

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-L950-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-L950-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WHITE REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

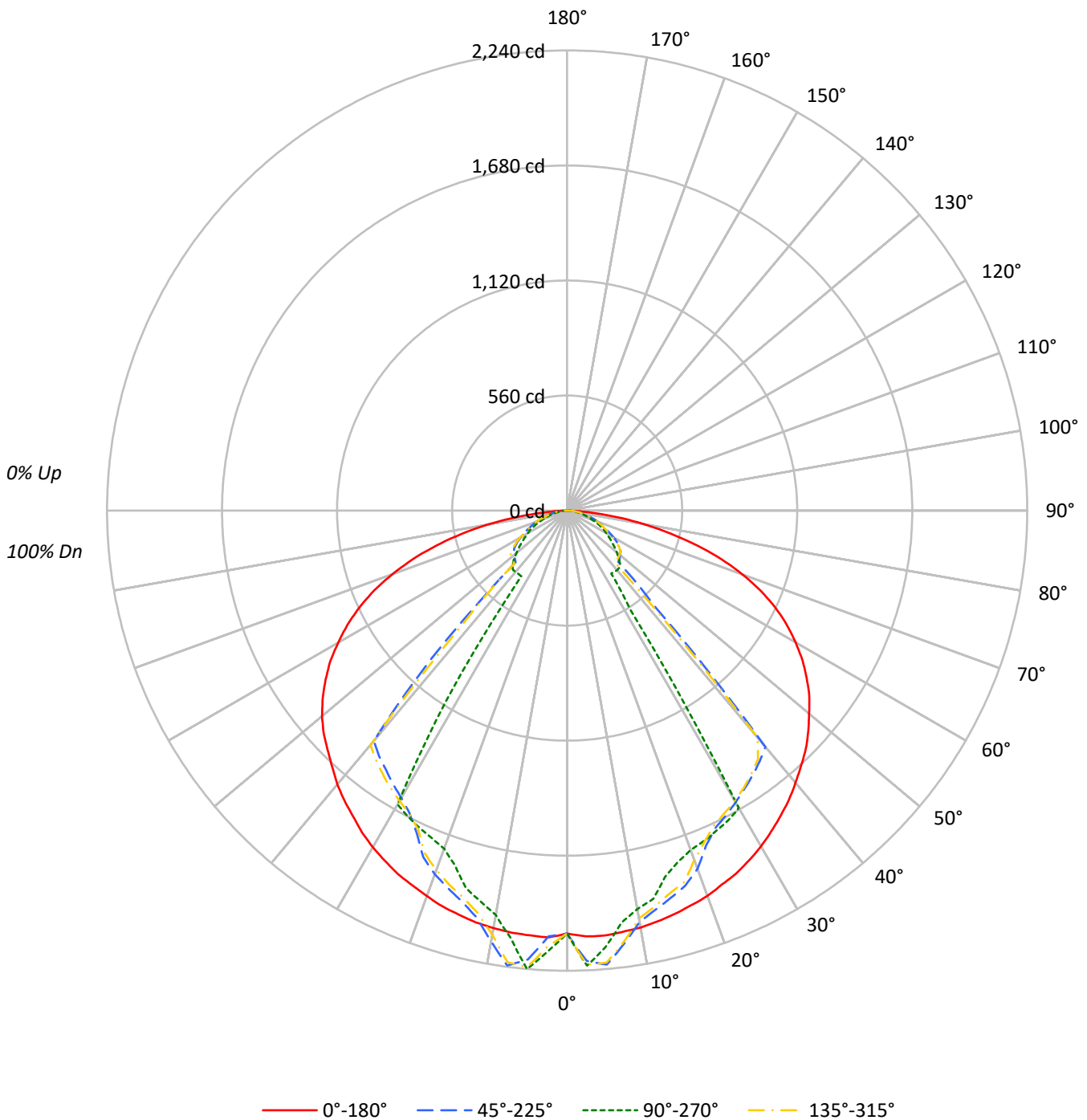
Lumens per Lamp: N/A
Luminaire Lumens: 4123.0 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.16 / 1.2
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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	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°	16638	16638	16638	16638
5°	16801	16763	16794	17594
10°	16818	15156	16840	15389
15°	16855	14023	16894	14467
20°	16977	13300	16977	13250
25°	17124	13046	17150	12924
30°	17298	12816	17341	12664
35°	17499	2919	17535	3044
40°	17779	3036	17886	3133
45°	18205	3019	18269	3128
50°	18630	2729	18882	2803
55°	19204	2423	19356	2458
60°	19690	2154	19734	2181
65°	20039	1879	19987	1850
70°	19751	1514	19690	1460
75°	18337	1165	18469	1117
80°	14883	828	15480	759
85°	8055	496	8512	380



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.6	4.9
10°-20°	557.0	13.5
20°-30°	825.0	20.0
30°-40°	831.2	20.2
40°-50°	649.3	15.7
50°-60°	501.6	12.2
60°-70°	336.7	8.2
70°-80°	171.8	4.2
80°-90°	47.8	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°	1584.5	38.4
0°-40°	2415.8	58.6
0°-60°	3566.7	86.5
0°-90°	4123.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4123.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2059	2059	2059	2059	2059	
5°	2077	2134	2076	2240	2077	198
15°	2032	1845	2036	1903	2032	575
25°	1948	1719	1951	1703	1948	899
35°	1813	374	1816	390	1813	1136
45°	1643	363	1648	376	1643	1267
55°	1424	264	1435	268	1424	1272
65°	1118	177	1115	175	1118	1100
75°	656	90	660	86	656	686
85°	118	28	125	22	118	162
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2075.0	2082.5	2088.2	2091.9	2093.8	2093.8	2094.8	2095.7	2108.0	2113.6	2117.4
5°	2076.8	2084.4	2095.7	2110.8	2124.0	2135.4	2144.8	2158.0	2171.2	2185.4	2190.1
7.5°	2068.4	2077.8	2100.4	2127.8	2153.3	2171.2	2183.5	2192.0	2198.6	2199.5	2204.2
10°	2060.8	2077.8	2108.9	2144.8	2176.9	2198.6	2198.6	2193.9	2200.5	2175.0	2149.5
12.5°	2047.6	2066.5	2108.9	2156.1	2186.3	2194.8	2191.0	2172.2	2133.5	2102.3	2088.2
15°	2031.6	2057.0	2109.9	2162.7	2188.2	2191.0	2155.2	2107.0	2077.8	2058.9	2035.3
17.5°	2013.6	2047.6	2110.8	2163.7	2173.1	2159.9	2091.9	2061.8	2031.6	1987.2	1955.1
20°	1996.6	2029.7	2103.3	2150.4	2156.1	2096.7	2043.8	2011.7	1960.8	1922.1	1907.9
22.5°	1970.2	2008.9	2096.7	2132.5	2110.8	2041.9	1991.0	1940.0	1893.8	1882.5	1865.5
25°	1948.5	1989.1	2081.6	2110.8	2053.3	1991.9	1932.5	1873.0	1851.3	1835.3	1820.2
27.5°	1919.3	1969.3	2061.8	2071.2	1991.9	1938.1	1851.3	1824.9	1805.1	1787.2	1780.6
30°	1887.2	1948.5	2034.4	2016.5	1941.0	1861.7	1797.5	1773.0	1758.9	1740.0	1732.4
32.5°	1850.4	1917.4	2004.2	1953.2	1886.2	1787.2	1745.6	1726.8	1707.9	1693.7	1646.6
35°	1812.6	1890.0	1968.3	1892.8	1820.2	1730.5	1693.7	1676.8	1658.8	1606.9	1557.9
37.5°	1774.0	1859.8	1924.9	1827.7	1732.4	1672.0	1640.9	1622.0	1581.5	1515.4	1490.9
40°	1729.6	1823.0	1869.3	1760.7	1656.0	1612.6	1583.3	1564.5	1472.9	1443.7	1436.1
42.5°	1685.3	1787.2	1801.3	1695.6	1592.8	1549.4	1524.8	1462.6	1400.3	1385.2	1388.0
45°	1642.8	1748.5	1726.8	1603.2	1526.7	1490.9	1449.4	1363.5	1330.5	1338.0	1339.9
47.5°	1591.8	1702.2	1648.5	1510.7	1458.8	1422.9	1330.5	1278.6	1273.9	1284.2	1289.9
50°	1537.1	1650.3	1565.4	1426.7	1385.2	1342.7	1238.0	1211.6	1217.2	1227.6	1234.2
52.5°	1486.2	1591.8	1479.6	1348.4	1312.5	1215.3	1144.6	1149.3	1158.7	1171.0	1174.8
55°	1423.9	1521.1	1388.0	1269.1	1235.2	1107.8	1075.7	1087.0	1096.5	1106.8	1114.4
57.5°	1358.8	1439.9	1279.5	1180.4	1125.7	1012.5	1015.3	1022.9	1029.5	1041.7	430.3
60°	1284.2	1347.5	1160.6	1098.3	989.8	937.0	939.8	953.0	959.6	536.0	296.3
62.5°	1206.9	1239.9	1053.0	1004.9	865.3	861.5	874.7	880.4	599.2	283.1	277.4
65°	1118.2	1111.6	947.4	870.9	780.4	784.1	798.3	770.0	265.1	265.1	263.3
67.5°	1020.0	980.4	844.5	720.9	698.3	706.8	721.8	251.9	245.3	247.2	240.6
70°	907.7	852.1	737.9	610.5	618.1	626.5	243.4	228.3	225.5	220.8	207.6
72.5°	788.8	712.4	603.9	530.3	535.0	335.9	213.3	205.7	196.3	186.8	172.7
75°	655.8	556.7	443.5	443.5	450.1	191.5	185.9	173.6	163.2	151.0	142.5
77.5°	514.3	428.4	344.4	357.6	174.6	160.4	150.0	136.8	128.3	120.8	116.1
80°	376.5	299.1	259.5	232.1	135.9	121.7	111.3	103.8	100.0	95.3	89.6
82.5°	247.2	180.2	180.2	109.5	95.3	84.0	81.1	75.5	71.7	68.9	66.1
85°	117.9	104.7	79.3	67.0	59.4	53.8	51.9	49.1	49.1	48.1	47.2
87.5°	43.4	47.2	34.9	34.0	32.1	31.1	32.1	32.1	33.0	32.1	31.1
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°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2126.9	2134.4	2140.1	2149.5	2161.8	2172.2	2181.6	2194.8	2215.6	2221.2	2225.9
5°	2190.1	2192.9	2199.5	2207.1	2209.0	2213.7	2212.7	2218.4	2221.2	2227.8	2213.7
7.5°	2193.9	2178.8	2160.8	2144.8	2133.5	2123.1	2116.5	2126.9	2132.5	2137.2	2123.1
