

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: P196449

Luminaire Tested: **NAV-AF-03-D-UNV-5WQ-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196449
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-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 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: 14726 lumens
Efficiency: N/A
Efficacy: 118.8 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

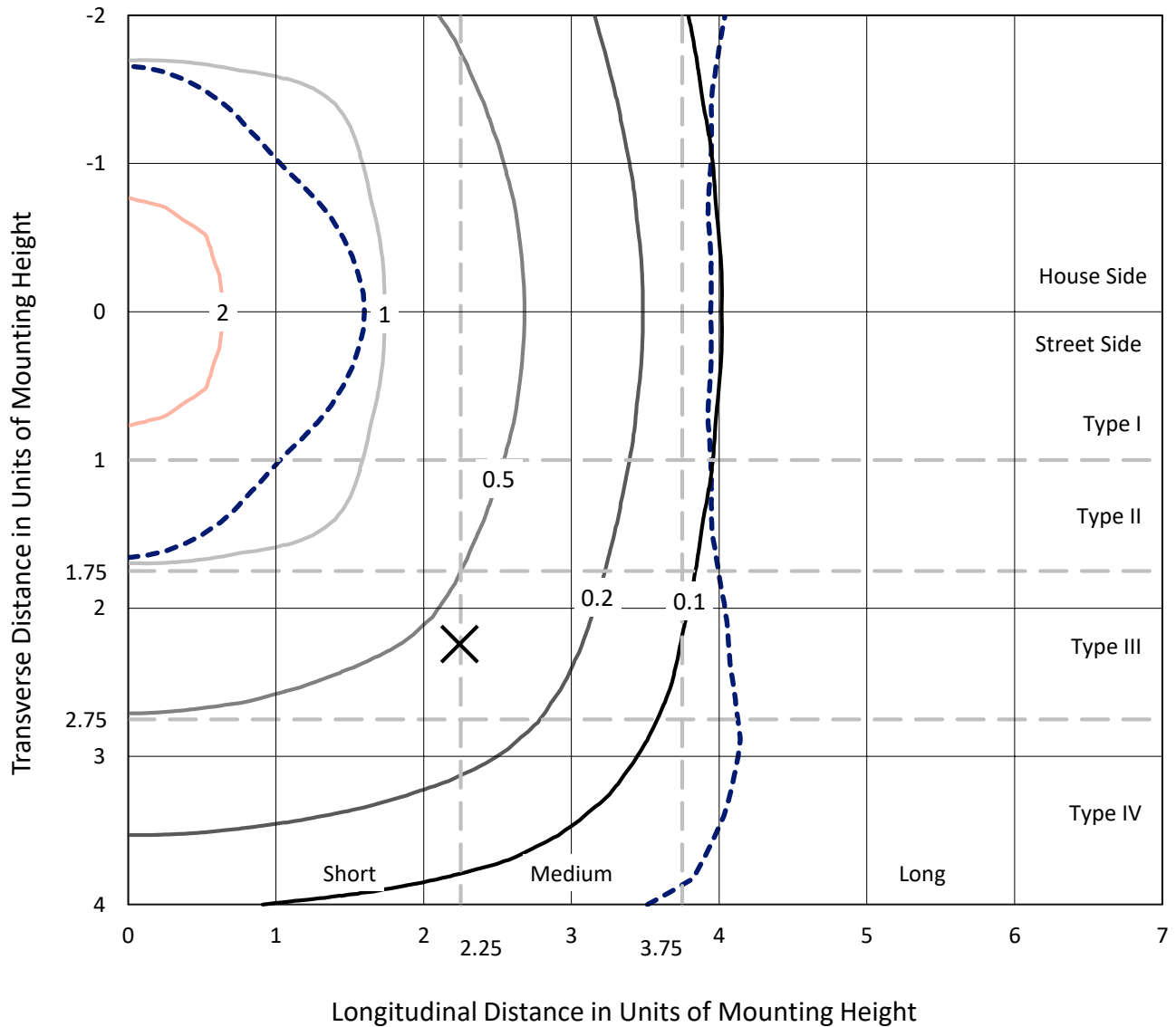
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

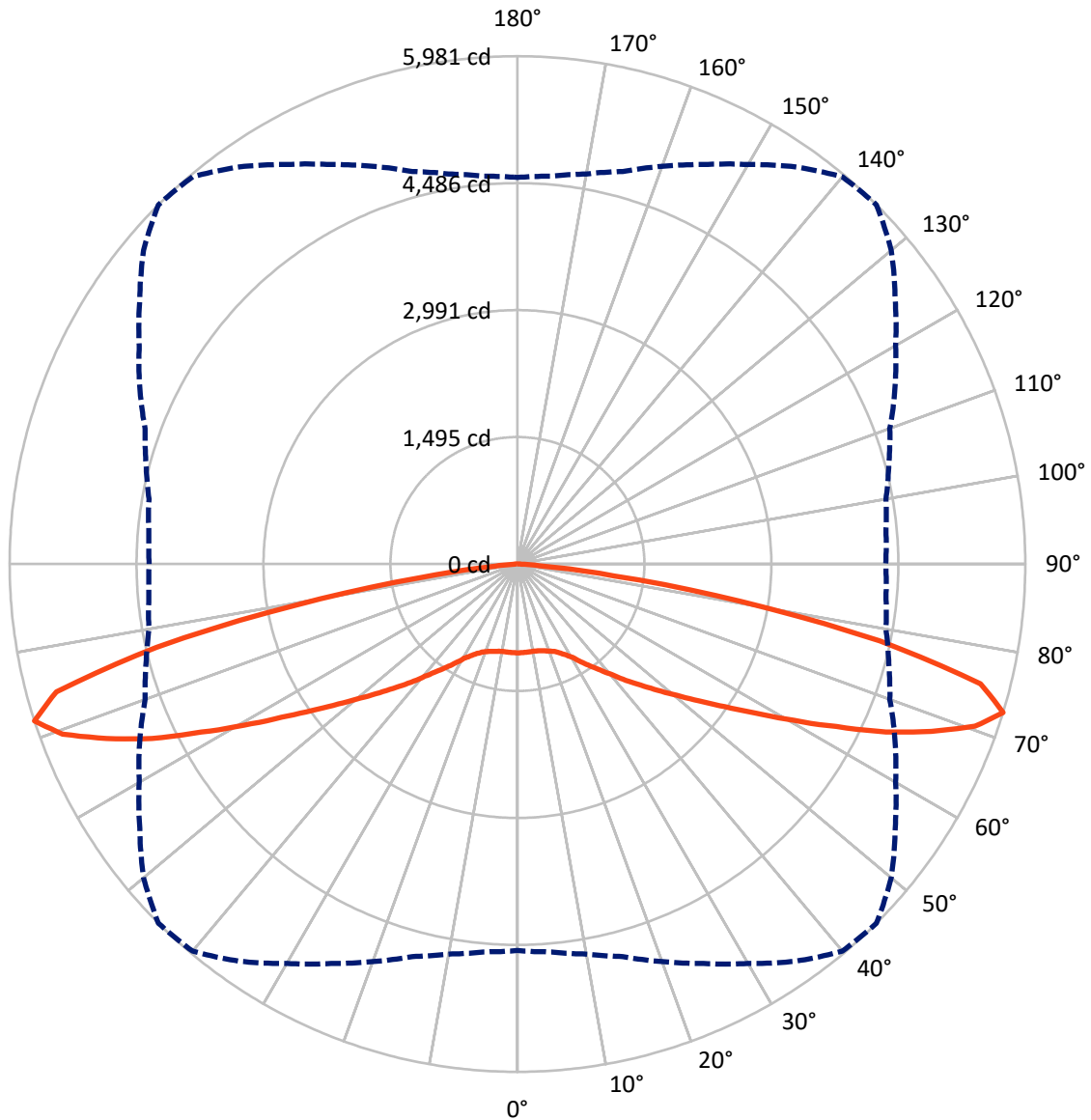
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.6 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	7363.0	0.0	7363.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7363.0	0.0	7363.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	14726.0	0.0	14726.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.9	0.7
10°-20°	302.4	2.1
20°-30°	546.0	3.7
30°-40°	931.2	6.3
40°-50°	1585.5	10.8
50°-60°	2551.6	17.3
60°-70°	4243.3	28.8
70°-80°	4104.9	27.9
80°-90°	361.3	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°	14726.0	100.0
0°-180°	14726.0	100.0



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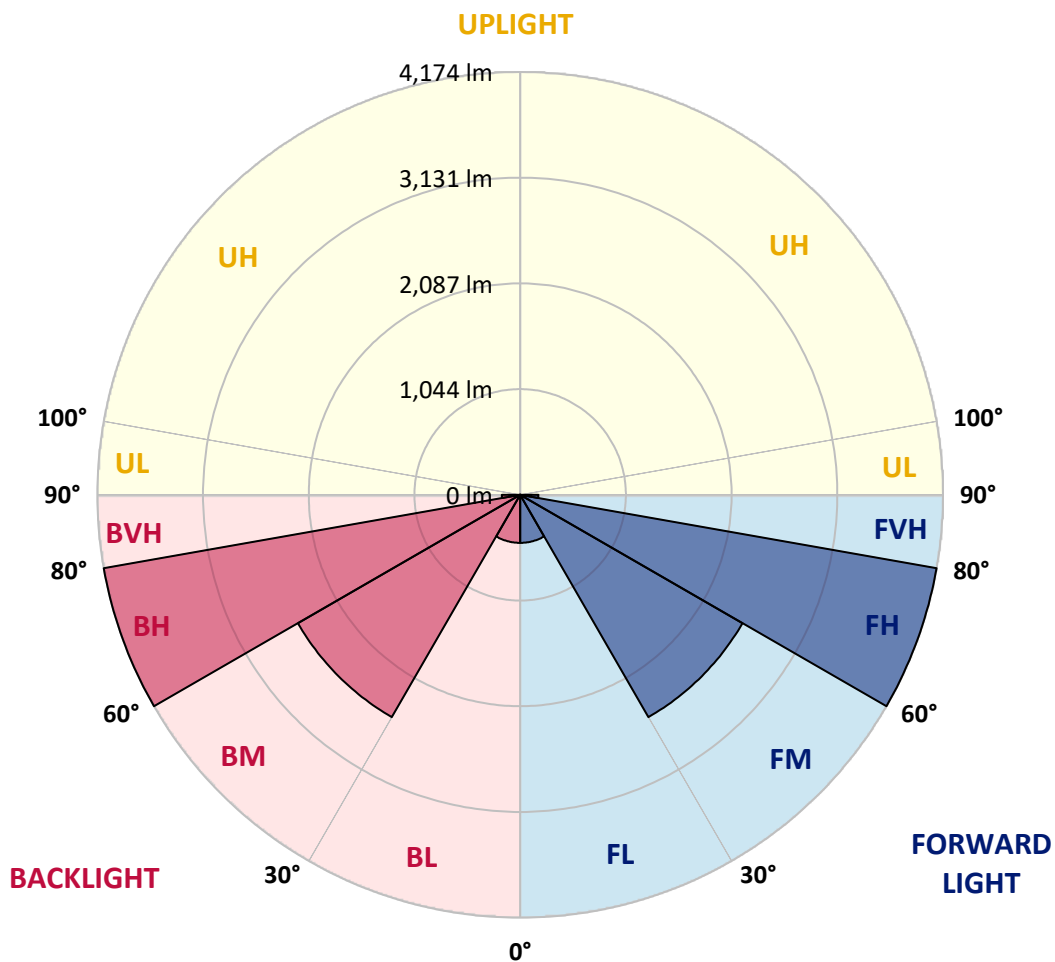
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	474.1	3.2			
FM (30°-60°)	2534.1	17.2			
FH (60°-80°)	4174.1	28.3			G2/5000
