

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: P135829

Luminaire Tested: **LD6A20D010TE ERM6A20930 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135829
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23357-R2)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A20D010TE ERM6A20930 6LM121LI
Description: PORTFOLIO 6 INCH 50 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: 2222.0 lumens
Efficiency: N/A
Efficacy: 67.7 lumens/watt
Spacing Criteria (0/90/45): 0.86 / 1.02 / 0.97
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

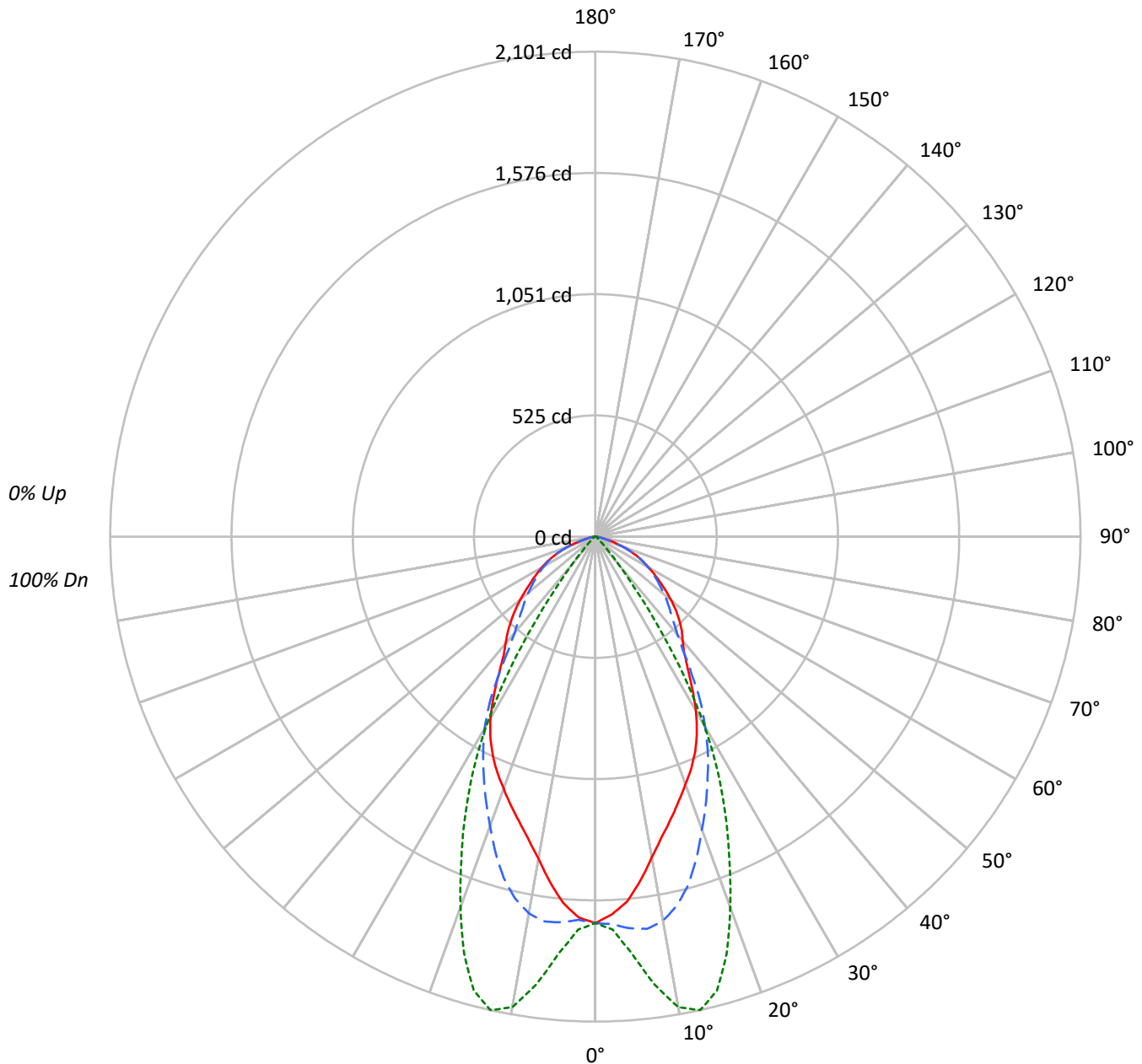
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	108	105	102	109	106	103	101	102	100	97		98	96	95		95
2	104	98	93	88	102	96	91	87	93	89	86		90	87	84		87
3	97	89	83	78	95	88	82	77	85	80	76		82	78	75		80
4	91	81	74	69	89	80	74	69	78	72	68		76	71	67		74
5	85	75	68	62	83	74	67	62	72	66	61		70	65	61		68
6	80	69	62	56	78	68	61	56	66	60	56		65	59	55		63
7	75	64	57	52	74	63	56	51	62	56	51		60	55	51		59
8	71	59	52	47	69	59	52	47	58	51	47		57	51	47		55
9	67	56	49	44	66	55	48	44	54	48	44		53	47	43		52
10	63	52	45	41	62	52	45	41	51	45	41		50	44	40		49

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	109239	109239	109239
5°	103873	118635	104378
10°	93382	137145	93885
15°	85441	137462	86265
20°	79259	118575	80633
25°	73742	96100	75606
30°	65593	71100	68455
35°	55400	37584	58069
40°	50043	12570	51466
45°	47470	4355	47608
50°	43410	1857	42953
55°	38787	1388	38434
60°	34564	1396	34956
65°	30550	1405	30782
70°	23520	1164	23233
75°	14570	756	13813
80°	7439	601	6875
85°	3443	0	3443



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.5	7.3
10°-20°	443.5	20.0
20°-30°	533.8	24.0
30°-40°	414.8	18.7
40°-50°	277.6	12.5
50°-60°	208.9	9.4
60°-70°	134.1	6.0
70°-80°	42.9	1.9
80°-90°	4.1	0.2
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°	1139.7	51.3
0°-40°	1554.5	70.0
0°-60°	2041.0	91.9
0°-90°	2222.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2222.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1674	1674	1674	1674	1674	
5°	1586	1703	1812	1678	1594	146
15°	1265	1559	2035	1531	1277	356
25°	1024	1151	1335	1145	1050	467
35°	696	728	472	728	729	442
45°	514	460	47	449	516	395
