

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-L935-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-L935-CD1-U  
Description: 4FT LINEAR SNLED LED FIXTURE  
NARROW LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

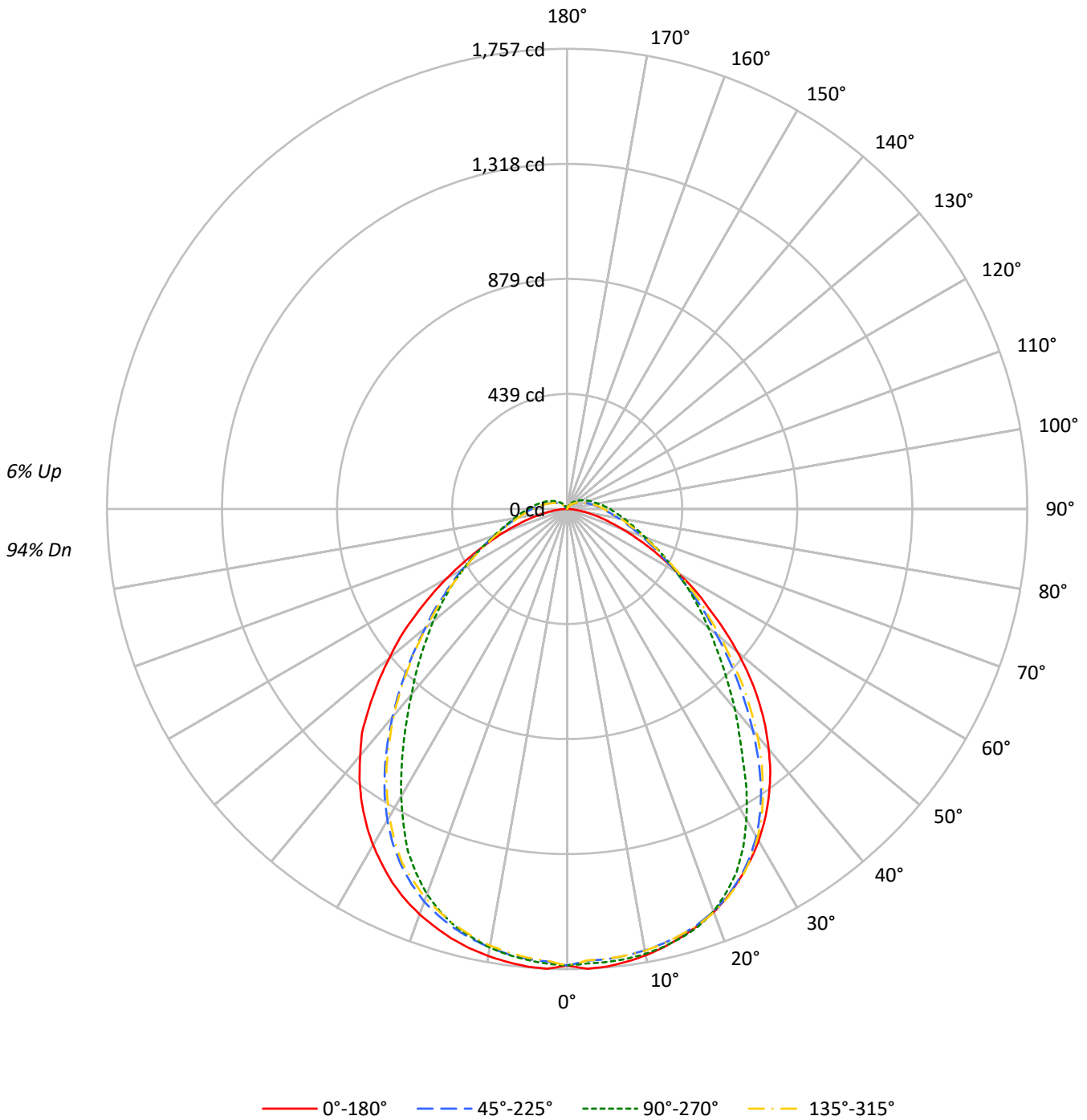
Lumens per Lamp: N/A  
Luminaire Lumens: 4411.0 lumens  
Efficiency: N/A  
Efficacy: 113.1 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.14 / 1.24  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.12')  
CIE Type: Direct

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#  
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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	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°	14085	14085	14085	14085
5°	14185	13637	14185	13576
10°	14122	13275	14146	13090
15°	14031	12878	14095	12542
20°	13924	12367	14005	11845
25°	13700	11611	13852	10927
30°	13410	10500	13586	9720
35°	12957	9138	13207	8508
40°	12310	7991	12634	7414
45°	11453	6947	11826	6548
50°	10284	6104	10737	5796
55°	8896	5390	9542	5118
60°	7482	4733	8158	4460
65°	6134	4184	6752	3879
70°	4881	3714	5466	3435
75°	3834	3429	4317	3155
80°	2767	3308	3261	3024
85°	1701	3326	2295	3058



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	165.2	3.7
10°-20°	473.8	10.7
20°-30°	702.2	15.9
30°-40°	780.2	17.7
40°-50°	707.2	16.0
50°-60°	548.0	12.4
60°-70°	372.1	8.4
70°-80°	236.8	5.4
80°-90°	151.4	3.4
90°-100°	102.1	2.3
100°-110°	69.9	1.6
110°-120°	46.6	1.1
120°-130°	29.0	0.7
130°-140°	16.0	0.4
140°-150°	7.5	0.2
150°-160°	2.8	0.1
160°-170°	0.2	0.0
170°-180°	0.0	0.0
0°-30°	1341.3	30.4
0°-40°	2121.5	48.1
0°-60°	3376.7	76.6
0°-90°	4136.9	93.8
90°-120°	218.6	5.0
90°-150°	271.2	6.1
90°-180°	274.0	6.2
0°-180°	4411.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	1743	1743	1743	1743	1743	
5°	1754	1736	1754	1729	1754	167
15°	1691	1694	1699	1650	1691	477
25°	1559	1530	1576	1440	1559	718
35°	1342	1170	1368	1089	1342	837
45°	1034	836	1067	788	1034	794
55°	660	588	708	558	660	594
65°	342	395	377	366	342	343
75°	137	264	154	243	137	148
85°	25	190	34	174	25	30
90°	0	164	2	150	0	1
95°	1	140	0	130	1	1
105°	1	103	0	97	1	1
115°	1	78	0	72	1	1
125°	1	58	1	51	1	1
135°	1	40	1	33	1	1
145°	1	26	1	18	1	1
155°	1	14	1	7	1	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-LD5-54HL-LN-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0
2.5°	1757.4	1755.4	1753.5	1750.6	1753.5	1761.2	1756.4	1745.8	1743.9	1726.7	1734.3
5°	1753.5	1750.6	1748.7	1745.8	1749.7	1759.3	1754.5	1744.9	1742.0	1725.7	1734.3
7.5°	1743.9	1742.0	1739.1	1739.1	1743.0	1752.6	1748.7	1738.2	1736.3	1720.0	1729.5
10°	1730.5	1729.5	1727.6	1727.6	1731.5	1743.0	1738.2	1728.6	1726.7	1711.3	1721.9
12.5°	1713.2	1714.2	1711.3	1711.3	1717.1	1728.6	1724.8	1714.2	1712.3	1698.9	1709.4
15°	1691.2	1692.2	1690.2	1691.2	1697.0	1710.4	1705.6	1696.0	1694.1	1683.5	1692.2
17.5°	1666.3	1667.2	1667.2	1666.3	1673.0	1686.4	1682.6	1673.9	1671.1	1662.4	1673.0
20°	1637.5	1637.5	1637.5	1637.5	1645.2	1658.6	1653.8	1647.1	1641.3	1634.6	1643.3
22.5°	1602.0	1601.1	1602.0	1604.9	1612.6	1623.1	1620.3	1612.6	1604.0	1600.1	1606.8
25°	1558.9	1561.8	1562.7	1565.6	1575.2	1583.8	1580.9	1573.3	1559.9	1557.0	1558.9
27.5°	1513.8	1515.8	1518.6	1517.7	1531.1	1539.7	1534.0	1527.3	1508.1	1505.2	1503.3
30°	1463.0	1465.9	1467.8	1466.9	1477.4	1487.0	1481.2	1472.6	1446.7	1444.8	1429.5
32.5°	1405.5	1408.4	1410.3	1410.3	1425.6	1429.5	1418.9	1406.5	1378.7	1371.9	1358.5
35°	1342.2	1345.1	1346.1	1346.1	1361.4	1360.4	1347.0	1329.8	1299.1	1290.5	1267.4
37.5°	1274.2	1276.1	1277.0	1282.8	1289.5	1283.7	1266.5	1244.4	1221.4	1197.5	1172.5
40°	1197.5	1200.3	1202.2	1206.1	1212.8	1206.1	1181.2	1154.3	1129.4	1102.5	1077.6
42.5°	1118.8	1127.5	1125.5	1124.6	1128.4	1110.2	1091.0	1060.4	1035.4	1007.6	982.7
45°	1033.5	1032.6	1037.3	1039.3	1038.3	1023.0	996.1	968.3	943.4	914.6	893.5
47.5°	943.4	942.4	946.3	948.2	942.4	926.1	905.0	873.4	852.3	827.4	811.1
50°	848.5	848.5	854.2	848.5	845.6	829.3	812.0	780.4	764.1	742.1	732.5
52.5°	753.6	762.2	756.4	754.5	751.6	735.3	721.9	696.0	682.6	673.0	661.5
55°	659.6	669.2	665.4	662.5	661.5	648.1	635.6	616.5	607.8	601.1	594.4