FVH (80°-90°)	180.6	1.2			G2/225
BL (0°-30°)	474.1	3.2	B1/500		
BM (30°-60°)	2534.1	17.2	B3/5000		
BH (60°-80°)	4174.1	28.3	B4/5000		G2/5000
BVH (80°-90°)	180.6	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°	1046.9	1046.9	1046.9	1046.9	1046.9	1046.9	1046.9	1046.9	1046.9	1046.9	1046.9
2.5°	1055.1	1055.1	1056.0	1055.1	1053.3	1052.3	1049.7	1047.8	1046.0	1045.1	1043.3
5°	1056.0	1056.0	1056.9	1056.0	1054.2	1052.3	1050.5	1047.8	1046.0	1044.2	1043.3
7.5°	1059.6	1060.5	1061.5	1060.5	1056.9	1055.1	1052.3	1049.7	1046.0	1044.2	1042.4
10°	1066.8	1066.8	1066.8	1066.0	1063.2	1059.6	1056.0	1053.3	1048.7	1044.2	1041.5
12.5°	1072.3	1073.2	1073.2	1071.4	1067.8	1063.2	1059.6	1056.9	1053.3	1049.7	1046.9
15°	1080.5	1080.5	1079.6	1075.8	1070.5	1066.8	1065.1	1064.0	1063.2	1061.5	1058.7
17.5°	1096.8	1095.9	1093.1	1087.6	1081.3	1078.6	1076.9	1076.9	1076.9	1075.8	1074.1
20°	1120.4	1120.4	1116.7	1107.7	1102.2	1099.4	1096.8	1096.8	1096.8	1094.0	1091.3
22.5°	1158.3	1159.4	1153.9	1143.0	1135.8	1130.3	1126.7	1124.0	1121.2	1119.5	1114.9
25°	1210.0	1209.2	1202.8	1189.2	1183.9	1178.4	1171.0	1166.6	1162.9	1160.3	1154.8
27.5°	1264.4	1263.6	1256.3	1244.5	1240.8	1232.8	1227.3	1221.0	1216.4	1211.9	1206.4
30°	1334.3	1329.6	1324.2	1315.2	1313.4	1307.1	1299.7	1290.7	1283.5	1276.2	1269.9
32.5°	1396.8	1396.8	1388.5	1384.1	1387.7	1385.0	1386.0	1380.5	1375.9	1373.2	1366.9
