

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-L940-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-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WHITE REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

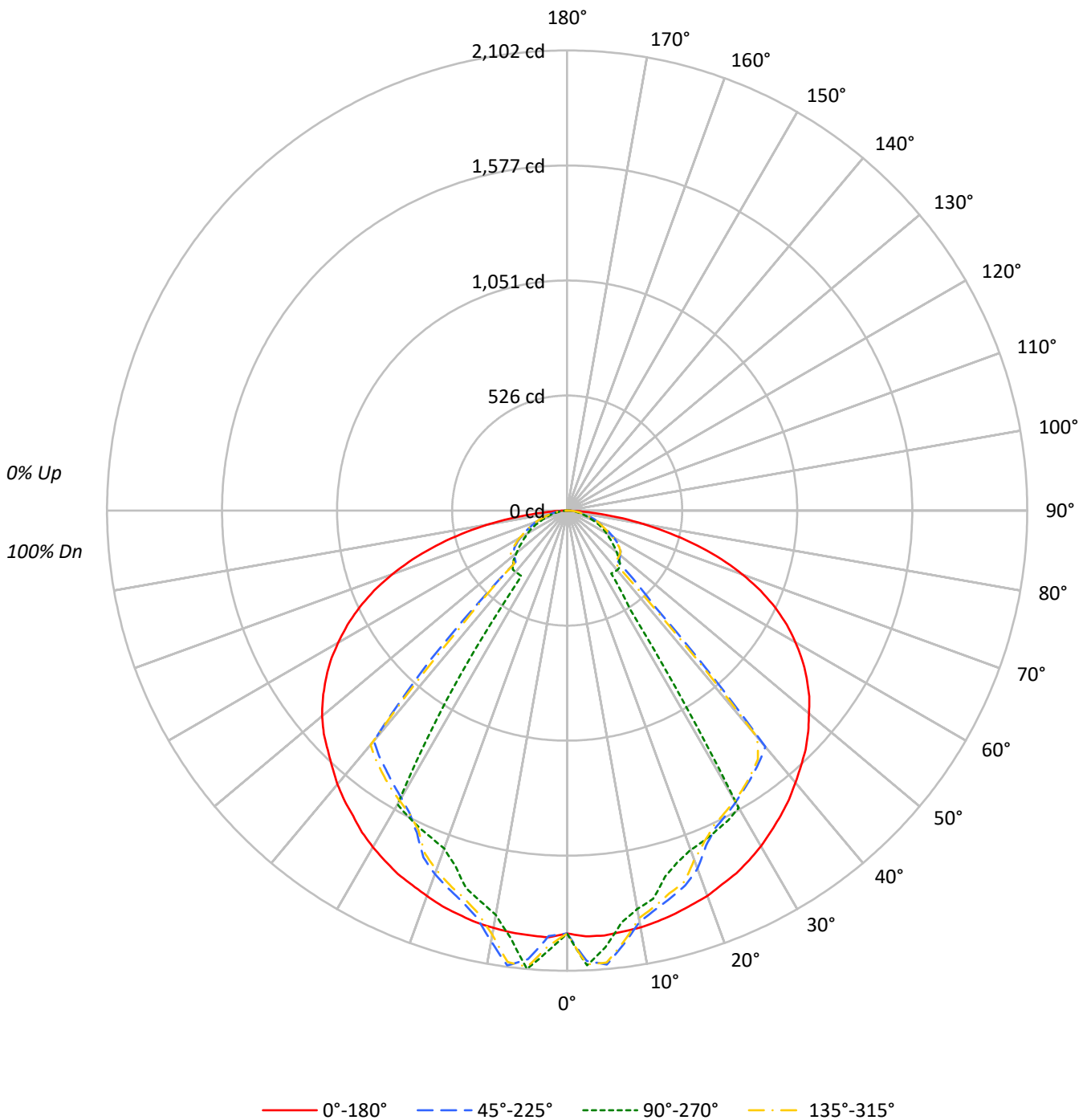
Lumens per Lamp: N/A
Luminaire Lumens: 3868.0 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.16 / 1.2
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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



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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	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	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°	15609	15609	15609	15609
5°	15762	15727	15755	16505
10°	15778	14219	15799	14437
15°	15813	13155	15849	13573
20°	15928	12478	15928	12431
25°	16065	12239	16089	12124
30°	16228	12023	16268	11881
35°	16416	2739	16451	2856
40°	16679	2848	16780	2940
45°	17080	2832	17138	2935
50°	17478	2561	17714	2629
55°	18016	2274	18159	2306
60°	18472	2021	18514	2046
65°	18798	1763	18750	1735
70°	18530	1421	18471	1369
75°	17202	1094	17328	1048
80°	13962	776	14524	711
85°	7563	466	7986	358



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.0	4.9
10°-20°	522.5	13.5
20°-30°	774.0	20.0
30°-40°	779.8	20.2
40°-50°	609.2	15.7
50°-60°	470.5	12.2
60°-70°	315.9	8.2
70°-80°	161.2	4.2
80°-90°	44.8	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°	1486.5	38.4
0°-40°	2266.4	58.6
0°-60°	3346.1	86.5
0°-90°	3868.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3868.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1932	1932	1932	1932	1932	
5°	1948	2002	1948	2102	1948	185
15°	1906	1731	1910	1786	1906	539
25°	1828	1613	1831	1598	1828	843
35°	1700	351	1704	366	1700	1066
45°	1541	341	1546	353	1541	1188
55°	1336	248	1346	251	1336	1193
65°	1049	166	1046	164	1049	1032
75°	615	84	620	81	615	643
85°	111	27	117	20	111	152
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°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	1946.6	1953.7	1959.0	1962.6	1964.3	1964.3	1965.2	1966.1	1977.6	1982.9	1986.5
5°	1948.4	1955.5	1966.1	1980.3	1992.7	2003.3	2012.1	2024.5	2036.9	2050.2	2054.6
7.5°	1940.4	1949.3	1970.5	1996.2	2020.1	2036.9	2048.4	2056.4	2062.6	2063.5	2067.9
10°	1933.4	1949.3	1978.5	2012.1	2042.2	2062.6	2062.6	2058.2	2064.4	2040.5	2016.6
12.5°	1921.0	1938.7	1978.5	2022.8	2051.1	2059.1	2055.5	2037.8	2001.5	1972.3	1959.0
15°	1905.9	1929.8	1979.4	2029.0	2052.9	2055.5	2021.9	1976.7	1949.3	1931.6	1909.4
17.5°	1889.1	1921.0	1980.3	2029.8	2038.7	2026.3	1962.6	1934.2	1905.9	1864.3	1834.2
20°	1873.2	1904.1	1973.2	2017.4	2022.8	1967.0	1917.4	1887.3	1839.5	1803.2	1789.9
22.5°	1848.4	1884.7	1967.0	2000.6	1980.3	1915.6	1867.8	1820.0	1776.7	1766.0	1750.1
25°	1828.0	1866.1	1952.8	1980.3	1926.3	1868.7	1813.0	1757.2	1736.8	1721.8	1707.6
27.5°	1800.6	1847.5	1934.2	1943.1	1868.7	1818.3	1736.8	1712.0	1693.5	1676.6	1670.4
30°	1770.5	1828.0	1908.6	1891.7	1820.9	1746.6	1686.4	1663.4	1650.1	1632.4	1625.3
32.5°	1735.9	1798.8	1880.2	1832.4	1769.6	1676.6	1637.7	1620.0	1602.3	1589.0	1544.7
35°	1700.5	1773.1	1846.6	1775.8	1707.6	1623.5	1589.0	1573.1	1556.2	1507.6	1461.5
37.5°	1664.2	1744.8	1805.9	1714.7	1625.3	1568.6	1539.4	1521.7	1483.7	1421.7	1398.7
40°	1622.6	1710.3	1753.6	1651.8	1553.6	1512.9	1485.4	1467.7	1381.8	1354.4	1347.3
42.5°	1581.0	1676.6	1689.9	1590.8	1494.3	1453.6	1430.5	1372.1	1313.7	1299.5	1302.2
45°	1541.2	1640.3	1620.0	1504.0	1432.3	1398.7	1359.7	1279.2	1248.2	1255.3	1257.0
47.5°	1493.4	1597.0	1546.5	1417.3	1368.6	1334.9	1248.2	1199.5	1195.1	1204.8	1210.1
50°	1442.0	1548.3	1468.6	1338.5	1299.5	1259.7	1161.4	1136.6	1142.0	1151.7	1157.9
52.5°	1394.2	1493.4	1388.0	1265.0	1231.4	1140.2	1073.8	1078.2	1087.1	1098.6	1102.1
55°	1335.8	1427.0	1302.2	1190.6	1158.8	1039.3	1009.2	1019.8	1028.6	1038.4	1045.5
57.5°	1274.7	1350.9	1200.4	1107.4	1056.1	949.9	952.5	959.6	965.8	977.3	403.7
60°	1204.8	1264.1	1088.8	1030.4	928.6	879.0	881.7	894.1	900.3	502.8	278.0
62.5°	1132.2	1163.2	987.9	942.8	811.8	808.2	820.6	825.9	562.1	265.6	260.3
65°	1049.0	1042.8	888.8	817.1	732.1	735.6	748.9	722.4	248.8	248.8	247.0
67.5°	956.9	919.8	792.3	676.3	655.1	663.0	677.2	236.4	230.2	231.9	225.7
70°	851.6	799.4	692.3	572.7	579.8	587.8	228.4	214.2	211.6	207.1	194.8
72.5°	740.1	668.4	566.5	497.5	501.9	315.1	200.1	193.0	184.1	175.3	162.0
75°	615.2	522.3	416.1	416.1	422.3	179.7	174.4	162.9	153.1	141.6	133.7
77.5°	482.5	401.9	323.1	335.5	163.8	150.5	140.8	128.4	120.4	113.3	108.9
80°	353.2	280.6	243.4	217.8	127.5	114.2	104.5	97.4	93.8	89.4	84.1
82.5°	231.9	169.1	169.1	102.7	89.4	78.8	76.1	70.8	67.3	64.6	62.0
85°	110.7	98.3	74.4	62.9	55.8	50.5	48.7	46.0	46.0	45.1	44.3
87.5°	40.7	44.3	32.8	31.9	30.1	29.2	30.1	30.1	31.0	30.1	29.2
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°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	1995.3	2002.4	2007.7	2016.6	2028.1	2037.8	2046.7	2059.1	2078.5	2083.8	2088.3