10°	2114.6	2096.7	2086.3	2076.8	2065.5	2049.5	2027.8	2032.5	2030.6	2030.6	2025.9
12.5°	2064.6	2039.1	2012.7	1989.1	1978.7	1977.8	1978.7	1989.1	1989.1	1988.2	1982.5
15°	1986.3	1961.7	1948.5	1942.9	1942.9	1940.0	1940.0	1951.4	1948.5	1948.5	1945.7
17.5°	1934.4	1917.4	1907.9	1901.3	1898.5	1903.2	1908.9	1913.6	1914.6	1910.8	1895.7
20°	1891.9	1875.9	1864.5	1866.4	1865.5	1868.3	1871.1	1855.1	1835.3	1808.9	1796.6
22.5°	1847.6	1835.3	1826.8	1826.8	1815.5	1797.5	1771.1	1765.5	1762.6	1750.4	1740.0
25°	1805.1	1790.9	1778.7	1740.9	1717.3	1720.2	1715.5	1706.0	1705.1	1704.1	1707.9
27.5°	1762.6	1725.8	1678.7	1673.0	1663.6	1662.6	1668.3	1673.0	1673.0	1676.8	1681.5
30°	1674.9	1632.4	1623.9	1613.5	1617.3	1630.5	1633.4	1640.0	1641.9	1648.5	1652.2
32.5°	1594.7	1575.8	1568.3	1573.0	1585.2	1596.6	1603.2	1606.0	1610.7	1616.4	1621.1
35°	1529.6	1523.9	1530.5	1540.9	1553.2	1562.6	1568.3	1573.9	1578.6	1583.3	1587.1
37.5°	1481.4	1485.2	1494.7	1507.9	1520.1	1527.7	1532.4	1539.0	1545.6	1551.3	1528.6
40°	1436.1	1445.6	1456.0	1470.1	1480.5	1488.0	1492.8	1501.3	1444.6	653.9	358.6
42.5°	1396.5	1406.9	1414.4	1425.8	1437.1	1442.8	1401.2	625.6	353.8	352.0	356.7
45°	1348.4	1356.9	1369.2	1377.6	1388.0	911.5	348.2	352.0	346.3	350.1	352.0
47.5°	1299.3	1312.5	1319.1	1258.8	374.6	346.3	342.5	346.3	342.5	347.2	344.4
50°	1243.7	1259.7	896.4	338.7	335.9	334.0	337.8	335.9	338.7	342.5	335.0
52.5°	1187.0	735.1	328.4	326.5	328.4	326.5	333.1	328.4	329.3	325.5	316.1
55°	402.0	318.0	315.2	314.2	319.9	319.9	319.9	312.3	307.6	298.2	291.6
57.5°	307.6	307.6	306.7	307.6	305.7	303.8	295.3	288.7	282.1	268.9	265.1
60°	291.6	291.6	291.6	291.6	283.1	279.3	266.1	260.4	249.1	242.5	238.7
62.5°	278.4	276.5	268.0	265.1	255.7	245.3	237.8	232.1	220.8	217.0	214.2
65°	259.5	252.9	242.5	231.2	226.5	215.1	211.4	202.9	197.2	194.4	192.5
67.5°	228.3	218.9	210.4	202.9	194.4	190.6	185.9	179.3	175.5	173.6	171.7
70°	195.3	188.7	180.2	175.5	169.8	167.0	160.4	158.5	155.7	152.9	150.0
72.5°	163.2	159.5	155.7	149.1	147.2	145.3	138.7	134.9	131.2	127.4	125.5
75°	136.8	134.0	132.1	126.4	123.6	117.9	113.2	110.4	107.6	104.7	102.9
77.5°	112.3	110.4	104.7	101.0	99.1	94.4	92.5	93.4	91.5	87.8	85.9
80°	87.8	85.9	81.1	81.1	79.3	77.4	75.5	73.6	71.7	68.9	67.0
82.5°	67.0	65.1	63.2	61.3	59.4	58.5	57.6	55.7	53.8	51.9	51.0
85°	47.2	46.2	45.3	44.3	43.4	42.5	41.5	39.6	37.7	36.8	35.9
87.5°	32.1	31.1	30.2	29.3	28.3	27.4	26.4	25.5	23.6	22.6	21.7
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°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2225.9	2230.7	2225.9	2215.6	2209.0	2206.1	2211.8	2211.8	2215.6	2220.3	2221.2
5°	2191.0	2179.7	2166.5	2153.3	2146.7	2142.9	2132.5	2134.4	2137.2	2139.1	2141.0
7.5°	2104.2	2089.1	2071.2	2054.2	2047.6	2041.9	2029.7	2029.7	2029.7	2030.6	2036.3
10°	2015.5	2008.9	2001.4	1990.0	1981.5	1978.7	1968.3	1971.2	1969.3	1972.1	1978.7
12.5°	1974.0	1966.4	1959.8	1948.5	1939.1	1935.3	1930.6	1933.4	1932.5	1937.2	1942.9
15°	1936.3	1932.5	1924.9	1916.4	1907.9	1900.4	1883.4	1877.8	1874.0	1869.3	1875.9
17.5°	1874.0	1847.6	1829.6	1816.4	1807.0	1800.4	1795.7	1795.7	1798.5	1801.3	1807.0
20°	1789.1	1781.5	1773.0	1758.9	1749.4	1745.6	1742.8	1742.8	1747.5	1751.3	1761.7
22.5°	1730.5	1729.6	1726.8	1720.2	1715.5	1715.5	1716.4	1718.3	1724.9	1730.5	1740.9
25°	1703.2	1707.0	1705.1	1701.3	1698.5	1699.4	1697.5	1699.4	1706.0	1711.7	1720.2
27.5°	1681.5	1687.1	1685.3	1679.6	1674.9	1676.8	1679.6	1677.7	1683.4	1690.0	1696.6
30°	1652.2	1653.2	1656.9	1650.3	1648.5	1651.3	1652.2	1654.1	1659.8	1664.5	1670.2
32.5°	1619.2	1626.8	1625.8	1619.2	1619.2	1622.0	1623.0	1559.8	1441.8	1241.8	1187.0
35°	1587.1	1595.6	1581.5	1333.3	922.8	492.6	380.3	367.1	369.9	371.8	373.7
37.5°	1173.8	556.7	354.8	357.6	360.5	363.3	366.1	368.9	371.8	374.6	375.6
40°	352.9	352.0	354.8	358.6	361.4	363.3	367.1	369.9	372.7	375.6	376.5
42.5°	349.1	351.0	353.8	357.6	361.4	365.2	368.0	371.8	373.7	375.6	376.5
45°	347.2	351.0	354.8	357.6	360.5	362.3	364.2	365.2	364.2	364.2	366.1
47.5°	344.4	348.2	349.1	348.2	349.1	348.2	348.2	348.2	345.4	344.4	344.4
50°	334.0	334.0	332.1	328.4	327.4	326.5	324.6	323.7	319.9	318.9	318.9
52.5°	312.3	311.4	308.6	303.8	301.9	300.1	299.1	298.2	294.4	292.5	293.5
55°	286.9	285.0	282.1	276.5	275.5	273.6	272.7	271.8	268.0	269.9	267.0
57.5°	263.3	259.5	255.7	254.8	251.0	250.1	249.1	248.2	245.3	246.3	244.4
60°	235.0	234.0	232.1	228.3	228.3	227.4	227.4	225.5	223.6	222.7	222.7
62.5°	214.2	211.4	209.5	209.5	206.6	206.6	206.6	204.8	202.9	203.8	202.9
65°	191.5	190.6	189.7	187.8	187.8	186.8	186.8	184.9	182.1	183.1	181.2
67.5°	172.7	170.8	168.9	168.0	164.2	162.3	161.4	160.4	156.6	157.6	155.7
70°	149.1	146.3	144.4	142.5	139.7	137.8	137.8	135.9	133.0	134.0	132.1
72.5°	124.6	122.7	120.8	119.8	117.0	116.1	115.1	114.2	111.3	112.3	111.3
75°	103.8	103.8	102.9	101.9	99.1	96.2	94.4	93.4	91.5	92.5	90.6
77.5°	85.9	84.0	82.1	82.1	79.3	77.4	75.5	75.5	75.5	74.5	73.6
80°	67.0	65.1	65.1	64.2	62.3	60.4	59.4	59.4	58.5	58.5	57.6
