

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: P195913

Luminaire Tested: **NAV-AF-01-D-UNV-5MQ-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195913
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4385.4 lumens
Efficiency: N/A
Efficacy: 129.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

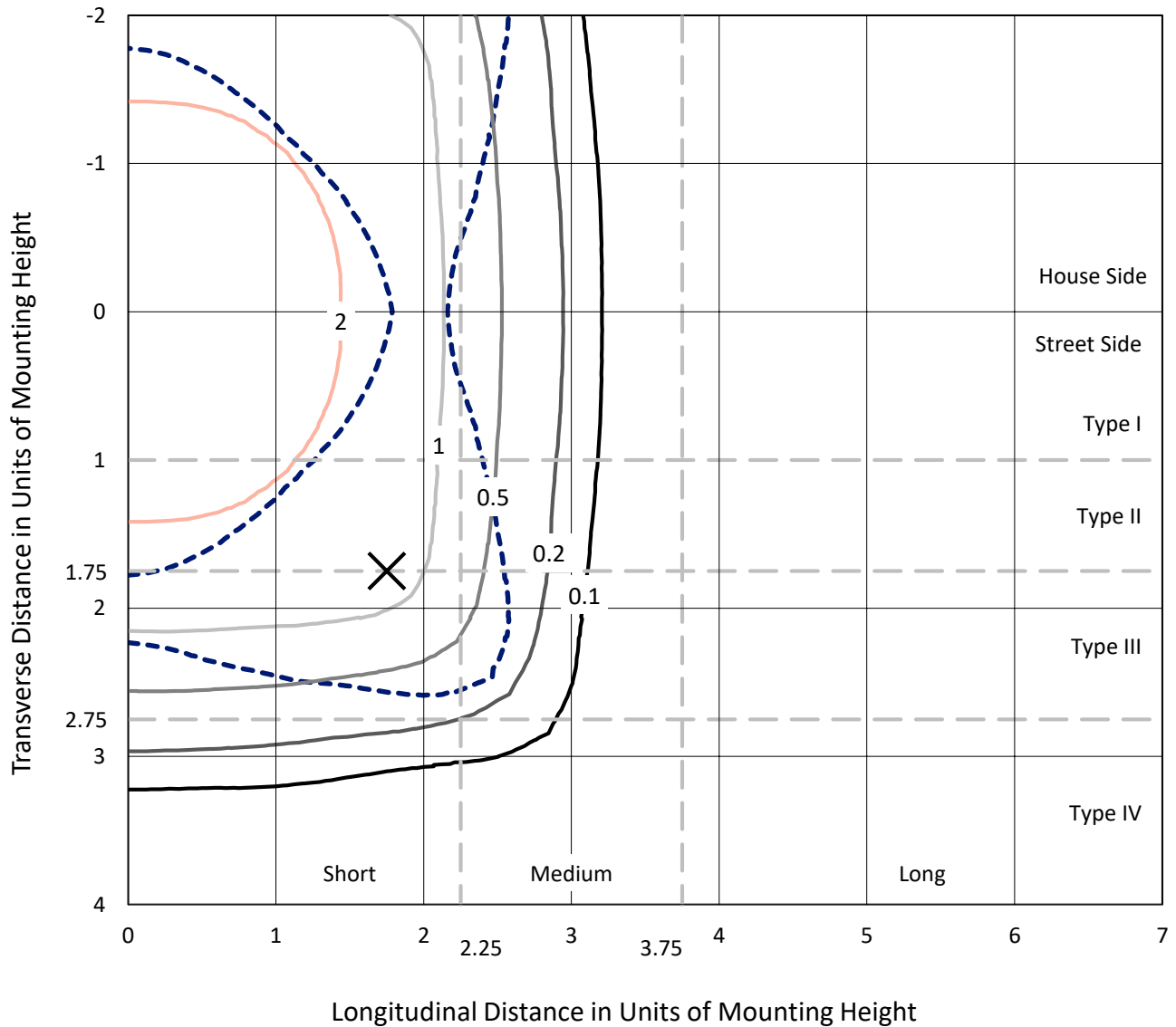
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195913
 CATALOG NUMBER: NAV-AF-01-D-UNV-5MQ-600

