

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: P196996

Luminaire Tested: **NAV-AF-04-D-UNV-RW-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196996  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-RW-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13404 lumens  
Efficiency: N/A  
Efficacy: 103.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G3

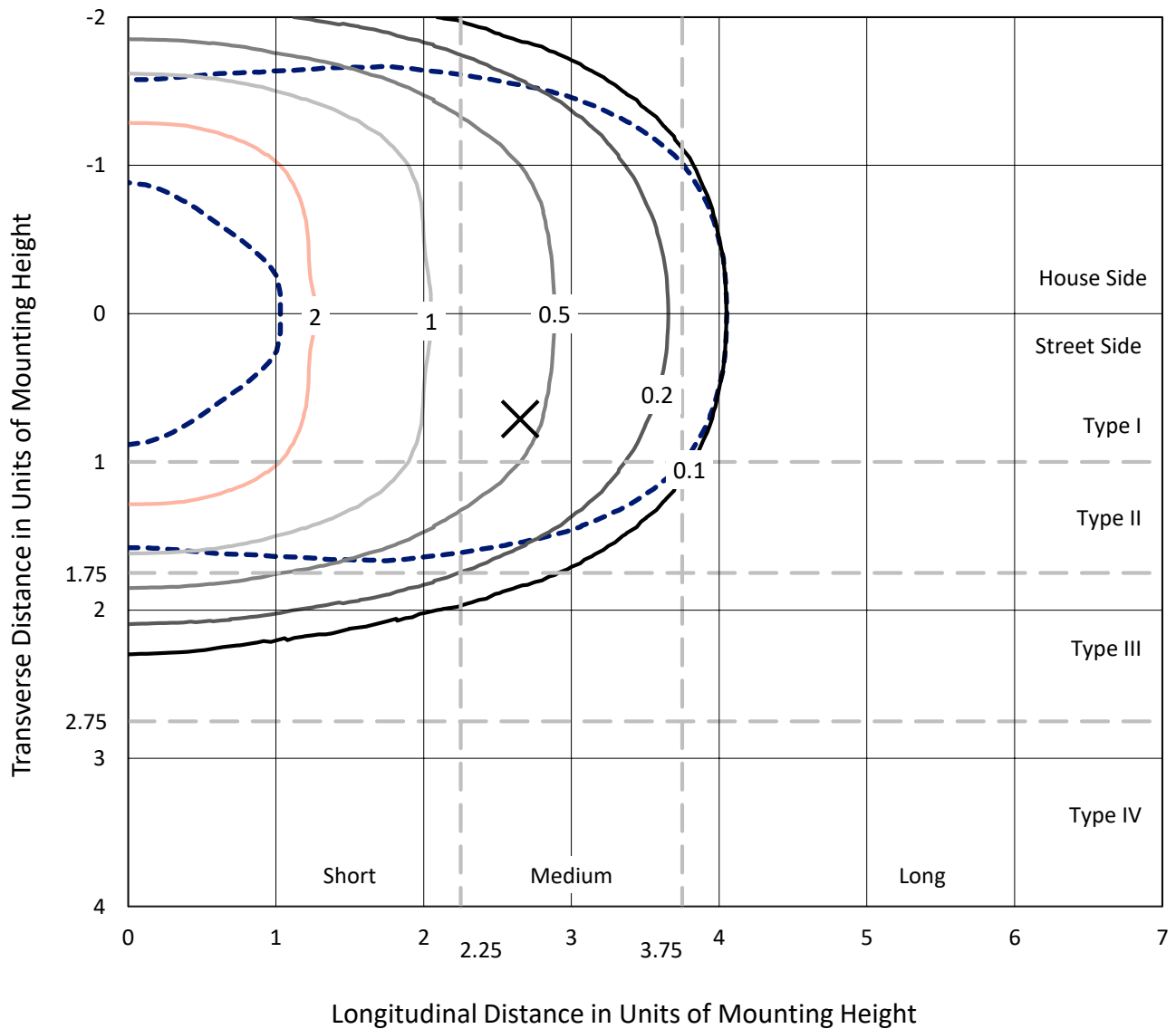
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196996  
 CATALOG NUMBER: NAV-AF-04-D-UNV-RW-8030-600