57.5°	580.0	579.1	577.2	574.3	575.2	564.7	552.2	541.7	537.8	535.0	536.9
60°	488.0	495.7	492.8	493.7	494.7	492.8	482.2	475.5	476.5	477.4	480.3
62.5°	412.3	419.0	423.8	419.9	421.8	424.7	419.0	417.0	420.9	424.7	428.6
65°	342.3	349.0	353.8	352.8	358.6	364.3	363.4	365.3	373.9	378.7	383.5
67.5°	279.0	285.7	292.4	293.4	302.0	310.6	314.5	321.2	330.8	337.5	343.2
70°	224.3	230.1	237.8	242.6	254.1	265.6	272.3	285.7	291.5	301.0	304.9
72.5°	175.4	180.2	190.8	202.3	211.9	226.3	239.7	251.2	259.8	270.4	275.2
75°	137.1	139.0	150.5	163.9	177.4	193.7	208.0	220.5	232.0	242.6	250.2
77.5°	100.7	103.5	114.1	132.3	147.6	164.9	181.2	194.6	207.1	217.6	228.2
80°	70.0	75.7	87.2	105.5	122.7	141.9	157.2	172.6	186.0	196.5	207.1
82.5°	45.1	49.9	66.2	84.4	102.6	121.8	138.1	153.4	167.8	179.3	188.9
85°	24.9	31.6	47.9	67.1	85.3	104.5	121.8	137.1	151.5	162.0	171.6
87.5°	9.6	19.2	34.5	52.7	70.9	89.2	107.4	121.8	136.1	147.6	156.3
90°	0.0	11.5	25.9	44.1	62.3	80.5	97.8	113.1	126.6	137.1	146.7
92.5°	1.0	7.7	20.1	35.5	52.7	70.0	86.3	101.6	115.0	125.6	134.2
95°	1.0	5.8	16.3	30.7	46.0	62.3	77.7	92.0	104.5	115.0	123.7
97.5°	1.0	3.8	13.4	26.8	40.3	56.6	70.9	84.4	95.9	106.4	113.1
100°	1.0	3.8	11.5	23.0	36.4	50.8	64.2	77.7	88.2	96.8	104.5
102.5°	1.0	2.9	9.6	20.1	32.6	45.1	58.5	70.9	80.5	89.2	96.8
105°	1.0	2.9	8.6	17.3	28.8	41.2	52.7	64.2	74.8	82.5	89.2
107.5°	1.0	1.9	7.7	14.4	24.9	37.4	48.9	58.5	68.1	75.7	82.5
110°	1.0	1.9	6.7	13.4	22.1	33.6	44.1	53.7	62.3	70.0	75.7



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1.0	1.9	5.8	12.5	20.1	29.7	40.3	48.9	57.5	64.2	70.0
115°	1.0	1.9	5.8	11.5	18.2	25.9	35.5	45.1	51.8	59.4	64.2
117.5°	1.0	1.9	4.8	9.6	17.3	24.0	32.6	40.3	47.9	54.6	59.4
120°	1.0	1.9	4.8	8.6	15.3	22.1	28.8	36.4	44.1	48.9	53.7
122.5°	1.0	1.9	3.8	8.6	13.4	20.1	25.9	32.6	39.3	45.1	49.9
125°	1.0	1.9	3.8	7.7	12.5	18.2	24.0	28.8	35.5	40.3	45.1
127.5°	1.0	1.9	3.8	6.7	11.5	16.3	22.1	26.8	31.6	36.4	40.3
130°	1.0	1.9	2.9	5.8	10.5	14.4	19.2	24.9	28.8	32.6	36.4
132.5°	1.0	1.9	2.9	5.8	8.6	12.5	17.3	22.1	25.9	29.7	32.6
135°	1.0	1.9	2.9	4.8	7.7	11.5	14.4	19.2	23.0	26.8	29.7
137.5°	1.0	1.9	2.9	4.8	6.7	9.6	12.5	16.3	20.1	23.0	26.8
140°	1.0	1.9	2.9	3.8	5.8	8.6	11.5	13.4	17.3	20.1	23.0
142.5°	1.0	1.9	2.9	3.8	5.8	7.7	9.6	11.5	14.4	17.3	20.1
145°	1.0	1.9	2.9	3.8	4.8	6.7	8.6	10.5	11.5	14.4	16.3
147.5°	1.0	1.9	2.9	3.8	3.8	5.8	7.7	8.6	10.5	11.5	13.4
150°	1.0	1.9	2.9	2.9	3.8	4.8	6.7	7.7	8.6	10.5	11.5
152.5°	1.0	1.9	2.9	2.9	3.8	4.8	5.8	6.7	7.7	8.6	9.6
155°	1.0	1.9	2.9	2.9	2.9	3.8	4.8	5.8	6.7	7.7	8.6
157.5°	1.9	1.9	1.9	2.9	2.9	3.8	3.8	4.8	5.8	5.8	6.7
160°	1.9	1.9	1.9	2.9	2.9	2.9	3.8	3.8	4.8	4.8	5.8
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°	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0
2.5°	1732.4	1735.3	1743.9	1743.9	1742.0	1740.1	1740.1	1737.2	1739.1	1743.0	1741.1
5°	1732.4	1735.3	1743.9	1743.9	1742.0	1740.1	1739.1	1736.3	1739.1	1743.0	1741.1
7.5°	1726.7	1730.5	1739.1	1739.1	1737.2	1736.3	1734.3	1732.4	1735.3	1739.1	1737.2
10°	1719.0	1722.8	1731.5	1731.5	1729.5	1729.5	1726.7	1724.8	1728.6	1731.5	1730.5
12.5°	1707.5	1712.3	1720.0	1719.0	1717.1	1718.0	1715.2	1711.3	1715.2	1718.0	1719.0
15°	1691.2	1697.0	1704.6	1702.7	1699.8	1701.7	1697.0	1694.1	1697.0	1702.7	1701.7
17.5°	1670.1	1673.9	1679.7	1679.7	1676.8	1674.9	1673.0	1670.1	1672.0	1675.9	1676.8
20°	1640.4	1645.2	1648.1	1645.2	1644.2	1641.3	1637.5	1634.6	1638.5	1644.2	1645.2
22.5°	1601.1	1602.0	1608.7	1602.0	1597.2	1596.3	1592.4	1586.7	1592.4	1597.2	1598.2
25°	1552.2	1557.0	1554.1	1542.6	1542.6	1534.9	1533.0	1530.1	1531.1	1539.7	1543.6
27.5°	1489.9	1491.8	1484.1	1474.5	1465.9	1461.1	1454.4	1455.4	1455.4	1466.9	1470.7
30°	1421.8	1411.3	1404.5	1389.2	1382.5	1371.0	1369.1	1369.1	1367.1	1372.9	1390.2
32.5°	1340.3	1325.9	1315.4	1301.0	1289.5	1278.0	1272.2	1275.1	1274.2	1288.5	1294.3
35°	1251.1	1242.5	1220.5	1202.2	1195.5	1178.3	1178.3	1169.7	1175.4	1191.7	1198.4
37.5°	1157.2	1143.8	1125.5	1105.4	1100.6	1087.2	1082.4	1077.6	1090.1	1093.0	1099.7
40°	1061.3	1048.9	1031.6	1012.4	1012.4	996.1	996.1	996.1	997.1	1002.8	1015.3
42.5°	970.2	956.8	941.5	928.1	926.1	913.7	913.7	912.7	914.6	919.4	930.9
