

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-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-LD5-48HL-RW-UNV-L940-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
WHITE REFLECTOR
Light Source: -
Ballast/Driver: -

Summary

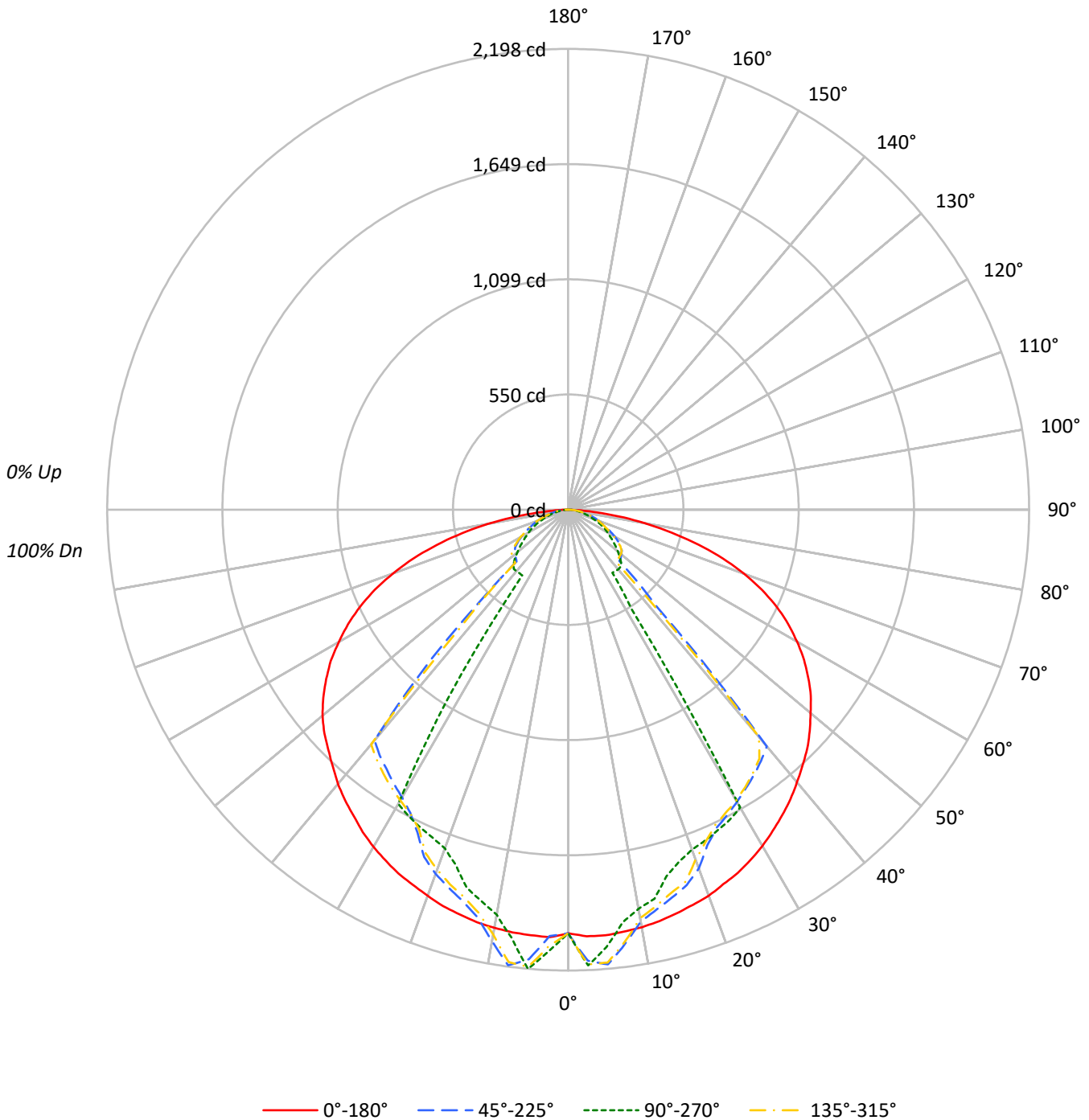
Lumens per Lamp: N/A
Luminaire Lumens: 4046.0 lumens
Efficiency: N/A
Efficacy: 103.7 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.16 / 1.2
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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



TEST NUMBER: P#
CATALOG NUMBER: 4SNLED-LD5-48HL-RW-UNV-L940-CD1-U

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	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°	16328	16328	16328	16328
5°	16488	16450	16480	17265
10°	16503	14873	16526	15101
15°	16540	13761	16578	14197
20°	16661	13052	16661	13003
25°	16804	12802	16829	12683
30°	16974	12577	17017	12427
35°	17172	2865	17208	2987
40°	17447	2979	17552	3076
45°	17865	2962	17927	3070
50°	18282	2678	18530	2751
55°	18845	2378	18995	2412
60°	19322	2114	19365	2140
65°	19664	1844	19614	1815
70°	19383	1486	19322	1433
75°	17993	1144	18125	1096
80°	14607	812	15192	744
85°	7904	487	8348	373



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-RW-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.8	4.9
10°-20°	546.6	13.5
20°-30°	809.6	20.0
30°-40°	815.7	20.2
40°-50°	637.2	15.7
50°-60°	492.2	12.2
60°-70°	330.5	8.2
70°-80°	168.6	4.2
80°-90°	46.9	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°	1555.0	38.4
0°-40°	2370.7	58.6
0°-60°	3500.1	86.5
0°-90°	4046.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4046.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	2020	2020	2020	2020	2020	
5°	2038	2094	2037	2198	2038	194
15°	1994	1810	1998	1868	1994	564
25°	1912	1687	1915	1671	1912	882
35°	1779	367	1782	382	1779	1115
45°	1612	356	1618	370	1612	1243
55°	1397	259	1408	263	1397	1248
65°	1097	174	1094	171	1097	1079
75°	644	88	648	84	644	673
85°	116	28	122	21	116	159
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-RW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°	20°	22.5°	25°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2036.2	2043.6	2049.2	2052.9	2054.7	2054.7	2055.7	2056.6	2068.6	2074.2	2077.9
5°	2038.1	2045.5	2056.6	2071.4	2084.4	2095.5	2104.7	2117.7	2130.7	2144.5	2149.2
7.5°	2029.7	2039.0	2061.2	2088.1	2113.1	2130.7	2142.7	2151.0	2157.5	2158.4	2163.1
10°	2022.3	2039.0	2069.5	2104.7	2136.2	2157.5	2157.5	2152.9	2159.4	2134.4	2109.4
12.5°	2009.4	2027.9	2069.5	2115.8	2145.5	2153.8	2150.1	2131.6	2093.6	2063.1	2049.2
15°	1993.6	2018.6	2070.5	2122.3	2147.3	2150.1	2114.9	2067.7	2039.0	2020.5	1997.3
17.5°	1976.0	2009.4	2071.4	2123.3	2132.5	2119.5	2052.9	2023.2	1993.6	1950.1	1918.6
20°	1959.4	1991.8	2064.0	2110.3	2115.8	2057.5	2005.7	1974.2	1924.2	1886.2	1872.3
22.5°	1933.4	1971.4	2057.5	2092.7	2071.4	2003.8	1953.8	1903.8	1858.4	1847.3	1830.6
25°	1912.1	1951.9	2042.7	2071.4	2014.9	1954.7	1896.4	1838.1	1816.8	1801.0	1786.2
27.5°	1883.4	1932.5	2023.2	2032.5	1954.7	1901.9	1816.8	1790.8	1771.4	1753.8	1747.3
30°	1851.9	1912.1	1996.4	1978.8	1904.7	1826.9	1764.0	1739.9	1726.0	1707.5	1700.1
32.5°	1815.8	1881.6	1966.8	1916.8	1851.0	1753.8	1713.0	1694.5	1676.0	1662.1	1615.8
35°	1778.8	1854.7	1931.6	1857.5	1786.2	1698.2	1662.1	1645.5	1627.9	1576.9	1528.8
37.5°	1740.8	1825.1	1889.0	1793.6	1700.1	1640.8	1610.3	1591.7	1551.9	1487.1	1463.0
40°	1697.3	1789.0	1834.3	1727.9	1625.1	1582.5	1553.8	1535.3	1445.4	1416.7	1409.3
42.5°	1653.8	1753.8	1767.7	1664.0	1563.0	1520.4	1496.4	1435.3	1374.1	1359.3	1362.1
45°	1612.1	1715.8	1694.5	1573.2	1498.2	1463.0	1422.3	1338.0	1305.6	1313.0	1314.9
47.5°	1562.1	1670.5	1617.7	1482.5	1431.6	1396.4	1305.6	1254.7	1250.1	1260.2	1265.8
50°	1508.4	1619.5	1536.2	1400.1	1359.3	1317.7	1214.9	1188.9	1194.5	1204.7	1211.2
52.5°	1458.4	1562.1	1451.9	1323.2	1288.0	1192.7	1123.2	1127.8	1137.1	1149.1	1152.8
55°	1397.3	1492.7	1362.1	1245.4	1212.1	1087.1	1055.6	1066.7	1076.0	1086.2	1093.6
57.5°	1333.4	1413.0	1255.6	1158.4	1104.7	993.6	996.3	1003.8	1010.2	1022.3	422.2
60°	1260.2	1322.3	1138.9	1077.8	971.3	919.5	922.3	935.2	941.7	526.0	290.8
62.5°	1184.3	1216.7	1033.4	986.2	849.1	845.4	858.4	863.9	588.0	277.8	272.2
65°	1097.3	1090.8	929.7	854.7	765.8	769.5	783.4	755.6	260.2	260.2	258.3
67.5°	1001.0	962.1	828.7	707.4	685.2	693.6	708.4	247.2	240.8	242.6	236.1
70°	890.8	836.2	724.1	599.1	606.5	614.8	238.9	224.1	221.3	216.7	203.7
72.5°	774.1	699.1	592.6	520.4	525.0	329.6	209.3	201.9	192.6	183.3	169.5
75°	643.5	546.3	435.2	435.2	441.7	188.0	182.4	170.4	160.2	148.2	139.8
77.5°	504.7	420.4	338.0	350.9	171.3	157.4	147.2	134.3	125.9	118.5	113.9
80°	369.5	293.5	254.6	227.8	133.3	119.5	109.3	101.9	98.2	93.5	88.0
82.5°	242.6	176.9	176.9	107.4	93.5	82.4	79.6	74.1	70.4	67.6	64.8
85°	115.7	102.8	77.8	65.7	58.3	52.8	50.9	48.2	48.2	47.2	46.3
87.5°	42.6	46.3	34.3	33.3	31.5	30.6	31.5	31.5	32.4	31.5	30.6
