

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: P179624

Luminaire Tested: **LDA6A45927D010TE LARH30NF 6LLWW1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P179624
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26668)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDA6A45927D010TE LARH30NF 6LLWW1
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 30° Narrow Flood
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2807.5 lumens
Efficiency: N/A
Efficacy: 53.0 lumens/watt
Spacing Criteria (0/90/45): 2.16 / 1.11 / 1.51
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

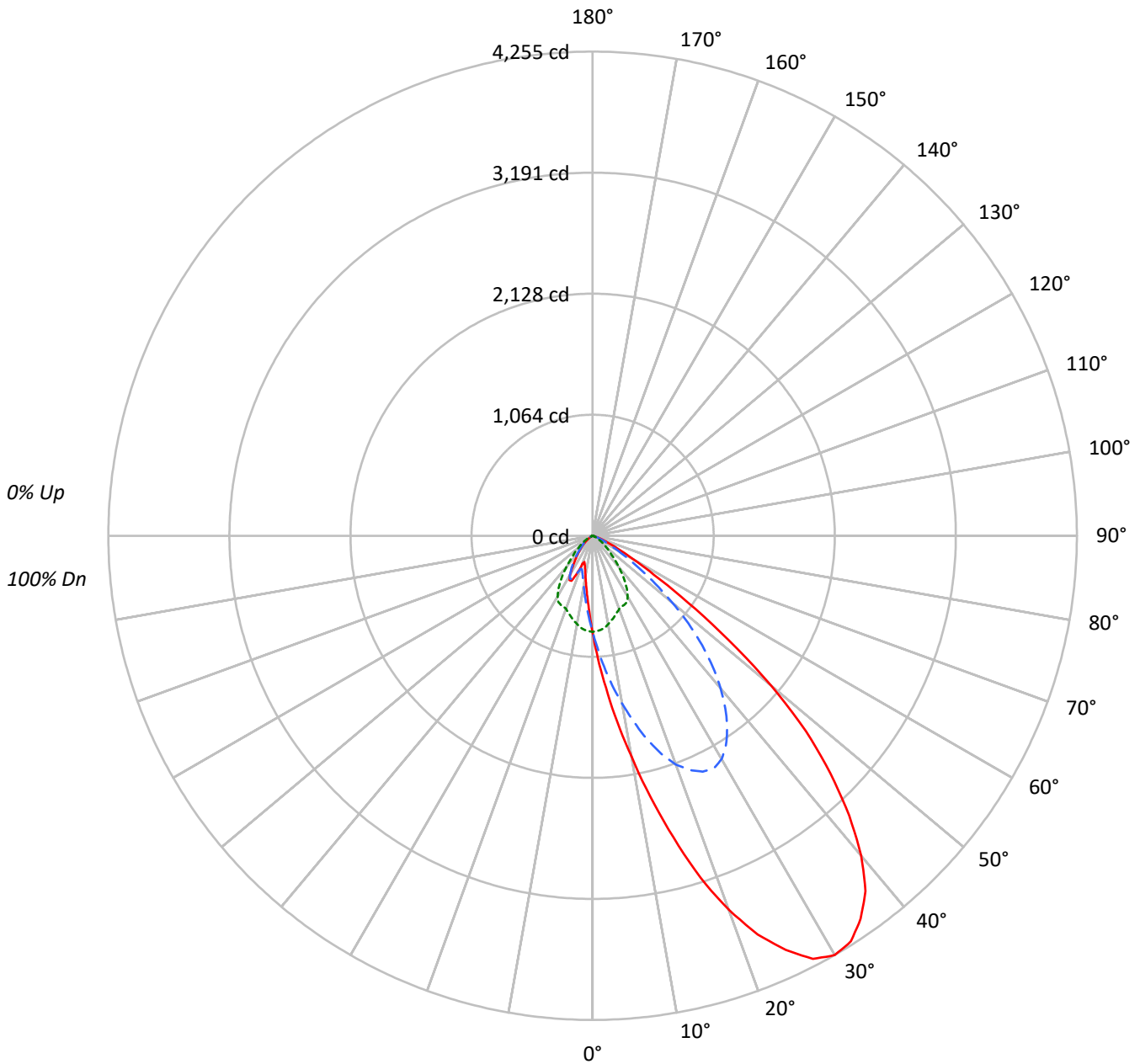
Input Watts (W): 53
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90								
2	104	98	92	88	102	96	91	87	93	89	85	89	86	83	87	84	81	80								
3	97	88	82	76	94	87	81	76	84	79	75	81	77	73	79	75	72	70								
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62								
5	83	72	65	59	81	71	64	59	69	63	58	67	62	57	66	61	57	55								
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49								
7	72	60	52	47	70	59	52	46	58	51	46	56	50	46	55	50	46	44								
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	51	45	41	39								
9	63	50	43	38	61	50	43	38	49	42	37	48	42	37	47	41	37	35								
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	46350	46350	46350
5°	73685	45680	29523
10°	109667	43898	19940
15°	155824	41794	15006
20°	203986	39909	15337
25°	242887	40357	26500
30°	269364	38924	24960
35°	274800	33180	18364
40°	262656	25576	13590
45°	229070	18413	10249
50°	174638	13373	6814
55°	97488	9625	3966
60°	44832	6655	1601
65°	21144	3593	700
70°	10354	1731	737
75°	4893	1144	805
80°	2431	1200	979
85°	1447	1950	943



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.1	3.1
10°-20°	318.9	11.4
20°-30°	638.0	22.7
30°-40°	783.4	27.9
40°-50°	627.6	22.4
50°-60°	276.1	9.8
60°-70°	62.3	2.2
70°-80°	11.3	0.4
80°-90°	2.8	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°	1044.1	37.2
0°-40°	1827.5	65.1
0°-60°	2731.1	97.3
0°-90°	2807.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2807.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	846	846	846	846	846	
5°	1339	1152	830	615	536	147
15°	2746	1852	736	343	264	801
25°	4016	2288	667	415	438	1848
35°	4106	2062	496	299	274	2542
45°	2955	1361	238	145	132	2246
55°	1020	504	101	58	42	969
65°	163	103	28	9	5	187
75°	23	13	5	5	4	29
85°	2	2	3	3	2	3
