

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: P270403

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270403  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)  
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-5MQ-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13541.5 lumens  
Efficiency: N/A  
Efficacy: 109.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

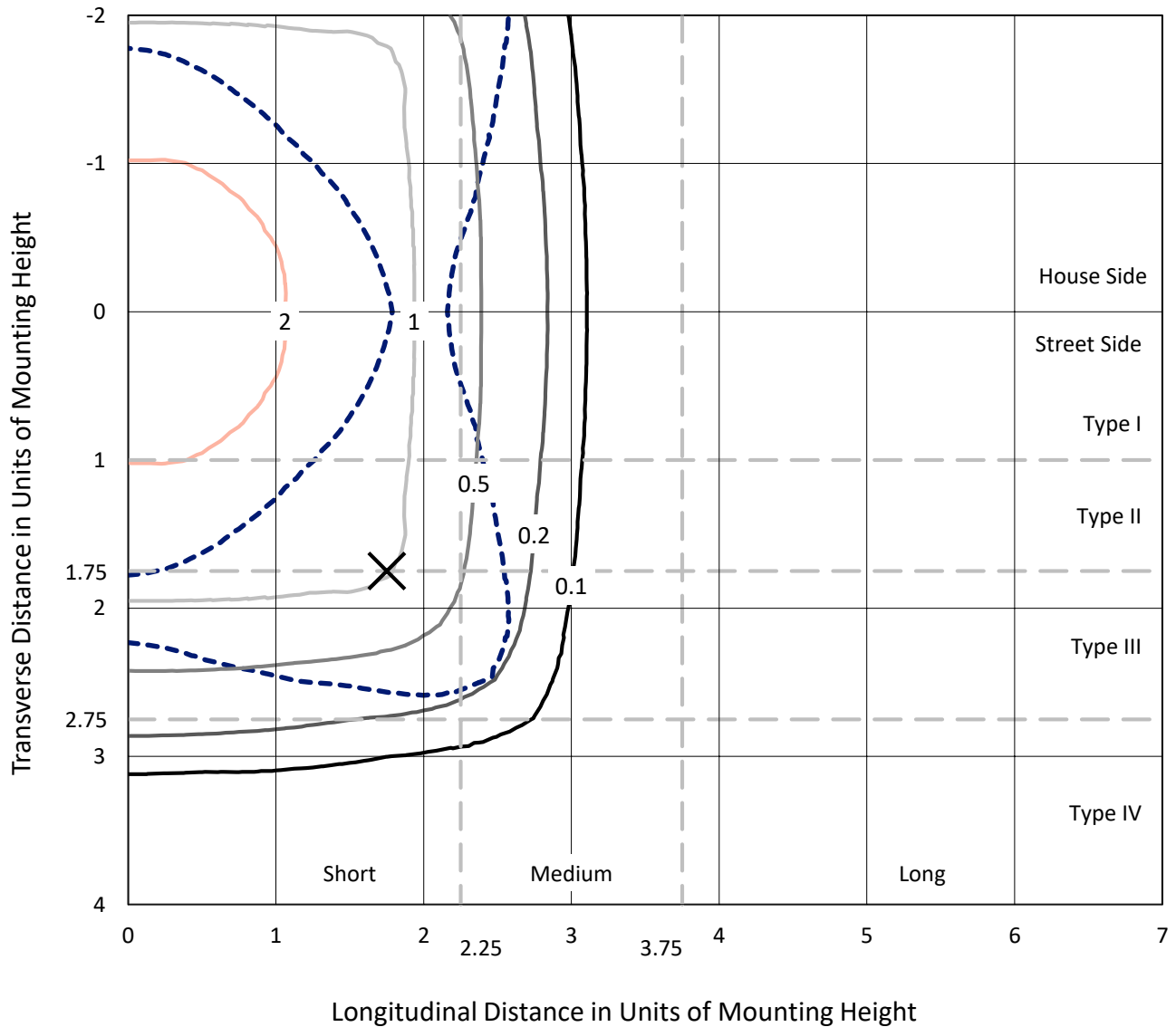
Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

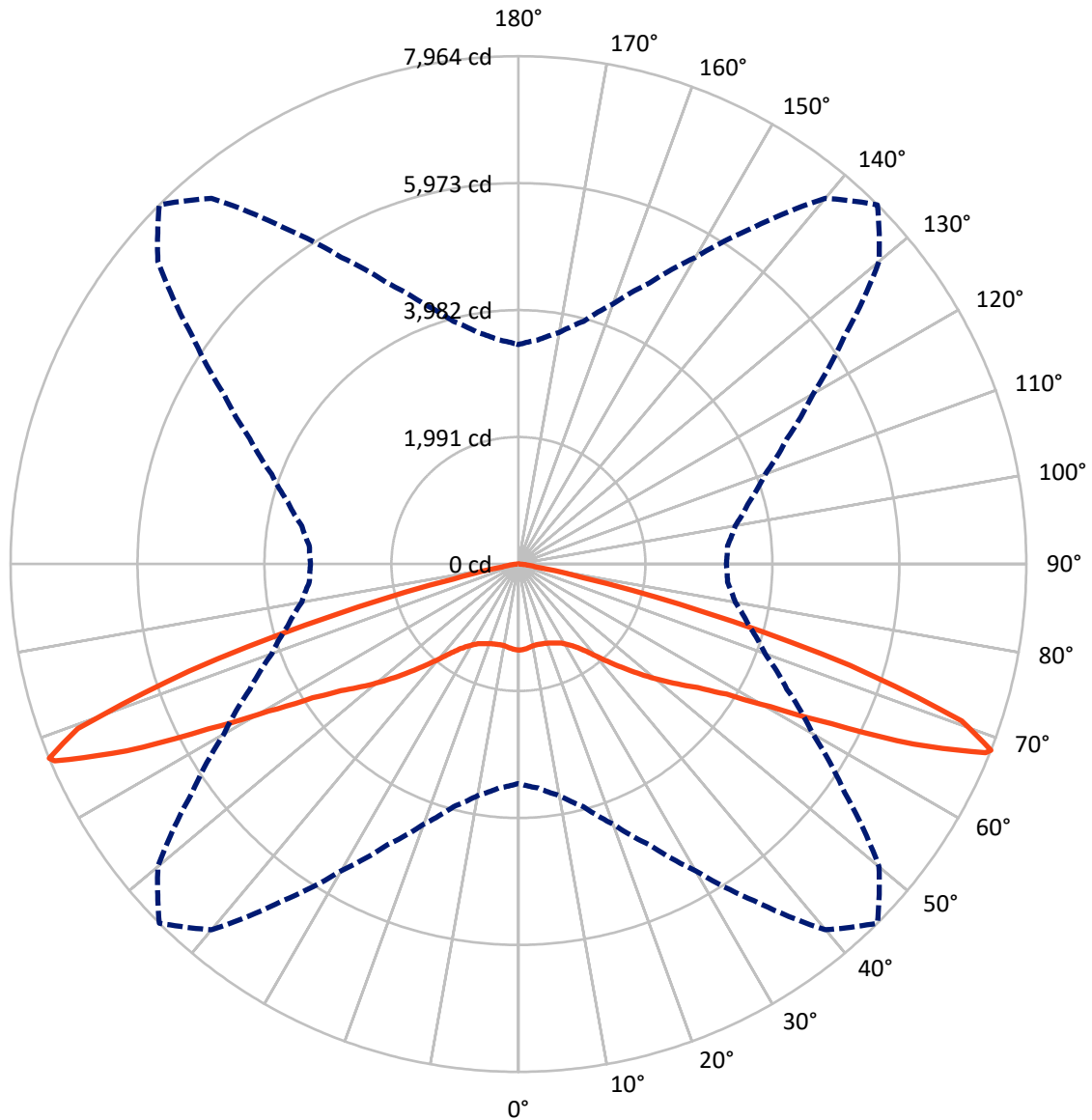
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.4 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6770.7	0.0	6770.7
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	6770.7	0.0	6770.7
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	13541.5	0.0	13541.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.4	0.9
10°-20°	366.6	2.7
20°-30°	623.2	4.6
30°-40°	1019.9	7.5
40°-50°	1822.7	13.5
50°-60°	3078.2	22.7
60°-70°	4773.2	35.2
70°-80°	1641.1	12.1
80°-90°	90.2	0.7
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°	13541.5	100.0
0°-180°	13541.5	100.0



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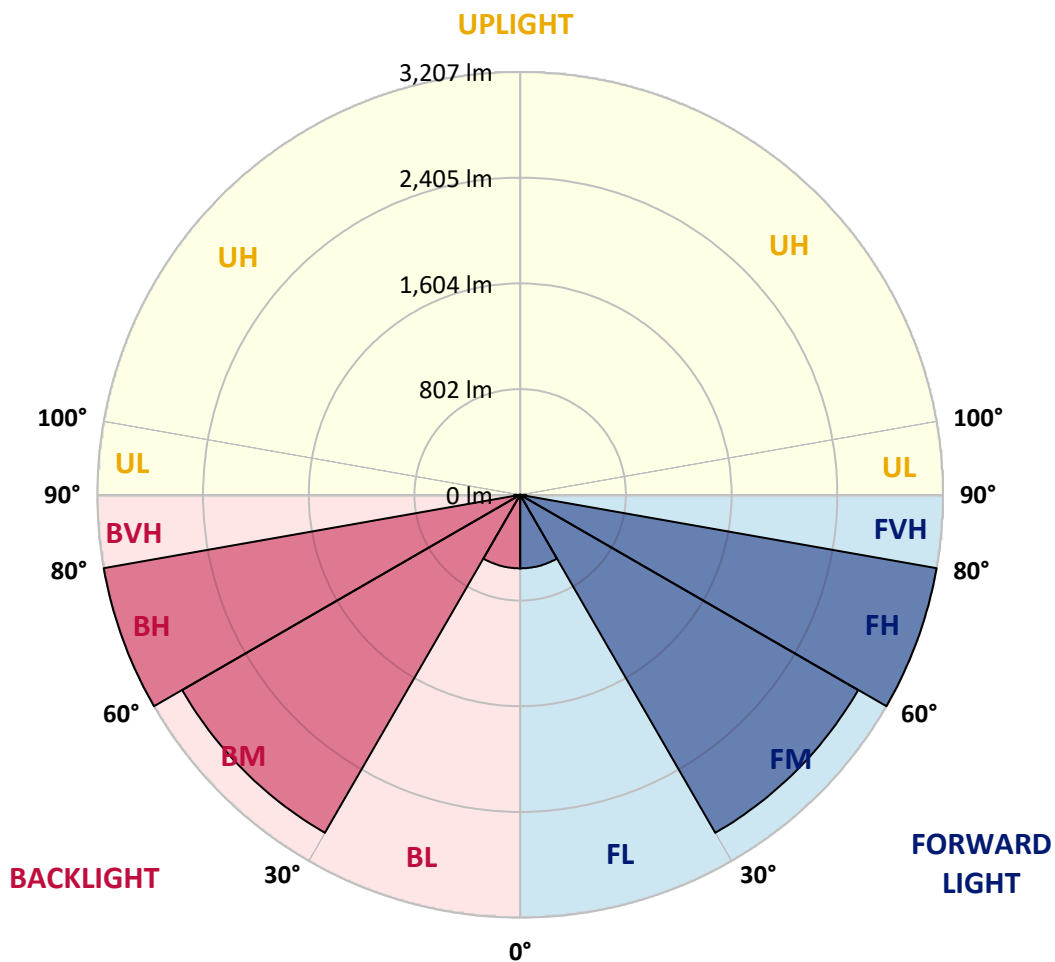
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	558.1	4.1			
FM	(30°-60°)	2960.4	21.9			
FH	(60°-80°)	3207.2	23.7			G2/5000
