

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: P196930

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196930  
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-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 80 CRI, 3000K, 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: 16734 lumens  
Efficiency: N/A  
Efficacy: 97.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B4 - U0 - G2

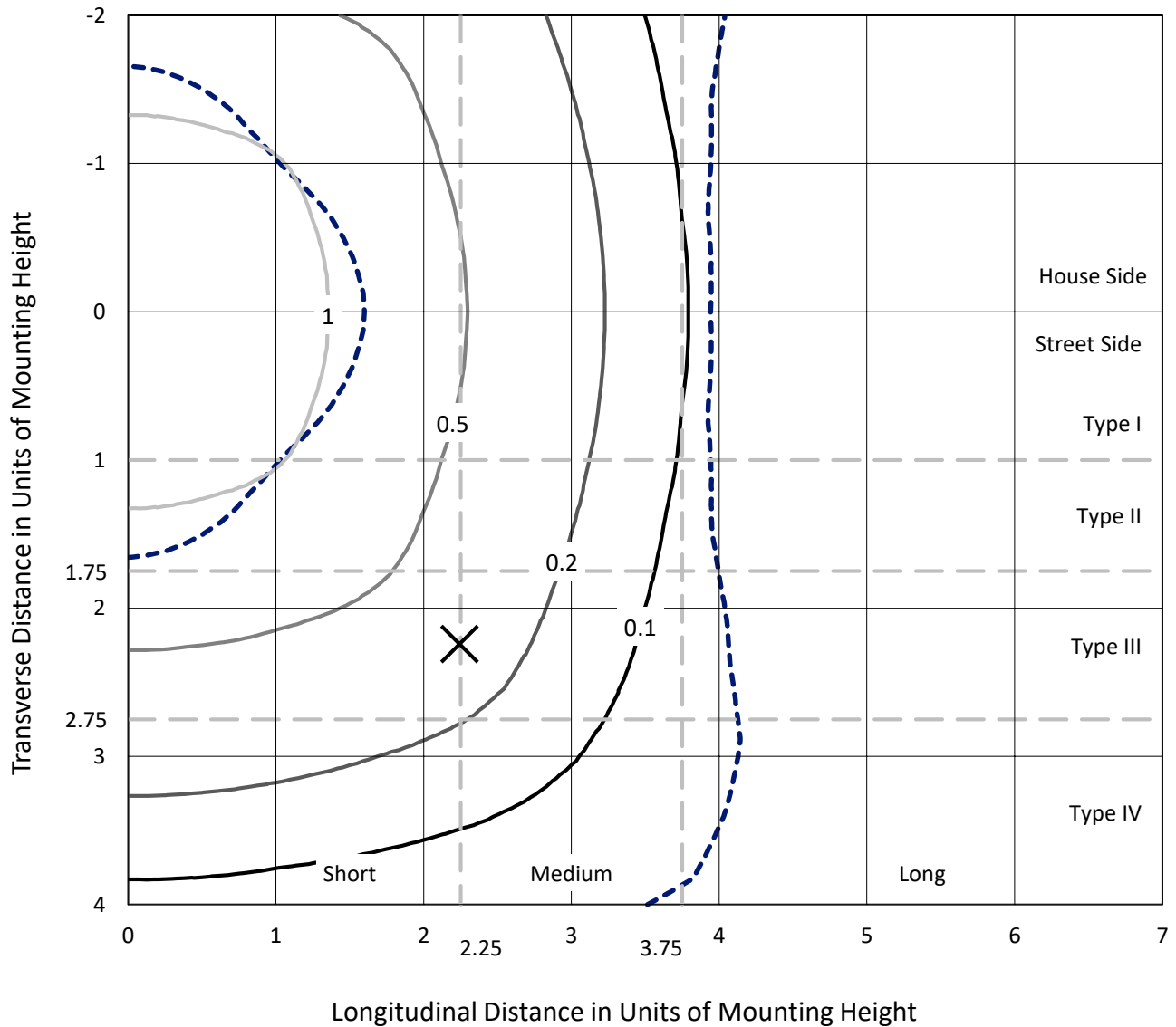
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

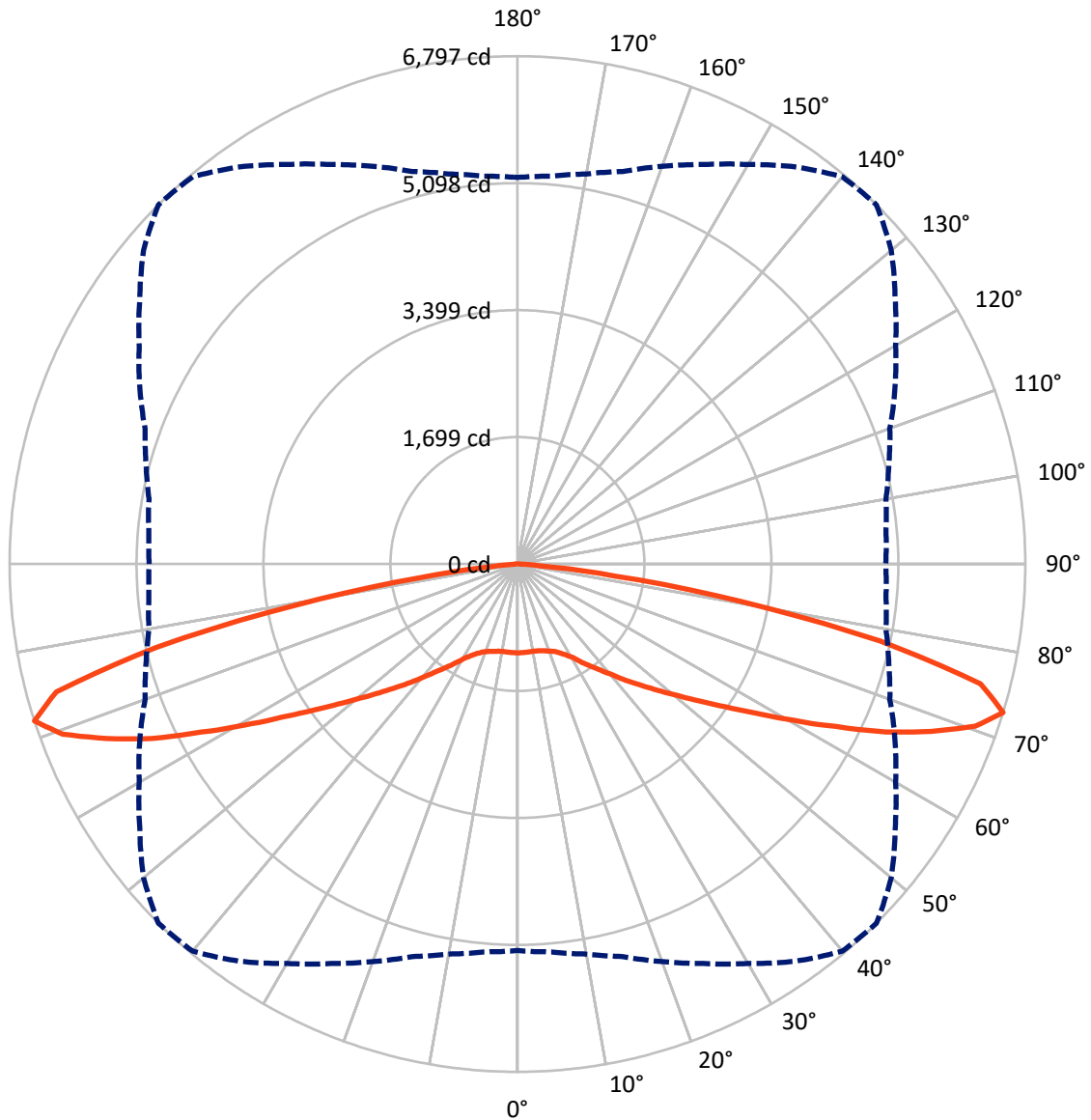
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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
<b>House Side</b>	Lumens	8367.0	0.0	8367.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	8367.0	0.0	8367.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	16734.0	0.0	16734.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.6	0.7
10°-20°	343.7	2.1
20°-30°	620.4	3.7
30°-40°	1058.2	6.3
40°-50°	1801.6	10.8
50°-60°	2899.5	17.3
60°-70°	4821.9	28.8
70°-80°	4664.6	27.9
80°-90°	410.5	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°	16734.0	100.0
0°-180°	16734.0	100.0



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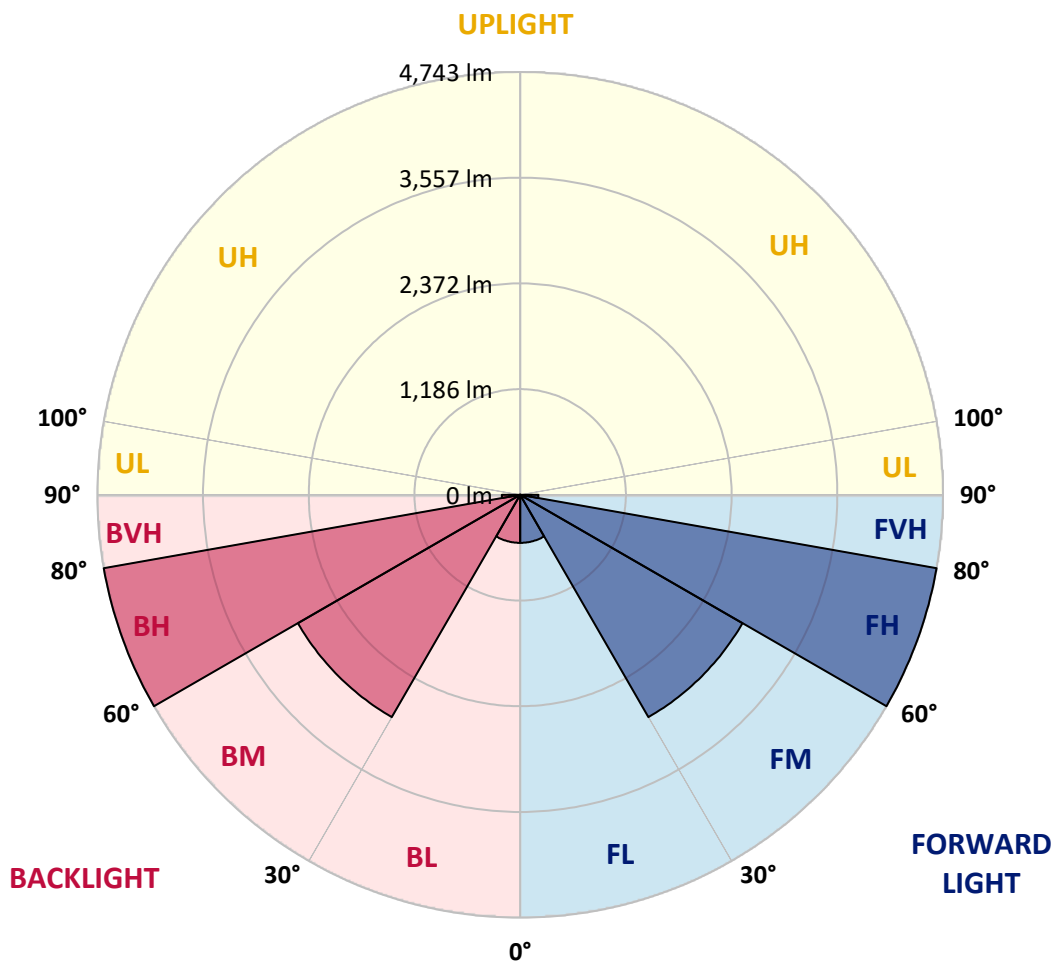
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	538.8	3.2			
FM (30°-60°)	2879.7	17.2			
