

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: P882104

Luminaire Tested: **NAV-SB1D-827-U-SL4**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882104  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB1D-827-U-SL4  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(1) 80 CRI, 2700K, 900mA LIGHTSQUARE WITH 26 LEDS AND TYPE IV SPILL LIGHT  
ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

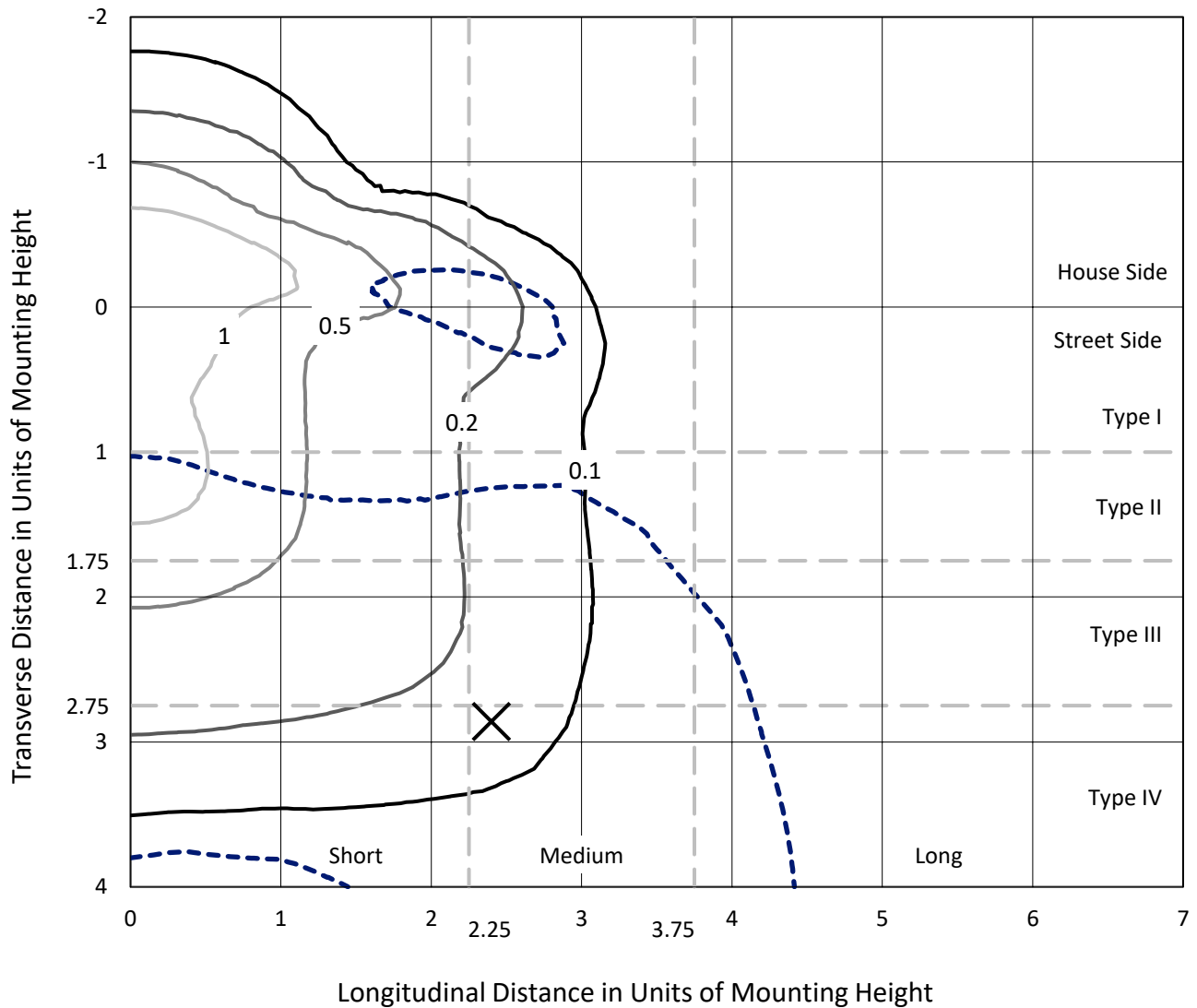
Lumens per Lamp: N/A  
Luminaire Lumens: 8203 lumens  
Efficiency: N/A  
Efficacy: 103.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Medium  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 79.6  
Input Voltage (V): 120.0  
Input Current (Ain): 0.638  
Voltage Rise (V): NR  
Power Factor: 0.997  
Total Harmonic Distortion (THDi): 6.673  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



