

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: AMETRIX

Report Number: P189140

Luminaire Tested: A04-SI-A-1-LED-40K-D-120-S

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2019  
Report Number: P189140  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (ITL87330-GONIOPHOTOMETRY)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: AMETRIX  
Catalog Number: A04-SI-A-1-LED-40K-D-120-S  
Description: ARROWLINEAR LED LUMINAIRE, EXTRA SMALL HOUSING  
4-FOOT LONG EXTRUDED HOUSING WITH WHITE REFLECTOR AND FROSTED LENS  
Light Source: (119) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

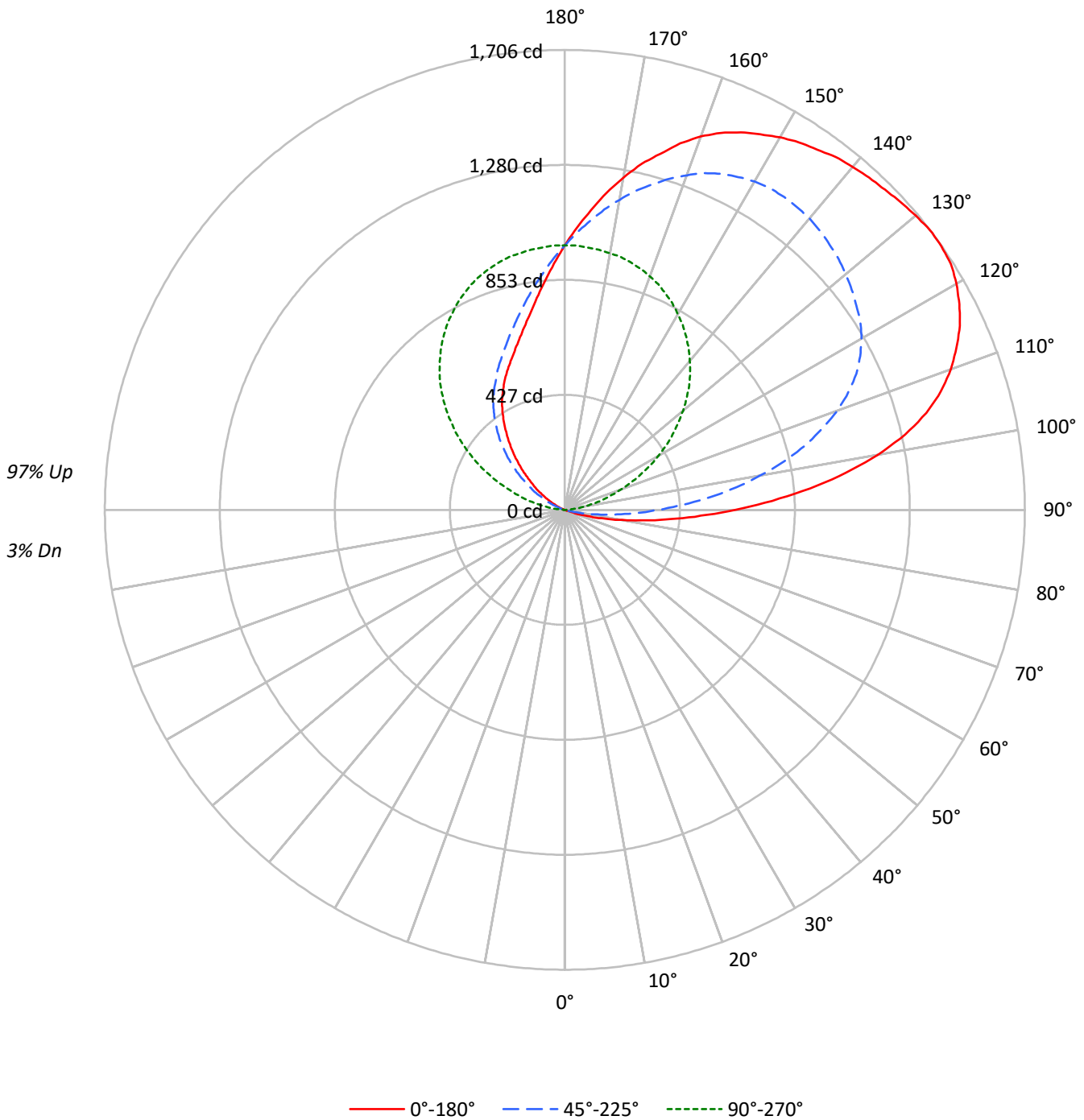
Lumens per Lamp: N/A  
Luminaire Lumens: 4171.4 lumens  
Efficiency: N/A  
Efficacy: 103.0 lumens/watt  
Spacing Criteria (0/90/45): - / - / -  
Luminous Opening: Rectangular w/ Sides (W: 4.15' x L: 0.29' x H: 0.11')  
CIE Type: Indirect

