

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: P196051

Luminaire Tested: **NAV-AF-01-D-UNV-RW-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196051
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-01-D-UNV-RW-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7006.2 lumens
Efficiency: N/A
Efficacy: 104.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

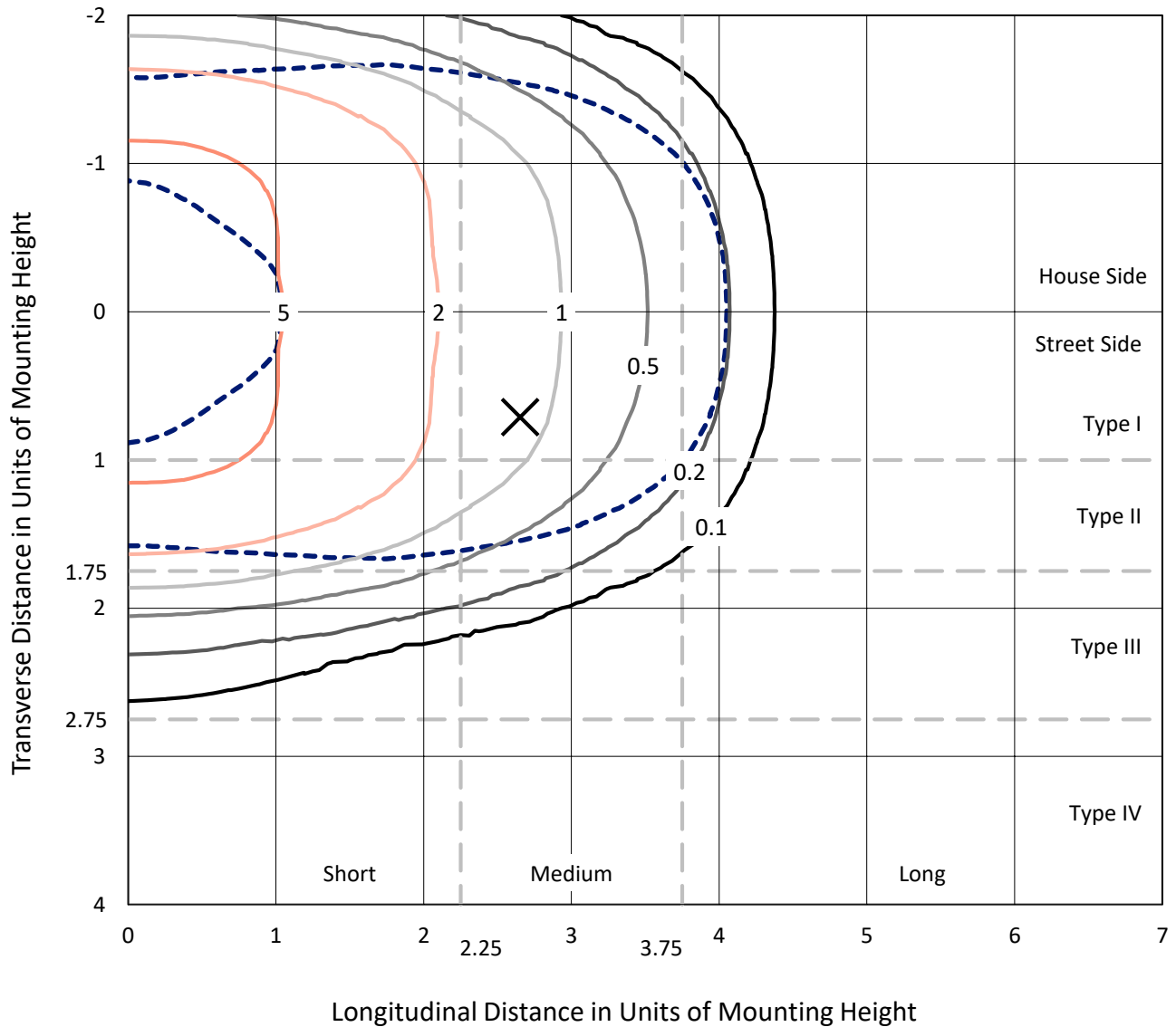
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

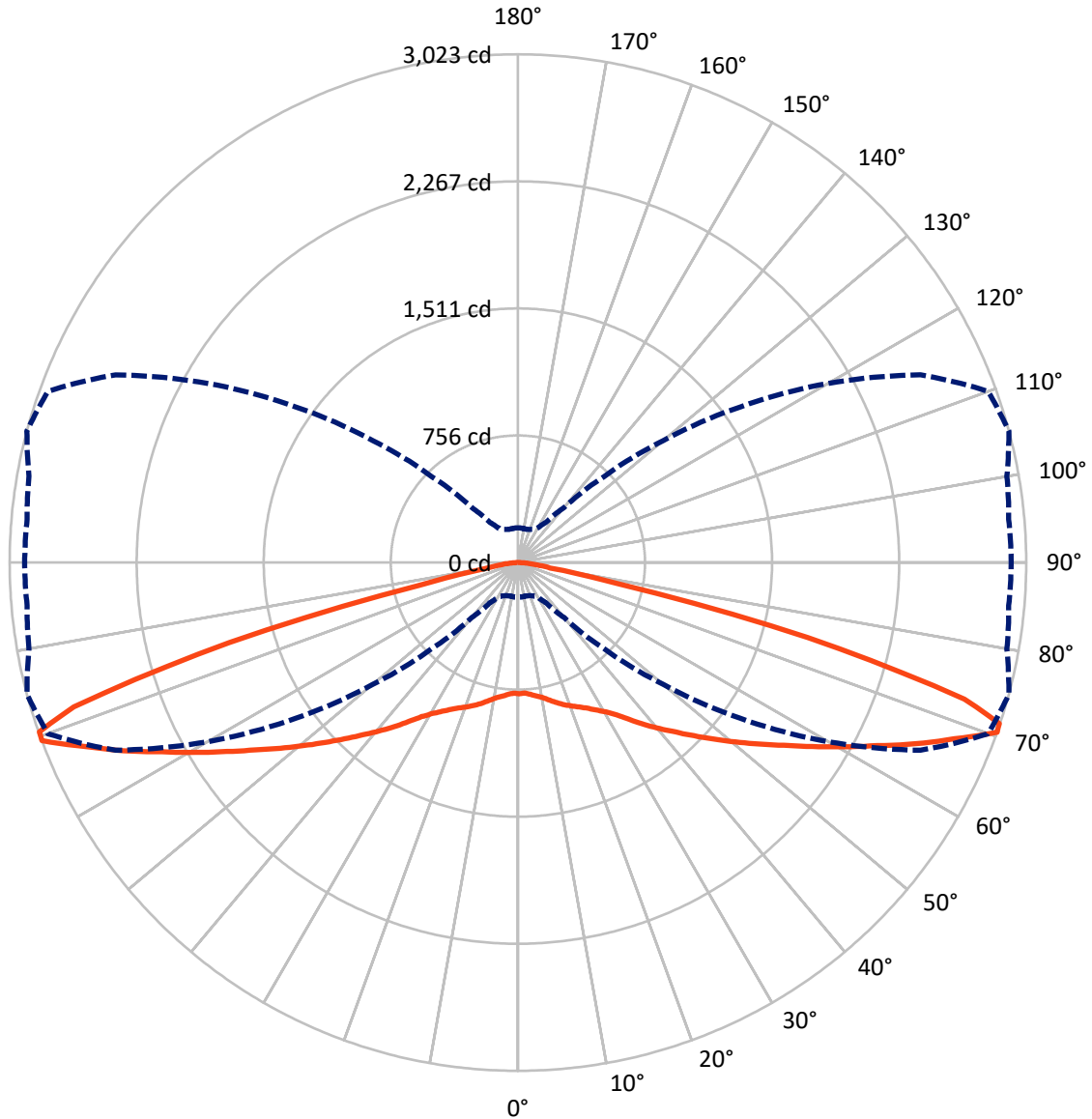
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.9 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	3503.1	0.0	3503.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3503.1	0.0	3503.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	7006.2	0.0	7006.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.8	1.1
10°-20°	232.1	3.3
20°-30°	435.9	6.2
30°-40°	767.9	11.0
40°-50°	1272.6	18.2
50°-60°	1770.4	25.3
60°-70°	1671.3	23.9
70°-80°	713.8	10.2
80°-90°	67.5	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°	7006.2	100.0
0°-180°	7006.2	100.0



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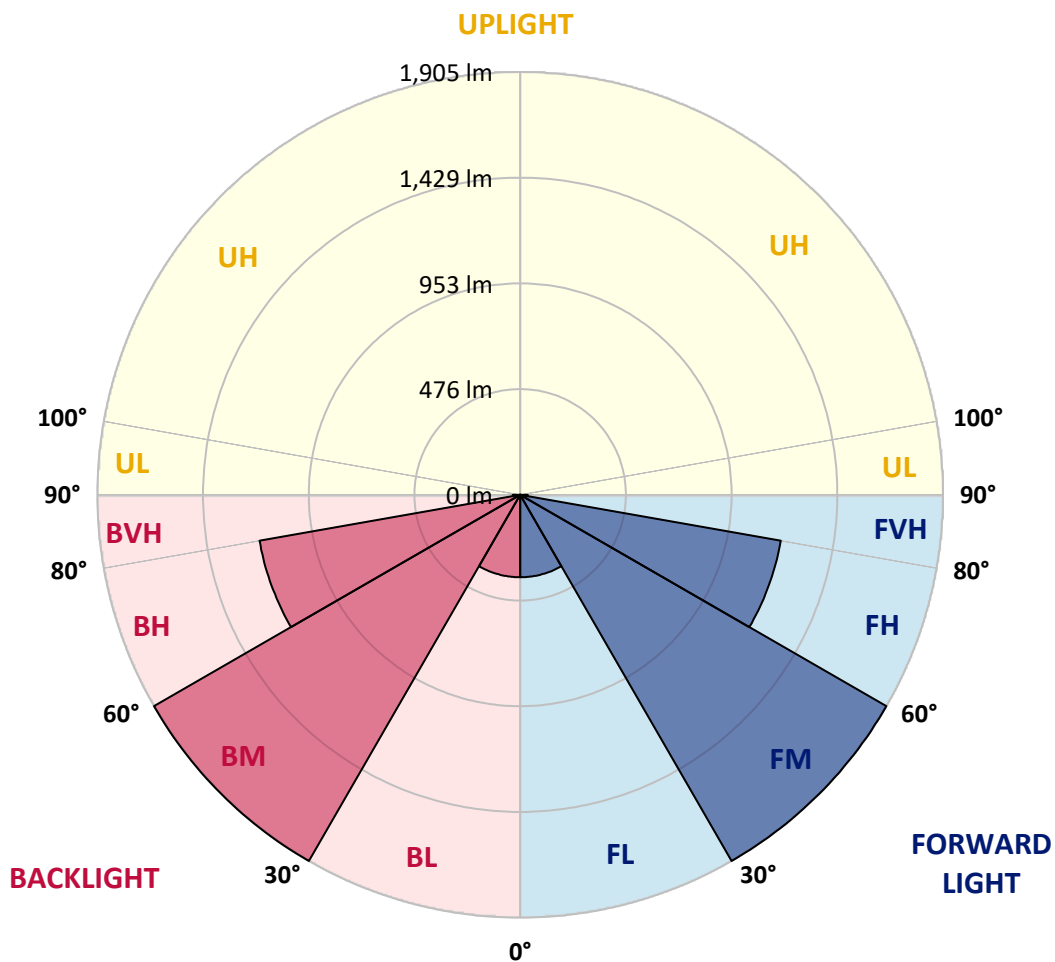
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	371.4	5.3			
FM	(30°-60°)	1905.4	27.2			
FH	(60°-80°)	1192.5	17.0			G1/1800
