

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: P179832

Luminaire Tested: **LDA6A55927D010TE LARH30NF 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179832
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: LDA6A55927D010TE LARH30NF 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 30° Narrow Flood
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3084.6 lumens
Efficiency: N/A
Efficacy: 50.6 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

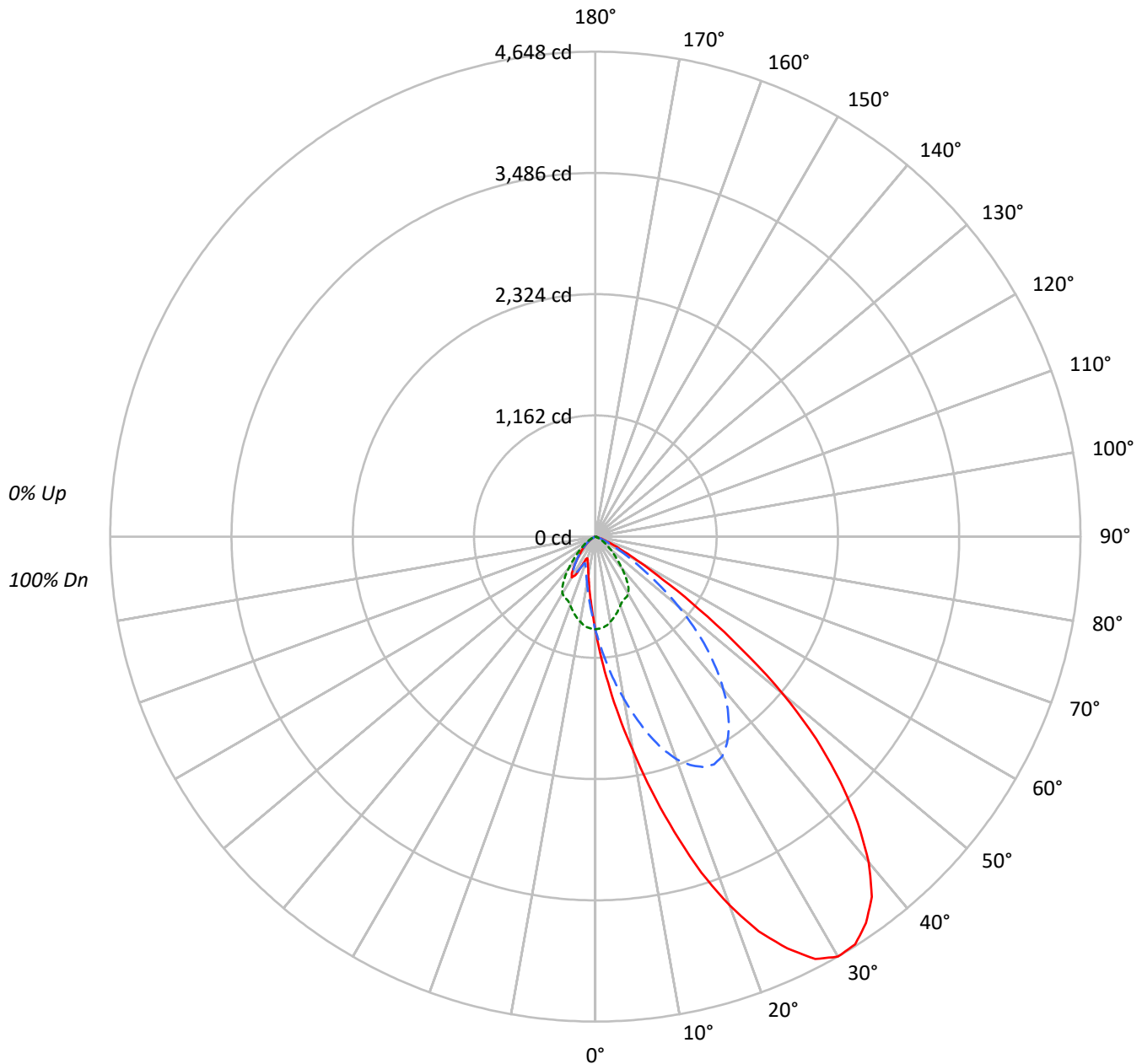
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	48658	48658	48658
5°	77306	48063	31218
10°	115985	46119	20958
15°	166204	43706	15505
20°	219399	40866	12922
25°	263332	39837	18878
30°	294248	39937	28517
35°	302519	35764	24340
40°	291518	28439	18105
45°	256926	21118	13924
50°	200360	15641	9637
55°	115876	11440	6222
60°	54162	7960	2785
65°	25333	4371	1167
70°	11749	1923	833
75°	4914	1271	953
80°	2115	1421	1168
85°	440	2327	1887



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.8	3.0
10°-20°	336.9	10.9
20°-30°	667.0	21.6
30°-40°	862.4	28.0
40°-50°	708.7	23.0
50°-60°	327.6	10.6
60°-70°	74.8	2.4
70°-80°	12.2	0.4
80°-90°	3.1	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°	1095.7	35.5
0°-40°	1958.2	63.5
0°-60°	2994.5	97.1
0°-90°	3084.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3084.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	888	888	888	888	888	
5°	1405	1208	873	632	567	155
15°	2928	1959	770	345	273	855
25°	4354	2437	659	323	312	2005
35°	4520	2230	534	355	364	2799
45°	3314	1506	272	181	180	2522
55°	1212	586	120	77	65	1140
65°	195	120	34	13	9	224
75°	23	14	6	5	4	31
85°	1	2	4	4	3	2
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°	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6
2.5°	1127.1	1109.9	1120.4	1125.6	1098.7	1104.7	1107.7	1086.7	1080.7	1069.5	1036.6
5°	1404.8	1384.6	1392.8	1392.8	1353.1	1355.4	1353.9	1314.2	1292.5	1264.1	1207.9
7.5°	1731.8	1711.6	1713.1	1705.6	1649.5	1645.8	1621.8	1573.2	1530.5	1478.1	1394.3
10°	2083.6	2071.6	2064.1	2045.4	1971.3	1958.6	1923.4	1846.3	1776.0	1695.9	1577.7
12.5°	2496.7	2472.8	2451.1	2421.1	2324.6	2300.6	2251.2	2139.7	2036.4	1924.2	1767.8
15°	2928.5	2909.8	2874.7	2827.5	2704.0	2665.9	2601.5	2451.8	2323.1	2159.2	1958.6
