

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: P270570

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270570
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-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 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: 17908.1 lumens
Efficiency: N/A
Efficacy: 110.5 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

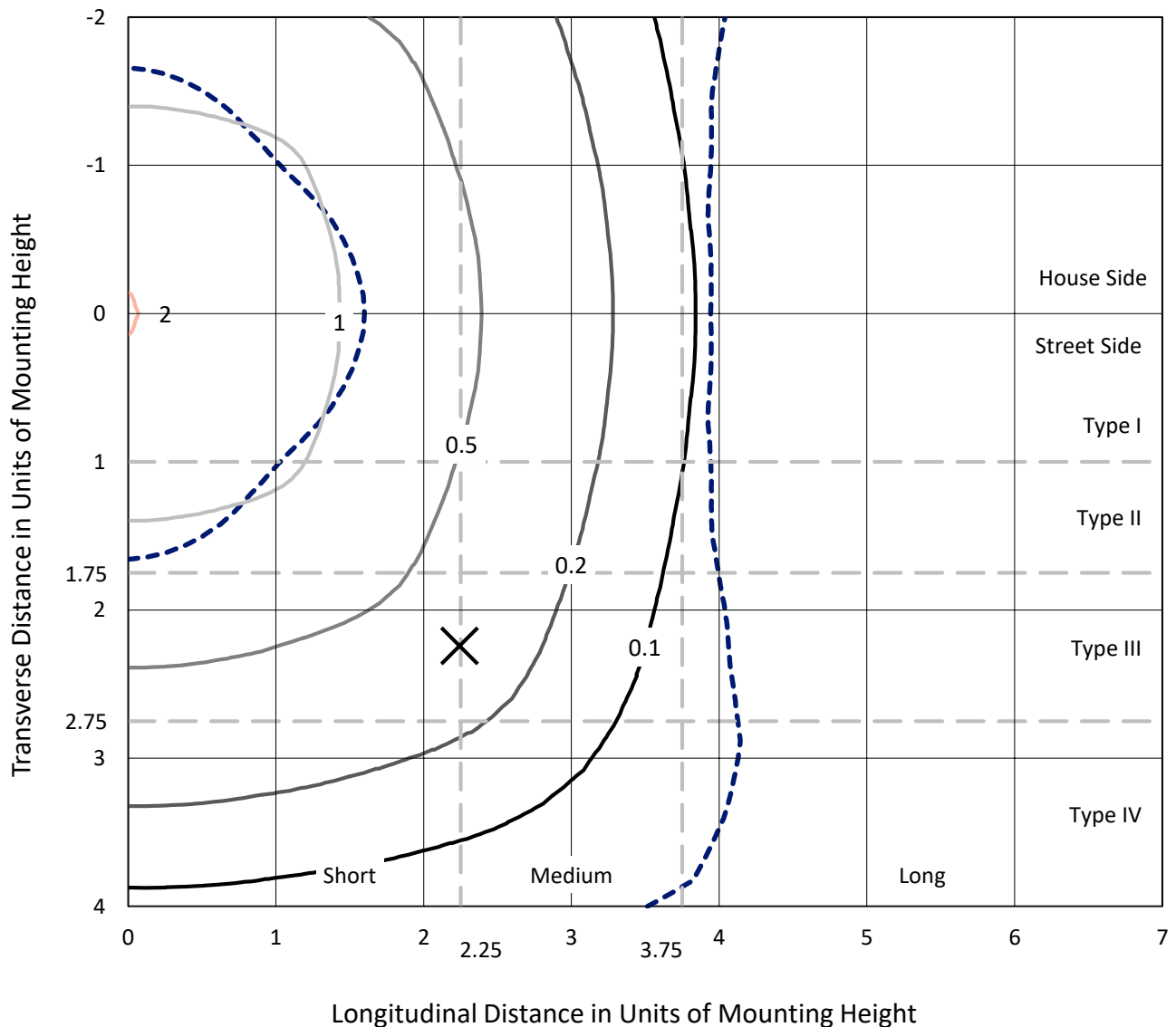
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

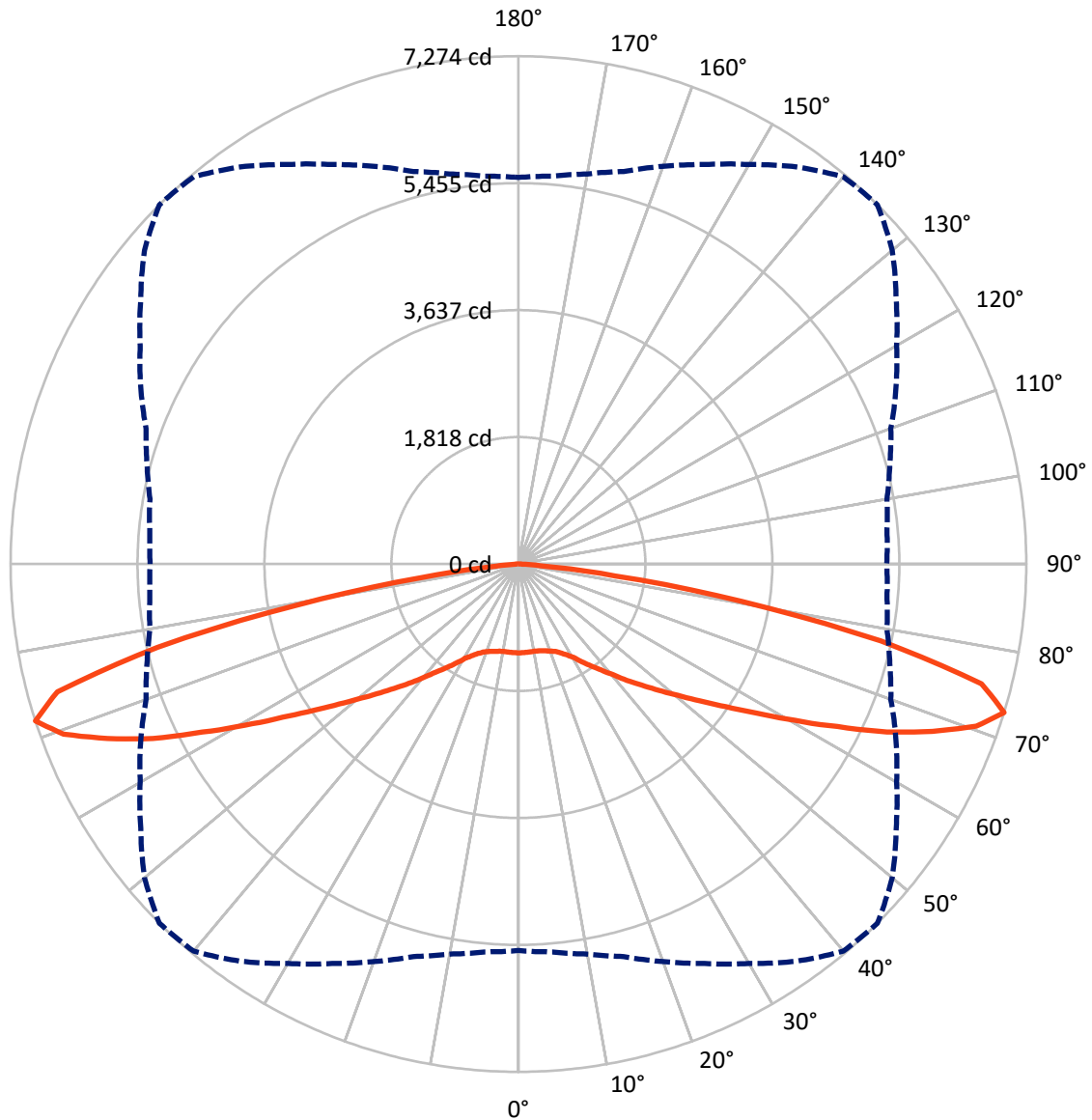
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 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	8954.0	0.0	8954.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8954.0	0.0	8954.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	17908.1	0.0	17908.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.5	0.7
10°-20°	367.8	2.1
20°-30°	663.9	3.7
30°-40°	1132.5	6.3
40°-50°	1928.1	10.8
50°-60°	3102.9	17.3
60°-70°	5160.2	28.8
70°-80°	4991.9	27.9
80°-90°	439.3	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°	17908.1	100.0
0°-180°	17908.1	100.0



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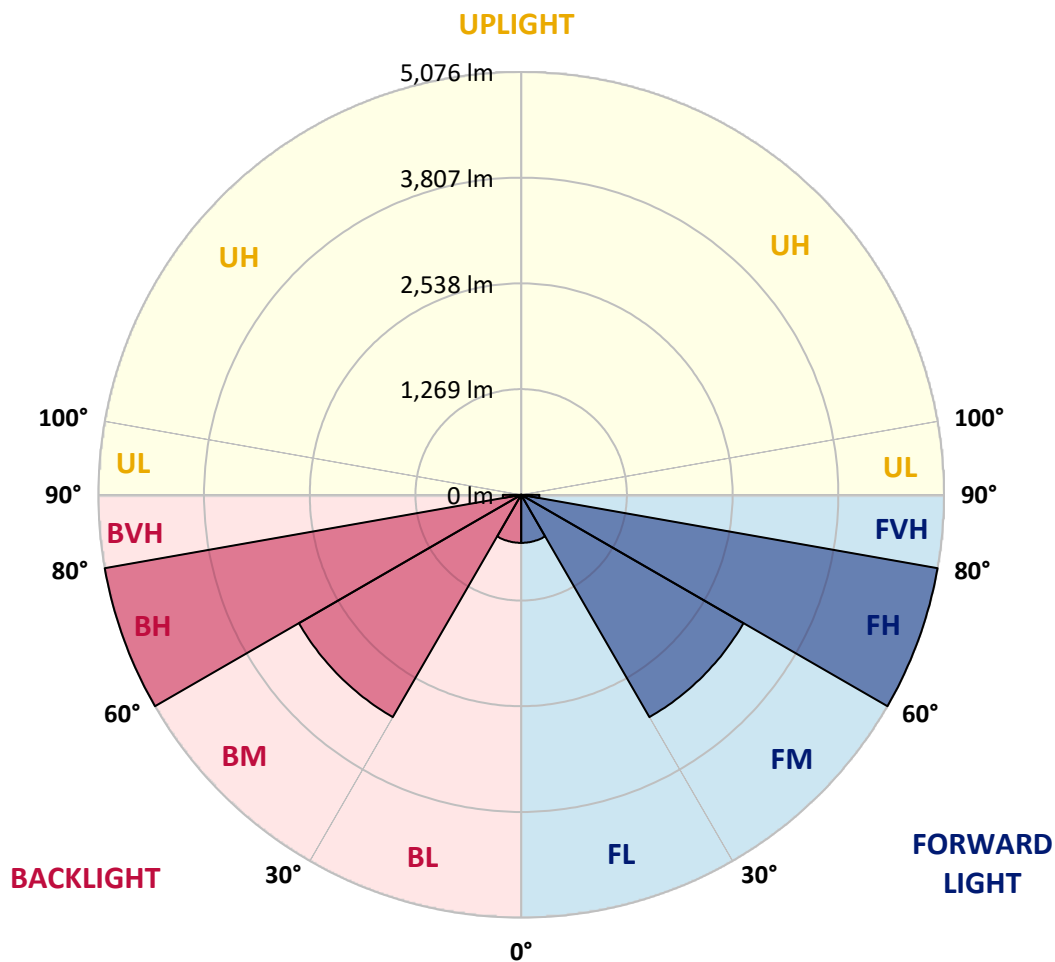
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	576.6	3.2			
FM	(30°-60°)	3081.7	17.2			
FH	(60°-80°)	5076.1	28.3			G3/7500
FVH	(80°-90°)	219.7	1.2			G2/225
BL	(0°-30°)	576.6	3.2	B2/1000		
