

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: P270491

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270491
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-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 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: 17816.8 lumens
Efficiency: N/A
Efficacy: 104.2 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

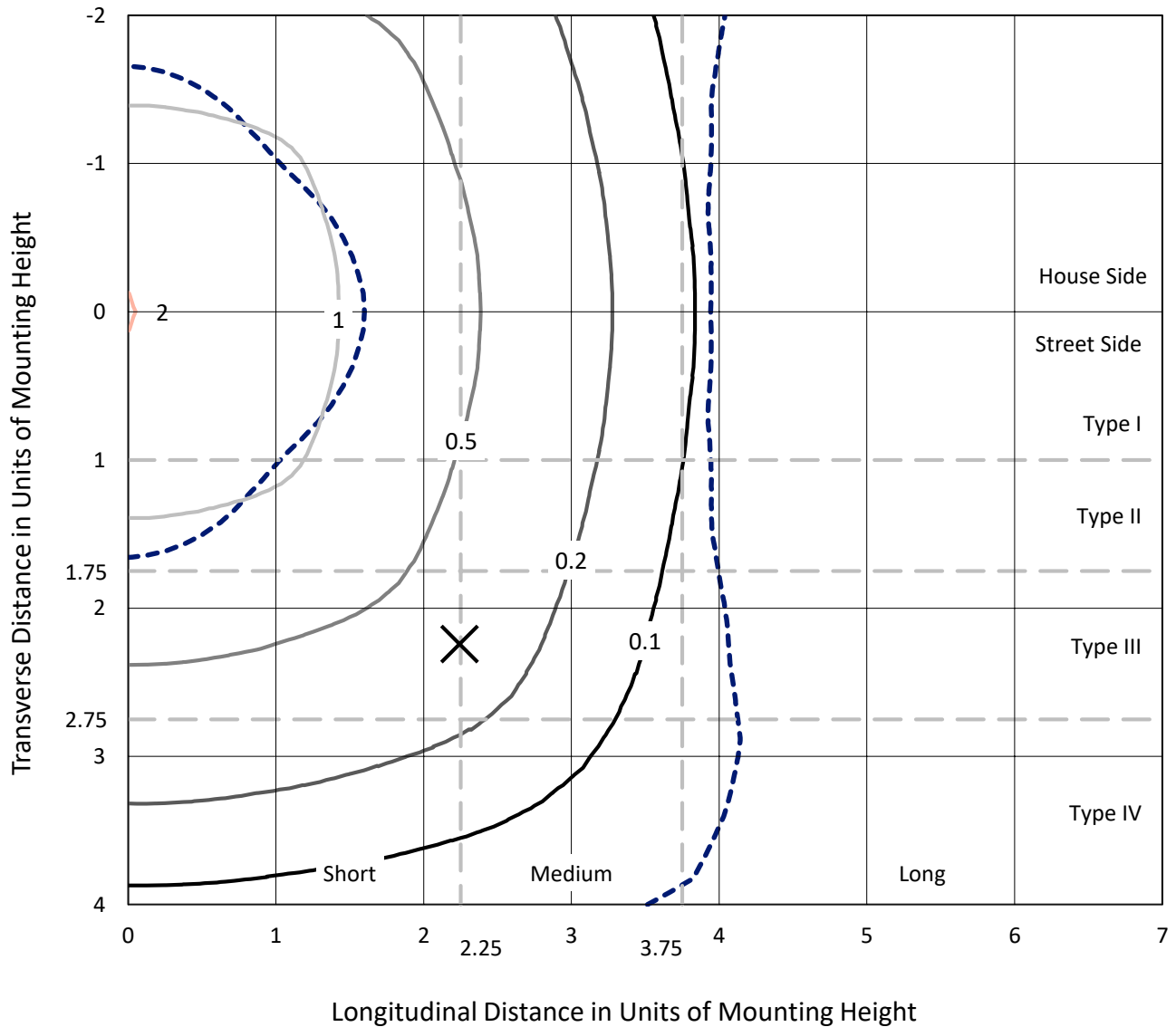
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

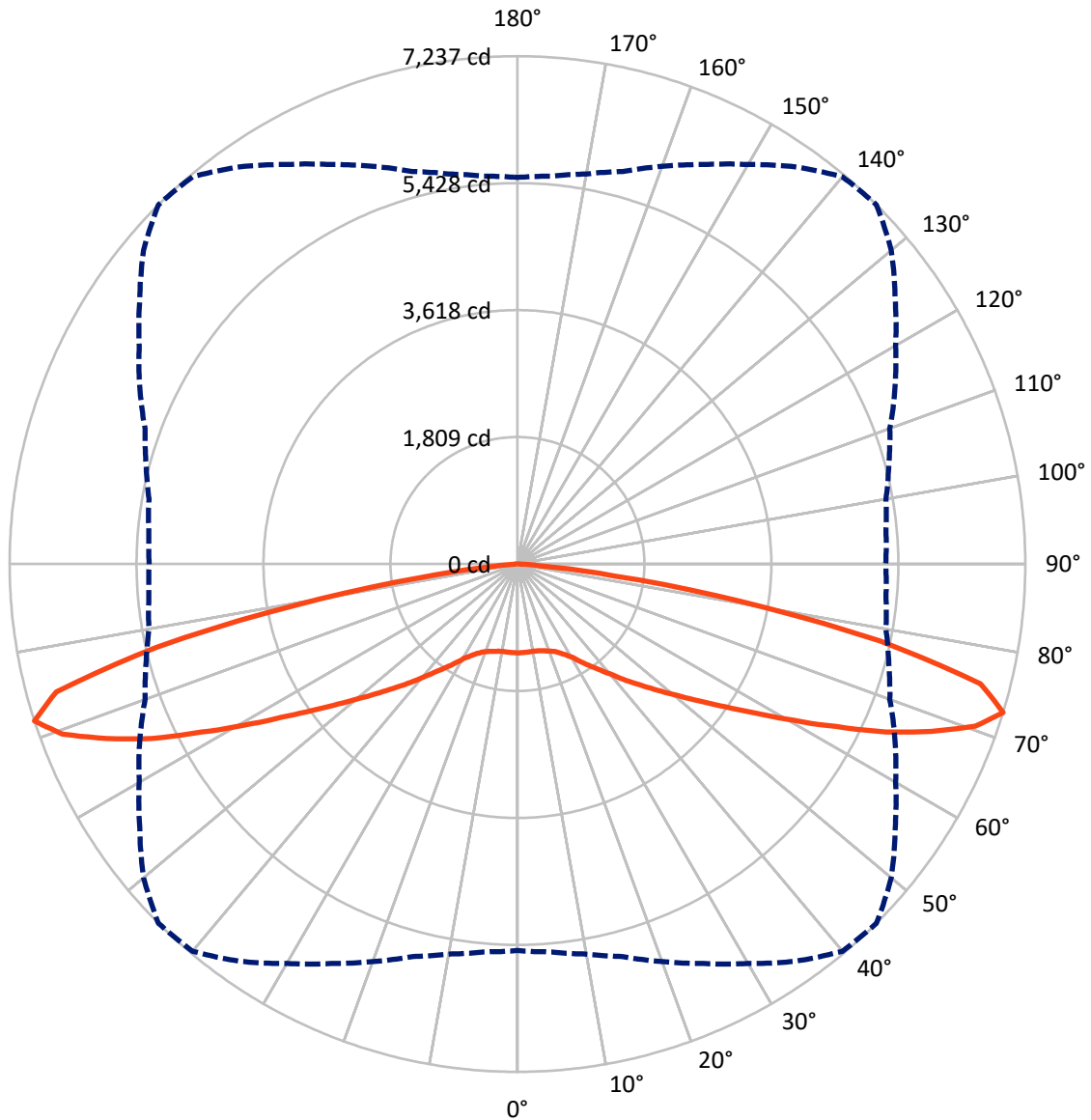
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 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	8908.4	0.0	8908.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8908.4	0.0	8908.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	17816.8	0.0	17816.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.9	0.7
10°-20°	365.9	2.1
20°-30°	660.5	3.7
30°-40°	1126.7	6.3
40°-50°	1918.2	10.8
50°-60°	3087.1	17.3
60°-70°	5133.9	28.8
70°-80°	4966.5	27.9
80°-90°	437.1	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°	17816.8	100.0
0°-180°	17816.8	100.0



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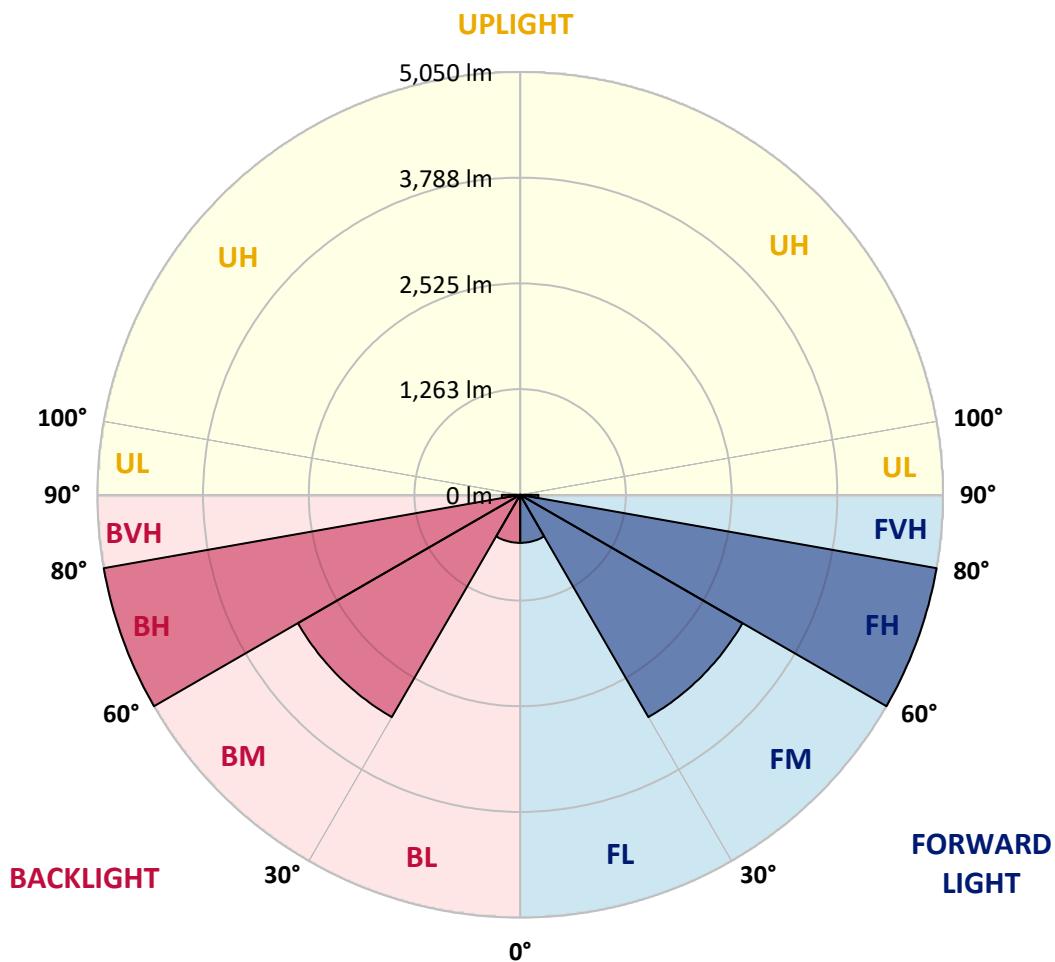
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	573.7	3.2			
FM (30°-60°)	3066.0	17.2			
FH (60°-80°)	5050.2	28.3			G3/7500
FVH (80°-90°)	218.6	1.2			G2/225
