

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: P195021

Luminaire Tested: **NAV-AF-03-D-UNV-5WQ-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195021
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-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20673 lumens
Efficiency: N/A
Efficacy: 108.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G3

Input Watts (W): 191
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

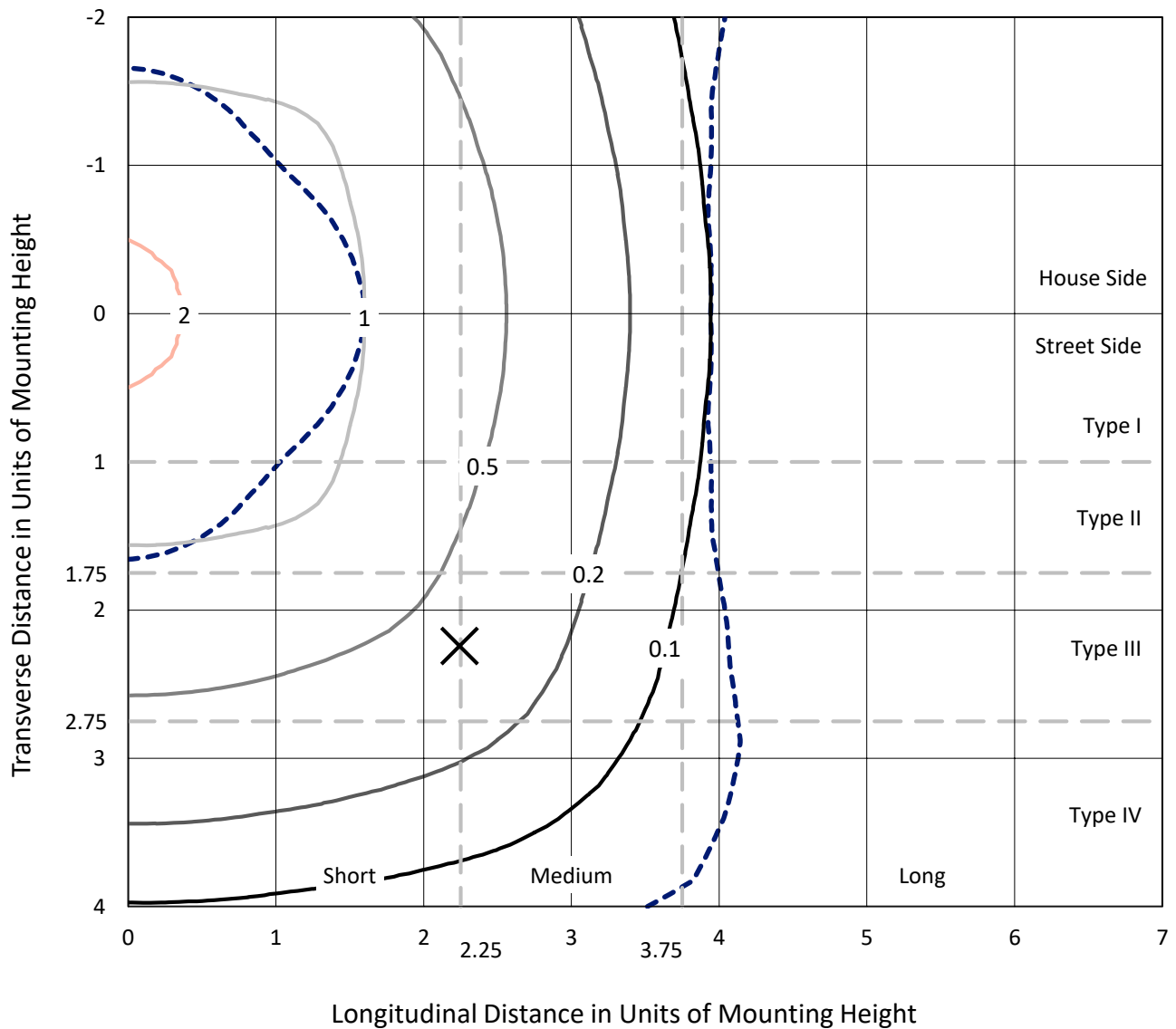


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Iso-Footcandle Lines of Horizontal Illumination

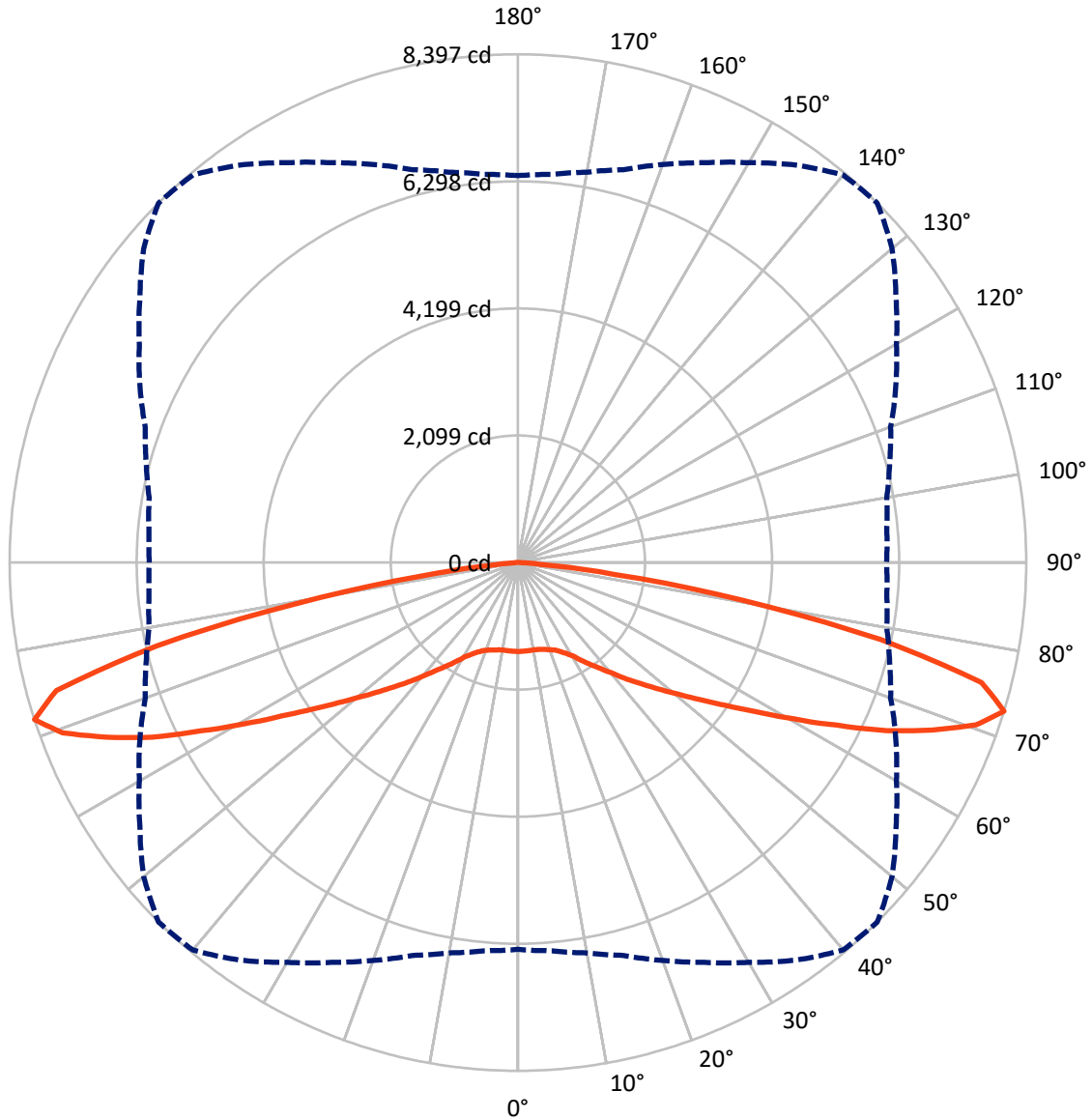
× Max cd
 - - - 1/2 Max cd



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
House Side	Lumens	10336.5	0.0	10336.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10336.5	0.0	10336.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	20673.0	0.0	20673.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.3	0.7
10°-20°	424.5	2.1
20°-30°	766.4	3.7
30°-40°	1307.3	6.3
40°-50°	2225.7	10.8
50°-60°	3582.0	17.3
60°-70°	5956.9	28.8
70°-80°	5762.6	27.9
80°-90°	507.2	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°	20673.0	100.0
0°-180°	20673.0	100.0



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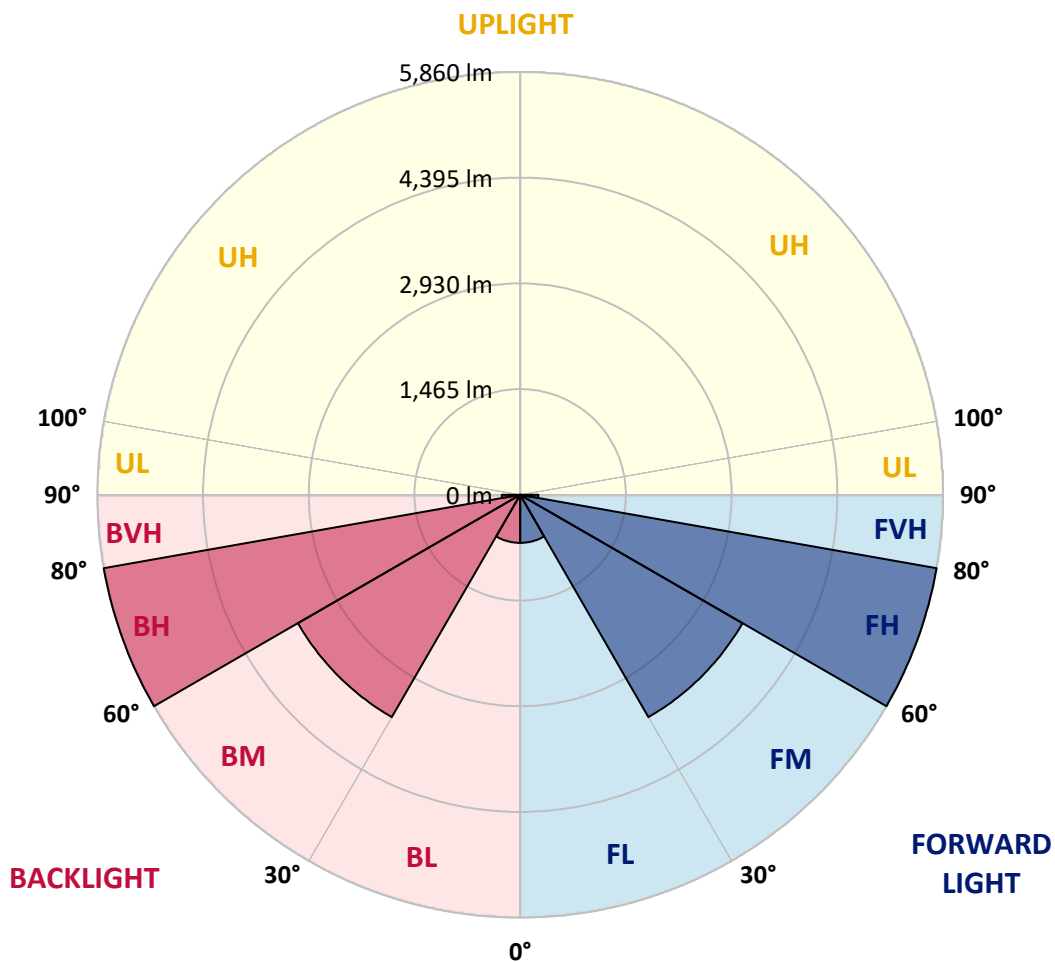
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	665.6	3.2			
