

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: P196936

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196936  
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-04-D-UNV-5WQ-8030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20712 lumens  
Efficiency: N/A  
Efficacy: 92.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B5 - U0 - G3

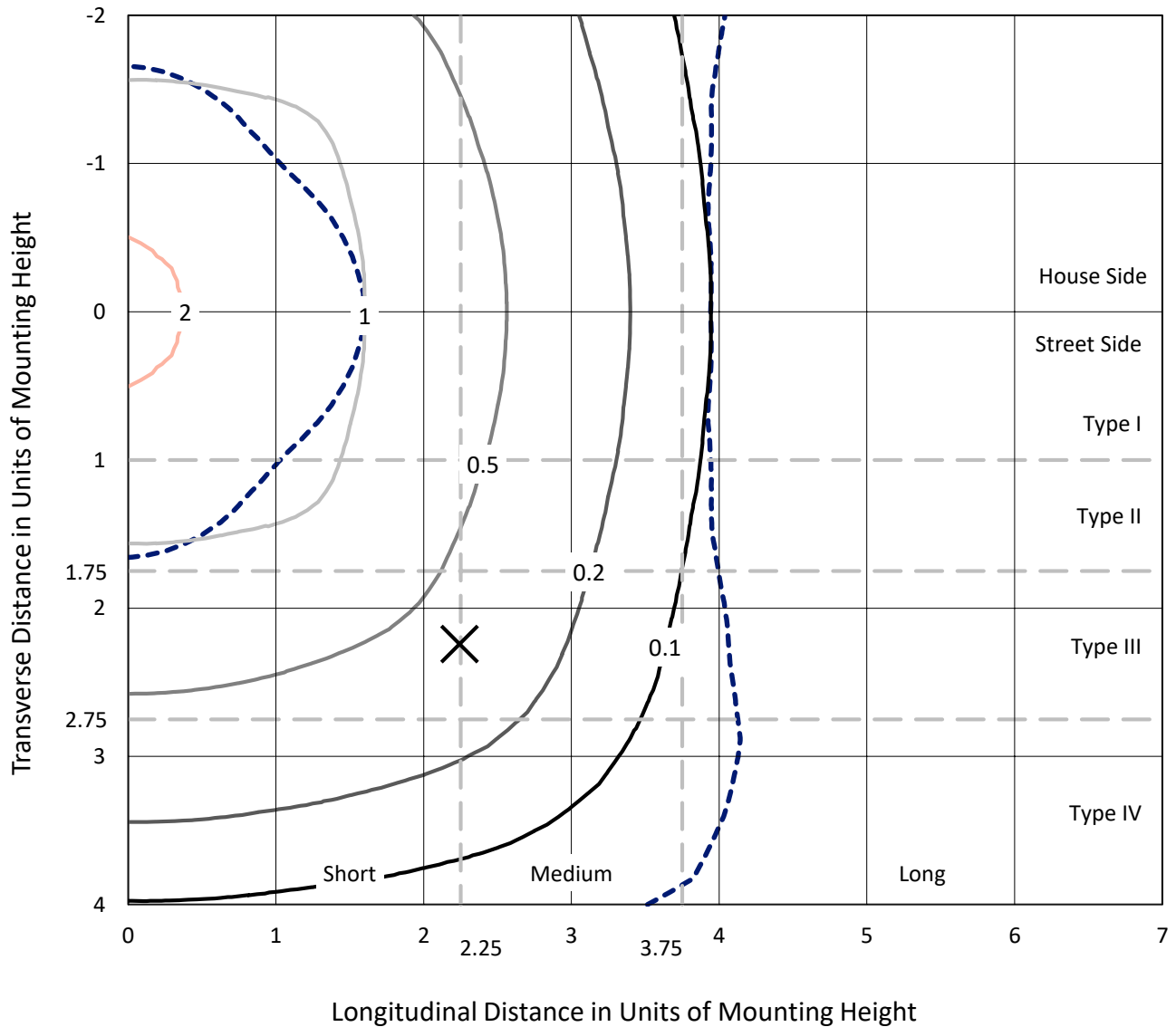
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196936  
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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

