

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: P195955

Luminaire Tested: **NAV-AF-01-D-UNV-5NQ-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195955
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-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7047.1 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

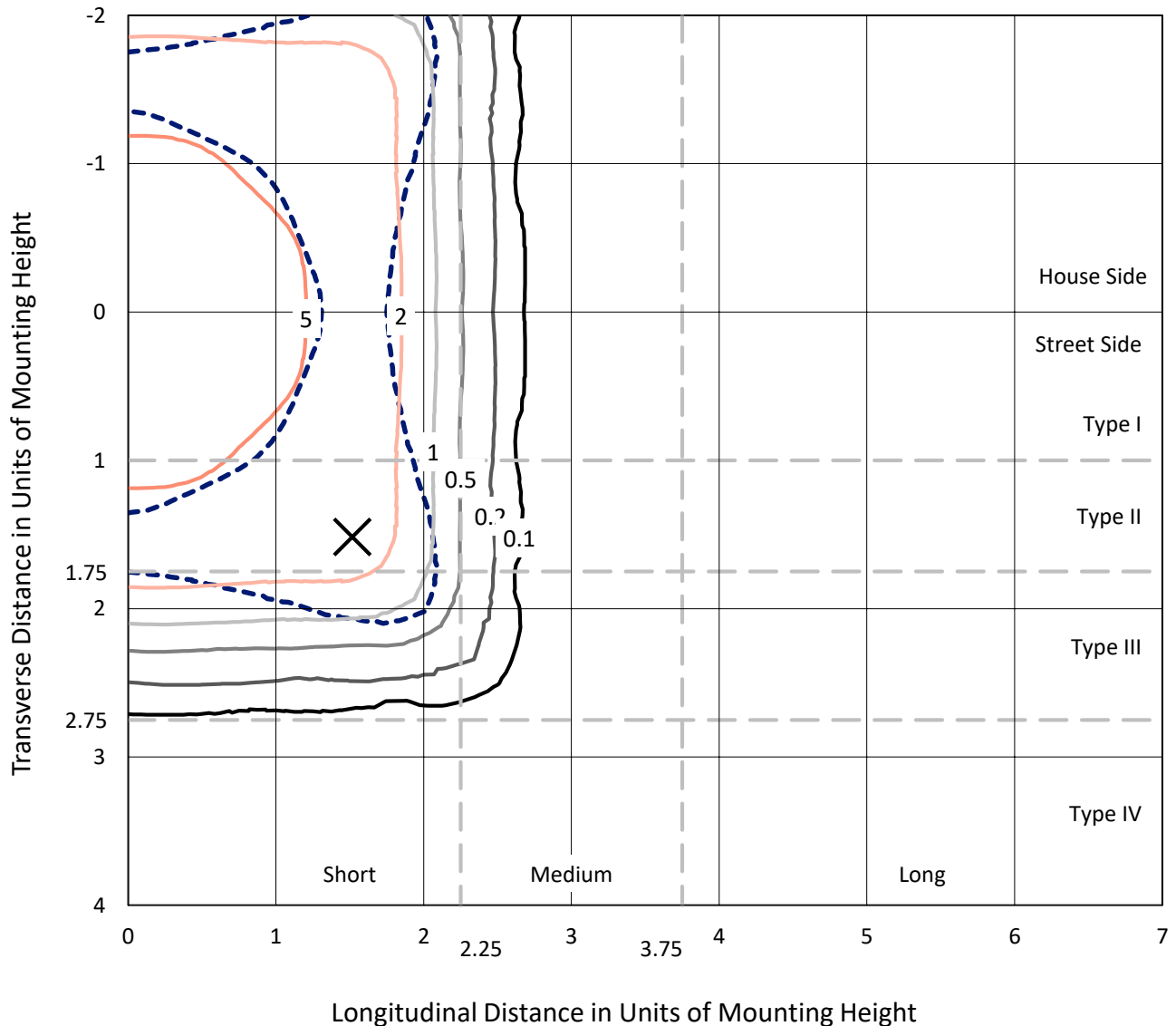
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

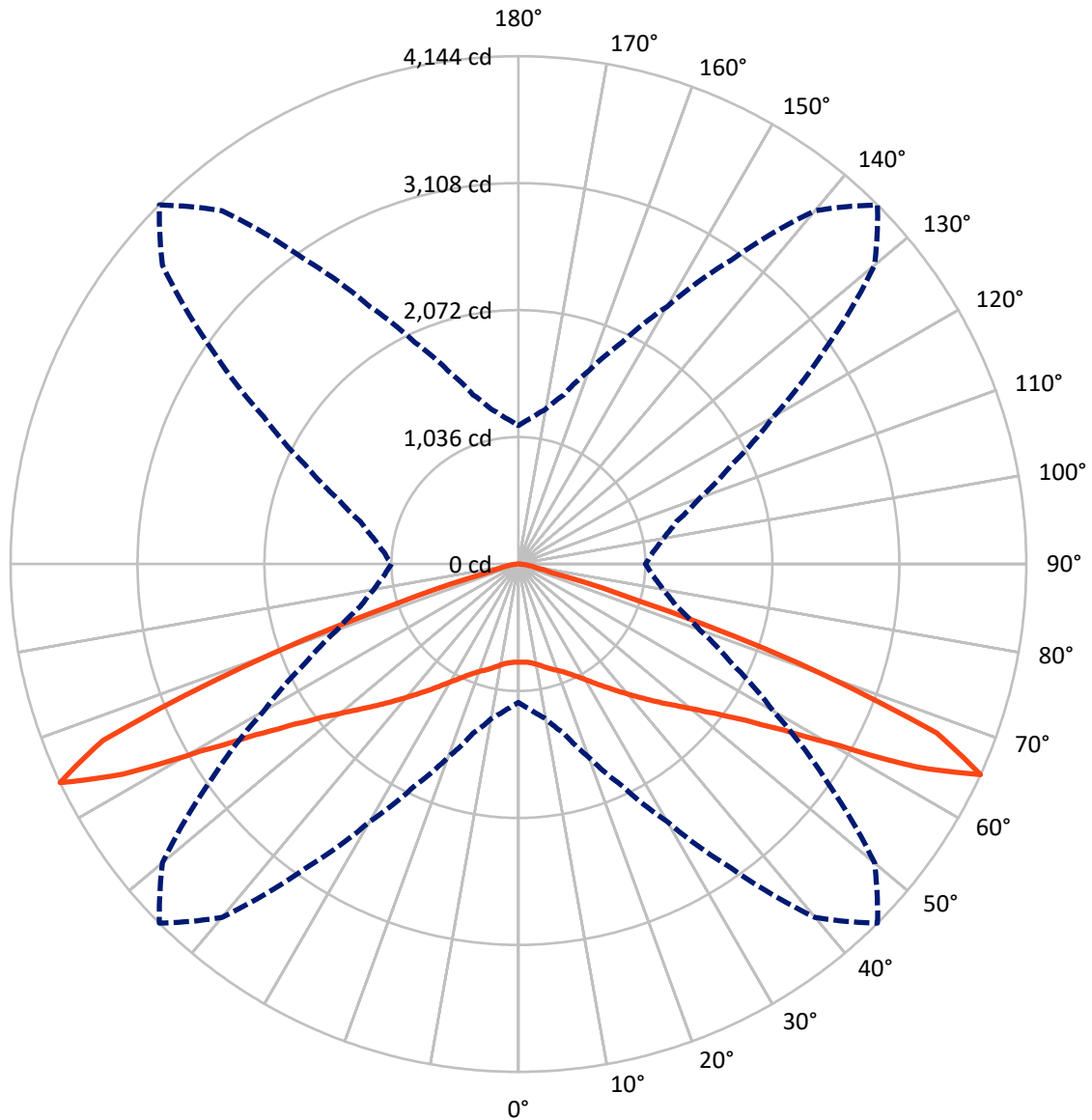
× Max cd
 - - - 1/2 Max cd



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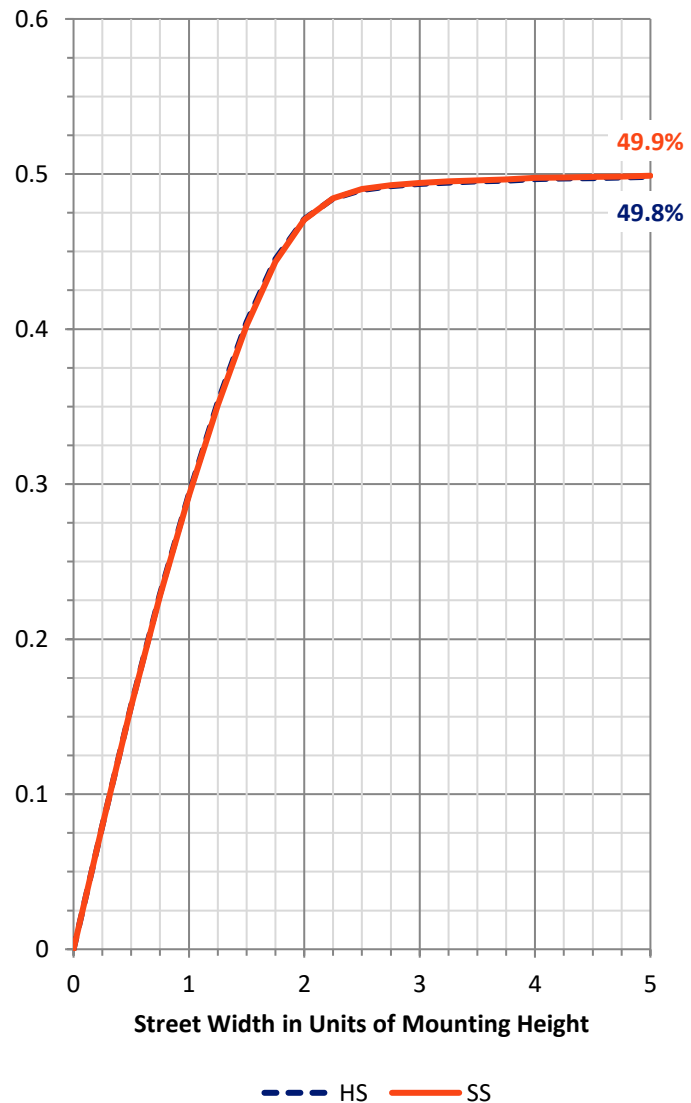
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3523.6	0.0	3523.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3523.6	0.0	3523.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	7047.1	0.0	7047.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.1	1.1
10°-20°	250.2	3.6
20°-30°	466.7	6.6
30°-40°	787.0	11.2
40°-50°	1278.3	18.1
50°-60°	2002.8	28.4
60°-70°	1890.5	26.8
70°-80°	254.8	3.6
80°-90°	38.8	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°	7047.1	100.0