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°	47.5°	50°	52.5°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2087.1	2094.5	2100.1	2109.4	2121.4	2131.6	2140.8	2153.8	2174.2	2179.7	2184.4
5°	2149.2	2152.0	2158.4	2165.8	2167.7	2172.3	2171.4	2177.0	2179.7	2186.2	2172.3
7.5°	2152.9	2138.1	2120.5	2104.7	2093.6	2083.4	2077.0	2087.1	2092.7	2097.3	2083.4
10°	2075.1	2057.5	2047.3	2038.1	2027.0	2011.2	1989.9	1994.5	1992.7	1992.7	1988.1
12.5°	2026.0	2001.0	1975.1	1951.9	1941.8	1940.8	1941.8	1951.9	1951.9	1951.0	1945.5
15°	1949.2	1925.1	1912.1	1906.6	1906.6	1903.8	1903.8	1914.9	1912.1	1912.1	1909.4
17.5°	1898.2	1881.6	1872.3	1865.8	1863.1	1867.7	1873.2	1877.9	1878.8	1875.1	1860.3
20°	1856.6	1840.8	1829.7	1831.6	1830.6	1833.4	1836.2	1820.5	1801.0	1775.1	1763.0
22.5°	1813.1	1801.0	1792.7	1792.7	1781.6	1764.0	1738.0	1732.5	1729.7	1717.7	1707.5
25°	1771.4	1757.5	1745.5	1708.4	1685.3	1688.0	1683.4	1674.2	1673.2	1672.3	1676.0
27.5°	1729.7	1693.6	1647.3	1641.7	1632.5	1631.6	1637.1	1641.7	1641.7	1645.5	1650.1
30°	1643.6	1601.9	1593.6	1583.4	1587.1	1600.1	1602.9	1609.3	1611.2	1617.7	1621.4
32.5°	1564.9	1546.4	1539.0	1543.6	1555.6	1566.7	1573.2	1576.0	1580.6	1586.2	1590.8
35°	1501.0	1495.4	1501.9	1512.1	1524.1	1533.4	1539.0	1544.5	1549.1	1553.8	1557.5
37.5°	1453.8	1457.5	1466.7	1479.7	1491.7	1499.1	1503.8	1510.3	1516.7	1522.3	1500.1
40°	1409.3	1418.6	1428.8	1442.7	1452.8	1460.3	1464.9	1473.2	1417.7	641.7	351.9
42.5°	1370.4	1380.6	1388.0	1399.1	1410.3	1415.8	1375.1	613.9	347.2	345.4	350.0
45°	1323.2	1331.5	1343.6	1351.9	1362.1	894.5	341.7	345.4	339.8	343.5	345.4
47.5°	1275.1	1288.0	1294.5	1235.2	367.6	339.8	336.1	339.8	336.1	340.8	338.0
50°	1220.4	1236.2	879.7	332.4	329.6	327.8	331.5	329.6	332.4	336.1	328.7
52.5°	1164.9	721.3	322.2	320.4	322.2	320.4	326.9	322.2	323.2	319.5	310.2
55°	394.5	312.1	309.3	308.3	313.9	313.9	313.9	306.5	301.9	292.6	286.1
57.5°	301.9	301.9	300.9	301.9	300.0	298.2	289.8	283.3	276.9	263.9	260.2
60°	286.1	286.1	286.1	286.1	277.8	274.1	261.1	255.6	244.5	238.0	234.3
62.5°	273.2	271.3	263.0	260.2	250.9	240.8	233.3	227.8	216.7	213.0	210.2
65°	254.6	248.2	238.0	226.9	222.2	211.1	207.4	199.1	193.5	190.7	188.9
67.5°	224.1	214.8	206.5	199.1	190.7	187.0	182.4	175.9	172.2	170.4	168.5
70°	191.7	185.2	176.9	172.2	166.7	163.9	157.4	155.6	152.8	150.0	147.2
72.5°	160.2	156.5	152.8	146.3	144.5	142.6	136.1	132.4	128.7	125.0	123.2
75°	134.3	131.5	129.6	124.1	121.3	115.7	111.1	108.3	105.6	102.8	100.9
77.5°	110.2	108.3	102.8	99.1	97.2	92.6	90.7	91.7	89.8	86.1	84.3
80°	86.1	84.3	79.6	79.6	77.8	75.9	74.1	72.2	70.4	67.6	65.7
82.5°	65.7	63.9	62.0	60.2	58.3	57.4	56.5	54.6	52.8	50.9	50.0
85°	46.3	45.4	44.4	43.5	42.6	41.7	40.7	38.9	37.0	36.1	35.2
87.5°	31.5	30.6	29.6	28.7	27.8	26.9	25.9	25.0	23.1	22.2	21.3
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°	75°	77.5°	80°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2184.4	2189.0	2184.4	2174.2	2167.7	2164.9	2170.5	2170.5	2174.2	2178.8	2179.7
5°	2150.1	2139.0	2126.0	2113.1	2106.6	2102.9	2092.7	2094.5	2097.3	2099.2	2101.0
7.5°	2064.9	2050.1	2032.5	2015.8	2009.4	2003.8	1991.8	1991.8	1991.8	1992.7	1998.2
10°	1977.9	1971.4	1964.0	1952.9	1944.5	1941.8	1931.6	1934.4	1932.5	1935.3	1941.8
12.5°	1937.1	1929.7	1923.2	1912.1	1902.9	1899.2	1894.5	1897.3	1896.4	1901.0	1906.6
15°	1900.1	1896.4	1889.0	1880.6	1872.3	1864.9	1848.2	1842.7	1839.0	1834.3	1840.8
17.5°	1839.0	1813.1	1795.5	1782.5	1773.2	1766.8	1762.1	1762.1	1764.9	1767.7	1773.2
20°	1755.6	1748.2	1739.9	1726.0	1716.7	1713.0	1710.3	1710.3	1714.9	1718.6	1728.8
22.5°	1698.2	1697.3	1694.5	1688.0	1683.4	1683.4	1684.3	1686.2	1692.7	1698.2	1708.4
25°	1671.4	1675.1	1673.2	1669.5	1666.7	1667.7	1665.8	1667.7	1674.2	1679.7	1688.0
27.5°	1650.1	1655.6	1653.8	1648.2	1643.6	1645.5	1648.2	1646.4	1651.9	1658.4	1664.9
30°	1621.4	1622.3	1626.0	1619.5	1617.7	1620.4	1621.4	1623.2	1628.8	1633.4	1639.0
32.5°	1589.0	1596.4	1595.4	1589.0	1589.0	1591.7	1592.7	1530.6	1414.9	1218.6	1164.9
35°	1557.5	1565.8	1551.9	1308.4	905.6	483.4	373.2	360.2	363.0	364.8	366.7
37.5°	1151.9	546.3	348.2	350.9	353.7	356.5	359.3	362.1	364.8	367.6	368.5
40°	346.3	345.4	348.2	351.9	354.6	356.5	360.2	363.0	365.8	368.5	369.5
42.5°	342.6	344.5	347.2	350.9	354.6	358.4	361.1	364.8	366.7	368.5	369.5
45°	340.8	344.5	348.2	350.9	353.7	355.6	357.4	358.4	357.4	357.4	359.3
47.5°	338.0	341.7	342.6	341.7	342.6	341.7	341.7	341.7	338.9	338.0	338.0
50°	327.8	327.8	325.9	322.2	321.3	320.4	318.5	317.6	313.9	313.0	313.0
52.5°	306.5	305.6	302.8	298.2	296.3	294.5	293.5	292.6	288.9	287.1	288.0
55°	281.5	279.6	276.9	271.3	270.4	268.5	267.6	266.7	263.0	264.8	262.0
57.5°	258.3	254.6	250.9	250.0	246.3	245.4	244.5	243.5	240.8	241.7	239.8
60°	230.6	229.6	227.8	224.1	224.1	223.2	223.2	221.3	219.5	218.5	218.5
62.5°	210.2	207.4	205.6	205.6	202.8	202.8	202.8	200.9	199.1	200.0	199.1
65°	188.0	187.0	186.1	184.3	184.3	183.3	183.3	181.5	178.7	179.6	177.8
