

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: P196445

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196445
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-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 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: 19935.4 lumens
Efficiency: N/A
Efficacy: 123.1 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

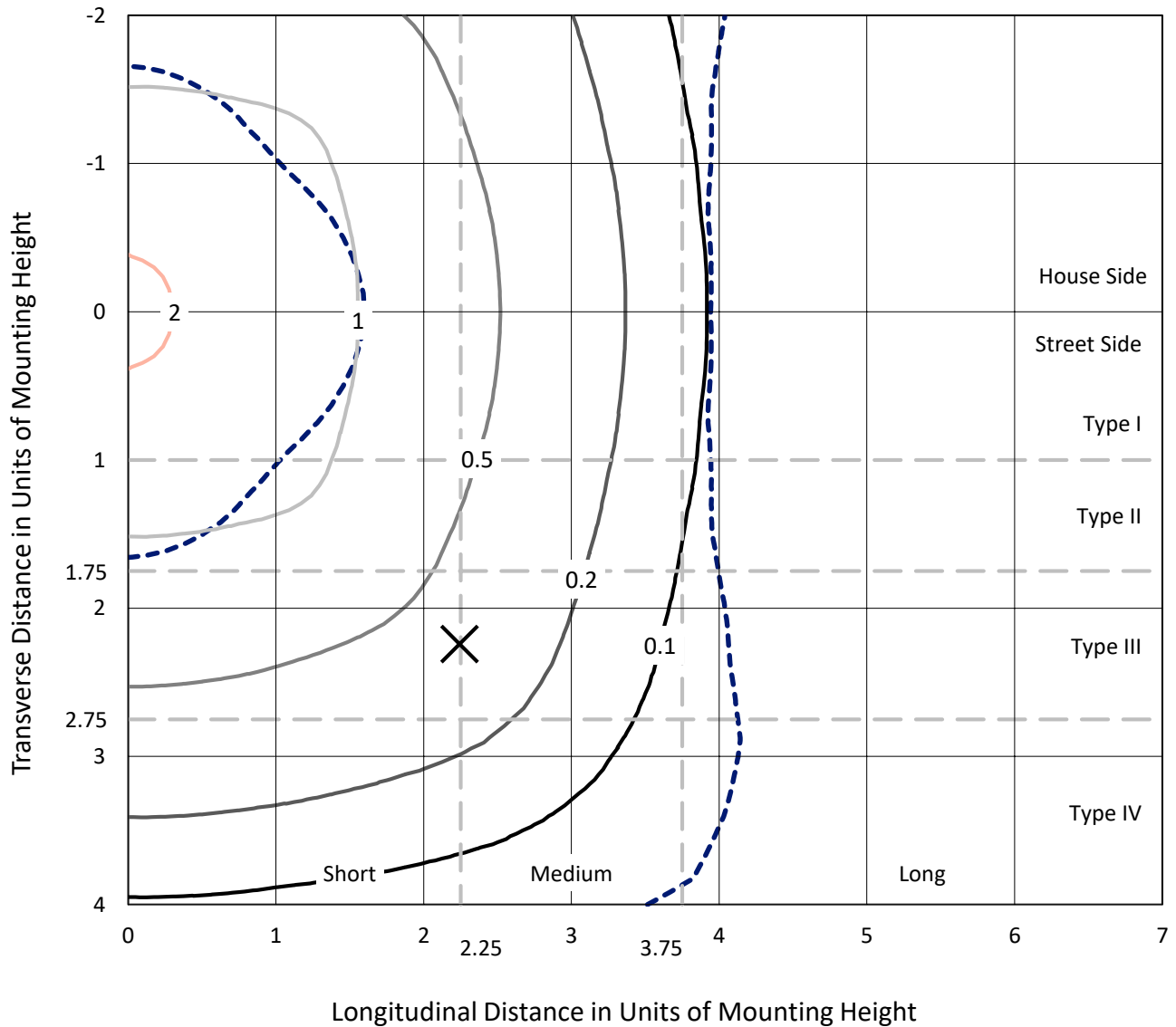
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

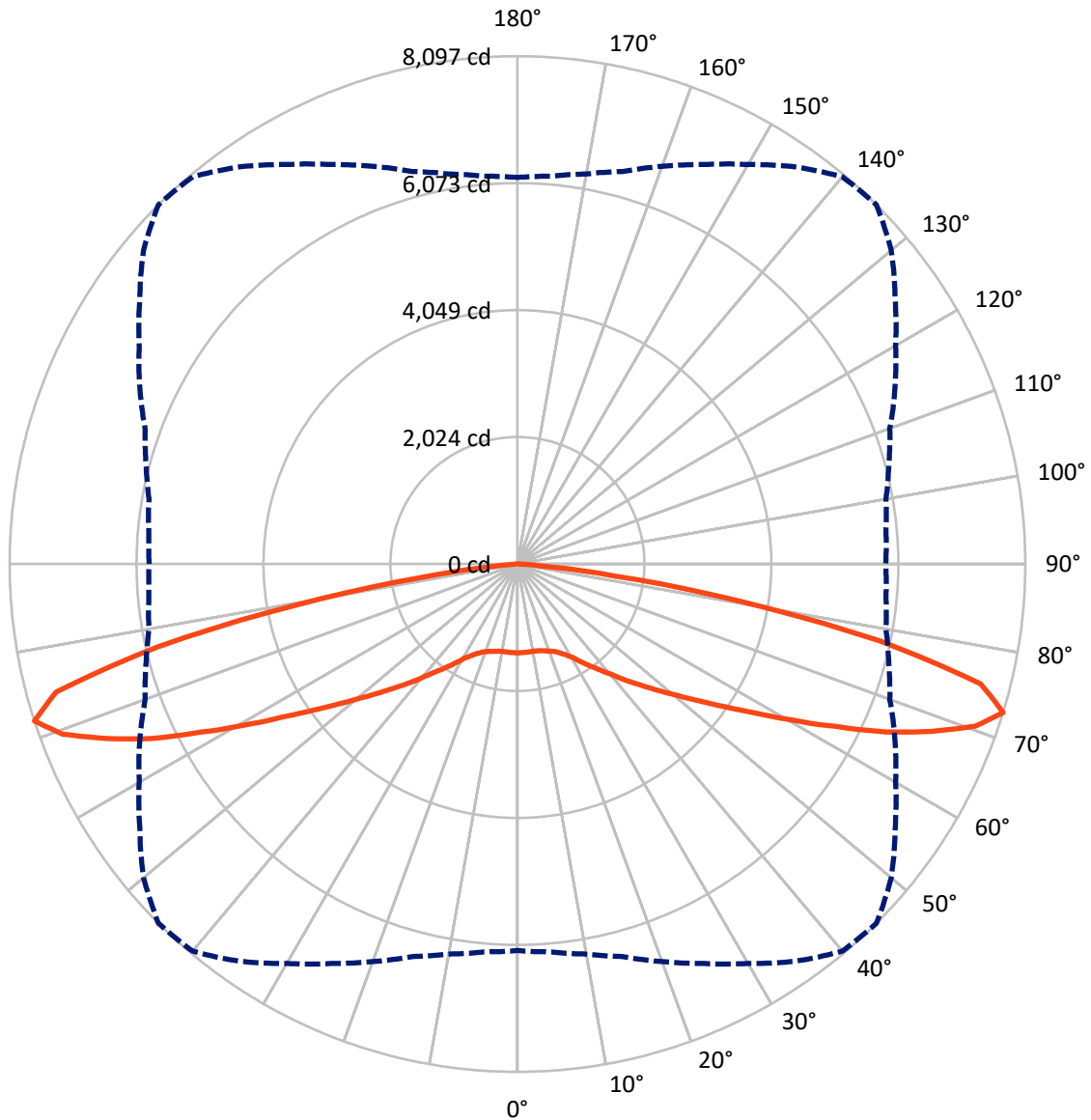
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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	9967.7	0.0	9967.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9967.7	0.0	9967.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	19935.4	0.0	19935.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.3	0.7
10°-20°	409.4	2.1
20°-30°	739.1	3.7
30°-40°	1260.7	6.3
40°-50°	2146.3	10.8
50°-60°	3454.2	17.3
60°-70°	5744.4	28.8
70°-80°	5557.0	27.9
80°-90°	489.1	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°	19935.4	100.0
0°-180°	19935.4	100.0



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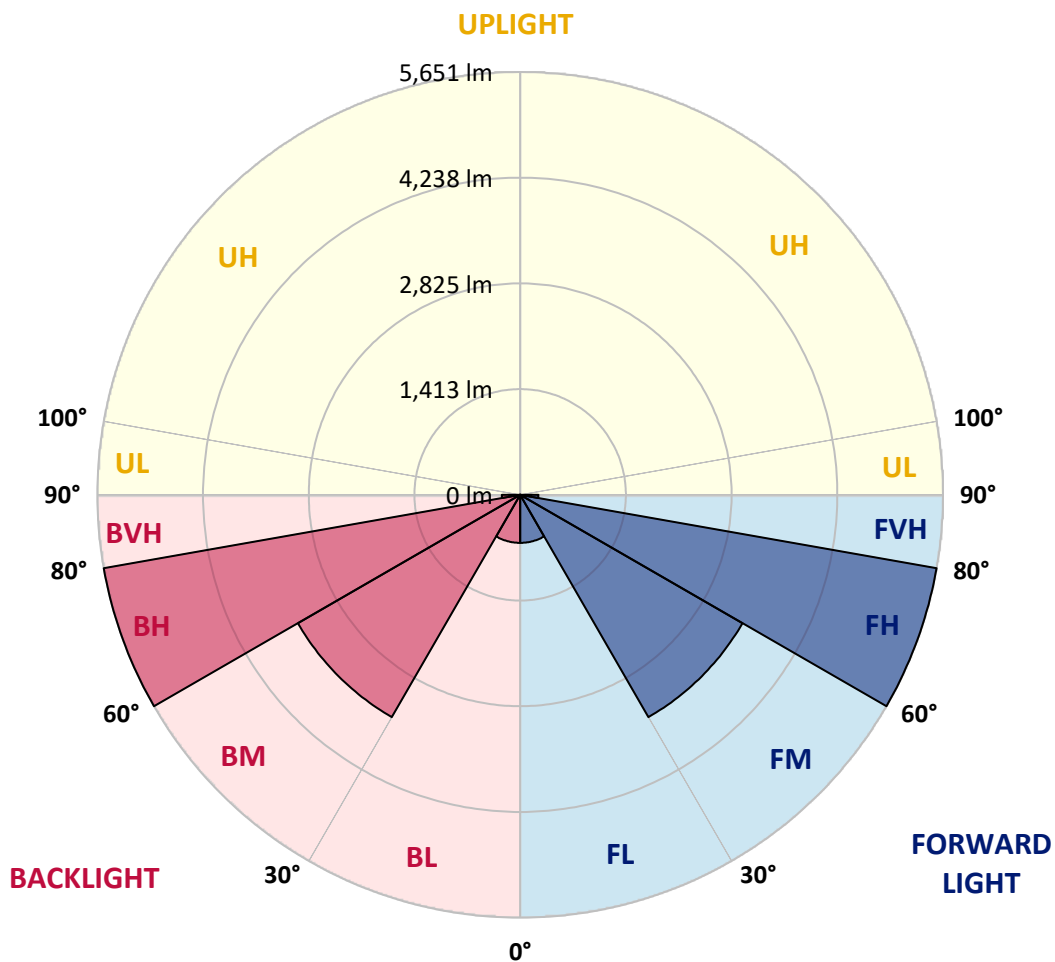
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	641.9	3.2			
FM (30°-60°)	3430.6	17.2			
FH (60°-80°)	5650.7	28.3			G3/7500
FVH (80°-90°)	244.5	1.2			G3/500