45°	882.0	871.5	855.2	848.5	849.4	836.0	838.9	836.0	839.8	844.6	848.5
47.5°	800.5	793.8	787.1	777.5	774.7	773.7	768.9	765.1	771.8	771.8	777.5
50°	724.8	721.0	717.1	711.4	712.3	708.5	702.7	702.7	707.5	708.5	712.3
52.5°	658.6	653.9	649.1	650.0	651.0	649.1	646.2	643.3	646.2	648.1	652.9
55°	592.5	588.7	593.5	591.5	593.5	591.5	589.6	587.7	592.5	589.6	594.4
57.5°	533.1	536.9	538.8	535.0	537.8	535.9	536.9	534.0	537.8	539.8	538.8
60°	478.4	484.2	481.3	482.2	486.1	484.2	480.3	483.2	487.0	488.0	487.0
62.5°	428.6	435.3	438.1	436.2	437.2	435.3	438.1	434.3	439.1	441.0	438.1
65°	383.5	391.2	393.1	393.1	393.1	391.2	394.0	395.0	396.9	396.9	395.0
67.5°	345.1	351.9	353.8	355.7	353.8	351.9	351.9	352.8	356.6	358.6	356.6
70°	310.6	317.3	318.3	318.3	319.3	321.2	317.3	319.3	322.1	323.1	322.1
72.5°	280.9	287.6	289.5	288.6	289.5	290.5	290.5	288.6	291.5	293.4	293.4
75°	256.9	260.8	262.7	262.7	263.7	264.6	264.6	263.7	265.6	266.5	267.5
77.5°	234.9	237.8	240.6	240.6	241.6	240.6	242.6	242.6	243.5	244.5	245.4
80°	212.8	216.7	218.6	219.5	221.5	222.4	222.4	222.4	223.4	224.3	224.3
82.5°	195.6	198.5	201.3	204.2	204.2	205.2	205.2	205.2	206.1	206.1	207.1
85°	178.3	182.2	185.0	187.0	187.9	188.9	188.9	189.8	189.8	189.8	190.8
87.5°	163.0	167.8	169.7	171.6	172.6	174.5	174.5	174.5	175.4	175.4	175.4
90°	152.4	157.2	159.1	161.1	162.0	163.0	163.0	163.9	163.9	164.9	164.9
92.5°	140.0	144.8	148.6	148.6	149.6	151.5	150.5	150.5	151.5	152.4	152.4
95°	130.4	134.2	137.1	138.1	139.0	139.0	139.0	140.0	139.0	140.0	140.0
97.5°	118.9	122.7	125.6	127.5	128.5	128.5	128.5	129.4	128.5	129.4	129.4
100°	109.3	113.1	116.0	117.0	118.9	118.9	118.9	118.9	118.9	118.9	119.8
102.5°	101.6	105.5	107.4	108.3	109.3	110.3	110.3	110.3	110.3	111.2	111.2
105°	94.0	97.8	99.7	100.7	101.6	102.6	102.6	102.6	103.5	103.5	102.6
107.5°	87.2	90.1	92.0	94.0	94.9	94.9	95.9	95.9	95.9	95.9	95.9
110°	80.5	83.4	86.3	88.2	88.2	89.2	89.2	90.1	90.1	89.2	90.1





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	73.8	77.7	79.6	81.5	82.5	83.4	83.4	83.4	83.4	83.4	83.4
115°	68.1	71.9	73.8	75.7	76.7	77.7	77.7	77.7	77.7	77.7	77.7
117.5°	63.3	67.1	69.0	70.0	70.9	71.9	72.9	72.9	72.9	72.9	71.9
120°	58.5	61.4	63.3	65.2	66.2	67.1	67.1	67.1	67.1	67.1	67.1
122.5°	53.7	56.6	58.5	60.4	61.4	62.3	62.3	62.3	62.3	62.3	62.3
125°	48.9	51.8	53.7	55.6	56.6	57.5	57.5	57.5	57.5	57.5	57.5
127.5°	44.1	47.0	49.9	50.8	51.8	52.7	52.7	52.7	53.7	52.7	52.7
130°	39.3	42.2	45.1	46.0	47.0	47.9	48.9	48.9	48.9	48.9	47.9
132.5°	35.5	38.3	40.3	41.2	43.1	43.1	44.1	44.1	44.1	44.1	43.1
135°	32.6	34.5	36.4	37.4	39.3	39.3	39.3	40.3	40.3	39.3	38.3
137.5°	28.8	30.7	32.6	33.6	34.5	35.5	35.5	36.4	35.5	35.5	35.5
140°	26.8	27.8	29.7	30.7	31.6	31.6	31.6	32.6	32.6	31.6	31.6
142.5°	23.0	24.9	26.8	27.8	28.8	28.8	28.8	28.8	28.8	28.8	28.8
145°	19.2	22.1	23.0	24.9	24.9	25.9	25.9	25.9	25.9	25.9	24.9
147.5°	16.3	18.2	21.1	22.1	22.1	23.0	23.0	23.0	23.0	23.0	22.1
150°	12.5	14.4	17.3	19.2	19.2	20.1	20.1	20.1	20.1	19.2	19.2
152.5°	10.5	12.5	13.4	15.3	16.3	16.3	16.3	17.3	16.3	16.3	16.3
155°	9.6	10.5	11.5	12.5	13.4	14.4	14.4	14.4	14.4	13.4	13.4
157.5°	7.7	8.6	9.6	10.5	11.5	12.5	12.5	12.5	12.5	12.5	11.5
160°	5.8	6.7	7.7	7.7	8.6	9.6	10.5	9.6	9.6	9.6	9.6
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-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0
2.5°	1739.1	1738.2	1741.1	1736.3	1721.9	1725.7	1723.8	1732.4	1734.3	1736.3	1744.9
5°	1739.1	1738.2	1740.1	1736.3	1720.9	1723.8	1721.9	1730.5	1732.4	1733.4	1742.0
7.5°	1735.3	1734.3	1737.2	1732.4	1716.1	1720.0	1717.1	1725.7	1726.7	1727.6	1735.3
10°	1727.6	1726.7	1728.6	1724.8	1708.5	1712.3	1708.5	1717.1	1717.1	1719.0	1724.8
12.5°	1716.1	1714.2	1718.0	1713.2	1695.0	1699.8	1697.9	1703.7	1704.6	1705.6	1711.3
15°	1699.8	1697.9	1700.8	1697.9	1681.6	1682.6	1679.7	1688.3	1689.3	1687.4	1693.1
17.5°	1675.9	1673.9	1679.7	1677.8	1661.5	1665.3	1664.4	1666.3	1669.1	1664.4	1672.0
20°	1646.1	1648.1	1650.0	1650.9	1638.5	1638.5	1637.5	1641.3	1644.2	1640.4	1646.1
22.5°	1602.0	1606.8	1612.6	1614.5	1605.9	1604.9	1610.7	1608.7	1611.6	1609.7	1613.5
25°	1546.4	1556.0	1561.8	1567.5	1562.7	1564.6	1573.3	1575.2	1575.2	1574.2	1578.1
