

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: P179882

Luminaire Tested: **LDA6A55935D010TE LARH30NF 6LA1LI 30°**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179882
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: LDA6A55935D010TE 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 / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4702.2 lumens
Efficiency: N/A
Efficacy: 77.1 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

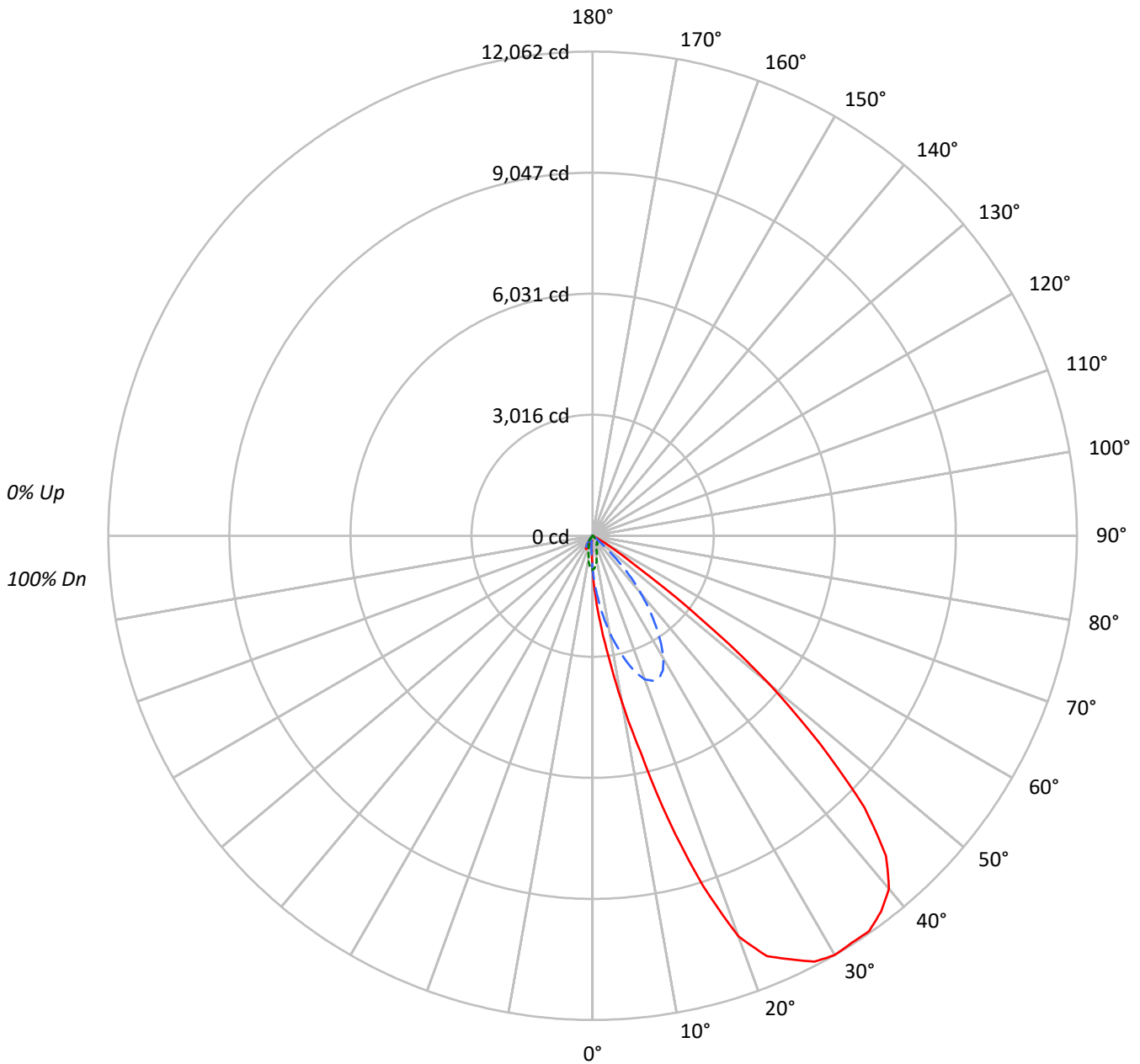
Input Watts (W): 61
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	46498	46498	46498
5°	119271	42301	13174
10°	232500	32509	6329
15°	417363	22077	8490
20°	619659	16761	14019
25°	704339	13809	21981
30°	763510	15097	20674
35°	804228	9784	12816
40°	821618	4344	6240
45°	742077	1659	2318
50°	488487	657	657
55°	133778	573	0
60°	26719	658	0
65°	1881	882	0
70°	272	1090	0
75°	0	1631	0
80°	0	2431	284
85°	0	4843	566



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.9	2.2
10°-20°	552.0	11.7
20°-30°	1251.0	26.6
30°-40°	1501.7	31.9
40°-50°	1058.4	22.5
50°-60°	218.4	4.6
60°-70°	7.7	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°	1906.9	40.6
0°-40°	3408.6	72.5
0°-60°	4685.3	99.6
0°-90°	4702.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4702.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	848	848	848	848	848	
5°	2167	1579	769	320	239	267
15°	7354	3235	389	138	150	2182
25°	11644	3913	228	320	363	5374
35°	12017	2740	146	192	192	7471
45°	9572	940	21	29	30	7040
55°	1400	19	6	4	0	1844
65°	14	4	7	4	0	43
75°	0	4	8	5	0	0
85°	0	5	8	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°	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2
2.5°	1445.8	1402.2	1419.3	1368.9	1357.8	1348.4	1357.8	1303.0	1272.3	1232.9	1201.3
5°	2167.4	2115.3	2127.3	2039.2	1999.0	1971.7	1966.5	1853.7	1769.0	1675.8	1579.2
7.5°	3017.3	2967.7	2960.9	2824.1	2741.2	2694.1	2674.5	2512.9	2366.7	2200.8	2019.5
10°	4176.7	4063.9	4028.8	3830.4	3672.3	3572.2	3449.1	3190.9	2934.4	2683.9	2453.0
12.5°	5525.9	5464.4	5377.2	5027.5	4750.4	4608.5	4424.7	4021.1	3632.9	3219.1	2832.6
