

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: P136545

Luminaire Tested: **LD6A20D010TE ERW6A20830 6LW121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136545
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 ERW6A20830 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 3000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2393.0 lumens
Efficiency: N/A
Efficacy: 73.0 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

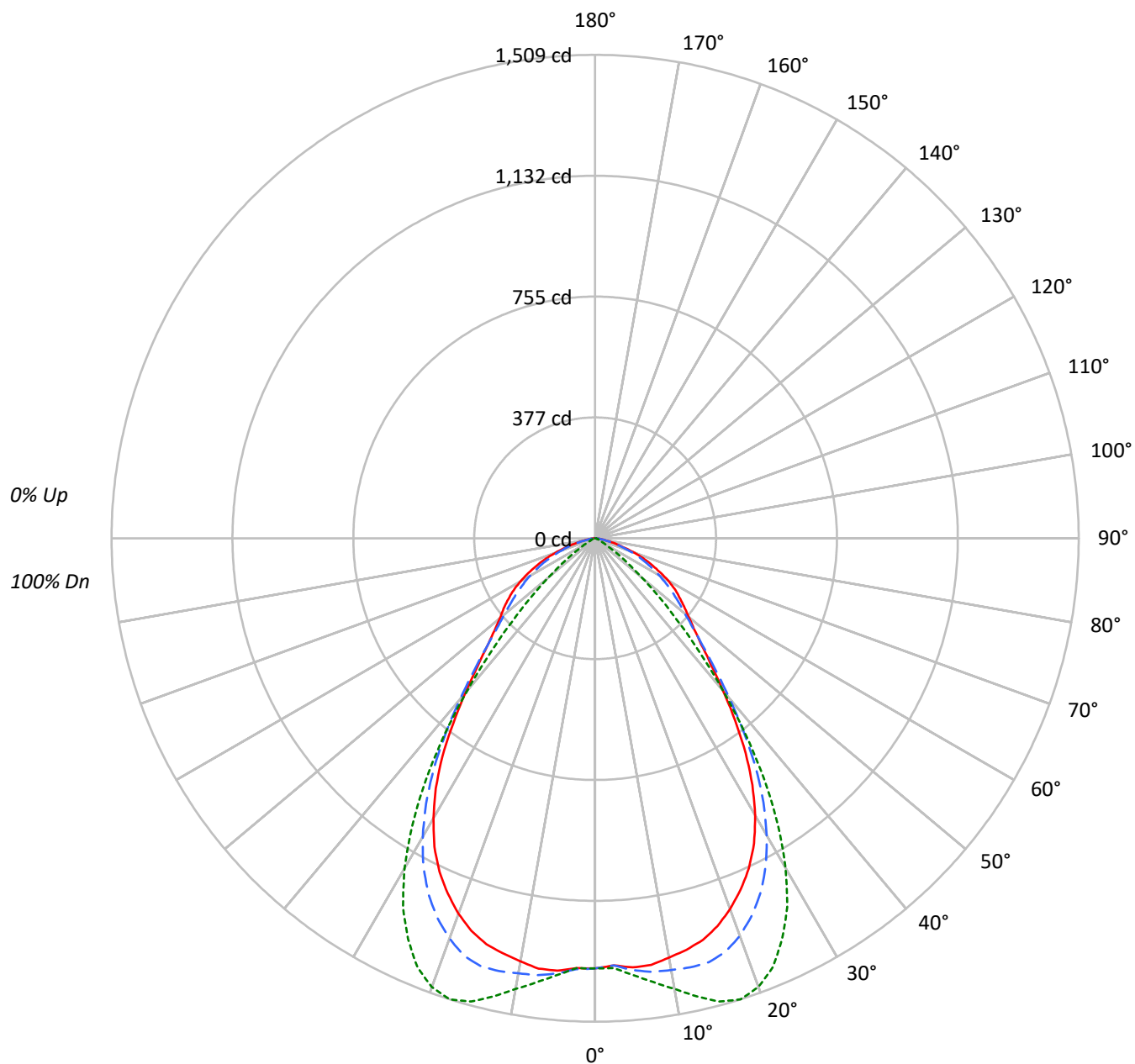
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	87612	87612	87612
5°	88058	89623	88726
10°	88056	94634	88844
15°	87690	101110	88615
20°	85500	103461	86569
25°	81746	99375	82732
30°	75228	89549	76004
35°	65205	73392	66160
40°	52803	52803	53535
45°	43143	33501	43936
50°	38589	19122	39289
55°	36432	9736	37604
60°	34199	4241	35086
65°	29871	2377	30936
70°	24168	1965	25160
75°	16838	1286	17267
80°	10294	639	10294
85°	5165	1273	5165



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.6	5.5
10°-20°	391.4	16.4
20°-30°	569.5	23.8
30°-40°	541.2	22.6
40°-50°	350.6	14.7
50°-60°	219.9	9.2
60°-70°	131.5	5.5
70°-80°	51.3	2.1
80°-90°	7.0	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°	1091.5	45.6
0°-40°	1632.6	68.2
0°-60°	2203.2	92.1
0°-90°	2393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2393.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1343	1343	1343	1343	1343	
5°	1345	1353	1368	1363	1355	128
15°	1298	1370	1497	1382	1312	365
25°	1136	1221	1380	1228	1149	519
35°	819	874	922	877	831	507
45°	468	474	363	476	476	369
55°	320	295	86	298	331	287
65°	194	170	15	173	200	191
75°	67	58	5	60	68	74
85°	7	7	2	7	7	10
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°	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9
2.5°	1334.3	1325.7	1349.7	1336.0	1337.7	1354.8	1341.1	1336.0	1353.1	1334.3	1342.9
5°	1344.6	1337.7	1361.7	1349.7	1351.4	1368.5	1356.6	1351.4	1370.3	1353.1	1361.7
7.5°	1342.9	1337.7	1360.0	1349.7	1351.4	1372.0	1360.0	1358.3	1380.5	1365.1	1377.1
10°	1329.2	1322.3	1346.3	1337.7	1341.1	1363.4	1353.1	1353.1	1378.8	1368.5	1385.7
12.5°	1315.5	1308.6	1332.6	1325.7	1329.2	1353.1	1346.3	1349.7	1378.8	1372.0	1394.2
