

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: P179653

Luminaire Tested: **LDA6A45830D010TE LARH40FL 6LA1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179653
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26672)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A45830D010TE LARH40FL 6LA1LI 30°
Description: PORTFOLIO 6" Adjustable Reflector, Angle-cut Trim, Self-flanged, 40° Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4976.9 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 2.54 / 0.51 / 1.33
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

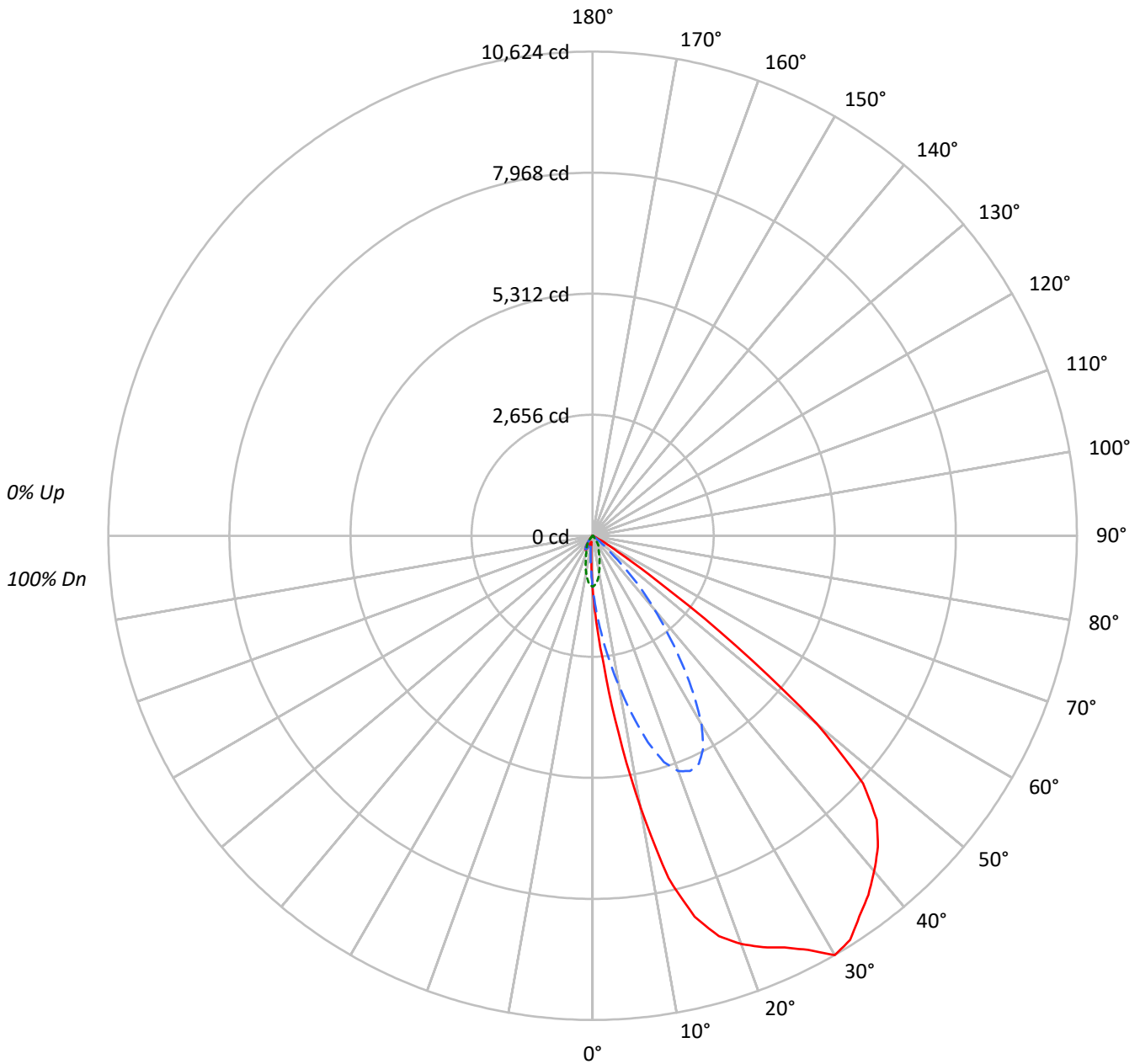
Input Watts (W): 53
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	109	106	103	110	107	104	102	103	101	99	99	97	96	95	94	93	91																			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	84	82																			
3	98	90	84	79	96	89	83	79	86	81	77	84	80	76	81	78	75	73																			
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65																			
5	85	75	68	62	83	74	67	62	72	66	62	70	65	61	69	64	60	59																			
6	80	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	47																			
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	54	48	45	43																			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	44	40	39																			
10	61	49	42	37	60	49	42	37	48	41	37	47	41	37	46	41	37	35																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	61245	61245	61245
5°	156609	56466	20603
10°	336589	45551	7582
15°	491007	33315	8678
20°	556000	23954	13377
25°	602738	19265	20747
30°	672528	15819	19978
35°	682609	10233	13311
40°	687645	4909	6734
45°	683342	2054	2814
50°	547112	921	921
55°	163167	659	96
60°	33309	757	0
65°	3178	895	0
70°	321	1250	0
75°	0	1652	0
80°	0	2778	316
85°	0	5535	629



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.3	2.9
10°-20°	698.0	14.0
20°-30°	1282.9	25.8
30°-40°	1471.8	29.6
40°-50°	1113.6	22.4
50°-60°	246.8	5.0
60°-70°	10.5	0.2
70°-80°	4.6	0.1
80°-90°	4.5	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°	2125.2	42.7
0°-40°	3597.0	72.3
0°-60°	4957.3	99.6
0°-90°	4976.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4976.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1117	1117	1117	1117	1117	
5°	2846	2126	1026	502	374	376
15°	8652	4692	587	152	153	2411
