

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: P196039

Luminaire Tested: **NAV-AF-01-D-UNV-RW-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196039
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-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5159.8 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B2 - U0 - G2

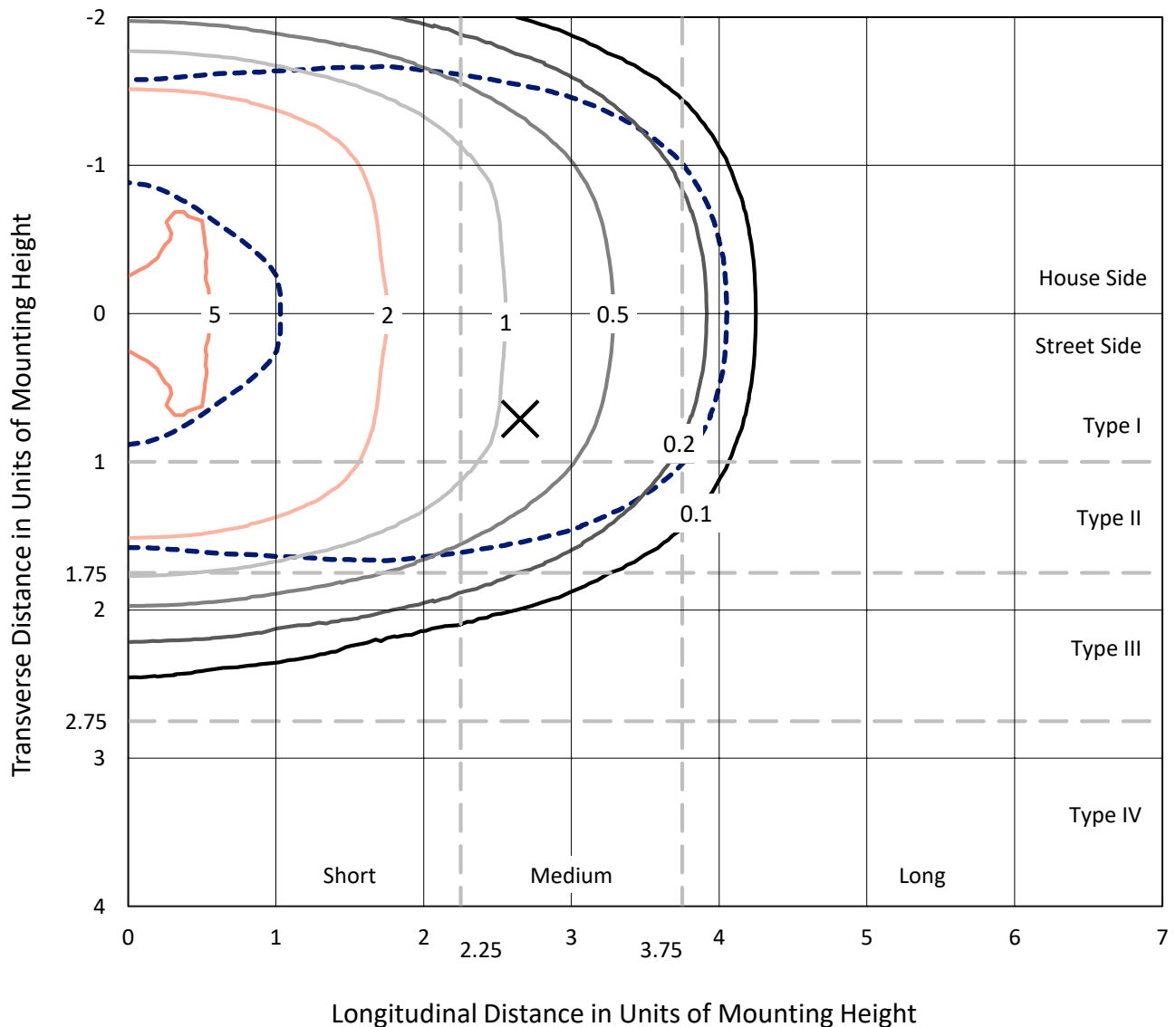
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

