347.6	330.0	296.4	264.3	229.1
65°	251.5	246.7	245.9	241.9	234.7	231.5	217.9	205.1	189.0	171.4	146.6
67.5°	161.8	154.6	150.6	148.2	143.4	137.8	133.0	127.4	114.5	104.1	88.1
70°	96.1	89.7	88.9	89.7	84.1	83.3	78.5	74.5	65.7	59.3	49.7
72.5°	54.5	51.3	50.5	50.5	47.3	46.5	43.3	40.9	36.0	31.2	27.2
75°	29.6	27.2	27.2	27.2	25.6	24.8	23.2	22.4	19.2	17.6	15.2
77.5°	16.8	16.0	16.0	15.2	14.4	13.6	12.8	12.8	11.2	10.4	9.6
80°	9.6	9.6	9.6	9.6	8.8	8.8	8.0	8.0	7.2	7.2	6.4
82.5°	5.6	5.6	5.6	5.6	5.6	5.6	4.8	4.8	4.8	4.8	4.0
85°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
87.5°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	1.6	1.6	1.6	2.4
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°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8
2.5°	1302.4	1278.4	1276.8	1241.5	1219.1	1200.7	1187.1	1170.2	1132.6	1111.8	1096.5
5°	1490.6	1441.0	1415.3	1351.3	1316.0	1284.8	1246.3	1206.3	1144.6	1101.4	1066.1
7.5°	1686.1	1603.6	1549.1	1453.8	1405.7	1356.9	1292.0	1227.1	1143.0	1078.1	1024.5
10°	1867.9	1751.0	1664.4	1536.3	1473.8	1409.7	1318.4	1231.1	1126.2	1042.9	972.4
12.5°	2046.5	1892.7	1773.4	1610.8	1534.7	1455.4	1338.4	1228.7	1105.4	1005.2	922.7
15°	2217.1	2024.1	1871.9	1675.7	1586.7	1491.4	1351.3	1221.5	1081.3	967.6	873.9
17.5°	2353.3	2124.2	1941.6	1715.7	1615.6	1507.5	1346.5	1200.7	1048.5	927.5	825.0
20°	2447.0	2188.3	1980.0	1731.7	1622.0	1505.8	1328.0	1171.8	1014.0	888.3	784.2
22.5°	2497.5	2217.1	1990.4	1726.9	1612.4	1490.6	1305.6	1145.4	986.8	861.1	761.7
25°	2515.9	2219.5	1979.2	1706.1	1590.8	1466.6	1279.2	1120.6	965.2	843.4	750.5
27.5°	2494.3	2185.9	1938.4	1662.8	1545.9	1423.3	1236.7	1085.3	933.1	817.8	730.5
30°	2420.6	2107.4	1858.3	1585.9	1471.4	1353.7	1169.4	1020.5	881.1	772.1	688.8
32.5°	2303.6	1992.0	1745.3	1480.2	1369.7	1256.7	1080.5	938.8	809.0	706.5	632.0
35°	2158.7	1854.3	1614.0	1356.9	1252.7	1146.2	978.8	845.0	723.3	631.2	558.3
37.5°	1994.5	1701.3	1469.0	1232.7	1127.0	1026.9	864.3	749.7	632.8	548.7	482.2
40°	1810.2	1525.9	1314.4	1084.5	991.6	900.3	749.7	645.6	539.1	464.6	406.9
42.5°	1613.2	1348.1	1152.6	946.0	853.0	769.7	634.4	540.7	446.1	384.5	338.8
45°	1404.1	1170.2	982.8	797.8	713.7	641.6	518.2	433.3	364.4	317.2	282.7
47.5°	1185.5	978.8	812.2	651.2	576.7	514.2	414.9	350.0	295.6	261.1	234.7
50°	965.2	781.0	648.8	511.8	447.8	398.1	324.4	279.5	239.5	213.1	193.0
52.5°	754.5	603.9	496.6	386.1	337.2	302.8	253.1	221.9	191.4	171.4	156.2
55°	557.5	455.0	362.8	280.3	251.5	229.9	194.6	172.2	150.6	135.4	124.2
57.5°	402.9	326.0	258.7	205.9	186.6	172.2	146.6	131.4	116.1	104.9	96.1
