

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: P179848

Luminaire Tested: **LDA6A55927D010TE LARH40FL 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179848
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: LDA6A55927D010TE 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: 3264.2 lumens
Efficiency: N/A
Efficacy: 53.5 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

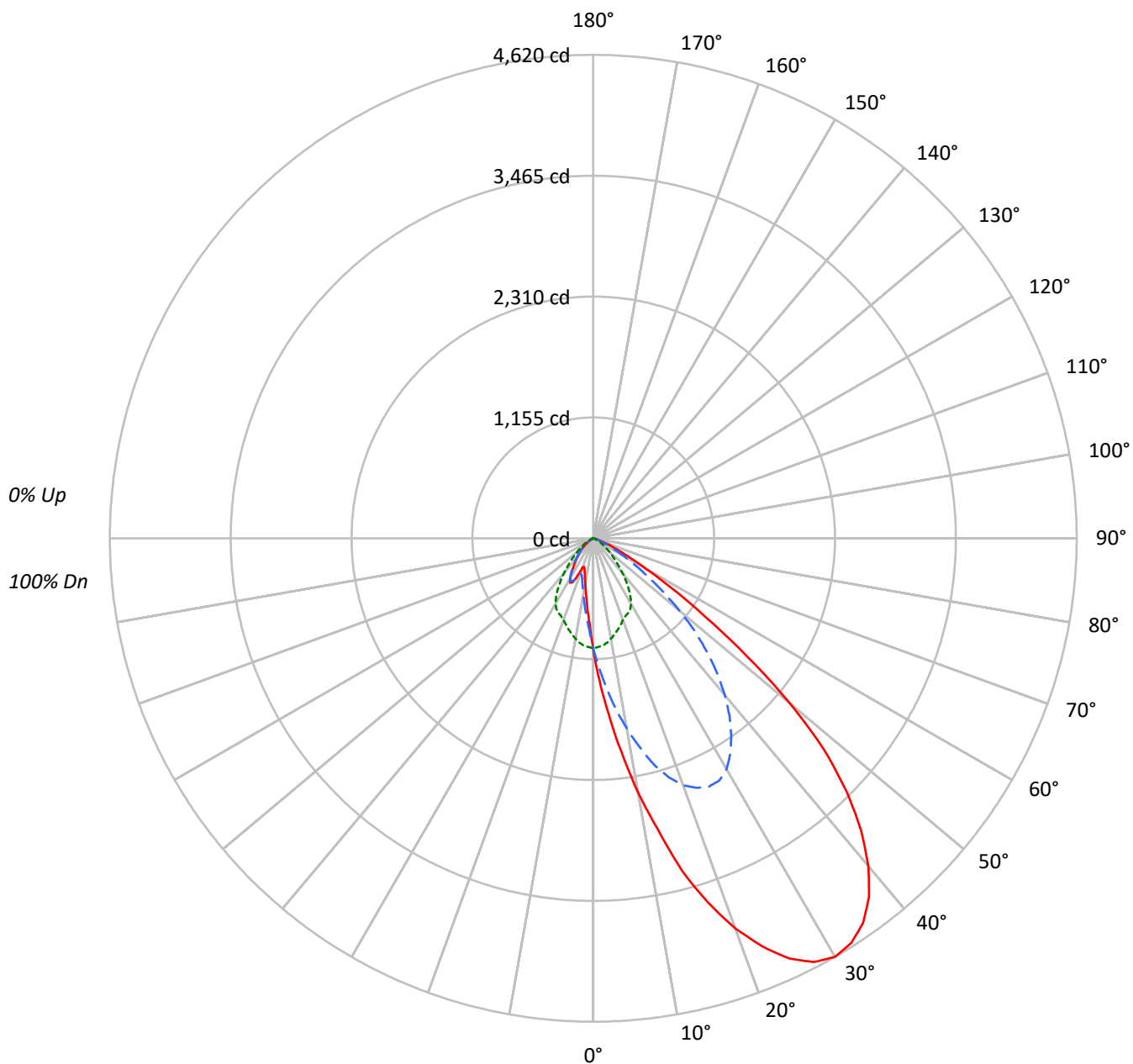
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	57764	57764	57764
5°	92829	56625	36116
10°	137272	54241	24248
15°	187056	51311	18008
20°	231353	48421	17070
25°	268032	47670	28024
30°	292437	45672	28042
35°	300558	39465	21937
40°	292691	31065	17082
45°	265392	22979	13459
50°	209093	16980	9125
55°	124679	12090	5218
60°	63756	8037	1974
65°	30483	4268	869
70°	14393	1923	833
75°	5867	1271	953
80°	2841	1421	947
85°	1384	2327	1384



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.2	3.3
10°-20°	382.2	11.7
20°-30°	719.3	22.0
30°-40°	876.0	26.8
40°-50°	729.1	22.3
50°-60°	349.2	10.7
60°-70°	83.9	2.6
70°-80°	13.2	0.4
80°-90°	3.1	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°	1209.7	37.1
0°-40°	2085.6	63.9
0°-60°	3164.0	96.9
0°-90°	3264.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3264.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1054	1054	1054	1054	1054	
5°	1687	1431	1029	748	656	185
15°	3296	2239	904	410	317	945
25°	4431	2617	788	447	463	2035
35°	4491	2298	590	344	328	2783
45°	3423	1536	296	183	174	2592
55°	1304	634	126	71	55	1229
65°	235	137	33	10	7	269
75°	28	14	6	5	4	38
85°	2	2	4	3	2	3
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°	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7
2.5°	1362.8	1314.9	1329.9	1326.9	1323.9	1308.2	1297.0	1287.2	1262.5	1262.5	1231.1
5°	1686.9	1630.8	1645.0	1634.5	1621.0	1597.1	1575.4	1550.7	1505.0	1485.6	1430.9
7.5°	2057.3	1993.7	2006.4	1985.5	1957.1	1924.9	1889.7	1843.3	1770.7	1726.5	1642.0
10°	2466.0	2375.4	2382.9	2351.5	2304.3	2260.9	2227.2	2138.9	2035.6	1962.3	1844.0
12.5°	2852.9	2773.6	2775.8	2731.6	2663.5	2610.4	2559.5	2442.8	2305.1	2200.3	2044.6
15°	3295.9	3198.6	3175.4	3115.6	3026.5	2961.4	2891.8	2744.4	2571.5	2433.0	2239.2
17.5°	3652.9	3552.6	3537.7	3481.5	3354.3	3275.7	3188.2	3022.0	2802.7	2630.6	2392.6