Input Watts (W): 40.5  
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: 24 FT



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### Luminous Intensity Polar Plot



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

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	96	96	96	96	82	82	82	82	57	57	57	34	34	34	13	13	13	3
1	86	82	78	74	74	70	67	64	48	46	45	28	27	26	10	9	9	1
2	78	71	65	60	67	61	56	52	42	39	36	25	23	21	8	8	7	0
3	71	62	55	50	61	54	48	43	37	33	30	22	20	18	7	7	6	0
4	65	55	47	42	55	47	41	36	33	29	26	19	17	15	7	6	5	0
5	59	49	41	35	51	42	36	31	29	25	22	17	15	13	6	5	4	0
6	55	43	36	30	46	37	31	26	26	22	19	15	13	11	5	4	4	0
7	50	39	31	26	43	33	27	23	23	19	16	14	11	10	5	4	3	0
8	46	35	28	23	40	30	24	20	21	17	14	12	10	8	4	3	3	0
9	43	32	25	20	37	27	21	17	19	15	12	11	9	7	4	3	2	0
10	40	29	22	17	34	25	19	15	17	13	11	10	8	7	4	3	2	0

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	0	0	0	0	0
5°	0	0	0	0	0
10°	0	0	0	0	0
15°	0	0	0	0	0
20°	0	0	0	0	0
25°	0	0	0	0	0
30°	0	0	0	0	0
35°	0	0	0	0	0
40°	0	0	0	0	0
45°	0	0	0	0	0
50°	0	0	0	0	0
55°	0	0	0	0	0
60°	0	0	0	0	0
65°	0	0	0	0	0
70°	271	0	0	0	0
75°	1390	212	0	0	0
80°	3589	1617	0	0	0
85°	7628	4710	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 90°  
 Luminance: 14955 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	0.0	0.0
10°-20°	0.0	0.0
20°-30°	0.0	0.0
30°-40°	0.0	0.0
40°-50°	0.0	0.0
50°-60°	0.0	0.0
60°-70°	0.3	0.0
70°-80°	20.8	0.5
80°-90°	108.2	2.6
90°-100°	279.9	6.7
100°-110°	466.3	11.2
110°-120°	593.9	14.2
120°-130°	655.4	15.7
130°-140°	647.7	15.5
140°-150°	578.1	13.9
150°-160°	448.5	10.8
160°-170°	278.5	6.7
170°-180°	93.7	2.2
0°-30°	0.0	0.0
0°-40°	0.0	0.0
0°-60°	0.0	0.0
0°-90°	129.4	3.1
90°-120°	1340.1	32.1
90°-150°	3221.4	77.2
90°-180°	4042.0	96.9
0°-180°	4171.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	0	0	0	0	0	
5°	0	0	0	0	0	0
15°	0	0	0	0	0	0
25°	0	0	0	0	0	0
35°	0	0	0	0	0	0
45°	0	0	0	0	0	0
55°	0	0	0	0	0	0
65°	0	0	0	0	0	3
75°	96	13	0	0	0	112
85°	394	195	0	0	0	287
90°	631	348	0	0	0	348
95°	912	541	25	2	2	800
105°	1388	922	147	6	8	1452
115°	1616	1193	310	67	25	1597
125°	1704	1321	488	180	113	1524
135°	1679	1390	652	321	241	1301
145°	1631	1417	784	461	392	1026
155°	1545	1375	885	583	528	715
165°	1367	1249	950	715	654	391
175°	1115	1075	977	887	851	111
180°	981	981	981	981	981	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	21.0	23.1	16.8	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	52.4	52.4	44.0	29.3	10.5	0.0	0.0	0.0	0.0	0.0	0.0
75°	96.4	96.4	85.9	67.1	39.8	12.6	0.0	0.0	0.0	0.0	0.0
77.5°	150.9	148.8	136.3	113.2	79.7	41.9	6.3	0.0	0.0	0.0	0.0
80°	218.0	215.9	201.2	171.9	132.1	81.8	31.4	0.0	0.0	0.0	0.0
82.5°	297.7	295.6	276.7	243.2	195.0	134.2	67.1	14.7	0.0	0.0	0.0
85°	394.1	392.0	369.0	329.1	272.5	195.0	111.1	44.0	4.2	0.0	0.0
87.5°	505.2	496.8	475.9	427.6	354.3	266.2	165.6	79.7	18.9	0.0	0.0
90°	631.0	622.6	597.5	540.9	452.8	348.0	230.6	123.7	44.0	4.2	0.0