FVH	(80°-90°)	45.1	0.3			G1/100
BL	(0°-30°)	558.1	4.1	B2/1000		
BM	(30°-60°)	2960.4	21.9	B3/5000		
BH	(60°-80°)	3207.2	23.7	B4/5000		G2/5000
BVH	(80°-90°)	45.1	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8
2.5°	1356.6	1356.6	1358.2	1357.5	1355.0	1352.5	1350.0	1347.5	1345.8	1344.1	1342.4
5°	1342.4	1342.4	1345.0	1343.3	1341.7	1339.3	1337.5	1335.1	1333.4	1331.7	1332.5
7.5°	1324.3	1325.9	1327.5	1326.7	1323.5	1322.7	1320.1	1319.3	1317.6	1315.2	1315.9
10°	1308.6	1309.3	1310.9	1310.2	1309.3	1306.9	1306.0	1305.1	1304.3	1301.0	1300.2
12.5°	1292.8	1294.4	1296.1	1297.0	1296.1	1297.0	1297.7	1298.6	1297.7	1296.1	1296.1
15°	1280.4	1282.1	1284.4	1286.9	1287.8	1292.8	1296.1	1299.4	1301.9	1302.7	1300.2
17.5°	1273.6	1276.2	1279.5	1284.4	1288.6	1294.4	1300.2	1305.1	1309.3	1310.2	1307.8
20°	1272.9	1275.4	1280.4	1286.2	1293.6	1301.0	1310.2	1317.6	1321.8	1324.3	1321.8
22.5°	1278.6	1282.1	1288.6	1296.1	1305.1	1315.2	1326.7	1335.1	1343.3	1346.6	1344.1
25°	1295.3	1298.6	1306.0	1315.2	1325.1	1337.5	1349.2	1359.9	1368.2	1372.4	1369.0
27.5°	1330.1	1330.8	1339.3	1349.2	1360.8	1371.5	1386.4	1391.5	1398.0	1402.3	1398.0
30°	1379.0	1380.7	1388.2	1404.0	1414.7	1428.8	1437.1	1442.0	1449.4	1453.6	1448.6
32.5°	1453.6	1455.3	1461.9	1476.9	1486.9	1497.6	1507.5	1510.9	1518.3	1523.3	1517.4
35°	1559.0	1562.2	1568.0	1578.1	1586.2	1594.6	1602.0	1599.6	1604.6	1611.2	1605.5