### Iso-Footcandle Lines of Horizontal Illumination

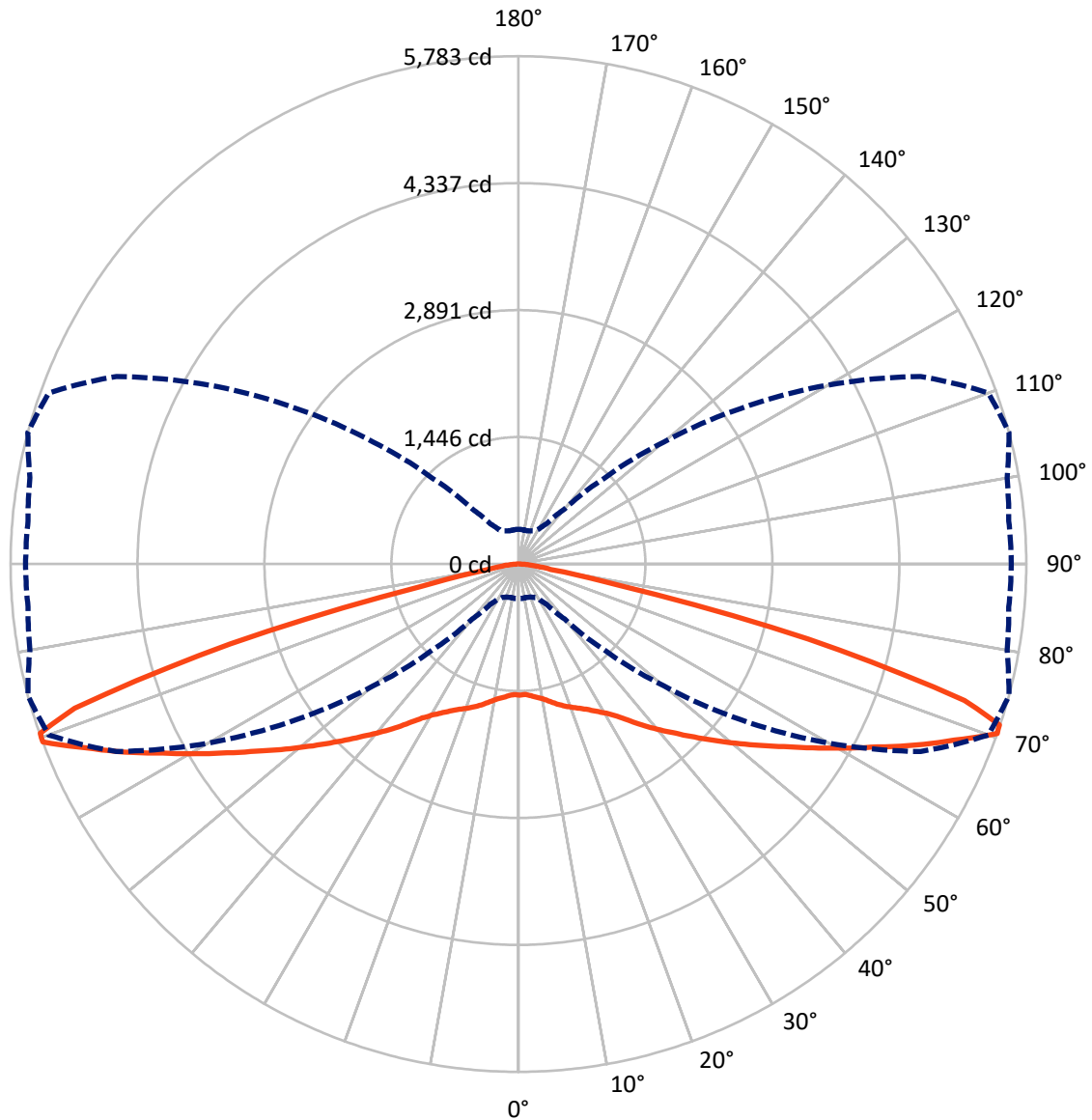
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.8 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P196996  
CATALOG NUMBER: NAV-AF-04-D-UNV-RW-8030-600

### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P196996

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-8030-600

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6702.0	0.0	6702.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	6702.0	0.0	6702.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	13404.0	0.0	13404.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.2	1.1
10°-20°	444.0	3.3
20°-30°	834.0	6.2
30°-40°	1469.0	11.0
40°-50°	2434.7	18.2
50°-60°	3387.0	25.3
60°-70°	3197.4	23.9
70°-80°	1365.6	10.2
80°-90°	129.0	1.0
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°	13404.0	100.0
0°-180°	13404.0	100.0