25°	9965	5517	318	309	343	4649
35°	10200	3406	153	191	199	6389
45°	8814	963	26	34	36	6578
55°	1707	36	7	5	1	2113
65°	24	5	7	4	0	65
75°	0	4	8	5	0	0
85°	0	5	9	5	1	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°	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2
2.5°	1892.4	1873.8	1878.7	1902.2	1805.2	1802.2	1757.2	1751.3	1706.2	1623.9	1582.7
5°	2845.9	2834.2	2813.6	2821.4	2710.7	2636.2	2557.8	2501.0	2385.3	2229.5	2125.6
7.5°	4366.9	4239.5	4177.8	4059.2	3918.1	3774.0	3629.0	3460.4	3217.4	2945.9	2726.4
10°	6046.6	5990.8	5864.4	5788.9	5476.3	5264.6	5039.2	4694.2	4249.3	3757.4	3347.7
12.5°	7693.1	7627.4	7436.3	7275.6	6859.1	6669.9	6376.9	5941.8	5377.3	4676.6	4028.8
15°	8651.5	8666.2	8449.6	8441.8	8083.1	7837.1	7583.3	7068.8	6352.4	5547.8	4692.3
17.5°	9213.1	9249.3	9034.7	9095.5	8737.8	8482.9	8293.8	7917.5	7156.0	6190.7	5204.8
20°	9530.6	9588.4	9360.1	9407.1	9101.3	8928.9	8736.8	8364.4	7692.1	6626.8	5495.9
22.5°	9772.6	9795.2	9541.4	9604.1	9269.9	9097.4	8961.2	8612.3	7948.8	6857.1	5587.0
25°	9964.7	10021.6	9731.5	9736.4	9404.2	9231.7	9080.8	8763.2	8058.6	6917.9	5517.4
27.5°	10241.1	10287.1	9860.8	9823.6	9502.2	9312.0	9148.4	8835.8	8053.7	6782.6	5254.8
30°	10624.3	10367.5	9931.4	9835.4	9473.7	9280.7	9105.3	8699.5	7873.4	6418.1	4777.5
32.5°	10514.5	10306.7	9876.5	9723.6	9365.0	9158.2	8957.3	8463.3	7454.9	5853.6	4126.8
35°	10199.9	10133.3	9681.5	9633.5	9199.3	8982.8	8780.9	8105.6	6813.0	5115.6	3405.5
37.5°	9934.3	9820.7	9529.6	9454.1	8998.4	8759.3	8437.9	7571.5	5964.3	4174.8	2719.5
40°	9609.0	9532.5	9251.3	9170.9	8643.7	8279.1	7886.1	6603.3	4939.2	3249.7	2100.2
42.5°	9263.0	9194.4	8928.9	8760.3	8057.6	7575.5	6964.9	5431.2	3802.4	2449.0	1573.9
45°	8814.2	8717.2	8384.9	8071.3	7063.9	6374.0	5687.0	4144.5	2783.2	1743.4	963.3
47.5°	8042.9	7889.1	7486.3	6856.1	5618.4	4955.9	4240.5	2810.7	1718.9	897.7	485.1
50°	6415.1	6146.6	5610.5	4860.8	3598.6	2963.5	2403.0	1428.9	737.9	462.6	285.2
52.5°	3953.4	3707.4	3250.7	2527.4	1659.2	1277.9	1006.5	665.4	406.7	261.7	105.8
55°	1707.2	1553.3	1334.8	1018.2	723.2	594.9	478.2	332.2	209.7	80.4	36.3
57.5°	644.8	598.8	542.9	445.9	333.2	278.3	234.2	147.0	51.0	30.4	20.6
60°	303.8	275.4	243.0	193.1	127.4	92.1	57.8	37.2	24.5	16.7	11.8
62.5°	83.3	62.7	51.9	42.1	32.3	28.4	24.5	18.6	13.7	8.8	6.9
65°	24.5	21.6	20.6	17.6	14.7	12.7	10.8	8.8	6.9	4.9	4.9
