

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: P195490

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195490
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-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20507 lumens
Efficiency: N/A
Efficacy: 119.9 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

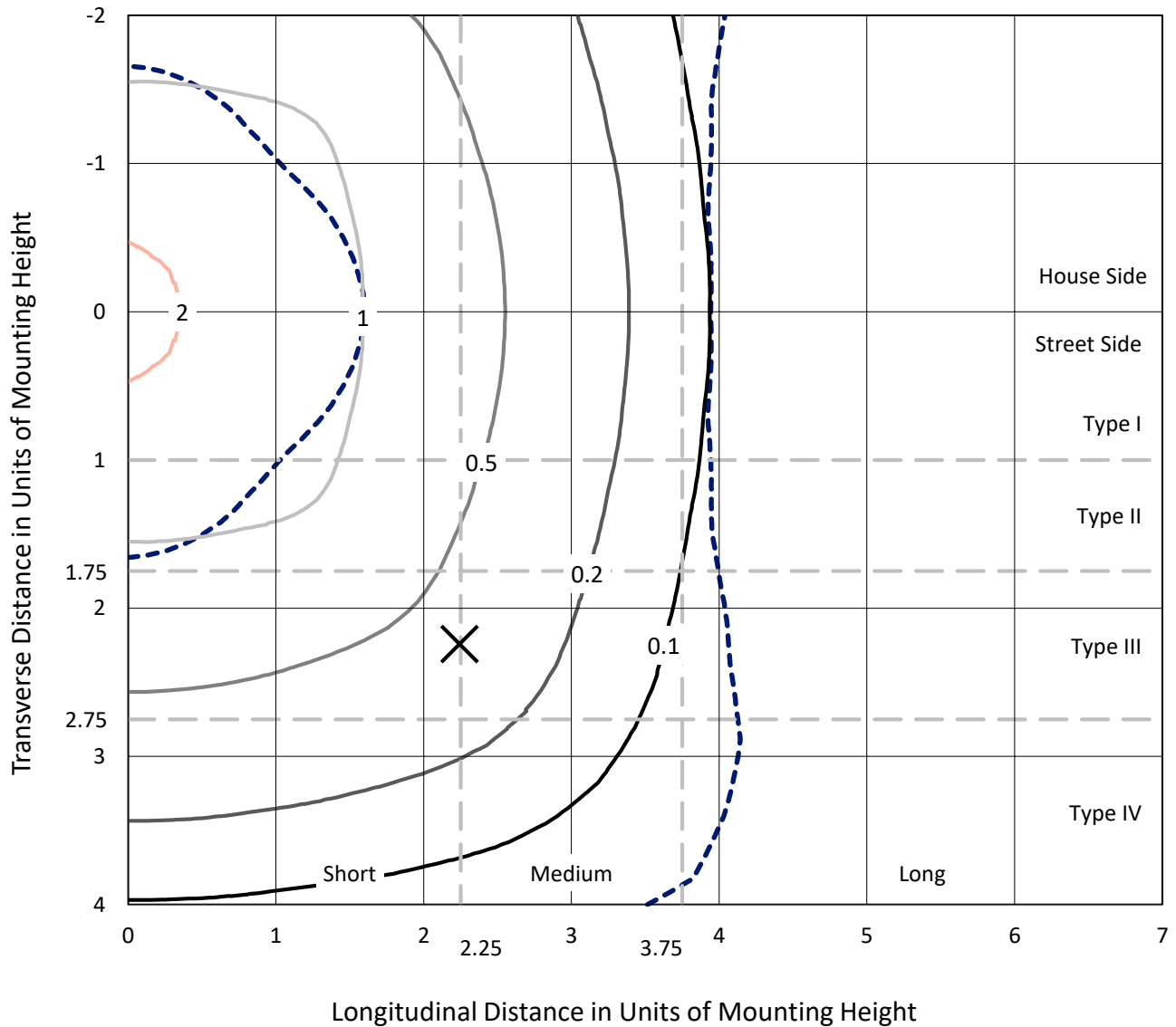
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

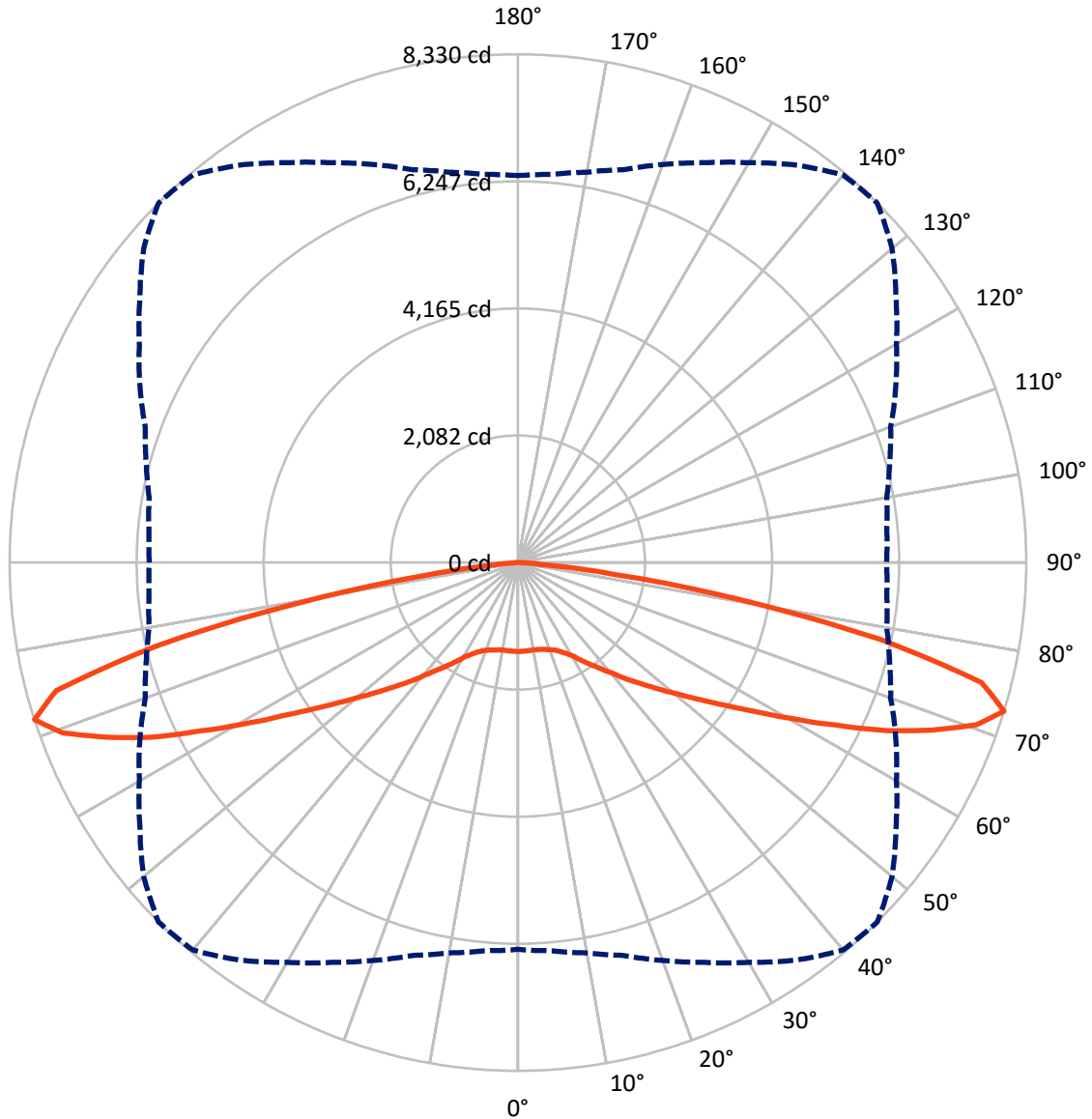
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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	10253.5	0.0	10253.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10253.5	0.0	10253.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	20507.0	0.0	20507.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.2	0.7
10°-20°	421.1	2.1
20°-30°	760.3	3.7
30°-40°	1296.8	6.3
40°-50°	2207.9	10.8
50°-60°	3553.2	17.3
60°-70°	5909.1	28.8
70°-80°	5716.3	27.9
80°-90°	503.1	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°	20507.0	100.0
0°-180°	20507.0	100.0



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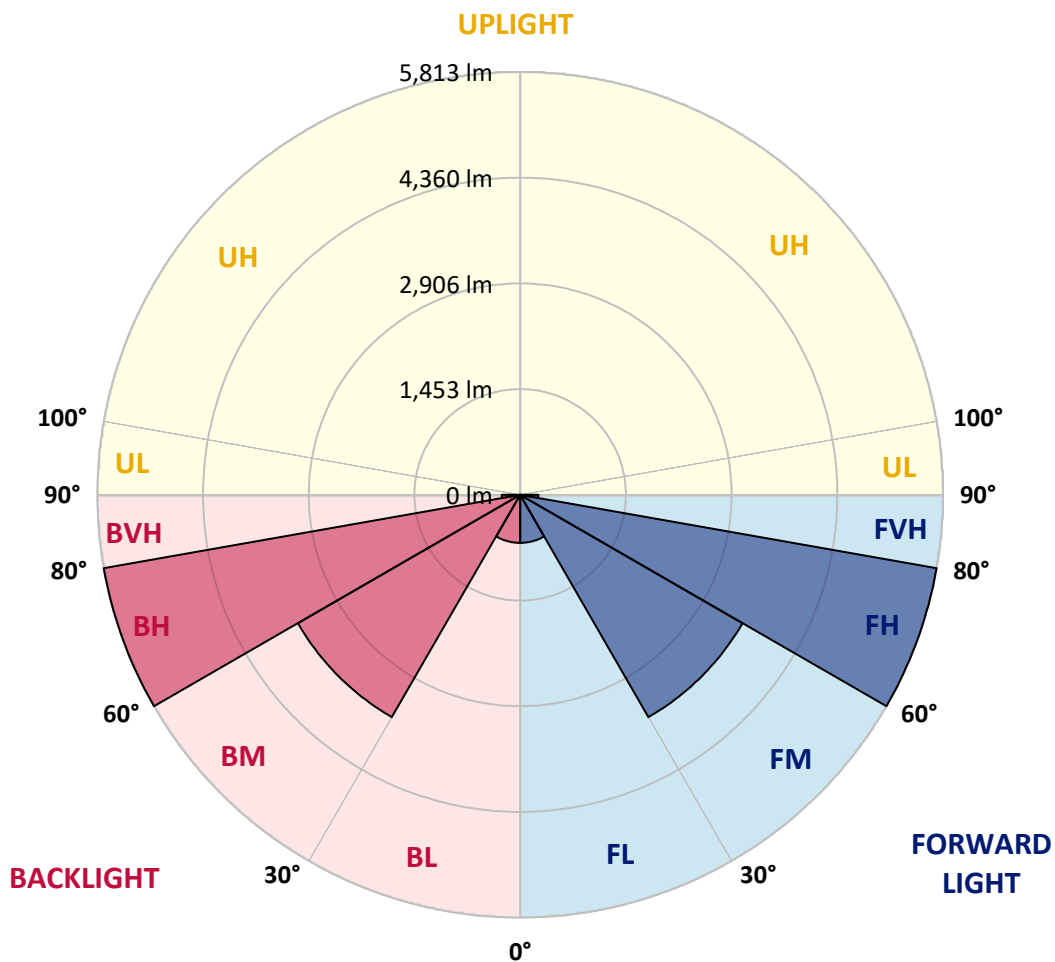
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	660.3	3.2			
FM (30°-60°)	3528.9	17.2			
FH (60°-80°)	5812.7	28.3			G3/7500
FVH (80°-90°)	251.6	1.2			G3/500
BL (0°-30°)	660.3	3.2	B2/1000		
