

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: P270490

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270490
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-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14528.9 lumens
Efficiency: N/A
Efficacy: 112.6 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

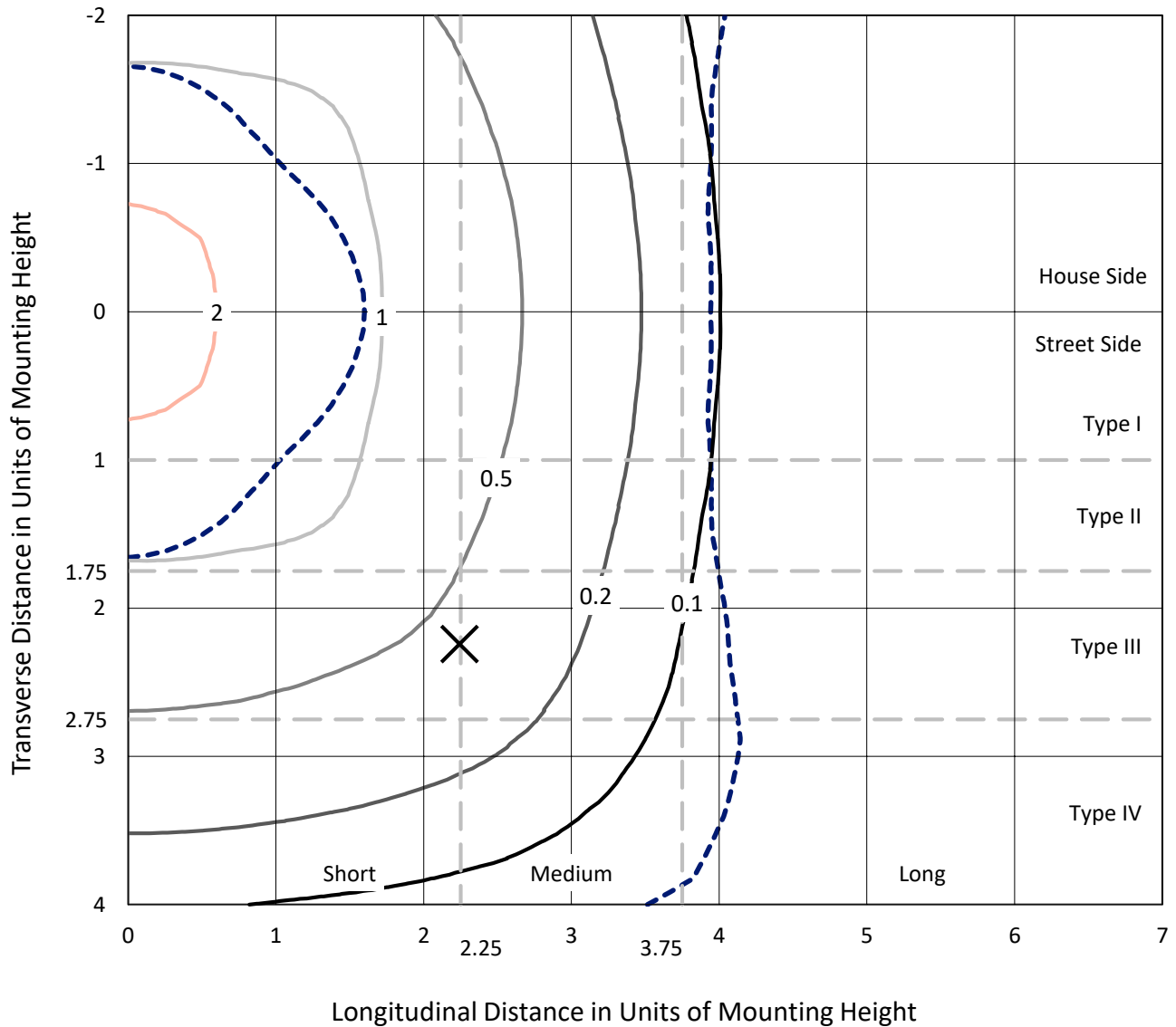
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

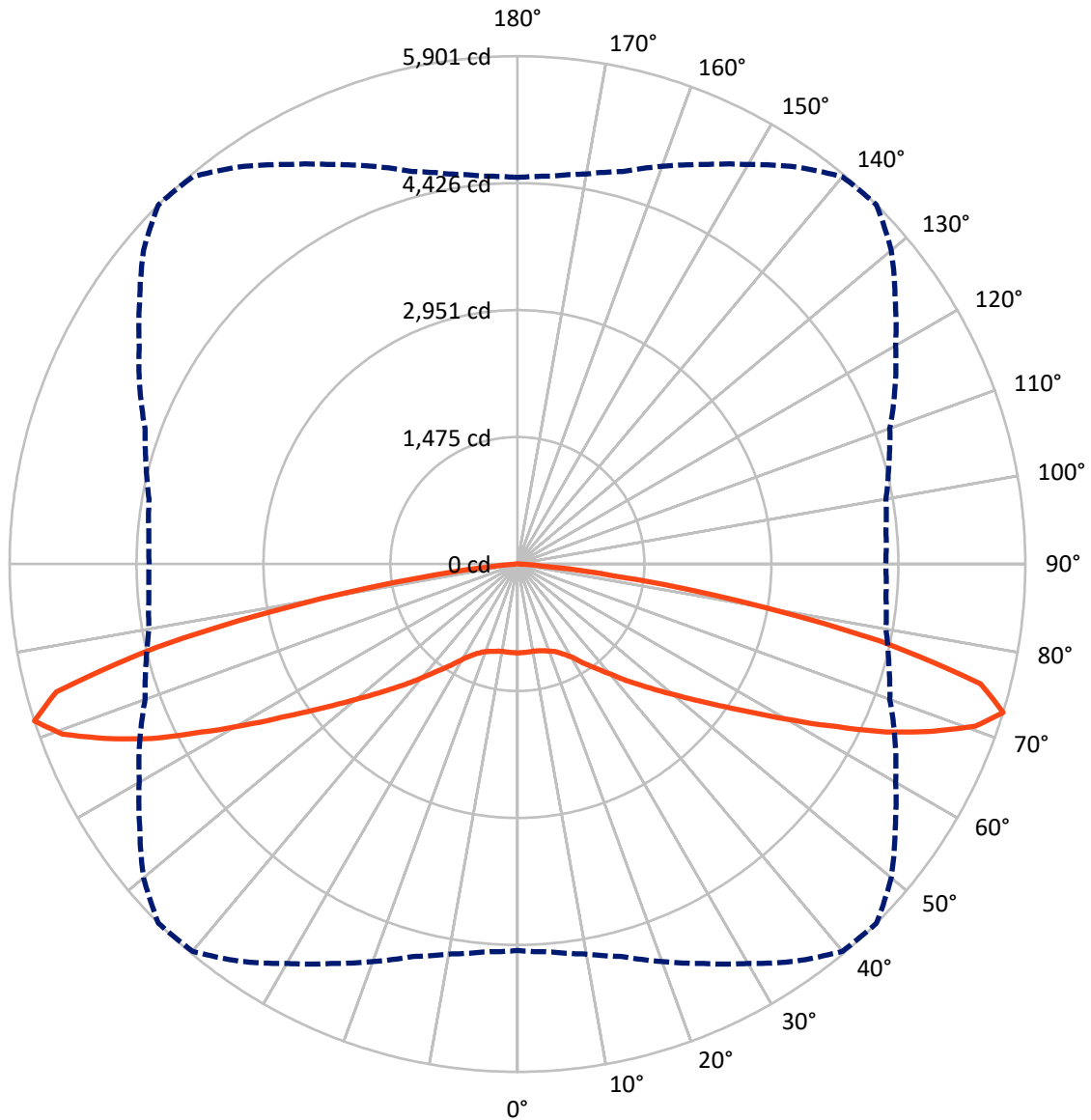
× Max cd
 - - - 1/2 Max cd



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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CATALOG NUMBER: NAV-AF-04-D-UNV-5WQ-7027-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7264.4	0.0	7264.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7264.4	0.0	7264.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	14528.9	0.0	14528.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.6	0.7
10°-20°	298.4	2.1
20°-30°	538.6	3.7
30°-40°	918.8	6.3
40°-50°	1564.2	10.8
50°-60°	2517.4	17.3
60°-70°	4186.5	28.8
70°-80°	4049.9	27.9
80°-90°	356.5	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°	14528.9	100.0
0°-180°	14528.9	100.0



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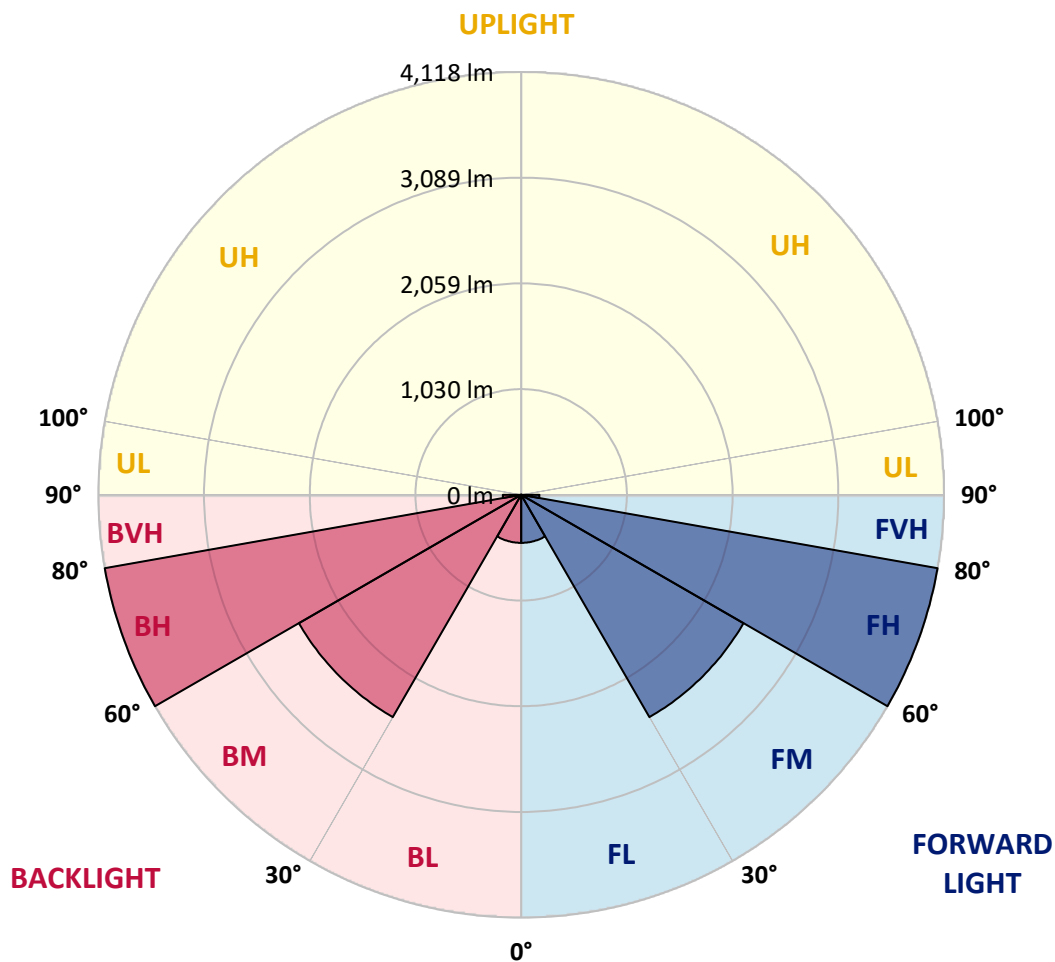
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	467.8	3.2			
FM (30°-60°)	2500.2	17.2			
FH (60°-80°)	4118.2	28.3			G2/5000
