

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: P135948

Luminaire Tested: **LD6A20D010TE ERM6A20927 6LM121H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135948
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23373)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A20D010TE ERM6A20927 6LM121H
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED DOUBLE WALL WASH LUMINAIRE
SEMI-SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER
Light Source: (1) HIGH LUMEN LED 2700K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2046.8 lumens
Efficiency: N/A
Efficacy: 62.4 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 1.06 / 1.01
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

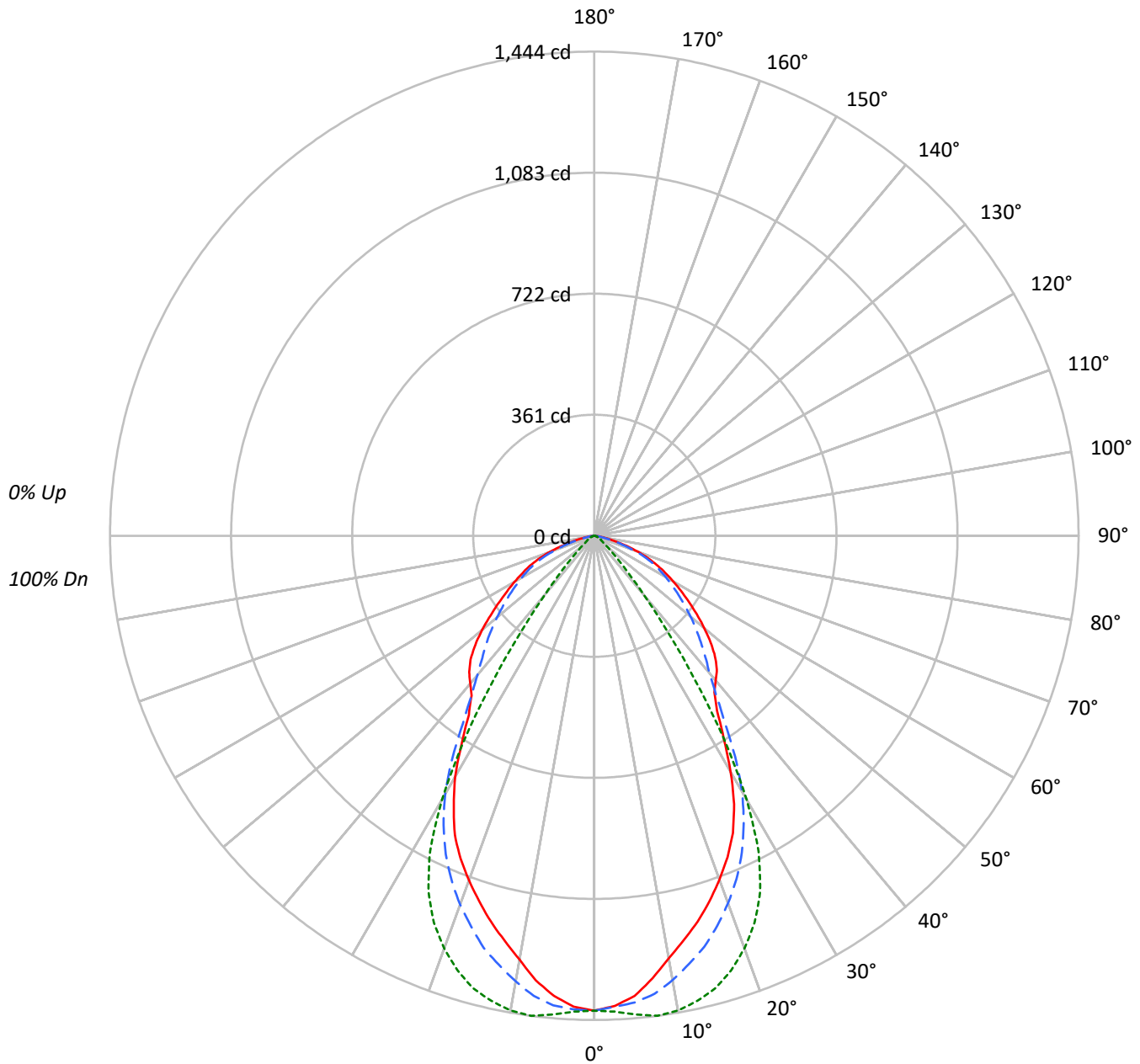
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	111	108	105	102	109	106	103	100	101	99	97		98	96	94		94
2	104	97	92	87	101	95	90	86	92	88	84		89	85	82		86
3	96	88	81	76	94	86	80	75	84	78	74		81	77	73		79
4	90	80	73	67	88	79	72	67	76	71	66		74	69	65		72
5	84	73	66	60	82	72	65	60	70	64	59		68	63	59		67
6	78	67	60	54	77	66	59	54	65	58	54		63	57	53		62
7	74	62	55	49	72	61	54	49	60	53	49		59	53	49		57
8	69	58	50	45	68	57	50	45	56	49	45		55	49	45		53
9	65	54	46	42	64	53	46	41	52	46	41		51	45	41		50
10	62	50	43	38	61	50	43	38	49	43	38		48	42	38		47

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	92394	92394	92394
5°	90225	93860	90225
10°	84750	95237	85028
15°	80476	94350	80476
20°	75746	90888	75891
25°	70373	84230	70841
30°	61239	68493	62527
35°	50773	41399	51968
40°	47914	19307	49004
45°	46972	9079	48153
50°	43420	4770	44293
55°	39173	3162	39424
60°	35452	2518	35726
65°	31693	1976	32696
70°	26114	1640	26934
75°	17242	1059	17242
80°	9618	789	9618
85°	6438	0	4866



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.1	6.5
10°-20°	358.4	17.5
20°-30°	479.0	23.4
30°-40°	396.1	19.4
40°-50°	284.2	13.9
50°-60°	208.9	10.2
60°-70°	134.9	6.6
70°-80°	47.8	2.3
80°-90°	5.5	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°	969.5	47.4
0°-40°	1365.6	66.7
0°-60°	1858.6	90.8
0°-90°	2046.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2046.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1416	1416	1416	1416	1416	
5°	1378	1397	1433	1406	1378	128
15°	1192	1269	1397	1273	1192	334
