

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: P179884

Luminaire Tested: **LDA6A65827D010TE LARH30NF 6LA1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179884
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26687)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A65827D010TE LARH30NF 6LA1LI 30°
Description: PORTFOLIO 6" Adjustable Reflector, Angle-cut Trim, Self-flanged, 30°
Narrow Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6175.4 lumens
Efficiency: N/A
Efficacy: 79.2 lumens/watt
Spacing Criteria (0/90/45): 2.58 / 0.47 / 1.37
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

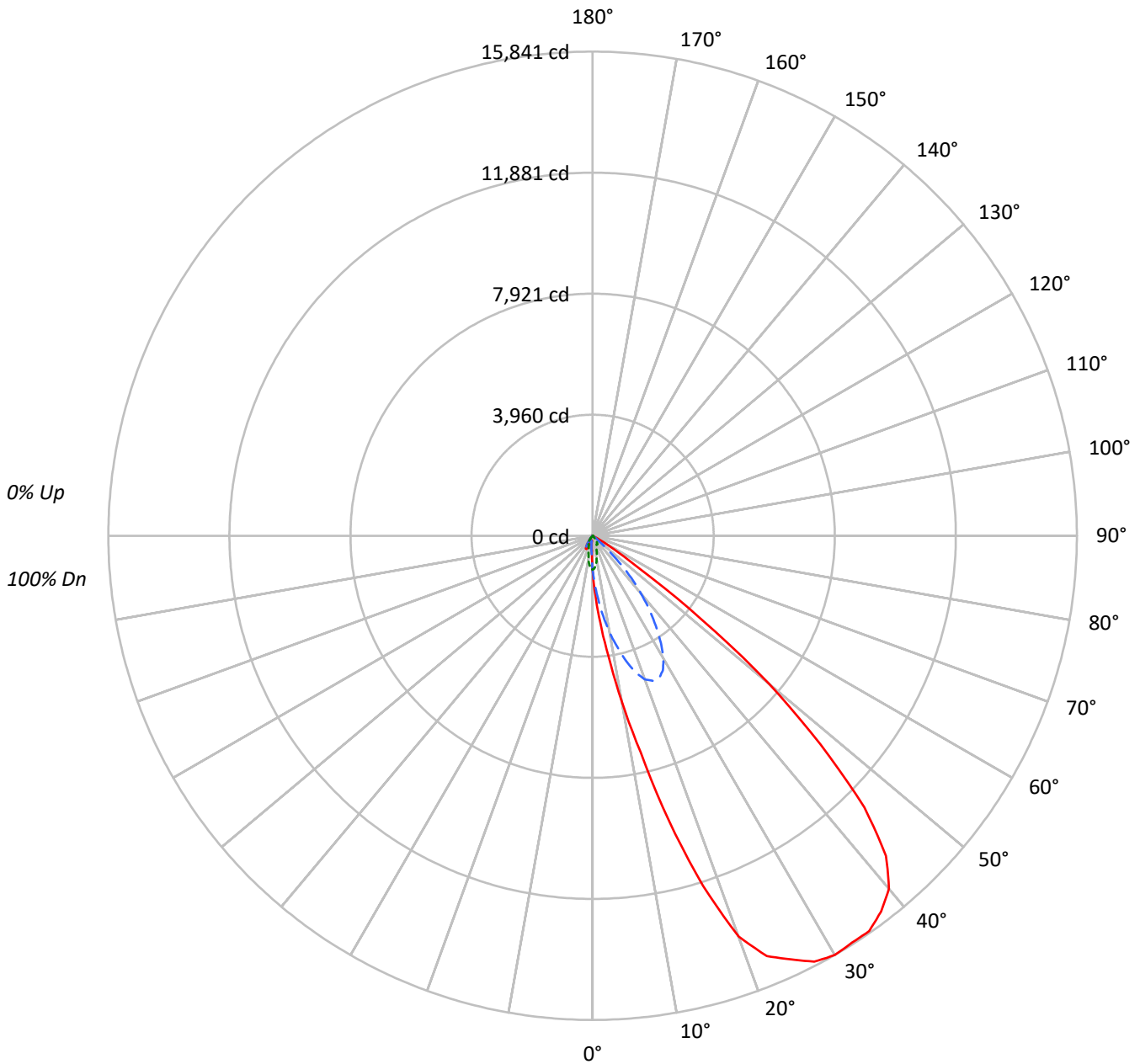
Input Watts (W): 78
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	98	99	97	95	95	94	93	91																			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	85	83	81																			
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	77	74	73																			
4	91	82	75	70	89	81	74	69	78	73	68	76	71	67	74	70	67	65																			
5	85	74	67	62	83	73	67	61	71	65	61	70	64	60	68	63	60	58																			
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52																			
7	74	62	55	49	72	61	54	49	60	53	49	59	53	49	57	52	48	46																			
8	69	57	49	44	67	56	49	44	55	49	44	54	48	44	53	47	43	42																			
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	39	38																			
10	60	48	41	36	59	48	41	36	47	40	36	46	40	36	45	40	36	34																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	61064	61064	61064
5°	156642	55552	17301
10°	305344	42690	8311
15°	548130	28996	11152
20°	813803	22011	18406
25°	925009	18134	28865
30°	1002724	19832	27150
35°	1056193	12849	16831
40°	1079036	5704	8194
45°	974574	2179	3047
50°	641531	861	861
55°	175688	755	0
60°	35085	866	0
65°	2478	1167	0
70°	353	1443	0
75°	0	2139	0
80°	0	3189	347
85°	0	6353	692



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.5	2.2