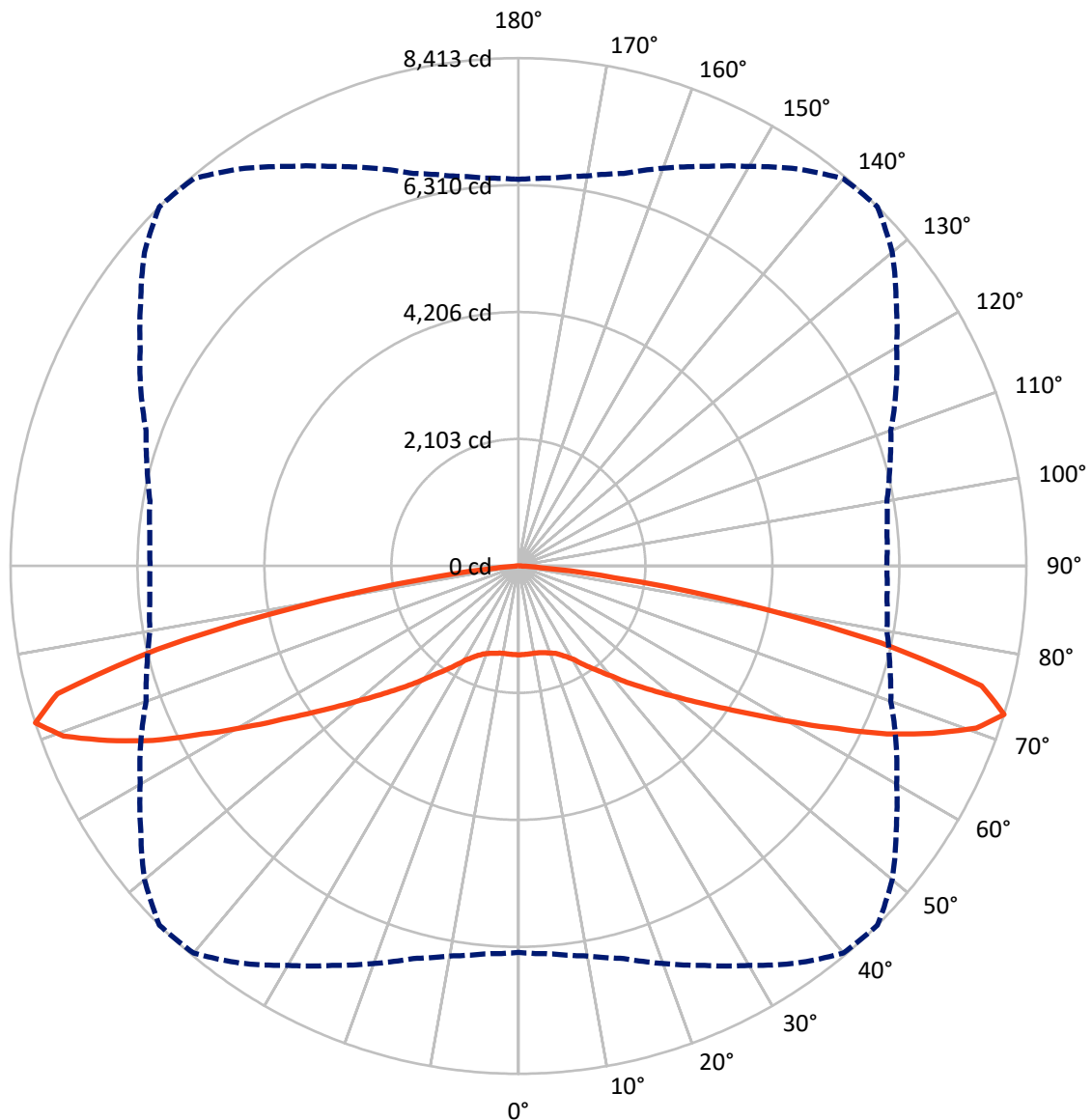


Based on 25 foot mounting height. Maximum calculated value = 2.4 fc  
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P196936

CATALOG NUMBER: NAV-AF-04-D-UNV-5WQ-8030

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P196936

CATALOG NUMBER: NAV-AF-04-D-UNV-5WQ-8030

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10356.0	0.0	10356.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10356.0	0.0	10356.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	20712.0	0.0	20712.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.5	0.7
10°-20°	425.3	2.1
20°-30°	767.9	3.7
30°-40°	1309.8	6.3
40°-50°	2229.9	10.8
50°-60°	3588.7	17.3
60°-70°	5968.2	28.8
70°-80°	5773.5	27.9
80°-90°	508.1	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°	20712.0	100.0
0°-180°	20712.0	100.0