FVH (80°-90°)	178.2	1.2			G2/225
BL (0°-30°)	467.8	3.2	B1/500		
BM (30°-60°)	2500.2	17.2	B3/5000		
BH (60°-80°)	4118.2	28.3	B4/5000		G2/5000
BVH (80°-90°)	178.2	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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CATALOG NUMBER: NAV-AF-04-D-UNV-5WQ-7027-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1033.0	1033.0	1033.0	1033.0	1033.0	1033.0	1033.0	1033.0	1033.0	1033.0	1033.0
2.5°	1041.0	1041.0	1041.9	1041.0	1039.2	1038.3	1035.6	1033.8	1032.1	1031.2	1029.3
5°	1041.9	1041.9	1042.8	1041.9	1040.1	1038.3	1036.5	1033.8	1032.1	1030.1	1029.3
7.5°	1045.4	1046.3	1047.2	1046.3	1042.8	1041.0	1038.3	1035.6	1032.1	1030.1	1028.4
10°	1052.5	1052.5	1052.5	1051.6	1049.0	1045.4	1041.9	1039.2	1034.7	1030.1	1027.5
12.5°	1057.9	1058.8	1058.8	1057.0	1053.4	1049.0	1045.4	1042.8	1039.2	1035.6	1033.0
15°	1066.0	1066.0	1065.1	1061.4	1056.1	1052.5	1050.7	1049.8	1049.0	1047.2	1044.5
17.5°	1082.1	1081.2	1078.5	1073.1	1066.8	1064.2	1062.4	1062.4	1062.4	1061.4	1059.7
20°	1105.4	1105.4	1101.7	1092.8	1087.5	1084.8	1082.1	1082.1	1082.1	1079.5	1076.7
22.5°	1143.0	1143.8	1138.4	1127.7	1120.5	1115.2	1111.7	1108.9	1106.3	1104.5	1100.0
25°	1193.8	1192.9	1186.8	1173.2	1167.9	1162.5	1155.4	1151.0	1147.3	1144.7	1139.3
27.5°	1247.6	1246.6	1239.5	1227.9	1224.3	1216.2	1210.8	1204.5	1200.1	1195.6	1190.3
30°	1316.3	1312.0	1306.6	1297.6	1295.8	1289.5	1282.4	1273.4	1266.3	1259.2	1252.9
