

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: P179852

Luminaire Tested: **LDA6A65827D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179852
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: LDA6A65827D010TE LARH40FL 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 40° Flood
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4897.6 lumens
Efficiency: N/A
Efficacy: 62.8 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

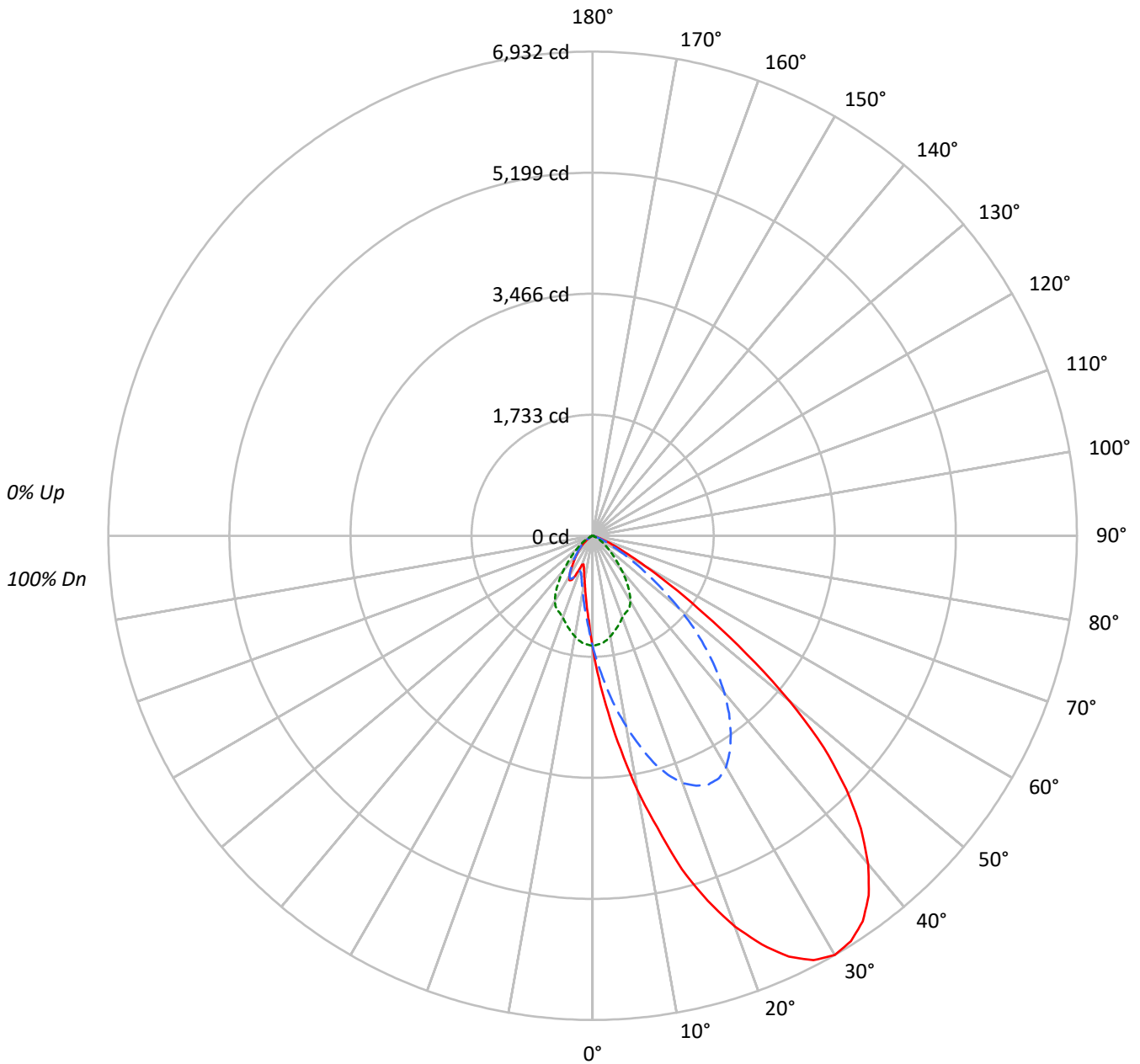
Input Watts (W): 78
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0					
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°	86676	86676	86676
5°	139280	84966	54193
10°	205964	81383	36378
15°	280666	76987	27021
20°	347131	72649	25616
25°	402162	71520	42045
30°	438783	68523	42082
35°	450968	59220	32913
40°	439159	46609	25634
45°	398196	34476	20196
50°	313730	25475	13697
55°	187061	18140	7837
60°	95661	12060	2949
65°	45738	6408	1310
70°	21590	2885	1266
75°	8790	1906	1419
80°	4262	2115	1421
85°	2139	3522	2139



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.3	3.3
10°-20°	573.4	11.7
20°-30°	1079.3	22.0
30°-40°	1314.3	26.8
40°-50°	1094.0	22.3
50°-60°	524.0	10.7
60°-70°	125.9	2.6
70°-80°	19.8	0.4
80°-90°	4.6	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°	1815.0	37.1
0°-40°	3129.3	63.9
0°-60°	4747.3	96.9
0°-90°	4897.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4897.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1581	1581	1581	1581	1581	
5°	2531	2147	1544	1123	985	277
15°	4945	3360	1356	615	476	1418
25°	6649	3927	1182	670	695	3054
35°	6739	3448	885	515	492	4175
45°	5136	2305	445	274	260	3889
55°	1957	951	190	107	82	1844
65°	353	206	49	16	10	404
75°	42	21	9	8	7	57
85°	3	3	6	4	3	5
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°	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1
2.5°	2044.8	1972.9	1995.4	1990.9	1986.4	1962.8	1946.0	1931.4	1894.3	1894.3	1847.2
5°	2531.0	2446.8	2468.2	2452.4	2432.2	2396.3	2363.7	2326.7	2258.2	2229.0	2147.0
7.5°	3086.9	2991.4	3010.5	2979.1	2936.4	2888.1	2835.3	2765.7	2656.8	2590.5	2463.7
10°	3700.0	3564.1	3575.3	3528.2	3457.4	3392.3	3341.8	3209.3	3054.3	2944.3	2766.8
12.5°	4280.5	4161.5	4164.9	4098.6	3996.4	3916.7	3840.3	3665.2	3458.6	3301.3	3067.8
15°	4945.3	4799.3	4764.5	4674.7	4541.0	4443.3	4338.9	4117.7	3858.3	3650.6	3359.7