55°	341	323	12	315	338	306
65°	198	199	9	195	199	194
75°	58	55	3	52	55	66
85°	5	5	0	5	5	7
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°	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4
2.5°	1637.9	1651.6	1647.1	1668.4	1653.1	1651.6	1662.3	1668.4	1669.8	1680.5	1680.5
5°	1586.1	1601.3	1596.8	1624.2	1618.1	1624.2	1647.1	1663.7	1679.0	1703.3	1718.6
7.5°	1500.9	1519.2	1522.2	1549.6	1552.6	1569.4	1605.9	1639.4	1671.4	1714.0	1750.5
10°	1409.6	1427.8	1432.4	1462.8	1472.0	1494.8	1542.0	1584.6	1630.3	1689.7	1744.4
12.5°	1330.4	1348.7	1354.8	1385.2	1395.8	1421.7	1472.0	1519.2	1570.9	1636.4	1701.8
15°	1265.0	1281.7	1287.8	1315.1	1325.8	1350.2	1397.4	1443.0	1493.3	1558.7	1622.6
17.5°	1201.0	1217.8	1222.3	1246.7	1254.3	1275.6	1318.2	1357.8	1400.4	1458.2	1516.1
20°	1141.6	1156.8	1159.9	1181.3	1185.8	1202.6	1237.5	1269.5	1304.5	1350.2	1397.4
22.5°	1085.3	1100.6	1102.1	1120.3	1121.9	1135.5	1164.5	1188.8	1213.2	1249.8	1283.2
25°	1024.4	1039.6	1041.2	1056.4	1057.9	1067.0	1089.9	1108.2	1124.9	1150.7	1173.6
27.5°	951.4	966.6	971.1	981.8	983.3	989.4	1009.2	1021.4	1038.2	1054.9	1064.0
30°	870.7	884.4	890.5	899.6	901.2	910.3	928.5	937.7	948.4	951.4	954.5
32.5°	780.9	796.1	802.2	809.8	814.4	823.5	840.2	844.8	847.9	846.3	829.6
35°	695.6	709.4	715.5	724.6	727.6	733.7	747.4	745.9	741.3	727.6	697.1
37.5°	631.8	642.4	648.4	654.5	656.1	659.1	666.7	660.6	648.4	625.7	586.0
40°	587.6	598.2	599.8	605.8	604.3	604.3	605.8	595.2	579.9	552.6	506.9
42.5°	554.1	563.2	563.2	569.3	564.7	561.7	561.7	549.5	529.7	500.8	455.1
45°	514.5	522.1	523.6	526.6	522.1	519.1	519.1	506.9	488.7	459.7	414.1
47.5°	473.4	481.0	481.0	485.6	481.0	478.0	478.0	467.4	450.6	424.7	382.1
50°	427.7	435.4	436.8	439.9	436.8	435.4	436.8	426.2	412.5	389.7	351.7
52.5°	383.6	391.2	391.2	394.2	391.2	391.2	392.8	385.1	372.9	354.7	321.2
55°	341.0	347.0	350.1	353.1	348.6	348.6	350.1	345.6	336.4	322.7	293.7
57.5°	301.4	307.5	309.0	312.1	309.0	310.5	312.1	307.5	302.9	292.3	269.4
60°	264.9	271.0	272.5	274.0	272.5	272.5	274.0	272.5	269.4	261.8	242.0
62.5°	231.3	235.9	237.5	240.5	237.5	235.9	239.0	237.5	235.9	231.3	217.7
65°	197.9	200.9	202.5	203.9	200.9	197.9	200.9	200.9	202.5	199.4	188.7
67.5°	161.4	164.4	164.4	164.4	159.9	158.3	161.4	161.4	164.4	162.9	155.3