32.5°	1378.1	1378.1	1370.0	1365.6	1369.1	1366.4	1367.4	1362.0	1357.5	1354.9	1348.5
35°	1464.0	1464.0	1460.4	1455.0	1456.0	1449.7	1448.7	1449.7	1453.2	1453.2	1446.0
37.5°	1578.4	1580.2	1568.6	1566.7	1562.3	1553.3	1548.9	1550.7	1558.6	1563.2	1553.3
40°	1720.7	1724.1	1720.7	1708.9	1703.5	1688.5	1679.4	1679.4	1685.7	1690.3	1686.6
42.5°	1861.0	1867.2	1861.0	1852.0	1847.5	1836.0	1831.5	1835.1	1843.1	1848.5	1843.1
45°	2017.6	2021.9	2013.9	2003.2	1997.8	1991.5	1988.8	1991.5	2000.5	2005.8	2004.1
47.5°	2171.4	2177.6	2167.7	2163.3	2163.3	2157.0	2164.1	2171.4	2179.4	2191.9	2186.6
50°	2321.6	2329.7	2323.3	2324.3	2331.5	2343.0	2356.4	2370.7	2385.0	2398.5	2400.2
52.5°	2455.6	2468.3	2469.1	2485.3	2507.6	2525.4	2563.0	2594.3	2628.4	2639.8	2634.5
55°	2597.0	2614.0	2636.3	2661.4	2697.2	2733.8	2797.3	2853.6	2898.3	2926.0	2921.6
57.5°	2799.1	2816.0	2839.4	2880.4	2934.1	2984.2	3070.9	3158.6	3226.5	3268.7	3248.0
60°	3061.2	3079.0	3109.5	3153.2	3222.9	3290.9	3409.8	3536.0	3641.5	3689.8	3652.2
62.5°	3408.1	3425.1	3444.8	3502.9	3580.7	3668.4	3817.6	3979.5	4113.7	4160.2	4107.4
65°	3902.6	3923.2	3929.5	3976.8	4052.9	4134.3	4295.2	4477.6	4630.7	4706.6	4601.1
67.5°	4459.7	4467.8	4492.9	4548.3	4626.1	4699.5	4826.5	4999.0	5145.8	5187.7	5075.1
70°	4786.2	4802.2	4846.0	4923.0	5016.0	5131.4	5269.9	5455.9	5622.3	5642.1	5499.0
72.5°	4491.0	4524.1	4601.9	4721.9	4916.8	5121.5	5360.4	5634.9	5873.7	5901.3	5671.4
