

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-LD5-48HL-RW-UNV-L930-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-LD5-48HL-RW-UNV-L930-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WHITE REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

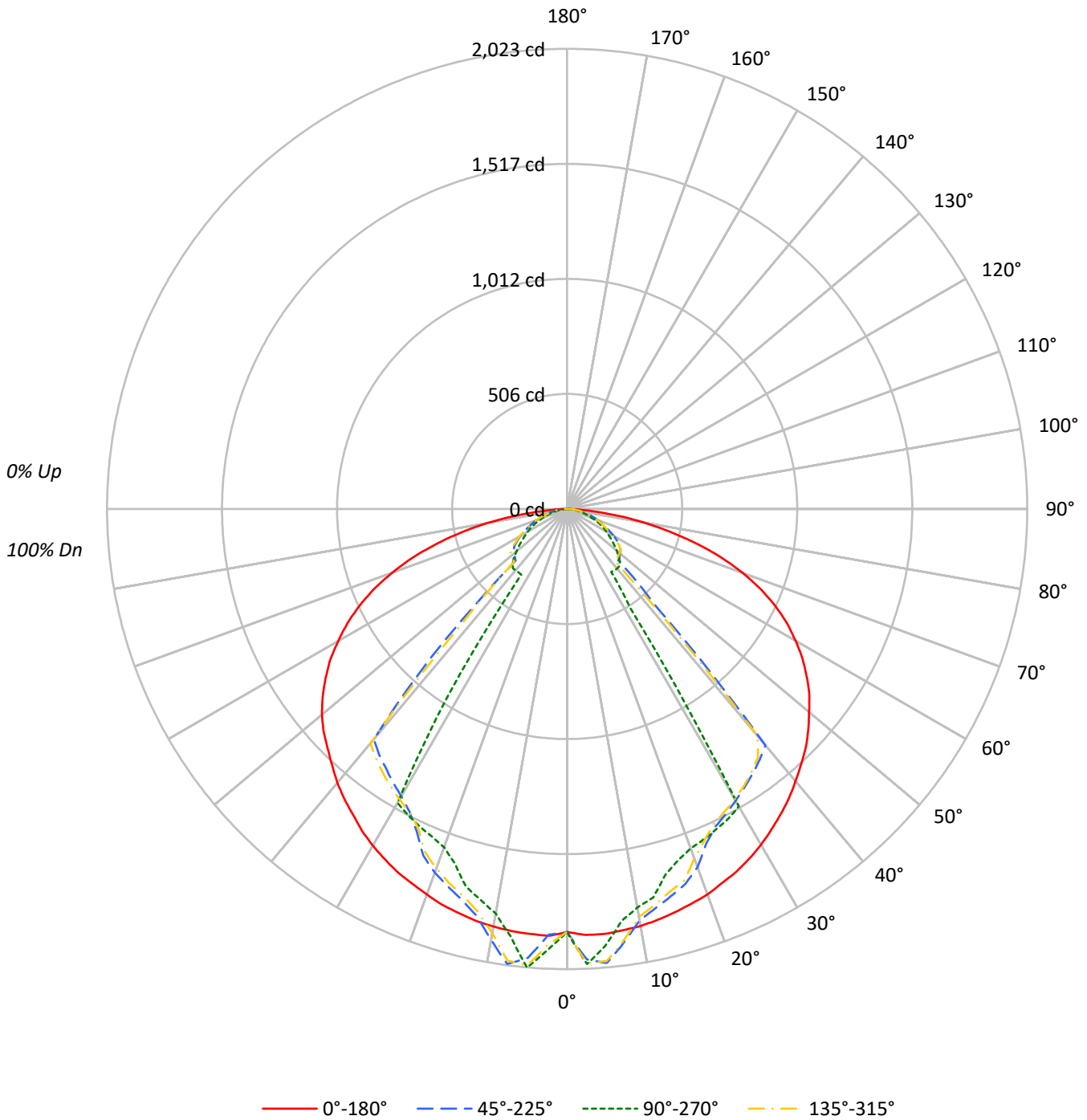
Lumens per Lamp: N/A
Luminaire Lumens: 3724.0 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.16 / 1.2
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 39
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°	15028	15028	15028	15028
5°	15176	15142	15168	15891
10°	15190	13689	15211	13899
15°	15224	12666	15259	13067
20°	15334	12013	15334	11968
25°	15467	11783	15489	11674
30°	15624	11576	15662	11438
35°	15805	2636	15838	2750
40°	16059	2742	16155	2830
45°	16443	2726	16500	2826
50°	16828	2465	17055	2532
55°	17346	2188	17483	2220
60°	17784	1945	17824	1970
65°	18098	1697	18053	1671
70°	17840	1368	17784	1319
75°	16562	1053	16682	1009
80°	13444	748	13982	684
85°	7276	449	7686	343



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.0	4.9
10°-20°	503.1	13.5
20°-30°	745.2	20.0
30°-40°	750.8	20.2
40°-50°	586.5	15.7
50°-60°	453.0	12.2
60°-70°	304.2	8.2
70°-80°	155.2	4.2
80°-90°	43.2	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°	1431.2	38.4
0°-40°	2182.0	58.6
0°-60°	3221.5	86.5
0°-90°	3724.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3724.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1860	1860	1860	1860	1860	
5°	1876	1928	1875	2023	1876	178
15°	1835	1666	1839	1719	1835	519
25°	1760	1553	1762	1538	1760	812
35°	1637	338	1641	352	1637	1026
45°	1484	328	1489	340	1484	1144
55°	1286	239	1296	242	1286	1149
65°	1010	160	1007	158	1010	993
75°	592	81	597	78	592	619
85°	106	26	112	20	106	147
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°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1874.2	1881.0	1886.1	1889.5	1891.2	1891.2	1892.1	1892.9	1904.0	1909.1	1912.5
5°	1875.9	1882.7	1892.9	1906.5	1918.5	1928.7	1937.2	1949.2	1961.1	1973.9	1978.1
7.5°	1868.2	1876.7	1897.2	1921.9	1944.9	1961.1	1972.2	1979.8	1985.8	1986.7	1990.9
10°	1861.4	1876.7	1904.8	1937.2	1966.2	1985.8	1985.8	1981.5	1987.5	1964.5	1941.5
12.5°	1849.4	1866.5	1904.8	1947.5	1974.7	1982.4	1979.0	1961.9	1927.0	1898.9	1886.1
15°	1835.0	1858.0	1905.7	1953.4	1976.4	1979.0	1946.6	1903.1	1876.7	1859.7	1838.4
17.5°	1818.8	1849.4	1906.5	1954.3	1962.8	1950.9	1889.5	1862.2	1835.0	1794.9	1765.9
20°	1803.4	1833.2	1899.7	1942.3	1947.5	1893.8	1846.0	1817.1	1771.0	1736.1	1723.3
22.5°	1779.6	1814.5	1893.8	1926.1	1906.5	1844.3	1798.3	1752.3	1710.5	1700.3	1685.0
25°	1760.0	1796.6	1880.1	1906.5	1854.6	1799.2	1745.5	1691.8	1672.2	1657.7	1644.0
27.5°	1733.5	1778.7	1862.2	1870.7	1799.2	1750.6	1672.2	1648.3	1630.4	1614.2	1608.2
30°	1704.6	1760.0	1837.5	1821.3	1753.1	1681.5	1623.6	1601.4	1588.6	1571.6	1564.8
32.5°	1671.3	1731.8	1810.2	1764.2	1703.7	1614.2	1576.7	1559.7	1542.6	1529.8	1487.2
35°	1637.2	1707.1	1777.9	1709.7	1644.0	1563.1	1529.8	1514.5	1498.3	1451.4	1407.1
37.5°	1602.3	1679.8	1738.6	1650.9	1564.8	1510.2	1482.1	1465.1	1428.4	1368.8	1346.6
40°	1562.2	1646.6	1688.4	1590.4	1495.7	1456.5	1430.1	1413.1	1330.4	1304.0	1297.2
42.5°	1522.2	1614.2	1627.0	1531.5	1438.6	1399.4	1377.3	1321.0	1264.8	1251.1	1253.7
45°	1483.8	1579.3	1559.7	1448.0	1379.0	1346.6	1309.1	1231.5	1201.7	1208.5	1210.2
47.5°	1437.8	1537.5	1488.9	1364.5	1317.6	1285.2	1201.7	1154.8	1150.6	1159.9	1165.1
50°	1388.4	1490.6	1413.9	1288.6	1251.1	1212.8	1118.2	1094.3	1099.4	1108.8	1114.8
52.5°	1342.3	1437.8	1336.4	1217.9	1185.5	1097.7	1033.8	1038.1	1046.6	1057.7	1061.1
55°	1286.1	1373.9	1253.7	1146.3	1115.6	1000.6	971.6	981.8	990.3	999.7	1006.5
57.5°	1227.3	1300.6	1155.7	1066.2	1016.8	914.5	917.1	923.9	929.8	940.9	388.6
60°	1159.9	1217.1	1048.3	992.1	894.0	846.3	848.9	860.8	866.8	484.1	267.6
62.5°	1090.1	1119.9	951.1	907.7	781.5	778.1	790.1	795.2	541.2	255.7	250.6
65°	1009.9	1004.0	855.7	786.7	704.8	708.2	721.0	695.5	239.5	239.5	237.8
67.5°	921.3	885.5	762.8	651.1	630.7	638.4	652.0	227.6	221.6	223.3	217.3
70°	819.9	769.6	666.5	551.4	558.2	565.9	219.9	206.3	203.7	199.4	187.5
72.5°	712.5	643.5	545.5	479.0	483.2	303.4	192.6	185.8	177.3	168.8	156.0
75°	592.3	502.8	400.6	400.6	406.5	173.0	167.9	156.8	147.4	136.4	128.7
77.5°	464.5	386.9	311.1	323.0	157.7	144.9	135.5	123.6	115.9	109.1	104.8
80°	340.1	270.2	234.4	209.7	122.7	109.9	100.6	93.8	90.3	86.1	81.0
82.5°	223.3	162.8	162.8	98.9	86.1	75.9	73.3	68.2	64.8	62.2	59.7
85°	106.5	94.6	71.6	60.5	53.7	48.6	46.9	44.3	44.3	43.5	42.6
87.5°	39.2	42.6	31.5	30.7	29.0	28.1	29.0	29.0	29.8	29.0	28.1
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°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1921.0	1927.9	1933.0	1941.5	1952.6	1961.9	1970.5	1982.4	2001.1	2006.3	2010.5
5°	1978.1	1980.7	1986.7	1993.5	1995.2	1999.4	1998.6	2003.7	2006.3	2012.2	1999.4
