

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: P459861

Luminaire Tested: **NAV-SA4A-AMB-U-SL3**

Issue Date: 1/6/2021

Test Information

Test Method: LM-79-08
Report Number: P459861
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2003-697-6)
Test Lab: INNOVATION CENTER
Issue Date: 1/6/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SA4A-AMB-U-SL3
Description: NAVION AREA AND ROADWAY LUMINAIRE
(4) NARROW BAND AMBER, 500mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4086 lumens
Efficiency: N/A
Efficacy: 51.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

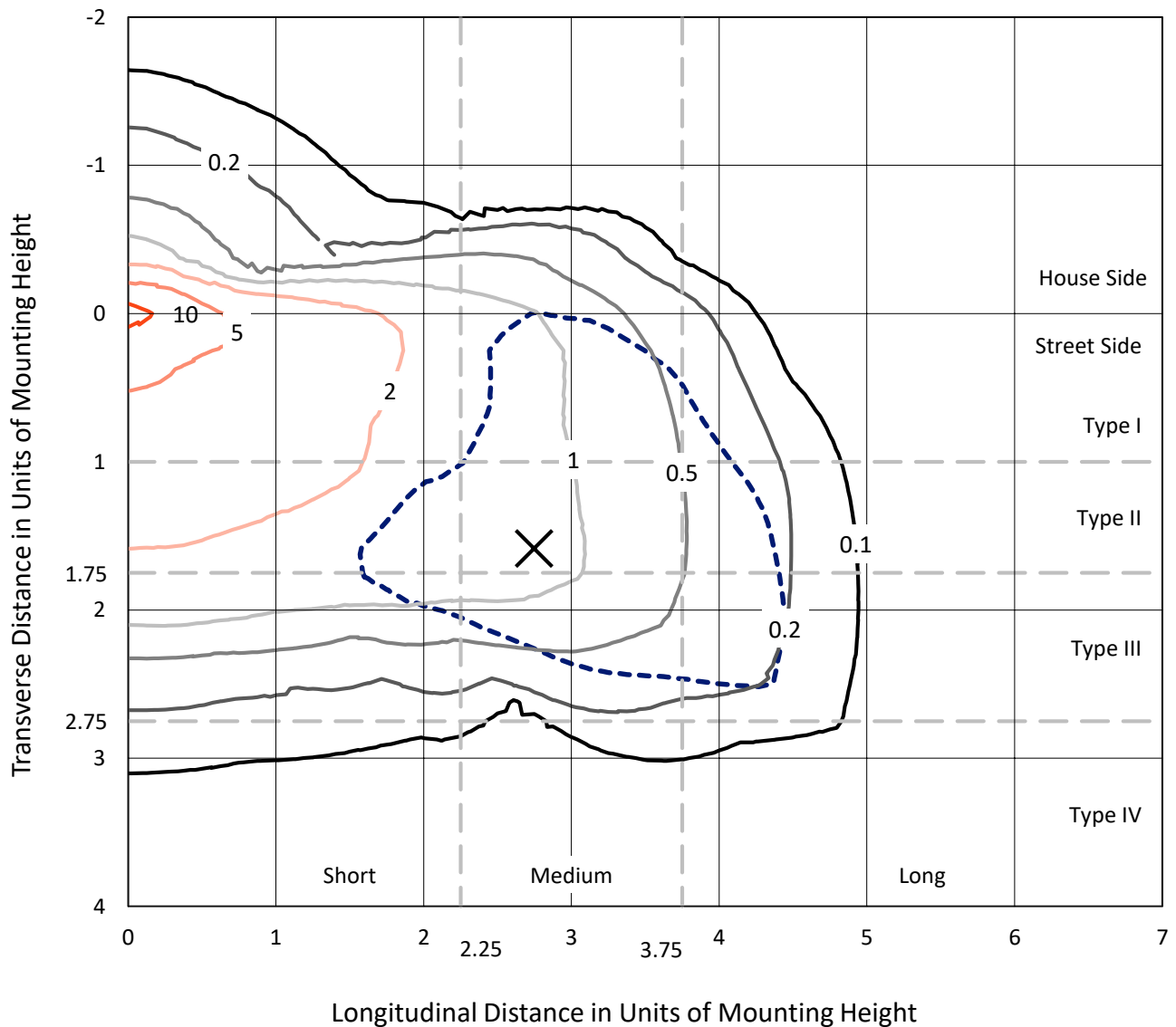
Input Watts (W): 79.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P459861
 CATALOG NUMBER: NAV-SA4A-AMB-U-SL3

