

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: P270341

Luminaire Tested: **NAV-AF-02-D-UNV-RW-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270341  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-RW-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10814 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G3

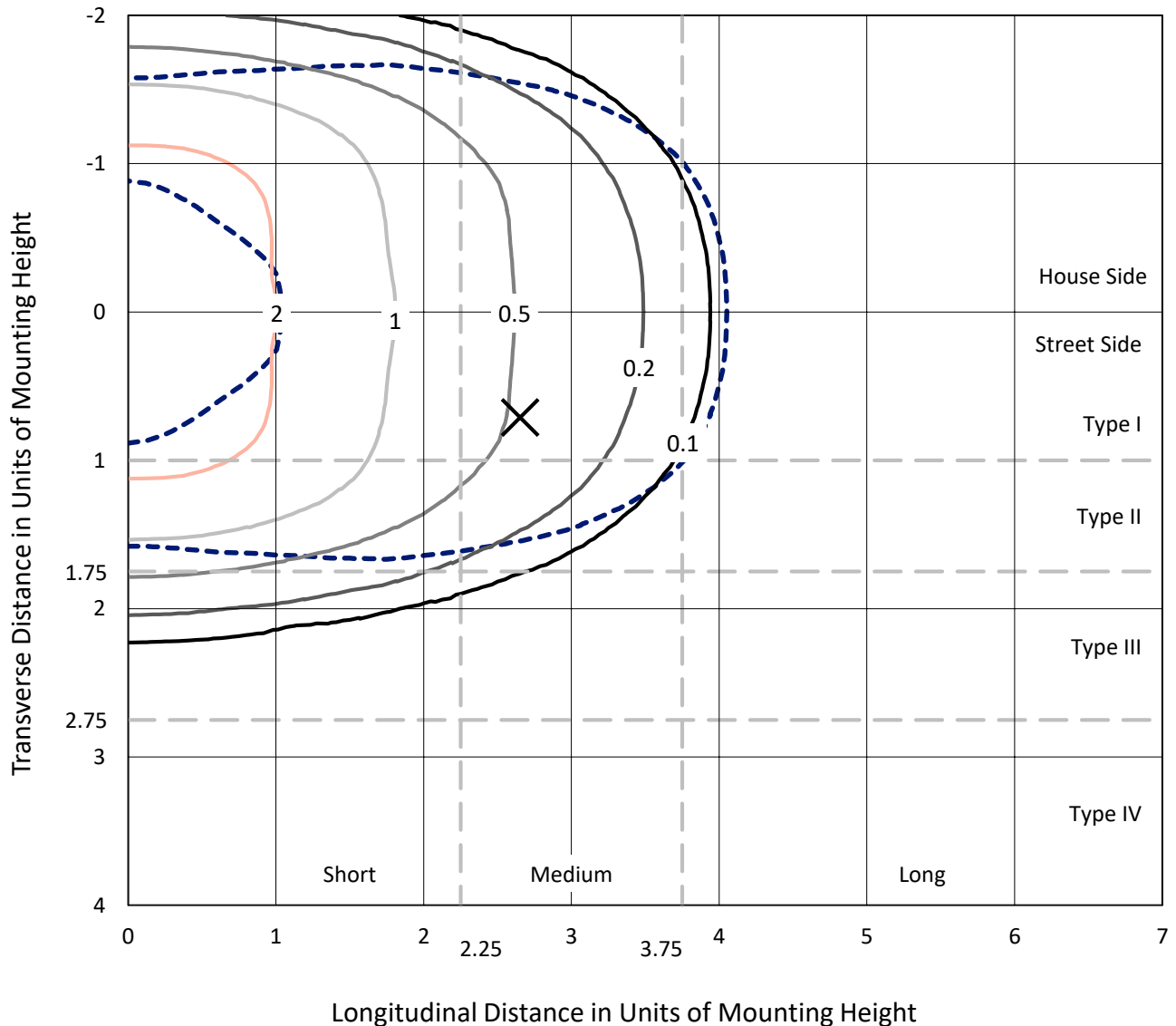
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

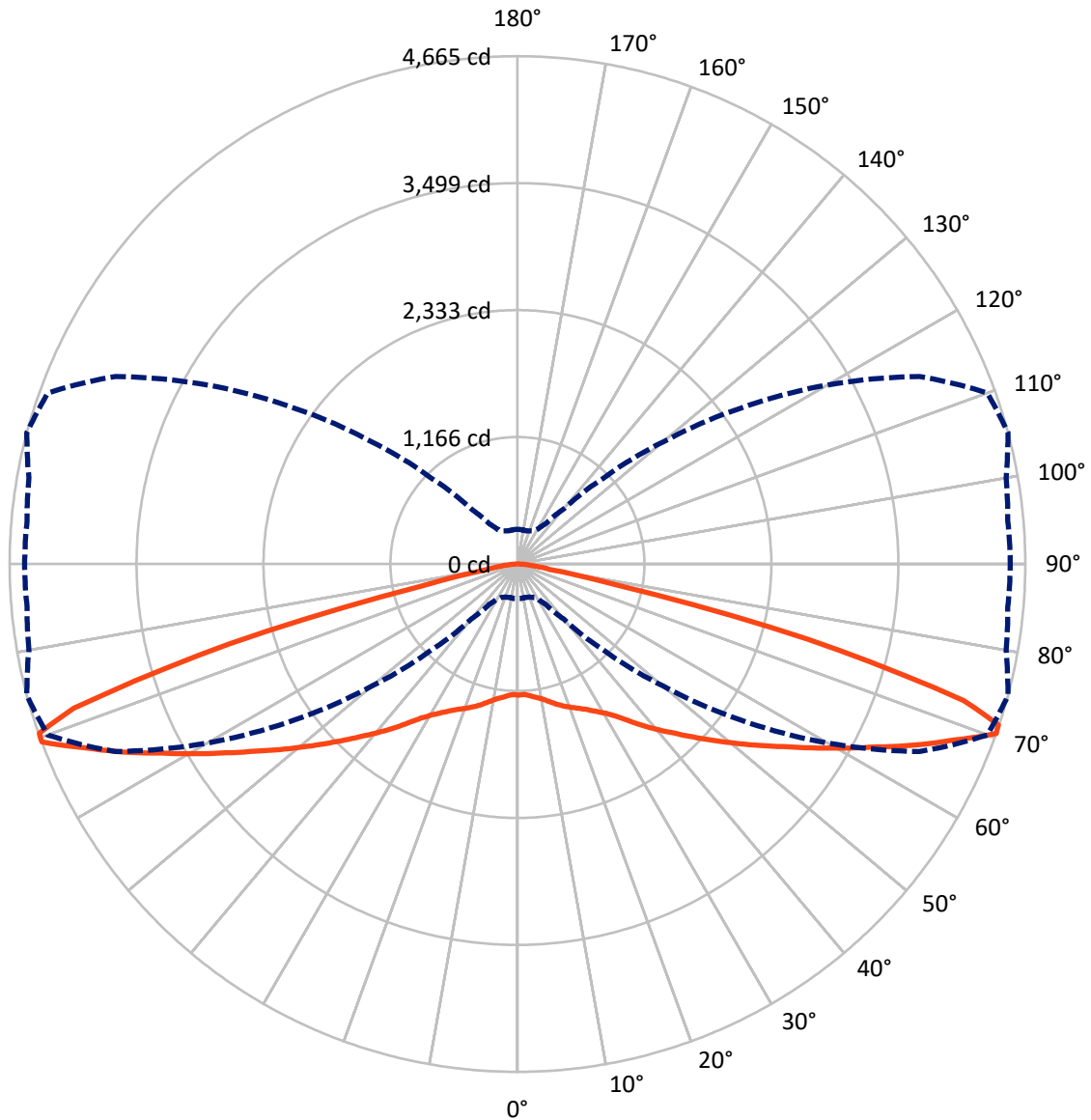
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5407.0	0.0	5407.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5407.0	0.0	5407.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	10814.0	0.0	10814.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.5	1.1
10°-20°	358.2	3.3
20°-30°	672.8	6.2
30°-40°	1185.2	11.0
40°-50°	1964.2	18.2
50°-60°	2732.5	25.3
60°-70°	2579.6	23.9
70°-80°	1101.7	10.2
80°-90°	104.1	1.0
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°	10814.0	100.0
0°-180°	10814.0	100.0



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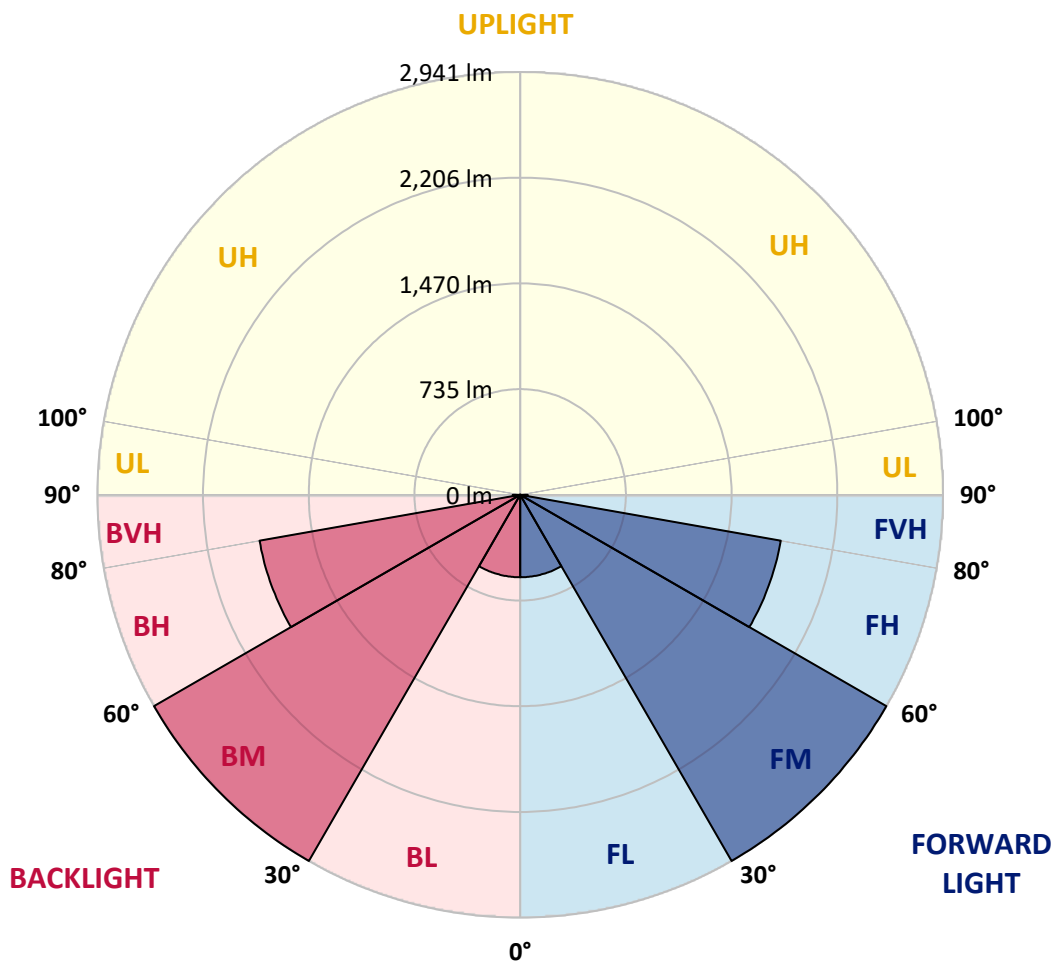
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	573.3	5.3			
FM	(30°-60°)	2941.0	27.2			
FH	(60°-80°)	1840.7	17.0			G2/5000
FVH	(80°-90°)	52.1	0.5			G1/100
BL	(0°-30°)	573.3	5.3	B2/1000		
BM	(30°-60°)	2941.0	27.2	B3/5000		
