

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: P179625

Luminaire Tested: **LDA6A45930D010TE LARH30NF 6LLWW1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P179625  
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: LDA6A45930D010TE LARH30NF 6LLWW1  
Description: PORTFOLIO 6" Lensed Wall Wash, Self-flanged, 30° Narrow Flood  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2973.0 lumens  
Efficiency: N/A  
Efficacy: 56.1 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

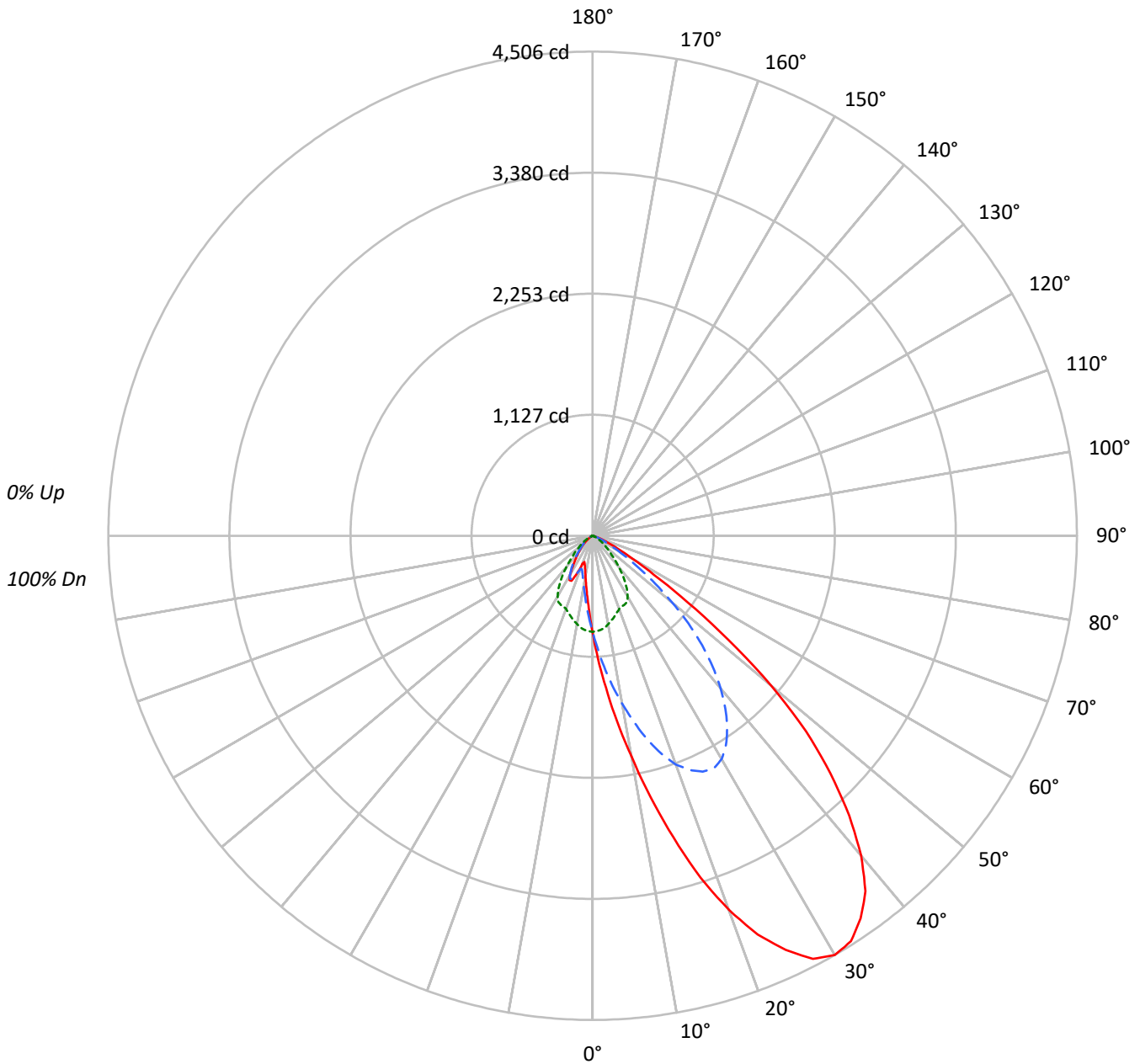
Input Watts (W): 53  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	49080	49080	49080
5°	78026	48376	31262
10°	116125	46487	21114
15°	165007	44257	15891
20°	216004	42260	16241
25°	257192	42734	28060
30°	285234	41222	26434
35°	290988	35135	19448
40°	278135	27086	14384
45°	242568	19498	10854
50°	184924	14157	7224
55°	103232	10188	4205
60°	47474	7050	1699
65°	22389	3801	739
70°	10963	1827	785
75°	5168	1207	868
80°	2557	1294	1042
85°	1510	2076	1006



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.3	3.1
10°-20°	337.7	11.4
20°-30°	675.6	22.7
30°-40°	829.6	27.9
40°-50°	664.5	22.4
50°-60°	292.3	9.8
60°-70°	65.9	2.2
70°-80°	12.0	0.4
80°-90°	3.0	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°	1105.6	37.2
0°-40°	1935.2	65.1
0°-60°	2892.1	97.3
0°-90°	2973.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2973.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	895	895	895	895	895	
5°	1418	1220	879	651	568	156
15°	2907	1961	780	363	280	848
25°	4252	2422	706	440	464	1956
35°	4348	2183	525	317	291	2692
45°	3129	1442	252	154	140	2379
55°	1080	534	107	61	44	1026
65°	173	109	29	10	6	198
75°	24	14	6	5	4	31
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°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	1142.0	1112.7	1136.3	1115.9	1109.4	1107.0	1097.2	1090.7	1088.2	1065.5	1047.5
5°	1417.9	1383.7	1408.1	1378.0	1362.5	1354.4	1337.3	1316.1	1299.1	1255.9	1220.1
7.5°	1741.0	1704.4	1727.2	1684.0	1654.7	1640.1	1612.4	1571.7	1533.5	1464.3	1404.1
10°	2086.1	2056.0	2075.6	2015.3	1969.7	1946.1	1905.4	1853.3	1775.2	1674.3	1585.6
12.5°	2488.2	2445.1	2460.6	2380.0	2314.9	2281.5	2223.7	2142.3	2031.6	1894.0	1772.8
15°	2907.4	2866.7	2876.5	2773.9	2683.6	2637.2	2562.3	2446.7	2300.2	2120.3	1960.8