10°-20°	724.9	11.7
20°-30°	1643.0	26.6
30°-40°	1972.2	31.9
40°-50°	1389.9	22.5
50°-60°	286.8	4.6
60°-70°	10.1	0.2
70°-80°	6.0	0.1
80°-90°	5.9	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°	2504.4	40.6
0°-40°	4476.5	72.5
0°-60°	6153.3	99.6
0°-90°	6175.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6175.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1114	1114	1114	1114	1114	
5°	2846	2074	1010	420	314	350
15°	9658	4249	511	182	196	2866
25°	15293	5140	300	420	477	7057
35°	15782	3599	192	252	252	9811
45°	12571	1234	28	38	39	9246
55°	1838	25	8	6	0	2422
65°	19	6	9	6	0	57
75°	0	6	10	7	0	0
85°	0	7	10	7	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°	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9
2.5°	1898.8	1841.5	1864.0	1797.7	1783.1	1770.8	1783.1	1711.3	1670.9	1619.2	1577.7
5°	2846.5	2778.0	2793.7	2678.1	2625.3	2589.4	2582.6	2434.4	2323.3	2200.9	2074.0
7.5°	3962.7	3897.5	3888.6	3708.9	3600.0	3538.2	3512.4	3300.2	3108.2	2890.3	2652.3
10°	5485.3	5337.1	5291.1	5030.5	4822.8	4691.4	4529.7	4190.6	3853.8	3524.8	3221.6
12.5°	7257.2	7176.4	7061.9	6602.6	6238.8	6052.4	5811.0	5280.9	4771.2	4227.7	3720.1
15°	9658.0	9370.5	9175.1	8511.5	7925.4	7637.9	7285.3	6474.6	5704.3	5015.9	4249.0
17.5°	12003.7	11853.2	11547.8	10686.5	9783.7	9330.1	8804.6	7703.0	6614.9	5635.8	4699.3
20°	13949.7	13808.2	13460.1	12648.2	11646.6	10977.4	10316.0	8804.6	7383.0	6129.9	5000.2
22.5°	14881.7	14791.8	14507.7	13812.7	12959.3	12322.6	11611.8	9742.2	7951.2	6453.2	5137.2
25°	15292.6	15251.1	15068.1	14520.1	13716.1	13176.0	12504.5	10405.8	8304.9	6603.7	5139.5
27.5°	15709.2	15717.1	15312.8	14879.4	14117.0	13598.2	12951.4	10700.0	8368.9	6519.5	4971.0
30°	15840.6	15757.5	15579.0	14956.9	14232.6	13681.3	12987.3	10564.1	8106.1	6173.6	4635.3
32.5°	15786.7	15754.1	15557.6	14899.6	14036.1	13428.6	12640.4	10025.2	7587.4	5679.6	4159.2
35°	15782.2	15721.6	15271.3	14706.5	13643.1	12893.0	11854.3	9153.8	6853.0	5028.3	3598.9
