

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: P882451

Luminaire Tested: **NAV-SB2B-827-U-T4FT**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882451  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB2B-827-U-T4FT  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 80 CRI, 2700K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

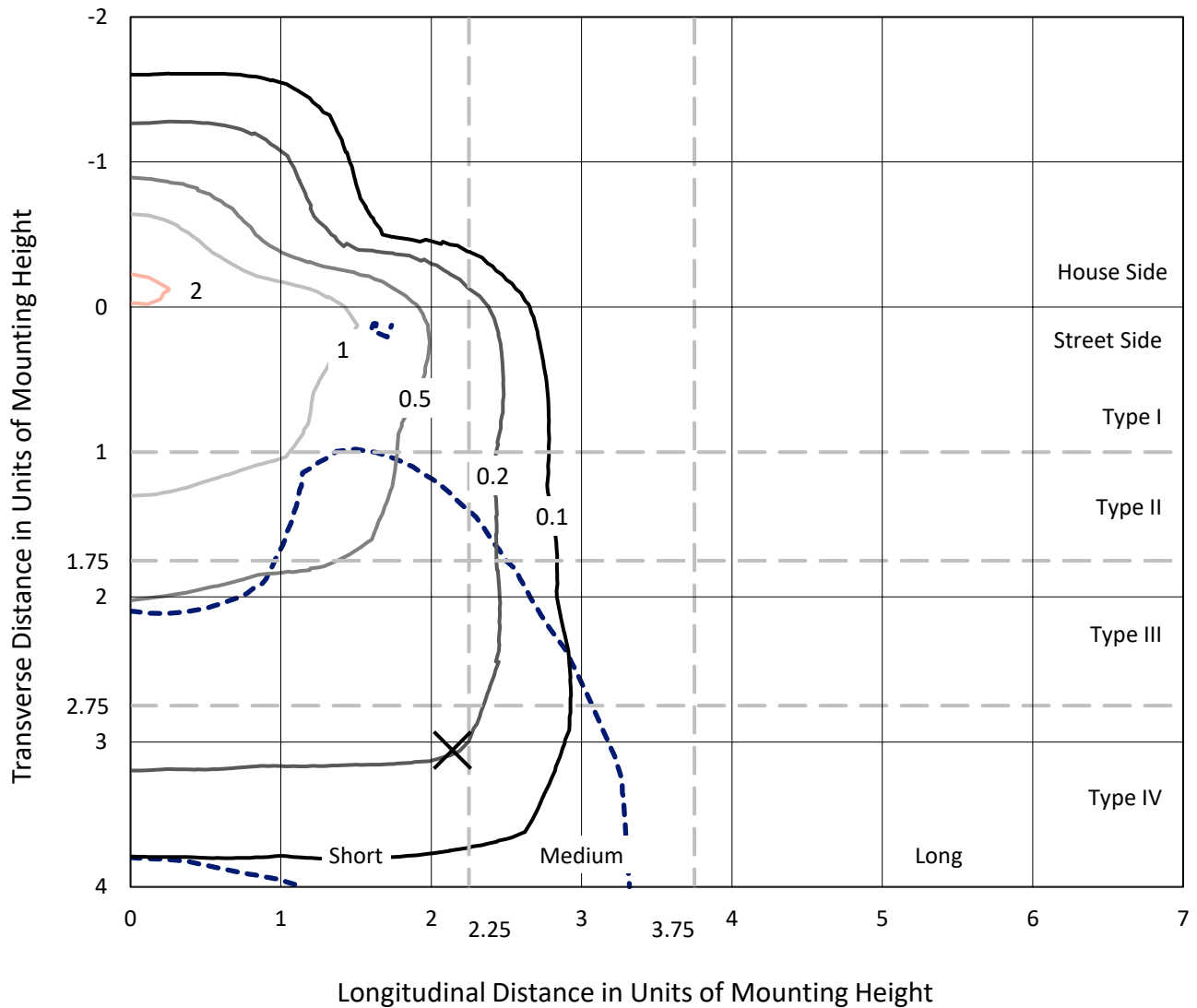
Lumens per Lamp: N/A  
Luminaire Lumens: 9216 lumens  
Efficiency: N/A  
Efficacy: 124.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 73.9  
Input Voltage (V): 120.0  
Input Current (Ain): 0.627  
Voltage Rise (V): NR  
Power Factor: 0.988  
Total Harmonic Distortion (THDi): 13.593  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

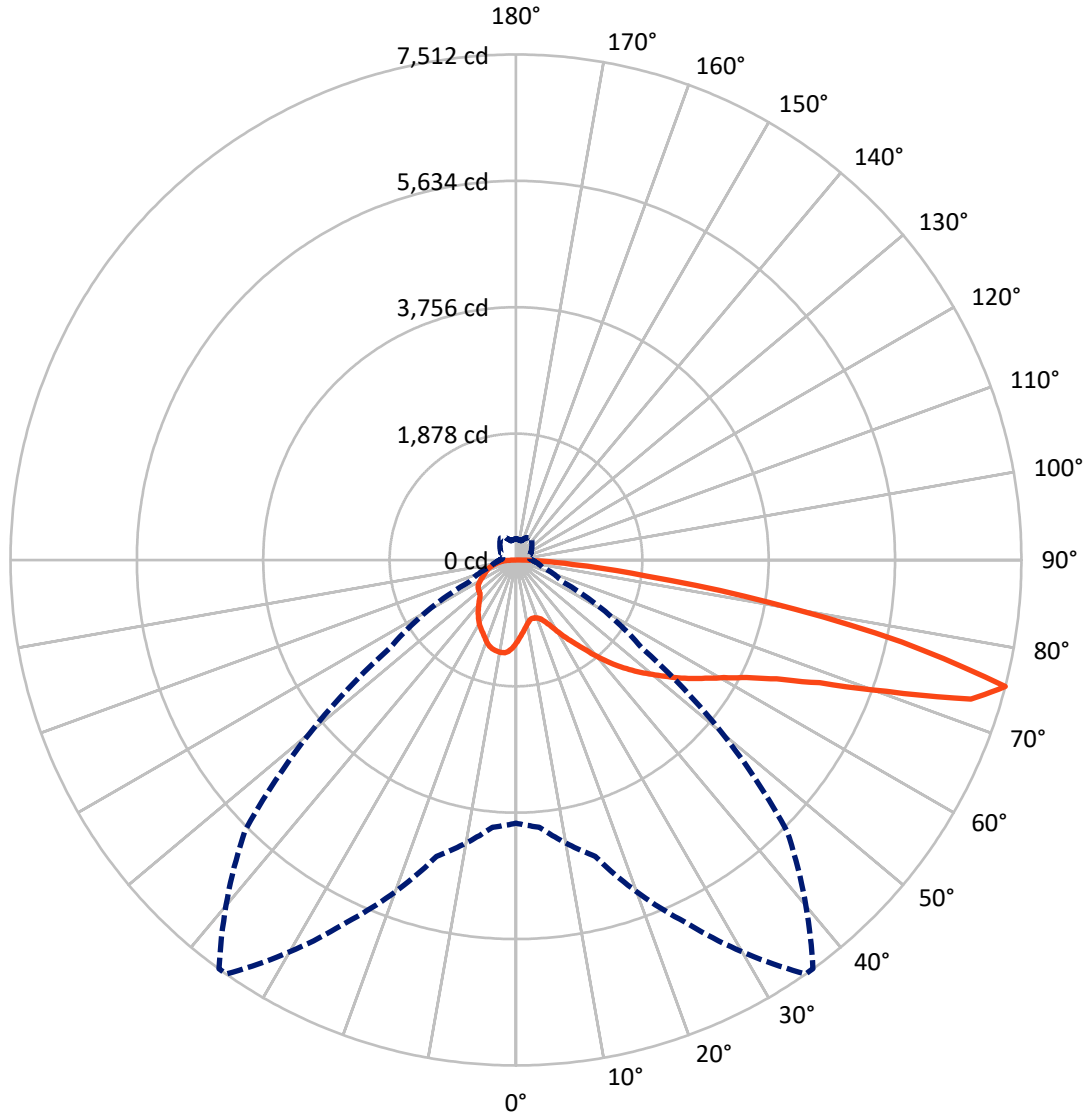
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2193.2	0.0	2193.2
	% Fixture	23.8	0.0	23.8
<b>Street Side</b>	Lumens	7022.8	0.0	7022.8
	% Fixture	76.2	0.0	76.2
<b>Total</b>	Lumens	9216.0	0.0	9216.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.3	1.3
10°-20°	335.4	3.6
20°-30°	563.2	6.1
30°-40°	875.3	9.5
40°-50°	1299.2	14.1
50°-60°	1793.6	19.5
60°-70°	2176.0	23.6
70°-80°	1798.3	19.5
80°-90°	258.7	2.8
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°	9216.0	100.0
0°-180°	9216.0	100.0

**Coefficient of Utilization**



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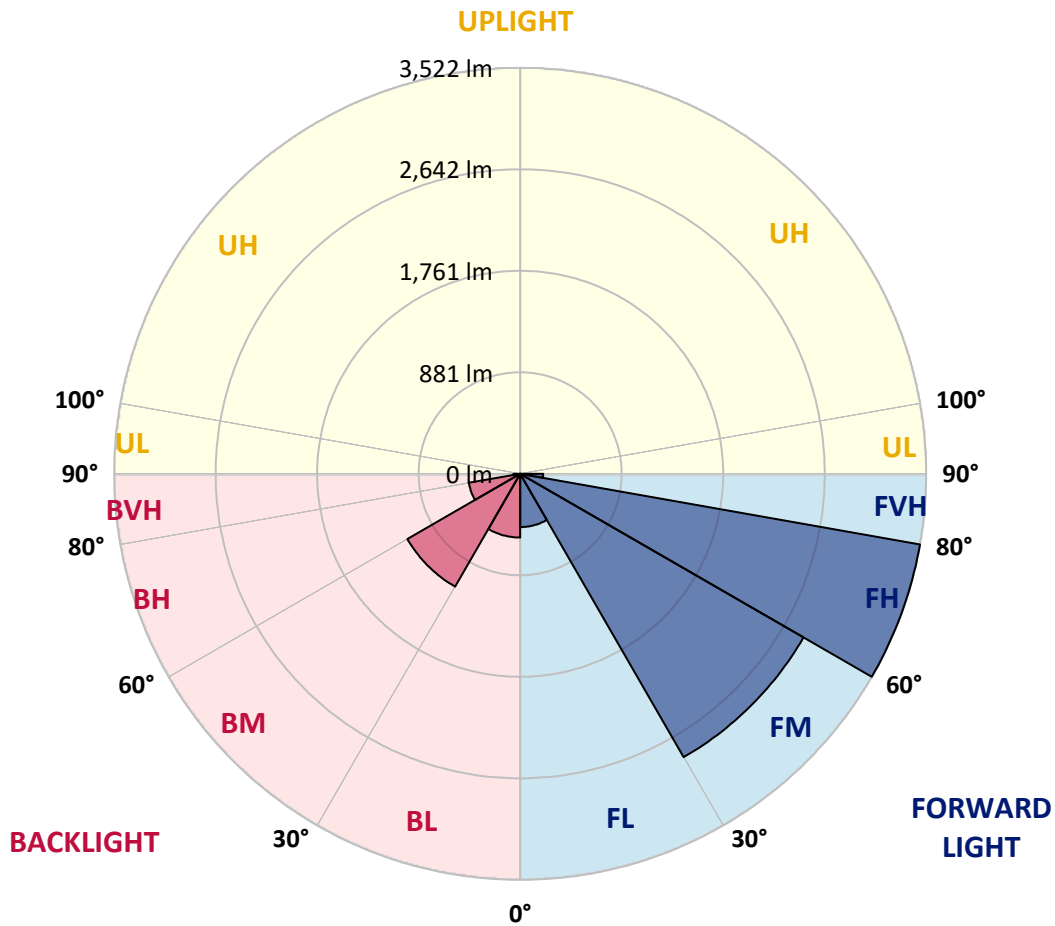
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	462.2	5.0			