25°	978	1042	1170	1048	984	444
35°	638	676	520	682	652	410
45°	509	449	98	456	522	389
55°	344	306	28	310	347	309
65°	205	190	13	192	212	202
75°	68	56	4	56	68	78
85°	9	4	0	4	6	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°	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2
2.5°	1403.3	1392.6	1401.2	1392.6	1394.8	1403.3	1405.5	1409.7	1411.9	1405.5	1405.5
5°	1377.7	1367.0	1377.7	1369.1	1373.4	1384.1	1386.2	1394.8	1399.0	1396.9	1401.2
7.5°	1330.6	1322.1	1332.8	1326.3	1332.8	1347.7	1354.1	1364.8	1373.4	1377.7	1384.1
10°	1279.3	1270.7	1281.4	1274.9	1285.6	1302.8	1309.1	1322.1	1334.9	1345.6	1356.3
12.5°	1234.3	1225.8	1232.2	1230.0	1240.7	1255.7	1266.4	1281.4	1296.3	1307.0	1322.1
15°	1191.5	1183.0	1191.5	1187.3	1195.8	1212.9	1223.6	1238.6	1255.7	1268.6	1285.6
17.5°	1142.4	1133.8	1140.2	1138.0	1146.6	1161.6	1172.3	1187.3	1204.4	1219.3	1236.5
20°	1091.0	1082.4	1088.9	1084.5	1093.1	1110.3	1118.8	1135.9	1150.9	1165.9	1180.8
22.5°	1037.5	1029.0	1037.5	1031.1	1043.9	1054.6	1063.2	1080.3	1093.1	1108.2	1121.0
25°	977.6	969.0	975.5	971.2	979.7	992.6	999.0	1016.1	1026.8	1041.8	1054.6
27.5°	902.7	892.0	904.9	896.4	907.1	917.8	924.1	939.1	952.0	964.8	975.5
30°	812.9	804.4	817.2	810.7	823.6	832.1	840.7	855.7	866.4	881.3	883.5
32.5°	718.8	714.5	725.2	720.9	733.7	742.3	748.8	763.7	772.3	780.8	774.4
35°	637.5	633.2	643.9	641.8	652.5	658.9	665.3	673.9	673.9	676.0	658.9
37.5°	588.2	586.1	594.7	592.6	601.1	607.5	607.5	609.7	605.4	594.7	569.1
40°	562.6	560.5	566.8	564.7	571.2	573.3	571.2	566.8	554.0	532.6	498.4
42.5°	541.2	537.0	541.2	539.1	543.3	545.5	539.1	532.6	515.6	489.9	449.2
45°	509.1	504.9	511.2	507.0	511.2	511.2	504.9	496.3	477.0	449.2	406.4
47.5°	470.6	466.3	472.8	468.5	472.8	472.8	466.3	457.8	438.5	410.8	368.0
50°	427.8	423.6	427.8	425.7	430.0	432.1	423.6	417.1	400.1	374.3	331.6
52.5°	385.0	380.8	385.0	385.0	387.2	387.2	380.8	376.5	361.5	338.0	299.5
55°	344.4	340.1	346.6	344.4	346.6	346.6	340.1	335.9	325.2	305.9	269.5
57.5°	305.9	303.8	308.0	305.9	305.9	305.9	301.6	299.5	290.9	273.8	243.9
60°	271.7	267.4	269.5	269.5	269.5	271.7	267.4	265.3	258.8	246.0	218.2
62.5°	237.4	235.3	237.4	235.3	235.3	237.4	235.3	233.2	228.9	218.2	194.6
65°	205.3	201.1	205.3	203.2	203.2	203.2	201.1	201.1	196.8	190.4	169.0