37.5°	15497.0	15346.5	15008.5	14247.2	12845.9	11894.8	10730.3	8089.3	5954.7	4297.3	3043.0
40°	15078.2	14876.0	14431.4	13279.3	11464.7	10368.8	9232.4	6879.9	5003.6	3576.4	2452.4
42.5°	14203.4	13898.0	13269.2	11684.8	9624.3	8636.1	7690.7	5654.9	4080.6	2913.9	1871.9
45°	12570.7	12153.0	11303.0	9563.7	7774.9	6968.7	6208.5	4549.9	3266.5	2161.6	1234.1
47.5°	10103.8	9716.4	8942.7	7613.2	6097.3	5415.7	4809.3	3384.4	2214.3	1252.0	589.5
50°	7522.2	7189.9	6585.7	5291.1	4092.9	3557.3	3038.5	1922.4	1037.5	595.1	244.8
52.5°	4488.2	4323.1	3787.5	2934.1	2021.2	1741.6	1398.0	814.1	523.3	215.6	66.3
55°	1838.2	1696.7	1495.7	1200.4	879.2	745.6	637.8	402.0	162.8	44.9	24.7
57.5°	830.9	799.5	708.5	557.0	404.2	339.1	229.1	76.4	35.9	22.5	14.6
60°	320.0	288.6	247.0	133.6	57.3	48.3	39.3	25.8	18.0	12.4	9.0
62.5°	46.0	43.8	39.3	31.4	24.7	22.5	19.1	13.5	10.1	7.9	6.7
65°	19.1	19.1	16.8	13.5	11.2	10.1	9.0	6.7	5.6	5.6	5.6
67.5°	7.9	7.9	6.7	5.6	4.5	4.5	4.5	3.4	4.5	4.5	5.6
70°	2.2	2.2	2.2	2.2	2.2	2.2	3.4	3.4	4.5	4.5	5.6
72.5°	0.0	0.0	1.1	1.1	2.2	2.2	2.2	3.4	4.5	5.6	5.6
75°	0.0	0.0	1.1	1.1	2.2	2.2	2.2	3.4	4.5	5.6	5.6
77.5°	0.0	0.0	1.1	1.1	2.2	2.2	3.4	3.4	4.5	5.6	5.6
80°	0.0	0.0	1.1	1.1	2.2	2.2	3.4	3.4	4.5	5.6	6.7
82.5°	0.0	0.0	1.1	1.1	2.2	2.2	3.4	3.4	4.5	5.6	6.7
85°	0.0	0.0	1.1	1.1	2.2	2.2	3.4	3.4	4.5	5.6	6.7
87.5°	0.0	0.0	1.1	1.1	2.2	2.2	3.4	3.4	4.5	5.6	6.7
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°	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9
2.5°	1541.7	1469.9	1449.7	1386.8	1334.0	1308.2	1275.6	1202.6	1147.6	1074.6	1030.8
5°	1985.3	1849.4	1741.6	1610.2	1523.8	1467.6	1380.0	1246.4	1138.6	1009.5	917.4
7.5°	2464.7	2216.6	2022.3	1805.6	1681.0	1583.3	1433.9	1241.9	1083.6	911.8	769.2
10°	2927.4	2556.8	2251.4	1940.4	1776.4	1640.5	1435.1	1193.6	983.7	766.9	616.5
12.5°	3335.0	2856.6	2426.6	2026.8	1823.6	1654.0	1396.9	1107.2	853.4	631.1	498.6
15°	3675.2	3089.1	2550.1	2059.4	1826.9	1624.8	1317.1	983.7	708.5	510.9	417.7