17.5°	5480.9	5330.4	5308.0	5223.8	5032.9	4915.0	4783.6	4534.3	4205.3	3947.0	3589.9
20°	5950.3	5800.9	5762.8	5653.8	5434.9	5300.1	5141.8	4847.6	4488.3	4170.5	3767.4
22.5°	6334.3	6170.4	6116.5	5981.7	5738.1	5586.5	5393.3	5072.2	4671.3	4316.5	3872.9
25°	6648.7	6462.3	6393.8	6241.1	5967.1	5799.8	5587.6	5228.3	4791.4	4399.6	3926.8
27.5°	6849.7	6663.3	6588.1	6412.9	6105.3	5925.6	5694.3	5305.7	4834.1	4410.8	3915.6
30°	6931.7	6738.6	6653.2	6454.5	6123.2	5933.4	5692.0	5272.1	4779.1	4329.9	3821.3
32.5°	6881.2	6691.4	6596.0	6380.4	6035.6	5831.3	5589.8	5141.8	4634.2	4169.4	3657.3
35°	6738.6	6551.0	6452.2	6222.0	5862.7	5649.4	5409.0	4945.3	4432.1	3957.1	3448.5
37.5°	6492.7	6315.2	6201.8	5973.9	5612.3	5394.5	5156.4	4688.1	4163.7	3716.8	3207.0
40°	6136.7	5968.3	5856.0	5612.3	5270.9	5050.8	4826.3	4351.3	3857.2	3421.5	2929.7
42.5°	5683.0	5528.1	5420.3	5183.3	4857.7	4641.0	4435.5	3979.6	3509.1	3094.7	2629.9
45°	5136.2	5001.4	4895.9	4699.4	4378.2	4172.7	3987.4	3574.2	3117.2	2736.5	2305.3
47.5°	4492.8	4381.6	4279.4	4100.9	3811.1	3616.9	3464.2	3085.8	2698.3	2340.1	1972.9
50°	3678.6	3598.9	3519.2	3333.9	3129.5	2960.0	2848.8	2511.9	2198.7	1917.9	1613.6
52.5°	2773.6	2725.3	2669.2	2536.6	2399.7	2300.8	2202.0	1946.0	1711.3	1502.5	1265.5
55°	1957.2	1932.5	1888.7	1834.8	1730.4	1663.0	1577.7	1447.4	1265.5	1125.2	951.1
57.5°	1322.8	1316.0	1285.7	1253.2	1195.9	1173.4	1101.6	1017.4	915.2	810.7	687.2
60°	872.5	857.9	851.2	833.2	789.4	771.4	745.6	691.7	628.8	555.8	479.5
62.5°	561.5	553.6	548.0	540.1	513.2	513.2	487.3	462.6	415.5	370.6	321.2
65°	352.6	345.9	344.7	339.1	329.0	324.5	305.4	287.5	265.0	240.3	205.5
67.5°	226.8	216.7	211.1	207.7	201.0	193.1	186.4	178.5	160.6	146.0	123.5
70°	134.7	125.8	124.6	125.8	117.9	116.8	110.0	104.4	92.1	83.1	69.6
72.5°	76.4	71.9	70.7	70.7	66.3	65.1	60.6	57.3	50.5	43.8	38.2
75°	41.5	38.2	38.2	38.2	35.9	34.8	32.6	31.4	26.9	24.7	21.3
77.5°	23.6	22.5	22.5	21.3	20.2	19.1	18.0	18.0	15.7	14.6	13.5
80°	13.5	13.5	13.5	13.5	12.4	12.4	11.2	11.2	10.1	10.1	9.0
82.5°	7.9	7.9	7.9	7.9	7.9	7.9	6.7	6.7	6.7	6.7	5.6
85°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
87.5°	0.0	0.0	1.1	1.1	1.1	1.1	1.1	2.2	2.2	2.2	3.4
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°	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1
2.5°	1825.8	1792.2	1789.9	1740.5	1709.1	1683.2	1664.1	1640.6	1587.8	1558.6	1537.3
