

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-LD5-54HL-LN-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 (P33519)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4SNLED-LD5-54HL-LN-UNV-L950-CD1-U
Description: 4FT LINEAR SNLED LED FIXTURE
NARROW LENS
Light Source: -
Ballast/Driver: -

Summary

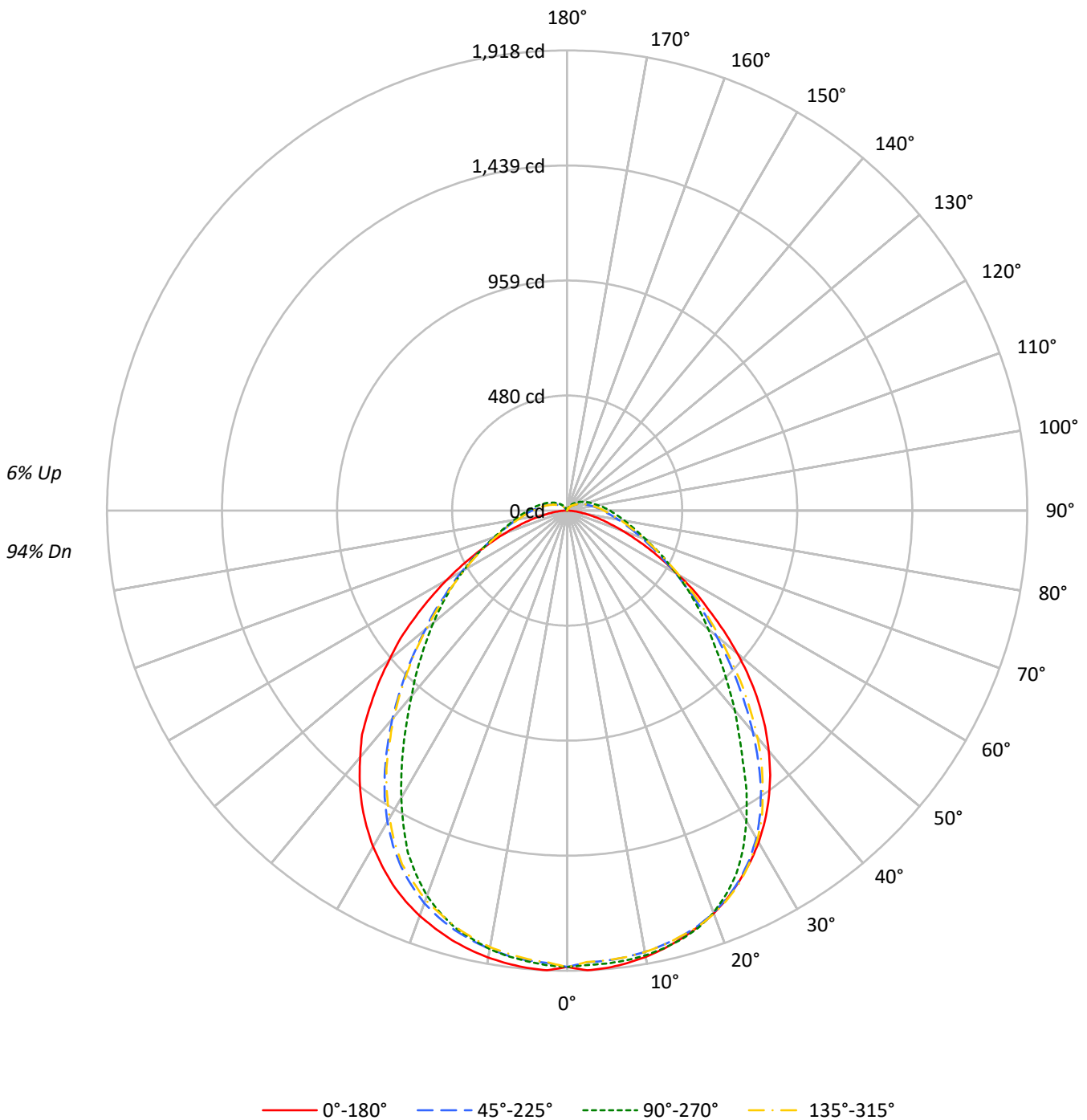
Lumens per Lamp: N/A
Luminaire Lumens: 4814.0 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')
CIE Type: Direct

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-LD5-54HL-LN-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	114	114	114	114	108	108	108	102	102	102	96	96	96	94				
1	107	103	98	95	104	100	96	92	94	91	88	89	87	85	85	83	81	79				
2	98	90	84	78	95	88	82	77	83	78	74	79	75	72	75	72	69	67				
3	90	80	72	66	87	78	71	65	74	68	63	71	66	61	67	63	60	57				
4	83	72	63	57	80	70	62	56	67	60	55	64	58	53	61	56	52	50				
5	77	64	56	50	74	63	55	49	60	53	48	58	52	47	55	50	46	44				
6	71	58	50	44	69	57	49	43	55	48	42	52	46	42	50	45	41	39				
7	66	53	45	39	64	52	44	39	50	43	38	48	42	37	46	41	37	35				
8	62	49	41	35	60	48	40	35	46	39	34	44	38	34	43	37	33	31				
9	58	45	37	32	56	44	37	31	42	36	31	41	35	30	40	34	30	28				
10	54	42	34	29	53	41	34	29	39	33	28	38	32	28	37	31	27	26				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	15372	15372	15372	15372
5°	15481	14882	15481	14816
10°	15412	14487	15438	14286
15°	15313	14054	15383	13688
20°	15196	13498	15285	12927
25°	14952	12671	15118	11926
30°	14635	11458	14827	10608
35°	14142	9972	14414	9285
40°	13434	8721	13789	8092
45°	12499	7581	12906	7147
50°	11224	6662	11718	6325
55°	9709	5883	10415	5586
60°	8166	5164	8903	4868
65°	6693	4567	7369	4234
70°	5327	4052	5964	3749
75°	4183	3741	4712	3442
80°	3020	3610	3558	3299
85°	1858	3631	2500	3337



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.3	3.7
10°-20°	517.1	10.7
20°-30°	766.4	15.9
30°-40°	851.4	17.7
40°-50°	771.8	16.0
50°-60°	598.1	12.4
60°-70°	406.1	8.4
70°-80°	258.4	5.4
80°-90°	165.2	3.4
90°-100°	111.4	2.3
100°-110°	76.3	1.6
110°-120°	50.9	1.1
120°-130°	31.6	0.7
130°-140°	17.5	0.4
140°-150°	8.2	0.2
150°-160°	3.0	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1463.8	30.4
0°-40°	2315.3	48.1
0°-60°	3685.2	76.6
0°-90°	4514.9	93.8
90°-120°	238.5	5.0
90°-150°	295.9	6.1
90°-180°	299.0	6.2
0°-180°	4814.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	1902	1902	1902	1902	1902	
5°	1914	1895	1914	1886	1914	182
15°	1846	1849	1854	1801	1846	521
25°	1701	1670	1720	1572	1701	784
35°	1465	1276	1493	1189	1465	914
45°	1128	912	1165	860	1128	866
55°	720	641	772	609	720	648
65°	374	431	411	400	374	375
75°	150	288	168	265	150	161
85°	27	207	37	190	27	33
90°	0	179	2	163	0	2
95°	1	153	0	142	1	1
105°	1	112	0	106	1	1
115°	1	85	0	78	1	1
125°	1	63	1	56	1	1
135°	1	44	1	36	1	1
145°	1	28	1	20	1	1
155°	1	16	1	7	1	1
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2
2.5°	1917.9	1915.8	1913.7	1910.6	1913.7	1922.1	1916.9	1905.4	1903.3	1884.4	1892.8
5°	1913.7	1910.6	1908.5	1905.4	1909.5	1920.0	1914.8	1904.3	1901.2	1883.4	1892.8
7.5°	1903.3	1901.2	1898.0	1898.0	1902.2	1912.7	1908.5	1897.0	1894.9	1877.1	1887.6
10°	1888.6	1887.6	1885.5	1885.5	1889.7	1902.2	1897.0	1886.5	1884.4	1867.7	1879.2
12.5°	1869.8	1870.8	1867.7	1867.7	1874.0	1886.5	1882.3	1870.8	1868.7	1854.1	1865.6
15°	1845.7	1846.8	1844.7	1845.7	1852.0	1866.6	1861.4	1850.9	1848.9	1837.3	1846.8
17.5°	1818.5	1819.6	1819.6	1818.5	1825.8	1840.5	1836.3	1826.9	1823.7	1814.3	1825.8
20°	1787.1	1787.1	1787.1	1787.1	1795.5	1810.1	1804.9	1797.6	1791.3	1784.0	1793.4
22.5°	1748.4	1747.4	1748.4	1751.5	1759.9	1771.4	1768.3	1759.9	1750.5	1746.3	1753.6
25°	1701.3	1704.5	1705.5	1708.6	1719.1	1728.5	1725.4	1717.0	1702.4	1699.2	1701.3
27.5°	1652.1	1654.2	1657.4	1656.3	1671.0	1680.4	1674.1	1666.8	1645.9	1642.7	1640.6
30°	1596.7	1599.8	1601.9	1600.9	1612.4	1622.8	1616.6	1607.2	1578.9	1576.8	1560.1
32.5°	1533.9	1537.0	1539.1	1539.1	1555.9	1560.1	1548.6	1535.0	1504.6	1497.3	1482.6
35°	1464.9	1468.0	1469.0	1469.0	1485.8	1484.7	1470.1	1451.2	1417.8	1408.3	1383.2
37.5°	1390.6	1392.7	1393.7	1400.0	1407.3	1401.0	1382.2	1358.1	1333.0	1306.9	1279.7
40°	1306.9	1310.0	1312.1	1316.3	1323.6	1316.3	1289.1	1259.8	1232.6	1203.3	1176.1
