

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: P135970

Luminaire Tested: **LD6A30D010TE ERM6A30835 6LM121H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135970
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: LD6A30D010TE ERM6A30835 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 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2833.0 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

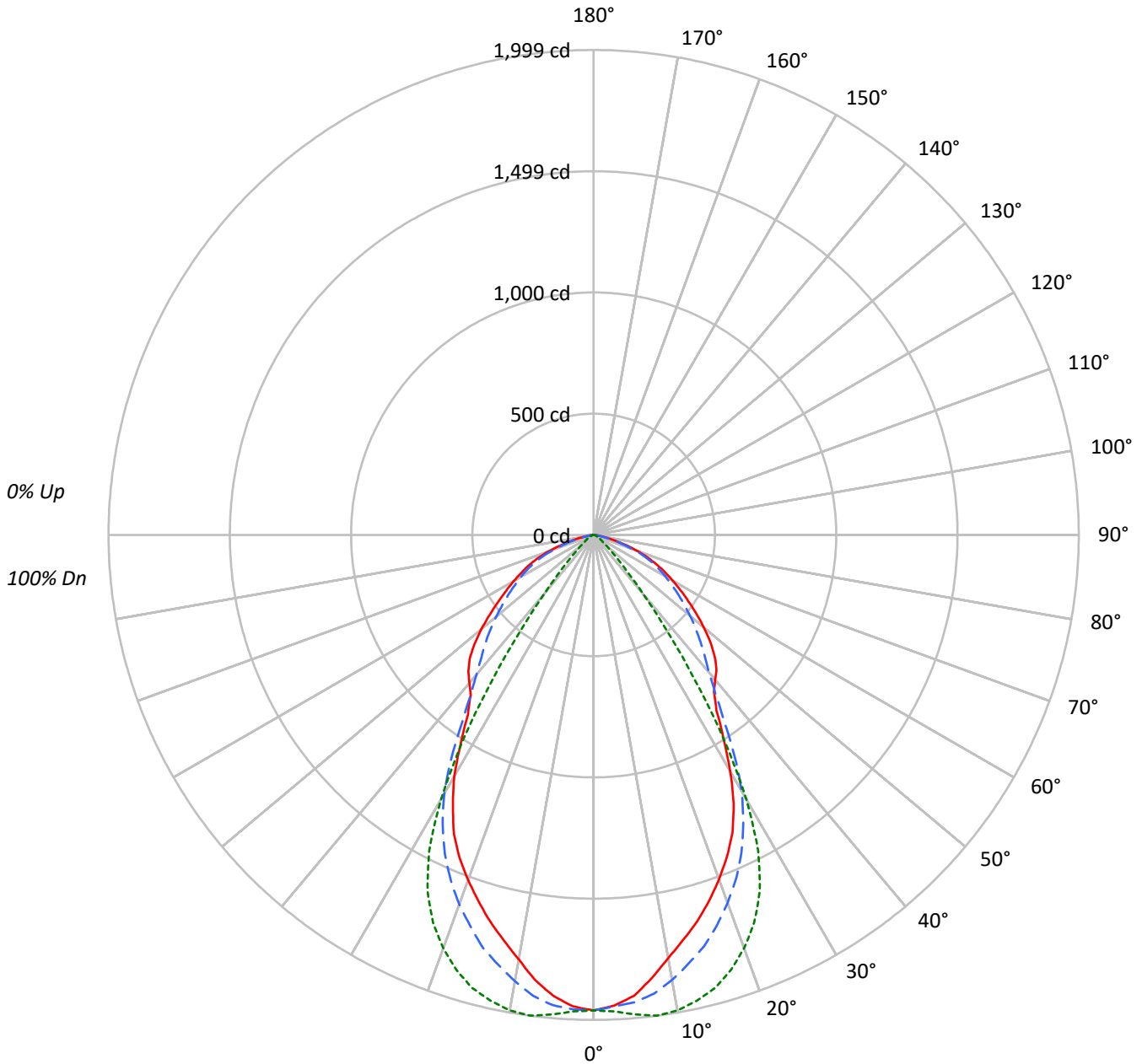
Input Watts (W): 45.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P135970