5°	2089.7	2020.1	1984.2	1894.3	1844.9	1801.1	1747.2	1691.1	1604.6	1544.0	1494.6
7.5°	2363.7	2248.1	2171.7	2038.1	1970.7	1902.2	1811.3	1720.3	1602.4	1511.4	1436.2
10°	2618.6	2454.7	2333.4	2153.7	2066.2	1976.3	1848.3	1725.9	1578.8	1462.0	1363.2
12.5°	2869.0	2653.4	2486.1	2258.2	2151.5	2040.3	1876.4	1722.5	1549.6	1409.2	1293.6
15°	3108.2	2837.6	2624.2	2349.1	2224.5	2090.9	1894.3	1712.4	1515.9	1356.5	1225.1
17.5°	3299.1	2978.0	2721.9	2405.3	2264.9	2113.3	1887.6	1683.2	1469.9	1300.3	1156.6
20°	3430.5	3067.8	2775.8	2427.7	2273.9	2111.1	1861.8	1642.8	1421.6	1245.3	1099.3
22.5°	3501.2	3108.2	2790.4	2421.0	2260.4	2089.7	1830.3	1605.8	1383.4	1207.1	1067.9
25°	3527.1	3111.6	2774.7	2391.8	2230.1	2056.0	1793.3	1570.9	1353.1	1182.4	1052.2
27.5°	3496.7	3064.4	2717.4	2331.2	2167.2	1995.4	1733.8	1521.5	1308.2	1146.5	1024.1
30°	3393.4	2954.4	2605.1	2223.4	2062.8	1897.7	1639.4	1430.6	1235.2	1082.5	965.7
32.5°	3229.5	2792.7	2446.8	2075.1	1920.2	1761.8	1514.8	1316.0	1134.1	990.4	886.0
35°	3026.2	2599.5	2262.7	1902.2	1756.2	1606.9	1372.2	1184.7	1014.0	884.9	782.7
37.5°	2796.0	2385.1	2059.4	1728.2	1579.9	1439.6	1211.6	1051.0	887.1	769.2	676.0
40°	2537.8	2139.1	1842.7	1520.4	1390.2	1262.1	1051.0	905.1	755.7	651.3	570.4
42.5°	2261.5	1889.9	1615.9	1326.2	1195.9	1079.1	889.3	758.0	625.5	539.0	475.0
45°	1968.5	1640.6	1377.8	1118.4	1000.5	899.4	726.5	607.5	510.9	444.7	396.4
47.5°	1661.9	1372.2	1138.6	912.9	808.5	720.9	581.7	490.7	414.4	366.1	329.0
50°	1353.1	1094.8	909.6	717.5	627.7	558.1	454.8	391.9	335.7	298.7	270.6
52.5°	1057.8	846.7	696.2	541.2	472.7	424.5	354.8	311.0	268.4	240.3	219.0
55°	781.5	637.8	508.7	393.0	352.6	322.3	272.9	241.4	211.1	189.8	174.1
57.5°	564.8	457.0	362.7	288.6	261.6	241.4	205.5	184.2	162.8	147.1	134.7
60°	396.4	315.5	256.0	211.1	192.0	178.5	152.7	139.2	123.5	110.0	97.7
62.5°	260.5	212.2	178.5	149.3	138.1	128.0	110.0	99.9	86.5	77.5	66.3
65°	169.6	139.2	119.0	99.9	91.0	86.5	74.1	66.3	57.3	49.4	42.7
67.5°	103.3	86.5	75.2	62.9	58.4	53.9	46.0	40.4	34.8	29.2	25.8
70°	57.3	50.5	43.8	37.1	33.7	31.4	26.9	24.7	20.2	18.0	14.6
72.5°	33.7	29.2	25.8	21.3	20.2	19.1	15.7	14.6	12.4	11.2	10.1
75°	20.2	16.8	15.7	13.5	12.4	12.4	11.2	10.1	9.0	9.0	7.9
77.5°	12.4	11.2	10.1	9.0	9.0	9.0	7.9	7.9	7.9	6.7	6.7
80°	7.9	7.9	7.9	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