BM	(30°-60°)	3081.7	17.2	B3/5000		
BH	(60°-80°)	5076.1	28.3	B5		G3/7500
BVH	(80°-90°)	219.7	1.2			G2/225
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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CATALOG NUMBER: NAV-AF-05-D-UNV-5WQ-7027-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1273.2	1273.2	1273.2	1273.2	1273.2	1273.2	1273.2	1273.2	1273.2	1273.2	1273.2
2.5°	1283.0	1283.0	1284.1	1283.0	1280.9	1279.7	1276.4	1274.2	1272.0	1270.9	1268.8
5°	1284.1	1284.1	1285.3	1284.1	1281.9	1279.7	1277.5	1274.2	1272.0	1269.8	1268.8
7.5°	1288.6	1289.6	1290.8	1289.6	1285.3	1283.0	1279.7	1276.4	1272.0	1269.8	1267.6
10°	1297.4	1297.4	1297.4	1296.3	1293.0	1288.6	1284.1	1280.9	1275.4	1269.8	1266.5
12.5°	1304.0	1305.1	1305.1	1302.9	1298.5	1293.0	1288.6	1285.3	1280.9	1276.4	1273.2
15°	1314.0	1314.0	1312.9	1308.4	1301.9	1297.4	1295.1	1294.1	1293.0	1290.8	1287.5
17.5°	1333.8	1332.6	1329.3	1322.8	1314.9	1311.7	1309.5	1309.5	1309.5	1308.4	1306.1
20°	1362.4	1362.4	1358.0	1347.0	1340.5	1337.0	1333.8	1333.8	1333.8	1330.5	1327.2
22.5°	1408.7	1409.8	1403.2	1389.9	1381.1	1374.5	1370.2	1366.9	1363.4	1361.3	1355.8
25°	1471.6	1470.4	1462.7	1446.2	1439.5	1432.9	1424.2	1418.7	1414.2	1410.9	1404.3
27.5°	1537.7	1536.6	1527.7	1513.5	1509.1	1499.1	1492.4	1484.8	1479.2	1473.8	1467.1
30°	1622.6	1617.0	1610.4	1599.4	1597.1	1589.6	1580.7	1569.7	1560.8	1552.0	1544.2
