

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: P196904

Luminaire Tested: **NAV-AF-02-D-UNV-5NQ-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196904
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-5NQ-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8255 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

Input Watts (W): 85
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

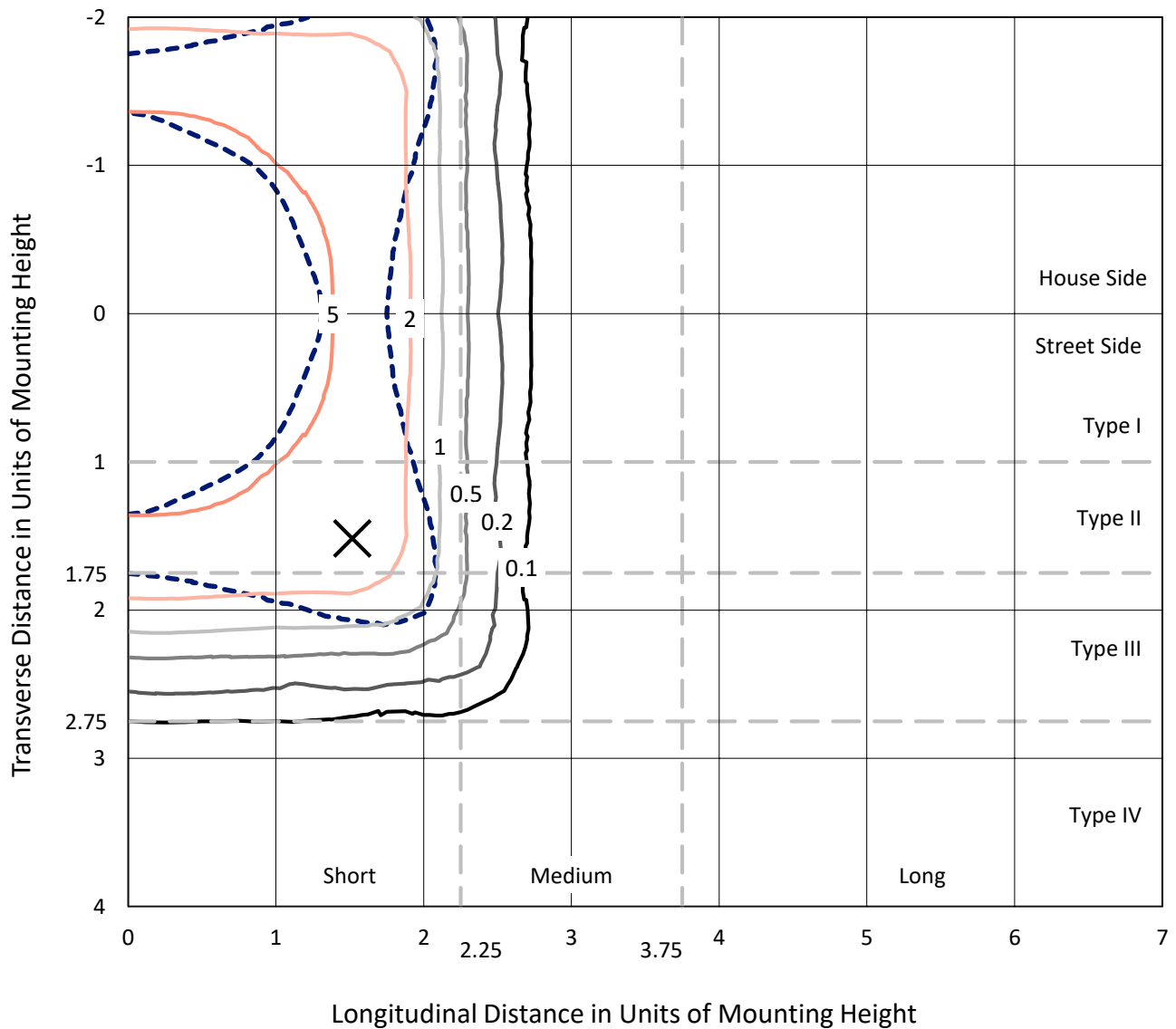


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Iso-Footcandle Lines of Horizontal Illumination

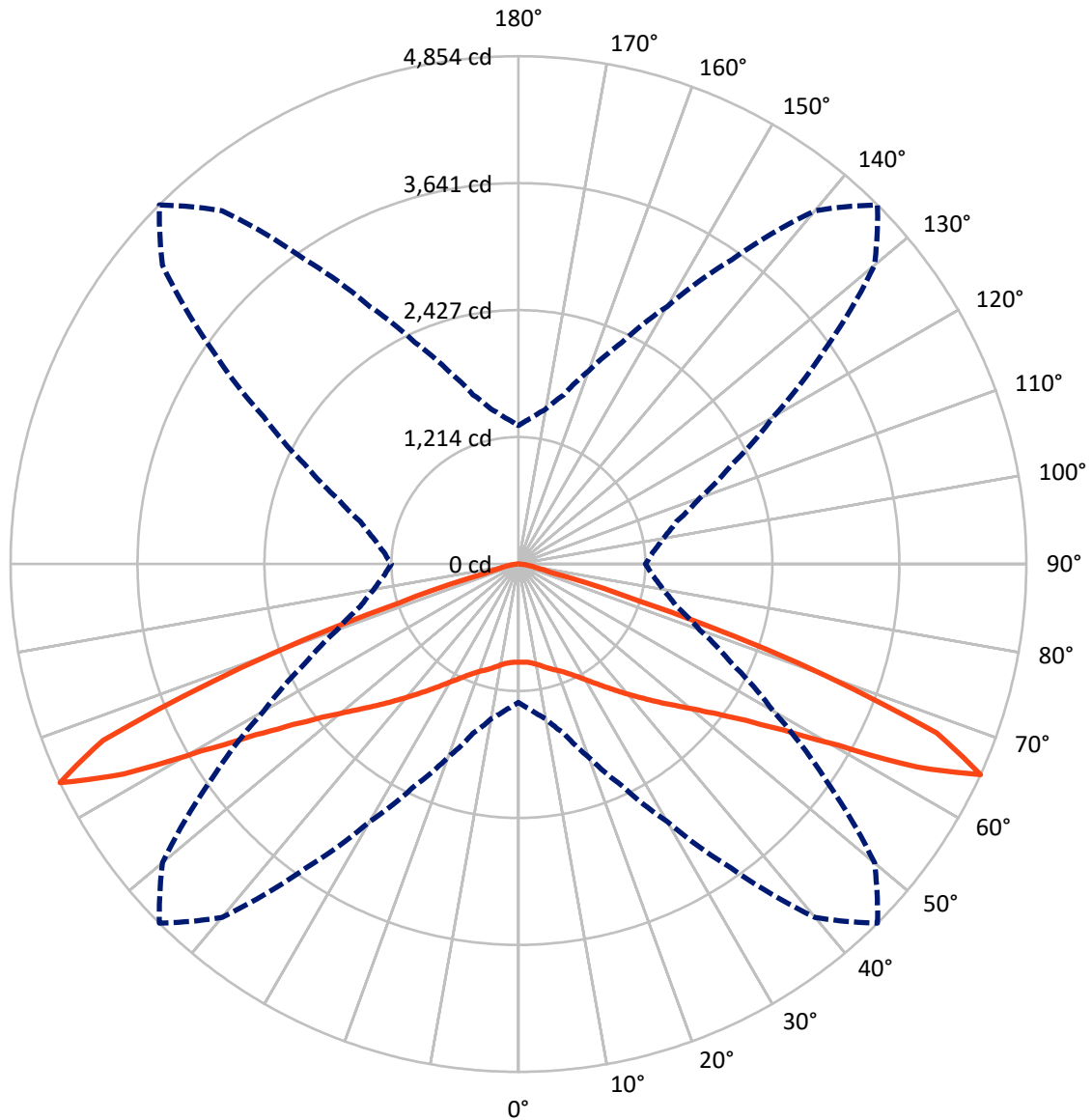
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.4 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4127.5	0.0	4127.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4127.5	0.0	4127.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	8255.0	0.0	8255.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.4	1.1
10°-20°	293.1	3.6
20°-30°	546.7	6.6
30°-40°	921.8	11.2
40°-50°	1497.3	18.1
50°-60°	2346.1	28.4
60°-70°	2214.6	26.8
70°-80°	298.5	3.6
80°-90°	45.5	0.6
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°	8255.0	100.0
0°-180°	8255.0	100.0



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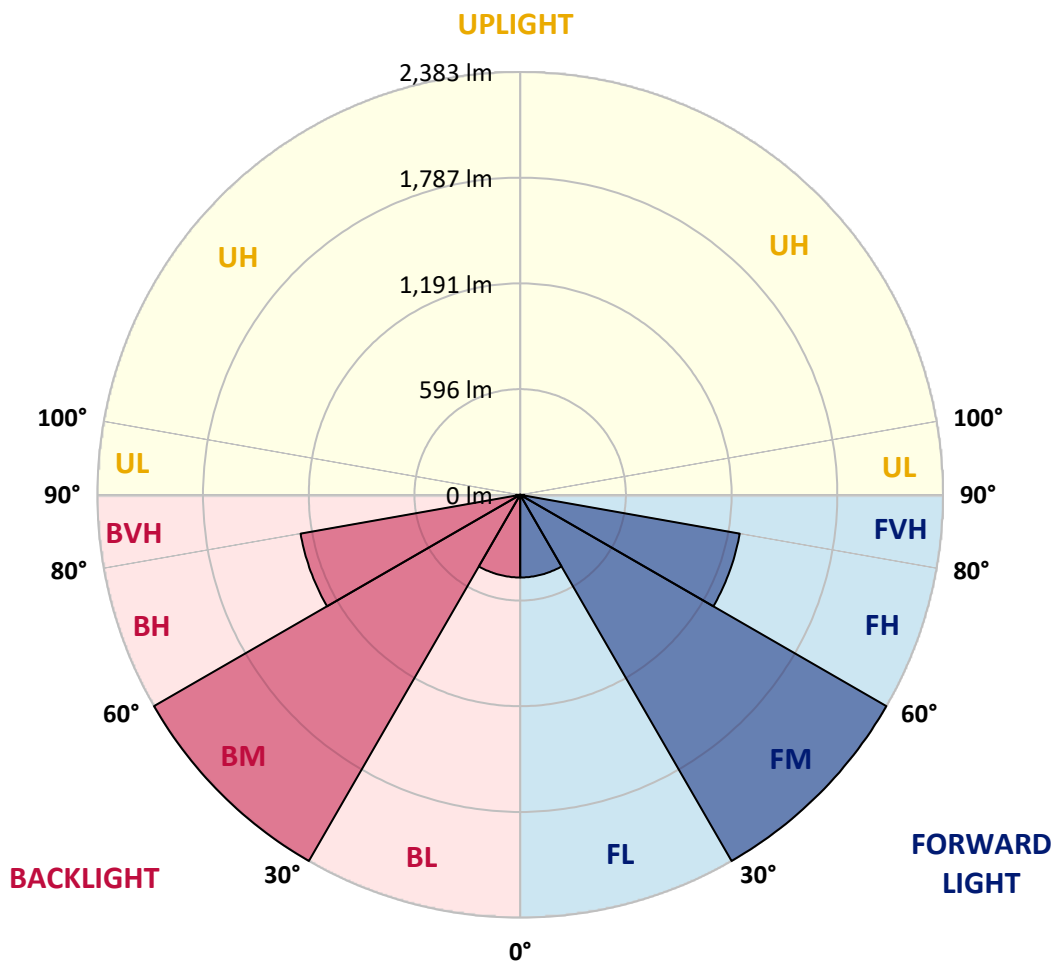
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	465.6	5.6			