20°	3965.7	3866.2	3840.8	3768.2	3622.2	3532.4	3426.9	3230.8	2991.3	2779.5	2510.9
22.5°	4221.7	4112.4	4076.5	3986.7	3824.3	3723.3	3594.5	3380.5	3113.3	2876.8	2581.2
25°	4431.2	4307.0	4261.4	4159.6	3977.0	3865.5	3724.0	3484.5	3193.4	2932.2	2617.1
27.5°	4565.2	4441.0	4390.8	4274.1	4069.0	3949.3	3795.1	3536.2	3221.8	2939.7	2609.7
30°	4619.8	4491.1	4434.2	4301.8	4081.0	3954.5	3793.6	3513.7	3185.2	2885.8	2546.8
32.5°	4586.2	4459.7	4396.1	4252.4	4022.6	3886.4	3725.5	3426.9	3088.6	2778.8	2437.5
35°	4491.1	4366.1	4300.3	4146.9	3907.4	3765.2	3605.0	3295.9	2953.9	2637.3	2298.3
37.5°	4327.2	4209.0	4133.4	3981.5	3740.5	3595.3	3436.6	3124.5	2775.0	2477.2	2137.4
40°	4090.0	3977.7	3902.9	3740.5	3513.0	3366.3	3216.6	2900.0	2570.7	2280.4	1952.6
42.5°	3787.6	3684.3	3612.5	3454.6	3237.6	3093.1	2956.2	2652.3	2338.7	2062.6	1752.7
45°	3423.2	3333.4	3263.0	3132.0	2918.0	2781.0	2657.6	2382.1	2077.5	1823.8	1536.5
47.5°	2994.3	2920.2	2852.1	2733.1	2540.1	2410.6	2308.8	2056.6	1798.4	1559.7	1314.9
50°	2451.7	2398.6	2345.5	2222.0	2085.8	1972.8	1898.7	1674.2	1465.4	1278.3	1075.4
52.5°	1848.5	1816.4	1778.9	1690.6	1599.3	1533.5	1467.6	1297.0	1140.6	1001.4	843.4
55°	1304.5	1288.0	1258.8	1222.9	1153.3	1108.4	1051.5	964.7	843.4	749.9	633.9
57.5°	881.6	877.1	856.9	835.2	797.0	782.1	734.2	678.0	609.9	540.3	458.0
60°	581.5	571.8	567.3	555.3	526.1	514.1	496.9	461.0	419.1	370.5	319.6
62.5°	374.2	369.0	365.2	360.0	342.0	342.0	324.8	308.3	276.9	247.0	214.0
65°	235.0	230.5	229.8	226.0	219.3	216.3	203.6	191.6	176.6	160.2	137.0
67.5°	151.2	144.4	140.7	138.5	134.0	128.7	124.2	119.0	107.0	97.3	82.3
70°	89.8	83.8	83.1	83.8	78.6	77.8	73.3	69.6	61.4	55.4	46.4
72.5°	50.9	47.9	47.1	47.1	44.2	43.4	40.4	38.2	33.7	29.2	25.4
75°	27.7	25.4	25.4	25.4	23.9	23.2	21.7	21.0	18.0	16.5	14.2
77.5°	15.7	15.0	15.0	14.2	13.5	12.7	12.0	12.0	10.5	9.7	9.0
80°	9.0	9.0	9.0	9.0	8.2	8.2	7.5	7.5	6.7	6.7	6.0
82.5°	5.2	5.2	5.2	5.2	5.2	5.2	4.5	4.5	4.5	4.5	3.7
85°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
87.5°	0.0	0.0	0.7	0.7	0.7	0.7	0.7	1.5	1.5	1.5	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7
2.5°	1216.9	1194.4	1192.9	1160.0	1139.1	1121.8	1109.1	1093.4	1058.2	1038.8	1024.6
