

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: P136546

Luminaire Tested: **LD6A20D010TE ERW6A20835 6LW121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136546
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23360)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A20D010TE ERW6A20835 6LW121LI
Description: PORTFOLIO 6 INCH 60 DEGREE CUTOFF RECESSED DOUBLE WALL WASH LUMINAIRE
SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER
Light Source: (1) HIGH LUMEN LED 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2455.0 lumens
Efficiency: N/A
Efficacy: 74.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.24 / 1.14
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

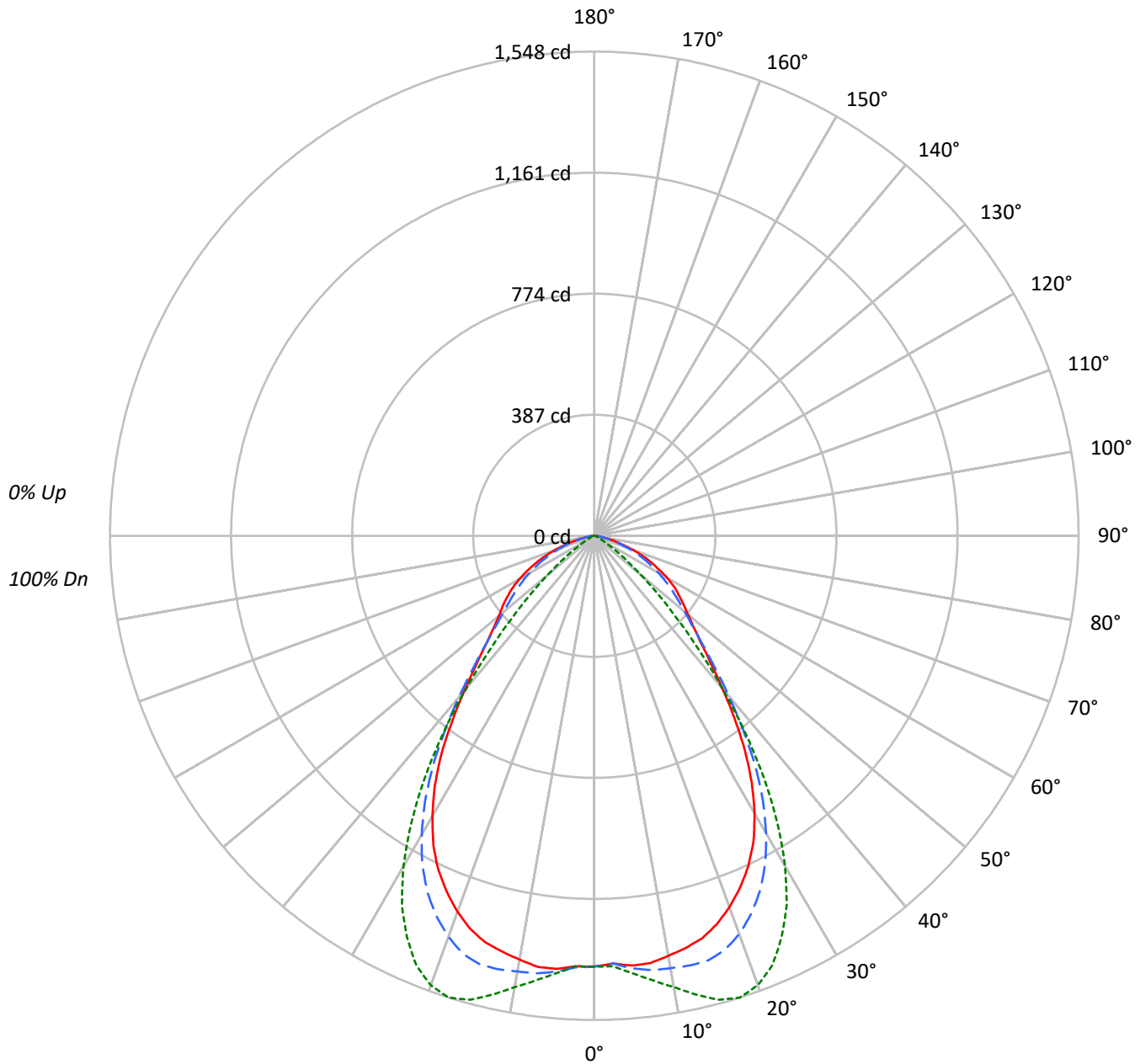
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89		
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79		
3	97	88	82	76	94	87	81	76	84	79	74	81	77	73	79	75	72	70		
4	90	80	73	67	88	79	72	67	77	71	66	74	69	65	72	68	65	63		
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56		
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51		
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46		
8	69	57	50	45	68	57	50	45	55	49	44	54	48	44	53	48	44	42		
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	44	40	39		
10	61	49	42	38	60	49	42	38	48	42	38	47	42	37	46	41	37	36		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	89875	89875	89875
5°	90337	91948	91024
10°	90335	97085	91149
15°	89966	103731	90912
20°	87715	106141	88812
25°	83863	101952	84878
30°	77179	91869	77970
35°	66893	75296	67873
40°	54174	54174	54923
45°	44259	34368	45071
50°	39594	19619	40304
55°	37376	9998	38570
60°	35086	4358	36000
65°	30658	2439	31739
70°	24798	2003	25809
75°	17267	1336	17721
80°	10557	676	10557
85°	5240	1347	5240



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.0	5.5
10°-20°	401.6	16.4
20°-30°	584.2	23.8
30°-40°	555.2	22.6
40°-50°	359.7	14.7
50°-60°	225.6	9.2
60°-70°	134.9	5.5
70°-80°	52.6	2.1
80°-90°	7.2	0.3
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°	1119.7	45.6
0°-40°	1674.9	68.2
0°-60°	2260.2	92.1
0°-90°	2455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2455.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1378	1378	1378	1378	1378	
5°	1379	1388	1404	1399	1390	131
