

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: P135828

Luminaire Tested: **LD6A20D010TE ERM6A20927 6LM121LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135828
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 ERM6A20927 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 2700K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2122.5 lumens
Efficiency: N/A
Efficacy: 64.7 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

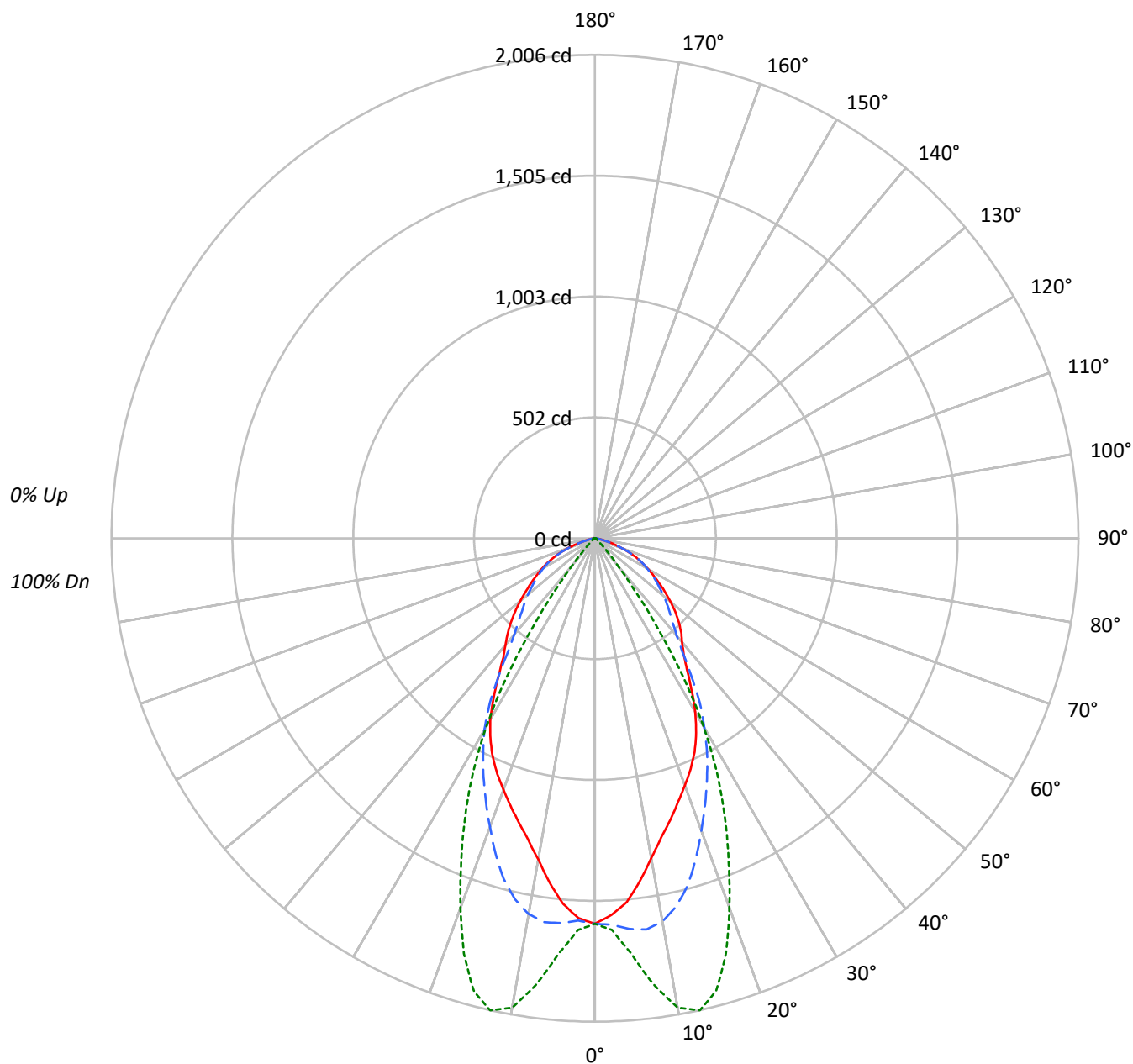
Input Watts (W): 32.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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	97	98	96	95	95	93	92	90			
2	104	98	93	89	102	96	91	87	93	89	86	90	87	84	87	84	82	80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	72			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64			
5	85	75	68	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53			
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49			
8	71	59	52	47	69	59	52	47	58	51	47	57	51	47	55	50	47	45			
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	104346	104346	104346
5°	99217	113311	99695
10°	89195	130997	89679
15°	81611	131295	82395
20°	75704	113264	77023
25°	70437	91788	72215
30°	62647	67906	65397
35°	52924	35904	55472
40°	47795	12017	49166
45°	45339	4161	45477
50°	41461	1766	41025
55°	37046	1319	36716
60°	33012	1318	33390
65°	29176	1358	29408
70°	22451	1106	22203
75°	13914	756	13208
80°	7101	564	6537
85°	3219	0	3219



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.2	7.3
10°-20°	423.6	20.0
20°-30°	509.8	24.0
30°-40°	396.2	18.7
40°-50°	265.1	12.5
50°-60°	199.5	9.4
60°-70°	128.1	6.0
70°-80°	41.0	1.9
80°-90°	3.9	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°	1088.6	51.3
0°-40°	1484.8	70.0
0°-60°	1949.5	91.9
0°-90°	2122.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2122.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1599	1599	1599	1599	1599	
5°	1515	1627	1730	1602	1522	139
15°	1208	1489	1944	1463	1220	340
25°	978	1099	1275	1093	1003	446
35°	664	695	451	695	696	422
45°	491	439	45	429	493	377
55°	326	308	12	301	323	293
65°	189	190	9	186	190	185
75°	55	52	3	49	52	63
85°	4	4	0	4	4	6