FVH	(80°-90°)	33.7	0.5			G1/100
BL	(0°-30°)	371.4	5.3	B1/500		
BM	(30°-60°)	1905.4	27.2	B2/2500		
BH	(60°-80°)	1192.5	17.0	B3/2500		G3/2500
BVH	(80°-90°)	33.7	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°	780.2	780.2	780.2	780.2	780.2	780.2	780.2	780.2	780.2	780.2	780.2
2.5°	785.0	784.6	785.0	783.7	784.2	783.7	783.7	781.9	781.9	781.1	779.8
5°	776.2	777.1	777.1	777.1	778.5	778.5	780.2	780.6	781.9	783.3	784.2
7.5°	761.8	762.2	763.5	764.5	767.0	770.6	774.1	778.1	781.5	785.9	790.7
10°	749.5	750.3	752.6	754.7	759.5	763.9	770.1	776.2	782.4	789.8	797.3
12.5°	742.9	744.2	747.7	751.3	758.7	764.5	772.7	782.4	790.7	797.8	806.1
15°	743.8	744.2	749.0	753.9	764.5	772.3	784.2	795.5	805.7	813.6	823.3
17.5°	756.5	757.4	762.2	769.3	779.3	789.4	802.2	814.1	827.7	836.9	848.2
20°	781.5	782.9	788.1	795.5	806.6	817.1	830.2	842.6	856.6	867.6	879.0
22.5°	814.1	816.2	821.9	831.1	842.1	854.9	868.5	881.2	894.4	905.3	915.0
25°	857.4	860.1	866.2	875.4	886.5	900.1	914.1	927.3	940.9	949.2	957.2
27.5°	915.8	920.2	926.9	934.4	944.0	958.5	971.6	982.6	995.7	1005.0	1010.3
30°	994.5	1000.7	1005.9	1013.7	1020.8	1036.1	1046.7	1055.5	1065.6	1070.8	1072.2
32.5°	1090.7	1096.3	1101.6	1107.3	1117.0	1131.0	1141.1	1145.9	1151.2	1150.3	1145.5
35°	1199.1	1203.5	1206.6	1216.6	1232.5	1241.7	1249.1	1250.9	1251.8	1242.6	1233.3
