

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P#

Luminaire Tested: **4SNLED-LD5-45HL-RW-UNV-L935-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33525)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WHITE REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

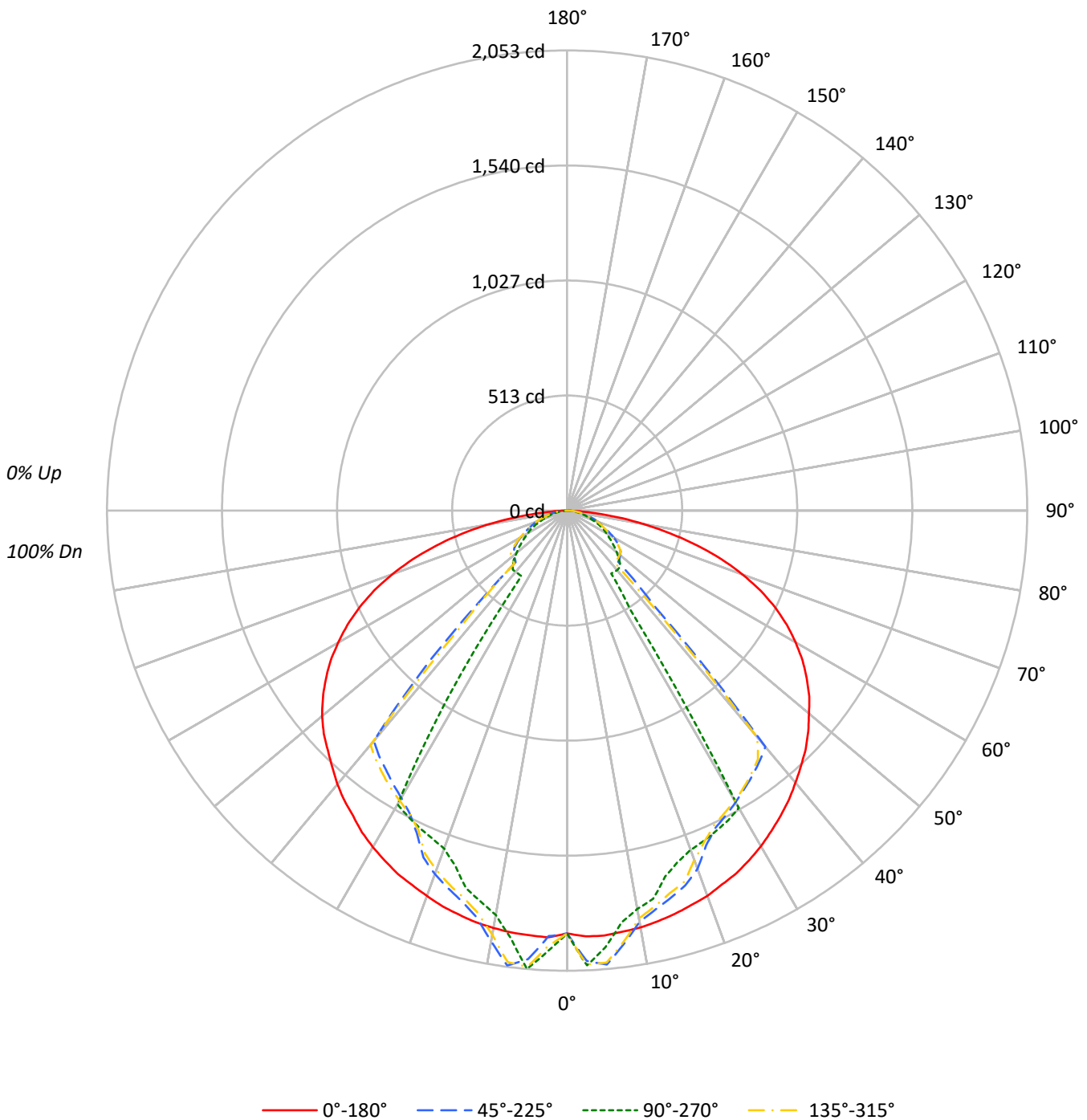
Lumens per Lamp: N/A
Luminaire Lumens: 3778.0 lumens
Efficiency: N/A
Efficacy: 102.1 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.16 / 1.2
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 37
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



TEST NUMBER: P#
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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	110	106	102	99	108	104	101	98	100	97	94	96	94	92	92	91	89	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	75
3	94	84	77	72	91	83	76	71	80	74	70	77	73	69	75	71	67	65
4	87	76	68	62	85	75	67	62	72	66	61	70	65	60	68	63	59	57
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41
8	66	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37
9	62	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	15246	15246	15246	15246
5°	15396	15361	15388	16121
10°	15411	13888	15432	14101
15°	15445	12850	15481	13257
20°	15557	12187	15557	12142
25°	15692	11954	15714	11843
30°	15850	11744	15890	11604
35°	16035	2675	16068	2790
40°	16292	2781	16390	2872
45°	16682	2766	16739	2867
50°	17072	2501	17302	2568
55°	17596	2221	17737	2253
60°	18043	1974	18083	1999
65°	18361	1723	18315	1695
70°	18099	1388	18043	1338
75°	16802	1068	16922	1023
80°	13638	759	14184	695
85°	7385	454	7795	349



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	185.6	4.9
10°-20°	510.4	13.5
20°-30°	756.0	20.0
30°-40°	761.7	20.2
40°-50°	595.0	15.7
50°-60°	459.6	12.2
60°-70°	308.6	8.2
70°-80°	157.4	4.2
80°-90°	43.8	1.2
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°	1452.0	38.4
0°-40°	2213.6	58.6
0°-60°	3268.2	86.5
0°-90°	3778.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3778.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1887	1887	1887	1887	1887	
5°	1903	1956	1902	2053	1903	181
15°	1862	1690	1866	1744	1862	527
25°	1786	1575	1788	1561	1786	824
35°	1661	342	1664	357	1661	1041
45°	1505	333	1510	345	1505	1161
55°	1305	242	1315	246	1305	1165
65°	1025	163	1022	160	1025	1008
75°	601	82	605	79	601	628
85°	108	26	114	20	108	149
90°	0	0	0	0	0	



TEST NUMBER: P#

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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	1901.3	1908.3	1913.4	1916.9	1918.6	1918.6	1919.5	1920.4	1931.6	1936.8	1940.2
5°	1903.1	1910.0	1920.4	1934.2	1946.3	1956.7	1965.3	1977.4	1989.5	2002.5	2006.8
7.5°	1895.3	1903.9	1924.7	1949.8	1973.1	1989.5	2000.8	2008.5	2014.6	2015.5	2019.8
10°	1888.4	1903.9	1932.5	1965.3	1994.7	2014.6	2014.6	2010.3	2016.3	1993.0	1969.6
12.5°	1876.3	1893.6	1932.5	1975.7	2003.4	2011.1	2007.7	1990.4	1954.9	1926.4	1913.4
15°	1861.6	1884.9	1933.3	1981.7	2005.1	2007.7	1974.8	1930.7	1903.9	1886.6	1865.0
17.5°	1845.1	1876.3	1934.2	1982.6	1991.3	1979.2	1916.9	1889.2	1861.6	1820.9	1791.5
20°	1829.6	1859.8	1927.3	1970.5	1975.7	1921.2	1872.8	1843.4	1796.7	1761.3	1748.3
22.5°	1805.4	1840.8	1921.2	1954.1	1934.2	1871.1	1824.4	1777.7	1735.3	1724.9	1709.4
25°	1785.5	1822.7	1907.4	1934.2	1881.4	1825.2	1770.8	1716.3	1696.4	1681.7	1667.9
27.5°	1758.7	1804.5	1889.2	1897.9	1825.2	1776.0	1696.4	1672.2	1654.0	1637.6	1631.6
30°	1729.3	1785.5	1864.2	1847.7	1778.6	1705.9	1647.1	1624.7	1611.7	1594.4	1587.5
32.5°	1695.6	1756.9	1836.5	1789.8	1728.4	1637.6	1599.6	1582.3	1565.0	1552.0	1508.8
35°	1661.0	1731.9	1803.6	1734.5	1667.9	1585.7	1552.0	1536.5	1520.0	1472.5	1427.5
37.5°	1625.5	1704.2	1763.9	1674.8	1587.5	1532.1	1503.6	1486.3	1449.1	1388.6	1366.1
40°	1584.9	1670.5	1712.8	1613.4	1517.4	1477.7	1450.9	1433.6	1349.7	1322.9	1316.0
42.5°	1544.2	1637.6	1650.6	1553.8	1459.5	1419.7	1397.3	1340.2	1283.1	1269.3	1271.9
45°	1505.3	1602.2	1582.3	1469.0	1399.0	1366.1	1328.1	1249.4	1219.1	1226.1	1227.8
47.5°	1458.6	1559.8	1510.5	1384.3	1336.7	1303.9	1219.1	1171.6	1167.3	1176.8	1182.0
50°	1408.5	1512.2	1434.4	1307.3	1269.3	1230.4	1134.4	1110.2	1115.4	1124.9	1130.9
52.5°	1361.8	1458.6	1355.7	1235.6	1202.7	1113.7	1048.8	1053.1	1061.8	1073.0	1076.5
55°	1304.7	1393.8	1271.9	1162.9	1131.8	1015.1	985.7	996.1	1004.7	1014.2	1021.1
57.5°	1245.1	1319.4	1172.4	1081.7	1031.5	927.8	930.3	937.3	943.3	954.6	394.3
60°	1176.8	1234.7	1063.5	1006.4	907.0	858.6	861.2	873.3	879.3	491.1	271.5
62.5°	1105.9	1136.1	964.9	920.8	792.9	789.4	801.5	806.7	549.0	259.4	254.2
65°	1024.6	1018.5	868.1	798.1	715.1	718.5	731.5	705.5	243.0	243.0	241.2
67.5°	934.7	898.4	773.8	660.6	639.8	647.6	661.4	230.9	224.8	226.5	220.5
70°	831.8	780.8	676.1	559.4	566.3	574.1	223.1	209.2	206.6	202.3	190.2
72.5°	722.8	652.8	553.4	485.9	490.2	307.8	195.4	188.5	179.8	171.2	158.2
75°	600.9	510.1	406.4	406.4	412.4	175.5	170.3	159.1	149.6	138.3	130.6