0°-180°	7047.1	100.0



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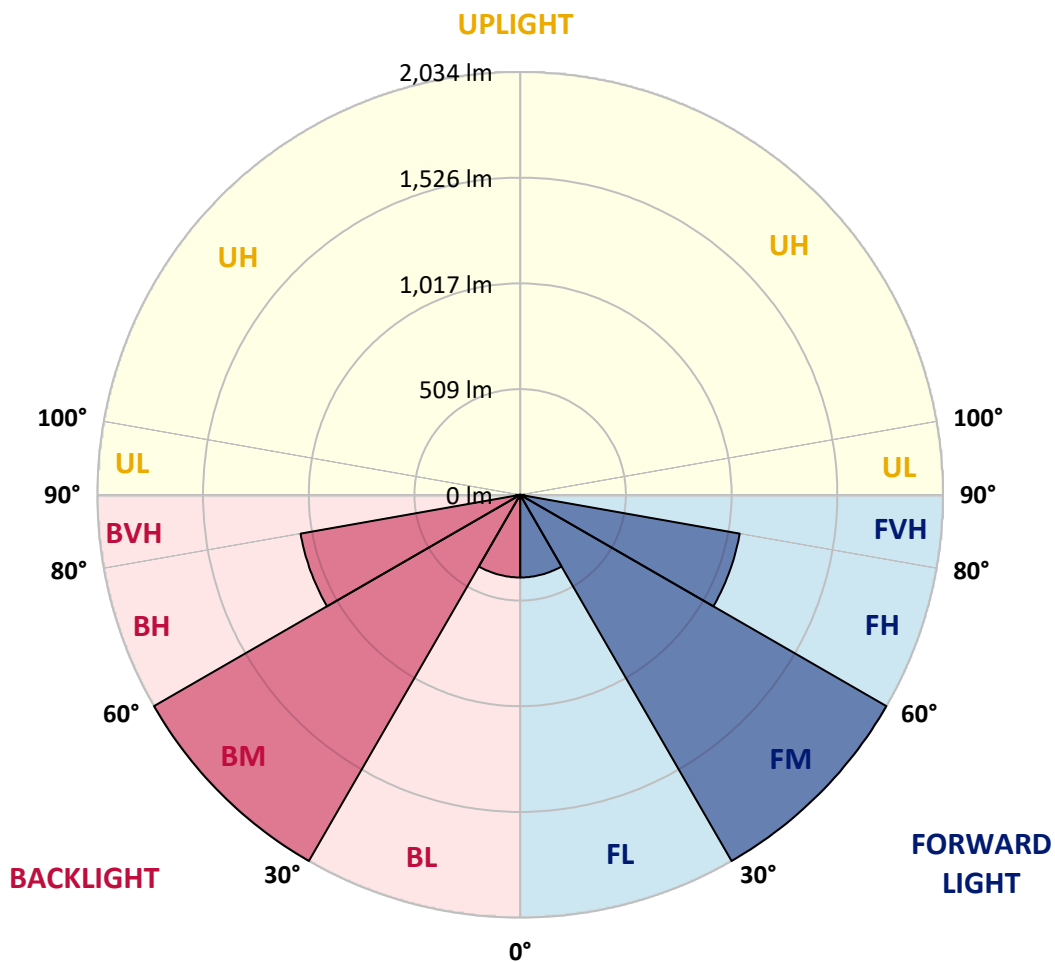
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	397.5	5.6			
FM	(30°-60°)	2034.0	28.9			
FH	(60°-80°)	1072.7	15.2			G1/1800
FVH	(80°-90°)	19.4	0.3			G1/100
BL	(0°-30°)	397.5	5.6	B1/500		
BM	(30°-60°)	2034.0	28.9	B2/2500		
BH	(60°-80°)	1072.7	15.2	B3/2500		G1/1800
BVH	(80°-90°)	19.4	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	801.6	801.6	801.6	801.6	801.6	801.6	801.6	801.6	801.6	801.6	801.6
2.5°	808.2	808.2	809.5	809.1	807.3	806.0	804.7	802.9	802.0	801.2	800.8
5°	812.5	812.5	813.9	813.5	812.1	810.4	809.5	808.2	806.9	806.0	806.4
7.5°	823.6	824.0	824.4	824.0	822.7	821.3	819.6	819.2	817.4	816.1	816.9
10°	840.3	840.3	840.7	841.1	840.3	837.2	837.2	836.3	834.5	832.8	833.2
12.5°	858.7	858.7	859.1	859.1	859.1	857.3	857.7	857.3	855.2	854.3	855.2
15°	876.7	877.1	877.1	878.0	878.0	878.4	880.1	880.1	879.3	878.8	878.8
17.5°	897.7	898.7	899.1	900.4	900.8	901.7	903.5	903.9	904.3	903.0	903.5
