

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: P195965

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195965  
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-05-D-UNV-5WQ-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 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: 21085.1 lumens  
Efficiency: N/A  
Efficacy: 130.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B5 - U0 - G3

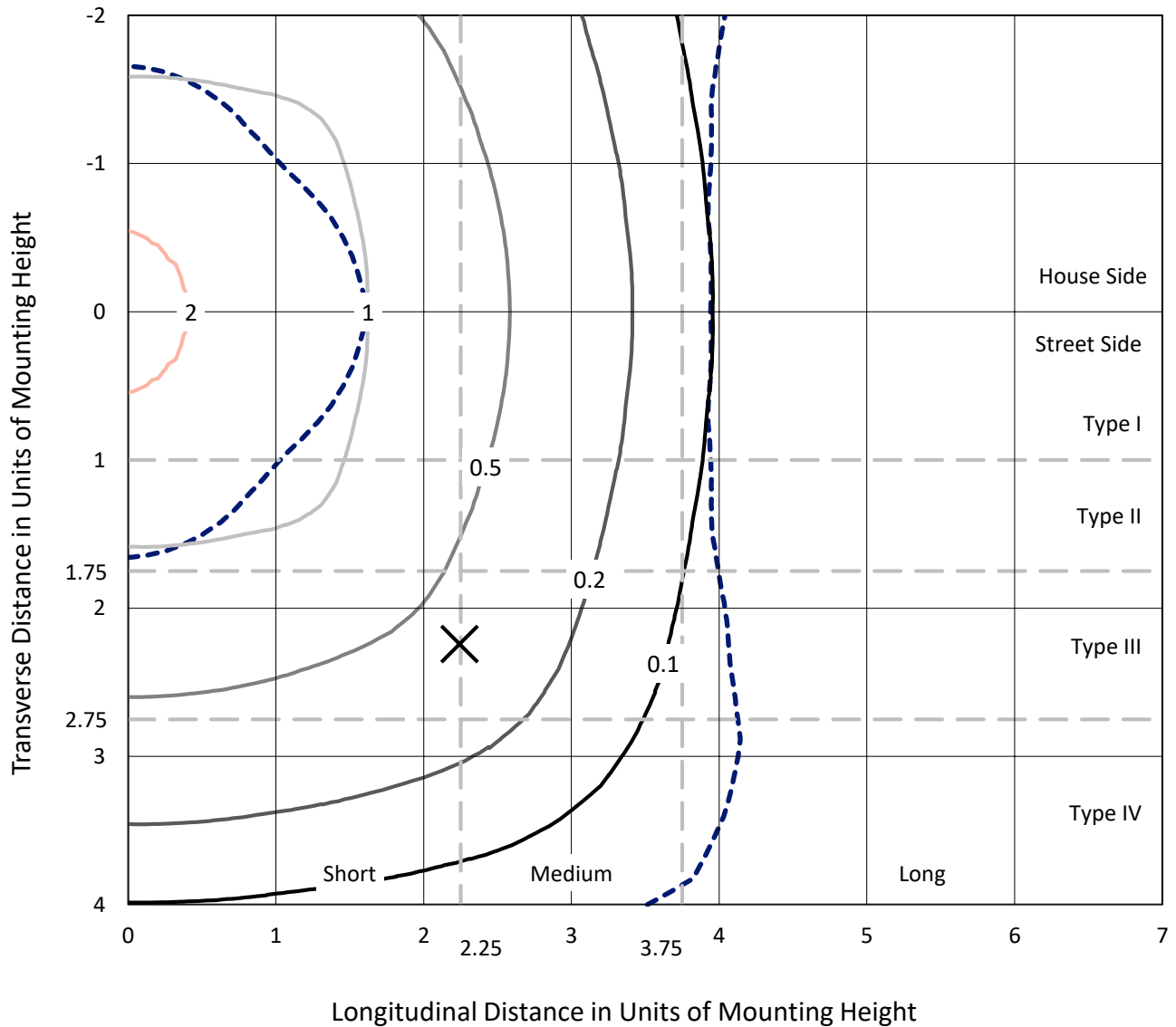
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

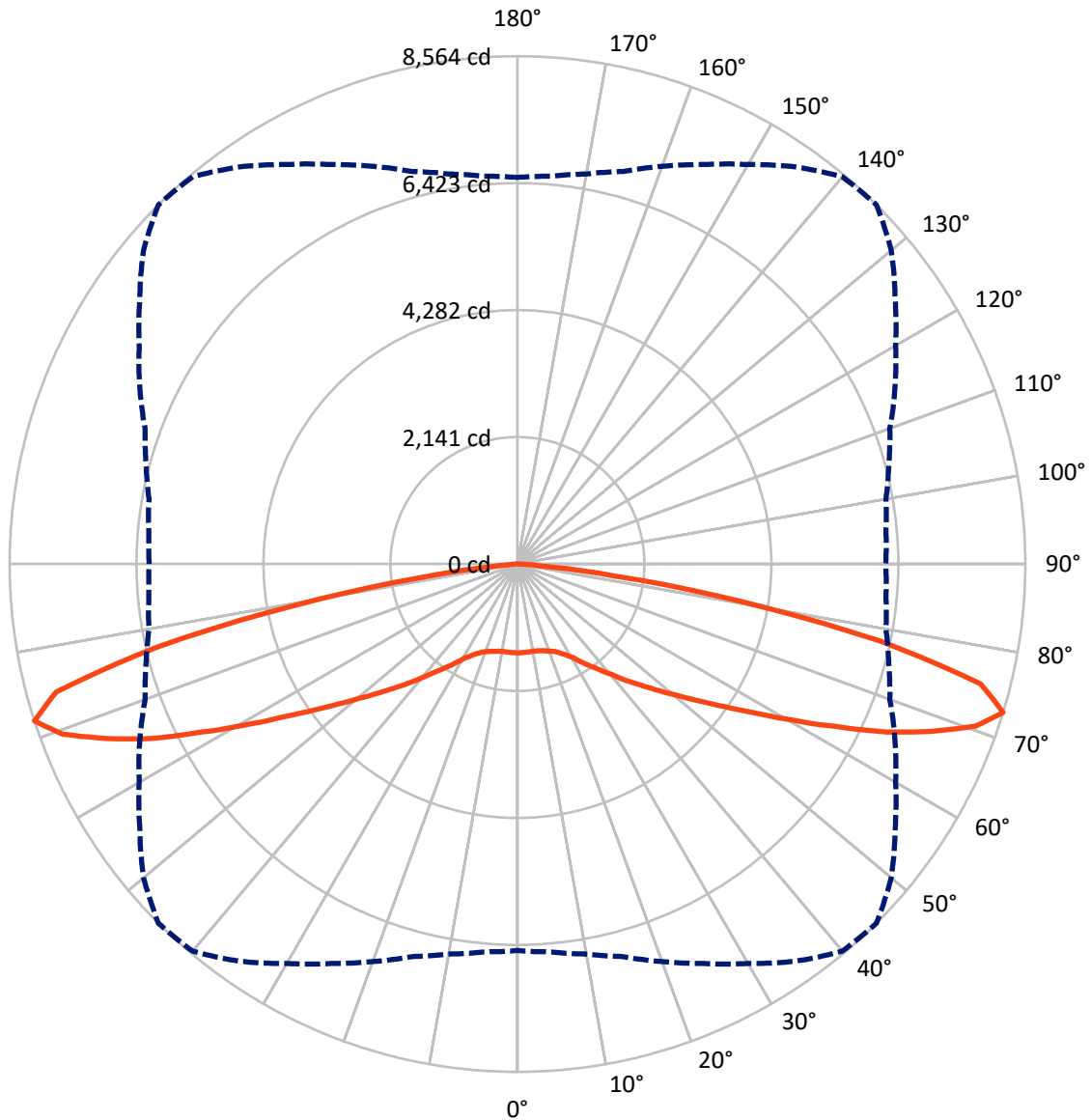
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 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	10542.5	0.0	10542.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10542.5	0.0	10542.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	21085.1	0.0	21085.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.1	0.7
10°-20°	433.0	2.1
20°-30°	781.7	3.7
30°-40°	1333.4	6.3
40°-50°	2270.1	10.8
50°-60°	3653.4	17.3
60°-70°	6075.6	28.8
70°-80°	5877.5	27.9
80°-90°	517.3	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°	21085.1	100.0
0°-180°	21085.1	100.0



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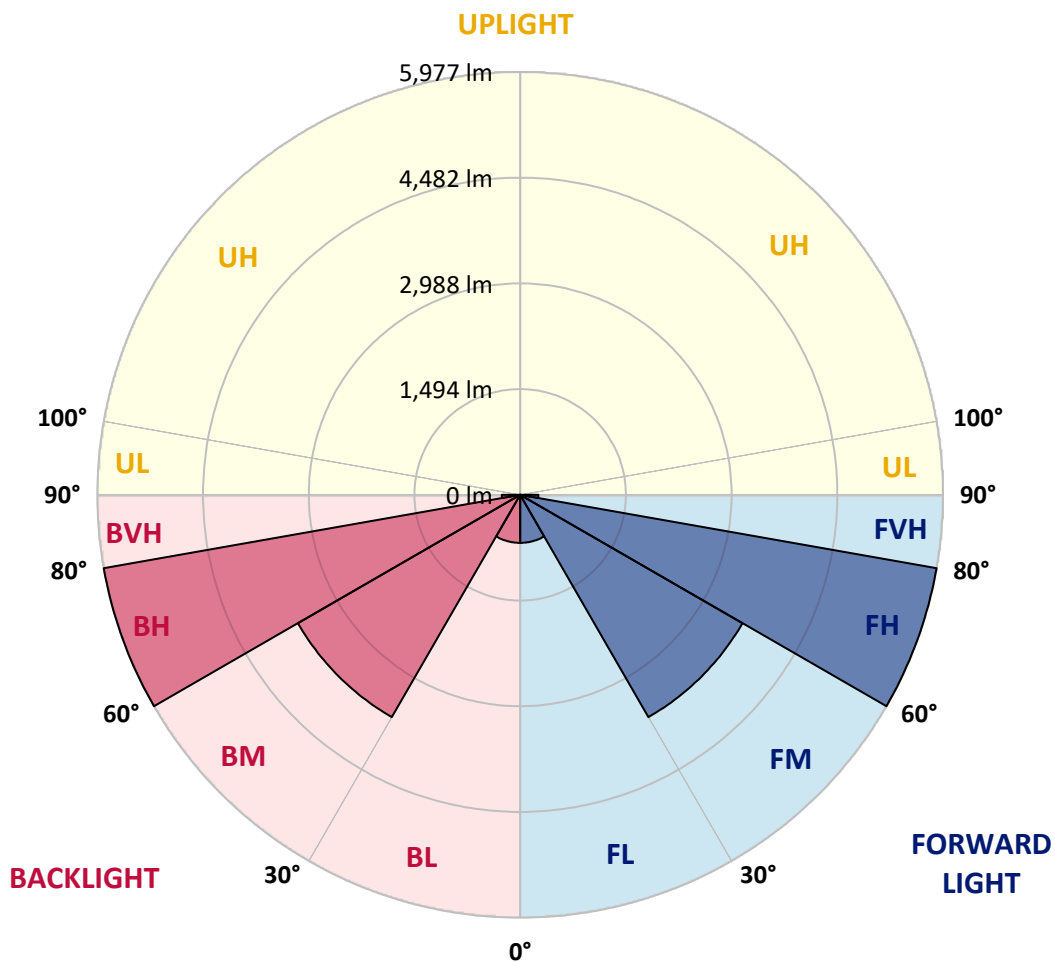
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	678.9	3.2			
FM (30°-60°)	3628.4	17.2			
FH (60°-80°)	5976.6	28.3			G3/7500