60°	282.7	225.1	182.6	150.6	137.0	127.4	108.9	99.3	88.1	78.5	69.7
62.5°	185.8	151.4	127.4	106.5	98.5	91.3	78.5	71.3	61.7	55.3	47.3
65°	120.9	99.3	84.9	71.3	64.9	61.7	52.9	47.3	40.9	35.2	30.4
67.5°	73.7	61.7	53.7	44.9	41.7	38.4	32.8	28.8	24.8	20.8	18.4
70°	40.9	36.0	31.2	26.4	24.0	22.4	19.2	17.6	14.4	12.8	10.4
72.5°	24.0	20.8	18.4	15.2	14.4	13.6	11.2	10.4	8.8	8.0	7.2
75°	14.4	12.0	11.2	9.6	8.8	8.8	8.0	7.2	6.4	6.4	5.6
77.5°	8.8	8.0	7.2	6.4	6.4	6.4	5.6	5.6	5.6	4.8	4.8
80°	5.6	5.6	5.6	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
82.5°	4.0	4.0	4.0	3.2	4.0	3.2	4.0	4.0	4.0	4.0	4.0
85°	2.4	2.4	3.2	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0
87.5°	2.4	2.4	3.2	3.2	3.2	3.2	3.2	4.0	4.0	4.0	3.2
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°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8
2.5°	1078.9	1049.3	1027.7	1011.6	1017.2	989.2	980.4	950.0	938.8	938.8	922.7
5°	1030.1	982.8	946.0	922.7	921.1	881.1	860.3	821.8	801.0	785.8	770.5
7.5°	971.6	910.7	861.9	833.8	825.8	778.6	750.5	712.1	680.8	660.8	642.4
10°	909.1	836.2	781.0	748.9	736.9	685.6	648.8	613.6	579.9	559.1	539.9
12.5°	849.0	769.7	708.9	676.0	660.8	607.9	570.3	533.5	501.4	479.8	460.6
15°	793.8	709.7	645.6	612.8	595.9	543.9	506.2	470.2	438.9	418.9	401.3
17.5°	741.7	656.0	591.9	559.9	541.5	493.4	457.4	422.1	394.1	375.7	359.6
20°	702.5	617.6	558.3	530.3	511.8	467.0	435.7	405.3	382.1	368.5	353.2
22.5°	685.6	607.1	556.7	531.1	518.2	482.2	460.6	438.9	423.7	421.3	411.7
25°	683.2	614.4	572.7	551.1	543.1	515.8	503.0	489.4	478.2	481.4	483.0
27.5°	672.8	608.7	574.3	555.9	549.5	527.0	517.4	504.6	496.6	500.6	502.2
30°	636.8	577.5	545.5	530.3	523.8	501.4	493.4	479.0	472.6	473.4	472.6
32.5°	580.7	524.6	495.0	481.4	474.2	454.2	445.3	432.5	422.9	422.1	420.5
35°	512.6	462.2	434.9	422.9	415.7	398.9	390.9	378.9	367.7	366.9	365.2
37.5°	442.9	398.1	374.9	364.4	358.0	344.4	334.8	326.8	319.6	316.4	315.6
40°	375.7	335.6	318.8	310.8	306.0	291.6	286.8	278.7	273.1	269.9	269.1
42.5°	312.4	284.3	270.7	263.5	259.5	249.1	243.5	237.1	231.5	228.3	227.5
45°	265.1	241.9	229.1	223.5	220.3	210.7	206.7	200.2	195.4	193.0	192.2
47.5°	221.1	202.6	193.8	187.4	186.6	178.6	173.0	168.2	163.4	161.0	160.2
50°	181.0	165.8	158.6	154.6	153.8	145.8	141.8	137.8	133.8	131.4	129.8
52.5°	149.0	134.6	129.8	124.2	123.4	116.1	112.9	108.9	104.9	101.7	99.3
55°	117.7	106.5	101.7	96.9	96.1	88.1	84.9	80.1	76.1	72.9	69.7
57.5°	89.7	80.9	76.1	71.3	70.5	64.9	59.3	55.3	51.3	47.3	44.9
60°	65.7	56.9	51.3	48.9	46.5	40.9	36.8	33.6	30.4	28.0	25.6
