

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: P179833

Luminaire Tested: **LDA6A55930D010TE LARH30NF 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179833
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: LDA6A55930D010TE LARH30NF 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 30° Narrow Flood
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3301.3 lumens
Efficiency: N/A
Efficacy: 54.1 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

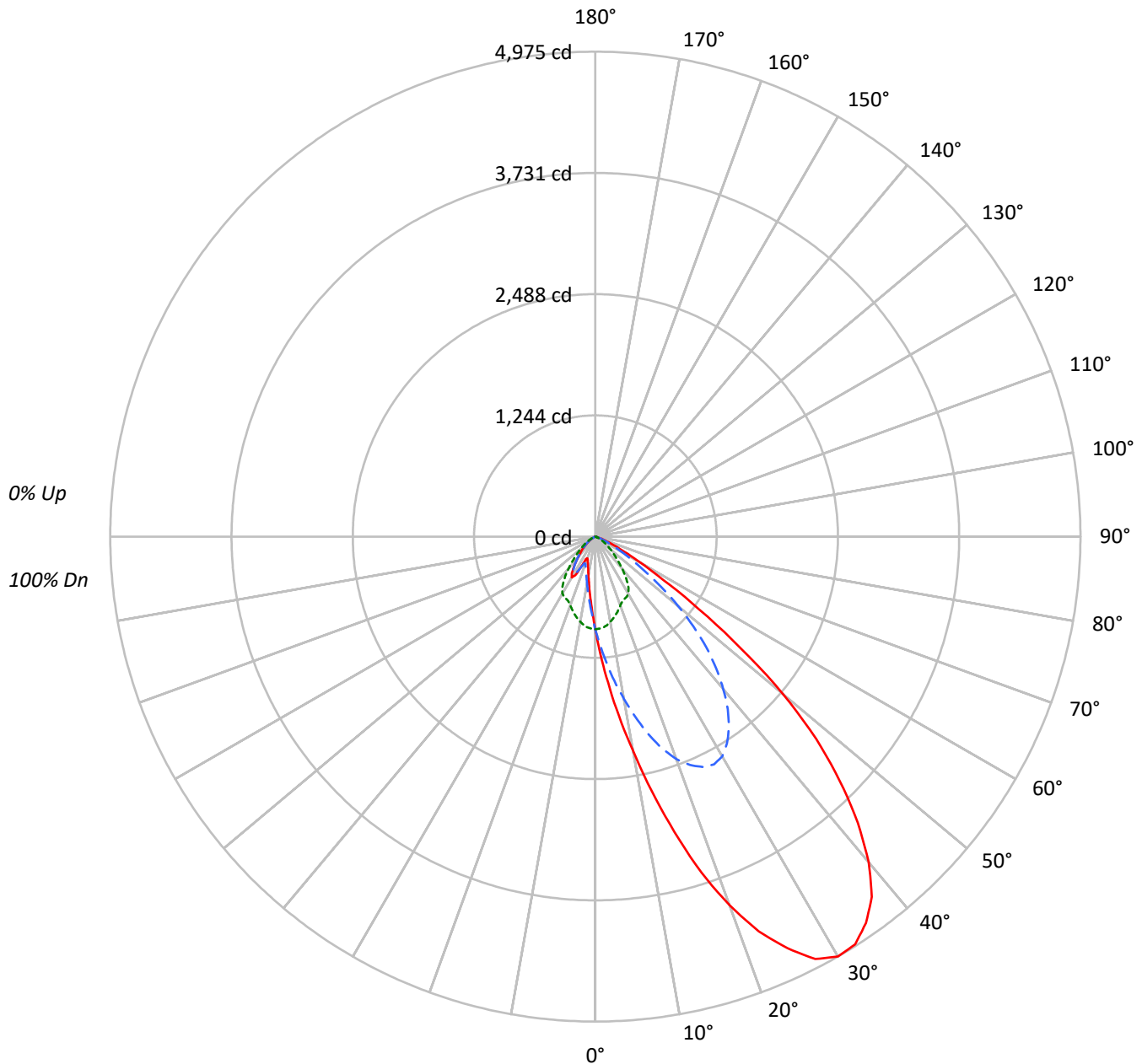
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	52079	52079	52079
5°	82737	51442	33414
10°	124135	49359	22428
15°	177884	46777	16595
20°	234812	43736	13832
25°	281835	42638	20203
30°	314922	42741	30524
35°	323781	38273	26053
40°	312006	30436	19372
45°	274974	22607	14901
50°	214441	16733	10319
55°	124019	12253	6662
60°	57967	8519	2982
65°	27124	4670	1245
70°	12582	2052	898
75°	5253	1356	1017
80°	2273	1515	1263
85°	503	2516	2013



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.2	3.0
10°-20°	360.6	10.9
20°-30°	713.9	21.6
30°-40°	923.0	28.0
40°-50°	758.5	23.0
50°-60°	350.6	10.6
60°-70°	80.1	2.4
70°-80°	13.1	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°	1172.7	35.5
0°-40°	2095.8	63.5
0°-60°	3204.9	97.1
0°-90°	3301.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3301.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	950	950	950	950	950	
5°	1504	1293	935	676	607	166
15°	3134	2096	824	369	292	916
25°	4659	2608	705	346	334	2145
35°	4838	2387	572	380	389	2995
45°	3547	1612	292	194	192	2699
55°	1298	627	128	82	70	1220
65°	209	128	36	14	10	240
75°	25	14	6	6	5	33
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°	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0
2.5°	1206.3	1187.9	1199.1	1204.7	1175.9	1182.3	1185.5	1163.1	1156.7	1144.6	1109.4
5°	1503.5	1481.9	1490.7	1490.7	1448.2	1450.6	1449.0	1406.6	1383.3	1352.9	1292.8
7.5°	1853.5	1831.9	1833.5	1825.5	1765.4	1761.4	1735.8	1683.7	1638.1	1582.0	1492.3
10°	2230.0	2217.2	2209.2	2189.1	2109.8	2096.2	2058.6	1976.1	1900.8	1815.1	1688.5
12.5°	2672.2	2646.5	2623.3	2591.2	2487.9	2462.3	2409.4	2290.1	2179.5	2059.4	1892.0
15°	3134.3	3114.3	3076.7	3026.2	2894.0	2853.2	2784.3	2624.1	2486.3	2310.9	2096.2