FM (30°-60°)	3557.5	17.2			
FH (60°-80°)	5859.8	28.3			G3/7500
FVH (80°-90°)	253.6	1.2			G3/500
BL (0°-30°)	665.6	3.2	B2/1000		
BM (30°-60°)	3557.5	17.2	B3/5000		
BH (60°-80°)	5859.8	28.3	B5		G3/7500
BVH (80°-90°)	253.6	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°	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7
2.5°	1481.1	1481.1	1482.4	1481.1	1478.6	1477.3	1473.5	1471.0	1468.4	1467.2	1464.6
5°	1482.4	1482.4	1483.7	1482.4	1479.9	1477.3	1474.8	1471.0	1468.4	1465.9	1464.6
7.5°	1487.5	1488.8	1490.1	1488.8	1483.7	1481.1	1477.3	1473.5	1468.4	1465.9	1463.3
10°	1497.7	1497.7	1497.7	1496.4	1492.6	1487.5	1482.4	1478.6	1472.2	1465.9	1462.1
12.5°	1505.3	1506.6	1506.6	1504.1	1499.0	1492.6	1487.5	1483.7	1478.6	1473.5	1469.7
15°	1516.8	1516.8	1515.5	1510.4	1502.8	1497.7	1495.1	1493.9	1492.6	1490.1	1486.2
17.5°	1539.7	1538.4	1534.6	1527.0	1518.0	1514.2	1511.7	1511.7	1511.7	1510.4	1507.9
20°	1572.8	1572.8	1567.7	1555.0	1547.3	1543.5	1539.7	1539.7	1539.7	1535.9	1532.0
22.5°	1626.2	1627.5	1619.8	1604.6	1594.4	1586.8	1581.7	1577.9	1574.0	1571.5	1565.1
25°	1698.7	1697.5	1688.6	1669.5	1661.8	1654.2	1644.0	1637.7	1632.6	1628.8	1621.1
27.5°	1775.1	1773.8	1763.6	1747.1	1742.0	1730.6	1722.9	1714.0	1707.6	1701.3	1693.6
30°	1873.1	1866.7	1859.1	1846.3	1843.8	1834.9	1824.7	1812.0	1801.8	1791.6	1782.7