Iso-Footcandle Lines of Horizontal Illumination

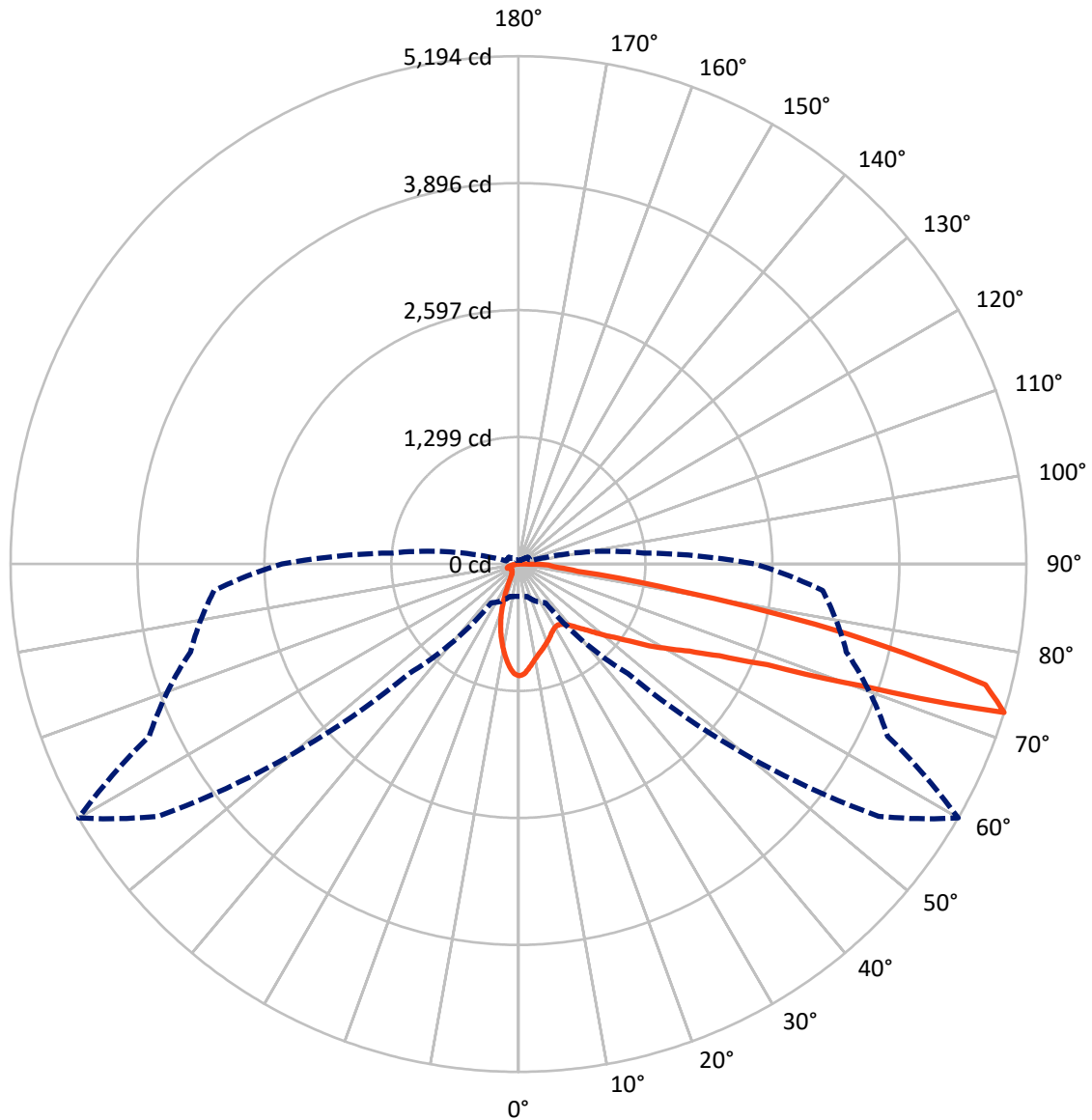
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.4 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P459861
CATALOG NUMBER: NAV-SA4A-AMB-U-SL3

Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P459861

CATALOG NUMBER: NAV-SA4A-AMB-U-SL3

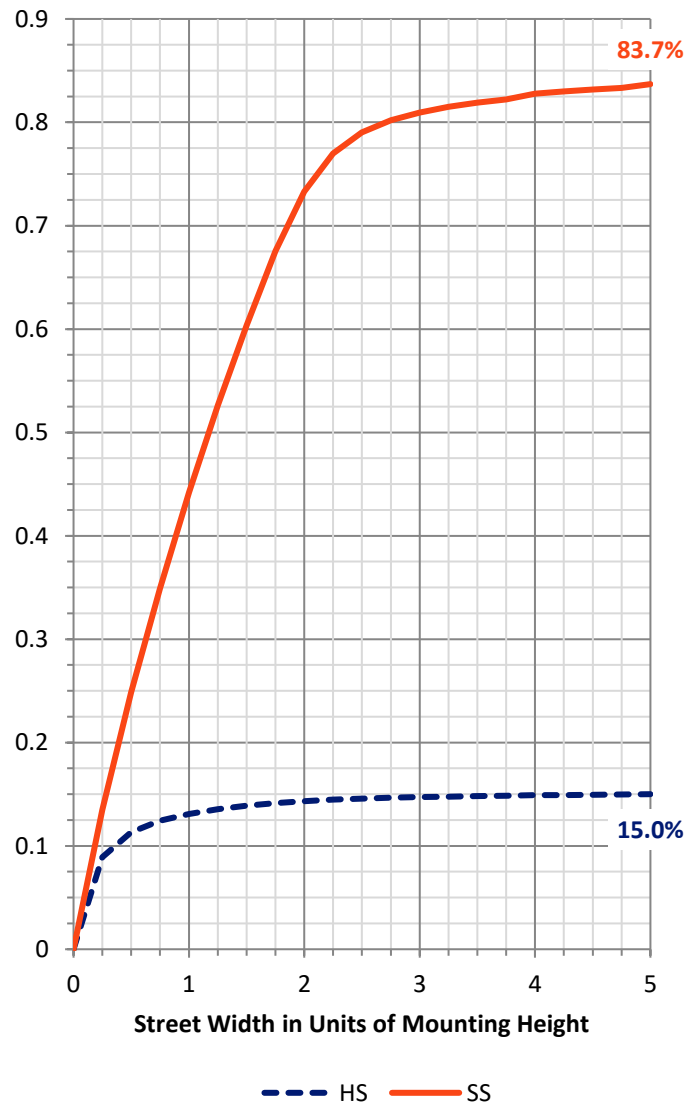
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	620.8	0.0	620.8
	% Fixture	15.2	0.0	15.2
Street Side	Lumens	3465.2	0.0	3465.2
	% Fixture	84.8	0.0	84.8
Total	Lumens	4086.0	0.0	4086.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.9	2.3
10°-20°	203.5	5.0
20°-30°	251.6	6.2
30°-40°	318.1	7.8
40°-50°	451.8	11.1
50°-60°	688.7	16.9
60°-70°	1038.9	25.4
70°-80°	914.0	22.4
80°-90°	123.4	3.0
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°	4086.0	100.0
0°-180°	4086.0	100.0