Iso-Footcandle Lines of Horizontal Illumination

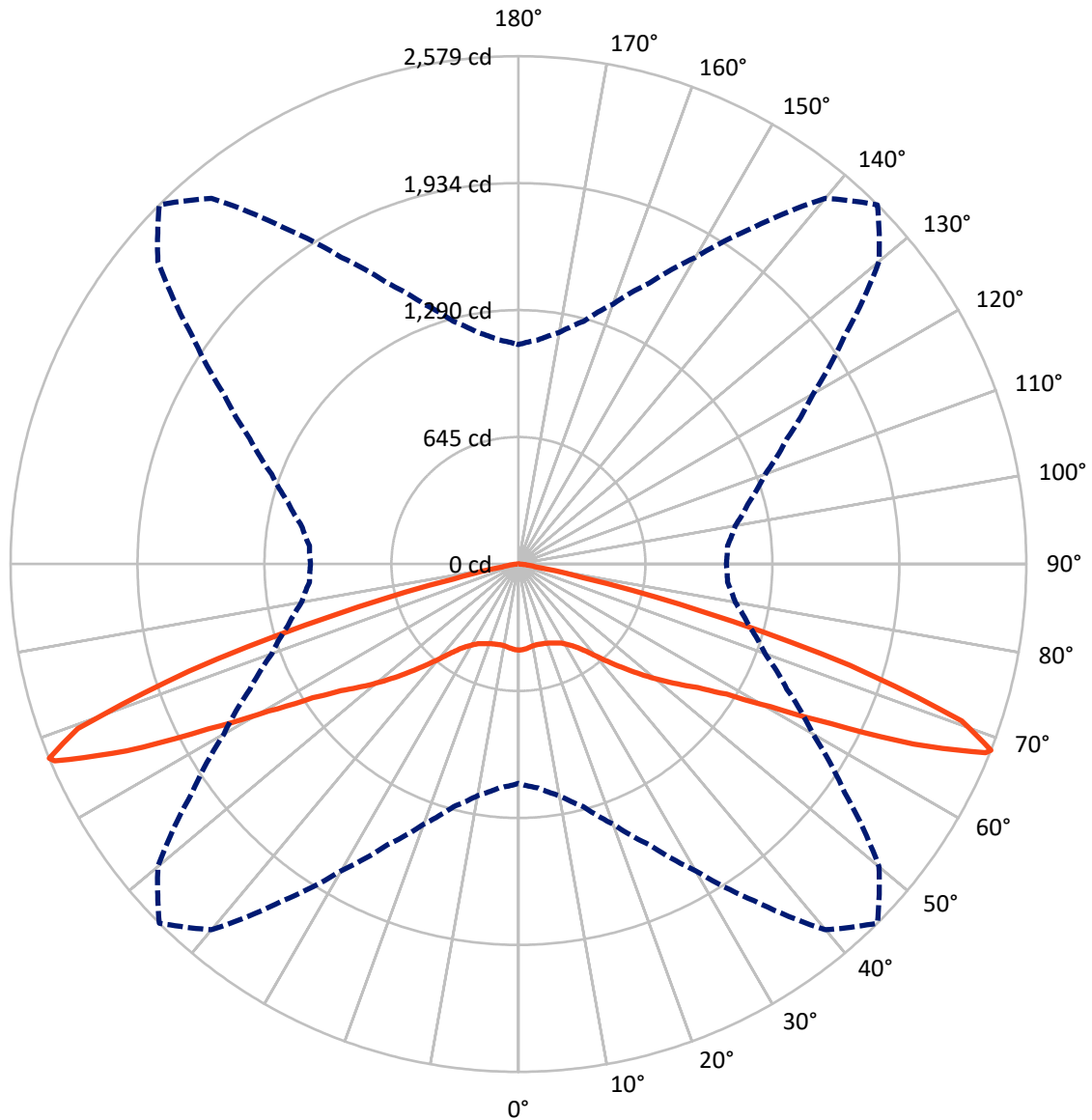
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.4 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P195913
CATALOG NUMBER: NAV-AF-01-D-UNV-5MQ-600