77.5°	471.2	392.5	315.6	327.7	160.0	147.0	137.5	125.4	117.6	110.7	106.4
80°	345.0	274.1	237.8	212.7	124.5	111.5	102.0	95.1	91.7	87.3	82.1
82.5°	226.5	165.1	165.1	100.3	87.3	77.0	74.4	69.2	65.7	63.1	60.5
85°	108.1	96.0	72.6	61.4	54.5	49.3	47.6	45.0	45.0	44.1	43.2
87.5°	39.8	43.2	32.0	31.1	29.4	28.5	29.4	29.4	30.3	29.4	28.5
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):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	47.5°	50°	52.5°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	1948.9	1955.8	1961.0	1969.6	1980.9	1990.4	1999.0	2011.1	2030.2	2035.4	2039.7
5°	2006.8	2009.4	2015.5	2022.4	2024.1	2028.4	2027.6	2032.8	2035.4	2041.4	2028.4
7.5°	2010.3	1996.4	1980.0	1965.3	1954.9	1945.4	1939.4	1948.9	1954.1	1958.4	1945.4
10°	1937.6	1921.2	1911.7	1903.1	1892.7	1878.0	1858.1	1862.4	1860.7	1860.7	1856.4
12.5°	1891.8	1868.5	1844.3	1822.7	1813.1	1812.3	1813.1	1822.7	1822.7	1821.8	1816.6
15°	1820.1	1797.6	1785.5	1780.3	1780.3	1777.7	1777.7	1788.1	1785.5	1785.5	1782.9
17.5°	1772.5	1756.9	1748.3	1742.2	1739.6	1744.0	1749.2	1753.5	1754.3	1750.9	1737.1
20°	1733.6	1718.9	1708.5	1710.3	1709.4	1712.0	1714.6	1699.9	1681.7	1657.5	1646.3
22.5°	1693.0	1681.7	1673.9	1673.9	1663.6	1647.1	1622.9	1617.7	1615.1	1603.9	1594.4
25°	1654.0	1641.1	1629.8	1595.3	1573.6	1576.2	1571.9	1563.3	1562.4	1561.5	1565.0
27.5°	1615.1	1581.4	1538.2	1533.0	1524.4	1523.5	1528.7	1533.0	1533.0	1536.5	1540.8
30°	1534.7	1495.8	1488.0	1478.5	1482.0	1494.1	1496.7	1502.7	1504.5	1510.5	1514.0
32.5°	1461.2	1443.9	1437.0	1441.3	1452.6	1463.0	1469.0	1471.6	1475.9	1481.1	1485.4
35°	1401.6	1396.4	1402.4	1412.0	1423.2	1431.8	1437.0	1442.2	1446.5	1450.9	1454.3
37.5°	1357.5	1360.9	1369.6	1381.7	1392.9	1399.8	1404.2	1410.2	1416.3	1421.5	1400.7
40°	1316.0	1324.6	1334.1	1347.1	1356.6	1363.5	1367.9	1375.6	1323.8	599.2	328.6
42.5°	1279.7	1289.2	1296.1	1306.5	1316.8	1322.0	1284.0	573.3	324.2	322.5	326.8
45°	1235.6	1243.3	1254.6	1262.4	1271.9	835.2	319.1	322.5	317.3	320.8	322.5
47.5°	1190.6	1202.7	1208.8	1153.4	343.3	317.3	313.9	317.3	313.9	318.2	315.6
50°	1139.6	1154.3	821.4	310.4	307.8	306.1	309.5	307.8	310.4	313.9	306.9
52.5°	1087.7	673.6	300.9	299.2	300.9	299.2	305.2	300.9	301.8	298.3	289.7
55°	368.3	291.4	288.8	287.9	293.1	293.1	293.1	286.2	281.9	273.2	267.2
57.5°	281.9	281.9	281.0	281.9	280.1	278.4	270.6	264.6	258.5	246.4	243.0
60°	267.2	267.2	267.2	267.2	259.4	255.9	243.8	238.6	228.3	222.2	218.8
62.5°	255.1	253.3	245.6	243.0	234.3	224.8	217.9	212.7	202.3	198.9	196.3
65°	237.8	231.7	222.2	211.8	207.5	197.1	193.7	185.9	180.7	178.1	176.4
67.5°	209.2	200.6	192.8	185.9	178.1	174.7	170.3	164.3	160.8	159.1	157.4
70°	179.0	172.9	165.1	160.8	155.6	153.0	147.0	145.3	142.7	140.1	137.5
72.5°	149.6	146.1	142.7	136.6	134.9	133.2	127.1	123.6	120.2	116.7	115.0
75°	125.4	122.8	121.0	115.9	113.3	108.1	103.8	101.2	98.6	96.0	94.2
77.5°	102.9	101.2	96.0	92.5	90.8	86.5	84.7	85.6	83.9	80.4	78.7
80°	80.4	78.7	74.4	74.4	72.6	70.9	69.2	67.4	65.7	63.1	61.4
82.5°	61.4	59.7	57.9	56.2	54.5	53.6	52.7	51.0	49.3	47.6	46.7
85°	43.2	42.4	41.5	40.6	39.8	38.9	38.0	36.3	34.6	33.7	32.9
87.5°	29.4	28.5	27.7	26.8	25.9	25.1	24.2	23.3	21.6	20.8	19.9
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°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77.5°	80°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	2039.7	2044.0	2039.7	2030.2	2024.1	2021.5	2026.7	2026.7	2030.2	2034.5	2035.4
5°	2007.7	1997.3	1985.2	1973.1	1967.0	1963.6	1954.1	1955.8	1958.4	1960.1	1961.9
7.5°	1928.1	1914.3	1897.9	1882.3	1876.3	1871.1	1859.8	1859.8	1859.8	1860.7	1865.9
10°	1846.9	1840.8	1833.9	1823.5	1815.7	1813.1	1803.6	1806.2	1804.5	1807.1	1813.1
12.5°	1808.8	1801.9	1795.8	1785.5	1776.8	1773.4	1769.0	1771.6	1770.8	1775.1	1780.3
15°	1774.2	1770.8	1763.9	1756.1	1748.3	1741.4	1725.8	1720.6	1717.2	1712.8	1718.9
17.5°	1717.2	1693.0	1676.5	1664.4	1655.8	1649.7	1645.4	1645.4	1648.0	1650.6	1655.8
20°	1639.4	1632.4	1624.7	1611.7	1603.0	1599.6	1597.0	1597.0	1601.3	1604.8	1614.3
22.5°	1585.7	1584.9	1582.3	1576.2	1571.9	1571.9	1572.8	1574.5	1580.6	1585.7	1595.3
25°	1560.7	1564.1	1562.4	1558.9	1556.3	1557.2	1555.5	1557.2	1563.3	1568.4	1576.2
27.5°	1540.8	1546.0	1544.2	1539.1	1534.7	1536.5	1539.1	1537.3	1542.5	1548.6	1554.6
30°	1514.0	1514.8	1518.3	1512.2	1510.5	1513.1	1514.0	1515.7	1520.9	1525.2	1530.4
32.5°	1483.7	1490.6	1489.8	1483.7	1483.7	1486.3	1487.2	1429.2	1321.2	1137.9	1087.7
35°	1454.3	1462.1	1449.1	1221.7	845.6	451.3	348.4	336.3	338.9	340.7	342.4
37.5°	1075.6	510.1	325.1	327.7	330.3	332.9	335.5	338.1	340.7	343.3	344.1
40°	323.4	322.5	325.1	328.6	331.2	332.9	336.3	338.9	341.5	344.1	345.0
42.5°	319.9	321.6	324.2	327.7	331.2	334.6	337.2	340.7	342.4	344.1	345.0
45°	318.2	321.6	325.1	327.7	330.3	332.0	333.7	334.6	333.7	333.7	335.5
47.5°	315.6	319.1	319.9	319.1	319.9	319.1	319.1	319.1	316.5	315.6	315.6
50°	306.1	306.1	304.4	300.9	300.0	299.2	297.4	296.6	293.1	292.2	292.2
52.5°	286.2	285.3	282.7	278.4	276.7	275.0	274.1	273.2	269.8	268.0	268.9