17.5°	3337.2	3281.8	3280.2	3158.1	3037.6	2979.0	2885.4	2733.2	2561.5	2325.4	2128.5
20°	3702.6	3654.6	3641.6	3514.6	3350.2	3281.8	3168.7	2979.8	2769.0	2495.6	2264.4
22.5°	4016.0	3960.6	3937.0	3788.1	3601.7	3521.9	3392.5	3163.8	2929.4	2620.1	2359.6
25°	4252.0	4206.5	4172.3	4004.6	3796.2	3706.7	3565.1	3317.6	3045.8	2707.2	2422.3
27.5°	4439.2	4378.2	4335.1	4151.9	3917.5	3823.1	3670.9	3402.3	3105.2	2742.2	2441.0
30°	4506.0	4444.9	4395.3	4199.9	3951.7	3848.3	3688.8	3403.9	3088.9	2716.1	2400.3
32.5°	4474.2	4410.8	4354.6	4150.3	3893.1	3784.8	3622.0	3333.1	3003.5	2629.0	2310.0
35°	4348.1	4297.6	4234.1	4028.2	3774.3	3656.2	3494.3	3198.0	2870.8	2493.1	2183.0
37.5°	4169.8	4091.7	4033.1	3831.2	3585.4	3465.0	3309.5	3024.6	2693.3	2330.3	2030.0
40°	3886.6	3807.6	3749.0	3554.5	3331.5	3210.2	3066.9	2795.1	2475.2	2137.4	1850.9
42.5°	3533.3	3460.1	3403.1	3222.4	3025.4	2907.4	2781.2	2529.7	2232.6	1923.3	1654.7
45°	3128.8	3058.0	3009.1	2852.1	2677.1	2572.9	2458.9	2236.7	1964.9	1684.0	1441.5
47.5°	2690.1	2617.6	2576.1	2435.3	2287.2	2192.8	2095.1	1903.0	1659.6	1418.7	1207.9
50°	2168.3	2098.3	2060.9	1942.9	1837.9	1750.8	1680.0	1526.1	1326.7	1137.1	965.3
52.5°	1588.0	1533.5	1505.8	1424.4	1361.7	1296.6	1251.0	1143.6	997.9	863.6	734.2
55°	1080.1	1035.3	1022.3	971.8	937.7	902.7	870.1	807.4	708.9	620.2	533.9
57.5°	675.6	670.7	679.6	634.9	619.4	604.8	579.5	544.5	482.7	427.3	375.2
60°	433.0	428.1	424.1	407.8	400.5	389.9	377.7	357.3	319.1	286.5	252.3
62.5°	274.3	271.0	275.1	265.3	255.6	255.6	242.6	231.2	207.6	188.0	163.6
65°	172.6	171.7	174.2	167.7	162.8	160.3	153.8	147.3	132.7	120.5	109.1
67.5°	109.1	108.3	109.9	108.3	102.6	100.9	96.9	92.8	83.0	75.7	67.6
70°	68.4	67.6	68.4	66.7	63.5	61.9	59.4	56.2	52.9	44.8	40.7
72.5°	41.5	40.7	41.5	40.7	38.3	38.3	35.0	33.4	30.9	26.0	22.8
75°	24.4	24.4	24.4	23.6	22.0	22.0	20.3	19.5	17.9	15.5	13.8
77.5°	13.8	13.8	13.8	13.8	13.0	13.0	12.2	11.4	10.6	9.0	9.0
80°	8.1	8.1	8.1	8.1	7.3	8.1	7.3	7.3	6.5	5.7	5.7
82.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.1	4.1	4.1	4.1
85°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
87.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	1.6	1.6	1.6	1.6
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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	1032.9	1006.8	1002.0	974.3	969.4	953.9	945.8	931.2	901.8	886.4	867.7