FVH (80°-90°)	258.6	1.2			G3/500
BL (0°-30°)	678.9	3.2	B2/1000		
BM (30°-60°)	3628.4	17.2	B3/5000		
BH (60°-80°)	5976.6	28.3	B5		G3/7500
BVH (80°-90°)	258.6	1.2			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G3**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1499.0	1499.0	1499.0	1499.0	1499.0	1499.0	1499.0	1499.0	1499.0	1499.0	1499.0
2.5°	1510.7	1510.7	1511.9	1510.7	1508.0	1506.8	1502.9	1500.3	1497.7	1496.4	1493.8
5°	1511.9	1511.9	1513.3	1511.9	1509.4	1506.8	1504.1	1500.3	1497.7	1495.1	1493.8
7.5°	1517.1	1518.5	1519.8	1518.5	1513.3	1510.7	1506.8	1502.9	1497.7	1495.1	1492.5
10°	1527.6	1527.6	1527.6	1526.2	1522.4	1517.1	1511.9	1508.0	1501.6	1495.1	1491.2
12.5°	1535.3	1536.7	1536.7	1534.0	1528.8	1522.4	1517.1	1513.3	1508.0	1502.9	1499.0
15°	1547.0	1547.0	1545.7	1540.6	1532.7	1527.6	1524.9	1523.7	1522.4	1519.8	1515.9
17.5°	1570.3	1569.1	1565.2	1557.4	1548.3	1544.5	1541.8	1541.8	1541.8	1540.6	1537.9
20°	1604.1	1604.1	1598.9	1586.0	1578.1	1574.2	1570.3	1570.3	1570.3	1566.4	1562.6
22.5°	1658.6	1659.9	1652.2	1636.5	1626.2	1618.4	1613.2	1609.3	1605.4	1602.9	1596.3
25°	1732.6	1731.3	1722.2	1702.7	1694.9	1687.2	1676.8	1670.3	1665.2	1661.2	1653.4
27.5°	1810.4	1809.2	1798.8	1781.9	1776.8	1765.0	1757.2	1748.2	1741.7	1735.2	1727.5
30°	1910.4	1903.9	1896.1	1883.2	1880.6	1871.5	1861.1	1848.1	1837.7	1827.3	1818.3