20°	925.9	926.3	927.6	928.0	929.8	929.8	930.7	930.3	929.4	927.6	927.6
22.5°	957.5	958.3	961.0	961.0	963.1	961.9	962.3	961.0	958.7	957.9	957.0
25°	998.7	1000.0	1002.2	1001.4	1002.2	1000.0	1000.0	1000.0	998.7	997.4	997.0
27.5°	1051.0	1048.7	1051.0	1049.2	1048.7	1047.0	1047.4	1046.6	1045.3	1044.8	1043.0
30°	1105.4	1102.7	1104.1	1104.5	1103.7	1103.2	1101.4	1100.1	1097.9	1098.3	1097.0
32.5°	1167.7	1165.0	1166.4	1166.9	1166.0	1166.9	1166.4	1163.3	1160.7	1162.5	1162.5
35°	1241.9	1240.1	1243.7	1245.0	1242.4	1241.0	1239.3	1235.7	1231.8	1234.5	1234.9
37.5°	1331.1	1328.8	1331.5	1335.0	1330.1	1327.5	1320.5	1315.2	1312.5	1313.9	1315.6
40°	1423.6	1424.0	1431.5	1432.4	1427.1	1424.0	1417.1	1409.1	1401.7	1401.7	1403.9
42.5°	1521.1	1522.5	1531.3	1534.3	1532.5	1526.9	1517.1	1507.5	1497.8	1499.6	1502.2
45°	1631.3	1629.6	1638.8	1646.2	1644.9	1643.2	1634.0	1616.4	1607.6	1607.2	1611.6
47.5°	1747.2	1750.7	1760.4	1773.1	1772.7	1768.3	1756.4	1740.1	1723.9	1725.2	1730.5
50°	1882.4	1887.2	1903.5	1916.2	1917.9	1916.6	1902.6	1883.8	1860.8	1862.2	1869.2