CATALOG NUMBER: LD6A30D010TE ERM6A30835 6LM121H

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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89			89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79			79
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70			70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62			62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56			56
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51			51
7	74	62	55	49	72	61	54	49	60	53	49	59	53	49	57	52	48	47			47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43			43
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39			39
10	62	50	43	38	61	50	43	38	49	43	38	48	42	38	47	42	38	36			36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	127878	127878	127878
5°	124876	129919	124876
10°	117297	131812	117688
15°	111390	130586	111390
20°	104836	125803	105044
25°	97403	116587	98044
30°	84758	94800	86543
35°	70270	57304	71927
40°	66318	26725	67834
45°	65019	12566	66652
50°	60106	6607	61304
55°	54222	4379	54563
60°	49061	3471	49452
65°	43873	2748	45247
70°	36147	2251	37273
75°	23871	1487	23871
80°	13338	1127	13338
85°	8833	0	6662



TEST NUMBER: P135970

CATALOG NUMBER: LD6A30D010TE ERM6A30835 6LM121H

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.8	6.5
10°-20°	496.0	17.5
20°-30°	663.0	23.4
30°-40°	548.2	19.4
40°-50°	393.4	13.9
50°-60°	289.1	10.2
60°-70°	186.7	6.6
70°-80°	66.1	2.3
80°-90°	7.7	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°	1341.8	47.4
0°-40°	1890.0	66.7
0°-60°	2572.5	90.8
0°-90°	2833.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2833.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1960	1960	1960	1960	1960	
5°	1907	1933	1984	1945	1907	177
15°	1649	1756	1933	1762	1649	463
25°	1353	1442	1620	1451	1362	615
35°	882	936	720	944	903	568
45°	705	622	136	631	722	538
55°	477	423	38	429	480	428
65°	284	264	18	266	293	280
75°	95	77	6	77	95	107
85°	12	6	0	6	9	14
90°	0	0	0	0	0	



TEST NUMBER: P135970

CATALOG NUMBER: LD6A30D010TE ERM6A30835 6LM121H

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1
2.5°	1942.3	1927.5	1939.4	1927.5	1930.5	1942.3	1945.3	1951.2	1954.2	1945.3	1945.3
5°	1906.8	1892.0	1906.8	1894.9	1900.9	1915.7	1918.6	1930.5	1936.4	1933.4	1939.4
7.5°	1841.6	1829.8	1844.6	1835.7	1844.6	1865.3	1874.2	1889.0	1900.9	1906.8	1915.7
10°	1770.6	1758.7	1773.5	1764.7	1779.5	1803.2	1812.0	1829.8	1847.6	1862.4	1877.2
12.5°	1708.4	1696.6	1705.4	1702.5	1717.3	1738.0	1752.8	1773.5	1794.3	1809.1	1829.8
15°	1649.2	1637.3	1649.2	1643.3	1655.1	1678.8	1693.6	1714.3	1738.0	1755.8	1779.5
17.5°	1581.1	1569.2	1578.1	1575.2	1587.0	1607.7	1622.5	1643.3	1667.0	1687.7	1711.4
20°	1510.0	1498.2	1507.1	1501.1	1513.0	1536.7	1548.5	1572.2	1592.9	1613.7	1634.4
22.5°	1436.0	1424.2	1436.0	1427.1	1444.9	1459.7	1471.5	1495.2	1513.0	1533.7	1551.5
25°	1353.1	1341.3	1350.1	1344.2	1356.1	1373.8	1382.7	1406.4	1421.2	1441.9	1459.7
27.5°	1249.5	1234.7	1252.4	1240.6	1255.4	1270.2	1279.1	1299.8	1317.6	1335.3	1350.1
30°	1125.1	1113.3	1131.0	1122.2	1139.9	1151.8	1163.6	1184.3	1199.1	1219.9	1222.8
32.5°	994.8	988.9	1003.7	997.8	1015.6	1027.4	1036.3	1057.0	1068.9	1080.7	1071.8
35°	882.3	876.4	891.2	888.3	903.1	911.9	920.8	932.7	932.7	935.6	911.9
37.5°	814.2	811.3	823.1	820.2	832.0	840.9	840.9	843.8	837.9	823.1	787.6
40°	778.7	775.7	784.6	781.7	790.5	793.5	790.5	784.6	766.9	737.2	689.9
42.5°	749.1	743.2	749.1	746.1	752.1	755.0	746.1	737.2	713.6	678.0	621.8
45°	704.7	698.8	707.6	701.7	707.6	707.6	698.8	686.9	660.3	621.8	562.6
47.5°	651.4	645.5	654.3	648.4	654.3	654.3	645.5	633.6	607.0	568.5	509.3
50°	592.2	586.2	592.2	589.2	595.1	598.1	586.2	577.4	553.7	518.1	458.9
52.5°	533.0	527.0	533.0	533.0	535.9	535.9	527.0	521.1	500.4	467.8	414.5
55°	476.7	470.8	479.7	476.7	479.7	479.7	470.8	464.9	450.0	423.4	373.1
57.5°	423.4	420.4	426.4	423.4	423.4	423.4	417.5	414.5	402.7	379.0	337.5
60°	376.0	370.1	373.1	373.1	373.1	376.0	370.1	367.1	358.3	340.5	302.0
62.5°	328.7	325.7	328.7	325.7	325.7	328.7	325.7	322.7	316.8	302.0	269.4
65°	284.2	278.3	284.2	281.3	281.3	281.3	278.3	278.3	272.4	263.5	233.9
67.5°	236.9	233.9	236.9	233.9	230.9	230.9	228.0	228.0	225.0	219.1	192.5
70°	189.5	183.6	186.5	180.6	183.6	177.7	177.7	174.7	171.7	168.8	148.0
72.5°	139.2	136.2	136.2	130.3	130.3	127.3	124.4	124.4	121.4	121.4	106.6
75°	94.7	94.7	91.8	85.9	88.8	82.9	82.9	82.9	79.9	77.0	68.1
77.5°	62.2	59.2	59.2	56.3	56.3	50.3	53.3	50.3	50.3	47.4	41.5
80°	35.5	35.5	35.5	32.6	32.6	29.6	29.6	29.6	26.6	26.6	23.7
82.5°	20.7	20.7	20.7	17.8	17.8	17.8	17.8	14.8	14.8	14.8	11.8
85°	11.8	8.9	8.9	8.9	8.9	8.9	8.9	5.9	5.9	5.9	5.9
87.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	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: P135970