37.5°	1703.2	1702.4	1704.1	1711.5	1719.8	1724.7	1736.5	1730.6	1735.5	1741.4	1738.0
40°	1871.6	1871.6	1870.7	1883.9	1887.2	1892.3	1904.8	1897.3	1903.9	1910.5	1904.8
42.5°	2063.0	2066.5	2070.6	2081.4	2090.4	2092.2	2097.9	2094.6	2102.9	2108.7	2102.9
45°	2283.8	2288.6	2293.6	2318.5	2322.7	2326.0	2330.2	2319.3	2328.4	2333.4	2331.8
47.5°	2512.6	2521.6	2532.4	2558.2	2574.7	2582.2	2585.5	2573.0	2574.0	2581.4	2582.2
50°	2771.4	2781.2	2792.0	2820.9	2836.8	2850.1	2854.2	2840.1	2841.8	2847.5	2849.2
52.5°	3010.1	3021.7	3045.0	3083.9	3106.2	3129.4	3131.1	3113.7	3121.3	3125.4	3122.0
55°	3234.7	3249.7	3280.4	3332.6	3373.2	3418.9	3439.6	3420.6	3420.6	3417.2	3415.5
57.5°	3496.8	3513.5	3544.9	3605.4	3661.9	3727.3	3783.8	3802.9	3837.6	3849.2	3831.0
60°	3891.5	3909.0	3941.4	4021.0	4092.1	4187.5	4280.5	4355.9	4478.6	4545.0	4485.2
62.5°	4252.2	4278.7	4355.2	4494.4	4648.5	4825.2	5030.1	5176.0	5399.1	5510.3	5360.0
65°	4170.1	4224.1	4373.3	4592.2	4910.7	5293.7	5710.9	6111.3	6572.4	6808.8	6503.5
67.5°	3642.7	3688.4	3849.2	4103.8	4501.0	5029.3	5677.6	6507.0	7458.1	7900.9	7361.0
68°	3441.2	3526.7	3686.7	3939.6	4340.2	4859.2	5551.6	6447.2	7485.3	7963.8	7381.0
70°	2638.6	2669.3	2822.7	3049.8	3481.9	3991.1	4690.1	5710.9	6884.3	7376.8	6777.3
72.5°	1253.8	1272.0	1371.5	1595.4	1869.9	2284.5	2901.4	3864.1	4921.5	5433.8	4836.0