BH	(60°-80°)	1840.7	17.0	B3/2500		G3/2500
BVH	(80°-90°)	52.1	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1204.3	1204.3	1204.3	1204.3	1204.3	1204.3	1204.3	1204.3	1204.3	1204.3	1204.3
2.5°	1211.8	1211.0	1211.8	1209.7	1210.3	1209.7	1209.7	1207.0	1207.0	1205.5	1203.5
5°	1198.1	1199.4	1199.4	1199.4	1201.6	1201.6	1204.3	1204.9	1207.0	1208.9	1210.3
7.5°	1175.8	1176.5	1178.4	1179.8	1183.8	1189.4	1194.7	1200.9	1206.2	1213.0	1220.4
10°	1156.7	1158.2	1161.6	1164.9	1172.4	1179.1	1188.6	1198.1	1207.6	1219.2	1230.7
12.5°	1146.6	1148.7	1154.1	1159.5	1171.0	1179.8	1192.7	1207.6	1220.4	1231.3	1244.2
15°	1148.0	1148.7	1156.1	1163.6	1179.8	1192.1	1210.3	1228.0	1243.6	1255.7	1270.7
17.5°	1167.6	1169.1	1176.5	1187.3	1202.9	1218.6	1238.1	1256.4	1277.4	1291.7	1309.3
20°	1206.2	1208.3	1216.5	1228.0	1245.0	1261.2	1281.5	1300.4	1322.1	1339.2	1356.7
22.5°	1256.4	1259.9	1268.6	1282.9	1299.8	1319.4	1340.5	1360.2	1380.4	1397.4	1412.2
25°	1323.6	1327.5	1337.0	1351.3	1368.3	1389.3	1411.0	1431.3	1452.3	1465.1	1477.4
27.5°	1413.7	1420.4	1430.6	1442.0	1457.1	1479.4	1499.7	1516.7	1537.0	1551.3	1559.4
30°	1534.9	1544.5	1552.6	1564.8	1575.5	1599.3	1615.6	1629.2	1644.7	1652.9	1654.9
32.5°	1683.3	1692.1	1700.3	1709.1	1724.0	1745.6	1761.2	1768.8	1776.8	1775.5	1768.0
35°	1850.8	1857.5	1862.2	1877.8	1902.3	1916.4	1928.0	1930.6	1932.1	1917.8	1903.6