CATALOG NUMBER: LD6A30D010TE ERM6A30835 6LM121H

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1
2.5°	1957.1	1954.2	1951.2	1963.0	1966.0	1957.1	1957.1	1966.0	1971.9	1957.1	1954.2
5°	1954.2	1957.1	1957.1	1971.9	1980.8	1974.9	1974.9	1983.8	1989.7	1971.9	1966.0
7.5°	1939.4	1948.2	1954.2	1974.9	1989.7	1986.7	1989.7	1998.6	2001.5	1983.8	1974.9
10°	1906.8	1918.6	1930.5	1957.1	1974.9	1977.8	1980.8	1989.7	1995.6	1971.9	1960.1
12.5°	1862.4	1880.1	1897.9	1927.5	1948.2	1951.2	1960.1	1966.0	1969.0	1948.2	1933.4
15°	1812.0	1835.7	1853.5	1886.1	1909.7	1915.7	1924.5	1933.4	1933.4	1909.7	1894.9
17.5°	1749.9	1770.6	1794.3	1826.8	1853.5	1859.4	1871.3	1880.1	1880.1	1856.4	1835.7
20°	1672.9	1696.6	1717.3	1752.8	1782.4	1791.3	1803.2	1812.0	1812.0	1791.3	1764.7
22.5°	1592.9	1616.6	1637.3	1669.9	1699.5	1708.4	1717.3	1729.1	1726.2	1708.4	1684.7
25°	1498.2	1518.9	1533.7	1566.3	1590.0	1598.9	1610.7	1619.6	1616.6	1598.9	1578.1
27.5°	1382.7	1397.5	1400.5	1421.2	1441.9	1450.8	1459.7	1468.6	1465.6	1450.8	1433.0
30°	1249.5	1246.5	1231.7	1231.7	1240.6	1246.5	1252.4	1258.4	1255.4	1246.5	1234.7
32.5°	1080.7	1060.0	1021.5	1000.8	991.9	991.9	991.9	997.8	994.8	991.9	991.9
35°	900.1	855.7	796.5	752.1	728.4	719.5	713.6	719.5	716.5	719.5	731.3
37.5°	752.1	686.9	607.0	547.8	509.3	491.5	479.7	482.6	482.6	491.5	512.2
40°	642.5	559.6	470.8	396.8	352.3	328.7	313.8	313.8	316.8	328.7	355.3
42.5°	559.6	467.8	370.1	299.0	245.7	222.1	207.3	204.3	207.3	222.1	248.7
45°	494.5	396.8	299.0	222.1	177.7	151.0	139.2	136.2	139.2	154.0	177.7
47.5°	438.2	340.5	248.7	171.7	127.3	106.6	94.7	91.8	97.7	109.6	130.3
50°	390.8	296.1	204.3	136.2	97.7	77.0	68.1	65.1	68.1	79.9	97.7
52.5°	346.4	257.6	171.7	106.6	74.0	59.2	50.3	47.4	50.3	59.2	77.0
55°	310.9	228.0	148.0	88.8	59.2	47.4	41.5	38.5	41.5	47.4	62.2
57.5°	278.3	201.3	127.3	74.0	50.3	38.5	32.6	32.6	32.6	38.5	50.3
60°	248.7	177.7	109.6	62.2	41.5	32.6	26.6	26.6	26.6	32.6	41.5
62.5°	222.1	156.9	94.7	53.3	35.5	26.6	23.7	23.7	23.7	26.6	35.5
65°	189.5	133.2	79.9	44.4	29.6	23.7	20.7	17.8	20.7	23.7	29.6
67.5°	156.9	109.6	65.1	35.5	23.7	17.8	14.8	14.8	14.8	17.8	23.7
70°	121.4	85.9	50.3	26.6	17.8	14.8	11.8	11.8	11.8	14.8	17.8
72.5°	82.9	59.2	35.5	20.7	14.8	11.8	8.9	8.9	8.9	11.8	14.8
75°	53.3	38.5	23.7	14.8	8.9	8.9	5.9	5.9	5.9	8.9	8.9
77.5°	32.6	23.7	14.8	8.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
80°	17.8	14.8	8.9	5.9	5.9	3.0	3.0	3.0	3.0	3.0	3.0
82.5°	8.9	8.9	5.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
85°	3.0	3.0	3.0	3.0	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



