

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: P196935

Luminaire Tested: **NAV-AF-03-D-UNV-5WQ-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196935
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-03-D-UNV-5WQ-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15378 lumens
Efficiency: N/A
Efficacy: 92.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 166
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

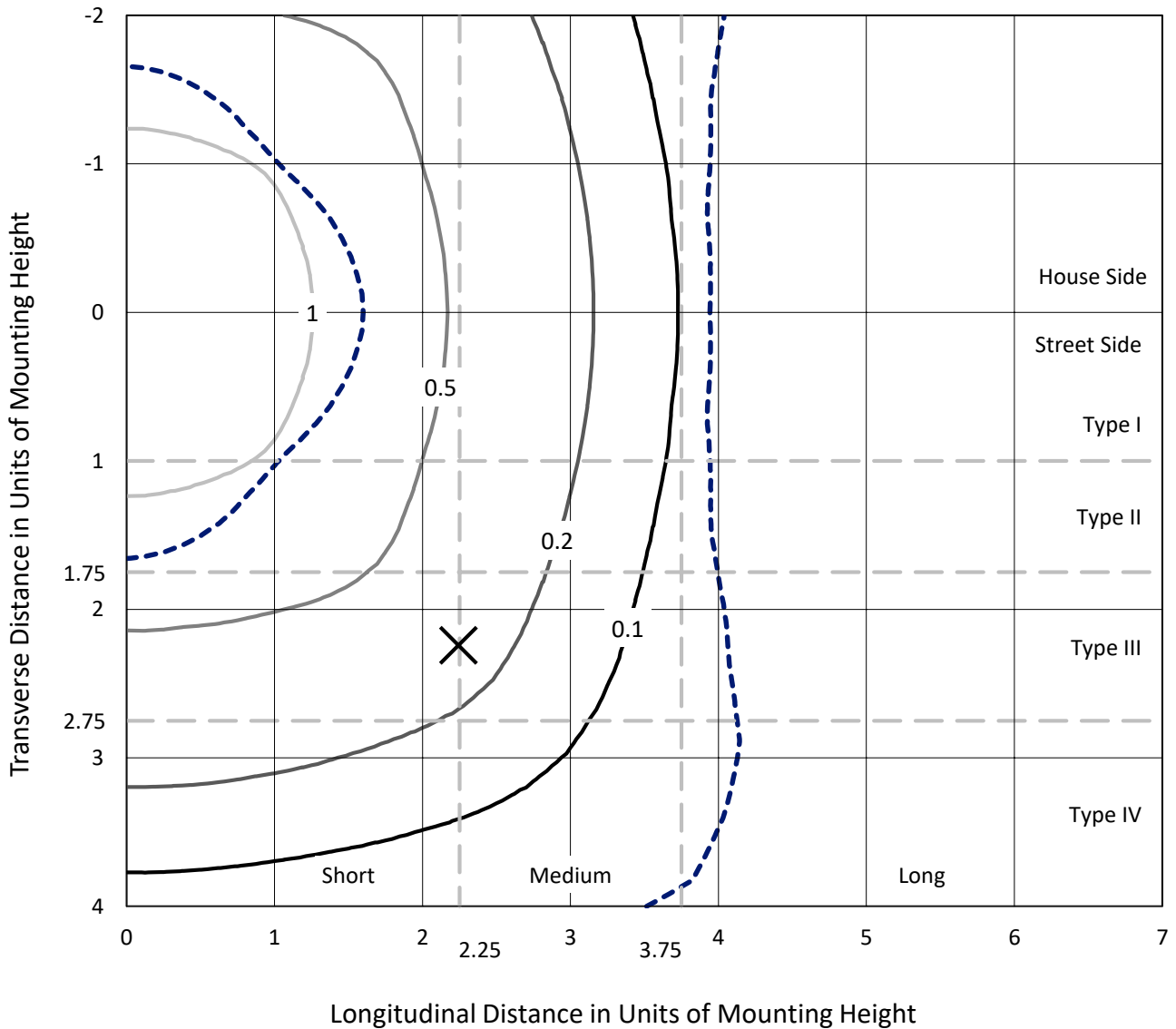


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Iso-Footcandle Lines of Horizontal Illumination

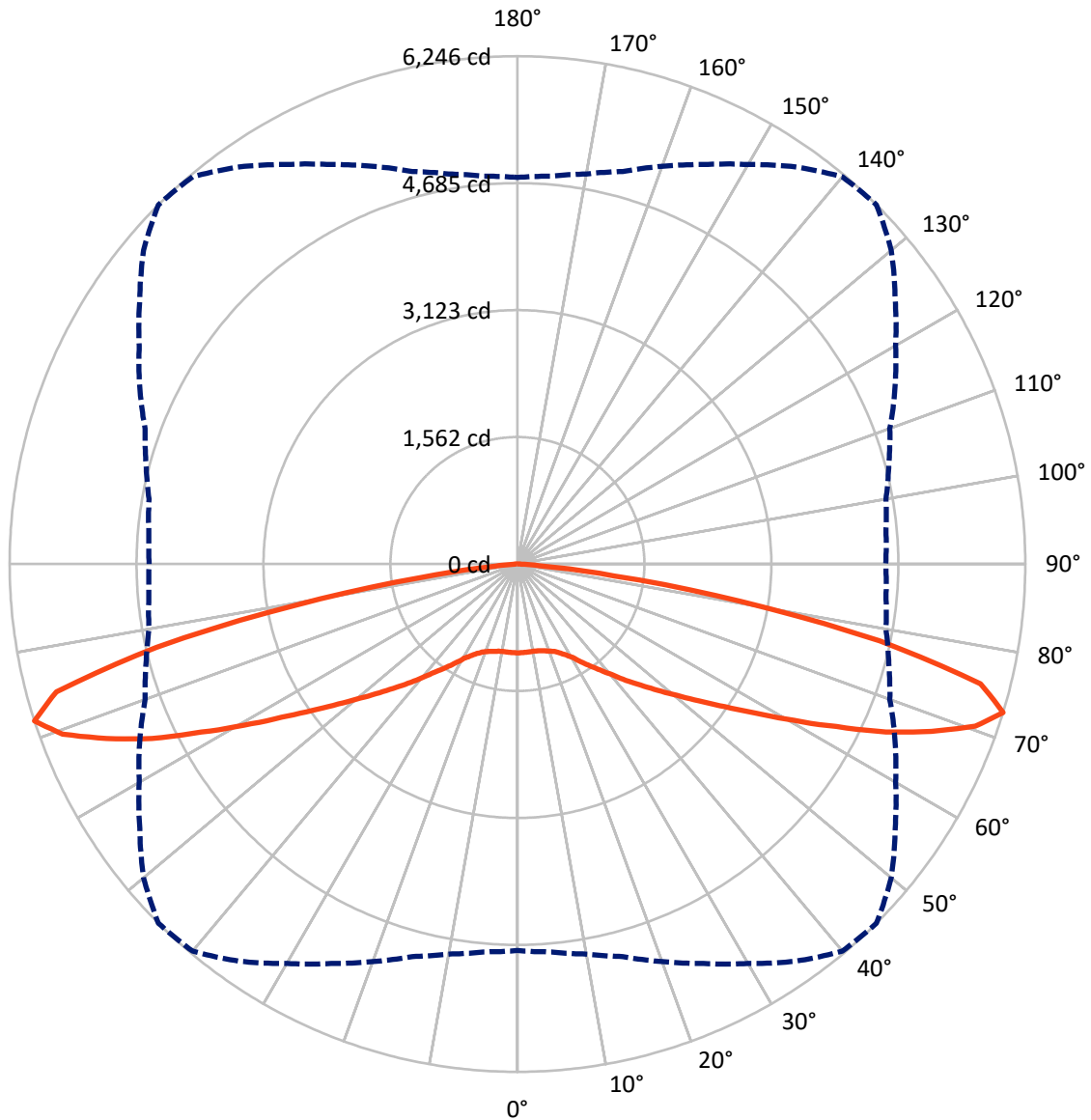
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 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	7689.0	0.0	7689.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7689.0	0.0	7689.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	15378.0	0.0	15378.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.4	0.7
10°-20°	315.8	2.1
20°-30°	570.1	3.7
30°-40°	972.5	6.3
40°-50°	1655.6	10.8
50°-60°	2664.5	17.3
60°-70°	4431.2	28.8
70°-80°	4286.6	27.9
80°-90°	377.3	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°	15378.0	100.0
0°-180°	15378.0	100.0



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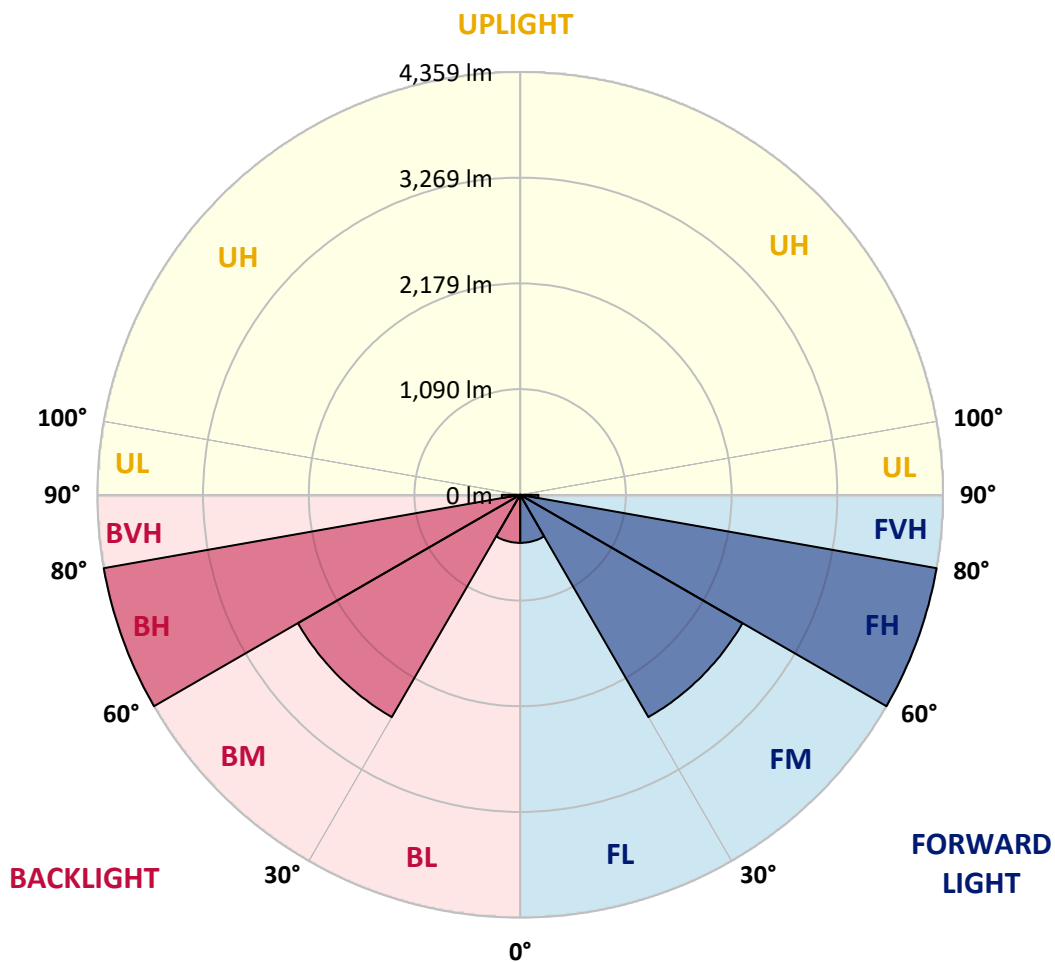
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	495.1	3.2			