REPORT NUMBER: P196936

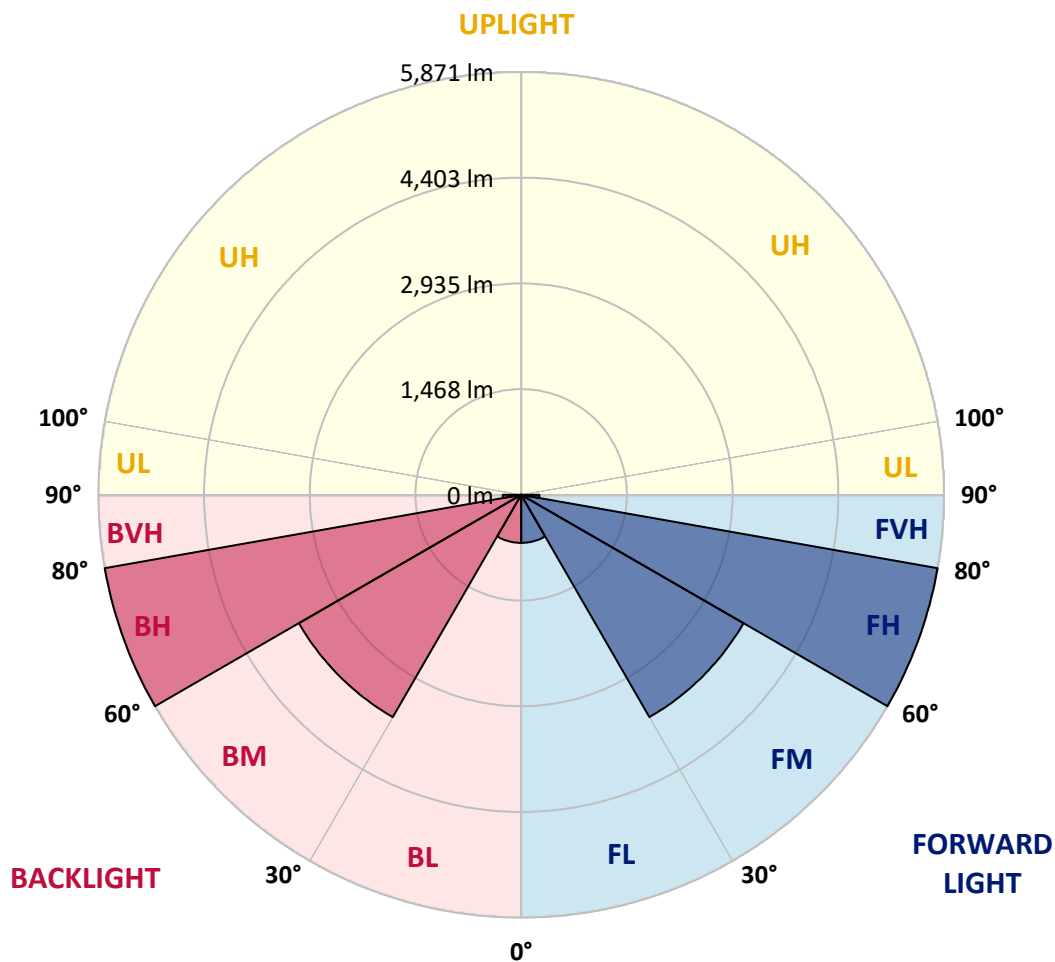
CATALOG NUMBER: NAV-AF-04-D-UNV-5WQ-8030

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	666.9	3.2			
FM	(30°-60°)	3564.2	17.2			
FH	(60°-80°)	5870.8	28.3			G3/7500
FVH	(80°-90°)	254.1	1.2			G3/500
BL	(0°-30°)	666.9	3.2	B2/1000		
BM	(30°-60°)	3564.2	17.2	B3/5000		
BH	(60°-80°)	5870.8	28.3	B5		G3/7500
BVH	(80°-90°)	254.1	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