REPORT NUMBER: P196996

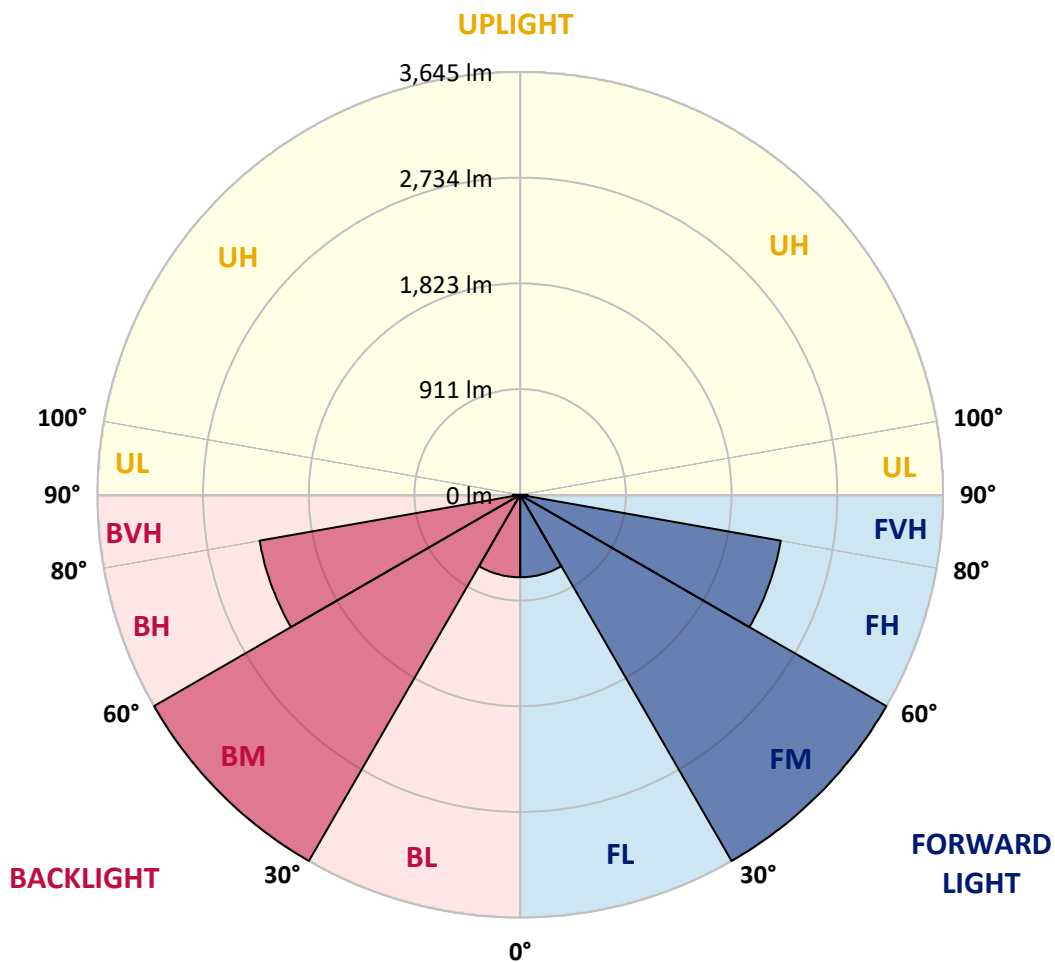
CATALOG NUMBER: NAV-AF-04-D-UNV-RW-8030-600

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	710.6	5.3			
FM	(30°-60°)	3645.4	27.2			
FH	(60°-80°)	2281.5	17.0			G2/5000
FVH	(80°-90°)	64.5	0.5			G1/100
BL	(0°-30°)	710.6	5.3	B2/1000		
BM	(30°-60°)	3645.4	27.2	B3/5000		
BH	(60°-80°)	2281.5	17.0	B3/2500		G3/2500
BVH	(80°-90°)	64.5	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