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°	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4
2.5°	1564.4	1577.5	1573.2	1593.6	1579.0	1577.5	1587.8	1593.6	1595.1	1605.2	1605.2
5°	1515.0	1529.6	1525.3	1551.4	1545.5	1551.4	1573.2	1589.3	1603.7	1627.1	1641.5
7.5°	1433.6	1451.0	1454.0	1480.2	1483.0	1499.1	1533.9	1565.9	1596.4	1637.2	1672.0
10°	1346.4	1363.8	1368.2	1397.3	1406.0	1427.8	1472.9	1513.6	1557.3	1614.0	1666.2
12.5°	1270.8	1288.2	1294.0	1323.2	1333.3	1358.0	1406.0	1451.0	1500.6	1563.1	1625.6
15°	1208.3	1224.2	1230.0	1256.2	1266.5	1289.7	1334.8	1378.4	1426.3	1488.8	1550.0
17.5°	1147.2	1163.2	1167.5	1190.9	1198.0	1218.4	1259.2	1297.0	1337.6	1393.0	1448.2
20°	1090.4	1105.0	1108.0	1128.3	1132.7	1148.6	1182.1	1212.6	1246.1	1289.7	1334.8
22.5°	1036.7	1051.3	1052.6	1070.2	1071.5	1084.6	1112.3	1135.5	1158.9	1193.7	1225.7
25°	978.5	993.1	994.6	1009.0	1010.5	1019.3	1041.0	1058.5	1074.5	1099.2	1121.1
27.5°	908.7	923.3	927.6	937.9	939.2	945.0	964.0	975.7	991.6	1007.7	1016.3
30°	831.6	844.7	850.5	859.3	860.8	869.4	887.0	895.6	905.9	908.7	911.7
32.5°	745.9	760.5	766.3	773.6	777.9	786.7	802.6	806.9	809.9	808.4	792.5
35°	664.5	677.6	683.4	692.1	695.0	700.8	713.9	712.4	708.1	695.0	666.0
37.5°	603.4	613.6	619.4	625.2	626.7	629.5	636.8	631.0	619.4	597.5	559.7
40°	561.2	571.5	572.8	578.6	577.3	577.3	578.6	568.5	553.9	527.8	484.1
42.5°	529.2	538.0	538.0	543.8	539.5	536.5	536.5	524.9	506.0	478.3	434.7
45°	491.4	498.7	500.2	503.0	498.7	495.9	495.9	484.1	466.7	439.1	395.4
47.5°	452.1	459.4	459.4	463.9	459.4	456.6	456.6	446.3	430.4	405.7	364.9
50°	408.5	415.8	417.3	420.2	417.3	415.8	417.3	407.2	394.1	372.2	335.9
52.5°	366.4	373.7	373.7	376.5	373.7	373.7	375.2	367.9	356.3	338.7	306.7
55°	325.7	331.6	334.4	337.4	332.9	332.9	334.4	330.1	321.3	308.2	280.7
57.5°	287.8	293.7	295.1	298.1	295.1	296.6	298.1	293.7	289.3	279.2	257.3
60°	253.0	258.8	260.3	261.8	260.3	260.3	261.8	260.3	257.3	250.0	231.1
62.5°	221.0	225.3	226.8	229.8	226.8	225.3	228.3	226.8	225.3	221.0	207.9
65°	189.0	192.0	193.3	194.8	192.0	189.0	192.0	192.0	193.3	190.5	180.3
67.5°	154.2	157.0	157.0	157.0	152.7	151.2	154.2	154.2	157.0	155.5	148.3
70°	117.7	119.2	119.2	119.2	113.4	113.4	114.9	114.9	117.7	117.7	113.4