15°	1298.3	1291.5	1317.2	1310.3	1313.7	1339.4	1336.0	1339.4	1372.0	1370.3	1396.0
17.5°	1269.2	1265.8	1288.0	1284.6	1288.0	1313.7	1312.0	1317.2	1353.1	1353.1	1385.7
20°	1231.5	1226.4	1250.4	1246.9	1248.7	1274.3	1274.3	1279.5	1317.2	1320.6	1353.1
22.5°	1187.0	1183.6	1207.5	1202.4	1205.8	1229.8	1229.8	1234.9	1270.9	1276.1	1310.3
25°	1135.6	1132.2	1154.4	1152.7	1154.4	1178.4	1176.7	1183.6	1217.8	1221.2	1253.8
27.5°	1073.9	1068.8	1091.1	1091.1	1092.8	1115.1	1115.1	1118.5	1149.3	1152.7	1183.6
30°	998.6	993.4	1014.0	1015.7	1015.7	1038.0	1038.0	1039.7	1068.8	1070.5	1097.9
32.5°	912.9	912.9	928.4	930.1	930.1	950.6	952.3	952.3	978.0	978.0	1000.3
35°	818.7	820.4	832.4	834.1	835.9	854.7	854.7	853.0	875.3	873.5	892.4
37.5°	717.7	717.7	729.7	731.4	731.4	748.5	748.5	746.8	765.6	760.5	774.2
40°	620.0	620.0	630.3	633.7	632.0	645.7	645.7	644.0	657.7	650.9	657.7
42.5°	534.4	537.8	544.7	546.4	544.7	556.7	555.0	553.2	563.5	553.2	555.0
45°	467.6	471.0	476.2	477.9	476.2	484.7	483.0	479.6	484.7	474.5	469.3
47.5°	417.9	419.6	428.2	426.5	424.8	431.6	431.6	424.8	426.5	412.8	402.5
50°	380.2	382.0	388.8	388.8	385.4	392.2	388.8	382.0	380.2	364.8	349.4
52.5°	349.4	351.1	358.0	358.0	354.6	359.7	356.3	346.0	344.3	328.9	310.0
55°	320.3	322.0	328.9	328.9	325.4	328.9	323.7	315.2	311.7	294.6	274.1
57.5°	294.6	292.9	298.0	298.0	294.6	296.3	292.9	284.3	277.5	262.1	241.5
60°	262.1	260.3	263.8	263.8	260.3	262.1	258.6	248.4	244.9	229.5	209.0
62.5°	226.1	226.1	229.5	229.5	226.1	226.1	224.4	214.1	210.7	197.0	179.8
65°	193.5	193.5	197.0	197.0	193.5	195.3	191.8	185.0	181.6	169.6	154.2
67.5°	161.0	161.0	162.7	162.7	161.0	161.0	159.3	154.2	149.0	140.5	126.7
70°	126.7	126.7	128.5	128.5	126.7	126.7	126.7	121.6	119.9	111.3	101.1
72.5°	94.2	94.2	95.9	95.9	95.9	97.6	95.9	92.5	89.1	83.9	75.4
75°	66.8	66.8	66.8	68.5	66.8	66.8	68.5	65.1	63.4	58.2	53.1
77.5°	44.5	44.5	44.5	44.5	44.5	46.2	44.5	44.5	42.8	39.4	36.0
80°	27.4	27.4	27.4	27.4	27.4	27.4	27.4	27.4	25.7	25.7	22.3
82.5°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4	13.7	12.0
85°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	5.1