42.5°	1221.1	1230.5	1228.4	1227.3	1231.5	1211.6	1190.7	1157.2	1130.0	1099.7	1072.5
45°	1127.9	1126.9	1132.1	1134.2	1133.2	1116.4	1087.1	1056.8	1029.6	998.2	975.2
47.5°	1029.6	1028.5	1032.7	1034.8	1028.5	1010.7	987.7	953.2	930.2	903.0	885.2
50°	926.0	926.0	932.3	926.0	922.9	905.1	886.2	851.7	833.9	809.9	799.4
52.5°	822.4	831.8	825.5	823.5	820.3	802.5	787.9	759.6	745.0	734.5	722.0
55°	719.9	730.3	726.1	723.0	722.0	707.3	693.7	672.8	663.4	656.0	648.7
57.5°	633.0	632.0	629.9	626.7	627.8	616.3	602.7	591.2	587.0	583.8	585.9
60°	532.6	540.9	537.8	538.9	539.9	537.8	526.3	519.0	520.0	521.1	524.2
62.5°	449.9	457.2	462.5	458.3	460.4	463.5	457.2	455.1	459.3	463.5	467.7
65°	373.5	380.9	386.1	385.0	391.3	397.6	396.6	398.6	408.1	413.3	418.5
67.5°	304.5	311.8	319.1	320.2	329.6	339.0	343.2	350.5	361.0	368.3	374.6
70°	244.8	251.1	259.5	264.7	277.3	289.8	297.2	311.8	318.1	328.5	332.7
72.5°	191.5	196.7	208.2	220.8	231.2	246.9	261.6	274.1	283.6	295.1	300.3
75°	149.6	151.7	164.3	178.9	193.6	211.4	227.1	240.7	253.2	264.7	273.1
77.5°	109.9	113.0	124.5	144.4	161.1	180.0	197.8	212.4	226.0	237.5	249.0
80°	76.4	82.7	95.2	115.1	133.9	154.9	171.6	188.3	203.0	214.5	226.0
82.5°	49.2	54.4	72.2	92.1	112.0	132.9	150.7	167.4	183.1	195.7	206.1
85°	27.2	34.5	52.3	73.2	93.1	114.0	132.9	149.6	165.3	176.8	187.3
87.5°	10.5	20.9	37.7	57.5	77.4	97.3	117.2	132.9	148.6	161.1	170.6
90°	0.0	12.6	28.3	48.1	68.0	87.9	106.7	123.5	138.1	149.6	160.1
92.5°	1.0	8.4	22.0	38.7	57.5	76.4	94.2	110.9	125.6	137.1	146.5
95°	1.0	6.3	17.8	33.5	50.2	68.0	84.8	100.4	114.0	125.6	135.0
97.5°	1.0	4.2	14.6	29.3	43.9	61.7	77.4	92.1	104.6	116.1	123.5
100°	1.0	4.2	12.6	25.1	39.8	55.5	70.1	84.8	96.3	105.7	114.0
102.5°	1.0	3.1	10.5	22.0	35.6	49.2	63.8	77.4	87.9	97.3	105.7
105°	1.0	3.1	9.4	18.8	31.4	45.0	57.5	70.1	81.6	90.0	97.3
107.5°	1.0	2.1	8.4	15.7	27.2	40.8	53.4	63.8	74.3	82.7	90.0
110°	1.0	2.1	7.3	14.6	24.1	36.6	48.1	58.6	68.0	76.4	82.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.0	2.1	6.3	13.6	22.0	32.4	43.9	53.4	62.8	70.1	76.4
115°	1.0	2.1	6.3	12.6	19.9	28.3	38.7	49.2	56.5	64.9	70.1
117.5°	1.0	2.1	5.2	10.5	18.8	26.2	35.6	43.9	52.3	59.6	64.9
120°	1.0	2.1	5.2	9.4	16.7	24.1	31.4	39.8	48.1	53.4	58.6
122.5°	1.0	2.1	4.2	9.4	14.6	22.0	28.3	35.6	42.9	49.2	54.4
125°	1.0	2.1	4.2	8.4	13.6	19.9	26.2	31.4	38.7	43.9	49.2
127.5°	1.0	2.1	4.2	7.3	12.6	17.8	24.1	29.3	34.5	39.8	43.9
130°	1.0	2.1	3.1	6.3	11.5	15.7	20.9	27.2	31.4	35.6	39.8
132.5°	1.0	2.1	3.1	6.3	9.4	13.6	18.8	24.1	28.3	32.4	35.6
135°	1.0	2.1	3.1	5.2	8.4	12.6	15.7	20.9	25.1	29.3	32.4
137.5°	1.0	2.1	3.1	5.2	7.3	10.5	13.6	17.8	22.0	25.1	29.3
140°	1.0	2.1	3.1	4.2	6.3	9.4	12.6	14.6	18.8	22.0	25.1
142.5°	1.0	2.1	3.1	4.2	6.3	8.4	10.5	12.6	15.7	18.8	22.0
145°	1.0	2.1	3.1	4.2	5.2	7.3	9.4	11.5	12.6	15.7	17.8
147.5°	1.0	2.1	3.1	4.2	4.2	6.3	8.4	9.4	11.5	12.6	14.6
150°	1.0	2.1	3.1	3.1	4.2	5.2	7.3	8.4	9.4	11.5	12.6
152.5°	1.0	2.1	3.1	3.1	4.2	5.2	6.3	7.3	8.4	9.4	10.5
155°	1.0	2.1	3.1	3.1	3.1	4.2	5.2	6.3	7.3	8.4	9.4
157.5°	2.1	2.1	2.1	3.1	3.1	4.2	4.2	5.2	6.3	6.3	7.3
160°	2.1	2.1	2.1	3.1	3.1	3.1	4.2	4.2	5.2	5.2	6.3
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°	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2
2.5°	1890.7	1893.8	1903.3	1903.3	1901.2	1899.1	1899.1	1895.9	1898.0	1902.2	1900.1
5°	1890.7	1893.8	1903.3	1903.3	1901.2	1899.1	1898.0	1894.9	1898.0	1902.2	1900.1
7.5°	1884.4	1888.6	1898.0	1898.0	1895.9	1894.9	1892.8	1890.7	1893.8	1898.0	1895.9
10°	1876.1	1880.2	1889.7	1889.7	1887.6	1887.6	1884.4	1882.3	1886.5	1889.7	1888.6
12.5°	1863.5	1868.7	1877.1	1876.1	1874.0	1875.0	1871.9	1867.7	1871.9	1875.0	1876.1
15°	1845.7	1852.0	1860.4	1858.3	1855.1	1857.2	1852.0	1848.9	1852.0	1858.3	1857.2
17.5°	1822.7	1826.9	1833.2	1833.2	1830.0	1827.9	1825.8	1822.7	1824.8	1829.0	1830.0
20°	1790.3	1795.5	1798.6	1795.5	1794.4	1791.3	1787.1	1784.0	1788.2	1794.4	1795.5
22.5°	1747.4	1748.4	1755.7	1748.4	1743.2	1742.1	1737.9	1731.7	1737.9	1743.2	1744.2
25°	1694.0	1699.2	1696.1	1683.5	1683.5	1675.2	1673.1	1669.9	1671.0	1680.4	1684.6
27.5°	1626.0	1628.1	1619.7	1609.2	1599.8	1594.6	1587.3	1588.3	1588.3	1600.9	1605.1
30°	1551.7	1540.2	1532.9	1516.1	1508.8	1496.2	1494.1	1494.1	1492.1	1498.3	1517.2
