

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: P195943

Luminaire Tested: **NAV-AF-01-D-UNV-5NQ-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195943
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-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5190.5 lumens
Efficiency: N/A
Efficacy: 118.0 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

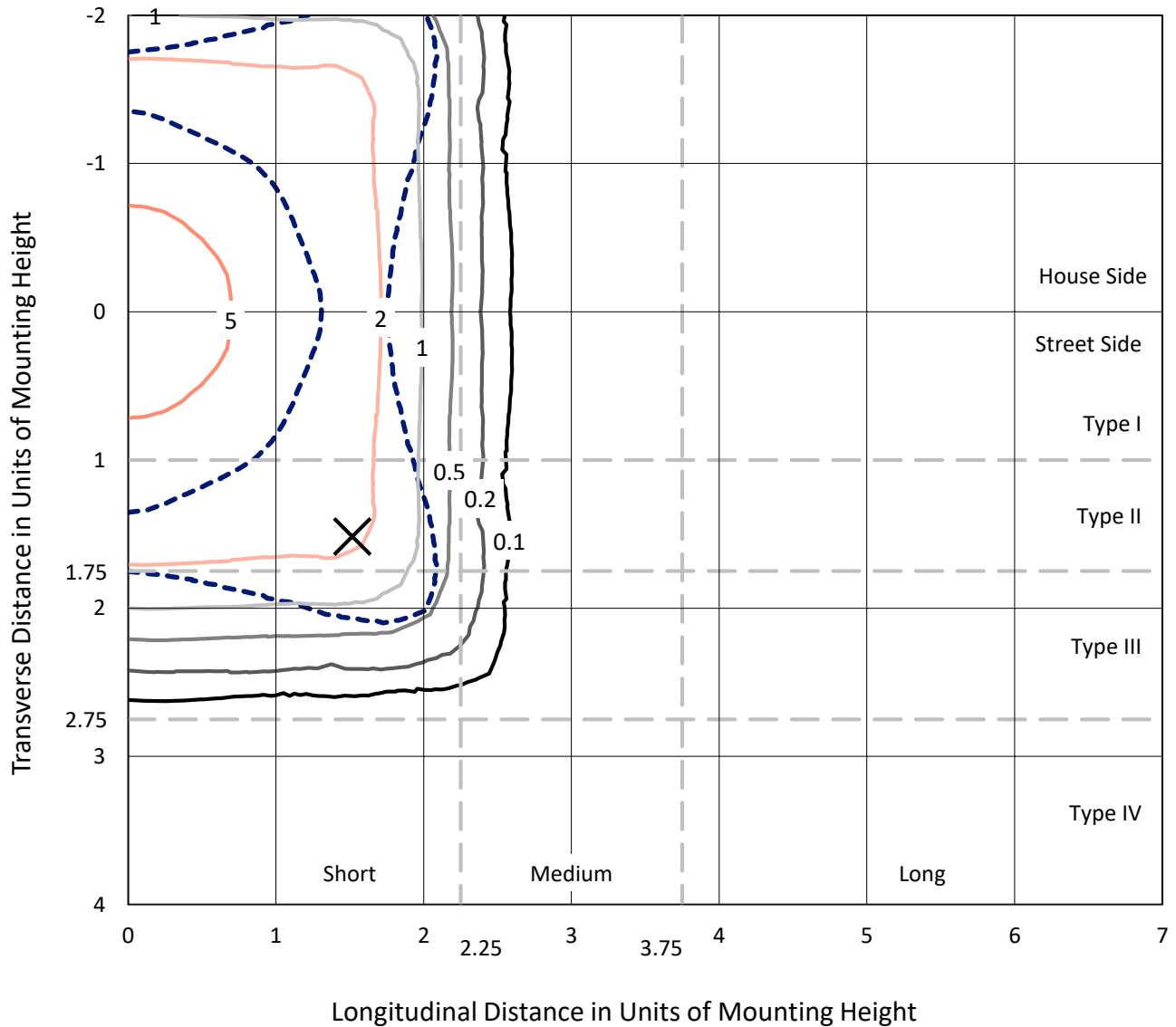
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

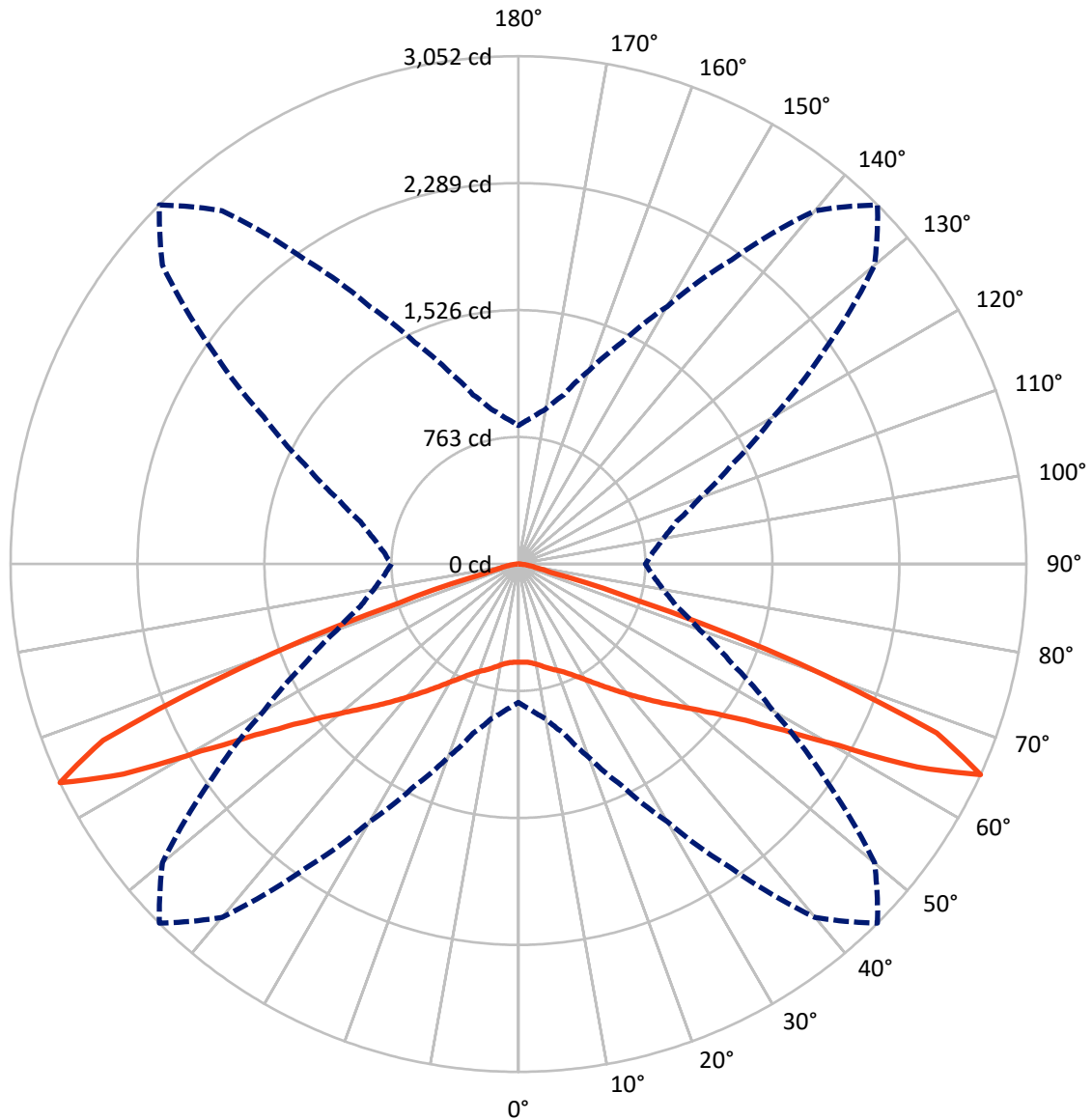
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 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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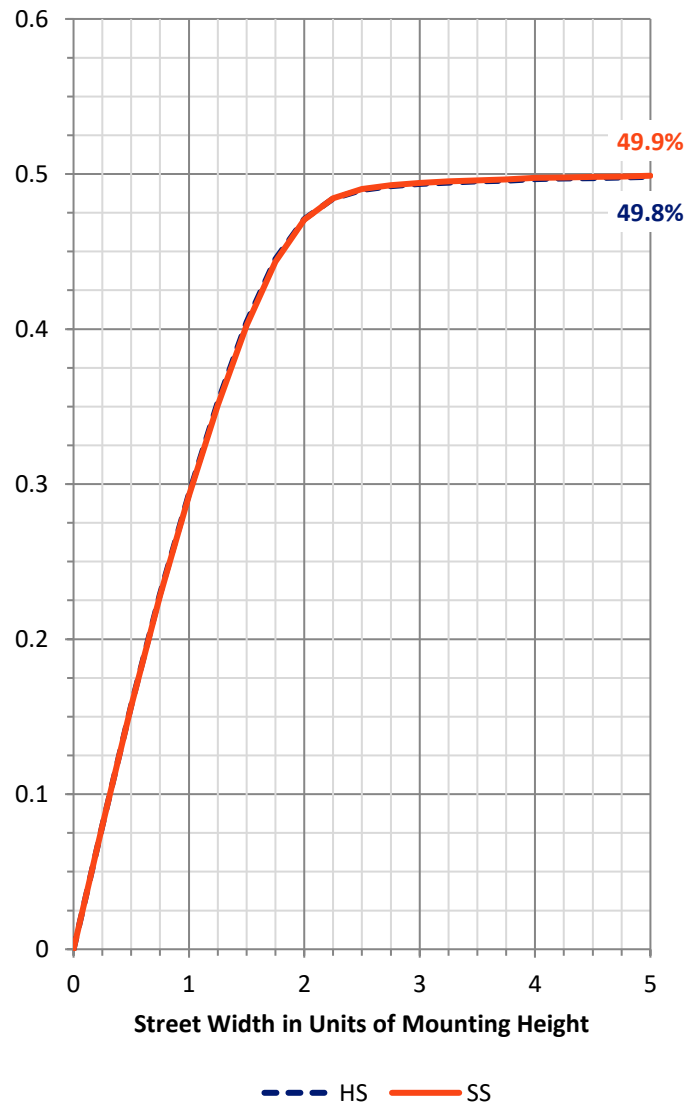
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2595.2	0.0	2595.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2595.2	0.0	2595.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	5190.5	0.0	5190.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.5	1.1
10°-20°	184.3	3.6
20°-30°	343.8	6.6
30°-40°	579.6	11.2
40°-50°	941.5	18.1
50°-60°	1475.1	28.4
60°-70°	1392.5	26.8
70°-80°	187.7	3.6
80°-90°	28.6	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°	5190.5	100.0
0°-180°	5190.5	100.0

Coefficient of Utilization