BM (30°-60°)	3528.9	17.2	B3/5000		
BH (60°-80°)	5812.7	28.3	B5		G3/7500
BVH (80°-90°)	251.6	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°	1457.9	1457.9	1457.9	1457.9	1457.9	1457.9	1457.9	1457.9	1457.9	1457.9	1457.9
2.5°	1469.3	1469.3	1470.5	1469.3	1466.7	1465.5	1461.7	1459.2	1456.6	1455.4	1452.8
5°	1470.5	1470.5	1471.8	1470.5	1468.0	1465.5	1462.9	1459.2	1456.6	1454.1	1452.8
7.5°	1475.6	1476.8	1478.1	1476.8	1471.8	1469.3	1465.5	1461.7	1456.6	1454.1	1451.6
10°	1485.7	1485.7	1485.7	1484.4	1480.6	1475.6	1470.5	1466.7	1460.4	1454.1	1450.3
12.5°	1493.2	1494.5	1494.5	1492.0	1486.9	1480.6	1475.6	1471.8	1466.7	1461.7	1457.9
15°	1504.6	1504.6	1503.3	1498.3	1490.7	1485.7	1483.1	1481.9	1480.6	1478.1	1474.3
17.5°	1527.3	1526.1	1522.3	1514.7	1505.9	1502.1	1499.5	1499.5	1499.5	1498.3	1495.8
20°	1560.1	1560.1	1555.1	1542.5	1534.9	1531.1	1527.3	1527.3	1527.3	1523.5	1519.7
22.5°	1613.1	1614.4	1606.8	1591.7	1581.6	1574.0	1569.0	1565.2	1561.4	1558.9	1552.6
25°	1685.1	1683.8	1675.0	1656.1	1648.5	1640.9	1630.8	1624.5	1619.5	1615.7	1608.1
27.5°	1760.8	1759.6	1749.5	1733.1	1728.0	1716.7	1709.1	1700.2	1693.9	1687.6	1680.0
30°	1858.0	1851.7	1844.1	1831.5	1829.0	1820.2	1810.1	1797.4	1787.3	1777.2	1768.4
32.5°	1945.1	1945.1	1933.8	1927.4	1932.5	1928.7	1930.0	1922.4	1916.1	1912.3	1903.5
