

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-LD5-52HL-LC-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 (P33518)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-52HL-LC-UNV-L950-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
CLEAR LENSED
Light Source: -
Ballast/Driver: -

Summary

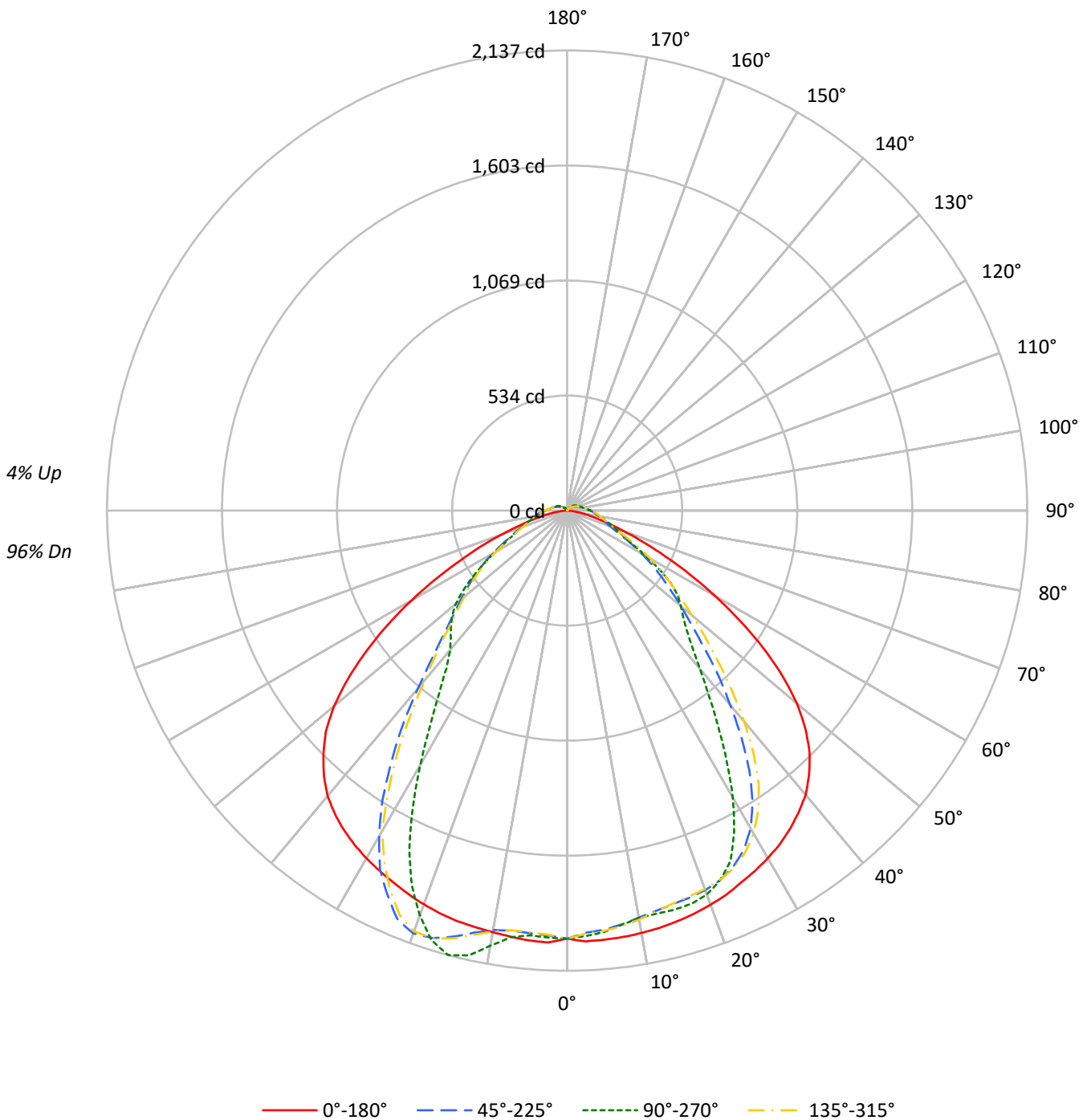
Lumens per Lamp: N/A
Luminaire Lumens: 4739.0 lumens
Efficiency: N/A
Efficacy: 128.1 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.12 / 1.19
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 37
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P#
CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L950-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	0	
RCR																						
0	118	118	118	118	115	115	115	115	109	109	109	103	103	103	98	98	98	96				
1	109	104	100	97	106	102	98	95	97	94	91	92	90	88	88	86	84	82				
2	100	93	86	81	97	90	85	80	86	82	77	82	79	75	79	76	73	71				
3	92	83	75	69	89	81	74	68	77	71	67	74	69	65	71	67	63	61				
4	85	74	66	60	83	73	65	59	70	63	58	67	61	57	64	60	56	54				
5	79	67	59	52	76	66	58	52	63	56	51	61	55	50	59	53	49	47				
6	73	61	52	46	71	60	52	46	57	51	45	55	49	45	54	48	44	42				
7	68	55	47	42	66	54	47	41	53	46	41	51	45	40	49	44	40	38				
8	64	51	43	37	62	50	42	37	48	42	37	47	41	36	45	40	36	34				
9	60	47	39	34	58	46	39	34	45	38	33	43	37	33	42	37	33	31				
10	56	43	36	31	54	43	36	31	42	35	30	40	34	30	39	34	30	28				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	16064	16064	16064	16064
5°	16181	15428	16214	15548
10°	16256	14785	16223	15790
15°	16382	14588	16373	16243
20°	16562	14356	16545	15133
25°	16766	13620	16758	13160
30°	17081	11804	17091	10458
35°	17417	9545	17466	8077
40°	17712	7685	17786	6771
45°	17649	6510	17740	6339
50°	16889	5993	17125	5860
55°	14984	5387	15358	4897
60°	12154	4123	12799	3782
65°	9035	3155	9734	2992
70°	6145	2723	6926	2603
75°	4021	2457	4681	2324
80°	2597	2291	3044	2108
85°	1332	2285	1756	2087



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.8	4.0
10°-20°	561.8	11.9
20°-30°	854.1	18.0
30°-40°	916.3	19.3
40°-50°	795.2	16.8
50°-60°	589.3	12.4
60°-70°	337.7	7.1
70°-80°	187.0	3.9
80°-90°	113.9	2.4
90°-100°	74.0	1.6
100°-110°	49.6	1.0
110°-120°	33.5	0.7
120°-130°	20.5	0.4
130°-140°	10.8	0.2
140°-150°	4.9	0.1
150°-160°	1.5	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1604.8	33.9
0°-40°	2521.1	53.2
0°-60°	3905.6	82.4
0°-90°	4544.2	95.9
90°-120°	157.1	3.3
90°-150°	193.4	4.1
90°-180°	195.0	4.1
0°-180°	4739.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1988	1988	1988	1988	1988	
5°	2000	1964	2004	1980	2000	191
15°	1974	1919	1974	2137	1974	559
25°	1908	1795	1907	1734	1908	882
35°	1804	1222	1809	1034	1804	1129
45°	1593	784	1601	763	1593	1219
55°	1111	587	1139	534	1111	985
65°	504	298	543	282	504	508
75°	144	189	167	179	144	164
85°	20	130	26	119	20	26
90°	0	109	2	101	0	1
95°	1	89	0	85	1	1
105°	1	67	1	64	1	1
115°	1	54	1	49	1	1
125°	1	41	1	34	1	1
135°	1	26	1	22	1	1
145°	1	15	2	12	1	1
155°	2	7	2	6	2	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9
2.5°	2002.3	1997.1	1995.1	1991.0	1994.1	2006.4	1998.2	1984.8	1985.8	1962.2	1974.5
5°	2000.2	1994.1	1991.0	1986.9	1988.9	2000.2	1992.0	1978.6	1977.6	1954.0	1965.3
7.5°	1997.1	1991.0	1985.8	1982.8	1983.8	1993.0	1982.8	1967.4	1964.3	1938.6	1948.9
10°	1992.0	1987.9	1980.7	1975.6	1974.5	1984.8	1968.4	1953.0	1945.8	1919.1	1929.4
12.5°	1984.8	1978.6	1971.5	1962.2	1961.2	1967.4	1954.0	1932.4	1925.3	1903.7	1915.0
15°	1974.5	1967.4	1959.1	1948.9	1943.7	1947.8	1931.4	1911.9	1910.9	1892.4	1907.8
17.5°	1963.2	1953.0	1943.7	1929.4	1922.2	1925.3	1911.9	1894.5	1896.5	1885.2	1902.7
20°	1947.8	1936.6	1922.2	1907.8	1897.5	1902.7	1893.4	1880.1	1883.2	1874.9	1890.3
22.5°	1930.4	1915.0	1897.5	1881.1	1872.9	1880.1	1872.9	1861.6	1862.6	1857.5	1866.7
25°	1907.8	1890.3	1869.8	1849.3	1845.2	1850.3	1846.2	1837.0	1832.8	1824.6	1828.7
27.5°	1887.3	1867.8	1842.1	1820.5	1813.3	1823.6	1814.4	1799.0	1787.7	1776.4	1768.2
30°	1863.6	1840.0	1811.3	1786.6	1780.5	1784.6	1771.2	1747.6	1717.8	1703.5	1680.9
