

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: P195080

Luminaire Tested: **NAV-AF-02-D-UNV-RW-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195080
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-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10056 lumens
Efficiency: N/A
Efficacy: 118.3 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

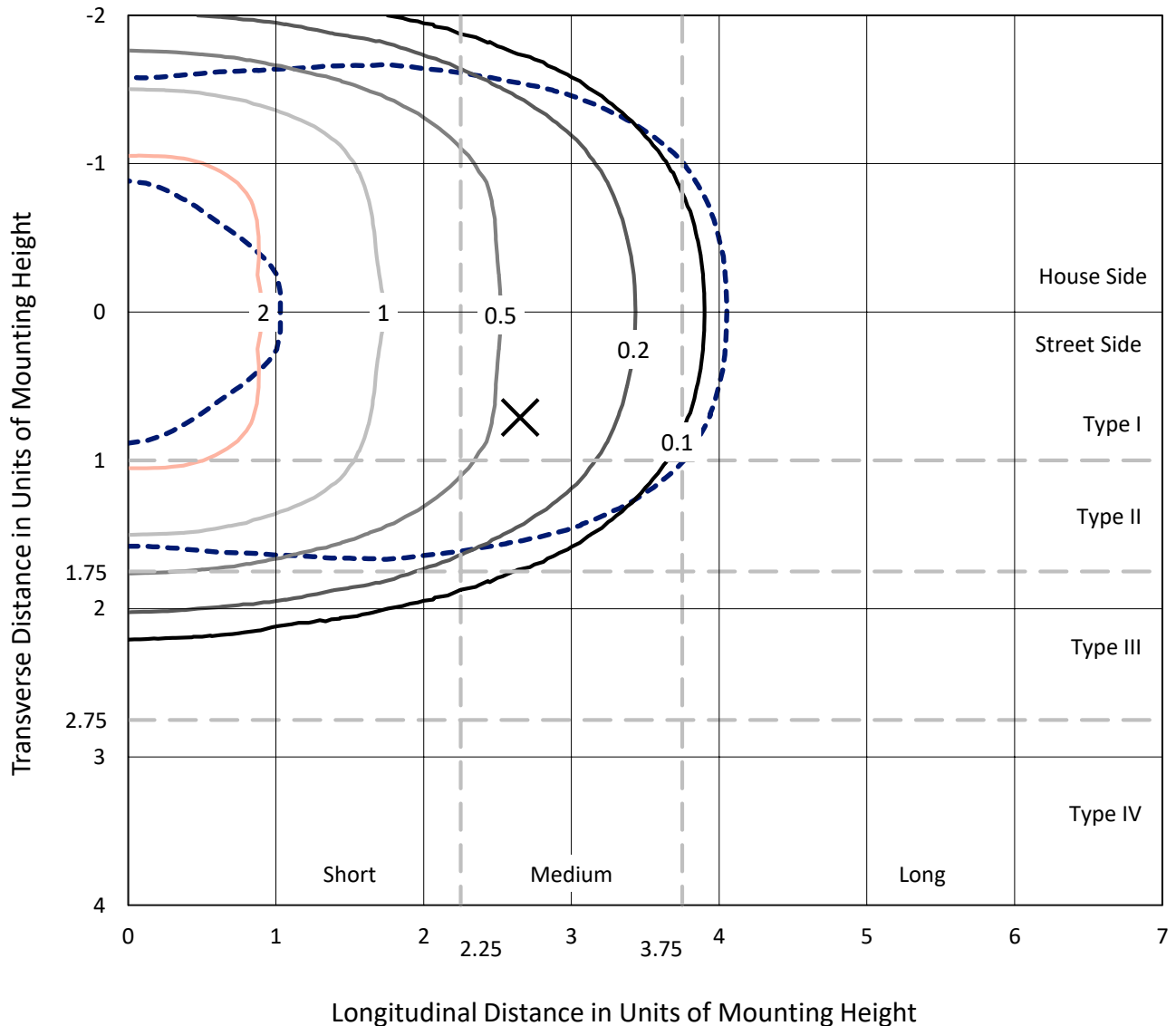
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

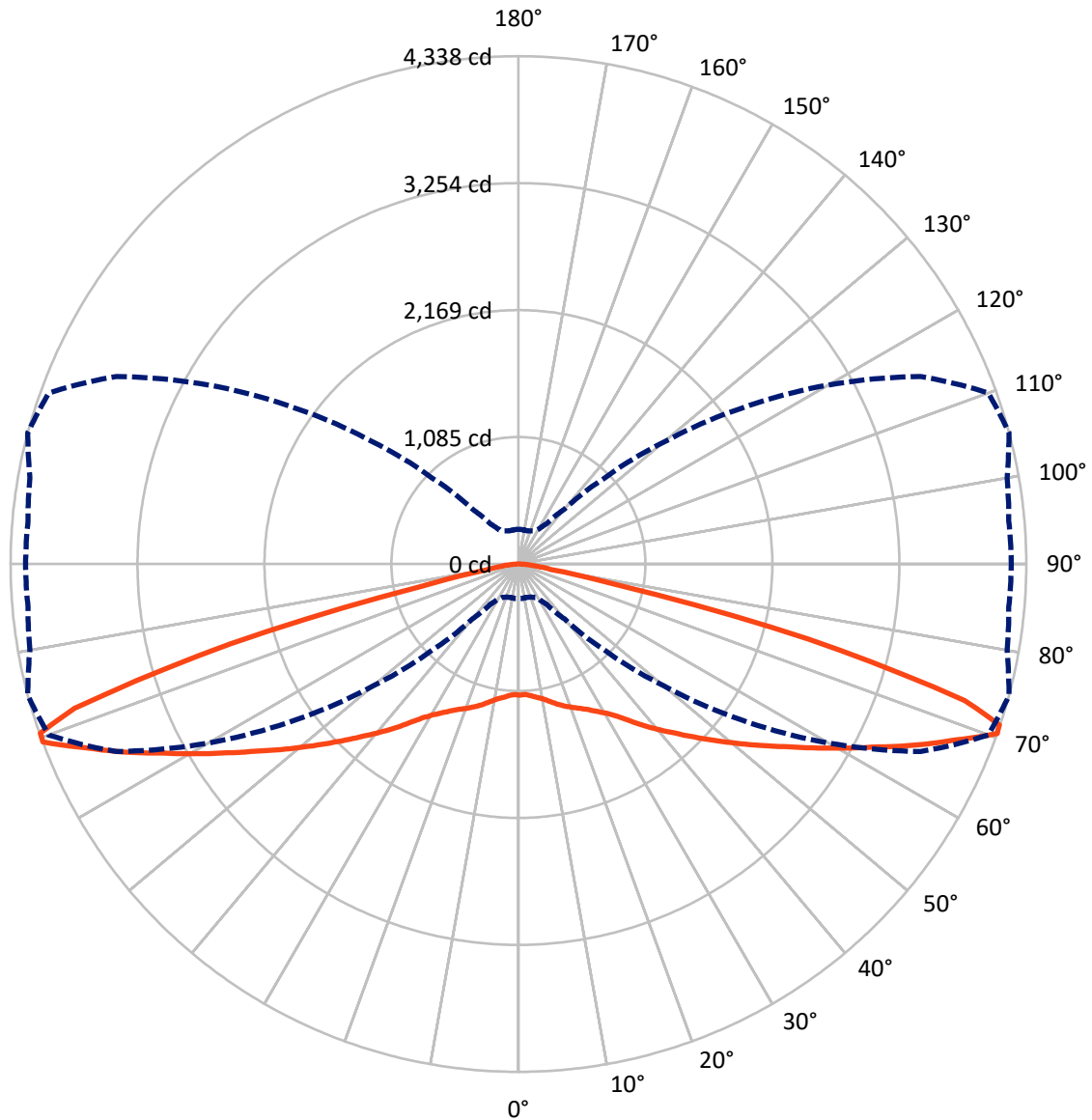
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.8 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
House Side	Lumens	5028.0	0.0	5028.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5028.0	0.0	5028.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	10056.0	0.0	10056.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.4	1.1
10°-20°	333.1	3.3
20°-30°	625.7	6.2
30°-40°	1102.1	11.0
40°-50°	1826.6	18.2
50°-60°	2541.0	25.3
60°-70°	2398.8	23.9
70°-80°	1024.5	10.2
80°-90°	96.8	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°	10056.0	100.0
0°-180°	10056.0	100.0



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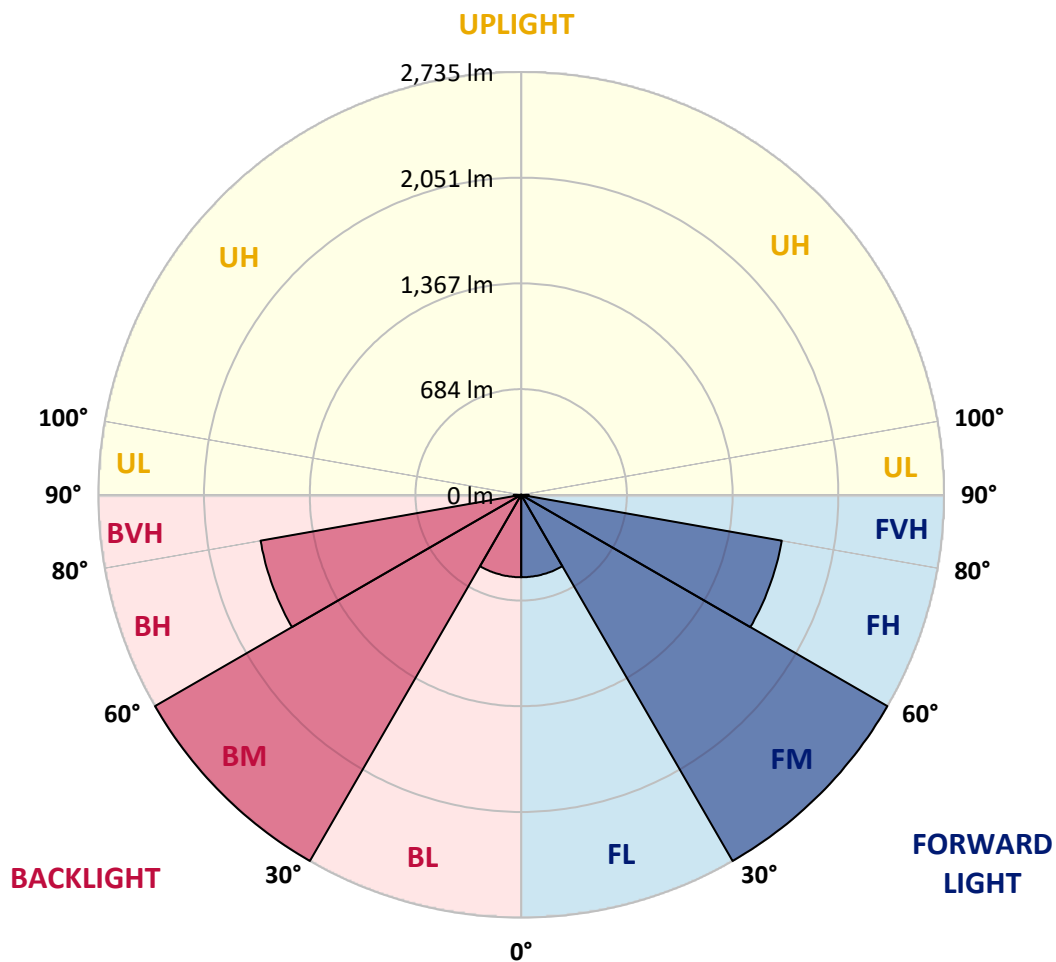
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	533.1	5.3			
FM	(30°-60°)	2734.8	27.2			
FH	(60°-80°)	1711.6	17.0			G1/1800
FVH	(80°-90°)	48.4	0.5			G1/100