32.5°	1462.8	1447.1	1435.6	1419.9	1407.3	1394.7	1388.5	1391.6	1390.6	1406.3	1412.5
35°	1365.4	1356.0	1332.0	1312.1	1304.8	1285.9	1285.9	1276.5	1282.8	1300.6	1307.9
37.5°	1262.9	1248.3	1228.4	1206.4	1201.2	1186.5	1181.3	1176.1	1189.7	1192.8	1200.1
40°	1158.3	1144.7	1125.8	1104.9	1104.9	1087.1	1087.1	1087.1	1088.2	1094.5	1108.1
42.5°	1058.9	1044.2	1027.5	1012.8	1010.7	997.1	997.1	996.1	998.2	1003.4	1016.0
45°	962.6	951.1	933.3	926.0	927.0	912.4	915.5	912.4	916.6	921.8	926.0
47.5°	873.7	866.4	859.0	848.6	845.4	844.4	839.1	835.0	842.3	842.3	848.6
50°	791.0	786.8	782.6	776.4	777.4	773.2	767.0	767.0	772.2	773.2	777.4
52.5°	718.8	713.6	708.4	709.4	710.5	708.4	705.2	702.1	705.2	707.3	712.5
55°	646.6	642.4	647.7	645.6	647.7	645.6	643.5	641.4	646.6	643.5	648.7
57.5°	581.8	585.9	588.0	583.8	587.0	584.9	585.9	582.8	587.0	589.1	588.0
60°	522.1	528.4	525.3	526.3	530.5	528.4	524.2	527.3	531.5	532.6	531.5
62.5°	467.7	475.0	478.2	476.1	477.1	475.0	478.2	474.0	479.2	481.3	478.2
65°	418.5	426.9	429.0	429.0	429.0	426.9	430.0	431.1	433.2	433.2	431.1
67.5°	376.7	384.0	386.1	388.2	386.1	384.0	384.0	385.0	389.2	391.3	389.2
70°	339.0	346.3	347.4	347.4	348.4	350.5	346.3	348.4	351.6	352.6	351.6
72.5°	306.6	313.9	316.0	314.9	316.0	317.0	317.0	314.9	318.1	320.2	320.2
75°	280.4	284.6	286.7	286.7	287.7	288.8	288.8	287.7	289.8	290.9	291.9
77.5°	256.3	259.5	262.6	262.6	263.7	262.6	264.7	264.7	265.8	266.8	267.9
80°	232.3	236.5	238.6	239.6	241.7	242.7	242.7	242.7	243.8	244.8	244.8
82.5°	213.4	216.6	219.7	222.9	222.9	223.9	223.9	223.9	225.0	225.0	226.0
85°	194.6	198.8	201.9	204.0	205.1	206.1	206.1	207.2	207.2	207.2	208.2
87.5°	177.9	183.1	185.2	187.3	188.3	190.4	190.4	190.4	191.5	191.5	191.5
90°	166.4	171.6	173.7	175.8	176.8	177.9	177.9	178.9	178.9	180.0	180.0
92.5°	152.8	158.0	162.2	162.2	163.2	165.3	164.3	164.3	165.3	166.4	166.4
95°	142.3	146.5	149.6	150.7	151.7	151.7	151.7	152.8	151.7	152.8	152.8
97.5°	129.7	133.9	137.1	139.2	140.2	140.2	140.2	141.3	140.2	141.3	141.3
100°	119.3	123.5	126.6	127.7	129.7	129.7	129.7	129.7	129.7	129.7	130.8
102.5°	110.9	115.1	117.2	118.2	119.3	120.3	120.3	120.3	120.3	121.4	121.4
105°	102.5	106.7	108.8	109.9	110.9	112.0	112.0	112.0	113.0	113.0	112.0
107.5°	95.2	98.4	100.4	102.5	103.6	103.6	104.6	104.6	104.6	104.6	104.6
110°	87.9	91.0	94.2	96.3	96.3	97.3	97.3	98.4	98.4	97.3	98.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	80.6	84.8	86.8	88.9	90.0	91.0	91.0	91.0	91.0	91.0	91.0
115°	74.3	78.5	80.6	82.7	83.7	84.8	84.8	84.8	84.8	84.8	84.8
117.5°	69.1	73.2	75.3	76.4	77.4	78.5	79.5	79.5	79.5	79.5	78.5
120°	63.8	67.0	69.1	71.1	72.2	73.2	73.2	73.2	73.2	73.2	73.2
122.5°	58.6	61.7	63.8	65.9	67.0	68.0	68.0	68.0	68.0	68.0	68.0
125°	53.4	56.5	58.6	60.7	61.7	62.8	62.8	62.8	62.8	62.8	62.8
127.5°	48.1	51.3	54.4	55.5	56.5	57.5	57.5	57.5	58.6	57.5	57.5
130°	42.9	46.0	49.2	50.2	51.3	52.3	53.4	53.4	53.4	53.4	52.3
132.5°	38.7	41.9	43.9	45.0	47.1	47.1	48.1	48.1	48.1	48.1	47.1
135°	35.6	37.7	39.8	40.8	42.9	42.9	42.9	43.9	43.9	42.9	41.9
137.5°	31.4	33.5	35.6	36.6	37.7	38.7	38.7	39.8	38.7	38.7	38.7
140°	29.3	30.3	32.4	33.5	34.5	34.5	34.5	35.6	35.6	34.5	34.5
142.5°	25.1	27.2	29.3	30.3	31.4	31.4	31.4	31.4	31.4	31.4	31.4
145°	20.9	24.1	25.1	27.2	27.2	28.3	28.3	28.3	28.3	28.3	27.2
147.5°	17.8	19.9	23.0	24.1	24.1	25.1	25.1	25.1	25.1	25.1	24.1
150°	13.6	15.7	18.8	20.9	20.9	22.0	22.0	22.0	22.0	20.9	20.9
152.5°	11.5	13.6	14.6	16.7	17.8	17.8	17.8	18.8	17.8	17.8	17.8
155°	10.5	11.5	12.6	13.6	14.6	15.7	15.7	15.7	15.7	14.6	14.6
157.5°	8.4	9.4	10.5	11.5	12.6	13.6	13.6	13.6	13.6	13.6	12.6
160°	6.3	7.3	8.4	8.4	9.4	10.5	11.5	10.5	10.5	10.5	10.5
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-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2
2.5°	1898.0	1897.0	1900.1	1894.9	1879.2	1883.4	1881.3	1890.7	1892.8	1894.9	1904.3
5°	1898.0	1897.0	1899.1	1894.9	1878.1	1881.3	1879.2	1888.6	1890.7	1891.7	1901.2
7.5°	1893.8	1892.8	1895.9	1890.7	1872.9	1877.1	1874.0	1883.4	1884.4	1885.5	1893.8
10°	1885.5	1884.4	1886.5	1882.3	1864.5	1868.7	1864.5	1874.0	1874.0	1876.1	1882.3
12.5°	1872.9	1870.8	1875.0	1869.8	1849.9	1855.1	1853.0	1859.3	1860.4	1861.4	1867.7
15°	1855.1	1853.0	1856.2	1853.0	1835.2	1836.3	1833.2	1842.6	1843.6	1841.5	1847.8