REPORT NUMBER: P196996

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-8030-600

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1492.7	1492.7	1492.7	1492.7	1492.7	1492.7	1492.7	1492.7	1492.7	1492.7	1492.7
2.5°	1501.9	1501.1	1501.9	1499.4	1500.2	1499.4	1499.4	1496.0	1496.0	1494.3	1491.8
5°	1485.1	1486.8	1486.8	1486.8	1489.3	1489.3	1492.7	1493.5	1496.0	1498.5	1500.2
7.5°	1457.4	1458.2	1460.7	1462.4	1467.5	1474.2	1480.9	1488.5	1495.2	1503.6	1512.8
10°	1433.9	1435.5	1439.7	1443.9	1453.2	1461.6	1473.3	1485.1	1496.9	1511.1	1525.4
12.5°	1421.3	1423.8	1430.5	1437.2	1451.5	1462.4	1478.4	1496.9	1512.8	1526.3	1542.2
15°	1422.9	1423.8	1433.0	1442.3	1462.4	1477.5	1500.2	1522.1	1541.4	1556.5	1575.0
17.5°	1447.3	1449.0	1458.2	1471.7	1491.0	1510.3	1534.7	1557.3	1583.4	1601.0	1622.9
20°	1495.2	1497.7	1507.8	1522.1	1543.1	1563.2	1588.4	1611.9	1638.8	1659.8	1681.7
22.5°	1557.3	1561.5	1572.5	1590.1	1611.1	1635.5	1661.5	1685.9	1711.1	1732.1	1750.5
25°	1640.5	1645.5	1657.3	1674.9	1695.9	1722.0	1748.9	1774.1	1800.1	1816.1	1831.2
27.5°	1752.2	1760.6	1773.2	1787.5	1806.0	1833.7	1858.9	1879.9	1905.1	1922.7	1932.8
30°	1902.6	1914.3	1924.4	1939.5	1953.0	1982.4	2002.5	2019.3	2038.7	2048.7	2051.3
32.5°	2086.5	2097.5	2107.5	2118.5	2136.9	2163.8	2183.1	2192.4	2202.5	2200.8	2191.5
35°	2294.0	2302.4	2308.3	2327.6	2357.9	2375.5	2389.8	2393.1	2394.8	2377.2	2359.5
37.5°	2512.4	2522.5	2527.5	2557.8	2586.3	2606.5	2613.2	2620.8	2615.7	2586.3	2554.4
40°	2748.5	2759.4	2774.5	2800.5	2834.1	2853.5	2861.9	2861.0	2856.8	2822.4	2770.3
42.5°	2980.3	2993.7	3006.3	3051.7	3079.4	3112.2	3116.4	3115.5	3106.3	3066.8	3006.3
45°	3176.9	3192.8	3218.9	3269.2	3313.8	3353.2	3369.2	3375.1	3365.8	3323.8	3255.0
47.5°	3339.0	3349.9	3382.6	3444.0	3501.1	3559.0	3591.0	3613.6	3612.8	3582.6	3509.5
50°	3449.8	3462.4	3502.8	3571.6	3643.0	3711.1	3774.1	3825.3	3849.7	3827.8	3759.8
52.5°	3481.8	3497.7	3550.6	3633.0	3716.1	3807.7	3901.8	3992.5	4047.1	4060.5	4007.6
55°	3347.4	3365.0	3442.3	3556.5	3693.4	3828.7	3971.5	4100.8	4213.4	4265.5	4244.5
57.5°	2955.9	2968.5	3066.8	3214.7	3410.4	3648.1	3888.3	4125.2	4318.4	4453.6	4477.2
60°	2337.7	2353.7	2461.2	2617.4	2840.0	3140.7	3476.7	3864.8	4243.6	4553.6	4707.3
62.5°	1577.5	1588.4	1691.7	1834.5	2078.1	2367.9	2742.6	3234.0	3774.1	4327.6	4761.1
65°	828.2	828.2	898.0	997.9	1191.9	1451.5	1835.4	2339.4	2982.0	3673.3	4398.2
67.5°	480.5	479.6	495.6	518.3	579.6	684.6	896.3	1266.7	1874.9	2679.6	3504.4
70°	396.5	394.0	391.4	391.4	400.7	416.6	457.0	558.6	817.3	1381.8	2156.3
71°	378.8	377.2	370.4	367.9	372.1	380.5	398.2	445.2	580.4	942.5	1610.3
72.5°	357.8	353.6	343.6	339.4	340.2	343.6	348.6	367.1	408.2	535.9	918.1
75°	325.9	315.8	303.2	297.4	294.8	294.0	294.0	299.0	308.3	323.4	376.3
77.5°	289.0	274.7	261.2	255.4	251.2	248.6	247.0	243.6	241.9	248.6	268.0
80°	244.4	229.3	218.4	215.0	212.5	207.5	200.8	194.0	189.8	193.2	205.0
82.5°	189.0	173.9	175.6	176.4	172.2	163.8	157.1	149.5	142.0	140.3	146.2
85°	150.4	142.8	137.8	148.7	139.4	129.4	120.1	107.5	89.9	73.9	80.6
87.5°	64.7	65.5	94.1	142.0	124.3	100.0	83.2	67.2	42.8	31.9	32.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196996