5°	2054.6	2057.3	2063.5	2070.6	2072.3	2076.8	2075.9	2081.2	2083.8	2090.0	2076.8
7.5°	2058.2	2044.0	2027.2	2012.1	2001.5	1991.8	1985.6	1995.3	2000.6	2005.1	1991.8
10°	1983.8	1967.0	1957.3	1948.4	1937.8	1922.7	1902.4	1906.8	1905.0	1905.0	1900.6
12.5°	1936.9	1913.0	1888.2	1866.1	1856.3	1855.4	1856.3	1866.1	1866.1	1865.2	1859.9
15°	1863.4	1840.4	1828.0	1822.7	1822.7	1820.0	1820.0	1830.7	1828.0	1828.0	1825.4
17.5°	1814.7	1798.8	1789.9	1783.7	1781.1	1785.5	1790.8	1795.3	1796.1	1792.6	1778.4
20°	1774.9	1759.8	1749.2	1751.0	1750.1	1752.8	1755.4	1740.4	1721.8	1697.0	1685.5
22.5°	1733.3	1721.8	1713.8	1713.8	1703.2	1686.4	1661.6	1656.3	1653.6	1642.1	1632.4
25°	1693.5	1680.2	1668.7	1633.3	1611.1	1613.8	1609.4	1600.5	1599.6	1598.7	1602.3
27.5°	1653.6	1619.1	1574.8	1569.5	1560.7	1559.8	1565.1	1569.5	1569.5	1573.1	1577.5
30°	1571.3	1531.5	1523.5	1513.7	1517.3	1529.7	1532.3	1538.5	1540.3	1546.5	1550.0
32.5°	1496.0	1478.3	1471.3	1475.7	1487.2	1497.8	1504.0	1506.7	1511.1	1516.4	1520.8
35°	1435.0	1429.7	1435.8	1445.6	1457.1	1465.9	1471.3	1476.6	1481.0	1485.4	1489.0
37.5°	1389.8	1393.4	1402.2	1414.6	1426.1	1433.2	1437.6	1443.8	1450.0	1455.3	1434.1
40°	1347.3	1356.2	1365.9	1379.2	1388.9	1396.0	1400.4	1408.4	1355.3	613.5	336.4
42.5°	1310.1	1319.9	1327.0	1337.6	1348.2	1353.5	1314.6	586.9	332.0	330.2	334.6
45°	1265.0	1273.0	1284.5	1292.4	1302.2	855.1	326.7	330.2	324.9	328.4	330.2
47.5°	1219.0	1231.4	1237.6	1180.9	351.4	324.9	321.3	324.9	321.3	325.8	323.1
50°	1166.7	1181.8	841.0	317.8	315.1	313.4	316.9	315.1	317.8	321.3	314.3
52.5°	1113.6	689.6	308.1	306.3	308.1	306.3	312.5	308.1	308.9	305.4	296.6
55°	377.1	298.3	295.7	294.8	300.1	300.1	300.1	293.0	288.6	279.7	273.5
57.5°	288.6	288.6	287.7	288.6	286.8	285.0	277.1	270.9	264.7	252.3	248.8
60°	273.5	273.5	273.5	273.5	265.6	262.0	249.6	244.3	233.7	227.5	224.0
62.5°	261.1	259.4	251.4	248.8	239.9	230.2	223.1	217.8	207.1	203.6	200.9
65°	243.4	237.2	227.5	216.9	212.5	201.8	198.3	190.3	185.0	182.4	180.6
67.5°	214.2	205.4	197.4	190.3	182.4	178.8	174.4	168.2	164.7	162.9	161.1
70°	183.2	177.0	169.1	164.7	159.3	156.7	150.5	148.7	146.1	143.4	140.8
72.5°	153.1	149.6	146.1	139.9	138.1	136.3	130.1	126.6	123.0	119.5	117.7
75°	128.4	125.7	123.9	118.6	116.0	110.7	106.2	103.6	100.9	98.3	96.5
77.5°	105.3	103.6	98.3	94.7	92.9	88.5	86.8	87.6	85.9	82.3	80.6
80°	82.3	80.6	76.1	76.1	74.4	72.6	70.8	69.0	67.3	64.6	62.9
82.5°	62.9	61.1	59.3	57.5	55.8	54.9	54.0	52.2	50.5	48.7	47.8
85°	44.3	43.4	42.5	41.6	40.7	39.8	39.0	37.2	35.4	34.5	33.6
87.5°	30.1	29.2	28.3	27.4	26.6	25.7	24.8	23.9	22.1	21.2	20.4
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°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	2088.3	2092.7	2088.3	2078.5	2072.3	2069.7	2075.0	2075.0	2078.5	2083.0	2083.8
5°	2055.5	2044.9	2032.5	2020.1	2013.9	2010.4	2000.6	2002.4	2005.1	2006.8	2008.6
7.5°	1974.1	1959.9	1943.1	1927.2	1921.0	1915.6	1904.1	1904.1	1904.1	1905.0	1910.3
10°	1890.9	1884.7	1877.6	1867.0	1859.0	1856.3	1846.6	1849.3	1847.5	1850.1	1856.3
12.5°	1851.9	1844.8	1838.6	1828.0	1819.2	1815.6	1811.2	1813.8	1813.0	1817.4	1822.7
15°	1816.5	1813.0	1805.9	1797.9	1789.9	1782.9	1766.9	1761.6	1758.1	1753.6	1759.8
17.5°	1758.1	1733.3	1716.5	1704.1	1695.2	1689.0	1684.6	1684.6	1687.3	1689.9	1695.2
20°	1678.4	1671.3	1663.4	1650.1	1641.2	1637.7	1635.0	1635.0	1639.5	1643.0	1652.7
22.5°	1623.5	1622.6	1620.0	1613.8	1609.4	1609.4	1610.2	1612.0	1618.2	1623.5	1633.3
25°	1597.8	1601.4	1599.6	1596.1	1593.4	1594.3	1592.5	1594.3	1600.5	1605.8	1613.8
27.5°	1577.5	1582.8	1581.0	1575.7	1571.3	1573.1	1575.7	1573.9	1579.3	1585.5	1591.6
30°	1550.0	1550.9	1554.5	1548.3	1546.5	1549.2	1550.0	1551.8	1557.1	1561.6	1566.9
32.5°	1519.1	1526.1	1525.3	1519.1	1519.1	1521.7	1522.6	1463.3	1352.6	1165.0	1113.6
35°	1489.0	1496.9	1483.7	1250.8	865.8	462.1	356.7	344.4	347.0	348.8	350.6
37.5°	1101.2	522.3	332.8	335.5	338.2	340.8	343.5	346.1	348.8	351.4	352.3
40°	331.1	330.2	332.8	336.4	339.0	340.8	344.4	347.0	349.7	352.3	353.2
42.5°	327.5	329.3	332.0	335.5	339.0	342.6	345.2	348.8	350.6	352.3	353.2
45°	325.8	329.3	332.8	335.5	338.2	339.9	341.7	342.6	341.7	341.7	343.5
47.5°	323.1	326.7	327.5	326.7	327.5	326.7	326.7	326.7	324.0	323.1	323.1
50°	313.4	313.4	311.6	308.1	307.2	306.3	304.5	303.6	300.1	299.2	299.2
52.5°	293.0	292.1	289.5	285.0	283.3	281.5	280.6	279.7	276.2	274.4	275.3
55°	269.1	267.3	264.7	259.4	258.5	256.7	255.8	254.9	251.4	253.2	250.5
57.5°	247.0	243.4	239.9	239.0	235.5	234.6	233.7	232.8	230.2	231.0	229.3
60°	220.4	219.5	217.8	214.2	214.2	213.3	213.3	211.6	209.8	208.9	208.9
62.5°	200.9	198.3	196.5	196.5	193.9	193.9	193.9	192.1	190.3	191.2	190.3
65°	179.7	178.8	177.9	176.2	176.2	175.3	175.3	173.5	170.9	171.7	170.0
67.5°	162.0	160.2	158.5	157.6	154.0	152.3	151.4	150.5	146.9	147.8	146.1
70°	139.9	137.2	135.4	133.7	131.0	129.2	129.2	127.5	124.8	125.7	123.9