75°	459.5	463.5	486.7	539.8	642.6	798.6	1094.6	1693.2	2506.7	2989.4	2516.7
77.5°	247.9	248.8	258.0	271.2	289.4	310.2	354.9	476.0	767.8	1044.8	811.0
80°	155.9	155.0	164.2	175.0	187.3	197.4	201.5	215.7	242.9	284.5	261.1
82.5°	79.6	87.0	107.7	119.5	137.6	140.9	136.8	136.1	144.3	155.9	160.8
85°	43.9	38.9	57.2	76.3	83.0	85.3	86.2	81.2	79.6	78.0	82.0
87.5°	22.4	20.8	24.9	38.2	40.7	33.1	34.0	29.0	19.9	19.9	20.8
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°	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8	1350.8
2.5°	1340.9	1341.7	1340.0	1340.0	1340.0	1340.9	1340.0	1339.3
5°	1330.1	1331.7	1331.7	1332.5	1333.4	1333.4	1333.4	1333.4
7.5°	1314.3	1315.2	1316.8	1316.8	1316.8	1316.8	1316.8	1316.8
10°	1299.4	1297.7	1297.0	1295.3	1295.3	1292.8	1293.6	1294.4
12.5°	1291.9	1288.6	1286.9	1284.4	1282.8	1280.4	1280.4	1281.2
15°	1295.3	1290.2	1285.3	1283.7	1282.1	1280.4	1278.6	1279.5
17.5°	1301.9	1296.1	1290.2	1286.9	1283.7	1281.2	1280.4	1281.2
20°	1315.9	1307.8	1298.6	1292.8	1286.2	1284.4	1282.1	1284.4
22.5°	1335.1	1325.1	1313.5	1302.7	1295.3	1291.9	1288.6	1291.1
25°	1358.2	1347.5	1335.9	1323.5	1315.2	1312.7	1308.6	1308.6
27.5°	1390.5	1381.6	1371.5	1359.9	1351.6	1349.2	1342.4	1342.4
30°	1442.0	1432.8	1423.8	1413.8	1405.6	1403.1	1394.8	1394.8
32.5°	1510.1	1500.1	1494.3	1485.9	1479.2	1475.1	1465.2	1464.3
35°	1601.1	1592.1	1591.3	1585.5	1578.9	1579.7	1569.7	1568.0