37.5°	1313.3	1318.5	1321.1	1336.9	1351.8	1362.4	1365.9	1369.8	1367.3	1351.8	1335.2
40°	1436.6	1442.3	1450.2	1463.8	1481.3	1491.5	1495.9	1495.5	1493.2	1475.2	1448.0
42.5°	1557.7	1564.8	1571.4	1595.1	1609.6	1626.7	1628.9	1628.4	1623.6	1603.0	1571.4
45°	1660.6	1668.8	1682.4	1708.8	1732.1	1752.7	1761.1	1764.2	1759.3	1737.4	1701.4
47.5°	1745.3	1751.0	1768.1	1800.2	1830.0	1860.3	1877.0	1888.9	1888.4	1872.6	1834.4
50°	1803.3	1809.8	1830.9	1866.9	1904.2	1939.7	1972.7	1999.5	2012.2	2000.8	1965.2
52.5°	1819.9	1828.2	1855.9	1898.9	1942.4	1990.3	2039.5	2086.8	2115.4	2122.4	2094.8
55°	1749.7	1758.9	1799.3	1859.0	1930.5	2001.2	2075.9	2143.5	2202.3	2229.5	2218.6
57.5°	1545.1	1551.6	1603.0	1680.3	1782.6	1906.9	2032.4	2156.2	2257.2	2327.9	2340.2
60°	1221.9	1230.2	1286.5	1368.1	1484.5	1641.6	1817.3	2020.1	2218.2	2380.1	2460.5
62.5°	824.6	830.2	884.2	958.9	1086.3	1237.7	1433.6	1690.4	1972.7	2262.1	2488.6
65°	432.9	432.9	469.3	521.6	623.0	758.7	959.3	1222.7	1558.7	1920.0	2298.9
67.5°	251.1	250.7	259.0	270.9	303.0	357.8	468.5	662.1	980.0	1400.6	1831.8
70°	207.2	205.9	204.6	204.6	209.4	217.8	238.9	292.0	427.2	722.2	1127.1
71°	198.0	197.1	193.6	192.3	194.5	198.9	208.1	232.7	303.4	492.7	841.7
72.5°	187.0	184.8	179.5	177.4	177.8	179.5	182.2	191.9	213.4	280.1	479.9