32.5°	1698.7	1698.7	1688.8	1683.2	1687.6	1684.3	1685.4	1678.8	1673.3	1669.9	1662.3
35°	1804.4	1804.4	1800.1	1793.3	1794.5	1786.8	1785.7	1786.8	1791.2	1791.2	1782.3
37.5°	1945.5	1947.7	1933.4	1931.1	1925.6	1914.6	1909.2	1911.4	1921.3	1926.8	1914.6
40°	2120.8	2125.2	2120.8	2106.4	2099.9	2081.2	2070.1	2070.1	2077.8	2083.3	2078.9
42.5°	2293.8	2301.5	2293.8	2282.9	2277.4	2263.0	2257.5	2261.9	2271.9	2278.5	2271.9
45°	2486.8	2492.3	2482.3	2469.1	2462.6	2454.8	2451.5	2454.8	2465.8	2472.4	2470.2
47.5°	2676.3	2684.0	2671.9	2666.3	2666.3	2658.8	2667.4	2676.3	2686.2	2701.7	2695.1
50°	2861.6	2871.4	2863.7	2864.9	2873.7	2888.1	2904.5	2922.1	2939.8	2956.3	2958.5
52.5°	3026.8	3042.3	3043.4	3063.2	3090.8	3112.8	3159.1	3197.6	3239.6	3253.9	3247.4
55°	3201.0	3222.0	3249.4	3280.4	3324.4	3369.6	3448.0	3517.4	3572.5	3606.7	3601.1
57.5°	3450.1	3471.1	3499.7	3550.5	3616.5	3678.3	3785.2	3893.3	3977.1	4028.8	4003.4
60°	3773.2	3795.2	3832.6	3886.6	3972.7	4056.3	4203.0	4358.3	4488.6	4547.9	4501.6
62.5°	4200.7	4221.8	4246.0	4317.7	4413.6	4521.6	4705.6	4905.1	5070.6	5127.9	5062.8
65°	4810.3	4835.7	4843.4	4901.8	4995.6	5095.8	5294.3	5519.0	5707.7	5801.3	5671.2
67.5°	5497.1	5507.0	5537.8	5606.2	5702.1	5792.5	5948.9	6161.7	6342.6	6394.3	6255.4
70°	5899.3	5919.2	5973.3	6068.1	6182.7	6324.8	6495.7	6725.0	6930.1	6954.3	6777.9
72.5°	5535.6	5576.4	5672.3	5819.9	6060.3	6312.7	6607.0	6945.4	7239.8	7273.9	6990.7