BL	(0°-30°)	533.1	5.3	B2/1000		
BM	(30°-60°)	2734.8	27.2	B3/5000		
BH	(60°-80°)	1711.6	17.0	B3/2500		G3/2500
BVH	(80°-90°)	48.4	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°	1119.8	1119.8	1119.8	1119.8	1119.8	1119.8	1119.8	1119.8	1119.8	1119.8	1119.8
2.5°	1126.8	1126.1	1126.8	1124.9	1125.5	1124.9	1124.9	1122.4	1122.4	1121.1	1119.2
5°	1114.2	1115.4	1115.4	1115.4	1117.3	1117.3	1119.8	1120.5	1122.4	1124.2	1125.5
7.5°	1093.4	1094.0	1095.9	1097.1	1100.9	1106.0	1111.0	1116.7	1121.7	1128.0	1135.0
10°	1075.7	1077.0	1080.1	1083.3	1090.2	1096.5	1105.3	1114.2	1123.0	1133.7	1144.4
12.5°	1066.3	1068.2	1073.2	1078.2	1089.0	1097.1	1109.1	1123.0	1135.0	1145.0	1157.0
15°	1067.5	1068.2	1075.1	1082.0	1097.1	1108.5	1125.5	1141.9	1156.4	1167.7	1181.6
17.5°	1085.8	1087.1	1094.0	1104.1	1118.6	1133.1	1151.3	1168.4	1187.9	1201.1	1217.5
20°	1121.7	1123.6	1131.2	1141.9	1157.6	1172.8	1191.7	1209.3	1229.5	1245.2	1261.6
22.5°	1168.4	1171.5	1179.7	1192.9	1208.7	1227.0	1246.5	1264.8	1283.7	1299.4	1313.3
25°	1230.7	1234.5	1243.3	1256.6	1272.3	1291.9	1312.0	1330.9	1350.5	1362.5	1373.8
27.5°	1314.6	1320.9	1330.3	1341.0	1354.9	1375.7	1394.6	1410.3	1429.3	1442.5	1450.0
30°	1427.4	1436.2	1443.7	1455.1	1465.2	1487.2	1502.4	1515.0	1529.5	1537.0	1538.9
32.5°	1565.4	1573.6	1581.1	1589.3	1603.2	1623.3	1637.8	1644.8	1652.3	1651.1	1644.1
