

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: P179896

Luminaire Tested: **LDA6A55927D010TE LARH40FL 6LA1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179896
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26688)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A55927D010TE LARH40FL 6LA1LI 30°
Description: PORTFOLIO 6" Adjustable Reflector, Angle-cut Trim, Self-flanged, 40° Flood, 30° Tilt
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4328.2 lumens
Efficiency: N/A
Efficacy: 71.0 lumens/watt
Spacing Criteria (0/90/45): 2.63 / 0.54 / 1.37
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

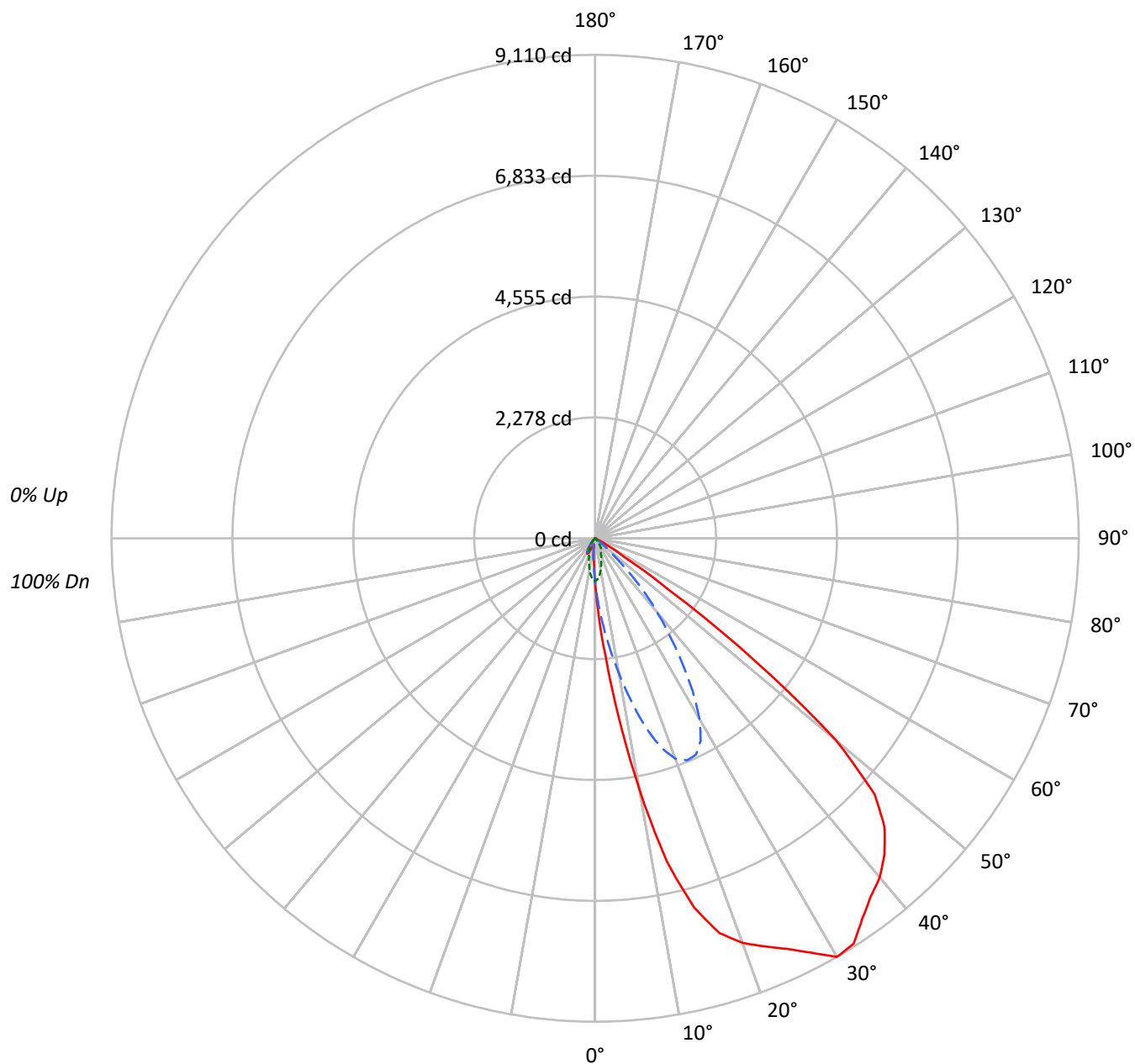
Input Watts (W): 61
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	109	106	103	110	107	104	102	103	100	98		99	97	95		95
2	105	99	94	90	103	97	93	89	94	90	87		91	88	85		88
3	98	90	84	79	96	88	83	78	86	81	77		83	79	76		81
4	91	82	75	70	89	80	74	69	78	73	68		76	71	67		74
5	85	74	67	62	83	73	66	61	71	65	61		70	64	60		68
6	79	68	60	55	77	67	60	55	65	59	54		64	58	54		62
7	74	62	55	49	72	61	54	49	60	53	49		59	53	49		57
8	69	57	49	44	67	56	49	44	55	49	44		54	48	44		53
9	64	52	45	40	63	52	45	40	51	44	40		50	44	40		49
10	60	48	41	36	59	48	41	36	47	41	36		46	40	36		45

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	44470	44470	44470
5°	122061	40975	16718
10°	267474	33533	6374
15°	408572	25522	7475
20°	473369	18989	11615
25°	516381	15618	18739
30°	576639	14167	19136
35°	586694	9717	13124
40°	597004	4609	6641
45°	597977	1915	2900
50°	505527	827	895
55°	162785	573	143
60°	32322	658	0
65°	3295	778	0
70°	353	1074	0
75°	0	1419	0
80°	0	2368	221
85°	0	4717	440



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.1	2.5
10°-20°	569.5	13.2
20°-30°	1090.4	25.2
30°-40°	1284.7	29.7
40°-50°	1009.1	23.3
50°-60°	245.9	5.7
60°-70°	10.5	0.2
70°-80°	4.0	0.1
80°-90°	4.0	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°	1770.1	40.9
0°-40°	3054.8	70.6
0°-60°	4309.8	99.6
0°-90°	4328.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4328.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	811	811	811	811	811	
5°	2218	1605	745	390	304	293
15°	7199	3698	450	129	132	2010
25°	8537	4496	258	270	310	3979
35°	8767	2842	145	187	196	5497
45°	7713	878	25	34	37	5795
55°	1703	32	6	4	2	2027