35°	1483.8	1483.8	1480.1	1474.8	1475.6	1469.3	1468.3	1469.3	1473.0	1473.0	1465.7
37.5°	1599.8	1601.6	1589.8	1588.1	1583.5	1574.4	1569.9	1571.7	1579.9	1584.4	1574.4
40°	1743.9	1747.6	1743.9	1732.2	1726.8	1711.3	1702.3	1702.3	1708.6	1713.0	1709.5
42.5°	1886.3	1892.6	1886.3	1877.2	1872.6	1860.9	1856.4	1859.9	1868.2	1873.6	1868.2
45°	2044.9	2049.3	2041.3	2030.4	2024.9	2018.6	2015.9	2018.6	2027.7	2033.1	2031.2
47.5°	2200.8	2207.1	2197.1	2192.7	2192.7	2186.3	2193.5	2200.8	2208.9	2221.6	2216.3
50°	2353.0	2361.2	2354.9	2355.7	2363.1	2374.8	2388.4	2402.9	2417.4	2431.0	2432.7
52.5°	2489.0	2501.7	2502.6	2519.0	2541.6	2559.7	2597.7	2629.6	2664.0	2675.8	2670.3
55°	2632.2	2649.4	2672.2	2697.5	2733.7	2771.0	2835.3	2892.3	2937.7	2965.8	2961.3
57.5°	2837.0	2854.3	2877.9	2919.5	2973.9	3024.8	3112.6	3201.4	3270.3	3313.0	3292.1
60°	3102.6	3120.8	3151.6	3196.1	3266.8	3335.5	3456.2	3583.9	3690.9	3739.8	3701.8
62.5°	3454.3	3471.6	3491.5	3550.4	3629.3	3718.1	3869.4	4033.6	4169.5	4216.7	4163.1
65°	3955.6	3976.4	3982.7	4030.8	4107.8	4190.3	4353.6	4538.4	4693.4	4770.5	4663.5
67.5°	4520.3	4528.5	4553.8	4609.9	4688.9	4763.1	4891.9	5066.8	5215.5	5258.1	5143.9
70°	4851.1	4867.4	4911.9	4989.8	5084.1	5201.0	5341.4	5530.0	5698.6	5718.5	5573.6
72.5°	4552.0	4585.5	4664.4	4785.9	4983.5	5191.0	5433.0	5711.3	5953.3	5981.4	5748.4
