

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: P179856

Luminaire Tested: **LDA6A65927D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179856
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: LDA6A65927D010TE LARH40FL 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 40° Flood
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3894.6 lumens
Efficiency: N/A
Efficacy: 49.9 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

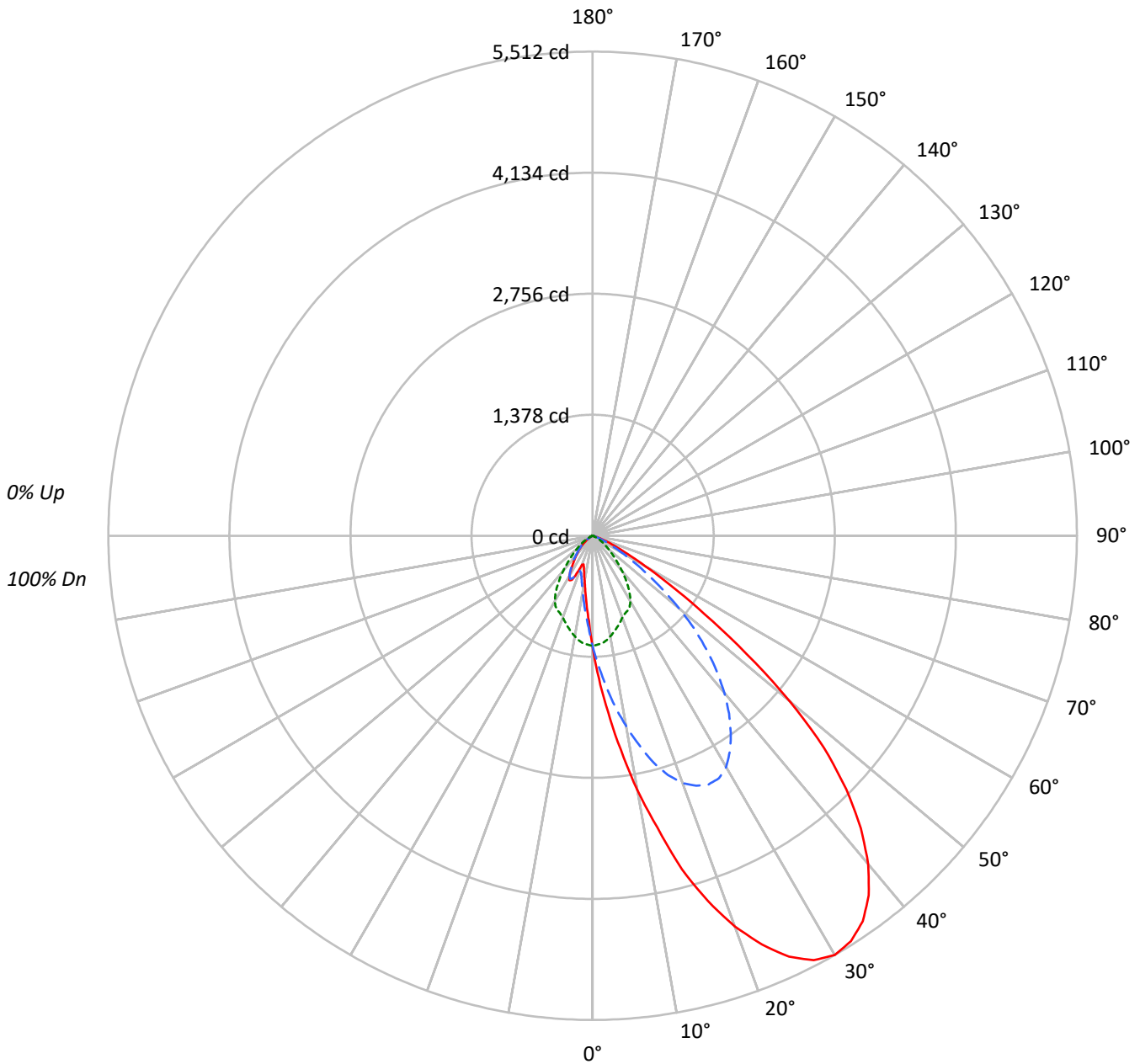
Input Watts (W): 78
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P179856