27.5°	1477.4	1489.9	1500.4	1512.9	1508.1	1511.9	1526.3	1528.2	1532.1	1528.2	1535.9
30°	1395.0	1406.5	1426.6	1444.8	1446.7	1452.5	1472.6	1474.5	1485.1	1481.2	1484.1
32.5°	1312.5	1318.3	1341.3	1359.5	1371.0	1385.4	1407.4	1411.3	1425.6	1428.5	1428.5
35°	1209.0	1225.3	1246.3	1272.2	1286.6	1302.0	1331.7	1337.4	1358.5	1365.2	1372.9
37.5°	1121.7	1137.1	1150.5	1177.3	1203.2	1220.5	1244.4	1258.8	1280.9	1293.3	1302.9
40°	1028.7	1041.2	1055.6	1082.4	1104.5	1130.3	1154.3	1171.6	1199.4	1213.8	1226.2
42.5°	940.5	950.1	965.4	984.6	1007.6	1036.4	1059.4	1079.5	1109.3	1129.4	1143.8
45°	861.9	867.7	881.1	895.5	915.6	945.3	967.4	993.2	1017.2	1038.3	1055.6
47.5°	788.1	795.7	802.5	812.0	830.3	848.5	874.4	899.3	923.3	946.3	963.5
50°	720.0	720.0	730.6	737.3	749.7	766.0	786.2	803.4	833.1	849.4	871.5
52.5°	653.9	657.7	663.4	667.3	676.9	687.4	703.7	718.1	743.0	758.4	779.4
55°	595.4	599.2	602.1	604.0	609.8	622.2	628.0	639.5	656.7	669.2	687.4
57.5°	539.8	541.7	544.6	545.5	546.5	554.1	558.9	561.8	579.1	591.5	606.9
60°	489.0	489.0	491.8	490.9	489.9	493.7	492.8	495.7	506.2	513.9	520.6
62.5°	441.0	441.0	442.0	440.1	439.1	439.1	435.3	438.1	441.0	442.0	446.8
65°	396.9	401.7	397.9	398.8	393.1	391.2	389.2	383.5	382.5	378.7	380.6
67.5°	357.6	361.4	357.6	357.6	352.8	349.0	344.2	334.6	331.7	324.1	322.1
70°	326.0	323.1	325.0	322.1	316.4	311.6	304.9	297.2	287.6	278.0	271.3
72.5°	295.3	295.3	293.4	290.5	287.6	278.0	270.4	261.7	250.2	237.8	228.2
75°	265.6	266.5	266.5	263.7	258.9	250.2	241.6	229.1	216.7	202.3	189.8
77.5°	244.5	244.5	244.5	239.7	234.9	227.2	216.7	203.3	189.8	172.6	158.2
80°	224.3	223.4	223.4	217.6	212.8	204.2	193.7	180.2	165.9	147.6	131.3
82.5°	208.0	207.1	205.2	200.4	193.7	185.0	174.5	160.1	144.8	128.5	108.3
85°	190.8	189.8	187.9	183.1	176.4	168.7	157.2	142.9	127.5	109.3	90.1
87.5°	175.4	174.5	171.6	168.7	161.1	152.4	140.9	127.5	111.2	94.0	74.8
90°	164.9	163.0	161.1	157.2	150.5	140.9	129.4	115.0	98.7	81.5	62.3
92.5°	152.4	151.5	148.6	144.8	139.0	129.4	117.9	104.5	88.2	71.9	53.7
95°	140.0	139.0	137.1	133.3	127.5	118.9	108.3	94.9	79.6	63.3	47.0
97.5°	128.5	128.5	125.6	122.7	116.0	109.3	98.7	86.3	71.9	57.5	42.2
100°	118.9	118.9	116.0	112.2	107.4	100.7	90.1	78.6	65.2	51.8	36.4
102.5°	110.3	109.3	107.4	103.5	98.7	92.0	82.5	71.9	59.4	46.0	32.6
105°	102.6	101.6	99.7	95.9	92.0	84.4	76.7	66.2	53.7	41.2	28.8
107.5°	94.9	94.0	93.0	89.2	84.4	77.7	70.0	59.4	48.9	37.4	25.9
110°	88.2	87.2	85.3	81.5	76.7	70.9	63.3	54.6	44.1	33.6	23.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	82.5	81.5	79.6	75.7	71.9	65.2	58.5	48.9	40.3	30.7	20.1
115°	76.7	75.7	73.8	70.0	65.2	59.4	52.7	45.1	35.5	26.8	18.2
117.5°	70.9	70.0	68.1	65.2	60.4	54.6	47.9	40.3	31.6	24.9	16.3
120°	66.2	64.2	62.3	59.4	54.6	49.9	43.1	36.4	28.8	22.1	14.4
122.5°	61.4	59.4	57.5	54.6	49.9	45.1	38.3	32.6	26.8	20.1	13.4
125°	55.6	54.6	52.7	49.9	45.1	40.3	35.5	29.7	24.0	18.2	11.5
127.5°	50.8	49.9	47.9	44.1	40.3	36.4	31.6	26.8	21.1	15.3	10.5
130°	47.0	45.1	43.1	40.3	37.4	33.6	28.8	24.0	19.2	13.4	9.6
132.5°	42.2	40.3	38.3	36.4	33.6	29.7	25.9	21.1	17.3	12.5	8.6
135°	38.3	36.4	34.5	32.6	29.7	26.8	23.0	19.2	15.3	11.5	7.7
137.5°	33.6	32.6	31.6	29.7	26.8	24.0	21.1	16.3	13.4	10.5	6.7
140°	30.7	29.7	28.8	25.9	24.0	21.1	18.2	14.4	11.5	8.6	5.8
142.5°	27.8	26.8	24.9	23.0	21.1	19.2	15.3	13.4	10.5	7.7	5.8
145°	24.0	23.0	22.1	20.1	18.2	15.3	13.4	11.5	9.6	6.7	4.8
147.5°	22.1	21.1	19.2	17.3	15.3	13.4	12.5	10.5	7.7	5.8	3.8
150°	18.2	17.3	16.3	14.4	13.4	12.5	10.5	8.6	6.7	4.8	3.8
152.5°	15.3	14.4	13.4	13.4	11.5	10.5	8.6	7.7	5.8	4.8	2.9
155°	13.4	13.4	12.5	11.5	9.6	8.6	7.7	5.8	4.8	3.8	2.9
157.5°	11.5	10.5	9.6	9.6	8.6	7.7	5.8	4.8	3.8	3.8	2.9
160°	9.6	8.6	8.6	7.7	6.7	5.8	4.8	4.8	3.8	2.9	2.9
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-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0
2.5°	1745.8	1735.3	1744.9	1757.4	1757.4	1755.4	1753.5	1757.4	1766.9	1763.1	1751.6
5°	1743.0	1732.4	1741.1	1753.5	1753.5	1750.6	1748.7	1751.6	1762.1	1757.4	1746.8
7.5°	1737.2	1727.6	1733.4	1744.9	1744.9	1742.0	1740.1	1743.9	1752.6	1747.8	1736.3
10°	1726.7	1716.1	1722.8	1733.4	1732.4	1730.5	1727.6	1732.4	1740.1	1733.4	1720.0
12.5°	1713.2	1702.7	1708.5	1718.0	1717.1	1713.2	1711.3	1714.2	1720.9	1717.1	1702.7