82.5°	5.6	5.6	5.6	4.5	5.6	4.5	5.6	5.6	5.6	5.6	5.6
85°	3.4	3.4	4.5	4.5	4.5	4.5	4.5	5.6	5.6	5.6	5.6
87.5°	3.4	3.4	4.5	4.5	4.5	4.5	4.5	5.6	5.6	5.6	4.5
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°	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1
2.5°	1512.6	1471.0	1440.7	1418.2	1426.1	1386.8	1374.4	1331.8	1316.0	1316.0	1293.6
5°	1444.1	1377.8	1326.2	1293.6	1291.3	1235.2	1206.0	1152.1	1122.9	1101.6	1080.2
7.5°	1362.1	1276.7	1208.2	1168.9	1157.7	1091.5	1052.2	998.3	954.5	926.4	900.6
10°	1274.5	1172.3	1094.8	1049.9	1033.1	961.2	909.6	860.1	813.0	783.8	756.8
12.5°	1190.3	1079.1	993.8	947.7	926.4	852.3	799.5	747.9	702.9	672.6	645.7
15°	1112.8	994.9	905.1	859.0	835.4	762.5	709.7	659.1	615.4	587.3	562.6
17.5°	1039.8	919.7	829.8	784.9	759.1	691.7	641.2	591.8	552.5	526.6	504.2
20°	984.8	865.8	782.7	743.4	717.5	654.7	610.9	568.2	535.6	516.5	495.2
22.5°	961.2	851.2	780.4	744.5	726.5	676.0	645.7	615.4	594.0	590.6	577.2
25°	957.8	861.3	802.9	772.6	761.3	723.2	705.2	686.1	670.4	674.9	677.1
27.5°	943.2	853.4	805.1	779.3	770.3	738.9	725.4	707.4	696.2	701.8	704.1
30°	892.7	809.6	764.7	743.4	734.4	702.9	691.7	671.5	662.5	663.6	662.5
32.5°	814.1	735.5	694.0	674.9	664.8	636.7	624.3	606.4	592.9	591.8	589.5
35°	718.7	647.9	609.7	592.9	582.8	559.2	548.0	531.1	515.4	514.3	512.0
37.5°	621.0	558.1	525.5	510.9	501.9	482.9	469.4	458.1	448.0	443.5	442.4
40°	526.6	470.5	446.9	435.7	429.0	408.7	402.0	390.8	382.9	378.4	377.3
42.5°	437.9	398.6	379.5	369.4	363.8	349.2	341.4	332.4	324.5	320.0	318.9
45°	371.7	339.1	321.2	313.3	308.8	295.3	289.7	280.7	274.0	270.6	269.5
47.5°	309.9	284.1	271.7	262.8	261.6	250.4	242.5	235.8	229.1	225.7	224.6
50°	253.8	232.4	222.3	216.7	215.6	204.4	198.8	193.1	187.5	184.2	181.9
52.5°	208.9	188.6	181.9	174.1	172.9	162.8	158.3	152.7	147.1	142.6	139.2
55°	165.1	149.3	142.6	135.9	134.7	123.5	119.0	112.3	106.7	102.2	97.7
57.5°	125.8	113.4	106.7	99.9	98.8	91.0	83.1	77.5	71.9	66.3	62.9
60°	92.1	79.7	71.9	68.5	65.1	57.3	51.7	47.2	42.7	39.3	35.9
62.5°	60.6	51.7	46.0	41.5	39.3	33.7	30.3	26.9	24.7	23.6	22.5
65°	37.1	31.4	26.9	24.7	24.7	21.3	19.1	16.8	15.7	15.7	14.6
67.5°	22.5	19.1	16.8	15.7	14.6	13.5	12.4	12.4	11.2	11.2	10.1
70°	13.5	12.4	11.2	10.1	10.1	10.1	10.1	10.1	9.0	9.0	9.0
72.5°	10.1	9.0	9.0	9.0	9.0	9.0	9.0	9.0	7.9	7.9	7.9