32.5°	1838.0	1807.2	1771.2	1743.5	1739.4	1736.3	1711.7	1677.8	1631.6	1602.8	1567.9
35°	1804.1	1770.2	1727.1	1693.2	1687.0	1669.6	1629.5	1584.4	1524.8	1475.5	1416.0
37.5°	1766.1	1726.1	1680.9	1635.7	1618.2	1583.3	1526.9	1479.6	1389.3	1329.7	1257.8
40°	1723.0	1674.7	1619.3	1564.8	1536.1	1479.6	1414.9	1345.1	1257.8	1177.7	1117.2
42.5°	1663.4	1612.1	1546.4	1485.8	1436.5	1361.5	1285.6	1187.0	1106.9	1039.1	977.5
45°	1592.6	1531.0	1455.0	1382.1	1319.4	1230.1	1140.8	1042.2	975.5	896.4	854.3
47.5°	1501.2	1434.4	1353.3	1272.2	1190.1	1091.5	998.1	903.6	836.8	780.4	749.6
50°	1393.4	1331.8	1242.4	1145.9	1055.6	952.9	859.4	788.6	723.9	689.0	665.4
52.5°	1259.9	1202.4	1111.0	1006.3	919.0	818.4	733.1	675.6	629.4	603.8	595.5
55°	1111.0	1060.7	970.3	872.8	783.5	691.0	626.3	576.0	546.3	530.9	531.9
57.5°	951.8	912.8	827.6	740.3	656.1	586.3	527.8	487.7	465.1	464.1	467.2
60°	792.7	763.9	690.0	615.1	541.1	484.7	441.5	413.8	399.4	400.5	399.4
62.5°	640.7	614.0	560.6	499.0	440.5	402.5	363.5	352.2	339.9	338.8	338.8
65°	504.2	483.6	440.5	396.3	352.2	327.6	308.0	294.7	285.5	283.4	284.4
67.5°	378.9	370.7	340.9	311.1	283.4	268.0	251.6	248.5	241.3	241.3	243.4
70°	282.4	276.2	259.8	242.3	231.0	220.8	212.5	212.5	211.5	210.5	215.6
72.5°	204.3	205.4	200.2	186.9	185.9	183.8	181.7	184.8	185.9	188.9	195.1
75°	143.8	146.8	146.8	144.8	148.9	154.0	157.1	162.2	168.4	172.5	179.7
77.5°	101.7	101.7	106.8	112.9	121.2	130.4	138.6	145.8	154.0	159.2	165.3
80°	65.7	68.8	77.0	88.3	99.6	111.9	123.2	132.5	140.7	148.9	153.0
82.5°	39.0	44.2	54.4	68.8	83.2	98.6	109.9	121.2	130.4	138.6	141.7
85°	19.5	26.7	39.0	54.4	69.8	86.3	100.6	110.9	121.2	128.4	132.5
87.5°	6.2	14.4	27.7	42.1	58.5	75.0	90.4	101.7	110.9	117.1	121.2
90°	0.0	7.2	19.5	34.9	50.3	66.7	81.1	93.4	102.7	107.8	110.9
92.5°	0.0	4.1	15.4	28.8	43.1	59.6	73.9	85.2	93.4	98.6	100.6
95°	1.0	3.1	11.3	23.6	38.0	53.4	66.7	77.0	85.2	90.4	91.4
97.5°	1.0	2.1	9.2	19.5	32.9	47.2	60.6	70.8	77.0	82.1	83.2
100°	1.0	2.1	7.2	17.5	28.8	42.1	54.4	63.7	70.8	75.0	76.0
102.5°	1.0	1.0	6.2	14.4	25.7	37.0	48.3	57.5	63.7	67.8	69.8
105°	1.0	1.0	5.1	12.3	22.6	32.9	43.1	52.4	57.5	61.6	63.7
107.5°	1.0	1.0	4.1	10.3	19.5	28.8	39.0	46.2	52.4	56.5	58.5
110°	1.0	1.0	3.1	9.2	16.4	25.7	33.9	41.1	47.2	51.3	53.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.0	1.0	3.1	8.2	14.4	22.6	29.8	37.0	42.1	46.2	49.3
115°	1.0	1.0	3.1	7.2	13.3	19.5	26.7	32.9	38.0	42.1	45.2
117.5°	1.0	1.0	3.1	6.2	11.3	17.5	23.6	29.8	33.9	38.0	41.1
120°	1.0	1.0	2.1	5.1	10.3	15.4	20.5	25.7	30.8	34.9	38.0
122.5°	1.0	1.0	2.1	5.1	8.2	13.3	18.5	22.6	27.7	30.8	33.9
125°	1.0	1.0	2.1	4.1	7.2	12.3	16.4	20.5	23.6	27.7	30.8
127.5°	1.0	1.0	2.1	4.1	6.2	10.3	14.4	18.5	21.6	24.6	26.7
130°	1.0	1.0	2.1	3.1	5.1	8.2	12.3	15.4	19.5	21.6	23.6
132.5°	1.0	1.0	1.0	3.1	4.1	6.2	9.2	13.3	16.4	19.5	20.5
135°	1.0	1.0	1.0	2.1	4.1	5.1	7.2	10.3	13.3	16.4	18.5
137.5°	1.0	1.0	1.0	2.1	3.1	5.1	6.2	8.2	11.3	13.3	16.4
140°	1.0	1.0	1.0	2.1	3.1	4.1	5.1	7.2	9.2	11.3	13.3
142.5°	1.0	1.0	1.0	2.1	2.1	3.1	4.1	6.2	7.2	9.2	11.3
145°	1.0	1.0	1.0	2.1	2.1	3.1	4.1	5.1	6.2	7.2	9.2
147.5°	1.0	1.0	1.0	2.1	2.1	2.1	3.1	4.1	5.1	6.2	7.2
150°	2.1	2.1	2.1	2.1	2.1	2.1	3.1	3.1	4.1	5.1	6.2
152.5°	2.1	2.1	2.1	2.1	2.1	2.1	3.1	3.1	3.1	4.1	5.1
155°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.1	3.1	4.1	4.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9
2.5°	1970.4	1972.5	1984.8	1983.8	1981.7	1979.7	1979.7	1977.6	1979.7	1984.8	1982.8
5°	1960.2	1963.2	1972.5	1971.5	1969.4	1968.4	1967.4	1964.3	1966.3	1973.5	1971.5
7.5°	1941.7	1944.8	1953.0	1948.9	1945.8	1947.8	1942.7	1939.6	1943.7	1950.9	1949.9
10°	1922.2	1924.2	1934.5	1932.4	1927.3	1928.3	1923.2	1921.1	1926.3	1930.4	1931.4
12.5°	1908.8	1916.0	1925.3	1924.2	1923.2	1924.2	1919.1	1917.0	1920.1	1924.2	1923.2
15°	1905.7	1915.0	1925.3	1925.3	1926.3	1927.3	1922.2	1919.1	1922.2	1925.3	1924.2
17.5°	1902.7	1914.0	1923.2	1922.2	1923.2	1925.3	1917.0	1915.0	1919.1	1923.2	1921.1
20°	1892.4	1902.7	1908.8	1906.8	1906.8	1907.8	1897.5	1897.5	1903.7	1906.8	1907.8