72.5°	84.4	82.9	82.9	81.4	79.9	77.1	77.1	78.6	81.4	81.4	78.6
75°	55.2	53.8	52.4	52.4	50.9	47.9	47.9	49.4	50.9	52.4	50.9
77.5°	33.5	32.0	32.0	30.5	30.5	29.0	29.0	29.0	30.5	30.5	30.5
80°	18.9	17.4	17.4	17.4	16.0	16.0	16.0	16.0	16.0	17.4	16.0
82.5°	10.1	8.8	8.8	8.8	8.8	8.8	7.3	8.8	8.8	8.8	8.8
85°	4.3	4.3	4.3	4.3	3.0	3.0	3.0	3.0	3.0	4.3	4.3
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°	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4
2.5°	1600.9	1615.3	1605.2	1637.2	1615.3	1627.1	1643.0	1627.1	1631.4	1641.5	1621.2
5°	1650.3	1676.5	1679.3	1722.9	1705.5	1725.9	1747.7	1730.2	1733.2	1740.5	1714.3
7.5°	1701.2	1747.7	1769.5	1830.5	1826.2	1859.7	1885.9	1868.3	1868.3	1869.8	1830.5
10°	1715.7	1784.1	1824.7	1900.3	1912.0	1960.0	1989.0	1977.4	1974.6	1970.1	1916.4
12.5°	1683.8	1768.0	1820.4	1904.8	1928.0	1984.7	2010.9	2006.5	2002.1	1993.5	1930.9
15°	1609.5	1696.8	1752.1	1835.0	1864.0	1922.2	1943.9	1943.9	1939.6	1930.9	1864.0
17.5°	1500.6	1582.0	1632.9	1705.5	1734.7	1788.4	1803.0	1807.3	1803.0	1794.2	1733.2
20°	1376.9	1445.2	1486.0	1545.5	1568.9	1615.3	1624.1	1631.4	1628.4	1621.2	1567.4
22.5°	1256.2	1310.1	1340.6	1393.0	1401.6	1440.9	1443.9	1449.7	1448.2	1445.2	1401.6
25°	1145.8	1182.1	1199.5	1238.8	1241.7	1270.8	1269.3	1275.1	1273.7	1273.7	1240.3
27.5°	1029.4	1051.3	1055.6	1080.3	1074.5	1096.4	1099.2	1096.4	1097.7	1099.2	1074.5
30°	913.1	917.5	904.4	907.2	891.3	904.4	891.3	901.4	901.4	905.9	891.3
32.5°	780.7	767.7	732.8	715.4	687.7	687.7	680.4	680.4	680.4	687.7	684.9
35°	639.8	607.8	553.9	516.1	477.0	466.7	465.2	450.8	453.6	463.9	471.0
37.5°	519.1	471.0	399.9	346.0	299.6	279.2	271.9	260.3	264.6	276.2	293.7
40°	433.2	375.2	292.3	229.8	183.2	160.0	148.3	141.1	145.4	160.0	181.7
42.5°	379.5	315.5	226.8	161.4	117.7	96.0	84.4	78.6	82.9	96.0	122.2
45°	340.2	273.4	183.2	119.2	79.9	59.7	49.4	45.1	47.9	59.7	81.4
47.5°	309.7	241.4	152.7	91.6	56.7	39.3	30.5	26.2	29.0	39.3	56.7
50°	282.0	215.2	129.4	72.7	43.6	29.0	20.4	17.4	20.4	27.7	42.1
52.5°	257.3	192.0	110.5	59.7	33.5	23.2	16.0	13.1	14.6	21.9	33.5
55°	235.6	174.4	97.5	50.9	29.0	20.4	14.6	11.6	14.6	18.9	29.0
57.5°	215.2	157.0	85.7	43.6	24.7	17.4	13.1	11.6	13.1	17.4	24.7
60°	194.8	139.6	75.6	37.8	21.9	16.0	11.6	10.1	11.6	14.6	21.9
