

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: P179940

Luminaire Tested: **LDA6A55827D010TE LARH40FL 6LAL1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179940
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26691)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A55827D010TE LARH40FL 6LAL1LI 30°
Description: PORTFOLIO 6" Lensed Adjustable, Self-flanged, 40° Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5058.2 lumens
Efficiency: N/A
Efficacy: 82.9 lumens/watt
Spacing Criteria (0/90/45): 2.62 / 0.52 / 1.36
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

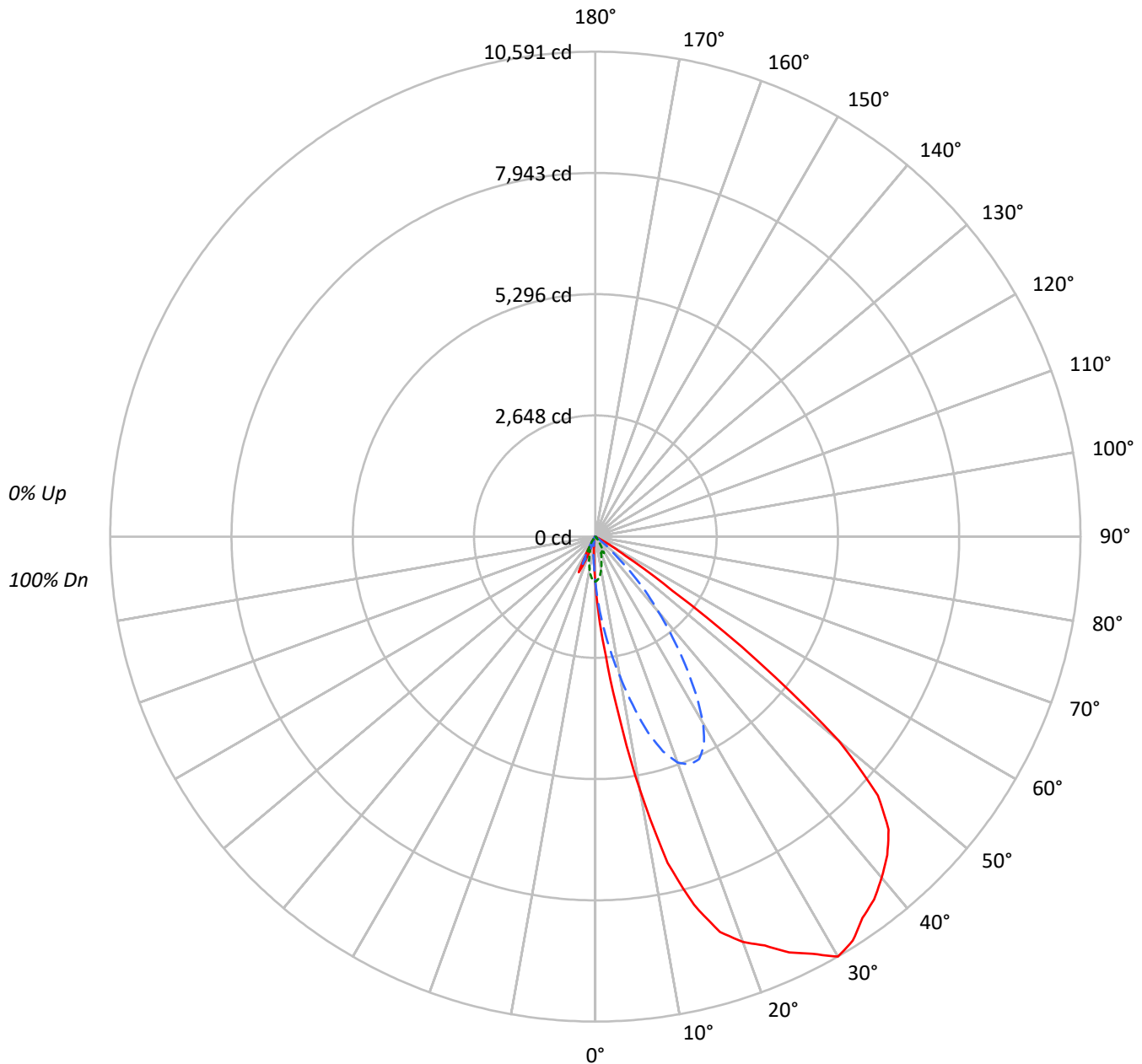
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	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
1	112	109	106	103	110	107	104	102		103	100	98		99	97	95		95	94	93
2	105	99	94	90	103	97	93	89		94	90	87		91	88	85		88	85	83
3	98	90	84	79	96	88	83	78		86	81	77		83	79	76		81	77	74
4	91	82	75	70	89	80	74	69		78	73	68		76	71	67		74	70	67
5	85	74	67	62	83	73	67	61		71	65	61		70	64	60		68	63	60
6	79	68	60	55	77	67	60	55		65	59	54		64	58	54		62	57	54
7	74	62	55	49	72	61	54	49		60	54	49		59	53	49		57	52	48
8	69	57	50	44	67	56	49	44		55	49	44		54	48	44		53	48	44
9	64	52	45	40	63	52	45	40		51	44	40		50	44	40		49	44	40
10	60	48	41	37	59	48	41	36		47	41	36		46	40	36		45	40	36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	54020	54020	54020
5°	143358	50082	19161
10°	312920	40497	5711
15°	472330	29592	4966
20°	549425	20313	7794
25°	605926	21915	51916
30°	670394	16503	16142
35°	680347	8439	6043
40°	695997	3435	2898
45°	701840	2116	1752
50°	591230	1441	1126
55°	195281	994	631
60°	38385	932	417
65°	4514	1219	493
70°	1202	1362	609
75°	191	1800	996
80°	0	2968	1484
85°	0	5913	2390



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.1	2.6
10°-20°	662.2	13.1
20°-30°	1307.0	25.8
30°-40°	1474.3	29.1
40°-50°	1170.4	23.1