92.5°	769.3	767.3	729.5	662.4	559.7	438.1	306.1	176.1	77.6	21.0	8.4
95°	911.9	909.8	867.9	790.3	675.0	540.9	383.6	234.8	119.5	46.1	25.2
97.5°	1052.4	1050.3	997.8	918.2	790.3	641.5	467.5	299.8	165.6	77.6	50.3
100°	1180.2	1176.0	1121.5	1037.7	903.5	737.9	551.3	364.8	213.8	111.1	77.6
102.5°	1293.4	1285.0	1232.6	1144.6	1008.3	834.3	633.1	431.8	268.3	150.9	111.1
105°	1387.8	1377.3	1329.1	1238.9	1098.5	922.4	714.8	501.0	322.8	192.9	146.7
107.5°	1463.2	1454.8	1404.5	1318.6	1180.2	999.9	792.4	568.1	379.4	236.9	182.4
110°	1524.0	1517.7	1471.6	1385.7	1249.4	1075.4	863.7	635.2	438.1	285.1	224.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	1572.2	1568.0	1524.0	1438.1	1310.2	1138.3	926.6	698.1	494.7	333.3	266.2
115°	1616.3	1612.1	1570.1	1488.4	1360.5	1192.8	985.3	758.9	553.4	381.5	310.3
117.5°	1649.8	1645.6	1603.7	1524.0	1400.3	1234.7	1033.5	815.5	614.2	431.8	356.4
120°	1677.1	1670.8	1633.0	1555.5	1433.9	1270.4	1075.4	870.0	670.8	482.2	400.4
122.5°	1698.0	1691.7	1656.1	1576.4	1459.0	1299.7	1115.2	922.4	725.3	530.4	446.5
125°	1704.3	1700.1	1666.6	1586.9	1471.6	1320.7	1150.9	968.5	773.5	578.6	488.4
127.5°	1706.4	1702.2	1668.7	1591.1	1482.1	1341.6	1182.3	1010.4	819.7	622.6	530.4
130°	1698.0	1698.0	1664.5	1591.1	1488.4	1360.5	1211.7	1050.3	859.5	664.5	572.3
132.5°	1689.6	1687.5	1658.2	1589.0	1494.7	1377.3	1238.9	1083.8	897.2	704.4	612.1
135°	1679.2	1679.2	1651.9	1589.0	1501.0	1389.9	1262.0	1113.1	928.7	740.0	652.0
137.5°	1670.8	1670.8	1645.6	1586.9	1505.2	1402.4	1282.9	1136.2	960.1	775.6	687.6
140°	1660.3	1660.3	1635.1	1582.7	1507.3	1410.8	1295.5	1155.1	981.1	807.1	721.1
142.5°	1649.8	1649.8	1624.6	1576.4	1507.3	1415.0	1308.1	1169.7	1004.1	836.4	754.7
145°	1630.9	1633.0	1612.1	1566.0	1501.0	1417.1	1312.3	1178.1	1020.9	863.7	784.0
147.5°	1616.3	1616.3	1597.4	1553.4	1492.6	1415.0	1312.3	1182.3	1035.6	886.7	813.4
150°	1595.3	1595.3	1576.4	1540.8	1484.2	1406.6	1310.2	1184.4	1046.1	907.7	838.5
152.5°	1570.1	1572.2	1553.4	1519.8	1465.3	1392.0	1297.6	1180.2	1052.4	926.6	863.7
155°	1545.0	1547.1	1530.3	1496.8	1444.4	1375.2	1285.0	1176.0	1058.6	943.3	884.6
157.5°	1513.5	1515.6	1498.9	1465.3	1417.1	1352.1	1264.1	1167.7	1062.8	955.9	905.6
160°	1473.7	1475.8	1456.9	1427.6	1381.5	1320.7	1243.1	1155.1	1060.7	968.5	922.4
162.5°	1425.5	1425.5	1410.8	1383.6	1339.5	1287.1	1218.0	1140.4	1058.6	976.9	937.1
165°	1366.8	1371.0	1358.4	1333.3	1295.5	1249.4	1188.6	1121.5	1052.4	983.2	949.6
167.5°	1314.4	1312.3	1301.8	1282.9	1249.4	1211.7	1159.3	1102.7	1046.1	989.5	960.1
170°	1251.5	1249.4	1241.0	1224.3	1199.1	1167.7	1125.7	1081.7	1037.7	989.5	966.4
172.5°	1186.5	1182.3	1176.0	1165.6	1146.7	1123.6	1092.2	1058.6	1025.1	989.5	972.7
175°	1115.2	1115.2	1111.0	1102.7	1090.1	1075.4	1054.4	1031.4	1010.4	987.4	976.9
177.5°	1048.2	1048.2	1046.1	1041.9	1035.6	1029.3	1018.8	1008.3	997.8	985.3	981.1
180°	981.1	981.1	981.1	981.1	981.1	981.1	981.1	981.1	981.1	981.1	981.1