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P195913
 CATALOG NUMBER: NAV-AF-01-D-UNV-5MQ-600

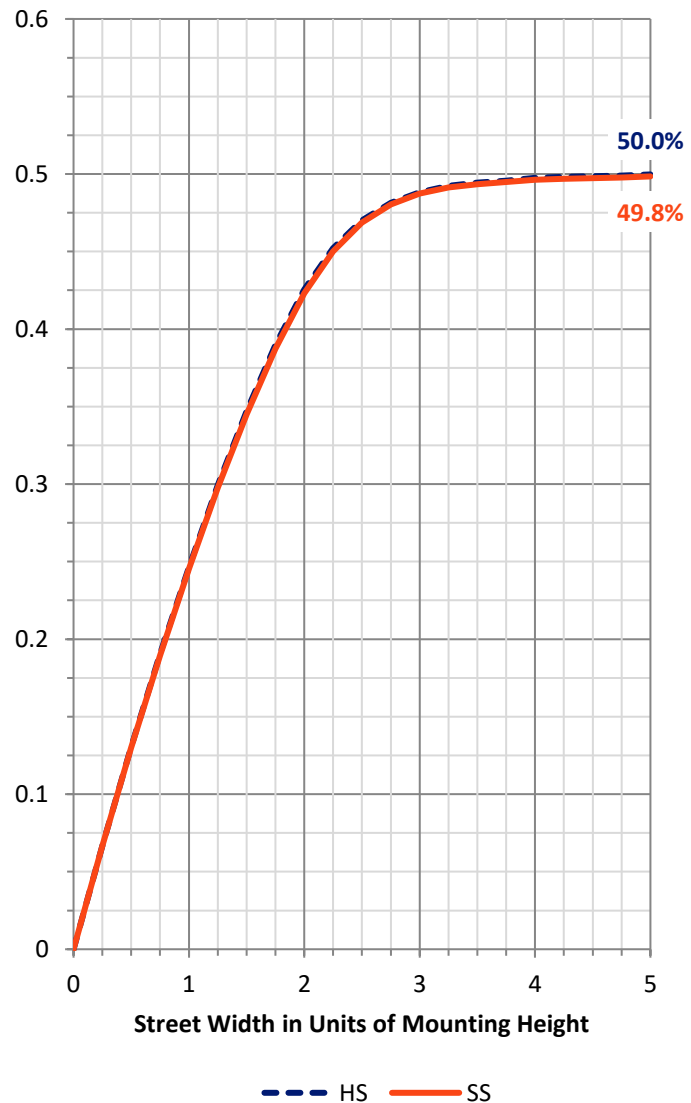
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2192.7	0.0	2192.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2192.7	0.0	2192.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	4385.4	0.0	4385.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	0.9
10°-20°	118.7	2.7
20°-30°	201.8	4.6
30°-40°	330.3	7.5
40°-50°	590.3	13.5
50°-60°	996.9	22.7
60°-70°	1545.8	35.2
70°-80°	531.5	12.1
80°-90°	29.2	0.7
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°	4385.4	100.0
0°-180°	4385.4	100.0