17.5°	3933.5	3211.5	2588.3	2020.1	1761.8	1541.7	1194.8	827.6	574.9	433.4	351.5
20°	4067.1	3235.0	2533.2	1913.4	1641.7	1416.0	1034.2	671.5	487.3	377.3	294.2
22.5°	4083.9	3168.8	2401.9	1760.7	1490.1	1263.3	856.8	560.3	434.6	333.5	259.4
25°	3984.0	3025.1	2214.3	1587.8	1323.9	1088.1	697.3	501.9	395.3	299.8	298.7
27.5°	3770.7	2778.0	1989.8	1386.8	1122.9	884.8	591.8	453.6	352.6	317.8	338.0
30°	3469.7	2461.4	1713.5	1133.0	877.0	680.5	498.6	373.9	309.9	313.3	330.1
32.5°	3062.1	2068.4	1389.0	829.8	627.7	512.0	373.9	254.9	257.1	258.3	272.9
35°	2550.1	1658.5	1037.5	558.1	441.3	360.4	211.1	187.5	190.9	192.0	202.1
37.5°	2043.7	1274.5	689.5	371.7	277.4	189.8	131.4	125.8	128.0	126.9	138.1
40°	1565.3	888.2	413.2	184.2	106.7	88.7	80.8	77.5	78.6	79.7	86.5
42.5°	1108.3	481.7	204.4	69.6	56.1	51.7	48.3	46.0	47.2	47.2	51.7
45°	562.6	227.9	69.6	38.2	34.8	31.4	29.2	28.1	28.1	28.1	30.3
47.5°	243.7	75.2	32.6	23.6	21.3	20.2	18.0	16.8	16.8	16.8	18.0
50°	76.4	30.3	20.2	15.7	13.5	12.4	11.2	11.2	11.2	10.1	11.2
52.5°	28.1	19.1	13.5	10.1	9.0	9.0	9.0	7.9	9.0	7.9	9.0
55°	16.8	12.4	9.0	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
57.5°	11.2	9.0	7.9	7.9	6.7	6.7	7.9	7.9	7.9	7.9	7.9
60°	7.9	7.9	6.7	6.7	6.7	6.7	7.9	7.9	7.9	7.9	7.9
62.5°	6.7	6.7	6.7	6.7	6.7	6.7	7.9	7.9	7.9	7.9	9.0
65°	5.6	6.7	6.7	6.7	6.7	6.7	7.9	7.9	9.0	9.0	9.0
67.5°	5.6	6.7	6.7	7.9	7.9	7.9	7.9	9.0	9.0	9.0	9.0
70°	6.7	6.7	7.9	7.9	7.9	7.9	9.0	9.0	9.0	9.0	10.1
72.5°	6.7	6.7	7.9	7.9	7.9	7.9	9.0	9.0	10.1	10.1	10.1
75°	6.7	7.9	7.9	7.9	7.9	9.0	9.0	9.0	10.1	10.1	10.1
77.5°	6.7	7.9	7.9	9.0	9.0	9.0	9.0	10.1	10.1	10.1	10.1
80°	6.7	7.9	7.9	9.0	9.0	9.0	10.1	10.1	10.1	10.1	11.2
82.5°	6.7	7.9	7.9	9.0	9.0	9.0	10.1	10.1	10.1	10.1	11.2
85°	7.9	7.9	9.0	9.0	9.0	9.0	10.1	10.1	10.1	10.1	11.2
87.5°	7.9	7.9	9.0	9.0	9.0	9.0	10.1	10.1	11.2	10.1	11.2
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9
2.5°	972.4	907.3	862.4	845.5	813.0	761.3	731.0	702.9	650.2	638.9	609.7