17.5°	3375.3	3340.9	3289.3	3222.7	3073.7	3019.9	2939.8	2748.2	2577.5	2373.2	2130.7
20°	3760.8	3733.8	3662.7	3576.7	3406.0	3334.2	3239.9	3004.9	2796.1	2553.6	2268.4
22.5°	4095.3	4059.4	3971.8	3867.8	3677.0	3587.9	3481.6	3218.9	2964.5	2683.1	2369.5
25°	4353.5	4326.6	4222.6	4101.3	3891.8	3788.5	3671.0	3373.1	3091.0	2781.9	2436.8
27.5°	4563.8	4518.2	4402.2	4265.2	4039.2	3918.7	3794.5	3468.2	3162.8	2832.0	2462.3
30°	4648.4	4601.2	4478.5	4326.6	4087.1	3954.6	3826.6	3478.6	3157.6	2814.8	2431.6
32.5°	4632.7	4579.5	4448.6	4287.7	4042.9	3901.5	3772.0	3410.5	3082.7	2737.0	2348.5
35°	4520.4	4476.3	4340.8	4172.4	3928.4	3779.5	3644.0	3286.3	2957.7	2616.5	2230.3
37.5°	4351.3	4288.4	4161.9	3992.8	3734.6	3596.1	3462.2	3108.9	2787.8	2449.6	2082.8
40°	4073.6	3998.0	3871.5	3724.1	3478.6	3340.9	3218.9	2888.9	2573.0	2257.2	1907.0
42.5°	3724.1	3665.0	3547.5	3395.6	3170.3	3038.6	2929.3	2612.0	2332.1	2039.4	1713.1
45°	3314.0	3257.1	3156.8	3019.9	2816.3	2701.8	2601.5	2319.3	2067.1	1799.9	1505.8
47.5°	2870.2	2814.0	2726.5	2606.0	2424.1	2325.3	2237.8	2006.5	1768.5	1535.0	1276.8
50°	2349.3	2272.2	2224.3	2123.3	1971.3	1887.5	1820.1	1612.8	1437.0	1249.1	1034.3
52.5°	1753.5	1728.8	1660.0	1588.9	1481.9	1419.7	1375.6	1242.4	1096.4	960.2	796.3
55°	1212.4	1190.0	1148.1	1104.7	1032.8	1001.4	968.4	887.6	790.3	697.5	586.0
57.5°	766.4	782.8	755.9	731.2	687.8	676.6	651.1	604.0	544.1	485.7	416.1
60°	494.0	502.9	485.7	471.5	447.6	438.6	426.6	398.2	362.2	328.6	281.4
62.5°	312.8	317.3	307.6	299.4	285.9	282.2	273.9	257.5	235.8	215.5	185.6
65°	195.3	199.1	192.3	187.1	178.9	179.6	172.1	162.4	149.7	137.0	119.7
67.5°	120.5	122.7	118.2	115.3	110.0	110.0	105.5	99.5	91.3	83.8	72.6
70°	73.3	74.1	71.1	69.6	65.9	65.1	62.9	58.4	53.1	47.9	41.2
72.5°	42.7	43.4	41.2	39.7	37.4	37.4	35.9	33.7	31.4	26.9	23.2
75°	23.2	23.9	22.5	21.7	20.2	21.0	19.5	18.7	16.5	15.0	13.5
77.5°	12.0	12.7	12.0	11.2	11.2	11.2	10.5	9.7	9.7	8.2	8.2
80°	6.7	6.7	6.7	6.7	6.7	6.0	6.0	6.0	6.0	6.0	5.2
82.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0
85°	0.7	0.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.2	2.2
87.5°	0.0	0.0	0.7	0.7	0.7	0.7	0.7	1.5	1.5	1.5	2.2
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6
2.5°	1026.8	1026.1	991.6	976.7	964.7	946.0	932.5	918.3	905.6	882.4	862.9