FM	(30°-60°)	2382.6	28.9			
FH	(60°-80°)	1256.5	15.2			G1/1800
FVH	(80°-90°)	22.7	0.3			G1/100
BL	(0°-30°)	465.6	5.6	B1/500		
BM	(30°-60°)	2382.6	28.9	B2/2500		
BH	(60°-80°)	1256.5	15.2	B3/2500		G1/1800
BVH	(80°-90°)	22.7	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	939.0	939.0	939.0	939.0	939.0	939.0	939.0	939.0	939.0	939.0	939.0
2.5°	946.7	946.7	948.3	947.7	945.7	944.1	942.6	940.5	939.5	938.5	938.0
5°	951.9	951.9	953.4	952.9	951.3	949.3	948.3	946.7	945.2	944.1	944.7
7.5°	964.7	965.2	965.7	965.2	963.7	962.1	960.1	959.6	957.5	956.0	957.0
10°	984.2	984.2	984.8	985.3	984.2	980.6	980.6	979.6	977.6	975.5	976.0
12.5°	1005.8	1005.8	1006.4	1006.4	1006.4	1004.3	1004.8	1004.3	1001.7	1000.7	1001.7
15°	1026.9	1027.4	1027.4	1028.5	1028.5	1029.0	1031.0	1031.0	1030.0	1029.5	1029.5
17.5°	1051.6	1052.6	1053.2	1054.7	1055.2	1056.2	1058.3	1058.8	1059.3	1057.8	1058.3
20°	1084.5	1085.0	1086.6	1087.1	1089.2	1089.2	1090.2	1089.7	1088.6	1086.6	1086.6
22.5°	1121.6	1122.6	1125.7	1125.7	1128.2	1126.7	1127.2	1125.7	1123.1	1122.1	1121.0
25°	1169.9	1171.4	1174.0	1173.0	1174.0	1171.4	1171.4	1171.4	1169.9	1168.3	1167.8
27.5°	1231.1	1228.5	1231.1	1229.0	1228.5	1226.5	1227.0	1225.9	1224.4	1223.9	1221.8
30°	1294.8	1291.8	1293.3	1293.8	1292.8	1292.3	1290.2	1288.7	1286.1	1286.6	1285.1