5°	1392.8	1346.4	1322.4	1262.5	1229.6	1200.4	1164.5	1127.1	1069.5	1029.0	996.1
7.5°	1575.4	1498.3	1447.4	1358.3	1313.4	1267.8	1207.2	1146.5	1068.0	1007.3	957.2
10°	1745.3	1636.0	1555.2	1435.4	1377.0	1317.2	1231.9	1150.3	1052.2	974.4	908.6
12.5°	1912.1	1768.5	1656.9	1505.0	1433.9	1359.8	1250.6	1148.0	1032.8	939.2	862.2
15°	2071.6	1891.2	1749.0	1565.6	1482.6	1393.5	1262.5	1141.3	1010.3	904.1	816.5
17.5°	2198.8	1984.7	1814.1	1603.1	1509.5	1408.5	1258.1	1121.8	979.6	866.6	770.8
20°	2286.3	2044.6	1850.0	1618.0	1515.5	1407.0	1240.8	1094.9	947.5	830.0	732.7
22.5°	2333.5	2071.6	1859.8	1613.5	1506.5	1392.8	1219.9	1070.2	922.0	804.5	711.7
25°	2350.7	2073.8	1849.3	1594.1	1486.3	1370.3	1195.2	1047.0	901.8	788.1	701.2
27.5°	2330.5	2042.4	1811.1	1553.7	1444.4	1329.9	1155.5	1014.1	871.9	764.1	682.5
30°	2261.6	1969.0	1736.3	1481.8	1374.8	1264.8	1092.7	953.5	823.2	721.5	643.6
32.5°	2152.4	1861.3	1630.8	1383.0	1279.8	1174.2	1009.6	877.1	755.9	660.1	590.5
35°	2016.9	1732.5	1508.0	1267.8	1170.5	1071.0	914.5	789.6	675.8	589.7	521.6
37.5°	1863.5	1589.6	1372.6	1151.8	1053.0	959.4	807.5	700.5	591.2	512.7	450.5
40°	1691.4	1425.7	1228.1	1013.3	926.5	841.2	700.5	603.2	503.7	434.1	380.2
42.5°	1507.3	1259.5	1076.9	883.9	797.0	719.2	592.7	505.2	416.9	359.2	316.6
45°	1311.9	1093.4	918.3	745.4	666.8	599.5	484.2	404.9	340.5	296.4	264.2
47.5°	1107.6	914.5	758.9	608.4	538.8	480.5	387.7	327.0	276.2	244.0	219.3
50°	901.8	729.7	606.2	478.2	418.4	372.0	303.1	261.2	223.8	199.1	180.4
52.5°	705.0	564.3	464.0	360.7	315.1	282.9	236.5	207.3	178.9	160.2	145.9
55°	520.9	425.1	339.0	261.9	235.0	214.8	181.9	160.9	140.7	126.5	116.0
57.5°	376.4	304.6	241.7	192.3	174.4	160.9	137.0	122.7	108.5	98.0	89.8
60°	264.2	210.3	170.6	140.7	128.0	119.0	101.8	92.8	82.3	73.3	65.1
62.5°	173.6	141.4	119.0	99.5	92.1	85.3	73.3	66.6	57.6	51.6	44.2
65°	113.0	92.8	79.3	66.6	60.6	57.6	49.4	44.2	38.2	32.9	28.4
67.5°	68.9	57.6	50.1	41.9	38.9	35.9	30.7	26.9	23.2	19.5	17.2
70°	38.2	33.7	29.2	24.7	22.5	21.0	18.0	16.5	13.5	12.0	9.7
72.5°	22.5	19.5	17.2	14.2	13.5	12.7	10.5	9.7	8.2	7.5	6.7
75°	13.5	11.2	10.5	9.0	8.2	8.2	7.5	6.7	6.0	6.0	5.2
77.5°	8.2	7.5	6.7	6.0	6.0	6.0	5.2	5.2	5.2	4.5	4.5
80°	5.2	5.2	5.2	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
82.5°	3.7	3.7	3.7	3.0	3.7	3.0	3.7	3.7	3.7	3.7	3.7