70°	123.3	124.8	124.8	124.8	118.8	118.8	120.2	120.2	123.3	123.3	118.8
72.5°	88.3	86.8	86.8	85.3	83.7	80.7	80.7	82.2	85.3	85.3	82.2
75°	57.8	56.3	54.8	54.8	53.3	50.2	50.2	51.7	53.3	54.8	53.3
77.5°	35.0	33.5	33.5	32.0	32.0	30.4	30.4	30.4	32.0	32.0	32.0
80°	19.8	18.3	18.3	18.3	16.8	16.8	16.8	16.8	16.8	18.3	16.8
82.5°	10.7	9.1	9.1	9.1	9.1	9.1	7.7	9.1	9.1	9.1	9.1
85°	4.6	4.6	4.6	4.6	3.0	3.0	3.0	3.0	3.0	4.6	4.6
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4
2.5°	1675.9	1691.1	1680.5	1714.0	1691.1	1703.3	1720.1	1703.3	1707.9	1718.6	1697.2
5°	1727.7	1755.1	1758.2	1803.8	1785.5	1806.8	1829.7	1811.5	1814.5	1822.1	1794.7
7.5°	1780.9	1829.7	1852.5	1916.5	1911.9	1946.9	1974.3	1956.0	1956.0	1957.6	1916.5
10°	1796.2	1867.8	1910.4	1989.5	2001.7	2051.9	2082.3	2070.2	2067.1	2062.6	2006.3
12.5°	1762.7	1851.0	1905.8	1994.1	2018.4	2077.8	2105.2	2100.7	2096.1	2086.9	2021.5
15°	1685.0	1776.4	1834.2	1921.0	1951.5	2012.4	2035.2	2035.2	2030.6	2021.5	1951.5
17.5°	1570.9	1656.2	1709.5	1785.5	1816.0	1872.3	1887.5	1892.1	1887.5	1878.4	1814.5
20°	1441.5	1513.1	1555.7	1618.1	1642.5	1691.1	1700.3	1707.9	1704.9	1697.2	1641.0
22.5°	1315.1	1371.5	1403.5	1458.2	1467.4	1508.5	1511.5	1517.6	1516.1	1513.1	1467.4
25°	1199.5	1237.5	1255.9	1296.9	1299.9	1330.4	1328.9	1335.0	1333.5	1333.5	1298.5
27.5°	1077.7	1100.6	1105.1	1131.0	1124.9	1147.7	1150.7	1147.7	1149.3	1150.7	1124.9
30°	955.9	960.5	946.8	949.8	933.2	946.8	933.2	943.8	943.8	948.4	933.2
32.5°	817.4	803.7	767.2	748.9	720.0	720.0	712.4	712.4	712.4	720.0	716.9
35°	669.7	636.3	579.9	540.4	499.3	488.7	487.1	471.9	474.9	485.6	493.2
37.5°	543.4	493.2	418.6	362.3	313.6	292.3	284.6	272.5	277.1	289.2	307.5
40°	453.6	392.8	305.9	240.5	191.8	167.4	155.3	147.6	152.2	167.4	190.3
42.5°	397.3	330.4	237.5	169.0	123.3	100.5	88.3	82.2	86.8	100.5	127.9
45°	356.2	286.2	191.8	124.8	83.7	62.4	51.7	47.2	50.2	62.4	85.3
47.5°	324.3	252.7	159.9	95.9	59.4	41.1	32.0	27.4	30.4	41.1	59.4
50°	295.3	225.2	135.4	76.1	45.6	30.4	21.3	18.3	21.3	29.0	44.2
52.5°	269.4	200.9	115.7	62.4	35.0	24.3	16.8	13.7	15.2	22.9	35.0
55°	246.6	182.6	102.0	53.3	30.4	21.3	15.2	12.2	15.2	19.8	30.4
57.5°	225.2	164.4	89.8	45.6	25.9	18.3	13.7	12.2	13.7	18.3	25.9