FH (60°-80°)	4743.3	28.3			G2/5000
FVH (80°-90°)	205.3	1.2			G2/225
BL (0°-30°)	538.8	3.2	B2/1000		
BM (30°-60°)	2879.7	17.2	B3/5000		
BH (60°-80°)	4743.3	28.3	B4/5000		G2/5000
BVH (80°-90°)	205.3	1.2			G2/225
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°	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7
2.5°	1198.9	1198.9	1200.0	1198.9	1196.9	1195.8	1192.8	1190.7	1188.6	1187.6	1185.5
5°	1200.0	1200.0	1201.0	1200.0	1197.9	1195.8	1193.8	1190.7	1188.6	1186.6	1185.5
7.5°	1204.1	1205.1	1206.1	1205.1	1201.0	1198.9	1195.8	1192.8	1188.6	1186.6	1184.5
10°	1212.3	1212.3	1212.3	1211.3	1208.2	1204.1	1200.0	1196.9	1191.7	1186.6	1183.5
12.5°	1218.5	1219.5	1219.5	1217.5	1213.4	1208.2	1204.1	1201.0	1196.9	1192.8	1189.7
15°	1227.8	1227.8	1226.7	1222.6	1216.4	1212.3	1210.3	1209.2	1208.2	1206.1	1203.1
17.5°	1246.3	1245.3	1242.2	1236.0	1228.8	1225.7	1223.7	1223.7	1223.7	1222.6	1220.6
20°	1273.1	1273.1	1269.0	1258.7	1252.5	1249.4	1246.3	1246.3	1246.3	1243.2	1240.1
22.5°	1316.4	1317.4	1311.2	1298.8	1290.6	1284.4	1280.3	1277.2	1274.1	1272.1	1266.9
25°	1375.1	1374.0	1366.8	1351.4	1345.2	1339.0	1330.8	1325.6	1321.5	1318.4	1312.2
27.5°	1436.9	1435.8	1427.6	1414.2	1410.1	1400.8	1394.6	1387.4	1382.3	1377.1	1370.9
30°	1516.2	1511.0	1504.8	1494.5	1492.5	1485.3	1477.0	1466.7	1458.5	1450.3	1443.0
32.5°	1587.2	1587.2	1578.0	1572.8	1576.9	1573.9	1574.9	1568.7	1563.6	1560.5	1553.3