17.5°	1829.0	1826.9	1833.2	1831.1	1813.3	1817.5	1816.4	1818.5	1821.6	1816.4	1824.8
20°	1796.5	1798.6	1800.7	1801.8	1788.2	1788.2	1787.1	1791.3	1794.4	1790.3	1796.5
22.5°	1748.4	1753.6	1759.9	1762.0	1752.6	1751.5	1757.8	1755.7	1758.9	1756.8	1761.0
25°	1687.7	1698.2	1704.5	1710.7	1705.5	1707.6	1717.0	1719.1	1719.1	1718.1	1722.2
27.5°	1612.4	1626.0	1637.5	1651.1	1645.9	1650.0	1665.7	1667.8	1672.0	1667.8	1676.2
30°	1522.4	1535.0	1556.9	1576.8	1578.9	1585.2	1607.2	1609.2	1620.8	1616.6	1619.7
32.5°	1432.4	1438.7	1463.8	1483.7	1496.2	1511.9	1536.0	1540.2	1555.9	1559.0	1559.0
35°	1319.4	1337.2	1360.2	1388.5	1404.2	1420.9	1453.3	1459.6	1482.6	1490.0	1498.3
37.5°	1224.2	1240.9	1255.6	1284.9	1313.1	1332.0	1358.1	1373.8	1397.9	1411.5	1422.0
40°	1122.7	1136.3	1152.0	1181.3	1205.4	1233.6	1259.8	1278.6	1308.9	1324.6	1338.2
42.5°	1026.4	1036.9	1053.6	1074.6	1099.7	1131.1	1156.2	1178.2	1210.6	1232.6	1248.3
45°	940.6	946.9	961.6	977.3	999.2	1031.7	1055.7	1084.0	1110.1	1133.2	1152.0
47.5°	860.1	868.4	875.8	886.2	906.1	926.0	954.2	981.4	1007.6	1032.7	1051.6
50°	785.8	785.8	797.3	804.6	818.2	836.0	858.0	876.8	909.3	927.0	951.1
52.5°	713.6	717.8	724.1	728.2	738.7	750.2	768.0	783.7	810.9	827.6	850.7
55°	649.8	654.0	657.1	659.2	665.5	679.1	685.3	697.9	716.7	730.3	750.2
57.5°	589.1	591.2	594.3	595.4	596.4	604.8	610.0	613.1	632.0	645.6	662.3
60°	533.6	533.6	536.8	535.7	534.7	538.9	537.8	540.9	552.5	560.8	568.2
62.5°	481.3	481.3	482.4	480.3	479.2	479.2	475.0	478.2	481.3	482.4	487.6
65°	433.2	438.4	434.2	435.3	429.0	426.9	424.8	418.5	417.5	413.3	415.4
67.5°	390.3	394.5	390.3	390.3	385.0	380.9	375.6	365.2	362.0	353.7	351.6
70°	355.7	352.6	354.7	351.6	345.3	340.1	332.7	324.4	313.9	303.4	296.1
72.5°	322.3	322.3	320.2	317.0	313.9	303.4	295.1	285.6	273.1	259.5	249.0
75°	289.8	290.9	290.9	287.7	282.5	273.1	263.7	250.1	236.5	220.8	207.2
77.5°	266.8	266.8	266.8	261.6	256.3	248.0	236.5	221.8	207.2	188.3	172.6
80°	244.8	243.8	243.8	237.5	232.3	222.9	211.4	196.7	181.0	161.1	143.3
82.5°	227.1	226.0	223.9	218.7	211.4	201.9	190.4	174.7	158.0	140.2	118.2
85°	208.2	207.2	205.1	199.8	192.5	184.2	171.6	155.9	139.2	119.3	98.4
87.5°	191.5	190.4	187.3	184.2	175.8	166.4	153.8	139.2	121.4	102.5	81.6
90°	180.0	177.9	175.8	171.6	164.3	153.8	141.3	125.6	107.8	88.9	68.0
92.5°	166.4	165.3	162.2	158.0	151.7	141.3	128.7	114.0	96.3	78.5	58.6
95°	152.8	151.7	149.6	145.4	139.2	129.7	118.2	103.6	86.8	69.1	51.3
97.5°	140.2	140.2	137.1	133.9	126.6	119.3	107.8	94.2	78.5	62.8	46.0
100°	129.7	129.7	126.6	122.4	117.2	109.9	98.4	85.8	71.1	56.5	39.8
102.5°	120.3	119.3	117.2	113.0	107.8	100.4	90.0	78.5	64.9	50.2	35.6
105°	112.0	110.9	108.8	104.6	100.4	92.1	83.7	72.2	58.6	45.0	31.4
107.5°	103.6	102.5	101.5	97.3	92.1	84.8	76.4	64.9	53.4	40.8	28.3
110°	96.3	95.2	93.1	88.9	83.7	77.4	69.1	59.6	48.1	36.6	25.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	90.0	88.9	86.8	82.7	78.5	71.1	63.8	53.4	43.9	33.5	22.0
115°	83.7	82.7	80.6	76.4	71.1	64.9	57.5	49.2	38.7	29.3	19.9
117.5°	77.4	76.4	74.3	71.1	65.9	59.6	52.3	43.9	34.5	27.2	17.8
120°	72.2	70.1	68.0	64.9	59.6	54.4	47.1	39.8	31.4	24.1	15.7
122.5°	67.0	64.9	62.8	59.6	54.4	49.2	41.9	35.6	29.3	22.0	14.6
125°	60.7	59.6	57.5	54.4	49.2	43.9	38.7	32.4	26.2	19.9	12.6
127.5°	55.5	54.4	52.3	48.1	43.9	39.8	34.5	29.3	23.0	16.7	11.5
130°	51.3	49.2	47.1	43.9	40.8	36.6	31.4	26.2	20.9	14.6	10.5
132.5°	46.0	43.9	41.9	39.8	36.6	32.4	28.3	23.0	18.8	13.6	9.4
135°	41.9	39.8	37.7	35.6	32.4	29.3	25.1	20.9	16.7	12.6	8.4
137.5°	36.6	35.6	34.5	32.4	29.3	26.2	23.0	17.8	14.6	11.5	7.3
140°	33.5	32.4	31.4	28.3	26.2	23.0	19.9	15.7	12.6	9.4	6.3
142.5°	30.3	29.3	27.2	25.1	23.0	20.9	16.7	14.6	11.5	8.4	6.3
145°	26.2	25.1	24.1	22.0	19.9	16.7	14.6	12.6	10.5	7.3	5.2
147.5°	24.1	23.0	20.9	18.8	16.7	14.6	13.6	11.5	8.4	6.3	4.2
150°	19.9	18.8	17.8	15.7	14.6	13.6	11.5	9.4	7.3	5.2	4.2
152.5°	16.7	15.7	14.6	14.6	12.6	11.5	9.4	8.4	6.3	5.2	3.1
155°	14.6	14.6	13.6	12.6	10.5	9.4	8.4	6.3	5.2	4.2	3.1
157.5°	12.6	11.5	10.5	10.5	9.4	8.4	6.3	5.2	4.2	4.2	3.1
160°	10.5	9.4	9.4	8.4	7.3	6.3	5.2	5.2	4.2	3.1	3.1
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-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2
2.5°	1905.4	1893.8	1904.3	1917.9	1917.9	1915.8	1913.7	1917.9	1928.4	1924.2	1911.6
