

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: P194978

Luminaire Tested: **NAV-AF-02-D-UNV-5NQ-7060-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P194978  
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-7060-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8250 lumens  
Efficiency: N/A  
Efficacy: 125.0 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

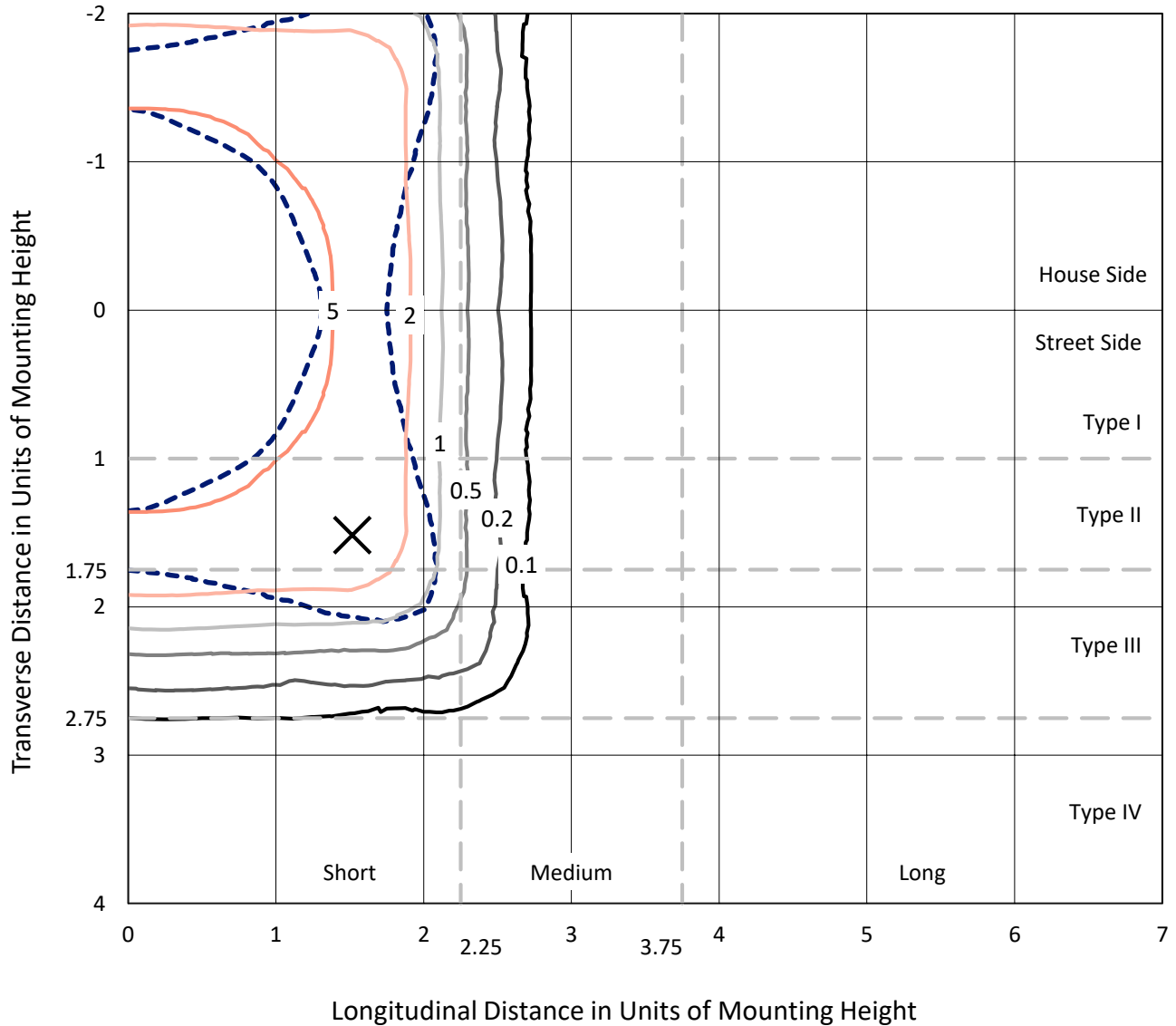
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

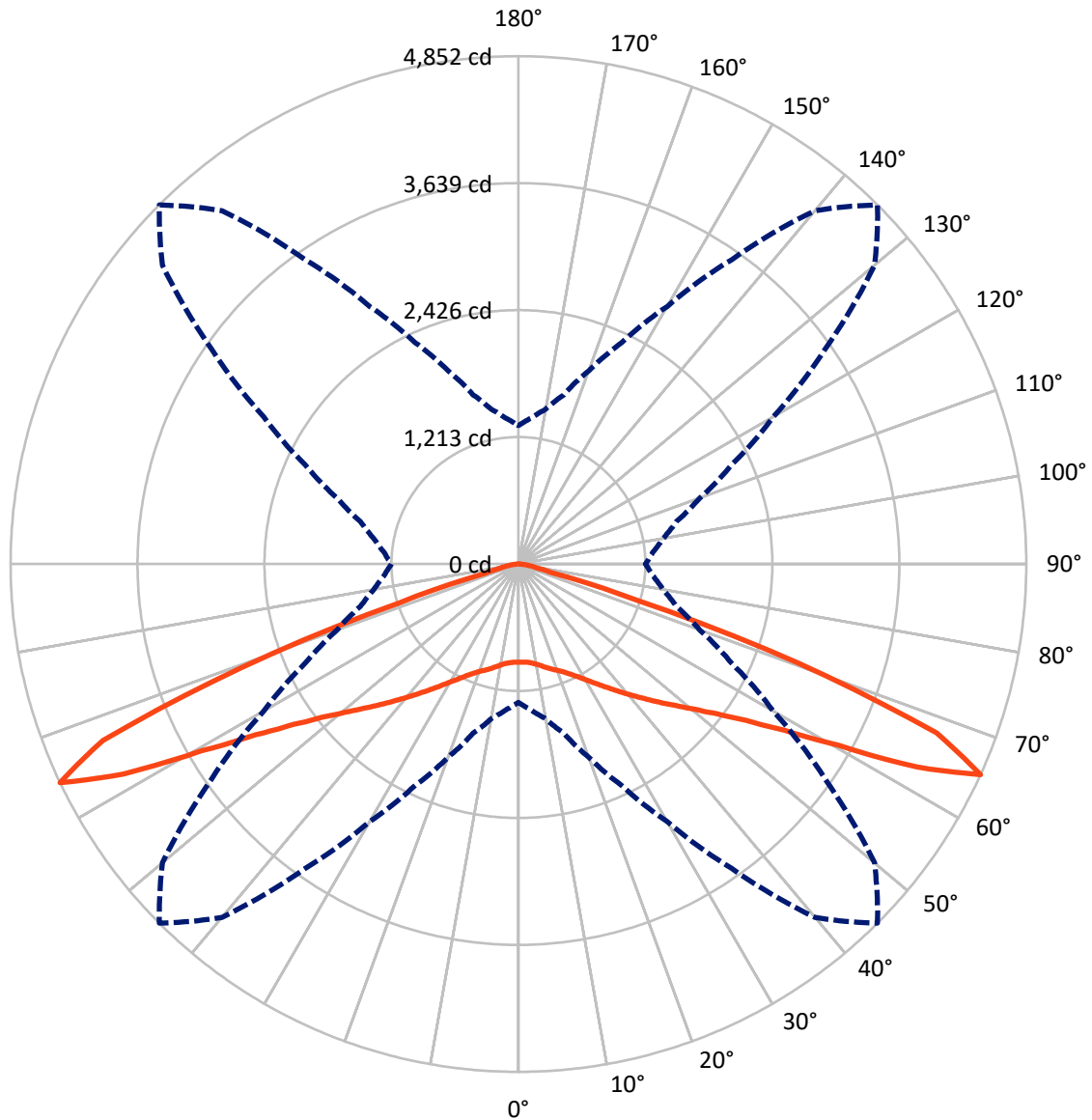
× Max cd  
 - - - 1/2 Max cd



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
<b>House Side</b>	Lumens	4125.0	0.0	4125.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	4125.0	0.0	4125.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	8250.0	0.0	8250.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.4	1.1
10°-20°	292.9	3.6
20°-30°	546.4	6.6
30°-40°	921.3	11.2
40°-50°	1496.4	18.1
50°-60°	2344.7	28.4
60°-70°	2213.2	26.8
70°-80°	298.3	3.6
80°-90°	45.4	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°	8250.0	100.0
0°-180°	8250.0	100.0



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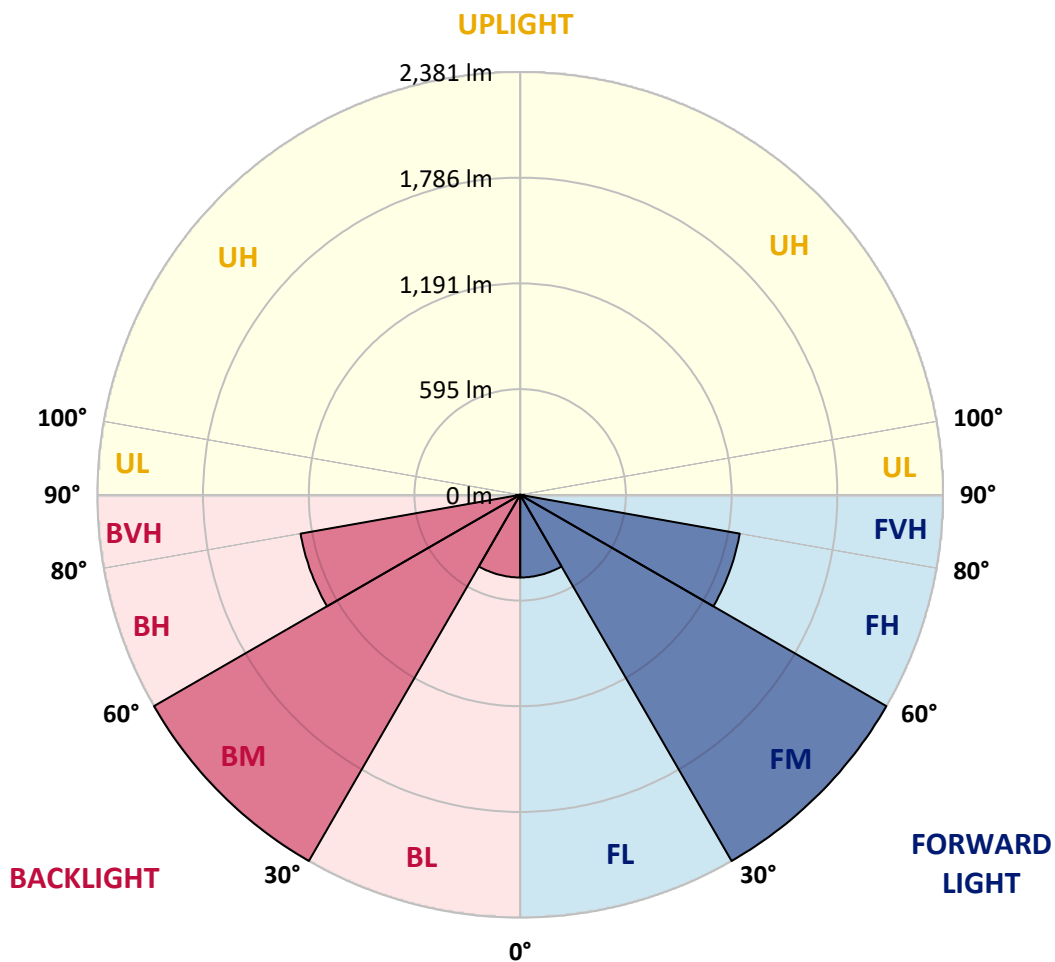
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	465.3	5.6			
FM	(30°-60°)	2381.2	28.9			