BL (0°-30°)	573.7	3.2	B2/1000		
BM (30°-60°)	3066.0	17.2	B3/5000		
BH (60°-80°)	5050.2	28.3	B5		G3/7500
BVH (80°-90°)	218.6	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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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6
2.5°	1276.5	1276.5	1277.6	1276.5	1274.3	1273.2	1269.9	1267.8	1265.5	1264.5	1262.3
5°	1277.6	1277.6	1278.6	1277.6	1275.5	1273.2	1271.0	1267.8	1265.5	1263.3	1262.3
7.5°	1282.1	1283.0	1284.1	1283.0	1278.6	1276.5	1273.2	1269.9	1265.5	1263.3	1261.2
10°	1290.8	1290.8	1290.8	1289.6	1286.5	1282.1	1277.6	1274.3	1268.9	1263.3	1260.1
12.5°	1297.3	1298.4	1298.4	1296.3	1291.9	1286.5	1282.1	1278.6	1274.3	1269.9	1266.6
15°	1307.3	1307.3	1306.1	1301.7	1295.1	1290.8	1288.6	1287.5	1286.5	1284.1	1281.0
17.5°	1326.9	1325.9	1322.6	1315.9	1308.3	1305.0	1302.8	1302.8	1302.8	1301.7	1299.6
20°	1355.5	1355.5	1351.1	1340.1	1333.5	1330.2	1326.9	1326.9	1326.9	1323.7	1320.4
22.5°	1401.5	1402.7	1396.1	1382.9	1374.0	1367.5	1363.2	1359.9	1356.6	1354.4	1348.8
25°	1464.1	1462.9	1455.3	1438.8	1432.3	1425.7	1416.8	1411.3	1407.0	1403.7	1397.1
27.5°	1529.9	1528.7	1520.0	1505.6	1501.3	1491.5	1484.9	1477.3	1471.8	1466.3	1459.7
30°	1614.3	1608.9	1602.2	1591.3	1589.0	1581.3	1572.7	1561.7	1552.9	1544.0	1536.5
32.5°	1689.9	1689.9	1680.1	1674.6	1679.0	1675.7	1676.7	1670.2	1664.6	1661.4	1653.8