22.5°	1863.6	1876.0	1876.0	1870.8	1870.8	1866.7	1863.6	1857.5	1864.7	1869.8	1873.9
25°	1820.5	1825.7	1819.5	1808.2	1802.0	1796.9	1782.5	1794.9	1794.9	1810.3	1815.4
27.5°	1759.9	1748.6	1731.2	1707.6	1702.4	1686.0	1676.8	1679.8	1685.0	1706.5	1723.0
30°	1660.3	1626.5	1596.7	1586.4	1563.8	1547.4	1531.0	1539.2	1548.4	1560.7	1594.6
32.5°	1528.9	1496.1	1447.8	1430.3	1406.7	1386.2	1366.7	1379.0	1395.4	1403.6	1440.6
35°	1378.0	1339.0	1294.8	1265.0	1240.4	1229.1	1204.4	1221.9	1239.4	1245.5	1277.3
37.5°	1217.8	1177.7	1138.7	1113.1	1089.4	1082.3	1065.8	1078.1	1091.5	1100.7	1127.4
40°	1065.8	1028.9	999.1	981.6	965.2	959.0	952.9	958.0	968.3	975.5	996.0
42.5°	935.4	905.6	885.1	874.8	863.5	855.3	856.4	858.4	863.5	878.9	888.2
45°	821.4	804.0	790.6	788.6	781.4	780.4	779.3	783.5	786.5	795.8	803.0
47.5°	730.1	722.9	719.8	723.9	727.0	722.9	724.9	730.1	736.2	736.2	735.2
50°	658.2	660.2	664.3	673.6	679.7	681.8	683.9	690.0	691.0	693.1	690.0
52.5°	599.7	601.7	613.0	627.4	634.6	637.6	641.8	647.9	647.9	650.0	645.9
55°	540.1	543.2	554.5	568.8	575.0	579.1	583.2	587.3	590.4	594.5	591.4
57.5°	474.4	483.6	490.8	494.9	499.0	502.1	505.2	506.2	512.4	513.4	518.5
60°	404.6	406.6	413.8	412.8	409.7	417.9	413.8	421.0	428.2	437.4	438.4
62.5°	337.8	338.8	344.0	341.9	346.0	345.0	348.1	348.1	353.2	357.3	362.5
65°	285.5	286.5	290.6	290.6	289.6	292.6	295.7	297.8	297.8	300.9	305.0
67.5°	246.4	249.5	253.6	255.7	257.7	257.7	260.8	261.8	263.9	264.9	267.0
70°	219.7	223.8	228.0	230.0	231.0	233.1	234.1	234.1	236.2	237.2	239.2
72.5°	200.2	204.3	207.4	207.4	209.5	210.5	210.5	211.5	212.5	214.6	216.7
75°	183.8	186.9	188.9	187.9	187.9	187.9	188.9	188.9	191.0	193.0	195.1
77.5°	168.4	171.5	171.5	169.4	169.4	169.4	169.4	170.4	171.5	173.5	175.6
80°	157.1	157.1	156.1	156.1	154.0	153.0	153.0	154.0	154.0	156.1	159.2
82.5°	144.8	144.8	143.8	142.7	141.7	140.7	140.7	141.7	142.7	143.8	145.8
85°	133.5	133.5	131.4	131.4	130.4	130.4	130.4	130.4	131.4	132.5	134.5
87.5°	122.2	121.2	120.1	119.1	119.1	119.1	119.1	119.1	120.1	122.2	123.2
90°	110.9	109.9	108.8	108.8	107.8	107.8	108.8	108.8	109.9	110.9	111.9
92.5°	100.6	99.6	98.6	98.6	97.5	97.5	98.6	97.5	99.6	99.6	100.6
95°	91.4	90.4	89.3	89.3	89.3	89.3	89.3	89.3	90.4	90.4	91.4
97.5°	83.2	82.1	81.1	81.1	82.1	81.1	82.1	82.1	82.1	83.2	84.2
100°	76.0	75.0	75.0	76.0	75.0	75.0	76.0	76.0	76.0	76.0	77.0
102.5°	69.8	69.8	69.8	69.8	69.8	69.8	70.8	70.8	70.8	70.8	71.9
105°	63.7	64.7	64.7	64.7	65.7	65.7	65.7	66.7	66.7	66.7	66.7
107.5°	59.6	60.6	60.6	61.6	61.6	62.6	62.6	62.6	62.6	63.7	63.7
110°	55.4	56.5	57.5	58.5	58.5	59.6	59.6	59.6	59.6	59.6	59.6



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	51.3	52.4	53.4	55.4	56.5	56.5	56.5	56.5	57.5	57.5	56.5
115°	47.2	49.3	50.3	52.4	53.4	53.4	54.4	54.4	54.4	54.4	53.4
117.5°	43.1	46.2	47.2	49.3	50.3	50.3	51.3	51.3	51.3	51.3	50.3
120°	40.0	42.1	44.2	45.2	46.2	47.2	47.2	48.3	48.3	48.3	47.2
122.5°	37.0	39.0	41.1	42.1	43.1	44.2	44.2	44.2	44.2	44.2	44.2
125°	32.9	34.9	37.0	38.0	39.0	40.0	40.0	41.1	41.1	41.1	40.0
127.5°	29.8	31.8	32.9	34.9	35.9	35.9	37.0	37.0	37.0	37.0	35.9
130°	25.7	27.7	29.8	30.8	31.8	31.8	32.9	32.9	32.9	32.9	32.9
132.5°	22.6	24.6	25.7	27.7	27.7	28.8	28.8	29.8	29.8	29.8	28.8
135°	20.5	21.6	22.6	24.6	24.6	25.7	25.7	25.7	25.7	25.7	25.7
137.5°	18.5	19.5	20.5	21.6	21.6	22.6	22.6	22.6	22.6	23.6	22.6
140°	15.4	17.5	18.5	18.5	19.5	19.5	19.5	20.5	20.5	20.5	19.5
142.5°	13.3	14.4	15.4	16.4	17.5	17.5	17.5	17.5	18.5	17.5	17.5
145°	10.3	12.3	13.3	14.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
147.5°	8.2	9.2	11.3	12.3	12.3	13.3	13.3	13.3	13.3	13.3	13.3
150°	7.2	7.2	9.2	10.3	11.3	11.3	11.3	11.3	11.3	11.3	11.3
152.5°	5.1	6.2	7.2	8.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
155°	5.1	5.1	6.2	6.2	7.2	7.2	7.2	7.2	8.2	7.2	7.2
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9
2.5°	1979.7	1978.6	1982.8	1978.6	1958.1	1966.3	1963.2	1974.5	1975.6	1978.6	1988.9
5°	1969.4	1969.4	1974.5	1970.4	1950.9	1959.1	1958.1	1969.4	1971.5	1973.5	1984.8
7.5°	1948.9	1949.9	1957.1	1954.0	1933.5	1945.8	1944.8	1958.1	1962.2	1966.3	1976.6