65°	25	4	6	4	0	67
75°	0	4	7	4	0	0
85°	0	4	8	4	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°	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2
2.5°	1390.4	1387.4	1367.2	1385.9	1329.0	1326.8	1301.4	1290.1	1257.2	1225.8	1180.9
5°	2218.1	2169.4	2129.8	2131.3	2022.0	2001.8	1944.9	1887.3	1799.0	1716.7	1605.2
7.5°	3381.0	3323.3	3239.5	3204.4	2995.6	2934.2	2816.7	2663.3	2471.0	2279.4	2072.9
10°	4805.0	4814.0	4705.5	4605.2	4289.4	4165.2	3975.1	3672.8	3308.4	2948.4	2582.5
12.5°	6238.1	6232.1	6102.7	5950.7	5561.6	5386.5	5133.6	4756.4	4273.7	3715.5	3143.0
15°	7199.0	7241.6	7187.0	7065.8	6733.5	6532.9	6247.8	5736.0	5147.8	4469.8	3697.5
17.5°	7802.1	7842.5	7823.1	7728.0	7434.7	7220.7	6982.7	6563.6	5883.4	5031.0	4134.5
20°	8114.2	8177.8	8168.8	8065.5	7844.0	7666.7	7404.0	7015.6	6426.7	5420.9	4417.4
22.5°	8322.2	8370.9	8384.3	8267.6	8038.6	7870.2	7677.9	7284.3	6730.5	5658.9	4529.7
25°	8537.0	8623.0	8538.5	8394.8	8184.5	8022.9	7817.8	7440.7	6875.7	5756.2	4496.0
27.5°	8800.4	8841.6	8650.0	8519.0	8285.5	8110.4	7892.7	7531.2	6901.1	5678.4	4303.7
30°	9109.5	8938.8	8804.9	8545.2	8280.3	8109.7	7888.2	7474.3	6767.2	5420.2	3931.0
32.5°	9058.6	8902.2	8750.3	8475.6	8213.7	8044.6	7797.6	7285.0	6450.6	4988.4	3416.9
35°	8766.7	8800.4	8636.5	8409.0	8112.7	7938.3	7668.9	7015.6	5913.3	4392.7	2842.2
37.5°	8520.5	8594.6	8487.6	8277.3	7976.5	7740.8	7377.1	6583.1	5212.1	3636.9	2297.4
40°	8342.4	8366.4	8308.7	8073.0	7711.6	7371.1	6950.5	5806.3	4360.5	2854.9	1813.2
42.5°	8066.3	8129.9	8028.1	7770.7	7222.9	6837.5	6228.4	4909.1	3387.0	2180.6	1365.0
45°	7713.1	7773.7	7648.0	7219.9	6458.1	5893.1	5150.0	3827.7	2505.4	1607.4	878.5
47.5°	7136.9	7174.3	6931.1	6339.1	5231.6	4699.5	3937.7	2668.6	1614.2	898.7	427.3
50°	5927.5	5909.6	5408.2	4680.1	3499.2	2940.9	2343.8	1446.5	725.1	425.8	267.2
52.5°	3820.2	3779.1	3282.9	2620.7	1772.1	1352.2	1016.2	624.1	377.9	238.0	105.5
55°	1703.2	1687.5	1381.4	1073.1	725.1	624.1	476.7	306.1	201.3	83.1	32.2
57.5°	631.6	617.4	544.0	456.5	350.2	291.1	231.2	146.7	51.6	27.7	17.2
60°	294.8	294.1	258.9	213.3	148.2	112.2	65.1	34.4	21.7	15.0	9.7
62.5°	94.3	92.0	64.4	47.1	33.7	29.2	23.2	17.2	11.2	8.2	6.0
65°	25.4	25.4	23.2	19.5	15.7	13.5	11.2	8.2	5.2	4.5	3.7
67.5°	9.7	9.7	9.0	8.2	6.0	5.2	4.5	3.7	3.0	3.7	3.7