REPORT NUMBER: P882104  
 CATALOG NUMBER: NAV-SB1D-827-U-SL4

### Iso-Footcandle Lines of Horizontal Illumination

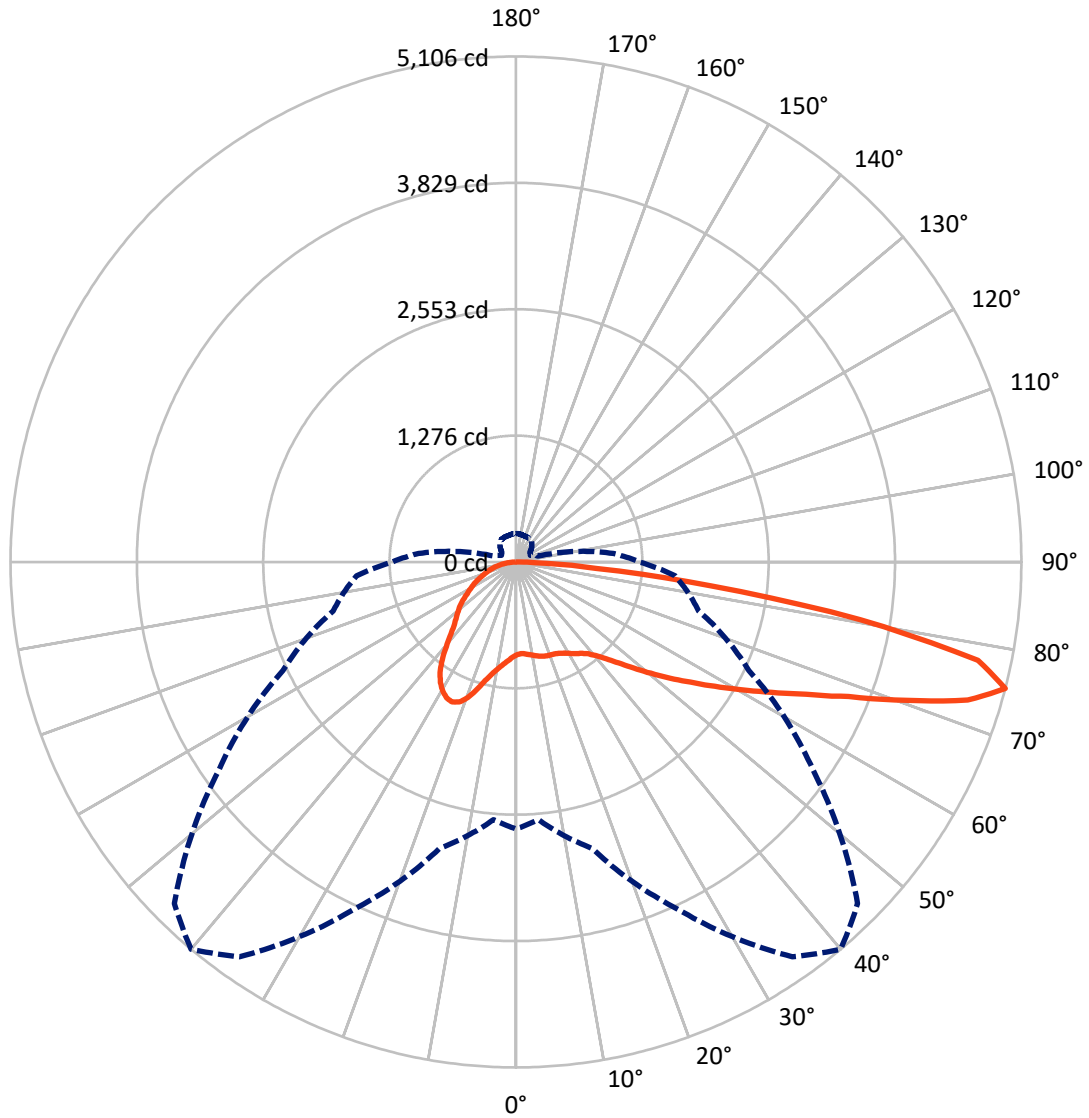
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc  
 Type IV - Medium - N/A