72.5°	116.9	115.1	113.3	112.4	109.8	108.9	108.0	107.1	104.5	105.3	104.5
75°	97.4	97.4	96.5	95.6	92.9	90.3	88.5	87.6	85.9	86.8	85.0
77.5°	80.6	78.8	77.0	77.0	74.4	72.6	70.8	70.8	70.8	69.9	69.0
80°	62.9	61.1	61.1	60.2	58.4	56.7	55.8	55.8	54.9	54.9	54.0
82.5°	47.8	46.0	45.1	45.1	43.4	42.5	41.6	40.7	40.7	40.7	39.8
85°	33.6	31.9	31.0	31.0	29.2	28.3	28.3	27.4	27.4	26.6	26.6
87.5°	20.4	19.5	18.6	18.6	16.8	15.9	15.9	15.9	15.0	15.0	14.2
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°	92.5°	95°	97.5°	100°	102.5°	105°	107.5°
0°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	2083.8	2083.8	2077.6	2079.4	2076.8	2080.3	2075.9	2075.9	2081.2	2081.2	2084.7
5°	2009.5	2005.1	2004.2	2002.4	1993.5	1997.1	1992.7	1988.2	1994.4	1994.4	2002.4
7.5°	1907.7	1899.7	1903.3	1897.9	1892.6	1884.7	1887.3	1883.8	1888.2	1894.4	1902.4
10°	1855.4	1848.4	1852.8	1847.5	1850.1	1838.6	1839.5	1840.4	1844.8	1846.6	1853.7
12.5°	1821.8	1820.0	1818.3	1816.5	1818.3	1812.1	1808.5	1809.4	1811.2	1812.1	1817.4
15°	1751.0	1739.5	1743.0	1730.6	1731.5	1732.4	1725.3	1732.4	1731.5	1743.0	1753.6
17.5°	1693.5	1693.5	1687.3	1681.9	1678.4	1677.5	1672.2	1675.7	1672.2	1679.3	1681.9
20°	1653.6	1652.7	1651.8	1649.2	1640.3	1641.2	1643.9	1635.9	1635.0	1634.1	1639.5
22.5°	1635.0	1635.9	1632.4	1632.4	1624.4	1626.2	1627.1	1618.2	1619.1	1616.4	1619.1
25°	1615.6	1617.3	1612.9	1612.9	1611.1	1610.2	1605.8	1607.6	1602.3	1597.8	1602.3
27.5°	1592.5	1596.1	1592.5	1594.3	1590.8	1589.0	1586.3	1584.6	1579.3	1578.4	1581.0
30°	1571.3	1573.1	1572.2	1567.7	1566.9	1561.6	1564.2	1558.9	1553.6	1554.5	1556.2
32.5°	805.6	769.3	593.1	535.6	530.3	549.7	651.5	793.2	1027.8	1255.3	1419.0
35°	351.4	351.4	351.4	350.6	350.6	349.7	348.8	347.9	347.0	346.1	345.2
37.5°	353.2	353.2	353.2	353.2	352.3	351.4	351.4	349.7	348.8	347.9	347.0
40°	354.1	355.0	355.0	355.0	354.1	354.1	353.2	351.4	350.6	348.8	347.0
42.5°	353.2	354.1	354.1	353.2	353.2	352.3	352.3	351.4	350.6	349.7	348.8
45°	341.7	342.6	340.8	340.8	339.9	339.9	339.9	339.9	339.9	340.8	340.8
47.5°	321.3	321.3	320.5	319.6	319.6	318.7	319.6	318.7	320.5	321.3	323.1
50°	297.4	297.4	295.7	294.8	294.8	294.8	294.8	295.7	296.6	298.3	300.1
52.5°	272.7	272.7	271.8	270.9	270.0	270.0	272.7	271.8	272.7	273.5	276.2
55°	248.8	249.6	247.9	247.9	247.0	247.0	247.0	247.9	248.8	249.6	252.3
57.5°	228.4	228.4	226.6	226.6	226.6	225.7	228.4	226.6	227.5	228.4	230.2
60°	208.0	207.1	207.1	206.3	206.3	206.3	208.0	207.1	207.1	208.0	209.8
62.5°	189.4	189.4	188.6	188.6	187.7	187.7	189.4	188.6	188.6	189.4	190.3
65°	168.2	168.2	167.3	166.4	169.1	166.4	169.1	167.3	169.1	170.0	171.7
67.5°	144.3	144.3	144.3	143.4	143.4	145.2	146.1	144.3	145.2	146.9	147.8
70°	123.0	123.0	122.2	122.2	122.2	123.9	124.8	123.0	123.9	124.8	126.6
72.5°	104.5	102.7	102.7	101.8	103.6	103.6	104.5	103.6	104.5	104.5	106.2
75°	85.9	84.1	84.1	84.1	85.9	85.0	85.9	85.0	85.9	85.9	86.8
77.5°	69.0	68.2	67.3	67.3	69.0	69.0	69.0	68.2	69.0	69.9	70.8
80°	54.0	53.1	52.2	52.2	54.0	54.0	54.0	54.9	54.0	54.9	55.8
82.5°	39.8	39.0	38.1	39.8	39.8	39.8	39.8	40.7	39.8	40.7	41.6
85°	26.6	25.7	24.8	26.6	26.6	26.6	26.6	27.4	26.6	27.4	28.3
87.5°	14.2	13.3	13.3	14.2	14.2	14.2	15.0	15.0	15.0	15.9	15.9
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°
0°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	2090.0	2092.7	2091.8	2086.5	2081.2	2075.0	2070.6	2071.4	2080.3	2083.0	2075.0
5°	2002.4	2019.2	2019.2	2030.7	2024.5	2019.2	2022.8	2042.2	2052.0	2067.0	2072.3
7.5°	1912.1	1920.1	1919.2	1930.7	1928.9	1928.9	1931.6	1957.3	1969.6	1982.0	1985.6
10°	1861.6	1869.6	1868.7	1869.6	1867.0	1860.8	1860.8	1872.3	1882.9	1889.1	1890.9
12.5°	1825.4	1829.8	1828.9	1828.9	1827.1	1821.8	1820.9	1830.7	1842.2	1850.1	1851.0
15°	1771.4	1783.7	1786.4	1797.9	1795.3	1788.2	1789.9	1797.9	1805.0	1812.1	1809.4
17.5°	1690.8	1697.0	1697.9	1702.3	1700.5	1700.5	1711.2	1740.4	1759.8	1776.7	1778.4
20°	1644.8	1649.2	1647.4	1657.2	1652.7	1651.8	1654.5	1666.9	1675.7	1683.7	1697.9
22.5°	1622.6	1626.2	1623.5	1624.4	1616.4	1609.4	1607.6	1617.3	1627.1	1637.7	1637.7
25°	1604.0	1606.7	1605.8	1604.0	1597.8	1588.1	1586.3	1588.1	1591.6	1592.5	1586.3
27.5°	1581.9	1583.7	1583.7	1584.6	1576.6	1567.7	1566.0	1564.2	1567.7	1566.9	1557.1
30°	1558.9	1556.2	1557.1	1558.0	1550.9	1543.0	1539.4	1538.5	1542.1	1541.2	1531.5
32.5°	1504.0	1524.4	1526.1	1527.9	1521.7	1514.6	1511.1	1508.4	1510.2	1509.3	1500.5
35°	344.4	350.6	429.3	972.0	1319.9	1461.5	1476.6	1473.0	1473.9	1473.9	1466.8
37.5°	345.2	344.4	343.5	340.8	338.2	336.4	581.6	1240.2	1436.7	1437.6	1431.4
40°	345.2	344.4	343.5	341.7	338.2	335.5	331.1	327.5	335.5	738.3	1350.9
42.5°	347.0	345.2	343.5	341.7	338.2	334.6	331.1	326.7	329.3	327.5	323.1
45°	341.7	340.8	340.8	339.9	338.2	334.6	330.2	324.9	322.2	324.9	320.5
47.5°	324.9	325.8	328.4	329.3	329.3	330.2	327.5	324.0	319.6	322.2	316.9
50°	301.9	303.6	304.5	308.9	310.7	314.3	315.1	315.1	314.3	317.8	314.3