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**CANDELA DISTRIBUTION (continued):**

	112.5°	135°	157.5°	180°
0°	0.0	0.0	0.0	0.0
2.5°	0.0	0.0	0.0	0.0
5°	0.0	0.0	0.0	0.0
7.5°	0.0	0.0	0.0	0.0
10°	0.0	0.0	0.0	0.0
12.5°	0.0	0.0	0.0	0.0
15°	0.0	0.0	0.0	0.0
17.5°	0.0	0.0	0.0	0.0
20°	0.0	0.0	0.0	0.0
22.5°	0.0	0.0	0.0	0.0
25°	0.0	0.0	0.0	0.0
27.5°	0.0	0.0	0.0	0.0
30°	0.0	0.0	0.0	0.0
32.5°	0.0	0.0	0.0	0.0
35°	0.0	0.0	0.0	0.0
37.5°	0.0	0.0	0.0	0.0
40°	0.0	0.0	0.0	0.0
42.5°	0.0	0.0	0.0	0.0
45°	0.0	0.0	0.0	0.0
47.5°	0.0	0.0	0.0	0.0
50°	0.0	0.0	0.0	0.0
52.5°	0.0	0.0	0.0	0.0
55°	0.0	0.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	2.1	2.1
95°	0.0	2.1	2.1	2.1
97.5°	2.1	2.1	4.2	4.2
100°	6.3	4.2	4.2	4.2
102.5°	21.0	6.3	6.3	6.3
105°	37.7	6.3	8.4	8.4
107.5°	60.8	12.6	8.4	8.4
110°	85.9	25.2	10.5	10.5





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CATALOG NUMBER: A04-SI-A-1-LED-40K-D-120-S

**CANDELA DISTRIBUTION (continued):**

	112.5°	135°	157.5°	180°
112.5°	113.2	44.0	18.9	14.7
115°	142.5	67.1	33.5	25.2
117.5°	174.0	90.1	54.5	41.9
120°	207.5	117.4	75.5	62.9
122.5°	243.2	148.8	102.7	85.9
125°	276.7	180.3	130.0	113.2
127.5°	312.4	213.8	159.3	142.5
130°	348.0	249.5	190.8	171.9
132.5°	383.6	285.1	226.4	205.4
135°	419.3	320.7	262.0	241.1
137.5°	452.8	358.5	299.8	278.8
140°	486.3	392.0	337.5	316.5
142.5°	522.0	427.6	375.2	354.3
145°	553.4	461.2	410.9	392.0
147.5°	587.0	492.6	448.6	429.7
150°	618.4	522.0	482.2	465.4
152.5°	649.9	551.3	511.5	496.8
155°	683.4	582.8	540.9	528.3
157.5°	714.8	612.1	570.2	557.6
160°	746.3	643.6	601.6	587.0
162.5°	777.7	679.2	633.1	618.4
165°	811.3	714.8	668.7	654.1
167.5°	840.6	754.7	708.6	693.9
170°	870.0	796.6	754.7	740.0
172.5°	897.2	840.6	807.1	792.4
175°	924.5	886.7	861.6	851.1
177.5°	953.8	935.0	918.2	914.0
180°	981.1	981.1	981.1	981.1

(END OF REPORT)