67.5°	171.1	169.0	171.1	169.0	166.9	166.9	164.8	164.8	162.5	158.3	139.0
70°	136.9	132.7	134.8	130.5	132.7	128.3	128.3	126.2	124.1	122.0	107.0
72.5°	100.5	98.4	98.4	94.1	94.1	92.0	89.8	89.8	87.7	87.7	77.0
75°	68.4	68.4	66.3	62.1	64.2	59.9	59.9	59.9	57.7	55.6	49.2
77.5°	44.9	42.8	42.8	40.7	40.7	36.3	38.5	36.3	36.3	34.2	30.0
80°	25.6	25.6	25.6	23.5	23.5	21.4	21.4	21.4	19.3	19.3	17.1
82.5°	14.9	14.9	14.9	12.8	12.8	12.8	12.8	10.7	10.7	10.7	8.6
85°	8.6	6.5	6.5	6.5	6.5	6.5	6.5	4.2	4.2	4.2	4.2
87.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2
2.5°	1414.0	1411.9	1409.7	1418.3	1420.4	1414.0	1414.0	1420.4	1424.7	1414.0	1411.9
5°	1411.9	1414.0	1414.0	1424.7	1431.1	1426.9	1426.9	1433.2	1437.6	1424.7	1420.4
7.5°	1401.2	1407.6	1411.9	1426.9	1437.6	1435.4	1437.6	1443.9	1446.1	1433.2	1426.9
10°	1377.7	1386.2	1394.8	1414.0	1426.9	1429.0	1431.1	1437.6	1441.8	1424.7	1416.2
12.5°	1345.6	1358.4	1371.2	1392.6	1407.6	1409.7	1416.2	1420.4	1422.6	1407.6	1396.9
15°	1309.1	1326.3	1339.1	1362.7	1379.8	1384.1	1390.5	1396.9	1396.9	1379.8	1369.1
17.5°	1264.2	1279.3	1296.3	1319.9	1339.1	1343.4	1352.0	1358.4	1358.4	1341.3	1326.3
20°	1208.6	1225.8	1240.7	1266.4	1287.8	1294.2	1302.8	1309.1	1309.1	1294.2	1274.9
22.5°	1150.9	1168.0	1183.0	1206.5	1227.9	1234.3	1240.7	1249.3	1247.2	1234.3	1217.2
25°	1082.4	1097.5	1108.2	1131.7	1148.7	1155.2	1163.7	1170.1	1168.0	1155.2	1140.2
27.5°	999.0	1009.7	1011.8	1026.8	1041.8	1048.2	1054.6	1061.0	1058.9	1048.2	1035.4
30°	902.7	900.6	889.9	889.9	896.4	900.6	904.9	909.2	907.1	900.6	892.0
32.5°	780.8	765.8	738.1	723.0	716.7	716.7	716.7	720.9	718.8	716.7	716.7
35°	650.3	618.2	575.4	543.3	526.3	519.8	515.6	519.8	517.7	519.8	528.4
37.5°	543.3	496.3	438.5	395.7	368.0	355.1	346.6	348.7	348.7	355.1	370.1
40°	464.2	404.3	340.1	286.6	254.6	237.4	226.7	226.7	228.9	237.4	256.7
42.5°	404.3	338.0	267.4	216.0	177.6	160.4	149.7	147.6	149.7	160.4	179.7
45°	357.3	286.6	216.0	160.4	128.3	109.1	100.5	98.4	100.5	111.2	128.3
47.5°	316.6	246.0	179.7	124.1	92.0	77.0	68.4	66.3	70.6	79.1	94.1
50°	282.4	213.9	147.6	98.4	70.6	55.6	49.2	47.0	49.2	57.7	70.6
52.5°	250.3	186.2	124.1	77.0	53.5	42.8	36.3	34.2	36.3	42.8	55.6
55°	224.6	164.8	107.0	64.2	42.8	34.2	30.0	27.8	30.0	34.2	44.9
57.5°	201.1	145.5	92.0	53.5	36.3	27.8	23.5	23.5	23.5	27.8	36.3