5°	1177.0	1136.3	1112.7	1063.0	1047.5	1021.5	994.6	958.8	912.4	879.1	844.1
7.5°	1334.9	1268.1	1218.5	1145.2	1118.4	1080.1	1032.9	976.7	911.6	862.0	812.3
10°	1493.6	1389.4	1312.9	1214.4	1175.3	1124.9	1056.5	980.8	899.4	835.1	773.2
12.5°	1639.3	1509.1	1404.1	1278.7	1226.6	1164.8	1075.2	980.8	883.9	807.4	735.0
15°	1798.0	1626.3	1489.5	1336.5	1272.2	1198.9	1089.1	977.5	866.8	779.8	700.0
17.5°	1927.4	1723.1	1555.4	1377.2	1300.7	1216.8	1090.7	964.5	844.9	749.6	666.6
20°	2022.6	1796.4	1600.2	1400.8	1314.5	1223.4	1084.2	947.4	822.1	724.4	639.8
22.5°	2091.8	1840.3	1623.0	1408.9	1315.3	1220.1	1072.8	932.8	806.6	711.4	630.8
25°	2133.3	1862.3	1630.3	1405.7	1308.8	1209.5	1059.8	919.8	796.9	706.5	632.4
27.5°	2137.4	1853.3	1610.8	1381.3	1282.0	1182.7	1032.9	894.5	775.7	692.7	621.9
30°	2091.0	1802.9	1559.5	1327.5	1227.4	1129.8	982.4	846.5	733.4	651.2	586.9
32.5°	2001.5	1714.2	1473.2	1246.1	1147.7	1052.4	909.2	781.4	670.7	595.0	531.5
35°	1882.7	1601.8	1361.7	1148.5	1052.4	962.1	822.9	697.5	596.6	525.0	467.2
37.5°	1741.8	1470.8	1246.1	1040.2	947.4	863.6	729.3	615.3	518.5	452.6	399.6
40°	1581.5	1322.7	1111.8	916.5	833.5	752.1	630.0	525.8	435.5	378.5	333.7
42.5°	1408.1	1165.6	971.0	789.5	713.8	639.8	529.1	434.6	356.5	310.1	275.1
45°	1217.7	999.5	824.5	665.8	593.4	532.3	428.1	350.0	290.6	251.5	227.1
47.5°	1014.2	824.5	672.3	535.6	472.1	420.0	334.5	275.9	233.6	206.7	186.4
50°	809.9	652.0	525.0	407.0	358.9	315.0	258.8	219.0	186.4	166.0	153.0
52.5°	618.6	490.8	390.7	298.7	266.2	236.0	199.4	172.6	148.1	133.5	123.7
55°	448.5	354.1	278.4	219.0	197.0	179.9	153.0	133.5	118.0	106.6	98.5
57.5°	312.6	245.0	194.5	159.5	146.5	134.3	115.6	102.6	92.0	83.8	77.3
60°	211.6	166.0	135.9	115.6	107.4	99.3	87.1	78.1	70.0	64.3	57.8
62.5°	139.2	114.0	96.9	84.7	77.3	71.6	64.3	57.0	50.5	45.6	39.9
65°	90.3	74.9	66.7	57.0	53.7	49.7	43.1	39.1	33.4	29.3	25.2
67.5°	57.0	48.8	43.1	37.4	35.0	31.7	28.5	24.4	21.2	17.9	15.5
70°	34.2	30.1	26.0	22.8	21.2	19.5	17.1	14.7	12.2	11.4	9.8
72.5°	20.3	17.9	15.5	13.8	13.0	12.2	10.6	9.0	8.1	7.3	6.5
75°	12.2	11.4	9.8	8.1	8.1	7.3	7.3	6.5	5.7	5.7	4.9
77.5°	8.1	7.3	6.5	5.7	5.7	5.7	4.9	4.9	4.9	4.9	4.9
80°	4.9	4.9	4.9	4.9	4.1	4.1	4.1	4.1	4.1	4.1	4.1