37.5°	2026.9	2035.1	2039.2	2063.5	2086.7	2102.8	2108.2	2114.4	2110.3	2086.7	2060.8
40°	2217.3	2226.2	2238.3	2259.3	2286.5	2302.0	2308.9	2308.1	2304.8	2277.1	2235.1
42.5°	2404.5	2415.3	2425.5	2462.1	2484.4	2510.9	2514.1	2513.5	2506.1	2474.2	2425.5
45°	2563.0	2575.9	2596.9	2637.6	2673.4	2705.2	2718.2	2722.9	2715.4	2681.6	2626.0
47.5°	2693.7	2702.6	2729.1	2778.5	2824.6	2871.3	2897.2	2915.4	2914.7	2890.2	2831.4
50°	2783.3	2793.4	2826.0	2881.6	2939.2	2994.1	3044.9	3086.1	3105.8	3088.3	3033.2
52.5°	2809.0	2821.8	2864.5	2931.0	2998.1	3071.9	3147.8	3221.1	3265.1	3275.8	3233.2
55°	2700.6	2714.8	2777.1	2869.2	2979.8	3088.9	3204.1	3308.5	3399.2	3441.2	3424.2
57.5°	2384.8	2394.9	2474.2	2593.4	2751.4	2943.1	3137.1	3328.1	3483.9	3593.1	3612.1
60°	1886.0	1898.8	1985.7	2111.6	2291.2	2533.8	2804.9	3117.9	3423.6	3673.7	3797.8
62.5°	1272.7	1281.5	1364.9	1480.0	1676.5	1910.3	2212.6	2609.0	3044.9	3491.4	3841.2
65°	668.2	668.2	724.5	805.2	961.6	1171.0	1480.8	1887.3	2405.8	2963.5	3548.3
67.5°	387.6	387.0	399.8	418.2	467.6	552.3	723.0	1021.9	1512.6	2161.9	2827.2
70°	319.8	317.8	315.8	315.8	323.3	336.1	368.7	450.7	659.4	1114.7	1739.6
71°	305.7	304.3	298.9	296.8	300.3	307.0	321.2	359.1	468.2	760.3	1299.0
72.5°	288.6	285.3	277.1	273.8	274.4	277.1	281.2	296.1	329.4	432.4	740.7
75°	262.9	254.8	244.7	239.8	238.0	237.2	237.2	241.3	248.7	260.9	303.5