FM	(30°-60°)	2646.3	17.2			
FH	(60°-80°)	4358.9	28.3			G2/5000
FVH	(80°-90°)	188.6	1.2			G2/225
BL	(0°-30°)	495.1	3.2	B1/500		
BM	(30°-60°)	2646.3	17.2	B3/5000		
BH	(60°-80°)	4358.9	28.3	B4/5000		G2/5000
BVH	(80°-90°)	188.6	1.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	1093.3	1093.3	1093.3	1093.3	1093.3	1093.3	1093.3	1093.3	1093.3	1093.3	1093.3
2.5°	1101.8	1101.8	1102.7	1101.8	1099.9	1098.9	1096.1	1094.2	1092.3	1091.4	1089.5
5°	1102.7	1102.7	1103.7	1102.7	1100.8	1098.9	1097.0	1094.2	1092.3	1090.4	1089.5
7.5°	1106.5	1107.5	1108.4	1107.5	1103.7	1101.8	1098.9	1096.1	1092.3	1090.4	1088.5
10°	1114.1	1114.1	1114.1	1113.1	1110.3	1106.5	1102.7	1099.9	1095.2	1090.4	1087.6
12.5°	1119.8	1120.7	1120.7	1118.8	1115.0	1110.3	1106.5	1103.7	1099.9	1096.1	1093.3
15°	1128.3	1128.3	1127.3	1123.5	1117.9	1114.1	1112.2	1111.2	1110.3	1108.4	1105.6
17.5°	1145.3	1144.4	1141.5	1135.9	1129.2	1126.4	1124.5	1124.5	1124.5	1123.5	1121.7
20°	1169.9	1169.9	1166.1	1156.7	1151.0	1148.2	1145.3	1145.3	1145.3	1142.5	1139.6
22.5°	1209.7	1210.6	1205.0	1193.6	1186.0	1180.3	1176.6	1173.7	1170.9	1169.0	1164.3
25°	1263.6	1262.7	1256.1	1241.9	1236.2	1230.5	1222.9	1218.2	1214.4	1211.6	1205.9
27.5°	1320.4	1319.5	1311.9	1299.6	1295.8	1287.3	1281.6	1275.0	1270.3	1265.5	1259.9
30°	1393.3	1388.6	1382.9	1373.4	1371.5	1364.9	1357.3	1347.9	1340.3	1332.7	1326.1