87.5°	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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°	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9
2.5°	1341.1	1342.9	1342.9	1348.0	1353.1	1339.4	1346.3	1342.9	1339.4	1353.1	1344.6
5°	1363.4	1365.1	1365.1	1372.0	1378.8	1363.4	1370.3	1368.5	1365.1	1377.1	1368.5
7.5°	1380.5	1385.7	1389.1	1397.7	1406.2	1392.5	1401.1	1397.7	1396.0	1407.9	1396.0
10°	1392.5	1402.8	1407.9	1421.6	1433.6	1419.9	1431.9	1428.5	1426.8	1437.1	1423.4
12.5°	1406.2	1419.9	1433.6	1449.1	1466.2	1454.2	1469.6	1464.5	1464.5	1473.0	1455.9
15°	1414.8	1431.9	1450.8	1473.0	1493.6	1485.0	1502.2	1497.0	1497.0	1503.9	1485.0
17.5°	1406.2	1428.5	1450.8	1476.5	1500.4	1495.3	1514.1	1509.0	1507.3	1514.1	1491.9
20°	1377.1	1402.8	1428.5	1454.2	1481.6	1478.2	1498.7	1490.2	1491.9	1495.3	1473.0
22.5°	1330.9	1358.3	1384.0	1411.4	1437.1	1435.4	1454.2	1449.1	1447.3	1452.5	1428.5
25°	1276.1	1300.0	1324.0	1348.0	1373.7	1370.3	1389.1	1380.5	1382.3	1384.0	1363.4
27.5°	1202.4	1224.7	1243.5	1264.1	1288.0	1282.9	1301.7	1298.3	1293.2	1294.9	1277.8
30°	1111.6	1130.5	1144.2	1161.3	1180.1	1175.0	1192.1	1188.7	1185.3	1185.3	1175.0
32.5°	1008.9	1022.6	1031.1	1043.1	1056.8	1051.7	1065.4	1062.0	1058.5	1058.5	1051.7
35°	894.1	902.7	902.7	909.5	919.8	911.2	923.2	921.5	916.4	918.1	916.4
37.5°	769.1	772.5	765.6	765.6	772.5	760.5	770.8	770.8	765.6	767.3	767.3
40°	647.4	645.7	632.0	625.2	625.2	613.2	621.8	620.0	616.6	618.3	621.8
42.5°	539.5	529.3	510.4	496.7	493.3	479.6	484.7	483.0	479.6	483.0	488.2
45°	448.8	429.9	404.2	385.4	376.8	363.1	364.8	363.1	361.4	364.8	373.4
47.5°	376.8	351.1	318.6	294.6	282.6	267.2	267.2	265.5	265.5	274.1	279.2
50°	320.3	289.5	251.8	224.4	207.3	193.5	190.1	188.4	190.1	197.0	207.3
52.5°	277.5	239.8	198.7	169.6	150.7	135.3	131.9	130.2	131.9	138.7	149.0
55°	239.8	200.4	157.6	125.0	104.5	90.8	85.6	85.6	85.6	94.2	104.5
57.5°	205.5	166.1	123.3	90.8	71.9	58.2	53.1	51.4	54.8	59.9	70.2
60°	176.4	138.7	97.6	68.5	49.7	37.7	32.5	32.5	32.5	39.4	49.7
62.5°	150.7	116.5	78.8	51.4	36.0	25.7	20.6	20.6	22.3	25.7	36.0
65°	128.5	99.3	66.8	44.5	29.1	20.6	17.1	15.4	17.1	20.6	29.1
67.5°	106.2	82.2	56.5	37.7	25.7	17.1	15.4	13.7	13.7	18.8	24.0