75°	3602.2	3639.8	3732.7	3864.1	4095.0	4399.0	4744.2	5156.5	5514.2	5559.7	5255.7
77.5°	1919.9	1966.5	2101.6	2278.6	2607.7	3010.1	3426.0	3896.4	4200.5	4303.3	4084.1
80°	483.7	508.8	574.1	678.0	900.6	1225.2	1583.8	2089.9	2467.4	2627.5	2467.4
82.5°	187.7	206.6	224.4	237.1	258.4	303.2	418.5	682.4	919.3	1132.1	980.1
85°	72.5	77.0	110.9	126.1	126.1	138.6	159.2	187.7	232.5	254.0	212.9
87.5°	28.7	31.4	38.4	59.0	60.8	53.7	57.2	64.4	49.1	41.1	46.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270490

CATALOG NUMBER: NAV-AF-04-D-UNV-5WQ-7027-600

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1033.0	1033.0	1033.0	1033.0	1033.0	1033.0	1033.0	1033.0
2.5°	1028.4	1027.5	1025.8	1026.7	1025.8	1025.8	1025.8	1025.8
5°	1027.5	1027.5	1025.8	1025.8	1025.8	1026.7	1025.8	1025.8
7.5°	1026.7	1025.8	1024.0	1023.1	1023.1	1022.1	1022.1	1022.1
10°	1024.8	1023.1	1021.3	1020.4	1020.4	1018.6	1018.6	1018.6
12.5°	1029.3	1026.7	1024.8	1024.0	1024.0	1024.0	1024.8	1024.8
15°	1041.9	1036.5	1033.8	1033.0	1033.8	1035.6	1036.5	1037.4
17.5°	1055.2	1049.8	1045.4	1043.7	1044.5	1047.2	1049.8	1051.6
20°	1072.2	1067.7	1062.4	1060.5	1060.5	1064.2	1066.0	1068.7
22.5°	1096.4	1092.8	1088.3	1085.6	1083.8	1088.3	1091.0	1092.8
25°	1134.9	1131.2	1127.7	1124.9	1124.0	1128.6	1130.3	1131.2
27.5°	1185.9	1182.2	1180.5	1179.6	1176.9	1178.7	1181.4	1180.5
30°	1252.0	1254.7	1252.0	1252.0	1247.6	1249.4	1247.6	1245.7