67.5°	169.5	167.6	165.7	164.8	161.1	159.3	158.3	157.4	153.7	154.6	152.8
70°	146.3	143.5	141.7	139.8	137.0	135.2	135.2	133.3	130.6	131.5	129.6
72.5°	122.2	120.4	118.5	117.6	114.8	113.9	113.0	112.0	109.3	110.2	109.3
75°	101.9	101.9	100.9	100.0	97.2	94.4	92.6	91.7	89.8	90.7	88.9
77.5°	84.3	82.4	80.6	80.6	77.8	75.9	74.1	74.1	74.1	73.2	72.2
80°	65.7	63.9	63.9	63.0	61.1	59.3	58.3	58.3	57.4	57.4	56.5
82.5°	50.0	48.2	47.2	47.2	45.4	44.4	43.5	42.6	42.6	42.6	41.7
85°	35.2	33.3	32.4	32.4	30.6	29.6	29.6	28.7	28.7	27.8	27.8
87.5°	21.3	20.4	19.4	19.4	17.6	16.7	16.7	16.7	15.7	15.7	14.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-48HL-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°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2179.7	2179.7	2173.3	2175.1	2172.3	2176.0	2171.4	2171.4	2177.0	2177.0	2180.7
5°	2102.0	2097.3	2096.4	2094.5	2085.3	2089.0	2084.4	2079.7	2086.2	2086.2	2094.5
7.5°	1995.5	1987.1	1990.8	1985.3	1979.7	1971.4	1974.2	1970.5	1975.1	1981.6	1989.9
10°	1940.8	1933.4	1938.1	1932.5	1935.3	1923.2	1924.2	1925.1	1929.7	1931.6	1939.0
12.5°	1905.6	1903.8	1901.9	1900.1	1901.9	1895.5	1891.8	1892.7	1894.5	1895.5	1901.0
15°	1831.6	1819.5	1823.2	1810.3	1811.2	1812.1	1804.7	1812.1	1811.2	1823.2	1834.3
17.5°	1771.4	1771.4	1764.9	1759.3	1755.6	1754.7	1749.2	1752.9	1749.2	1756.6	1759.3
20°	1729.7	1728.8	1727.9	1725.1	1715.8	1716.7	1719.5	1711.2	1710.3	1709.3	1714.9
22.5°	1710.3	1711.2	1707.5	1707.5	1699.2	1701.0	1701.9	1692.7	1693.6	1690.8	1693.6
25°	1689.9	1691.7	1687.1	1687.1	1685.3	1684.3	1679.7	1681.6	1676.0	1671.4	1676.0
27.5°	1665.8	1669.5	1665.8	1667.7	1664.0	1662.1	1659.3	1657.5	1651.9	1651.0	1653.8
30°	1643.6	1645.5	1644.5	1639.9	1639.0	1633.4	1636.2	1630.6	1625.1	1626.0	1627.9
32.5°	842.6	804.7	620.4	560.2	554.7	575.0	681.5	829.7	1075.1	1313.0	1484.3
35°	367.6	367.6	367.6	366.7	366.7	365.8	364.8	363.9	363.0	362.1	361.1
37.5°	369.5	369.5	369.5	369.5	368.5	367.6	367.6	365.8	364.8	363.9	363.0
40°	370.4	371.3	371.3	371.3	370.4	370.4	369.5	367.6	366.7	364.8	363.0
42.5°	369.5	370.4	370.4	369.5	369.5	368.5	368.5	367.6	366.7	365.8	364.8
45°	357.4	358.4	356.5	356.5	355.6	355.6	355.6	355.6	355.6	356.5	356.5
47.5°	336.1	336.1	335.2	334.3	334.3	333.3	334.3	333.3	335.2	336.1	338.0
50°	311.1	311.1	309.3	308.3	308.3	308.3	308.3	309.3	310.2	312.1	313.9
52.5°	285.2	285.2	284.3	283.3	282.4	282.4	285.2	284.3	285.2	286.1	288.9
55°	260.2	261.1	259.3	259.3	258.3	258.3	258.3	259.3	260.2	261.1	263.9
57.5°	238.9	238.9	237.0	237.0	237.0	236.1	238.9	237.0	238.0	238.9	240.8
60°	217.6	216.7	216.7	215.8	215.8	215.8	217.6	216.7	216.7	217.6	219.5
62.5°	198.2	198.2	197.2	197.2	196.3	196.3	198.2	197.2	197.2	198.2	199.1
65°	175.9	175.9	175.0	174.1	176.9	174.1	176.9	175.0	176.9	177.8	179.6
67.5°	150.9	150.9	150.9	150.0	150.0	151.9	152.8	150.9	151.9	153.7	154.6
70°	128.7	128.7	127.8	127.8	127.8	129.6	130.6	128.7	129.6	130.6	132.4
72.5°	109.3	107.4	107.4	106.5	108.3	108.3	109.3	108.3	109.3	109.3	111.1
75°	89.8	88.0	88.0	88.0	89.8	88.9	89.8	88.9	89.8	89.8	90.7
77.5°	72.2	71.3	70.4	70.4	72.2	72.2	72.2	71.3	72.2	73.2	74.1
80°	56.5	55.6	54.6	54.6	56.5	56.5	56.5	57.4	56.5	57.4	58.3
82.5°	41.7	40.7	39.8	41.7	41.7	41.7	41.7	42.6	41.7	42.6	43.5
85°	27.8	26.9	25.9	27.8	27.8	27.8	27.8	28.7	27.8	28.7	29.6
87.5°	14.8	13.9	13.9	14.8	14.8	14.8	15.7	15.7	15.7	16.7	16.7
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2186.2	2189.0	2188.1	2182.5	2177.0	2170.5	2165.8	2166.8	2176.0	2178.8	2170.5
5°	2094.5	2112.1	2112.1	2124.2	2117.7	2112.1	2115.8	2136.2	2146.4	2162.1	2167.7
7.5°	2000.1	2008.4	2007.5	2019.5	2017.7	2017.7	2020.5	2047.3	2060.3	2073.2	2077.0
10°	1947.3	1955.7	1954.7	1955.7	1952.9	1946.4	1946.4	1958.4	1969.5	1976.0	1977.9
12.5°	1909.4	1914.0	1913.1	1913.1	1911.2	1905.6	1904.7	1914.9	1926.9	1935.3	1936.2
15°	1852.9	1865.8	1868.6	1880.6	1877.9	1870.5	1872.3	1880.6	1888.1	1895.5	1892.7
17.5°	1768.6	1775.1	1776.0	1780.6	1778.8	1778.8	1789.9	1820.5	1840.8	1858.4	1860.3
20°	1720.5	1725.1	1723.2	1733.4	1728.8	1727.9	1730.6	1743.6	1752.9	1761.2	1776.0
22.5°	1697.3	1701.0	1698.2	1699.2	1690.8	1683.4	1681.6	1691.7	1701.9	1713.0	1713.0
25°	1677.9	1680.6	1679.7	1677.9	1671.4	1661.2	1659.3	1661.2	1664.9	1665.8	1659.3
27.5°	1654.7	1656.6	1656.6	1657.5	1649.2	1639.9	1638.0	1636.2	1639.9	1639.0	1628.8
30°	1630.6	1627.9	1628.8	1629.7	1622.3	1614.0	1610.3	1609.3	1613.0	1612.1	1601.9
32.5°	1573.2	1594.5	1596.4	1598.2	1591.7	1584.3	1580.6	1577.9	1579.7	1578.8	1569.5
35°	360.2	366.7	449.1	1016.7	1380.6	1528.8	1544.5	1540.8	1541.7	1541.7	1534.3
37.5°	361.1	360.2	359.3	356.5	353.7	351.9	608.4	1297.3	1502.9	1503.8	1497.3
40°	361.1	360.2	359.3	357.4	353.7	350.9	346.3	342.6	350.9	772.3	1413.0
42.5°	363.0	361.1	359.3	357.4	353.7	350.0	346.3	341.7	344.5	342.6	338.0
45°	357.4	356.5	356.5	355.6	353.7	350.0	345.4	339.8	337.1	339.8	335.2
47.5°	339.8	340.8	343.5	344.5	344.5	345.4	342.6	338.9	334.3	337.1	331.5