REPORT NUMBER: P195913

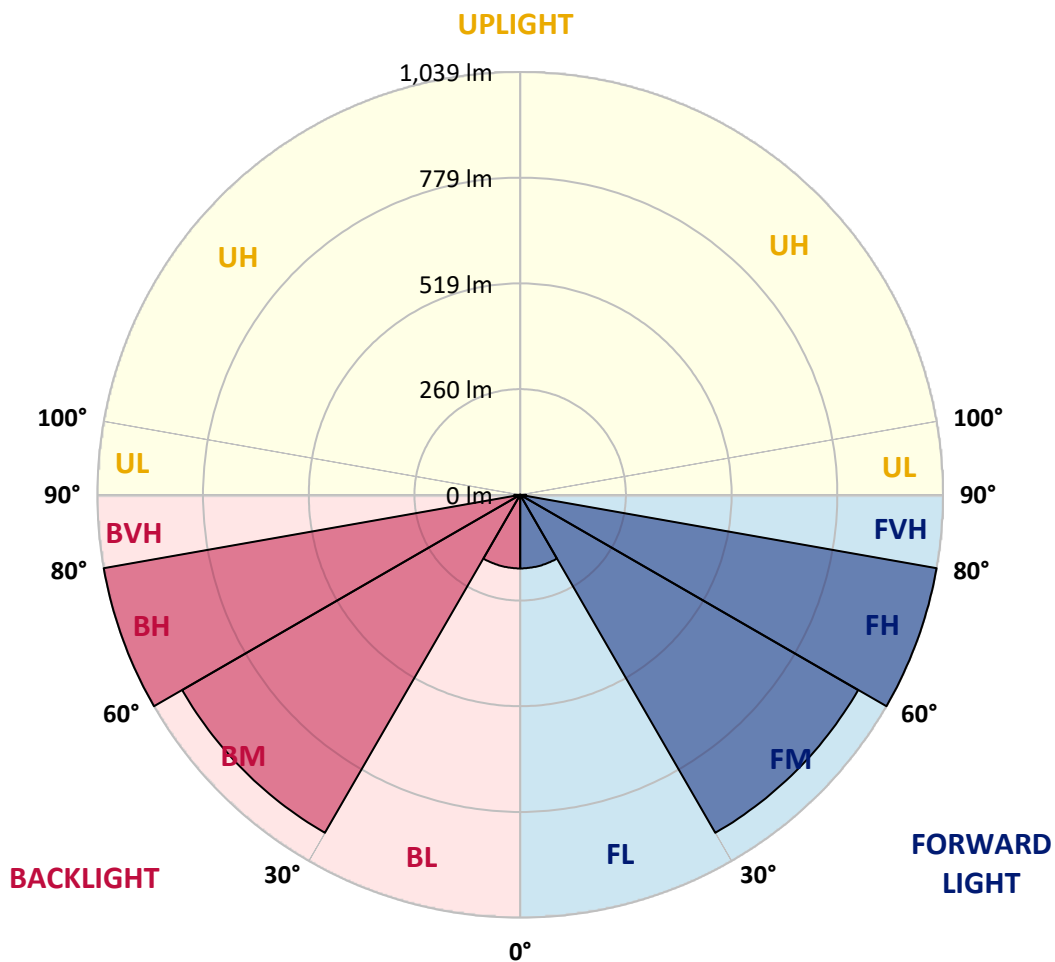
CATALOG NUMBER: NAV-AF-01-D-UNV-5MQ-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	180.7	4.1			
FM	(30°-60°)	958.7	21.9			
FH	(60°-80°)	1038.6	23.7			G1/1800
FVH	(80°-90°)	14.6	0.3			G1/100
BL	(0°-30°)	180.7	4.1	B1/500		
BM	(30°-60°)	958.7	21.9	B1/1000		
BH	(60°-80°)	1038.6	23.7	B3/2500		G1/1800
BVH	(80°-90°)	14.6	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