75°	4440.1	4486.2	4600.8	4763.0	5047.3	5422.1	5847.5	6355.8	6796.7	6852.9	6478.0
77.5°	2366.6	2423.8	2590.4	2808.6	3214.2	3710.3	4222.8	4802.6	5177.4	5304.1	5034.1
80°	596.4	627.1	707.7	835.6	1109.9	1510.1	1952.1	2576.0	3041.2	3238.5	3041.2
82.5°	231.5	254.6	276.7	292.0	318.5	373.6	515.8	841.1	1133.1	1395.4	1208.1
85°	89.3	94.9	136.7	155.4	155.4	170.9	196.2	231.5	286.6	313.1	262.3
87.5°	35.3	38.5	47.4	72.8	75.0	66.1	70.5	79.4	60.6	50.8	57.3
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°	1273.2	1273.2	1273.2	1273.2	1273.2	1273.2	1273.2	1273.2
2.5°	1267.6	1266.5	1264.4	1265.4	1264.4	1264.4	1264.4	1264.4
5°	1266.5	1266.5	1264.4	1264.4	1264.4	1265.4	1264.4	1264.4
7.5°	1265.4	1264.4	1262.1	1261.0	1261.0	1260.0	1260.0	1260.0
10°	1263.1	1261.0	1258.9	1257.6	1257.6	1255.6	1255.6	1255.6
12.5°	1268.8	1265.4	1263.1	1262.1	1262.1	1262.1	1263.1	1263.1
15°	1284.1	1277.5	1274.2	1273.2	1274.2	1276.4	1277.5	1278.6
17.5°	1300.7	1294.1	1288.6	1286.4	1287.5	1290.8	1294.1	1296.3
20°	1321.6	1316.1	1309.5	1307.4	1307.4	1311.7	1314.0	1317.3
22.5°	1351.4	1347.0	1341.4	1338.1	1336.0	1341.4	1344.9	1347.0
25°	1398.8	1394.3	1389.9	1386.7	1385.5	1391.0	1393.4	1394.3
27.5°	1461.6	1457.2	1455.1	1453.8	1450.7	1452.7	1456.2	1455.1
30°	1543.2	1546.5	1543.2	1543.2	1537.7	1539.9	1537.7	1535.5
32.5°	1652.3	1649.0	1639.0	1632.5	1624.8	1624.8	1621.4	1618.1