FM (30°-60°)	2838.0	30.8			
FH (60°-80°)	3522.2	38.2			G2/5000
FVH (80°-90°)	200.4	2.2			G2/225
BL (0°-30°)	552.7	6.0	B2/1000		
BM (30°-60°)	1130.1	12.3	B2/2500		
BH (60°-80°)	452.2	4.9	B1/500		G1/500
BVH (80°-90°)	58.2	0.6			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 Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1
2.5°	1132.4	1139.4	1142.4	1140.9	1148.4	1147.4	1157.8	1170.8	1188.7	1206.2	1231.6
5°	1045.3	1052.7	1059.2	1065.2	1079.6	1084.1	1100.6	1125.5	1158.3	1191.7	1233.6
7.5°	964.0	970.5	980.5	991.4	1015.9	1020.3	1047.7	1086.6	1132.4	1181.3	1239.1
10°	897.8	904.3	914.7	927.2	957.6	963.0	997.9	1049.7	1109.5	1171.3	1245.0
12.5°	869.4	871.4	877.4	889.8	916.2	919.7	958.1	1017.4	1087.1	1163.8	1254.0
15°	867.9	871.9	872.4	878.8	900.8	902.3	937.6	996.4	1073.2	1162.3	1267.5
17.5°	882.8	885.8	881.3	885.3	903.8	906.2	934.1	986.5	1068.7	1168.8	1290.4
20°	922.7	925.2	911.7	906.2	919.7	921.7	949.1	992.9	1073.2	1182.3	1321.8
22.5°	1007.4	1008.9	976.0	953.6	954.6	955.6	979.5	1019.3	1090.6	1206.7	1361.6
25°	1139.4	1138.4	1086.1	1042.8	1017.8	1012.4	1028.3	1062.2	1120.0	1239.1	1412.9
27.5°	1293.9	1286.4	1234.1	1169.3	1115.0	1107.0	1103.5	1118.0	1161.8	1281.9	1475.7
30°	1468.2	1461.3	1405.0	1320.3	1245.0	1232.1	1199.2	1191.7	1224.1	1340.2	1562.9
32.5°	1659.5	1655.1	1587.8	1485.2	1384.5	1369.6	1314.3	1294.4	1319.8	1428.4	1684.5
35°	1820.0	1816.0	1760.2	1654.6	1531.5	1513.1	1456.8	1434.4	1447.3	1541.5	1843.4