TEST NUMBER: P135970

CATALOG NUMBER: LD6A30D010TE ERM6A30835 6LM121H

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1	1960.1
2.5°	1954.2	1960.1	1963.0	1951.2	1954.2	1957.1	1939.4	1942.3	1933.4	1951.2	1942.3
5°	1963.0	1966.0	1969.0	1951.2	1948.2	1945.3	1924.5	1921.6	1909.7	1924.5	1915.7
7.5°	1966.0	1960.1	1960.1	1933.4	1924.5	1915.7	1889.0	1880.1	1865.3	1871.3	1859.4
10°	1951.2	1939.4	1930.5	1897.9	1883.1	1868.3	1835.7	1823.9	1803.2	1806.1	1791.3
12.5°	1918.6	1903.8	1889.0	1853.5	1835.7	1815.0	1782.4	1764.7	1743.9	1743.9	1726.2
15°	1877.2	1859.4	1841.6	1806.1	1782.4	1761.7	1723.2	1705.4	1684.7	1681.8	1667.0
17.5°	1818.0	1797.2	1779.5	1738.0	1714.3	1690.6	1655.1	1634.4	1613.7	1613.7	1595.9
20°	1746.9	1723.2	1702.5	1664.0	1640.3	1619.6	1578.1	1560.4	1542.6	1539.6	1524.8
22.5°	1664.0	1640.3	1622.5	1587.0	1560.4	1539.6	1504.1	1489.3	1471.5	1468.6	1450.8
25°	1560.4	1539.6	1521.9	1492.3	1468.6	1450.8	1418.2	1400.5	1388.6	1388.6	1373.8
27.5°	1421.2	1403.4	1400.5	1376.8	1359.0	1347.2	1320.5	1308.7	1293.9	1293.9	1276.1
30°	1234.7	1237.6	1249.5	1243.6	1237.6	1231.7	1208.0	1205.1	1187.3	1184.3	1163.6
32.5°	1006.7	1027.4	1060.0	1077.7	1086.6	1092.6	1086.6	1080.7	1065.9	1062.9	1039.3
35°	763.9	805.3	858.6	894.2	923.8	944.5	953.4	953.4	947.5	944.5	923.8
37.5°	553.7	615.9	686.9	746.1	793.5	832.0	849.8	861.6	861.6	861.6	852.7
40°	405.6	479.7	562.6	639.5	698.8	749.1	775.7	796.5	802.4	811.3	805.3
42.5°	302.0	381.9	470.8	559.6	627.7	684.0	719.5	743.2	758.0	766.9	766.9
45°	230.9	310.9	402.7	497.4	568.5	630.7	666.2	692.8	707.6	719.5	719.5
47.5°	177.7	254.6	346.4	441.2	515.2	577.4	612.9	636.6	651.4	663.2	663.2
50°	139.2	210.2	299.0	390.8	464.9	524.1	556.6	580.3	592.2	601.1	604.0
52.5°	112.5	177.7	263.5	352.3	420.4	473.7	500.4	521.1	533.0	538.9	541.8
55°	91.8	154.0	233.9	313.8	379.0	429.3	453.0	467.8	476.7	482.6	482.6
57.5°	77.0	133.2	207.3	284.2	346.4	384.9	405.6	417.5	423.4	429.3	429.3
60°	65.1	115.5	183.6	254.6	310.9	346.4	361.2	370.1	376.0	379.0	379.0