35°	1686.1	1686.1	1682.0	1675.8	1676.9	1669.6	1668.6	1669.6	1673.8	1673.8	1665.5
37.5°	1818.0	1820.0	1806.6	1804.6	1799.4	1789.1	1784.0	1786.0	1795.3	1800.5	1789.1
40°	1981.7	1985.9	1981.7	1968.3	1962.2	1944.7	1934.4	1934.4	1941.6	1946.7	1942.6
42.5°	2143.5	2150.7	2143.5	2133.2	2128.0	2114.6	2109.5	2113.6	2122.9	2129.0	2122.9
45°	2323.7	2328.9	2319.6	2307.2	2301.0	2293.8	2290.7	2293.8	2304.1	2310.3	2308.3
47.5°	2500.9	2508.1	2496.7	2491.6	2491.6	2484.4	2492.6	2500.9	2510.1	2524.6	2518.4
50°	2673.9	2683.2	2676.0	2677.0	2685.2	2698.6	2714.1	2730.6	2747.0	2762.5	2764.5
52.5°	2828.4	2842.8	2843.9	2862.4	2888.1	2908.7	2952.0	2988.1	3027.2	3040.6	3034.4
55°	2991.1	3010.7	3036.5	3065.3	3106.5	3148.7	3221.9	3286.8	3338.3	3370.2	3365.0
57.5°	3223.9	3243.5	3270.3	3317.7	3379.5	3437.1	3537.1	3638.0	3716.3	3764.7	3741.0
60°	3525.7	3546.3	3581.3	3631.8	3712.2	3790.4	3927.4	4072.7	4194.2	4249.8	4206.6
62.5°	3925.4	3944.9	3967.6	4034.5	4124.2	4225.1	4397.1	4583.5	4738.0	4791.6	4730.8
65°	4495.0	4518.7	4525.9	4580.5	4668.0	4761.7	4947.1	5157.3	5333.4	5420.9	5299.4
67.5°	5136.7	5145.9	5174.8	5238.6	5328.2	5412.7	5559.0	5757.8	5926.7	5975.1	5845.3
70°	5512.6	5531.2	5581.6	5670.2	5777.3	5910.2	6069.9	6284.1	6475.7	6498.3	6333.5
72.5°	5172.7	5210.8	5300.4	5438.5	5663.0	5898.9	6173.9	6490.1	6765.1	6797.0	6532.3