70°	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	3.0	3.0	3.7
72.5°	0.0	0.0	0.7	0.7	1.5	1.5	2.2	2.2	3.0	3.7	3.7
75°	0.0	0.0	0.7	0.7	1.5	1.5	2.2	2.2	3.0	3.7	3.7
77.5°	0.0	0.0	0.7	0.7	1.5	1.5	2.2	2.2	3.0	3.7	3.7
80°	0.0	0.0	0.7	0.7	1.5	1.5	2.2	2.2	3.0	3.7	3.7
82.5°	0.0	0.0	0.7	1.5	1.5	1.5	2.2	3.0	3.0	3.7	4.5
85°	0.0	0.0	0.7	1.5	1.5	2.2	2.2	3.0	3.0	3.7	4.5
87.5°	0.0	0.0	0.7	1.5	1.5	2.2	2.2	3.0	3.0	3.7	4.5
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°	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2
2.5°	1147.9	1098.6	1030.5	990.8	981.1	960.1	923.4	868.8	823.9	780.5	755.1
5°	1510.9	1394.1	1263.2	1171.1	1133.7	1083.6	994.5	902.5	817.9	744.6	687.0
7.5°	1895.5	1703.2	1491.4	1320.8	1259.4	1180.1	1034.9	898.0	782.0	680.2	603.2
10°	2277.9	1968.1	1680.8	1433.8	1333.5	1225.8	1034.2	856.8	720.6	602.4	517.1
12.5°	2660.3	2215.1	1819.9	1501.9	1371.7	1235.5	1003.5	794.0	642.8	522.3	440.8
15°	3013.5	2411.9	1914.2	1525.1	1368.0	1207.1	941.4	717.7	561.2	449.7	374.2
17.5°	3277.0	2515.1	1935.9	1489.9	1308.8	1130.7	846.4	627.9	483.4	385.4	308.3
20°	3406.4	2531.6	1884.3	1389.7	1207.1	1022.2	742.3	541.8	416.8	325.5	260.4
22.5°	3406.4	2453.8	1772.1	1263.9	1079.8	897.3	642.1	470.7	364.4	283.6	229.0
25°	3277.0	2298.9	1621.6	1118.8	939.9	773.8	555.3	417.6	324.0	258.2	212.5
27.5°	3025.5	2084.9	1428.6	957.1	802.2	663.8	486.4	368.9	293.3	232.7	233.5
30°	2679.8	1822.2	1207.1	786.5	660.8	545.5	409.3	309.1	235.0	223.8	230.5
32.5°	2280.2	1507.9	956.4	609.9	511.9	429.5	311.3	218.5	187.1	188.6	196.1
35°	1870.1	1186.9	719.9	452.0	380.9	311.3	204.3	143.7	142.2	145.2	150.4
37.5°	1476.5	888.3	520.8	330.8	255.9	191.6	110.0	98.8	98.8	101.8	104.8
40°	1106.0	630.1	358.5	196.1	124.2	87.6	69.6	64.4	63.6	64.4	68.1
42.5°	759.6	398.9	213.3	78.6	59.9	50.9	44.2	40.4	39.7	40.4	42.7
45°	426.5	245.5	83.1	41.9	35.9	32.2	27.7	25.4	24.7	24.7	26.2
47.5°	267.2	97.3	37.4	26.2	22.4	21.0	18.0	16.5	15.7	15.7	16.5
50°	102.5	38.2	23.2	17.2	15.0	13.5	12.0	10.5	9.7	9.7	10.5
52.5°	35.2	22.4	15.0	11.2	9.7	9.0	7.5	6.7	6.7	6.7	6.7
55°	19.5	13.5	9.0	6.7	6.0	6.0	6.0	6.0	6.0	6.0	6.0
57.5°	12.0	8.2	6.0	5.2	5.2	5.2	5.2	5.2	5.2	6.0	6.0
60°	6.7	5.2	4.5	4.5	4.5	4.5	5.2	5.2	5.2	6.0	6.0
62.5°	4.5	4.5	4.5	4.5	4.5	4.5	5.2	5.2	6.0	6.0	6.0
65°	3.7	3.7	3.7	4.5	4.5	4.5	5.2	5.2	6.0	6.0	6.0