BL (0°-30°)	641.9	3.2	B2/1000		
BM (30°-60°)	3430.6	17.2	B3/5000		
BH (60°-80°)	5650.7	28.3	B5		G3/7500
BVH (80°-90°)	244.5	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°	1417.3	1417.3	1417.3	1417.3	1417.3	1417.3	1417.3	1417.3	1417.3	1417.3	1417.3
2.5°	1428.3	1428.3	1429.5	1428.3	1425.9	1424.6	1420.9	1418.5	1416.0	1414.8	1412.4
5°	1429.5	1429.5	1430.8	1429.5	1427.0	1424.6	1422.1	1418.5	1416.0	1413.6	1412.4
7.5°	1434.5	1435.6	1436.9	1435.6	1430.8	1428.3	1424.6	1420.9	1416.0	1413.6	1411.1
10°	1444.3	1444.3	1444.3	1443.0	1439.4	1434.5	1429.5	1425.9	1419.8	1413.6	1409.9
12.5°	1451.6	1452.8	1452.8	1450.4	1445.5	1439.4	1434.5	1430.8	1425.9	1420.9	1417.3
15°	1462.7	1462.7	1461.5	1456.5	1449.3	1444.3	1441.7	1440.6	1439.4	1436.9	1433.3
17.5°	1484.8	1483.5	1479.8	1472.5	1463.8	1460.2	1457.7	1457.7	1457.7	1456.5	1454.0
20°	1516.6	1516.6	1511.7	1499.5	1492.2	1488.4	1484.8	1484.8	1484.8	1481.1	1477.4
22.5°	1568.2	1569.4	1562.1	1547.3	1537.5	1530.1	1525.3	1521.6	1517.8	1515.4	1509.3
25°	1638.2	1636.9	1628.3	1609.9	1602.5	1595.1	1585.4	1579.3	1574.3	1570.6	1563.3
27.5°	1711.8	1710.6	1700.7	1684.8	1679.9	1668.8	1661.4	1652.9	1646.7	1640.6	1633.2
30°	1806.3	1800.1	1792.7	1780.5	1777.9	1769.5	1759.6	1747.4	1737.5	1727.7	1719.0
32.5°	1891.0	1891.0	1880.0	1873.7	1878.6	1875.0	1876.2	1868.8	1862.7	1859.0	1850.5