75°	4148.9	4192.1	4299.3	4450.7	4716.4	5066.6	5464.2	5939.0	6351.0	6403.6	6053.4
77.5°	2211.4	2265.0	2420.5	2624.5	3003.5	3467.0	3946.0	4487.8	4838.0	4956.4	4704.1
80°	557.2	586.1	661.3	780.7	1037.2	1411.1	1824.1	2407.1	2841.8	3026.2	2841.8
82.5°	216.3	237.9	258.5	273.0	297.7	349.2	482.0	785.9	1058.9	1304.0	1128.9
85°	83.4	88.6	127.7	145.2	145.2	159.7	183.3	216.3	267.8	292.5	245.1
87.5°	33.0	36.1	44.3	68.0	70.0	61.8	65.9	74.2	56.7	47.4	53.6
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°	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7	1189.7
2.5°	1184.5	1183.5	1181.4	1182.5	1181.4	1181.4	1181.4	1181.4
5°	1183.5	1183.5	1181.4	1181.4	1181.4	1182.5	1181.4	1181.4
7.5°	1182.5	1181.4	1179.4	1178.3	1178.3	1177.3	1177.3	1177.3
10°	1180.4	1178.3	1176.3	1175.2	1175.2	1173.2	1173.2	1173.2
12.5°	1185.5	1182.5	1180.4	1179.4	1179.4	1179.4	1180.4	1180.4
15°	1200.0	1193.8	1190.7	1189.7	1190.7	1192.8	1193.8	1194.8
17.5°	1215.4	1209.2	1204.1	1202.0	1203.1	1206.1	1209.2	1211.3
20°	1235.0	1229.8	1223.7	1221.6	1221.6	1225.7	1227.8	1230.9
22.5°	1262.8	1258.7	1253.5	1250.4	1248.4	1253.5	1256.6	1258.7
25°	1307.1	1303.0	1298.8	1295.8	1294.7	1299.9	1301.9	1303.0
27.5°	1365.8	1361.7	1359.6	1358.6	1355.5	1357.6	1360.6	1359.6
30°	1442.0	1445.1	1442.0	1442.0	1436.9	1438.9	1436.9	1434.8
32.5°	1544.0	1540.9	1531.6	1525.4	1518.2	1518.2	1515.1	1512.1