50°-60°	286.2	5.7
60°-70°	15.3	0.3
70°-80°	6.5	0.1
80°-90°	5.4	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°	2100.3	41.5
0°-40°	3574.5	70.7
0°-60°	5031.1	99.5
0°-90°	5058.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5058.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	985	985	985	985	985	
5°	2605	1952	910	457	348	344
15°	8322	4423	521	103	88	2335
25°	10017	5362	362	656	858	4640
35°	10166	3412	126	100	90	6393
45°	9053	1064	27	28	23	6785
55°	2043	46	10	10	7	2397
65°	35	8	9	8	4	85
75°	1	5	8	8	5	2
85°	0	5	9	7	4	0
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°	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4
2.5°	1710.0	1677.1	1692.2	1668.6	1601.8	1581.1	1598.0	1572.6	1496.4	1467.2	1437.1
5°	2605.1	2575.9	2585.3	2531.6	2406.5	2363.2	2360.4	2283.2	2128.8	2042.3	1951.9
7.5°	3949.9	3909.5	3898.2	3769.2	3528.3	3438.0	3393.7	3203.6	2912.8	2706.7	2504.4
10°	5621.4	5660.9	5620.4	5411.5	5033.2	4863.8	4756.5	4397.0	3872.8	3480.3	3102.0
12.5°	7297.5	7322.0	7245.8	6986.0	6505.1	6301.8	6143.7	5683.5	4992.7	4326.4	3761.7
15°	8322.4	8438.2	8366.7	8185.0	7812.3	7565.8	7423.7	6855.2	5985.6	5253.4	4423.3
17.5°	9052.8	9160.0	9100.8	8952.1	8531.4	8332.8	8240.6	7772.8	6826.0	5895.3	4918.4
20°	9417.9	9548.7	9495.1	9326.6	9017.9	8852.3	8740.3	8283.9	7430.2	6372.4	5248.7
22.5°	9665.4	9810.4	9752.0	9598.6	9284.3	9091.3	9038.6	8606.7	7746.5	6658.5	5388.9
25°	10017.4	10138.8	9974.1	9785.0	9474.4	9271.1	9239.1	8797.7	7898.0	6766.7	5361.6
27.5°	10269.6	10413.6	10134.1	9942.1	9587.3	9373.7	9332.3	8917.2	7912.1	6681.1	5140.5
30°	10590.6	10497.4	10251.8	9973.2	9594.8	9367.1	9314.4	8847.6	7770.9	6365.8	4707.5
32.5°	10463.5	10440.9	10195.3	9867.8	9514.9	9285.2	9214.6	8633.0	7383.2	5821.8	4094.9
35°	10166.1	10237.6	10032.5	9829.2	9390.6	9151.6	9053.7	8316.8	6798.7	5121.6	3412.5
37.5°	9992.0	10037.2	9907.3	9658.8	9224.0	8909.7	8724.3	7785.1	6033.6	4238.9	2754.7
