

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: P179881

Luminaire Tested: **LDA6A55930D010TE LARH30NF 6LA1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179881
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: LDA6A55930D010TE LARH30NF 6LA1LI 30°
Description: PORTFOLIO 6" Adjustable Reflector, Angle-cut Trim, Self-flanged, 30°
Narrow Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4405.0 lumens
Efficiency: N/A
Efficacy: 72.2 lumens/watt
Spacing Criteria (0/90/45): 2.58 / 0.46 / 1.37
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

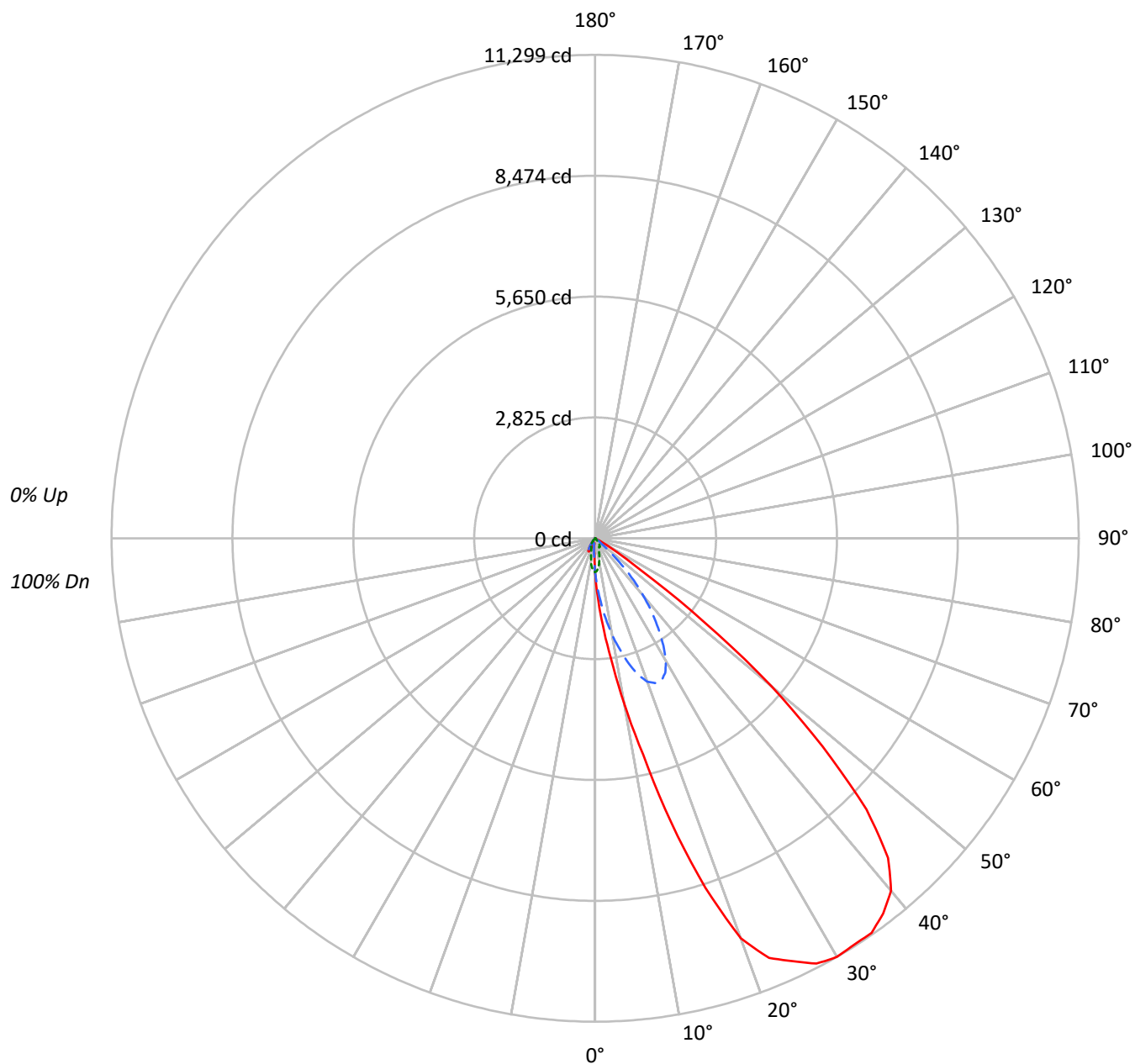
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	43560	43560	43560
5°	111738	39627	12343
10°	217804	30455	5928
15°	390990	20681	7957
20°	580496	15699	13132
25°	659820	12938	20590
30°	715256	14148	19370
35°	753393	9168	12006
40°	769685	4072	5847
45°	695181	1551	2171
50°	457614	614	614
55°	125319	535	0
60°	25031	614	0
65°	1764	830	0
70°	256	1026	0
75°	0	1525	0
80°	0	2273	253
85°	0	4529	503



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.3	2.2
10°-20°	517.1	11.7
20°-30°	1172.0	26.6
30°-40°	1406.8	31.9
40°-50°	991.5	22.5
50°-60°	204.6	4.6
60°-70°	7.2	0.2
70°-80°	4.3	0.1
80°-90°	4.2	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°	1786.4	40.6
0°-40°	3193.2	72.5
0°-60°	4389.2	99.6
0°-90°	4405.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4405.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	795	795	795	795	795	
5°	2030	1479	720	300	224	250
15°	6889	3031	364	130	140	2044
25°	10908	3666	214	300	340	5034
35°	11258	2567	137	179	179	6998
45°	8967	880	20	27	28	6595
55°	1311	18	6	4	0	1728
65°	14	4	6	4	0	40
75°	0	4	7	5	0	0
85°	0	5	7	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°	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6
2.5°	1354.4	1313.6	1329.6	1282.4	1271.9	1263.1	1271.9	1220.7	1191.8	1155.0	1125.4
5°	2030.5	1981.6	1992.8	1910.3	1872.7	1847.0	1842.2	1736.5	1657.2	1569.9	1479.4
7.5°	2826.6	2780.2	2773.8	2645.6	2567.9	2523.9	2505.4	2354.1	2217.1	2061.7	1891.9
10°	3912.7	3807.0	3774.2	3588.3	3440.2	3346.5	3231.1	2989.2	2748.9	2514.2	2298.0