85°	2.2	2.2	3.0	3.0	3.0	3.0	3.0	3.7	3.7	3.7	3.7
87.5°	2.2	2.2	3.0	3.0	3.0	3.0	3.0	3.7	3.7	3.7	3.0
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°	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7
2.5°	1008.1	980.4	960.2	945.2	950.5	924.3	916.0	887.6	877.1	877.1	862.2
5°	962.4	918.3	883.9	862.2	860.7	823.2	803.8	767.9	748.4	734.2	720.0
7.5°	907.8	850.9	805.3	779.1	771.6	727.4	701.2	665.3	636.1	617.4	600.2
10°	849.4	781.3	729.7	699.7	688.5	640.6	606.2	573.3	541.8	522.4	504.4
12.5°	793.3	719.2	662.3	631.6	617.4	568.0	532.9	498.4	468.5	448.3	430.3
15°	741.7	663.1	603.2	572.5	556.8	508.2	473.0	439.3	410.1	391.4	374.9
17.5°	693.0	612.9	553.1	523.1	505.9	461.0	427.3	394.4	368.2	351.0	336.0
20°	656.3	577.0	521.6	495.4	478.2	436.3	407.1	378.7	357.0	344.3	330.0
22.5°	640.6	567.3	520.1	496.2	484.2	450.5	430.3	410.1	395.9	393.7	384.7
25°	638.4	574.0	535.1	514.9	507.4	482.0	470.0	457.3	446.8	449.8	451.3
27.5°	628.7	568.8	536.6	519.4	513.4	492.4	483.5	471.5	464.0	467.7	469.2
30°	595.0	539.6	509.7	495.4	489.5	468.5	461.0	447.5	441.6	442.3	441.6
32.5°	542.6	490.2	462.5	449.8	443.0	424.3	416.1	404.1	395.2	394.4	392.9
35°	479.0	431.8	406.4	395.2	388.4	372.7	365.2	354.0	343.5	342.8	341.3
37.5°	413.9	372.0	350.2	340.5	334.5	321.8	312.8	305.3	298.6	295.6	294.9
40°	351.0	313.6	297.9	290.4	285.9	272.4	267.9	260.4	255.2	252.2	251.5
42.5°	291.9	265.7	253.0	246.2	242.5	232.8	227.5	221.5	216.3	213.3	212.5
45°	247.7	226.0	214.0	208.8	205.8	196.8	193.1	187.1	182.6	180.4	179.6
47.5°	206.6	189.3	181.1	175.1	174.4	166.9	161.7	157.2	152.7	150.4	149.7
50°	169.1	154.9	148.2	144.4	143.7	136.2	132.5	128.7	125.0	122.7	121.2
52.5°	139.2	125.7	121.2	116.0	115.3	108.5	105.5	101.8	98.0	95.0	92.8
55°	110.0	99.5	95.0	90.6	89.8	82.3	79.3	74.8	71.1	68.1	65.1
57.5°	83.8	75.6	71.1	66.6	65.9	60.6	55.4	51.6	47.9	44.2	41.9
60°	61.4	53.1	47.9	45.7	43.4	38.2	34.4	31.4	28.4	26.2	23.9
62.5°	40.4	34.4	30.7	27.7	26.2	22.5	20.2	18.0	16.5	15.7	15.0
65°	24.7	21.0	18.0	16.5	16.5	14.2	12.7	11.2	10.5	10.5	9.7
67.5°	15.0	12.7	11.2	10.5	9.7	9.0	8.2	8.2	7.5	7.5	6.7
70°	9.0	8.2	7.5	6.7	6.7	6.7	6.7	6.7	6.0	6.0	6.0
72.5°	6.7	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.2	5.2	5.2
75°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	4.5