REPORT NUMBER: P196936

CATALOG NUMBER: NAV-AF-04-D-UNV-5WQ-8030

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1472.5	1472.5	1472.5	1472.5	1472.5	1472.5	1472.5	1472.5	1472.5	1472.5	1472.5
2.5°	1483.9	1483.9	1485.2	1483.9	1481.4	1480.1	1476.3	1473.7	1471.2	1469.9	1467.4
5°	1485.2	1485.2	1486.5	1485.2	1482.7	1480.1	1477.6	1473.7	1471.2	1468.6	1467.4
7.5°	1490.3	1491.6	1492.9	1491.6	1486.5	1483.9	1480.1	1476.3	1471.2	1468.6	1466.1
10°	1500.5	1500.5	1500.5	1499.2	1495.4	1490.3	1485.2	1481.4	1475.0	1468.6	1464.8
12.5°	1508.2	1509.4	1509.4	1506.9	1501.8	1495.4	1490.3	1486.5	1481.4	1476.3	1472.5
15°	1519.6	1519.6	1518.4	1513.3	1505.6	1500.5	1498.0	1496.7	1495.4	1492.9	1489.0
17.5°	1542.6	1541.3	1537.5	1529.8	1520.9	1517.1	1514.5	1514.5	1514.5	1513.3	1510.7
20°	1575.7	1575.7	1570.6	1557.9	1550.2	1546.4	1542.6	1542.6	1542.6	1538.8	1534.9
22.5°	1629.3	1630.6	1622.9	1607.6	1597.4	1589.8	1584.7	1580.8	1577.0	1574.5	1568.1
25°	1701.9	1700.7	1691.7	1672.6	1665.0	1657.3	1647.1	1640.7	1635.7	1631.8	1624.2
27.5°	1778.4	1777.2	1767.0	1750.4	1745.3	1733.8	1726.2	1717.2	1710.9	1704.5	1696.8
30°	1876.6	1870.2	1862.6	1849.8	1847.3	1838.4	1828.2	1815.4	1805.2	1795.0	1786.1
32.5°	1964.6	1964.6	1953.1	1946.7	1951.8	1948.0	1949.3	1941.6	1935.2	1931.4	1922.5
35°	2087.0	2087.0	2081.9	2074.2	2075.5	2066.6	2065.3	2066.6	2071.7	2071.7	2061.5
37.5°	2250.1	2252.7	2236.1	2233.6	2227.2	2214.4	2208.1	2210.6	2222.1	2228.5	2214.4
40°	2452.8	2457.9	2452.8	2436.3	2428.6	2406.9	2394.2	2394.2	2403.1	2409.5	2404.4
42.5°	2653.0	2661.9	2653.0	2640.2	2633.9	2617.3	2610.9	2616.0	2627.5	2635.1	2627.5
45°	2876.1	2882.5	2871.0	2855.7	2848.0	2839.1	2835.3	2839.1	2851.9	2859.5	2857.0
47.5°	3095.4	3104.3	3090.3	3083.9	3083.9	3075.0	3085.2	3095.4	3106.8	3124.7	3117.0
50°	3309.5	3321.0	3312.1	3313.4	3323.6	3340.1	3359.3	3379.7	3400.1	3419.2	3421.7
52.5°	3500.8	3518.6	3519.9	3542.8	3574.7	3600.2	3653.8	3698.4	3746.8	3763.4	3755.7
55°	3702.2	3726.4	3758.3	3794.0	3845.0	3897.3	3987.8	4068.1	4131.8	4171.4	4165.0
57.5°	3990.3	4014.5	4047.7	4106.3	4182.8	4254.2	4377.9	4502.8	4599.7	4659.6	4630.3
60°	4363.9	4389.4	4432.7	4495.2	4594.6	4691.5	4861.1	5040.8	5191.2	5260.1	5206.5
62.5°	4858.5	4882.7	4910.8	4993.6	5104.6	5229.5	5442.4	5673.1	5864.4	5930.7	5855.4
65°	5563.5	5592.8	5601.8	5669.3	5777.7	5893.7	6123.2	6383.2	6601.2	6709.6	6559.2
67.5°	6357.7	6369.2	6404.9	6484.0	6594.9	6699.4	6880.4	7126.5	7335.6	7395.5	7234.9
70°	6823.1	6846.0	6908.5	7018.1	7150.7	7315.2	7512.8	7777.9	8015.1	8043.1	7839.1
72.5°	6402.4	6449.5	6560.4	6731.3	7009.2	7301.1	7641.5	8032.9	8373.3	8412.8	8085.2
75°	5135.2	5188.7	5321.3	5508.7	5837.6	6271.1	6763.2	7350.9	7860.8	7925.8	7492.4
77.5°	2737.1	2803.4	2995.9	3248.4	3717.5	4291.2	4884.0	5554.6	5988.0	6134.6	5822.3
80°	689.7	725.4	818.5	966.3	1283.8	1746.6	2257.8	2979.4	3517.3	3745.5	3517.3
82.5°	267.7	294.5	320.0	337.8	368.4	432.2	596.6	972.7	1310.6	1614.0	1397.3
85°	103.3	109.6	158.1	179.8	179.8	197.6	226.9	267.7	331.5	362.1	303.4
87.5°	40.8	44.6	54.8	84.1	86.7	76.5	81.6	91.8	70.1	58.6	66.3
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: P196936