37.5°	1965.0	1963.0	1915.1	1831.9	1704.9	1682.5	1619.2	1611.7	1609.2	1690.4	2036.2
40°	2099.5	2094.5	2044.7	2000.8	1906.7	1886.2	1830.4	1824.0	1805.0	1873.8	2254.4
42.5°	2248.4	2235.5	2163.2	2142.8	2117.4	2100.5	2067.1	2068.1	2026.2	2080.5	2485.6
45°	2370.0	2362.5	2288.3	2276.3	2303.7	2296.8	2325.7	2333.1	2251.9	2297.3	2725.7
47.5°	2500.5	2493.6	2430.8	2422.3	2496.5	2498.5	2600.7	2603.2	2472.1	2522.5	2966.4
50°	2661.5	2651.5	2589.2	2599.7	2682.9	2690.3	2877.2	2860.2	2674.9	2751.1	3205.0
52.5°	2767.6	2773.6	2760.1	2777.0	2890.6	2897.6	3149.2	3105.9	2875.7	2976.8	3439.2
55°	2845.8	2857.7	2899.6	2938.5	3109.8	3116.8	3405.8	3339.5	3042.1	3186.1	3659.4
57.5°	2946.4	2929.5	3007.7	3083.4	3318.1	3336.5	3655.4	3564.7	3189.6	3366.4	3810.3
60°	3090.9	3079.0	3139.7	3251.8	3551.3	3580.7	3919.4	3767.5	3297.7	3509.4	3839.7
62.5°	3383.9	3354.0	3363.4	3462.6	3845.2	3884.1	4217.4	3944.4	3351.5	3565.2	3682.3
65°	3821.8	3770.5	3722.6	3791.4	4259.2	4297.6	4553.7	4083.4	3331.5	3457.1	3264.3
67.5°	4373.3	4322.5	4263.7	4328.5	4869.0	4899.4	4968.7	4161.6	3174.6	3040.6	2525.4
70°	4828.2	4809.2	4879.5	5146.0	5843.0	5844.0	5500.8	4096.8	2744.7	2155.8	1461.3
72.5°	4767.9	4756.4	5126.6	5950.7	7070.6	7044.2	6004.5	3606.6	1848.9	972.5	547.5
75°	3911.5	3985.7	4559.1	5936.2	7511.6	7508.1	5696.1	2292.8	764.8	403.1	283.0
77.5°	2097.5	2215.1	2959.9	4382.8	5864.0	5952.1	4004.6	802.1	328.3	258.1	195.8
80°	684.0	786.7	1179.8	2231.5	3810.3	3793.9	1716.3	314.9	224.7	182.8	135.5