82.5°	51.0	49.1	48.1	48.1	46.2	45.3	44.3	43.4	43.4	43.4	42.5
85°	35.9	34.0	33.0	33.0	31.1	30.2	30.2	29.3	29.3	28.3	28.3
87.5°	21.7	20.8	19.8	19.8	17.9	17.0	17.0	17.0	16.0	16.0	15.1
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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°	92.5°	95°	97.5°	100°	102.5°	105°	107.5°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2221.2	2221.2	2214.6	2216.5	2213.7	2217.4	2212.7	2212.7	2218.4	2218.4	2222.2
5°	2142.0	2137.2	2136.3	2134.4	2125.0	2128.7	2124.0	2119.3	2125.9	2125.9	2134.4
7.5°	2033.4	2025.0	2028.7	2023.1	2017.4	2008.9	2011.7	2008.0	2012.7	2019.3	2027.8
10°	1977.8	1970.2	1974.9	1969.3	1972.1	1959.8	1960.8	1961.7	1966.4	1968.3	1975.9
12.5°	1941.9	1940.0	1938.1	1936.3	1938.1	1931.5	1927.8	1928.7	1930.6	1931.5	1937.2
15°	1866.4	1854.2	1857.9	1844.7	1845.7	1846.6	1839.1	1846.6	1845.7	1857.9	1869.3
17.5°	1805.1	1805.1	1798.5	1792.8	1789.1	1788.1	1782.4	1786.2	1782.4	1790.0	1792.8
20°	1762.6	1761.7	1760.7	1757.9	1748.5	1749.4	1752.3	1743.8	1742.8	1741.9	1747.5
22.5°	1742.8	1743.8	1740.0	1740.0	1731.5	1733.4	1734.3	1724.9	1725.8	1723.0	1725.8
25°	1722.1	1723.9	1719.2	1719.2	1717.3	1716.4	1711.7	1713.6	1707.9	1703.2	1707.9
27.5°	1697.5	1701.3	1697.5	1699.4	1695.6	1693.7	1690.9	1689.0	1683.4	1682.4	1685.3
30°	1674.9	1676.8	1675.8	1671.1	1670.2	1664.5	1667.3	1661.7	1656.0	1656.9	1658.8
32.5°	858.7	820.0	632.2	570.9	565.2	586.0	694.5	845.5	1095.5	1338.0	1512.6
35°	374.6	374.6	374.6	373.7	373.7	372.7	371.8	370.8	369.9	368.9	368.0
37.5°	376.5	376.5	376.5	376.5	375.6	374.6	374.6	372.7	371.8	370.8	369.9
40°	377.4	378.4	378.4	378.4	377.4	377.4	376.5	374.6	373.7	371.8	369.9
42.5°	376.5	377.4	377.4	376.5	376.5	375.6	375.6	374.6	373.7	372.7	371.8
45°	364.2	365.2	363.3	363.3	362.3	362.3	362.3	362.3	362.3	363.3	363.3
47.5°	342.5	342.5	341.6	340.6	340.6	339.7	340.6	339.7	341.6	342.5	344.4
50°	317.0	317.0	315.2	314.2	314.2	314.2	314.2	315.2	316.1	318.0	319.9
52.5°	290.6	290.6	289.7	288.7	287.8	287.8	290.6	289.7	290.6	291.6	294.4
55°	265.1	266.1	264.2	264.2	263.3	263.3	263.3	264.2	265.1	266.1	268.9
57.5°	243.4	243.4	241.6	241.6	241.6	240.6	243.4	241.6	242.5	243.4	245.3
60°	221.7	220.8	220.8	219.9	219.9	219.9	221.7	220.8	220.8	221.7	223.6
62.5°	201.9	201.9	201.0	201.0	200.0	200.0	201.9	201.0	201.0	201.9	202.9
65°	179.3	179.3	178.3	177.4	180.2	177.4	180.2	178.3	180.2	181.2	183.1
67.5°	153.8	153.8	153.8	152.9	152.9	154.7	155.7	153.8	154.7	156.6	157.6
70°	131.2	131.2	130.2	130.2	130.2	132.1	133.0	131.2	132.1	133.0	134.9
72.5°	111.3	109.5	109.5	108.5	110.4	110.4	111.3	110.4	111.3	111.3	113.2
75°	91.5	89.6	89.6	89.6	91.5	90.6	91.5	90.6	91.5	91.5	92.5
77.5°	73.6	72.7	71.7	71.7	73.6	73.6	73.6	72.7	73.6	74.5	75.5
80°	57.6	56.6	55.7	55.7	57.6	57.6	57.6	58.5	57.6	58.5	59.4
82.5°	42.5	41.5	40.6	42.5	42.5	42.5	42.5	43.4	42.5	43.4	44.3
85°	28.3	27.4	26.4	28.3	28.3	28.3	28.3	29.3	28.3	29.3	30.2
87.5°	15.1	14.2	14.2	15.1	15.1	15.1	16.0	16.0	16.0	17.0	17.0
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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2227.8	2230.7	2229.7	2224.0	2218.4	2211.8	2207.1	2208.0	2217.4	2220.3	2211.8
5°	2134.4	2152.3	2152.3	2164.6	2158.0	2152.3	2156.1	2176.9	2187.2	2203.3	2209.0
7.5°	2038.2	2046.7	2045.7	2058.0	2056.1	2056.1	2058.9	2086.3	2099.5	2112.7	2116.5
10°	1984.4	1992.9	1991.9	1992.9	1990.0	1983.4	1983.4	1995.7	2007.0	2013.6	2015.5
12.5°	1945.7	1950.4	1949.5	1949.5	1947.6	1941.9	1941.0	1951.4	1963.6	1972.1	1973.1
15°	1888.1	1901.3	1904.2	1916.4	1913.6	1906.1	1907.9	1916.4	1924.0	1931.5	1928.7
17.5°	1802.3	1808.9	1809.8	1814.5	1812.6	1812.6	1824.0	1855.1	1875.9	1893.8	1895.7
20°	1753.2	1757.9	1756.0	1766.4	1761.7	1760.7	1763.6	1776.8	1786.2	1794.7	1809.8
22.5°	1729.6	1733.4	1730.5	1731.5	1723.0	1715.5	1713.6	1723.9	1734.3	1745.6	1745.6
25°	1709.8	1712.6	1711.7	1709.8	1703.2	1692.8	1690.9	1692.8	1696.6	1697.5	1690.9
27.5°	1686.2	1688.1	1688.1	1689.0	1680.5	1671.1	1669.2	1667.3	1671.1	1670.2	1659.8
30°	1661.7	1658.8	1659.8	1660.7	1653.2	1644.7	1640.9	1640.0	1643.7	1642.8	1632.4
32.5°	1603.2	1624.9	1626.8	1628.6	1622.0	1614.5	1610.7	1607.9	1609.8	1608.8	1599.4
35°	367.1	373.7	457.6	1036.1	1406.9	1557.9	1573.9	1570.1	1571.1	1571.1	1563.5
37.5°	368.0	367.1	366.1	363.3	360.5	358.6	619.9	1322.0	1531.5	1532.4	1525.8
40°	368.0	367.1	366.1	364.2	360.5	357.6	352.9	349.1	357.6	787.0	1439.9
42.5°	369.9	368.0	366.1	364.2	360.5	356.7	352.9	348.2	351.0	349.1	344.4
45°	364.2	363.3	363.3	362.3	360.5	356.7	352.0	346.3	343.5	346.3	341.6
47.5°	346.3	347.2	350.1	351.0	351.0	352.0	349.1	345.4	340.6	343.5	337.8
50°	321.8	323.7	324.6	329.3	331.2	335.0	335.9	335.9	335.0	338.7	335.0
52.5°	295.3	297.2	301.9	303.8	305.7	311.4	313.3	316.1	318.0	323.7	327.4
55°	269.9	270.8	272.7	276.5	279.3	284.0	286.9	289.7	294.4	297.2	308.6
57.5°	246.3	247.2	251.0	251.9	253.8	257.6	260.4	264.2	268.0	269.9	283.1