15°	1332	1406	1536	1418	1346	374
25°	1165	1253	1416	1260	1179	532
35°	840	896	945	900	852	520
45°	480	487	372	488	488	379
55°	329	302	88	306	339	295
65°	199	174	16	178	206	196
75°	68	60	5	62	70	76
85°	7	7	2	7	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6
2.5°	1368.9	1360.1	1384.7	1370.6	1372.4	1389.9	1375.9	1370.6	1388.2	1368.9	1377.6
5°	1379.4	1372.4	1397.0	1384.7	1386.4	1404.0	1391.7	1386.4	1405.8	1388.2	1397.0
7.5°	1377.6	1372.4	1395.2	1384.7	1386.4	1407.5	1395.2	1393.5	1416.3	1400.5	1412.8
10°	1363.6	1356.6	1381.2	1372.4	1375.9	1398.7	1388.2	1388.2	1414.6	1404.0	1421.6
12.5°	1349.5	1342.5	1367.1	1360.1	1363.6	1388.2	1381.2	1384.7	1414.6	1407.5	1430.4
15°	1332.0	1324.9	1351.3	1344.3	1347.8	1374.1	1370.6	1374.1	1407.5	1405.8	1432.1
17.5°	1302.1	1298.6	1321.4	1317.9	1321.4	1347.8	1346.0	1351.3	1388.2	1388.2	1421.6
20°	1263.4	1258.2	1282.8	1279.2	1281.0	1307.4	1307.4	1312.6	1351.3	1354.8	1388.2
22.5°	1217.7	1214.2	1238.8	1233.6	1237.1	1261.7	1261.7	1266.9	1303.8	1309.1	1344.3
25°	1165.0	1161.5	1184.4	1182.6	1184.4	1209.0	1207.2	1214.2	1249.4	1252.9	1286.3
27.5°	1101.8	1096.5	1119.3	1119.3	1121.1	1143.9	1143.9	1147.5	1179.1	1182.6	1214.2
30°	1024.5	1019.2	1040.3	1042.0	1042.0	1064.9	1064.9	1066.6	1096.5	1098.3	1126.4
32.5°	936.6	936.6	952.4	954.2	954.2	975.2	977.0	977.0	1003.4	1003.4	1026.2
35°	839.9	841.7	854.0	855.8	857.5	876.8	876.8	875.1	897.9	896.2	915.5
37.5°	736.3	736.3	748.6	750.3	750.3	767.9	767.9	766.1	785.5	780.2	794.3
40°	636.1	636.1	646.7	650.2	648.4	662.5	662.5	660.7	674.8	667.7	674.8
42.5°	548.2	551.8	558.8	560.5	558.8	571.1	569.3	567.6	578.1	567.6	569.3
45°	479.7	483.2	488.5	490.3	488.5	497.3	495.5	492.0	497.3	486.7	481.5
47.5°	428.8	430.5	439.3	437.5	435.8	442.8	442.8	435.8	437.5	423.5	412.9
50°	390.1	391.9	398.9	398.9	395.4	402.4	398.9	391.9	390.1	374.3	358.5
52.5°	358.5	360.2	367.3	367.3	363.7	369.0	365.5	355.0	353.2	337.4	318.1
55°	328.6	330.4	337.4	337.4	333.9	337.4	332.1	323.3	319.8	302.2	281.2
57.5°	302.2	300.5	305.8	305.8	302.2	304.0	300.5	291.7	284.7	268.9	247.8
60°	268.9	267.1	270.6	270.6	267.1	268.9	265.3	254.8	251.3	235.5	214.4
62.5°	232.0	232.0	235.5	235.5	232.0	232.0	230.2	219.7	216.1	202.1	184.5
65°	198.6	198.6	202.1	202.1	198.6	200.3	196.8	189.8	186.3	174.0	158.1
