

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: P179845

Luminaire Tested: **LDA6A55830D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179845
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: LDA6A55830D010TE 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: 4203.8 lumens
Efficiency: N/A
Efficacy: 68.9 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

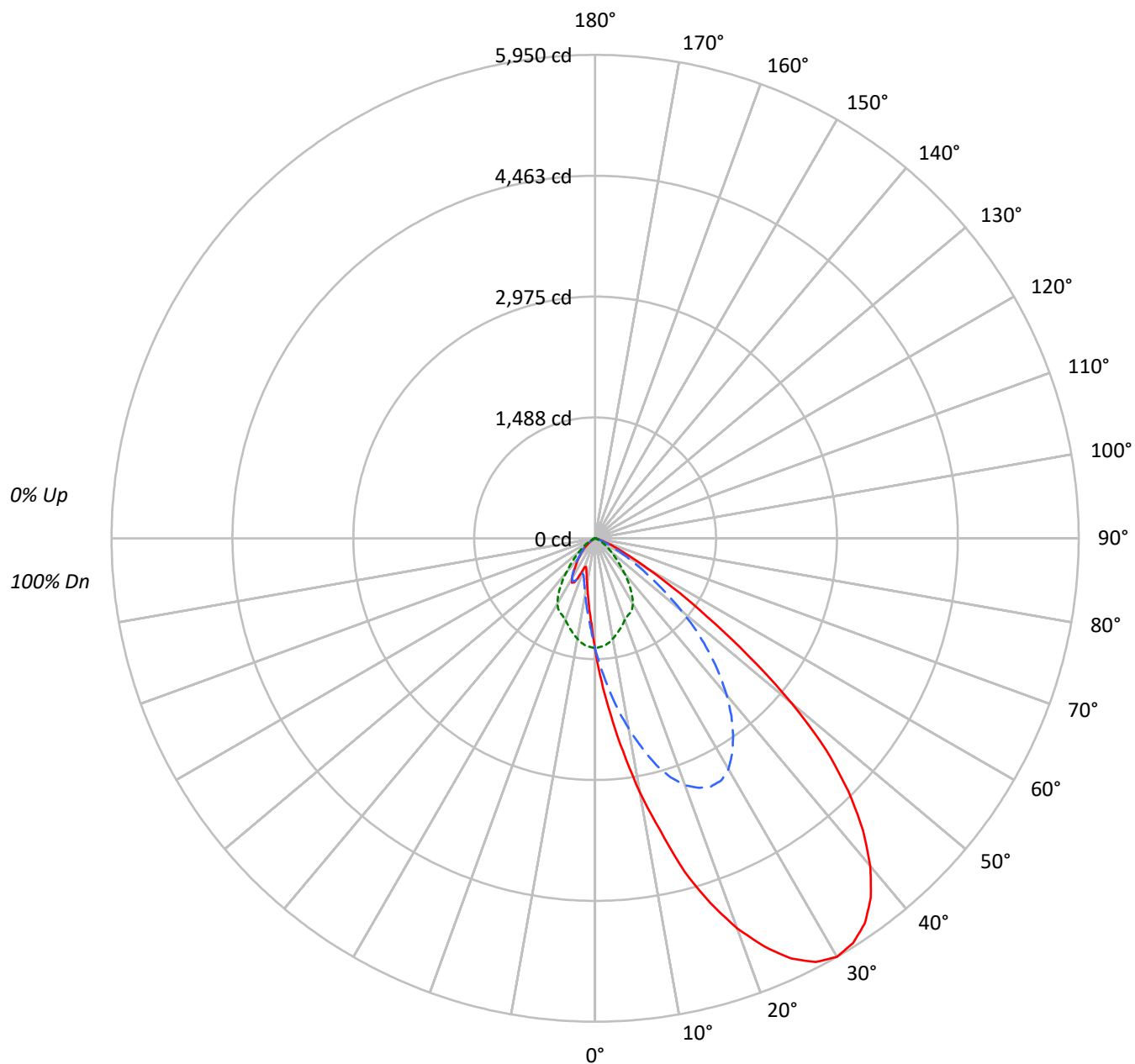
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	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°	74396	74396	74396
5°	119552	72931	46516
10°	176784	69855	31223
15°	240904	66079	23195
20°	297952	62358	21988
25°	345189	61389	36087
30°	376621	58813	36119
35°	387076	50828	28255
40°	376942	40004	22006
45°	341787	29592	17335
50°	269288	21867	11752
55°	160568	15569	6729
60°	82110	10361	2533
65°	39252	5500	1129
70°	18545	2468	1074
75°	7562	1631	1228
80°	3662	1831	1231
85°	1824	3019	1824



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.3	3.3
10°-20°	492.2	11.7
20°-30°	926.4	22.0
30°-40°	1128.1	26.8
40°-50°	939.0	22.3
50°-60°	449.8	10.7
60°-70°	108.0	2.6
70°-80°	17.0	0.4
80°-90°	4.0	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°	1557.9	37.1
0°-40°	2686.0	63.9
0°-60°	4074.8	96.9
0°-90°	4203.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4203.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1357	1357	1357	1357	1357	
5°	2172	1843	1325	964	845	238
15°	4245	2884	1164	528	409	1217
25°	5707	3370	1015	575	597	2621
35°	5784	2960	760	442	422	3584
45°	4409	1979	382	235	224	3338
55°	1680	816	163	92	70	1583
65°	303	176	42	14	9	346
75°	36	18	8	7	6	49
85°	3	3	5	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°	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1
2.5°	1755.1	1693.4	1712.7	1708.9	1705.0	1684.8	1670.3	1657.8	1626.0	1626.0	1585.5
5°	2172.5	2100.2	2118.5	2105.0	2087.7	2056.8	2028.9	1997.1	1938.3	1913.2	1842.8
7.5°	2649.6	2567.6	2584.0	2557.0	2520.4	2479.0	2433.7	2373.9	2280.4	2223.6	2114.6
10°	3175.8	3059.2	3068.8	3028.3	2967.6	2911.7	2868.4	2754.6	2621.6	2527.2	2374.9
12.5°	3674.1	3571.9	3574.8	3518.0	3430.3	3361.8	3296.3	3145.9	2968.6	2833.7	2633.2
15°	4244.7	4119.4	4089.5	4012.4	3897.7	3813.9	3724.2	3534.4	3311.7	3133.4	2883.8
17.5°	4704.4	4575.3	4556.0	4483.7	4319.9	4218.7	4105.9	3891.9	3609.5	3387.9	3081.4