10°	1929.4	1928.3	1936.6	1933.5	1914.0	1928.3	1927.3	1940.7	1946.8	1954.0	1966.3
12.5°	1919.1	1916.0	1919.1	1916.0	1894.5	1905.7	1906.8	1922.2	1929.4	1938.6	1953.0
15°	1919.1	1914.0	1914.0	1907.8	1883.2	1890.3	1891.4	1901.6	1910.9	1920.1	1937.6
17.5°	1917.0	1911.9	1910.9	1905.7	1879.0	1879.0	1878.0	1885.2	1890.3	1899.6	1918.1
20°	1905.7	1903.7	1902.7	1899.6	1874.9	1870.8	1868.8	1868.8	1871.9	1874.9	1893.4
22.5°	1876.0	1878.0	1880.1	1882.1	1862.6	1855.4	1856.5	1854.4	1851.3	1851.3	1866.7
25°	1820.5	1830.8	1839.0	1848.2	1837.0	1831.8	1838.0	1834.9	1829.8	1825.7	1839.0
27.5°	1732.2	1753.8	1771.2	1793.8	1794.9	1790.7	1807.2	1805.1	1804.1	1797.9	1808.2
30°	1610.0	1643.9	1667.5	1700.4	1728.1	1732.2	1759.9	1764.0	1768.2	1765.1	1775.3
32.5°	1462.2	1508.4	1548.4	1599.8	1626.5	1650.1	1689.1	1705.5	1721.9	1727.1	1738.4
35°	1301.0	1353.3	1400.6	1457.0	1499.1	1550.5	1597.7	1622.3	1659.3	1673.7	1690.1
37.5°	1148.0	1197.3	1243.5	1299.9	1367.7	1421.1	1479.6	1535.1	1585.4	1605.9	1630.6
40°	1012.4	1052.5	1096.6	1145.9	1207.5	1277.3	1341.0	1418.0	1477.6	1518.6	1554.6
42.5°	909.7	929.3	967.2	1011.4	1060.7	1131.5	1196.2	1282.5	1354.4	1412.9	1472.4
45°	818.4	827.6	855.3	878.9	929.3	991.9	1060.7	1144.9	1219.8	1294.8	1366.7
47.5°	740.3	751.6	765.0	779.3	815.3	867.6	927.2	1003.2	1078.1	1165.4	1247.6
50°	688.0	691.0	693.1	699.3	720.8	756.8	805.0	869.7	941.6	1035.0	1122.3
52.5°	641.8	641.8	635.6	632.5	640.7	663.3	691.0	737.2	811.2	897.4	989.8
55°	592.5	583.2	581.2	570.9	573.0	583.2	596.6	632.5	693.1	767.0	856.4
57.5°	523.7	519.6	519.6	515.5	507.2	512.4	515.5	541.1	584.3	647.9	725.9
60°	444.6	442.6	447.7	448.7	441.5	444.6	443.6	459.0	489.8	541.1	605.8
62.5°	365.5	374.8	375.8	379.9	375.8	374.8	379.9	393.3	408.7	447.7	498.0
65°	307.0	312.1	313.2	318.3	316.3	316.3	320.4	330.6	339.9	366.6	405.6
67.5°	269.0	267.0	268.0	271.1	268.0	267.0	270.0	276.2	283.4	299.8	327.6
70°	239.2	237.2	237.2	237.2	233.1	230.0	231.0	233.1	236.2	245.4	262.9
72.5°	216.7	216.7	213.6	210.5	207.4	205.4	203.3	201.3	200.2	203.3	212.5
75°	196.1	197.1	196.1	193.0	188.9	184.8	180.7	176.6	171.5	169.4	170.4
77.5°	177.6	178.7	179.7	178.7	174.6	169.4	163.3	157.1	149.9	142.7	138.6
80°	161.2	163.3	164.3	163.3	160.2	156.1	148.9	141.7	131.4	122.2	111.9
82.5°	146.8	149.9	150.9	150.9	148.9	144.8	136.6	128.4	117.1	104.7	91.4
85°	135.5	137.6	139.6	139.6	138.6	134.5	126.3	117.1	105.8	91.4	77.0
87.5°	124.2	125.3	127.3	129.4	127.3	123.2	116.0	105.8	94.5	80.1	63.7
90°	112.9	114.0	116.0	118.1	117.1	112.9	106.8	97.5	85.2	69.8	53.4
92.5°	101.7	103.7	104.7	105.8	106.8	103.7	98.6	89.3	77.0	61.6	46.2
95°	93.4	93.4	95.5	96.5	97.5	94.5	90.4	81.1	69.8	55.4	40.0
97.5°	85.2	85.2	87.3	87.3	88.3	86.3	82.1	73.9	62.6	49.3	33.9
100°	77.0	78.0	79.1	80.1	80.1	79.1	75.0	66.7	56.5	44.2	29.8
102.5°	71.9	71.9	72.9	72.9	73.9	71.9	67.8	60.6	50.3	39.0	25.7
105°	66.7	66.7	67.8	67.8	66.7	64.7	60.6	54.4	45.2	33.9	22.6
107.5°	62.6	62.6	62.6	62.6	61.6	59.6	55.4	48.3	40.0	30.8	20.5
110°	59.6	58.5	58.5	57.5	56.5	53.4	49.3	43.1	35.9	26.7	17.5



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	56.5	55.4	54.4	53.4	51.3	48.3	44.2	39.0	31.8	23.6	15.4
115°	53.4	52.4	51.3	49.3	47.2	44.2	40.0	34.9	27.7	20.5	13.3
117.5°	50.3	49.3	47.2	45.2	43.1	40.0	35.9	30.8	24.6	18.5	12.3
120°	46.2	45.2	44.2	42.1	40.0	35.9	31.8	27.7	21.6	16.4	10.3
122.5°	43.1	42.1	40.0	39.0	35.9	32.9	28.8	24.6	19.5	14.4	9.2
125°	39.0	38.0	37.0	34.9	32.9	28.8	25.7	21.6	17.5	12.3	7.2
127.5°	35.9	34.9	32.9	30.8	28.8	25.7	22.6	19.5	15.4	10.3	7.2
130°	31.8	30.8	29.8	27.7	25.7	22.6	20.5	16.4	13.3	9.2	6.2
132.5°	27.7	27.7	26.7	24.6	22.6	20.5	17.5	14.4	11.3	8.2	5.1
135°	25.7	24.6	23.6	21.6	20.5	17.5	15.4	12.3	9.2	7.2	4.1
137.5°	22.6	21.6	20.5	19.5	17.5	15.4	13.3	10.3	8.2	6.2	4.1
140°	19.5	18.5	18.5	16.4	15.4	13.3	11.3	9.2	7.2	5.1	3.1
142.5°	17.5	16.4	15.4	14.4	13.3	11.3	9.2	7.2	6.2	4.1	3.1
145°	15.4	14.4	13.3	12.3	11.3	9.2	8.2	6.2	5.1	4.1	3.1
147.5°	12.3	12.3	11.3	10.3	9.2	8.2	7.2	6.2	4.1	3.1	2.1
150°	10.3	10.3	9.2	8.2	8.2	7.2	6.2	5.1	4.1	3.1	2.1
152.5°	9.2	8.2	8.2	7.2	7.2	6.2	5.1	4.1	3.1	3.1	2.1
