

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: P195963

Luminaire Tested: **NAV-AF-03-D-UNV-5WQ-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195963  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-5WQ-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12702 lumens  
Efficiency: N/A  
Efficacy: 132.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B4 - U0 - G2

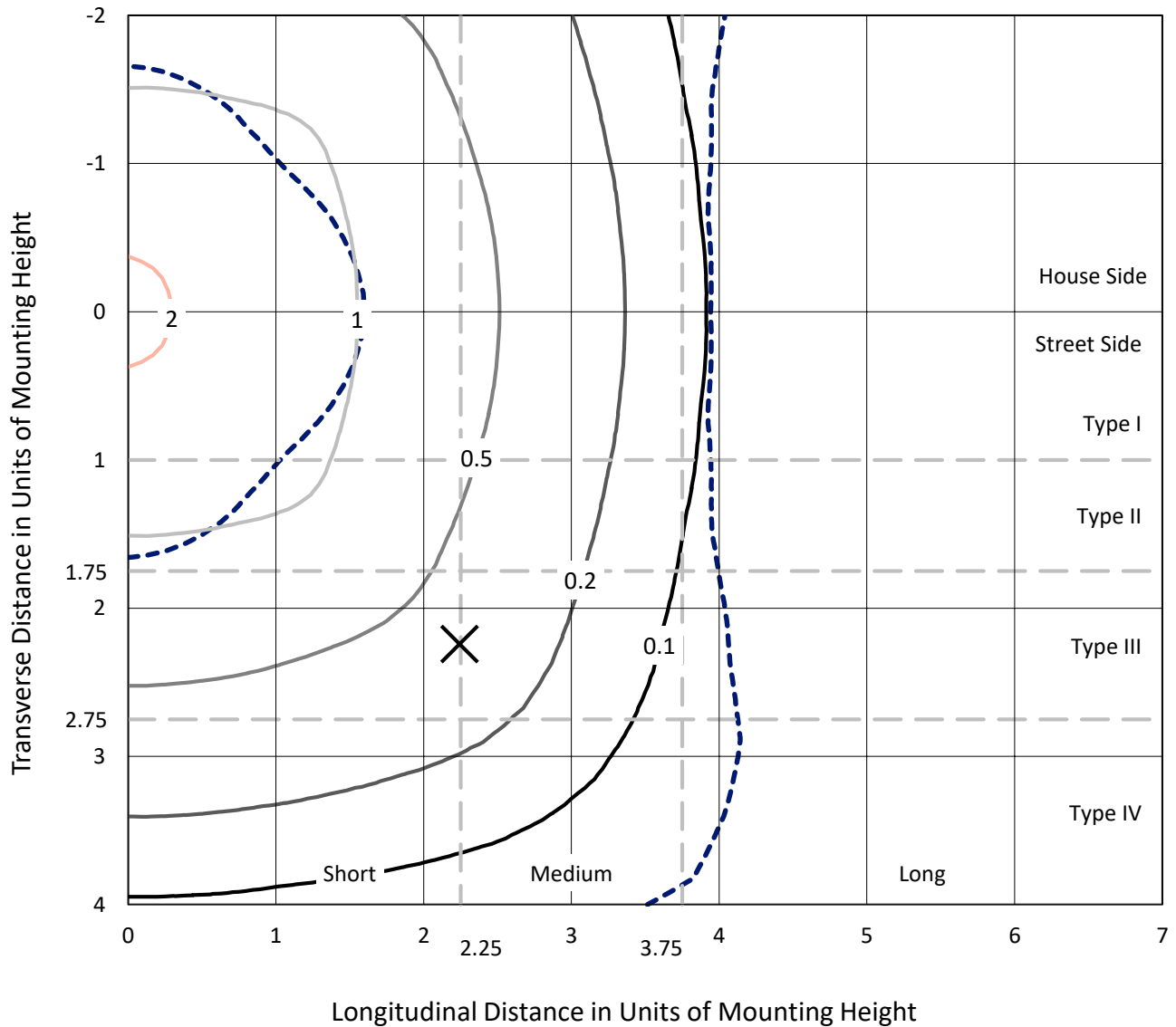
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

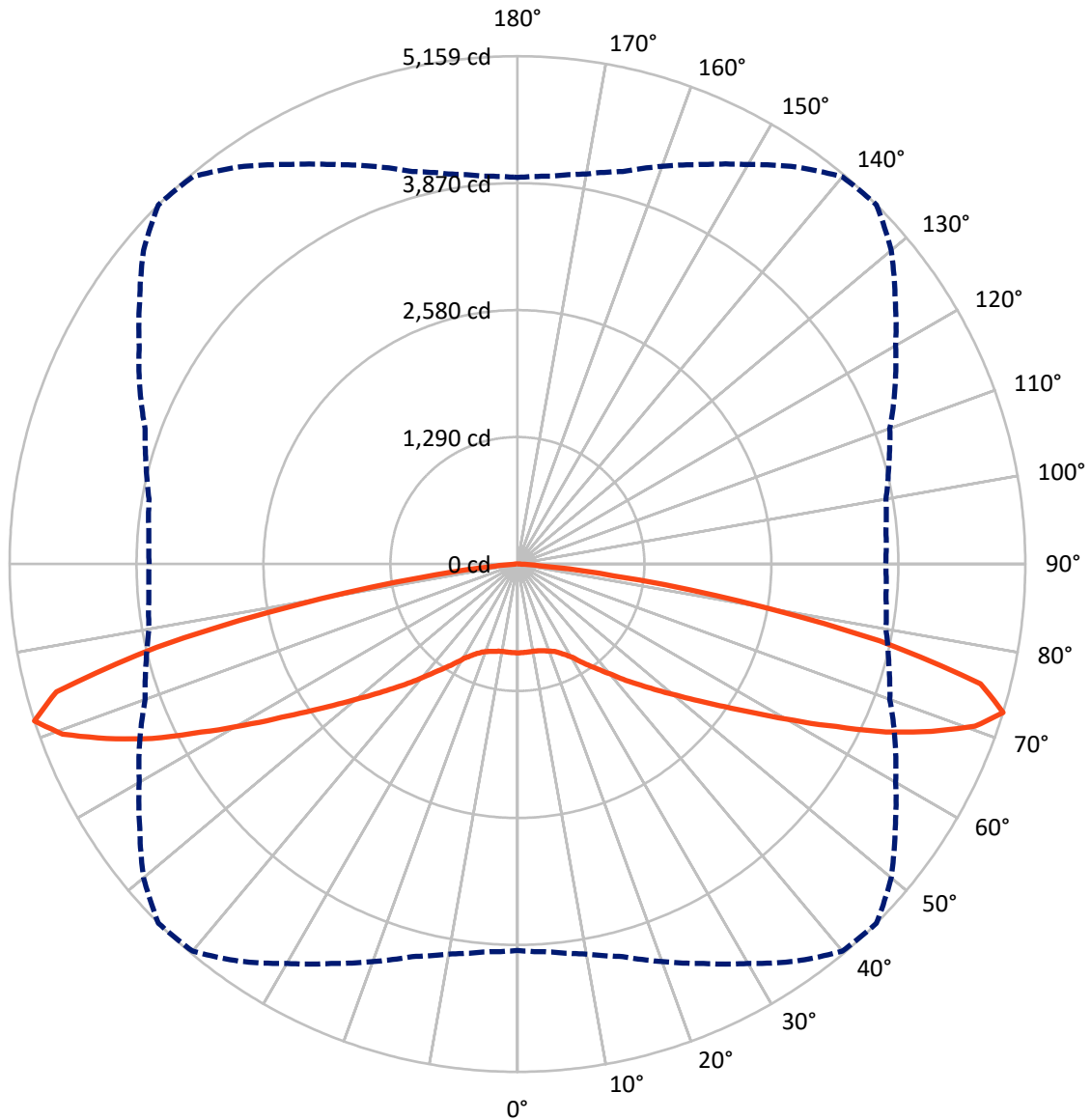
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.3 fc  
 Type V - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6351.0	0.0	6351.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	6351.0	0.0	6351.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	12702.0	0.0	12702.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.2	0.7
10°-20°	260.8	2.1
20°-30°	470.9	3.7
30°-40°	803.3	6.3
40°-50°	1367.5	10.8
50°-60°	2200.9	17.3
60°-70°	3660.1	28.8
70°-80°	3540.7	27.9
80°-90°	311.6	2.5
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°	12702.0	100.0
0°-180°	12702.0	100.0



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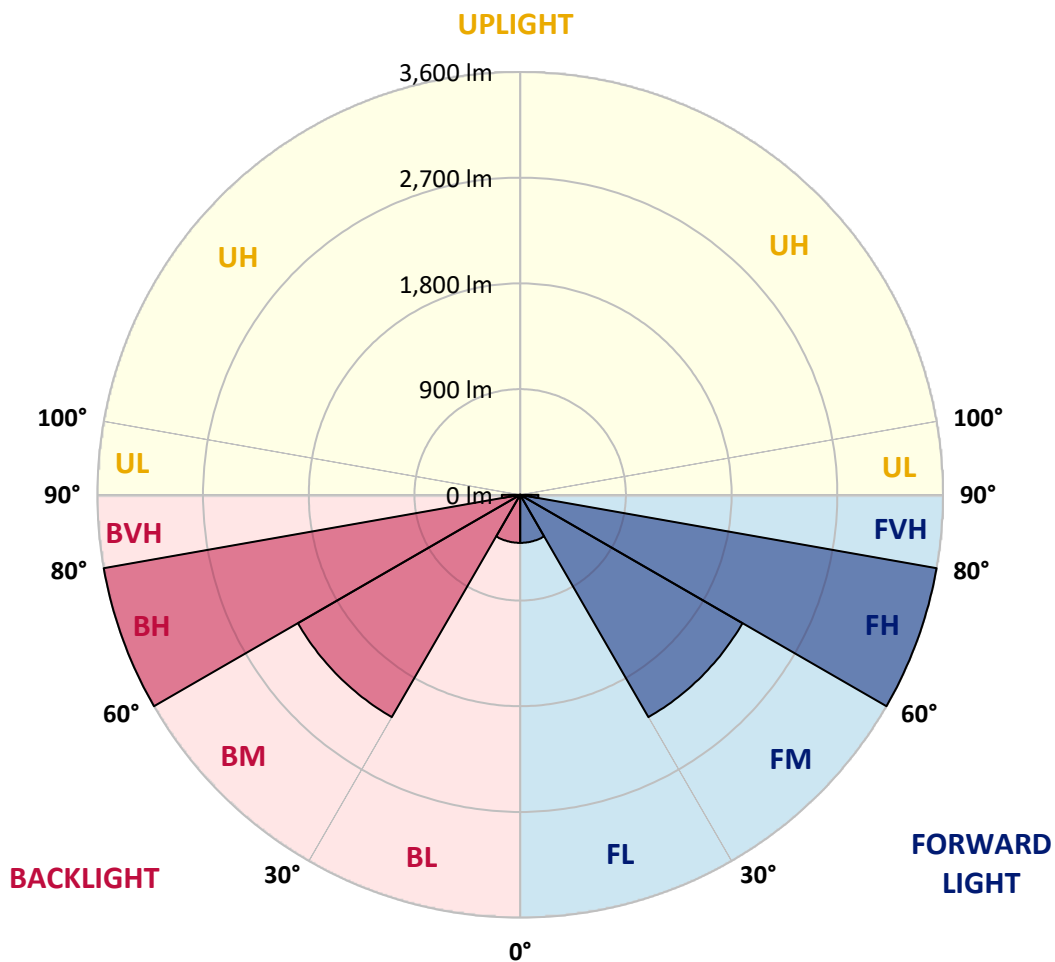
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	409.0	3.2			
FM	(30°-60°)	2185.8	17.2			