5°	1902.2	1890.7	1900.1	1913.7	1913.7	1910.6	1908.5	1911.6	1923.1	1917.9	1906.4
7.5°	1895.9	1885.5	1891.7	1904.3	1904.3	1901.2	1899.1	1903.3	1912.7	1907.4	1894.9
10°	1884.4	1872.9	1880.2	1891.7	1890.7	1888.6	1885.5	1890.7	1899.1	1891.7	1877.1
12.5°	1869.8	1858.3	1864.5	1875.0	1874.0	1869.8	1867.7	1870.8	1878.1	1874.0	1858.3
15°	1849.9	1838.4	1843.6	1854.1	1850.9	1847.8	1843.6	1844.7	1854.1	1846.8	1830.0
17.5°	1825.8	1813.3	1817.5	1826.9	1823.7	1820.6	1815.4	1816.4	1826.9	1816.4	1798.6
20°	1796.5	1782.9	1786.1	1797.6	1792.3	1787.1	1781.9	1781.9	1792.3	1780.8	1761.0
22.5°	1765.1	1751.5	1753.6	1762.0	1757.8	1748.4	1743.2	1746.3	1751.5	1736.9	1716.0
25°	1726.4	1708.6	1711.8	1720.2	1717.0	1704.5	1699.2	1701.3	1699.2	1687.7	1665.7
27.5°	1681.4	1662.6	1664.7	1669.9	1665.7	1654.2	1648.0	1649.0	1644.8	1630.2	1605.1
30°	1624.9	1615.5	1614.5	1617.6	1611.3	1599.8	1592.5	1590.4	1589.4	1568.4	1538.1
32.5°	1567.4	1559.0	1553.8	1558.0	1550.6	1539.1	1526.6	1526.6	1516.1	1496.2	1470.1
35°	1508.8	1495.2	1490.0	1493.1	1484.7	1470.1	1459.6	1454.4	1438.7	1413.6	1385.3
37.5°	1433.5	1424.0	1417.8	1420.9	1411.5	1401.0	1381.1	1375.9	1359.2	1324.6	1289.1
40°	1351.8	1344.5	1338.2	1341.4	1330.9	1315.2	1297.4	1289.1	1270.2	1231.5	1203.3
42.5°	1264.0	1260.8	1253.5	1265.0	1244.1	1228.4	1210.6	1197.0	1178.2	1136.3	1103.9
45°	1170.8	1178.2	1161.4	1164.6	1151.0	1137.4	1118.5	1098.6	1079.8	1040.0	1003.4
47.5°	1072.5	1077.7	1066.2	1068.3	1053.6	1041.1	1024.3	999.2	978.3	943.8	911.3
50°	971.0	968.9	968.9	966.8	955.3	939.6	922.9	899.8	878.9	847.5	820.3
52.5°	863.2	867.4	869.5	874.7	860.1	850.7	824.5	804.6	788.9	756.5	733.5
55°	759.6	774.3	770.1	772.2	755.4	748.1	727.2	711.5	688.5	669.6	655.0
57.5°	665.5	668.6	670.7	673.8	666.5	651.9	635.1	622.6	604.8	589.1	578.6
60°	574.4	574.4	575.5	580.7	573.4	560.8	548.3	538.9	526.3	516.9	510.6
62.5°	488.6	496.0	497.0	492.8	483.4	477.1	468.8	463.5	455.1	452.0	449.9
65°	409.1	409.1	409.1	411.2	406.0	401.8	396.6	395.5	398.6	394.5	396.6
67.5°	342.1	339.0	336.9	338.0	335.9	333.8	332.7	335.9	342.1	342.1	347.4
70°	284.6	278.3	274.1	274.1	274.1	275.2	278.3	284.6	295.1	299.2	306.6
72.5°	237.5	223.9	217.6	217.6	218.7	222.9	232.3	243.8	253.2	261.6	271.0
75°	192.5	178.9	169.5	168.5	170.6	176.8	190.4	200.9	216.6	228.1	239.6
77.5°	155.9	139.2	127.7	126.6	129.7	139.2	155.9	169.5	187.3	199.8	212.4
80°	124.5	105.7	96.3	90.0	95.2	106.7	125.6	142.3	159.0	175.8	191.5
82.5°	99.4	81.6	67.0	60.7	67.0	82.7	100.4	120.3	137.1	154.9	170.6
85°	78.5	59.6	42.9	36.6	43.9	60.7	80.6	100.4	119.3	137.1	152.8
87.5°	61.7	42.9	26.2	17.8	27.2	45.0	63.8	83.7	103.6	121.4	137.1
90°	48.1	30.3	14.6	2.1	15.7	32.4	51.3	70.1	90.0	107.8	123.5
92.5°	40.8	23.0	8.4	0.0	9.4	24.1	41.9	60.7	78.5	96.3	112.0
95°	34.5	18.8	6.3	0.0	6.3	18.8	34.5	51.3	69.1	86.8	102.5
97.5°	29.3	14.6	4.2	0.0	4.2	14.6	28.3	45.0	60.7	77.4	92.1
100°	25.1	12.6	3.1	0.0	3.1	11.5	24.1	38.7	54.4	70.1	83.7
102.5°	22.0	10.5	2.1	0.0	2.1	9.4	19.9	33.5	47.1	61.7	75.3
105°	18.8	8.4	2.1	0.0	1.0	7.3	16.7	29.3	41.9	55.5	68.0
107.5°	16.7	7.3	2.1	0.0	1.0	6.3	14.6	25.1	37.7	49.2	60.7
110°	14.6	6.3	2.1	0.0	1.0	4.2	12.6	22.0	32.4	43.9	55.5



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	12.6	5.2	1.0	0.0	0.0	3.1	10.5	18.8	28.3	39.8	49.2
115°	11.5	5.2	1.0	0.0	0.0	2.1	8.4	16.7	25.1	35.6	43.9
117.5°	10.5	4.2	1.0	0.0	1.0	2.1	7.3	14.6	22.0	30.3	39.8
120°	9.4	4.2	1.0	0.0	1.0	1.0	5.2	12.6	18.8	27.2	34.5
122.5°	8.4	4.2	1.0	0.0	1.0	1.0	4.2	10.5	16.7	24.1	30.3
125°	7.3	3.1	2.1	1.0	1.0	1.0	3.1	8.4	14.6	19.9	27.2
127.5°	7.3	3.1	2.1	1.0	1.0	1.0	2.1	7.3	11.5	17.8	24.1
130°	6.3	3.1	2.1	1.0	1.0	1.0	1.0	5.2	10.5	14.6	19.9
132.5°	5.2	3.1	2.1	1.0	1.0	1.0	1.0	3.1	7.3	12.6	16.7
135°	5.2	3.1	2.1	1.0	1.0	1.0	1.0	2.1	5.2	9.4	13.6
137.5°	4.2	2.1	2.1	1.0	1.0	1.0	1.0	1.0	4.2	7.3	10.5
140°	4.2	2.1	2.1	1.0	1.0	1.0	1.0	1.0	3.1	5.2	8.4
142.5°	3.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	2.1	4.2	6.3
145°	3.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0	2.1	4.2
147.5°	3.1	3.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0	2.1	3.1
150°	3.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1
152.5°	3.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1