155°	7.2	7.2	7.2	6.2	6.2	5.1	4.1	4.1	3.1	2.1	2.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9
2.5°	1991.0	1978.6	1988.9	2007.4	2005.3	2003.3	2001.2	2005.3	2018.7	2011.5	2000.2
5°	1987.9	1975.6	1986.9	2004.3	2003.3	2000.2	1998.2	2002.3	2015.6	2008.4	1996.1
7.5°	1981.7	1970.4	1978.6	1996.1	1996.1	1994.1	1992.0	1996.1	2008.4	2002.3	1989.9
10°	1971.5	1963.2	1971.5	1987.9	1988.9	1984.8	1982.8	1987.9	2000.2	1997.1	1986.9
12.5°	1963.2	1955.0	1964.3	1980.7	1981.7	1977.6	1974.5	1980.7	1997.1	1999.2	1996.1
15°	1952.0	1944.8	1956.1	1973.5	1973.5	1970.4	1970.4	1978.6	2001.2	2010.5	2015.6
17.5°	1935.5	1930.4	1943.7	1961.2	1962.2	1960.2	1961.2	1977.6	2007.4	2030.0	2044.4
20°	1915.0	1912.9	1927.3	1945.8	1948.9	1949.9	1955.0	1979.7	2020.7	2051.6	2065.9
22.5°	1890.3	1891.4	1907.8	1927.3	1931.4	1934.5	1944.8	1979.7	2031.0	2063.9	2070.0
25°	1862.6	1865.7	1883.2	1906.8	1911.9	1918.1	1935.5	1980.7	2034.1	2055.7	2045.4
27.5°	1832.8	1839.0	1861.6	1886.2	1892.4	1902.7	1925.3	1974.5	2019.7	2020.7	1982.8
30°	1802.0	1809.2	1835.9	1864.7	1874.9	1885.2	1912.9	1960.2	1984.8	1952.0	1885.2
32.5°	1767.1	1777.4	1804.1	1839.0	1851.3	1864.7	1892.4	1932.4	1923.2	1852.4	1756.9
35°	1723.0	1737.4	1768.2	1809.2	1820.5	1838.0	1857.5	1866.7	1825.7	1725.0	1617.2
37.5°	1668.6	1690.1	1726.1	1773.3	1785.6	1796.9	1802.0	1776.4	1694.2	1585.4	1473.5
40°	1605.9	1638.8	1677.8	1730.2	1742.5	1742.5	1724.0	1669.6	1565.9	1423.1	1298.9
42.5°	1529.9	1570.0	1619.3	1671.6	1684.0	1669.6	1625.4	1529.9	1411.9	1252.7	1121.3
45°	1437.5	1490.9	1546.4	1600.8	1606.9	1575.1	1496.1	1374.9	1229.1	1081.2	956.0
47.5°	1327.7	1397.5	1458.1	1519.7	1511.5	1458.1	1352.3	1214.7	1060.7	921.0	820.4
50°	1204.4	1286.6	1354.4	1412.9	1395.4	1321.5	1197.3	1053.5	900.5	781.4	698.2
52.5°	1073.0	1167.5	1235.2	1282.5	1258.9	1170.6	1034.0	896.4	771.1	662.3	606.8
55°	936.4	1031.9	1101.8	1138.7	1107.9	1012.4	877.9	752.6	634.6	563.7	530.9
57.5°	804.0	893.3	959.0	988.8	949.8	854.3	730.1	624.3	539.1	479.5	463.1
60°	676.7	749.6	812.2	834.8	792.7	704.4	597.6	513.4	450.8	409.7	401.5
62.5°	558.6	618.1	667.4	684.9	643.8	575.0	482.6	420.0	375.8	355.3	345.0
65°	461.0	495.9	546.3	543.2	518.5	454.9	387.1	343.0	314.2	300.9	294.7
67.5°	362.5	394.3	426.1	430.2	399.4	355.3	311.1	279.3	263.9	256.7	253.6
70°	280.3	303.9	323.4	318.3	301.9	274.2	246.4	229.0	222.8	219.7	219.7
72.5°	217.7	230.0	239.2	233.1	222.8	208.4	195.1	187.9	188.9	191.0	193.0
75°	168.4	171.5	173.5	167.4	165.3	156.1	155.0	156.1	162.2	168.4	171.5
77.5°	129.4	125.3	122.2	116.0	117.1	116.0	121.2	129.4	138.6	147.9	156.1
80°	99.6	90.4	83.2	77.0	80.1	85.2	95.5	107.8	120.1	130.4	140.7
82.5°	77.0	63.7	53.4	47.2	53.4	61.6	75.0	90.4	104.7	116.0	127.3
85°	59.6	44.2	31.8	25.7	31.8	44.2	58.5	76.0	91.4	103.7	115.0
87.5°	46.2	31.8	17.5	10.3	17.5	30.8	47.2	63.7	79.1	93.4	104.7
90°	37.0	21.6	8.2	2.1	9.2	21.6	37.0	53.4	68.8	84.2	95.5
92.5°	29.8	15.4	4.1	0.0	5.1	16.4	30.8	46.2	61.6	76.0	87.3
95°	24.6	12.3	3.1	0.0	4.1	12.3	24.6	40.0	54.4	68.8	78.0
97.5°	20.5	9.2	2.1	0.0	2.1	10.3	20.5	33.9	48.3	61.6	70.8
100°	17.5	8.2	2.1	0.0	2.1	8.2	17.5	29.8	42.1	54.4	63.7
102.5°	14.4	6.2	1.0	1.0	1.0	6.2	15.4	25.7	37.0	48.3	57.5
105°	13.3	5.1	1.0	1.0	1.0	5.1	13.3	22.6	32.9	43.1	51.3
107.5°	11.3	4.1	1.0	1.0	1.0	4.1	11.3	19.5	29.8	39.0	46.2
110°	9.2	4.1	1.0	1.0	1.0	4.1	9.2	17.5	25.7	33.9	41.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	8.2	3.1	1.0	1.0	1.0	3.1	8.2	15.4	22.6	30.8	37.0
115°	7.2	3.1	1.0	1.0	1.0	3.1	7.2	13.3	19.5	26.7	32.9
117.5°	6.2	3.1	1.0	1.0	1.0	2.1	6.2	11.3	17.5	23.6	29.8
120°	5.1	2.1	1.0	1.0	1.0	2.1	5.1	10.3	15.4	20.5	25.7
122.5°	5.1	2.1	1.0	1.0	1.0	2.1	4.1	8.2	13.3	17.5	22.6
125°	4.1	2.1	1.0	1.0	1.0	1.0	4.1	7.2	11.3	15.4	19.5
127.5°	4.1	2.1	1.0	1.0	1.0	1.0	3.1	6.2	9.2	13.3	17.5
130°	3.1	2.1	1.0	1.0	1.0	1.0	2.1	5.1	8.2	11.3	14.4
132.5°	3.1	2.1	1.0	1.0	1.0	1.0	2.1	4.1	6.2	9.2	12.3
135°	3.1	1.0	1.0	1.0	1.0	1.0	1.0	3.1	5.1	7.2	9.2
137.5°	2.1	1.0	1.0	1.0	1.0	1.0	1.0	2.1	4.1	5.1	8.2
140°	2.1	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1	4.1	6.2