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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1472.5	1472.5	1472.5	1472.5	1472.5	1472.5	1472.5	1472.5
2.5°	1466.1	1464.8	1462.3	1463.5	1462.3	1462.3	1462.3	1462.3
5°	1464.8	1464.8	1462.3	1462.3	1462.3	1463.5	1462.3	1462.3
7.5°	1463.5	1462.3	1459.7	1458.4	1458.4	1457.2	1457.2	1457.2
10°	1461.0	1458.4	1455.9	1454.6	1454.6	1452.1	1452.1	1452.1
12.5°	1467.4	1463.5	1461.0	1459.7	1459.7	1459.7	1461.0	1461.0
15°	1485.2	1477.6	1473.7	1472.5	1473.7	1476.3	1477.6	1478.8
17.5°	1504.3	1496.7	1490.3	1487.8	1489.0	1492.9	1496.7	1499.2
20°	1528.6	1522.2	1514.5	1512.0	1512.0	1517.1	1519.6	1523.5
22.5°	1563.0	1557.9	1551.5	1547.7	1545.1	1551.5	1555.3	1557.9
25°	1617.8	1612.7	1607.6	1603.8	1602.5	1608.9	1611.4	1612.7
27.5°	1690.5	1685.4	1682.8	1681.5	1677.7	1680.3	1684.1	1682.8
30°	1784.8	1788.6	1784.8	1784.8	1778.4	1781.0	1778.4	1775.9
32.5°	1911.0	1907.2	1895.7	1888.1	1879.1	1879.1	1875.3	1871.5
35°	2037.2	2024.5	2018.1	2021.9	2018.1	2020.7	2014.3	2007.9
37.5°	2186.4	2178.7	2177.5	2188.9	2186.4	2188.9	2188.9	2180.0
40°	2384.0	2378.9	2387.8	2406.9	2414.6	2413.3	2415.9	2404.4
42.5°	2610.9	2602.0	2605.8	2622.4	2631.3	2633.9	2632.6	2622.4
45°	2837.8	2840.4	2840.4	2858.2	2867.2	2872.3	2863.3	2859.5
47.5°	3094.1	3097.9	3089.0	3100.5	3103.0	3111.9	3104.3	3097.9
50°	3389.9	3375.8	3355.4	3359.3	3359.3	3356.7	3347.8	3340.1
52.5°	3720.1	3688.2	3649.9	3637.2	3623.2	3609.1	3591.3	3577.3
55°	4096.1	4041.3	3972.5	3940.6	3913.8	3882.0	3841.2	3827.1
57.5°	4532.1	4437.8	4346.0	4288.6	4219.8	4177.7	4125.5	4122.9
60°	5049.7	4922.2	4760.3	4674.9	4606.1	4556.4	4516.8	4501.5
62.5°	5647.6	5428.4	5253.7	5161.9	5081.6	5051.0	5001.3	5007.7
65°	6260.9	6037.8	5868.2	5794.3	5719.0	5698.6	5652.7	5669.3
67.5°	6925.1	6741.5	6555.3	6486.5	6417.7	6397.3	6350.1	6364.1
70°	7520.4	7287.1	7075.5	6940.4	6823.1	6728.7	6668.8	6644.6
72.5°	7639.0	7234.9	6902.1	6564.3	6369.2	6198.4	6128.3	6101.5
75°	6863.9	6236.6	5762.4	5365.9	5146.6	4898.0	4871.3	4834.3
77.5°	5339.1	4625.2	4051.5	3541.6	3247.1	2943.7	2839.1	2760.1
80°	3184.6	2447.7	1897.0	1329.7	1084.9	873.3	821.0	766.2
82.5°	1139.7	730.5	492.1	383.7	342.9	316.2	295.8	269.0
85°	275.4	232.0	219.3	198.9	196.3	167.0	118.6	105.8
87.5°	88.0	80.3	81.6	77.8	81.6	61.2	49.7	44.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)