

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: P882221

Luminaire Tested: **NAV-SB2A-727-U-T4FT**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882221  
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-SB2A-727-U-T4FT  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(2) 70 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

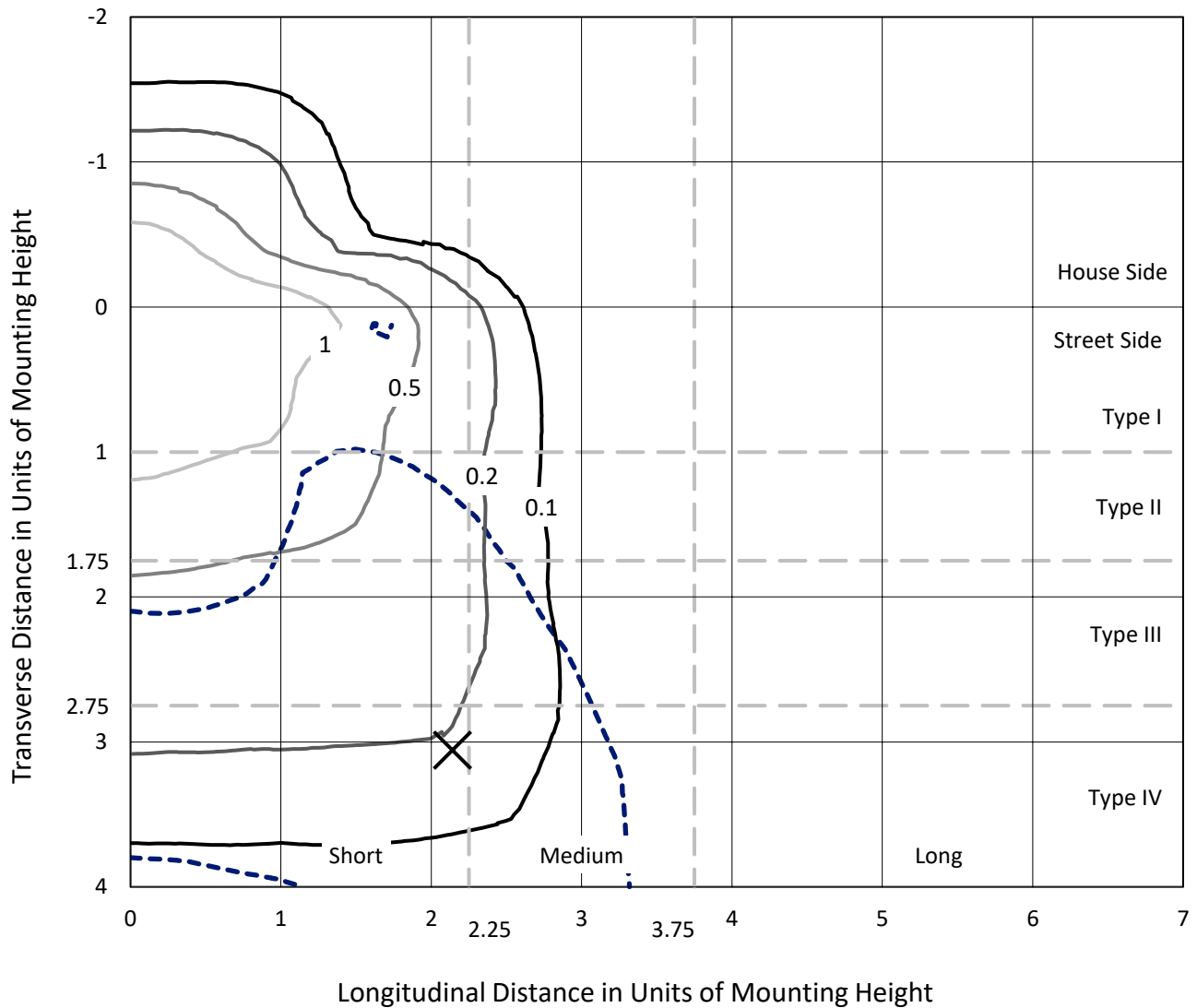
Lumens per Lamp: N/A  
Luminaire Lumens: 8189 lumens  
Efficiency: N/A  
Efficacy: 142.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2  
  
Input Watts (W): 57.3  
Input Voltage (V): 120.0  
Input Current (Ain): 0.484  
Voltage Rise (V): NR  
Power Factor: 0.994  
Total Harmonic Distortion (THDi): 9.038  
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

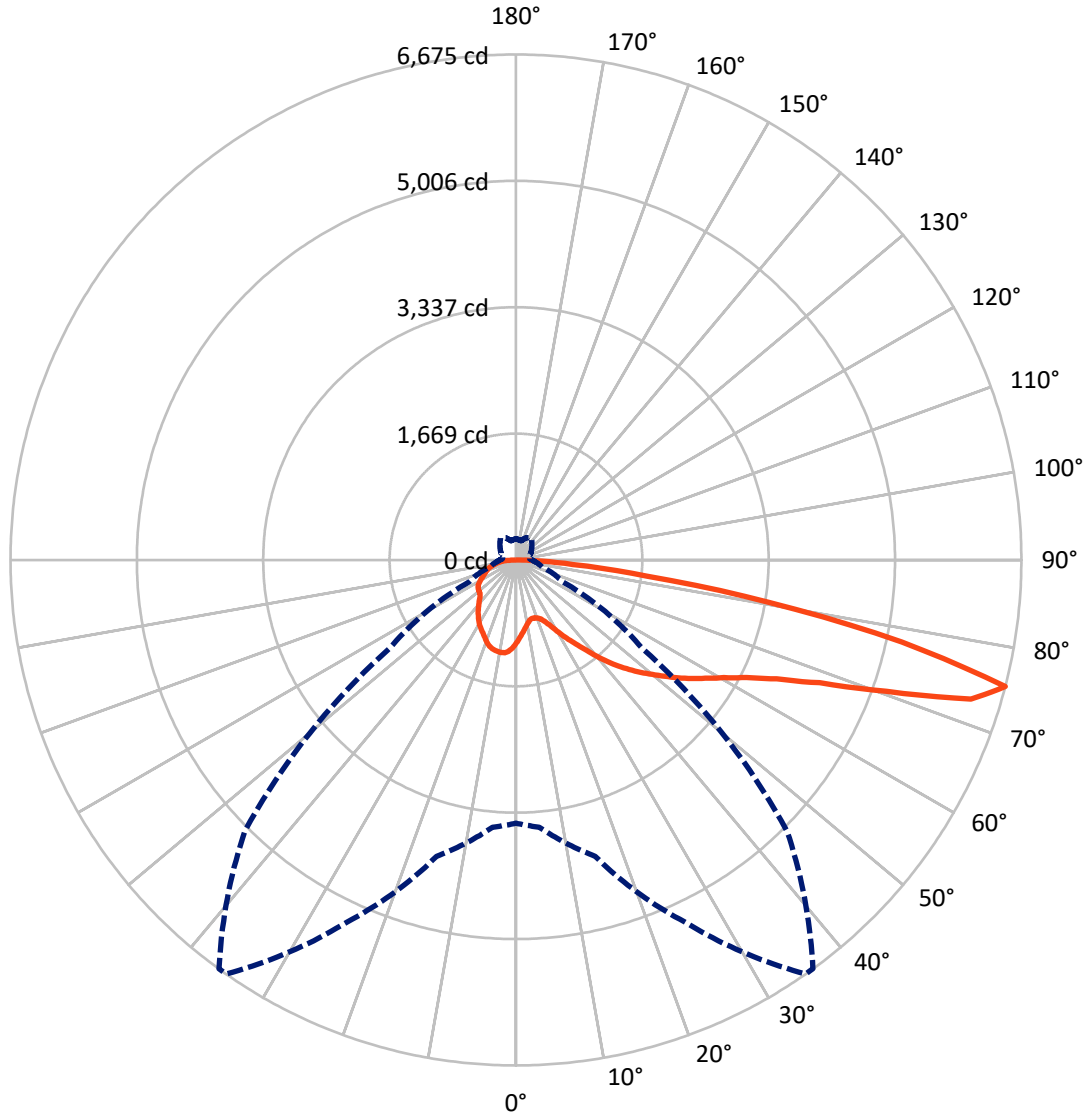
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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	1948.8	0.0	1948.8
	% Fixture	23.8	0.0	23.8
<b>Street Side</b>	Lumens	6240.2	0.0	6240.2
	% Fixture	76.2	0.0	76.2
<b>Total</b>	Lumens	8189.0	0.0	8189.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.3	1.3
10°-20°	298.0	3.6
20°-30°	500.4	6.1
30°-40°	777.8	9.5
40°-50°	1154.4	14.1
50°-60°	1593.7	19.5
60°-70°	1933.6	23.6
70°-80°	1597.9	19.5
80°-90°	229.8	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°	8189.0	100.0
0°-180°	8189.0	100.0

**Coefficient of Utilization**



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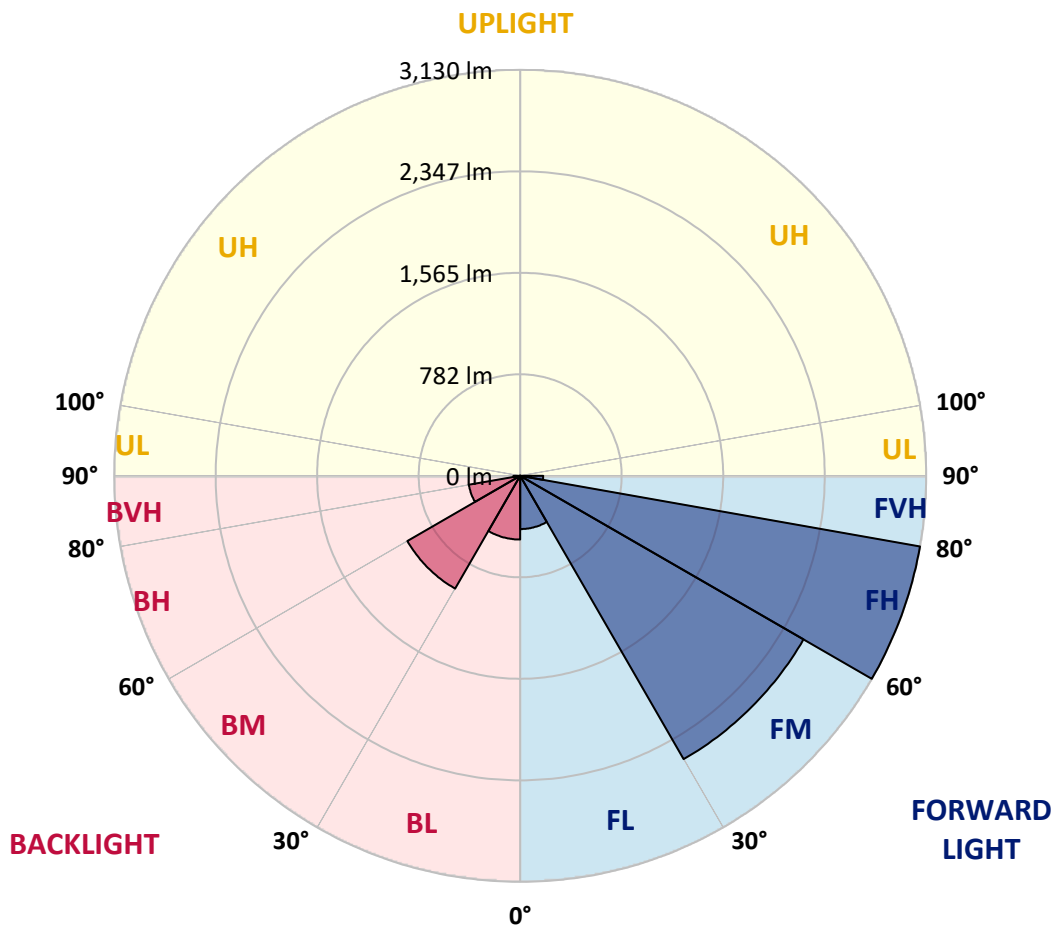