75°	170.3	165.1	158.5	155.4	154.2	153.6	153.6	156.3	161.1	169.0	196.7
77.5°	151.0	143.6	136.6	133.5	131.2	129.9	129.1	127.4	126.4	129.9	140.0
80°	127.8	119.9	114.2	112.4	111.1	108.4	105.0	101.4	99.2	101.0	107.1
82.5°	98.8	90.8	91.8	92.2	90.0	85.6	82.1	78.2	74.2	73.3	76.4
85°	78.6	74.7	72.0	77.7	72.8	67.6	62.8	56.2	47.0	38.7	42.1
87.5°	33.8	34.3	49.2	74.2	65.0	52.3	43.5	35.1	22.4	16.7	17.1
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°	780.2	780.2	780.2	780.2	780.2	780.2	780.2	780.2
2.5°	779.3	779.3	778.1	777.1	777.1	777.1	776.2	776.7
5°	784.6	785.5	786.3	785.9	787.3	788.6	788.1	787.7
7.5°	793.4	796.1	798.6	799.9	801.7	803.5	803.9	802.6
10°	802.2	807.4	811.4	814.9	817.1	818.9	820.2	819.7
12.5°	813.1	820.6	827.7	834.6	839.4	842.1	844.8	843.8
15°	831.1	839.4	848.2	857.4	864.9	868.9	872.9	872.0
17.5°	855.7	863.2	870.2	879.4	888.6	893.0	897.4	897.0
20°	886.5	892.2	896.1	901.4	910.1	915.0	918.9	917.6
22.5°	921.6	923.3	923.8	925.6	932.5	938.3	943.6	944.9
25°	959.7	958.5	955.8	954.5	959.3	965.5	972.1	973.8
27.5°	1007.2	1002.8	996.3	990.9	992.3	1000.1	1007.6	1009.3
30°	1066.9	1056.8	1042.8	1032.7	1030.9	1039.2	1047.2	1049.8
32.5°	1135.0	1121.4	1102.0	1086.7	1080.1	1087.5	1094.6	1098.5
35°	1215.8	1200.8	1177.5	1157.8	1147.2	1152.0	1164.4	1168.8
37.5°	1311.4	1290.9	1264.9	1239.9	1222.3	1223.2	1236.4	1241.7
