

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: P196514

Luminaire Tested: **NAV-AF-02-D-UNV-RW-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196514
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-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7932.2 lumens
Efficiency: N/A
Efficacy: 120.2 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

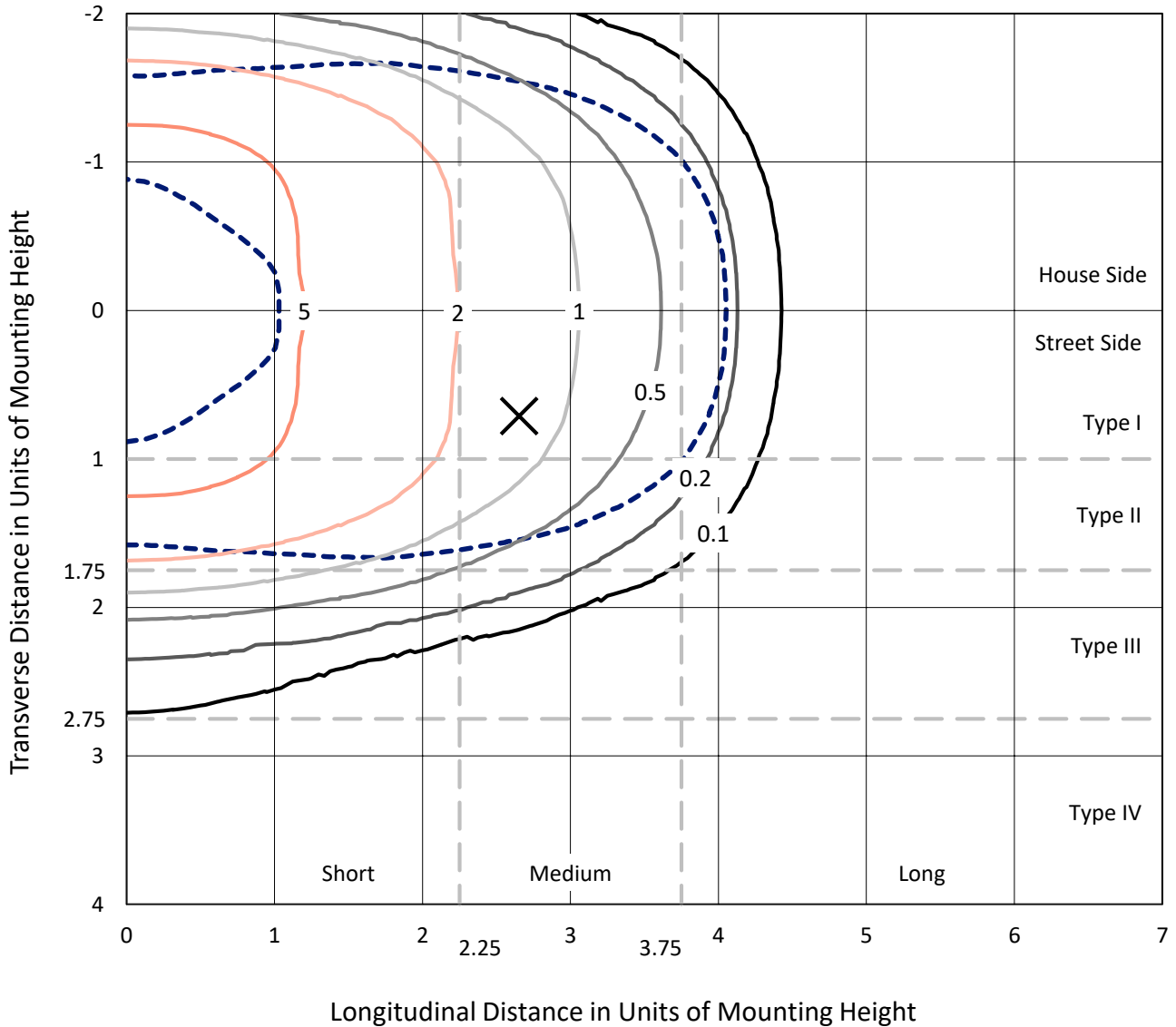
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

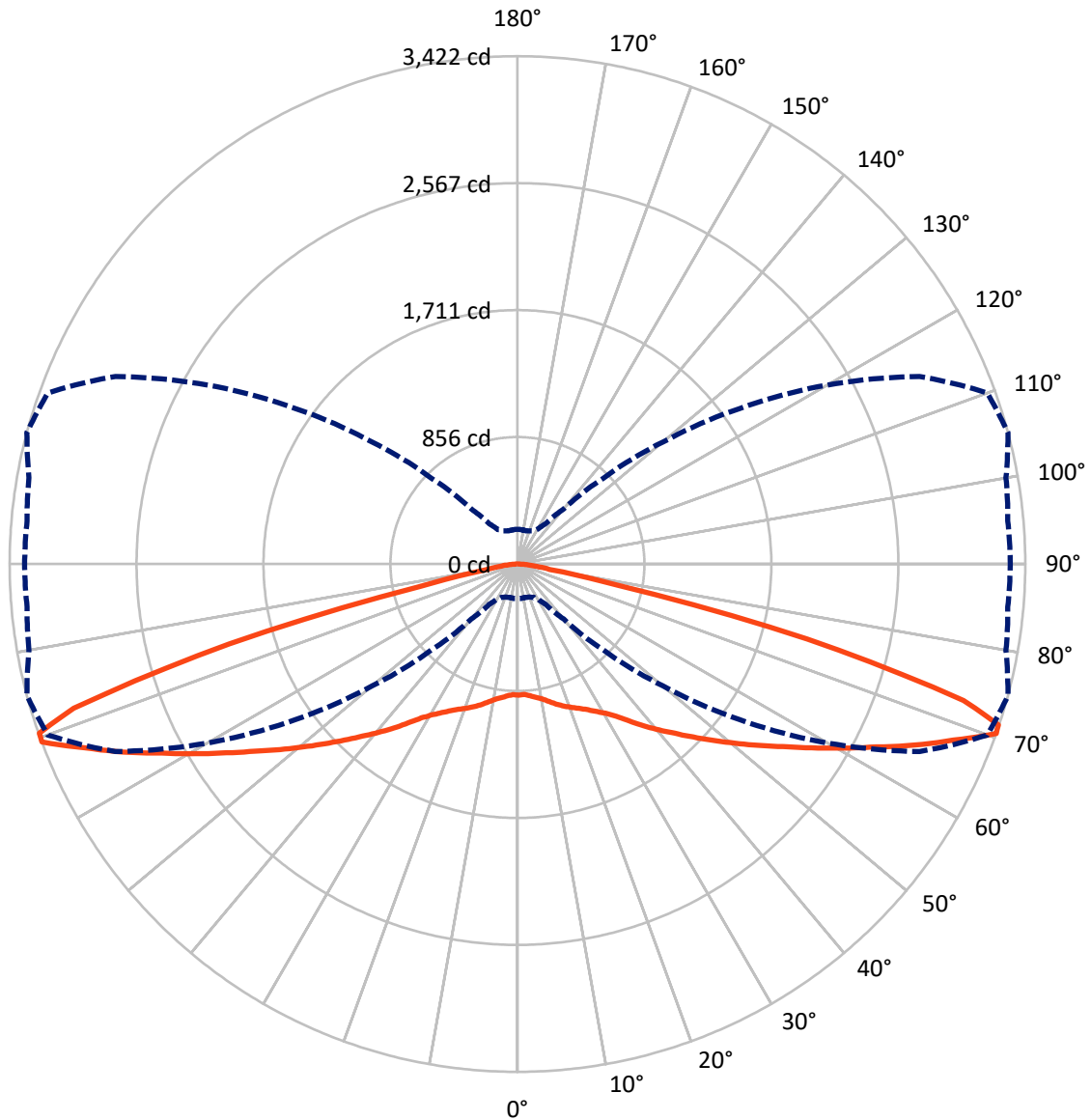
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.9 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	3966.1	0.0	3966.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3966.1	0.0	3966.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	7932.2	0.0	7932.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.7	1.1
10°-20°	262.8	3.3
20°-30°	493.5	6.2
30°-40°	869.4	11.0
40°-50°	1440.8	18.2
50°-60°	2004.4	25.3
60°-70°	1892.2	23.9
70°-80°	808.2	10.2
80°-90°	76.4	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°	7932.2	100.0
0°-180°	7932.2	100.0



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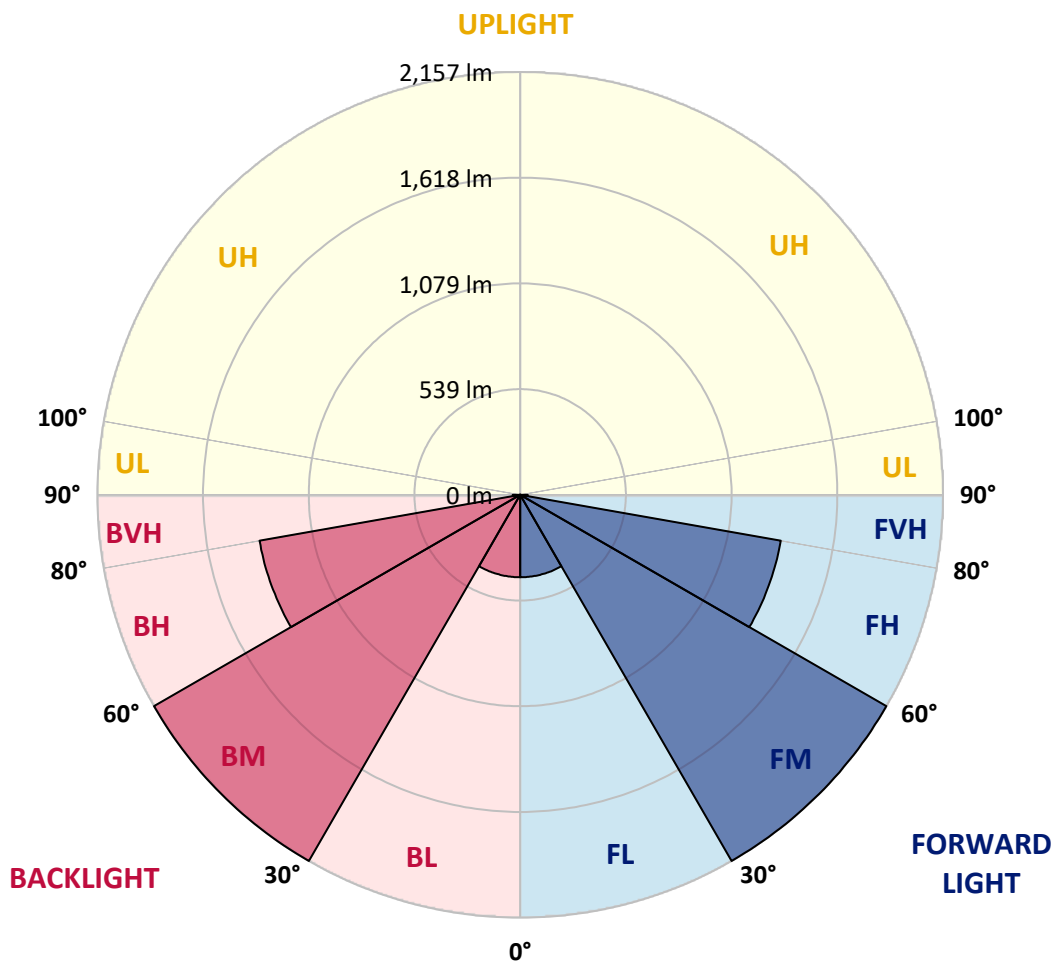
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	420.5	5.3			
FM	(30°-60°)	2157.3	27.2			
FH	(60°-80°)	1350.2	17.0			G1/1800