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	410.7	5.0			
FM (30°-60°)	2521.8	30.8			
FH (60°-80°)	3129.7	38.2			G2/5000
FVH (80°-90°)	178.1	2.2			G2/225
BL (0°-30°)	491.1	6.0	B1/500		
BM (30°-60°)	1004.1	12.3	B2/2500		
BH (60°-80°)	401.8	4.9	B1/500		G1/500
BVH (80°-90°)	51.8	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°	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2
2.5°	1006.2	1012.4	1015.1	1013.8	1020.4	1019.5	1028.8	1040.3	1056.3	1071.8	1094.3
5°	928.8	935.4	941.2	946.5	959.3	963.3	977.9	1000.0	1029.3	1058.9	1096.1
7.5°	856.6	862.4	871.2	881.0	902.7	906.6	931.0	965.5	1006.2	1049.6	1101.0
10°	797.7	803.5	812.8	823.9	850.9	855.7	886.7	932.8	985.9	1040.8	1106.3
12.5°	772.5	774.3	779.6	790.7	814.1	817.2	851.3	904.0	966.0	1034.1	1114.3
15°	771.2	774.7	775.2	780.9	800.4	801.7	833.1	885.4	953.6	1032.8	1126.2
17.5°	784.5	787.1	783.1	786.7	803.0	805.3	830.1	876.5	949.6	1038.6	1146.6
20°	819.9	822.1	810.1	805.3	817.2	819.0	843.3	882.3	953.6	1050.5	1174.5
22.5°	895.1	896.5	867.2	847.3	848.2	849.1	870.3	905.8	969.1	1072.2	1209.9
25°	1012.4	1011.6	965.1	926.6	904.4	899.6	913.7	943.8	995.2	1101.0	1255.5
27.5°	1149.7	1143.0	1096.6	1039.0	990.7	983.7	980.6	993.4	1032.4	1139.1	1311.3
30°	1304.6	1298.4	1248.4	1173.1	1106.3	1094.8	1065.6	1058.9	1087.7	1190.8	1388.7
32.5°	1474.6	1470.6	1410.9	1319.7	1230.2	1217.0	1167.8	1150.1	1172.7	1269.2	1496.7
35°	1617.2	1613.6	1564.0	1470.2	1360.8	1344.5	1294.4	1274.5	1286.0	1369.7	1638.0