40°	9725.7	9840.5	9715.3	9430.2	8928.5	8497.5	8174.7	6824.2	5025.6	3342.0	2154.3
42.5°	9433.9	9536.5	9417.0	9075.3	8366.7	7788.8	7252.4	5694.8	3934.9	2553.3	1615.9
45°	9052.8	9145.0	8930.4	8398.7	7395.4	6598.3	6062.8	4472.3	2967.4	1875.7	1063.5
47.5°	8365.7	8341.3	8037.3	7211.0	5975.3	5260.9	4637.9	3203.6	1972.6	1062.5	528.9
50°	6932.4	6703.7	6256.7	5297.6	4010.2	3238.4	2813.0	1653.6	895.0	514.8	332.2
52.5°	4490.1	4235.1	3825.7	2940.1	1925.6	1545.3	1239.5	747.3	466.8	290.8	130.8
55°	2043.2	1862.5	1600.9	1187.7	826.3	687.0	581.6	378.3	250.3	108.2	46.1
57.5°	778.3	718.1	638.1	509.2	382.1	330.3	273.9	181.6	78.1	40.5	27.3
60°	350.1	324.7	298.3	233.4	163.8	117.6	89.4	48.9	32.9	23.5	17.9
62.5°	119.5	99.8	82.8	59.3	44.2	38.6	33.9	27.3	19.8	16.0	12.2
65°	34.8	33.9	32.0	28.2	22.6	20.7	19.8	16.0	12.2	10.4	8.5
67.5°	16.9	16.0	15.1	14.1	11.3	10.4	10.4	9.4	7.5	6.6	5.6
70°	7.5	7.5	6.6	6.6	5.6	5.6	5.6	4.7	4.7	4.7	4.7
72.5°	3.8	3.8	3.8	2.8	2.8	2.8	2.8	3.8	3.8	4.7	4.7
75°	0.9	1.9	1.9	1.9	1.9	2.8	2.8	3.8	3.8	4.7	4.7
77.5°	0.9	0.9	0.9	1.9	1.9	1.9	2.8	3.8	3.8	4.7	4.7
80°	0.0	0.9	0.9	1.9	1.9	1.9	2.8	2.8	3.8	4.7	4.7
82.5°	0.0	0.9	0.9	1.9	1.9	1.9	2.8	2.8	3.8	4.7	4.7
85°	0.0	0.0	0.9	0.9	1.9	1.9	2.8	2.8	3.8	4.7	4.7
87.5°	0.0	0.0	0.9	0.9	1.9	1.9	2.8	2.8	3.8	4.7	4.7
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4
2.5°	1363.7	1343.9	1265.8	1205.6	1177.4	1175.5	1112.4	1073.8	1006.1	953.4	903.5
5°	1792.9	1705.3	1547.2	1422.1	1361.8	1330.8	1206.5	1117.1	1000.4	910.1	820.7
7.5°	2229.5	2063.0	1840.9	1602.7	1504.9	1444.6	1252.6	1109.6	954.3	828.2	717.1
10°	2676.6	2382.9	2051.7	1737.3	1596.2	1494.5	1247.9	1054.1	875.3	727.5	606.1
12.5°	3142.4	2679.4	2218.3	1824.9	1638.5	1504.9	1205.6	973.1	778.3	621.1	505.4
15°	3534.9	2909.0	2323.7	1845.6	1625.3	1463.5	1115.2	870.5	674.8	521.4	416.0
17.5°	3837.9	3038.0	2343.4	1794.7	1551.9	1371.2	998.5	757.6	565.6	430.1	325.6
