

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: LUMARK

Report Number: P196909

Luminaire Tested: **NAV-AF-01-D-UNV-5NQ-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196909  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-01-D-UNV-5NQ-8030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 3000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5124 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B2 - U0 - G1

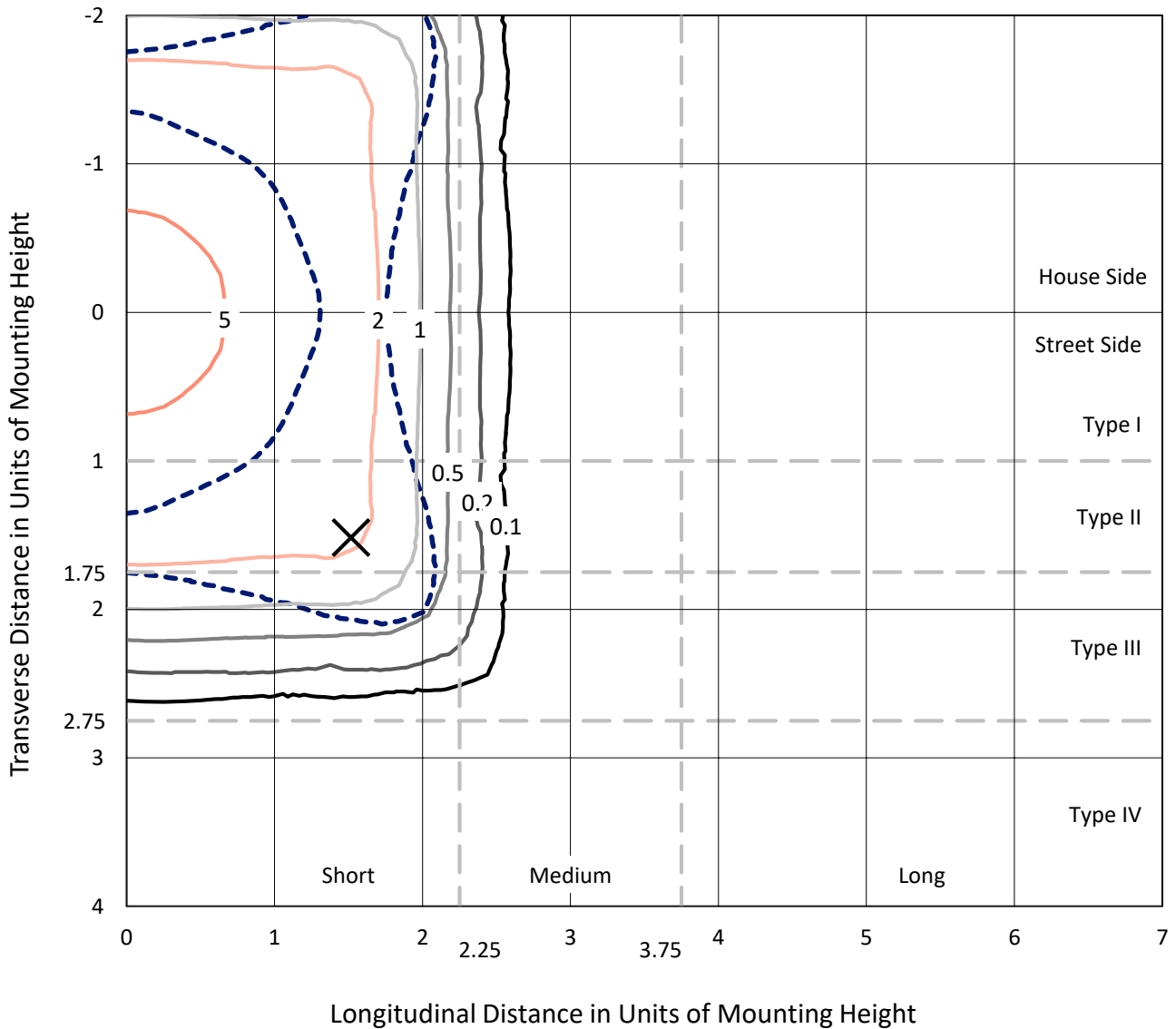
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

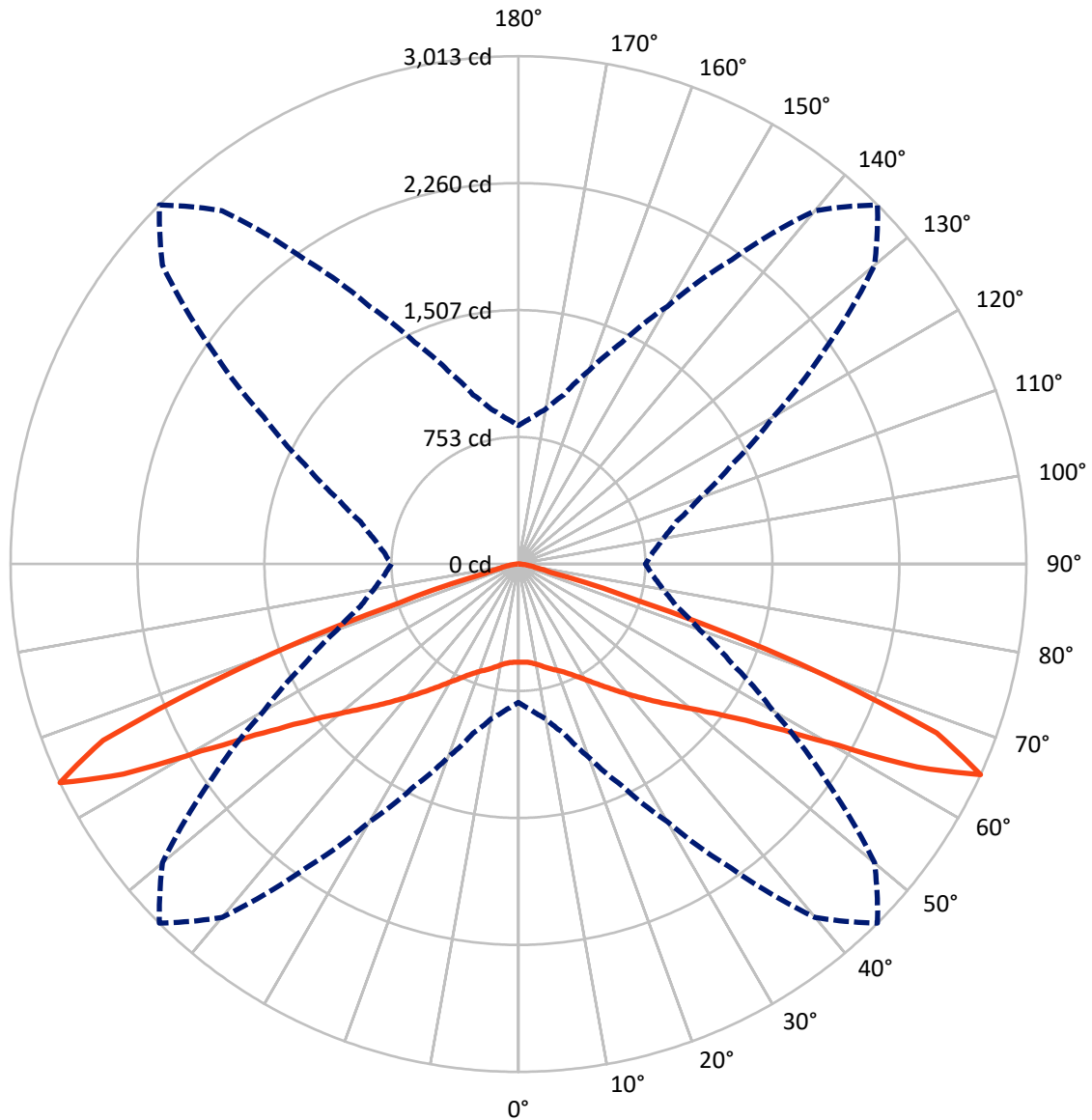
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.8 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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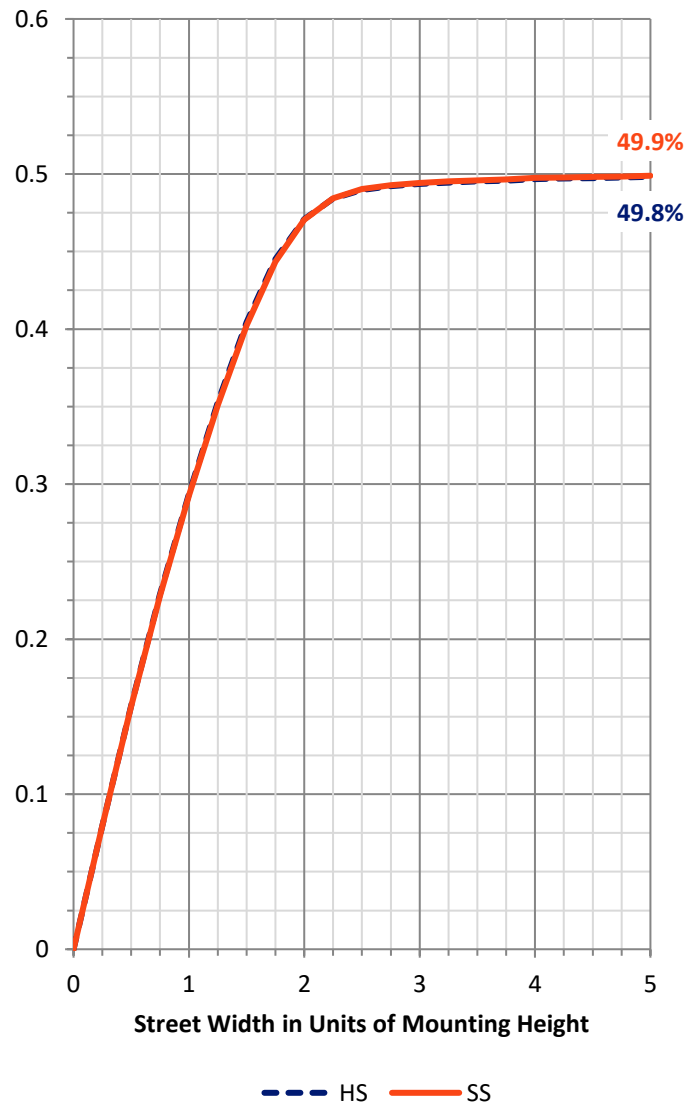
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2562.0	0.0	2562.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	2562.0	0.0	2562.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	5124.0	0.0	5124.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.8	1.1
10°-20°	181.9	3.6
20°-30°	339.4	6.6
30°-40°	572.2	11.2
40°-50°	929.4	18.1
50°-60°	1456.2	28.4
60°-70°	1374.6	26.8
70°-80°	185.3	3.6
80°-90°	28.2	0.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	5124.0	100.0