Coefficient of Utilization



REPORT NUMBER: P459861

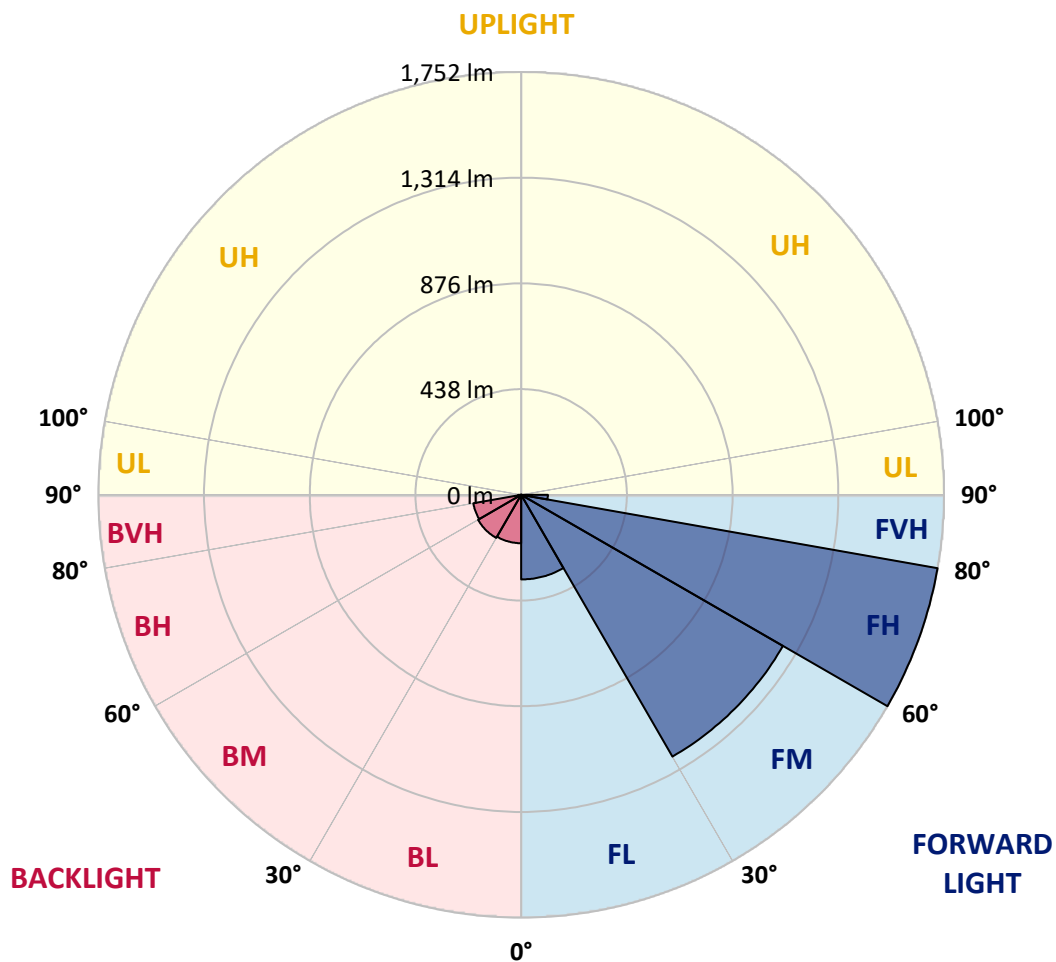
CATALOG NUMBER: NAV-SA4A-AMB-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	350.5	8.6			
FM (30°-60°)	1252.3	30.6			
FH (60°-80°)	1751.7	42.9			G1/1800
FVH (80°-90°)	110.6	2.7			G2/225
BL (0°-30°)	200.5	4.9	B1/500		
BM (30°-60°)	206.3	5.0	B0/220		
BH (60°-80°)	201.1	4.9	B1/500		G1/500
BVH (80°-90°)	12.9	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Medium