60°	223.6	224.6	227.4	228.3	229.3	233.1	235.9	238.7	241.6	243.4	252.9
62.5°	203.8	203.8	206.6	206.6	207.6	210.4	212.3	214.2	217.0	218.0	222.7
65°	184.0	184.9	186.8	186.8	187.8	189.7	190.6	191.5	194.4	194.4	198.2
67.5°	159.5	160.4	163.2	165.1	166.1	169.8	170.8	171.7	173.6	174.6	176.5
70°	135.9	136.8	139.7	140.6	141.5	144.4	146.3	149.1	151.9	154.7	156.6
72.5°	114.2	115.1	117.9	117.9	120.8	121.7	123.6	124.6	127.4	129.3	132.1
75°	93.4	94.4	97.2	97.2	100.0	101.0	101.9	102.9	104.7	106.6	108.5
77.5°	76.4	76.4	80.2	82.1	84.0	84.0	84.9	84.9	84.9	85.9	87.8
80°	60.4	60.4	63.2	65.1	67.0	67.0	67.9	68.9	69.8	69.8	70.8
82.5°	45.3	45.3	48.1	49.1	51.0	51.0	51.0	51.9	52.8	51.9	53.8
85°	31.1	31.1	33.0	34.0	35.9	35.9	35.9	36.8	37.7	36.8	37.7
87.5°	17.9	18.9	19.8	20.8	21.7	22.6	22.6	22.6	23.6	23.6	24.5
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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2202.3	2191.0	2190.1	2176.9	2173.1	2174.0	2163.7	2159.9	2142.9	2139.1	2121.2
5°	2210.8	2216.5	2213.7	2212.7	2215.6	2213.7	2206.1	2202.3	2199.5	2192.0	2176.9
7.5°	2117.4	2121.2	2124.0	2136.3	2146.7	2164.6	2183.5	2195.7	2205.2	2207.1	2194.8
10°	2022.1	2040.0	2052.3	2071.2	2086.3	2096.7	2108.0	2118.4	2145.7	2173.1	2189.1
12.5°	1973.1	1977.8	1976.8	1987.2	1997.6	2025.0	2051.4	2066.5	2087.2	2099.5	2128.7
15°	1931.5	1932.5	1935.3	1942.9	1948.5	1958.0	1970.2	1992.9	2034.4	2053.3	2069.3
17.5°	1893.8	1893.8	1895.7	1902.3	1909.8	1918.3	1925.9	1935.3	1956.1	1987.2	2026.8
20°	1833.4	1859.8	1862.7	1861.7	1865.5	1881.5	1883.4	1900.4	1910.8	1923.0	1961.7
22.5°	1743.8	1759.8	1782.4	1817.4	1830.6	1838.1	1843.8	1851.3	1867.4	1881.5	1897.6
25°	1694.7	1705.1	1711.7	1722.1	1749.4	1793.8	1802.3	1810.8	1821.1	1831.5	1851.3
27.5°	1651.3	1650.3	1655.1	1664.5	1672.0	1695.6	1737.2	1770.2	1772.1	1787.2	1804.1
30°	1620.1	1614.5	1607.9	1606.0	1616.4	1628.6	1640.9	1692.8	1728.7	1736.2	1754.1
32.5°	1590.9	1581.5	1572.0	1564.5	1557.9	1568.3	1575.8	1598.4	1644.7	1688.1	1697.5
35°	1555.0	1545.6	1534.3	1525.8	1515.4	1514.5	1513.5	1535.2	1550.3	1602.2	1647.5
37.5°	1518.2	1507.9	1498.4	1489.0	1478.6	1471.1	1466.3	1472.0	1486.2	1508.8	1584.3
40°	1479.6	1467.3	1457.9	1450.3	1436.1	1430.5	1421.1	1417.3	1418.2	1438.0	1477.7
42.5°	884.1	1409.7	1414.4	1406.0	1393.7	1386.1	1375.8	1371.0	1361.6	1371.0	1393.7
45°	340.6	344.4	1031.3	1362.5	1347.5	1338.0	1328.6	1323.9	1313.5	1305.9	1326.7
47.5°	334.0	337.8	330.3	468.0	1286.1	1288.9	1277.6	1272.9	1262.5	1256.9	1251.2
50°	329.3	332.1	326.5	328.4	321.8	1178.5	1225.7	1220.1	1208.7	1202.1	1190.8
52.5°	324.6	324.6	320.8	316.1	314.2	315.2	991.7	1166.3	1153.1	1146.5	1131.4
55°	309.5	311.4	315.2	307.6	305.7	304.8	301.9	944.5	1091.7	1084.2	1071.0
57.5°	286.9	290.6	301.0	299.1	299.1	291.6	289.7	289.7	876.6	1021.0	1007.8
60°	260.4	264.2	275.5	279.3	282.1	280.2	278.4	277.4	273.6	923.8	940.8
62.5°	233.1	236.8	240.6	252.9	256.7	261.4	267.0	264.2	260.4	260.4	870.0
65°	203.8	209.5	211.4	222.7	227.4	235.9	240.6	247.2	245.3	244.4	249.1
67.5°	178.3	184.9	185.9	190.6	199.1	202.9	208.5	220.8	226.5	228.3	230.2
70°	156.6	160.4	163.2	165.1	170.8	171.7	182.1	190.6	199.1	208.5	211.4
72.5°	134.9	137.8	143.4	141.5	143.4	147.2	152.9	158.5	167.0	180.2	188.7
75°	110.4	112.3	116.1	117.9	121.7	124.6	128.3	133.0	140.6	147.2	158.5
77.5°	88.7	89.6	92.5	93.4	97.2	100.0	106.6	109.5	114.2	118.9	125.5
80°	71.7	71.7	72.7	72.7	75.5	78.3	83.0	85.9	91.5	95.3	95.3
82.5°	54.7	54.7	57.6	57.6	59.4	59.4	62.3	62.3	65.1	67.0	68.9
85°	38.7	39.6	41.5	40.6	42.5	41.5	43.4	45.3	46.2	45.3	44.3
87.5°	25.5	25.5	27.4	26.4	27.4	27.4	29.3	29.3	30.2	30.2	29.3
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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	167.5°	170°	172.5°	175°	177.5°	180°	182.5°	185°	187.5°	190°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2114.6	2100.4	2091.9	2081.6	2078.7	2075.9	2079.7	2079.7	2074.0	2069.3	2060.8
5°	2163.7	2148.6	2132.5	2115.5	2099.5	2082.5	2075.9	2075.0	2064.6	2058.9	2056.1
7.5°	2189.1	2181.6	2163.7	2140.1	2115.5	2085.3	2072.1	2064.6	2054.2	2052.3	2052.3
10°	2192.0	2183.5	2174.0	2157.1	2128.7	2089.1	2063.6	2048.5	2039.1	2045.7	2058.0
12.5°	2164.6	2180.6	2172.2	2160.8	2138.2	2090.1	2053.3	2030.6	2027.8	2044.8	2076.8
15°	2094.8	2142.0	2165.5	2154.2	2136.3	2088.2	2036.3	2009.9	2009.9	2044.8	2086.3
17.5°	2041.9	2078.7	2136.3	2145.7	2125.0	2084.4	2020.2	1989.1	1997.6	2048.5	2092.9
20°	1998.5	2021.2	2076.8	2129.7	2109.9	2075.9	1996.6	1964.6	1981.5	2042.9	2102.3
22.5°	1930.6	1975.9	2009.9	2088.2	2094.8	2059.9	1973.1	1934.4	1968.3	2042.9	2097.6
25°	1864.5	1919.3	1955.1	2031.6	2072.1	2040.0	1951.4	1902.3	1954.2	2040.0	2093.8
27.5°	1818.3	1843.8	1908.9	1963.6	2038.2	2013.6	1922.1	1867.4	1936.3	2025.0	2072.1
30°	1769.2	1786.2	1850.4	1902.3	1992.9	1983.4	1891.9	1828.7	1913.6	2010.8	2015.5
32.5°	1715.5	1734.3	1767.3	1842.8	1929.6	1955.1	1857.9	1790.0	1889.1	1989.1	1949.5
35°	1660.7	1674.9	1701.3	1782.4	1856.0	1912.7	1816.4	1745.6	1872.1	1956.1	1886.2