5°	1179.5	1158.5	1101.7	1065.7	1043.3	1013.4	980.4	947.5	915.3	873.4	839.0
7.5°	1339.7	1294.8	1209.4	1149.6	1115.1	1073.2	1017.8	966.2	913.8	856.2	806.8
10°	1492.3	1419.0	1310.5	1219.2	1172.0	1118.1	1041.8	969.9	901.1	828.5	767.1
12.5°	1648.0	1543.2	1401.8	1283.5	1223.7	1157.0	1059.0	969.9	884.6	800.8	728.2
15°	1802.2	1663.7	1487.8	1341.2	1268.6	1189.2	1071.0	964.7	864.4	770.1	689.3
17.5°	1933.9	1762.5	1550.7	1380.8	1295.5	1205.7	1070.2	949.0	837.5	735.7	649.6
20°	2036.4	1833.6	1594.9	1401.0	1305.2	1207.2	1058.3	925.8	806.8	700.5	612.2
22.5°	2106.0	1880.0	1617.3	1404.8	1302.2	1199.0	1039.5	902.6	779.1	672.8	584.5
25°	2149.4	1903.2	1624.1	1399.5	1291.8	1184.7	1022.3	882.4	761.1	658.6	576.3
27.5°	2157.7	1896.5	1610.6	1377.8	1267.1	1159.3	997.6	862.9	745.4	650.4	576.3
30°	2117.3	1853.1	1564.9	1329.2	1220.7	1115.1	956.5	827.7	717.7	630.9	563.6
32.5°	2040.2	1773.0	1489.3	1257.3	1151.8	1053.0	900.3	777.6	671.3	591.2	530.6
35°	1928.7	1666.0	1391.3	1166.8	1064.2	972.2	821.8	709.5	608.5	534.4	478.2
37.5°	1793.2	1537.2	1276.8	1063.5	966.2	880.1	736.4	630.9	537.4	467.8	417.6
40°	1628.5	1398.0	1148.1	949.7	856.9	779.1	646.6	544.8	456.5	397.4	351.8
42.5°	1456.4	1242.4	1011.1	822.5	740.2	666.1	548.6	457.3	378.7	330.1	294.1
45°	1279.0	1069.5	867.4	699.8	637.6	554.6	446.1	372.0	308.3	272.4	244.0
47.5°	1079.2	901.8	715.5	568.0	502.9	446.8	356.2	296.4	255.2	223.8	202.1
50°	864.4	723.0	566.5	440.8	386.9	344.3	277.7	236.5	205.1	183.4	166.9
52.5°	664.6	553.1	426.6	323.3	289.6	257.5	216.3	187.9	165.4	148.9	137.0
55°	494.0	403.4	306.8	239.5	215.5	194.6	169.9	147.4	131.0	119.7	110.0
57.5°	348.0	281.4	215.5	173.6	160.9	147.4	128.7	113.8	102.5	93.6	86.1
60°	232.8	191.6	151.9	127.2	118.2	109.3	97.3	86.8	78.6	72.6	65.1
62.5°	156.4	128.7	106.3	91.3	85.3	79.3	71.1	63.6	57.6	51.6	45.7
65°	100.3	85.3	71.8	62.1	57.6	54.6	48.6	43.4	38.9	33.7	29.2
67.5°	61.4	53.1	44.9	38.9	36.7	34.4	30.7	26.9	23.9	20.2	17.2
70°	35.9	31.4	26.9	23.2	22.5	21.0	18.0	15.7	14.2	12.0	10.5
72.5°	21.0	18.7	15.7	14.2	13.5	12.0	11.2	9.7	8.2	7.5	6.7
75°	12.0	10.5	9.0	8.2	8.2	7.5	6.7	6.7	6.0	6.0	5.2
77.5°	7.5	6.7	6.0	6.0	6.0	5.2	5.2	5.2	5.2	4.5	4.5
80°	5.2	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
82.5°	3.0	3.0	3.0	3.0	3.0	3.7	3.7	3.7	3.7	3.7	4.5