FVH	(80°-90°)	38.2	0.5			G1/100
BL	(0°-30°)	420.5	5.3	B1/500		
BM	(30°-60°)	2157.3	27.2	B2/2500		
BH	(60°-80°)	1350.2	17.0	B3/2500		G3/2500
BVH	(80°-90°)	38.2	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°	883.4	883.4	883.4	883.4	883.4	883.4	883.4	883.4	883.4	883.4	883.4
2.5°	888.9	888.3	888.9	887.3	887.8	887.3	887.3	885.3	885.3	884.4	882.9
5°	878.9	879.9	879.9	879.9	881.4	881.4	883.4	883.8	885.3	886.8	887.8
7.5°	862.5	862.9	864.5	865.5	868.4	872.4	876.4	880.8	884.8	889.8	895.3
10°	848.5	849.5	852.0	854.5	860.0	864.9	871.9	878.9	885.8	894.3	902.7
12.5°	841.1	842.6	846.5	850.5	859.0	865.5	874.8	885.8	895.3	903.2	912.7
15°	842.1	842.6	848.1	853.6	865.5	874.4	887.8	900.8	912.2	921.0	932.1
17.5°	856.5	857.4	862.9	870.9	882.4	893.7	908.2	921.6	937.0	947.5	960.4
20°	884.8	886.3	892.3	900.8	913.2	925.1	939.9	954.0	969.7	982.2	995.2
22.5°	921.6	924.2	930.6	940.9	953.4	967.8	983.3	997.6	1012.7	1025.0	1035.9
25°	970.8	973.8	980.7	991.2	1003.6	1019.1	1034.9	1049.9	1065.3	1074.7	1083.7
27.5°	1037.0	1041.9	1049.3	1057.8	1068.8	1085.2	1100.0	1112.5	1127.4	1137.8	1143.8
30°	1125.9	1132.9	1138.8	1147.8	1155.8	1173.1	1185.0	1195.0	1206.4	1212.4	1213.9
32.5°	1234.7	1241.1	1247.2	1253.6	1264.5	1280.5	1292.0	1297.5	1303.4	1302.4	1296.9
35°	1357.5	1362.6	1366.0	1377.4	1395.4	1405.7	1414.3	1416.2	1417.2	1406.7	1396.4