35°	1761.4	1750.3	1744.9	1748.2	1744.9	1747.2	1741.6	1736.1
37.5°	1890.5	1883.7	1882.7	1892.5	1890.5	1892.5	1892.5	1885.0
40°	2061.3	2056.8	2064.6	2081.2	2087.8	2086.7	2088.7	2078.9
42.5°	2257.5	2249.7	2253.0	2267.4	2275.0	2277.4	2276.2	2267.4
45°	2453.7	2455.8	2455.8	2471.2	2479.1	2483.5	2475.6	2472.4
47.5°	2675.2	2678.6	2670.8	2680.7	2683.0	2690.7	2684.0	2678.6
50°	2931.0	2918.9	2901.2	2904.5	2904.5	2902.3	2894.6	2888.1
52.5°	3216.4	3189.0	3155.8	3144.7	3132.7	3120.5	3105.1	3093.0
55°	3541.6	3494.2	3434.7	3407.1	3383.9	3356.4	3321.2	3309.0
57.5°	3918.5	3837.0	3757.7	3708.1	3648.6	3612.2	3567.0	3564.7
60°	4366.1	4255.9	4115.9	4042.1	3982.5	3939.5	3905.4	3892.1
62.5°	4883.0	4693.6	4542.5	4463.0	4393.7	4367.2	4324.3	4329.7
65°	5413.2	5220.4	5073.7	5009.8	4944.8	4927.3	4887.5	4901.8
67.5°	5987.7	5828.8	5667.9	5608.4	5548.9	5531.3	5490.4	5502.6
70°	6502.3	6300.6	6117.6	6000.8	5899.3	5817.9	5766.0	5745.1
72.5°	6604.9	6255.4	5967.7	5675.6	5507.0	5359.3	5298.7	5275.4
75°	5934.7	5392.3	4982.3	4639.4	4449.9	4235.0	4211.9	4179.9
77.5°	4616.3	3999.1	3503.0	3062.1	2807.6	2545.2	2454.8	2386.4
80°	2753.5	2116.3	1640.1	1149.7	938.0	755.0	709.9	662.5
82.5°	985.4	631.6	425.4	331.7	296.5	273.4	255.7	232.7
85°	238.1	200.6	189.6	171.9	169.8	144.4	102.4	91.4
87.5°	76.0	69.4	70.5	67.3	70.5	52.9	42.9	38.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)