67.5°	8.8	8.8	7.8	6.9	5.9	4.9	4.9	3.9	3.9	3.9	3.9
70°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9	2.9	3.9	3.9
72.5°	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.9	2.9	3.9	3.9
75°	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.9	2.9	3.9	3.9
77.5°	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.9	3.9	3.9	4.9
80°	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.9	3.9	3.9	4.9
82.5°	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.9	3.9	3.9	4.9
85°	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.9	3.9	3.9	4.9
87.5°	0.0	0.0	1.0	1.0	2.0	2.0	2.0	2.9	3.9	3.9	4.9
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°	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2
2.5°	1548.4	1491.6	1411.2	1370.1	1333.8	1324.0	1249.5	1201.5	1144.6	1085.8	1024.1
5°	2028.6	1883.6	1729.7	1600.4	1534.7	1496.5	1351.4	1242.7	1137.8	1026.1	931.0
7.5°	2504.9	2245.2	2020.8	1812.0	1697.4	1611.1	1403.4	1239.7	1080.9	935.9	807.5
10°	2965.5	2591.1	2233.4	1951.2	1793.4	1665.0	1396.5	1183.8	984.9	818.3	684.0
12.5°	3432.0	2886.1	2410.8	2025.7	1837.5	1672.9	1349.5	1090.7	880.0	703.6	564.5
15°	3848.5	3115.4	2521.6	2043.3	1816.0	1621.9	1257.4	972.2	762.4	587.0	465.5
17.5°	4137.6	3238.9	2528.4	1978.6	1725.8	1517.1	1129.0	847.7	643.9	489.0	382.2
20°	4268.9	3235.0	2435.3	1844.4	1579.8	1362.2	977.1	720.3	537.0	410.6	319.5
22.5°	4229.7	3111.5	2270.7	1654.3	1401.4	1183.8	835.9	607.6	461.6	352.8	280.3
25°	4033.7	2895.9	2077.6	1464.1	1209.3	1006.5	708.5	519.4	400.8	318.5	254.8
27.5°	3713.3	2601.9	1817.9	1241.7	1008.4	850.6	596.8	448.8	352.8	281.3	265.6
30°	3244.8	2245.2	1513.1	1001.6	814.4	673.3	484.1	361.6	282.2	249.9	250.9
32.5°	2728.3	1852.2	1189.7	765.4	613.5	519.4	357.7	252.8	206.8	204.8	205.8
35°	2213.8	1442.6	884.9	559.6	449.8	374.4	230.3	158.8	153.9	152.9	154.8
37.5°	1757.2	1073.1	638.0	391.0	297.9	228.3	124.5	107.8	103.9	105.8	106.8
40°	1312.2	752.6	431.2	231.3	145.0	104.9	75.5	69.6	67.6	68.6	68.6
42.5°	902.6	470.4	256.8	96.0	69.6	57.8	48.0	45.1	43.1	42.1	43.1
45°	486.1	293.0	100.0	49.0	41.2	37.2	30.4	28.4	27.4	26.5	26.5
47.5°	310.7	108.8	45.1	30.4	26.5	24.5	20.6	18.6	17.6	16.7	16.7
50°	116.6	42.1	27.4	19.6	16.7	15.7	12.7	11.8	10.8	10.8	10.8
52.5°	40.2	25.5	17.6	12.7	10.8	9.8	8.8	7.8	7.8	7.8	7.8
55°	22.5	15.7	10.8	7.8	7.8	6.9	6.9	6.9	6.9	6.9	6.9