75°	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	6.7
77.5°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
80°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	5.6	5.6	5.6
82.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
85°	5.6	5.6	5.6	5.6	5.6	5.6	4.5	4.5	4.5	4.5	4.5
87.5°	5.6	4.5	4.5	4.5	4.5	4.5	3.4	3.4	3.4	3.4	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: P179852

CATALOG NUMBER: LDA6A65827D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1	1581.1
2.5°	1282.4	1291.3	1277.9	1268.9	1259.9	1266.6	1235.2	1221.7
5°	1060.0	1049.9	1043.2	1035.3	1021.8	1024.1	997.1	984.8
7.5°	877.0	870.3	853.4	844.4	831.0	831.0	806.2	796.1
10°	732.1	722.0	706.3	698.4	686.1	676.0	663.6	653.5
12.5°	622.1	610.9	597.4	590.6	578.3	570.4	558.1	560.3
15°	540.1	528.9	516.5	509.8	499.7	491.8	481.7	476.1
17.5°	482.9	472.7	462.6	455.9	448.0	441.3	432.3	431.2
20°	478.4	470.5	464.9	460.4	453.7	449.2	444.7	439.1
22.5°	572.7	573.8	574.9	574.9	576.1	576.1	577.2	565.9
25°	676.0	688.3	688.3	691.7	701.8	701.8	699.6	695.1
27.5°	702.9	715.3	711.9	714.2	724.3	726.5	718.7	719.8
30°	658.0	669.3	662.5	663.6	670.4	670.4	660.3	664.8
32.5°	582.8	589.5	580.5	580.5	586.2	585.0	578.3	578.3
35°	503.1	506.4	498.6	501.9	501.9	498.6	491.8	491.8
37.5°	434.6	435.7	427.8	429.0	429.0	425.6	418.8	418.8
40°	369.4	372.8	366.1	368.3	366.1	362.7	359.3	358.2
42.5°	312.2	314.4	308.8	312.2	311.0	311.0	309.9	311.0
45°	262.8	265.0	260.5	262.8	263.9	262.8	259.4	260.5
47.5°	217.8	220.1	220.1	217.8	216.7	211.1	207.7	207.7
50°	176.3	175.2	174.1	170.7	167.3	163.9	160.6	160.6
52.5°	132.5	130.3	129.1	125.8	124.6	121.3	121.3	117.9
55°	91.0	89.8	89.8	86.5	86.5	83.1	82.0	82.0
57.5°	57.3	55.0	56.1	53.9	52.8	49.4	49.4	48.3
60°	32.6	31.4	31.4	30.3	29.2	26.9	26.9	26.9
62.5°	21.3	20.2	20.2	19.1	19.1	18.0	18.0	16.8
65°	13.5	12.4	12.4	11.2	11.2	10.1	10.1	10.1
67.5°	10.1	9.0	9.0	9.0	9.0	9.0	7.9	7.9
70°	9.0	9.0	7.9	7.9	7.9	7.9	7.9	7.9
72.5°	7.9	7.9	7.9	7.9	6.7	6.7	6.7	6.7
75°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
77.5°	6.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6
80°	5.6	5.6	5.6	5.6	5.6	5.6	4.5	4.5
82.5°	5.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5
85°	4.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4
87.5°	2.2	2.2	2.2	2.2	1.1	1.1	1.1	1.1
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)