CATALOG NUMBER: LDA6A65927D010TE LARH40FL 6LLWW1

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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°	68920	68920	68920
5°	110753	67565	43094
10°	163780	64717	28930
15°	223179	61215	21487
20°	276034	57767	20366
25°	319797	56870	33431
30°	348914	54489	33461
35°	358601	47087	26174
40°	349211	37062	20381
45°	316638	27414	16064
50°	249476	20255	10891
55°	148755	14422	6232
60°	76068	9594	2346
65°	36372	5098	1038
70°	17182	2292	1010
75°	6990	1504	1144
80°	3378	1705	1137
85°	1698	2830	1698



TEST NUMBER: P179856

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.1	3.3
10°-20°	456.0	11.7
20°-30°	858.3	22.0
30°-40°	1045.1	26.8
40°-50°	870.0	22.3
50°-60°	416.7	10.7
60°-70°	100.1	2.6
70°-80°	15.8	0.4
80°-90°	3.7	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°	1443.3	37.1
0°-40°	2488.4	63.9
0°-60°	3775.0	96.9
0°-90°	3894.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3894.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1257	1257	1257	1257	1257	
5°	2013	1707	1228	893	783	220
15°	3932	2672	1079	489	379	1127
25°	5287	3122	940	533	553	2428
35°	5358	2742	704	410	391	3320
45°	4084	1833	354	218	207	3093
55°	1556	756	151	85	65	1466
65°	280	163	39	12	8	321
75°	33	17	7	6	5	45
85°	3	3	4	4	3	4
90°	0	0	0	0	0	



TEST NUMBER: P179856

CATALOG NUMBER: LDA6A65927D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2
2.5°	1626.0	1568.9	1586.7	1583.1	1579.6	1560.8	1547.4	1535.8	1506.4	1506.4	1468.8
5°	2012.6	1945.7	1962.6	1950.1	1934.1	1905.5	1879.6	1850.1	1795.7	1772.4	1707.3
7.5°	2454.6	2378.7	2393.9	2368.9	2335.0	2296.6	2254.6	2199.3	2112.6	2060.0	1959.1
10°	2942.2	2834.1	2843.0	2805.5	2749.3	2697.5	2657.3	2552.0	2428.7	2341.2	2200.1
12.5°	3403.8	3309.2	3311.8	3259.1	3177.9	3114.5	3053.8	2914.5	2750.2	2625.2	2439.5
15°	3932.4	3816.3	3788.6	3717.2	3611.0	3533.3	3450.2	3274.3	3068.1	2902.9	2671.6
17.5°	4358.3	4238.7	4220.8	4153.9	4002.1	3908.3	3803.8	3605.6	3344.0	3138.6	2854.7
20°	4731.6	4612.8	4582.5	4495.8	4321.7	4214.6	4088.7	3854.7	3569.0	3316.3	2995.7
22.5°	5036.9	4906.6	4863.7	4756.6	4562.8	4442.3	4288.7	4033.3	3714.5	3432.4	3079.7
25°	5287.0	5138.7	5084.3	4962.8	4745.0	4611.9	4443.2	4157.4	3810.1	3498.5	3122.5
27.5°	5446.8	5298.6	5238.7	5099.5	4854.8	4711.9	4528.0	4219.0	3844.0	3507.4	3113.6
30°	5512.0	5358.4	5290.5	5132.5	4869.1	4718.2	4526.2	4192.2	3800.3	3443.1	3038.6
32.5°	5471.8	5320.9	5245.0	5073.6	4799.4	4636.9	4444.9	4088.7	3685.1	3315.4	2908.2
35°	5358.4	5209.3	5130.7	4947.7	4661.9	4492.3	4301.2	3932.4	3524.3	3146.6	2742.1
37.5°	5162.8	5021.8	4931.6	4750.3	4462.8	4289.6	4100.3	3727.9	3310.9	2955.6	2550.2
40°	4879.8	4745.9	4656.6	4462.8	4191.4	4016.3	3837.8	3460.1	3067.2	2720.7	2329.6
42.5°	4519.1	4395.8	4310.1	4121.7	3862.8	3690.4	3527.0	3164.5	2790.4	2460.9	2091.2
45°	4084.2	3977.1	3893.1	3736.9	3481.5	3318.1	3170.7	2842.2	2478.7	2176.0	1833.2
47.5°	3572.6	3484.2	3402.9	3260.9	3030.6	2876.1	2754.7	2453.7	2145.7	1860.8	1568.9
50°	2925.2	2861.8	2798.4	2651.1	2488.6	2353.7	2265.3	1997.5	1748.3	1525.1	1283.1
52.5°	2205.5	2167.1	2122.5	2017.1	1908.2	1829.6	1751.0	1547.4	1360.8	1194.7	1006.3
55°	1556.4	1536.7	1501.9	1459.0	1376.0	1322.4	1254.5	1151.0	1006.3	894.7	756.3
57.5°	1051.9	1046.5	1022.4	996.5	951.0	933.1	876.0	809.0	727.7	644.7	546.5
60°	693.8	682.2	676.8	662.5	627.7	613.4	592.9	550.0	500.0	442.0	381.3
62.5°	446.5	440.2	435.7	429.5	408.1	408.1	387.5	367.9	330.4	294.7	255.4
65°	280.4	275.0	274.1	269.7	261.6	258.1	242.9	228.6	210.7	191.1	163.4
67.5°	180.4	172.3	167.9	165.2	159.8	153.6	148.2	142.0	127.7	116.1	98.2
70°	107.2	100.0	99.1	100.0	93.8	92.9	87.5	83.0	73.2	66.1	55.4
72.5°	60.7	57.1	56.3	56.3	52.7	51.8	48.2	45.5	40.2	34.8	30.4
75°	33.0	30.4	30.4	30.4	28.6	27.7	25.9	25.0	21.4	19.6	17.0
77.5°	18.8	17.9	17.9	17.0	16.1	15.2	14.3	14.3	12.5	11.6	10.7
80°	10.7	10.7	10.7	10.7	9.8	9.8	8.9	8.9	8.0	8.0	7.1
82.5°	6.3	6.3	6.3	6.3	6.3	6.3	5.4	5.4	5.4	5.4	4.5
85°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
87.5°	0.0	0.0	0.9	0.9	0.9	0.9	0.9	1.8	1.8	1.8	2.7
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: P179856