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°	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5
2.5°	1078.4	1050.8	1073.0	1053.8	1047.7	1045.4	1036.1	1030.0	1027.7	1006.2	989.3
5°	1339.0	1306.7	1329.8	1301.3	1286.7	1279.0	1262.9	1242.9	1226.8	1186.0	1152.2
7.5°	1644.2	1609.6	1631.1	1590.3	1562.7	1548.8	1522.7	1484.3	1448.1	1382.8	1325.9
10°	1970.1	1941.6	1960.1	1903.2	1860.1	1837.9	1799.4	1750.2	1676.4	1581.1	1497.3
12.5°	2349.8	2309.0	2323.6	2247.5	2186.1	2154.5	2100.0	2023.1	1918.6	1788.7	1674.1
15°	2745.6	2707.2	2716.4	2619.6	2534.3	2490.4	2419.7	2310.6	2172.2	2002.3	1851.7
17.5°	3151.5	3099.2	3097.7	2982.4	2868.6	2813.3	2724.9	2581.1	2419.0	2196.0	2010.0
20°	3496.6	3451.3	3439.0	3319.1	3163.8	3099.2	2992.4	2814.0	2615.0	2356.7	2138.4
22.5°	3792.5	3740.3	3718.0	3577.3	3401.3	3326.0	3203.8	2987.8	2766.4	2474.3	2228.3
25°	4015.5	3972.4	3940.1	3781.8	3585.0	3500.5	3366.7	3133.0	2876.3	2556.5	2287.5
27.5°	4192.2	4134.6	4093.9	3920.9	3699.5	3610.4	3466.6	3213.0	2932.4	2589.6	2305.2
30°	4255.3	4197.6	4150.7	3966.3	3731.8	3634.2	3483.5	3214.5	2917.0	2565.0	2266.8
32.5°	4225.3	4165.3	4112.3	3919.4	3676.5	3574.2	3420.5	3147.6	2836.3	2482.8	2181.4
35°	4106.2	4058.5	3998.5	3804.1	3564.3	3452.8	3299.8	3020.0	2711.0	2354.4	2061.5
37.5°	3937.8	3864.0	3808.7	3618.1	3385.9	3272.2	3125.3	2856.3	2543.5	2200.7	1917.0
40°	3670.3	3595.8	3540.4	3356.7	3146.1	3031.6	2896.3	2639.6	2337.5	2018.5	1747.9
42.5°	3336.7	3267.6	3213.7	3043.1	2857.1	2745.6	2626.5	2389.0	2108.4	1816.3	1562.7
45°	2954.7	2887.8	2841.7	2693.4	2528.1	2429.7	2322.1	2112.3	1855.5	1590.3	1361.3
47.5°	2540.4	2472.0	2432.8	2299.8	2159.9	2070.8	1978.5	1797.1	1567.3	1339.8	1140.7
50°	2047.7	1981.6	1946.2	1834.8	1735.6	1653.4	1586.5	1441.2	1252.9	1073.8	911.6
52.5°	1499.6	1448.1	1422.0	1345.1	1286.0	1224.5	1181.4	1080.0	942.4	815.5	693.3
55°	1020.0	977.7	965.4	917.8	885.5	852.4	821.7	762.5	669.5	585.7	504.2
57.5°	638.0	633.4	641.8	599.6	584.9	571.1	547.3	514.2	455.8	403.5	354.3
60°	408.9	404.3	400.5	385.1	378.2	368.2	356.7	337.4	301.3	270.6	238.3
62.5°	259.0	256.0	259.8	250.6	241.4	241.4	229.1	218.3	196.0	177.6	154.5
65°	163.0	162.2	164.5	158.3	153.7	151.4	145.3	139.1	125.3	113.8	103.0
67.5°	103.0	102.2	103.8	102.2	96.9	95.3	91.5	87.6	78.4	71.5	63.8
70°	64.6	63.8	64.6	63.0	60.0	58.4	56.1	53.0	50.0	42.3	38.4
72.5°	39.2	38.4	39.2	38.4	36.1	36.1	33.1	31.5	29.2	24.6	21.5
75°	23.1	23.1	23.1	22.3	20.8	20.8	19.2	18.4	16.9	14.6	13.1