62.5°	56.3	97.7	159.9	225.0	275.4	307.9	319.8	325.7	328.7	328.7	331.6
65°	47.4	82.9	136.2	195.4	236.9	266.5	275.4	278.3	278.3	281.3	284.2
67.5°	35.5	65.1	109.6	159.9	195.4	219.1	228.0	228.0	228.0	228.0	230.9
70°	29.6	50.3	82.9	121.4	151.0	168.8	174.7	174.7	174.7	174.7	177.7
72.5°	20.7	35.5	59.2	85.9	109.6	121.4	121.4	124.4	121.4	121.4	127.3
75°	14.8	23.7	38.5	56.3	68.1	77.0	79.9	79.9	79.9	79.9	82.9
77.5°	8.9	14.8	23.7	32.6	44.4	47.4	50.3	50.3	50.3	50.3	53.3
80°	5.9	8.9	14.8	20.7	23.7	26.6	29.6	29.6	29.6	29.6	29.6
82.5°	3.0	5.9	8.9	8.9	11.8	14.8	14.8	14.8	14.8	14.8	17.8
85°	0.0	3.0	3.0	5.9	5.9	5.9	5.9	5.9	5.9	5.9	8.9
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: P135970

CATALOG NUMBER: LD6A30D010TE ERM6A30835 6LM121H

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1960.1	1960.1	1960.1	1960.1
2.5°	1924.5	1945.3	1930.5	1945.3
5°	1894.9	1912.7	1894.9	1906.8
7.5°	1835.7	1850.5	1832.8	1850.5
10°	1764.7	1779.5	1761.7	1776.5
12.5°	1699.5	1711.4	1693.6	1711.4
15°	1640.3	1652.1	1634.4	1649.2
17.5°	1572.2	1581.1	1566.3	1581.1
20°	1501.1	1510.0	1498.2	1513.0
22.5°	1430.1	1441.9	1427.1	1441.9
25°	1350.1	1359.0	1344.2	1362.0
27.5°	1255.4	1261.3	1246.5	1255.4
30°	1139.9	1142.9	1131.0	1148.8
32.5°	1018.5	1018.5	1000.8	1018.5
35°	906.0	903.1	891.2	903.1
37.5°	835.0	835.0	826.1	832.0
40°	793.5	796.5	784.6	796.5
42.5°	758.0	763.9	755.0	763.9
45°	713.6	719.5	710.6	722.4
47.5°	657.3	663.2	657.3	666.2
50°	595.1	601.1	595.1	604.0
52.5°	533.0	538.9	533.0	538.9
55°	476.7	479.7	473.7	479.7
57.5°	423.4	426.4	420.4	426.4
60°	373.1	379.0	373.1	379.0
62.5°	328.7	331.6	331.6	334.6
65°	281.3	293.1	290.2	293.1
67.5°	233.9	242.8	242.8	245.7
70°	180.6	186.5	192.5	195.4
72.5°	127.3	136.2	139.2	142.1
75°	82.9	91.8	91.8	94.7
77.5°	53.3	59.2	59.2	59.2
80°	32.6	35.5	32.6	35.5
82.5°	17.8	17.8	17.8	20.7
85°	8.9	8.9	8.9	8.9
87.5°	3.0	3.0	3.0	3.0
90°	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)