7.5°	1981.5	1967.9	1951.7	1937.2	1927.0	1917.6	1911.7	1921.0	1926.1	1930.4	1917.6
10°	1910.0	1893.8	1884.4	1875.9	1865.6	1851.1	1831.5	1835.8	1834.1	1834.1	1829.8
12.5°	1864.8	1841.8	1817.9	1796.6	1787.2	1786.4	1787.2	1796.6	1796.6	1795.7	1790.6
15°	1794.0	1771.9	1760.0	1754.8	1754.8	1752.3	1752.3	1762.5	1760.0	1760.0	1757.4
17.5°	1747.2	1731.8	1723.3	1717.3	1714.8	1719.0	1724.2	1728.4	1729.3	1725.9	1712.2
20°	1708.8	1694.3	1684.1	1685.8	1685.0	1687.5	1690.1	1675.6	1657.7	1633.8	1622.7
22.5°	1668.8	1657.7	1650.0	1650.0	1639.8	1623.6	1599.7	1594.6	1592.1	1581.0	1571.6
25°	1630.4	1617.6	1606.5	1572.5	1551.1	1553.7	1549.4	1540.9	1540.1	1539.2	1542.6
27.5°	1592.1	1558.8	1516.2	1511.1	1502.6	1501.7	1506.8	1511.1	1511.1	1514.5	1518.8
30°	1512.8	1474.4	1466.8	1457.4	1460.8	1472.7	1475.3	1481.3	1483.0	1488.9	1492.3
32.5°	1440.3	1423.3	1416.5	1420.7	1431.8	1442.1	1448.0	1450.6	1454.8	1460.0	1464.2
35°	1381.5	1376.4	1382.4	1391.8	1402.8	1411.4	1416.5	1421.6	1425.9	1430.1	1433.5
37.5°	1338.1	1341.5	1350.0	1361.9	1373.0	1379.8	1384.1	1390.1	1396.0	1401.1	1380.7
40°	1297.2	1305.7	1315.1	1327.8	1337.2	1344.0	1348.3	1356.0	1304.8	590.6	323.9
42.5°	1261.4	1270.7	1277.6	1287.8	1298.0	1303.1	1265.6	565.1	319.6	317.9	322.2
45°	1217.9	1225.6	1236.7	1244.3	1253.7	823.3	314.5	317.9	312.8	316.2	317.9
47.5°	1173.6	1185.5	1191.5	1136.9	338.4	312.8	309.4	312.8	309.4	313.6	311.1
50°	1123.3	1137.8	809.7	306.0	303.4	301.7	305.1	303.4	306.0	309.4	302.6
52.5°	1072.2	663.9	296.6	294.9	296.6	294.9	300.9	296.6	297.4	294.0	285.5
55°	363.1	287.2	284.7	283.8	288.9	288.9	288.9	282.1	277.8	269.3	263.4
57.5°	277.8	277.8	277.0	277.8	276.1	274.4	266.8	260.8	254.8	242.9	239.5
60°	263.4	263.4	263.4	263.4	255.7	252.3	240.3	235.2	225.0	219.0	215.6
62.5°	251.4	249.7	242.0	239.5	231.0	221.6	214.8	209.7	199.4	196.0	193.5
65°	234.4	228.4	219.0	208.8	204.5	194.3	190.9	183.2	178.1	175.6	173.9
67.5°	206.3	197.7	190.1	183.2	175.6	172.2	167.9	161.9	158.5	156.8	155.1
70°	176.4	170.5	162.8	158.5	153.4	150.9	144.9	143.2	140.6	138.1	135.5
72.5°	147.4	144.0	140.6	134.7	133.0	131.3	125.3	121.9	118.5	115.1	113.4
75°	123.6	121.0	119.3	114.2	111.6	106.5	102.3	99.7	97.2	94.6	92.9
77.5°	101.4	99.7	94.6	91.2	89.5	85.2	83.5	84.4	82.7	79.3	77.6
80°	79.3	77.6	73.3	73.3	71.6	69.9	68.2	66.5	64.8	62.2	60.5
82.5°	60.5	58.8	57.1	55.4	53.7	52.8	52.0	50.3	48.6	46.9	46.0
85°	42.6	41.8	40.9	40.1	39.2	38.4	37.5	35.8	34.1	33.2	32.4
87.5°	29.0	28.1	27.3	26.4	25.6	24.7	23.9	23.0	21.3	20.5	19.6
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°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	2010.5	2014.8	2010.5	2001.1	1995.2	1992.6	1997.7	1997.7	2001.1	2005.4	2006.3
5°	1979.0	1968.8	1956.8	1944.9	1938.9	1935.5	1926.1	1927.9	1930.4	1932.1	1933.8
7.5°	1900.6	1886.9	1870.7	1855.4	1849.4	1844.3	1833.2	1833.2	1833.2	1834.1	1839.2
10°	1820.5	1814.5	1807.7	1797.5	1789.8	1787.2	1777.9	1780.4	1778.7	1781.3	1787.2
12.5°	1783.0	1776.1	1770.2	1760.0	1751.4	1748.0	1743.8	1746.3	1745.5	1749.7	1754.8
15°	1748.9	1745.5	1738.6	1731.0	1723.3	1716.5	1701.1	1696.0	1692.6	1688.4	1694.3
17.5°	1692.6	1668.8	1652.6	1640.6	1632.1	1626.1	1621.9	1621.9	1624.4	1627.0	1632.1
20°	1615.9	1609.1	1601.4	1588.6	1580.1	1576.7	1574.2	1574.2	1578.4	1581.8	1591.2
22.5°	1563.1	1562.2	1559.7	1553.7	1549.4	1549.4	1550.3	1552.0	1558.0	1563.1	1572.5
25°	1538.4	1541.8	1540.1	1536.7	1534.1	1535.0	1533.2	1535.0	1540.9	1546.0	1553.7
27.5°	1518.8	1523.9	1522.2	1517.1	1512.8	1514.5	1517.1	1515.3	1520.5	1526.4	1532.4
30°	1492.3	1493.2	1496.6	1490.6	1488.9	1491.5	1492.3	1494.0	1499.2	1503.4	1508.5
32.5°	1462.5	1469.3	1468.5	1462.5	1462.5	1465.1	1465.9	1408.8	1302.3	1121.6	1072.2
35°	1433.5	1441.2	1428.4	1204.3	833.5	444.9	343.5	331.5	334.1	335.8	337.5
37.5°	1060.2	502.8	320.5	323.0	325.6	328.1	330.7	333.2	335.8	338.4	339.2
40°	318.8	317.9	320.5	323.9	326.4	328.1	331.5	334.1	336.6	339.2	340.1
42.5°	315.3	317.0	319.6	323.0	326.4	329.8	332.4	335.8	337.5	339.2	340.1
45°	313.6	317.0	320.5	323.0	325.6	327.3	329.0	329.8	329.0	329.0	330.7
47.5°	311.1	314.5	315.3	314.5	315.3	314.5	314.5	314.5	311.9	311.1	311.1
50°	301.7	301.7	300.0	296.6	295.7	294.9	293.2	292.3	288.9	288.1	288.1
52.5°	282.1	281.3	278.7	274.4	272.7	271.0	270.2	269.3	265.9	264.2	265.1
55°	259.1	257.4	254.8	249.7	248.9	247.2	246.3	245.5	242.0	243.8	241.2
57.5°	237.8	234.4	231.0	230.1	226.7	225.9	225.0	224.1	221.6	222.4	220.7
60°	212.2	211.4	209.7	206.3	206.3	205.4	205.4	203.7	202.0	201.1	201.1
62.5°	193.5	190.9	189.2	189.2	186.6	186.6	186.6	184.9	183.2	184.1	183.2
65°	173.0	172.2	171.3	169.6	169.6	168.8	168.8	167.0	164.5	165.3	163.6
67.5°	156.0	154.3	152.6	151.7	148.3	146.6	145.7	144.9	141.5	142.3	140.6
70°	134.7	132.1	130.4	128.7	126.1	124.4	124.4	122.7	120.2	121.0	119.3
72.5°	112.5	110.8	109.1	108.2	105.7	104.8	104.0	103.1	100.6	101.4	100.6
75°	93.8	93.8	92.9	92.0	89.5	86.9	85.2	84.4	82.7	83.5	81.8