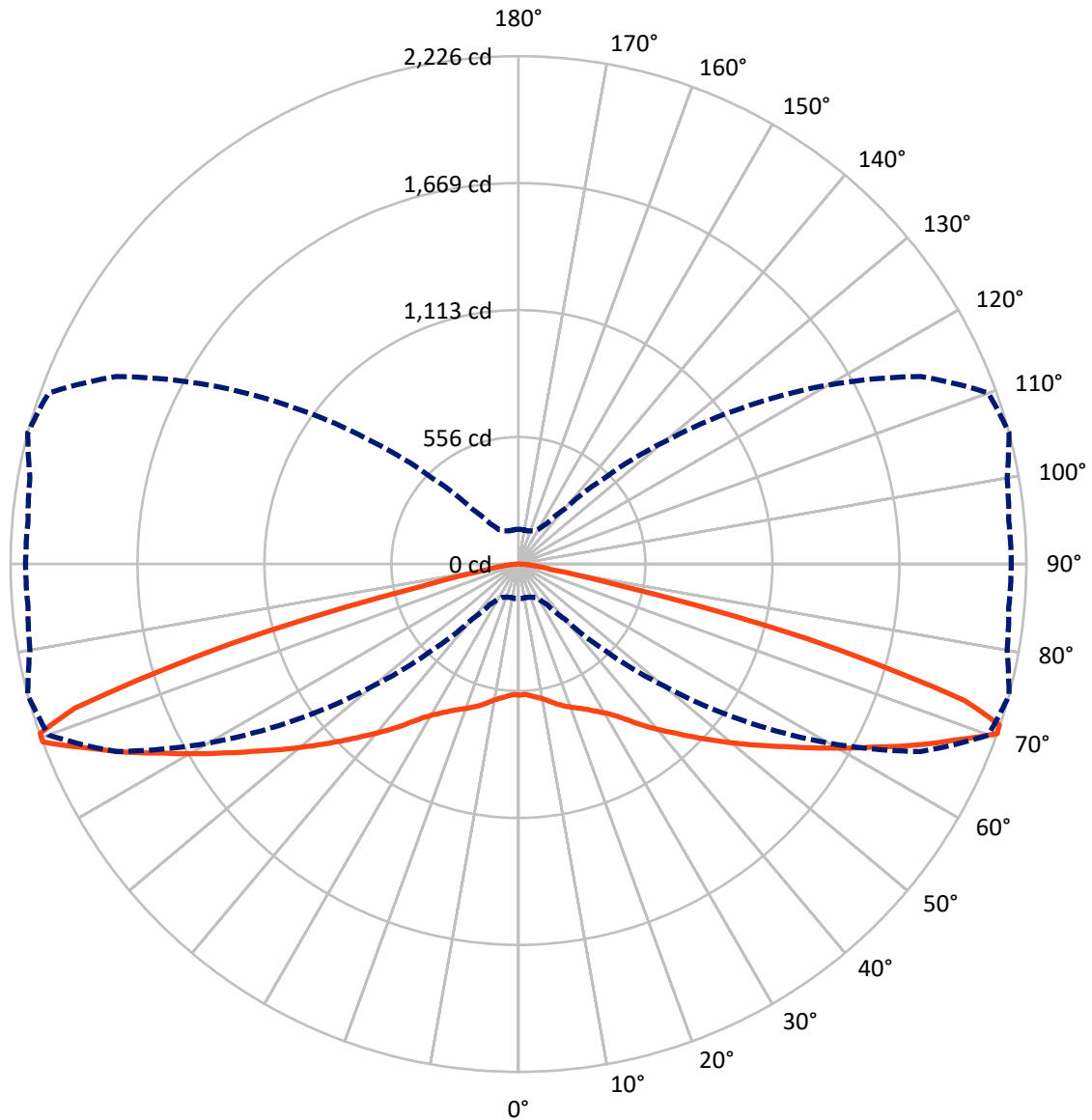
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.8 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	2579.9	0.0	2579.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2579.9	0.0	2579.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	5159.8	0.0	5159.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.1	1.1
10°-20°	170.9	3.3
20°-30°	321.0	6.2
30°-40°	565.5	11.0
40°-50°	937.2	18.2
50°-60°	1303.8	25.3
60°-70°	1230.8	23.9
70°-80°	525.7	10.2
80°-90°	49.7	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°	5159.8	100.0
0°-180°	5159.8	100.0