52.5°	2003.6	2010.6	2029.4	2055.8	2072.1	2079.6	2070.2	2052.8	2029.4	2030.8	2038.2
55°	2113.3	2124.3	2152.4	2188.4	2220.8	2251.1	2264.7	2264.3	2247.2	2251.1	2260.8
57.5°	2182.3	2197.6	2240.2	2298.2	2362.6	2423.7	2476.4	2526.0	2536.9	2557.6	2557.6
60°	2089.6	2125.6	2182.3	2281.5	2408.3	2545.3	2693.6	2838.1	2931.2	3004.5	2964.9
62.5°	1744.9	1798.1	1877.5	2008.4	2205.9	2450.5	2748.6	3084.4	3434.7	3648.9	3491.7
65°	1129.1	1195.8	1282.3	1429.4	1678.3	1993.0	2427.2	3030.8	3763.9	4144.1	3792.9
67.5°	447.3	492.6	545.2	649.7	865.7	1174.8	1662.0	2406.6	3323.6	3682.3	3288.5
70°	213.8	221.3	231.4	253.7	307.7	415.3	667.7	1185.7	2038.2	2416.2	1989.5
72.5°	154.6	155.8	160.7	168.2	183.9	205.9	250.2	362.6	702.9	1021.9	703.7
75°	117.2	119.0	121.6	125.5	133.9	144.4	161.1	193.1	240.6	277.4	240.1
77.5°	89.1	90.8	93.1	97.0	101.4	108.8	115.0	127.8	147.9	155.8	155.0
80°	65.0	68.0	71.6	75.1	78.2	81.6	82.0	88.3	99.6	107.1	105.0
82.5°	41.2	43.9	53.1	57.1	57.5	58.4	57.9	58.4	64.5	69.8	68.0
85°	26.3	28.1	32.9	37.3	36.4	38.2	38.2	37.3	34.7	29.9	35.6
87.5°	13.2	13.6	15.8	19.7	18.9	16.7	16.3	16.3	11.9	10.1	10.9