5°	811.8	707.4	633.3	605.2	568.2	524.4	481.7	453.6	420.0	406.5	386.3
7.5°	640.0	535.6	471.6	449.2	423.3	387.4	349.2	321.1	286.3	268.4	251.5
10°	503.1	425.6	371.7	349.2	322.3	284.1	244.8	207.7	177.4	158.3	155.0
12.5°	408.7	344.7	287.5	263.9	232.4	194.3	166.2	165.1	162.8	161.7	163.9
15°	334.6	272.9	212.2	186.4	177.4	176.3	179.7	183.0	181.9	185.3	187.5
17.5°	275.1	208.9	195.4	196.5	197.6	201.0	206.6	215.6	216.7	222.3	226.8
20°	224.6	221.2	226.8	231.3	234.7	241.4	253.8	265.0	268.4	276.2	285.2
22.5°	254.9	265.0	277.4	283.0	287.5	299.8	313.3	331.3	338.0	348.1	360.4
25°	307.7	324.5	343.6	350.3	357.1	377.3	393.0	414.3	420.0	432.3	444.7
27.5°	351.5	369.4	389.6	398.6	404.2	424.5	437.9	451.4	451.4	458.1	467.1
30°	344.7	359.3	376.2	382.9	385.2	399.7	413.2	417.7	415.5	418.8	425.6
32.5°	286.3	297.6	311.0	316.7	318.9	329.0	340.2	340.2	339.1	339.1	343.6
35°	212.2	220.1	226.8	232.4	235.8	242.5	252.7	251.5	251.5	249.3	252.7
37.5°	142.6	147.1	155.0	157.2	158.3	162.8	170.7	170.7	168.4	169.6	171.8
40°	86.5	92.1	96.6	97.7	99.9	103.3	108.9	108.9	108.9	108.9	110.0
42.5°	51.7	55.0	58.4	58.4	59.5	64.0	66.3	66.3	66.3	66.3	67.4
45°	30.3	31.4	33.7	34.8	34.8	37.1	38.2	38.2	38.2	38.2	39.3
47.5°	18.0	19.1	19.1	20.2	20.2	21.3	22.5	22.5	21.3	21.3	21.3
50°	11.2	11.2	11.2	11.2	12.4	12.4	12.4	12.4	12.4	12.4	11.2
52.5°	9.0	9.0	9.0	9.0	7.9	7.9	7.9	7.9	6.7	6.7	5.6
55°	7.9	7.9	7.9	7.9	7.9	6.7	6.7	6.7	5.6	4.5	3.4
57.5°	7.9	7.9	7.9	7.9	7.9	6.7	6.7	5.6	4.5	4.5	3.4
60°	7.9	7.9	7.9	7.9	7.9	6.7	6.7	5.6	4.5	4.5	3.4
62.5°	9.0	9.0	7.9	7.9	7.9	6.7	6.7	5.6	5.6	4.5	3.4
65°	9.0	9.0	7.9	7.9	7.9	7.9	6.7	6.7	5.6	4.5	3.4
67.5°	9.0	9.0	9.0	9.0	7.9	7.9	7.9	6.7	5.6	4.5	3.4
70°	10.1	10.1	9.0	9.0	9.0	7.9	7.9	6.7	5.6	5.6	4.5
72.5°	10.1	10.1	9.0	9.0	9.0	9.0	7.9	6.7	6.7	5.6	4.5
75°	10.1	10.1	10.1	10.1	9.0	9.0	7.9	6.7	6.7	5.6	4.5
77.5°	10.1	10.1	10.1	10.1	9.0	9.0	9.0	7.9	6.7	5.6	4.5
80°	10.1	10.1	10.1	10.1	10.1	9.0	9.0	7.9	6.7	5.6	4.5
82.5°	11.2	11.2	10.1	10.1	10.1	9.0	9.0	7.9	6.7	5.6	5.6