20°	5107.3	4979.1	4946.4	4852.9	4664.9	4549.3	4413.4	4160.8	3852.4	3579.7	3233.6
22.5°	5437.0	5296.2	5250.0	5134.3	4925.2	4795.0	4629.3	4353.6	4009.5	3705.0	3324.2
25°	5706.8	5546.8	5488.0	5357.0	5121.8	4978.2	4796.0	4487.6	4112.7	3776.3	3370.5
27.5°	5879.4	5719.4	5654.8	5504.4	5240.3	5086.1	4887.6	4554.1	4149.3	3785.9	3360.9
30°	5949.7	5783.9	5710.7	5540.1	5255.8	5092.9	4885.6	4525.2	4102.1	3716.5	3279.9
32.5°	5906.3	5743.5	5661.5	5476.5	5180.6	5005.2	4797.9	4413.4	3977.7	3578.7	3139.2
35°	5783.9	5623.0	5538.2	5340.6	5032.1	4849.0	4642.8	4244.7	3804.2	3396.5	2959.9
37.5°	5572.9	5420.6	5323.2	5127.6	4817.2	4630.2	4425.9	4024.0	3573.9	3190.3	2752.7
40°	5267.3	5122.7	5026.4	4817.2	4524.2	4335.3	4142.5	3734.8	3310.8	2936.8	2514.6
42.5°	4877.9	4744.9	4652.4	4449.0	4169.5	3983.5	3807.1	3415.8	3012.0	2656.3	2257.3
45°	4408.6	4292.9	4202.3	4033.6	3758.0	3581.6	3422.6	3067.9	2675.6	2348.8	1978.7
47.5°	3856.3	3760.9	3673.2	3519.9	3271.2	3104.5	2973.4	2648.6	2316.1	2008.6	1693.4
50°	3157.5	3089.1	3020.6	2861.6	2686.2	2540.7	2445.2	2156.1	1887.2	1646.2	1385.0
52.5°	2380.7	2339.2	2291.0	2177.3	2059.7	1974.9	1890.1	1670.3	1468.9	1289.6	1086.2
55°	1680.0	1658.7	1621.2	1574.9	1485.3	1427.4	1354.2	1242.4	1086.2	965.8	816.4
57.5°	1135.4	1129.6	1103.6	1075.6	1026.5	1007.2	945.5	873.2	785.5	695.9	589.9
60°	748.9	736.4	730.6	715.2	677.6	662.2	640.0	593.7	539.7	477.1	411.6
62.5°	481.9	475.2	470.3	463.6	440.5	440.5	418.3	397.1	356.6	318.1	275.7
65°	302.6	296.9	295.9	291.1	282.4	278.5	262.2	246.7	227.5	206.3	176.4
67.5°	194.7	186.0	181.2	178.3	172.5	165.8	160.0	153.2	137.8	125.3	106.0
70°	115.7	107.9	107.0	107.9	101.2	100.2	94.5	89.6	79.0	71.3	59.8
72.5°	65.5	61.7	60.7	60.7	56.9	55.9	52.0	49.2	43.4	37.6	32.8
75°	35.7	32.8	32.8	32.8	30.8	29.9	28.0	27.0	23.1	21.2	18.3
77.5°	20.2	19.3	19.3	18.3	17.3	16.4	15.4	15.4	13.5	12.5	11.6
80°	11.6	11.6	11.6	11.6	10.6	10.6	9.6	9.6	8.7	8.7	7.7
82.5°	6.7	6.7	6.7	6.7	6.7	6.7	5.8	5.8	5.8	5.8	4.8
85°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
87.5°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9	1.9	2.9
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°	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1
2.5°	1567.2	1538.3	1536.3	1493.9	1466.9	1444.8	1428.4	1408.2	1362.9	1337.8	1319.5