17.5°	3612.5	3575.7	3520.4	3449.1	3289.7	3232.1	3146.3	2941.3	2758.7	2540.0	2280.5
20°	4025.0	3996.2	3920.1	3828.0	3645.4	3568.5	3467.5	3216.0	2992.6	2733.0	2427.8
22.5°	4383.1	4344.6	4250.9	4139.6	3935.3	3840.0	3726.3	3445.1	3172.8	2871.6	2536.0
25°	4659.4	4630.6	4519.3	4389.5	4165.2	4054.7	3928.9	3610.1	3308.1	2977.3	2608.1
27.5°	4884.5	4835.7	4711.5	4564.9	4323.0	4194.1	4061.1	3711.9	3385.0	3031.0	2635.3
30°	4975.0	4924.6	4793.2	4630.6	4374.3	4232.5	4095.5	3723.1	3379.4	3012.6	2602.5
32.5°	4958.2	4901.3	4761.2	4589.0	4327.0	4175.6	4037.1	3650.2	3299.3	2929.3	2513.6
35°	4838.1	4790.8	4645.8	4465.6	4204.5	4045.1	3900.1	3517.2	3165.6	2800.3	2387.0
37.5°	4657.0	4589.8	4454.4	4273.4	3997.0	3848.8	3705.4	3327.4	2983.7	2621.7	2229.2
40°	4359.9	4279.0	4143.6	3985.8	3723.1	3575.7	3445.1	3091.9	2753.9	2415.8	2041.0
42.5°	3985.8	3922.5	3796.8	3634.2	3393.1	3252.1	3135.1	2795.5	2495.9	2182.7	1833.5
45°	3546.8	3486.0	3378.6	3232.1	3014.2	2891.6	2784.3	2482.3	2212.4	1926.4	1611.6
47.5°	3071.9	3011.8	2918.1	2789.1	2594.5	2488.7	2395.0	2147.5	1892.8	1642.9	1366.5
50°	2514.4	2431.8	2380.6	2272.4	2109.8	2020.1	1948.0	1726.2	1537.9	1336.9	1107.0
52.5°	1876.8	1850.3	1776.6	1700.5	1586.0	1519.5	1472.2	1329.7	1173.5	1027.7	852.3
55°	1297.6	1273.6	1228.7	1182.3	1105.4	1071.7	1036.5	950.0	845.9	746.5	627.2
57.5°	820.2	837.9	809.0	782.6	736.1	724.1	696.9	646.4	582.3	519.9	445.4
60°	528.7	538.3	519.9	504.6	479.0	469.4	456.6	426.1	387.7	351.6	301.2
62.5°	334.8	339.6	329.2	320.4	306.0	302.0	293.2	275.5	252.3	230.7	198.6
65°	209.1	213.1	205.9	200.3	191.4	192.2	184.2	173.8	160.2	146.6	128.2
67.5°	129.0	131.4	126.6	123.4	117.7	117.7	112.9	106.5	97.7	89.7	77.7
70°	78.5	79.3	76.1	74.5	70.5	69.7	67.3	62.5	56.9	51.3	44.1
72.5°	45.7	46.5	44.1	42.5	40.1	40.1	38.4	36.0	33.6	28.8	24.8
75°	24.8	25.6	24.0	23.2	21.6	22.4	20.8	20.0	17.6	16.0	14.4
77.5°	12.8	13.6	12.8	12.0	12.0	12.0	11.2	10.4	10.4	8.8	8.8
80°	7.2	7.2	7.2	7.2	7.2	6.4	6.4	6.4	6.4	6.4	5.6
82.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.2
85°	0.8	0.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	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°	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0
2.5°	1099.0	1098.2	1061.3	1045.3	1032.5	1012.5	998.1	982.8	969.2	944.4	923.6