155°	3.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0	2.1	2.1
157.5°	3.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.1
160°	3.1	2.1	2.1	1.0	2.1	1.0	2.1	2.1	2.1	2.1	2.1
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-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2
2.5°	1907.4	1887.6	1898.0	1894.9	1899.1	1907.4	1906.4	1904.3	1904.3	1901.2	1897.0
5°	1901.2	1882.3	1891.7	1886.5	1891.7	1899.1	1898.0	1894.9	1897.0	1891.7	1886.5
7.5°	1888.6	1871.9	1880.2	1876.1	1880.2	1887.6	1884.4	1883.4	1885.5	1877.1	1874.0
10°	1874.0	1855.1	1864.5	1859.3	1864.5	1869.8	1867.7	1863.5	1867.7	1859.3	1856.2
12.5°	1850.9	1835.2	1841.5	1839.4	1842.6	1847.8	1843.6	1840.5	1842.6	1835.2	1829.0
15°	1825.8	1810.1	1815.4	1812.2	1814.3	1820.6	1813.3	1812.2	1810.1	1802.8	1800.7
17.5°	1793.4	1778.7	1784.0	1778.7	1781.9	1779.8	1778.7	1773.5	1773.5	1765.1	1758.9
20°	1753.6	1741.1	1737.9	1733.8	1737.9	1733.8	1727.5	1723.3	1722.2	1713.9	1708.6
22.5°	1707.6	1692.9	1695.0	1683.5	1684.6	1678.3	1667.8	1663.7	1659.5	1650.0	1642.7
25°	1652.1	1637.5	1627.0	1619.7	1610.3	1609.2	1595.6	1585.2	1584.1	1572.6	1571.6
27.5°	1589.4	1572.6	1564.3	1546.5	1535.0	1525.5	1514.0	1503.6	1498.3	1485.8	1477.4
30°	1517.2	1498.3	1477.4	1464.9	1447.1	1439.7	1419.9	1407.3	1403.1	1389.5	1383.2
32.5°	1435.6	1415.7	1398.9	1374.9	1355.0	1344.5	1324.6	1312.1	1306.9	1292.2	1283.8
35°	1346.6	1324.6	1304.8	1281.7	1266.0	1248.3	1224.2	1211.6	1200.1	1194.9	1188.6
37.5°	1253.5	1229.4	1206.4	1183.4	1169.8	1148.9	1127.9	1119.6	1106.0	1100.7	1094.5
40°	1157.2	1133.2	1111.2	1089.2	1073.5	1054.7	1035.9	1032.7	1018.1	1012.8	1008.7
42.5°	1062.0	1036.9	1011.8	996.1	984.6	965.8	953.2	950.1	937.5	934.4	934.4
45°	976.2	944.8	923.9	910.3	900.9	885.2	874.7	872.6	862.2	860.1	860.1
47.5°	884.1	854.8	839.1	830.8	822.4	810.9	804.6	804.6	794.2	792.1	791.0
50°	798.3	771.1	759.6	751.3	750.2	741.8	736.6	734.5	734.5	727.2	728.2
52.5°	716.7	703.1	693.7	688.5	682.2	677.0	672.8	672.8	669.6	664.4	666.5
55°	641.4	625.7	626.7	622.6	619.4	616.3	617.3	611.1	610.0	605.8	609.0
57.5°	566.1	566.1	564.0	560.8	555.6	557.7	557.7	557.7	552.5	549.3	552.5
60°	502.2	505.4	500.1	503.3	501.2	502.2	500.1	500.1	497.0	496.0	497.0
62.5°	445.7	451.0	448.9	453.1	451.0	452.0	454.1	449.9	447.8	445.7	447.8
65°	395.5	401.8	400.7	403.9	404.9	406.0	407.0	404.9	402.8	400.7	399.7
67.5°	351.6	357.8	362.0	363.1	364.1	367.3	366.2	364.1	362.0	358.9	357.8
70°	311.8	320.2	325.4	327.5	331.7	329.6	329.6	328.5	326.5	323.3	322.3
72.5°	278.3	287.7	293.0	295.1	299.2	299.2	298.2	297.2	295.1	291.9	290.9
75°	249.0	257.4	264.7	268.9	272.0	272.0	271.0	270.0	267.9	265.8	264.7
77.5°	226.0	233.3	239.6	244.8	246.9	248.0	246.9	244.8	244.8	243.8	242.7
80°	203.0	211.4	217.6	222.9	226.0	226.0	225.0	226.0	223.9	222.9	221.8
82.5°	183.1	192.5	199.8	205.1	207.2	208.2	207.2	208.2	206.1	206.1	206.1
85°	165.3	174.7	183.1	187.3	190.4	191.5	191.5	191.5	190.4	190.4	190.4
87.5°	150.7	160.1	168.5	172.6	175.8	176.8	176.8	177.9	175.8	175.8	175.8
90°	137.1	146.5	154.9	159.0	162.2	164.3	164.3	165.3	164.3	163.2	163.2
92.5°	124.5	135.0	143.3	147.5	150.7	153.8	153.8	154.9	152.8	152.8	152.8
95°	114.0	124.5	131.8	137.1	140.2	142.3	143.3	143.3	142.3	142.3	142.3
97.5°	104.6	114.0	121.4	126.6	129.7	130.8	131.8	132.9	131.8	131.8	131.8
100°	95.2	104.6	112.0	116.1	120.3	121.4	122.4	123.5	123.5	122.4	122.4
102.5°	86.8	96.3	102.5	107.8	110.9	113.0	114.0	114.0	114.0	114.0	114.0
105°	78.5	87.9	94.2	99.4	102.5	104.6	105.7	106.7	106.7	105.7	105.7
107.5°	71.1	79.5	86.8	91.0	95.2	97.3	98.4	98.4	99.4	98.4	98.4
110°	63.8	73.2	79.5	83.7	87.9	90.0	91.0	92.1	92.1	92.1	92.1



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	58.6	65.9	72.2	76.4	80.6	82.7	83.7	84.8	85.8	84.8	84.8
115°	52.3	59.6	65.9	70.1	73.2	75.3	77.4	78.5	78.5	79.5	78.5
117.5°	47.1	53.4	59.6	63.8	67.0	70.1	71.1	72.2	73.2	72.2	72.2
120°	41.9	48.1	53.4	57.5	60.7	63.8	64.9	65.9	67.0	65.9	65.9
122.5°	37.7	42.9	48.1	52.3	55.5	57.5	59.6	59.6	60.7	60.7	60.7
125°	33.5	38.7	42.9	47.1	50.2	52.3	53.4	54.4	54.4	55.5	55.5
127.5°	29.3	33.5	38.7	41.9	45.0	47.1	48.1	49.2	49.2	50.2	50.2
130°	25.1	29.3	33.5	36.6	39.8	41.9	42.9	43.9	45.0	45.0	45.0
132.5°	22.0	26.2	29.3	32.4	34.5	36.6	38.7	39.8	39.8	39.8	39.8