75°	3651.0	3689.1	3783.3	3916.6	4150.4	4458.7	4808.5	5226.4	5588.9	5635.1	5326.9
77.5°	1946.0	1993.2	2130.1	2309.5	2643.1	3050.9	3472.5	3949.2	4257.4	4361.6	4139.7
80°	490.3	515.7	582.0	687.0	912.8	1241.7	1605.2	2118.3	2500.8	2663.0	2500.8
82.5°	190.3	209.3	227.5	240.2	262.0	307.2	424.3	691.6	931.8	1147.5	993.3
85°	73.4	77.9	112.4	127.9	127.9	140.5	161.3	190.3	235.7	257.5	215.7
87.5°	29.0	31.6	39.0	59.9	61.6	54.4	58.0	65.2	49.8	41.7	47.1
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°	1046.9	1046.9	1046.9	1046.9	1046.9	1046.9	1046.9	1046.9
2.5°	1042.4	1041.5	1039.6	1040.5	1039.6	1039.6	1039.6	1039.6
5°	1041.5	1041.5	1039.6	1039.6	1039.6	1040.5	1039.6	1039.6
7.5°	1040.5	1039.6	1037.9	1037.0	1037.0	1036.0	1036.0	1036.0
10°	1038.7	1037.0	1035.1	1034.2	1034.2	1032.4	1032.4	1032.4
12.5°	1043.3	1040.5	1038.7	1037.9	1037.9	1037.9	1038.7	1038.7
15°	1056.0	1050.5	1047.8	1046.9	1047.8	1049.7	1050.5	1051.4
17.5°	1069.5	1064.0	1059.6	1057.7	1058.7	1061.5	1064.0	1066.0
20°	1086.8	1082.2	1076.9	1075.0	1075.0	1078.6	1080.5	1083.2
22.5°	1111.2	1107.7	1103.1	1100.4	1098.6	1103.1	1105.8	1107.7
25°	1150.3	1146.5	1143.0	1140.2	1139.3	1144.0	1145.7	1146.5
27.5°	1201.9	1198.2	1196.5	1195.6	1192.8	1194.6	1197.4	1196.5
30°	1268.9	1271.7	1268.9	1268.9	1264.4	1266.2	1264.4	1262.6
32.5°	1358.7	1356.0	1347.8	1342.4	1336.0	1336.0	1333.3	1330.6