32.5°	1458.6	1458.6	1450.1	1445.4	1449.2	1446.3	1447.3	1441.6	1436.9	1434.0	1427.4
35°	1549.5	1549.5	1545.7	1540.0	1541.0	1534.4	1533.4	1534.4	1538.1	1538.1	1530.6
37.5°	1670.7	1672.5	1660.2	1658.3	1653.6	1644.2	1639.4	1641.3	1649.8	1654.6	1644.2
40°	1821.2	1824.9	1821.2	1808.8	1803.2	1787.1	1777.6	1777.6	1784.2	1789.0	1785.2
42.5°	1969.8	1976.4	1969.8	1960.3	1955.6	1943.3	1938.5	1942.3	1950.8	1956.5	1950.8
45°	2135.4	2140.1	2131.6	2120.3	2114.6	2108.0	2105.1	2108.0	2117.4	2123.1	2121.2
47.5°	2298.2	2304.8	2294.4	2289.7	2289.7	2283.1	2290.6	2298.2	2306.7	2320.0	2314.3
50°	2457.2	2465.8	2459.1	2460.1	2467.6	2479.9	2494.1	2509.3	2524.4	2538.6	2540.5
52.5°	2599.2	2612.5	2613.4	2630.5	2654.1	2673.0	2712.8	2745.9	2781.9	2794.2	2788.5
55°	2748.8	2766.8	2790.4	2816.9	2854.8	2893.6	2960.8	3020.4	3067.8	3097.1	3092.4
57.5°	2962.7	2980.7	3005.3	3048.8	3105.6	3158.6	3250.4	3343.2	3415.1	3459.6	3437.9
60°	3240.0	3259.0	3291.1	3337.5	3411.4	3483.3	3609.2	3742.6	3854.3	3905.4	3865.7
62.5°	3607.3	3625.3	3646.1	3707.6	3790.0	3882.7	4040.8	4212.1	4354.1	4403.3	4347.5
65°	4130.7	4152.5	4159.1	4209.3	4289.7	4375.9	4546.3	4739.4	4901.2	4981.7	4870.0
67.5°	4720.4	4728.9	4755.4	4814.1	4896.5	4974.1	5108.5	5291.2	5446.4	5490.9	5371.6
70°	5065.9	5083.0	5129.3	5210.7	5309.2	5431.3	5578.0	5774.9	5950.9	5971.8	5820.3
72.5°	4753.6	4788.6	4870.9	4997.8	5204.1	5420.9	5673.6	5964.2	6216.9	6246.3	6003.0