67.5°	3.7	3.7	4.5	4.5	4.5	5.2	5.2	6.0	6.0	6.0	6.0
70°	3.7	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.0	6.7	6.7
72.5°	3.7	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.7	6.7	6.7
75°	4.5	4.5	4.5	5.2	5.2	5.2	6.0	6.7	6.7	6.7	6.7
77.5°	4.5	4.5	5.2	5.2	5.2	6.0	6.0	6.7	6.7	6.7	6.7
80°	4.5	4.5	5.2	5.2	6.0	6.0	6.7	6.7	6.7	7.5	7.5
82.5°	4.5	4.5	5.2	6.0	6.0	6.0	6.7	6.7	7.5	7.5	7.5
85°	4.5	5.2	5.2	6.0	6.0	6.0	6.7	6.7	7.5	7.5	7.5
87.5°	4.5	5.2	5.2	6.0	6.0	6.0	6.7	6.7	7.5	7.5	7.5
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°	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2
2.5°	721.4	690.0	658.5	635.3	624.1	612.9	588.2	556.0	542.5	523.1	511.9
5°	628.6	575.5	533.6	505.9	489.4	467.7	439.3	407.8	389.9	369.7	356.2
7.5°	532.8	470.7	430.3	404.8	388.4	361.4	325.5	288.1	266.4	244.0	228.2
10°	449.0	389.9	344.2	315.0	294.1	262.7	226.7	200.6	181.8	162.4	146.7
12.5°	374.9	311.3	262.7	238.0	223.8	193.8	163.9	134.7	123.5	119.7	119.7
15°	303.8	246.2	205.0	184.1	169.1	136.9	131.0	129.5	128.7	128.0	129.5
17.5°	247.7	199.1	155.7	145.2	143.7	142.9	143.7	143.7	144.4	146.7	150.4
20°	208.0	163.1	160.1	160.9	160.9	163.9	167.6	170.6	173.6	177.4	184.1
22.5°	184.8	184.1	189.3	190.1	193.8	198.3	205.0	209.5	217.0	220.8	230.5
25°	213.3	218.5	228.2	231.2	237.2	244.7	255.2	261.2	270.1	274.6	285.9
27.5°	241.7	249.9	261.9	265.7	270.9	282.9	290.4	295.6	300.1	303.1	309.8
30°	239.5	246.9	258.9	259.7	267.2	275.4	279.9	284.4	287.4	286.6	290.4
32.5°	202.8	209.5	220.8	220.8	229.0	235.7	238.0	241.7	241.7	241.7	243.2
35°	155.7	160.1	167.6	169.9	176.6	181.1	182.6	187.1	187.1	185.6	185.6
37.5°	107.8	113.7	119.0	120.5	125.0	128.0	131.7	132.5	131.0	131.7	131.7
40°	70.3	74.1	77.8	78.6	82.3	84.6	88.3	88.3	89.1	88.3	89.8
42.5°	43.4	46.4	48.6	50.1	51.6	53.1	55.4	56.1	56.9	56.1	57.6
45°	26.9	28.4	29.9	30.7	31.4	32.2	34.4	34.4	34.4	34.4	35.2
47.5°	16.5	17.2	18.0	18.0	18.7	19.5	20.2	20.2	20.2	20.2	21.0
50°	9.7	10.5	10.5	10.5	11.2	11.2	12.0	12.0	12.0	11.2	12.0
52.5°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.0	6.7
55°	6.0	6.0	5.2	5.2	5.2	5.2	5.2	4.5	3.7	3.7	3.0
57.5°	5.2	5.2	5.2	5.2	5.2	4.5	4.5	3.7	3.7	3.0	2.2
60°	5.2	5.2	5.2	5.2	5.2	4.5	4.5	3.7	3.0	3.0	2.2
62.5°	6.0	5.2	5.2	5.2	5.2	4.5	4.5	3.7	3.0	3.0	2.2
65°	6.0	6.0	5.2	5.2	5.2	4.5	4.5	3.7	3.7	3.0	2.2