67.5°	165.2	165.2	166.9	166.9	165.2	165.2	163.4	158.1	152.9	144.1	130.0
70°	130.0	130.0	131.8	131.8	130.0	130.0	130.0	124.8	123.0	114.2	103.7
72.5°	96.6	96.6	98.4	98.4	98.4	100.2	98.4	94.9	91.4	86.1	77.3
75°	68.5	68.5	68.5	70.3	68.5	68.5	70.3	66.8	65.0	59.7	54.5
77.5°	45.7	45.7	45.7	45.7	45.7	47.4	45.7	45.7	43.9	40.4	36.9
80°	28.1	28.1	28.1	28.1	28.1	28.1	28.1	28.1	26.4	26.4	22.8
82.5°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	14.1	12.3
85°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	5.3
87.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6
2.5°	1375.9	1377.6	1377.6	1382.9	1388.2	1374.1	1381.2	1377.6	1374.1	1388.2	1379.4
5°	1398.7	1400.5	1400.5	1407.5	1414.6	1398.7	1405.8	1404.0	1400.5	1412.8	1404.0
7.5°	1416.3	1421.6	1425.1	1433.9	1442.7	1428.6	1437.4	1433.9	1432.1	1444.4	1432.1
10°	1428.6	1439.2	1444.4	1458.5	1470.8	1456.7	1469.0	1465.5	1463.8	1474.3	1460.2
12.5°	1442.7	1456.7	1470.8	1486.6	1504.2	1491.9	1507.7	1502.4	1502.4	1511.2	1493.6
15°	1451.5	1469.0	1488.4	1511.2	1532.3	1523.5	1541.1	1535.8	1535.8	1542.8	1523.5
17.5°	1442.7	1465.5	1488.4	1514.7	1539.3	1534.0	1553.4	1548.1	1546.3	1553.4	1530.5
20°	1412.8	1439.2	1465.5	1491.9	1520.0	1516.5	1537.6	1528.8	1530.5	1534.0	1511.2
22.5°	1365.3	1393.5	1419.8	1447.9	1474.3	1472.5	1491.9	1486.6	1484.8	1490.1	1465.5
25°	1309.1	1333.7	1358.3	1382.9	1409.3	1405.8	1425.1	1416.3	1418.1	1419.8	1398.7
27.5°	1233.6	1256.4	1275.7	1296.8	1321.4	1316.1	1335.5	1332.0	1326.7	1328.4	1310.9
30°	1140.4	1159.8	1173.8	1191.4	1210.7	1205.4	1223.0	1219.5	1216.0	1216.0	1205.4
32.5°	1035.0	1049.1	1057.8	1070.1	1084.2	1078.9	1093.0	1089.5	1086.0	1086.0	1078.9
35°	917.3	926.0	926.0	933.1	943.6	934.8	947.1	945.4	940.1	941.9	940.1
37.5°	789.0	792.5	785.5	785.5	792.5	780.2	790.7	790.7	785.5	787.2	787.2
40°	664.2	662.5	648.4	641.4	641.4	629.1	637.9	636.1	632.6	634.4	637.9
42.5°	553.5	543.0	523.6	509.6	506.1	492.0	497.3	495.5	492.0	495.5	500.8
45°	460.4	441.1	414.7	395.4	386.6	372.5	374.3	372.5	370.8	374.3	383.1
47.5°	386.6	360.2	326.8	302.2	289.9	274.1	274.1	272.4	272.4	281.2	286.4
50°	328.6	297.0	258.3	230.2	212.6	198.6	195.0	193.3	195.0	202.1	212.6
52.5°	284.7	246.0	203.8	174.0	154.6	138.8	135.3	133.5	135.3	142.3	152.9
55°	246.0	205.6	161.7	128.3	107.2	93.1	87.9	87.9	87.9	96.6	107.2