60°	179.7	128.3	79.1	44.9	30.0	23.5	19.3	19.3	19.3	23.5	30.0
62.5°	160.4	113.4	68.4	38.5	25.6	19.3	17.1	17.1	17.1	19.3	25.6
65°	136.9	96.3	57.7	32.1	21.4	17.1	14.9	12.8	14.9	17.1	21.4
67.5°	113.4	79.1	47.0	25.6	17.1	12.8	10.7	10.7	10.7	12.8	17.1
70°	87.7	62.1	36.3	19.3	12.8	10.7	8.6	8.6	8.6	10.7	12.8
72.5°	59.9	42.8	25.6	14.9	10.7	8.6	6.5	6.5	6.5	8.6	10.7
75°	38.5	27.8	17.1	10.7	6.5	6.5	4.2	4.2	4.2	6.5	6.5
77.5°	23.5	17.1	10.7	6.5	4.2	4.2	4.2	4.2	4.2	4.2	4.2
80°	12.8	10.7	6.5	4.2	4.2	2.1	2.1	2.1	2.1	2.1	2.1
82.5°	6.5	6.5	4.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
85°	2.1	2.1	2.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	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°	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2	1416.2
2.5°	1411.9	1416.2	1418.3	1409.7	1411.9	1414.0	1401.2	1403.3	1396.9	1409.7	1403.3
5°	1418.3	1420.4	1422.6	1409.7	1407.6	1405.5	1390.5	1388.3	1379.8	1390.5	1384.1
7.5°	1420.4	1416.2	1416.2	1396.9	1390.5	1384.1	1364.8	1358.4	1347.7	1352.0	1343.4
10°	1409.7	1401.2	1394.8	1371.2	1360.5	1349.8	1326.3	1317.7	1302.8	1304.9	1294.2
12.5°	1386.2	1375.5	1364.8	1339.1	1326.3	1311.4	1287.8	1274.9	1260.0	1260.0	1247.2
15°	1356.3	1343.4	1330.6	1304.9	1287.8	1272.8	1245.0	1232.2	1217.2	1215.1	1204.4
17.5°	1313.5	1298.5	1285.6	1255.7	1238.6	1221.5	1195.8	1180.8	1165.9	1165.9	1153.1
20°	1262.1	1245.0	1230.0	1202.2	1185.1	1170.1	1140.2	1127.3	1114.5	1112.4	1101.7
22.5°	1202.2	1185.1	1172.3	1146.6	1127.3	1112.4	1086.8	1076.0	1063.2	1061.0	1048.2
25°	1127.3	1112.4	1099.6	1078.2	1061.0	1048.2	1024.7	1011.8	1003.3	1003.3	992.6
27.5°	1026.8	1014.0	1011.8	994.7	981.9	973.4	954.1	945.5	934.8	934.8	922.0
30°	892.0	894.2	902.7	898.5	894.2	889.9	872.8	870.6	857.8	855.7	840.7
32.5°	727.4	742.3	765.8	778.6	785.1	789.3	785.1	780.8	770.1	767.9	750.9
35°	551.9	581.9	620.4	646.0	667.4	682.4	688.8	688.8	684.6	682.4	667.4
37.5°	400.1	445.0	496.3	539.1	573.3	601.1	614.0	622.5	622.5	622.5	616.1
40°	293.1	346.6	406.4	462.1	504.9	541.2	560.5	575.4	579.8	586.1	581.9
42.5°	218.2	276.0	340.1	404.3	453.5	494.2	519.8	537.0	547.7	554.0	554.0
45°	166.9	224.6	290.9	359.4	410.8	455.7	481.3	500.6	511.2	519.8	519.8
47.5°	128.3	183.9	250.3	318.7	372.2	417.1	442.8	459.9	470.6	479.2	479.2