FH	(60°-80°)	1255.8	15.2			G1/1800
FVH	(80°-90°)	22.7	0.3			G1/100
BL	(0°-30°)	465.3	5.6	B1/500		
BM	(30°-60°)	2381.2	28.9	B2/2500		
BH	(60°-80°)	1255.8	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°	938.4	938.4	938.4	938.4	938.4	938.4	938.4	938.4	938.4	938.4	938.4
2.5°	946.1	946.1	947.7	947.2	945.1	943.6	942.0	940.0	938.9	937.9	937.4
5°	951.3	951.3	952.8	952.3	950.8	948.7	947.7	946.1	944.6	943.6	944.1
7.5°	964.1	964.6	965.2	964.6	963.1	961.6	959.5	959.0	956.9	955.4	956.4
10°	983.7	983.7	984.2	984.7	983.7	980.1	980.1	979.0	977.0	974.9	975.4
12.5°	1005.2	1005.2	1005.8	1005.8	1005.8	1003.7	1004.2	1003.7	1001.1	1000.1	1001.1
15°	1026.3	1026.8	1026.8	1027.9	1027.9	1028.4	1030.4	1030.4	1029.4	1028.9	1028.9
17.5°	1051.0	1052.0	1052.5	1054.1	1054.6	1055.6	1057.7	1058.2	1058.7	1057.1	1057.7
20°	1083.9	1084.4	1085.9	1086.4	1088.5	1088.5	1089.5	1089.0	1088.0	1085.9	1085.9
22.5°	1120.9	1121.9	1125.0	1125.0	1127.6	1126.0	1126.5	1125.0	1122.4	1121.4	1120.4
25°	1169.2	1170.7	1173.3	1172.3	1173.3	1170.7	1170.7	1170.7	1169.2	1167.6	1167.1
27.5°	1230.3	1227.8	1230.3	1228.3	1227.8	1225.7	1226.2	1225.2	1223.7	1223.1	1221.1
30°	1294.1	1291.0	1292.5	1293.0	1292.0	1291.5	1289.4	1287.9	1285.3	1285.8	1284.3
32.5°	1367.0	1364.0	1365.5	1366.0	1365.0	1366.0	1365.5	1361.9	1358.8	1360.9	1360.9