5°	1262.4	1240.0	1179.1	1140.6	1116.6	1084.6	1049.3	1014.1	979.6	934.8	897.9
7.5°	1433.8	1385.7	1294.4	1230.3	1193.5	1148.6	1089.4	1034.1	978.0	916.3	863.5
10°	1597.2	1518.7	1402.6	1304.8	1254.4	1196.7	1115.0	1038.1	964.4	886.7	821.0
12.5°	1763.8	1651.7	1500.3	1373.7	1309.6	1238.4	1133.4	1038.1	946.8	857.1	779.4
15°	1928.8	1780.6	1592.4	1435.4	1357.7	1272.8	1146.2	1032.5	925.2	824.2	737.7
17.5°	2069.8	1886.4	1659.7	1477.9	1386.5	1290.4	1145.4	1015.7	896.3	787.4	695.3
20°	2179.5	1962.5	1706.9	1499.5	1397.0	1292.0	1132.6	990.8	863.5	749.7	655.2
22.5°	2254.0	2012.1	1731.0	1503.5	1393.7	1283.2	1112.6	966.0	833.8	720.1	625.6
25°	2300.5	2037.0	1738.2	1497.9	1382.5	1268.0	1094.2	944.4	814.6	704.9	616.8
27.5°	2309.3	2029.7	1723.8	1474.6	1356.1	1240.8	1067.7	923.6	797.8	696.1	616.8
30°	2266.0	1983.3	1674.9	1422.6	1306.4	1193.5	1023.7	885.9	768.2	675.2	603.2
32.5°	2183.5	1897.6	1594.0	1345.7	1232.7	1127.0	963.6	832.2	718.5	632.8	567.9
35°	2064.2	1783.0	1489.1	1248.8	1139.0	1040.5	879.5	759.4	651.2	571.9	511.8
37.5°	1919.2	1645.3	1366.5	1138.2	1034.1	942.0	788.2	675.2	575.1	500.6	447.0
40°	1743.0	1496.3	1228.7	1016.5	917.1	833.8	692.1	583.1	488.6	425.3	376.5
42.5°	1558.8	1329.7	1082.2	880.3	792.2	712.9	587.1	489.4	405.3	353.2	314.8
45°	1368.9	1144.6	928.4	748.9	682.5	593.5	477.4	398.1	330.0	291.6	261.1
47.5°	1155.0	965.2	765.8	608.0	538.3	478.2	381.3	317.2	273.1	239.5	216.3
50°	925.2	773.8	606.4	471.8	414.1	368.5	297.2	253.1	219.5	196.2	178.6
52.5°	711.3	591.9	456.6	346.0	310.0	275.5	231.5	201.1	177.0	159.4	146.6
55°	528.7	431.7	328.4	256.3	230.7	208.3	181.8	157.8	140.2	128.2	117.7
57.5°	372.5	301.2	230.7	185.8	172.2	157.8	137.8	121.8	109.7	100.1	92.1
60°	249.1	205.1	162.6	136.2	126.6	116.9	104.1	92.9	84.1	77.7	69.7
62.5°	167.4	137.8	113.7	97.7	91.3	84.9	76.1	68.1	61.7	55.3	48.9
65°	107.3	91.3	76.9	66.5	61.7	58.5	52.1	46.5	41.7	36.0	31.2
67.5°	65.7	56.9	48.1	41.7	39.2	36.8	32.8	28.8	25.6	21.6	18.4
70°	38.4	33.6	28.8	24.8	24.0	22.4	19.2	16.8	15.2	12.8	11.2
72.5°	22.4	20.0	16.8	15.2	14.4	12.8	12.0	10.4	8.8	8.0	7.2
75°	12.8	11.2	9.6	8.8	8.8	8.0	7.2	7.2	6.4	6.4	5.6
77.5°	8.0	7.2	6.4	6.4	6.4	5.6	5.6	5.6	5.6	4.8	4.8
80°	5.6	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
82.5°	3.2	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0	4.0	4.8