12.5°	5176.7	5119.0	5037.3	4709.7	4450.2	4317.2	4145.0	3767.0	3403.3	3015.7	2653.6
15°	6889.2	6684.1	6544.7	6071.4	5653.3	5448.2	5196.7	4618.4	4068.9	3577.9	3030.9
17.5°	8562.4	8455.0	8237.2	7622.8	6978.9	6655.3	6280.4	5494.7	4718.5	4020.1	3352.1
20°	9950.5	9849.5	9601.2	9022.1	8307.7	7830.3	7358.5	6280.4	5266.4	4372.5	3566.7
22.5°	10615.3	10551.2	10348.5	9852.7	9244.0	8789.9	8282.8	6949.2	5671.7	4603.2	3664.4
25°	10908.4	10878.8	10748.2	10357.4	9783.9	9398.6	8919.6	7422.6	5924.0	4710.5	3666.0
27.5°	11205.6	11211.2	10922.8	10613.7	10069.8	9699.8	9238.4	7632.5	5969.6	4650.4	3545.9
30°	11299.3	11240.0	11112.7	10668.9	10152.3	9759.0	9264.0	7535.5	5782.2	4403.7	3306.4
32.5°	11260.8	11237.6	11097.5	10628.1	10012.1	9578.8	9016.5	7151.1	5412.2	4051.3	2966.8
35°	11257.6	11214.4	10893.2	10490.3	9731.8	9196.7	8455.8	6529.5	4888.3	3586.7	2567.1
37.5°	11054.2	10946.9	10705.8	10162.7	9163.1	8484.7	7654.1	5770.2	4247.5	3065.3	2170.6
40°	10755.4	10611.3	10294.1	9472.3	8177.9	7396.2	6585.6	4907.5	3569.1	2551.1	1749.3
42.5°	10131.5	9913.6	9465.1	8334.9	6865.1	6160.3	5485.8	4033.7	2910.7	2078.5	1335.2
45°	8966.9	8668.9	8062.6	6821.9	5545.9	4970.8	4428.6	3245.5	2330.0	1541.9	880.3
47.5°	7207.1	6930.8	6378.9	5430.6	4349.3	3863.1	3430.6	2414.1	1579.5	893.1	420.5
50°	5365.7	5128.6	4697.7	3774.2	2919.5	2537.5	2167.4	1371.3	740.1	424.5	174.6
52.5°	3201.5	3083.7	2701.7	2092.9	1441.7	1242.3	997.2	580.7	373.3	153.8	47.3
55°	1311.2	1210.3	1066.9	856.2	627.2	531.8	455.0	286.7	116.1	32.0	17.6
57.5°	592.7	570.3	505.4	397.3	288.3	241.9	163.4	54.5	25.6	16.0	10.4
60°	228.3	205.8	176.2	95.3	40.8	34.4	28.0	18.4	12.8	8.8	6.4
62.5°	32.8	31.2	28.0	22.4	17.6	16.0	13.6	9.6	7.2	5.6	4.8
65°	13.6	13.6	12.0	9.6	8.0	7.2	6.4	4.8	4.0	4.0	4.0
67.5°	5.6	5.6	4.8	4.0	3.2	3.2	3.2	2.4	3.2	3.2	4.0
70°	1.6	1.6	1.6	1.6	1.6	1.6	2.4	2.4	3.2	3.2	4.0
72.5°	0.0	0.0	0.8	0.8	1.6	1.6	1.6	2.4	3.2	4.0	4.0
75°	0.0	0.0	0.8	0.8	1.6	1.6	1.6	2.4	3.2	4.0	4.0
77.5°	0.0	0.0	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.0
80°	0.0	0.0	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.8
82.5°	0.0	0.0	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.8