77.5°	77.6	75.9	74.1	74.1	71.6	69.9	68.2	68.2	68.2	67.3	66.5
80°	60.5	58.8	58.8	58.0	56.3	54.5	53.7	53.7	52.8	52.8	52.0
82.5°	46.0	44.3	43.5	43.5	41.8	40.9	40.1	39.2	39.2	39.2	38.4
85°	32.4	30.7	29.8	29.8	28.1	27.3	27.3	26.4	26.4	25.6	25.6
87.5°	19.6	18.8	17.9	17.9	16.2	15.3	15.3	15.3	14.5	14.5	13.6
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	82.5°	85°	87.5°	90°	92.5°	95°	97.5°	100°	102.5°	105°	107.5°
0°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	2006.3	2006.3	2000.3	2002.0	1999.4	2002.9	1998.6	1998.6	2003.7	2003.7	2007.1
5°	1934.7	1930.4	1929.6	1927.9	1919.3	1922.7	1918.5	1914.2	1920.2	1920.2	1927.9
7.5°	1836.7	1829.0	1832.4	1827.3	1822.2	1814.5	1817.1	1813.6	1817.9	1823.9	1831.5
10°	1786.4	1779.6	1783.8	1778.7	1781.3	1770.2	1771.0	1771.9	1776.1	1777.9	1784.7
12.5°	1754.0	1752.3	1750.6	1748.9	1750.6	1744.6	1741.2	1742.1	1743.8	1744.6	1749.7
15°	1685.8	1674.7	1678.1	1666.2	1667.1	1667.9	1661.1	1667.9	1667.1	1678.1	1688.4
17.5°	1630.4	1630.4	1624.4	1619.3	1615.9	1615.1	1610.0	1613.4	1610.0	1616.8	1619.3
20°	1592.1	1591.2	1590.4	1587.8	1579.3	1580.1	1582.7	1575.0	1574.2	1573.3	1578.4
22.5°	1574.2	1575.0	1571.6	1571.6	1563.9	1565.6	1566.5	1558.0	1558.8	1556.3	1558.8
25°	1555.4	1557.1	1552.8	1552.8	1551.1	1550.3	1546.0	1547.7	1542.6	1538.4	1542.6
27.5°	1533.2	1536.7	1533.2	1535.0	1531.5	1529.8	1527.3	1525.6	1520.5	1519.6	1522.2
30°	1512.8	1514.5	1513.6	1509.4	1508.5	1503.4	1506.0	1500.9	1495.7	1496.6	1498.3
32.5°	775.6	740.6	571.0	515.6	510.5	529.3	627.3	763.6	989.5	1208.5	1366.2
35°	338.4	338.4	338.4	337.5	337.5	336.6	335.8	334.9	334.1	333.2	332.4
37.5°	340.1	340.1	340.1	340.1	339.2	338.4	338.4	336.6	335.8	334.9	334.1
40°	340.9	341.8	341.8	341.8	340.9	340.9	340.1	338.4	337.5	335.8	334.1
42.5°	340.1	340.9	340.9	340.1	340.1	339.2	339.2	338.4	337.5	336.6	335.8
45°	329.0	329.8	328.1	328.1	327.3	327.3	327.3	327.3	327.3	328.1	328.1
47.5°	309.4	309.4	308.5	307.7	307.7	306.8	307.7	306.8	308.5	309.4	311.1
50°	286.4	286.4	284.7	283.8	283.8	283.8	283.8	284.7	285.5	287.2	288.9
52.5°	262.5	262.5	261.6	260.8	259.9	259.9	262.5	261.6	262.5	263.4	265.9
55°	239.5	240.3	238.6	238.6	237.8	237.8	237.8	238.6	239.5	240.3	242.9
57.5°	219.9	219.9	218.2	218.2	218.2	217.3	219.9	218.2	219.0	219.9	221.6
60°	200.3	199.4	199.4	198.6	198.6	198.6	200.3	199.4	199.4	200.3	202.0
62.5°	182.4	182.4	181.5	181.5	180.7	180.7	182.4	181.5	181.5	182.4	183.2
65°	161.9	161.9	161.1	160.2	162.8	160.2	162.8	161.1	162.8	163.6	165.3
67.5°	138.9	138.9	138.9	138.1	138.1	139.8	140.6	138.9	139.8	141.5	142.3
70°	118.5	118.5	117.6	117.6	117.6	119.3	120.2	118.5	119.3	120.2	121.9
72.5°	100.6	98.9	98.9	98.0	99.7	99.7	100.6	99.7	100.6	100.6	102.3
75°	82.7	81.0	81.0	81.0	82.7	81.8	82.7	81.8	82.7	82.7	83.5
77.5°	66.5	65.6	64.8	64.8	66.5	66.5	66.5	65.6	66.5	67.3	68.2
80°	52.0	51.1	50.3	50.3	52.0	52.0	52.0	52.8	52.0	52.8	53.7
82.5°	38.4	37.5	36.6	38.4	38.4	38.4	38.4	39.2	38.4	39.2	40.1
85°	25.6	24.7	23.9	25.6	25.6	25.6	25.6	26.4	25.6	26.4	27.3
87.5°	13.6	12.8	12.8	13.6	13.6	13.6	14.5	14.5	14.5	15.3	15.3
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°
0°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	2012.2	2014.8	2013.9	2008.8	2003.7	1997.7	1993.5	1994.3	2002.9	2005.4	1997.7
5°	1927.9	1944.0	1944.0	1955.1	1949.2	1944.0	1947.5	1966.2	1975.6	1990.1	1995.2
7.5°	1840.9	1848.6	1847.7	1858.8	1857.1	1857.1	1859.7	1884.4	1896.3	1908.2	1911.7
10°	1792.3	1800.0	1799.2	1800.0	1797.5	1791.5	1791.5	1802.6	1812.8	1818.8	1820.5
12.5°	1757.4	1761.7	1760.8	1760.8	1759.1	1754.0	1753.1	1762.5	1773.6	1781.3	1782.1
15°	1705.4	1717.3	1719.9	1731.0	1728.4	1721.6	1723.3	1731.0	1737.8	1744.6	1742.1
17.5°	1627.9	1633.8	1634.7	1638.9	1637.2	1637.2	1647.5	1675.6	1694.3	1710.5	1712.2
20°	1583.5	1587.8	1586.1	1595.5	1591.2	1590.4	1592.9	1604.8	1613.4	1621.0	1634.7
22.5°	1562.2	1565.6	1563.1	1563.9	1556.3	1549.4	1547.7	1557.1	1566.5	1576.7	1576.7
25°	1544.3	1546.9	1546.0	1544.3	1538.4	1529.0	1527.3	1529.0	1532.4	1533.2	1527.3
27.5°	1523.0	1524.7	1524.7	1525.6	1517.9	1509.4	1507.7	1506.0	1509.4	1508.5	1499.2
30°	1500.9	1498.3	1499.2	1500.0	1493.2	1485.5	1482.1	1481.3	1484.7	1483.8	1474.4
32.5°	1448.0	1467.6	1469.3	1471.0	1465.1	1458.2	1454.8	1452.3	1454.0	1453.1	1444.6
35°	331.5	337.5	413.4	935.8	1270.7	1407.1	1421.6	1418.2	1419.0	1419.0	1412.2
37.5°	332.4	331.5	330.7	328.1	325.6	323.9	559.9	1194.0	1383.2	1384.1	1378.1
40°	332.4	331.5	330.7	329.0	325.6	323.0	318.8	315.3	323.0	710.8	1300.6
42.5°	334.1	332.4	330.7	329.0	325.6	322.2	318.8	314.5	317.0	315.3	311.1
45°	329.0	328.1	328.1	327.3	325.6	322.2	317.9	312.8	310.2	312.8	308.5
47.5°	312.8	313.6	316.2	317.0	317.0	317.9	315.3	311.9	307.7	310.2	305.1
50°	290.6	292.3	293.2	297.4	299.1	302.6	303.4	303.4	302.6	306.0	302.6
52.5°	266.8	268.5	272.7	274.4	276.1	281.3	283.0	285.5	287.2	292.3	295.7