35°	1453.9	1451.8	1456.0	1457.5	1454.4	1452.9	1450.8	1446.7	1442.1	1445.2	1445.7
37.5°	1558.2	1555.7	1558.7	1562.8	1557.2	1554.1	1545.9	1539.7	1536.6	1538.2	1540.2
40°	1666.7	1667.2	1675.9	1676.9	1670.8	1667.2	1659.0	1649.7	1641.0	1641.0	1643.5
42.5°	1780.8	1782.3	1792.6	1796.2	1794.1	1787.4	1776.1	1764.8	1753.5	1755.6	1758.7
45°	1909.7	1907.7	1918.5	1927.2	1925.7	1923.6	1912.8	1892.3	1882.0	1881.5	1886.6
47.5°	2045.4	2049.5	2060.8	2075.7	2075.2	2070.1	2056.2	2037.2	2018.2	2019.7	2025.9
50°	2203.7	2209.4	2228.4	2243.3	2245.3	2243.8	2227.4	2205.3	2178.5	2180.1	2188.3
52.5°	2345.6	2353.8	2375.9	2406.7	2425.7	2434.5	2423.7	2403.1	2375.9	2377.4	2386.2
55°	2474.0	2486.9	2519.8	2561.9	2599.9	2635.4	2651.3	2650.8	2630.8	2635.4	2646.7
57.5°	2554.7	2572.7	2622.6	2690.4	2765.9	2837.4	2899.1	2957.1	2970.0	2994.1	2994.1
60°	2446.3	2488.4	2554.7	2670.9	2819.4	2979.7	3153.4	3322.5	3431.5	3517.3	3471.1
62.5°	2042.9	2105.0	2198.1	2351.2	2582.5	2868.7	3217.7	3610.8	4021.0	4271.7	4087.8
65°	1321.8	1399.9	1501.2	1673.3	1964.7	2333.2	2841.5	3548.1	4406.4	4851.5	4440.3
67.5°	523.7	576.6	638.3	760.6	1013.5	1375.3	1945.7	2817.3	3890.9	4310.8	3849.8
70°	250.3	259.0	270.8	297.0	360.3	486.2	781.7	1388.1	2386.2	2828.6	2329.1
72.5°	180.9	182.4	188.1	196.8	215.3	241.0	292.9	424.5	822.8	1196.4	823.8