FH	(60°-80°)	3600.4	28.3			G2/5000
FVH	(80°-90°)	155.8	1.2			G2/225
BL	(0°-30°)	409.0	3.2	B1/500		
BM	(30°-60°)	2185.8	17.2	B2/2500		
BH	(60°-80°)	3600.4	28.3	B4/5000		G2/5000
BVH	(80°-90°)	155.8	1.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	903.1	903.1	903.1	903.1	903.1	903.1	903.1	903.1	903.1	903.1	903.1
2.5°	910.0	910.0	910.8	910.0	908.5	907.7	905.3	903.8	902.2	901.4	899.9
5°	910.8	910.8	911.7	910.8	909.3	907.7	906.1	903.8	902.2	900.7	899.9
7.5°	914.0	914.7	915.5	914.7	911.7	910.0	907.7	905.3	902.2	900.7	899.1
10°	920.2	920.2	920.2	919.4	917.1	914.0	910.8	908.5	904.6	900.7	898.4
12.5°	925.0	925.7	925.7	924.1	921.0	917.1	914.0	911.7	908.5	905.3	903.1
15°	931.9	931.9	931.2	928.0	923.3	920.2	918.6	917.9	917.1	915.5	913.2
17.5°	946.0	945.2	942.9	938.1	932.7	930.4	928.8	928.8	928.8	928.0	926.5
20°	966.4	966.4	963.2	955.4	950.7	948.4	946.0	946.0	946.0	943.7	941.3
22.5°	999.2	999.9	995.2	985.9	979.7	975.0	971.8	969.5	967.1	965.6	961.7
25°	1043.7	1043.0	1037.5	1025.7	1021.1	1016.4	1010.2	1006.2	1003.1	1000.8	996.0
27.5°	1090.7	1089.9	1083.6	1073.5	1070.3	1063.3	1058.5	1053.1	1049.2	1045.4	1040.6
30°	1150.8	1146.9	1142.2	1134.5	1132.9	1127.4	1121.2	1113.3	1107.0	1100.8	1095.4
32.5°	1204.8	1204.8	1197.8	1193.9	1197.0	1194.6	1195.4	1190.7	1186.8	1184.5	1179.1