82.5°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	4.1	4.1
85°	2.4	2.4	2.4	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
87.5°	2.4	2.4	2.4	2.4	3.3	3.3	3.3	3.3	3.3	3.3	3.3
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°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	859.5	835.1	825.3	810.7	796.0	795.2	778.1	769.2	762.7	751.3	739.9
5°	820.5	783.0	760.2	740.7	722.0	708.9	683.7	666.6	651.2	634.9	613.7
7.5°	774.9	726.9	694.3	669.9	647.9	627.6	596.6	573.8	554.3	538.8	512.8
10°	726.0	670.7	630.0	603.1	580.3	551.0	520.9	495.7	474.5	457.4	432.2
12.5°	680.5	619.4	573.8	546.2	522.6	490.8	459.9	433.8	411.0	394.8	372.0
15°	638.1	573.8	525.0	497.3	472.9	441.2	410.2	384.2	363.0	345.9	325.6
17.5°	600.7	533.1	485.1	459.9	434.6	405.3	374.4	350.0	328.8	313.4	297.1
20°	575.5	511.2	464.8	441.2	419.2	391.5	367.1	347.6	327.2	315.0	305.2
22.5°	571.4	514.4	474.5	455.0	437.9	417.6	402.9	393.1	379.3	373.6	373.6
25°	579.5	530.7	498.9	483.5	469.6	458.3	450.9	444.4	439.5	440.3	440.3
27.5°	574.6	530.7	504.6	490.0	477.8	470.5	463.1	459.1	454.2	456.6	456.6
30°	542.9	500.6	478.6	463.1	451.7	445.2	434.6	429.8	424.1	424.9	422.4
32.5°	490.0	450.1	428.9	414.3	402.1	395.6	384.2	378.5	371.2	371.2	366.3
35°	428.1	390.7	371.2	358.1	346.7	340.2	329.6	323.9	316.6	312.6	310.1
37.5°	363.0	330.5	312.6	302.8	293.8	287.3	277.6	273.5	266.2	262.9	259.6
40°	302.8	279.2	262.1	254.0	246.6	240.9	232.0	228.7	222.2	219.8	216.5
42.5°	250.7	232.8	219.0	212.4	204.3	201.0	194.5	191.3	185.6	183.1	179.9
45°	209.2	194.5	183.1	177.4	172.6	168.5	162.0	159.5	153.8	151.4	149.8
47.5°	172.6	161.2	152.2	147.3	144.9	140.0	134.3	131.9	127.8	125.3	122.9
50°	141.6	132.7	125.3	121.3	119.6	114.8	109.9	108.3	104.2	102.6	100.1
52.5°	115.6	108.3	101.7	98.5	95.2	92.0	87.9	86.3	82.2	79.8	76.5
55°	92.8	85.5	79.8	77.3	75.7	70.8	66.7	64.3	61.0	57.0	54.5
57.5°	71.6	65.1	60.2	57.0	56.2	51.3	48.0	44.0	39.9	37.4	35.0
60°	52.9	47.2	42.3	39.1	38.3	33.4	29.3	26.9	23.6	22.0	21.2
62.5°	35.0	30.9	26.9	25.2	23.6	20.3	17.9	16.3	14.7	13.8	13.0
65°	22.0	18.7	16.3	15.5	13.8	12.2	11.4	10.6	9.8	9.0	8.1
67.5°	13.0	11.4	9.8	9.8	9.0	8.1	8.1	7.3	6.5	6.5	6.5
70°	8.1	7.3	6.5	6.5	6.5	6.5	6.5	5.7	5.7	5.7	5.7
72.5°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	4.9	4.9