REPORT NUMBER: P459861

CATALOG NUMBER: NAV-SA4A-AMB-U-SL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2
2.5°	1110.8	1110.8	1110.8	1117.7	1119.5	1119.5	1126.5	1126.5	1124.7	1131.7	1130.0
5°	1042.6	1046.1	1046.1	1049.6	1060.1	1065.3	1075.8	1077.6	1082.8	1093.3	1100.3
7.5°	958.8	964.1	972.8	986.8	997.2	1006.0	1025.2	1025.2	1033.9	1049.6	1061.9
10°	880.2	882.0	889.0	904.7	925.6	948.3	971.0	978.0	988.5	1007.7	1026.9
12.5°	826.1	829.6	833.1	847.0	869.7	892.4	927.4	941.3	953.6	976.3	1002.5
15°	768.4	770.2	778.9	796.4	824.3	848.8	889.0	908.2	927.4	957.1	985.0
17.5°	730.0	728.3	735.3	747.5	777.2	810.4	854.0	876.7	899.4	939.6	969.3
20°	709.1	710.8	710.8	714.3	733.5	766.7	817.3	847.0	876.7	929.1	960.6
22.5°	703.8	703.8	698.6	696.8	705.6	733.5	784.2	817.3	852.3	927.4	955.3
25°	703.8	703.8	698.6	691.6	691.6	707.3	752.7	784.2	826.1	929.1	948.3
27.5°	716.1	716.1	709.1	698.6	689.9	693.3	728.3	761.5	808.6	932.6	943.1
30°	735.3	733.5	728.3	719.5	702.1	689.9	716.1	745.7	791.2	941.3	939.6
32.5°	754.5	756.2	752.7	745.7	726.5	700.3	714.3	742.3	787.7	953.6	939.6
35°	784.2	785.9	785.9	778.9	763.2	726.5	731.8	756.2	798.1	972.8	946.6
37.5°	817.3	817.3	822.6	822.6	803.4	763.2	765.0	784.2	819.1	999.0	964.1
40°	850.5	850.5	859.3	871.5	855.8	813.9	815.6	829.6	861.0	1035.7	999.0
42.5°	892.4	889.0	908.2	923.9	916.9	878.5	869.7	887.2	909.9	1086.3	1051.4
45°	922.1	922.1	951.8	971.0	986.8	948.3	943.1	957.1	979.8	1142.2	1124.7
47.5°	957.1	958.8	990.2	1030.4	1054.9	1032.2	1025.2	1044.4	1060.1	1215.5	1217.3
50°	986.8	992.0	1033.9	1091.5	1131.7	1133.5	1121.2	1145.7	1145.7	1297.6	1325.6
52.5°	1026.9	1035.7	1089.8	1152.7	1219.0	1241.7	1245.2	1252.2	1254.0	1398.9	1446.1
55°	1128.2	1138.7	1184.1	1236.5	1315.1	1367.5	1404.2	1391.9	1378.0	1509.0	1571.8
57.5°	1308.1	1299.4	1316.8	1329.1	1405.9	1491.5	1582.3	1577.1	1535.1	1636.4	1706.3
60°	1463.5	1467.0	1489.7	1460.1	1510.7	1645.2	1751.7	1753.5	1681.9	1772.7	1830.3
62.5°	1477.5	1500.2	1596.3	1662.6	1739.5	1823.3	1985.7	1963.0	1870.5	1905.4	1975.3
65°	1203.3	1233.0	1390.2	1606.8	2003.2	2359.5	2272.2	2261.7	2101.0	2090.5	2179.6
67.5°	620.0	642.7	726.5	1126.5	1802.4	2913.1	2970.7	2745.5	2418.9	2373.5	2481.7
70°	424.4	426.1	426.1	513.5	880.2	2670.4	4226.5	3749.7	3051.1	2845.0	2981.2
72.5°	331.8	331.8	344.1	419.2	483.8	1584.1	4498.9	5194.0	4167.1	3472.0	3124.4
75°	248.0	249.7	272.4	349.3	471.5	473.3	3763.6	4933.8	4706.7	3424.8	2427.6
77.5°	188.6	185.1	214.8	288.2	459.3	431.4	2031.1	3447.5	3332.3	2328.0	880.2
80°	118.8	124.0	145.0	241.0	440.1	431.4	710.8	1681.9	1346.5	557.1	148.5
82.5°	68.1	71.6	90.8	150.2	394.7	429.6	443.6	609.5	333.6	138.0	69.9
85°	40.2	40.2	57.6	94.3	286.4	424.4	431.4	366.8	185.1	71.6	36.7
87.5°	17.5	21.0	33.2	45.4	129.2	358.0	391.2	310.9	134.5	40.2	19.2
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: P459861