62.5°	174.4	123.5	65.5	32.0	18.9	13.1	10.1	8.8	10.1	13.1	18.9
65°	151.2	104.6	55.2	27.7	16.0	11.6	8.8	8.8	8.8	11.6	16.0
67.5°	125.0	85.7	43.6	21.9	13.1	10.1	7.3	7.3	7.3	10.1	13.1
70°	96.0	64.0	33.5	17.4	10.1	7.3	5.8	5.8	5.8	7.3	10.1
72.5°	66.8	45.1	23.2	13.1	7.3	5.8	4.3	4.3	4.3	5.8	7.3
75°	42.1	29.0	16.0	8.8	5.8	4.3	3.0	3.0	3.0	4.3	5.8
77.5°	24.7	17.4	10.1	5.8	3.0	3.0	1.5	1.5	1.5	3.0	3.0
80°	13.1	10.1	5.8	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
82.5°	7.3	4.3	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
85°	3.0	1.5	1.5	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°	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4	1599.4
2.5°	1615.3	1621.2	1619.8	1589.3	1586.3	1587.8	1567.4	1574.7	1582.0	1574.7	1576.2
5°	1693.9	1692.4	1675.0	1631.4	1614.0	1602.3	1568.9	1563.1	1558.6	1542.7	1536.9
7.5°	1797.2	1776.8	1740.5	1675.0	1638.7	1606.7	1557.3	1532.5	1515.0	1487.5	1471.4
10°	1868.3	1827.7	1773.8	1688.1	1632.9	1583.4	1519.5	1481.7	1452.5	1416.2	1393.0
12.5°	1878.6	1821.9	1759.4	1659.0	1595.1	1533.9	1464.1	1422.0	1388.5	1349.3	1327.5
15°	1813.1	1754.9	1689.6	1589.3	1525.3	1462.8	1395.8	1353.7	1320.2	1282.4	1263.5
17.5°	1689.6	1635.7	1577.5	1484.5	1429.3	1372.6	1312.9	1276.6	1247.6	1218.4	1199.5
20°	1532.5	1490.3	1442.4	1363.8	1320.2	1273.7	1227.2	1198.0	1176.3	1151.6	1137.0
22.5°	1376.9	1344.9	1310.1	1247.6	1215.6	1182.1	1145.8	1125.4	1109.4	1090.4	1080.3
25°	1227.2	1205.3	1183.6	1135.5	1116.6	1093.4	1067.2	1052.6	1042.5	1029.4	1022.1
27.5°	1071.5	1064.4	1058.5	1027.9	1020.7	1004.7	987.3	978.5	971.2	962.6	956.8
30°	902.9	907.2	930.6	914.5	921.8	917.5	910.2	904.4	901.4	894.2	887.0
32.5°	712.4	742.9	776.4	780.7	802.6	812.7	811.4	812.7	814.2	808.4	802.6
35°	510.3	559.7	612.1	635.4	671.8	695.0	703.8	712.4	718.2	716.9	712.4
37.5°	340.2	407.2	469.7	510.3	558.4	590.4	609.3	623.7	632.5	635.4	635.4
40°	226.8	290.8	373.7	426.1	479.8	519.1	540.8	559.7	572.8	578.6	581.6
42.5°	160.0	228.3	312.7	372.2	427.4	469.7	494.4	514.8	527.8	535.0	538.0
45°	117.7	183.2	270.4	331.6	388.3	428.9	453.6	472.5	485.6	492.9	497.2
47.5°	90.2	154.2	238.4	300.9	357.6	395.4	418.8	436.2	447.8	453.6	456.6
50°	71.3	129.4	212.2	274.8	327.1	362.1	382.4	396.9	407.2	411.5	414.3