15°	1695.0	1684.5	1689.3	1698.9	1696.0	1693.1	1689.3	1690.2	1698.9	1692.2	1676.8
17.5°	1673.0	1661.5	1665.3	1673.9	1671.1	1668.2	1663.4	1664.4	1673.9	1664.4	1648.1
20°	1646.1	1633.7	1636.6	1647.1	1642.3	1637.5	1632.7	1632.7	1642.3	1631.8	1613.5
22.5°	1617.4	1604.9	1606.8	1614.5	1610.7	1602.0	1597.2	1600.1	1604.9	1591.5	1572.3
25°	1581.9	1565.6	1568.5	1576.2	1573.3	1561.8	1557.0	1558.9	1557.0	1546.4	1526.3
27.5°	1540.7	1523.4	1525.3	1530.1	1526.3	1515.8	1510.0	1511.0	1507.1	1493.7	1470.7
30°	1488.9	1480.3	1479.3	1482.2	1476.4	1465.9	1459.2	1457.3	1456.3	1437.1	1409.3
32.5°	1436.2	1428.5	1423.7	1427.5	1420.8	1410.3	1398.8	1398.8	1389.2	1371.0	1347.0
35°	1382.5	1370.0	1365.2	1368.1	1360.4	1347.0	1337.4	1332.6	1318.3	1295.2	1269.4
37.5°	1313.5	1304.8	1299.1	1302.0	1293.3	1283.7	1265.5	1260.7	1245.4	1213.8	1181.2
40°	1238.7	1232.0	1226.2	1229.1	1219.5	1205.1	1188.8	1181.2	1163.9	1128.4	1102.5
42.5°	1158.1	1155.3	1148.6	1159.1	1139.9	1125.5	1109.3	1096.8	1079.5	1041.2	1011.5
45°	1072.8	1079.5	1064.2	1067.1	1054.6	1042.1	1024.9	1006.7	989.4	953.0	919.4
47.5°	982.7	987.5	976.9	978.9	965.4	953.9	938.6	915.6	896.4	864.8	835.1
50°	889.7	887.8	887.8	885.9	875.3	860.9	845.6	824.5	805.3	776.6	751.6
52.5°	791.0	794.8	796.7	801.5	788.1	779.4	755.5	737.3	722.9	693.2	672.1
55°	696.0	709.5	705.6	707.5	692.2	685.5	666.3	651.9	630.8	613.6	600.2
57.5°	609.8	612.6	614.5	617.4	610.7	597.3	581.9	570.4	554.1	539.8	530.2
60°	526.3	526.3	527.3	532.1	525.4	513.9	502.4	493.7	482.2	473.6	467.9
62.5°	447.7	454.4	455.4	451.6	442.9	437.2	429.5	424.7	417.0	414.2	412.3
65°	374.9	374.9	374.9	376.8	372.0	368.2	363.4	362.4	365.3	361.4	363.4
67.5°	313.5	310.6	308.7	309.7	307.8	305.8	304.9	307.8	313.5	313.5	318.3
70°	260.8	255.0	251.2	251.2	251.2	252.1	255.0	260.8	270.4	274.2	280.9
72.5°	217.6	205.2	199.4	199.4	200.4	204.2	212.8	223.4	232.0	239.7	248.3
75°	176.4	163.9	155.3	154.4	156.3	162.0	174.5	184.1	198.5	209.0	219.5
77.5°	142.9	127.5	117.0	116.0	118.9	127.5	142.9	155.3	171.6	183.1	194.6
80°	114.1	96.8	88.2	82.5	87.2	97.8	115.0	130.4	145.7	161.1	175.4
82.5°	91.1	74.8	61.4	55.6	61.4	75.7	92.0	110.3	125.6	141.9	156.3
85°	71.9	54.6	39.3	33.6	40.3	55.6	73.8	92.0	109.3	125.6	140.0
87.5°	56.6	39.3	24.0	16.3	24.9	41.2	58.5	76.7	94.9	111.2	125.6
90°	44.1	27.8	13.4	1.9	14.4	29.7	47.0	64.2	82.5	98.7	113.1
92.5°	37.4	21.1	7.7	0.0	8.6	22.1	38.3	55.6	71.9	88.2	102.6
95°	31.6	17.3	5.8	0.0	5.8	17.3	31.6	47.0	63.3	79.6	94.0
97.5°	26.8	13.4	3.8	0.0	3.8	13.4	25.9	41.2	55.6	70.9	84.4
100°	23.0	11.5	2.9	0.0	2.9	10.5	22.1	35.5	49.9	64.2	76.7
102.5°	20.1	9.6	1.9	0.0	1.9	8.6	18.2	30.7	43.1	56.6	69.0
105°	17.3	7.7	1.9	0.0	1.0	6.7	15.3	26.8	38.3	50.8	62.3
107.5°	15.3	6.7	1.9	0.0	1.0	5.8	13.4	23.0	34.5	45.1	55.6
110°	13.4	5.8	1.9	0.0	1.0	3.8	11.5	20.1	29.7	40.3	50.8



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
112.5°	11.5	4.8	1.0	0.0	0.0	2.9	9.6	17.3	25.9	36.4	45.1
115°	10.5	4.8	1.0	0.0	0.0	1.9	7.7	15.3	23.0	32.6	40.3
117.5°	9.6	3.8	1.0	0.0	1.0	1.9	6.7	13.4	20.1	27.8	36.4
120°	8.6	3.8	1.0	0.0	1.0	1.0	4.8	11.5	17.3	24.9	31.6
122.5°	7.7	3.8	1.0	0.0	1.0	1.0	3.8	9.6	15.3	22.1	27.8
125°	6.7	2.9	1.9	1.0	1.0	1.0	2.9	7.7	13.4	18.2	24.9
127.5°	6.7	2.9	1.9	1.0	1.0	1.0	1.9	6.7	10.5	16.3	22.1
130°	5.8	2.9	1.9	1.0	1.0	1.0	1.0	4.8	9.6	13.4	18.2
132.5°	4.8	2.9	1.9	1.0	1.0	1.0	1.0	2.9	6.7	11.5	15.3
135°	4.8	2.9	1.9	1.0	1.0	1.0	1.0	1.9	4.8	8.6	12.5
137.5°	3.8	1.9	1.9	1.0	1.0	1.0	1.0	1.0	3.8	6.7	9.6
140°	3.8	1.9	1.9	1.0	1.0	1.0	1.0	1.0	2.9	4.8	7.7
142.5°	2.9	1.9	1.9	1.0	1.0	1.0	1.0	1.0	1.9	3.8	5.8
145°	2.9	1.9	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.9	3.8
147.5°	2.9	2.9	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.9	2.9
150°	2.9	1.9	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9
152.5°	2.9	1.9	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9
155°	2.9	1.9	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.9	1.9
157.5°	2.9	1.9	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.9
160°	2.9	1.9	1.9	1.0	1.9	1.0	1.9	1.9	1.9	1.9	1.9
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-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0
