

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: P194955

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-7060-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P194955  
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-7060-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12710 lumens  
Efficiency: N/A  
Efficacy: 132.4 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

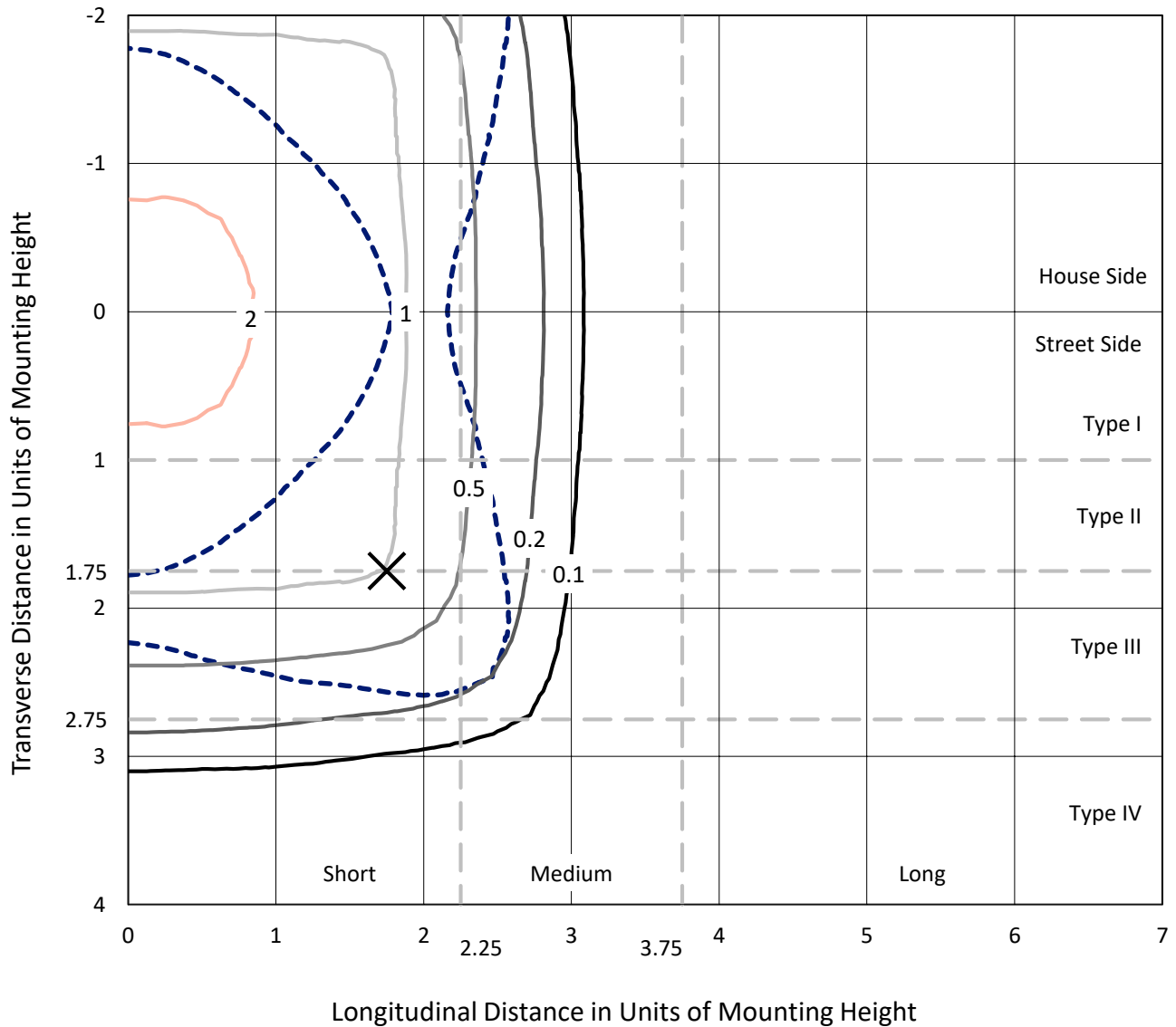
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

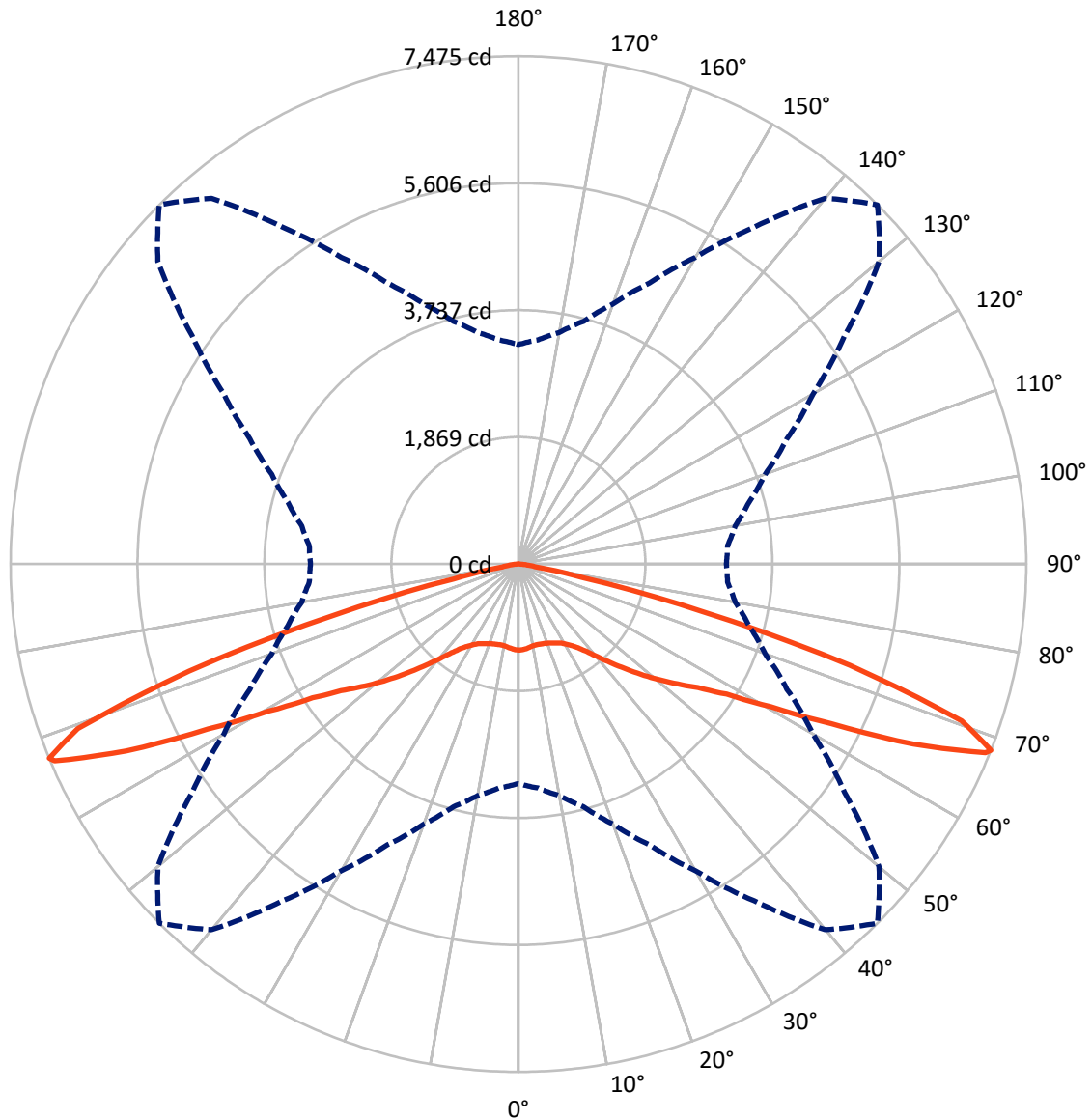
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.2 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	6355.0	0.0	6355.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	6355.0	0.0	6355.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	12710.0	0.0	12710.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.6	0.9
10°-20°	344.1	2.7
20°-30°	585.0	4.6
30°-40°	957.3	7.5
40°-50°	1710.8	13.5
50°-60°	2889.2	22.7
60°-70°	4480.1	35.2
70°-80°	1540.4	12.1
80°-90°	84.6	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°	12710.0	100.0
0°-180°	12710.0	100.0



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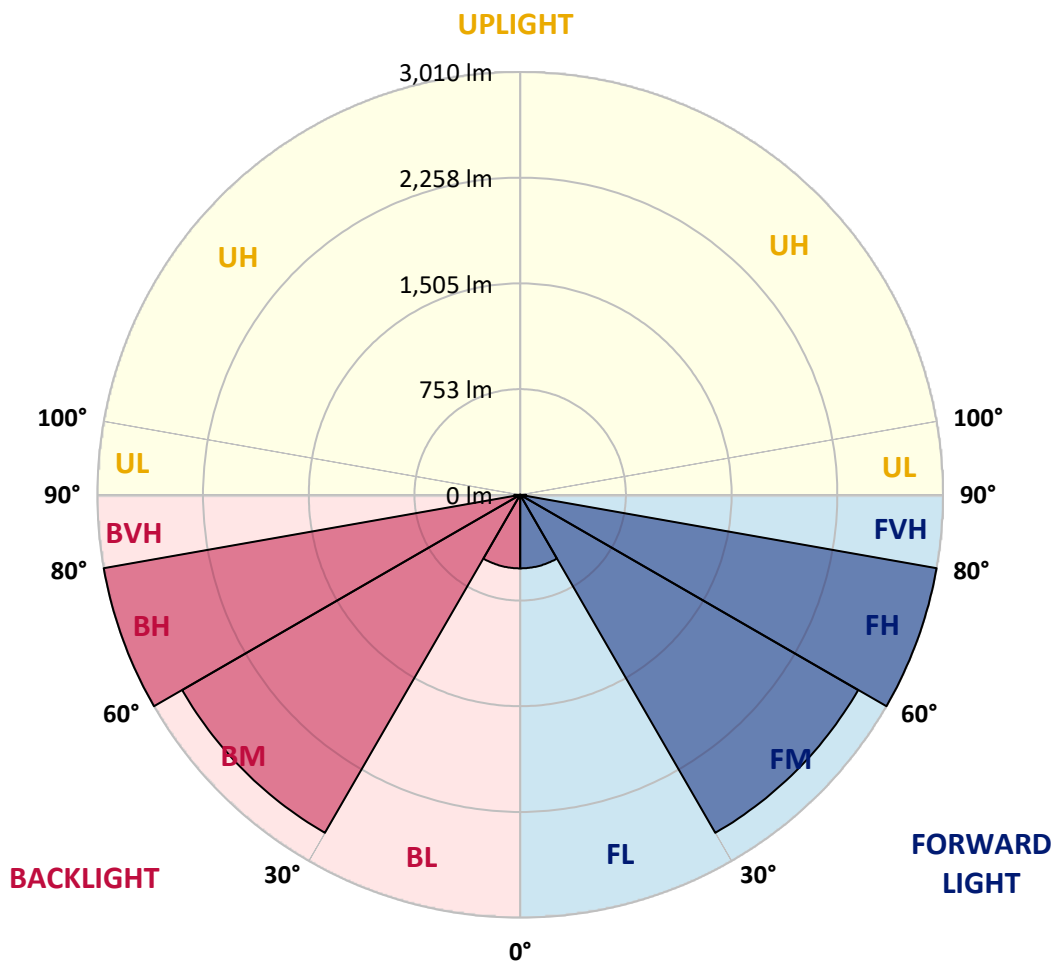
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	523.8	4.1			
FM	(30°-60°)	2778.6	21.9			
FH	(60°-80°)	3010.2	23.7			G2/5000
FVH	(80°-90°)	42.3	0.3			G1/100