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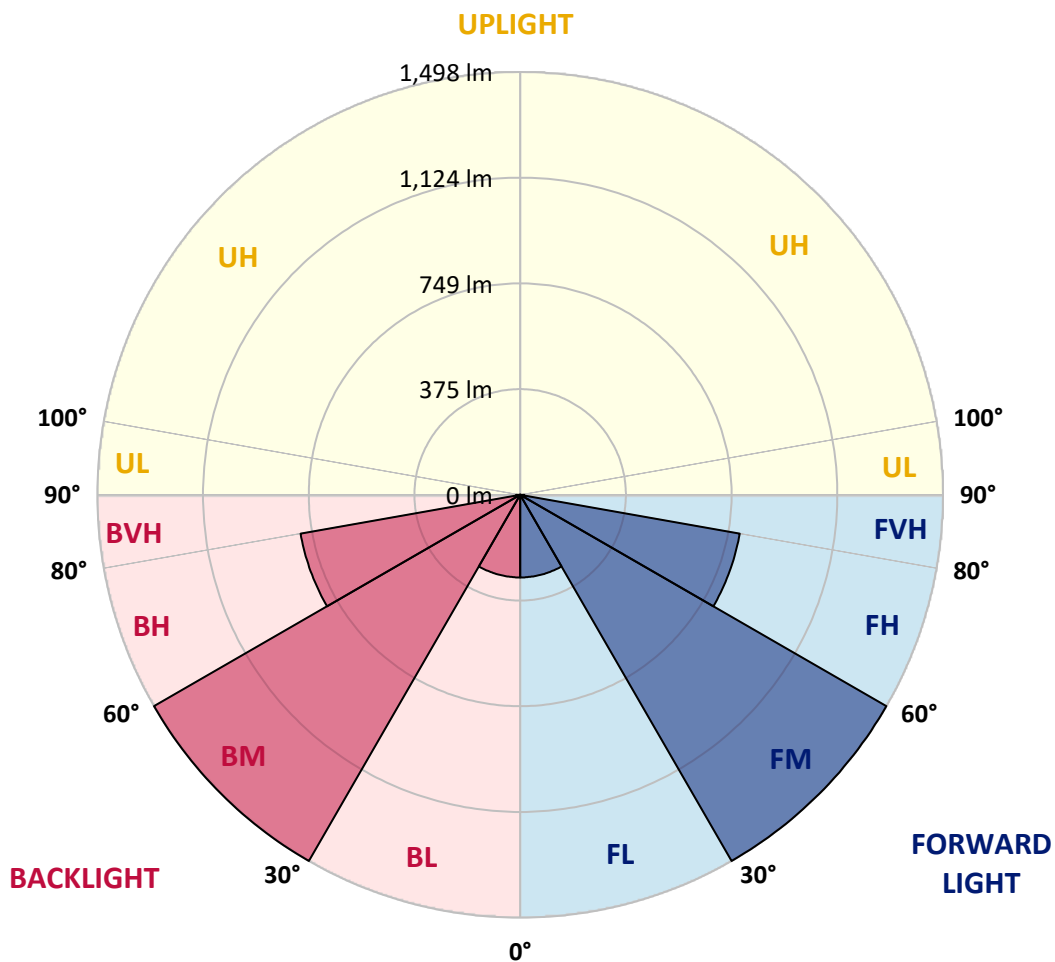
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	292.8	5.6			
FM (30°-60°)	1498.1	28.9			
FH (60°-80°)	790.1	15.2			G1/1800
FVH (80°-90°)	14.3	0.3			G1/100
BL (0°-30°)	292.8	5.6	B1/500		
BM (30°-60°)	1498.1	28.9	B2/2500		
BH (60°-80°)	790.1	15.2	B2/1000		G1/1800
BVH (80°-90°)	14.3	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°	590.4	590.4	590.4	590.4	590.4	590.4	590.4	590.4	590.4	590.4	590.4
2.5°	595.3	595.3	596.3	595.9	594.6	593.6	592.7	591.4	590.8	590.0	589.7
5°	598.5	598.5	599.4	599.1	598.1	596.9	596.3	595.3	594.3	593.6	593.9
7.5°	606.6	606.9	607.2	606.9	605.9	605.0	603.6	603.3	602.0	601.1	601.7
10°	618.9	618.9	619.2	619.5	618.9	616.6	616.6	615.9	614.7	613.4	613.7
12.5°	632.5	632.5	632.8	632.8	632.8	631.5	631.8	631.5	629.8	629.2	629.8
15°	645.7	646.0	646.0	646.7	646.7	647.0	648.2	648.2	647.6	647.3	647.3
17.5°	661.2	661.8	662.2	663.2	663.5	664.1	665.4	665.7	666.0	665.1	665.4
20°	681.9	682.2	683.2	683.5	684.9	684.9	685.5	685.2	684.5	683.2	683.2
22.5°	705.2	705.8	707.8	707.8	709.4	708.4	708.7	707.8	706.1	705.5	704.9
25°	735.6	736.5	738.2	737.5	738.2	736.5	736.5	736.5	735.6	734.6	734.3
27.5°	774.1	772.4	774.1	772.7	772.4	771.1	771.5	770.8	769.9	769.6	768.2