2.5°	1747.8	1729.5	1739.1	1736.3	1740.1	1747.8	1746.8	1744.9	1744.9	1742.0	1738.2
5°	1742.0	1724.8	1733.4	1728.6	1733.4	1740.1	1739.1	1736.3	1738.2	1733.4	1728.6
7.5°	1730.5	1715.2	1722.8	1719.0	1722.8	1729.5	1726.7	1725.7	1727.6	1720.0	1717.1
10°	1717.1	1699.8	1708.5	1703.7	1708.5	1713.2	1711.3	1707.5	1711.3	1703.7	1700.8
12.5°	1696.0	1681.6	1687.4	1685.4	1688.3	1693.1	1689.3	1686.4	1688.3	1681.6	1675.9
15°	1673.0	1658.6	1663.4	1660.5	1662.4	1668.2	1661.5	1660.5	1658.6	1651.9	1650.0
17.5°	1643.3	1629.8	1634.6	1629.8	1632.7	1630.8	1629.8	1625.0	1625.0	1617.4	1611.6
20°	1606.8	1595.3	1592.4	1588.6	1592.4	1588.6	1582.9	1579.0	1578.1	1570.4	1565.6
22.5°	1564.6	1551.2	1553.1	1542.6	1543.6	1537.8	1528.2	1524.4	1520.5	1511.9	1505.2
25°	1513.8	1500.4	1490.8	1484.1	1475.5	1474.5	1462.1	1452.5	1451.5	1441.0	1440.0
27.5°	1456.3	1441.0	1433.3	1417.0	1406.5	1397.8	1387.3	1377.7	1372.9	1361.4	1353.7
30°	1390.2	1372.9	1353.7	1342.2	1325.9	1319.2	1301.0	1289.5	1285.7	1273.2	1267.4
32.5°	1315.4	1297.2	1281.8	1259.8	1241.6	1232.0	1213.8	1202.2	1197.5	1184.0	1176.4
35°	1233.9	1213.8	1195.5	1174.4	1160.1	1143.8	1121.7	1110.2	1099.7	1094.9	1089.1
37.5°	1148.6	1126.5	1105.4	1084.3	1071.9	1052.7	1033.5	1025.8	1013.4	1008.6	1002.8
40°	1060.4	1038.3	1018.2	998.0	983.7	966.4	949.1	946.3	932.8	928.1	924.2
42.5°	973.1	950.1	927.1	912.7	902.2	884.9	873.4	870.5	859.0	856.1	856.1
45°	894.5	865.7	846.6	834.1	825.5	811.1	801.5	799.6	790.0	788.1	788.1
47.5°	810.1	783.3	768.9	761.2	753.6	743.0	737.3	737.3	727.7	725.8	724.8
50°	731.5	706.6	696.0	688.4	687.4	679.7	674.9	673.0	673.0	666.3	667.3
52.5°	656.7	644.3	635.6	630.8	625.1	620.3	616.5	616.5	613.6	608.8	610.7
55°	587.7	573.3	574.3	570.4	567.6	564.7	565.7	559.9	558.9	555.1	558.0
57.5°	518.7	518.7	516.8	513.9	509.1	511.0	511.0	511.0	506.2	503.3	506.2
60°	460.2	463.1	458.3	461.1	459.2	460.2	458.3	458.3	455.4	454.4	455.4
62.5°	408.4	413.2	411.3	415.1	413.2	414.2	416.1	412.3	410.3	408.4	410.3
65°	362.4	368.2	367.2	370.1	371.0	372.0	372.9	371.0	369.1	367.2	366.2
67.5°	322.1	327.9	331.7	332.7	333.6	336.5	335.6	333.6	331.7	328.8	327.9
70°	285.7	293.4	298.2	300.1	303.9	302.0	302.0	301.0	299.1	296.2	295.3
72.5°	255.0	263.7	268.4	270.4	274.2	274.2	273.2	272.3	270.4	267.5	266.5
75°	228.2	235.8	242.6	246.4	249.3	249.3	248.3	247.4	245.4	243.5	242.6
77.5°	207.1	213.8	219.5	224.3	226.3	227.2	226.3	224.3	224.3	223.4	222.4
80°	186.0	193.7	199.4	204.2	207.1	207.1	206.1	207.1	205.2	204.2	203.3
82.5°	167.8	176.4	183.1	187.9	189.8	190.8	189.8	190.8	188.9	188.9	188.9
85°	151.5	160.1	167.8	171.6	174.5	175.4	175.4	175.4	174.5	174.5	174.5
87.5°	138.1	146.7	154.4	158.2	161.1	162.0	162.0	163.0	161.1	161.1	161.1
90°	125.6	134.2	141.9	145.7	148.6	150.5	150.5	151.5	150.5	149.6	149.6
92.5°	114.1	123.7	131.3	135.2	138.1	140.9	140.9	141.9	140.0	140.0	140.0
95°	104.5	114.1	120.8	125.6	128.5	130.4	131.3	131.3	130.4	130.4	130.4
97.5°	95.9	104.5	111.2	116.0	118.9	119.8	120.8	121.8	120.8	120.8	120.8
100°	87.2	95.9	102.6	106.4	110.3	111.2	112.2	113.1	113.1	112.2	112.2
102.5°	79.6	88.2	94.0	98.7	101.6	103.5	104.5	104.5	104.5	104.5	104.5
105°	71.9	80.5	86.3	91.1	94.0	95.9	96.8	97.8	97.8	96.8	96.8
107.5°	65.2	72.9	79.6	83.4	87.2	89.2	90.1	90.1	91.1	90.1	90.1
110°	58.5	67.1	72.9	76.7	80.5	82.5	83.4	84.4	84.4	84.4	84.4



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
112.5°	53.7	60.4	66.2	70.0	73.8	75.7	76.7	77.7	78.6	77.7	77.7
115°	47.9	54.6	60.4	64.2	67.1	69.0	70.9	71.9	71.9	72.9	71.9
117.5°	43.1	48.9	54.6	58.5	61.4	64.2	65.2	66.2	67.1	66.2	66.2
120°	38.3	44.1	48.9	52.7	55.6	58.5	59.4	60.4	61.4	60.4	60.4
122.5°	34.5	39.3	44.1	47.9	50.8	52.7	54.6	54.6	55.6	55.6	55.6
125°	30.7	35.5	39.3	43.1	46.0	47.9	48.9	49.9	49.9	50.8	50.8
127.5°	26.8	30.7	35.5	38.3	41.2	43.1	44.1	45.1	45.1	46.0	46.0
130°	23.0	26.8	30.7	33.6	36.4	38.3	39.3	40.3	41.2	41.2	41.2
132.5°	20.1	24.0	26.8	29.7	31.6	33.6	35.5	36.4	36.4	36.4	36.4
135°	16.3	20.1	23.0	25.9	27.8	29.7	30.7	32.6	32.6	32.6	32.6
137.5°	13.4	17.3	20.1	22.1	24.0	25.9	26.8	27.8	28.8	28.8	28.8
140°	10.5	13.4	16.3	19.2	21.1	22.1	24.0	24.0	24.9	24.9	24.9