135°	17.8	22.0	25.1	28.3	30.3	32.4	33.5	35.6	35.6	35.6	35.6
137.5°	14.6	18.8	22.0	24.1	26.2	28.3	29.3	30.3	31.4	31.4	31.4
140°	11.5	14.6	17.8	20.9	23.0	24.1	26.2	26.2	27.2	27.2	27.2
142.5°	8.4	11.5	13.6	16.7	18.8	20.9	22.0	23.0	23.0	23.0	23.0
145°	6.3	8.4	10.5	12.6	15.7	16.7	17.8	18.8	19.9	19.9	19.9
147.5°	4.2	6.3	7.3	9.4	11.5	13.6	14.6	15.7	16.7	16.7	16.7
150°	3.1	4.2	6.3	7.3	8.4	10.5	12.6	12.6	13.6	13.6	12.6
152.5°	2.1	3.1	4.2	5.2	6.3	7.3	9.4	9.4	10.5	10.5	10.5
155°	2.1	2.1	2.1	3.1	4.2	5.2	6.3	7.3	7.3	7.3	7.3
157.5°	2.1	2.1	2.1	2.1	2.1	3.1	4.2	5.2	5.2	5.2	5.2
160°	2.1	2.1	1.0	1.0	2.1	2.1	2.1	2.1	3.1	3.1	3.1
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-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2
2.5°	1900.1	1902.2	1902.2	1900.1	1899.1	1903.3	1898.0	1878.1	1884.4	1886.5	1892.8
5°	1890.7	1892.8	1892.8	1892.8	1890.7	1894.9	1889.7	1869.8	1877.1	1880.2	1884.4
7.5°	1877.1	1878.1	1880.2	1879.2	1877.1	1883.4	1878.1	1858.3	1863.5	1868.7	1874.0
10°	1859.3	1859.3	1860.4	1862.5	1860.4	1865.6	1860.4	1842.6	1847.8	1850.9	1857.2
12.5°	1835.2	1837.3	1838.4	1837.3	1836.3	1840.5	1838.4	1821.6	1823.7	1830.0	1836.3
15°	1802.8	1802.8	1808.0	1806.0	1806.0	1810.1	1812.2	1793.4	1796.5	1806.0	1812.2
17.5°	1763.1	1764.1	1768.3	1770.4	1769.3	1776.7	1777.7	1763.1	1762.0	1773.5	1779.8
20°	1711.8	1713.9	1719.1	1723.3	1723.3	1731.7	1734.8	1725.4	1726.4	1739.0	1741.1
22.5°	1649.0	1649.0	1658.4	1664.7	1669.9	1675.2	1684.6	1676.2	1676.2	1692.9	1702.4
25°	1571.6	1578.9	1582.0	1594.6	1601.9	1616.6	1624.9	1626.0	1627.0	1642.7	1649.0
27.5°	1485.8	1487.9	1497.3	1511.9	1520.3	1533.9	1549.6	1552.7	1558.0	1578.9	1588.3
30°	1388.5	1394.7	1398.9	1419.9	1431.4	1449.2	1469.0	1476.4	1480.5	1508.8	1520.3
32.5°	1289.1	1291.2	1308.9	1320.5	1334.1	1352.9	1375.9	1389.5	1397.9	1427.2	1443.9
35°	1189.7	1193.9	1208.5	1223.1	1236.8	1255.6	1279.7	1298.5	1313.1	1339.3	1361.3
37.5°	1098.6	1109.1	1112.2	1126.9	1137.4	1156.2	1172.9	1200.1	1214.8	1242.0	1270.2
40°	1017.0	1020.2	1022.3	1036.9	1044.2	1062.0	1086.1	1103.9	1123.7	1143.6	1177.1
42.5°	936.5	938.6	941.7	950.1	958.4	971.0	988.8	1006.6	1027.5	1056.8	1078.8
45°	862.2	864.3	866.4	871.6	878.9	890.4	901.9	914.5	935.4	960.5	983.5
47.5°	793.1	797.3	797.3	798.3	803.6	813.0	821.4	837.1	848.6	862.2	888.3
50°	727.2	730.3	731.4	731.4	734.5	740.8	742.9	753.4	763.8	776.4	795.2
52.5°	665.5	665.5	664.4	668.6	668.6	672.8	673.8	680.1	687.4	701.0	709.4
55°	606.9	606.9	610.0	607.9	607.9	610.0	609.0	610.0	616.3	624.7	632.0
57.5°	550.4	549.3	552.5	550.4	549.3	551.4	553.5	549.3	550.4	558.7	558.7
60°	493.9	494.9	498.0	496.0	496.0	496.0	493.9	491.8	489.7	494.9	497.0
62.5°	448.9	445.7	448.9	445.7	447.8	446.8	444.7	440.5	441.5	439.5	437.4
65°	401.8	401.8	402.8	399.7	401.8	401.8	398.6	397.6	391.3	389.2	384.0
67.5°	361.0	361.0	362.0	359.9	359.9	361.0	357.8	354.7	348.4	345.3	338.0
70°	325.4	325.4	325.4	324.4	324.4	324.4	322.3	318.1	311.8	306.6	297.2
72.5°	293.0	294.0	293.0	293.0	296.1	293.0	289.8	285.6	280.4	270.0	261.6
75°	266.8	267.9	266.8	266.8	266.8	265.8	264.7	258.4	252.2	243.8	231.2
77.5°	243.8	243.8	244.8	243.8	243.8	242.7	239.6	234.4	227.1	219.7	205.1
80°	221.8	222.9	223.9	225.0	222.9	221.8	218.7	214.5	205.1	196.7	182.1
82.5°	206.1	205.1	206.1	207.2	205.1	204.0	200.9	195.7	188.3	176.8	162.2
85°	190.4	189.4	189.4	190.4	189.4	187.3	184.2	178.9	171.6	160.1	145.4
87.5°	174.7	175.8	176.8	175.8	174.7	172.6	169.5	164.3	155.9	146.5	130.8
90°	163.2	163.2	163.2	163.2	162.2	160.1	156.9	150.7	143.3	131.8	118.2
92.5°	152.8	152.8	152.8	152.8	151.7	148.6	145.4	140.2	131.8	120.3	107.8
95°	142.3	143.3	142.3	142.3	140.2	139.2	133.9	128.7	121.4	109.9	96.3
97.5°	130.8	131.8	130.8	130.8	129.7	127.7	124.5	118.2	110.9	100.4	87.9
100°	122.4	122.4	121.4	121.4	120.3	118.2	114.0	108.8	101.5	91.0	78.5
102.5°	113.0	114.0	113.0	113.0	110.9	108.8	105.7	100.4	93.1	82.7	71.1
105°	105.7	105.7	104.6	104.6	102.5	100.4	97.3	91.0	84.8	75.3	63.8
107.5°	98.4	98.4	97.3	97.3	95.2	93.1	88.9	83.7	77.4	68.0	57.5
110°	91.0	91.0	91.0	90.0	87.9	84.8	81.6	76.4	70.1	61.7	51.3



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	85.8	84.8	83.7	82.7	80.6	78.5	74.3	69.1	62.8	55.5	46.0
115°	78.5	78.5	77.4	76.4	74.3	71.1	68.0	63.8	57.5	49.2	40.8