52.5°	277.1	278.8	283.3	285.0	286.8	292.1	293.9	296.6	298.3	303.6	307.2
55°	253.2	254.1	255.8	259.4	262.0	266.5	269.1	271.8	276.2	278.8	289.5
57.5°	231.0	231.9	235.5	236.4	238.1	241.7	244.3	247.9	251.4	253.2	265.6
60°	209.8	210.7	213.3	214.2	215.1	218.7	221.3	224.0	226.6	228.4	237.2
62.5°	191.2	191.2	193.9	193.9	194.8	197.4	199.2	200.9	203.6	204.5	208.9
65°	172.6	173.5	175.3	175.3	176.2	177.9	178.8	179.7	182.4	182.4	185.9
67.5°	149.6	150.5	153.1	154.9	155.8	159.3	160.2	161.1	162.9	163.8	165.5
70°	127.5	128.4	131.0	131.9	132.8	135.4	137.2	139.9	142.5	145.2	146.9
72.5°	107.1	108.0	110.7	110.7	113.3	114.2	116.0	116.9	119.5	121.3	123.9
75°	87.6	88.5	91.2	91.2	93.8	94.7	95.6	96.5	98.3	100.0	101.8
77.5°	71.7	71.7	75.2	77.0	78.8	78.8	79.7	79.7	79.7	80.6	82.3
80°	56.7	56.7	59.3	61.1	62.9	62.9	63.7	64.6	65.5	65.5	66.4
82.5°	42.5	42.5	45.1	46.0	47.8	47.8	47.8	48.7	49.6	48.7	50.5
85°	29.2	29.2	31.0	31.9	33.6	33.6	33.6	34.5	35.4	34.5	35.4
87.5°	16.8	17.7	18.6	19.5	20.4	21.2	21.2	21.2	22.1	22.1	23.0
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°
0°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	2066.1	2055.5	2054.6	2042.2	2038.7	2039.6	2029.8	2026.3	2010.4	2006.8	1990.0
5°	2074.1	2079.4	2076.8	2075.9	2078.5	2076.8	2069.7	2066.1	2063.5	2056.4	2042.2
7.5°	1986.5	1990.0	1992.7	2004.2	2013.9	2030.7	2048.4	2059.9	2068.8	2070.6	2059.1
10°	1897.1	1913.9	1925.4	1943.1	1957.3	1967.0	1977.6	1987.3	2013.0	2038.7	2053.7
12.5°	1851.0	1855.4	1854.6	1864.3	1874.0	1899.7	1924.5	1938.7	1958.1	1969.6	1997.1
15°	1812.1	1813.0	1815.6	1822.7	1828.0	1836.9	1848.4	1869.6	1908.6	1926.3	1941.3
17.5°	1776.7	1776.7	1778.4	1784.6	1791.7	1799.7	1806.8	1815.6	1835.1	1864.3	1901.5
20°	1720.0	1744.8	1747.5	1746.6	1750.1	1765.2	1766.9	1782.9	1792.6	1804.1	1840.4
22.5°	1635.9	1651.0	1672.2	1705.0	1717.4	1724.4	1729.7	1736.8	1751.9	1765.2	1780.2
25°	1589.9	1599.6	1605.8	1615.6	1641.2	1682.8	1690.8	1698.8	1708.5	1718.2	1736.8
27.5°	1549.2	1548.3	1552.7	1561.6	1568.6	1590.8	1629.7	1660.7	1662.5	1676.6	1692.6
30°	1519.9	1514.6	1508.4	1506.7	1516.4	1527.9	1539.4	1588.1	1621.7	1628.8	1645.6
32.5°	1492.5	1483.7	1474.8	1467.7	1461.5	1471.3	1478.3	1499.6	1543.0	1583.7	1592.5
35°	1458.9	1450.0	1439.4	1431.4	1421.7	1420.8	1419.9	1440.3	1454.4	1503.1	1545.6
37.5°	1424.3	1414.6	1405.8	1396.9	1387.2	1380.1	1375.7	1381.0	1394.2	1415.5	1486.3
40°	1388.0	1376.5	1367.7	1360.6	1347.3	1342.0	1333.2	1329.6	1330.5	1349.1	1386.3
42.5°	829.5	1322.5	1327.0	1319.0	1307.5	1300.4	1290.7	1286.2	1277.4	1286.2	1307.5
45°	319.6	323.1	967.6	1278.3	1264.1	1255.3	1246.4	1242.0	1232.2	1225.2	1244.6
47.5°	313.4	316.9	309.8	439.1	1206.6	1209.2	1198.6	1194.2	1184.4	1179.1	1173.8
50°	308.9	311.6	306.3	308.1	301.9	1105.7	1149.9	1144.6	1134.0	1127.8	1117.2
52.5°	304.5	304.5	301.0	296.6	294.8	295.7	930.4	1094.1	1081.8	1075.6	1061.4
55°	290.4	292.1	295.7	288.6	286.8	285.9	283.3	886.1	1024.2	1017.1	1004.7
57.5°	269.1	272.7	282.4	280.6	280.6	273.5	271.8	271.8	822.4	957.8	945.4
60°	244.3	247.9	258.5	262.0	264.7	262.9	261.1	260.3	256.7	866.6	882.6
62.5°	218.7	222.2	225.7	237.2	240.8	245.2	250.5	247.9	244.3	244.3	816.2
65°	191.2	196.5	198.3	208.9	213.3	221.3	225.7	231.9	230.2	229.3	233.7
67.5°	167.3	173.5	174.4	178.8	186.8	190.3	195.6	207.1	212.5	214.2	216.0
70°	146.9	150.5	153.1	154.9	160.2	161.1	170.9	178.8	186.8	195.6	198.3
72.5°	126.6	129.2	134.6	132.8	134.6	138.1	143.4	148.7	156.7	169.1	177.0
75°	103.6	105.3	108.9	110.7	114.2	116.9	120.4	124.8	131.9	138.1	148.7
77.5°	83.2	84.1	86.8	87.6	91.2	93.8	100.0	102.7	107.1	111.5	117.7
80°	67.3	67.3	68.2	68.2	70.8	73.5	77.9	80.6	85.9	89.4	89.4
82.5°	51.3	51.3	54.0	54.0	55.8	55.8	58.4	58.4	61.1	62.9	64.6
85°	36.3	37.2	39.0	38.1	39.8	39.0	40.7	42.5	43.4	42.5	41.6
87.5°	23.9	23.9	25.7	24.8	25.7	25.7	27.4	27.4	28.3	28.3	27.4
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	167.5°	170°	172.5°	175°	177.5°	180°	182.5°	185°	187.5°	190°
0°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	1983.8	1970.5	1962.6	1952.8	1950.2	1947.5	1951.1	1951.1	1945.7	1941.3	1933.4
5°	2029.8	2015.7	2000.6	1984.7	1969.6	1953.7	1947.5	1946.6	1936.9	1931.6	1928.9
7.5°	2053.7	2046.7	2029.8	2007.7	1984.7	1956.4	1944.0	1936.9	1927.2	1925.4	1925.4
10°	2056.4	2048.4	2039.6	2023.6	1997.1	1959.9	1936.0	1921.8	1913.0	1919.2	1930.7
12.5°	2030.7	2045.8	2037.8	2027.2	2005.9	1960.8	1926.3	1905.0	1902.4	1918.3	1948.4
15°	1965.2	2009.5	2031.6	2021.0	2004.2	1959.0	1910.3	1885.5	1885.5	1918.3	1957.3
17.5°	1915.6	1950.2	2004.2	2013.0	1993.5	1955.5	1895.3	1866.1	1874.0	1921.8	1963.4
20°	1874.9	1896.2	1948.4	1998.0	1979.4	1947.5	1873.2	1843.1	1859.0	1916.5	1972.3
22.5°	1811.2	1853.7	1885.5	1959.0	1965.2	1932.5	1851.0	1814.7	1846.6	1916.5	1967.9
25°	1749.2	1800.6	1834.2	1905.9	1944.0	1913.9	1830.7	1784.6	1833.3	1913.9	1964.3
27.5°	1705.8	1729.7	1790.8	1842.2	1912.1	1889.1	1803.2	1751.9	1816.5	1899.7	1944.0