142.5°	2.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1	5.1
145°	2.1	1.0	1.0	2.1	2.1	1.0	1.0	2.1	2.1	3.1	4.1
147.5°	2.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1	3.1
150°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	3.1
152.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
155°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9
2.5°	1998.2	1974.5	1986.9	1982.8	1986.9	1997.1	1996.1	1993.0	1995.1	1989.9	1984.8
5°	1994.1	1970.4	1982.8	1977.6	1982.8	1993.0	1991.0	1987.9	1991.0	1984.8	1979.7
7.5°	1988.9	1967.4	1981.7	1980.7	1989.9	2003.3	2004.3	2004.3	2011.5	2002.3	1998.2
10°	1988.9	1977.6	1997.1	2004.3	2027.9	2045.4	2047.4	2051.6	2063.9	2061.8	2051.6
12.5°	2010.5	2008.4	2037.2	2054.6	2076.2	2100.8	2114.2	2118.3	2126.5	2120.3	2116.2
15°	2038.2	2048.5	2080.3	2099.8	2123.4	2141.9	2145.0	2147.0	2153.2	2144.0	2136.8
17.5°	2075.2	2081.3	2107.0	2115.2	2130.6	2133.7	2129.6	2119.3	2119.3	2098.8	2092.6
20°	2092.6	2089.5	2099.8	2086.5	2080.3	2061.8	2044.4	2024.9	2023.8	2002.3	2000.2
22.5°	2077.2	2056.7	2035.1	2002.3	1987.9	1961.2	1937.6	1926.3	1919.1	1891.4	1884.2
25°	2022.8	1972.5	1940.7	1901.6	1866.7	1835.9	1813.3	1789.7	1767.7	1744.5	1734.3
27.5°	1928.3	1881.1	1829.8	1775.3	1727.1	1679.8	1641.9	1618.2	1596.7	1566.9	1551.5
30°	1812.3	1746.6	1690.1	1637.8	1558.7	1501.2	1469.4	1422.1	1405.7	1392.3	1363.6
32.5°	1675.7	1596.7	1519.7	1448.8	1367.7	1314.3	1272.2	1237.3	1227.0	1192.1	1183.9
35°	1524.8	1421.1	1333.8	1264.0	1205.5	1140.8	1105.9	1082.3	1061.7	1038.1	1034.0
37.5°	1347.2	1253.7	1155.2	1093.5	1047.3	991.9	965.2	948.8	939.5	922.1	919.0
40°	1168.5	1075.1	1007.3	945.7	916.9	887.2	867.6	860.5	856.4	850.2	844.0
42.5°	1006.3	924.1	875.9	834.8	822.5	808.1	803.0	807.1	803.0	800.9	799.9
45°	868.7	806.0	772.2	759.8	756.8	752.6	756.8	763.9	765.0	762.9	762.9
47.5°	743.4	713.6	699.3	701.3	706.4	709.5	716.7	725.9	728.0	722.9	724.9
50°	661.3	643.8	640.7	648.9	660.2	664.3	672.6	679.7	678.7	676.7	674.6
52.5°	584.3	579.1	587.3	595.5	607.9	609.9	613.0	616.1	615.1	610.9	608.9
55°	519.6	523.7	530.9	533.9	543.2	542.2	543.2	543.2	539.1	537.0	533.9
57.5°	461.0	462.1	466.2	467.2	472.3	470.3	469.2	467.2	461.0	460.0	456.9
60°	401.5	399.4	408.7	401.5	405.6	401.5	400.5	395.3	389.2	388.1	386.1
62.5°	345.0	340.9	347.1	344.0	346.0	341.9	339.9	333.7	328.6	327.6	326.5
65°	294.7	292.6	298.8	297.8	299.8	294.7	292.6	288.5	284.4	283.4	282.4
67.5°	252.6	257.7	260.8	260.8	262.9	261.8	256.7	255.7	254.6	250.5	250.5
70°	221.8	224.9	231.0	232.1	231.0	233.1	229.0	228.0	226.9	224.9	223.8
72.5°	197.1	201.3	207.4	208.4	207.4	207.4	205.4	204.3	204.3	201.3	201.3
75°	177.6	182.8	187.9	187.9	187.9	185.9	183.8	183.8	181.7	180.7	178.7
77.5°	161.2	167.4	171.5	170.4	169.4	167.4	167.4	164.3	161.2	161.2	159.2
80°	148.9	153.0	156.1	155.0	154.0	150.9	149.9	146.8	144.8	141.7	141.7
82.5°	135.5	140.7	142.7	141.7	139.6	136.6	135.5	133.5	131.4	130.4	128.4
85°	124.2	129.4	130.4	128.4	126.3	124.2	123.2	122.2	121.2	119.1	119.1
87.5°	112.9	118.1	118.1	117.1	115.0	114.0	112.9	111.9	110.9	109.9	108.8
90°	103.7	107.8	107.8	106.8	105.8	104.7	103.7	102.7	101.7	100.6	100.6
92.5°	94.5	98.6	98.6	97.5	96.5	95.5	95.5	94.5	93.4	92.4	91.4
95°	86.3	90.4	90.4	90.4	89.3	88.3	88.3	87.3	86.3	86.3	85.2
97.5°	78.0	82.1	82.1	82.1	81.1	80.1	80.1	79.1	79.1	79.1	78.0
100°	70.8	73.9	75.0	75.0	73.9	73.9	73.9	72.9	72.9	72.9	71.9
102.5°	63.7	66.7	68.8	68.8	68.8	67.8	67.8	67.8	67.8	67.8	66.7
105°	57.5	60.6	62.6	63.7	63.7	63.7	63.7	63.7	63.7	63.7	63.7
107.5°	52.4	55.4	57.5	58.5	59.6	59.6	60.6	60.6	60.6	60.6	60.6
110°	47.2	50.3	53.4	54.4	55.4	56.5	56.5	57.5	56.5	56.5	56.5



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	42.1	46.2	48.3	50.3	51.3	52.4	53.4	53.4	53.4	53.4	53.4
115°	38.0	42.1	44.2	46.2	48.3	49.3	49.3	50.3	50.3	50.3	49.3
117.5°	33.9	38.0	40.0	42.1	43.1	45.2	46.2	46.2	46.2	46.2	45.2
120°	30.8	33.9	35.9	38.0	40.0	41.1	42.1	42.1	42.1	42.1	42.1
122.5°	26.7	29.8	32.9	34.9	35.9	37.0	38.0	38.0	38.0	38.0	38.0
125°	23.6	26.7	28.8	30.8	31.8	33.9	33.9	33.9	33.9	33.9	33.9