CATALOG NUMBER: LDA6A65927D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2
2.5°	1451.9	1425.1	1423.3	1384.0	1359.0	1338.5	1323.3	1304.6	1262.6	1239.4	1222.4
5°	1661.7	1606.4	1577.8	1506.4	1467.1	1432.2	1389.4	1344.7	1276.0	1227.8	1188.5
7.5°	1879.6	1787.6	1726.9	1620.6	1567.1	1512.6	1440.3	1367.9	1274.2	1201.9	1142.0
10°	2082.3	1951.9	1855.5	1712.6	1643.0	1571.5	1469.7	1372.4	1255.4	1162.6	1084.0
12.5°	2281.4	2110.0	1976.9	1795.7	1710.8	1622.4	1492.1	1369.7	1232.2	1120.6	1028.6
15°	2471.6	2256.4	2086.7	1868.0	1768.9	1662.6	1506.4	1361.7	1205.4	1078.6	974.2
17.5°	2623.4	2368.0	2164.4	1912.6	1801.0	1680.5	1501.0	1338.5	1168.8	1034.0	919.7
20°	2727.9	2439.5	2207.3	1930.5	1808.2	1678.7	1480.5	1306.3	1130.4	990.2	874.2
22.5°	2784.1	2471.6	2218.9	1925.1	1797.4	1661.7	1455.5	1276.9	1100.1	959.9	849.2
25°	2804.7	2474.3	2206.4	1901.9	1773.3	1634.9	1426.0	1249.2	1076.0	940.2	836.7
27.5°	2780.5	2436.8	2160.9	1853.7	1723.3	1586.7	1378.7	1209.9	1040.2	911.7	814.3
30°	2698.4	2349.3	2071.6	1768.0	1640.3	1509.0	1303.7	1137.6	982.2	860.8	767.9
32.5°	2568.0	2220.7	1945.7	1650.1	1526.9	1401.0	1204.5	1046.5	901.8	787.6	704.5
35°	2406.4	2067.1	1799.2	1512.6	1396.5	1277.8	1091.1	942.0	806.3	703.6	622.4
37.5°	2223.4	1896.6	1637.6	1374.2	1256.3	1144.7	963.5	835.8	705.4	611.6	537.5
40°	2018.0	1701.0	1465.3	1209.0	1105.4	1003.6	835.8	719.7	600.9	517.9	453.6
42.5°	1798.3	1502.8	1284.9	1054.5	951.0	858.1	707.2	602.7	497.4	428.6	377.7
45°	1565.3	1304.6	1095.6	889.3	795.6	715.2	577.7	483.1	406.3	353.6	315.2
47.5°	1321.5	1091.1	905.4	725.9	642.9	573.3	462.5	390.2	329.5	291.1	261.6
50°	1076.0	870.6	723.3	570.6	499.1	443.8	361.6	311.6	267.0	237.5	215.2
52.5°	841.1	673.3	553.6	430.4	375.9	337.5	282.2	247.3	213.4	191.1	174.1
55°	621.5	507.2	404.5	312.5	280.4	256.3	217.0	192.0	167.9	150.9	138.4
57.5°	449.1	363.4	288.4	229.5	208.0	192.0	163.4	146.4	129.5	117.0	107.2
60°	315.2	250.9	203.6	167.9	152.7	142.0	121.4	110.7	98.2	87.5	77.7
62.5°	207.2	168.8	142.0	118.8	109.8	101.8	87.5	79.5	68.8	61.6	52.7
65°	134.8	110.7	94.6	79.5	72.3	68.8	58.9	52.7	45.5	39.3	33.9
67.5°	82.1	68.8	59.8	50.0	46.4	42.9	36.6	32.1	27.7	23.2	20.5
70°	45.5	40.2	34.8	29.5	26.8	25.0	21.4	19.6	16.1	14.3	11.6
72.5°	26.8	23.2	20.5	17.0	16.1	15.2	12.5	11.6	9.8	8.9	8.0
75°	16.1	13.4	12.5	10.7	9.8	9.8	8.9	8.0	7.1	7.1	6.3
77.5°	9.8	8.9	8.0	7.1	7.1	7.1	6.3	6.3	6.3	5.4	5.4
80°	6.3	6.3	6.3	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
82.5°	4.5	4.5	4.5	3.6	4.5	3.6	4.5	4.5	4.5	4.5	4.5
85°	2.7	2.7	3.6	3.6	3.6	3.6	3.6	4.5	4.5	4.5	4.5
87.5°	2.7	2.7	3.6	3.6	3.6	3.6	3.6	4.5	4.5	4.5	3.6
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: P179856