142.5°	7.7	10.5	12.5	15.3	17.3	19.2	20.1	21.1	21.1	21.1	21.1
145°	5.8	7.7	9.6	11.5	14.4	15.3	16.3	17.3	18.2	18.2	18.2
147.5°	3.8	5.8	6.7	8.6	10.5	12.5	13.4	14.4	15.3	15.3	15.3
150°	2.9	3.8	5.8	6.7	7.7	9.6	11.5	11.5	12.5	12.5	11.5
152.5°	1.9	2.9	3.8	4.8	5.8	6.7	8.6	8.6	9.6	9.6	9.6
155°	1.9	1.9	1.9	2.9	3.8	4.8	5.8	6.7	6.7	6.7	6.7
157.5°	1.9	1.9	1.9	1.9	1.9	2.9	3.8	4.8	4.8	4.8	4.8
160°	1.9	1.9	1.0	1.0	1.9	1.9	1.9	1.9	2.9	2.9	2.9
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-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
0°	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0
2.5°	1741.1	1743.0	1743.0	1741.1	1740.1	1743.9	1739.1	1720.9	1726.7	1728.6	1734.3
5°	1732.4	1734.3	1734.3	1734.3	1732.4	1736.3	1731.5	1713.2	1720.0	1722.8	1726.7
7.5°	1720.0	1720.9	1722.8	1721.9	1720.0	1725.7	1720.9	1702.7	1707.5	1712.3	1717.1
10°	1703.7	1703.7	1704.6	1706.5	1704.6	1709.4	1704.6	1688.3	1693.1	1696.0	1701.7
12.5°	1681.6	1683.5	1684.5	1683.5	1682.6	1686.4	1684.5	1669.1	1671.1	1676.8	1682.6
15°	1651.9	1651.9	1656.7	1654.8	1654.8	1658.6	1660.5	1643.3	1646.1	1654.8	1660.5
17.5°	1615.5	1616.4	1620.3	1622.2	1621.2	1627.9	1628.9	1615.5	1614.5	1625.0	1630.8
20°	1568.5	1570.4	1575.2	1579.0	1579.0	1586.7	1589.6	1580.9	1581.9	1593.4	1595.3
22.5°	1511.0	1511.0	1519.6	1525.3	1530.1	1534.9	1543.6	1535.9	1535.9	1551.2	1559.9
25°	1440.0	1446.7	1449.6	1461.1	1467.8	1481.2	1488.9	1489.9	1490.8	1505.2	1511.0
27.5°	1361.4	1363.3	1371.9	1385.4	1393.0	1405.5	1419.9	1422.8	1427.5	1446.7	1455.4
30°	1272.2	1278.0	1281.8	1301.0	1311.5	1327.8	1346.1	1352.8	1356.6	1382.5	1393.0
32.5°	1181.2	1183.1	1199.4	1209.9	1222.4	1239.6	1260.7	1273.2	1280.9	1307.7	1323.0
35°	1090.1	1093.9	1107.3	1120.8	1133.2	1150.5	1172.5	1189.8	1203.2	1227.2	1247.3
37.5°	1006.7	1016.3	1019.1	1032.6	1042.1	1059.4	1074.7	1099.7	1113.1	1138.0	1163.9
40°	931.9	934.8	936.7	950.1	956.8	973.1	995.2	1011.5	1029.7	1047.9	1078.6
42.5°	858.1	860.0	862.9	870.5	878.2	889.7	906.0	922.3	941.5	968.3	988.5
45°	790.0	791.9	793.8	798.6	805.3	815.9	826.4	837.9	857.1	880.1	901.2
47.5°	726.7	730.6	730.6	731.5	736.3	744.9	752.6	767.0	777.5	790.0	814.0
50°	666.3	669.2	670.2	670.2	673.0	678.8	680.7	690.3	699.9	711.4	728.6
52.5°	609.8	609.8	608.8	612.6	612.6	616.5	617.4	623.2	629.9	642.3	650.0
55°	556.1	556.1	558.9	557.0	557.0	558.9	558.0	558.9	564.7	572.4	579.1
57.5°	504.3	503.3	506.2	504.3	503.3	505.3	507.2	503.3	504.3	512.0	512.0
60°	452.5	453.5	456.4	454.4	454.4	454.4	452.5	450.6	448.7	453.5	455.4
62.5°	411.3	408.4	411.3	408.4	410.3	409.4	407.5	403.6	404.6	402.7	400.7
65°	368.2	368.2	369.1	366.2	368.2	368.2	365.3	364.3	358.6	356.6	351.9
67.5°	330.8	330.8	331.7	329.8	329.8	330.8	327.9	325.0	319.3	316.4	309.7
70°	298.2	298.2	298.2	297.2	297.2	297.2	295.3	291.5	285.7	280.9	272.3
72.5°	268.4	269.4	268.4	268.4	271.3	268.4	265.6	261.7	256.9	247.4	239.7
75°	244.5	245.4	244.5	244.5	244.5	243.5	242.6	236.8	231.1	223.4	211.9
77.5°	223.4	223.4	224.3	223.4	223.4	222.4	219.5	214.8	208.0	201.3	187.9
80°	203.3	204.2	205.2	206.1	204.2	203.3	200.4	196.5	187.9	180.2	166.8
82.5°	188.9	187.9	188.9	189.8	187.9	187.0	184.1	179.3	172.6	162.0	148.6
85°	174.5	173.5	173.5	174.5	173.5	171.6	168.7	163.9	157.2	146.7	133.3
87.5°	160.1	161.1	162.0	161.1	160.1	158.2	155.3	150.5	142.9	134.2	119.8
90°	149.6	149.6	149.6	149.6	148.6	146.7	143.8	138.1	131.3	120.8	108.3
92.5°	140.0	140.0	140.0	140.0	139.0	136.1	133.3	128.5	120.8	110.3	98.7
95°	130.4	131.3	130.4	130.4	128.5	127.5	122.7	117.9	111.2	100.7	88.2
97.5°	119.8	120.8	119.8	119.8	118.9	117.0	114.1	108.3	101.6	92.0	80.5
100°	112.2	112.2	111.2	111.2	110.3	108.3	104.5	99.7	93.0	83.4	71.9
102.5°	103.5	104.5	103.5	103.5	101.6	99.7	96.8	92.0	85.3	75.7	65.2
105°	96.8	96.8	95.9	95.9	94.0	92.0	89.2	83.4	77.7	69.0	58.5
107.5°	90.1	90.1	89.2	89.2	87.2	85.3	81.5	76.7	70.9	62.3	52.7
110°	83.4	83.4	83.4	82.5	80.5	77.7	74.8	70.0	64.2	56.6	47.0





TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°
112.5°	78.6	77.7	76.7	75.7	73.8	71.9	68.1	63.3	57.5	50.8	42.2
115°	71.9	71.9	70.9	70.0	68.1	65.2	62.3	58.5	52.7	45.1	37.4
117.5°	66.2	66.2	65.2	64.2	62.3	59.4	56.6	52.7	47.0	40.3	33.6