77.5°	233.1	221.6	210.7	206.0	202.6	200.6	199.2	196.5	195.2	200.6	216.2
80°	197.2	185.1	176.2	173.6	171.4	167.4	162.0	156.6	153.2	155.9	165.4
82.5°	152.5	140.2	141.7	142.3	138.9	132.1	126.8	120.6	114.5	113.1	117.9
85°	121.4	115.3	111.1	120.0	112.5	104.4	96.8	86.7	72.6	59.6	65.0
87.5°	52.2	52.9	75.8	114.5	100.3	80.7	67.2	54.2	34.6	25.7	26.4
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°	1204.3	1204.3	1204.3	1204.3	1204.3	1204.3	1204.3	1204.3
2.5°	1202.9	1202.9	1200.9	1199.4	1199.4	1199.4	1198.1	1198.8
5°	1211.0	1212.4	1213.7	1213.0	1215.0	1217.2	1216.5	1215.8
7.5°	1224.6	1228.6	1232.7	1234.7	1237.4	1240.2	1240.7	1238.9
10°	1238.1	1246.3	1252.3	1257.7	1261.2	1263.8	1265.9	1265.3
12.5°	1255.0	1266.6	1277.4	1288.3	1295.7	1299.8	1303.9	1302.5
15°	1282.9	1295.7	1309.3	1323.6	1335.1	1341.1	1347.3	1345.9
17.5°	1320.8	1332.4	1343.1	1357.3	1371.6	1378.4	1385.1	1384.5
20°	1368.3	1377.0	1383.1	1391.2	1404.8	1412.2	1418.3	1416.4
22.5°	1422.5	1425.3	1425.8	1428.6	1439.4	1448.2	1456.3	1458.4
25°	1481.5	1479.4	1475.2	1473.3	1480.8	1490.2	1500.3	1503.1
27.5°	1554.5	1547.8	1537.7	1529.5	1531.6	1543.7	1555.2	1558.0
30°	1646.8	1631.2	1609.6	1594.0	1591.2	1604.1	1616.3	1620.4
32.5°	1751.9	1730.9	1701.0	1677.2	1667.2	1678.7	1689.4	1695.6
35°	1876.5	1853.5	1817.5	1787.1	1770.7	1778.3	1797.1	1803.9