20°	3990.4	3057.7	2281.3	1674.3	1419.2	1232.9	865.8	642.8	474.3	348.2	258.8
22.5°	4001.7	2965.5	2145.8	1519.0	1273.4	1084.2	756.7	554.3	416.0	312.5	245.6
25°	3854.9	2787.6	1964.1	1359.9	1123.7	953.4	678.6	531.7	418.8	362.3	333.2
27.5°	3576.3	2541.1	1764.6	1200.9	994.8	863.0	646.6	531.7	453.6	409.4	419.7
30°	3190.4	2226.7	1487.0	984.4	809.4	694.6	508.2	398.1	312.5	260.7	251.3
32.5°	2689.8	1822.0	1152.9	727.5	590.1	500.7	343.5	249.4	201.4	196.7	191.0
35°	2213.5	1439.0	875.3	537.4	434.8	353.9	219.3	146.8	133.6	126.1	120.5
37.5°	1748.6	1076.7	628.7	390.6	298.3	224.9	112.9	95.1	82.8	75.3	68.7
40°	1314.8	773.6	443.3	236.2	156.2	96.9	67.8	58.4	51.8	48.0	46.1
42.5°	929.8	514.8	274.8	99.8	74.3	61.2	47.1	41.4	37.6	35.8	33.9
45°	540.2	320.0	111.1	58.4	47.1	42.4	34.8	31.1	29.2	27.3	26.4
47.5°	337.9	128.9	57.4	37.6	32.9	30.1	25.4	24.5	22.6	21.6	21.6
50°	136.5	57.4	35.8	26.4	23.5	22.6	19.8	18.8	16.9	16.9	16.9
52.5°	51.8	33.9	24.5	18.8	16.9	16.0	14.1	14.1	13.2	13.2	13.2
55°	30.1	22.6	16.9	13.2	12.2	12.2	11.3	11.3	10.4	10.4	10.4
57.5°	19.8	15.1	12.2	9.4	9.4	9.4	8.5	8.5	8.5	8.5	8.5
60°	13.2	10.4	8.5	7.5	7.5	7.5	7.5	8.5	8.5	8.5	8.5
62.5°	9.4	8.5	7.5	7.5	7.5	7.5	7.5	8.5	8.5	8.5	9.4
65°	7.5	6.6	6.6	6.6	6.6	7.5	7.5	8.5	8.5	9.4	9.4
67.5°	5.6	5.6	5.6	5.6	6.6	6.6	7.5	8.5	8.5	8.5	9.4
70°	4.7	5.6	5.6	6.6	6.6	6.6	7.5	7.5	8.5	8.5	9.4
72.5°	4.7	5.6	5.6	6.6	6.6	6.6	7.5	8.5	8.5	8.5	9.4
75°	4.7	5.6	5.6	6.6	6.6	6.6	7.5	8.5	8.5	8.5	9.4
77.5°	5.6	5.6	6.6	6.6	6.6	7.5	7.5	8.5	8.5	9.4	9.4
80°	5.6	5.6	6.6	6.6	6.6	7.5	7.5	8.5	8.5	9.4	9.4
82.5°	5.6	5.6	6.6	6.6	6.6	7.5	7.5	8.5	8.5	9.4	9.4
85°	5.6	5.6	6.6	6.6	6.6	7.5	7.5	8.5	8.5	9.4	9.4
87.5°	5.6	5.6	6.6	6.6	6.6	7.5	7.5	8.5	8.5	8.5	9.4
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4
2.5°	879.0	835.7	788.7	773.6	758.6	729.4	711.5	679.5	656.0	632.4	613.6
5°	761.4	692.7	635.3	610.8	587.3	546.8	518.6	484.7	457.4	433.9	412.2