37.5°	1606.0	1621.1	1643.7	1711.7	1778.7	1873.0	1780.6	1701.3	1841.0	1897.6	1820.2
40°	1554.1	1562.6	1586.2	1628.6	1714.5	1832.5	1740.0	1655.1	1808.9	1823.0	1730.5
42.5°	1458.8	1501.3	1523.0	1556.9	1641.9	1776.8	1692.8	1606.0	1773.0	1748.5	1640.9
45°	1355.9	1448.4	1457.9	1491.8	1577.7	1717.3	1648.5	1557.9	1739.0	1684.3	1556.0
47.5°	1272.0	1339.0	1393.7	1422.0	1501.3	1647.5	1606.9	1517.3	1688.1	1603.2	1472.9
50°	1197.4	1233.3	1332.4	1353.1	1409.7	1563.5	1557.9	1470.1	1617.3	1501.3	1391.8
52.5°	1124.8	1150.2	1239.9	1284.2	1330.5	1472.9	1499.4	1423.9	1539.9	1399.3	1309.7
55°	1061.5	1070.0	1119.1	1212.5	1254.0	1381.4	1435.2	1370.1	1441.8	1302.2	1230.4
57.5°	996.4	988.9	1024.7	1144.6	1174.8	1288.0	1367.3	1315.4	1362.5	1203.1	1148.4
60°	928.5	918.1	933.2	1012.5	1090.8	1195.5	1287.1	1255.0	1266.3	1104.9	1056.8
62.5°	857.7	847.3	842.6	892.6	1008.7	1100.2	1205.9	1188.0	1148.4	1015.3	943.6
65°	784.1	773.7	766.2	786.0	918.1	976.6	1115.3	1110.6	1019.1	920.9	794.5
67.5°	238.7	703.9	687.9	686.9	773.7	864.3	1017.2	1009.6	888.9	820.0	684.1
70°	215.1	570.9	606.7	598.2	636.0	750.2	904.9	899.2	762.4	657.7	604.8
72.5°	197.2	201.9	536.0	526.5	535.0	637.9	787.9	772.8	646.4	519.0	522.8
75°	168.9	177.4	184.9	444.4	433.1	528.4	660.5	636.9	533.1	428.4	436.9
77.5°	137.8	148.1	153.8	323.7	350.1	376.5	527.5	496.3	367.1	342.5	163.2
80°	102.9	111.3	120.8	129.3	266.1	263.3	391.6	360.5	255.7	213.3	127.4
82.5°	75.5	78.3	84.0	93.4	105.7	176.5	251.9	221.7	177.4	97.2	87.8
85°	47.2	51.0	53.8	56.6	64.2	105.7	124.6	99.1	74.5	59.4	55.7
87.5°	30.2	30.2	29.3	30.2	31.1	37.7	42.5	40.6	32.1	30.2	30.2
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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	192.5°	195°	197.5°	200°	202.5°	205°	207.5°	210°	212.5°	215°	217.5°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2051.4	2038.2	2038.2	2034.4	2037.2	2037.2	2036.3	2037.2	2043.8	2047.6	2054.2
5°	2050.4	2046.7	2055.1	2065.5	2077.8	2092.9	2096.7	2109.9	2122.1	2138.2	2155.2
7.5°	2062.7	2075.9	2091.9	2108.9	2133.5	2151.4	2167.4	2183.5	2194.8	2209.9	2219.3
10°	2080.6	2107.0	2134.4	2156.1	2182.5	2197.6	2208.0	2209.9	2193.9	2168.4	2147.6
12.5°	2106.1	2137.2	2162.7	2183.5	2195.7	2190.1	2159.9	2128.7	2110.8	2084.4	2047.6
15°	2127.8	2156.1	2182.5	2174.0	2141.0	2109.9	2086.3	2049.5	2013.6	1989.1	1973.1
17.5°	2137.2	2164.6	2155.2	2110.8	2079.7	2043.8	1995.7	1967.4	1943.8	1924.9	1915.5
20°	2142.9	2138.2	2087.2	2055.1	1994.8	1961.7	1930.6	1904.2	1886.2	1876.8	1874.9
22.5°	2127.8	2070.2	2026.8	1969.3	1924.9	1897.6	1873.0	1851.3	1839.1	1831.5	1826.8
25°	2077.8	2010.8	1946.6	1901.3	1863.6	1840.0	1821.1	1803.2	1788.1	1784.3	1774.9
27.5°	2008.0	1953.2	1868.3	1833.4	1800.4	1789.1	1768.3	1750.4	1737.2	1725.8	1695.6
30°	1950.4	1863.6	1802.3	1770.2	1750.4	1737.2	1713.6	1694.7	1672.0	1630.5	1613.5
32.5°	1879.6	1793.8	1735.3	1717.3	1692.8	1681.5	1655.1	1613.5	1578.6	1561.6	1560.7
35°	1788.1	1717.3	1674.9	1658.8	1639.0	1620.1	1565.4	1527.7	1510.7	1512.6	1526.7
37.5°	1711.7	1648.5	1621.1	1598.4	1575.8	1527.7	1481.4	1463.5	1468.2	1477.7	1484.3
40°	1634.3	1586.2	1555.0	1537.1	1486.2	1439.0	1414.4	1421.1	1429.5	1436.1	1444.6
42.5°	1558.8	1524.8	1493.7	1458.8	1389.0	1363.5	1369.2	1377.6	1385.2	1394.6	1403.1
45°	1487.1	1456.9	1421.1	1341.8	1306.9	1313.5	1322.0	1328.6	1339.9	1346.5	1355.0
47.5°	1419.2	1387.1	1323.9	1254.0	1250.3	1263.5	1271.0	1279.5	1288.0	1271.0	701.1
50°	1342.7	1309.7	1213.5	1187.0	1195.5	1207.8	1217.2	1225.7	1091.7	434.1	334.0
52.5°	1267.2	1183.3	1121.9	1129.5	1138.0	1152.1	1158.7	860.6	342.5	326.5	327.4
55°	1183.3	1075.7	1057.8	1067.2	1074.8	1088.9	721.8	316.1	314.2	313.3	320.8
57.5°	1051.2	986.1	993.6	1003.0	1010.6	713.4	307.6	305.7	306.7	307.6	308.6
60°	933.2	919.1	927.6	936.0	662.4	297.2	291.6	292.5	296.3	293.5	285.9
62.5°	839.8	851.1	859.6	753.0	282.1	279.3	282.1	279.3	272.7	268.0	258.5
65°	768.1	779.4	786.0	265.1	264.2	268.0	265.1	255.7	245.3	232.1	229.3
67.5°	692.6	703.9	251.9	245.3	249.1	244.4	233.1	221.7	214.2	202.9	198.2
70°	614.3	263.3	228.3	227.4	220.8	213.3	201.0	189.7	180.2	175.5	170.8
72.5°	443.5	208.5	205.7	198.2	186.8	176.5	166.1	159.5	154.7	151.9	149.1
75°	184.9	181.2	172.7	159.5	148.1	143.4	135.9	131.2	129.3	123.6	121.7
77.5°	154.7	147.2	134.9	125.5	118.9	116.1	110.4	104.7	101.9	101.0	97.2
80°	118.9	108.5	102.9	98.1	96.2	89.6	83.0	80.2	78.3	77.4	74.5
82.5°	81.1	77.4	73.6	67.0	67.0	64.2	61.3	59.4	57.6	57.6	55.7
85°	52.8	50.0	49.1	46.2	46.2	44.3	43.4	42.5	41.5	40.6	39.6
87.5°	30.2	30.2	31.1	30.2	30.2	29.3	28.3	27.4	26.4	26.4	24.5
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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	222.5°	225°	227.5°	230°	232.5°	235°	237.5°	240°	242.5°	245°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2062.7	2072.1	2074.0	2106.1	2124.0	2123.1	2117.4	2134.4	2124.0	2118.4	2124.0
5°	2172.2	2183.5	2192.9	2227.8	2240.1	2245.8	2244.8	2254.2	2246.7	2240.1	2240.1