0°-180°	5124.0	100.0



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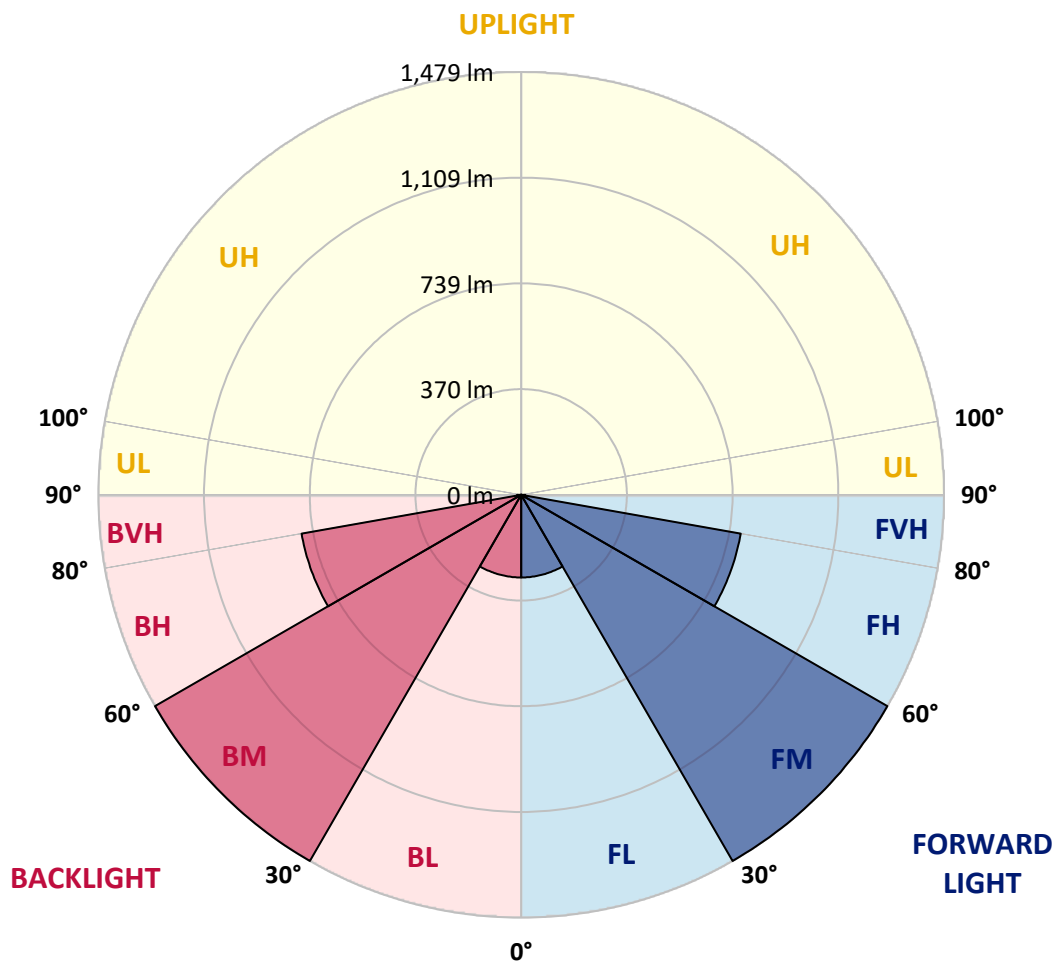
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	289.0	5.6			
FM	(30°-60°)	1478.9	28.9			
FH	(60°-80°)	779.9	15.2			G1/1800
FVH	(80°-90°)	14.1	0.3			G1/100
BL	(0°-30°)	289.0	5.6	B1/500		
BM	(30°-60°)	1478.9	28.9	B2/2500		
BH	(60°-80°)	779.9	15.2	B2/1000		G1/1800
BVH	(80°-90°)	14.1	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G1**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8
2.5°	587.6	587.6	588.6	588.3	587.0	586.0	585.1	583.8	583.2	582.5	582.2
5°	590.8	590.8	591.8	591.5	590.5	589.2	588.6	587.6	586.7	586.0	586.4
7.5°	598.8	599.1	599.4	599.1	598.2	597.2	595.9	595.6	594.3	593.4	594.0
10°	610.9	610.9	611.3	611.6	610.9	608.7	608.7	608.1	606.8	605.5	605.8
12.5°	624.3	624.3	624.7	624.7	624.7	623.4	623.7	623.4	621.8	621.2	621.8
15°	637.4	637.8	637.8	638.4	638.4	638.7	640.0	640.0	639.3	639.0	639.0
17.5°	652.8	653.4	653.7	654.7	655.0	655.6	656.9	657.2	657.5	656.6	656.9
20°	673.2	673.5	674.5	674.8	676.1	676.1	676.7	676.4	675.7	674.5	674.5
22.5°	696.2	696.8	698.7	698.7	700.3	699.4	699.7	698.7	697.1	696.5	695.8
25°	726.2	727.1	728.7	728.1	728.7	727.1	727.1	727.1	726.2	725.2	724.9
27.5°	764.2	762.6	764.2	762.9	762.6	761.3	761.6	761.0	760.0	759.7	758.4