35°	2066.3	2066.3	2061.2	2053.7	2054.9	2046.1	2044.8	2046.1	2051.1	2051.1	2041.1
37.5°	2227.9	2230.4	2214.0	2211.5	2205.1	2192.5	2186.2	2188.7	2200.1	2206.4	2192.5
40°	2428.6	2433.6	2428.6	2412.2	2404.6	2383.1	2370.5	2370.5	2379.3	2385.6	2380.6
42.5°	2626.7	2635.6	2626.7	2614.1	2607.8	2591.4	2585.1	2590.1	2601.5	2609.1	2601.5
45°	2847.6	2853.9	2842.6	2827.4	2819.9	2811.0	2807.2	2811.0	2823.6	2831.2	2828.7
47.5°	3064.7	3073.6	3059.7	3053.4	3053.4	3044.5	3054.6	3064.7	3076.1	3093.8	3086.2
50°	3276.8	3288.1	3279.3	3280.6	3290.7	3307.1	3326.0	3346.2	3366.4	3385.3	3387.9
52.5°	3466.1	3483.8	3485.1	3507.8	3539.3	3564.6	3617.6	3661.8	3709.7	3726.1	3718.6
55°	3665.6	3689.5	3721.1	3756.4	3806.9	3858.7	3948.3	4027.8	4090.9	4130.1	4123.8
57.5°	3950.8	3974.8	4007.6	4065.7	4141.4	4212.1	4334.6	4458.3	4554.2	4613.5	4584.5
60°	4320.7	4345.9	4388.8	4450.7	4549.1	4645.1	4812.9	4990.9	5139.9	5208.0	5155.0
62.5°	4810.4	4834.4	4862.2	4944.2	5054.0	5177.7	5388.5	5617.0	5806.3	5872.0	5797.5
65°	5508.4	5537.5	5546.3	5613.2	5720.5	5835.4	6062.6	6320.1	6535.9	6643.2	6494.3
67.5°	6294.8	6306.2	6341.5	6419.8	6529.6	6633.1	6812.3	7056.0	7263.0	7322.3	7163.2
70°	6755.5	6778.3	6840.1	6948.7	7079.9	7242.8	7438.4	7701.0	7935.7	7963.5	7761.5
72.5°	6339.0	6385.7	6495.5	6664.7	6939.8	7228.9	7565.9	7953.4	8290.4	8329.6	8005.2
75°	5084.3	5137.3	5268.6	5454.2	5779.8	6209.0	6696.2	7278.1	7783.0	7847.4	7418.2