BL	(0°-30°)	523.8	4.1	B2/1000		
BM	(30°-60°)	2778.6	21.9	B3/5000		
BH	(60°-80°)	3010.2	23.7	B4/5000		G2/5000
BVH	(80°-90°)	42.3	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°	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9
2.5°	1273.3	1273.3	1274.9	1274.1	1271.8	1269.4	1267.1	1264.7	1263.2	1261.6	1260.1
5°	1260.1	1260.1	1262.4	1260.9	1259.3	1257.0	1255.4	1253.1	1251.5	1250.0	1250.7
7.5°	1243.0	1244.5	1246.1	1245.3	1242.2	1241.4	1239.1	1238.3	1236.7	1234.4	1235.2
10°	1228.2	1228.9	1230.5	1229.7	1228.9	1226.6	1225.8	1225.1	1224.3	1221.2	1220.4
12.5°	1213.4	1214.9	1216.5	1217.3	1216.5	1217.3	1218.0	1218.8	1218.0	1216.5	1216.5
15°	1201.7	1203.3	1205.6	1207.9	1208.7	1213.4	1216.5	1219.6	1221.9	1222.7	1220.4
17.5°	1195.5	1197.8	1200.9	1205.6	1209.5	1214.9	1220.4	1225.1	1228.9	1229.7	1227.4
20°	1194.7	1197.0	1201.7	1207.2	1214.2	1221.2	1229.7	1236.7	1240.6	1243.0	1240.6
22.5°	1200.1	1203.3	1209.5	1216.5	1225.1	1234.4	1245.3	1253.1	1260.9	1264.0	1261.6
25°	1215.7	1218.8	1225.8	1234.4	1243.7	1255.4	1266.3	1276.4	1284.2	1288.1	1285.0
27.5°	1248.4	1249.2	1257.0	1266.3	1277.2	1287.3	1301.3	1306.0	1312.2	1316.1	1312.2
30°	1294.3	1295.9	1302.9	1317.7	1327.8	1341.0	1348.8	1353.5	1360.5	1364.4	1359.7
32.5°	1364.4	1365.9	1372.2	1386.2	1395.5	1405.6	1415.0	1418.1	1425.1	1429.7	1424.3