37.5°	1486.8	1492.8	1495.8	1513.7	1530.5	1542.5	1546.4	1550.9	1547.9	1530.5	1511.6
40°	1626.5	1633.0	1641.8	1657.4	1677.2	1688.6	1693.6	1693.1	1690.6	1670.2	1639.4
42.5°	1763.7	1771.6	1779.1	1805.9	1822.3	1841.7	1844.2	1843.7	1838.3	1814.9	1779.1
45°	1880.1	1889.4	1904.8	1934.7	1960.9	1984.3	1993.9	1997.3	1991.8	1967.0	1926.2
47.5°	1976.0	1982.4	2001.7	2038.1	2071.9	2106.2	2125.1	2138.5	2137.9	2120.0	2076.8
50°	2041.5	2049.0	2072.8	2113.6	2155.9	2196.1	2233.5	2263.8	2278.2	2265.3	2224.9
52.5°	2060.4	2069.9	2101.2	2149.9	2199.2	2253.4	2308.9	2362.6	2395.0	2402.9	2371.6
55°	1980.9	1991.4	2037.0	2104.7	2185.7	2265.7	2350.2	2426.7	2493.4	2524.2	2511.8
57.5°	1749.2	1756.7	1814.9	1902.3	2018.2	2158.9	2301.0	2441.2	2555.6	2635.6	2649.5
60°	1383.4	1392.8	1456.4	1549.0	1680.6	1858.6	2057.5	2287.2	2511.4	2694.8	2785.7
62.5°	933.5	939.9	1001.2	1085.6	1229.8	1401.2	1623.0	1913.7	2233.5	2561.0	2817.5
65°	490.1	490.1	531.4	590.5	705.4	859.0	1086.1	1384.5	1764.6	2173.8	2602.8
67.5°	284.3	283.8	293.3	306.7	343.0	405.2	530.4	749.6	1109.5	1585.7	2073.8
70°	234.6	233.2	231.6	231.6	237.1	246.6	270.4	330.6	483.7	817.7	1276.0
71°	224.2	223.2	219.2	217.8	220.1	225.2	235.7	263.5	343.5	557.8	953.0
72.5°	211.8	209.2	203.3	200.8	201.4	203.3	206.3	217.2	241.6	317.2	543.3