30°	814.2	812.2	813.1	813.6	812.8	812.5	811.2	810.3	808.6	808.9	808.0
32.5°	860.1	858.2	859.1	859.4	858.8	859.4	859.1	856.8	854.9	856.2	856.2
35°	914.7	913.4	916.1	917.0	915.0	914.1	912.8	910.2	907.3	909.2	909.5
37.5°	980.4	978.8	980.7	983.3	979.7	977.7	972.6	968.7	966.8	967.7	969.0
40°	1048.5	1048.9	1054.4	1055.1	1051.2	1048.9	1043.7	1037.9	1032.4	1032.4	1034.0
42.5°	1120.3	1121.4	1127.8	1130.1	1128.7	1124.5	1117.5	1110.3	1103.3	1104.5	1106.4
45°	1201.6	1200.2	1207.0	1212.5	1211.6	1210.3	1203.4	1190.5	1184.1	1183.8	1186.9
47.5°	1286.9	1289.4	1296.6	1305.9	1305.6	1302.4	1293.6	1281.7	1269.7	1270.7	1274.6
50°	1386.4	1390.0	1402.0	1411.4	1412.7	1411.7	1401.3	1387.4	1370.7	1371.6	1376.8
52.5°	1475.7	1480.8	1494.7	1514.2	1526.1	1531.7	1524.8	1511.9	1494.7	1495.8	1501.3
55°	1556.5	1564.6	1585.3	1611.9	1635.7	1658.1	1668.1	1667.7	1655.1	1658.1	1665.2
57.5°	1607.3	1618.6	1650.0	1692.7	1740.1	1785.2	1823.9	1860.4	1868.5	1883.8	1883.8
60°	1539.0	1565.6	1607.3	1680.4	1773.8	1874.7	1984.0	2090.4	2158.9	2212.8	2183.8
62.5°	1285.2	1324.4	1382.9	1479.3	1624.8	1804.9	2024.4	2271.8	2529.8	2687.6	2571.8
65°	831.7	880.8	944.5	1052.8	1236.1	1467.9	1787.7	2232.3	2772.3	3052.3	2793.6
67.5°	329.5	362.7	401.6	478.5	637.6	865.2	1224.2	1772.5	2447.9	2712.1	2422.1