32.5°	2000.0	2000.0	1988.3	1981.8	1987.0	1983.1	1984.4	1976.5	1970.1	1966.2	1957.1
35°	2124.6	2124.6	2119.3	2111.6	2112.9	2103.8	2102.5	2103.8	2109.0	2109.0	2098.6
37.5°	2290.7	2293.3	2276.4	2273.8	2267.3	2254.3	2247.8	2250.4	2262.2	2268.6	2254.3
40°	2497.0	2502.2	2497.0	2480.1	2472.4	2450.3	2437.3	2437.3	2446.4	2452.9	2447.7
42.5°	2700.8	2709.9	2700.8	2687.8	2681.4	2664.5	2657.9	2663.2	2674.8	2682.6	2674.8
45°	2927.9	2934.4	2922.7	2907.1	2899.3	2890.2	2886.4	2890.2	2903.2	2911.0	2908.5
47.5°	3151.1	3160.2	3145.9	3139.4	3139.4	3130.3	3140.8	3151.1	3162.8	3181.0	3173.2
50°	3369.2	3380.9	3371.7	3373.1	3383.4	3400.3	3419.7	3440.5	3461.3	3480.8	3483.4
52.5°	3563.9	3582.0	3583.3	3606.6	3639.1	3665.0	3719.6	3765.0	3814.3	3831.2	3823.4
55°	3768.9	3793.5	3826.0	3862.4	3914.2	3967.4	4059.6	4141.3	4206.3	4246.5	4240.0
57.5°	4062.2	4086.9	4120.5	4180.3	4258.1	4330.9	4456.7	4583.9	4682.6	4743.5	4713.7
60°	4442.5	4468.5	4512.5	4576.2	4677.3	4776.0	4948.6	5131.6	5284.8	5354.8	5300.3
62.5°	4946.0	4970.7	4999.3	5083.6	5196.5	5323.6	5540.4	5775.4	5970.0	6037.5	5960.9
65°	5663.7	5693.5	5702.6	5771.4	5881.8	5999.8	6233.5	6498.2	6720.2	6830.4	6677.3
67.5°	6472.2	6484.0	6520.3	6600.8	6713.6	6820.1	7004.3	7254.9	7467.6	7528.7	7365.1
70°	6945.9	6969.4	7032.9	7144.5	7279.5	7447.0	7648.1	7918.0	8159.5	8188.0	7980.3
72.5°	6517.7	6565.7	6678.6	6852.5	7135.5	7432.7	7779.1	8177.6	8524.1	8564.3	8230.9