50°	100.5	151.9	216.0	282.4	335.9	378.7	402.2	419.3	427.8	434.3	436.4
52.5°	81.3	128.3	190.4	254.6	303.8	342.2	361.5	376.5	385.0	389.4	391.5
55°	66.3	111.2	169.0	226.7	273.8	310.2	327.3	338.0	344.4	348.7	348.7
57.5°	55.6	96.3	149.7	205.3	250.3	278.1	293.1	301.6	305.9	310.2	310.2
60°	47.0	83.4	132.7	183.9	224.6	250.3	261.0	267.4	271.7	273.8	273.8
62.5°	40.7	70.6	115.5	162.5	199.0	222.5	231.1	235.3	237.4	237.4	239.6
65°	34.2	59.9	98.4	141.2	171.1	192.5	199.0	201.1	201.1	203.2	205.3
67.5°	25.6	47.0	79.1	115.5	141.2	158.3	164.8	164.8	164.8	164.8	166.9
70°	21.4	36.3	59.9	87.7	109.1	122.0	126.2	126.2	126.2	126.2	128.3
72.5°	14.9	25.6	42.8	62.1	79.1	87.7	87.7	89.8	87.7	87.7	92.0
75°	10.7	17.1	27.8	40.7	49.2	55.6	57.7	57.7	57.7	57.7	59.9
77.5°	6.5	10.7	17.1	23.5	32.1	34.2	36.3	36.3	36.3	36.3	38.5
80°	4.2	6.5	10.7	14.9	17.1	19.3	21.4	21.4	21.4	21.4	21.4
82.5°	2.1	4.2	6.5	6.5	8.6	10.7	10.7	10.7	10.7	10.7	12.8
85°	0.0	2.1	2.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2	6.5
87.5°	0.0	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



TEST NUMBER: P135948

CATALOG NUMBER: LD6A20D010TE ERM6A20927 6LM121H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1416.2	1416.2	1416.2	1416.2
2.5°	1390.5	1405.5	1394.8	1405.5
5°	1369.1	1381.9	1369.1	1377.7
7.5°	1326.3	1337.0	1324.2	1337.0
10°	1274.9	1285.6	1272.8	1283.5
12.5°	1227.9	1236.5	1223.6	1236.5
15°	1185.1	1193.7	1180.8	1191.5
17.5°	1135.9	1142.4	1131.7	1142.4
20°	1084.5	1091.0	1082.4	1093.1
22.5°	1033.2	1041.8	1031.1	1041.8
25°	975.5	981.9	971.2	984.1
27.5°	907.1	911.3	900.6	907.1
30°	823.6	825.7	817.2	830.0
32.5°	735.8	735.8	723.0	735.8
35°	654.6	652.5	643.9	652.5
37.5°	603.3	603.3	596.8	601.1
40°	573.3	575.4	566.8	575.4
42.5°	547.7	551.9	545.5	551.9
45°	515.6	519.8	513.4	521.9
47.5°	474.9	479.2	474.9	481.3
50°	430.0	434.3	430.0	436.4
52.5°	385.0	389.4	385.0	389.4
55°	344.4	346.6	342.2	346.6
57.5°	305.9	308.0	303.8	308.0
60°	269.5	273.8	269.5	273.8
62.5°	237.4	239.6	239.6	241.7
65°	203.2	211.8	209.7	211.8
67.5°	169.0	175.5	175.5	177.6
70°	130.5	134.8	139.0	141.2
72.5°	92.0	98.4	100.5	102.7
75°	59.9	66.3	66.3	68.4
77.5°	38.5	42.8	42.8	42.8
80°	23.5	25.6	23.5	25.6
82.5°	12.8	12.8	12.8	14.9
85°	6.5	6.5	6.5	6.5
87.5°	2.1	2.1	2.1	2.1
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)