57.5°	13.7	8.8	6.9	5.9	5.9	5.9	5.9	6.9	6.9	6.9	6.9
60°	7.8	5.9	5.9	5.9	5.9	5.9	5.9	5.9	6.9	6.9	6.9
62.5°	4.9	4.9	4.9	4.9	4.9	5.9	5.9	6.9	6.9	6.9	6.9
65°	4.9	4.9	4.9	4.9	4.9	5.9	5.9	6.9	6.9	6.9	6.9
67.5°	3.9	4.9	4.9	5.9	5.9	5.9	5.9	6.9	6.9	7.8	6.9
70°	4.9	4.9	4.9	5.9	5.9	5.9	6.9	6.9	7.8	7.8	7.8
72.5°	4.9	4.9	4.9	5.9	5.9	5.9	6.9	6.9	7.8	7.8	7.8
75°	4.9	4.9	5.9	5.9	5.9	6.9	6.9	7.8	7.8	7.8	7.8
77.5°	4.9	4.9	5.9	5.9	5.9	6.9	6.9	7.8	7.8	8.8	7.8
80°	4.9	4.9	5.9	6.9	6.9	6.9	6.9	7.8	7.8	8.8	8.8
82.5°	4.9	5.9	5.9	6.9	6.9	6.9	7.8	7.8	8.8	8.8	8.8
85°	4.9	5.9	5.9	6.9	6.9	6.9	7.8	7.8	8.8	8.8	8.8
87.5°	4.9	5.9	5.9	6.9	6.9	6.9	7.8	7.8	8.8	8.8	8.8
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°	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2
2.5°	990.8	933.9	887.9	888.9	850.6	821.2	784.0	763.4	746.8	719.3	693.8
5°	861.4	774.2	708.5	695.8	651.7	606.6	560.6	526.3	501.8	475.3	450.8
7.5°	721.3	621.3	545.9	528.2	491.0	448.8	406.7	372.4	343.0	314.6	285.2
10°	585.1	493.9	425.3	407.7	370.4	326.3	286.2	255.8	233.2	210.7	188.2
12.5°	473.3	393.0	328.3	305.8	275.4	241.1	208.7	179.3	154.8	145.0	142.1
15°	383.2	306.7	255.8	237.2	211.7	176.4	157.8	152.9	151.9	151.9	151.9
17.5°	309.7	249.9	203.8	184.2	171.5	169.5	169.5	169.5	170.5	172.5	176.4
20°	259.7	206.8	189.1	191.1	191.1	193.1	197.0	199.9	203.8	208.7	214.6
22.5°	230.3	219.5	217.6	223.4	224.4	230.3	238.1	244.0	250.9	258.7	263.6
25°	251.9	255.8	258.7	267.5	270.5	280.3	292.0	300.9	308.7	317.5	323.4
27.5°	274.4	281.3	287.1	296.0	297.9	310.7	320.5	326.3	332.2	336.1	340.1
30°	258.7	265.6	271.5	279.3	279.3	293.0	297.9	302.8	307.7	309.7	313.6
32.5°	212.7	219.5	225.4	231.3	232.3	242.1	247.9	249.9	253.8	254.8	257.7
35°	159.7	162.7	168.6	173.5	174.4	181.3	186.2	188.2	191.1	191.1	193.1
37.5°	109.8	111.7	116.6	119.6	121.5	126.4	129.4	131.3	133.3	134.3	135.2
40°	71.5	72.5	75.5	78.4	80.4	83.3	85.3	87.2	88.2	90.2	90.2
42.5°	44.1	45.1	47.0	49.0	49.0	51.9	52.9	54.9	55.9	56.8	56.8
45°	27.4	28.4	28.4	29.4	30.4	31.4	33.3	33.3	34.3	34.3	34.3
47.5°	16.7	17.6	16.7	17.6	17.6	18.6	19.6	19.6	19.6	19.6	19.6
50°	10.8	10.8	10.8	10.8	10.8	10.8	11.8	11.8	11.8	11.8	10.8
52.5°	7.8	7.8	6.9	7.8	6.9	6.9	6.9	6.9	6.9	6.9	5.9
55°	6.9	6.9	6.9	6.9	5.9	5.9	5.9	4.9	4.9	3.9	3.9
57.5°	6.9	6.9	5.9	5.9	5.9	4.9	4.9	4.9	3.9	3.9	2.9
60°	6.9	6.9	5.9	5.9	5.9	4.9	4.9	3.9	3.9	2.9	2.9