35°	1279.8	1279.8	1276.7	1272.0	1272.9	1267.3	1266.6	1267.3	1270.5	1270.5	1264.3
37.5°	1380.0	1381.5	1371.4	1369.7	1365.8	1358.1	1354.2	1355.7	1362.8	1366.7	1358.1
40°	1504.2	1507.4	1504.2	1494.1	1489.4	1476.1	1468.2	1468.2	1473.8	1477.7	1474.6
42.5°	1627.0	1632.4	1627.0	1619.1	1615.2	1605.1	1601.2	1604.3	1611.4	1616.1	1611.4
45°	1763.8	1767.8	1760.7	1751.3	1746.6	1741.2	1738.8	1741.2	1748.9	1753.6	1752.1
47.5°	1898.3	1903.7	1895.1	1891.2	1891.2	1885.8	1892.0	1898.3	1905.3	1916.3	1911.6
50°	2029.6	2036.7	2031.2	2032.0	2038.2	2048.4	2060.1	2072.6	2085.2	2096.8	2098.5
52.5°	2146.9	2157.8	2158.6	2172.7	2192.3	2207.9	2240.8	2268.1	2297.8	2308.0	2303.3
55°	2270.4	2285.3	2304.8	2326.7	2358.0	2390.0	2445.6	2494.9	2534.0	2558.2	2554.2
57.5°	2447.1	2462.0	2482.3	2518.3	2565.2	2608.9	2684.8	2761.5	2820.9	2857.6	2839.6
60°	2676.2	2691.9	2718.4	2756.8	2817.7	2877.2	2981.1	3091.4	3183.6	3225.9	3193.0
62.5°	2979.5	2994.4	3011.6	3062.4	3130.4	3207.1	3337.7	3479.2	3596.4	3637.1	3591.0
65°	3412.0	3429.9	3435.4	3476.8	3543.3	3614.4	3755.2	3914.6	4048.3	4114.8	4022.5
67.5°	3899.0	3906.0	3927.9	3976.4	4044.4	4108.5	4219.6	4370.5	4498.6	4535.4	4436.8
70°	4184.4	4198.4	4236.8	4304.0	4385.3	4486.2	4607.4	4769.9	4915.4	4932.6	4807.5
72.5°	3926.4	3955.2	4023.3	4128.1	4298.5	4477.6	4686.3	4926.3	5135.1	5159.4	4958.3