37.5°	1746.0	1744.2	1701.7	1627.8	1514.9	1495.0	1438.8	1432.1	1429.9	1502.1	1809.3
40°	1865.5	1861.1	1816.8	1777.9	1694.2	1676.0	1626.5	1620.7	1603.9	1665.0	2003.2
42.5°	1997.9	1986.4	1922.2	1904.0	1881.4	1866.4	1836.7	1837.6	1800.4	1848.7	2208.6
45°	2105.9	2099.3	2033.3	2022.7	2047.0	2040.8	2066.5	2073.1	2001.0	2041.3	2422.0
47.5°	2221.9	2215.7	2159.9	2152.4	2218.3	2220.1	2310.9	2313.1	2196.6	2241.4	2635.8
50°	2364.9	2356.0	2300.7	2310.0	2383.9	2390.5	2556.6	2541.5	2376.8	2444.6	2847.8
52.5°	2459.2	2464.5	2452.5	2467.6	2568.5	2574.7	2798.3	2759.8	2555.2	2645.1	3055.9
55°	2528.7	2539.3	2576.5	2611.0	2763.3	2769.5	3026.3	2967.4	2703.1	2831.0	3251.6
57.5°	2618.1	2603.0	2672.5	2739.8	2948.3	2964.7	3248.0	3167.5	2834.1	2991.3	3385.7
60°	2746.5	2735.8	2789.9	2889.5	3155.5	3181.6	3482.7	3347.6	2930.2	3118.3	3411.8
62.5°	3006.8	2980.2	2988.6	3076.7	3416.7	3451.2	3747.4	3504.8	2978.0	3167.9	3271.9
65°	3395.9	3350.3	3307.8	3368.9	3784.6	3818.7	4046.2	3628.3	2960.3	3071.9	2900.5
67.5°	3886.0	3840.8	3788.6	3846.1	4326.4	4353.4	4415.0	3697.8	2820.8	2701.8	2244.0
70°	4290.1	4273.3	4335.7	4572.6	5191.9	5192.8	4887.8	3640.3	2438.8	1915.5	1298.4
72.5°	4236.6	4226.4	4555.3	5287.5	6282.7	6259.2	5335.3	3204.7	1642.8	864.1	486.5
75°	3475.6	3541.5	4051.1	5274.7	6674.5	6671.4	5061.3	2037.3	679.5	358.1	251.4
77.5°	1863.7	1968.2	2630.0	3894.4	5210.5	5288.9	3558.4	712.7	291.7	229.3	174.0
80°	607.8	699.0	1048.3	1982.8	3385.7	3371.1	1525.1	279.8	199.7	162.5	120.4
82.5°	258.1	268.7	468.4	936.3	1737.6	1710.6	485.6	160.7	140.3	111.1	74.4