CATALOG NUMBER: NAV-AF-04-D-UNV-RW-8030-600

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1492.7	1492.7	1492.7	1492.7	1492.7	1492.7	1492.7	1492.7
2.5°	1491.0	1491.0	1488.5	1486.8	1486.8	1486.8	1485.1	1485.9
5°	1501.1	1502.7	1504.4	1503.6	1506.1	1508.6	1507.8	1506.9
7.5°	1517.9	1522.9	1527.9	1530.5	1533.8	1537.2	1538.0	1535.5
10°	1534.7	1544.7	1552.3	1559.0	1563.2	1566.6	1569.1	1568.3
12.5°	1555.7	1569.9	1583.4	1596.8	1606.1	1611.1	1616.1	1614.5
15°	1590.1	1606.1	1622.9	1640.5	1654.8	1662.3	1669.9	1668.2
17.5°	1637.1	1651.4	1664.9	1682.5	1700.1	1708.5	1716.9	1716.1
20°	1695.9	1706.9	1714.4	1724.5	1741.3	1750.5	1758.1	1755.6
22.5°	1763.1	1766.5	1767.3	1770.7	1784.1	1795.1	1805.1	1807.7
25°	1836.2	1833.7	1828.7	1826.1	1835.4	1847.1	1859.7	1863.1
27.5°	1926.9	1918.5	1905.9	1895.9	1898.4	1913.5	1927.8	1931.1
30°	2041.2	2021.9	1995.0	1975.7	1972.3	1988.3	2003.4	2008.4
32.5°	2171.4	2145.3	2108.4	2079.0	2066.4	2080.7	2094.1	2101.7
35°	2325.9	2297.4	2252.9	2215.1	2194.9	2204.1	2227.7	2236.1
37.5°	2509.1	2469.6	2420.0	2372.1	2338.5	2340.2	2365.4	2375.5
40°	2711.5	2654.4	2591.4	2531.7	2483.0	2479.7	2502.3	2509.9
42.5°	2922.3	2849.3	2775.3	2697.2	2636.7	2625.8	2655.2	2656.1
45°	3149.1	3055.1	2963.5	2872.8	2809.8	2790.5	2819.0	2822.4
47.5°	3391.0	3273.4	3165.1	3066.8	2998.8	2968.5	2996.3	3001.3
50°	3643.0	3521.2	3395.2	3286.0	3206.3	3169.3	3202.1	3205.4
52.5°	3892.5	3777.4	3652.3	3527.1	3430.5	3388.5	3427.2	3438.9
55°	4143.7	4032.8	3915.2	3790.0	3668.2	3631.3	3673.3	3685.9
57.5°	4404.9	4298.2	4191.6	4065.6	3947.1	3890.8	3936.2	3953.8
60°	4693.0	4599.0	4498.2	4371.3	4254.6	4189.0	4227.7	4247.8
62.5°	4976.1	4956.8	4865.2	4733.4	4585.5	4520.0	4552.8	4567.0
65°	4999.6	5313.0	5308.8	5177.7	4971.1	4861.0	4870.3	4877.0
67.5°	4363.8	5082.8	5542.3	5583.4	5353.3	5181.1	5160.9	5165.1
70°	3089.5	4076.5	5051.7	5691.8	5782.5	5648.9	5605.3	5612.0
71°	2475.5	3497.7	4571.2	5432.2	5775.8	5737.1	5712.8	5730.4
72.5°	1580.0	2577.1	3622.0	4651.9	5311.3	5500.3	5528.0	5538.9
75°	573.7	1108.8	1876.5	2688.8	3407.8	3902.6	4174.8	4196.6
77.5°	308.3	397.3	614.0	917.3	1152.5	1278.5	1293.6	1299.5
80°	226.8	262.9	300.7	343.6	370.4	375.5	366.2	346.9
82.5°	160.4	181.4	196.6	211.7	222.6	213.4	177.2	135.2
85°	93.2	102.5	110.9	118.4	120.1	113.4	74.8	61.3
87.5°	37.0	40.3	39.5	44.5	42.8	39.5	29.4	25.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)