77.5°	13.1	13.1	13.1	13.1	12.3	12.3	11.5	10.8	10.0	8.5	8.5
80°	7.7	7.7	7.7	7.7	6.9	7.7	6.9	6.9	6.1	5.4	5.4
82.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	3.8	3.8	3.8	3.8
85°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
87.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.5	1.5	1.5	1.5
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°	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5
2.5°	975.4	950.8	946.2	920.1	915.5	900.9	893.2	879.3	851.7	837.1	819.4
5°	1111.5	1073.0	1050.8	1003.9	989.3	964.7	939.3	905.5	861.7	830.1	797.1
7.5°	1260.6	1197.6	1150.7	1081.5	1056.1	1020.0	975.4	922.4	860.9	814.0	767.1
10°	1410.5	1312.1	1239.8	1146.8	1109.9	1062.3	997.7	926.2	849.4	788.6	730.2
12.5°	1548.1	1425.1	1325.9	1207.6	1158.4	1099.9	1015.4	926.2	834.8	762.5	694.1
15°	1698.0	1535.8	1406.6	1262.1	1201.4	1132.2	1028.5	923.2	818.6	736.4	661.0
17.5°	1820.2	1627.2	1468.9	1300.6	1228.3	1149.1	1030.0	910.9	797.9	707.9	629.5
20°	1910.1	1696.4	1511.2	1322.9	1241.4	1155.3	1023.8	894.7	776.3	684.1	604.2
22.5°	1975.4	1737.9	1532.7	1330.5	1242.1	1152.2	1013.1	880.9	761.7	671.8	595.7
25°	2014.6	1758.7	1539.6	1327.5	1236.0	1142.2	1000.8	868.6	752.5	667.2	597.2
27.5°	2018.5	1750.2	1521.2	1304.4	1210.6	1116.9	975.4	844.8	732.5	654.1	587.3
30°	1974.7	1702.6	1472.7	1253.7	1159.1	1066.9	927.8	799.4	692.6	614.9	554.2
32.5°	1890.1	1618.8	1391.3	1176.8	1083.8	993.9	858.6	737.9	633.4	561.9	501.9
35°	1777.9	1512.7	1286.0	1084.6	993.9	908.5	777.1	658.7	563.4	495.8	441.2
37.5°	1644.9	1389.0	1176.8	982.3	894.7	815.5	688.7	581.1	489.6	427.4	377.4
40°	1493.5	1249.1	1050.0	865.5	787.1	710.2	594.9	496.6	411.2	357.4	315.1
42.5°	1329.8	1100.7	917.0	745.6	674.1	604.2	499.6	410.5	336.7	292.9	259.8
45°	1149.9	943.9	778.6	628.8	560.3	502.7	404.3	330.5	274.4	237.5	214.5
47.5°	957.7	778.6	634.9	505.8	445.8	396.6	315.9	260.6	220.6	195.2	176.0
50°	764.8	615.7	495.8	384.3	339.0	297.5	244.4	206.8	176.0	156.8	144.5
52.5°	584.2	463.5	369.0	282.1	251.4	222.9	188.3	163.0	139.9	126.1	116.8
55°	423.5	334.4	262.9	206.8	186.0	169.9	144.5	126.1	111.5	100.7	93.0
57.5°	295.2	231.4	183.7	150.7	138.4	126.8	109.1	96.9	86.9	79.2	73.0
60°	199.9	156.8	128.4	109.1	101.5	93.8	82.2	73.8	66.1	60.7	54.6
62.5°	131.4	107.6	91.5	79.9	73.0	67.6	60.7	53.8	47.7	43.0	37.7
65°	85.3	70.7	63.0	53.8	50.7	46.9	40.7	36.9	31.5	27.7	23.8
67.5°	53.8	46.1	40.7	35.4	33.1	30.0	26.9	23.1	20.0	16.9	14.6