75°	3149.3	3182.1	3263.3	3378.3	3580.0	3845.8	4147.7	4508.0	4820.8	4860.7	4594.8
77.5°	1678.6	1719.3	1837.3	1992.1	2279.9	2631.6	2995.2	3406.4	3672.3	3762.2	3570.6
80°	423.0	444.9	502.0	592.6	787.3	1071.1	1384.7	1827.1	2157.1	2297.0	2157.1
82.5°	164.2	180.7	196.2	207.1	226.0	265.0	365.9	596.6	803.7	989.8	856.9
85°	63.3	67.2	97.0	110.3	110.3	121.2	139.1	164.2	203.3	222.1	186.1
87.5°	25.1	27.4	33.7	51.6	53.2	47.0	50.0	56.3	43.0	36.0	40.6
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°	903.1	903.1	903.1	903.1	903.1	903.1	903.1	903.1
2.5°	899.1	898.4	896.7	897.5	896.7	896.7	896.7	896.7
5°	898.4	898.4	896.7	896.7	896.7	897.5	896.7	896.7
7.5°	897.5	896.7	895.2	894.4	894.4	893.6	893.6	893.6
10°	896.0	894.4	892.8	892.1	892.1	890.5	890.5	890.5
12.5°	899.9	897.5	896.0	895.2	895.2	895.2	896.0	896.0
15°	910.8	906.1	903.8	903.1	903.8	905.3	906.1	906.9
17.5°	922.6	917.9	914.0	912.4	913.2	915.5	917.9	919.4
20°	937.4	933.5	928.8	927.2	927.2	930.4	931.9	934.3
22.5°	958.5	955.4	951.4	949.1	947.6	951.4	953.8	955.4
25°	992.2	989.0	985.9	983.6	982.7	986.6	988.3	989.0
27.5°	1036.7	1033.6	1032.1	1031.2	1028.9	1030.4	1032.8	1032.1
30°	1094.6	1096.9	1094.6	1094.6	1090.7	1092.2	1090.7	1089.1
32.5°	1172.0	1169.6	1162.6	1157.9	1152.5	1152.5	1150.1	1147.8
35°	1249.3	1241.6	1237.7	1240.0	1237.7	1239.2	1235.3	1231.4