60°	203.9	146.1	79.2	39.6	22.9	16.8	12.2	10.7	12.2	15.2	22.9
62.5°	182.6	129.4	68.5	33.5	19.8	13.7	10.7	9.1	10.7	13.7	19.8
65°	158.3	109.6	57.8	29.0	16.8	12.2	9.1	9.1	9.1	12.2	16.8
67.5°	130.9	89.8	45.6	22.9	13.7	10.7	7.7	7.7	7.7	10.7	13.7
70°	100.5	66.9	35.0	18.3	10.7	7.7	6.1	6.1	6.1	7.7	10.7
72.5°	70.0	47.2	24.3	13.7	7.7	6.1	4.6	4.6	4.6	6.1	7.7
75°	44.2	30.4	16.8	9.1	6.1	4.6	3.0	3.0	3.0	4.6	6.1
77.5°	25.9	18.3	10.7	6.1	3.0	3.0	1.6	1.6	1.6	3.0	3.0
80°	13.7	10.7	6.1	3.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6
82.5°	7.7	4.6	3.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
85°	3.0	1.6	1.6	0.0	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°	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4	1674.4
2.5°	1691.1	1697.2	1695.7	1663.7	1660.7	1662.3	1641.0	1648.5	1656.2	1648.5	1650.1
5°	1773.4	1771.8	1753.6	1707.9	1689.7	1677.5	1642.5	1636.4	1631.8	1615.1	1609.0
7.5°	1881.4	1860.1	1822.1	1753.6	1715.6	1682.0	1630.3	1604.4	1586.1	1557.3	1540.5
10°	1956.0	1913.4	1857.1	1767.3	1709.5	1657.7	1590.7	1551.1	1520.7	1482.7	1458.2
12.5°	1966.7	1907.3	1841.9	1736.9	1669.8	1605.9	1532.8	1488.8	1453.7	1412.6	1389.7
15°	1898.2	1837.3	1768.8	1663.7	1596.8	1531.3	1461.3	1417.2	1382.2	1342.6	1322.8
17.5°	1768.8	1712.5	1651.6	1554.2	1496.3	1436.9	1374.5	1336.5	1306.0	1275.6	1255.9
20°	1604.4	1560.3	1510.1	1427.8	1382.2	1333.5	1284.7	1254.3	1231.4	1205.6	1190.4
22.5°	1441.5	1408.1	1371.5	1306.0	1272.5	1237.5	1199.5	1178.2	1161.4	1141.6	1131.0
25°	1284.7	1261.9	1239.1	1188.8	1169.1	1144.7	1117.3	1102.1	1091.5	1077.7	1070.1
27.5°	1121.9	1114.2	1108.2	1076.2	1068.6	1051.8	1033.6	1024.4	1016.9	1007.7	1001.6
30°	945.3	949.8	974.2	957.5	965.1	960.5	952.9	946.8	943.8	936.2	928.5
32.5°	745.9	777.9	812.8	817.4	840.2	850.9	849.3	850.9	852.4	846.3	840.2
35°	534.3	586.0	640.9	665.2	703.3	727.6	736.8	745.9	752.0	750.4	745.9
37.5°	356.2	426.2	491.7	534.3	584.5	618.0	637.8	653.1	662.2	665.2	665.2
40°	237.5	304.4	391.2	446.0	502.3	543.4	566.3	586.0	599.8	605.8	608.9
42.5°	167.4	239.0	327.3	389.7	447.5	491.7	517.5	538.8	552.6	560.2	563.2
45°	123.3	191.8	283.1	347.0	406.4	449.0	474.9	494.7	508.4	516.0	520.6
47.5°	94.4	161.4	249.7	315.1	374.4	414.1	438.4	456.7	468.8	474.9	478.0