32.5°	1367.9	1364.8	1366.3	1366.8	1365.8	1366.8	1366.3	1362.7	1359.6	1361.7	1361.7
35°	1454.8	1452.7	1456.8	1458.4	1455.3	1453.7	1451.7	1447.6	1442.9	1446.0	1446.5
37.5°	1559.2	1556.6	1559.7	1563.8	1558.1	1555.1	1546.8	1540.7	1537.6	1539.1	1541.2
40°	1667.7	1668.2	1676.9	1678.0	1671.8	1668.2	1660.0	1650.7	1642.0	1642.0	1644.5
42.5°	1781.8	1783.4	1793.7	1797.3	1795.2	1788.5	1777.2	1765.9	1754.6	1756.6	1759.7
45°	1910.9	1908.8	1919.6	1928.4	1926.8	1924.8	1914.0	1893.4	1883.1	1882.6	1887.8
47.5°	2046.7	2050.8	2062.1	2077.0	2076.5	2071.3	2057.5	2038.4	2019.4	2021.0	2027.1
50°	2205.0	2210.7	2229.7	2244.6	2246.7	2245.2	2228.7	2206.6	2179.8	2181.4	2189.6
52.5°	2347.0	2355.2	2377.3	2408.2	2427.2	2435.9	2425.1	2404.6	2377.3	2378.9	2387.6
55°	2475.5	2488.4	2521.3	2563.5	2601.5	2637.0	2652.9	2652.4	2632.4	2637.0	2648.3
57.5°	2556.3	2574.3	2624.2	2692.0	2767.6	2839.1	2900.8	2958.9	2971.8	2995.9	2995.9
60°	2447.8	2489.9	2556.3	2672.5	2821.1	2981.5	3155.4	3324.5	3433.6	3519.4	3473.2
62.5°	2044.1	2106.3	2199.4	2352.6	2584.0	2870.5	3219.6	3613.0	4023.4	4274.3	4090.2
65°	1322.6	1400.8	1502.1	1674.4	1965.9	2334.6	2843.2	3550.3	4409.1	4854.4	4443.0
67.5°	524.0	577.0	638.7	761.1	1014.1	1376.1	1946.9	2819.0	3893.3	4313.4	3852.1
70°	250.4	259.2	271.0	297.2	360.5	486.5	782.2	1389.0	2387.6	2830.4	2330.5