50°	315.8	317.6	318.5	323.2	325.0	328.7	329.6	329.6	328.7	332.4	328.7
52.5°	289.8	291.7	296.3	298.2	300.0	305.6	307.4	310.2	312.1	317.6	321.3
55°	264.8	265.8	267.6	271.3	274.1	278.7	281.5	284.3	288.9	291.7	302.8
57.5°	241.7	242.6	246.3	247.2	249.1	252.8	255.6	259.3	263.0	264.8	277.8
60°	219.5	220.4	223.2	224.1	225.0	228.7	231.5	234.3	237.0	238.9	248.2
62.5°	200.0	200.0	202.8	202.8	203.7	206.5	208.3	210.2	213.0	213.9	218.5
65°	180.6	181.5	183.3	183.3	184.3	186.1	187.0	188.0	190.7	190.7	194.5
67.5°	156.5	157.4	160.2	162.0	163.0	166.7	167.6	168.5	170.4	171.3	173.2
70°	133.3	134.3	137.0	138.0	138.9	141.7	143.5	146.3	149.1	151.9	153.7
72.5°	112.0	113.0	115.7	115.7	118.5	119.5	121.3	122.2	125.0	126.9	129.6
75°	91.7	92.6	95.4	95.4	98.2	99.1	100.0	100.9	102.8	104.6	106.5
77.5°	75.0	75.0	78.7	80.6	82.4	82.4	83.3	83.3	83.3	84.3	86.1
80°	59.3	59.3	62.0	63.9	65.7	65.7	66.7	67.6	68.5	68.5	69.4
82.5°	44.4	44.4	47.2	48.2	50.0	50.0	50.0	50.9	51.9	50.9	52.8
85°	30.6	30.6	32.4	33.3	35.2	35.2	35.2	36.1	37.0	36.1	37.0
87.5°	17.6	18.5	19.4	20.4	21.3	22.2	22.2	22.2	23.1	23.1	24.1
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2161.2	2150.1	2149.2	2136.2	2132.5	2133.4	2123.3	2119.5	2102.9	2099.2	2081.6
5°	2169.5	2175.1	2172.3	2171.4	2174.2	2172.3	2164.9	2161.2	2158.4	2151.0	2136.2
7.5°	2077.9	2081.6	2084.4	2096.4	2106.6	2124.2	2142.7	2154.7	2164.0	2165.8	2153.8
10°	1984.4	2001.9	2014.0	2032.5	2047.3	2057.5	2068.6	2078.8	2105.7	2132.5	2148.3
12.5°	1936.2	1940.8	1939.9	1950.1	1960.3	1987.1	2013.1	2027.9	2048.2	2060.3	2089.0
15°	1895.5	1896.4	1899.2	1906.6	1912.1	1921.4	1933.4	1955.7	1996.4	2014.9	2030.7
17.5°	1858.4	1858.4	1860.3	1866.8	1874.2	1882.5	1889.9	1899.2	1919.5	1950.1	1989.0
20°	1799.2	1825.1	1827.9	1826.9	1830.6	1846.4	1848.2	1864.9	1875.1	1887.1	1925.1
22.5°	1711.2	1726.9	1749.2	1783.4	1796.4	1803.8	1809.3	1816.8	1832.5	1846.4	1862.1
25°	1663.0	1673.2	1679.7	1689.9	1716.7	1760.3	1768.6	1776.9	1787.1	1797.3	1816.8
27.5°	1620.4	1619.5	1624.2	1633.4	1640.8	1664.0	1704.7	1737.1	1739.0	1753.8	1770.5
30°	1589.9	1584.3	1577.9	1576.0	1586.2	1598.2	1610.3	1661.2	1696.4	1703.8	1721.4
32.5°	1561.2	1551.9	1542.7	1535.3	1528.8	1539.0	1546.4	1568.6	1614.0	1656.6	1665.8
35°	1526.0	1516.7	1505.6	1497.3	1487.1	1486.2	1485.3	1506.6	1521.4	1572.3	1616.7
37.5°	1489.9	1479.7	1470.4	1461.2	1451.0	1443.6	1439.0	1444.5	1458.4	1480.6	1554.7
40°	1451.9	1439.9	1430.6	1423.2	1409.3	1403.8	1394.5	1390.8	1391.7	1411.2	1450.1
42.5°	867.6	1383.4	1388.0	1379.7	1367.7	1360.3	1350.1	1345.4	1336.2	1345.4	1367.7
45°	334.3	338.0	1012.1	1337.1	1322.3	1313.0	1303.8	1299.1	1289.0	1281.5	1301.9
47.5°	327.8	331.5	324.1	459.3	1262.1	1264.9	1253.8	1249.1	1238.9	1233.4	1227.8
50°	323.2	325.9	320.4	322.2	315.8	1156.5	1202.8	1197.3	1186.2	1179.7	1168.6
52.5°	318.5	318.5	314.8	310.2	308.3	309.3	973.2	1144.5	1131.5	1125.1	1110.2
55°	303.7	305.6	309.3	301.9	300.0	299.1	296.3	926.9	1071.3	1063.9	1051.0
57.5°	281.5	285.2	295.4	293.5	293.5	286.1	284.3	284.3	860.2	1001.9	988.9
60°	255.6	259.3	270.4	274.1	276.9	275.0	273.2	272.2	268.5	906.5	923.2
62.5°	228.7	232.4	236.1	248.2	251.9	256.5	262.0	259.3	255.6	255.6	853.7
65°	200.0	205.6	207.4	218.5	223.2	231.5	236.1	242.6	240.8	239.8	244.5
67.5°	175.0	181.5	182.4	187.0	195.4	199.1	204.6	216.7	222.2	224.1	225.9
70°	153.7	157.4	160.2	162.0	167.6	168.5	178.7	187.0	195.4	204.6	207.4
72.5°	132.4	135.2	140.7	138.9	140.7	144.5	150.0	155.6	163.9	176.9	185.2
75°	108.3	110.2	113.9	115.7	119.5	122.2	125.9	130.6	138.0	144.5	155.6
77.5°	87.0	88.0	90.7	91.7	95.4	98.2	104.6	107.4	112.0	116.7	123.2
80°	70.4	70.4	71.3	71.3	74.1	76.9	81.5	84.3	89.8	93.5	93.5
82.5°	53.7	53.7	56.5	56.5	58.3	58.3	61.1	61.1	63.9	65.7	67.6
85°	38.0	38.9	40.7	39.8	41.7	40.7	42.6	44.4	45.4	44.4	43.5
87.5°	25.0	25.0	26.9	25.9	26.9	26.9	28.7	28.7	29.6	29.6	28.7
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	167.5°	170°	172.5°	175°	177.5°	180°	182.5°	185°	187.5°	190°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2075.1	2061.2	2052.9	2042.7	2039.9	2037.1	2040.8	2040.8	2035.3	2030.7	2022.3
5°	2123.3	2108.4	2092.7	2076.0	2060.3	2043.6	2037.1	2036.2	2026.0	2020.5	2017.7
7.5°	2148.3	2140.8	2123.3	2100.1	2076.0	2046.4	2033.4	2026.0	2015.8	2014.0	2014.0
10°	2151.0	2142.7	2133.4	2116.8	2089.0	2050.1	2025.1	2010.3	2001.0	2007.5	2019.5
12.5°	2124.2	2139.9	2131.6	2120.5	2098.2	2051.0	2014.9	1992.7	1989.9	2006.6	2038.1
15°	2055.7	2102.0	2125.1	2114.0	2096.4	2049.2	1998.2	1972.3	1972.3	2006.6	2047.3
17.5°	2003.8	2039.9	2096.4	2105.7	2085.3	2045.5	1982.5	1951.9	1960.3	2010.3	2053.8
20°	1961.2	1983.4	2038.1	2089.9	2070.5	2037.1	1959.4	1927.9	1944.5	2004.7	2063.1
22.5°	1894.5	1939.0	1972.3	2049.2	2055.7	2021.4	1936.2	1898.2	1931.6	2004.7	2058.4
25°	1829.7	1883.4	1918.6	1993.6	2033.4	2001.9	1914.9	1866.8	1917.7	2001.9	2054.7
27.5°	1784.3	1809.3	1873.2	1926.9	2000.1	1976.0	1886.2	1832.5	1900.1	1987.1	2033.4