70°	157.4	163.0	170.4	186.9	226.7	305.9	491.8	873.3	1501.3	1779.6	1465.4
72.5°	113.9	114.8	118.4	123.9	135.4	151.6	184.3	267.1	517.6	752.7	518.3
75°	86.3	87.7	89.6	92.5	98.6	106.4	118.7	142.3	177.2	204.4	176.9
77.5°	65.7	66.9	68.5	71.5	74.7	80.2	84.7	94.1	108.9	114.8	114.2
80°	47.9	50.1	52.7	55.2	57.6	60.1	60.5	65.0	73.4	78.9	77.2
82.5°	30.4	32.3	39.1	42.0	42.4	43.0	42.7	43.0	47.6	51.5	50.1
85°	19.4	20.7	24.2	27.5	26.8	28.1	28.1	27.5	25.6	22.0	26.2
87.5°	9.7	10.0	11.7	14.5	13.9	12.3	12.0	12.0	8.7	7.5	8.1
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°	590.4	590.4	590.4	590.4	590.4	590.4	590.4	590.4
2.5°	588.8	589.4	588.5	588.5	588.1	588.8	587.8	587.8
5°	593.3	594.3	593.9	593.9	594.6	595.3	594.9	594.6
7.5°	601.4	602.0	602.7	603.0	603.6	603.3	604.0	603.6
10°	613.7	613.1	614.0	613.1	613.4	612.7	613.1	613.1
12.5°	629.2	628.2	627.6	627.0	627.0	625.6	625.6	625.9
15°	647.0	645.4	644.0	643.4	642.8	642.8	641.8	642.5
17.5°	664.4	662.9	660.6	660.6	659.6	659.0	658.3	659.9
20°	682.9	681.3	680.0	679.6	677.7	677.1	677.4	679.3
22.5°	704.2	703.3	703.3	702.6	701.3	700.3	700.3	702.6
25°	733.0	731.1	731.4	731.7	731.1	731.1	730.4	732.0
27.5°	768.2	766.6	767.6	768.2	767.6	768.5	767.6	768.8
30°	809.7	808.6	809.7	810.6	808.9	808.9	808.3	809.3
32.5°	859.1	857.8	858.5	858.5	856.2	854.3	851.7	853.7