77.5°	2710.0	2775.7	2966.3	3216.2	3680.7	4248.7	4835.7	5499.6	5928.8	6073.9	5764.7
80°	682.9	718.2	810.4	956.8	1271.1	1729.3	2235.4	2949.9	3482.5	3708.5	3482.5
82.5°	265.1	291.6	316.8	334.5	364.8	427.9	590.7	963.1	1297.6	1598.0	1383.4
85°	102.2	108.6	156.5	178.0	178.0	195.6	224.7	265.1	328.2	358.5	300.4
87.5°	40.4	44.2	54.3	83.3	85.8	75.7	80.8	90.9	69.4	58.1	65.6
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°	1457.9	1457.9	1457.9	1457.9	1457.9	1457.9	1457.9	1457.9
2.5°	1451.6	1450.3	1447.8	1449.1	1447.8	1447.8	1447.8	1447.8
5°	1450.3	1450.3	1447.8	1447.8	1447.8	1449.1	1447.8	1447.8
7.5°	1449.1	1447.8	1445.3	1444.0	1444.0	1442.7	1442.7	1442.7
10°	1446.5	1444.0	1441.5	1440.2	1440.2	1437.7	1437.7	1437.7
12.5°	1452.8	1449.1	1446.5	1445.3	1445.3	1445.3	1446.5	1446.5
15°	1470.5	1462.9	1459.2	1457.9	1459.2	1461.7	1462.9	1464.2
17.5°	1489.4	1481.9	1475.6	1473.0	1474.3	1478.1	1481.9	1484.4
20°	1513.4	1507.1	1499.5	1497.0	1497.0	1502.1	1504.6	1508.4
22.5°	1547.5	1542.5	1536.2	1532.4	1529.8	1536.2	1539.9	1542.5
25°	1601.8	1596.7	1591.7	1587.9	1586.6	1593.0	1595.5	1596.7
27.5°	1673.7	1668.7	1666.2	1664.9	1661.1	1663.6	1667.4	1666.2
30°	1767.1	1770.9	1767.1	1767.1	1760.8	1763.4	1760.8	1758.3
32.5°	1892.1	1888.3	1877.0	1869.4	1860.6	1860.6	1856.8	1853.0
35°	2017.1	2004.4	1998.1	2001.9	1998.1	2000.7	1994.3	1988.0