35°	1463.2	1466.3	1471.8	1481.1	1488.9	1496.7	1503.7	1501.4	1506.0	1512.2	1506.8
37.5°	1598.6	1597.9	1599.4	1606.4	1614.2	1618.9	1629.8	1624.3	1629.0	1634.4	1631.3
40°	1756.6	1756.6	1755.9	1768.3	1771.4	1776.1	1787.8	1780.8	1787.0	1793.2	1787.8
42.5°	1936.4	1939.5	1943.4	1953.5	1962.1	1963.7	1969.1	1966.0	1973.8	1979.2	1973.8
45°	2143.5	2148.1	2152.8	2176.1	2180.0	2183.1	2187.0	2176.9	2185.5	2190.2	2188.6
47.5°	2358.3	2366.8	2376.9	2401.1	2416.6	2423.6	2426.8	2415.1	2415.9	2422.9	2423.6
50°	2601.1	2610.4	2620.6	2647.8	2662.6	2675.0	2678.9	2665.7	2667.3	2672.7	2674.3
52.5°	2825.3	2836.1	2857.9	2894.5	2915.5	2937.3	2938.9	2922.5	2929.5	2933.4	2930.3
55°	3036.2	3050.2	3079.0	3128.0	3166.1	3209.0	3228.4	3210.5	3210.5	3207.4	3205.8
57.5°	3282.1	3297.7	3327.3	3384.1	3437.0	3498.5	3551.4	3569.3	3602.0	3612.9	3595.8
60°	3652.6	3668.9	3699.3	3774.0	3840.9	3930.4	4017.6	4088.4	4203.6	4265.9	4209.9
62.5°	3991.2	4016.1	4087.7	4218.4	4363.2	4529.0	4721.2	4858.2	5067.5	5171.8	5031.0
65°	3914.1	3964.7	4104.8	4310.3	4609.1	4968.7	5360.2	5736.1	6168.9	6390.7	6104.3
67.5°	3419.1	3461.9	3612.9	3851.8	4224.6	4720.4	5329.1	6107.4	7000.1	7415.7	6909.0
68°	3230.0	3310.1	3460.3	3697.7	4073.7	4560.9	5210.8	6051.3	7025.8	7474.8	6927.7
70°	2476.6	2505.4	2649.4	2862.6	3268.1	3746.0	4402.1	5360.2	6461.5	6923.8	6361.1
72.5°	1176.8	1193.9	1287.3	1497.5	1755.1	2144.2	2723.3	3626.9	4619.2	5100.2	4539.1