35°	2008.7	2008.7	2003.9	1996.3	1997.7	1989.1	1987.9	1989.1	1994.0	1994.0	1984.1
37.5°	2165.7	2168.2	2152.3	2149.7	2143.6	2131.4	2125.3	2127.8	2138.8	2144.9	2131.4
40°	2360.9	2365.8	2360.9	2344.9	2337.6	2316.8	2304.4	2304.4	2313.0	2319.1	2314.2
42.5°	2553.5	2562.1	2553.5	2541.3	2535.2	2519.2	2513.1	2518.0	2529.1	2536.4	2529.1
45°	2768.3	2774.4	2763.3	2748.6	2741.4	2732.7	2729.0	2732.7	2744.9	2752.3	2749.8
47.5°	2979.3	2987.9	2974.4	2968.2	2968.2	2959.8	2969.4	2979.3	2990.3	3007.6	3000.2
50°	3185.5	3196.5	3187.9	3189.2	3199.0	3215.0	3233.3	3252.9	3272.6	3291.0	3293.4
52.5°	3369.5	3386.7	3387.9	3410.0	3440.7	3465.2	3516.7	3559.6	3606.3	3622.3	3615.0
55°	3563.4	3586.8	3617.3	3651.8	3700.8	3751.1	3838.3	3915.6	3976.9	4015.0	4008.8
57.5°	3840.7	3864.1	3895.9	3952.4	4025.9	4094.7	4213.7	4334.0	4427.3	4484.9	4456.6
60°	4200.3	4224.8	4266.5	4326.6	4422.4	4515.5	4678.8	4851.7	4996.7	5062.8	5011.2
62.5°	4676.3	4699.7	4726.7	4806.5	4913.2	5033.5	5238.3	5460.4	5644.6	5708.4	5635.9
65°	5354.9	5383.1	5391.7	5456.7	5561.1	5672.7	5893.6	6143.8	6353.8	6458.1	6313.2
67.5°	6119.4	6130.4	6164.7	6240.9	6347.6	6448.3	6622.4	6859.3	7060.6	7118.2	6963.6
70°	6567.2	6589.3	6649.5	6755.0	6882.6	7040.8	7231.1	7486.3	7714.6	7741.6	7545.2
72.5°	6162.3	6207.7	6314.5	6478.8	6746.4	7027.4	7355.0	7731.7	8059.4	8097.4	7782.1