57.5°	210.9	170.4	126.5	93.1	73.8	59.7	54.5	52.7	56.2	61.5	72.0
60°	181.0	142.3	100.2	70.3	51.0	38.7	33.4	33.4	33.4	40.4	51.0
62.5°	154.6	119.5	80.8	52.7	36.9	26.4	21.1	21.1	22.8	26.4	36.9
65°	131.8	101.9	68.5	45.7	29.9	21.1	17.6	15.8	17.6	21.1	29.9
67.5°	108.9	84.3	58.0	38.7	26.4	17.6	15.8	14.1	14.1	19.3	24.6
70°	86.1	66.8	47.4	31.6	21.1	14.1	12.3	10.5	12.3	15.8	21.1
72.5°	65.0	51.0	35.1	24.6	15.8	12.3	8.8	8.8	8.8	12.3	15.8
75°	45.7	36.9	26.4	17.6	10.5	7.0	7.0	5.3	7.0	8.8	10.5
77.5°	29.9	24.6	17.6	10.5	7.0	5.3	3.5	3.5	3.5	5.3	7.0
80°	19.3	15.8	10.5	7.0	5.3	3.5	1.8	1.8	1.8	3.5	3.5
82.5°	10.5	8.8	5.3	3.5	3.5	1.8	1.8	1.8	1.8	1.8	1.8
85°	5.3	3.5	3.5	1.8	1.8	1.8	0.0	1.8	1.8	1.8	1.8
87.5°	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6	1377.6
2.5°	1381.2	1375.9	1382.9	1388.2	1386.4	1381.2	1389.9	1375.9	1381.2	1375.9	1367.1
5°	1405.8	1400.5	1405.8	1409.3	1407.5	1398.7	1405.8	1393.5	1397.0	1389.9	1381.2
7.5°	1432.1	1425.1	1426.9	1428.6	1423.3	1411.0	1416.3	1400.5	1402.3	1393.5	1382.9
10°	1456.7	1446.2	1444.4	1440.9	1430.4	1414.6	1416.3	1397.0	1395.2	1382.9	1370.6
12.5°	1488.4	1470.8	1463.8	1456.7	1440.9	1419.8	1416.3	1393.5	1389.9	1375.9	1361.8
15°	1511.2	1491.9	1479.6	1465.5	1444.4	1418.1	1411.0	1384.7	1377.6	1361.8	1347.8
17.5°	1516.5	1491.9	1474.3	1456.7	1432.1	1400.5	1389.9	1361.8	1353.0	1335.5	1321.4
20°	1493.6	1467.3	1447.9	1425.1	1400.5	1363.6	1353.0	1323.2	1312.6	1296.8	1282.8
22.5°	1449.7	1419.8	1400.5	1377.6	1353.0	1317.9	1305.6	1277.5	1266.9	1251.1	1237.1
25°	1386.4	1358.3	1339.0	1317.9	1295.1	1259.9	1249.4	1223.0	1214.2	1198.4	1184.4
27.5°	1298.6	1272.2	1261.7	1240.6	1219.5	1189.6	1179.1	1156.2	1147.5	1136.9	1121.1
30°	1193.1	1170.3	1165.0	1145.7	1129.9	1103.5	1094.7	1075.4	1066.6	1057.8	1043.8
32.5°	1071.9	1054.3	1054.3	1038.5	1028.0	1006.9	999.9	984.0	977.0	970.0	957.7
35°	934.8	922.5	929.6	919.0	913.7	899.7	894.4	882.1	876.8	871.6	859.3
37.5°	789.0	780.2	794.3	796.0	796.0	783.7	780.2	773.2	769.7	764.4	753.8
40°	644.9	643.1	664.2	667.7	678.3	671.3	673.0	667.7	664.2	660.7	653.7
42.5°	511.3	518.4	544.7	560.5	571.1	571.1	576.4	574.6	572.8	569.3	564.1
45°	397.1	411.2	442.8	462.1	483.2	488.5	497.3	497.3	499.0	497.3	492.0
47.5°	304.0	325.1	362.0	391.9	414.7	425.2	437.5	441.1	442.8	442.8	439.3
50°	230.2	256.6	298.7	332.1	363.7	377.8	391.9	397.1	404.2	402.4	398.9