7.5°	639.0	560.0	502.6	478.1	454.6	410.3	374.6	332.2	300.2	273.9	252.2
10°	526.1	450.8	388.7	359.5	332.2	286.1	252.2	218.3	191.0	168.5	148.7
12.5°	428.2	347.3	284.2	262.6	236.2	198.6	166.6	129.9	113.9	107.3	102.6
15°	332.2	259.8	207.0	187.3	163.8	128.0	113.9	107.3	102.6	99.8	96.0
17.5°	253.2	192.9	141.2	128.0	120.5	112.9	109.2	104.5	101.6	100.7	97.9
20°	198.6	145.9	132.7	128.9	128.9	127.1	124.2	124.2	123.3	126.1	126.1
22.5°	204.2	204.2	215.5	214.6	229.6	244.7	256.0	292.7	313.4	357.6	387.7
25°	356.7	390.6	430.1	442.3	471.5	514.8	560.0	616.4	656.0	698.3	715.3
27.5°	445.2	450.8	445.2	459.3	440.5	429.2	432.9	439.5	439.5	442.3	453.6
30°	263.5	276.7	288.9	298.3	293.6	288.9	287.0	272.9	272.9	267.3	262.6
32.5°	178.8	176.9	175.1	178.8	175.1	175.1	172.2	173.2	167.5	163.8	161.9
35°	122.3	116.7	110.1	111.1	107.3	106.3	103.5	103.5	99.8	97.9	96.9
37.5°	67.8	67.8	64.9	65.9	64.9	64.9	64.9	65.9	64.9	64.9	65.9
40°	46.1	46.1	45.2	46.1	45.2	46.1	47.1	47.1	47.1	47.1	46.1
42.5°	34.8	34.8	33.9	34.8	33.9	34.8	35.8	35.8	35.8	35.8	35.8
45°	27.3	27.3	27.3	27.3	27.3	27.3	27.3	28.2	28.2	27.3	27.3
47.5°	21.6	22.6	21.6	21.6	21.6	21.6	22.6	22.6	21.6	21.6	21.6
50°	17.9	17.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9	16.9
52.5°	14.1	13.2	13.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	11.3
55°	10.4	10.4	9.4	9.4	9.4	10.4	10.4	10.4	10.4	9.4	9.4
57.5°	9.4	9.4	9.4	8.5	8.5	9.4	9.4	8.5	8.5	8.5	7.5
60°	8.5	9.4	8.5	8.5	8.5	8.5	8.5	7.5	7.5	7.5	6.6
62.5°	9.4	9.4	8.5	8.5	8.5	8.5	7.5	7.5	7.5	6.6	6.6
65°	9.4	9.4	9.4	8.5	8.5	8.5	8.5	7.5	7.5	6.6	6.6
67.5°	9.4	9.4	9.4	9.4	8.5	8.5	8.5	7.5	7.5	7.5	6.6
70°	9.4	9.4	9.4	9.4	9.4	8.5	8.5	8.5	7.5	7.5	6.6
72.5°	9.4	9.4	9.4	8.5	8.5	8.5	8.5	8.5	7.5	7.5	6.6
75°	9.4	9.4	9.4	8.5	8.5	8.5	8.5	7.5	7.5	7.5	6.6
77.5°	9.4	9.4	9.4	8.5	8.5	8.5	8.5	7.5	7.5	7.5	6.6
80°	9.4	9.4	9.4	8.5	8.5	8.5	8.5	7.5	7.5	7.5	6.6
82.5°	9.4	9.4	9.4	8.5	8.5	8.5	8.5	7.5	7.5	6.6	6.6