5°	1793.7	1733.9	1703.1	1626.0	1583.6	1546.0	1499.7	1451.5	1377.3	1325.3	1282.9
7.5°	2028.9	1929.6	1864.0	1749.3	1691.5	1632.7	1554.7	1476.6	1375.4	1297.3	1232.7
10°	2247.6	2106.9	2002.8	1848.6	1773.4	1696.3	1586.5	1481.4	1355.1	1254.9	1170.1
12.5°	2462.6	2277.5	2133.9	1938.3	1846.7	1751.3	1610.6	1478.5	1330.1	1209.6	1110.3
15°	2667.9	2435.6	2252.5	2016.3	1909.3	1794.6	1626.0	1469.8	1301.2	1164.3	1051.5
17.5°	2831.7	2556.1	2336.3	2064.5	1944.0	1813.9	1620.2	1444.8	1261.7	1116.1	992.7
20°	2944.5	2633.2	2382.6	2083.8	1951.8	1812.0	1598.0	1410.1	1220.2	1068.9	943.6
22.5°	3005.2	2667.9	2395.1	2078.0	1940.2	1793.7	1571.0	1378.3	1187.4	1036.1	916.6
25°	3027.4	2670.8	2381.6	2053.0	1914.2	1764.8	1539.2	1348.4	1161.4	1014.9	903.1
27.5°	3001.4	2630.3	2332.5	2000.9	1860.2	1712.7	1488.2	1306.0	1122.9	984.1	879.0
30°	2912.7	2535.8	2236.1	1908.4	1770.6	1628.9	1407.2	1227.9	1060.2	929.1	828.9
32.5°	2772.0	2397.0	2100.2	1781.2	1648.1	1512.2	1300.2	1129.6	973.5	850.1	760.5
35°	2597.5	2231.3	1942.1	1632.7	1507.4	1379.2	1177.8	1016.8	870.3	759.5	671.8
37.5°	2399.9	2047.2	1767.7	1483.3	1356.1	1235.6	1040.0	902.1	761.4	660.2	580.2
40°	2178.3	1836.1	1581.6	1305.0	1193.2	1083.3	902.1	776.8	648.7	559.0	489.6
42.5°	1941.2	1622.1	1386.9	1138.3	1026.5	926.2	763.4	650.6	536.9	462.6	407.7
45°	1689.6	1408.2	1182.6	960.0	858.8	772.0	623.6	521.4	438.5	381.7	340.2
47.5°	1426.5	1177.8	977.3	783.6	694.0	618.8	499.3	421.2	355.7	314.2	282.4
50°	1161.4	939.7	780.7	615.9	538.8	479.0	390.4	336.4	288.2	256.4	232.3
52.5°	907.9	726.7	597.6	464.6	405.8	364.3	304.6	267.0	230.4	206.3	187.9
55°	670.8	547.5	436.6	337.3	302.6	276.6	234.2	207.2	181.2	162.9	149.4
57.5°	484.8	392.3	311.3	247.7	224.6	207.2	176.4	158.1	139.8	126.3	115.7
60°	340.2	270.8	219.8	181.2	164.8	153.2	131.1	119.5	106.0	94.5	83.9
62.5°	223.6	182.2	153.2	128.2	118.6	109.9	94.5	85.8	74.2	66.5	56.9
65°	145.5	119.5	102.2	85.8	78.1	74.2	63.6	56.9	49.2	42.4	36.6
67.5°	88.7	74.2	64.6	54.0	50.1	46.3	39.5	34.7	29.9	25.1	22.2
70°	49.2	43.4	37.6	31.8	28.9	27.0	23.1	21.2	17.3	15.4	12.5
72.5°	28.9	25.1	22.2	18.3	17.3	16.4	13.5	12.5	10.6	9.6	8.7
75°	17.3	14.5	13.5	11.6	10.6	10.6	9.6	8.7	7.7	7.7	6.7
77.5°	10.6	9.6	8.7	7.7	7.7	7.7	6.7	6.7	6.7	5.8	5.8
80°	6.7	6.7	6.7	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