30°	1659.8	1675.7	1735.9	1784.6	1869.6	1860.8	1774.9	1715.6	1795.3	1886.4	1890.9
32.5°	1609.4	1627.1	1658.0	1728.9	1810.3	1834.2	1743.0	1679.3	1772.2	1866.1	1828.9
35°	1558.0	1571.3	1596.1	1672.2	1741.3	1794.4	1704.1	1637.7	1756.3	1835.1	1769.6
37.5°	1506.7	1520.8	1542.1	1605.8	1668.7	1757.2	1670.4	1596.1	1727.1	1780.2	1707.6
40°	1458.0	1465.9	1488.1	1527.9	1608.5	1719.1	1632.4	1552.7	1697.0	1710.3	1623.5
42.5°	1368.6	1408.4	1428.8	1460.6	1540.3	1666.9	1588.1	1506.7	1663.4	1640.3	1539.4
45°	1272.1	1358.8	1367.7	1399.6	1480.1	1611.1	1546.5	1461.5	1631.5	1580.1	1459.8
47.5°	1193.3	1256.1	1307.5	1334.0	1408.4	1545.6	1507.6	1423.5	1583.7	1504.0	1381.8
50°	1123.4	1157.0	1249.9	1269.4	1322.5	1466.8	1461.5	1379.2	1517.3	1408.4	1305.7
52.5°	1055.2	1079.1	1163.2	1204.8	1248.2	1381.8	1406.6	1335.8	1444.7	1312.8	1228.7
55°	995.9	1003.9	1049.9	1137.5	1176.5	1296.0	1346.4	1285.4	1352.6	1221.6	1154.3
57.5°	934.8	927.7	961.4	1073.8	1102.1	1208.3	1282.7	1234.0	1278.3	1128.7	1077.3
60°	871.1	861.3	875.5	949.9	1023.3	1121.6	1207.5	1177.4	1188.0	1036.6	991.5
62.5°	804.7	794.9	790.5	837.4	946.3	1032.2	1131.3	1114.5	1077.3	952.5	885.2
65°	735.6	725.9	718.8	737.4	861.3	916.2	1046.3	1041.9	956.1	864.0	745.4
67.5°	224.0	660.4	645.3	644.5	725.9	810.9	954.3	947.2	833.9	769.3	641.8
70°	201.8	535.6	569.2	561.2	596.6	703.8	848.9	843.6	715.3	617.0	567.4
72.5°	185.0	189.4	502.8	494.0	501.9	598.4	739.2	725.0	606.4	486.9	490.4
75°	158.5	166.4	173.5	416.9	406.3	495.7	619.7	597.5	500.2	401.9	409.9
77.5°	129.2	139.0	144.3	303.6	328.4	353.2	494.8	465.6	344.4	321.3	153.1
80°	96.5	104.5	113.3	121.3	249.6	247.0	367.4	338.2	239.9	200.1	119.5
82.5°	70.8	73.5	78.8	87.6	99.1	165.5	236.4	208.0	166.4	91.2	82.3
85°	44.3	47.8	50.5	53.1	60.2	99.1	116.9	92.9	69.9	55.8	52.2
87.5°	28.3	28.3	27.4	28.3	29.2	35.4	39.8	38.1	30.1	28.3	28.3
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	192.5°	195°	197.5°	200°	202.5°	205°	207.5°	210°	212.5°	215°	217.5°
0°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	1924.5	1912.1	1912.1	1908.6	1911.2	1911.2	1910.3	1911.2	1917.4	1921.0	1927.2
5°	1923.6	1920.1	1928.0	1937.8	1949.3	1963.4	1967.0	1979.4	1990.9	2005.9	2021.9
7.5°	1935.1	1947.5	1962.6	1978.5	2001.5	2018.3	2033.4	2048.4	2059.1	2073.2	2082.1
10°	1951.9	1976.7	2002.4	2022.8	2047.5	2061.7	2071.4	2073.2	2058.2	2034.3	2014.8
12.5°	1975.8	2005.1	2029.0	2048.4	2059.9	2054.6	2026.3	1997.1	1980.3	1955.5	1921.0
15°	1996.2	2022.8	2047.5	2039.6	2008.6	1979.4	1957.3	1922.7	1889.1	1866.1	1851.0
17.5°	2005.1	2030.7	2021.9	1980.3	1951.1	1917.4	1872.3	1845.7	1823.6	1805.9	1797.0
20°	2010.4	2005.9	1958.1	1928.0	1871.4	1840.4	1811.2	1786.4	1769.6	1760.7	1759.0
22.5°	1996.2	1942.2	1901.5	1847.5	1805.9	1780.2	1757.2	1736.8	1725.3	1718.2	1713.8
25°	1949.3	1886.4	1826.2	1783.7	1748.3	1726.2	1708.5	1691.7	1677.5	1674.0	1665.1
27.5°	1883.8	1832.4	1752.8	1720.0	1689.0	1678.4	1658.9	1642.1	1629.7	1619.1	1590.8
30°	1829.8	1748.3	1690.8	1660.7	1642.1	1629.7	1607.6	1589.9	1568.6	1529.7	1513.7
32.5°	1763.4	1682.8	1627.9	1611.1	1588.1	1577.5	1552.7	1513.7	1481.0	1465.1	1464.2
35°	1677.5	1611.1	1571.3	1556.2	1537.7	1519.9	1468.6	1433.2	1417.3	1419.0	1432.3
37.5°	1605.8	1546.5	1520.8	1499.6	1478.3	1433.2	1389.8	1373.0	1377.4	1386.3	1392.5
40°	1533.2	1488.1	1458.9	1442.0	1394.2	1350.0	1327.0	1333.2	1341.1	1347.3	1355.3
42.5°	1462.4	1430.5	1401.3	1368.6	1303.1	1279.2	1284.5	1292.4	1299.5	1308.4	1316.3
45°	1395.1	1366.8	1333.2	1258.8	1226.0	1232.2	1240.2	1246.4	1257.0	1263.2	1271.2
47.5°	1331.4	1301.3	1242.0	1176.5	1172.9	1185.3	1192.4	1200.4	1208.3	1192.4	657.7
50°	1259.7	1228.7	1138.4	1113.6	1121.6	1133.1	1142.0	1149.9	1024.2	407.2	313.4
52.5°	1188.9	1110.1	1052.5	1059.6	1067.6	1080.9	1087.1	807.3	321.3	306.3	307.2
55°	1110.1	1009.2	992.3	1001.2	1008.3	1021.6	677.2	296.6	294.8	293.9	301.0
57.5°	986.2	925.1	932.2	941.0	948.1	669.2	288.6	286.8	287.7	288.6	289.5
60°	875.5	862.2	870.2	878.2	621.4	278.8	273.5	274.4	278.0	275.3	268.2
62.5°	787.9	798.5	806.4	706.4	264.7	262.0	264.7	262.0	255.8	251.4	242.6
65°	720.6	731.2	737.4	248.8	247.9	251.4	248.8	239.9	230.2	217.8	215.1
67.5°	649.8	660.4	236.4	230.2	233.7	229.3	218.7	208.0	200.9	190.3	185.9
70°	576.3	247.0	214.2	213.3	207.1	200.1	188.6	177.9	169.1	164.7	160.2
72.5°	416.1	195.6	193.0	185.9	175.3	165.5	155.8	149.6	145.2	142.5	139.9
75°	173.5	170.0	162.0	149.6	139.0	134.6	127.5	123.0	121.3	116.0	114.2
77.5°	145.2	138.1	126.6	117.7	111.5	108.9	103.6	98.3	95.6	94.7	91.2
80°	111.5	101.8	96.5	92.1	90.3	84.1	77.9	75.2	73.5	72.6	69.9
82.5°	76.1	72.6	69.0	62.9	62.9	60.2	57.5	55.8	54.0	54.0	52.2
85°	49.6	46.9	46.0	43.4	43.4	41.6	40.7	39.8	39.0	38.1	37.2
87.5°	28.3	28.3	29.2	28.3	28.3	27.4	26.6	25.7	24.8	24.8	23.0
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	222.5°	225°	227.5°	230°	232.5°	235°	237.5°	240°	242.5°	245°
0°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	1935.1	1944.0	1945.7	1975.8	1992.7	1991.8	1986.5	2002.4	1992.7	1987.3	1992.7