REPORT NUMBER: P882104  
CATALOG NUMBER: NAV-SB1D-827-U-SL4

### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

REPORT NUMBER: P882104

CATALOG NUMBER: NAV-SB1D-827-U-SL4

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2541.6	0.0	2541.6
	% Fixture	31.0	0.0	31.0
<b>Street Side</b>	Lumens	5661.4	0.0	5661.4
	% Fixture	69.0	0.0	69.0
<b>Total</b>	Lumens	8203.0	0.0	8203.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.6	1.1
10°-20°	314.4	3.8
20°-30°	574.0	7.0
30°-40°	814.1	9.9
40°-50°	1099.3	13.4
50°-60°	1478.8	18.0
60°-70°	1877.0	22.9
70°-80°	1703.5	20.8
80°-90°	248.3	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°	8203.0	100.0
0°-180°	8203.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P882104

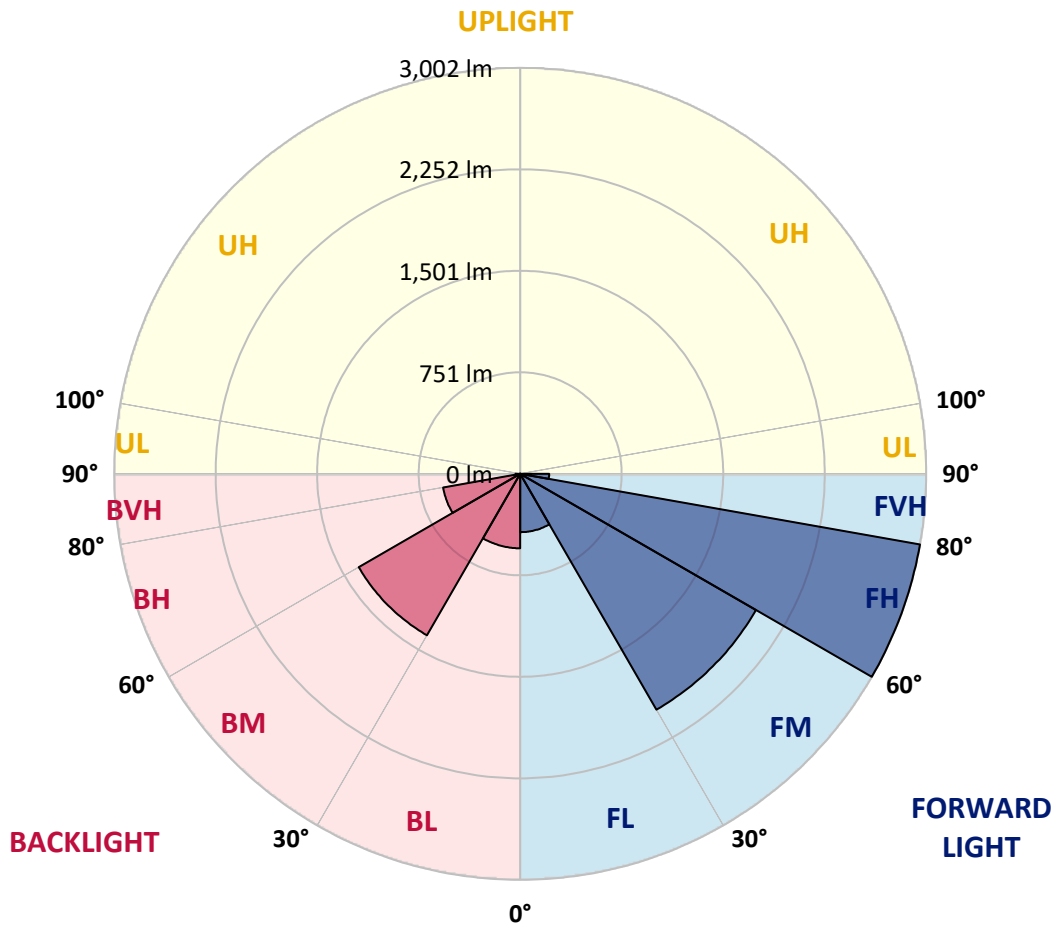
CATALOG NUMBER: NAV-SB1D-827-U-SL4

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	431.5	5.3			
FM (30°-60°)	2013.7	24.5			
FH (60°-80°)	3002.2	36.6			G2/5000
FVH (80°-90°)	214.1	2.6			G2/225
BL (0°-30°)	550.5	6.7	B2/1000		
BM (30°-60°)	1378.6	16.8	B2/2500		
BH (60°-80°)	578.3	7.0	B2/1000		G2/1000
BVH (80°-90°)	34.2	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type IV Medium