72.5°	181.0	182.6	188.2	197.0	215.5	241.2	293.1	424.8	823.3	1197.1	824.3
75°	137.3	139.4	142.4	147.1	156.8	169.2	188.7	226.3	281.8	325.0	281.3
77.5°	104.4	106.4	109.0	113.6	118.8	127.5	134.7	149.6	173.3	182.6	181.5
80°	76.1	79.7	83.8	87.9	91.5	95.6	96.2	103.4	116.7	125.5	122.9
82.5°	48.3	51.4	62.2	66.9	67.4	68.4	67.9	68.4	75.6	81.8	79.7
85°	30.9	32.9	38.6	43.7	42.7	44.7	44.7	43.7	40.6	35.0	41.7
87.5°	15.4	15.9	18.5	23.1	22.1	19.5	19.0	19.0	13.9	11.8	12.9
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	939.0	939.0	939.0	939.0	939.0	939.0	939.0	939.0
2.5°	936.4	937.5	935.9	935.9	935.4	936.4	934.9	934.9
5°	943.6	945.2	944.7	944.7	945.7	946.7	946.2	945.7
7.5°	956.5	957.5	958.5	959.1	960.1	959.6	960.6	960.1
10°	976.0	975.0	976.5	975.0	975.5	974.5	975.0	975.0
12.5°	1000.7	999.2	998.1	997.1	997.1	995.0	995.0	995.6
15°	1029.0	1026.4	1024.4	1023.3	1022.3	1022.3	1020.8	1021.8
17.5°	1056.8	1054.2	1050.6	1050.6	1049.0	1048.0	1047.0	1049.6
20°	1086.1	1083.5	1081.4	1080.9	1077.8	1076.8	1077.3	1080.4
22.5°	1120.0	1118.5	1118.5	1117.4	1115.4	1113.8	1113.8	1117.4
25°	1165.8	1162.7	1163.2	1163.7	1162.7	1162.7	1161.7	1164.2
27.5°	1221.8	1219.3	1220.8	1221.8	1220.8	1222.3	1220.8	1222.9
30°	1287.6	1286.1	1287.6	1289.2	1286.6	1286.6	1285.6	1287.1
32.5°	1366.3	1364.3	1365.3	1365.3	1361.7	1358.6	1354.5	1357.6