35°	1795.3	1795.3	1790.9	1784.3	1785.3	1777.7	1776.6	1777.7	1782.1	1782.1	1773.3
37.5°	1935.6	1937.9	1923.5	1921.4	1915.8	1904.9	1899.5	1901.6	1911.5	1917.0	1904.9
40°	2109.9	2114.4	2109.9	2095.7	2089.2	2070.6	2059.5	2059.5	2067.2	2072.7	2068.3
42.5°	2282.1	2289.8	2282.1	2271.2	2265.7	2251.4	2245.9	2250.3	2260.2	2266.9	2260.2
45°	2474.0	2479.5	2469.7	2456.5	2449.9	2442.2	2439.0	2442.2	2453.2	2459.7	2457.7
47.5°	2662.7	2670.4	2658.4	2652.9	2652.9	2645.1	2654.0	2662.7	2672.5	2687.9	2681.4
50°	2846.9	2856.8	2849.2	2850.2	2858.9	2873.3	2889.7	2907.3	2924.8	2941.2	2943.4
52.5°	3011.4	3026.7	3027.8	3047.6	3075.1	3096.9	3143.0	3181.3	3223.1	3237.3	3230.8
55°	3184.8	3205.5	3233.0	3263.6	3307.5	3352.5	3430.4	3499.4	3554.2	3588.3	3582.8
57.5°	3432.6	3453.4	3481.9	3532.3	3598.2	3659.5	3766.0	3873.4	3956.8	4008.2	3983.1
60°	3753.8	3775.8	3813.0	3866.8	3952.4	4035.7	4181.6	4336.2	4465.7	4524.9	4478.8
62.5°	4179.4	4200.3	4224.3	4295.6	4391.1	4498.5	4681.6	4880.1	5044.6	5101.7	5036.9
65°	4785.8	4811.1	4818.7	4876.9	4970.1	5069.9	5267.2	5491.0	5678.5	5771.7	5642.3
67.5°	5469.1	5478.9	5509.7	5577.7	5673.1	5762.9	5918.8	6130.4	6310.1	6361.7	6223.5
70°	5869.3	5889.1	5942.7	6037.1	6151.1	6292.6	6462.6	6690.8	6894.8	6918.8	6743.3
72.5°	5507.4	5548.0	5643.4	5790.4	6029.5	6280.6	6573.3	6910.0	7202.9	7236.8	6954.9