REPORT NUMBER: P882104

CATALOG NUMBER: NAV-SB1D-827-U-SL4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	938.0	938.0	938.0	938.0	938.0	938.0	938.0	938.0	938.0	938.0	938.0
2.5°	923.7	928.9	927.6	925.8	925.8	926.3	925.8	928.9	931.9	935.0	939.8
5°	933.2	938.5	935.8	933.7	931.9	931.5	930.2	929.8	931.5	935.4	941.9
7.5°	951.9	957.2	953.3	949.3	945.9	944.1	942.4	939.8	938.5	940.6	949.8
10°	972.8	978.1	973.3	966.3	960.6	958.5	956.7	954.1	952.4	953.7	963.7
12.5°	993.7	998.9	992.4	982.8	975.4	974.1	972.0	971.1	970.7	970.2	980.2
15°	1013.3	1017.6	1009.4	998.1	990.2	988.1	985.9	987.2	989.4	992.0	1003.3
17.5°	1028.5	1032.9	1020.7	1005.9	998.5	997.6	996.3	1000.7	1006.8	1013.3	1027.2
20°	1042.4	1046.8	1031.1	1011.1	1002.4	1002.4	1002.9	1012.0	1020.7	1030.3	1049.4
22.5°	1062.0	1065.5	1046.4	1018.9	1006.3	1007.2	1010.7	1019.8	1030.7	1043.7	1070.3
25°	1091.2	1093.8	1070.3	1033.7	1019.4	1022.0	1025.0	1029.4	1039.8	1055.1	1090.7
27.5°	1138.2	1140.3	1109.4	1059.8	1038.1	1042.4	1046.8	1043.7	1048.5	1061.6	1107.3
30°	1204.3	1205.6	1166.4	1100.7	1069.9	1072.0	1072.9	1060.3	1051.1	1061.6	1119.0
32.5°	1282.6	1282.2	1235.6	1150.3	1106.0	1103.8	1096.4	1071.6	1050.3	1059.4	1129.5
35°	1404.0	1399.2	1339.2	1220.0	1146.9	1133.4	1116.0	1084.2	1054.6	1057.2	1138.6
37.5°	1605.0	1590.2	1507.1	1333.9	1207.8	1173.4	1147.7	1104.7	1064.2	1056.4	1149.5
40°	1831.7	1813.0	1721.6	1490.1	1299.1	1243.9	1202.6	1133.8	1079.9	1060.3	1165.6
42.5°	2100.5	2074.0	1975.7	1674.2	1414.9	1334.8	1272.6	1170.8	1102.9	1072.9	1187.3