75°	3812.7	3852.4	3950.9	4090.0	4334.2	4656.1	5021.4	5457.8	5836.4	5884.7	5562.8
77.5°	2032.2	2081.5	2224.4	2411.8	2760.1	3186.1	3626.2	4124.1	4445.9	4554.8	4322.9
80°	512.1	538.6	607.7	717.5	953.2	1296.8	1676.3	2212.1	2611.5	2781.0	2611.5
82.5°	198.8	218.7	237.6	250.8	273.6	320.9	443.0	722.2	973.0	1198.3	1037.4
85°	76.7	81.4	117.4	133.5	133.5	146.7	168.5	198.8	246.1	268.8	225.3
87.5°	30.3	33.1	40.7	62.5	64.4	56.8	60.6	68.2	52.1	43.5	49.2
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°	1093.3	1093.3	1093.3	1093.3	1093.3	1093.3	1093.3	1093.3
2.5°	1088.5	1087.6	1085.7	1086.6	1085.7	1085.7	1085.7	1085.7
5°	1087.6	1087.6	1085.7	1085.7	1085.7	1086.6	1085.7	1085.7
7.5°	1086.6	1085.7	1083.8	1082.8	1082.8	1081.9	1081.9	1081.9
10°	1084.7	1082.8	1081.0	1080.0	1080.0	1078.1	1078.1	1078.1
12.5°	1089.5	1086.6	1084.7	1083.8	1083.8	1083.8	1084.7	1084.7
15°	1102.7	1097.0	1094.2	1093.3	1094.2	1096.1	1097.0	1098.0
17.5°	1116.9	1111.2	1106.5	1104.6	1105.6	1108.4	1111.2	1113.1
20°	1134.9	1130.2	1124.5	1122.6	1122.6	1126.4	1128.3	1131.1
22.5°	1160.5	1156.7	1151.9	1149.1	1147.2	1151.9	1154.8	1156.7
25°	1201.2	1197.4	1193.6	1190.8	1189.8	1194.5	1196.4	1197.4
27.5°	1255.1	1251.3	1249.4	1248.5	1245.7	1247.5	1250.4	1249.4
30°	1325.2	1328.0	1325.2	1325.2	1320.4	1322.3	1320.4	1318.5
32.5°	1418.9	1416.0	1407.5	1401.8	1395.2	1395.2	1392.4	1389.5