75°	431.2	435.1	456.9	506.7	603.2	749.5	1027.4	1589.3	2352.8	2805.8	2362.2
77.5°	232.7	233.5	242.1	254.5	271.6	291.1	333.1	446.7	720.7	980.7	761.2
80°	146.3	145.5	154.1	164.2	175.9	185.2	189.1	202.4	228.0	267.0	245.2
82.5°	74.7	81.7	101.2	112.1	129.2	132.3	128.4	127.6	135.4	146.3	151.0
85°	41.3	36.6	53.7	71.6	77.8	80.2	80.9	76.3	74.7	73.2	77.1
87.5°	21.0	19.5	23.3	35.8	38.1	31.1	31.9	27.2	18.7	18.7	19.5
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°	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9	1267.9
2.5°	1258.5	1259.3	1257.7	1257.7	1257.7	1258.5	1257.7	1257.0
5°	1248.4	1250.0	1250.0	1250.7	1251.5	1251.5	1251.5	1251.5
7.5°	1233.6	1234.4	1235.9	1235.9	1235.9	1235.9	1235.9	1235.9
10°	1219.6	1218.0	1217.3	1215.7	1215.7	1213.4	1214.2	1214.9
12.5°	1212.6	1209.5	1207.9	1205.6	1204.0	1201.7	1201.7	1202.5
15°	1215.7	1211.0	1206.4	1204.8	1203.3	1201.7	1200.1	1200.9
17.5°	1221.9	1216.5	1211.0	1207.9	1204.8	1202.5	1201.7	1202.5
20°	1235.2	1227.4	1218.8	1213.4	1207.2	1205.6	1203.3	1205.6
22.5°	1253.1	1243.7	1232.8	1222.7	1215.7	1212.6	1209.5	1211.8
25°	1274.9	1264.7	1253.9	1242.2	1234.4	1232.1	1228.2	1228.2
27.5°	1305.2	1296.7	1287.3	1276.4	1268.6	1266.3	1260.1	1260.1
30°	1353.5	1344.9	1336.4	1327.0	1319.2	1316.9	1309.1	1309.1
32.5°	1417.3	1408.0	1402.5	1394.7	1388.5	1384.6	1375.3	1374.5
35°	1502.9	1494.3	1493.6	1488.1	1481.9	1482.7	1473.3	1471.8