85°	0.0	0.0	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.8
87.5°	0.0	0.0	0.8	0.8	1.6	1.6	2.4	2.4	3.2	4.0	4.8
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6
2.5°	1099.7	1048.5	1034.1	989.2	951.6	933.1	909.9	857.8	818.6	766.5	735.3
5°	1416.1	1319.2	1242.3	1148.6	1086.9	1046.9	984.4	889.1	812.2	720.1	654.4
7.5°	1758.1	1581.1	1442.5	1288.0	1199.1	1129.4	1022.8	885.9	772.9	650.4	548.7
10°	2088.1	1823.8	1605.9	1384.1	1267.1	1170.2	1023.6	851.4	701.7	547.1	439.7
12.5°	2378.9	2037.7	1730.9	1445.8	1300.8	1179.8	996.4	789.8	608.7	450.1	355.6
15°	2621.6	2203.5	1819.0	1469.0	1303.2	1159.0	939.5	701.7	505.4	364.4	298.0
17.5°	2805.8	2290.8	1846.2	1440.9	1256.7	1099.7	852.2	590.3	410.1	309.2	250.7
20°	2901.1	2307.6	1807.0	1364.9	1171.0	1010.0	737.7	479.0	347.6	269.1	209.9
22.5°	2913.1	2260.3	1713.3	1255.9	1062.9	901.1	611.1	399.7	310.0	237.9	185.0
25°	2841.8	2157.8	1579.5	1132.6	944.3	776.1	497.4	358.0	281.9	213.9	213.1
27.5°	2689.7	1981.6	1419.3	989.2	801.0	631.2	422.1	323.6	251.5	226.7	241.1
30°	2475.0	1755.7	1222.3	808.2	625.6	485.4	355.6	266.7	221.1	223.5	235.5
32.5°	2184.2	1475.4	990.8	591.9	447.7	365.2	266.7	181.8	183.4	184.2	194.6
35°	1819.0	1183.0	740.1	398.1	314.8	257.1	150.6	133.8	136.2	137.0	144.2
37.5°	1457.8	909.1	491.8	265.1	197.8	135.4	93.7	89.7	91.3	90.5	98.5
40°	1116.6	633.6	294.8	131.4	76.1	63.3	57.7	55.3	56.1	56.9	61.7
42.5°	790.6	343.6	145.8	49.7	40.0	36.8	34.4	32.8	33.6	33.6	36.8
45°	401.3	162.6	49.7	27.2	24.8	22.4	20.8	20.0	20.0	20.0	21.6
47.5°	173.8	53.7	23.2	16.8	15.2	14.4	12.8	12.0	12.0	12.0	12.8
50°	54.5	21.6	14.4	11.2	9.6	8.8	8.0	8.0	8.0	7.2	8.0
52.5°	20.0	13.6	9.6	7.2	6.4	6.4	6.4	5.6	6.4	5.6	6.4
55°	12.0	8.8	6.4	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
57.5°	8.0	6.4	5.6	5.6	4.8	4.8	5.6	5.6	5.6	5.6	5.6
60°	5.6	5.6	4.8	4.8	4.8	4.8	5.6	5.6	5.6	5.6	5.6
62.5°	4.8	4.8	4.8	4.8	4.8	4.8	5.6	5.6	5.6	5.6	6.4
65°	4.0	4.8	4.8	4.8	4.8	4.8	5.6	5.6	6.4	6.4	6.4
67.5°	4.0	4.8	4.8	5.6	5.6	5.6	5.6	6.4	6.4	6.4	6.4
70°	4.8	4.8	5.6	5.6	5.6	5.6	6.4	6.4	6.4	6.4	7.2
72.5°	4.8	4.8	5.6	5.6	5.6	5.6	6.4	6.4	7.2	7.2	7.2
75°	4.8	5.6	5.6	5.6	5.6	6.4	6.4	6.4	7.2	7.2	7.2
77.5°	4.8	5.6	5.6	6.4	6.4	6.4	6.4	7.2	7.2	7.2	7.2