75°	5227.7	5282.1	5417.1	5607.9	5942.7	6384.0	6885.0	7483.3	8002.4	8068.6	7627.3
77.5°	2786.4	2853.9	3049.9	3306.9	3784.5	4368.5	4972.0	5654.7	6095.9	6245.1	5927.2
80°	702.2	738.5	833.2	983.8	1306.9	1778.0	2298.5	3033.0	3580.7	3813.0	3580.7
82.5°	272.5	299.8	325.7	343.9	375.1	440.0	607.4	990.2	1334.1	1643.1	1422.4
85°	105.2	111.6	160.9	183.0	183.0	201.1	231.0	272.5	337.5	368.6	308.9
87.5°	41.5	45.4	55.9	85.6	88.3	77.8	83.1	93.4	71.4	59.7	67.5
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°	1499.0	1499.0	1499.0	1499.0	1499.0	1499.0	1499.0	1499.0
2.5°	1492.5	1491.2	1488.6	1489.9	1488.6	1488.6	1488.6	1488.6
5°	1491.2	1491.2	1488.6	1488.6	1488.6	1489.9	1488.6	1488.6
7.5°	1489.9	1488.6	1486.0	1484.7	1484.7	1483.4	1483.4	1483.4
10°	1487.3	1484.7	1482.2	1480.8	1480.8	1478.3	1478.3	1478.3
12.5°	1493.8	1489.9	1487.3	1486.0	1486.0	1486.0	1487.3	1487.3
15°	1511.9	1504.1	1500.3	1499.0	1500.3	1502.9	1504.1	1505.5
17.5°	1531.5	1523.7	1517.1	1514.6	1515.9	1519.8	1523.7	1526.2
20°	1556.1	1549.6	1541.8	1539.2	1539.2	1544.5	1547.0	1550.9
22.5°	1591.1	1586.0	1579.4	1575.5	1573.0	1579.4	1583.3	1586.0
25°	1647.0	1641.7	1636.5	1632.6	1631.4	1637.8	1640.4	1641.7
27.5°	1720.9	1715.7	1713.1	1711.8	1707.9	1710.6	1714.5	1713.1
30°	1817.0	1820.9	1817.0	1817.0	1810.4	1813.1	1810.4	1807.9
32.5°	1945.4	1941.6	1929.9	1922.1	1913.0	1913.0	1909.1	1905.2