62.5°	6.9	6.9	5.9	5.9	5.9	5.9	4.9	4.9	3.9	3.9	2.9
65°	6.9	6.9	6.9	5.9	5.9	5.9	4.9	4.9	3.9	3.9	2.9
67.5°	6.9	6.9	6.9	6.9	5.9	5.9	5.9	4.9	3.9	3.9	2.9
70°	6.9	6.9	6.9	6.9	6.9	5.9	5.9	4.9	4.9	3.9	2.9
72.5°	7.8	7.8	6.9	6.9	6.9	5.9	5.9	4.9	4.9	3.9	3.9
75°	7.8	7.8	6.9	6.9	6.9	5.9	5.9	4.9	4.9	3.9	3.9
77.5°	7.8	7.8	7.8	7.8	6.9	6.9	5.9	5.9	4.9	4.9	3.9
80°	7.8	7.8	7.8	7.8	6.9	6.9	6.9	5.9	4.9	4.9	3.9
82.5°	7.8	7.8	7.8	7.8	7.8	6.9	6.9	5.9	4.9	4.9	3.9
85°	7.8	7.8	7.8	7.8	7.8	6.9	6.9	5.9	4.9	4.9	3.9
87.5°	7.8	7.8	7.8	7.8	7.8	6.9	6.9	5.9	4.9	4.9	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



TEST NUMBER: P179653

CATALOG NUMBER: LDA6A45830D010TE LARH40FL 6LA1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2	1117.2
2.5°	670.3	657.6	656.6	645.8	624.3	635.0	621.3	611.5
5°	429.2	415.5	401.8	403.8	388.1	391.0	380.2	374.4
7.5°	272.4	257.7	253.8	253.8	236.2	236.2	229.3	225.4
10°	171.5	159.7	155.8	149.0	141.1	140.1	137.2	136.2
12.5°	139.2	139.2	136.2	137.2	137.2	137.2	136.2	136.2
15°	151.9	152.9	149.9	150.9	152.9	151.9	152.9	152.9
17.5°	175.4	180.3	176.4	178.4	182.3	181.3	182.3	183.3
20°	214.6	222.5	217.6	221.5	226.4	225.4	228.3	229.3
22.5°	267.5	277.3	272.4	276.4	284.2	282.2	286.2	288.1
25°	326.3	336.1	330.3	335.2	340.1	342.0	342.0	343.0
27.5°	340.1	345.9	342.0	346.9	348.9	350.8	348.9	349.9
30°	311.6	316.5	312.6	317.5	317.5	319.5	317.5	315.6
32.5°	256.8	260.7	255.8	261.7	260.7	261.7	262.6	263.6
35°	194.0	196.0	193.1	194.0	195.0	196.0	198.9	198.9
37.5°	135.2	138.2	135.2	136.2	136.2	138.2	140.1	140.1
40°	90.2	93.1	90.2	92.1	91.1	92.1	94.1	94.1
42.5°	56.8	58.8	56.8	57.8	57.8	57.8	58.8	59.8
45°	34.3	35.3	34.3	35.3	35.3	35.3	36.3	36.3
47.5°	19.6	20.6	19.6	19.6	20.6	19.6	20.6	20.6
50°	10.8	10.8	10.8	10.8	10.8	9.8	9.8	10.8
52.5°	5.9	5.9	4.9	4.9	4.9	4.9	4.9	4.9
55°	2.9	2.9	2.0	2.0	2.0	1.0	2.0	1.0
57.5°	2.0	2.0	1.0	1.0	1.0	1.0	0.0	0.0
60°	2.0	2.0	1.0	1.0	1.0	0.0	0.0	0.0
62.5°	2.0	2.0	1.0	1.0	1.0	0.0	0.0	0.0
65°	2.0	2.0	1.0	1.0	1.0	0.0	0.0	0.0
67.5°	2.9	2.0	1.0	1.0	1.0	0.0	0.0	0.0
70°	2.9	2.0	2.0	1.0	1.0	0.0	0.0	0.0
72.5°	2.9	2.0	2.0	2.0	1.0	1.0	0.0	0.0
75°	2.9	2.0	2.0	2.0	1.0	1.0	0.0	0.0
77.5°	2.9	2.9	2.0	2.0	1.0	1.0	1.0	0.0
80°	2.9	2.9	2.0	2.0	2.0	1.0	1.0	1.0
82.5°	2.9	2.9	2.0	2.0	2.0	1.0	1.0	1.0
85°	2.9	2.9	2.0	2.0	2.0	1.0	1.0	1.0
87.5°	2.9	2.9	2.0	2.0	2.0	1.0	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)