127.5°	20.5	23.6	25.7	27.7	28.8	29.8	30.8	30.8	30.8	30.8	30.8
130°	17.5	20.5	22.6	24.6	25.7	26.7	26.7	27.7	27.7	27.7	27.7
132.5°	15.4	17.5	19.5	21.6	22.6	23.6	23.6	24.6	24.6	24.6	24.6
135°	12.3	15.4	16.4	18.5	19.5	20.5	20.5	21.6	21.6	21.6	21.6
137.5°	10.3	12.3	14.4	16.4	17.5	17.5	18.5	18.5	19.5	19.5	19.5
140°	8.2	9.2	12.3	13.3	14.4	15.4	16.4	16.4	16.4	16.4	16.4
142.5°	6.2	8.2	9.2	11.3	12.3	13.3	14.4	14.4	14.4	14.4	14.4
145°	5.1	6.2	7.2	9.2	10.3	11.3	12.3	12.3	12.3	12.3	12.3
147.5°	4.1	5.1	6.2	7.2	8.2	9.2	10.3	10.3	10.3	10.3	10.3
150°	3.1	4.1	5.1	5.1	6.2	7.2	8.2	9.2	9.2	9.2	9.2
152.5°	3.1	3.1	4.1	4.1	5.1	6.2	7.2	7.2	7.2	7.2	7.2
155°	2.1	3.1	3.1	3.1	4.1	4.1	5.1	6.2	6.2	6.2	6.2
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9
2.5°	1987.9	1992.0	1989.9	1986.9	1985.8	1991.0	1985.8	1962.2	1971.5	1972.5	1979.7
5°	1984.8	1987.9	1985.8	1983.8	1980.7	1986.9	1980.7	1956.1	1965.3	1966.3	1973.5
7.5°	2005.3	2006.4	2006.4	2001.2	1993.0	1996.1	1987.9	1960.2	1965.3	1965.3	1970.4
10°	2056.7	2058.7	2061.8	2048.5	2038.2	2030.0	2018.7	1984.8	1983.8	1975.6	1975.6
12.5°	2123.4	2118.3	2113.2	2107.0	2098.8	2088.5	2072.1	2032.0	2018.7	2005.3	1992.0
15°	2142.9	2140.9	2139.9	2136.8	2131.6	2128.6	2116.2	2076.2	2056.7	2040.3	2016.6
17.5°	2091.6	2095.7	2109.1	2110.1	2116.2	2128.6	2126.5	2098.8	2081.3	2074.1	2045.4
20°	1999.2	2000.2	2016.6	2023.8	2050.5	2071.1	2086.5	2083.4	2079.3	2087.5	2065.9
22.5°	1888.3	1895.5	1912.9	1924.2	1949.9	1973.5	1998.2	2011.5	2033.1	2067.0	2062.8
25°	1737.4	1746.6	1771.2	1789.7	1825.7	1861.6	1894.5	1918.1	1943.7	2008.4	2030.0
27.5°	1556.6	1571.0	1602.8	1621.3	1671.6	1708.6	1755.8	1802.0	1838.0	1911.9	1956.1
30°	1366.7	1379.0	1412.9	1438.6	1481.7	1532.0	1591.5	1657.3	1716.8	1791.8	1847.2
32.5°	1189.0	1202.4	1230.1	1252.7	1301.0	1343.1	1408.8	1489.9	1545.3	1649.0	1723.0
35°	1034.0	1046.3	1065.8	1085.3	1125.4	1168.5	1225.0	1304.0	1374.9	1482.7	1576.1
37.5°	925.1	927.2	938.5	949.8	979.6	1012.4	1056.6	1126.4	1192.1	1308.1	1410.8
40°	847.1	847.1	853.3	856.4	869.7	889.2	916.9	971.4	1025.8	1114.1	1239.4
42.5°	798.9	796.8	796.8	797.8	796.8	806.0	822.5	848.1	896.4	969.3	1066.8
45°	762.9	758.8	755.7	748.5	744.4	744.4	745.5	754.7	782.4	829.7	908.7
47.5°	722.9	721.8	716.7	708.5	701.3	696.2	688.0	684.9	693.1	719.8	773.2
50°	676.7	671.5	666.4	660.2	652.0	646.9	631.5	632.5	625.3	637.6	665.4
52.5°	608.9	604.8	602.7	597.6	594.5	592.5	580.1	567.8	564.7	566.8	577.1
55°	533.9	536.0	527.8	531.9	530.9	521.6	516.5	507.2	504.2	503.1	508.3
57.5°	455.9	458.0	452.8	456.9	456.9	451.8	448.7	448.7	441.5	435.4	442.6
60°	385.1	380.9	384.0	389.2	389.2	386.1	384.0	384.0	378.9	376.8	382.0
62.5°	327.6	323.4	326.5	331.7	332.7	330.6	328.6	328.6	322.4	322.4	326.5
65°	283.4	284.4	283.4	287.5	287.5	288.5	286.5	284.4	277.2	280.3	279.3
67.5°	251.6	250.5	250.5	254.6	253.6	255.7	253.6	250.5	245.4	241.3	240.3
70°	224.9	223.8	223.8	225.9	226.9	226.9	225.9	223.8	216.7	212.5	209.5
72.5°	201.3	200.2	201.3	202.3	203.3	204.3	203.3	201.3	195.1	190.0	184.8
75°	179.7	178.7	181.7	181.7	182.8	182.8	183.8	182.8	177.6	171.5	165.3
77.5°	158.1	159.2	162.2	163.3	165.3	166.3	167.4	167.4	162.2	157.1	148.9
80°	140.7	142.7	144.8	145.8	147.9	150.9	152.0	153.0	148.9	143.8	134.5
82.5°	128.4	129.4	131.4	132.5	135.5	136.6	137.6	139.6	137.6	132.5	122.2
85°	118.1	119.1	121.2	121.2	123.2	125.3	126.3	127.3	126.3	121.2	110.9
87.5°	108.8	109.9	110.9	111.9	112.9	114.0	115.0	116.0	115.0	109.9	100.6
90°	100.6	100.6	101.7	101.7	102.7	103.7	105.8	105.8	104.7	100.6	91.4
92.5°	91.4	92.4	92.4	93.4	94.5	95.5	96.5	96.5	95.5	91.4	83.2
95°	85.2	85.2	86.3	86.3	87.3	87.3	88.3	88.3	87.3	83.2	75.0
97.5°	78.0	78.0	78.0	78.0	79.1	79.1	80.1	80.1	79.1	75.0	67.8
100°	71.9	71.9	71.9	71.9	71.9	72.9	72.9	72.9	71.9	67.8	60.6
102.5°	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	64.7	61.6	54.4
105°	63.7	63.7	63.7	62.6	62.6	62.6	61.6	61.6	58.5	55.4	49.3
107.5°	59.6	59.6	59.6	58.5	58.5	57.5	56.5	56.5	53.4	50.3	44.2
110°	56.5	56.5	56.5	55.4	54.4	53.4	52.4	51.3	48.3	44.2	39.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	53.4	53.4	52.4	52.4	51.3	50.3	48.3	47.2	44.2	40.0	34.9