30°	803.7	801.8	802.8	803.1	802.5	802.1	800.9	799.9	798.3	798.6	797.7
32.5°	849.1	847.1	848.1	848.4	847.8	848.4	848.1	845.9	843.9	845.2	845.2
35°	903.0	901.7	904.3	905.2	903.3	902.4	901.1	898.5	895.7	897.6	897.9
37.5°	967.8	966.2	968.1	970.7	967.2	965.2	960.1	956.3	954.4	955.3	956.6
40°	1035.1	1035.5	1040.9	1041.5	1037.7	1035.5	1030.4	1024.6	1019.2	1019.2	1020.8
42.5°	1106.0	1107.0	1113.3	1115.6	1114.3	1110.2	1103.1	1096.1	1089.1	1090.4	1092.3
45°	1186.1	1184.8	1191.6	1197.0	1196.0	1194.7	1188.0	1175.3	1168.9	1168.6	1171.8
47.5°	1270.4	1272.9	1280.0	1289.2	1288.9	1285.7	1277.1	1265.3	1253.5	1254.4	1258.3
50°	1368.7	1372.2	1384.0	1393.3	1394.6	1393.6	1383.4	1369.7	1353.1	1354.0	1359.1
52.5°	1456.8	1461.9	1475.6	1494.8	1506.6	1512.0	1505.3	1492.6	1475.6	1476.6	1482.0
55°	1536.6	1544.6	1565.0	1591.2	1614.8	1636.8	1646.7	1646.4	1634.0	1636.8	1643.9
57.5°	1586.7	1597.9	1628.8	1671.0	1717.9	1762.3	1800.6	1836.6	1844.6	1859.6	1859.6
60°	1519.4	1545.5	1586.7	1658.9	1751.1	1850.7	1958.6	2063.6	2131.3	2184.6	2155.8
62.5°	1268.8	1307.4	1365.2	1460.3	1604.0	1781.7	1998.5	2242.7	2497.4	2653.1	2538.9
65°	821.0	869.5	932.4	1039.3	1220.3	1449.1	1764.8	2203.7	2736.8	3013.2	2757.8
67.5°	325.3	358.1	396.4	472.4	629.5	854.2	1208.5	1749.8	2416.6	2677.4	2391.1