85°	11.2	11.2	10.1	10.1	10.1	9.0	9.0	7.9	6.7	6.7	5.6
87.5°	11.2	11.2	10.1	10.1	10.1	9.0	9.0	7.9	6.7	6.7	5.6
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: P179884

CATALOG NUMBER: LDA6A65827D010TE LARH30NF 6LA1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9	1113.9
2.5°	591.8	558.1	546.8	554.7	545.7	539.0	530.0	525.5
5°	370.6	345.8	338.0	340.2	332.4	325.6	316.7	314.4
7.5°	227.9	204.4	195.4	195.4	186.4	178.5	172.9	169.6
10°	152.7	148.2	149.3	150.5	149.3	150.5	147.1	149.3
12.5°	163.9	161.7	163.9	165.1	165.1	167.3	162.8	166.2
15°	190.9	188.6	192.0	194.3	194.3	197.6	193.1	196.5
17.5°	233.6	232.4	238.1	240.3	241.4	247.0	241.4	245.9
20°	295.3	294.2	302.1	305.4	304.3	315.5	307.7	315.5
22.5°	375.0	372.8	384.0	387.4	388.5	403.1	396.4	402.0
25°	454.8	457.0	462.6	468.2	469.4	481.7	471.6	477.2
27.5°	471.6	468.2	471.6	478.4	479.5	485.1	476.1	480.6
30°	426.7	421.1	422.2	430.1	432.3	434.6	426.7	428.9
32.5°	347.0	338.0	338.0	345.8	348.1	351.5	338.0	343.6
35°	256.0	248.2	248.2	253.8	254.9	257.1	247.0	251.5
37.5°	175.2	168.4	170.7	172.9	174.0	176.3	175.2	174.0
40°	112.3	107.8	111.2	111.2	112.3	113.4	113.4	114.5
42.5°	68.5	65.1	67.4	67.4	68.5	68.5	68.5	69.6
45°	39.3	38.2	38.2	39.3	39.3	39.3	38.2	39.3
47.5°	21.3	20.2	21.3	21.3	21.3	21.3	21.3	21.3
50°	11.2	10.1	10.1	10.1	10.1	10.1	10.1	10.1
52.5°	5.6	4.5	4.5	4.5	3.4	4.5	3.4	3.4
55°	3.4	2.2	2.2	2.2	1.1	1.1	0.0	0.0
57.5°	2.2	1.1	1.1	1.1	0.0	0.0	0.0	0.0
60°	2.2	1.1	1.1	1.1	0.0	0.0	0.0	0.0
62.5°	2.2	1.1	1.1	1.1	0.0	0.0	0.0	0.0
65°	2.2	1.1	1.1	1.1	0.0	0.0	0.0	0.0
67.5°	3.4	2.2	1.1	1.1	1.1	0.0	0.0	0.0
70°	3.4	2.2	2.2	1.1	1.1	0.0	0.0	0.0
72.5°	3.4	2.2	2.2	2.2	1.1	1.1	0.0	0.0
75°	3.4	2.2	2.2	2.2	1.1	1.1	0.0	0.0
77.5°	3.4	3.4	2.2	2.2	1.1	1.1	1.1	0.0
80°	4.5	3.4	2.2	2.2	2.2	1.1	1.1	1.1
82.5°	4.5	3.4	2.2	2.2	2.2	1.1	1.1	1.1
85°	4.5	3.4	3.4	2.2	2.2	1.1	1.1	1.1
87.5°	4.5	3.4	3.4	2.2	2.2	1.1	1.1	1.1
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)