117.5°	72.2	72.2	71.1	70.1	68.0	64.9	61.7	57.5	51.3	43.9	36.6
120°	65.9	65.9	64.9	63.8	61.7	58.6	56.5	51.3	46.0	38.7	32.4
122.5°	60.7	59.6	59.6	57.5	56.5	53.4	50.2	46.0	40.8	34.5	28.3
125°	54.4	54.4	53.4	52.3	51.3	48.1	45.0	40.8	35.6	30.3	25.1
127.5°	49.2	49.2	48.1	47.1	46.0	42.9	39.8	36.6	31.4	26.2	20.9
130°	43.9	43.9	42.9	41.9	40.8	37.7	35.6	31.4	27.2	23.0	17.8
132.5°	39.8	39.8	38.7	37.7	35.6	33.5	31.4	27.2	24.1	19.9	15.7
135°	35.6	34.5	34.5	33.5	31.4	29.3	27.2	24.1	19.9	16.7	12.6
137.5°	31.4	30.3	29.3	28.3	27.2	25.1	23.0	20.9	17.8	13.6	10.5
140°	27.2	26.2	26.2	25.1	23.0	22.0	19.9	16.7	14.6	11.5	8.4
142.5°	23.0	23.0	22.0	20.9	19.9	18.8	16.7	14.6	11.5	9.4	6.3
145°	19.9	18.8	18.8	17.8	16.7	14.6	13.6	11.5	9.4	7.3	5.2
147.5°	15.7	15.7	15.7	14.6	13.6	12.6	11.5	9.4	7.3	5.2	3.1
150°	12.6	12.6	12.6	11.5	10.5	9.4	8.4	7.3	5.2	3.1	2.1
152.5°	10.5	10.5	9.4	9.4	8.4	7.3	6.3	5.2	3.1	2.1	2.1
155°	7.3	7.3	7.3	6.3	6.3	5.2	4.2	3.1	2.1	2.1	2.1
157.5°	5.2	5.2	5.2	4.2	4.2	3.1	3.1	2.1	2.1	2.1	2.1
160°	3.1	3.1	3.1	3.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
0°	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2	1902.2
2.5°	1889.7	1888.6	1897.0	1897.0	1887.6	1902.2	1917.9
5°	1883.4	1882.3	1890.7	1890.7	1882.3	1897.0	1913.7
7.5°	1870.8	1871.9	1880.2	1882.3	1871.9	1885.5	1903.3
10°	1857.2	1856.2	1865.6	1867.7	1859.3	1871.9	1888.6
12.5°	1835.2	1835.2	1844.7	1847.8	1839.4	1854.1	1869.8
15°	1812.2	1812.2	1818.5	1823.7	1816.4	1830.0	1845.7
17.5°	1782.9	1781.9	1788.2	1794.4	1787.1	1801.8	1818.5
20°	1745.3	1745.3	1752.6	1759.9	1754.7	1768.3	1787.1
22.5°	1705.5	1701.3	1713.9	1719.1	1716.0	1729.6	1748.4
25°	1655.3	1654.2	1666.8	1674.1	1669.9	1684.6	1701.3
27.5°	1600.9	1599.8	1612.4	1621.8	1619.7	1633.3	1652.1
30°	1535.0	1540.2	1551.7	1567.4	1562.2	1576.8	1596.7
32.5°	1465.9	1471.1	1484.7	1501.5	1502.5	1514.0	1533.9
35°	1383.2	1396.8	1406.3	1428.2	1432.4	1443.9	1464.9
37.5°	1296.4	1312.1	1332.0	1348.7	1357.1	1366.5	1390.6
40°	1199.1	1222.1	1244.1	1264.0	1274.4	1283.8	1306.9
42.5°	1111.2	1129.0	1149.9	1169.8	1188.6	1197.0	1221.1
45°	1011.8	1032.7	1051.6	1075.6	1094.5	1103.9	1127.9
47.5°	914.5	935.4	960.5	977.3	997.1	1006.6	1029.6
50°	821.4	840.2	861.1	881.0	897.7	906.1	926.0
52.5°	729.3	749.2	769.0	781.6	799.4	805.7	822.4
55°	647.7	661.3	679.1	686.4	704.2	708.4	719.9
57.5°	569.2	578.6	584.9	597.4	610.0	619.4	633.0
60°	498.0	502.2	506.4	513.7	524.2	527.3	532.6
62.5°	434.2	433.2	441.5	443.6	444.7	455.1	449.9
65°	377.7	378.8	371.4	368.3	372.5	375.6	373.5
67.5°	330.6	324.4	318.1	310.8	304.5	307.6	304.5
70°	284.6	279.4	268.9	258.4	254.3	248.0	244.8
72.5°	248.0	235.4	225.0	211.4	204.0	196.7	191.5
75°	219.7	201.9	187.3	172.6	162.2	151.7	149.6
77.5°	190.4	173.7	156.9	141.3	125.6	114.0	109.9
80°	167.4	151.7	131.8	113.0	96.3	81.6	76.4
82.5°	146.5	129.7	109.9	90.0	71.1	55.5	49.2
85°	128.7	110.9	91.0	71.1	52.3	35.6	27.2
87.5°	115.1	95.2	75.3	56.5	36.6	19.9	10.5
90°	102.5	83.7	64.9	45.0	26.2	10.5	0.0
92.5°	91.0	73.2	54.4	36.6	19.9	6.3	1.0
95°	80.6	64.9	46.0	29.3	14.6	4.2	1.0
97.5°	72.2	56.5	39.8	24.1	11.5	3.1	1.0
100°	64.9	49.2	34.5	19.9	9.4	2.1	1.0
102.5°	57.5	43.9	29.3	16.7	7.3	1.0	1.0
105°	51.3	38.7	25.1	14.6	6.3	1.0	1.0
107.5°	46.0	34.5	22.0	12.6	4.2	1.0	1.0
110°	40.8	29.3	18.8	10.5	3.1	1.0	1.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L950-CD1-U

CANDELA DISTRIBUTION (continued):

	330°	335°	340°	345°	350°	355°	360°
112.5°	36.6	26.2	16.7	8.4	2.1	1.0	1.0
115°	32.4	23.0	14.6	7.3	2.1	1.0	1.0
117.5°	28.3	19.9	12.6	5.2	1.0	1.0	1.0
120°	25.1	17.8	10.5	4.2	1.0	1.0	1.0
122.5°	22.0	14.6	8.4	3.1	1.0	1.0	1.0
125°	18.8	12.6	7.3	2.1	1.0	1.0	1.0
127.5°	15.7	10.5	5.2	2.1	1.0	1.0	1.0
130°	13.6	8.4	4.2	1.0	1.0	1.0	1.0
132.5°	11.5	6.3	3.1	1.0	1.0	1.0	1.0
135°	9.4	5.2	2.1	1.0	1.0	1.0	1.0
137.5°	7.3	4.2	2.1	1.0	1.0	1.0	1.0
140°	5.2	3.1	1.0	1.0	1.0	1.0	1.0
142.5°	4.2	2.1	1.0	1.0	1.0	1.0	1.0
145°	3.1	2.1	1.0	1.0	1.0	1.0	1.0
147.5°	2.1	2.1	2.1	2.1	1.0	1.0	1.0
150°	2.1	2.1	1.0	1.0	2.1	1.0	1.0
152.5°	2.1	1.0	1.0	1.0	2.1	1.0	1.0
155°	2.1	2.1	2.1	2.1	2.1	2.1	1.0
157.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1
160°	2.1	2.1	2.1	2.1	2.1	2.1	2.1
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)