80°	4.8	5.6	5.6	6.4	6.4	6.4	7.2	7.2	7.2	7.2	8.0
82.5°	4.8	5.6	5.6	6.4	6.4	6.4	7.2	7.2	7.2	7.2	8.0
85°	5.6	5.6	6.4	6.4	6.4	6.4	7.2	7.2	7.2	7.2	8.0
87.5°	5.6	5.6	6.4	6.4	6.4	6.4	7.2	7.2	8.0	7.2	8.0
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°	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6
2.5°	693.6	647.2	615.1	603.1	579.9	543.1	521.4	501.4	463.8	455.8	434.9
5°	579.1	504.6	451.7	431.7	405.3	374.1	343.6	323.6	299.6	290.0	275.5
7.5°	456.6	382.1	336.4	320.4	302.0	276.3	249.1	229.1	204.2	191.4	179.4
10°	358.8	303.6	265.1	249.1	229.9	202.6	174.6	148.2	126.6	112.9	110.5
12.5°	291.6	245.9	205.0	188.2	165.8	138.6	118.5	117.7	116.1	115.3	116.9
15°	238.7	194.6	151.4	133.0	126.6	125.8	128.2	130.6	129.8	132.2	133.8
17.5°	196.2	149.0	139.4	140.2	141.0	143.4	147.4	153.8	154.6	158.6	161.8
20°	160.2	157.8	161.8	165.0	167.4	172.2	181.0	189.0	191.4	197.0	203.4
22.5°	181.8	189.0	197.8	201.8	205.0	213.9	223.5	236.3	241.1	248.3	257.1
25°	219.5	231.5	245.1	249.9	254.7	269.1	280.3	295.6	299.6	308.4	317.2
27.5°	250.7	263.5	277.9	284.3	288.3	302.8	312.4	322.0	322.0	326.8	333.2
30°	245.9	256.3	268.3	273.1	274.7	285.1	294.8	298.0	296.4	298.8	303.6
32.5°	204.2	212.3	221.9	225.9	227.5	234.7	242.7	242.7	241.9	241.9	245.1
35°	151.4	157.0	161.8	165.8	168.2	173.0	180.2	179.4	179.4	177.8	180.2
37.5°	101.7	104.9	110.5	112.1	112.9	116.1	121.7	121.7	120.1	120.9	122.5
40°	61.7	65.7	68.9	69.7	71.3	73.7	77.7	77.7	77.7	77.7	78.5
42.5°	36.8	39.2	41.7	41.7	42.5	45.7	47.3	47.3	47.3	47.3	48.1
45°	21.6	22.4	24.0	24.8	24.8	26.4	27.2	27.2	27.2	27.2	28.0
47.5°	12.8	13.6	13.6	14.4	14.4	15.2	16.0	16.0	15.2	15.2	15.2
50°	8.0	8.0	8.0	8.0	8.8	8.8	8.8	8.8	8.8	8.8	8.0
52.5°	6.4	6.4	6.4	6.4	5.6	5.6	5.6	5.6	4.8	4.8	4.0
55°	5.6	5.6	5.6	5.6	5.6	4.8	4.8	4.8	4.0	3.2	2.4
57.5°	5.6	5.6	5.6	5.6	5.6	4.8	4.8	4.0	3.2	3.2	2.4
60°	5.6	5.6	5.6	5.6	5.6	4.8	4.8	4.0	3.2	3.2	2.4
62.5°	6.4	6.4	5.6	5.6	5.6	4.8	4.8	4.0	4.0	3.2	2.4
65°	6.4	6.4	5.6	5.6	5.6	5.6	4.8	4.8	4.0	3.2	2.4
67.5°	6.4	6.4	6.4	6.4	5.6	5.6	5.6	4.8	4.0	3.2	2.4
70°	7.2	7.2	6.4	6.4	6.4	5.6	5.6	4.8	4.0	4.0	3.2
72.5°	7.2	7.2	6.4	6.4	6.4	6.4	5.6	4.8	4.8	4.0	3.2