70°	32.3	28.4	24.6	21.5	20.0	18.4	16.1	13.8	11.5	10.8	9.2
72.5°	19.2	16.9	14.6	13.1	12.3	11.5	10.0	8.5	7.7	6.9	6.1
75°	11.5	10.8	9.2	7.7	7.7	6.9	6.9	6.1	5.4	5.4	4.6
77.5°	7.7	6.9	6.1	5.4	5.4	5.4	4.6	4.6	4.6	4.6	4.6
80°	4.6	4.6	4.6	4.6	3.8	3.8	3.8	3.8	3.8	3.8	3.8
82.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.8	3.8
85°	2.3	2.3	2.3	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
87.5°	2.3	2.3	2.3	2.3	3.1	3.1	3.1	3.1	3.1	3.1	3.1
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5
2.5°	811.7	788.6	779.4	765.6	751.7	751.0	734.8	726.4	720.2	709.5	698.7
5°	774.8	739.4	717.9	699.5	681.8	669.5	645.7	629.5	614.9	599.6	579.6
7.5°	731.8	686.4	655.7	632.6	611.8	592.6	563.4	541.9	523.5	508.8	484.3
10°	685.6	633.4	594.9	569.6	548.1	520.4	491.9	468.1	448.1	432.0	408.2
12.5°	642.6	584.9	541.9	515.8	493.5	463.5	434.3	409.7	388.2	372.8	351.3
15°	602.6	541.9	495.8	469.6	446.6	416.6	387.4	362.8	342.8	326.7	307.5
17.5°	567.3	503.5	458.1	434.3	410.5	382.8	353.6	330.5	310.5	295.9	280.6
20°	543.4	482.7	438.9	416.6	395.9	369.7	346.7	328.2	309.0	297.5	288.2
22.5°	539.6	485.8	448.1	429.7	413.5	394.3	380.5	371.3	358.2	352.8	352.8
25°	547.3	501.2	471.2	456.6	443.5	432.8	425.8	419.7	415.1	415.8	415.8
27.5°	542.7	501.2	476.6	462.7	451.2	444.3	437.4	433.5	428.9	431.2	431.2
30°	512.7	472.7	452.0	437.4	426.6	420.5	410.5	405.8	400.5	401.2	398.9
32.5°	462.7	425.1	405.1	391.2	379.7	373.6	362.8	357.4	350.5	350.5	345.9
35°	404.3	369.0	350.5	338.2	327.4	321.3	311.3	305.9	299.0	295.2	292.9
37.5°	342.8	312.1	295.2	285.9	277.5	271.3	262.1	258.3	251.4	248.3	245.2
40°	285.9	263.6	247.5	239.8	232.9	227.5	219.1	216.0	209.8	207.5	204.5
42.5°	236.7	219.8	206.8	200.6	192.9	189.9	183.7	180.6	175.3	172.9	169.9
45°	197.5	183.7	172.9	167.6	163.0	159.1	153.0	150.7	145.3	143.0	141.4
47.5°	163.0	152.2	143.7	139.1	136.8	132.2	126.8	124.5	120.7	118.4	116.1
50°	133.7	125.3	118.4	114.5	113.0	108.4	103.8	102.2	98.4	96.9	94.5
52.5°	109.1	102.2	96.1	93.0	89.9	86.9	83.0	81.5	77.6	75.3	72.3
55°	87.6	80.7	75.3	73.0	71.5	66.9	63.0	60.7	57.6	53.8	51.5
57.5°	67.6	61.5	56.9	53.8	53.0	48.4	45.4	41.5	37.7	35.4	33.1
60°	50.0	44.6	40.0	36.9	36.1	31.5	27.7	25.4	22.3	20.8	20.0
62.5°	33.1	29.2	25.4	23.8	22.3	19.2	16.9	15.4	13.8	13.1	12.3
65°	20.8	17.7	15.4	14.6	13.1	11.5	10.8	10.0	9.2	8.5	7.7
67.5°	12.3	10.8	9.2	9.2	8.5	7.7	7.7	6.9	6.1	6.1	6.1
70°	7.7	6.9	6.1	6.1	6.1	6.1	6.1	5.4	5.4	5.4	5.4