CATALOG NUMBER: LDA6A65927D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2
2.5°	1202.8	1169.7	1145.6	1127.8	1134.0	1102.8	1092.9	1059.0	1046.5	1046.5	1028.6
5°	1148.3	1095.6	1054.5	1028.6	1026.9	982.2	959.0	916.1	892.9	876.0	859.0
7.5°	1083.1	1015.2	960.8	929.5	920.6	867.9	836.7	793.8	759.0	736.7	716.1
10°	1013.5	932.2	870.6	834.9	821.5	764.3	723.3	684.0	646.5	623.3	601.8
12.5°	946.5	858.1	790.2	753.6	736.7	677.7	635.8	594.7	559.0	534.9	513.4
15°	884.9	791.1	719.7	683.1	664.3	606.3	564.3	524.1	489.3	467.0	447.4
17.5°	826.8	731.3	659.9	624.1	603.6	550.0	509.9	470.6	439.3	418.8	400.9
20°	783.1	688.4	622.4	591.1	570.6	520.6	485.7	451.8	425.9	410.7	393.8
22.5°	764.3	676.8	620.6	592.0	577.7	537.5	513.4	489.3	472.4	469.7	459.0
25°	761.7	684.9	638.4	614.3	605.4	575.0	560.8	545.6	533.1	536.6	538.4
27.5°	750.1	678.6	640.2	619.7	612.5	587.5	576.8	562.5	553.6	558.1	559.9
30°	709.9	643.8	608.1	591.1	584.0	559.0	550.0	534.0	526.8	527.7	526.8
32.5°	647.4	584.9	551.8	536.6	528.6	506.3	496.5	482.2	471.5	470.6	468.8
35°	571.5	515.2	484.9	471.5	463.4	444.7	435.7	422.3	409.8	409.0	407.2
37.5°	493.8	443.8	417.9	406.3	399.1	384.0	373.2	364.3	356.3	352.7	351.8
40°	418.8	374.1	355.4	346.5	341.1	325.0	319.7	310.7	304.5	300.9	300.0
42.5°	348.2	317.0	301.8	293.8	289.3	277.7	271.4	264.3	258.1	254.5	253.6
45°	295.6	269.7	255.4	249.1	245.6	234.8	230.4	223.2	217.9	215.2	214.3
47.5°	246.4	225.9	216.1	208.9	208.0	199.1	192.9	187.5	182.2	179.5	178.6
50°	201.8	184.8	176.8	172.3	171.4	162.5	158.0	153.6	149.1	146.4	144.7
52.5°	166.1	150.0	144.7	138.4	137.5	129.5	125.9	121.4	117.0	113.4	110.7
55°	131.3	118.8	113.4	108.0	107.2	98.2	94.6	89.3	84.8	81.3	77.7
57.5°	100.0	90.2	84.8	79.5	78.6	72.3	66.1	61.6	57.1	52.7	50.0
60°	73.2	63.4	57.1	54.5	51.8	45.5	41.1	37.5	33.9	31.3	28.6
62.5°	48.2	41.1	36.6	33.0	31.3	26.8	24.1	21.4	19.6	18.8	17.9
65°	29.5	25.0	21.4	19.6	19.6	17.0	15.2	13.4	12.5	12.5	11.6
67.5°	17.9	15.2	13.4	12.5	11.6	10.7	9.8	9.8	8.9	8.9	8.0
70°	10.7	9.8	8.9	8.0	8.0	8.0	8.0	8.0	7.1	7.1	7.1
72.5°	8.0	7.1	7.1	7.1	7.1	7.1	7.1	7.1	6.3	6.3	6.3
75°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	5.4
77.5°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
80°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	4.5	4.5	4.5
82.5°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
85°	4.5	4.5	4.5	4.5	4.5	4.5	3.6	3.6	3.6	3.6	3.6
87.5°	4.5	3.6	3.6	3.6	3.6	3.6	2.7	2.7	2.7	2.7	1.8
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: P179856