35°	2073.9	2060.9	2054.5	2058.4	2054.5	2057.1	2050.6	2044.1
37.5°	2225.7	2218.0	2216.7	2228.4	2225.7	2228.4	2228.4	2219.3
40°	2427.0	2421.7	2430.8	2450.3	2458.0	2456.8	2459.4	2447.7
42.5°	2657.9	2648.8	2652.7	2669.6	2678.7	2681.4	2680.0	2669.6
45°	2888.9	2891.6	2891.6	2909.7	2918.8	2924.0	2914.9	2911.0
47.5°	3149.9	3153.8	3144.7	3156.3	3158.9	3168.0	3160.2	3153.8
50°	3450.9	3436.6	3415.8	3419.7	3419.7	3417.2	3408.1	3400.3
52.5°	3787.1	3754.6	3715.7	3702.7	3688.5	3674.1	3656.0	3641.7
55°	4170.0	4114.1	4044.0	4011.6	3984.3	3951.9	3910.3	3896.1
57.5°	4613.8	4517.8	4424.3	4365.9	4295.8	4253.0	4199.7	4197.2
60°	5140.7	5010.9	4846.1	4759.2	4689.0	4638.5	4598.2	4582.6
62.5°	5749.4	5526.2	5348.3	5254.9	5173.2	5142.0	5091.3	5097.9
65°	6373.6	6146.5	5973.9	5898.6	5822.0	5801.3	5754.6	5771.4
67.5°	7049.8	6862.9	6673.4	6603.4	6533.3	6512.5	6464.4	6478.8
70°	7655.9	7418.3	7202.9	7065.3	6945.9	6849.9	6788.9	6764.3
72.5°	7776.6	7365.1	7026.4	6682.5	6484.0	6310.1	6238.7	6211.4
75°	6987.5	6348.9	5866.2	5462.6	5239.3	4986.3	4959.0	4921.3
77.5°	5435.3	4708.5	4124.5	3605.4	3305.6	2996.6	2890.2	2809.8
80°	3241.9	2491.8	1931.1	1353.7	1104.5	889.0	835.8	780.0
82.5°	1160.2	743.7	500.9	390.7	349.1	321.8	301.1	273.8
85°	280.3	236.2	223.2	202.4	199.9	170.0	120.7	107.7
87.5°	89.5	81.7	83.1	79.2	83.1	62.3	50.6	45.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)