35°	1721.0	1727.3	1731.7	1746.2	1768.9	1782.2	1792.9	1795.4	1796.6	1783.4	1770.2
37.5°	1884.9	1892.4	1896.2	1918.9	1940.3	1955.5	1960.5	1966.2	1962.4	1940.3	1916.4
40°	2062.0	2070.1	2081.5	2101.0	2126.2	2140.7	2147.0	2146.4	2143.2	2117.4	2078.3
42.5°	2235.9	2246.0	2255.4	2289.5	2310.2	2334.8	2338.0	2337.3	2330.4	2300.8	2255.4
45°	2383.3	2395.3	2414.9	2452.7	2486.1	2515.7	2527.7	2532.1	2525.1	2493.6	2442.0
47.5°	2505.0	2513.2	2537.7	2583.7	2626.6	2670.1	2694.0	2711.0	2710.4	2687.7	2632.9
50°	2588.2	2597.6	2627.9	2679.5	2733.1	2784.1	2831.4	2869.8	2888.1	2871.7	2820.7
52.5°	2612.1	2624.1	2663.8	2725.5	2787.9	2856.6	2927.2	2995.3	3036.2	3046.3	3006.6
55°	2511.3	2524.5	2582.5	2668.2	2770.9	2872.4	2979.5	3076.5	3161.0	3200.1	3184.3
57.5°	2217.6	2227.1	2300.8	2411.7	2558.5	2736.9	2917.1	3094.8	3239.8	3341.2	3358.9
60°	1753.8	1765.8	1846.4	1963.6	2130.6	2356.3	2608.3	2899.5	3183.7	3416.2	3531.5
62.5°	1183.5	1191.7	1269.2	1376.3	1559.1	1776.5	2057.5	2426.2	2831.4	3246.7	3571.9
65°	621.4	621.4	673.7	748.7	894.2	1089.0	1376.9	1755.1	2237.1	2755.8	3299.6
67.5°	360.5	359.8	371.8	388.8	434.8	513.6	672.4	950.3	1406.6	2010.3	2629.1
70°	297.4	295.6	293.7	293.7	300.6	312.6	342.8	419.1	613.2	1036.6	1617.7
71°	284.2	283.0	277.9	276.0	279.2	285.5	298.7	334.0	435.5	707.1	1208.1
72.5°	268.5	265.3	257.7	254.6	255.2	257.7	261.5	275.4	306.3	402.1	688.8