5°	2037.8	2048.4	2057.3	2090.0	2101.5	2106.9	2106.0	2114.8	2107.7	2101.5	2101.5
7.5°	2088.3	2091.8	2095.3	2087.4	2082.1	2073.2	2059.9	2040.5	2030.7	2020.1	2006.8
10°	2005.1	1993.5	1998.0	1982.0	1968.8	1959.0	1946.6	1930.7	1917.4	1907.7	1892.6
12.5°	1903.3	1902.4	1904.1	1906.8	1893.5	1885.5	1875.8	1864.3	1854.6	1843.9	1831.5
15°	1841.3	1842.2	1849.3	1846.6	1842.2	1837.7	1827.1	1823.6	1814.7	1803.2	1796.1
17.5°	1797.0	1801.5	1808.5	1805.0	1797.9	1793.5	1785.5	1777.5	1769.6	1760.7	1750.1
20°	1758.1	1762.5	1766.9	1762.5	1749.2	1743.0	1732.4	1707.6	1689.9	1672.2	1656.3
22.5°	1715.6	1718.2	1714.7	1700.5	1666.9	1651.0	1638.6	1631.5	1616.4	1606.7	1597.0
25°	1662.5	1647.4	1624.4	1608.5	1595.2	1588.1	1582.8	1581.9	1580.1	1578.4	1573.9
27.5°	1575.7	1570.4	1558.0	1551.8	1552.7	1555.4	1556.2	1558.9	1556.2	1552.7	1549.2
30°	1511.1	1513.7	1514.6	1516.4	1520.8	1523.5	1524.4	1527.9	1526.1	1523.5	1521.7
32.5°	1470.4	1476.6	1480.1	1485.4	1488.1	1492.5	1492.5	1497.8	1492.5	1491.6	1489.8
35°	1436.7	1442.0	1443.8	1451.8	1454.4	1458.9	1458.9	1463.3	1458.9	1413.7	1116.3
37.5°	1403.1	1408.4	1411.9	1419.0	1419.9	1422.6	1312.8	960.5	619.7	479.8	366.5
40°	1363.3	1369.5	1373.0	1375.7	966.7	613.5	422.3	343.5	343.5	346.1	348.8
42.5°	1320.8	1325.2	923.3	537.3	334.6	333.7	336.4	339.0	341.7	345.2	348.8
45°	1038.4	524.1	332.8	324.9	327.5	331.1	334.6	338.2	342.6	346.1	347.9
47.5°	340.8	319.6	324.0	320.5	324.9	329.3	332.8	336.4	337.3	338.2	337.3
50°	315.1	315.1	317.8	317.8	321.3	323.1	323.1	323.1	319.6	318.7	316.0
52.5°	304.5	311.6	308.1	309.8	308.1	305.4	302.7	300.1	294.8	293.0	289.5
55°	299.2	301.9	293.0	290.4	286.8	279.7	276.2	272.7	268.2	266.5	262.0
57.5°	286.8	280.6	270.9	266.5	260.3	253.2	249.6	247.0	242.6	240.8	238.1
60°	263.8	251.4	245.2	239.9	232.8	226.6	224.0	222.2	218.7	217.8	215.1
62.5°	235.5	224.8	219.5	212.5	207.1	203.6	200.9	200.1	196.5	196.5	194.8
65°	204.5	199.2	194.8	187.7	185.0	181.5	180.6	179.7	177.9	177.0	175.3
67.5°	179.7	176.2	170.0	166.4	164.7	162.0	160.2	158.5	154.9	153.1	150.5
70°	157.6	154.9	148.7	146.1	142.5	138.1	135.4	133.7	131.0	129.2	126.6
72.5°	136.3	128.4	123.9	121.3	118.6	114.2	113.3	111.5	108.9	108.0	105.3
75°	109.8	103.6	100.9	99.1	96.5	93.8	93.8	93.8	91.2	90.3	89.4
77.5°	87.6	84.1	82.3	80.6	79.7	77.9	75.2	74.4	71.7	71.7	70.8
80°	67.3	65.5	63.7	62.9	62.0	60.2	58.4	57.5	54.9	54.9	54.0
82.5°	49.6	48.7	47.8	46.9	46.0	45.1	42.5	41.6	39.8	39.8	39.0
85°	35.4	34.5	32.8	31.9	31.9	31.0	28.3	27.4	25.7	25.7	25.7
87.5°	22.1	21.2	20.4	19.5	18.6	17.7	15.9	15.0	15.0	13.3	12.4
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	247.5°	250°	252.5°	255°	257.5°	260°	262.5°	265°	267.5°	270°	272.5°
0°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	1982.0	1997.1	1995.3	2005.9	2008.6	2013.9	2015.7	2016.6	2003.3	2013.9	2014.8
5°	2098.9	2101.5	2103.3	2107.7	2112.2	2113.1	2108.6	2103.3	2105.1	2101.5	2092.7
7.5°	2005.1	1991.8	1989.1	1985.6	1983.8	1982.0	1974.1	1981.2	1973.2	1969.6	1957.3
10°	1890.0	1877.6	1876.7	1876.7	1879.4	1878.5	1876.7	1873.2	1880.2	1875.8	1873.2
12.5°	1829.8	1825.4	1828.0	1826.2	1833.3	1835.1	1833.3	1833.3	1831.5	1828.0	1829.8
15°	1793.5	1789.9	1792.6	1789.9	1795.3	1796.1	1791.7	1794.4	1789.9	1785.5	1783.7
17.5°	1745.7	1737.7	1731.5	1722.7	1723.5	1721.8	1716.5	1716.5	1712.0	1700.5	1701.4
20°	1653.6	1645.6	1642.1	1642.1	1646.5	1648.3	1647.4	1649.2	1644.8	1643.0	1635.9
22.5°	1596.1	1595.2	1597.0	1601.4	1608.5	1618.2	1619.1	1619.1	1619.1	1618.2	1609.4
25°	1575.7	1575.7	1577.5	1583.7	1589.0	1596.1	1597.8	1599.6	1597.8	1597.8	1589.9
27.5°	1552.7	1550.9	1554.5	1560.7	1566.9	1572.2	1576.6	1577.5	1574.8	1574.8	1577.5
30°	1524.4	1523.5	1527.9	1534.1	1539.4	1544.7	1549.2	1552.7	1549.2	1549.2	1546.5
32.5°	1495.2	1495.2	1496.9	1459.8	1353.5	1219.0	1221.6	1143.7	1089.7	1021.6	1111.9
35°	933.0	679.0	583.4	494.0	431.1	390.4	389.5	376.2	370.0	365.6	364.7
37.5°	352.3	354.1	357.6	359.4	362.1	363.8	364.7	364.7	364.7	364.7	363.8
40°	351.4	355.0	357.6	360.3	362.9	364.7	364.7	365.6	366.5	366.5	366.5
42.5°	352.3	355.9	359.4	362.1	363.8	364.7	365.6	366.5	366.5	366.5	366.5
45°	351.4	353.2	353.2	354.1	354.1	354.1	355.0	355.0	354.1	353.2	355.0
47.5°	338.2	338.2	335.5	334.6	333.7	332.0	332.8	332.0	331.1	330.2	332.0
50°	315.1	311.6	309.8	308.1	307.2	305.4	306.3	305.4	304.5	302.7	305.4
52.5°	287.7	286.8	283.3	281.5	280.6	281.5	279.7	278.8	278.0	277.1	278.0
55°	261.1	257.6	256.7	254.9	254.1	254.9	254.1	253.2	252.3	251.4	252.3
57.5°	237.2	234.6	233.7	231.9	231.9	231.9	231.9	231.0	230.2	229.3	230.2
60°	214.2	212.5	211.6	211.6	210.7	210.7	210.7	209.8	208.9	208.9	209.8
62.5°	194.8	194.8	192.1	191.2	191.2	192.1	191.2	190.3	189.4	188.6	190.3
65°	174.4	170.9	170.0	168.2	166.4	167.3	166.4	165.5	164.7	163.8	165.5
67.5°	149.6	148.7	145.2	143.4	142.5	143.4	142.5	141.6	140.8	139.9	141.6
70°	125.7	125.7	122.2	121.3	120.4	120.4	119.5	119.5	118.6	117.7	119.5