55°	243.8	244.6	246.3	249.7	252.3	256.5	259.1	261.6	265.9	268.5	278.7
57.5°	222.4	223.3	226.7	227.6	229.3	232.7	235.2	238.6	242.0	243.8	255.7
60°	202.0	202.8	205.4	206.3	207.1	210.5	213.1	215.6	218.2	219.9	228.4
62.5°	184.1	184.1	186.6	186.6	187.5	190.1	191.8	193.5	196.0	196.9	201.1
65°	166.2	167.0	168.8	168.8	169.6	171.3	172.2	173.0	175.6	175.6	179.0
67.5°	144.0	144.9	147.4	149.1	150.0	153.4	154.3	155.1	156.8	157.7	159.4
70°	122.7	123.6	126.1	127.0	127.8	130.4	132.1	134.7	137.2	139.8	141.5
72.5°	103.1	104.0	106.5	106.5	109.1	109.9	111.6	112.5	115.1	116.8	119.3
75°	84.4	85.2	87.8	87.8	90.3	91.2	92.0	92.9	94.6	96.3	98.0
77.5°	69.0	69.0	72.4	74.1	75.9	75.9	76.7	76.7	76.7	77.6	79.3
80°	54.5	54.5	57.1	58.8	60.5	60.5	61.4	62.2	63.1	63.1	63.9
82.5°	40.9	40.9	43.5	44.3	46.0	46.0	46.0	46.9	47.7	46.9	48.6
85°	28.1	28.1	29.8	30.7	32.4	32.4	32.4	33.2	34.1	33.2	34.1
87.5°	16.2	17.0	17.9	18.8	19.6	20.5	20.5	20.5	21.3	21.3	22.2
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°
0°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1989.2	1979.0	1978.1	1966.2	1962.8	1963.6	1954.3	1950.9	1935.5	1932.1	1915.9
5°	1996.9	2002.0	1999.4	1998.6	2001.1	1999.4	1992.6	1989.2	1986.7	1979.8	1966.2
7.5°	1912.5	1915.9	1918.5	1929.6	1938.9	1955.1	1972.2	1983.3	1991.8	1993.5	1982.4
10°	1826.4	1842.6	1853.7	1870.7	1884.4	1893.8	1904.0	1913.4	1938.1	1962.8	1977.3
12.5°	1782.1	1786.4	1785.5	1794.9	1804.3	1829.0	1852.9	1866.5	1885.2	1896.3	1922.7
15°	1744.6	1745.5	1748.0	1754.8	1760.0	1768.5	1779.6	1800.0	1837.5	1854.6	1869.0
17.5°	1710.5	1710.5	1712.2	1718.2	1725.0	1732.7	1739.5	1748.0	1766.8	1794.9	1830.7
20°	1656.0	1679.8	1682.4	1681.5	1685.0	1699.4	1701.1	1716.5	1725.9	1736.9	1771.9
22.5°	1575.0	1589.5	1610.0	1641.5	1653.4	1660.2	1665.4	1672.2	1686.7	1699.4	1713.9
25°	1530.7	1540.1	1546.0	1555.4	1580.1	1620.2	1627.9	1635.5	1644.9	1654.3	1672.2
27.5°	1491.5	1490.6	1494.9	1503.4	1510.2	1531.5	1569.0	1598.9	1600.6	1614.2	1629.6
30°	1463.4	1458.2	1452.3	1450.6	1460.0	1471.0	1482.1	1529.0	1561.4	1568.2	1584.4
32.5°	1436.9	1428.4	1419.9	1413.1	1407.1	1416.5	1423.3	1443.8	1485.5	1524.7	1533.2
35°	1404.6	1396.0	1385.8	1378.1	1368.8	1367.9	1367.1	1386.7	1400.3	1447.2	1488.1
37.5°	1371.3	1361.9	1353.4	1344.9	1335.5	1328.7	1324.4	1329.6	1342.3	1362.8	1431.0
40°	1336.4	1325.3	1316.8	1310.0	1297.2	1292.1	1283.5	1280.1	1281.0	1298.9	1334.7
42.5°	798.6	1273.3	1277.6	1269.9	1258.8	1252.0	1242.6	1238.4	1229.8	1238.4	1258.8
45°	307.7	311.1	931.5	1230.7	1217.1	1208.5	1200.0	1195.7	1186.4	1179.6	1198.3
47.5°	301.7	305.1	298.3	422.7	1161.7	1164.2	1154.0	1149.7	1140.3	1135.2	1130.1
50°	297.4	300.0	294.9	296.6	290.6	1064.5	1107.1	1102.0	1091.8	1085.8	1075.6
52.5°	293.2	293.2	289.8	285.5	283.8	284.7	895.7	1053.4	1041.5	1035.5	1021.9
55°	279.5	281.3	284.7	277.8	276.1	275.3	272.7	853.1	986.1	979.3	967.3
57.5°	259.1	262.5	271.9	270.2	270.2	263.4	261.6	261.6	791.8	922.2	910.2
60°	235.2	238.6	248.9	252.3	254.8	253.1	251.4	250.6	247.2	834.4	849.7
62.5°	210.5	213.9	217.3	228.4	231.8	236.1	241.2	238.6	235.2	235.2	785.8
65°	184.1	189.2	190.9	201.1	205.4	213.1	217.3	223.3	221.6	220.7	225.0
67.5°	161.1	167.0	167.9	172.2	179.8	183.2	188.4	199.4	204.5	206.3	208.0
70°	141.5	144.9	147.4	149.1	154.3	155.1	164.5	172.2	179.8	188.4	190.9
72.5°	121.9	124.4	129.5	127.8	129.5	133.0	138.1	143.2	150.9	162.8	170.5
75°	99.7	101.4	104.8	106.5	109.9	112.5	115.9	120.2	127.0	133.0	143.2
77.5°	80.1	81.0	83.5	84.4	87.8	90.3	96.3	98.9	103.1	107.4	113.4
80°	64.8	64.8	65.6	65.6	68.2	70.7	75.0	77.6	82.7	86.1	86.1
82.5°	49.4	49.4	52.0	52.0	53.7	53.7	56.3	56.3	58.8	60.5	62.2
85°	34.9	35.8	37.5	36.6	38.4	37.5	39.2	40.9	41.8	40.9	40.1
87.5°	23.0	23.0	24.7	23.9	24.7	24.7	26.4	26.4	27.3	27.3	26.4
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	167.5°	170°	172.5°	175°	177.5°	180°	182.5°	185°	187.5°	190°
0°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1910.0	1897.2	1889.5	1880.1	1877.6	1875.0	1878.4	1878.4	1873.3	1869.0	1861.4
5°	1954.3	1940.6	1926.1	1910.8	1896.3	1881.0	1875.0	1874.2	1864.8	1859.7	1857.1
7.5°	1977.3	1970.5	1954.3	1933.0	1910.8	1883.5	1871.6	1864.8	1855.4	1853.7	1853.7
10°	1979.8	1972.2	1963.6	1948.3	1922.7	1886.9	1863.9	1850.3	1841.8	1847.7	1858.8
12.5°	1955.1	1969.6	1961.9	1951.7	1931.3	1887.8	1854.6	1834.1	1831.5	1846.9	1875.9
15°	1892.1	1934.7	1956.0	1945.7	1929.6	1886.1	1839.2	1815.4	1815.4	1846.9	1884.4
17.5°	1844.3	1877.6	1929.6	1938.1	1919.3	1882.7	1824.7	1796.6	1804.3	1850.3	1890.4
20°	1805.1	1825.6	1875.9	1923.6	1905.7	1875.0	1803.4	1774.4	1789.8	1845.2	1898.9
22.5°	1743.8	1784.7	1815.4	1886.1	1892.1	1860.5	1782.1	1747.2	1777.9	1845.2	1894.6
25°	1684.1	1733.5	1765.9	1835.0	1871.6	1842.6	1762.5	1718.2	1765.1	1842.6	1891.2
27.5°	1642.3	1665.4	1724.2	1773.6	1840.9	1818.8	1736.1	1686.7	1748.9	1829.0	1871.6
30°	1598.0	1613.4	1671.3	1718.2	1800.0	1791.5	1708.8	1651.7	1728.4	1816.2	1820.5