85°	2.4	3.2	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0	4.0
87.5°	2.4	3.2	3.2	3.2	3.2	3.2	4.0	4.0	4.0	4.0	4.0
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°	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0
2.5°	911.5	898.7	859.5	873.1	848.3	828.2	826.6	814.6	793.8	782.6	777.0
5°	869.9	841.1	793.0	796.2	767.4	736.1	719.3	703.3	676.0	659.2	648.0
7.5°	818.6	779.4	722.5	718.5	688.1	650.4	626.4	604.0	574.3	552.7	539.1
10°	765.0	716.9	650.4	645.6	613.6	572.7	545.5	519.9	489.4	467.8	453.4
12.5°	715.3	660.0	593.5	581.5	550.3	508.6	479.0	451.8	422.1	403.7	386.9
15°	668.0	608.0	537.5	526.3	495.8	454.2	421.3	397.3	369.3	351.6	336.4
17.5°	620.8	559.1	489.4	476.6	447.8	407.7	378.9	353.2	327.6	310.8	297.2
20°	579.9	518.2	450.2	437.3	410.9	372.5	346.0	322.0	298.8	282.8	271.5
22.5°	553.5	493.4	431.7	420.5	395.7	361.3	336.4	315.6	295.6	280.4	271.5
25°	551.9	499.8	444.6	438.1	417.3	388.5	370.9	358.0	346.0	334.0	330.8
27.5°	561.5	519.1	472.6	471.0	454.2	434.9	426.9	422.9	416.5	412.5	418.1
30°	555.9	519.9	480.6	480.6	467.8	454.2	450.2	448.6	444.6	445.4	451.8
32.5°	526.3	493.4	455.8	456.6	448.6	433.3	430.9	430.1	425.3	424.5	429.3
35°	472.6	442.2	410.9	411.7	405.3	390.9	387.7	386.1	379.7	376.5	379.7
37.5°	410.9	386.1	356.4	356.4	350.0	338.8	335.6	332.4	328.4	325.2	325.2
40°	347.6	327.6	303.6	302.8	298.0	286.8	283.6	281.2	277.1	271.5	273.1
42.5°	294.0	275.5	256.3	254.7	251.5	241.9	238.7	235.5	231.5	226.7	226.7
45°	244.3	232.3	215.5	214.7	211.5	203.5	201.1	197.0	193.8	189.0	189.0
47.5°	203.5	193.8	180.2	179.4	177.0	169.8	167.4	164.2	161.0	157.8	157.8
50°	170.6	161.0	149.8	149.0	147.4	141.8	138.6	136.2	133.8	131.4	129.8
52.5°	140.2	132.2	123.4	122.6	121.0	115.3	112.9	111.3	108.9	104.9	104.9
55°	112.9	106.5	98.5	97.7	96.1	91.3	88.9	85.7	82.5	78.5	77.7
57.5°	88.1	82.5	76.1	75.3	72.9	68.9	64.9	61.7	58.5	55.3	53.7
60°	66.5	60.1	54.5	52.9	51.3	45.7	42.5	39.2	36.0	33.6	32.0
62.5°	44.9	40.9	34.4	33.6	32.0	28.8	24.8	23.2	21.6	20.0	19.2
65°	28.0	24.8	21.6	20.8	19.2	16.8	15.2	14.4	13.6	12.8	12.0
67.5°	16.8	15.2	12.8	12.8	12.0	11.2	9.6	9.6	8.8	8.8	8.0
70°	10.4	9.6	8.8	8.0	8.0	8.0	7.2	7.2	7.2	7.2	7.2
72.5°	7.2	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
75°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