82.5°	4.8	4.8	4.8	3.9	4.8	3.9	4.8	4.8	4.8	4.8	4.8
85°	2.9	2.9	3.9	3.9	3.9	3.9	3.9	4.8	4.8	4.8	4.8
87.5°	2.9	2.9	3.9	3.9	3.9	3.9	3.9	4.8	4.8	4.8	3.9
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°	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1
2.5°	1298.3	1262.6	1236.6	1217.3	1224.1	1190.3	1179.7	1143.1	1129.6	1129.6	1110.3
5°	1239.5	1182.6	1138.3	1110.3	1108.4	1060.2	1035.2	988.9	963.8	945.5	927.2
7.5°	1169.1	1095.9	1037.1	1003.3	993.7	936.8	903.1	856.8	819.3	795.2	773.0
10°	1093.9	1006.2	939.7	901.2	886.7	825.0	780.7	738.3	697.8	672.8	649.6
12.5°	1021.7	926.2	853.0	813.5	795.2	731.5	686.2	641.9	603.4	577.3	554.2
15°	955.2	854.0	776.8	737.3	717.1	654.4	609.1	565.8	528.2	504.1	482.9
17.5°	892.5	789.4	712.3	673.7	651.5	593.7	550.3	507.9	474.2	452.0	432.8
20°	845.3	743.1	671.8	638.1	615.9	561.9	524.3	487.7	459.7	443.4	425.0
22.5°	825.0	730.6	669.9	639.0	623.6	580.2	554.2	528.2	509.9	507.0	495.4
25°	822.1	739.3	689.1	663.1	653.5	620.7	605.3	588.9	575.4	579.3	581.2
27.5°	809.6	732.5	691.1	668.9	661.2	634.2	622.6	607.2	597.6	602.4	604.3
30°	766.2	694.9	656.4	638.1	630.3	603.4	593.7	576.4	568.7	569.6	568.7
32.5°	698.8	631.3	595.6	579.3	570.6	546.5	535.9	520.5	508.9	507.9	506.0
35°	616.9	556.1	523.4	508.9	500.2	480.0	470.3	455.9	442.4	441.4	439.5
37.5°	533.0	479.0	451.1	438.5	430.8	414.4	402.9	393.2	384.6	380.7	379.7
40°	452.0	403.8	383.6	374.0	368.2	350.8	345.1	335.4	328.7	324.8	323.8
42.5°	375.9	342.2	325.8	317.1	312.3	299.8	293.0	285.3	278.5	274.7	273.7
45°	319.0	291.1	275.7	268.9	265.1	253.5	248.7	241.0	235.2	232.3	231.3
47.5°	266.0	243.8	233.2	225.5	224.6	214.9	208.2	202.4	196.6	193.7	192.8
50°	217.8	199.5	190.8	186.0	185.1	175.4	170.6	165.8	161.0	158.1	156.1
52.5°	179.3	161.9	156.1	149.4	148.4	139.8	135.9	131.1	126.3	122.4	119.5
55°	141.7	128.2	122.4	116.6	115.7	106.0	102.2	96.4	91.6	87.7	83.9
57.5°	107.9	97.3	91.6	85.8	84.8	78.1	71.3	66.5	61.7	56.9	54.0
60°	79.0	68.4	61.7	58.8	55.9	49.2	44.3	40.5	36.6	33.7	30.8
62.5°	52.0	44.3	39.5	35.7	33.7	28.9	26.0	23.1	21.2	20.2	19.3
65°	31.8	27.0	23.1	21.2	21.2	18.3	16.4	14.5	13.5	13.5	12.5
67.5°	19.3	16.4	14.5	13.5	12.5	11.6	10.6	10.6	9.6	9.6	8.7
70°	11.6	10.6	9.6	8.7	8.7	8.7	8.7	8.7	7.7	7.7	7.7
72.5°	8.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	6.7	6.7	6.7