32.5°	1549.4	1566.5	1596.3	1664.5	1742.9	1765.9	1678.1	1616.8	1706.3	1796.6	1760.8
35°	1500.0	1512.8	1536.7	1610.0	1676.4	1727.6	1640.6	1576.7	1690.9	1766.8	1703.7
37.5°	1450.6	1464.2	1484.7	1546.0	1606.5	1691.8	1608.2	1536.7	1662.8	1713.9	1644.0
40°	1403.7	1411.4	1432.7	1471.0	1548.6	1655.1	1571.6	1494.9	1633.8	1646.6	1563.1
42.5°	1317.6	1356.0	1375.6	1406.3	1483.0	1604.8	1529.0	1450.6	1601.4	1579.3	1482.1
45°	1224.7	1308.2	1316.8	1347.5	1425.0	1551.1	1488.9	1407.1	1570.7	1521.3	1405.4
47.5°	1148.9	1209.4	1258.8	1284.4	1356.0	1488.1	1451.4	1370.5	1524.7	1448.0	1330.4
50°	1081.5	1113.9	1203.4	1222.2	1273.3	1412.2	1407.1	1327.8	1460.8	1356.0	1257.1
52.5°	1015.9	1038.9	1119.9	1159.9	1201.7	1330.4	1354.3	1286.1	1390.9	1263.9	1183.0
55°	958.8	966.5	1010.8	1095.2	1132.7	1247.7	1296.3	1237.5	1302.3	1176.1	1111.4
57.5°	900.0	893.2	925.6	1033.8	1061.1	1163.4	1235.0	1188.1	1230.7	1086.7	1037.2
60°	838.6	829.3	842.9	914.5	985.2	1079.8	1162.5	1133.5	1143.8	998.0	954.6
62.5°	774.7	765.3	761.1	806.3	911.1	993.8	1089.2	1073.0	1037.2	917.1	852.3
65°	708.2	698.9	692.0	709.9	829.3	882.1	1007.4	1003.1	920.5	831.8	717.6
67.5°	215.6	635.8	621.3	620.5	698.9	780.7	918.8	911.9	802.8	740.6	617.9
70°	194.3	515.6	548.0	540.3	574.4	677.6	817.3	812.2	688.6	594.0	546.3
72.5°	178.1	182.4	484.1	475.6	483.2	576.1	711.7	698.0	583.8	468.8	472.2
75°	152.6	160.2	167.0	401.4	391.2	477.3	596.6	575.3	481.5	386.9	394.6
77.5°	124.4	133.8	138.9	292.3	316.2	340.1	476.4	448.3	331.5	309.4	147.4
80°	92.9	100.6	109.1	116.8	240.3	237.8	353.7	325.6	231.0	192.6	115.1
82.5°	68.2	70.7	75.9	84.4	95.5	159.4	227.6	200.3	160.2	87.8	79.3
85°	42.6	46.0	48.6	51.1	58.0	95.5	112.5	89.5	67.3	53.7	50.3
87.5°	27.3	27.3	26.4	27.3	28.1	34.1	38.4	36.6	29.0	27.3	27.3
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	192.5°	195°	197.5°	200°	202.5°	205°	207.5°	210°	212.5°	215°	217.5°
0°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1852.9	1840.9	1840.9	1837.5	1840.1	1840.1	1839.2	1840.1	1846.0	1849.4	1855.4
5°	1852.0	1848.6	1856.3	1865.6	1876.7	1890.4	1893.8	1905.7	1916.8	1931.3	1946.6
7.5°	1863.1	1875.0	1889.5	1904.8	1927.0	1943.2	1957.7	1972.2	1982.4	1996.0	2004.6
10°	1879.3	1903.1	1927.9	1947.5	1971.3	1985.0	1994.3	1996.0	1981.5	1958.5	1939.8
12.5°	1902.3	1930.4	1953.4	1972.2	1983.3	1978.1	1950.9	1922.7	1906.5	1882.7	1849.4
15°	1921.9	1947.5	1971.3	1963.6	1933.8	1905.7	1884.4	1851.1	1818.8	1796.6	1782.1
17.5°	1930.4	1955.1	1946.6	1906.5	1878.4	1846.0	1802.6	1777.0	1755.7	1738.6	1730.1
20°	1935.5	1931.3	1885.2	1856.3	1801.7	1771.9	1743.8	1719.9	1703.7	1695.2	1693.5
22.5°	1921.9	1869.9	1830.7	1778.7	1738.6	1713.9	1691.8	1672.2	1661.1	1654.3	1650.0
25°	1876.7	1816.2	1758.2	1717.3	1683.2	1661.9	1644.9	1628.7	1615.1	1611.7	1603.1
27.5°	1813.6	1764.2	1687.5	1656.0	1626.1	1615.9	1597.2	1581.0	1569.0	1558.8	1531.5
30°	1761.7	1683.2	1627.9	1598.9	1581.0	1569.0	1547.7	1530.7	1510.2	1472.7	1457.4
32.5°	1697.7	1620.2	1567.3	1551.1	1529.0	1518.8	1494.9	1457.4	1425.9	1410.5	1409.7
35°	1615.1	1551.1	1512.8	1498.3	1480.4	1463.4	1413.9	1379.8	1364.5	1366.2	1379.0
37.5°	1546.0	1488.9	1464.2	1443.8	1423.3	1379.8	1338.1	1321.9	1326.1	1334.7	1340.6
40°	1476.1	1432.7	1404.6	1388.4	1342.3	1299.7	1277.6	1283.5	1291.2	1297.2	1304.8
42.5°	1408.0	1377.3	1349.2	1317.6	1254.6	1231.5	1236.7	1244.3	1251.1	1259.7	1267.3
45°	1343.2	1315.9	1283.5	1211.9	1180.4	1186.4	1194.0	1200.0	1210.2	1216.2	1223.9
47.5°	1281.8	1252.8	1195.7	1132.7	1129.3	1141.2	1148.0	1155.7	1163.4	1148.0	633.2
50°	1212.8	1183.0	1096.0	1072.2	1079.8	1090.9	1099.4	1107.1	986.1	392.0	301.7
52.5°	1144.6	1068.8	1013.4	1020.2	1027.8	1040.6	1046.6	777.3	309.4	294.9	295.7
55°	1068.8	971.6	955.4	963.9	970.7	983.5	652.0	285.5	283.8	283.0	289.8
57.5°	949.4	890.6	897.4	906.0	912.8	644.3	277.8	276.1	277.0	277.8	278.7
60°	842.9	830.1	837.8	845.5	598.3	268.5	263.4	264.2	267.6	265.1	258.2
62.5°	758.5	768.8	776.4	680.1	254.8	252.3	254.8	252.3	246.3	242.0	233.5
65°	693.8	704.0	709.9	239.5	238.6	242.0	239.5	231.0	221.6	209.7	207.1
67.5°	625.6	635.8	227.6	221.6	225.0	220.7	210.5	200.3	193.5	183.2	179.0
70°	554.8	237.8	206.3	205.4	199.4	192.6	181.5	171.3	162.8	158.5	154.3
72.5°	400.6	188.4	185.8	179.0	168.8	159.4	150.0	144.0	139.8	137.2	134.7
75°	167.0	163.6	156.0	144.0	133.8	129.5	122.7	118.5	116.8	111.6	109.9
77.5°	139.8	133.0	121.9	113.4	107.4	104.8	99.7	94.6	92.0	91.2	87.8
80°	107.4	98.0	92.9	88.6	86.9	81.0	75.0	72.4	70.7	69.9	67.3
82.5°	73.3	69.9	66.5	60.5	60.5	58.0	55.4	53.7	52.0	52.0	50.3
85°	47.7	45.2	44.3	41.8	41.8	40.1	39.2	38.4	37.5	36.6	35.8
87.5°	27.3	27.3	28.1	27.3	27.3	26.4	25.6	24.7	23.9	23.9	22.2
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	222.5°	225°	227.5°	230°	232.5°	235°	237.5°	240°	242.5°	245°
0°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1863.1	1871.6	1873.3	1902.3	1918.5	1917.6	1912.5	1927.9	1918.5	1913.4	1918.5