35°	1452.7	1450.1	1452.2	1453.7	1449.6	1446.5	1440.4	1442.9
37.5°	1547.9	1548.9	1551.5	1558.1	1557.1	1552.0	1547.3	1549.4
40°	1654.3	1659.4	1670.8	1675.4	1674.4	1669.2	1663.0	1664.1
42.5°	1774.6	1781.3	1793.1	1800.9	1797.3	1790.1	1782.3	1785.4
45°	1905.8	1916.0	1931.5	1939.2	1934.6	1926.8	1916.0	1921.7
47.5°	2044.6	2065.2	2085.7	2096.0	2094.5	2083.7	2069.8	2071.3
50°	2210.7	2238.0	2264.2	2274.5	2266.8	2250.3	2230.8	2230.2
52.5°	2417.4	2446.7	2468.3	2465.8	2446.7	2421.0	2398.9	2397.9
55°	2675.6	2685.3	2682.3	2660.1	2626.7	2586.6	2558.3	2553.7
57.5°	2987.7	2954.8	2906.5	2839.6	2764.5	2688.4	2637.0	2618.0
60°	3369.3	3220.7	3047.9	2865.8	2699.7	2575.3	2496.6	2448.8
62.5°	3684.5	3254.1	2867.9	2551.6	2293.0	2139.2	2031.7	1965.4
65°	3576.5	2811.3	2251.8	1844.1	1561.7	1402.8	1289.2	1213.6
67.5°	2763.0	1878.5	1307.2	906.1	687.0	581.6	508.1	460.2
70°	1393.1	720.4	436.6	308.0	263.3	244.8	232.4	225.2
72.5°	408.8	273.1	226.8	200.6	184.6	173.3	166.1	162.5
75°	226.3	184.6	163.0	148.1	137.8	130.1	125.5	122.4
77.5°	155.8	134.2	123.4	113.6	105.4	99.8	96.2	93.1
80°	109.0	98.2	93.6	88.4	82.3	77.6	72.5	70.5
82.5°	72.5	67.9	66.9	62.7	59.1	54.0	44.7	41.7
85°	42.7	42.2	42.2	40.6	38.1	33.4	26.7	26.7
87.5°	14.9	15.4	15.9	17.0	16.5	13.9	11.3	10.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)