72.5°	104.5	104.5	103.6	101.8	100.9	100.0	99.1	98.3	98.3	99.1	99.1
75°	86.8	85.0	81.4	82.3	81.4	80.6	80.6	79.7	78.8	80.6	79.7
77.5°	68.2	67.3	64.6	65.5	64.6	63.7	63.7	62.9	62.0	62.9	62.9
80°	51.3	51.3	50.5	49.6	49.6	48.7	47.8	47.8	46.9	47.8	47.8
82.5°	37.2	37.2	36.3	35.4	34.5	34.5	33.6	33.6	33.6	33.6	33.6
85°	23.9	23.0	23.0	21.2	21.2	21.2	20.4	20.4	20.4	20.4	20.4
87.5°	11.5	11.5	10.6	10.6	9.7	8.9	8.9	8.0	8.0	8.9	8.9
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	277.5°	280°	282.5°	285°	287.5°	290°	292.5°	295°	297.5°	300°
0°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	1998.9	2010.4	2000.6	2005.1	2005.9	2021.0	2020.1	2023.6	2017.4	2010.4	2000.6
5°	2100.7	2095.3	2088.3	2105.1	2096.2	2106.9	2110.4	2117.5	2117.5	2116.6	2108.6
7.5°	1970.5	1959.0	1967.9	1974.1	1976.7	1969.6	1983.8	1999.7	2013.0	2021.0	2021.9
10°	1868.7	1872.3	1871.4	1874.0	1880.2	1879.4	1888.2	1897.1	1900.6	1905.9	1907.7
12.5°	1820.9	1820.0	1821.8	1828.0	1831.5	1830.7	1839.5	1844.8	1846.6	1847.5	1846.6
15°	1782.9	1776.7	1781.1	1782.0	1784.6	1784.6	1795.3	1803.2	1806.8	1808.5	1806.8
17.5°	1711.2	1696.1	1710.3	1710.3	1720.0	1718.2	1735.1	1748.3	1755.4	1760.7	1760.7
20°	1640.3	1633.3	1638.6	1636.8	1643.9	1643.0	1653.6	1662.5	1668.7	1673.1	1678.4
22.5°	1612.0	1613.8	1605.8	1606.7	1606.7	1605.8	1611.1	1615.6	1617.3	1620.0	1618.2
25°	1593.4	1595.2	1592.5	1588.1	1586.3	1588.1	1590.8	1596.1	1597.0	1595.2	1589.0
27.5°	1574.8	1569.5	1573.9	1566.0	1564.2	1567.7	1571.3	1572.2	1573.1	1573.1	1567.7
30°	1546.5	1542.1	1546.5	1543.0	1539.4	1543.0	1545.6	1545.6	1547.4	1548.3	1542.1
32.5°	1080.9	1089.7	1233.1	1319.9	1442.0	1504.0	1515.5	1515.5	1517.3	1517.3	1512.0
35°	368.3	369.1	399.2	432.9	504.6	593.1	709.1	769.3	972.9	1216.3	1451.8
37.5°	363.8	362.9	362.1	361.2	360.3	359.4	357.6	356.7	362.1	429.3	582.5
40°	365.6	364.7	362.9	362.1	361.2	359.4	358.5	356.7	355.0	353.2	351.4
42.5°	365.6	364.7	363.8	362.9	362.1	361.2	359.4	357.6	355.9	353.2	350.6
45°	353.2	353.2	354.1	354.1	355.0	355.0	355.0	354.1	354.1	353.2	349.7
47.5°	330.2	330.2	332.8	332.8	334.6	336.4	336.4	338.2	340.8	342.6	343.5
50°	303.6	303.6	306.3	307.2	308.9	311.6	314.3	315.1	317.8	321.3	324.9
52.5°	277.1	277.1	279.7	279.7	281.5	284.2	286.8	287.7	291.2	294.8	299.2
55°	252.3	252.3	254.1	254.9	255.8	257.6	260.3	260.3	263.8	266.5	270.9
57.5°	230.2	231.9	231.9	231.9	232.8	234.6	236.4	236.4	239.0	241.7	245.2
60°	208.9	210.7	210.7	210.7	211.6	212.5	214.2	214.2	216.0	217.8	221.3
62.5°	189.4	191.2	191.2	192.1	192.1	193.0	194.8	193.9	195.6	196.5	199.2
65°	164.7	166.4	167.3	168.2	169.1	170.9	173.5	172.6	175.3	177.0	179.7
67.5°	140.8	142.5	142.5	143.4	144.3	146.1	147.8	147.8	150.5	152.3	155.8
70°	118.6	120.4	120.4	121.3	122.2	123.9	125.7	124.8	127.5	129.2	131.9
72.5°	98.3	100.0	100.0	100.9	100.9	102.7	104.5	106.2	106.2	108.0	109.8
75°	79.7	80.6	81.4	81.4	82.3	83.2	85.0	86.8	87.6	88.5	90.3
77.5°	62.9	63.7	64.6	64.6	65.5	66.4	67.3	70.8	72.6	73.5	73.5
80°	47.8	48.7	48.7	48.7	49.6	50.5	52.2	52.2	55.8	55.8	56.7
82.5°	33.6	34.5	34.5	34.5	35.4	37.2	38.1	39.0	40.7	41.6	41.6
85°	20.4	21.2	21.2	21.2	22.1	23.0	24.8	25.7	26.6	26.6	27.4
87.5°	8.0	8.9	9.7	9.7	10.6	11.5	12.4	13.3	14.2	14.2	15.0
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: P#

CATALOG NUMBER: 4SNLED-LD5-45HL-RW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	302.5°	305°	307.5°	310°	312.5°	315°	317.5°	320°	322.5°	325°	327.5°
0°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	1990.0	1996.2	1990.0	1993.5	1998.0	1990.0	1971.4	1964.3	1961.7	1951.1	1944.0
5°	2100.7	2100.7	2098.0	2105.1	2104.2	2091.8	2072.3	2063.5	2054.6	2043.1	2034.3
7.5°	2021.9	2029.0	2033.4	2060.8	2078.5	2080.3	2092.7	2095.3	2098.9	2095.3	2090.0
10°	1908.6	1905.9	1918.3	1944.0	1959.0	1967.0	1990.9	2002.4	2012.1	2031.6	2052.0
12.5°	1844.8	1848.4	1853.7	1872.3	1886.4	1882.9	1892.6	1900.6	1912.1	1931.6	1960.8
15°	1802.3	1805.9	1811.2	1825.4	1834.2	1829.8	1835.1	1840.4	1848.4	1858.1	1875.8
17.5°	1756.3	1762.5	1768.7	1783.7	1791.7	1790.8	1795.3	1797.0	1799.7	1805.9	1818.3
20°	1684.6	1704.1	1716.5	1736.8	1748.3	1746.6	1754.5	1757.2	1760.7	1766.9	1772.2
22.5°	1619.1	1624.4	1630.6	1652.7	1672.2	1696.1	1701.4	1708.5	1717.4	1723.5	1728.9
25°	1581.9	1578.4	1581.0	1596.1	1606.7	1608.5	1616.4	1639.5	1663.4	1674.0	1686.4
27.5°	1559.8	1556.2	1555.4	1562.4	1564.2	1559.8	1558.0	1565.1	1582.8	1600.5	1637.7
30°	1535.9	1531.5	1527.9	1534.1	1536.8	1530.6	1519.1	1512.9	1523.5	1527.9	1543.0
32.5°	1507.6	1503.1	1501.4	1504.9	1506.7	1501.4	1489.0	1481.9	1480.1	1476.6	1480.1
35°	1475.7	1471.3	1468.6	1469.5	1473.0	1468.6	1458.0	1449.1	1444.7	1435.0	1427.9
37.5°	760.4	1077.3	1398.7	1432.3	1435.8	1435.0	1424.3	1414.6	1410.2	1398.7	1395.1
40°	347.9	388.6	583.4	762.2	1099.5	1396.9	1387.2	1377.4	1369.5	1365.9	1352.6
42.5°	347.0	347.9	348.8	344.4	426.7	726.8	1072.9	1339.4	1334.0	1325.2	1315.5