5°	1961.9	1972.2	1980.7	2012.2	2023.3	2028.4	2027.6	2036.1	2029.3	2023.3	2023.3
7.5°	2010.5	2013.9	2017.3	2009.7	2004.6	1996.0	1983.3	1964.5	1955.1	1944.9	1932.1
10°	1930.4	1919.3	1923.6	1908.2	1895.5	1886.1	1874.2	1858.8	1846.0	1836.7	1822.2
12.5°	1832.4	1831.5	1833.2	1835.8	1823.0	1815.4	1806.0	1794.9	1785.5	1775.3	1763.4
15°	1772.7	1773.6	1780.4	1777.9	1773.6	1769.3	1759.1	1755.7	1747.2	1736.1	1729.3
17.5°	1730.1	1734.4	1741.2	1737.8	1731.0	1726.7	1719.0	1711.4	1703.7	1695.2	1685.0
20°	1692.6	1696.9	1701.1	1696.9	1684.1	1678.1	1667.9	1644.0	1627.0	1610.0	1594.6
22.5°	1651.7	1654.3	1650.9	1637.2	1604.8	1589.5	1577.6	1570.7	1556.3	1546.9	1537.5
25°	1600.6	1586.1	1563.9	1548.6	1535.8	1529.0	1523.9	1523.0	1521.3	1519.6	1515.3
27.5°	1517.1	1511.9	1500.0	1494.0	1494.9	1497.5	1498.3	1500.9	1498.3	1494.9	1491.5
30°	1454.8	1457.4	1458.2	1460.0	1464.2	1466.8	1467.6	1471.0	1469.3	1466.8	1465.1
32.5°	1415.6	1421.6	1425.0	1430.1	1432.7	1436.9	1436.9	1442.1	1436.9	1436.1	1434.4
35°	1383.2	1388.4	1390.1	1397.7	1400.3	1404.6	1404.6	1408.8	1404.6	1361.1	1074.7
37.5°	1350.9	1356.0	1359.4	1366.2	1367.1	1369.6	1263.9	924.7	596.6	461.9	352.8
40°	1312.5	1318.5	1321.9	1324.4	930.7	590.6	406.5	330.7	330.7	333.2	335.8
42.5°	1271.6	1275.9	888.9	517.3	322.2	321.3	323.9	326.4	329.0	332.4	335.8
45°	999.7	504.5	320.5	312.8	315.3	318.8	322.2	325.6	329.8	333.2	334.9
47.5°	328.1	307.7	311.9	308.5	312.8	317.0	320.5	323.9	324.7	325.6	324.7
50°	303.4	303.4	306.0	306.0	309.4	311.1	311.1	311.1	307.7	306.8	304.3
52.5°	293.2	300.0	296.6	298.3	296.6	294.0	291.5	288.9	283.8	282.1	278.7
55°	288.1	290.6	282.1	279.5	276.1	269.3	265.9	262.5	258.2	256.5	252.3
57.5°	276.1	270.2	260.8	256.5	250.6	243.8	240.3	237.8	233.5	231.8	229.3
60°	254.0	242.0	236.1	231.0	224.1	218.2	215.6	213.9	210.5	209.7	207.1
62.5°	226.7	216.5	211.4	204.5	199.4	196.0	193.5	192.6	189.2	189.2	187.5
65°	196.9	191.8	187.5	180.7	178.1	174.7	173.9	173.0	171.3	170.5	168.8
67.5°	173.0	169.6	163.6	160.2	158.5	156.0	154.3	152.6	149.1	147.4	144.9
70°	151.7	149.1	143.2	140.6	137.2	133.0	130.4	128.7	126.1	124.4	121.9
72.5°	131.3	123.6	119.3	116.8	114.2	109.9	109.1	107.4	104.8	104.0	101.4
75°	105.7	99.7	97.2	95.5	92.9	90.3	90.3	90.3	87.8	86.9	86.1
77.5°	84.4	81.0	79.3	77.6	76.7	75.0	72.4	71.6	69.0	69.0	68.2
80°	64.8	63.1	61.4	60.5	59.7	58.0	56.3	55.4	52.8	52.8	52.0
82.5°	47.7	46.9	46.0	45.2	44.3	43.5	40.9	40.1	38.4	38.4	37.5
85°	34.1	33.2	31.5	30.7	30.7	29.8	27.3	26.4	24.7	24.7	24.7
87.5°	21.3	20.5	19.6	18.8	17.9	17.0	15.3	14.5	14.5	12.8	11.9
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	247.5°	250°	252.5°	255°	257.5°	260°	262.5°	265°	267.5°	270°	272.5°
0°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1908.2	1922.7	1921.0	1931.3	1933.8	1938.9	1940.6	1941.5	1928.7	1938.9	1939.8
5°	2020.8	2023.3	2025.0	2029.3	2033.5	2034.4	2030.1	2025.0	2026.7	2023.3	2014.8
7.5°	1930.4	1917.6	1915.1	1911.7	1910.0	1908.2	1900.6	1907.4	1899.7	1896.3	1884.4
10°	1819.6	1807.7	1806.8	1806.8	1809.4	1808.5	1806.8	1803.4	1810.2	1806.0	1803.4
12.5°	1761.7	1757.4	1760.0	1758.2	1765.1	1766.8	1765.1	1765.1	1763.4	1760.0	1761.7
15°	1726.7	1723.3	1725.9	1723.3	1728.4	1729.3	1725.0	1727.6	1723.3	1719.0	1717.3
17.5°	1680.7	1673.0	1667.1	1658.5	1659.4	1657.7	1652.6	1652.6	1648.3	1637.2	1638.1
20°	1592.1	1584.4	1581.0	1581.0	1585.2	1586.9	1586.1	1587.8	1583.5	1581.8	1575.0
22.5°	1536.7	1535.8	1537.5	1541.8	1548.6	1558.0	1558.8	1558.8	1558.8	1558.0	1549.4
25°	1517.1	1517.1	1518.8	1524.7	1529.8	1536.7	1538.4	1540.1	1538.4	1538.4	1530.7
27.5°	1494.9	1493.2	1496.6	1502.6	1508.5	1513.6	1517.9	1518.8	1516.2	1516.2	1518.8
30°	1467.6	1466.8	1471.0	1477.0	1482.1	1487.2	1491.5	1494.9	1491.5	1491.5	1488.9
32.5°	1439.5	1439.5	1441.2	1405.4	1303.1	1173.6	1176.1	1101.1	1049.2	983.5	1070.5
35°	898.3	653.7	561.7	475.6	415.1	375.9	375.0	362.2	356.3	352.0	351.1
37.5°	339.2	340.9	344.3	346.0	348.6	350.3	351.1	351.1	351.1	351.1	350.3
40°	338.4	341.8	344.3	346.9	349.4	351.1	351.1	352.0	352.8	352.8	352.8
42.5°	339.2	342.6	346.0	348.6	350.3	351.1	352.0	352.8	352.8	352.8	352.8
45°	338.4	340.1	340.1	340.9	340.9	340.9	341.8	341.8	340.9	340.1	341.8
47.5°	325.6	325.6	323.0	322.2	321.3	319.6	320.5	319.6	318.8	317.9	319.6
50°	303.4	300.0	298.3	296.6	295.7	294.0	294.9	294.0	293.2	291.5	294.0
52.5°	277.0	276.1	272.7	271.0	270.2	271.0	269.3	268.5	267.6	266.8	267.6
55°	251.4	248.0	247.2	245.5	244.6	245.5	244.6	243.8	242.9	242.0	242.9
57.5°	228.4	225.9	225.0	223.3	223.3	223.3	223.3	222.4	221.6	220.7	221.6
60°	206.3	204.5	203.7	203.7	202.8	202.8	202.8	202.0	201.1	201.1	202.0
62.5°	187.5	187.5	184.9	184.1	184.1	184.9	184.1	183.2	182.4	181.5	183.2
65°	167.9	164.5	163.6	161.9	160.2	161.1	160.2	159.4	158.5	157.7	159.4
67.5°	144.0	143.2	139.8	138.1	137.2	138.1	137.2	136.4	135.5	134.7	136.4
70°	121.0	121.0	117.6	116.8	115.9	115.9	115.1	115.1	114.2	113.4	115.1