85°	100.9	112.9	206.7	433.0	752.6	736.2	175.3	79.7	89.9	72.6	44.3
87.5°	33.2	40.3	73.9	148.3	234.2	225.8	42.9	27.4	39.0	33.2	15.9
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°	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2	1091.2
2.5°	1100.5	1107.6	1116.0	1128.4	1139.1	1147.9	1157.2	1163.0	1165.2	1171.8	1171.4
5°	1108.5	1124.0	1144.8	1165.2	1185.1	1197.0	1207.7	1213.0	1217.9	1221.4	1222.3
7.5°	1121.8	1141.7	1174.5	1201.0	1217.9	1227.6	1234.7	1232.9	1234.7	1235.6	1236.9
10°	1133.3	1161.2	1200.1	1225.4	1238.2	1238.7	1236.9	1230.7	1227.6	1228.0	1228.9
12.5°	1147.0	1178.0	1220.1	1241.3	1244.9	1235.1	1227.6	1217.0	1213.0	1211.2	1210.3
15°	1165.6	1201.0	1241.8	1249.7	1240.9	1228.5	1215.6	1198.4	1189.5	1182.4	1184.6
17.5°	1188.2	1227.1	1258.6	1252.8	1233.8	1213.4	1192.6	1166.5	1148.3	1140.8	1141.3
20°	1219.6	1254.6	1271.4	1246.2	1217.4	1186.4	1151.0	1119.1	1102.3	1094.8	1093.9
22.5°	1257.7	1291.3	1283.8	1234.7	1193.9	1144.4	1100.1	1076.6	1068.2	1062.9	1063.8
25°	1303.3	1332.1	1292.7	1217.9	1155.4	1088.6	1054.5	1047.0	1043.0	1039.0	1039.0
27.5°	1362.6	1378.1	1299.3	1193.1	1095.2	1029.3	1016.9	1018.2	1016.9	1010.2	1011.6
30°	1441.0	1437.9	1305.5	1152.8	1026.2	975.7	976.6	982.3	983.2	978.8	981.0
32.5°	1544.1	1512.7	1308.6	1100.5	960.2	928.8	929.7	935.9	940.3	932.8	936.3
35°	1669.0	1599.9	1303.7	1035.0	909.3	884.1	877.4	879.2	880.5	873.4	878.3
37.5°	1814.6	1697.7	1282.0	962.4	867.2	840.2	826.1	814.1	807.0	800.4	804.8