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°	801.6	801.6	801.6	801.6	801.6	801.6	801.6	801.6
2.5°	799.4	800.3	798.9	798.9	798.5	799.4	798.1	798.1
5°	805.6	806.9	806.4	806.4	807.3	808.2	807.7	807.3
7.5°	816.5	817.4	818.3	818.8	819.6	819.2	820.0	819.6
10°	833.2	832.4	833.6	832.4	832.8	831.9	832.4	832.4
12.5°	854.3	852.9	852.1	851.2	851.2	849.5	849.5	849.9
15°	878.4	876.3	874.5	873.6	872.7	872.7	871.3	872.3
17.5°	902.1	899.9	896.8	896.8	895.6	894.7	893.8	896.0
20°	927.2	925.0	923.2	922.8	920.1	919.2	919.7	922.3
22.5°	956.2	954.8	954.8	953.9	952.2	950.8	950.8	953.9
25°	995.2	992.6	993.0	993.5	992.6	992.6	991.6	993.9
27.5°	1043.0	1040.9	1042.2	1043.0	1042.2	1043.5	1042.2	1043.9
30°	1099.3	1097.9	1099.3	1100.6	1098.3	1098.3	1097.5	1098.8
32.5°	1166.4	1164.6	1165.6	1165.6	1162.5	1159.8	1156.3	1158.9
35°	1240.1	1238.0	1239.7	1241.0	1237.6	1234.9	1229.6	1231.8
37.5°	1321.3	1322.3	1324.4	1330.1	1329.2	1324.9	1320.9	1322.7
40°	1412.3	1416.6	1426.3	1430.2	1429.4	1425.0	1419.7	1420.6
42.5°	1515.0	1520.7	1530.7	1537.4	1534.3	1528.1	1521.5	1524.2