72.5°	100.6	100.6	99.7	98.0	97.2	96.3	95.5	94.6	94.6	95.5	95.5
75°	83.5	81.8	78.4	79.3	78.4	77.6	77.6	76.7	75.9	77.6	76.7
77.5°	65.6	64.8	62.2	63.1	62.2	61.4	61.4	60.5	59.7	60.5	60.5
80°	49.4	49.4	48.6	47.7	47.7	46.9	46.0	46.0	45.2	46.0	46.0
82.5°	35.8	35.8	34.9	34.1	33.2	33.2	32.4	32.4	32.4	32.4	32.4
85°	23.0	22.2	22.2	20.5	20.5	20.5	19.6	19.6	19.6	19.6	19.6
87.5°	11.1	11.1	10.2	10.2	9.4	8.5	8.5	7.7	7.7	8.5	8.5
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	277.5°	280°	282.5°	285°	287.5°	290°	292.5°	295°	297.5°	300°
0°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1924.4	1935.5	1926.1	1930.4	1931.3	1945.7	1944.9	1948.3	1942.3	1935.5	1926.1
5°	2022.5	2017.3	2010.5	2026.7	2018.2	2028.4	2031.8	2038.6	2038.6	2037.8	2030.1
7.5°	1897.2	1886.1	1894.6	1900.6	1903.1	1896.3	1910.0	1925.3	1938.1	1945.7	1946.6
10°	1799.2	1802.6	1801.7	1804.3	1810.2	1809.4	1817.9	1826.4	1829.8	1835.0	1836.7
12.5°	1753.1	1752.3	1754.0	1760.0	1763.4	1762.5	1771.0	1776.1	1777.9	1778.7	1777.9
15°	1716.5	1710.5	1714.8	1715.6	1718.2	1718.2	1728.4	1736.1	1739.5	1741.2	1739.5
17.5°	1647.5	1633.0	1646.6	1646.6	1656.0	1654.3	1670.5	1683.2	1690.1	1695.2	1695.2
20°	1579.3	1572.5	1577.6	1575.9	1582.7	1581.8	1592.1	1600.6	1606.5	1610.8	1615.9
22.5°	1552.0	1553.7	1546.0	1546.9	1546.9	1546.0	1551.1	1555.4	1557.1	1559.7	1558.0
25°	1534.1	1535.8	1533.2	1529.0	1527.3	1529.0	1531.5	1536.7	1537.5	1535.8	1529.8
27.5°	1516.2	1511.1	1515.3	1507.7	1506.0	1509.4	1512.8	1513.6	1514.5	1514.5	1509.4
30°	1488.9	1484.7	1488.9	1485.5	1482.1	1485.5	1488.1	1488.1	1489.8	1490.6	1484.7
32.5°	1040.6	1049.2	1187.2	1270.7	1388.4	1448.0	1459.1	1459.1	1460.8	1460.8	1455.7
35°	354.5	355.4	384.4	416.8	485.8	571.0	682.7	740.6	936.7	1171.0	1397.7
37.5°	350.3	349.4	348.6	347.7	346.9	346.0	344.3	343.5	348.6	413.4	560.8
40°	352.0	351.1	349.4	348.6	347.7	346.0	345.2	343.5	341.8	340.1	338.4
42.5°	352.0	351.1	350.3	349.4	348.6	347.7	346.0	344.3	342.6	340.1	337.5
45°	340.1	340.1	340.9	340.9	341.8	341.8	341.8	340.9	340.9	340.1	336.6
47.5°	317.9	317.9	320.5	320.5	322.2	323.9	323.9	325.6	328.1	329.8	330.7
50°	292.3	292.3	294.9	295.7	297.4	300.0	302.6	303.4	306.0	309.4	312.8
52.5°	266.8	266.8	269.3	269.3	271.0	273.6	276.1	277.0	280.4	283.8	288.1
55°	242.9	242.9	244.6	245.5	246.3	248.0	250.6	250.6	254.0	256.5	260.8
57.5°	221.6	223.3	223.3	223.3	224.1	225.9	227.6	227.6	230.1	232.7	236.1
60°	201.1	202.8	202.8	202.8	203.7	204.5	206.3	206.3	208.0	209.7	213.1
62.5°	182.4	184.1	184.1	184.9	184.9	185.8	187.5	186.6	188.4	189.2	191.8
65°	158.5	160.2	161.1	161.9	162.8	164.5	167.0	166.2	168.8	170.5	173.0
67.5°	135.5	137.2	137.2	138.1	138.9	140.6	142.3	142.3	144.9	146.6	150.0
70°	114.2	115.9	115.9	116.8	117.6	119.3	121.0	120.2	122.7	124.4	127.0
72.5°	94.6	96.3	96.3	97.2	97.2	98.9	100.6	102.3	102.3	104.0	105.7
75°	76.7	77.6	78.4	78.4	79.3	80.1	81.8	83.5	84.4	85.2	86.9
77.5°	60.5	61.4	62.2	62.2	63.1	63.9	64.8	68.2	69.9	70.7	70.7
80°	46.0	46.9	46.9	46.9	47.7	48.6	50.3	50.3	53.7	53.7	54.5
82.5°	32.4	33.2	33.2	33.2	34.1	35.8	36.6	37.5	39.2	40.1	40.1
85°	19.6	20.5	20.5	20.5	21.3	22.2	23.9	24.7	25.6	25.6	26.4
87.5°	7.7	8.5	9.4	9.4	10.2	11.1	11.9	12.8	13.6	13.6	14.5
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	302.5°	305°	307.5°	310°	312.5°	315°	317.5°	320°	322.5°	325°	327.5°
0°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1915.9	1921.9	1915.9	1919.3	1923.6	1915.9	1898.0	1891.2	1888.6	1878.4	1871.6
5°	2022.5	2022.5	2019.9	2026.7	2025.9	2013.9	1995.2	1986.7	1978.1	1967.1	1958.5
7.5°	1946.6	1953.4	1957.7	1984.1	2001.1	2002.9	2014.8	2017.3	2020.8	2017.3	2012.2
10°	1837.5	1835.0	1846.9	1871.6	1886.1	1893.8	1916.8	1927.9	1937.2	1956.0	1975.6
12.5°	1776.1	1779.6	1784.7	1802.6	1816.2	1812.8	1822.2	1829.8	1840.9	1859.7	1887.8
15°	1735.2	1738.6	1743.8	1757.4	1765.9	1761.7	1766.8	1771.9	1779.6	1788.9	1806.0
17.5°	1690.9	1696.9	1702.9	1717.3	1725.0	1724.2	1728.4	1730.1	1732.7	1738.6	1750.6
20°	1621.9	1640.6	1652.6	1672.2	1683.2	1681.5	1689.2	1691.8	1695.2	1701.1	1706.3
22.5°	1558.8	1563.9	1569.9	1591.2	1610.0	1633.0	1638.1	1644.9	1653.4	1659.4	1664.5
25°	1523.0	1519.6	1522.2	1536.7	1546.9	1548.6	1556.3	1578.4	1601.4	1611.7	1623.6
27.5°	1501.7	1498.3	1497.5	1504.3	1506.0	1501.7	1500.0	1506.8	1523.9	1540.9	1576.7
30°	1478.7	1474.4	1471.0	1477.0	1479.6	1473.6	1462.5	1456.5	1466.8	1471.0	1485.5
32.5°	1451.4	1447.2	1445.5	1448.9	1450.6	1445.5	1433.5	1426.7	1425.0	1421.6	1425.0
35°	1420.7	1416.5	1413.9	1414.8	1418.2	1413.9	1403.7	1395.2	1390.9	1381.5	1374.7
37.5°	732.1	1037.2	1346.6	1379.0	1382.4	1381.5	1371.3	1361.9	1357.7	1346.6	1343.2
40°	334.9	374.1	561.7	733.8	1058.5	1344.9	1335.5	1326.1	1318.5	1315.1	1302.3
42.5°	334.1	334.9	335.8	331.5	410.8	699.7	1033.0	1289.5	1284.4	1275.9	1266.5
45°	334.1	329.8	333.2	328.1	329.8	329.0	409.9	661.4	1177.0	1229.8	1225.6