55°	262.8	261.1	258.5	253.3	252.5	250.7	249.9	249.0	245.6	247.3	244.7
57.5°	241.2	237.8	234.3	233.5	230.0	229.1	228.3	227.4	224.8	225.7	223.9
60°	215.3	214.4	212.7	209.2	209.2	208.4	208.4	206.6	204.9	204.1	204.1
62.5°	196.3	193.7	191.9	191.9	189.4	189.4	189.4	187.6	185.9	186.8	185.9
65°	175.5	174.7	173.8	172.1	172.1	171.2	171.2	169.5	166.9	167.7	166.0
67.5°	158.2	156.5	154.8	153.9	150.4	148.7	147.9	147.0	143.5	144.4	142.7
70°	136.6	134.0	132.3	130.6	128.0	126.2	126.2	124.5	121.9	122.8	121.0
72.5°	114.1	112.4	110.7	109.8	107.2	106.4	105.5	104.6	102.0	102.9	102.0
75°	95.1	95.1	94.2	93.4	90.8	88.2	86.5	85.6	83.9	84.7	83.0
77.5°	78.7	77.0	75.2	75.2	72.6	70.9	69.2	69.2	69.2	68.3	67.4
80°	61.4	59.7	59.7	58.8	57.1	55.3	54.5	54.5	53.6	53.6	52.7
82.5°	46.7	45.0	44.1	44.1	42.4	41.5	40.6	39.8	39.8	39.8	38.9
85°	32.9	31.1	30.3	30.3	28.5	27.7	27.7	26.8	26.8	25.9	25.9
87.5°	19.9	19.0	18.2	18.2	16.4	15.6	15.6	15.6	14.7	14.7	13.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°	92.5°	95°	97.5°	100°	102.5°	105°	107.5°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	2035.4	2035.4	2029.3	2031.0	2028.4	2031.9	2027.6	2027.6	2032.8	2032.8	2036.2
5°	1962.7	1958.4	1957.5	1955.8	1947.2	1950.6	1946.3	1942.0	1948.0	1948.0	1955.8
7.5°	1863.3	1855.5	1859.0	1853.8	1848.6	1840.8	1843.4	1839.9	1844.3	1850.3	1858.1
10°	1812.3	1805.4	1809.7	1804.5	1807.1	1795.8	1796.7	1797.6	1801.9	1803.6	1810.5
12.5°	1779.4	1777.7	1776.0	1774.2	1776.0	1769.9	1766.5	1767.3	1769.0	1769.9	1775.1
15°	1710.3	1699.0	1702.5	1690.4	1691.2	1692.1	1685.2	1692.1	1691.2	1702.5	1712.8
17.5°	1654.0	1654.0	1648.0	1642.8	1639.4	1638.5	1633.3	1636.8	1633.3	1640.2	1642.8
20°	1615.1	1614.3	1613.4	1610.8	1602.2	1603.0	1605.6	1597.8	1597.0	1596.1	1601.3
22.5°	1597.0	1597.8	1594.4	1594.4	1586.6	1588.3	1589.2	1580.6	1581.4	1578.8	1581.4
25°	1578.0	1579.7	1575.4	1575.4	1573.6	1572.8	1568.4	1570.2	1565.0	1560.7	1565.0
27.5°	1555.5	1558.9	1555.5	1557.2	1553.8	1552.0	1549.4	1547.7	1542.5	1541.6	1544.2
30°	1534.7	1536.5	1535.6	1531.3	1530.4	1525.2	1527.8	1522.6	1517.4	1518.3	1520.0
32.5°	786.8	751.4	579.3	523.1	517.9	536.9	636.4	774.7	1003.8	1226.1	1386.0
35°	343.3	343.3	343.3	342.4	342.4	341.5	340.7	339.8	338.9	338.1	337.2
37.5°	345.0	345.0	345.0	345.0	344.1	343.3	343.3	341.5	340.7	339.8	338.9
40°	345.9	346.7	346.7	346.7	345.9	345.9	345.0	343.3	342.4	340.7	338.9
42.5°	345.0	345.9	345.9	345.0	345.0	344.1	344.1	343.3	342.4	341.5	340.7
45°	333.7	334.6	332.9	332.9	332.0	332.0	332.0	332.0	332.0	332.9	332.9
47.5°	313.9	313.9	313.0	312.1	312.1	311.3	312.1	311.3	313.0	313.9	315.6
50°	290.5	290.5	288.8	287.9	287.9	287.9	287.9	288.8	289.7	291.4	293.1
52.5°	266.3	266.3	265.4	264.6	263.7	263.7	266.3	265.4	266.3	267.2	269.8
55°	243.0	243.8	242.1	242.1	241.2	241.2	241.2	242.1	243.0	243.8	246.4
57.5°	223.1	223.1	221.3	221.3	221.3	220.5	223.1	221.3	222.2	223.1	224.8
60°	203.2	202.3	202.3	201.5	201.5	201.5	203.2	202.3	202.3	203.2	204.9
62.5°	185.0	185.0	184.2	184.2	183.3	183.3	185.0	184.2	184.2	185.0	185.9
65°	164.3	164.3	163.4	162.6	165.1	162.6	165.1	163.4	165.1	166.0	167.7
67.5°	140.9	140.9	140.9	140.1	140.1	141.8	142.7	140.9	141.8	143.5	144.4
70°	120.2	120.2	119.3	119.3	119.3	121.0	121.9	120.2	121.0	121.9	123.6
72.5°	102.0	100.3	100.3	99.4	101.2	101.2	102.0	101.2	102.0	102.0	103.8
75°	83.9	82.1	82.1	82.1	83.9	83.0	83.9	83.0	83.9	83.9	84.7
77.5°	67.4	66.6	65.7	65.7	67.4	67.4	67.4	66.6	67.4	68.3	69.2
80°	52.7	51.9	51.0	51.0	52.7	52.7	52.7	53.6	52.7	53.6	54.5
82.5°	38.9	38.0	37.2	38.9	38.9	38.9	38.9	39.8	38.9	39.8	40.6
85°	25.9	25.1	24.2	25.9	25.9	25.9	25.9	26.8	25.9	26.8	27.7
87.5°	13.8	13.0	13.0	13.8	13.8	13.8	14.7	14.7	14.7	15.6	15.6
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	2041.4	2044.0	2043.1	2037.9	2032.8	2026.7	2022.4	2023.2	2031.9	2034.5	2026.7
5°	1955.8	1972.2	1972.2	1983.5	1977.4	1972.2	1975.7	1994.7	2004.2	2018.9	2024.1
7.5°	1867.6	1875.4	1874.5	1885.8	1884.0	1884.0	1886.6	1911.7	1923.8	1935.9	1939.4
10°	1818.3	1826.1	1825.2	1826.1	1823.5	1817.5	1817.5	1828.7	1839.1	1845.1	1846.9
12.5°	1782.9	1787.2	1786.3	1786.3	1784.6	1779.4	1778.6	1788.1	1799.3	1807.1	1808.0
15°	1730.1	1742.2	1744.8	1756.1	1753.5	1746.6	1748.3	1756.1	1763.0	1769.9	1767.3
17.5°	1651.5	1657.5	1658.4	1662.7	1661.0	1661.0	1671.3	1699.9	1718.9	1735.3	1737.1
20°	1606.5	1610.8	1609.1	1618.6	1614.3	1613.4	1616.0	1628.1	1636.8	1644.5	1658.4
22.5°	1584.9	1588.3	1585.7	1586.6	1578.8	1571.9	1570.2	1579.7	1589.2	1599.6	1599.6
25°	1566.7	1569.3	1568.4	1566.7	1560.7	1551.2	1549.4	1551.2	1554.6	1555.5	1549.4
27.5°	1545.1	1546.8	1546.8	1547.7	1539.9	1531.3	1529.5	1527.8	1531.3	1530.4	1520.9
30°	1522.6	1520.0	1520.9	1521.8	1514.8	1507.1	1503.6	1502.7	1506.2	1505.3	1495.8
32.5°	1469.0	1488.9	1490.6	1492.4	1486.3	1479.4	1475.9	1473.3	1475.1	1474.2	1465.6
35°	336.3	342.4	419.3	949.4	1289.2	1427.5	1442.2	1438.8	1439.6	1439.6	1432.7
37.5°	337.2	336.3	335.5	332.9	330.3	328.6	568.1	1211.4	1403.3	1404.2	1398.1