32.5°	1960.9	1960.9	1949.4	1943.1	1948.1	1944.3	1945.6	1938.0	1931.6	1927.8	1918.9
35°	2083.0	2083.0	2077.9	2070.3	2071.6	2062.7	2061.4	2062.7	2067.8	2067.8	2057.6
37.5°	2245.9	2248.4	2231.9	2229.4	2223.0	2210.3	2203.9	2206.5	2217.9	2224.3	2210.3
40°	2448.2	2453.3	2448.2	2431.7	2424.0	2402.4	2389.7	2389.7	2398.6	2405.0	2399.9
42.5°	2648.0	2656.9	2648.0	2635.3	2628.9	2612.4	2606.0	2611.1	2622.5	2630.2	2622.5
45°	2870.7	2877.0	2865.6	2850.3	2842.7	2833.8	2830.0	2833.8	2846.5	2854.1	2851.6
47.5°	3089.5	3098.4	3084.5	3078.1	3078.1	3069.2	3079.4	3089.5	3101.0	3118.8	3111.2
50°	3303.3	3314.8	3305.9	3307.1	3317.3	3333.9	3352.9	3373.3	3393.7	3412.7	3415.3
52.5°	3494.2	3512.0	3513.3	3536.2	3568.0	3593.4	3646.9	3691.4	3739.8	3756.3	3748.7
55°	3695.2	3719.4	3751.2	3786.9	3837.7	3889.9	3980.3	4060.4	4124.1	4163.5	4157.1
57.5°	3982.8	4007.0	4040.1	4098.6	4175.0	4246.2	4369.6	4494.3	4591.0	4650.9	4621.6
60°	4355.6	4381.1	4424.4	4486.7	4586.0	4682.7	4851.9	5031.3	5181.5	5250.2	5196.7
62.5°	4849.4	4873.5	4901.5	4984.2	5094.9	5219.6	5432.1	5662.5	5853.3	5919.5	5844.4
65°	5553.0	5582.3	5591.2	5658.6	5766.8	5882.6	6111.6	6371.2	6588.8	6697.0	6546.8
67.5°	6345.8	6357.2	6392.9	6471.7	6582.5	6686.8	6867.5	7113.1	7321.8	7381.6	7221.2
70°	6810.2	6833.1	6895.5	7004.9	7137.2	7301.4	7498.6	7763.3	8000.0	8028.0	7824.4
72.5°	6390.3	6437.4	6548.1	6718.6	6996.0	7287.4	7627.1	8017.8	8357.5	8397.0	8070.0