37.5°	2164.8	2157.2	2155.9	2167.3	2164.8	2167.3	2167.3	2158.4
40°	2360.4	2355.4	2364.2	2383.1	2390.7	2389.4	2392.0	2380.6
42.5°	2585.1	2576.2	2580.0	2596.4	2605.3	2607.8	2606.5	2596.4
45°	2809.8	2812.3	2812.3	2830.0	2838.8	2843.8	2835.0	2831.2
47.5°	3063.5	3067.3	3058.4	3069.8	3072.3	3081.1	3073.6	3067.3
50°	3356.3	3342.4	3322.2	3326.0	3326.0	3323.5	3314.7	3307.1
52.5°	3683.2	3651.7	3613.8	3601.2	3587.3	3573.4	3555.7	3541.9
55°	4055.6	4001.3	3933.2	3901.6	3875.1	3843.5	3803.1	3789.3
57.5°	4487.3	4393.9	4303.0	4246.2	4178.0	4136.4	4084.6	4082.1
60°	4999.8	4873.5	4713.2	4628.7	4560.5	4511.3	4472.1	4457.0
62.5°	5591.7	5374.6	5201.7	5110.8	5031.3	5001.0	4951.8	4958.1
65°	6198.9	5978.0	5810.1	5736.9	5662.4	5642.2	5596.8	5613.2
67.5°	6856.5	6674.8	6490.5	6422.3	6354.1	6333.9	6287.2	6301.1
70°	7446.0	7215.0	7005.5	6871.7	6755.5	6662.1	6602.8	6578.8
72.5°	7563.4	7163.2	6833.8	6499.3	6306.2	6137.0	6067.6	6041.1
75°	6795.9	6174.9	5705.4	5312.8	5095.7	4849.5	4823.0	4786.4
77.5°	5286.3	4579.4	4011.4	3506.5	3214.9	2914.5	2811.0	2732.8
80°	3153.1	2423.5	1878.2	1316.5	1074.2	864.6	812.9	758.6
82.5°	1128.4	723.3	487.2	379.9	339.5	313.0	292.8	266.3
85°	272.6	229.7	217.1	196.9	194.4	165.4	117.4	104.8
87.5°	87.1	79.5	80.8	77.0	80.8	60.6	49.2	44.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)