85°	9.4	9.4	8.5	8.5	8.5	8.5	7.5	7.5	6.6	6.6	5.6
87.5°	8.5	8.5	8.5	8.5	7.5	7.5	7.5	6.6	5.6	5.6	4.7
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: P179940

CATALOG NUMBER: LDA6A55827D010TE LARH40FL 6LAL1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	985.4	985.4	985.4	985.4	985.4	985.4	985.4	985.4
2.5°	591.0	587.3	584.4	590.1	588.2	564.7	567.5	566.6
5°	387.7	379.3	372.7	375.5	368.0	357.6	350.1	348.2
7.5°	230.6	221.2	215.5	209.9	208.0	194.8	189.2	192.9
10°	127.1	113.9	112.9	110.1	106.3	103.5	101.6	102.6
12.5°	97.9	96.9	95.1	94.1	92.2	91.3	90.3	89.4
15°	93.2	92.2	91.3	90.3	89.4	88.5	87.5	87.5
17.5°	96.0	96.0	95.1	94.1	94.1	95.1	94.1	93.2
20°	125.2	125.2	127.1	129.9	129.9	132.7	136.5	133.6
22.5°	406.6	427.3	452.7	460.2	504.4	540.2	606.1	576.9
25°	743.5	790.6	801.8	817.8	842.3	854.5	842.3	858.3
27.5°	451.7	467.7	469.6	470.6	476.2	475.3	463.0	470.6
30°	262.6	268.2	266.3	265.4	263.5	253.2	251.3	255.0
32.5°	164.7	162.8	161.9	160.9	160.9	155.3	158.1	156.2
35°	94.1	96.9	96.0	95.1	92.2	91.3	91.3	90.3
37.5°	63.1	64.0	63.1	62.1	60.2	59.3	58.4	57.4
40°	45.2	46.1	45.2	44.2	43.3	42.4	41.4	40.5
42.5°	33.9	34.8	33.9	33.9	32.0	31.1	30.1	29.2
45°	26.4	25.4	25.4	25.4	24.5	23.5	22.6	22.6
47.5°	21.6	21.6	21.6	20.7	19.8	19.8	19.8	18.8
50°	16.0	16.9	16.0	16.0	15.1	14.1	14.1	13.2
52.5°	11.3	11.3	10.4	10.4	9.4	8.5	8.5	8.5
55°	8.5	8.5	8.5	7.5	7.5	6.6	6.6	6.6
57.5°	7.5	6.6	6.6	6.6	5.6	5.6	4.7	4.7
60°	6.6	5.6	5.6	4.7	4.7	3.8	3.8	3.8
62.5°	5.6	4.7	4.7	4.7	3.8	3.8	3.8	3.8
65°	5.6	4.7	4.7	4.7	3.8	3.8	3.8	3.8
67.5°	5.6	5.6	4.7	4.7	4.7	3.8	3.8	3.8
70°	5.6	5.6	5.6	4.7	4.7	4.7	3.8	3.8
72.5°	6.6	5.6	5.6	5.6	4.7	4.7	4.7	4.7
75°	6.6	5.6	5.6	5.6	4.7	4.7	4.7	4.7
77.5°	6.6	5.6	5.6	5.6	4.7	4.7	4.7	4.7
80°	5.6	5.6	5.6	4.7	4.7	4.7	4.7	4.7
82.5°	5.6	5.6	5.6	5.6	4.7	4.7	4.7	4.7
85°	5.6	4.7	4.7	4.7	3.8	3.8	3.8	3.8
87.5°	4.7	3.8	3.8	2.8	2.8	2.8	1.9	1.9
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)