40°	337.2	336.3	335.5	333.7	330.3	327.7	323.4	319.9	327.7	721.1	1319.4
42.5°	338.9	337.2	335.5	333.7	330.3	326.8	323.4	319.1	321.6	319.9	315.6
45°	333.7	332.9	332.9	332.0	330.3	326.8	322.5	317.3	314.7	317.3	313.0
47.5°	317.3	318.2	320.8	321.6	321.6	322.5	319.9	316.5	312.1	314.7	309.5
50°	294.8	296.6	297.4	301.8	303.5	306.9	307.8	307.8	306.9	310.4	306.9
52.5°	270.6	272.4	276.7	278.4	280.1	285.3	287.1	289.7	291.4	296.6	300.0
55°	247.3	248.2	249.9	253.3	255.9	260.3	262.8	265.4	269.8	272.4	282.7
57.5°	225.7	226.5	230.0	230.9	232.6	236.0	238.6	242.1	245.6	247.3	259.4
60°	204.9	205.8	208.4	209.2	210.1	213.6	216.2	218.8	221.3	223.1	231.7
62.5°	186.8	186.8	189.4	189.4	190.2	192.8	194.5	196.3	198.9	199.7	204.1
65°	168.6	169.5	171.2	171.2	172.1	173.8	174.7	175.5	178.1	178.1	181.6
67.5°	146.1	147.0	149.6	151.3	152.2	155.6	156.5	157.4	159.1	160.0	161.7
70°	124.5	125.4	128.0	128.8	129.7	132.3	134.0	136.6	139.2	141.8	143.5
72.5°	104.6	105.5	108.1	108.1	110.7	111.5	113.3	114.1	116.7	118.5	121.0
75°	85.6	86.5	89.1	89.1	91.7	92.5	93.4	94.2	96.0	97.7	99.4
77.5°	70.0	70.0	73.5	75.2	77.0	77.0	77.8	77.8	77.8	78.7	80.4
80°	55.3	55.3	57.9	59.7	61.4	61.4	62.3	63.1	64.0	64.0	64.8
82.5°	41.5	41.5	44.1	45.0	46.7	46.7	46.7	47.6	48.4	47.6	49.3
85°	28.5	28.5	30.3	31.1	32.9	32.9	32.9	33.7	34.6	33.7	34.6
87.5°	16.4	17.3	18.2	19.0	19.9	20.8	20.8	20.8	21.6	21.6	22.5
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	2018.1	2007.7	2006.8	1994.7	1991.3	1992.1	1982.6	1979.2	1963.6	1960.1	1943.7
5°	2025.8	2031.0	2028.4	2027.6	2030.2	2028.4	2021.5	2018.1	2015.5	2008.5	1994.7
7.5°	1940.2	1943.7	1946.3	1957.5	1967.0	1983.5	2000.8	2012.0	2020.7	2022.4	2011.1
10°	1852.9	1869.3	1880.6	1897.9	1911.7	1921.2	1931.6	1941.1	1966.2	1991.3	2006.0
12.5°	1808.0	1812.3	1811.4	1820.9	1830.4	1855.5	1879.7	1893.6	1912.6	1923.8	1950.6
15°	1769.9	1770.8	1773.4	1780.3	1785.5	1794.1	1805.4	1826.1	1864.2	1881.4	1896.1
17.5°	1735.3	1735.3	1737.1	1743.1	1750.0	1757.8	1764.7	1773.4	1792.4	1820.9	1857.2
20°	1680.0	1704.2	1706.8	1705.9	1709.4	1724.1	1725.8	1741.4	1750.9	1762.1	1797.6
22.5°	1597.8	1612.5	1633.3	1665.3	1677.4	1684.3	1689.5	1696.4	1711.1	1724.1	1738.8
25°	1552.9	1562.4	1568.4	1578.0	1603.0	1643.7	1651.5	1659.2	1668.7	1678.3	1696.4
27.5°	1513.1	1512.2	1516.6	1525.2	1532.1	1553.8	1591.8	1622.1	1623.8	1637.6	1653.2
30°	1484.6	1479.4	1473.3	1471.6	1481.1	1492.4	1503.6	1551.2	1584.0	1590.9	1607.4
32.5°	1457.8	1449.1	1440.5	1433.6	1427.5	1437.0	1443.9	1464.7	1507.1	1546.8	1555.5
35°	1424.9	1416.3	1405.9	1398.1	1388.6	1387.7	1386.9	1406.8	1420.6	1468.2	1509.7
37.5°	1391.2	1381.7	1373.0	1364.4	1354.9	1348.0	1343.6	1348.8	1361.8	1382.6	1451.7
40°	1355.7	1344.5	1335.9	1328.9	1316.0	1310.8	1302.1	1298.7	1299.5	1317.7	1354.0
42.5°	810.2	1291.8	1296.1	1288.3	1277.1	1270.2	1260.6	1256.3	1247.7	1256.3	1277.1
45°	312.1	315.6	945.0	1248.5	1234.7	1226.1	1217.4	1213.1	1203.6	1196.7	1215.7
47.5°	306.1	309.5	302.6	428.9	1178.5	1181.1	1170.7	1166.4	1156.9	1151.7	1146.5
50°	301.8	304.4	299.2	300.9	294.8	1079.9	1123.2	1118.0	1107.6	1101.5	1091.2
52.5°	297.4	297.4	294.0	289.7	287.9	288.8	908.7	1068.7	1056.6	1050.5	1036.7
55°	283.6	285.3	288.8	281.9	280.1	279.3	276.7	865.5	1000.4	993.5	981.4
57.5°	262.8	266.3	275.8	274.1	274.1	267.2	265.4	265.4	803.2	935.5	923.4
60°	238.6	242.1	252.5	255.9	258.5	256.8	255.1	254.2	250.7	846.5	862.0
62.5°	213.6	217.0	220.5	231.7	235.2	239.5	244.7	242.1	238.6	238.6	797.2
65°	186.8	191.9	193.7	204.1	208.4	216.2	220.5	226.5	224.8	223.9	228.3
67.5°	163.4	169.5	170.3	174.7	182.4	185.9	191.1	202.3	207.5	209.2	211.0
70°	143.5	147.0	149.6	151.3	156.5	157.4	166.9	174.7	182.4	191.1	193.7
72.5°	123.6	126.2	131.4	129.7	131.4	134.9	140.1	145.3	153.0	165.1	172.9
75°	101.2	102.9	106.4	108.1	111.5	114.1	117.6	121.9	128.8	134.9	145.3
77.5°	81.3	82.1	84.7	85.6	89.1	91.7	97.7	100.3	104.6	108.9	115.0
80°	65.7	65.7	66.6	66.6	69.2	71.8	76.1	78.7	83.9	87.3	87.3
82.5°	50.1	50.1	52.7	52.7	54.5	54.5	57.1	57.1	59.7	61.4	63.1
85°	35.5	36.3	38.0	37.2	38.9	38.0	39.8	41.5	42.4	41.5	40.6
87.5°	23.3	23.3	25.1	24.2	25.1	25.1	26.8	26.8	27.7	27.7	26.8
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	167.5°	170°	172.5°	175°	177.5°	180°	182.5°	185°	187.5°	190°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	1937.6	1924.7	1916.9	1907.4	1904.8	1902.2	1905.7	1905.7	1900.5	1896.1	1888.4
5°	1982.6	1968.8	1954.1	1938.5	1923.8	1908.3	1902.2	1901.3	1891.8	1886.6	1884.0
7.5°	2006.0	1999.0	1982.6	1961.0	1938.5	1910.8	1898.7	1891.8	1882.3	1880.6	1880.6
10°	2008.5	2000.8	1992.1	1976.6	1950.6	1914.3	1891.0	1877.1	1868.5	1874.5	1885.8
12.5°	1983.5	1998.2	1990.4	1980.0	1959.3	1915.2	1881.4	1860.7	1858.1	1873.7	1903.1
15°	1919.5	1962.7	1984.3	1974.0	1957.5	1913.4	1865.9	1841.7	1841.7	1873.7	1911.7
17.5°	1871.1	1904.8	1957.5	1966.2	1947.2	1910.0	1851.2	1822.7	1830.4	1877.1	1917.8
20°	1831.3	1852.1	1903.1	1951.5	1933.3	1902.2	1829.6	1800.2	1815.7	1871.9	1926.4