82.5°	290.5	302.4	527.1	1053.7	1955.5	1925.1	546.5	180.9	157.9	125.1	83.7
85°	113.6	127.0	232.7	487.3	847.0	828.5	197.3	89.7	101.1	81.7	49.8
87.5°	37.4	45.3	83.2	166.9	263.6	254.1	48.3	30.9	43.8	37.4	17.9
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1	1228.1
2.5°	1238.6	1246.5	1256.0	1269.9	1281.9	1291.9	1302.3	1308.8	1311.3	1318.8	1318.3
5°	1247.5	1265.0	1288.4	1311.3	1333.7	1347.2	1359.1	1365.1	1370.6	1374.6	1375.6
7.5°	1262.5	1284.9	1321.8	1351.7	1370.6	1381.5	1389.5	1387.5	1389.5	1390.5	1392.0
10°	1275.4	1306.8	1350.7	1379.1	1393.5	1394.0	1392.0	1385.0	1381.5	1382.0	1383.0
12.5°	1290.9	1325.7	1373.1	1397.0	1401.0	1390.0	1381.5	1369.6	1365.1	1363.1	1362.1
15°	1311.8	1351.7	1397.5	1406.5	1396.5	1382.5	1368.1	1348.7	1338.7	1330.7	1333.2
17.5°	1337.2	1381.0	1416.4	1409.9	1388.5	1365.6	1342.2	1312.8	1292.4	1283.9	1284.4
20°	1372.6	1411.9	1430.9	1402.5	1370.1	1335.2	1295.4	1259.5	1240.5	1232.1	1231.1
22.5°	1415.4	1453.3	1444.8	1389.5	1343.7	1287.9	1238.1	1211.7	1202.2	1196.2	1197.2
25°	1466.7	1499.1	1454.8	1370.6	1300.3	1225.1	1186.7	1178.3	1173.8	1169.3	1169.3
27.5°	1533.5	1550.9	1462.3	1342.7	1232.6	1158.3	1144.4	1145.9	1144.4	1136.9	1138.4
30°	1621.7	1618.2	1469.2	1297.3	1154.9	1098.1	1099.1	1105.5	1106.5	1101.5	1104.0
32.5°	1737.8	1702.4	1472.7	1238.6	1080.6	1045.3	1046.2	1053.2	1058.2	1049.7	1053.7
35°	1878.3	1800.5	1467.2	1164.8	1023.3	994.9	987.5	989.5	990.9	983.0	988.5
37.5°	2042.2	1910.6	1442.8	1083.1	976.0	945.6	929.7	916.2	908.2	900.8	905.8