37.5°	1625.9	1618.9	1621.2	1616.5	1611.1	1615.8	1610.3	1610.3
40°	1783.1	1780.8	1783.1	1780.0	1780.8	1781.5	1776.9	1778.4
42.5°	1973.0	1966.8	1980.8	1979.2	1976.9	1983.1	1972.2	1964.4
45°	2191.7	2189.4	2203.4	2205.7	2201.0	2204.9	2185.5	2184.7
47.5°	2429.1	2429.1	2441.5	2440.0	2435.3	2436.1	2412.7	2398.0
50°	2676.6	2675.0	2687.5	2684.4	2678.2	2677.4	2653.2	2638.5
52.5°	2934.2	2934.2	2952.1	2943.6	2928.8	2921.8	2892.2	2872.7
55°	3219.1	3215.2	3220.6	3192.6	3163.8	3142.8	3106.2	3091.4
57.5°	3579.4	3534.3	3495.4	3459.6	3419.1	3394.2	3351.4	3335.8
60°	4090.8	3970.1	3918.0	3846.4	3779.5	3746.0	3689.2	3658.8
62.5°	4799.0	4599.0	4457.4	4299.4	4146.8	4039.4	3953.0	3914.9
65°	5617.8	5182.0	4821.6	4483.0	4195.8	3967.8	3840.9	3801.2
67.5°	5929.1	5129.0	4507.2	4021.5	3672.8	3401.2	3249.4	3217.5
68°	5863.0	5007.6	4361.6	3864.3	3514.1	3240.1	3089.1	3060.3
70°	5171.8	4224.6	3542.8	3047.8	2721.0	2460.2	2353.6	2307.7
72.5°	3525.7	2713.2	2081.2	1664.8	1420.4	1255.4	1157.3	1123.9
75°	1622.8	1096.6	732.4	547.1	464.6	425.0	394.6	386.8
77.5°	473.2	344.0	295.8	274.0	257.6	243.6	233.5	232.7
80°	224.9	210.9	204.7	190.7	175.9	162.7	153.3	154.9
82.5°	151.0	147.1	147.1	133.1	109.7	94.2	77.8	70.0
85°	80.2	83.3	87.9	83.3	72.4	53.7	35.0	38.1
87.5°	27.2	31.1	32.7	31.9	28.8	21.8	16.3	16.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)