75°	192.9	187.0	179.4	176.0	174.5	173.9	173.9	177.0	182.5	191.4	222.7
77.5°	171.0	162.6	154.6	151.1	148.6	147.2	146.2	144.1	143.1	147.2	158.5
80°	144.7	135.7	129.3	127.3	125.7	122.8	118.8	114.8	112.3	114.2	121.3
82.5°	111.9	102.9	103.9	104.4	101.9	96.9	93.0	88.5	84.0	83.0	86.6
85°	88.9	84.4	81.5	88.0	82.5	76.6	71.1	63.6	53.2	43.7	47.7
87.5°	38.2	38.8	55.7	84.0	73.5	59.1	49.1	39.8	25.3	18.9	19.3
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°	883.4	883.4	883.4	883.4	883.4	883.4	883.4	883.4
2.5°	882.4	882.4	880.8	879.9	879.9	879.9	878.9	879.3
5°	888.3	889.3	890.3	889.8	891.3	892.7	892.3	891.8
7.5°	898.2	901.3	904.2	905.6	907.7	909.7	910.1	908.7
10°	908.2	914.2	918.7	922.5	925.1	927.1	928.6	928.0
12.5°	920.6	929.0	937.0	945.0	950.4	953.4	956.4	955.4
15°	940.9	950.4	960.4	970.8	979.3	983.8	988.2	987.2
17.5°	968.8	977.4	985.2	995.7	1006.1	1011.0	1016.0	1015.6
20°	1003.6	1010.1	1014.6	1020.5	1030.5	1035.9	1040.3	1038.9
22.5°	1043.4	1045.4	1045.8	1047.9	1055.8	1062.3	1068.2	1069.7
25°	1086.7	1085.2	1082.2	1080.7	1086.1	1093.1	1100.6	1102.5
27.5°	1140.3	1135.3	1127.9	1122.0	1123.4	1132.4	1140.7	1142.9
30°	1208.0	1196.5	1180.5	1169.2	1167.2	1176.6	1185.6	1188.5
32.5°	1285.0	1269.6	1247.7	1230.3	1222.8	1231.3	1239.2	1243.7
35°	1376.4	1359.5	1333.2	1310.8	1298.9	1304.3	1318.3	1323.2