120°	60.4	60.4	59.4	58.5	56.6	53.7	51.8	47.0	42.2	35.5	29.7
122.5°	55.6	54.6	54.6	52.7	51.8	48.9	46.0	42.2	37.4	31.6	25.9
125°	49.9	49.9	48.9	47.9	47.0	44.1	41.2	37.4	32.6	27.8	23.0
127.5°	45.1	45.1	44.1	43.1	42.2	39.3	36.4	33.6	28.8	24.0	19.2
130°	40.3	40.3	39.3	38.3	37.4	34.5	32.6	28.8	24.9	21.1	16.3
132.5°	36.4	36.4	35.5	34.5	32.6	30.7	28.8	24.9	22.1	18.2	14.4
135°	32.6	31.6	31.6	30.7	28.8	26.8	24.9	22.1	18.2	15.3	11.5
137.5°	28.8	27.8	26.8	25.9	24.9	23.0	21.1	19.2	16.3	12.5	9.6
140°	24.9	24.0	24.0	23.0	21.1	20.1	18.2	15.3	13.4	10.5	7.7
142.5°	21.1	21.1	20.1	19.2	18.2	17.3	15.3	13.4	10.5	8.6	5.8
145°	18.2	17.3	17.3	16.3	15.3	13.4	12.5	10.5	8.6	6.7	4.8
147.5°	14.4	14.4	14.4	13.4	12.5	11.5	10.5	8.6	6.7	4.8	2.9
150°	11.5	11.5	11.5	10.5	9.6	8.6	7.7	6.7	4.8	2.9	1.9
152.5°	9.6	9.6	8.6	8.6	7.7	6.7	5.8	4.8	2.9	1.9	1.9
155°	6.7	6.7	6.7	5.8	5.8	4.8	3.8	2.9	1.9	1.9	1.9
157.5°	4.8	4.8	4.8	3.8	3.8	2.9	2.9	1.9	1.9	1.9	1.9
160°	2.9	2.9	2.9	2.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	330°	335°	340°	345°	350°	355°	360°
0°	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0	1743.0
2.5°	1731.5	1730.5	1738.2	1738.2	1729.5	1743.0	1757.4
5°	1725.7	1724.8	1732.4	1732.4	1724.8	1738.2	1753.5
7.5°	1714.2	1715.2	1722.8	1724.8	1715.2	1727.6	1743.9
10°	1701.7	1700.8	1709.4	1711.3	1703.7	1715.2	1730.5
12.5°	1681.6	1681.6	1690.2	1693.1	1685.4	1698.9	1713.2
15°	1660.5	1660.5	1666.3	1671.1	1664.4	1676.8	1691.2
17.5°	1633.7	1632.7	1638.5	1644.2	1637.5	1650.9	1666.3
20°	1599.2	1599.2	1605.9	1612.6	1607.8	1620.3	1637.5
22.5°	1562.7	1558.9	1570.4	1575.2	1572.3	1584.8	1602.0
25°	1516.7	1515.8	1527.3	1534.0	1530.1	1543.6	1558.9
27.5°	1466.9	1465.9	1477.4	1486.0	1484.1	1496.6	1513.8
30°	1406.5	1411.3	1421.8	1436.2	1431.4	1444.8	1463.0
32.5°	1343.2	1348.0	1360.4	1375.8	1376.7	1387.3	1405.5
35°	1267.4	1279.9	1288.5	1308.7	1312.5	1323.0	1342.2
37.5°	1187.9	1202.2	1220.5	1235.8	1243.5	1252.1	1274.2
40°	1098.7	1119.8	1139.9	1158.1	1167.7	1176.4	1197.5
42.5°	1018.2	1034.5	1053.6	1071.9	1089.1	1096.8	1118.8
45°	927.1	946.3	963.5	985.6	1002.8	1011.5	1033.5
47.5°	837.9	857.1	880.1	895.5	913.7	922.3	943.4
50°	752.6	769.9	789.0	807.3	822.6	830.3	848.5
52.5°	668.2	686.5	704.7	716.2	732.5	738.2	753.6
55°	593.5	605.9	622.2	628.9	645.2	649.1	659.6
57.5°	521.5	530.2	535.9	547.4	558.9	567.6	580.0
60°	456.4	460.2	464.0	470.7	480.3	483.2	488.0
62.5°	397.9	396.9	404.6	406.5	407.5	417.0	412.3
65°	346.1	347.1	340.3	337.5	341.3	344.2	342.3
67.5°	303.0	297.2	291.5	284.7	279.0	281.9	279.0
70°	260.8	256.0	246.4	236.8	233.0	227.2	224.3
72.5°	227.2	215.7	206.1	193.7	187.0	180.2	175.4
75°	201.3	185.0	171.6	158.2	148.6	139.0	137.1
77.5°	174.5	159.1	143.8	129.4	115.0	104.5	100.7
80°	153.4	139.0	120.8	103.5	88.2	74.8	70.0
82.5°	134.2	118.9	100.7	82.5	65.2	50.8	45.1
85°	117.9	101.6	83.4	65.2	47.9	32.6	24.9
87.5°	105.5	87.2	69.0	51.8	33.6	18.2	9.6
90°	94.0	76.7	59.4	41.2	24.0	9.6	0.0
92.5°	83.4	67.1	49.9	33.6	18.2	5.8	1.0
95°	73.8	59.4	42.2	26.8	13.4	3.8	1.0
97.5°	66.2	51.8	36.4	22.1	10.5	2.9	1.0
100°	59.4	45.1	31.6	18.2	8.6	1.9	1.0
102.5°	52.7	40.3	26.8	15.3	6.7	1.0	1.0
105°	47.0	35.5	23.0	13.4	5.8	1.0	1.0
107.5°	42.2	31.6	20.1	11.5	3.8	1.0	1.0
110°	37.4	26.8	17.3	9.6	2.9	1.0	1.0



TEST NUMBER: P#

CATALOG NUMBER: 4SNLED-LD5-54HL-LN-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (continued):**

	330°	335°	340°	345°	350°	355°	360°
112.5°	33.6	24.0	15.3	7.7	1.9	1.0	1.0
115°	29.7	21.1	13.4	6.7	1.9	1.0	1.0
117.5°	25.9	18.2	11.5	4.8	1.0	1.0	1.0
120°	23.0	16.3	9.6	3.8	1.0	1.0	1.0
122.5°	20.1	13.4	7.7	2.9	1.0	1.0	1.0
125°	17.3	11.5	6.7	1.9	1.0	1.0	1.0
127.5°	14.4	9.6	4.8	1.9	1.0	1.0	1.0
130°	12.5	7.7	3.8	1.0	1.0	1.0	1.0
132.5°	10.5	5.8	2.9	1.0	1.0	1.0	1.0
135°	8.6	4.8	1.9	1.0	1.0	1.0	1.0
137.5°	6.7	3.8	1.9	1.0	1.0	1.0	1.0
140°	4.8	2.9	1.0	1.0	1.0	1.0	1.0
142.5°	3.8	1.9	1.0	1.0	1.0	1.0	1.0
145°	2.9	1.9	1.0	1.0	1.0	1.0	1.0
147.5°	1.9	1.9	1.9	1.9	1.0	1.0	1.0
150°	1.9	1.9	1.0	1.0	1.9	1.0	1.0
152.5°	1.9	1.0	1.0	1.0	1.9	1.0	1.0
155°	1.9	1.9	1.9	1.9	1.9	1.9	1.0
157.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9
160°	1.9	1.9	1.9	1.9	1.9	1.9	1.9
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)