15°	7353.9	7135.1	6986.3	6481.0	6034.7	5815.8	5547.3	4930.0	4343.4	3819.3	3235.4
17.5°	9140.1	9025.5	8792.9	8137.1	7449.7	7104.3	6704.1	5865.4	5036.9	4291.3	3578.2
20°	10621.8	10514.1	10249.0	9630.8	8868.2	8358.6	7855.0	6704.1	5621.7	4667.5	3807.4
22.5°	11331.4	11263.0	11046.7	10517.5	9867.7	9382.9	8841.7	7418.1	6054.3	4913.7	3911.7
25°	11644.4	11612.7	11473.4	11056.1	10443.9	10032.7	9521.4	7923.4	6323.7	5028.3	3913.4
27.5°	11961.6	11967.6	11659.8	11329.7	10749.2	10354.2	9861.7	8147.4	6372.4	4964.2	3785.1
30°	12061.6	11998.4	11862.4	11388.7	10837.2	10417.4	9889.0	8043.9	6172.3	4700.8	3529.5
32.5°	12020.6	11995.8	11846.2	11345.1	10687.6	10225.1	9624.8	7633.5	5777.3	4324.6	3167.0
35°	12017.2	11971.0	11628.1	11198.1	10388.4	9817.2	9026.3	6970.0	5218.1	3828.7	2740.3
37.5°	11800.0	11685.4	11428.1	10848.4	9781.3	9057.1	8170.5	6159.5	4534.1	3272.1	2317.1
40°	11481.1	11327.2	10988.6	10111.3	8729.6	7895.2	7029.9	5238.6	3809.9	2723.2	1867.3
42.5°	10815.0	10582.5	10103.6	8897.2	7328.3	6575.9	5856.0	4305.8	3107.1	2218.8	1425.3
45°	9571.8	9253.8	8606.5	7282.1	5920.1	5306.2	4727.3	3464.5	2487.2	1645.9	939.7
47.5°	7693.4	7398.4	6809.3	5797.0	4642.7	4123.7	3662.0	2577.0	1686.1	953.3	448.9
50°	5727.7	5474.6	5014.6	4028.8	3116.5	2708.7	2313.7	1463.8	790.0	453.2	186.4
52.5°	3417.5	3291.8	2883.9	2234.1	1539.0	1326.1	1064.5	619.9	398.4	164.2	50.4
55°	1399.7	1291.9	1138.9	914.0	669.5	567.7	485.6	306.1	124.0	34.2	18.8
57.5°	632.7	608.8	539.5	424.1	307.8	258.2	174.4	58.1	27.4	17.1	11.1
60°	243.7	219.7	188.1	101.7	43.6	36.8	29.9	19.7	13.7	9.4	6.8
62.5°	35.1	33.3	29.9	23.9	18.8	17.1	14.5	10.3	7.7	6.0	5.1
65°	14.5	14.5	12.8	10.3	8.6	7.7	6.8	5.1	4.3	4.3	4.3
67.5°	6.0	6.0	5.1	4.3	3.4	3.4	3.4	2.6	3.4	3.4	4.3
70°	1.7	1.7	1.7	1.7	1.7	1.7	2.6	2.6	3.4	3.4	4.3
72.5°	0.0	0.0	0.9	0.9	1.7	1.7	1.7	2.6	3.4	4.3	4.3
75°	0.0	0.0	0.9	0.9	1.7	1.7	1.7	2.6	3.4	4.3	4.3
77.5°	0.0	0.0	0.9	0.9	1.7	1.7	2.6	2.6	3.4	4.3	4.3
80°	0.0	0.0	0.9	0.9	1.7	1.7	2.6	2.6	3.4	4.3	5.1
82.5°	0.0	0.0	0.9	0.9	1.7	1.7	2.6	2.6	3.4	4.3	5.1
85°	0.0	0.0	0.9	0.9	1.7	1.7	2.6	2.6	3.4	4.3	5.1
87.5°	0.0	0.0	0.9	0.9	1.7	1.7	2.6	2.6	3.4	4.3	5.1