37.5°	1484.9	1461.5	1432.2	1403.8	1383.9	1384.9	1399.8	1405.7
40°	1604.6	1570.8	1533.6	1498.3	1469.4	1467.5	1480.8	1485.3
42.5°	1729.3	1686.1	1642.3	1596.2	1560.3	1553.8	1571.2	1571.8
45°	1863.6	1807.9	1753.7	1700.1	1662.8	1651.4	1668.3	1670.2
47.5°	2006.8	1937.1	1873.0	1814.9	1774.6	1756.7	1773.2	1776.1
50°	2155.9	2083.8	2009.3	1944.6	1897.4	1875.6	1894.9	1896.8
52.5°	2303.5	2235.5	2161.3	2087.3	2030.1	2005.2	2028.2	2035.1
55°	2452.1	2386.5	2317.0	2242.9	2170.8	2148.9	2173.8	2181.3
57.5°	2606.7	2543.7	2480.5	2405.9	2335.9	2302.5	2329.4	2339.8
60°	2777.3	2721.5	2661.9	2586.8	2517.8	2479.0	2501.8	2513.8
62.5°	2944.7	2933.3	2879.2	2801.1	2713.7	2674.8	2694.3	2702.6
65°	2958.6	3144.2	3141.6	3064.0	2941.8	2876.7	2882.2	2886.1
67.5°	2582.4	3007.9	3279.9	3304.1	3168.0	3066.1	3054.2	3056.6
70°	1828.4	2412.3	2989.6	3368.3	3422.0	3342.9	3317.1	3321.1
71°	1464.9	2069.9	2705.2	3214.7	3417.9	3395.1	3380.7	3391.2
72.5°	935.0	1525.0	2143.4	2752.9	3143.1	3255.0	3271.3	3277.8
75°	339.5	656.2	1110.5	1591.2	2016.7	2309.5	2470.6	2483.5
77.5°	182.5	235.1	363.4	542.8	682.0	756.6	765.5	768.9
80°	134.2	155.5	178.0	203.3	219.2	222.3	216.8	205.3
82.5°	94.9	107.4	116.4	125.3	131.7	126.3	104.9	80.0
85°	55.1	60.6	65.7	70.0	71.1	67.0	44.2	36.3
87.5°	21.9	23.8	23.4	26.3	25.3	23.4	17.4	14.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)