75°	5125.5	5178.9	5311.3	5498.3	5826.6	6259.2	6750.4	7337.0	7846.0	7910.9	7478.3
77.5°	2732.0	2798.1	2990.3	3242.2	3710.5	4283.1	4874.8	5544.1	5976.8	6123.1	5811.3
80°	688.4	724.0	816.9	964.5	1281.4	1743.3	2253.5	2973.7	3510.7	3738.5	3510.7
82.5°	267.2	293.9	319.4	337.2	367.7	431.4	595.5	970.9	1308.1	1610.9	1394.6
85°	103.1	109.4	157.8	179.4	179.4	197.2	226.5	267.2	330.8	361.4	302.8
87.5°	40.7	44.5	54.7	84.0	86.5	76.3	81.4	91.6	70.0	58.5	66.2
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°	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7	1469.7
2.5°	1463.3	1462.1	1459.5	1460.8	1459.5	1459.5	1459.5	1459.5
5°	1462.1	1462.1	1459.5	1459.5	1459.5	1460.8	1459.5	1459.5
7.5°	1460.8	1459.5	1457.0	1455.7	1455.7	1454.4	1454.4	1454.4
10°	1458.2	1455.7	1453.2	1451.9	1451.9	1449.3	1449.3	1449.3
12.5°	1464.6	1460.8	1458.2	1457.0	1457.0	1457.0	1458.2	1458.2
15°	1482.4	1474.8	1471.0	1469.7	1471.0	1473.5	1474.8	1476.1
17.5°	1501.5	1493.9	1487.5	1485.0	1486.2	1490.1	1493.9	1496.4
20°	1525.7	1519.3	1511.7	1509.1	1509.1	1514.2	1516.8	1520.6
22.5°	1560.0	1555.0	1548.6	1544.8	1542.2	1548.6	1552.4	1555.0
25°	1614.8	1609.7	1604.6	1600.8	1599.5	1605.8	1608.4	1609.7
27.5°	1687.3	1682.2	1679.7	1678.4	1674.6	1677.1	1680.9	1679.7
30°	1781.4	1785.3	1781.4	1781.4	1775.1	1777.6	1775.1	1772.5
32.5°	1907.4	1903.6	1892.2	1884.5	1875.6	1875.6	1871.8	1868.0