75°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
77.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.1	4.1	4.1	4.1
80°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
82.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	3.3	3.3	3.3
85°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.4
87.5°	3.3	3.3	3.3	3.3	3.3	2.4	2.4	2.4	2.4	2.4	1.6
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: P179625

CATALOG NUMBER: LDA6A45930D010TE LARH30NF 6LLWW1

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	730.9	717.1	715.5	712.2	708.9	713.0	710.6	704.1
5°	606.4	589.3	586.0	581.2	576.3	577.9	573.8	568.1
7.5°	502.2	484.3	481.0	475.3	470.5	469.6	465.6	459.9
10°	417.6	403.7	400.5	394.8	389.1	388.3	383.4	379.3
12.5°	357.3	344.3	341.0	335.3	330.5	328.8	324.8	321.5
15°	312.6	300.3	297.1	292.2	286.5	286.5	283.3	280.0
17.5°	284.9	274.3	270.2	266.2	261.3	260.5	258.8	256.4
20°	296.3	286.5	284.9	280.0	280.8	280.8	279.2	278.4
22.5°	369.5	366.3	372.8	367.9	376.9	380.1	381.7	381.7
25°	443.6	444.4	450.9	448.5	456.6	463.1	466.4	463.9
27.5°	456.6	457.4	459.9	459.1	465.6	469.6	472.1	466.4
30°	419.2	418.4	417.6	416.7	420.8	422.4	423.3	417.6
32.5°	361.4	358.9	359.8	355.7	357.3	357.3	360.6	352.4
35°	303.6	300.3	300.3	296.3	296.3	296.3	298.7	290.6
37.5°	254.8	251.5	250.7	246.6	245.8	244.2	246.6	239.3
40°	212.4	209.2	210.0	205.1	205.9	205.1	205.1	201.0
42.5°	175.8	173.4	172.6	170.9	171.7	171.7	174.2	170.9
45°	145.7	143.3	142.4	141.6	142.4	142.4	143.3	140.0
47.5°	121.3	118.0	117.2	115.6	115.6	113.1	113.1	109.9
50°	97.7	92.8	92.0	89.5	88.7	87.1	87.1	84.7
52.5°	74.1	70.0	68.4	66.7	65.9	64.3	64.3	62.7
55°	52.1	48.0	47.2	46.4	45.6	44.8	45.6	44.0
57.5°	32.6	30.9	30.1	29.3	28.5	27.7	27.7	26.9
60°	19.5	17.9	17.9	17.1	16.3	15.5	15.5	15.5
62.5°	12.2	11.4	11.4	10.6	10.6	9.8	9.8	9.8
65°	8.1	7.3	7.3	6.5	6.5	5.7	5.7	5.7
67.5°	5.7	5.7	5.7	5.7	4.9	4.9	4.9	4.9
70°	5.7	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	4.9	4.9	4.9	4.9	4.1	4.1	4.1	4.1
75°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
77.5°	4.1	4.1	4.1	4.1	3.3	3.3	3.3	3.3
80°	4.1	3.3	3.3	3.3	3.3	3.3	3.3	3.3
82.5°	3.3	3.3	3.3	3.3	3.3	2.4	2.4	2.4
85°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	1.6
87.5°	1.6	1.6	1.6	1.6	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)