40°	1974.4	1804.4	1242.2	891.6	820.3	793.7	772.5	749.9	726.0	717.2	721.1
42.5°	2141.8	1914.2	1193.9	823.9	766.3	744.6	722.0	689.3	653.4	635.3	637.5
45°	2315.3	2026.7	1146.6	757.0	711.0	701.7	675.6	636.2	597.2	574.2	572.4
47.5°	2485.3	2132.9	1077.1	689.7	659.2	669.4	649.0	612.7	569.3	533.0	529.0
50°	2647.8	2232.5	963.3	621.5	617.1	659.6	640.1	587.9	538.3	491.8	487.8
52.5°	2808.9	2313.1	817.7	559.6	594.5	657.0	628.6	571.1	510.4	461.7	456.4
55°	2945.7	2354.7	677.3	506.4	561.8	634.4	614.9	551.2	471.0	419.2	414.8
57.5°	3023.6	2321.0	560.5	454.2	516.6	597.2	591.4	508.7	424.1	384.3	378.9
60°	2990.0	2184.7	464.8	408.6	473.7	556.9	550.7	466.6	388.2	350.6	345.3
62.5°	2804.5	1924.8	389.1	368.8	434.7	515.7	510.0	434.3	360.8	324.5	318.7
65°	2430.8	1565.8	330.2	335.6	395.3	466.2	474.6	407.3	339.1	303.7	297.9
67.5°	1854.0	1134.2	284.2	306.8	356.8	417.5	441.8	387.8	321.0	287.3	282.0
70°	1056.7	644.1	245.3	278.9	322.7	372.3	416.6	372.3	301.5	273.6	270.0
72.5°	400.6	295.7	212.1	251.0	290.0	334.2	388.7	348.0	278.9	258.1	254.5
75°	213.8	180.2	178.4	218.2	252.3	297.0	353.7	324.1	262.1	272.7	281.6
77.5°	145.6	127.5	149.2	186.8	211.2	255.9	316.5	287.8	227.1	226.2	208.5
80°	100.9	90.3	121.3	150.5	163.4	215.1	276.2	247.0	185.0	172.7	165.1
82.5°	60.6	58.9	90.8	112.4	115.5	166.0	228.9	207.2	151.4	131.9	132.8
85°	33.2	35.0	58.0	66.0	67.3	116.0	179.3	160.3	116.4	97.8	98.7
87.5°	9.3	12.0	21.2	26.1	32.3	60.2	106.7	95.2	58.4	40.7	40.7
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)