75°	137.2	139.3	142.4	147.0	156.7	169.1	188.6	226.1	281.6	324.8	281.1
77.5°	104.3	106.4	109.0	113.6	118.7	127.5	134.6	149.6	173.2	182.4	181.4
80°	76.1	79.7	83.8	87.9	91.5	95.6	96.1	103.3	116.7	125.4	122.8
82.5°	48.3	51.4	62.2	66.8	67.3	68.4	67.8	68.4	75.5	81.7	79.7
85°	30.8	32.9	38.5	43.7	42.7	44.7	44.7	43.7	40.6	34.9	41.6
87.5°	15.4	15.9	18.5	23.1	22.1	19.5	19.0	19.0	13.9	11.8	12.8
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°	938.4	938.4	938.4	938.4	938.4	938.4	938.4	938.4
2.5°	935.9	936.9	935.3	935.3	934.8	935.9	934.3	934.3
5°	943.1	944.6	944.1	944.1	945.1	946.1	945.6	945.1
7.5°	955.9	956.9	958.0	958.5	959.5	959.0	960.0	959.5
10°	975.4	974.4	975.9	974.4	974.9	973.9	974.4	974.4
12.5°	1000.1	998.6	997.5	996.5	996.5	994.4	994.4	995.0
15°	1028.4	1025.8	1023.7	1022.7	1021.7	1021.7	1020.1	1021.2
17.5°	1056.1	1053.5	1049.9	1049.9	1048.4	1047.4	1046.4	1048.9
20°	1085.4	1082.8	1080.8	1080.3	1077.2	1076.2	1076.7	1079.8
22.5°	1119.3	1117.8	1117.8	1116.8	1114.7	1113.2	1113.2	1116.8
25°	1165.1	1162.0	1162.5	1163.0	1162.0	1162.0	1161.0	1163.5
27.5°	1221.1	1218.5	1220.1	1221.1	1220.1	1221.6	1220.1	1222.1
30°	1286.9	1285.3	1286.9	1288.4	1285.8	1285.8	1284.8	1286.4
32.5°	1365.5	1363.4	1364.5	1364.5	1360.9	1357.8	1353.7	1356.8