REPORT NUMBER: P195913

CATALOG NUMBER: NAV-AF-01-D-UNV-5MQ-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	437.4	437.4	437.4	437.4	437.4	437.4	437.4	437.4	437.4	437.4	437.4
2.5°	439.4	439.4	439.9	439.6	438.8	438.0	437.2	436.4	435.9	435.3	434.8
5°	434.8	434.8	435.6	435.1	434.5	433.7	433.1	432.4	431.8	431.3	431.6
7.5°	428.8	429.4	429.9	429.6	428.6	428.3	427.5	427.3	426.7	426.0	426.2
10°	423.8	424.0	424.5	424.3	424.0	423.2	423.0	422.7	422.4	421.4	421.0
12.5°	418.7	419.2	419.7	420.0	419.7	420.0	420.2	420.5	420.2	419.7	419.7
15°	414.6	415.2	415.9	416.8	417.1	418.7	419.7	420.8	421.7	421.9	421.0
17.5°	412.5	413.3	414.4	415.9	417.4	419.2	421.0	422.7	424.0	424.3	423.5
20°	412.2	413.1	414.6	416.5	418.9	421.4	424.3	426.7	428.1	428.8	428.1
22.5°	414.1	415.2	417.4	419.7	422.7	426.0	429.6	432.4	435.1	436.1	435.3
25°	419.5	420.5	423.0	426.0	429.1	433.1	436.9	440.4	443.1	444.5	443.3
27.5°	430.8	431.0	433.7	436.9	440.7	444.2	449.0	450.6	452.8	454.1	452.8
30°	446.6	447.1	449.6	454.6	458.2	462.7	465.3	467.0	469.4	470.8	469.1
32.5°	470.8	471.3	473.4	478.2	481.5	485.0	488.3	489.3	491.7	493.3	491.4
35°	504.8	506.0	507.8	511.1	513.7	516.4	518.8	518.0	519.7	521.8	519.9
37.5°	551.6	551.3	551.9	554.2	557.0	558.5	562.3	560.5	562.0	564.0	562.8
40°	606.1	606.1	605.8	610.1	611.2	612.8	616.8	614.4	616.5	618.7	616.8
42.5°	668.1	669.2	670.5	674.0	677.0	677.5	679.4	678.3	681.0	682.9	681.0
45°	739.6	741.1	742.8	750.8	752.2	753.3	754.6	751.2	754.0	755.7	755.1
47.5°	813.7	816.6	820.1	828.5	833.8	836.3	837.3	833.3	833.6	836.0	836.3
50°	897.4	900.7	904.2	913.6	918.7	923.0	924.3	919.7	920.2	922.2	922.7
52.5°	974.8	978.6	986.1	998.7	1006.0	1013.4	1014.1	1008.4	1010.8	1012.1	1011.1
55°	1047.6	1052.4	1062.3	1079.3	1092.4	1107.2	1113.9	1107.8	1107.8	1106.6	1106.1
57.5°	1132.4	1137.8	1148.1	1167.6	1185.9	1207.1	1225.4	1231.5	1242.8	1246.6	1240.6
60°	1260.3	1265.9	1276.3	1302.1	1325.2	1356.1	1386.2	1410.6	1450.4	1471.9	1452.6
62.5°	1377.1	1385.7	1410.3	1455.5	1505.5	1562.7	1628.9	1676.2	1748.5	1784.4	1735.8
65°	1350.5	1368.0	1416.3	1487.2	1590.3	1714.4	1849.5	1979.2	2128.5	2205.0	2106.2
67.5°	1179.7	1194.5	1246.6	1329.0	1457.6	1628.7	1838.8	2107.3	2415.3	2558.7	2383.9
68°	1114.4	1142.1	1194.0	1275.8	1405.5	1573.7	1797.9	2087.9	2424.1	2579.1	2390.3
70°	854.5	864.4	914.1	987.7	1127.6	1292.5	1518.9	1849.5	2229.4	2389.0	2194.8
72.5°	406.0	411.9	444.2	516.7	605.6	739.8	939.6	1251.4	1593.8	1759.8	1566.1
75°	148.7	150.1	157.6	174.8	208.2	258.6	354.5	548.4	811.8	968.1	815.0
77.5°	80.3	80.6	83.5	87.8	93.7	100.5	115.0	154.2	248.7	338.4	262.6
80°	50.5	50.2	53.2	56.7	60.7	63.9	65.3	69.9	78.7	92.1	84.6
82.5°	25.8	28.2	34.9	38.7	44.6	45.6	44.3	44.1	46.7	50.5	52.1
85°	14.2	12.6	18.5	24.8	26.9	27.6	27.9	26.3	25.8	25.3	26.6
87.5°	7.3	6.8	8.1	12.4	13.2	10.7	11.0	9.4	6.4	6.4	6.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P195913