7.5°	2225.9	2229.7	2233.5	2225.0	2219.3	2209.9	2195.7	2175.0	2164.6	2153.3	2139.1
10°	2137.2	2125.0	2129.7	2112.7	2098.6	2088.2	2075.0	2058.0	2043.8	2033.4	2017.4
12.5°	2028.7	2027.8	2029.7	2032.5	2018.3	2009.9	1999.5	1987.2	1976.8	1965.5	1952.3
15°	1962.7	1963.6	1971.2	1968.3	1963.6	1958.9	1947.6	1943.8	1934.4	1922.1	1914.6
17.5°	1915.5	1920.2	1927.8	1924.0	1916.4	1911.7	1903.2	1894.7	1886.2	1876.8	1865.5
20°	1874.0	1878.7	1883.4	1878.7	1864.5	1857.9	1846.6	1820.2	1801.3	1782.4	1765.5
22.5°	1828.7	1831.5	1827.7	1812.6	1776.8	1759.8	1746.6	1739.0	1723.0	1712.6	1702.2
25°	1772.1	1756.0	1731.5	1714.5	1700.4	1692.8	1687.1	1686.2	1684.3	1682.4	1677.7
27.5°	1679.6	1673.9	1660.7	1654.1	1655.1	1657.9	1658.8	1661.7	1658.8	1655.1	1651.3
30°	1610.7	1613.5	1614.5	1616.4	1621.1	1623.9	1624.9	1628.6	1626.8	1623.9	1622.0
32.5°	1567.3	1573.9	1577.7	1583.3	1586.2	1590.9	1590.9	1596.6	1590.9	1590.0	1588.1
35°	1531.5	1537.1	1539.0	1547.5	1550.3	1555.0	1555.0	1559.8	1555.0	1506.9	1189.9
37.5°	1495.6	1501.3	1505.0	1512.6	1513.5	1516.4	1399.3	1023.8	660.5	511.4	390.6
40°	1453.1	1459.7	1463.5	1466.3	1030.4	653.9	450.1	366.1	366.1	368.9	371.8
42.5°	1407.8	1412.6	984.2	572.8	356.7	355.7	358.6	361.4	364.2	368.0	371.8
45°	1106.8	558.6	354.8	346.3	349.1	352.9	356.7	360.5	365.2	368.9	370.8
47.5°	363.3	340.6	345.4	341.6	346.3	351.0	354.8	358.6	359.5	360.5	359.5
50°	335.9	335.9	338.7	338.7	342.5	344.4	344.4	344.4	340.6	339.7	336.9
52.5°	324.6	332.1	328.4	330.3	328.4	325.5	322.7	319.9	314.2	312.3	308.6
55°	318.9	321.8	312.3	309.5	305.7	298.2	294.4	290.6	285.9	284.0	279.3
57.5°	305.7	299.1	288.7	284.0	277.4	269.9	266.1	263.3	258.5	256.7	253.8
60°	281.2	268.0	261.4	255.7	248.2	241.6	238.7	236.8	233.1	232.1	229.3
62.5°	251.0	239.7	234.0	226.5	220.8	217.0	214.2	213.3	209.5	209.5	207.6
65°	218.0	212.3	207.6	200.0	197.2	193.4	192.5	191.5	189.7	188.7	186.8
67.5°	191.5	187.8	181.2	177.4	175.5	172.7	170.8	168.9	165.1	163.2	160.4
70°	168.0	165.1	158.5	155.7	151.9	147.2	144.4	142.5	139.7	137.8	134.9
72.5°	145.3	136.8	132.1	129.3	126.4	121.7	120.8	118.9	116.1	115.1	112.3
75°	117.0	110.4	107.6	105.7	102.9	100.0	100.0	100.0	97.2	96.2	95.3
77.5°	93.4	89.6	87.8	85.9	84.9	83.0	80.2	79.3	76.4	76.4	75.5
80°	71.7	69.8	67.9	67.0	66.1	64.2	62.3	61.3	58.5	58.5	57.6
82.5°	52.8	51.9	51.0	50.0	49.1	48.1	45.3	44.3	42.5	42.5	41.5
85°	37.7	36.8	34.9	34.0	34.0	33.0	30.2	29.3	27.4	27.4	27.4
87.5°	23.6	22.6	21.7	20.8	19.8	18.9	17.0	16.0	16.0	14.2	13.2
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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	247.5°	250°	252.5°	255°	257.5°	260°	262.5°	265°	267.5°	270°	272.5°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2112.7	2128.7	2126.9	2138.2	2141.0	2146.7	2148.6	2149.5	2135.4	2146.7	2147.6
5°	2237.3	2240.1	2242.0	2246.7	2251.4	2252.4	2247.6	2242.0	2243.9	2240.1	2230.7
7.5°	2137.2	2123.1	2120.3	2116.5	2114.6	2112.7	2104.2	2111.8	2103.3	2099.5	2086.3
10°	2014.6	2001.4	2000.4	2000.4	2003.2	2002.3	2000.4	1996.6	2004.2	1999.5	1996.6
12.5°	1950.4	1945.7	1948.5	1946.6	1954.2	1956.1	1954.2	1954.2	1952.3	1948.5	1950.4
15°	1911.7	1907.9	1910.8	1907.9	1913.6	1914.6	1909.8	1912.7	1907.9	1903.2	1901.3
17.5°	1860.8	1852.3	1845.7	1836.2	1837.2	1835.3	1829.6	1829.6	1824.9	1812.6	1813.6
20°	1762.6	1754.1	1750.4	1750.4	1755.1	1757.0	1756.0	1757.9	1753.2	1751.3	1743.8
22.5°	1701.3	1700.4	1702.2	1707.0	1714.5	1724.9	1725.8	1725.8	1725.8	1724.9	1715.5
25°	1679.6	1679.6	1681.5	1688.1	1693.7	1701.3	1703.2	1705.1	1703.2	1703.2	1694.7
27.5°	1655.1	1653.2	1656.9	1663.6	1670.2	1675.8	1680.5	1681.5	1678.7	1678.7	1681.5
30°	1624.9	1623.9	1628.6	1635.2	1640.9	1646.6	1651.3	1655.1	1651.3	1651.3	1648.5
32.5°	1593.7	1593.7	1595.6	1556.0	1442.8	1299.3	1302.2	1219.1	1161.6	1088.9	1185.2
35°	994.5	723.7	621.8	526.5	459.5	416.1	415.2	401.0	394.4	389.7	388.8
37.5°	375.6	377.4	381.2	383.1	385.9	387.8	388.8	388.8	388.8	388.8	387.8
40°	374.6	378.4	381.2	384.0	386.9	388.8	388.8	389.7	390.6	390.6	390.6
42.5°	375.6	379.3	383.1	385.9	387.8	388.8	389.7	390.6	390.6	390.6	390.6
45°	374.6	376.5	376.5	377.4	377.4	377.4	378.4	378.4	377.4	376.5	378.4
47.5°	360.5	360.5	357.6	356.7	355.7	353.8	354.8	353.8	352.9	352.0	353.8
50°	335.9	332.1	330.3	328.4	327.4	325.5	326.5	325.5	324.6	322.7	325.5
52.5°	306.7	305.7	301.9	300.1	299.1	300.1	298.2	297.2	296.3	295.3	296.3
55°	278.4	274.6	273.6	271.8	270.8	271.8	270.8	269.9	268.9	268.0	268.9
57.5°	252.9	250.1	249.1	247.2	247.2	247.2	247.2	246.3	245.3	244.4	245.3
60°	228.3	226.5	225.5	225.5	224.6	224.6	224.6	223.6	222.7	222.7	223.6
62.5°	207.6	207.6	204.8	203.8	203.8	204.8	203.8	202.9	201.9	201.0	202.9
65°	185.9	182.1	181.2	179.3	177.4	178.3	177.4	176.5	175.5	174.6	176.5
67.5°	159.5	158.5	154.7	152.9	151.9	152.9	151.9	151.0	150.0	149.1	151.0
70°	134.0	134.0	130.2	129.3	128.3	128.3	127.4	127.4	126.4	125.5	127.4
72.5°	111.3	111.3	110.4	108.5	107.6	106.6	105.7	104.7	104.7	105.7	105.7