75°	244.5	236.9	227.5	223.1	221.2	220.6	220.6	224.3	231.3	242.6	282.3
77.5°	216.8	206.1	196.0	191.6	188.4	186.5	185.3	182.8	181.5	186.5	201.0
80°	183.4	172.0	163.8	161.3	159.4	155.7	150.6	145.6	142.4	144.9	153.8
82.5°	141.8	130.4	131.7	132.3	129.2	122.9	117.8	112.2	106.5	105.2	109.7
85°	112.8	107.1	103.3	111.5	104.6	97.0	90.1	80.7	67.4	55.5	60.5
87.5°	48.5	49.2	70.6	106.5	93.3	75.0	62.4	50.4	32.1	23.9	24.6
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°	1119.8	1119.8	1119.8	1119.8	1119.8	1119.8	1119.8	1119.8
2.5°	1118.6	1118.6	1116.7	1115.4	1115.4	1115.4	1114.2	1114.8
5°	1126.1	1127.4	1128.7	1128.0	1129.9	1131.8	1131.2	1130.5
7.5°	1138.7	1142.5	1146.3	1148.2	1150.7	1153.2	1153.9	1152.0
10°	1151.3	1158.9	1164.6	1169.6	1172.8	1175.3	1177.2	1176.6
12.5°	1167.1	1177.8	1187.9	1198.0	1204.9	1208.7	1212.5	1211.2
15°	1192.9	1204.9	1217.5	1230.7	1241.5	1247.1	1252.8	1251.5
17.5°	1228.2	1238.9	1249.0	1262.3	1275.5	1281.8	1288.1	1287.5
20°	1272.3	1280.5	1286.2	1293.8	1306.4	1313.3	1319.0	1317.1
22.5°	1322.8	1325.3	1325.9	1328.4	1338.5	1346.7	1354.3	1356.2
25°	1377.6	1375.7	1371.9	1370.0	1376.9	1385.8	1395.2	1397.7
27.5°	1445.6	1439.3	1429.9	1422.3	1424.2	1435.6	1446.3	1448.8
30°	1531.3	1516.8	1496.7	1482.2	1479.7	1491.6	1503.0	1506.8
32.5°	1629.0	1609.5	1581.8	1559.7	1550.2	1561.0	1571.0	1576.7
35°	1745.0	1723.5	1690.1	1661.8	1646.7	1653.6	1671.2	1677.5