30°	1736.2	1752.9	1815.8	1866.8	1955.7	1946.4	1856.6	1794.5	1877.9	1973.2	1977.9
32.5°	1683.4	1701.9	1734.3	1808.4	1893.6	1918.6	1823.2	1756.6	1853.8	1951.9	1913.1
35°	1629.7	1643.6	1669.5	1749.2	1821.4	1876.9	1782.5	1713.0	1837.1	1919.5	1851.0
37.5°	1576.0	1590.8	1613.0	1679.7	1745.5	1838.1	1747.3	1669.5	1806.6	1862.1	1786.2
40°	1525.1	1533.4	1556.6	1598.2	1682.5	1798.2	1707.5	1624.2	1775.1	1789.0	1698.2
42.5°	1431.6	1473.2	1494.5	1527.9	1611.2	1743.6	1661.2	1576.0	1739.9	1715.8	1610.3
45°	1330.6	1421.4	1430.6	1464.0	1548.2	1685.3	1617.7	1528.8	1706.6	1652.9	1526.9
47.5°	1248.2	1314.0	1367.7	1395.4	1473.2	1616.7	1576.9	1489.0	1656.6	1573.2	1445.4
50°	1175.1	1210.2	1307.5	1327.8	1383.4	1534.3	1528.8	1442.7	1587.1	1473.2	1365.8
52.5°	1103.8	1128.8	1216.7	1260.2	1305.6	1445.4	1471.4	1397.3	1511.2	1373.2	1285.2
55°	1041.7	1050.1	1098.2	1189.9	1230.6	1355.6	1408.4	1344.5	1414.9	1277.8	1207.5
57.5°	977.8	970.4	1005.6	1123.2	1152.8	1264.0	1341.7	1290.8	1337.1	1180.6	1126.9
60°	911.2	901.0	915.8	993.6	1070.4	1173.2	1263.0	1231.5	1242.7	1084.3	1037.1
62.5°	841.7	831.5	826.9	876.0	989.9	1079.7	1183.4	1165.8	1126.9	996.3	926.0
65°	769.5	759.3	751.9	771.3	901.0	958.4	1094.5	1089.9	1000.0	903.7	779.7
67.5°	234.3	690.8	675.0	674.1	759.3	848.2	998.2	990.8	872.3	804.7	671.3
70°	211.1	560.2	595.4	587.1	624.1	736.1	888.0	882.5	748.2	645.4	593.5
72.5°	193.5	198.2	526.0	516.7	525.0	626.0	773.2	758.4	634.3	509.3	513.0
75°	165.7	174.1	181.5	436.1	425.0	518.5	648.2	625.0	523.2	420.4	428.7
77.5°	135.2	145.4	150.9	317.6	343.5	369.5	517.6	487.1	360.2	336.1	160.2
80°	100.9	109.3	118.5	126.9	261.1	258.3	384.3	353.7	250.9	209.3	125.0
82.5°	74.1	76.9	82.4	91.7	103.7	173.2	247.2	217.6	174.1	95.4	86.1
85°	46.3	50.0	52.8	55.6	63.0	103.7	122.2	97.2	73.2	58.3	54.6
87.5°	29.6	29.6	28.7	29.6	30.6	37.0	41.7	39.8	31.5	29.6	29.6
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	192.5°	195°	197.5°	200°	202.5°	205°	207.5°	210°	212.5°	215°	217.5°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2013.1	2000.1	2000.1	1996.4	1999.2	1999.2	1998.2	1999.2	2005.7	2009.4	2015.8
5°	2012.1	2008.4	2016.8	2027.0	2039.0	2053.8	2057.5	2070.5	2082.5	2098.2	2114.9
7.5°	2024.2	2037.1	2052.9	2069.5	2093.6	2111.2	2127.0	2142.7	2153.8	2168.6	2177.9
10°	2041.8	2067.7	2094.5	2115.8	2141.8	2156.6	2166.8	2168.6	2152.9	2127.9	2107.5
12.5°	2066.8	2097.3	2122.3	2142.7	2154.7	2149.2	2119.5	2089.0	2071.4	2045.5	2009.4
15°	2088.1	2115.8	2141.8	2133.4	2101.0	2070.5	2047.3	2011.2	1976.0	1951.9	1936.2
17.5°	2097.3	2124.2	2114.9	2071.4	2040.8	2005.7	1958.4	1930.6	1907.5	1889.0	1879.7
20°	2102.9	2098.2	2048.2	2016.8	1957.5	1925.1	1894.5	1868.6	1851.0	1841.8	1839.9
22.5°	2088.1	2031.6	1989.0	1932.5	1889.0	1862.1	1838.1	1816.8	1804.7	1797.3	1792.7
25°	2039.0	1973.2	1910.3	1865.8	1828.8	1805.6	1787.1	1769.5	1754.7	1751.0	1741.8
27.5°	1970.5	1916.8	1833.4	1799.2	1766.8	1755.6	1735.3	1717.7	1704.7	1693.6	1664.0
30°	1914.0	1828.8	1768.6	1737.1	1717.7	1704.7	1681.6	1663.0	1640.8	1600.1	1583.4
32.5°	1844.5	1760.3	1702.9	1685.3	1661.2	1650.1	1624.2	1583.4	1549.1	1532.5	1531.6
35°	1754.7	1685.3	1643.6	1627.9	1608.4	1589.9	1536.2	1499.1	1482.5	1484.3	1498.2
37.5°	1679.7	1617.7	1590.8	1568.6	1546.4	1499.1	1453.8	1436.2	1440.8	1450.1	1456.6
40°	1603.8	1556.6	1526.0	1508.4	1458.4	1412.1	1388.0	1394.5	1402.8	1409.3	1417.7
42.5°	1529.7	1496.4	1465.8	1431.6	1363.0	1338.0	1343.6	1351.9	1359.3	1368.6	1376.9
45°	1459.3	1429.7	1394.5	1316.7	1282.5	1289.0	1297.3	1303.8	1314.9	1321.4	1329.7
47.5°	1392.7	1361.2	1299.1	1230.6	1226.9	1239.9	1247.3	1255.6	1264.0	1247.3	688.0
50°	1317.7	1285.2	1190.8	1164.9	1173.2	1185.2	1194.5	1202.8	1071.3	425.9	327.8
52.5°	1243.6	1161.2	1101.0	1108.4	1116.7	1130.6	1137.1	844.5	336.1	320.4	321.3
55°	1161.2	1055.6	1038.0	1047.3	1054.7	1068.6	708.4	310.2	308.3	307.4	314.8
57.5°	1031.5	967.6	975.0	984.3	991.7	700.0	301.9	300.0	300.9	301.9	302.8
60°	915.8	901.9	910.2	918.6	650.0	291.7	286.1	287.1	290.8	288.0	280.6
62.5°	824.1	835.2	843.6	738.9	276.9	274.1	276.9	274.1	267.6	263.0	253.7
65°	753.7	764.9	771.3	260.2	259.3	263.0	260.2	250.9	240.8	227.8	225.0
67.5°	679.7	690.8	247.2	240.8	244.5	239.8	228.7	217.6	210.2	199.1	194.5
70°	602.8	258.3	224.1	223.2	216.7	209.3	197.2	186.1	176.9	172.2	167.6
72.5°	435.2	204.6	201.9	194.5	183.3	173.2	163.0	156.5	151.9	149.1	146.3
75°	181.5	177.8	169.5	156.5	145.4	140.7	133.3	128.7	126.9	121.3	119.5
77.5°	151.9	144.5	132.4	123.2	116.7	113.9	108.3	102.8	100.0	99.1	95.4
80°	116.7	106.5	100.9	96.3	94.4	88.0	81.5	78.7	76.9	75.9	73.2
82.5°	79.6	75.9	72.2	65.7	65.7	63.0	60.2	58.3	56.5	56.5	54.6
85°	51.9	49.1	48.2	45.4	45.4	43.5	42.6	41.7	40.7	39.8	38.9
87.5°	29.6	29.6	30.6	29.6	29.6	28.7	27.8	26.9	25.9	25.9	24.1
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	222.5°	225°	227.5°	230°	232.5°	235°	237.5°	240°	242.5°	245°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2024.2	2033.4	2035.3	2066.8	2084.4	2083.4	2077.9	2094.5	2084.4	2078.8	2084.4