70°	83.9	65.1	46.2	30.8	20.6	13.7	12.0	10.3	12.0	15.4	20.6
72.5°	63.4	49.7	34.3	24.0	15.4	12.0	8.6	8.6	8.6	12.0	15.4
75°	44.5	36.0	25.7	17.1	10.3	6.9	6.9	5.1	6.9	8.6	10.3
77.5°	29.1	24.0	17.1	10.3	6.9	5.1	3.4	3.4	3.4	5.1	6.9
80°	18.8	15.4	10.3	6.9	5.1	3.4	1.7	1.7	1.7	3.4	3.4
82.5°	10.3	8.6	5.1	3.4	3.4	1.7	1.7	1.7	1.7	1.7	1.7
85°	5.1	3.4	3.4	1.7	1.7	1.7	0.0	1.7	1.7	1.7	1.7
87.5°	1.7	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°	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9	1342.9
2.5°	1346.3	1341.1	1348.0	1353.1	1351.4	1346.3	1354.8	1341.1	1346.3	1341.1	1332.6
5°	1370.3	1365.1	1370.3	1373.7	1372.0	1363.4	1370.3	1358.3	1361.7	1354.8	1346.3
7.5°	1396.0	1389.1	1390.8	1392.5	1387.4	1375.4	1380.5	1365.1	1366.8	1358.3	1348.0
10°	1419.9	1409.7	1407.9	1404.5	1394.2	1378.8	1380.5	1361.7	1360.0	1348.0	1336.0
12.5°	1450.8	1433.6	1426.8	1419.9	1404.5	1384.0	1380.5	1358.3	1354.8	1341.1	1327.4
15°	1473.0	1454.2	1442.2	1428.5	1407.9	1382.3	1375.4	1349.7	1342.9	1327.4	1313.7
17.5°	1478.2	1454.2	1437.1	1419.9	1396.0	1365.1	1354.8	1327.4	1318.9	1301.7	1288.0
20°	1455.9	1430.2	1411.4	1389.1	1365.1	1329.2	1318.9	1289.8	1279.5	1264.1	1250.4
22.5°	1413.1	1384.0	1365.1	1342.9	1318.9	1284.6	1272.6	1245.2	1234.9	1219.5	1205.8
25°	1351.4	1324.0	1305.2	1284.6	1262.4	1228.1	1217.8	1192.1	1183.6	1168.1	1154.4
27.5°	1265.8	1240.1	1229.8	1209.3	1188.7	1159.6	1149.3	1127.0	1118.5	1108.2	1092.8
30°	1163.0	1140.7	1135.6	1116.8	1101.3	1075.7	1067.1	1048.3	1039.7	1031.1	1017.4
32.5°	1044.8	1027.7	1027.7	1012.3	1002.0	981.5	974.6	959.2	952.3	945.5	933.5
35°	911.2	899.2	906.1	895.8	890.7	877.0	871.8	859.8	854.7	849.6	837.6
37.5°	769.1	760.5	774.2	775.9	775.9	763.9	760.5	753.6	750.2	745.1	734.8
40°	628.6	626.9	647.4	650.9	661.2	654.3	656.0	650.9	647.4	644.0	637.2
42.5°	498.4	505.3	531.0	546.4	556.7	556.7	561.8	560.1	558.4	555.0	549.8
45°	387.1	400.8	431.6	450.5	471.0	476.2	484.7	484.7	486.4	484.7	479.6
47.5°	296.3	316.9	352.8	382.0	404.2	414.5	426.5	429.9	431.6	431.6	428.2
50°	224.4	250.1	291.2	323.7	354.6	368.3	382.0	387.1	394.0	392.2	388.8
52.5°	169.6	198.7	243.2	282.6	315.2	330.6	346.0	352.8	359.7	359.7	358.0