37.5°	1882.4	1852.7	1815.6	1779.6	1754.4	1755.7	1774.6	1782.2
40°	2034.2	1991.4	1944.1	1899.4	1862.8	1860.3	1877.3	1883.0
42.5°	2192.4	2137.6	2082.1	2023.5	1978.1	1969.9	1992.0	1992.6
45°	2362.6	2292.0	2223.3	2155.2	2108.0	2093.5	2114.9	2117.4
47.5°	2544.0	2455.8	2374.5	2300.8	2249.8	2227.1	2247.9	2251.6
50°	2733.1	2641.7	2547.2	2465.3	2405.4	2377.7	2402.3	2404.8
52.5°	2920.3	2833.9	2740.0	2646.1	2573.7	2542.2	2571.1	2580.0
55°	3108.7	3025.5	2937.3	2843.4	2752.0	2724.3	2755.8	2765.2
57.5°	3304.7	3224.6	3144.6	3050.1	2961.2	2919.0	2953.0	2966.3
60°	3520.8	3450.2	3374.6	3279.5	3191.9	3142.7	3171.7	3186.8
62.5°	3733.2	3718.7	3650.0	3551.1	3440.2	3391.0	3415.6	3426.3
65°	3750.8	3985.9	3982.8	3884.4	3729.4	3646.9	3653.8	3658.8
67.5°	3273.8	3813.2	4157.9	4188.8	4016.2	3887.0	3871.8	3875.0
70°	2317.8	3058.3	3789.9	4270.1	4338.2	4238.0	4205.2	4210.2
71°	1857.1	2624.1	3429.5	4075.4	4333.1	4304.1	4285.9	4299.1
72.5°	1185.4	1933.4	2717.3	3489.9	3984.6	4126.4	4147.2	4155.4
75°	430.4	831.8	1407.8	2017.2	2556.6	2927.8	3132.0	3148.4
77.5°	231.3	298.1	460.7	688.2	864.6	959.1	970.5	974.9
80°	170.1	197.2	225.6	257.7	277.9	281.7	274.8	260.3
82.5°	120.4	136.1	147.5	158.8	167.0	160.1	133.0	101.5
85°	70.0	76.9	83.2	88.9	90.1	85.1	56.1	46.0
87.5°	27.7	30.2	29.6	33.4	32.1	29.6	22.1	18.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)