77.5°	5.6	5.6	4.8	5.6	5.6	5.6	5.6	4.8	5.6	4.8	4.8
80°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
82.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0	4.0
85°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.2
87.5°	4.0	4.0	4.0	4.0	4.0	3.2	3.2	3.2	3.2	2.4	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



TEST NUMBER: P179833

CATALOG NUMBER: LDA6A55930D010TE LARH30NF 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	950.0	950.0	950.0	950.0	950.0	950.0	950.0	950.0
2.5°	778.6	756.1	765.0	752.1	748.1	744.9	740.1	755.3
5°	643.2	619.2	624.8	612.0	606.4	600.8	595.1	607.2
7.5°	531.1	507.8	510.2	499.0	493.4	487.0	481.4	491.0
10°	443.8	422.1	422.9	412.5	406.9	400.5	395.7	402.9
12.5°	377.3	357.2	357.2	349.2	344.4	337.2	333.2	338.8
15°	326.8	309.2	309.2	301.2	297.2	290.8	286.8	292.4
17.5°	288.4	272.3	272.3	266.7	262.7	257.1	253.9	258.7
20°	262.7	249.1	249.9	244.3	241.1	234.7	233.1	237.1
22.5°	265.1	252.3	253.9	249.9	246.7	241.9	240.3	245.9
25°	331.6	322.0	327.6	327.6	329.2	322.0	325.2	334.0
27.5°	426.1	421.3	430.1	426.9	433.3	433.3	436.5	447.8
30°	460.6	456.6	466.2	465.4	471.8	470.2	471.8	482.2
32.5°	435.7	431.7	439.8	439.0	443.8	439.8	440.6	449.4
35°	382.9	378.9	384.5	383.7	386.9	382.1	384.5	389.3
37.5°	326.8	322.8	326.0	325.2	326.0	320.4	323.6	326.0
40°	274.7	269.9	274.7	271.5	272.3	266.7	267.5	270.7
42.5°	229.9	224.3	228.3	228.3	228.3	224.3	225.1	228.3
45°	191.4	187.4	189.8	189.0	189.8	186.6	189.0	192.2
47.5°	158.6	155.4	157.0	156.2	156.2	153.0	153.8	153.8
50°	130.6	127.4	128.2	127.4	125.0	121.0	120.2	121.0
52.5°	103.3	99.3	99.3	97.7	96.1	92.9	92.9	93.7
55°	76.1	72.9	72.9	72.1	70.5	68.1	68.1	69.7
57.5°	51.3	48.9	49.7	48.9	48.9	45.7	47.3	47.3
60°	31.2	29.6	29.6	28.8	27.2	26.4	25.6	27.2
62.5°	18.4	17.6	17.6	16.8	16.8	16.0	16.0	16.0
65°	12.0	11.2	11.2	10.4	10.4	9.6	8.8	9.6
67.5°	8.0	7.2	7.2	7.2	7.2	6.4	6.4	6.4
70°	7.2	6.4	6.4	6.4	6.4	5.6	5.6	5.6
72.5°	6.4	5.6	6.4	5.6	5.6	5.6	5.6	5.6
75°	5.6	5.6	5.6	4.8	4.8	4.8	4.8	4.8
77.5°	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
80°	4.8	4.0	4.0	4.0	4.0	4.0	4.0	4.0
82.5°	4.0	4.0	4.0	4.0	4.0	3.2	3.2	3.2
85°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
87.5°	2.4	2.4	2.4	2.4	2.4	1.6	1.6	1.6
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)