55°	125.0	155.9	203.8	244.9	279.2	298.0	313.4	320.3	328.9	330.6	328.9
57.5°	90.8	121.6	167.9	212.4	244.9	265.5	280.9	287.8	296.3	298.0	298.0
60°	66.8	97.6	142.2	183.3	214.1	234.7	246.6	255.2	262.1	265.5	265.5
62.5°	51.4	78.8	119.9	157.6	185.0	202.1	214.1	221.0	227.8	229.5	231.2
65°	42.8	66.8	101.1	133.6	157.6	173.0	183.3	190.1	195.3	197.0	197.0
67.5°	36.0	56.5	83.9	109.6	130.2	142.2	150.7	155.9	161.0	162.7	162.7
70°	29.1	44.5	66.8	87.4	102.8	113.0	119.9	125.0	128.5	128.5	128.5
72.5°	22.3	34.3	49.7	65.1	77.1	85.6	90.8	92.5	95.9	95.9	95.9
75°	15.4	24.0	36.0	46.2	53.1	59.9	63.4	65.1	66.8	68.5	66.8
77.5°	10.3	15.4	22.3	29.1	36.0	39.4	41.1	42.8	44.5	44.5	44.5
80°	6.9	10.3	13.7	18.8	22.3	24.0	25.7	25.7	27.4	27.4	27.4
82.5°	3.4	5.1	8.6	10.3	12.0	13.7	13.7	13.7	15.4	15.4	13.7
85°	1.7	1.7	3.4	5.1	5.1	6.9	6.9	6.9	6.9	6.9	6.9
87.5°	0.0	0.0	0.0	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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: P136545

CATALOG NUMBER: LD6A20D010TE ERW6A20830 6LW121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1342.9	1342.9	1342.9	1342.9
2.5°	1336.0	1339.4	1325.7	1342.9
5°	1348.0	1351.4	1337.7	1354.8
7.5°	1349.7	1351.4	1337.7	1354.8
10°	1337.7	1337.7	1324.0	1341.1
12.5°	1327.4	1325.7	1310.3	1327.4
15°	1312.0	1310.3	1294.9	1312.0
17.5°	1286.3	1284.6	1269.2	1284.6
20°	1246.9	1245.2	1231.5	1246.9
22.5°	1204.1	1200.7	1187.0	1200.7
25°	1154.4	1151.0	1137.3	1149.3
27.5°	1091.1	1087.6	1073.9	1085.9
30°	1015.7	1010.6	1000.3	1008.9
32.5°	930.1	926.6	914.7	924.9
35°	835.9	830.7	822.2	830.7
37.5°	733.1	729.7	721.1	726.2
40°	633.7	632.0	625.2	628.6
42.5°	548.1	544.7	539.5	543.0
45°	479.6	477.9	472.7	476.2
47.5°	428.2	426.5	421.4	424.8
50°	390.5	388.8	385.4	387.1
52.5°	359.7	358.0	354.6	359.7
55°	332.3	330.6	325.4	330.6
57.5°	301.5	299.7	294.6	301.5
60°	267.2	267.2	262.1	268.9
62.5°	232.9	232.9	229.5	234.7
65°	200.4	198.7	197.0	200.4
67.5°	164.4	162.7	162.7	166.1
70°	130.2	128.5	128.5	131.9
72.5°	97.6	95.9	95.9	97.6
75°	68.5	66.8	66.8	68.5
77.5°	44.5	44.5	44.5	44.5
80°	27.4	27.4	27.4	27.4
82.5°	15.4	15.4	13.7	15.4
85°	6.9	6.9	6.9	6.9
87.5°	1.7	1.7	1.7	1.7
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)