70°	155.4	160.9	168.2	184.5	223.8	302.0	485.5	862.1	1482.0	1756.8	1446.6
72.5°	112.4	113.3	116.8	122.3	133.7	149.7	181.9	263.7	511.0	743.1	511.7
75°	85.2	86.5	88.4	91.3	97.4	105.0	117.1	140.4	174.9	201.7	174.6
77.5°	64.8	66.1	67.7	70.5	73.7	79.2	83.6	92.9	107.6	113.3	112.7
80°	47.2	49.5	52.0	54.6	56.8	59.4	59.7	64.2	72.5	77.9	76.3
82.5°	30.0	31.9	38.6	41.5	41.8	42.5	42.1	42.5	46.9	50.8	49.5
85°	19.2	20.4	23.9	27.1	26.5	27.8	27.8	27.1	25.2	21.7	25.9
87.5°	9.6	9.9	11.5	14.4	13.7	12.1	11.8	11.8	8.6	7.3	8.0
90°	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°
0°	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8
2.5°	581.3	581.9	580.9	580.9	580.6	581.3	580.3	580.3
5°	585.7	586.7	586.4	586.4	587.0	587.6	587.3	587.0
7.5°	593.7	594.3	595.0	595.3	595.9	595.6	596.3	595.9
10°	605.8	605.2	606.2	605.2	605.5	604.9	605.2	605.2
12.5°	621.2	620.2	619.6	618.9	618.9	617.6	617.6	618.0
15°	638.7	637.1	635.8	635.2	634.6	634.6	633.6	634.2
17.5°	655.9	654.3	652.1	652.1	651.2	650.5	649.9	651.5
20°	674.1	672.5	671.3	670.9	669.0	668.4	668.7	670.6
22.5°	695.2	694.2	694.2	693.6	692.3	691.4	691.4	693.6
25°	723.6	721.7	722.0	722.3	721.7	721.7	721.1	722.7
27.5°	758.4	756.8	757.8	758.4	757.8	758.7	757.8	759.0
30°	799.3	798.3	799.3	800.2	798.6	798.6	798.0	798.9
32.5°	848.1	846.8	847.5	847.5	845.2	843.3	840.8	842.7