75°	7.2	7.2	7.2	7.2	6.4	6.4	5.6	5.6	4.8	4.0	3.2
77.5°	7.2	7.2	7.2	7.2	6.4	6.4	6.4	5.6	4.8	4.0	3.2
80°	7.2	7.2	7.2	7.2	7.2	6.4	6.4	5.6	4.8	4.0	3.2
82.5°	8.0	8.0	7.2	7.2	7.2	6.4	6.4	5.6	4.8	4.0	4.0
85°	8.0	8.0	7.2	7.2	7.2	6.4	6.4	5.6	4.8	4.8	4.0
87.5°	8.0	8.0	7.2	7.2	7.2	6.4	6.4	5.6	4.8	4.8	4.0
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: P179881

CATALOG NUMBER: LDA6A55930D010TE LARH30NF 6LA1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	794.6	794.6	794.6	794.6	794.6	794.6	794.6	794.6
2.5°	422.1	398.1	390.1	395.7	389.3	384.5	378.1	374.9
5°	264.3	246.7	241.1	242.7	237.1	232.3	225.9	224.3
7.5°	162.6	145.8	139.4	139.4	133.0	127.4	123.3	120.9
10°	108.9	105.7	106.5	107.3	106.5	107.3	104.9	106.5
12.5°	116.9	115.3	116.9	117.7	117.7	119.3	116.1	118.5
15°	136.2	134.6	137.0	138.6	138.6	141.0	137.8	140.2
17.5°	166.6	165.8	169.8	171.4	172.2	176.2	172.2	175.4
20°	210.7	209.9	215.5	217.9	217.1	225.1	219.5	225.1
22.5°	267.5	265.9	273.9	276.3	277.1	287.5	282.7	286.7
25°	324.4	326.0	330.0	334.0	334.8	343.6	336.4	340.4
27.5°	336.4	334.0	336.4	341.2	342.0	346.0	339.6	342.8
30°	304.4	300.4	301.2	306.8	308.4	310.0	304.4	306.0
32.5°	247.5	241.1	241.1	246.7	248.3	250.7	241.1	245.1
35°	182.6	177.0	177.0	181.0	181.8	183.4	176.2	179.4
37.5°	125.0	120.1	121.7	123.3	124.2	125.8	125.0	124.2
40°	80.1	76.9	79.3	79.3	80.1	80.9	80.9	81.7
42.5°	48.9	46.5	48.1	48.1	48.9	48.9	48.9	49.7
45°	28.0	27.2	27.2	28.0	28.0	28.0	27.2	28.0
47.5°	15.2	14.4	15.2	15.2	15.2	15.2	15.2	15.2
50°	8.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2
52.5°	4.0	3.2	3.2	3.2	2.4	3.2	2.4	2.4
55°	2.4	1.6	1.6	1.6	0.8	0.8	0.0	0.0
57.5°	1.6	0.8	0.8	0.8	0.0	0.0	0.0	0.0
60°	1.6	0.8	0.8	0.8	0.0	0.0	0.0	0.0
62.5°	1.6	0.8	0.8	0.8	0.0	0.0	0.0	0.0
65°	1.6	0.8	0.8	0.8	0.0	0.0	0.0	0.0
67.5°	2.4	1.6	0.8	0.8	0.8	0.0	0.0	0.0
70°	2.4	1.6	1.6	0.8	0.8	0.0	0.0	0.0
72.5°	2.4	1.6	1.6	1.6	0.8	0.8	0.0	0.0
75°	2.4	1.6	1.6	1.6	0.8	0.8	0.0	0.0
77.5°	2.4	2.4	1.6	1.6	0.8	0.8	0.8	0.0
80°	3.2	2.4	1.6	1.6	1.6	0.8	0.8	0.8
82.5°	3.2	2.4	1.6	1.6	1.6	0.8	0.8	0.8
85°	3.2	2.4	2.4	1.6	1.6	0.8	0.8	0.8
87.5°	3.2	2.4	2.4	1.6	1.6	0.8	0.8	0.8
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)