37.5°	1732.2	1724.7	1727.4	1722.3	1716.5	1721.4	1715.7	1715.7
40°	1899.7	1897.3	1899.7	1896.4	1897.3	1898.1	1893.1	1894.7
42.5°	2102.0	2095.4	2110.4	2108.7	2106.3	2112.9	2101.2	2093.0
45°	2335.1	2332.5	2347.5	2350.1	2345.0	2349.2	2328.4	2327.6
47.5°	2587.9	2587.9	2601.3	2599.7	2594.7	2595.5	2570.6	2554.8
50°	2851.7	2850.1	2863.3	2860.1	2853.3	2852.5	2826.8	2811.1
52.5°	3126.2	3126.2	3145.2	3136.2	3120.4	3112.8	3081.4	3060.6
55°	3429.6	3425.5	3431.3	3401.5	3370.8	3348.4	3309.4	3293.6
57.5°	3813.7	3765.5	3724.1	3685.8	3642.7	3616.2	3570.7	3554.1
60°	4358.3	4229.8	4174.3	4098.0	4026.7	3991.1	3930.5	3898.1
62.5°	5113.1	4899.9	4749.0	4580.6	4418.1	4303.7	4211.7	4171.0
65°	5985.3	5521.0	5137.0	4776.3	4470.3	4227.3	4092.1	4049.9
67.5°	6317.1	5464.6	4802.0	4284.6	3913.0	3623.8	3462.0	3428.0
68°	6246.5	5335.3	4646.9	4117.1	3744.0	3452.0	3291.2	3260.5
70°	5510.3	4501.0	3774.6	3247.3	2899.0	2621.2	2507.6	2458.7
72.5°	3756.4	2890.7	2217.3	1773.8	1513.4	1337.5	1233.1	1197.4
75°	1729.0	1168.3	780.3	582.9	495.1	452.7	420.3	412.1
77.5°	504.2	366.5	315.1	291.9	274.5	259.5	248.8	247.9
80°	239.7	224.8	218.1	203.1	187.3	173.4	163.3	165.0
82.5°	160.8	156.8	156.8	141.8	116.9	100.3	83.0	74.6
85°	85.3	88.8	93.8	88.8	77.2	57.2	37.3	40.7
87.5°	29.0	33.1	34.9	34.0	30.7	23.3	17.3	17.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)