32.5°	1340.5	1337.8	1329.9	1324.5	1318.2	1318.2	1315.5	1312.9
35°	1429.1	1420.1	1415.6	1418.3	1415.6	1417.4	1412.9	1408.5
37.5°	1533.6	1528.3	1527.5	1535.6	1533.6	1535.6	1535.6	1529.3
40°	1672.4	1668.7	1675.0	1688.5	1693.8	1692.9	1694.7	1686.6
42.5°	1831.5	1825.3	1828.0	1839.5	1845.7	1847.5	1846.6	1839.5
45°	1990.6	1992.4	1992.4	2004.9	2011.2	2014.8	2008.6	2005.8
47.5°	2170.5	2173.1	2166.8	2174.8	2176.7	2182.9	2177.6	2173.1
50°	2378.0	2368.0	2353.7	2356.4	2356.4	2354.6	2348.3	2343.0
52.5°	2609.4	2587.2	2560.3	2551.4	2541.6	2531.8	2519.1	2509.3
55°	2873.3	2835.0	2786.6	2764.3	2745.4	2723.1	2694.5	2684.7
57.5°	3179.2	3112.9	3048.6	3008.3	2960.1	2930.5	2893.9	2892.2
60°	3542.2	3452.8	3339.2	3279.4	3231.1	3196.2	3168.4	3157.7
62.5°	3961.6	3807.8	3685.3	3621.0	3564.7	3543.2	3508.3	3512.7
65°	4391.9	4235.2	4116.4	4064.6	4011.7	3997.5	3965.3	3976.8
67.5°	4857.8	4728.9	4598.5	4550.1	4501.8	4487.6	4454.4	4464.2
70°	5275.3	5111.7	4963.2	4868.5	4786.2	4720.1	4678.0	4660.9
72.5°	5358.5	5075.1	4841.7	4604.6	4467.8	4347.9	4298.7	4280.1
75°	4814.7	4374.8	4042.2	3764.0	3610.2	3435.8	3417.1	3391.1
77.5°	3745.3	3244.5	2842.0	2484.4	2277.7	2064.9	1991.5	1936.0
80°	2233.9	1717.0	1330.7	932.7	761.0	612.6	576.0	537.5
82.5°	799.5	512.5	345.2	269.2	240.6	221.8	207.5	188.7
85°	193.1	162.8	153.8	139.4	137.7	117.1	83.2	74.2
87.5°	61.8	56.4	57.2	54.5	57.2	42.8	34.9	31.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)