77.5°	4.5	4.5	4.5	4.5	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	4.5	4.5	3.7	3.7	3.7
82.5°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
85°	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.0	3.0	3.0	3.0
87.5°	3.7	3.0	3.0	3.0	3.0	3.0	2.2	2.2	2.2	2.2	1.5
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: P179848

CATALOG NUMBER: LDA6A55927D010TE LARH40FL 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7	1053.7
2.5°	854.7	860.7	851.7	845.7	839.7	844.2	823.2	814.3
5°	706.5	699.7	695.3	690.0	681.0	682.5	664.6	656.3
7.5°	584.5	580.0	568.8	562.8	553.8	553.8	537.3	530.6
10°	488.0	481.2	470.7	465.5	457.3	450.5	442.3	435.6
12.5°	414.6	407.1	398.1	393.7	385.4	380.2	372.0	373.4
15°	360.0	352.5	344.3	339.8	333.0	327.8	321.1	317.3
17.5°	321.8	315.1	308.3	303.8	298.6	294.1	288.1	287.4
20°	318.8	313.6	309.8	306.8	302.4	299.4	296.4	292.6
22.5°	381.7	382.4	383.2	383.2	383.9	383.9	384.7	377.2
25°	450.5	458.8	458.8	461.0	467.7	467.7	466.3	463.3
27.5°	468.5	476.7	474.5	476.0	482.7	484.2	479.0	479.7
30°	438.6	446.0	441.6	442.3	446.8	446.8	440.1	443.0
32.5°	388.4	392.9	386.9	386.9	390.7	389.9	385.4	385.4
35°	335.3	337.5	332.3	334.5	334.5	332.3	327.8	327.8
37.5°	289.6	290.4	285.1	285.9	285.9	283.6	279.2	279.2
40°	246.2	248.5	244.0	245.5	244.0	241.7	239.5	238.7
42.5°	208.1	209.6	205.8	208.1	207.3	207.3	206.6	207.3
45°	175.1	176.6	173.6	175.1	175.9	175.1	172.9	173.6
47.5°	145.2	146.7	146.7	145.2	144.4	140.7	138.5	138.5
50°	117.5	116.7	116.0	113.8	111.5	109.3	107.0	107.0
52.5°	88.3	86.8	86.1	83.8	83.1	80.8	80.8	78.6
55°	60.6	59.9	59.9	57.6	57.6	55.4	54.6	54.6
57.5°	38.2	36.7	37.4	35.9	35.2	32.9	32.9	32.2
60°	21.7	21.0	21.0	20.2	19.5	18.0	18.0	18.0
62.5°	14.2	13.5	13.5	12.7	12.7	12.0	12.0	11.2
65°	9.0	8.2	8.2	7.5	7.5	6.7	6.7	6.7
67.5°	6.7	6.0	6.0	6.0	6.0	6.0	5.2	5.2
70°	6.0	6.0	5.2	5.2	5.2	5.2	5.2	5.2
72.5°	5.2	5.2	5.2	5.2	4.5	4.5	4.5	4.5
75°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
77.5°	4.5	3.7	3.7	3.7	3.7	3.7	3.7	3.7
80°	3.7	3.7	3.7	3.7	3.7	3.7	3.0	3.0
82.5°	3.7	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	3.0	2.2	2.2	2.2	2.2	2.2	2.2	2.2
87.5°	1.5	1.5	1.5	1.5	0.7	0.7	0.7	0.7
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)