52.5°	58.2	111.9	190.5	250.0	299.6	330.1	346.0	357.6	366.4	369.4	372.2
55°	49.4	97.5	171.6	229.8	274.8	300.9	312.7	322.8	327.1	330.1	331.6
57.5°	43.6	85.7	155.5	210.9	251.5	273.4	282.0	289.3	290.8	293.7	295.1
60°	37.8	74.1	138.1	190.5	226.8	245.7	250.0	255.9	255.9	257.3	258.8
62.5°	32.0	64.0	120.7	170.1	202.1	218.1	221.0	222.5	222.5	222.5	224.0
65°	26.2	53.8	101.8	146.9	175.9	186.2	187.5	189.0	186.2	186.2	187.5
67.5°	21.9	42.1	81.4	120.7	143.9	152.7	151.2	151.2	146.9	146.9	148.3
70°	16.0	32.0	61.0	91.6	109.1	114.9	111.9	111.9	107.6	107.6	109.1
72.5°	11.6	23.2	42.1	62.5	75.6	78.6	75.6	75.6	72.7	72.7	74.1
75°	8.8	14.6	27.7	40.8	47.9	49.4	47.9	46.6	45.1	45.1	46.6
77.5°	5.8	10.1	16.0	23.2	27.7	29.0	27.7	27.7	26.2	27.7	27.7
80°	3.0	5.8	8.8	13.1	14.6	16.0	16.0	16.0	14.6	14.6	16.0
82.5°	1.5	3.0	4.3	5.8	7.3	8.8	7.3	7.3	7.3	7.3	7.3
85°	0.0	1.5	1.5	3.0	3.0	4.3	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: P135828

CATALOG NUMBER: LD6A20D010TE ERM6A20927 6LM121LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1599.4	1599.4	1599.4	1599.4
2.5°	1573.2	1565.9	1555.8	1577.5
5°	1528.1	1513.6	1501.9	1522.3
7.5°	1456.9	1436.6	1420.5	1440.9
10°	1375.4	1352.2	1334.8	1353.7
12.5°	1304.3	1280.9	1266.5	1280.9
15°	1241.7	1219.9	1206.8	1219.9
17.5°	1180.6	1161.7	1150.1	1164.7
20°	1122.4	1106.5	1096.4	1109.4
22.5°	1068.7	1054.1	1045.5	1058.5
25°	1012.0	1001.8	991.6	1003.2
27.5°	949.5	937.9	932.0	939.2
30°	878.2	866.6	862.3	868.1
32.5°	793.8	782.2	777.9	782.2
35°	706.6	696.5	690.7	696.5
37.5°	632.5	623.7	619.4	623.7
40°	580.1	575.8	571.5	577.3
42.5°	539.5	535.0	532.2	536.5
45°	497.2	491.4	488.6	492.9
47.5°	455.1	449.3	446.3	449.3
50°	411.5	404.2	402.7	404.2
52.5°	367.9	362.1	359.1	360.6
55°	328.6	324.3	321.3	322.8
57.5°	293.7	287.8	286.5	287.8
60°	258.8	255.9	254.5	255.9
62.5°	224.0	222.5	224.0	224.0
65°	189.0	189.0	190.5	190.5
67.5°	151.2	154.2	155.5	155.5
70°	111.9	114.9	116.4	116.4
72.5°	75.6	78.6	79.9	81.4
75°	47.9	50.9	52.4	52.4
77.5°	29.0	30.5	30.5	32.0
80°	16.0	17.4	17.4	17.4
82.5°	8.8	8.8	8.8	10.1
85°	4.3	4.3	4.3	4.3
87.5°	0.0	1.5	1.5	1.5
90°	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





— 0°-180° - - 45°-225° - - - 90°-270°













(END OF REPORT)