5°	2131.6	2142.7	2152.0	2186.2	2198.3	2203.8	2202.9	2212.1	2204.7	2198.3	2198.3
7.5°	2184.4	2188.1	2191.8	2183.4	2177.9	2168.6	2154.7	2134.4	2124.2	2113.1	2099.2
10°	2097.3	2085.3	2089.9	2073.2	2059.4	2049.2	2036.2	2019.5	2005.7	1995.5	1979.7
12.5°	1990.8	1989.9	1991.8	1994.5	1980.7	1972.3	1962.1	1950.1	1939.9	1928.8	1915.8
15°	1926.0	1926.9	1934.4	1931.6	1926.9	1922.3	1911.2	1907.5	1898.2	1886.2	1878.8
17.5°	1879.7	1884.4	1891.8	1888.1	1880.6	1876.0	1867.7	1859.3	1851.0	1841.8	1830.6
20°	1839.0	1843.6	1848.2	1843.6	1829.7	1823.2	1812.1	1786.2	1767.7	1749.2	1732.5
22.5°	1794.5	1797.3	1793.6	1778.8	1743.6	1726.9	1714.0	1706.6	1690.8	1680.6	1670.5
25°	1739.0	1723.2	1699.2	1682.5	1668.6	1661.2	1655.6	1654.7	1652.9	1651.0	1646.4
27.5°	1648.2	1642.7	1629.7	1623.2	1624.2	1626.9	1627.9	1630.6	1627.9	1624.2	1620.4
30°	1580.6	1583.4	1584.3	1586.2	1590.8	1593.6	1594.5	1598.2	1596.4	1593.6	1591.7
32.5°	1538.0	1544.5	1548.2	1553.8	1556.6	1561.2	1561.2	1566.7	1561.2	1560.3	1558.4
35°	1502.9	1508.4	1510.3	1518.6	1521.4	1526.0	1526.0	1530.6	1526.0	1478.8	1167.6
37.5°	1467.7	1473.2	1476.9	1484.3	1485.3	1488.0	1373.2	1004.7	648.2	501.9	383.4
40°	1426.0	1432.5	1436.2	1439.0	1011.2	641.7	441.7	359.3	359.3	362.1	364.8
42.5°	1381.5	1386.2	965.8	562.1	350.0	349.1	351.9	354.6	357.4	361.1	364.8
45°	1086.2	548.2	348.2	339.8	342.6	346.3	350.0	353.7	358.4	362.1	363.9
47.5°	356.5	334.3	338.9	335.2	339.8	344.5	348.2	351.9	352.8	353.7	352.8
50°	329.6	329.6	332.4	332.4	336.1	338.0	338.0	338.0	334.3	333.3	330.6
52.5°	318.5	325.9	322.2	324.1	322.2	319.5	316.7	313.9	308.3	306.5	302.8
55°	313.0	315.8	306.5	303.7	300.0	292.6	288.9	285.2	280.6	278.7	274.1
57.5°	300.0	293.5	283.3	278.7	272.2	264.8	261.1	258.3	253.7	251.9	249.1
60°	275.9	263.0	256.5	250.9	243.5	237.0	234.3	232.4	228.7	227.8	225.0
62.5°	246.3	235.2	229.6	222.2	216.7	213.0	210.2	209.3	205.6	205.6	203.7
65°	213.9	208.3	203.7	196.3	193.5	189.8	188.9	188.0	186.1	185.2	183.3
67.5°	188.0	184.3	177.8	174.1	172.2	169.5	167.6	165.7	162.0	160.2	157.4
70°	164.8	162.0	155.6	152.8	149.1	144.5	141.7	139.8	137.0	135.2	132.4
72.5°	142.6	134.3	129.6	126.9	124.1	119.5	118.5	116.7	113.9	113.0	110.2
75°	114.8	108.3	105.6	103.7	100.9	98.2	98.2	98.2	95.4	94.4	93.5
77.5°	91.7	88.0	86.1	84.3	83.3	81.5	78.7	77.8	75.0	75.0	74.1
80°	70.4	68.5	66.7	65.7	64.8	63.0	61.1	60.2	57.4	57.4	56.5
82.5°	51.9	50.9	50.0	49.1	48.2	47.2	44.4	43.5	41.7	41.7	40.7
85°	37.0	36.1	34.3	33.3	33.3	32.4	29.6	28.7	26.9	26.9	26.9
87.5°	23.1	22.2	21.3	20.4	19.4	18.5	16.7	15.7	15.7	13.9	13.0
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-LD5-48HL-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°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2073.2	2089.0	2087.1	2098.2	2101.0	2106.6	2108.4	2109.4	2095.5	2106.6	2107.5
5°	2195.5	2198.3	2200.1	2204.7	2209.4	2210.3	2205.7	2200.1	2202.0	2198.3	2189.0
7.5°	2097.3	2083.4	2080.7	2077.0	2075.1	2073.2	2064.9	2072.3	2064.0	2060.3	2047.3
10°	1976.9	1964.0	1963.1	1963.1	1965.8	1964.9	1963.1	1959.4	1966.8	1962.1	1959.4
12.5°	1914.0	1909.4	1912.1	1910.3	1917.7	1919.5	1917.7	1917.7	1915.8	1912.1	1914.0
15°	1876.0	1872.3	1875.1	1872.3	1877.9	1878.8	1874.2	1876.9	1872.3	1867.7	1865.8
17.5°	1826.0	1817.7	1811.2	1801.9	1802.9	1801.0	1795.5	1795.5	1790.8	1778.8	1779.7
20°	1729.7	1721.4	1717.7	1717.7	1722.3	1724.2	1723.2	1725.1	1720.5	1718.6	1711.2
22.5°	1669.5	1668.6	1670.5	1675.1	1682.5	1692.7	1693.6	1693.6	1693.6	1692.7	1683.4
25°	1648.2	1648.2	1650.1	1656.6	1662.1	1669.5	1671.4	1673.2	1671.4	1671.4	1663.0
27.5°	1624.2	1622.3	1626.0	1632.5	1639.0	1644.5	1649.2	1650.1	1647.3	1647.3	1650.1
30°	1594.5	1593.6	1598.2	1604.7	1610.3	1615.8	1620.4	1624.2	1620.4	1620.4	1617.7
32.5°	1564.0	1564.0	1565.8	1526.9	1415.8	1275.1	1277.8	1196.4	1139.9	1068.6	1163.0
35°	976.0	710.2	610.2	516.7	450.9	408.4	407.4	393.5	387.1	382.4	381.5
37.5°	368.5	370.4	374.1	375.9	378.7	380.6	381.5	381.5	381.5	381.5	380.6
40°	367.6	371.3	374.1	376.9	379.6	381.5	381.5	382.4	383.4	383.4	383.4
42.5°	368.5	372.2	375.9	378.7	380.6	381.5	382.4	383.4	383.4	383.4	383.4
45°	367.6	369.5	369.5	370.4	370.4	370.4	371.3	371.3	370.4	369.5	371.3
47.5°	353.7	353.7	350.9	350.0	349.1	347.2	348.2	347.2	346.3	345.4	347.2
50°	329.6	325.9	324.1	322.2	321.3	319.5	320.4	319.5	318.5	316.7	319.5
52.5°	300.9	300.0	296.3	294.5	293.5	294.5	292.6	291.7	290.8	289.8	290.8
55°	273.2	269.5	268.5	266.7	265.8	266.7	265.8	264.8	263.9	263.0	263.9
57.5°	248.2	245.4	244.5	242.6	242.6	242.6	242.6	241.7	240.8	239.8	240.8
60°	224.1	222.2	221.3	221.3	220.4	220.4	220.4	219.5	218.5	218.5	219.5
62.5°	203.7	203.7	200.9	200.0	200.0	200.9	200.0	199.1	198.2	197.2	199.1
65°	182.4	178.7	177.8	175.9	174.1	175.0	174.1	173.2	172.2	171.3	173.2
67.5°	156.5	155.6	151.9	150.0	149.1	150.0	149.1	148.2	147.2	146.3	148.2
70°	131.5	131.5	127.8	126.9	125.9	125.9	125.0	125.0	124.1	123.2	125.0