85°	2.2	3.0	3.0	3.0	3.0	3.0	3.7	3.7	3.7	3.7	3.7
87.5°	2.2	3.0	3.0	3.0	3.0	3.0	3.7	3.7	3.7	3.7	3.7
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°	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6
2.5°	851.7	839.7	803.0	815.8	792.6	773.9	772.4	761.1	741.7	731.2	726.0
5°	812.8	785.8	740.9	743.9	717.0	687.8	672.1	657.1	631.7	615.9	605.5
7.5°	764.9	728.2	675.1	671.3	642.9	607.7	585.3	564.3	536.6	516.4	503.7
10°	714.7	669.8	607.7	603.2	573.3	535.1	509.7	485.7	457.3	437.1	423.6
12.5°	668.3	616.7	554.6	543.3	514.2	475.2	447.6	422.1	394.4	377.2	361.5
15°	624.2	568.0	502.2	491.7	463.3	424.4	393.7	371.2	345.0	328.6	314.3
17.5°	580.0	522.4	457.3	445.3	418.4	380.9	354.0	330.1	306.1	290.4	277.7
20°	541.9	484.2	420.6	408.6	383.9	348.0	323.3	300.9	279.2	264.2	253.7
22.5°	517.2	461.0	403.4	392.9	369.7	337.5	314.3	294.9	276.2	261.9	253.7
25°	515.7	467.0	415.4	409.4	389.9	363.0	346.5	334.5	323.3	312.1	309.1
27.5°	524.6	485.0	441.6	440.1	424.4	406.4	398.9	395.2	389.2	385.4	390.7
30°	519.4	485.7	449.0	449.0	437.1	424.4	420.6	419.1	415.4	416.1	422.1
32.5°	491.7	461.0	425.8	426.6	419.1	404.9	402.6	401.9	397.4	396.7	401.1
35°	441.6	413.1	383.9	384.7	378.7	365.2	362.2	360.7	354.7	351.8	354.7
37.5°	383.9	360.7	333.0	333.0	327.1	316.6	313.6	310.6	306.8	303.9	303.9
40°	324.8	306.1	283.6	282.9	278.4	267.9	264.9	262.7	259.0	253.7	255.2
42.5°	274.7	257.5	239.5	238.0	235.0	226.0	223.0	220.0	216.3	211.8	211.8
45°	228.3	217.0	201.3	200.6	197.6	190.1	187.9	184.1	181.1	176.6	176.6
47.5°	190.1	181.1	168.4	167.6	165.4	158.7	156.4	153.4	150.4	147.4	147.4
50°	159.4	150.4	140.0	139.2	137.7	132.5	129.5	127.2	125.0	122.7	121.2
52.5°	131.0	123.5	115.3	114.5	113.0	107.8	105.5	104.0	101.8	98.0	98.0
55°	105.5	99.5	92.1	91.3	89.8	85.3	83.1	80.1	77.1	73.3	72.6
57.5°	82.3	77.1	71.1	70.4	68.1	64.4	60.6	57.6	54.6	51.6	50.1
60°	62.1	56.1	50.9	49.4	47.9	42.7	39.7	36.7	33.7	31.4	29.9
62.5°	41.9	38.2	32.2	31.4	29.9	26.9	23.2	21.7	20.2	18.7	18.0
65°	26.2	23.2	20.2	19.5	18.0	15.7	14.2	13.5	12.7	12.0	11.2
67.5°	15.7	14.2	12.0	12.0	11.2	10.5	9.0	9.0	8.2	8.2	7.5
70°	9.7	9.0	8.2	7.5	7.5	7.5	6.7	6.7	6.7	6.7	6.7
72.5°	6.7	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
75°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