45°	347.0	342.6	346.1	340.8	342.6	341.7	425.8	686.9	1222.5	1277.4	1273.0
47.5°	343.5	340.8	344.4	339.9	334.6	337.3	333.7	338.2	527.6	895.0	1226.0
50°	327.5	329.3	335.5	334.6	330.2	333.7	327.5	332.8	328.4	360.3	694.0
52.5°	303.6	307.2	313.4	318.7	320.5	324.9	323.1	324.9	321.3	322.2	323.1
55°	275.3	279.7	285.0	293.0	296.6	303.6	308.9	311.6	316.0	315.1	308.1
57.5°	248.8	253.2	257.6	265.6	273.5	277.1	286.8	292.1	303.6	301.0	299.2
60°	224.0	227.5	231.9	233.7	243.4	249.6	258.5	263.8	278.8	282.4	287.7
62.5°	201.8	203.6	207.1	209.8	216.0	222.2	226.6	235.5	243.4	254.9	262.9
65°	181.5	183.2	185.9	187.7	188.6	197.4	200.1	209.8	212.5	224.8	231.9
67.5°	158.5	162.0	165.5	167.3	169.1	174.4	176.2	180.6	186.8	192.1	200.9
70°	134.6	137.2	140.8	143.4	146.9	150.5	155.8	158.5	162.9	166.4	173.5
72.5°	112.4	115.1	116.9	119.5	122.2	124.8	129.2	135.4	139.0	145.2	146.9
75°	91.2	93.8	95.6	97.4	100.0	101.8	103.6	109.8	113.3	118.6	123.9
77.5°	75.2	75.2	77.0	82.3	81.4	81.4	83.2	86.8	89.4	92.9	98.3
80°	58.4	59.3	60.2	64.6	65.5	66.4	65.5	68.2	70.8	71.7	75.2
82.5°	43.4	44.3	44.3	46.9	49.6	49.6	49.6	50.5	53.1	54.0	55.8
85°	29.2	30.1	31.0	31.9	33.6	34.5	35.4	35.4	37.2	38.1	39.0
87.5°	15.9	17.7	18.6	19.5	20.4	21.2	22.1	23.0	23.9	24.8	25.7
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	332.5°	335°	337.5°	340°	342.5°	345°	347.5°	350°	352.5°	355°
0°	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6	1931.6
2.5°	1941.3	1936.9	1934.2	1927.2	1925.4	1913.9	1915.6	1913.9	1913.9	1916.5	1925.4
5°	2024.5	2003.3	1998.0	1982.9	1970.5	1949.3	1936.0	1928.9	1918.3	1913.9	1920.1
7.5°	2081.2	2065.2	2052.0	2038.7	2021.0	1996.2	1977.6	1956.4	1938.7	1921.8	1917.4
10°	2071.4	2089.2	2089.2	2081.2	2064.4	2039.6	2017.4	1990.9	1959.9	1933.4	1917.4
12.5°	1989.1	2020.1	2044.9	2063.5	2080.3	2063.5	2041.3	2020.1	1985.6	1946.6	1917.4
15°	1898.8	1930.7	1961.7	2000.6	2041.3	2058.2	2057.3	2032.5	2001.5	1960.8	1920.1
17.5°	1835.1	1857.2	1874.0	1916.5	1966.1	2009.5	2038.7	2040.5	2010.4	1974.1	1921.0
20°	1787.3	1803.2	1817.4	1841.3	1884.7	1937.8	1991.8	2021.9	2016.6	1976.7	1923.6
22.5°	1743.9	1755.4	1766.9	1784.6	1819.2	1853.7	1916.5	1978.5	2005.1	1972.3	1921.0
25°	1700.5	1712.9	1721.8	1734.2	1761.6	1789.9	1834.2	1911.2	1970.5	1968.8	1915.6
27.5°	1649.2	1666.0	1676.6	1693.5	1712.0	1733.3	1763.4	1836.0	1921.0	1951.1	1901.5
30°	1587.2	1612.0	1627.9	1646.5	1662.5	1681.1	1705.0	1749.2	1854.6	1916.5	1886.4
32.5°	1497.8	1542.1	1577.5	1595.2	1612.9	1628.8	1650.1	1687.3	1773.1	1869.6	1869.6
35°	1434.1	1454.4	1486.3	1537.7	1559.8	1575.7	1595.2	1624.4	1679.3	1813.8	1842.2
37.5°	1384.5	1392.5	1408.4	1458.9	1500.5	1526.1	1545.6	1564.2	1618.2	1737.7	1806.8
40°	1347.3	1344.7	1342.9	1366.8	1426.1	1466.8	1489.0	1507.6	1549.2	1646.5	1759.8
42.5°	1303.9	1301.3	1292.4	1298.6	1327.9	1396.0	1429.7	1450.0	1484.5	1550.9	1708.5
45°	1258.8	1254.4	1250.8	1244.6	1255.3	1293.3	1362.4	1392.5	1411.9	1471.3	1643.9
47.5°	1212.8	1206.6	1202.1	1196.8	1190.6	1208.3	1273.9	1327.9	1361.5	1398.7	1566.0
50°	1147.3	1155.2	1149.9	1143.7	1138.4	1134.9	1162.3	1250.8	1292.4	1322.5	1471.3
52.5°	540.9	1051.7	1095.9	1089.7	1082.6	1076.4	1082.6	1149.9	1225.2	1249.1	1357.1
55°	308.1	468.3	974.6	1030.4	1024.2	1015.4	1010.1	1033.1	1145.5	1177.4	1252.6
57.5°	296.6	297.4	430.2	928.6	963.1	955.2	949.0	954.3	1049.9	1103.9	1161.4
60°	286.8	286.8	286.8	410.7	887.9	890.5	882.6	873.7	915.3	1021.6	1069.4
62.5°	265.6	270.9	273.5	273.5	405.4	822.4	814.4	811.8	813.5	922.4	977.3
65°	238.1	250.5	255.8	259.4	259.4	425.8	744.5	740.1	733.9	775.5	884.3
67.5°	208.0	220.4	231.9	239.0	239.9	247.9	444.4	666.6	657.7	658.6	785.2
70°	177.0	187.7	200.1	210.7	220.4	224.8	231.9	553.3	582.5	570.1	672.8
72.5°	153.1	157.6	166.4	177.0	188.6	199.2	205.4	220.4	505.5	492.2	511.7
75°	127.5	131.0	137.2	144.3	153.1	165.5	176.2	186.8	268.2	412.5	409.9
77.5°	99.1	105.3	112.4	116.9	121.3	130.1	144.3	154.9	165.5	278.8	328.4
80°	76.1	80.6	84.1	88.5	93.8	100.0	105.3	117.7	130.1	139.9	251.4
82.5°	56.7	59.3	62.0	63.7	65.5	69.0	78.8	83.2	91.2	100.0	118.6
85°	39.8	41.6	43.4	44.3	45.1	46.0	49.6	50.5	58.4	60.2	71.7
87.5°	25.7	26.6	28.3	29.2	29.2	30.1	31.0	31.0	31.0	29.2	35.4
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	357.5°	360°
0°	1931.6	1931.6
2.5°	1932.5	1946.6
5°	1929.8	1948.4
7.5°	1922.7	1940.4
10°	1912.1	1933.4
12.5°	1900.6	1921.0
15°	1890.9	1905.9
17.5°	1880.2	1889.1
20°	1866.1	1873.2
22.5°	1851.9	1848.4
25°	1836.0	1828.0
27.5°	1815.6	1800.6
30°	1797.0	1770.5
32.5°	1779.3	1735.9
35°	1755.4	1700.5
37.5°	1730.6	1664.2
40°	1701.4	1622.6
42.5°	1670.4	1581.0
45°	1631.5	1541.2
47.5°	1597.0	1493.4
50°	1549.2	1442.0
52.5°	1490.7	1394.2
55°	1421.7	1335.8
57.5°	1347.3	1274.7
60°	1267.7	1204.8
62.5°	1171.2	1132.2
65°	1057.9	1049.0
67.5°	910.0	956.9
70°	746.3	851.6
72.5°	624.1	740.1
75°	511.7	615.2
77.5°	405.4	482.5
80°	253.2	353.2
82.5°	170.0	231.9
85°	102.7	110.7
87.5°	39.8	40.7
90°	0.0	0.0

(END OF REPORT)