35°	1451.8	1449.3	1451.3	1452.9	1448.8	1445.7	1439.5	1442.1
37.5°	1546.9	1547.9	1550.5	1557.2	1556.2	1551.0	1546.4	1548.5
40°	1653.3	1658.4	1669.7	1674.4	1673.3	1668.2	1662.0	1663.1
42.5°	1773.6	1780.2	1792.1	1799.8	1796.2	1789.0	1781.3	1784.3
45°	1904.6	1914.9	1930.3	1938.0	1933.4	1925.7	1914.9	1920.5
47.5°	2043.4	2063.9	2084.5	2094.8	2093.2	2082.4	2068.5	2070.1
50°	2209.4	2236.6	2262.8	2273.1	2265.4	2248.9	2229.4	2228.9
52.5°	2416.0	2445.3	2466.8	2464.3	2445.3	2419.6	2397.5	2396.4
55°	2674.0	2683.7	2680.6	2658.5	2625.1	2585.0	2556.8	2552.2
57.5°	2985.9	2953.0	2904.7	2837.9	2762.9	2686.8	2635.4	2616.4
60°	3367.2	3218.7	3046.0	2864.1	2698.1	2573.7	2495.1	2447.3
62.5°	3682.3	3252.1	2866.2	2550.1	2291.6	2137.9	2030.5	1964.2
65°	3574.4	2809.6	2250.5	1842.9	1560.8	1402.0	1288.4	1212.9
67.5°	2761.3	1877.4	1306.4	905.5	686.6	581.2	507.8	460.0
70°	1392.2	720.0	436.3	307.8	263.1	244.6	232.3	225.1
72.5°	408.6	272.9	226.6	200.4	184.5	173.2	166.0	162.4
75°	226.1	184.5	162.9	148.0	137.7	130.0	125.4	122.3
77.5°	155.7	134.1	123.3	113.6	105.4	99.7	96.1	93.0
80°	109.0	98.2	93.5	88.4	82.2	77.6	72.5	70.4
82.5°	72.5	67.8	66.8	62.7	59.1	54.0	44.7	41.6
85°	42.7	42.1	42.1	40.6	38.0	33.4	26.7	26.7
87.5°	14.9	15.4	15.9	17.0	16.4	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)