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°	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2
2.5°	1173.9	1119.2	1103.8	1055.9	1015.8	996.1	971.3	915.7	873.8	818.2	784.9
5°	1511.7	1408.2	1326.1	1226.1	1160.2	1117.5	1050.8	949.1	867.0	768.7	698.5
7.5°	1876.7	1687.8	1539.9	1374.9	1279.9	1205.6	1091.8	945.6	825.1	694.3	585.7
10°	2229.0	1946.9	1714.3	1477.5	1352.6	1249.2	1092.7	908.9	749.0	584.0	469.4
12.5°	2539.4	2175.1	1847.7	1543.3	1388.5	1259.4	1063.6	843.0	649.8	480.5	379.6
15°	2798.4	2352.1	1941.7	1568.1	1391.1	1237.2	1002.9	749.0	539.5	389.0	318.1
17.5°	2995.1	2445.3	1970.8	1538.2	1341.5	1173.9	909.7	630.1	437.8	330.0	267.6
20°	3096.8	2463.3	1928.9	1456.9	1250.0	1078.2	787.5	511.3	371.1	287.3	224.0
22.5°	3109.7	2412.8	1828.9	1340.7	1134.6	961.9	652.4	426.6	330.9	253.9	197.5
25°	3033.6	2303.4	1686.1	1209.0	1008.1	828.5	531.0	382.2	301.0	228.3	227.4
27.5°	2871.1	2115.3	1515.1	1055.9	855.0	673.7	450.6	345.4	268.5	242.0	257.4
30°	2642.0	1874.2	1304.7	862.7	667.8	518.1	379.6	284.7	236.0	238.5	251.4
32.5°	2331.6	1574.9	1057.6	631.9	478.0	389.9	284.7	194.1	195.8	196.7	207.8
35°	1941.7	1262.8	790.0	424.9	336.0	274.5	160.7	142.8	145.4	146.2	153.9
37.5°	1556.1	970.4	525.0	283.0	211.2	144.5	100.0	95.8	97.5	96.6	105.2
40°	1191.9	676.3	314.6	140.2	81.2	67.5	61.6	59.0	59.9	60.7	65.8
42.5°	843.9	366.8	155.6	53.0	42.8	39.3	36.8	35.1	35.9	35.9	39.3
45°	428.4	173.6	53.0	29.1	26.5	23.9	22.2	21.4	21.4	21.4	23.1
47.5°	185.5	57.3	24.8	18.0	16.2	15.4	13.7	12.8	12.8	12.8	13.7
50°	58.1	23.1	15.4	12.0	10.3	9.4	8.6	8.6	8.6	7.7	8.6
52.5°	21.4	14.5	10.3	7.7	6.8	6.8	6.8	6.0	6.8	6.0	6.8
55°	12.8	9.4	6.8	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
57.5°	8.6	6.8	6.0	6.0	5.1	5.1	6.0	6.0	6.0	6.0	6.0
60°	6.0	6.0	5.1	5.1	5.1	5.1	6.0	6.0	6.0	6.0	6.0
62.5°	5.1	5.1	5.1	5.1	5.1	5.1	6.0	6.0	6.0	6.0	6.8
65°	4.3	5.1	5.1	5.1	5.1	5.1	6.0	6.0	6.8	6.8	6.8
67.5°	4.3	5.1	5.1	6.0	6.0	6.0	6.0	6.8	6.8	6.8	6.8
70°	5.1	5.1	6.0	6.0	6.0	6.0	6.8	6.8	6.8	6.8	7.7
72.5°	5.1	5.1	6.0	6.0	6.0	6.0	6.8	6.8	7.7	7.7	7.7
75°	5.1	6.0	6.0	6.0	6.0	6.8	6.8	6.8	7.7	7.7	7.7
77.5°	5.1	6.0	6.0	6.8	6.8	6.8	6.8	7.7	7.7	7.7	7.7