CATALOG NUMBER: NAV-AF-01-D-UNV-5MQ-600

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	437.4	437.4	437.4	437.4	437.4	437.4	437.4	437.4
2.5°	434.2	434.5	433.9	433.9	433.9	434.2	433.9	433.7
5°	430.8	431.3	431.3	431.6	431.8	431.8	431.8	431.8
7.5°	425.6	426.0	426.5	426.5	426.5	426.5	426.5	426.5
10°	420.8	420.2	420.0	419.5	419.5	418.7	418.9	419.2
12.5°	418.4	417.4	416.8	415.9	415.4	414.6	414.6	414.9
15°	419.5	417.9	416.2	415.7	415.2	414.6	414.1	414.4
17.5°	421.7	419.7	417.9	416.8	415.7	414.9	414.6	414.9
20°	426.2	423.5	420.5	418.7	416.5	415.9	415.2	415.9
22.5°	432.4	429.1	425.3	421.9	419.5	418.4	417.4	418.1
25°	439.9	436.4	432.6	428.6	426.0	425.1	423.8	423.8
27.5°	450.3	447.4	444.2	440.4	437.7	436.9	434.8	434.8
30°	467.0	464.0	461.0	457.9	455.2	454.4	451.7	451.7
32.5°	489.0	485.8	484.0	481.2	479.0	477.7	474.5	474.2
35°	518.5	515.6	515.4	513.4	511.3	511.6	508.3	507.8
37.5°	561.0	558.5	559.3	557.7	555.9	557.5	555.6	555.6
40°	615.2	614.4	615.2	614.2	614.4	614.7	613.1	613.7
42.5°	680.8	678.6	683.4	682.9	682.1	684.3	680.5	677.8
45°	756.2	755.4	760.3	761.1	759.4	760.8	754.0	753.8
47.5°	838.1	838.1	842.4	841.9	840.3	840.6	832.5	827.4
50°	923.5	923.0	927.3	926.2	924.0	923.8	915.4	910.3
52.5°	1012.4	1012.4	1018.6	1015.6	1010.6	1008.1	997.9	991.2
55°	1110.7	1109.4	1111.2	1101.5	1091.6	1084.3	1071.7	1066.6
57.5°	1235.0	1219.5	1206.1	1193.7	1179.7	1171.1	1156.3	1151.0
60°	1411.5	1369.8	1351.8	1327.2	1304.1	1292.5	1272.9	1262.4
62.5°	1655.9	1586.8	1537.9	1483.4	1430.8	1393.8	1363.9	1350.8
65°	1938.4	1787.9	1663.6	1546.8	1447.7	1369.0	1325.2	1311.5
67.5°	2045.8	1769.7	1555.1	1387.5	1267.2	1173.5	1121.2	1110.1
68°	2022.9	1727.8	1504.9	1333.3	1212.5	1118.0	1065.8	1055.9
70°	1784.4	1457.6	1222.4	1051.6	938.9	848.8	812.1	796.3
72.5°	1216.5	936.1	718.1	574.4	490.1	433.1	399.4	387.8
75°	559.9	378.4	252.7	188.7	160.3	146.6	136.2	133.5
77.5°	163.3	118.7	102.1	94.5	88.9	84.1	80.6	80.3
80°	77.6	72.7	70.6	65.8	60.7	56.2	52.9	53.4
82.5°	52.1	50.7	50.7	45.9	37.8	32.5	26.9	24.1
85°	27.6	28.7	30.4	28.7	25.0	18.5	12.1	13.2
87.5°	9.4	10.7	11.3	11.0	9.9	7.6	5.6	5.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)