35°	2033.4	2020.7	2014.3	2018.1	2014.3	2016.9	2010.5	2004.1
37.5°	2182.3	2174.6	2173.4	2184.8	2182.3	2184.8	2184.8	2175.9
40°	2379.5	2374.4	2383.3	2402.4	2410.0	2408.8	2411.3	2399.9
42.5°	2606.0	2597.1	2600.9	2617.5	2626.4	2628.9	2627.6	2617.5
45°	2832.5	2835.0	2835.0	2852.9	2861.8	2866.9	2858.0	2854.1
47.5°	3088.3	3092.1	3083.2	3094.6	3097.2	3106.1	3098.4	3092.1
50°	3383.5	3369.5	3349.1	3352.9	3352.9	3350.4	3341.5	3333.9
52.5°	3713.0	3681.2	3643.1	3630.3	3616.3	3602.3	3584.5	3570.5
55°	4088.4	4033.7	3965.0	3933.2	3906.5	3874.7	3833.9	3819.9
57.5°	4523.6	4429.4	4337.8	4280.6	4211.9	4169.9	4117.7	4115.1
60°	5040.2	4913.0	4751.4	4666.1	4597.4	4547.8	4508.3	4493.1
62.5°	5637.0	5418.1	5243.8	5152.2	5072.0	5041.5	4991.9	4998.2
65°	6249.1	6026.4	5857.1	5783.3	5708.3	5687.9	5642.1	5658.6
67.5°	6912.0	6728.8	6543.0	6474.3	6405.6	6385.2	6338.1	6352.1
70°	7506.3	7273.4	7062.2	6927.3	6810.2	6716.1	6656.3	6632.1
72.5°	7624.6	7221.2	6889.1	6551.9	6357.2	6186.7	6116.7	6090.0
75°	6850.9	6224.9	5751.5	5355.8	5136.9	4888.8	4862.1	4825.2
77.5°	5329.1	4616.5	4043.9	3534.9	3241.0	2938.1	2833.8	2754.9
80°	3178.6	2443.1	1893.4	1327.2	1082.9	871.6	819.5	764.8
82.5°	1137.6	729.1	491.2	383.0	342.3	315.6	295.2	268.5
85°	274.9	231.6	218.9	198.5	196.0	166.7	118.3	105.6
87.5°	87.8	80.2	81.4	77.6	81.4	61.1	49.6	44.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)