75°	92.5	90.6	86.8	87.8	86.8	85.9	85.9	84.9	84.0	85.9	84.9
77.5°	72.7	71.7	68.9	69.8	68.9	67.9	67.9	67.0	66.1	67.0	67.0
80°	54.7	54.7	53.8	52.8	52.8	51.9	51.0	51.0	50.0	51.0	51.0
82.5°	39.6	39.6	38.7	37.7	36.8	36.8	35.9	35.9	35.9	35.9	35.9
85°	25.5	24.5	24.5	22.6	22.6	22.6	21.7	21.7	21.7	21.7	21.7
87.5°	12.3	12.3	11.3	11.3	10.4	9.4	9.4	8.5	8.5	9.4	9.4
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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	277.5°	280°	282.5°	285°	287.5°	290°	292.5°	295°	297.5°	300°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2130.6	2142.9	2132.5	2137.2	2138.2	2154.2	2153.3	2157.1	2150.4	2142.9	2132.5
5°	2239.1	2233.5	2225.9	2243.9	2234.4	2245.8	2249.5	2257.1	2257.1	2256.1	2247.6
7.5°	2100.4	2088.2	2097.6	2104.2	2107.0	2099.5	2114.6	2131.6	2145.7	2154.2	2155.2
10°	1991.9	1995.7	1994.8	1997.6	2004.2	2003.2	2012.7	2022.1	2025.9	2031.6	2033.4
12.5°	1941.0	1940.0	1941.9	1948.5	1952.3	1951.4	1960.8	1966.4	1968.3	1969.3	1968.3
15°	1900.4	1893.8	1898.5	1899.5	1902.3	1902.3	1913.6	1922.1	1925.9	1927.8	1925.9
17.5°	1824.0	1807.9	1823.0	1823.0	1833.4	1831.5	1849.4	1863.6	1871.1	1876.8	1876.8
20°	1748.5	1740.9	1746.6	1744.7	1752.3	1751.3	1762.6	1772.1	1778.7	1783.4	1789.1
22.5°	1718.3	1720.2	1711.7	1712.6	1712.6	1711.7	1717.3	1722.1	1723.9	1726.8	1724.9
25°	1698.5	1700.4	1697.5	1692.8	1690.9	1692.8	1695.6	1701.3	1702.2	1700.4	1693.7
27.5°	1678.7	1673.0	1677.7	1669.2	1667.3	1671.1	1674.9	1675.8	1676.8	1676.8	1671.1
30°	1648.5	1643.7	1648.5	1644.7	1640.9	1644.7	1647.5	1647.5	1649.4	1650.3	1643.7
32.5°	1152.1	1161.6	1314.4	1406.9	1537.1	1603.2	1615.4	1615.4	1617.3	1617.3	1611.7
35°	392.5	393.5	425.6	461.4	537.8	632.2	755.8	820.0	1037.0	1296.5	1547.5
37.5°	387.8	386.9	385.9	385.0	384.0	383.1	381.2	380.3	385.9	457.6	620.9
40°	389.7	388.8	386.9	385.9	385.0	383.1	382.2	380.3	378.4	376.5	374.6
42.5°	389.7	388.8	387.8	386.9	385.9	385.0	383.1	381.2	379.3	376.5	373.7
45°	376.5	376.5	377.4	377.4	378.4	378.4	378.4	377.4	377.4	376.5	372.7
47.5°	352.0	352.0	354.8	354.8	356.7	358.6	358.6	360.5	363.3	365.2	366.1
50°	323.7	323.7	326.5	327.4	329.3	332.1	335.0	335.9	338.7	342.5	346.3
52.5°	295.3	295.3	298.2	298.2	300.1	302.9	305.7	306.7	310.4	314.2	318.9
55°	268.9	268.9	270.8	271.8	272.7	274.6	277.4	277.4	281.2	284.0	288.7
57.5°	245.3	247.2	247.2	247.2	248.2	250.1	251.9	251.9	254.8	257.6	261.4
60°	222.7	224.6	224.6	224.6	225.5	226.5	228.3	228.3	230.2	232.1	235.9
62.5°	201.9	203.8	203.8	204.8	204.8	205.7	207.6	206.6	208.5	209.5	212.3
65°	175.5	177.4	178.3	179.3	180.2	182.1	184.9	184.0	186.8	188.7	191.5
67.5°	150.0	151.9	151.9	152.9	153.8	155.7	157.6	157.6	160.4	162.3	166.1
70°	126.4	128.3	128.3	129.3	130.2	132.1	134.0	133.0	135.9	137.8	140.6
72.5°	104.7	106.6	106.6	107.6	107.6	109.5	111.3	113.2	113.2	115.1	117.0
75°	84.9	85.9	86.8	86.8	87.8	88.7	90.6	92.5	93.4	94.4	96.2
77.5°	67.0	67.9	68.9	68.9	69.8	70.8	71.7	75.5	77.4	78.3	78.3
80°	51.0	51.9	51.9	51.9	52.8	53.8	55.7	55.7	59.4	59.4	60.4
82.5°	35.9	36.8	36.8	36.8	37.7	39.6	40.6	41.5	43.4	44.3	44.3
85°	21.7	22.6	22.6	22.6	23.6	24.5	26.4	27.4	28.3	28.3	29.3
87.5°	8.5	9.4	10.4	10.4	11.3	12.3	13.2	14.2	15.1	15.1	16.0
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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	302.5°	305°	307.5°	310°	312.5°	315°	317.5°	320°	322.5°	325°	327.5°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2121.2	2127.8	2121.2	2125.0	2129.7	2121.2	2101.4	2093.8	2091.0	2079.7	2072.1
5°	2239.1	2239.1	2236.3	2243.9	2242.9	2229.7	2209.0	2199.5	2190.1	2177.8	2168.4
7.5°	2155.2	2162.7	2167.4	2196.7	2215.6	2217.4	2230.7	2233.5	2237.3	2233.5	2227.8
10°	2034.4	2031.6	2044.8	2072.1	2088.2	2096.7	2122.1	2134.4	2144.8	2165.5	2187.2
12.5°	1966.4	1970.2	1975.9	1995.7	2010.8	2007.0	2017.4	2025.9	2038.2	2058.9	2090.1
15°	1921.2	1924.9	1930.6	1945.7	1955.1	1950.4	1956.1	1961.7	1970.2	1980.6	1999.5
17.5°	1872.1	1878.7	1885.3	1901.3	1909.8	1908.9	1913.6	1915.5	1918.3	1924.9	1938.1
20°	1795.7	1816.4	1829.6	1851.3	1863.6	1861.7	1870.2	1873.0	1876.8	1883.4	1889.1
22.5°	1725.8	1731.5	1738.1	1761.7	1782.4	1807.9	1813.6	1821.1	1830.6	1837.2	1842.8
25°	1686.2	1682.4	1685.3	1701.3	1712.6	1714.5	1723.0	1747.5	1773.0	1784.3	1797.5
27.5°	1662.6	1658.8	1657.9	1665.4	1667.3	1662.6	1660.7	1668.3	1687.1	1706.0	1745.6
30°	1637.1	1632.4	1628.6	1635.2	1638.1	1631.5	1619.2	1612.6	1623.9	1628.6	1644.7
32.5°	1606.9	1602.2	1600.3	1604.1	1606.0	1600.3	1587.1	1579.6	1577.7	1573.9	1577.7
35°	1573.0	1568.3	1565.4	1566.4	1570.1	1565.4	1554.1	1544.7	1539.9	1529.6	1522.0
37.5°	810.5	1148.4	1490.9	1526.7	1530.5	1529.6	1518.2	1507.9	1503.1	1490.9	1487.1
40°	370.8	414.2	621.8	812.4	1171.9	1489.0	1478.6	1468.2	1459.7	1456.0	1441.8
42.5°	369.9	370.8	371.8	367.1	454.8	774.7	1143.6	1427.7	1422.0	1412.6	1402.2
45°	369.9	365.2	368.9	363.3	365.2	364.2	453.9	732.2	1303.1	1361.6	1356.9