40°	1417.3	1387.4	1354.5	1323.3	1297.8	1296.1	1307.9	1311.9
42.5°	1527.5	1489.3	1450.6	1409.8	1378.2	1372.5	1387.8	1388.3
45°	1646.0	1596.8	1549.0	1501.6	1468.7	1458.5	1473.5	1475.2
47.5°	1772.5	1711.0	1654.4	1603.0	1567.5	1551.6	1566.1	1568.8
50°	1904.2	1840.5	1774.7	1717.6	1675.9	1656.6	1673.6	1675.5
52.5°	2034.6	1974.4	1909.0	1843.6	1793.1	1771.1	1791.4	1797.5
55°	2165.9	2107.9	2046.4	1981.0	1917.4	1898.1	1920.0	1926.6
57.5°	2302.5	2246.7	2190.9	2125.1	2063.1	2033.7	2057.5	2066.7
60°	2453.0	2403.8	2351.2	2284.9	2223.8	2189.6	2209.8	2220.3
62.5°	2601.0	2590.9	2543.1	2474.1	2396.8	2362.6	2379.7	2387.2
65°	2613.2	2777.0	2774.9	2706.3	2598.4	2540.8	2545.6	2549.2
67.5°	2280.9	2656.7	2896.9	2918.4	2798.1	2708.2	2697.6	2699.8
70°	1614.8	2130.7	2640.5	2975.0	3022.5	2952.6	2929.8	2933.3
71°	1293.9	1828.2	2389.4	2839.4	3018.9	2998.8	2986.0	2995.3
72.5°	825.8	1347.0	1893.2	2431.6	2776.2	2875.0	2889.4	2895.2
75°	299.8	579.6	980.9	1405.4	1781.3	2039.9	2182.2	2193.5
77.5°	161.1	207.7	321.0	479.5	602.4	668.3	676.2	679.2
80°	118.6	137.4	157.2	179.5	193.6	196.3	191.4	181.4
82.5°	83.9	94.8	102.7	110.7	116.3	111.5	92.7	70.7
85°	48.7	53.6	58.0	61.9	62.8	59.2	39.1	32.0
87.5°	19.3	21.1	20.7	23.2	22.4	20.7	15.3	13.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)