35°	1646.0	1635.7	1630.5	1633.6	1630.5	1632.6	1627.4	1622.3
37.5°	1766.5	1760.3	1759.3	1768.5	1766.5	1768.5	1768.5	1761.3
40°	1926.1	1922.0	1929.2	1944.7	1950.8	1949.8	1951.9	1942.6
42.5°	2109.5	2102.3	2105.3	2118.7	2125.9	2128.0	2127.0	2118.7
45°	2292.8	2294.9	2294.9	2309.3	2316.5	2320.6	2313.4	2310.3
47.5°	2499.8	2502.9	2495.7	2505.0	2507.0	2514.3	2508.1	2502.9
50°	2738.8	2727.5	2711.0	2714.1	2714.1	2712.0	2704.8	2698.6
52.5°	3005.6	2979.8	2948.9	2938.6	2927.3	2916.0	2901.5	2890.2
55°	3309.4	3265.1	3209.5	3183.8	3162.1	3136.4	3103.4	3092.1
57.5°	3661.7	3585.5	3511.3	3465.0	3409.3	3375.3	3333.1	3331.1
60°	4079.9	3976.9	3846.1	3777.0	3721.4	3681.3	3649.3	3637.0
62.5°	4562.9	4385.8	4244.7	4170.5	4105.6	4080.9	4040.7	4045.9
65°	5058.4	4878.1	4741.1	4681.4	4620.6	4604.1	4567.1	4580.5
67.5°	5595.0	5446.7	5296.3	5240.7	5185.1	5168.6	5130.5	5141.8
70°	6076.0	5887.5	5716.6	5607.4	5512.6	5436.4	5388.0	5368.4
72.5°	6171.8	5845.3	5576.5	5303.5	5145.9	5007.9	4951.3	4929.6
75°	5545.6	5038.8	4655.6	4335.3	4158.2	3957.3	3935.7	3905.8
77.5°	4313.7	3736.9	3273.4	2861.4	2623.4	2378.3	2293.8	2230.0
80°	2573.0	1977.6	1532.7	1074.3	876.5	705.6	663.3	619.0
82.5°	920.8	590.2	397.6	310.0	277.1	255.4	239.0	217.3
85°	222.5	187.5	177.2	160.7	158.6	134.9	95.8	85.5
87.5°	71.1	64.9	65.9	62.8	65.9	49.4	40.2	36.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)