115°	49.3	49.3	49.3	48.3	47.2	46.2	45.2	43.1	40.0	35.9	30.8
117.5°	45.2	45.2	45.2	44.2	43.1	42.1	41.1	39.0	35.9	31.8	27.7
120°	41.1	41.1	41.1	40.0	39.0	38.0	37.0	34.9	31.8	28.8	23.6
122.5°	38.0	38.0	37.0	35.9	34.9	33.9	32.9	30.8	28.8	24.6	20.5
125°	33.9	33.9	32.9	32.9	31.8	30.8	29.8	27.7	24.6	21.6	18.5
127.5°	30.8	29.8	29.8	29.8	28.8	27.7	25.7	24.6	21.6	18.5	15.4
130°	26.7	26.7	26.7	25.7	25.7	24.6	22.6	20.5	18.5	16.4	13.3
132.5°	23.6	23.6	23.6	23.6	22.6	21.6	19.5	18.5	16.4	13.3	11.3
135°	21.6	21.6	20.5	20.5	19.5	18.5	17.5	15.4	13.3	11.3	9.2
137.5°	18.5	18.5	18.5	17.5	17.5	16.4	14.4	13.3	12.3	10.3	8.2
140°	16.4	16.4	15.4	15.4	14.4	14.4	13.3	11.3	10.3	8.2	7.2
142.5°	14.4	14.4	13.3	13.3	12.3	12.3	11.3	10.3	8.2	7.2	5.1
145°	12.3	12.3	11.3	11.3	11.3	10.3	9.2	8.2	7.2	6.2	5.1
147.5°	10.3	10.3	10.3	9.2	9.2	8.2	8.2	7.2	6.2	5.1	4.1
150°	9.2	9.2	8.2	8.2	8.2	7.2	6.2	6.2	5.1	4.1	3.1
152.5°	7.2	7.2	7.2	7.2	6.2	6.2	5.1	5.1	4.1	3.1	3.1
155°	6.2	6.2	6.2	5.1	5.1	5.1	4.1	4.1	3.1	3.1	2.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9	1987.9
2.5°	1976.6	1975.6	1984.8	1983.8	1971.5	1989.9	2002.3
5°	1971.5	1970.4	1978.6	1980.7	1967.4	1986.9	2000.2
7.5°	1967.4	1966.3	1975.6	1978.6	1965.3	1982.8	1997.1
10°	1968.4	1963.2	1971.5	1973.5	1961.2	1979.7	1992.0
12.5°	1975.6	1963.2	1966.3	1966.3	1955.0	1971.5	1984.8
15°	1993.0	1967.4	1963.2	1960.2	1945.8	1961.2	1974.5
17.5°	2012.5	1977.6	1963.2	1953.0	1935.5	1948.9	1963.2
20°	2032.0	1988.9	1965.3	1948.9	1925.3	1937.6	1947.8
22.5°	2041.3	1999.2	1967.4	1942.7	1912.9	1919.1	1930.4
25°	2029.0	1995.1	1963.2	1933.5	1897.5	1898.6	1907.8
27.5°	1983.8	1974.5	1954.0	1924.2	1885.2	1880.1	1887.3
30°	1906.8	1932.4	1933.5	1911.9	1870.8	1860.6	1863.6
32.5°	1799.0	1856.5	1890.3	1886.2	1850.3	1835.9	1838.0
35°	1674.7	1746.6	1820.5	1845.2	1819.5	1808.2	1804.1
37.5°	1525.8	1622.3	1720.9	1781.5	1777.4	1770.2	1766.1
40°	1361.5	1477.6	1594.6	1691.1	1720.9	1720.9	1723.0
42.5°	1186.0	1321.5	1449.8	1572.0	1641.9	1657.3	1663.4
45°	1016.5	1153.1	1292.7	1433.4	1526.9	1575.1	1592.6
47.5°	862.5	1000.1	1132.6	1286.6	1410.8	1473.5	1501.2
50°	731.1	833.8	973.4	1126.4	1261.9	1339.0	1393.4
52.5°	622.2	702.3	824.5	967.2	1103.8	1209.6	1259.9
55°	530.9	585.3	689.0	812.2	942.6	1052.5	1111.0
57.5°	453.8	497.0	567.8	670.5	780.4	889.2	951.8
60°	386.1	415.9	464.1	545.2	638.7	732.1	792.7
62.5°	327.6	347.1	378.9	438.4	511.3	584.3	640.7
65°	282.4	290.6	308.0	345.0	400.5	455.9	504.2
67.5°	238.2	243.4	256.7	279.3	307.0	347.1	378.9
70°	205.4	205.4	206.4	219.7	234.1	259.8	282.4
72.5°	178.7	175.6	169.4	172.5	175.6	190.0	204.3
75°	157.1	149.9	139.6	135.5	133.5	135.5	143.8
77.5°	138.6	128.4	116.0	105.8	97.5	94.5	101.7
80°	123.2	110.9	96.5	83.2	69.8	62.6	65.7
82.5°	110.9	95.5	80.1	64.7	49.3	39.0	39.0
85°	97.5	83.2	66.7	50.3	34.9	21.6	19.5
87.5°	88.3	72.9	55.4	40.0	24.6	11.3	6.2
90°	79.1	63.7	47.2	31.8	17.5	5.1	0.0
92.5°	70.8	56.5	41.1	25.7	12.3	3.1	0.0
95°	63.7	50.3	34.9	21.6	10.3	2.1	1.0
97.5°	56.5	44.2	30.8	17.5	7.2	2.1	1.0
100°	51.3	39.0	26.7	14.4	6.2	1.0	1.0
102.5°	45.2	34.9	22.6	12.3	5.1	1.0	1.0
105°	40.0	30.8	19.5	10.3	4.1	1.0	1.0
107.5°	35.9	26.7	17.5	9.2	4.1	1.0	1.0
110°	31.8	23.6	15.4	8.2	3.1	1.0	1.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-52HL-LC-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	28.8	20.5	13.3	7.2	2.1	1.0	1.0
115°	24.6	18.5	11.3	6.2	2.1	1.0	1.0
117.5°	21.6	15.4	10.3	5.1	2.1	1.0	1.0
120°	18.5	13.3	8.2	4.1	1.0	1.0	1.0
122.5°	16.4	11.3	7.2	4.1	1.0	1.0	1.0
125°	14.4	10.3	6.2	3.1	1.0	1.0	1.0
127.5°	12.3	8.2	5.1	2.1	1.0	1.0	1.0
130°	10.3	7.2	4.1	2.1	1.0	1.0	1.0
132.5°	8.2	6.2	4.1	2.1	1.0	1.0	1.0
135°	7.2	5.1	3.1	2.1	1.0	1.0	1.0
137.5°	6.2	4.1	2.1	2.1	2.1	1.0	1.0
140°	5.1	3.1	2.1	2.1	2.1	2.1	1.0
142.5°	4.1	3.1	2.1	2.1	2.1	2.1	1.0
145°	3.1	2.1	2.1	2.1	2.1	2.1	1.0
147.5°	3.1	2.1	2.1	2.1	2.1	2.1	1.0
150°	2.1	2.1	2.1	2.1	2.1	2.1	2.1
152.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1
155°	2.1	2.1	2.1	2.1	2.1	2.1	2.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)