50°	74.6	135.4	222.2	287.7	342.5	379.0	400.3	415.5	426.2	430.8	433.8
52.5°	60.9	117.2	199.4	261.8	313.6	345.6	362.3	374.4	383.6	386.6	389.7
55°	51.7	102.0	179.6	240.5	287.7	315.1	327.3	337.9	342.5	345.6	347.0
57.5°	45.6	89.8	162.9	220.7	263.3	286.2	295.3	302.9	304.4	307.5	309.0
60°	39.6	77.6	144.6	199.4	237.5	257.2	261.8	267.9	267.9	269.4	271.0
62.5°	33.5	66.9	126.3	178.1	211.6	228.3	231.3	232.9	232.9	232.9	234.5
65°	27.4	56.3	106.6	153.7	184.2	194.8	196.4	197.9	194.8	194.8	196.4
67.5°	22.9	44.2	85.3	126.3	150.7	159.9	158.3	158.3	153.7	153.7	155.3
70°	16.8	33.5	63.9	95.9	114.1	120.2	117.2	117.2	112.7	112.7	114.1
72.5°	12.2	24.3	44.2	65.5	79.2	82.2	79.2	79.2	76.1	76.1	77.6
75°	9.1	15.2	29.0	42.6	50.2	51.7	50.2	48.7	47.2	47.2	48.7
77.5°	6.1	10.7	16.8	24.3	29.0	30.4	29.0	29.0	27.4	29.0	29.0
80°	3.0	6.1	9.1	13.7	15.2	16.8	16.8	16.8	15.2	15.2	16.8
82.5°	1.6	3.0	4.6	6.1	7.7	9.1	7.7	7.7	7.7	7.7	7.7
85°	0.0	1.6	1.6	3.0	3.0	4.6	3.0	3.0	3.0	3.0	3.0
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



TEST NUMBER: P135829

CATALOG NUMBER: LD6A20D010TE ERM6A20930 6LM121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1674.4	1674.4	1674.4	1674.4
2.5°	1647.1	1639.4	1628.7	1651.6
5°	1599.9	1584.6	1572.5	1593.8
7.5°	1525.3	1504.0	1487.2	1508.5
10°	1440.0	1415.6	1397.4	1417.2
12.5°	1365.4	1341.0	1325.8	1341.0
15°	1299.9	1277.2	1263.4	1277.2
17.5°	1236.0	1216.2	1204.0	1219.3
20°	1175.2	1158.4	1147.7	1161.4
22.5°	1118.8	1103.6	1094.5	1108.2
25°	1059.5	1048.8	1038.2	1050.3
27.5°	994.0	981.8	975.8	983.3
30°	919.4	907.2	902.6	908.7
32.5°	831.1	818.9	814.4	818.9
35°	739.8	729.1	723.0	729.1
37.5°	662.2	653.1	648.4	653.1
40°	607.3	602.8	598.2	604.3
42.5°	564.7	560.2	557.2	561.7
45°	520.6	514.5	511.4	516.0
47.5°	476.5	470.4	467.4	470.4
50°	430.8	423.2	421.6	423.2
52.5°	385.1	379.0	376.0	377.5
55°	344.0	339.5	336.4	337.9
57.5°	307.5	301.4	299.8	301.4
60°	271.0	267.9	266.4	267.9
62.5°	234.5	232.9	234.5	234.5
65°	197.9	197.9	199.4	199.4
67.5°	158.3	161.4	162.9	162.9
70°	117.2	120.2	121.8	121.8
72.5°	79.2	82.2	83.7	85.3
75°	50.2	53.3	54.8	54.8
77.5°	30.4	32.0	32.0	33.5
80°	16.8	18.3	18.3	18.3
82.5°	9.1	9.1	9.1	10.7
85°	4.6	4.6	4.6	4.6
87.5°	0.0	1.6	1.6	1.6
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)