62.5°	43.3	36.8	32.8	29.6	28.0	24.0	21.6	19.2	17.6	16.8	16.0
65°	26.4	22.4	19.2	17.6	17.6	15.2	13.6	12.0	11.2	11.2	10.4
67.5°	16.0	13.6	12.0	11.2	10.4	9.6	8.8	8.8	8.0	8.0	7.2
70°	9.6	8.8	8.0	7.2	7.2	7.2	7.2	7.2	6.4	6.4	6.4
72.5°	7.2	6.4	6.4	6.4	6.4	6.4	6.4	6.4	5.6	5.6	5.6
75°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	4.8
77.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
80°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
82.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
85°	4.0	4.0	4.0	4.0	4.0	4.0	3.2	3.2	3.2	3.2	3.2
87.5°	4.0	3.2	3.2	3.2	3.2	3.2	2.4	2.4	2.4	2.4	1.6
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: P179849

CATALOG NUMBER: LDA6A55930D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8	1127.8
2.5°	914.7	921.1	911.5	905.1	898.7	903.5	881.1	871.5
5°	756.1	748.9	744.1	738.5	728.9	730.5	711.3	702.5
7.5°	625.6	620.8	608.7	602.3	592.7	592.7	575.1	567.9
10°	522.2	515.0	503.8	498.2	489.4	482.2	473.4	466.2
12.5°	443.7	435.7	426.1	421.3	412.5	406.9	398.1	399.7
15°	385.3	377.3	368.5	363.6	356.4	350.8	343.6	339.6
17.5°	344.4	337.2	330.0	325.2	319.6	314.8	308.4	307.6
20°	341.2	335.6	331.6	328.4	323.6	320.4	317.2	313.2
22.5°	408.5	409.3	410.1	410.1	410.9	410.9	411.7	403.7
25°	482.2	491.0	491.0	493.4	500.6	500.6	499.0	495.8
27.5°	501.4	510.2	507.8	509.4	516.6	518.2	512.6	513.4
30°	469.4	477.4	472.6	473.4	478.2	478.2	471.0	474.2
32.5°	415.7	420.5	414.1	414.1	418.1	417.3	412.5	412.5
35°	358.8	361.2	355.6	358.0	358.0	355.6	350.8	350.8
37.5°	310.0	310.8	305.2	306.0	306.0	303.6	298.8	298.8
40°	263.5	265.9	261.1	262.7	261.1	258.7	256.3	255.5
42.5°	222.7	224.3	220.3	222.7	221.9	221.9	221.1	221.9
45°	187.4	189.0	185.8	187.4	188.2	187.4	185.0	185.8
47.5°	155.4	157.0	157.0	155.4	154.6	150.6	148.2	148.2
50°	125.8	125.0	124.2	121.7	119.3	116.9	114.5	114.5
52.5°	94.5	92.9	92.1	89.7	88.9	86.5	86.5	84.1
55°	64.9	64.1	64.1	61.7	61.7	59.3	58.5	58.5
57.5°	40.9	39.2	40.0	38.4	37.6	35.2	35.2	34.4
60°	23.2	22.4	22.4	21.6	20.8	19.2	19.2	19.2
62.5°	15.2	14.4	14.4	13.6	13.6	12.8	12.8	12.0
65°	9.6	8.8	8.8	8.0	8.0	7.2	7.2	7.2
67.5°	7.2	6.4	6.4	6.4	6.4	6.4	5.6	5.6
70°	6.4	6.4	5.6	5.6	5.6	5.6	5.6	5.6
72.5°	5.6	5.6	5.6	5.6	4.8	4.8	4.8	4.8
75°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
77.5°	4.8	4.0	4.0	4.0	4.0	4.0	4.0	4.0
80°	4.0	4.0	4.0	4.0	4.0	4.0	3.2	3.2
82.5°	4.0	3.2	3.2	3.2	3.2	3.2	3.2	3.2
85°	3.2	2.4	2.4	2.4	2.4	2.4	2.4	2.4
87.5°	1.6	1.6	1.6	1.6	0.8	0.8	0.8	0.8
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)