37.5°	2024.2	1992.4	1952.3	1913.7	1886.7	1888.0	1908.4	1916.4
40°	2187.6	2141.5	2090.6	2042.6	2003.2	2000.5	2018.9	2024.9
42.5°	2357.6	2298.8	2239.0	2176.1	2127.2	2118.5	2142.2	2142.8
45°	2540.6	2464.7	2390.8	2317.6	2266.9	2251.2	2274.2	2277.1
47.5°	2735.8	2640.9	2553.5	2474.2	2419.3	2394.9	2417.2	2421.3
50°	2939.2	2840.8	2739.2	2651.1	2586.7	2556.8	2583.3	2586.0
52.5°	3140.4	3047.5	2946.6	2845.7	2767.7	2733.7	2765.0	2774.4
55°	3343.0	3253.5	3158.7	3057.7	2959.5	2929.6	2963.5	2973.7
57.5°	3553.8	3467.6	3381.6	3280.0	3184.4	3138.9	3175.6	3189.8
60°	3786.1	3710.3	3629.1	3526.7	3432.5	3379.7	3410.8	3427.0
62.5°	4014.5	3999.1	3925.1	3818.8	3699.5	3646.6	3673.0	3684.6
65°	4033.6	4286.4	4282.9	4177.2	4010.6	3921.7	3929.1	3934.7
67.5°	3520.5	4100.7	4471.4	4504.6	4319.0	4180.0	4163.6	4167.1
70°	2492.4	3288.8	4075.6	4592.0	4665.2	4557.5	4522.2	4527.5
71°	1997.1	2821.8	3687.9	4382.7	4659.8	4628.5	4608.9	4623.1
72.5°	1274.8	2079.1	2922.1	3752.9	4284.9	4437.4	4459.8	4468.6
75°	462.8	894.5	1514.0	2169.2	2749.4	3148.5	3368.0	3385.7
77.5°	248.7	320.5	495.3	740.1	929.7	1031.4	1043.7	1048.4
80°	183.0	212.1	242.6	277.1	298.9	302.9	295.5	279.9
82.5°	129.4	146.3	158.6	170.8	179.7	172.1	143.0	109.1
85°	75.2	82.6	89.4	95.6	96.8	91.4	60.4	49.4
87.5°	29.9	32.5	31.9	35.9	34.6	31.9	23.7	20.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)