CATALOG NUMBER: NAV-SA4A-AMB-U-SL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2	1142.2
2.5°	1128.2	1128.2	1124.7	1124.7	1126.5	1117.7	1116.0	1110.8	1114.2	1112.5	1105.5
5°	1098.5	1096.8	1093.3	1074.1	1063.6	1037.4	1037.4	1021.7	1016.4	1016.4	1006.0
7.5°	1061.9	1056.6	1033.9	1002.5	972.8	944.8	918.6	899.4	885.5	873.2	875.0
10°	1026.9	1016.4	979.8	925.6	878.5	826.1	785.9	740.5	716.1	681.1	695.1
12.5°	999.0	983.3	923.9	847.0	777.2	700.3	620.0	551.9	496.0	461.1	440.1
15°	976.3	950.1	862.8	766.7	672.4	560.6	452.3	359.8	289.9	269.0	270.7
17.5°	955.3	918.6	808.6	684.6	557.1	420.9	296.9	235.8	213.1	202.6	202.6
20°	936.1	882.0	738.8	593.8	429.6	282.9	213.1	192.1	183.4	178.1	176.4
22.5°	911.7	848.8	670.6	499.5	307.4	204.3	176.4	165.9	164.2	164.2	164.2
25°	892.4	808.6	599.0	382.5	213.1	165.9	151.9	150.2	151.9	153.7	153.7
27.5°	869.7	768.4	527.4	269.0	162.4	139.7	134.5	138.0	141.5	145.0	145.0
30°	848.8	730.0	450.6	188.6	134.5	122.3	122.3	125.7	131.0	134.5	134.5
32.5°	834.8	702.1	359.8	148.5	118.8	111.8	113.5	115.3	120.5	122.3	122.3
35°	824.3	674.1	270.7	125.7	108.3	104.8	106.5	108.3	110.0	111.8	111.8
37.5°	826.1	658.4	193.9	111.8	101.3	99.5	101.3	101.3	101.3	103.0	103.0
40°	847.0	651.4	153.7	103.0	97.8	96.1	96.1	94.3	94.3	96.1	96.1
42.5°	878.5	653.2	136.2	99.5	94.3	92.6	90.8	89.1	89.1	89.1	89.1
45°	929.1	670.6	125.7	96.1	92.6	89.1	85.6	83.8	83.8	87.3	87.3
47.5°	1004.2	696.8	115.3	94.3	89.1	83.8	82.1	80.3	82.1	83.8	85.6
50°	1091.5	719.5	110.0	92.6	89.1	80.3	78.6	76.8	78.6	83.8	83.8
52.5°	1192.8	752.7	108.3	92.6	87.3	78.6	75.1	75.1	76.8	82.1	82.1
55°	1306.4	803.4	110.0	92.6	85.6	76.8	73.4	71.6	75.1	78.6	78.6
57.5°	1425.1	871.5	113.5	92.6	82.1	76.8	71.6	68.1	69.9	73.4	73.4
60°	1543.9	964.1	118.8	90.8	80.3	75.1	69.9	64.6	64.6	68.1	68.1
62.5°	1685.3	1079.3	136.2	94.3	80.3	71.6	64.6	59.4	59.4	61.1	61.1
65°	1870.5	1247.0	162.4	106.5	87.3	68.1	59.4	54.1	54.1	54.1	54.1
67.5°	2176.1	1514.2	172.9	118.8	99.5	68.1	55.9	50.6	48.9	48.9	47.2
70°	2574.3	1688.8	153.7	124.0	118.8	69.9	52.4	45.4	43.7	43.7	41.9
72.5°	2417.1	1287.1	131.0	120.5	120.5	71.6	50.6	43.7	40.2	38.4	38.4
75°	1660.9	597.3	115.3	111.8	104.8	61.1	47.2	40.2	36.7	33.2	33.2
77.5°	489.0	160.7	96.1	97.8	80.3	50.6	43.7	36.7	33.2	29.7	29.7
80°	115.3	92.6	69.9	71.6	54.1	38.4	34.9	33.2	29.7	26.2	26.2
82.5°	66.4	59.4	48.9	45.4	33.2	26.2	27.9	27.9	26.2	22.7	21.0
85°	33.2	34.9	29.7	26.2	21.0	17.5	17.5	19.2	17.5	14.0	14.0
87.5°	19.2	17.5	19.2	14.0	10.5	8.7	10.5	10.5	10.5	7.0	7.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)