35°	1512.6	1503.1	1498.4	1501.2	1498.4	1500.3	1495.5	1490.8
37.5°	1623.3	1617.6	1616.7	1625.2	1623.3	1625.2	1625.2	1618.6
40°	1770.0	1766.3	1772.9	1787.1	1792.8	1791.8	1793.7	1785.2
42.5°	1938.5	1931.9	1934.7	1947.0	1953.7	1955.6	1954.6	1947.0
45°	2107.0	2108.9	2108.9	2122.2	2128.8	2132.6	2125.9	2123.1
47.5°	2297.3	2300.1	2293.5	2302.0	2303.9	2310.5	2304.8	2300.1
50°	2516.9	2506.5	2491.3	2494.1	2494.1	2492.3	2485.6	2479.9
52.5°	2762.0	2738.4	2710.0	2700.5	2690.1	2679.7	2666.4	2656.0
55°	3041.3	3000.6	2949.4	2925.8	2905.9	2882.2	2851.9	2841.5
57.5°	3365.0	3294.9	3226.8	3184.2	3133.1	3101.8	3063.0	3061.1
60°	3749.3	3654.6	3534.4	3471.0	3419.9	3383.0	3353.6	3342.3
62.5°	4193.2	4030.4	3900.7	3832.6	3772.9	3750.2	3713.3	3718.0
65°	4648.5	4482.8	4357.0	4302.1	4246.2	4231.1	4197.0	4209.3
67.5°	5141.6	5005.3	4867.1	4816.0	4764.9	4749.8	4714.7	4725.2
70°	5583.7	5410.5	5253.3	5153.0	5065.9	4995.9	4951.4	4933.4
72.5°	5671.7	5371.6	5124.6	4873.8	4728.9	4602.1	4550.0	4530.2
75°	5096.2	4630.5	4278.4	3984.0	3821.2	3636.6	3616.8	3589.3
77.5°	3964.1	3434.1	3008.1	2629.5	2410.9	2185.6	2108.0	2049.3
80°	2364.5	1817.4	1408.5	987.2	805.5	648.4	609.6	568.9
82.5°	846.2	542.4	365.4	284.9	254.6	234.7	219.6	199.7
85°	204.5	172.3	162.8	147.7	145.8	124.0	88.0	78.6
87.5°	65.3	59.6	60.6	57.7	60.6	45.4	36.9	33.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)