CATALOG NUMBER: LDA6A65927D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2	1257.2
2.5°	1019.7	1026.9	1016.1	1009.0	1001.9	1007.2	982.2	971.5
5°	842.9	834.9	829.5	823.3	812.6	814.3	792.9	783.1
7.5°	697.4	692.0	678.6	671.5	660.8	660.8	641.1	633.1
10°	582.2	574.1	561.6	555.4	545.6	537.5	527.7	519.7
12.5°	494.7	485.7	475.0	469.7	459.9	453.6	443.8	445.6
15°	429.5	420.6	410.7	405.4	397.3	391.1	383.1	378.6
17.5°	384.0	375.9	367.9	362.5	356.3	350.9	343.8	342.9
20°	380.4	374.1	369.7	366.1	360.7	357.2	353.6	349.1
22.5°	455.4	456.3	457.2	457.2	458.1	458.1	459.0	450.0
25°	537.5	547.4	547.4	550.0	558.1	558.1	556.3	552.7
27.5°	559.0	568.8	566.1	567.9	575.9	577.7	571.5	572.4
30°	523.2	532.2	526.8	527.7	533.1	533.1	525.0	528.6
32.5°	463.4	468.8	461.6	461.6	466.1	465.2	459.9	459.9
35°	400.0	402.7	396.5	399.1	399.1	396.5	391.1	391.1
37.5°	345.6	346.5	340.2	341.1	341.1	338.4	333.1	333.1
40°	293.8	296.4	291.1	292.9	291.1	288.4	285.7	284.8
42.5°	248.2	250.0	245.6	248.2	247.3	247.3	246.4	247.3
45°	208.9	210.7	207.2	208.9	209.8	208.9	206.3	207.2
47.5°	173.2	175.0	175.0	173.2	172.3	167.9	165.2	165.2
50°	140.2	139.3	138.4	135.7	133.0	130.4	127.7	127.7
52.5°	105.4	103.6	102.7	100.0	99.1	96.4	96.4	93.8
55°	72.3	71.4	71.4	68.8	68.8	66.1	65.2	65.2
57.5°	45.5	43.8	44.6	42.9	42.0	39.3	39.3	38.4
60°	25.9	25.0	25.0	24.1	23.2	21.4	21.4	21.4
62.5°	17.0	16.1	16.1	15.2	15.2	14.3	14.3	13.4
65°	10.7	9.8	9.8	8.9	8.9	8.0	8.0	8.0
67.5°	8.0	7.1	7.1	7.1	7.1	7.1	6.3	6.3
70°	7.1	7.1	6.3	6.3	6.3	6.3	6.3	6.3
72.5°	6.3	6.3	6.3	6.3	5.4	5.4	5.4	5.4
75°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
77.5°	5.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5
80°	4.5	4.5	4.5	4.5	4.5	4.5	3.6	3.6
82.5°	4.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6
85°	3.6	2.7	2.7	2.7	2.7	2.7	2.7	2.7
87.5°	1.8	1.8	1.8	1.8	0.9	0.9	0.9	0.9
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)