72.5°	109.3	109.3	108.3	106.5	105.6	104.6	103.7	102.8	102.8	103.7	103.7
75°	90.7	88.9	85.2	86.1	85.2	84.3	84.3	83.3	82.4	84.3	83.3
77.5°	71.3	70.4	67.6	68.5	67.6	66.7	66.7	65.7	64.8	65.7	65.7
80°	53.7	53.7	52.8	51.9	51.9	50.9	50.0	50.0	49.1	50.0	50.0
82.5°	38.9	38.9	38.0	37.0	36.1	36.1	35.2	35.2	35.2	35.2	35.2
85°	25.0	24.1	24.1	22.2	22.2	22.2	21.3	21.3	21.3	21.3	21.3
87.5°	12.0	12.0	11.1	11.1	10.2	9.3	9.3	8.3	8.3	9.3	9.3
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	277.5°	280°	282.5°	285°	287.5°	290°	292.5°	295°	297.5°	300°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2090.8	2102.9	2092.7	2097.3	2098.2	2114.0	2113.1	2116.8	2110.3	2102.9	2092.7
5°	2197.3	2191.8	2184.4	2202.0	2192.7	2203.8	2207.5	2214.9	2214.9	2214.0	2205.7
7.5°	2061.2	2049.2	2058.4	2064.9	2067.7	2060.3	2075.1	2091.8	2105.7	2114.0	2114.9
10°	1954.7	1958.4	1957.5	1960.3	1966.8	1965.8	1975.1	1984.4	1988.1	1993.6	1995.5
12.5°	1904.7	1903.8	1905.6	1912.1	1915.8	1914.9	1924.2	1929.7	1931.6	1932.5	1931.6
15°	1864.9	1858.4	1863.1	1864.0	1866.8	1866.8	1877.9	1886.2	1889.9	1891.8	1889.9
17.5°	1789.9	1774.2	1789.0	1789.0	1799.2	1797.3	1814.9	1828.8	1836.2	1841.8	1841.8
20°	1715.8	1708.4	1714.0	1712.1	1719.5	1718.6	1729.7	1739.0	1745.5	1750.1	1755.6
22.5°	1686.2	1688.0	1679.7	1680.6	1680.6	1679.7	1685.3	1689.9	1691.7	1694.5	1692.7
25°	1666.7	1668.6	1665.8	1661.2	1659.3	1661.2	1664.0	1669.5	1670.5	1668.6	1662.1
27.5°	1647.3	1641.7	1646.4	1638.0	1636.2	1639.9	1643.6	1644.5	1645.5	1645.5	1639.9
30°	1617.7	1613.0	1617.7	1614.0	1610.3	1614.0	1616.7	1616.7	1618.6	1619.5	1613.0
32.5°	1130.6	1139.9	1289.9	1380.6	1508.4	1573.2	1585.3	1585.3	1587.1	1587.1	1581.6
35°	385.2	386.1	417.6	452.8	527.8	620.4	741.7	804.7	1017.6	1272.3	1518.6
37.5°	380.6	379.6	378.7	377.8	376.9	375.9	374.1	373.2	378.7	449.1	609.3
40°	382.4	381.5	379.6	378.7	377.8	375.9	375.0	373.2	371.3	369.5	367.6
42.5°	382.4	381.5	380.6	379.6	378.7	377.8	375.9	374.1	372.2	369.5	366.7
45°	369.5	369.5	370.4	370.4	371.3	371.3	371.3	370.4	370.4	369.5	365.8
47.5°	345.4	345.4	348.2	348.2	350.0	351.9	351.9	353.7	356.5	358.4	359.3
50°	317.6	317.6	320.4	321.3	323.2	325.9	328.7	329.6	332.4	336.1	339.8
52.5°	289.8	289.8	292.6	292.6	294.5	297.2	300.0	300.9	304.6	308.3	313.0
55°	263.9	263.9	265.8	266.7	267.6	269.5	272.2	272.2	275.9	278.7	283.3
57.5°	240.8	242.6	242.6	242.6	243.5	245.4	247.2	247.2	250.0	252.8	256.5
60°	218.5	220.4	220.4	220.4	221.3	222.2	224.1	224.1	225.9	227.8	231.5
62.5°	198.2	200.0	200.0	200.9	200.9	201.9	203.7	202.8	204.6	205.6	208.3
65°	172.2	174.1	175.0	175.9	176.9	178.7	181.5	180.6	183.3	185.2	188.0
67.5°	147.2	149.1	149.1	150.0	150.9	152.8	154.6	154.6	157.4	159.3	163.0
70°	124.1	125.9	125.9	126.9	127.8	129.6	131.5	130.6	133.3	135.2	138.0
72.5°	102.8	104.6	104.6	105.6	105.6	107.4	109.3	111.1	111.1	113.0	114.8
75°	83.3	84.3	85.2	85.2	86.1	87.0	88.9	90.7	91.7	92.6	94.4
77.5°	65.7	66.7	67.6	67.6	68.5	69.4	70.4	74.1	75.9	76.9	76.9
80°	50.0	50.9	50.9	50.9	51.9	52.8	54.6	54.6	58.3	58.3	59.3
82.5°	35.2	36.1	36.1	36.1	37.0	38.9	39.8	40.7	42.6	43.5	43.5
85°	21.3	22.2	22.2	22.2	23.1	24.1	25.9	26.9	27.8	27.8	28.7
87.5°	8.3	9.3	10.2	10.2	11.1	12.0	13.0	13.9	14.8	14.8	15.7
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	302.5°	305°	307.5°	310°	312.5°	315°	317.5°	320°	322.5°	325°	327.5°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2081.6	2088.1	2081.6	2085.3	2089.9	2081.6	2062.1	2054.7	2052.0	2040.8	2033.4
5°	2197.3	2197.3	2194.6	2202.0	2201.0	2188.1	2167.7	2158.4	2149.2	2137.1	2127.9
7.5°	2114.9	2122.3	2127.0	2155.7	2174.2	2176.0	2189.0	2191.8	2195.5	2191.8	2186.2
10°	1996.4	1993.6	2006.6	2033.4	2049.2	2057.5	2082.5	2094.5	2104.7	2125.1	2146.4
12.5°	1929.7	1933.4	1939.0	1958.4	1973.2	1969.5	1979.7	1988.1	2000.1	2020.5	2051.0
15°	1885.3	1889.0	1894.5	1909.4	1918.6	1914.0	1919.5	1925.1	1933.4	1943.6	1962.1
17.5°	1837.1	1843.6	1850.1	1865.8	1874.2	1873.2	1877.9	1879.7	1882.5	1889.0	1901.9
20°	1762.1	1782.5	1795.5	1816.8	1828.8	1826.9	1835.3	1838.1	1841.8	1848.2	1853.8
22.5°	1693.6	1699.2	1705.6	1728.8	1749.2	1774.2	1779.7	1787.1	1796.4	1802.9	1808.4
25°	1654.7	1651.0	1653.8	1669.5	1680.6	1682.5	1690.8	1714.9	1739.9	1751.0	1764.0
27.5°	1631.6	1627.9	1626.9	1634.3	1636.2	1631.6	1629.7	1637.1	1655.6	1674.2	1713.0
30°	1606.6	1601.9	1598.2	1604.7	1607.5	1601.0	1589.0	1582.5	1593.6	1598.2	1614.0
32.5°	1576.9	1572.3	1570.4	1574.2	1576.0	1570.4	1557.5	1550.1	1548.2	1544.5	1548.2
35°	1543.6	1539.0	1536.2	1537.1	1540.8	1536.2	1525.1	1515.8	1511.2	1501.0	1493.6
37.5°	795.4	1126.9	1463.0	1498.2	1501.9	1501.0	1489.9	1479.7	1475.1	1463.0	1459.3
40°	363.9	406.5	610.2	797.3	1150.1	1461.2	1451.0	1440.8	1432.5	1428.8	1414.9
42.5°	363.0	363.9	364.8	360.2	446.3	760.2	1122.3	1401.0	1395.4	1386.2	1376.0
45°	363.0	358.4	362.1	356.5	358.4	357.4	445.4	718.6	1278.8	1336.2	1331.5
47.5°	359.3	356.5	360.2	355.6	350.0	352.8	349.1	353.7	551.9	936.2	1282.5