40°	2222.0	2030.7	1398.0	1003.4	923.2	893.3	869.4	844.0	817.1	807.1	811.6
42.5°	2410.4	2154.3	1343.7	927.2	862.4	838.0	812.6	775.7	735.4	714.9	717.4
45°	2605.7	2280.8	1290.4	851.9	800.1	789.7	760.3	715.9	672.1	646.2	644.2
47.5°	2797.0	2400.4	1212.2	776.2	741.8	753.3	730.4	689.5	640.7	599.8	595.4
50°	2979.8	2512.5	1084.1	699.5	694.5	742.3	720.4	661.6	605.8	553.5	549.0
52.5°	3161.2	2603.2	920.2	629.7	669.1	739.3	707.5	642.7	574.4	519.6	513.7
55°	3315.1	2650.0	762.3	570.0	632.2	713.9	692.0	620.3	530.1	471.8	466.8
57.5°	3402.8	2612.1	630.7	511.2	581.4	672.1	665.6	572.4	477.3	432.4	426.5
60°	3364.9	2458.7	523.1	459.9	533.1	626.8	619.8	525.1	436.9	394.6	388.6
62.5°	3156.2	2166.2	437.9	415.0	489.2	580.4	573.9	488.7	406.0	365.2	358.7
65°	2735.7	1762.2	371.7	377.6	444.9	524.6	534.1	458.4	381.6	341.8	335.3
67.5°	2086.5	1276.4	319.9	345.3	401.6	469.8	497.2	436.4	361.2	323.3	317.4
70°	1189.2	724.9	276.0	313.9	363.2	419.0	468.8	419.0	339.3	307.9	303.9
72.5°	450.9	332.8	238.6	282.5	326.3	376.2	437.4	391.6	313.9	290.5	286.5
75°	240.6	202.8	200.8	245.6	284.0	334.3	398.1	364.7	294.9	306.9	316.9
77.5°	163.9	143.5	167.9	210.2	237.6	288.0	356.2	323.8	255.6	254.6	234.7
80°	113.6	101.6	136.5	169.4	183.8	242.1	310.9	278.0	208.3	194.3	185.8
82.5°	68.3	66.3	102.1	126.5	130.0	186.8	257.6	233.2	170.4	148.5	149.5
85°	37.4	39.4	65.3	74.2	75.7	130.5	201.8	180.4	131.0	110.1	111.1
87.5°	10.5	13.5	23.9	29.4	36.4	67.8	120.1	107.1	65.8	45.8	45.8
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)