35°	901.7	900.1	901.4	902.4	899.8	897.9	894.1	895.7
37.5°	960.8	961.4	963.0	967.2	966.5	963.3	960.5	961.7
40°	1026.8	1030.0	1037.1	1039.9	1039.3	1036.1	1032.3	1032.9
42.5°	1101.5	1105.7	1113.0	1117.8	1115.6	1111.1	1106.3	1108.2
45°	1182.9	1189.3	1198.9	1203.7	1200.8	1196.0	1189.3	1192.8
47.5°	1269.1	1281.9	1294.7	1301.0	1300.1	1293.4	1284.8	1285.7
50°	1372.2	1389.1	1405.4	1411.8	1407.0	1396.8	1384.7	1384.3
52.5°	1500.5	1518.7	1532.1	1530.5	1518.7	1502.8	1489.0	1488.4
55°	1660.8	1666.8	1664.9	1651.2	1630.4	1605.5	1588.0	1585.1
57.5°	1854.5	1834.1	1804.1	1762.6	1716.0	1668.7	1636.8	1625.0
60°	2091.4	1999.1	1891.9	1778.9	1675.8	1598.5	1549.7	1520.0
62.5°	2287.0	2019.9	1780.1	1583.8	1423.3	1327.8	1261.1	1220.0
65°	2220.0	1745.0	1397.8	1144.6	969.4	870.8	800.2	753.3
67.5°	1715.0	1166.0	811.4	562.4	426.4	361.0	315.4	285.7
70°	864.7	447.2	271.0	191.2	163.4	151.9	144.3	139.8
72.5°	253.8	169.5	140.8	124.5	114.6	107.6	103.1	100.9
75°	140.4	114.6	101.2	91.9	85.5	80.8	77.9	76.0
77.5°	96.7	83.3	76.6	70.5	65.4	61.9	59.7	57.8
80°	67.7	61.0	58.1	54.9	51.1	48.2	45.0	43.7
82.5°	45.0	42.1	41.5	38.9	36.7	33.5	27.8	25.9
85°	26.5	26.2	26.2	25.2	23.6	20.7	16.6	16.6
87.5°	9.3	9.6	9.9	10.5	10.2	8.6	7.0	6.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)