22.5°	1769.0	1810.5	1841.7	1913.4	1919.5	1887.5	1808.0	1772.5	1803.6	1871.9	1922.1
25°	1708.5	1758.7	1791.5	1861.6	1898.7	1869.3	1788.1	1743.1	1790.7	1869.3	1918.6
27.5°	1666.2	1689.5	1749.2	1799.3	1867.6	1845.1	1761.3	1711.1	1774.2	1855.5	1898.7
30°	1621.2	1636.8	1695.6	1743.1	1826.1	1817.5	1733.6	1675.7	1753.5	1842.5	1846.9
32.5°	1571.9	1589.2	1619.5	1688.6	1768.2	1791.5	1702.5	1640.2	1731.0	1822.7	1786.3
35°	1521.8	1534.7	1558.9	1633.3	1700.7	1752.6	1664.4	1599.6	1715.4	1792.4	1728.4
37.5°	1471.6	1485.4	1506.2	1568.4	1629.8	1716.3	1631.6	1558.9	1686.9	1738.8	1667.9
40°	1424.1	1431.8	1453.5	1492.4	1571.0	1679.1	1594.4	1516.6	1657.5	1670.5	1585.7
42.5°	1336.7	1375.6	1395.5	1426.6	1504.5	1628.1	1551.2	1471.6	1624.7	1602.2	1503.6
45°	1242.5	1327.2	1335.9	1367.0	1445.7	1573.6	1510.5	1427.5	1593.5	1543.4	1425.8
47.5°	1165.5	1226.9	1277.1	1303.0	1375.6	1509.7	1472.5	1390.3	1546.8	1469.0	1349.7
50°	1097.2	1130.1	1220.9	1239.9	1291.8	1432.7	1427.5	1347.1	1482.0	1375.6	1275.3
52.5°	1030.6	1054.0	1136.1	1176.8	1219.1	1349.7	1373.9	1304.7	1411.1	1282.3	1200.1
55°	972.7	980.5	1025.5	1111.1	1149.1	1265.8	1315.1	1255.5	1321.2	1193.2	1127.5
57.5°	913.1	906.1	939.0	1048.8	1076.5	1180.2	1252.9	1205.3	1248.5	1102.4	1052.3
60°	850.8	841.3	855.1	927.8	999.5	1095.5	1179.4	1150.0	1160.3	1012.5	968.4
62.5°	786.0	776.4	772.1	817.9	924.3	1008.2	1105.0	1088.6	1052.3	930.3	864.6
65°	718.5	709.0	702.1	720.2	841.3	894.9	1022.0	1017.7	933.8	843.9	728.0
67.5°	218.8	645.0	630.3	629.5	709.0	792.0	932.1	925.2	814.5	751.4	626.9
70°	197.1	523.1	556.0	548.2	582.8	687.4	829.2	824.0	698.6	602.7	554.2
72.5°	180.7	185.0	491.1	482.5	490.2	584.5	722.0	708.1	592.3	475.5	479.0
75°	154.8	162.6	169.5	407.2	396.9	484.2	605.2	583.6	488.5	392.5	400.3
77.5°	126.2	135.7	140.9	296.6	320.8	345.0	483.3	454.8	336.3	313.9	149.6
80°	94.2	102.0	110.7	118.5	243.8	241.2	358.8	330.3	234.3	195.4	116.7
82.5°	69.2	71.8	77.0	85.6	96.8	161.7	230.9	203.2	162.6	89.1	80.4
85°	43.2	46.7	49.3	51.9	58.8	96.8	114.1	90.8	68.3	54.5	51.0
87.5°	27.7	27.7	26.8	27.7	28.5	34.6	38.9	37.2	29.4	27.7	27.7
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	192.5°	195°	197.5°	200°	202.5°	205°	207.5°	210°	212.5°	215°	217.5°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	1879.7	1867.6	1867.6	1864.2	1866.7	1866.7	1865.9	1866.7	1872.8	1876.3	1882.3
5°	1878.9	1875.4	1883.2	1892.7	1903.9	1917.8	1921.2	1933.3	1944.6	1959.3	1974.8
7.5°	1890.1	1902.2	1916.9	1932.5	1954.9	1971.4	1986.1	2000.8	2011.1	2025.0	2033.6
10°	1906.5	1930.7	1955.8	1975.7	1999.9	2013.7	2023.2	2025.0	2010.3	1986.9	1967.9
12.5°	1929.9	1958.4	1981.7	2000.8	2012.0	2006.8	1979.2	1950.6	1934.2	1910.0	1876.3
15°	1949.8	1975.7	1999.9	1992.1	1961.9	1933.3	1911.7	1878.0	1845.1	1822.7	1808.0
17.5°	1958.4	1983.5	1974.8	1934.2	1905.7	1872.8	1828.7	1802.8	1781.2	1763.9	1755.2
20°	1963.6	1959.3	1912.6	1883.2	1827.8	1797.6	1769.0	1744.8	1728.4	1719.8	1718.0
22.5°	1949.8	1897.0	1857.2	1804.5	1763.9	1738.8	1716.3	1696.4	1685.2	1678.3	1673.9
25°	1903.9	1842.5	1783.7	1742.2	1707.7	1686.0	1668.7	1652.3	1638.5	1635.0	1626.4
27.5°	1839.9	1789.8	1712.0	1680.0	1649.7	1639.4	1620.3	1603.9	1591.8	1581.4	1553.8
30°	1787.2	1707.7	1651.5	1622.1	1603.9	1591.8	1570.2	1552.9	1532.1	1494.1	1478.5
32.5°	1722.4	1643.7	1590.1	1573.6	1551.2	1540.8	1516.6	1478.5	1446.5	1431.0	1430.1
35°	1638.5	1573.6	1534.7	1520.0	1501.9	1484.6	1434.4	1399.8	1384.3	1386.0	1399.0
37.5°	1568.4	1510.5	1485.4	1464.7	1443.9	1399.8	1357.5	1341.1	1345.4	1354.0	1360.1
40°	1497.5	1453.5	1424.9	1408.5	1361.8	1318.6	1296.1	1302.1	1309.9	1316.0	1323.8
42.5°	1428.4	1397.3	1368.7	1336.7	1272.7	1249.4	1254.6	1262.4	1269.3	1277.9	1285.7
45°	1362.7	1335.0	1302.1	1229.5	1197.5	1203.6	1211.4	1217.4	1227.8	1233.8	1241.6
47.5°	1300.4	1271.0	1213.1	1149.1	1145.6	1157.7	1164.7	1172.4	1180.2	1164.7	642.4
50°	1230.4	1200.1	1111.9	1087.7	1095.5	1106.7	1115.4	1123.2	1000.4	397.7	306.1
52.5°	1161.2	1084.3	1028.1	1035.0	1042.8	1055.7	1061.8	788.5	313.9	299.2	300.0
55°	1084.3	985.7	969.3	977.9	984.8	997.8	661.4	289.7	287.9	287.1	294.0
57.5°	963.2	903.5	910.5	919.1	926.0	653.7	281.9	280.1	281.0	281.9	282.7
60°	855.1	842.2	849.9	857.7	607.0	272.4	267.2	268.0	271.5	268.9	262.0
62.5°	769.5	779.9	787.7	690.0	258.5	255.9	258.5	255.9	249.9	245.6	236.9
65°	703.8	714.2	720.2	243.0	242.1	245.6	243.0	234.3	224.8	212.7	210.1
67.5°	634.6	645.0	230.9	224.8	228.3	223.9	213.6	203.2	196.3	185.9	181.6
70°	562.9	241.2	209.2	208.4	202.3	195.4	184.2	173.8	165.1	160.8	156.5
72.5°	406.4	191.1	188.5	181.6	171.2	161.7	152.2	146.1	141.8	139.2	136.6
75°	169.5	166.0	158.2	146.1	135.7	131.4	124.5	120.2	118.5	113.3	111.5
77.5°	141.8	134.9	123.6	115.0	108.9	106.4	101.2	96.0	93.4	92.5	89.1
80°	108.9	99.4	94.2	89.9	88.2	82.1	76.1	73.5	71.8	70.9	68.3
82.5°	74.4	70.9	67.4	61.4	61.4	58.8	56.2	54.5	52.7	52.7	51.0
85°	48.4	45.8	45.0	42.4	42.4	40.6	39.8	38.9	38.0	37.2	36.3
87.5°	27.7	27.7	28.5	27.7	27.7	26.8	25.9	25.1	24.2	24.2	22.5