47.5°	366.1	363.3	367.1	362.3	356.7	359.5	355.7	360.5	562.4	954.0	1306.9
50°	349.1	351.0	357.6	356.7	352.0	355.7	349.1	354.8	350.1	384.0	739.8
52.5°	323.7	327.4	334.0	339.7	341.6	346.3	344.4	346.3	342.5	343.5	344.4
55°	293.5	298.2	303.8	312.3	316.1	323.7	329.3	332.1	336.9	335.9	328.4
57.5°	265.1	269.9	274.6	283.1	291.6	295.3	305.7	311.4	323.7	320.8	318.9
60°	238.7	242.5	247.2	249.1	259.5	266.1	275.5	281.2	297.2	301.0	306.7
62.5°	215.1	217.0	220.8	223.6	230.2	236.8	241.6	251.0	259.5	271.8	280.2
65°	193.4	195.3	198.2	200.0	201.0	210.4	213.3	223.6	226.5	239.7	247.2
67.5°	168.9	172.7	176.5	178.3	180.2	185.9	187.8	192.5	199.1	204.8	214.2
70°	143.4	146.3	150.0	152.9	156.6	160.4	166.1	168.9	173.6	177.4	184.9
72.5°	119.8	122.7	124.6	127.4	130.2	133.0	137.8	144.4	148.1	154.7	156.6
75°	97.2	100.0	101.9	103.8	106.6	108.5	110.4	117.0	120.8	126.4	132.1
77.5°	80.2	80.2	82.1	87.8	86.8	86.8	88.7	92.5	95.3	99.1	104.7
80°	62.3	63.2	64.2	68.9	69.8	70.8	69.8	72.7	75.5	76.4	80.2
82.5°	46.2	47.2	47.2	50.0	52.8	52.8	52.8	53.8	56.6	57.6	59.4
85°	31.1	32.1	33.0	34.0	35.9	36.8	37.7	37.7	39.6	40.6	41.5
87.5°	17.0	18.9	19.8	20.8	21.7	22.6	23.6	24.5	25.5	26.4	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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	332.5°	335°	337.5°	340°	342.5°	345°	347.5°	350°	352.5°	355°
0°	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9	2058.9
2.5°	2069.3	2064.6	2061.8	2054.2	2052.3	2040.0	2041.9	2040.0	2040.0	2042.9	2052.3
5°	2158.0	2135.4	2129.7	2113.6	2100.4	2077.8	2063.6	2056.1	2044.8	2040.0	2046.7
7.5°	2218.4	2201.4	2187.2	2173.1	2154.2	2127.8	2108.0	2085.3	2066.5	2048.5	2043.8
10°	2208.0	2226.9	2226.9	2218.4	2200.5	2174.0	2150.4	2122.1	2089.1	2060.8	2043.8
12.5°	2120.3	2153.3	2179.7	2199.5	2217.4	2199.5	2175.9	2153.3	2116.5	2075.0	2043.8
15°	2024.0	2058.0	2091.0	2132.5	2175.9	2193.9	2192.9	2166.5	2133.5	2090.1	2046.7
17.5°	1956.1	1979.7	1997.6	2042.9	2095.7	2142.0	2173.1	2175.0	2142.9	2104.2	2047.6
20°	1905.1	1922.1	1937.2	1962.7	2008.9	2065.5	2123.1	2155.2	2149.5	2107.0	2050.4
22.5°	1858.9	1871.1	1883.4	1902.3	1939.1	1975.9	2042.9	2108.9	2137.2	2102.3	2047.6
25°	1812.6	1825.9	1835.3	1848.5	1877.8	1907.9	1955.1	2037.2	2100.4	2098.6	2041.9
27.5°	1757.9	1775.8	1787.2	1805.1	1824.9	1847.6	1879.6	1957.0	2047.6	2079.7	2026.8
30°	1691.9	1718.3	1735.3	1755.1	1772.1	1791.9	1817.4	1864.5	1976.8	2042.9	2010.8
32.5°	1596.6	1643.7	1681.5	1700.4	1719.2	1736.2	1758.9	1798.5	1890.0	1992.9	1992.9
35°	1528.6	1550.3	1584.3	1639.0	1662.6	1679.6	1700.4	1731.5	1790.0	1933.4	1963.6
37.5°	1475.8	1484.3	1501.3	1555.0	1599.4	1626.8	1647.5	1667.3	1724.9	1852.3	1925.9
40°	1436.1	1433.3	1431.4	1456.9	1520.1	1563.5	1587.1	1606.9	1651.3	1755.1	1875.9
42.5°	1389.9	1387.1	1377.6	1384.3	1415.4	1488.0	1523.9	1545.6	1582.4	1653.2	1821.1
45°	1341.8	1337.1	1333.3	1326.7	1338.0	1378.6	1452.2	1484.3	1505.0	1568.3	1752.3
47.5°	1292.7	1286.1	1281.4	1275.7	1269.1	1288.0	1357.8	1415.4	1451.2	1490.9	1669.2
50°	1222.9	1231.4	1225.7	1219.1	1213.5	1209.7	1238.9	1333.3	1377.6	1409.7	1568.3
52.5°	576.5	1121.0	1168.2	1161.6	1154.0	1147.4	1154.0	1225.7	1305.9	1331.4	1446.5
55°	328.4	499.2	1038.9	1098.3	1091.7	1082.3	1076.6	1101.2	1221.0	1255.0	1335.2
57.5°	316.1	317.0	458.6	989.8	1026.6	1018.1	1011.5	1017.2	1119.1	1176.7	1238.0
60°	305.7	305.7	305.7	437.8	946.4	949.3	940.8	931.3	975.7	1088.9	1139.9
62.5°	283.1	288.7	291.6	291.6	432.2	876.6	868.1	865.3	867.2	983.2	1041.7
65°	253.8	267.0	272.7	276.5	276.5	453.9	793.6	788.8	782.2	826.6	942.6
67.5°	221.7	235.0	247.2	254.8	255.7	264.2	473.7	710.5	701.1	702.0	837.0
70°	188.7	200.0	213.3	224.6	235.0	239.7	247.2	589.7	620.9	607.7	717.1
72.5°	163.2	168.0	177.4	188.7	201.0	212.3	218.9	235.0	538.8	524.6	545.4
75°	135.9	139.7	146.3	153.8	163.2	176.5	187.8	199.1	285.9	439.7	436.9
77.5°	105.7	112.3	119.8	124.6	129.3	138.7	153.8	165.1	176.5	297.2	350.1
80°	81.1	85.9	89.6	94.4	100.0	106.6	112.3	125.5	138.7	149.1	268.0
82.5°	60.4	63.2	66.1	67.9	69.8	73.6	84.0	88.7	97.2	106.6	126.4
85°	42.5	44.3	46.2	47.2	48.1	49.1	52.8	53.8	62.3	64.2	76.4
87.5°	27.4	28.3	30.2	31.1	31.1	32.1	33.0	33.0	33.0	31.1	37.7
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-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	357.5°	360°
0°	2058.9	2058.9
2.5°	2059.9	2075.0
5°	2057.0	2076.8
7.5°	2049.5	2068.4
10°	2038.2	2060.8
12.5°	2025.9	2047.6
15°	2015.5	2031.6
17.5°	2004.2	2013.6
20°	1989.1	1996.6
22.5°	1974.0	1970.2
25°	1957.0	1948.5
27.5°	1935.3	1919.3
30°	1915.5	1887.2
32.5°	1896.6	1850.4
35°	1871.1	1812.6
37.5°	1844.7	1774.0
40°	1813.6	1729.6
42.5°	1780.6	1685.3
45°	1739.0	1642.8
47.5°	1702.2	1591.8
50°	1651.3	1537.1
52.5°	1589.0	1486.2
55°	1515.4	1423.9
57.5°	1436.1	1358.8
60°	1351.2	1284.2
62.5°	1248.4	1206.9
65°	1127.6	1118.2
67.5°	970.0	1020.0
70°	795.4	907.7
72.5°	665.2	788.8
75°	545.4	655.8
77.5°	432.2	514.3
80°	269.9	376.5
82.5°	181.2	247.2
85°	109.5	117.9
87.5°	42.5	43.4
90°	0.0	0.0

(END OF REPORT)