80°	5.1	6.0	6.0	6.8	6.8	6.8	7.7	7.7	7.7	7.7	8.6
82.5°	5.1	6.0	6.0	6.8	6.8	6.8	7.7	7.7	7.7	7.7	8.6
85°	6.0	6.0	6.8	6.8	6.8	6.8	7.7	7.7	7.7	7.7	8.6
87.5°	6.0	6.0	6.8	6.8	6.8	6.8	7.7	7.7	8.6	7.7	8.6
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°	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2
2.5°	740.4	690.8	656.6	643.8	619.0	579.7	556.6	535.2	495.1	486.5	464.3
5°	618.2	538.7	482.2	460.9	432.6	399.3	366.8	345.4	319.8	309.5	294.1
7.5°	487.4	407.8	359.1	342.0	322.3	295.0	265.9	244.5	218.0	204.3	191.5
10°	383.0	324.0	283.0	265.9	245.4	216.3	186.4	158.2	135.1	120.6	118.0
12.5°	311.2	262.5	218.9	200.9	177.0	147.9	126.5	125.7	124.0	123.1	124.8
15°	254.8	207.8	161.6	141.9	135.1	134.2	136.8	139.4	138.5	141.1	142.8
17.5°	209.5	159.0	148.8	149.6	150.5	153.0	157.3	164.2	165.0	169.3	172.7
20°	171.0	168.4	172.7	176.1	178.7	183.8	193.2	201.8	204.3	210.3	217.2
22.5°	194.1	201.8	211.2	215.5	218.9	228.3	238.5	252.2	257.4	265.1	274.5
25°	234.3	247.1	261.6	266.8	271.9	287.3	299.3	315.5	319.8	329.2	338.6
27.5°	267.6	281.3	296.7	303.5	307.8	323.2	333.5	343.7	343.7	348.8	355.7
30°	262.5	273.6	286.4	291.6	293.3	304.4	314.6	318.1	316.4	318.9	324.0
32.5°	218.0	226.6	236.8	241.1	242.8	250.5	259.1	259.1	258.2	258.2	261.6
35°	161.6	167.6	172.7	177.0	179.6	184.7	192.4	191.5	191.5	189.8	192.4
37.5°	108.6	112.0	118.0	119.7	120.6	124.0	130.0	130.0	128.3	129.1	130.8
40°	65.8	70.1	73.5	74.4	76.1	78.7	82.9	82.9	82.9	82.9	83.8
42.5°	39.3	41.9	44.5	44.5	45.3	48.7	50.4	50.4	50.4	50.4	51.3
45°	23.1	23.9	25.7	26.5	26.5	28.2	29.1	29.1	29.1	29.1	29.9
47.5°	13.7	14.5	14.5	15.4	15.4	16.2	17.1	17.1	16.2	16.2	16.2
50°	8.6	8.6	8.6	8.6	9.4	9.4	9.4	9.4	9.4	9.4	8.6
52.5°	6.8	6.8	6.8	6.8	6.0	6.0	6.0	6.0	5.1	5.1	4.3
55°	6.0	6.0	6.0	6.0	6.0	5.1	5.1	5.1	4.3	3.4	2.6
57.5°	6.0	6.0	6.0	6.0	6.0	5.1	5.1	4.3	3.4	3.4	2.6
60°	6.0	6.0	6.0	6.0	6.0	5.1	5.1	4.3	3.4	3.4	2.6
62.5°	6.8	6.8	6.0	6.0	6.0	5.1	5.1	4.3	4.3	3.4	2.6
65°	6.8	6.8	6.0	6.0	6.0	6.0	5.1	5.1	4.3	3.4	2.6
67.5°	6.8	6.8	6.8	6.8	6.0	6.0	6.0	5.1	4.3	3.4	2.6
70°	7.7	7.7	6.8	6.8	6.8	6.0	6.0	5.1	4.3	4.3	3.4
72.5°	7.7	7.7	6.8	6.8	6.8	6.8	6.0	5.1	5.1	4.3	3.4
75°	7.7	7.7	7.7	7.7	6.8	6.8	6.0	6.0	5.1	4.3	3.4