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	222.5°	225°	227.5°	230°	232.5°	235°	237.5°	240°	242.5°	245°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	1890.1	1898.7	1900.5	1929.9	1946.3	1945.4	1940.2	1955.8	1946.3	1941.1	1946.3
5°	1990.4	2000.8	2009.4	2041.4	2052.6	2057.8	2057.0	2065.6	2058.7	2052.6	2052.6
7.5°	2039.7	2043.1	2046.6	2038.8	2033.6	2025.0	2012.0	1993.0	1983.5	1973.1	1960.1
10°	1958.4	1947.2	1951.5	1935.9	1923.0	1913.4	1901.3	1885.8	1872.8	1863.3	1848.6
12.5°	1859.0	1858.1	1859.8	1862.4	1849.5	1841.7	1832.2	1820.9	1811.4	1801.0	1788.9
15°	1798.4	1799.3	1806.2	1803.6	1799.3	1795.0	1784.6	1781.2	1772.5	1761.3	1754.3
17.5°	1755.2	1759.5	1766.5	1763.0	1756.1	1751.8	1744.0	1736.2	1728.4	1719.8	1709.4
20°	1717.2	1721.5	1725.8	1721.5	1708.5	1702.5	1692.1	1667.9	1650.6	1633.3	1617.7
22.5°	1675.7	1678.3	1674.8	1661.0	1628.1	1612.5	1600.4	1593.5	1578.8	1569.3	1559.8
25°	1623.8	1609.1	1586.6	1571.0	1558.1	1551.2	1546.0	1545.1	1543.4	1541.6	1537.3
27.5°	1539.1	1533.9	1521.8	1515.7	1516.6	1519.2	1520.0	1522.6	1520.0	1516.6	1513.1
30°	1475.9	1478.5	1479.4	1481.1	1485.4	1488.0	1488.9	1492.4	1490.6	1488.0	1486.3
32.5°	1436.2	1442.2	1445.7	1450.9	1453.5	1457.8	1457.8	1463.0	1457.8	1456.9	1455.2
35°	1403.3	1408.5	1410.2	1418.0	1420.6	1424.9	1424.9	1429.2	1424.9	1380.8	1090.3
37.5°	1370.4	1375.6	1379.1	1386.0	1386.9	1389.5	1282.3	938.1	605.2	468.6	358.0
40°	1331.5	1337.6	1341.1	1343.6	944.2	599.2	412.4	335.5	335.5	338.1	340.7
42.5°	1290.0	1294.4	901.8	524.8	326.8	326.0	328.6	331.2	333.7	337.2	340.7
45°	1014.2	511.9	325.1	317.3	319.9	323.4	326.8	330.3	334.6	338.1	339.8
47.5°	332.9	312.1	316.5	313.0	317.3	321.6	325.1	328.6	329.4	330.3	329.4
50°	307.8	307.8	310.4	310.4	313.9	315.6	315.6	315.6	312.1	311.3	308.7
52.5°	297.4	304.4	300.9	302.6	300.9	298.3	295.7	293.1	287.9	286.2	282.7
55°	292.2	294.8	286.2	283.6	280.1	273.2	269.8	266.3	262.0	260.3	255.9
57.5°	280.1	274.1	264.6	260.3	254.2	247.3	243.8	241.2	236.9	235.2	232.6
60°	257.7	245.6	239.5	234.3	227.4	221.3	218.8	217.0	213.6	212.7	210.1
62.5°	230.0	219.6	214.4	207.5	202.3	198.9	196.3	195.4	191.9	191.9	190.2
65°	199.7	194.5	190.2	183.3	180.7	177.3	176.4	175.5	173.8	172.9	171.2
67.5°	175.5	172.1	166.0	162.6	160.8	158.2	156.5	154.8	151.3	149.6	147.0
70°	153.9	151.3	145.3	142.7	139.2	134.9	132.3	130.6	128.0	126.2	123.6
72.5°	133.2	125.4	121.0	118.5	115.9	111.5	110.7	108.9	106.4	105.5	102.9
75°	107.2	101.2	98.6	96.8	94.2	91.7	91.7	91.7	89.1	88.2	87.3
77.5°	85.6	82.1	80.4	78.7	77.8	76.1	73.5	72.6	70.0	70.0	69.2
80°	65.7	64.0	62.3	61.4	60.5	58.8	57.1	56.2	53.6	53.6	52.7
82.5°	48.4	47.6	46.7	45.8	45.0	44.1	41.5	40.6	38.9	38.9	38.0
85°	34.6	33.7	32.0	31.1	31.1	30.3	27.7	26.8	25.1	25.1	25.1
87.5°	21.6	20.8	19.9	19.0	18.2	17.3	15.6	14.7	14.7	13.0	12.1
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	247.5°	250°	252.5°	255°	257.5°	260°	262.5°	265°	267.5°	270°	272.5°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	1935.9	1950.6	1948.9	1959.3	1961.9	1967.0	1968.8	1969.6	1956.7	1967.0	1967.9
5°	2050.1	2052.6	2054.4	2058.7	2063.0	2063.9	2059.6	2054.4	2056.1	2052.6	2044.0
7.5°	1958.4	1945.4	1942.8	1939.4	1937.6	1935.9	1928.1	1935.1	1927.3	1923.8	1911.7
10°	1846.0	1833.9	1833.0	1833.0	1835.6	1834.8	1833.0	1829.6	1836.5	1832.2	1829.6
12.5°	1787.2	1782.9	1785.5	1783.7	1790.7	1792.4	1790.7	1790.7	1788.9	1785.5	1787.2
15°	1751.8	1748.3	1750.9	1748.3	1753.5	1754.3	1750.0	1752.6	1748.3	1744.0	1742.2
17.5°	1705.1	1697.3	1691.2	1682.6	1683.4	1681.7	1676.5	1676.5	1672.2	1661.0	1661.8
20°	1615.1	1607.4	1603.9	1603.9	1608.2	1610.0	1609.1	1610.8	1606.5	1604.8	1597.8
22.5°	1558.9	1558.1	1559.8	1564.1	1571.0	1580.6	1581.4	1581.4	1581.4	1580.6	1571.9
25°	1539.1	1539.1	1540.8	1546.8	1552.0	1558.9	1560.7	1562.4	1560.7	1560.7	1552.9
27.5°	1516.6	1514.8	1518.3	1524.4	1530.4	1535.6	1539.9	1540.8	1538.2	1538.2	1540.8
30°	1488.9	1488.0	1492.4	1498.4	1503.6	1508.8	1513.1	1516.6	1513.1	1513.1	1510.5
32.5°	1460.4	1460.4	1462.1	1425.8	1322.0	1190.6	1193.2	1117.1	1064.4	997.8	1086.0
35°	911.3	663.2	569.8	482.5	421.1	381.3	380.4	367.5	361.4	357.1	356.2
37.5°	344.1	345.9	349.3	351.0	353.6	355.4	356.2	356.2	356.2	356.2	355.4
40°	343.3	346.7	349.3	351.9	354.5	356.2	356.2	357.1	358.0	358.0	358.0
42.5°	344.1	347.6	351.0	353.6	355.4	356.2	357.1	358.0	358.0	358.0	358.0
45°	343.3	345.0	345.0	345.9	345.9	345.9	346.7	346.7	345.9	345.0	346.7
47.5°	330.3	330.3	327.7	326.8	326.0	324.2	325.1	324.2	323.4	322.5	324.2
50°	307.8	304.4	302.6	300.9	300.0	298.3	299.2	298.3	297.4	295.7	298.3
52.5°	281.0	280.1	276.7	275.0	274.1	275.0	273.2	272.4	271.5	270.6	271.5
55°	255.1	251.6	250.7	249.0	248.2	249.0	248.2	247.3	246.4	245.6	246.4
57.5°	231.7	229.1	228.3	226.5	226.5	226.5	226.5	225.7	224.8	223.9	224.8
60°	209.2	207.5	206.6	206.6	205.8	205.8	205.8	204.9	204.1	204.1	204.9
62.5°	190.2	190.2	187.6	186.8	186.8	187.6	186.8	185.9	185.0	184.2	185.9