75°	4942.7	4994.1	5121.7	5302.2	5618.7	6035.9	6509.5	7075.3	7566.1	7628.7	7211.4
77.5°	2634.5	2698.2	2883.6	3126.6	3578.1	4130.3	4700.9	5346.3	5763.5	5904.6	5604.0
80°	663.9	698.1	787.8	930.2	1235.6	1681.1	2173.1	2867.6	3385.5	3605.1	3385.5
82.5°	257.7	283.4	308.0	325.1	354.6	415.9	574.2	936.3	1261.4	1553.4	1344.9
85°	99.4	105.6	152.2	173.0	173.0	190.2	218.4	257.7	319.0	348.5	292.0
87.5°	39.3	42.9	52.8	81.0	83.5	73.6	78.5	88.4	67.5	56.5	63.8
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°	1417.3	1417.3	1417.3	1417.3	1417.3	1417.3	1417.3	1417.3
2.5°	1411.1	1409.9	1407.5	1408.7	1407.5	1407.5	1407.5	1407.5
5°	1409.9	1409.9	1407.5	1407.5	1407.5	1408.7	1407.5	1407.5
7.5°	1408.7	1407.5	1405.0	1403.8	1403.8	1402.6	1402.6	1402.6
10°	1406.1	1403.8	1401.4	1400.0	1400.0	1397.7	1397.7	1397.7
12.5°	1412.4	1408.7	1406.1	1405.0	1405.0	1405.0	1406.1	1406.1
15°	1429.5	1422.1	1418.5	1417.3	1418.5	1420.9	1422.1	1423.4
17.5°	1447.9	1440.6	1434.5	1432.0	1433.3	1436.9	1440.6	1443.0
20°	1471.2	1465.1	1457.7	1455.4	1455.4	1460.2	1462.7	1466.4
22.5°	1504.4	1499.5	1493.3	1489.6	1487.2	1493.3	1497.1	1499.5
25°	1557.2	1552.2	1547.3	1543.7	1542.4	1548.5	1551.1	1552.2
27.5°	1627.1	1622.2	1619.8	1618.4	1614.9	1617.2	1621.0	1619.8
30°	1717.9	1721.6	1717.9	1717.9	1711.8	1714.2	1711.8	1709.3
32.5°	1839.4	1835.7	1824.6	1817.3	1808.7	1808.7	1805.0	1801.3