77.5°	7.7	7.7	7.7	7.7	6.8	6.8	6.8	6.0	5.1	4.3	3.4
80°	7.7	7.7	7.7	7.7	7.7	6.8	6.8	6.0	5.1	4.3	3.4
82.5°	8.6	8.6	7.7	7.7	7.7	6.8	6.8	6.0	5.1	4.3	4.3
85°	8.6	8.6	7.7	7.7	7.7	6.8	6.8	6.0	5.1	5.1	4.3
87.5°	8.6	8.6	7.7	7.7	7.7	6.8	6.8	6.0	5.1	5.1	4.3
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: P179882

CATALOG NUMBER: LDA6A55935D010TE LARH30NF 6LA1LI 30°

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	848.2	848.2	848.2	848.2	848.2	848.2	848.2	848.2
2.5°	450.6	424.9	416.4	422.4	415.5	410.4	403.6	400.1
5°	282.2	263.3	257.4	259.1	253.1	248.0	241.1	239.4
7.5°	173.6	155.6	148.8	148.8	141.9	135.9	131.7	129.1
10°	116.3	112.9	113.7	114.6	113.7	114.6	112.0	113.7
12.5°	124.8	123.1	124.8	125.7	125.7	127.4	124.0	126.5
15°	145.4	143.6	146.2	147.9	147.9	150.5	147.1	149.6
17.5°	177.8	177.0	181.3	183.0	183.8	188.1	183.8	187.2
20°	224.9	224.0	230.0	232.6	231.7	240.3	234.3	240.3
22.5°	285.6	283.9	292.4	295.0	295.8	306.9	301.8	306.1
25°	346.3	348.0	352.3	356.5	357.4	366.8	359.1	363.4
27.5°	359.1	356.5	359.1	364.2	365.1	369.4	362.5	365.9
30°	324.9	320.6	321.5	327.5	329.2	330.9	324.9	326.6
32.5°	264.2	257.4	257.4	263.3	265.1	267.6	257.4	261.6
35°	194.9	189.0	189.0	193.2	194.1	195.8	188.1	191.5
37.5°	133.4	128.3	130.0	131.7	132.5	134.2	133.4	132.5
40°	85.5	82.1	84.6	84.6	85.5	86.4	86.4	87.2
42.5°	52.2	49.6	51.3	51.3	52.2	52.2	52.2	53.0
45°	29.9	29.1	29.1	29.9	29.9	29.9	29.1	29.9
47.5°	16.2	15.4	16.2	16.2	16.2	16.2	16.2	16.2
50°	8.6	7.7	7.7	7.7	7.7	7.7	7.7	7.7
52.5°	4.3	3.4	3.4	3.4	2.6	3.4	2.6	2.6
55°	2.6	1.7	1.7	1.7	0.9	0.9	0.0	0.0
57.5°	1.7	0.9	0.9	0.9	0.0	0.0	0.0	0.0
60°	1.7	0.9	0.9	0.9	0.0	0.0	0.0	0.0
62.5°	1.7	0.9	0.9	0.9	0.0	0.0	0.0	0.0
65°	1.7	0.9	0.9	0.9	0.0	0.0	0.0	0.0
67.5°	2.6	1.7	0.9	0.9	0.9	0.0	0.0	0.0
70°	2.6	1.7	1.7	0.9	0.9	0.0	0.0	0.0
72.5°	2.6	1.7	1.7	1.7	0.9	0.9	0.0	0.0
75°	2.6	1.7	1.7	1.7	0.9	0.9	0.0	0.0
77.5°	2.6	2.6	1.7	1.7	0.9	0.9	0.9	0.0
80°	3.4	2.6	1.7	1.7	1.7	0.9	0.9	0.9
82.5°	3.4	2.6	1.7	1.7	1.7	0.9	0.9	0.9
85°	3.4	2.6	2.6	1.7	1.7	0.9	0.9	0.9
87.5°	3.4	2.6	2.6	1.7	1.7	0.9	0.9	0.9
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)