65°	170.3	166.9	166.0	164.3	162.6	163.4	162.6	161.7	160.8	160.0	161.7
67.5°	146.1	145.3	141.8	140.1	139.2	140.1	139.2	138.3	137.5	136.6	138.3
70°	122.8	122.8	119.3	118.5	117.6	117.6	116.7	116.7	115.9	115.0	116.7
72.5°	102.0	102.0	101.2	99.4	98.6	97.7	96.8	96.0	96.0	96.8	96.8
75°	84.7	83.0	79.5	80.4	79.5	78.7	78.7	77.8	77.0	78.7	77.8
77.5°	66.6	65.7	63.1	64.0	63.1	62.3	62.3	61.4	60.5	61.4	61.4
80°	50.1	50.1	49.3	48.4	48.4	47.6	46.7	46.7	45.8	46.7	46.7
82.5°	36.3	36.3	35.5	34.6	33.7	33.7	32.9	32.9	32.9	32.9	32.9
85°	23.3	22.5	22.5	20.8	20.8	20.8	19.9	19.9	19.9	19.9	19.9
87.5°	11.2	11.2	10.4	10.4	9.5	8.6	8.6	7.8	7.8	8.6	8.6
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	277.5°	280°	282.5°	285°	287.5°	290°	292.5°	295°	297.5°	300°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	1952.3	1963.6	1954.1	1958.4	1959.3	1974.0	1973.1	1976.6	1970.5	1963.6	1954.1
5°	2051.8	2046.6	2039.7	2056.1	2047.5	2057.8	2061.3	2068.2	2068.2	2067.3	2059.6
7.5°	1924.7	1913.4	1922.1	1928.1	1930.7	1923.8	1937.6	1953.2	1966.2	1974.0	1974.8
10°	1825.2	1828.7	1827.8	1830.4	1836.5	1835.6	1844.3	1852.9	1856.4	1861.6	1863.3
12.5°	1778.6	1777.7	1779.4	1785.5	1788.9	1788.1	1796.7	1801.9	1803.6	1804.5	1803.6
15°	1741.4	1735.3	1739.6	1740.5	1743.1	1743.1	1753.5	1761.3	1764.7	1766.5	1764.7
17.5°	1671.3	1656.6	1670.5	1670.5	1680.0	1678.3	1694.7	1707.7	1714.6	1719.8	1719.8
20°	1602.2	1595.3	1600.4	1598.7	1605.6	1604.8	1615.1	1623.8	1629.8	1634.2	1639.4
22.5°	1574.5	1576.2	1568.4	1569.3	1569.3	1568.4	1573.6	1578.0	1579.7	1582.3	1580.6
25°	1556.3	1558.1	1555.5	1551.2	1549.4	1551.2	1553.8	1558.9	1559.8	1558.1	1552.0
27.5°	1538.2	1533.0	1537.3	1529.5	1527.8	1531.3	1534.7	1535.6	1536.5	1536.5	1531.3
30°	1510.5	1506.2	1510.5	1507.1	1503.6	1507.1	1509.7	1509.7	1511.4	1512.2	1506.2
32.5°	1055.7	1064.4	1204.4	1289.2	1408.5	1469.0	1480.3	1480.3	1482.0	1482.0	1476.8
35°	359.7	360.6	390.0	422.8	492.8	579.3	692.6	751.4	950.2	1188.0	1418.0
37.5°	355.4	354.5	353.6	352.8	351.9	351.0	349.3	348.4	353.6	419.3	568.9
40°	357.1	356.2	354.5	353.6	352.8	351.0	350.2	348.4	346.7	345.0	343.3
42.5°	357.1	356.2	355.4	354.5	353.6	352.8	351.0	349.3	347.6	345.0	342.4
45°	345.0	345.0	345.9	345.9	346.7	346.7	346.7	345.9	345.9	345.0	341.5
47.5°	322.5	322.5	325.1	325.1	326.8	328.6	328.6	330.3	332.9	334.6	335.5
50°	296.6	296.6	299.2	300.0	301.8	304.4	306.9	307.8	310.4	313.9	317.3
52.5°	270.6	270.6	273.2	273.2	275.0	277.5	280.1	281.0	284.5	287.9	292.2
55°	246.4	246.4	248.2	249.0	249.9	251.6	254.2	254.2	257.7	260.3	264.6
57.5°	224.8	226.5	226.5	226.5	227.4	229.1	230.9	230.9	233.5	236.0	239.5
60°	204.1	205.8	205.8	205.8	206.6	207.5	209.2	209.2	211.0	212.7	216.2
62.5°	185.0	186.8	186.8	187.6	187.6	188.5	190.2	189.4	191.1	191.9	194.5
65°	160.8	162.6	163.4	164.3	165.1	166.9	169.5	168.6	171.2	172.9	175.5
67.5°	137.5	139.2	139.2	140.1	140.9	142.7	144.4	144.4	147.0	148.7	152.2
70°	115.9	117.6	117.6	118.5	119.3	121.0	122.8	121.9	124.5	126.2	128.8
72.5°	96.0	97.7	97.7	98.6	98.6	100.3	102.0	103.8	103.8	105.5	107.2
75°	77.8	78.7	79.5	79.5	80.4	81.3	83.0	84.7	85.6	86.5	88.2
77.5°	61.4	62.3	63.1	63.1	64.0	64.8	65.7	69.2	70.9	71.8	71.8
80°	46.7	47.6	47.6	47.6	48.4	49.3	51.0	51.0	54.5	54.5	55.3
82.5°	32.9	33.7	33.7	33.7	34.6	36.3	37.2	38.0	39.8	40.6	40.6
85°	19.9	20.8	20.8	20.8	21.6	22.5	24.2	25.1	25.9	25.9	26.8
87.5°	7.8	8.6	9.5	9.5	10.4	11.2	12.1	13.0	13.8	13.8	14.7
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	302.5°	305°	307.5°	310°	312.5°	315°	317.5°	320°	322.5°	325°	327.5°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	1943.7	1949.8	1943.7	1947.2	1951.5	1943.7	1925.5	1918.6	1916.0	1905.7	1898.7
5°	2051.8	2051.8	2049.2	2056.1	2055.2	2043.1	2024.1	2015.5	2006.8	1995.6	1986.9
7.5°	1974.8	1981.7	1986.1	2012.9	2030.2	2031.9	2044.0	2046.6	2050.1	2046.6	2041.4
10°	1864.2	1861.6	1873.7	1898.7	1913.4	1921.2	1944.6	1955.8	1965.3	1984.3	2004.2
12.5°	1801.9	1805.4	1810.5	1828.7	1842.5	1839.1	1848.6	1856.4	1867.6	1886.6	1915.2
15°	1760.4	1763.9	1769.0	1782.9	1791.5	1787.2	1792.4	1797.6	1805.4	1814.9	1832.2
17.5°	1715.4	1721.5	1727.5	1742.2	1750.0	1749.2	1753.5	1755.2	1757.8	1763.9	1776.0
20°	1645.4	1664.4	1676.5	1696.4	1707.7	1705.9	1713.7	1716.3	1719.8	1725.8	1731.0
22.5°	1581.4	1586.6	1592.7	1614.3	1633.3	1656.6	1661.8	1668.7	1677.4	1683.4	1688.6
25°	1545.1	1541.6	1544.2	1558.9	1569.3	1571.0	1578.8	1601.3	1624.7	1635.0	1647.1
27.5°	1523.5	1520.0	1519.2	1526.1	1527.8	1523.5	1521.8	1528.7	1546.0	1563.3	1599.6
30°	1500.1	1495.8	1492.4	1498.4	1501.0	1495.0	1483.7	1477.7	1488.0	1492.4	1507.1
32.5°	1472.5	1468.2	1466.4	1469.9	1471.6	1466.4	1454.3	1447.4	1445.7	1442.2	1445.7
35°	1441.3	1437.0	1434.4	1435.3	1438.8	1434.4	1424.1	1415.4	1411.1	1401.6	1394.7
37.5°	742.7	1052.3	1366.1	1399.0	1402.4	1401.6	1391.2	1381.7	1377.4	1366.1	1362.7
40°	339.8	379.6	569.8	744.5	1073.9	1364.4	1354.9	1345.4	1337.6	1334.1	1321.2
42.5°	338.9	339.8	340.7	336.3	416.8	709.9	1047.9	1308.2	1303.0	1294.4	1284.8