67.5°	6.0	6.0	6.0	5.2	6.0	5.2	4.5	4.5	3.7	3.0	3.0
70°	6.7	6.0	6.0	6.0	6.0	5.2	5.2	4.5	3.7	3.0	3.0
72.5°	6.7	6.7	6.0	6.0	6.0	5.2	5.2	4.5	3.7	3.7	3.0
75°	6.7	6.7	6.0	6.0	6.0	5.2	5.2	4.5	4.5	3.7	3.0
77.5°	6.7	6.7	6.7	6.0	6.0	6.0	5.2	5.2	4.5	3.7	3.0
80°	6.7	6.7	6.7	6.7	6.7	6.0	6.0	5.2	4.5	3.7	3.0
82.5°	7.5	6.7	6.7	6.7	6.7	6.0	6.0	5.2	4.5	3.7	3.7
85°	7.5	7.5	6.7	6.7	6.7	6.0	6.0	5.2	4.5	4.5	3.7
87.5°	7.5	6.7	6.7	6.7	6.7	6.0	6.0	5.2	4.5	3.7	3.7
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: P179896

CATALOG NUMBER: LDA6A55927D010TE LARH40FL 6LA1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	811.2	811.2	811.2	811.2	811.2	811.2	811.2	811.2
2.5°	500.6	494.6	494.6	484.2	482.7	474.4	481.2	476.7
5°	341.2	331.5	328.5	318.0	314.3	304.6	307.6	303.8
7.5°	214.8	205.0	202.0	194.6	190.1	182.6	183.3	181.1
10°	131.0	122.0	119.7	117.5	115.2	114.5	115.2	114.5
12.5°	119.0	118.2	116.7	117.5	116.0	116.7	117.5	116.7
15°	129.5	131.0	129.5	130.2	129.5	131.0	131.7	131.7
17.5°	151.9	154.9	153.4	155.7	154.9	158.6	158.6	158.6
20°	186.3	191.6	190.1	193.1	193.1	197.6	197.6	199.1
22.5°	234.2	241.0	240.2	246.9	245.5	250.7	250.7	252.2
25°	291.8	298.6	299.3	303.8	303.1	308.3	308.3	309.8
27.5°	315.8	319.5	318.8	321.0	321.8	324.8	327.0	325.5
30°	296.3	299.3	298.6	300.1	300.1	302.3	304.6	302.3
32.5°	249.2	251.4	251.4	254.4	252.2	252.9	256.7	254.4
35°	190.8	192.3	190.8	192.3	193.1	193.1	196.8	196.1
37.5°	136.2	136.9	136.9	139.2	136.9	136.9	140.7	141.4
40°	91.3	92.0	91.3	94.3	92.8	92.8	95.0	92.8
42.5°	58.4	59.1	58.4	60.6	59.1	60.6	61.4	62.1
45°	35.9	35.9	35.2	36.7	35.9	36.7	37.4	37.4
47.5°	21.0	21.0	20.2	21.7	21.0	21.0	21.0	21.7
50°	11.2	11.2	11.2	12.0	11.2	11.2	11.2	10.5
52.5°	6.0	6.0	5.2	6.0	5.2	5.2	5.2	5.2
55°	3.0	2.2	2.2	2.2	1.5	1.5	1.5	1.5
57.5°	2.2	1.5	1.5	0.7	0.7	0.7	0.0	0.0
60°	1.5	1.5	0.7	0.7	0.0	0.0	0.0	0.0
62.5°	1.5	1.5	0.7	0.7	0.0	0.0	0.0	0.0
65°	1.5	1.5	0.7	0.7	0.0	0.0	0.0	0.0
67.5°	2.2	1.5	1.5	0.7	0.7	0.0	0.0	0.0
70°	2.2	1.5	1.5	0.7	0.7	0.0	0.0	0.0
72.5°	2.2	1.5	1.5	1.5	0.7	0.7	0.0	0.0
75°	2.2	2.2	1.5	1.5	0.7	0.7	0.0	0.0
77.5°	3.0	2.2	1.5	1.5	0.7	0.7	0.0	0.0
80°	3.0	2.2	1.5	1.5	1.5	0.7	0.7	0.7
82.5°	3.0	2.2	2.2	1.5	1.5	0.7	0.7	0.7
85°	3.0	2.2	2.2	1.5	1.5	0.7	0.7	0.7
87.5°	3.0	2.2	2.2	1.5	1.5	0.7	0.7	0.7
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)