35°	913.4	911.8	913.1	914.1	911.4	909.5	905.6	907.3
37.5°	973.2	973.8	975.5	979.7	979.1	975.8	972.9	974.2
40°	1040.1	1043.4	1050.5	1053.4	1052.8	1049.5	1045.7	1046.3
42.5°	1115.8	1120.0	1127.5	1132.3	1130.1	1125.6	1120.6	1122.6
45°	1198.3	1204.7	1214.4	1219.3	1216.4	1211.6	1204.7	1208.3
47.5°	1285.5	1298.5	1311.4	1317.9	1316.9	1310.2	1301.4	1302.4
50°	1390.0	1407.2	1423.6	1430.1	1425.3	1414.9	1402.7	1402.3
52.5°	1520.0	1538.4	1552.0	1550.4	1538.4	1522.3	1508.3	1507.7
55°	1682.3	1688.5	1686.5	1672.6	1651.6	1626.4	1608.6	1605.7
57.5°	1878.5	1857.9	1827.5	1785.5	1738.2	1690.4	1658.1	1646.1
60°	2118.5	2025.0	1916.4	1801.9	1697.5	1619.2	1569.8	1539.7
62.5°	2316.7	2046.1	1803.3	1604.4	1441.7	1345.1	1277.5	1235.8
65°	2248.8	1767.7	1415.9	1159.5	981.9	882.1	810.6	763.0
67.5°	1737.3	1181.1	821.9	569.7	432.0	365.7	319.5	289.4
70°	876.0	453.0	274.6	193.6	165.5	154.0	146.2	141.6
72.5°	257.1	171.7	142.6	126.1	116.1	108.9	104.4	102.2
75°	142.3	116.1	102.5	93.1	86.6	81.8	78.9	76.9
77.5°	98.0	84.4	77.6	71.5	66.3	62.7	60.5	58.5
80°	68.5	61.8	58.8	55.6	51.8	48.8	45.6	44.3
82.5°	45.6	42.7	42.0	39.5	37.1	34.0	28.1	26.2
85°	26.8	26.5	26.5	25.6	23.9	21.0	16.8	16.8
87.5°	9.4	9.7	10.0	10.6	10.3	8.7	7.2	6.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)