45°	1626.9	1635.7	1648.9	1655.4	1651.5	1644.9	1635.7	1640.5
47.5°	1745.5	1763.0	1780.5	1789.3	1788.0	1778.8	1766.9	1768.3
50°	1887.2	1910.5	1932.9	1941.7	1935.1	1921.0	1904.3	1903.9
52.5°	2063.7	2088.8	2107.2	2104.9	2088.8	2066.8	2047.9	2047.0
55°	2284.0	2292.4	2289.8	2271.0	2242.4	2208.1	2184.0	2180.0
57.5°	2550.5	2522.5	2481.2	2424.1	2360.0	2295.1	2251.1	2234.9
60°	2876.2	2749.4	2601.9	2446.5	2304.7	2198.4	2131.3	2090.5
62.5°	3145.4	2777.9	2448.2	2178.3	1957.4	1826.2	1734.4	1677.8
65°	3053.2	2399.9	1922.3	1574.2	1333.2	1197.6	1100.6	1036.0
67.5°	2358.7	1603.7	1115.9	773.6	586.5	496.5	433.7	392.9
70°	1189.2	615.0	372.7	263.0	224.7	209.0	198.5	192.3
72.5°	349.0	233.1	193.6	171.2	157.6	147.9	141.8	138.7
75°	193.1	157.6	139.1	126.4	117.6	111.1	107.1	104.4
77.5°	133.0	114.6	105.4	97.0	90.0	85.2	82.0	79.5
80°	93.1	83.9	79.9	75.5	70.3	66.3	61.9	60.1
82.5°	61.9	57.9	57.1	53.6	50.5	46.1	38.2	35.6
85°	36.4	36.0	36.0	34.7	32.5	28.5	22.8	22.8
87.5°	12.7	13.2	13.6	14.5	14.0	11.9	9.6	9.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)