75°	4417.3	4463.4	4577.5	4738.6	5021.6	5394.5	5817.9	6323.3	6762.0	6818.0	6445.1
77.5°	2354.5	2411.6	2577.1	2794.3	3197.8	3691.3	4201.4	4778.2	5151.1	5277.2	5008.4
80°	593.3	624.1	704.0	831.3	1104.3	1502.4	1942.1	2563.0	3025.8	3222.0	3025.8
82.5°	230.2	253.3	275.3	290.6	316.9	371.8	513.2	836.7	1127.4	1388.4	1201.9
85°	88.8	94.3	136.1	154.6	154.6	170.0	195.2	230.2	285.1	311.4	261.0
87.5°	35.2	38.4	47.2	72.4	74.6	65.8	70.2	79.0	60.4	50.5	57.0
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°	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6	1266.6
2.5°	1261.2	1260.1	1257.8	1259.0	1257.8	1257.8	1257.8	1257.8
5°	1260.1	1260.1	1257.8	1257.8	1257.8	1259.0	1257.8	1257.8
7.5°	1259.0	1257.8	1255.7	1254.7	1254.7	1253.5	1253.5	1253.5
10°	1256.8	1254.7	1252.3	1251.2	1251.2	1249.2	1249.2	1249.2
12.5°	1262.3	1259.0	1256.8	1255.7	1255.7	1255.7	1256.8	1256.8
15°	1277.6	1271.0	1267.8	1266.6	1267.8	1269.9	1271.0	1272.1
17.5°	1294.1	1287.5	1282.1	1279.8	1281.0	1284.1	1287.5	1289.6
20°	1314.8	1309.4	1302.8	1300.7	1300.7	1305.0	1307.3	1310.4
22.5°	1344.6	1340.1	1334.6	1331.4	1329.1	1334.6	1337.9	1340.1
25°	1391.7	1387.3	1382.9	1379.5	1378.4	1384.0	1386.2	1387.3
27.5°	1454.1	1449.8	1447.6	1446.5	1443.1	1445.5	1448.6	1447.6
30°	1535.4	1538.5	1535.4	1535.4	1529.9	1532.0	1529.9	1527.7
32.5°	1643.9	1640.7	1630.8	1624.1	1616.5	1616.5	1613.1	1609.9