45°	338.9	334.6	338.1	332.9	334.6	333.7	415.9	671.0	1194.1	1247.7	1243.3
47.5°	335.5	332.9	336.3	332.0	326.8	329.4	326.0	330.3	515.3	874.1	1197.5
50°	319.9	321.6	327.7	326.8	322.5	326.0	319.9	325.1	320.8	351.9	677.9
52.5°	296.6	300.0	306.1	311.3	313.0	317.3	315.6	317.3	313.9	314.7	315.6
55°	268.9	273.2	278.4	286.2	289.7	296.6	301.8	304.4	308.7	307.8	300.9
57.5°	243.0	247.3	251.6	259.4	267.2	270.6	280.1	285.3	296.6	294.0	292.2
60°	218.8	222.2	226.5	228.3	237.8	243.8	252.5	257.7	272.4	275.8	281.0
62.5°	197.1	198.9	202.3	204.9	211.0	217.0	221.3	230.0	237.8	249.0	256.8
65°	177.3	179.0	181.6	183.3	184.2	192.8	195.4	204.9	207.5	219.6	226.5
67.5°	154.8	158.2	161.7	163.4	165.1	170.3	172.1	176.4	182.4	187.6	196.3
70°	131.4	134.0	137.5	140.1	143.5	147.0	152.2	154.8	159.1	162.6	169.5
72.5°	109.8	112.4	114.1	116.7	119.3	121.9	126.2	132.3	135.7	141.8	143.5
75°	89.1	91.7	93.4	95.1	97.7	99.4	101.2	107.2	110.7	115.9	121.0
77.5°	73.5	73.5	75.2	80.4	79.5	79.5	81.3	84.7	87.3	90.8	96.0
80°	57.1	57.9	58.8	63.1	64.0	64.8	64.0	66.6	69.2	70.0	73.5
82.5°	42.4	43.2	43.2	45.8	48.4	48.4	48.4	49.3	51.9	52.7	54.5
85°	28.5	29.4	30.3	31.1	32.9	33.7	34.6	34.6	36.3	37.2	38.0
87.5°	15.6	17.3	18.2	19.0	19.9	20.8	21.6	22.5	23.3	24.2	25.1
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	332.5°	335°	337.5°	340°	342.5°	345°	347.5°	350°	352.5°	355°
0°	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6	1886.6
2.5°	1896.1	1891.8	1889.2	1882.3	1880.6	1869.3	1871.1	1869.3	1869.3	1871.9	1880.6
5°	1977.4	1956.7	1951.5	1936.8	1924.7	1903.9	1891.0	1884.0	1873.7	1869.3	1875.4
7.5°	2032.8	2017.2	2004.2	1991.3	1974.0	1949.8	1931.6	1910.8	1893.6	1877.1	1872.8
10°	2023.2	2040.5	2040.5	2032.8	2016.3	1992.1	1970.5	1944.6	1914.3	1888.4	1872.8
12.5°	1942.8	1973.1	1997.3	2015.5	2031.9	2015.5	1993.9	1973.1	1939.4	1901.3	1872.8
15°	1854.6	1885.8	1916.0	1954.1	1993.9	2010.3	2009.4	1985.2	1954.9	1915.2	1875.4
17.5°	1792.4	1814.0	1830.4	1871.9	1920.4	1962.7	1991.3	1993.0	1963.6	1928.1	1876.3
20°	1745.7	1761.3	1775.1	1798.4	1840.8	1892.7	1945.4	1974.8	1969.6	1930.7	1878.9
22.5°	1703.3	1714.6	1725.8	1743.1	1776.8	1810.5	1871.9	1932.5	1958.4	1926.4	1876.3
25°	1661.0	1673.1	1681.7	1693.8	1720.6	1748.3	1791.5	1866.7	1924.7	1923.0	1871.1
27.5°	1610.8	1627.2	1637.6	1654.0	1672.2	1693.0	1722.4	1793.3	1876.3	1905.7	1857.2
30°	1550.3	1574.5	1590.1	1608.2	1623.8	1641.9	1665.3	1708.5	1811.4	1871.9	1842.5
32.5°	1463.0	1506.2	1540.8	1558.1	1575.4	1590.9	1611.7	1648.0	1731.9	1826.1	1826.1
35°	1400.7	1420.6	1451.7	1501.9	1523.5	1539.1	1558.1	1586.6	1640.2	1771.6	1799.3
37.5°	1352.3	1360.1	1375.6	1424.9	1465.6	1490.6	1509.7	1527.8	1580.6	1697.3	1764.7
40°	1316.0	1313.4	1311.7	1335.0	1392.9	1432.7	1454.3	1472.5	1513.1	1608.2	1718.9
42.5°	1273.6	1271.0	1262.4	1268.4	1297.0	1363.5	1396.4	1416.3	1450.0	1514.8	1668.7
45°	1229.5	1225.2	1221.7	1215.7	1226.1	1263.2	1330.7	1360.1	1379.1	1437.0	1605.6
47.5°	1184.6	1178.5	1174.2	1169.0	1162.9	1180.2	1244.2	1297.0	1329.8	1366.1	1529.5
50°	1120.6	1128.4	1123.2	1117.1	1111.9	1108.5	1135.3	1221.7	1262.4	1291.8	1437.0
52.5°	528.3	1027.2	1070.4	1064.4	1057.4	1051.4	1057.4	1123.2	1196.7	1220.0	1325.5
55°	300.9	457.4	952.0	1006.4	1000.4	991.7	986.5	1009.0	1118.8	1150.0	1223.5
57.5°	289.7	290.5	420.2	907.0	940.7	932.9	926.9	932.1	1025.5	1078.2	1134.4
60°	280.1	280.1	280.1	401.2	867.2	869.8	862.0	853.4	894.0	997.8	1044.5
62.5°	259.4	264.6	267.2	267.2	396.0	803.2	795.5	792.9	794.6	901.0	954.6
65°	232.6	244.7	249.9	253.3	253.3	415.9	727.2	722.8	716.8	757.4	863.8
67.5°	203.2	215.3	226.5	233.5	234.3	242.1	434.0	651.1	642.4	643.3	766.9
70°	172.9	183.3	195.4	205.8	215.3	219.6	226.5	540.4	568.9	556.8	657.1
72.5°	149.6	153.9	162.6	172.9	184.2	194.5	200.6	215.3	493.7	480.7	499.8
75°	124.5	128.0	134.0	140.9	149.6	161.7	172.1	182.4	262.0	402.9	400.3
77.5°	96.8	102.9	109.8	114.1	118.5	127.1	140.9	151.3	161.7	272.4	320.8
80°	74.4	78.7	82.1	86.5	91.7	97.7	102.9	115.0	127.1	136.6	245.6
82.5°	55.3	57.9	60.5	62.3	64.0	67.4	77.0	81.3	89.1	97.7	115.9
85°	38.9	40.6	42.4	43.2	44.1	45.0	48.4	49.3	57.1	58.8	70.0
87.5°	25.1	25.9	27.7	28.5	28.5	29.4	30.3	30.3	30.3	28.5	34.6
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L935-CD1-U

CANDELA DISTRIBUTION (continued):

	357.5°	360°
0°	1886.6	1886.6
2.5°	1887.5	1901.3
5°	1884.9	1903.1
7.5°	1878.0	1895.3
10°	1867.6	1888.4
12.5°	1856.4	1876.3
15°	1846.9	1861.6
17.5°	1836.5	1845.1
20°	1822.7	1829.6
22.5°	1808.8	1805.4
25°	1793.3	1785.5
27.5°	1773.4	1758.7
30°	1755.2	1729.3
32.5°	1737.9	1695.6
35°	1714.6	1661.0
37.5°	1690.4	1625.5
40°	1661.8	1584.9
42.5°	1631.6	1544.2
45°	1593.5	1505.3
47.5°	1559.8	1458.6
50°	1513.1	1408.5
52.5°	1456.0	1361.8
55°	1388.6	1304.7
57.5°	1316.0	1245.1
60°	1238.2	1176.8
62.5°	1143.9	1105.9
65°	1033.2	1024.6
67.5°	888.8	934.7
70°	728.9	831.8
72.5°	609.6	722.8
75°	499.8	600.9
77.5°	396.0	471.2
80°	247.3	345.0
82.5°	166.0	226.5
85°	100.3	108.1
87.5°	38.9	39.8
90°	0.0	0.0

(END OF REPORT)