47.5°	330.7	328.1	331.5	327.3	322.2	324.7	321.3	325.6	508.0	861.7	1180.4
50°	315.3	317.0	323.0	322.2	317.9	321.3	315.3	320.5	316.2	346.9	668.2
52.5°	292.3	295.7	301.7	306.8	308.5	312.8	311.1	312.8	309.4	310.2	311.1
55°	265.1	269.3	274.4	282.1	285.5	292.3	297.4	300.0	304.3	303.4	296.6
57.5°	239.5	243.8	248.0	255.7	263.4	266.8	276.1	281.3	292.3	289.8	288.1
60°	215.6	219.0	223.3	225.0	234.4	240.3	248.9	254.0	268.5	271.9	277.0
62.5°	194.3	196.0	199.4	202.0	208.0	213.9	218.2	226.7	234.4	245.5	253.1
65°	174.7	176.4	179.0	180.7	181.5	190.1	192.6	202.0	204.5	216.5	223.3
67.5°	152.6	156.0	159.4	161.1	162.8	167.9	169.6	173.9	179.8	184.9	193.5
70°	129.5	132.1	135.5	138.1	141.5	144.9	150.0	152.6	156.8	160.2	167.0
72.5°	108.2	110.8	112.5	115.1	117.6	120.2	124.4	130.4	133.8	139.8	141.5
75°	87.8	90.3	92.0	93.8	96.3	98.0	99.7	105.7	109.1	114.2	119.3
77.5°	72.4	72.4	74.1	79.3	78.4	78.4	80.1	83.5	86.1	89.5	94.6
80°	56.3	57.1	58.0	62.2	63.1	63.9	63.1	65.6	68.2	69.0	72.4
82.5°	41.8	42.6	42.6	45.2	47.7	47.7	47.7	48.6	51.1	52.0	53.7
85°	28.1	29.0	29.8	30.7	32.4	33.2	34.1	34.1	35.8	36.6	37.5
87.5°	15.3	17.0	17.9	18.8	19.6	20.5	21.3	22.2	23.0	23.9	24.7
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	332.5°	335°	337.5°	340°	342.5°	345°	347.5°	350°	352.5°	355°
0°	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7	1859.7
2.5°	1869.0	1864.8	1862.2	1855.4	1853.7	1842.6	1844.3	1842.6	1842.6	1845.2	1853.7
5°	1949.2	1928.7	1923.6	1909.1	1897.2	1876.7	1863.9	1857.1	1846.9	1842.6	1848.6
7.5°	2003.7	1988.4	1975.6	1962.8	1945.7	1921.9	1904.0	1883.5	1866.5	1850.3	1846.0
10°	1994.3	2011.4	2011.4	2003.7	1987.5	1963.6	1942.3	1916.8	1886.9	1861.4	1846.0
12.5°	1915.1	1944.9	1968.8	1986.7	2002.9	1986.7	1965.4	1944.9	1911.7	1874.2	1846.0
15°	1828.1	1858.8	1888.6	1926.1	1965.4	1981.5	1980.7	1956.8	1927.0	1887.8	1848.6
17.5°	1766.8	1788.1	1804.3	1845.2	1892.9	1934.7	1962.8	1964.5	1935.5	1900.6	1849.4
20°	1720.7	1736.1	1749.7	1772.7	1814.5	1865.6	1917.6	1946.6	1941.5	1903.1	1852.0
22.5°	1679.0	1690.1	1701.1	1718.2	1751.4	1784.7	1845.2	1904.8	1930.4	1898.9	1849.4
25°	1637.2	1649.2	1657.7	1669.6	1696.0	1723.3	1765.9	1840.1	1897.2	1895.5	1844.3
27.5°	1587.8	1604.0	1614.2	1630.4	1648.3	1668.8	1697.7	1767.6	1849.4	1878.4	1830.7
30°	1528.1	1552.0	1567.3	1585.2	1600.6	1618.5	1641.5	1684.1	1785.5	1845.2	1816.2
32.5°	1442.1	1484.7	1518.8	1535.8	1552.8	1568.2	1588.6	1624.4	1707.1	1800.0	1800.0
35°	1380.7	1400.3	1431.0	1480.4	1501.7	1517.1	1535.8	1563.9	1616.8	1746.3	1773.6
37.5°	1333.0	1340.6	1356.0	1404.6	1444.6	1469.3	1488.1	1506.0	1558.0	1673.0	1739.5
40°	1297.2	1294.6	1292.9	1315.9	1373.0	1412.2	1433.5	1451.4	1491.5	1585.2	1694.3
42.5°	1255.4	1252.8	1244.3	1250.3	1278.4	1344.0	1376.4	1396.0	1429.3	1493.2	1644.9
45°	1211.9	1207.7	1204.3	1198.3	1208.5	1245.2	1311.7	1340.6	1359.4	1416.5	1582.7
47.5°	1167.6	1161.7	1157.4	1152.3	1146.3	1163.4	1226.4	1278.4	1310.8	1346.6	1507.7
50°	1104.6	1112.2	1107.1	1101.1	1096.0	1092.6	1119.0	1204.3	1244.3	1273.3	1416.5
52.5°	520.7	1012.5	1055.1	1049.2	1042.3	1036.4	1042.3	1107.1	1179.6	1202.6	1306.5
55°	296.6	450.9	938.4	992.1	986.1	977.6	972.4	994.6	1102.8	1133.5	1206.0
57.5°	285.5	286.4	414.2	894.0	927.3	919.6	913.6	918.8	1010.8	1062.8	1118.2
60°	276.1	276.1	276.1	395.5	854.8	857.4	849.7	841.2	881.3	983.5	1029.6
62.5°	255.7	260.8	263.4	263.4	390.3	791.8	784.1	781.5	783.2	888.1	940.9
65°	229.3	241.2	246.3	249.7	249.7	409.9	716.8	712.5	706.5	746.6	851.4
67.5°	200.3	212.2	223.3	230.1	231.0	238.6	427.8	641.8	633.2	634.1	756.0
70°	170.5	180.7	192.6	202.8	212.2	216.5	223.3	532.7	560.8	548.9	647.7
72.5°	147.4	151.7	160.2	170.5	181.5	191.8	197.7	212.2	486.7	473.9	492.6
75°	122.7	126.1	132.1	138.9	147.4	159.4	169.6	179.8	258.2	397.2	394.6
77.5°	95.5	101.4	108.2	112.5	116.8	125.3	138.9	149.1	159.4	268.5	316.2
80°	73.3	77.6	81.0	85.2	90.3	96.3	101.4	113.4	125.3	134.7	242.0
82.5°	54.5	57.1	59.7	61.4	63.1	66.5	75.9	80.1	87.8	96.3	114.2
85°	38.4	40.1	41.8	42.6	43.5	44.3	47.7	48.6	56.3	58.0	69.0
87.5°	24.7	25.6	27.3	28.1	28.1	29.0	29.8	29.8	29.8	28.1	34.1
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-LD5-48HL-RW-UNV-L930-CD1-U

CANDELA DISTRIBUTION (continued):

	357.5°	360°
0°	1859.7	1859.7
2.5°	1860.5	1874.2
5°	1858.0	1875.9
7.5°	1851.1	1868.2
10°	1840.9	1861.4
12.5°	1829.8	1849.4
15°	1820.5	1835.0
17.5°	1810.2	1818.8
20°	1796.6	1803.4
22.5°	1783.0	1779.6
25°	1767.6	1760.0
27.5°	1748.0	1733.5
30°	1730.1	1704.6
32.5°	1713.1	1671.3
35°	1690.1	1637.2
37.5°	1666.2	1602.3
40°	1638.1	1562.2
42.5°	1608.2	1522.2
45°	1570.7	1483.8
47.5°	1537.5	1437.8
50°	1491.5	1388.4
52.5°	1435.2	1342.3
55°	1368.8	1286.1
57.5°	1297.2	1227.3
60°	1220.5	1159.9
62.5°	1127.6	1090.1
65°	1018.5	1009.9
67.5°	876.1	921.3
70°	718.5	819.9
72.5°	600.9	712.5
75°	492.6	592.3
77.5°	390.3	464.5
80°	243.8	340.1
82.5°	163.6	223.3
85°	98.9	106.5
87.5°	38.4	39.2
90°	0.0	0.0

(END OF REPORT)