35°	1752.5	1741.5	1736.1	1739.3	1736.1	1738.2	1732.7	1727.3
37.5°	1880.8	1874.3	1873.1	1882.9	1880.8	1882.9	1882.9	1875.3
40°	2050.7	2046.3	2054.1	2070.6	2077.2	2076.0	2078.1	2068.3
42.5°	2245.9	2238.2	2241.6	2255.9	2263.5	2265.7	2264.5	2255.9
45°	2441.1	2443.4	2443.4	2458.8	2466.3	2470.8	2463.2	2459.7
47.5°	2661.6	2664.9	2657.1	2667.1	2669.3	2676.9	2670.4	2664.9
50°	2916.0	2904.0	2886.4	2889.7	2889.7	2887.5	2879.8	2873.3
52.5°	3200.0	3172.6	3139.8	3128.7	3116.7	3104.6	3089.4	3077.2
55°	3523.6	3476.4	3417.2	3389.8	3366.8	3339.3	3304.2	3292.2
57.5°	3898.6	3817.4	3738.6	3689.2	3630.0	3593.8	3548.8	3546.6
60°	4343.8	4234.3	4095.0	4021.4	3962.2	3919.5	3885.4	3872.4
62.5°	4858.3	4669.6	4519.4	4440.4	4371.3	4345.0	4302.3	4307.7
65°	5385.7	5193.8	5047.9	4984.3	4919.6	4902.1	4862.5	4876.9
67.5°	5957.1	5799.2	5639.0	5579.8	5520.7	5503.0	5462.5	5474.5
70°	6469.2	6268.6	6086.5	5970.2	5869.3	5788.1	5736.7	5715.7
72.5°	6571.2	6223.5	5937.3	5646.7	5478.9	5332.0	5271.7	5248.5
75°	5904.4	5364.9	4956.8	4615.9	4427.2	4213.4	4190.4	4158.6
77.5°	4592.9	3978.8	3485.2	3046.5	2793.2	2532.2	2442.2	2374.3
80°	2739.4	2105.5	1631.9	1143.8	933.2	751.3	706.2	659.0
82.5°	980.4	628.4	423.3	330.0	295.1	271.9	254.4	231.5
85°	236.9	199.7	188.6	171.0	168.9	143.6	102.0	91.0
87.5°	75.6	69.1	70.2	67.0	70.2	52.6	42.8	38.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)