35°	1448.4	1439.4	1434.9	1437.6	1434.9	1436.6	1432.2	1427.6
37.5°	1554.5	1549.1	1548.2	1556.3	1554.5	1556.3	1556.3	1550.0
40°	1694.9	1691.4	1697.7	1711.3	1716.8	1715.8	1717.7	1709.5
42.5°	1856.4	1850.0	1852.7	1864.5	1870.8	1872.6	1871.7	1864.5
45°	2017.7	2019.4	2019.4	2032.2	2038.6	2042.2	2035.8	2033.1
47.5°	2199.8	2202.5	2196.2	2204.5	2206.2	2212.5	2207.1	2202.5
50°	2410.2	2400.2	2385.6	2388.4	2388.4	2386.5	2380.2	2374.8
52.5°	2644.9	2622.2	2595.0	2585.9	2576.0	2566.1	2553.4	2543.3
55°	2912.3	2873.3	2824.4	2801.7	2782.8	2760.0	2731.1	2721.1
57.5°	3222.3	3155.2	3090.0	3049.2	3000.3	2970.3	2933.2	2931.3
60°	3590.3	3499.7	3384.6	3323.7	3274.8	3239.5	3211.4	3200.5
62.5°	4015.4	3859.5	3735.3	3670.0	3612.9	3591.3	3555.9	3560.4
65°	4451.4	4292.8	4172.2	4119.6	4066.2	4051.7	4019.0	4030.8
67.5°	4923.7	4793.1	4660.8	4611.9	4562.8	4548.4	4514.8	4524.8
70°	5346.9	5181.1	5030.7	4934.4	4851.1	4784.0	4741.5	4724.3
72.5°	5431.2	5143.9	4907.3	4667.1	4528.5	4407.0	4357.2	4338.1
75°	4880.2	4434.2	4097.0	3815.2	3659.2	3482.4	3463.4	3437.1
77.5°	3796.1	3288.4	2880.6	2518.0	2308.6	2092.9	2018.6	1962.4
80°	2264.2	1740.3	1348.7	945.4	771.4	620.9	583.8	544.7
82.5°	810.3	519.4	349.8	272.8	243.8	224.7	210.4	191.2
85°	195.8	165.0	155.9	141.4	139.7	118.8	84.3	75.3
87.5°	62.5	57.2	58.0	55.2	58.0	43.4	35.4	31.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)