45°	2430.8	2395.5	2256.3	1881.7	1560.6	1454.0	1370.9	1226.9	1138.2	1097.3	1220.0
47.5°	2764.5	2773.2	2575.2	2119.3	1735.5	1601.1	1494.1	1311.3	1189.5	1136.4	1272.6
50°	3119.1	3125.2	2892.4	2382.5	1933.9	1767.3	1632.4	1405.7	1260.9	1192.1	1351.3
52.5°	3395.8	3396.6	3180.4	2657.9	2140.6	1950.0	1781.6	1513.6	1343.5	1266.1	1456.2
55°	3568.9	3566.8	3382.3	2918.5	2378.1	2141.9	1947.0	1636.3	1444.5	1353.1	1588.0
57.5°	3694.7	3688.1	3521.5	3142.6	2631.3	2368.6	2134.0	1775.5	1563.7	1456.6	1761.6
60°	3742.5	3738.6	3615.9	3336.2	2897.6	2619.2	2349.8	1931.3	1699.0	1578.9	1984.8
62.5°	3760.8	3768.2	3708.6	3523.7	3182.6	2896.7	2587.0	2117.5	1851.2	1717.2	2220.2
65°	3825.2	3838.7	3826.5	3769.1	3504.5	3221.7	2901.5	2339.0	2017.4	1865.6	2466.0
67.5°	3952.7	3966.2	3971.4	4062.7	3897.8	3626.8	3294.0	2614.8	2211.9	2019.6	2650.9
70°	3949.6	3945.7	4037.9	4296.4	4390.4	4187.6	3823.0	2954.2	2443.8	2147.5	2674.4
72.5°	3595.0	3563.7	3781.7	4293.8	4800.2	4773.2	4469.1	3391.9	2644.0	2163.2	2320.7
75°	2697.0	2613.5	2998.5	3869.6	4868.5	5105.6	4879.8	3663.3	2596.5	1911.3	1615.0
77.5°	1153.4	1069.4	1523.2	2864.5	4357.3	4772.8	4503.0	3196.1	2072.7	1263.9	793.1
80°	301.9	301.5	460.3	1298.7	2963.3	3524.6	3092.1	2064.0	1184.3	451.6	218.8
82.5°	124.9	121.8	169.2	505.1	1447.9	1977.9	1614.1	920.6	427.7	122.3	72.7
85°	46.6	46.1	82.2	174.5	510.8	815.8	590.4	235.4	106.6	59.6	32.6
87.5°	13.1	12.6	17.8	60.5	124.4	188.8	100.9	38.7	30.0	23.5	9.6
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: P882104