50°	342.6	344.5	350.9	350.0	345.4	349.1	342.6	348.2	343.5	376.9	726.0
52.5°	317.6	321.3	327.8	333.3	335.2	339.8	338.0	339.8	336.1	337.1	338.0
55°	288.0	292.6	298.2	306.5	310.2	317.6	323.2	325.9	330.6	329.6	322.2
57.5°	260.2	264.8	269.5	277.8	286.1	289.8	300.0	305.6	317.6	314.8	313.0
60°	234.3	238.0	242.6	244.5	254.6	261.1	270.4	275.9	291.7	295.4	300.9
62.5°	211.1	213.0	216.7	219.5	225.9	232.4	237.0	246.3	254.6	266.7	275.0
65°	189.8	191.7	194.5	196.3	197.2	206.5	209.3	219.5	222.2	235.2	242.6
67.5°	165.7	169.5	173.2	175.0	176.9	182.4	184.3	188.9	195.4	200.9	210.2
70°	140.7	143.5	147.2	150.0	153.7	157.4	163.0	165.7	170.4	174.1	181.5
72.5°	117.6	120.4	122.2	125.0	127.8	130.6	135.2	141.7	145.4	151.9	153.7
75°	95.4	98.2	100.0	101.9	104.6	106.5	108.3	114.8	118.5	124.1	129.6
77.5°	78.7	78.7	80.6	86.1	85.2	85.2	87.0	90.7	93.5	97.2	102.8
80°	61.1	62.0	63.0	67.6	68.5	69.4	68.5	71.3	74.1	75.0	78.7
82.5°	45.4	46.3	46.3	49.1	51.9	51.9	51.9	52.8	55.6	56.5	58.3
85°	30.6	31.5	32.4	33.3	35.2	36.1	37.0	37.0	38.9	39.8	40.7
87.5°	16.7	18.5	19.4	20.4	21.3	22.2	23.1	24.1	25.0	25.9	26.9
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-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	332.5°	335°	337.5°	340°	342.5°	345°	347.5°	350°	352.5°	355°
0°	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5	2020.5
2.5°	2030.7	2026.0	2023.2	2015.8	2014.0	2001.9	2003.8	2001.9	2001.9	2004.7	2014.0
5°	2117.7	2095.5	2089.9	2074.2	2061.2	2039.0	2025.1	2017.7	2006.6	2001.9	2008.4
7.5°	2177.0	2160.3	2146.4	2132.5	2114.0	2088.1	2068.6	2046.4	2027.9	2010.3	2005.7
10°	2166.8	2185.3	2185.3	2177.0	2159.4	2133.4	2110.3	2082.5	2050.1	2022.3	2005.7
12.5°	2080.7	2113.1	2139.0	2158.4	2176.0	2158.4	2135.3	2113.1	2077.0	2036.2	2005.7
15°	1986.2	2019.5	2052.0	2092.7	2135.3	2152.9	2152.0	2126.0	2093.6	2051.0	2008.4
17.5°	1919.5	1942.7	1960.3	2004.7	2056.6	2102.0	2132.5	2134.4	2102.9	2064.9	2009.4
20°	1869.5	1886.2	1901.0	1926.0	1971.4	2027.0	2083.4	2114.9	2109.4	2067.7	2012.1
22.5°	1824.2	1836.2	1848.2	1866.8	1902.9	1939.0	2004.7	2069.5	2097.3	2063.1	2009.4
25°	1778.8	1791.8	1801.0	1814.0	1842.7	1872.3	1918.6	1999.2	2061.2	2059.4	2003.8
27.5°	1725.1	1742.7	1753.8	1771.4	1790.8	1813.1	1844.5	1920.5	2009.4	2040.8	1989.0
30°	1660.3	1686.2	1702.9	1722.3	1739.0	1758.4	1783.4	1829.7	1939.9	2004.7	1973.2
32.5°	1566.7	1613.0	1650.1	1668.6	1687.1	1703.8	1726.0	1764.9	1854.7	1955.7	1955.7
35°	1500.1	1521.4	1554.7	1608.4	1631.6	1648.2	1668.6	1699.2	1756.6	1897.3	1926.9
37.5°	1448.2	1456.6	1473.2	1526.0	1569.5	1596.4	1616.7	1636.2	1692.7	1817.7	1889.9
40°	1409.3	1406.5	1404.7	1429.7	1491.7	1534.3	1557.5	1576.9	1620.4	1722.3	1840.8
42.5°	1364.0	1361.2	1351.9	1358.4	1389.0	1460.3	1495.4	1516.7	1552.9	1622.3	1787.1
45°	1316.7	1312.1	1308.4	1301.9	1313.0	1352.8	1425.1	1456.6	1476.9	1539.0	1719.5
47.5°	1268.6	1262.1	1257.5	1251.9	1245.4	1264.0	1332.5	1389.0	1424.1	1463.0	1638.0
50°	1200.1	1208.4	1202.8	1196.4	1190.8	1187.1	1215.8	1308.4	1351.9	1383.4	1539.0
52.5°	565.8	1100.1	1146.4	1139.9	1132.5	1126.0	1132.5	1202.8	1281.5	1306.5	1419.5
55°	322.2	489.8	1019.5	1077.8	1071.3	1062.1	1056.5	1080.6	1198.2	1231.5	1310.2
57.5°	310.2	311.1	450.0	971.3	1007.5	999.1	992.6	998.2	1098.2	1154.7	1214.9
60°	300.0	300.0	300.0	429.7	928.7	931.5	923.2	913.9	957.5	1068.6	1118.6
62.5°	277.8	283.3	286.1	286.1	424.1	860.2	851.9	849.1	851.0	964.9	1022.3
65°	249.1	262.0	267.6	271.3	271.3	445.4	778.7	774.1	767.6	811.2	925.0
67.5°	217.6	230.6	242.6	250.0	250.9	259.3	464.8	697.3	688.0	688.9	821.3
70°	185.2	196.3	209.3	220.4	230.6	235.2	242.6	578.7	609.3	596.3	703.7
72.5°	160.2	164.8	174.1	185.2	197.2	208.3	214.8	230.6	528.7	514.8	535.2
75°	133.3	137.0	143.5	150.9	160.2	173.2	184.3	195.4	280.6	431.5	428.7
77.5°	103.7	110.2	117.6	122.2	126.9	136.1	150.9	162.0	173.2	291.7	343.5
80°	79.6	84.3	88.0	92.6	98.2	104.6	110.2	123.2	136.1	146.3	263.0
82.5°	59.3	62.0	64.8	66.7	68.5	72.2	82.4	87.0	95.4	104.6	124.1
85°	41.7	43.5	45.4	46.3	47.2	48.2	51.9	52.8	61.1	63.0	75.0
87.5°	26.9	27.8	29.6	30.6	30.6	31.5	32.4	32.4	32.4	30.6	37.0
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-LD5-48HL-RW-UNV-L940-CD1-U

CANDELA DISTRIBUTION (continued):

	357.5°	360°
0°	2020.5	2020.5
2.5°	2021.4	2036.2
5°	2018.6	2038.1
7.5°	2011.2	2029.7
10°	2000.1	2022.3
12.5°	1988.1	2009.4
15°	1977.9	1993.6
17.5°	1966.8	1976.0
20°	1951.9	1959.4
22.5°	1937.1	1933.4
25°	1920.5	1912.1
27.5°	1899.2	1883.4
30°	1879.7	1851.9
32.5°	1861.2	1815.8
35°	1836.2	1778.8
37.5°	1810.3	1740.8
40°	1779.7	1697.3
42.5°	1747.3	1653.8
45°	1706.6	1612.1
47.5°	1670.5	1562.1
50°	1620.4	1508.4
52.5°	1559.3	1458.4
55°	1487.1	1397.3
57.5°	1409.3	1333.4
60°	1326.0	1260.2
62.5°	1225.1	1184.3
65°	1106.5	1097.3
67.5°	951.9	1001.0
70°	780.6	890.8
72.5°	652.8	774.1
75°	535.2	643.5
77.5°	424.1	504.7
80°	264.8	369.5
82.5°	177.8	242.6
85°	107.4	115.7
87.5°	41.7	42.6
90°	0.0	0.0

(END OF REPORT)