37.5°	1340.9	1336.2	1335.4	1342.4	1340.9	1342.4	1342.4	1336.9
40°	1462.0	1458.9	1464.4	1476.1	1480.8	1480.0	1481.5	1474.6
42.5°	1601.2	1595.7	1598.1	1608.2	1613.7	1615.2	1614.5	1608.2
45°	1740.3	1741.9	1741.9	1752.8	1758.4	1761.4	1756.0	1753.6
47.5°	1897.5	1899.8	1894.4	1901.5	1903.0	1908.4	1903.7	1899.8
50°	2078.8	2070.2	2057.8	2060.1	2060.1	2058.6	2053.1	2048.4
52.5°	2281.4	2261.8	2238.4	2230.5	2222.0	2213.4	2202.4	2193.8
55°	2512.1	2478.4	2436.2	2416.6	2400.3	2380.7	2355.7	2347.1
57.5°	2779.5	2721.6	2665.3	2630.1	2587.9	2562.1	2530.0	2528.4
60°	3096.9	3018.6	2919.4	2867.0	2824.8	2794.3	2770.0	2760.6
62.5°	3463.5	3329.0	3221.9	3165.6	3116.4	3097.6	3067.1	3071.0
65°	3839.5	3702.8	3598.7	3553.4	3507.3	3494.8	3466.7	3476.8
67.5°	4246.9	4134.4	4020.2	3977.9	3935.7	3923.2	3894.3	3902.9
70°	4612.0	4469.0	4339.2	4256.3	4184.4	4126.5	4089.8	4074.9
72.5°	4684.7	4436.8	4232.9	4025.6	3906.0	3801.3	3758.2	3741.9
75°	4209.3	3824.7	3533.9	3290.7	3156.2	3003.8	2987.4	2964.7
77.5°	3274.3	2836.4	2484.6	2171.9	1991.3	1805.2	1741.2	1692.7
80°	1953.0	1501.1	1163.4	815.5	665.3	535.5	503.5	469.8
82.5°	699.0	448.0	301.8	235.4	210.3	193.8	181.4	165.0
85°	168.9	142.3	134.5	121.9	120.4	102.4	72.7	64.9
87.5°	53.9	49.3	50.0	47.7	50.0	37.5	30.5	27.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)