CATALOG NUMBER: NAV-SB1D-827-U-SL4

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	938.0	938.0	938.0	938.0	938.0	938.0	938.0	938.0	938.0	938.0	938.0
2.5°	941.1	943.2	947.2	950.2	954.1	958.5	964.6	968.5	972.4	975.0	973.3
5°	945.0	949.8	959.8	969.8	981.5	992.4	1005.0	1014.2	1021.6	1023.7	1024.6
7.5°	953.7	961.5	978.5	995.5	1014.2	1032.0	1050.3	1065.9	1078.6	1083.3	1083.8
10°	968.9	979.4	1003.3	1027.2	1052.0	1079.4	1102.9	1125.5	1143.4	1150.8	1151.2
12.5°	988.1	1001.1	1032.4	1065.5	1099.9	1137.7	1168.2	1196.0	1218.2	1228.2	1228.2
15°	1012.9	1029.8	1069.9	1114.2	1164.7	1217.3	1256.1	1287.0	1311.8	1323.9	1323.1
17.5°	1039.8	1062.5	1112.9	1179.9	1252.1	1321.3	1366.6	1389.2	1414.9	1426.6	1426.2
20°	1065.9	1093.8	1166.0	1263.5	1359.6	1433.1	1469.7	1475.8	1477.5	1478.8	1482.3
22.5°	1092.9	1130.3	1232.6	1368.7	1471.9	1522.8	1528.0	1501.9	1465.3	1448.4	1453.2
25°	1122.5	1172.1	1319.6	1484.9	1568.4	1574.5	1534.5	1471.0	1401.8	1370.1	1374.8
27.5°	1151.2	1220.4	1424.0	1595.9	1638.1	1584.5	1498.4	1408.3	1324.8	1291.3	1295.2
30°	1179.9	1275.6	1539.3	1692.9	1669.8	1559.7	1441.4	1340.9	1256.9	1221.7	1225.6
32.5°	1209.1	1340.0	1672.0	1762.9	1664.2	1507.1	1370.5	1265.2	1191.2	1154.3	1159.0
35°	1242.1	1419.2	1797.7	1801.2	1626.3	1429.7	1276.9	1174.7	1110.3	1080.7	1087.3
37.5°	1285.2	1519.7	1908.7	1810.8	1560.2	1316.1	1160.8	1067.7	1014.6	1001.1	1010.7
40°	1338.7	1640.7	1993.5	1795.6	1462.3	1178.2	1033.7	959.3	929.3	932.4	942.8
42.5°	1408.3	1776.0	2053.1	1756.4	1326.1	1035.9	922.4	889.3	903.7	915.8	927.1
45°	1498.8	1916.5	2090.1	1689.8	1172.1	915.4	856.7	864.5	875.4	876.7	885.4
47.5°	1614.6	2058.8	2114.5	1589.3	1015.0	830.6	814.9	816.6	814.5	805.3	812.3
50°	1759.0	2197.1	2136.2	1456.2	881.5	777.5	756.6	750.5	720.5	690.9	694.8
52.5°	1923.5	2324.2	2145.4	1290.9	777.5	733.1	699.2	660.9	604.8	595.6	598.7
55°	2106.2	2441.6	2121.9	1087.7	690.0	676.1	624.8	578.7	572.6	564.7	566.0
57.5°	2324.6	2568.3	2074.0	861.0	600.4	609.5	559.5	564.7	553.9	541.7	539.5
60°	2563.5	2699.2	1990.0	654.4	507.7	526.4	542.5	542.1	539.1	529.1	525.6
62.5°	2778.4	2785.4	1824.7	501.2	426.4	462.1	506.0	505.6	502.9	497.3	495.1
65°	2906.3	2772.3	1548.9	394.6	359.4	409.0	456.4	459.9	460.3	459.9	459.9
67.5°	2883.7	2619.6	1170.4	314.1	304.1	355.0	407.2	412.0	415.5	416.4	417.2
70°	2627.9	2284.1	763.1	250.6	255.0	307.6	360.7	365.5	368.5	372.0	373.7
72.5°	2048.3	1679.4	436.8	202.7	211.9	266.7	314.6	320.2	322.0	328.5	331.1
75°	1248.2	987.6	235.8	159.7	174.0	228.0	268.9	275.4	278.4	286.3	287.2
77.5°	593.4	427.7	134.4	124.4	140.1	186.2	227.1	234.5	226.2	230.6	227.1
80°	200.6	158.8	84.8	94.8	107.0	145.3	181.9	189.3	171.9	171.0	169.2
82.5°	70.0	64.4	53.9	63.1	69.2	104.0	137.5	147.1	127.9	127.5	121.4
85°	27.4	26.1	30.0	34.4	41.3	64.0	90.5	95.3	78.7	63.5	62.7
87.5°	5.7	6.1	7.4	7.8	12.6	22.2	32.6	40.0	31.8	27.0	24.8
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)