75°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	5.8
77.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
80°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	4.8	4.8	4.8
82.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
85°	4.8	4.8	4.8	4.8	4.8	4.8	3.9	3.9	3.9	3.9	3.9
87.5°	4.8	3.9	3.9	3.9	3.9	3.9	2.9	2.9	2.9	2.9	1.9
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: P179845

CATALOG NUMBER: LDA6A55830D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1	1357.1
2.5°	1100.7	1108.4	1096.8	1089.1	1081.4	1087.2	1060.2	1048.6
5°	909.9	901.2	895.4	888.6	877.1	879.0	855.9	845.3
7.5°	752.8	747.0	732.5	724.8	713.2	713.2	692.0	683.4
10°	628.4	619.7	606.2	599.5	588.9	580.2	569.6	560.9
12.5°	534.0	524.3	512.8	507.0	496.4	489.6	479.0	481.0
15°	463.6	454.0	443.4	437.6	428.9	422.2	413.5	408.7
17.5°	414.4	405.8	397.1	391.3	384.6	378.8	371.1	370.1
20°	410.6	403.8	399.0	395.2	389.4	385.5	381.7	376.9
22.5°	491.6	492.5	493.5	493.5	494.4	494.4	495.4	485.8
25°	580.2	590.8	590.8	593.7	602.4	602.4	600.5	596.6
27.5°	603.4	614.0	611.1	613.0	621.7	623.6	616.9	617.8
30°	564.8	574.4	568.7	569.6	575.4	575.4	566.7	570.6
32.5°	500.2	506.0	498.3	498.3	503.1	502.2	496.4	496.4
35°	431.8	434.7	427.9	430.8	430.8	427.9	422.2	422.2
37.5°	373.0	374.0	367.2	368.2	368.2	365.3	359.5	359.5
40°	317.1	320.0	314.2	316.1	314.2	311.3	308.4	307.5
42.5°	267.9	269.9	265.1	267.9	267.0	267.0	266.0	267.0
45°	225.5	227.5	223.6	225.5	226.5	225.5	222.6	223.6
47.5°	187.0	188.9	188.9	187.0	186.0	181.2	178.3	178.3
50°	151.3	150.4	149.4	146.5	143.6	140.7	137.8	137.8
52.5°	113.7	111.8	110.8	107.9	107.0	104.1	104.1	101.2
55°	78.1	77.1	77.1	74.2	74.2	71.3	70.4	70.4
57.5°	49.2	47.2	48.2	46.3	45.3	42.4	42.4	41.4
60°	28.0	27.0	27.0	26.0	25.1	23.1	23.1	23.1
62.5°	18.3	17.3	17.3	16.4	16.4	15.4	15.4	14.5
65°	11.6	10.6	10.6	9.6	9.6	8.7	8.7	8.7
67.5°	8.7	7.7	7.7	7.7	7.7	7.7	6.7	6.7
70°	7.7	7.7	6.7	6.7	6.7	6.7	6.7	6.7
72.5°	6.7	6.7	6.7	6.7	5.8	5.8	5.8	5.8
75°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
77.5°	5.8	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	3.9	3.9
82.5°	4.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9
85°	3.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
87.5°	1.9	1.9	1.9	1.9	1.0	1.0	1.0	1.0
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)