52.5°	174.0	203.8	249.5	289.9	323.3	339.1	355.0	362.0	369.0	369.0	367.3
55°	128.3	159.9	209.1	251.3	286.4	305.8	321.6	328.6	337.4	339.1	337.4
57.5°	93.1	124.8	172.2	217.9	251.3	272.4	288.2	295.2	304.0	305.8	305.8
60°	68.5	100.2	145.8	188.0	219.7	240.7	253.0	261.8	268.9	272.4	272.4
62.5°	52.7	80.8	123.0	161.7	189.8	207.4	219.7	226.7	233.7	235.5	237.2
65°	43.9	68.5	103.7	137.1	161.7	177.5	188.0	195.0	200.3	202.1	202.1
67.5°	36.9	58.0	86.1	112.5	133.5	145.8	154.6	159.9	165.2	166.9	166.9
70°	29.9	45.7	68.5	89.6	105.4	116.0	123.0	128.3	131.8	131.8	131.8
72.5°	22.8	35.1	51.0	66.8	79.1	87.9	93.1	94.9	98.4	98.4	98.4
75°	15.8	24.6	36.9	47.4	54.5	61.5	65.0	66.8	68.5	70.3	68.5
77.5°	10.5	15.8	22.8	29.9	36.9	40.4	42.2	43.9	45.7	45.7	45.7
80°	7.0	10.5	14.1	19.3	22.8	24.6	26.4	26.4	28.1	28.1	28.1
82.5°	3.5	5.3	8.8	10.5	12.3	14.1	14.1	14.1	15.8	15.8	14.1
85°	1.8	1.8	3.5	5.3	5.3	7.0	7.0	7.0	7.0	7.0	7.0
87.5°	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
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: P136546

CATALOG NUMBER: LD6A20D010TE ERW6A20835 6LW121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1377.6	1377.6	1377.6	1377.6
2.5°	1370.6	1374.1	1360.1	1377.6
5°	1382.9	1386.4	1372.4	1389.9
7.5°	1384.7	1386.4	1372.4	1389.9
10°	1372.4	1372.4	1358.3	1375.9
12.5°	1361.8	1360.1	1344.3	1361.8
15°	1346.0	1344.3	1328.4	1346.0
17.5°	1319.7	1317.9	1302.1	1317.9
20°	1279.2	1277.5	1263.4	1279.2
22.5°	1235.3	1231.8	1217.7	1231.8
25°	1184.4	1180.8	1166.8	1179.1
27.5°	1119.3	1115.8	1101.8	1114.1
30°	1042.0	1036.8	1026.2	1035.0
32.5°	954.2	950.6	938.3	948.9
35°	857.5	852.2	843.5	852.2
37.5°	752.1	748.6	739.8	745.1
40°	650.2	648.4	641.4	644.9
42.5°	562.3	558.8	553.5	557.0
45°	492.0	490.3	485.0	488.5
47.5°	439.3	437.5	432.3	435.8
50°	400.6	398.9	395.4	397.1
52.5°	369.0	367.3	363.7	369.0
55°	340.9	339.1	333.9	339.1
57.5°	309.3	307.5	302.2	309.3
60°	274.1	274.1	268.9	275.9
62.5°	239.0	239.0	235.5	240.7
65°	205.6	203.8	202.1	205.6
67.5°	168.7	166.9	166.9	170.4
70°	133.5	131.8	131.8	135.3
72.5°	100.2	98.4	98.4	100.2
75°	70.3	68.5	68.5	70.3
77.5°	45.7	45.7	45.7	45.7
80°	28.1	28.1	28.1	28.1
82.5°	15.8	15.8	14.1	15.8
85°	7.0	7.0	7.0	7.0
87.5°	1.8	1.8	1.8	1.8
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)