77.5°	5.2	5.2	4.5	5.2	5.2	5.2	5.2	4.5	5.2	4.5	4.5
80°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
82.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.7	3.7	3.7	3.7
85°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.0
87.5°	3.7	3.7	3.7	3.7	3.7	3.0	3.0	3.0	3.0	2.2	2.2
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: P179832

CATALOG NUMBER: LDA6A55927D010TE LARH30NF 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	887.6	887.6	887.6	887.6	887.6	887.6	887.6	887.6
2.5°	727.5	706.5	714.7	702.8	699.0	696.0	691.5	705.8
5°	601.0	578.5	583.8	571.8	566.5	561.3	556.1	567.3
7.5°	496.2	474.5	476.7	466.3	461.0	455.0	449.8	458.8
10°	414.6	394.4	395.2	385.4	380.2	374.2	369.7	376.5
12.5°	352.5	333.8	333.8	326.3	321.8	315.1	311.3	316.6
15°	305.4	288.9	288.9	281.4	277.7	271.7	267.9	273.2
17.5°	269.4	254.5	254.5	249.2	245.5	240.2	237.2	241.7
20°	245.5	232.8	233.5	228.3	225.3	219.3	217.8	221.5
22.5°	247.7	235.8	237.2	233.5	230.5	226.0	224.5	229.8
25°	309.8	300.9	306.1	306.1	307.6	300.9	303.9	312.1
27.5°	398.2	393.7	401.9	398.9	404.9	404.9	407.9	418.4
30°	430.3	426.6	435.6	434.8	440.8	439.3	440.8	450.5
32.5°	407.1	403.4	410.9	410.1	414.6	410.9	411.6	419.9
35°	357.7	354.0	359.2	358.5	361.5	357.0	359.2	363.7
37.5°	305.4	301.6	304.6	303.9	304.6	299.4	302.4	304.6
40°	256.7	252.2	256.7	253.7	254.5	249.2	250.0	253.0
42.5°	214.8	209.6	213.3	213.3	213.3	209.6	210.3	213.3
45°	178.9	175.1	177.4	176.6	177.4	174.4	176.6	179.6
47.5°	148.2	145.2	146.7	145.9	145.9	142.9	143.7	143.7
50°	122.0	119.0	119.7	119.0	116.8	113.0	112.3	113.0
52.5°	96.5	92.8	92.8	91.3	89.8	86.8	86.8	87.6
55°	71.1	68.1	68.1	67.4	65.9	63.6	63.6	65.1
57.5°	47.9	45.7	46.4	45.7	45.7	42.7	44.2	44.2
60°	29.2	27.7	27.7	26.9	25.4	24.7	23.9	25.4
62.5°	17.2	16.5	16.5	15.7	15.7	15.0	15.0	15.0
65°	11.2	10.5	10.5	9.7	9.7	9.0	8.2	9.0
67.5°	7.5	6.7	6.7	6.7	6.7	6.0	6.0	6.0
70°	6.7	6.0	6.0	6.0	6.0	5.2	5.2	5.2
72.5°	6.0	5.2	6.0	5.2	5.2	5.2	5.2	5.2
75°	5.2	5.2	5.2	4.5	4.5	4.5	4.5	4.5
77.5°	4.5	4.5	4.5	4.5	4.5	3.7	3.7	3.7
80°	4.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7
82.5°	3.7	3.7	3.7	3.7	3.7	3.0	3.0	3.0
85°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
87.5°	2.2	2.2	2.2	2.2	2.2	1.5	1.5	1.5
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)