35°	1960.8	1948.5	1942.4	1946.1	1942.4	1945.0	1938.8	1932.6
37.5°	2104.5	2097.0	2095.8	2106.8	2104.5	2106.8	2106.8	2098.4
40°	2294.7	2289.7	2298.3	2316.8	2324.1	2322.9	2325.2	2314.2
42.5°	2513.1	2504.4	2508.1	2524.1	2532.6	2535.2	2533.9	2524.1
45°	2731.5	2733.8	2733.8	2751.0	2759.7	2764.6	2755.9	2752.3
47.5°	2978.1	2981.8	2973.2	2984.2	2986.7	2995.3	2987.9	2981.8
50°	3262.8	3249.3	3229.6	3233.3	3233.3	3230.9	3222.3	3215.0
52.5°	3580.5	3550.0	3513.1	3500.7	3487.3	3473.8	3456.6	3443.2
55°	3942.5	3889.8	3823.5	3792.8	3767.0	3736.4	3697.2	3683.6
57.5°	4362.1	4271.4	4183.1	4127.9	4061.6	4021.1	3970.8	3968.3
60°	4860.4	4737.7	4581.9	4499.7	4433.4	4385.5	4347.5	4332.7
62.5°	5435.8	5224.9	5056.7	4968.3	4891.1	4861.6	4813.8	4819.9
65°	6026.0	5811.4	5648.1	5577.0	5504.6	5485.1	5440.8	5456.7
67.5°	6665.5	6488.7	6309.6	6243.3	6177.1	6157.5	6112.0	6125.5
70°	7238.4	7013.9	6810.2	6680.1	6567.2	6476.5	6418.8	6395.5
72.5°	7352.6	6963.6	6643.3	6318.1	6130.4	5966.0	5898.5	5872.6
75°	6606.5	6002.8	5546.3	5164.6	4953.7	4714.4	4688.7	4653.1
77.5°	5138.9	4451.8	3899.6	3408.8	3125.4	2833.3	2732.7	2656.6
80°	3065.2	2355.9	1825.8	1279.9	1044.2	840.5	790.3	737.5
82.5°	1097.0	703.1	473.6	369.3	330.1	304.3	284.7	259.0
85°	265.1	223.3	211.1	191.4	189.0	160.7	114.0	101.8
87.5°	84.6	77.3	78.5	74.9	78.5	58.9	47.8	42.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)