72.5°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	4.6	4.6
75°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
77.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	3.8	3.8	3.8	3.8
80°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
82.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.1	3.1	3.1
85°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.3
87.5°	3.1	3.1	3.1	3.1	3.1	2.3	2.3	2.3	2.3	2.3	1.5
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: P179624

CATALOG NUMBER: LDA6A45927D010TE LARH30NF 6LLWW1

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	845.5	845.5	845.5	845.5	845.5	845.5	845.5	845.5
2.5°	690.3	677.2	675.6	672.6	669.5	673.3	671.0	664.9
5°	572.6	556.5	553.4	548.8	544.2	545.7	541.9	536.5
7.5°	474.3	457.3	454.3	448.9	444.3	443.5	439.7	434.3
10°	394.3	381.3	378.2	372.8	367.4	366.6	362.0	358.2
12.5°	337.4	325.1	322.1	316.7	312.1	310.5	306.7	303.6
15°	295.2	283.6	280.6	275.9	270.6	270.6	267.5	264.4
17.5°	269.0	259.0	255.2	251.4	246.7	246.0	244.4	242.1
20°	279.8	270.6	269.0	264.4	265.2	265.2	263.6	262.9
22.5°	349.0	345.9	352.0	347.4	355.9	359.0	360.5	360.5
25°	418.9	419.7	425.8	423.5	431.2	437.4	440.4	438.1
27.5°	431.2	432.0	434.3	433.5	439.7	443.5	445.8	440.4
30°	395.9	395.1	394.3	393.6	397.4	398.9	399.7	394.3
32.5°	341.3	339.0	339.7	335.9	337.4	337.4	340.5	332.8
35°	286.7	283.6	283.6	279.8	279.8	279.8	282.1	274.4
37.5°	240.6	237.5	236.7	232.9	232.1	230.6	232.9	226.0
40°	200.6	197.5	198.3	193.7	194.5	193.7	193.7	189.9
42.5°	166.0	163.7	163.0	161.4	162.2	162.2	164.5	161.4
45°	137.6	135.3	134.5	133.7	134.5	134.5	135.3	132.2
47.5°	114.5	111.5	110.7	109.1	109.1	106.8	106.8	103.8
50°	92.2	87.6	86.9	84.6	83.8	82.2	82.2	79.9
52.5°	69.9	66.1	64.6	63.0	62.3	60.7	60.7	59.2
55°	49.2	45.4	44.6	43.8	43.0	42.3	43.0	41.5
57.5°	30.7	29.2	28.4	27.7	26.9	26.1	26.1	25.4
60°	18.4	16.9	16.9	16.1	15.4	14.6	14.6	14.6
62.5°	11.5	10.8	10.8	10.0	10.0	9.2	9.2	9.2
65°	7.7	6.9	6.9	6.1	6.1	5.4	5.4	5.4
67.5°	5.4	5.4	5.4	5.4	4.6	4.6	4.6	4.6
70°	5.4	4.6	4.6	4.6	4.6	4.6	4.6	4.6
72.5°	4.6	4.6	4.6	4.6	3.8	3.8	3.8	3.8
75°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
77.5°	3.8	3.8	3.8	3.8	3.1	3.1	3.1	3.1
80°	3.8	3.1	3.1	3.1	3.1	3.1	3.1	3.1
82.5°	3.1	3.1	3.1	3.1	3.1	2.3	2.3	2.3
85°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.5
87.5°	1.5	1.5	1.5	1.5	0.8	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)