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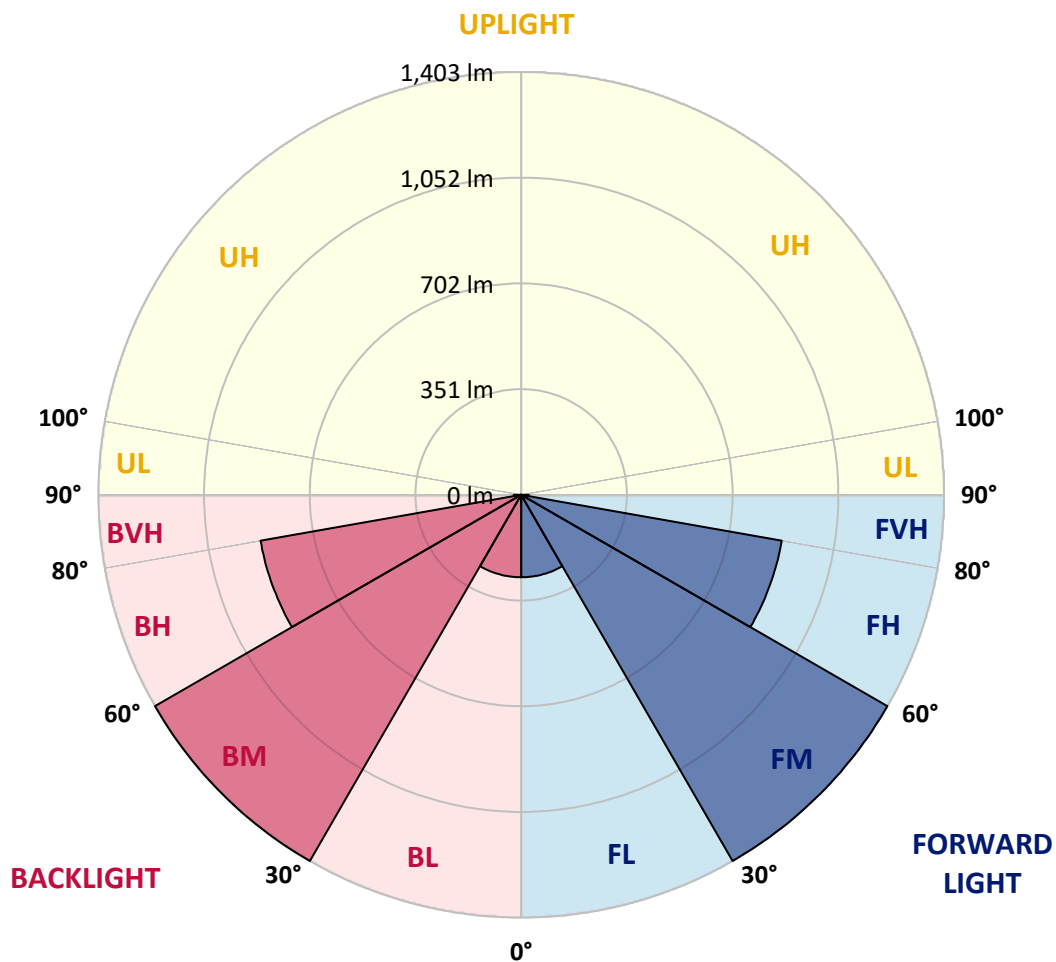
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	273.5	5.3			
FM	(30°-60°)	1403.3	27.2			
FH	(60°-80°)	878.3	17.0			G1/1800
FVH	(80°-90°)	24.8	0.5			G1/100
BL	(0°-30°)	273.5	5.3	B1/500		
BM	(30°-60°)	1403.3	27.2	B2/2500		
BH	(60°-80°)	878.3	17.0	B2/1000		G2/1000
BVH	(80°-90°)	24.8	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6
2.5°	578.2	577.9	578.2	577.1	577.5	577.1	577.1	575.9	575.9	575.2	574.3
5°	571.7	572.3	572.3	572.3	573.3	573.3	574.6	574.9	575.9	576.8	577.5
7.5°	561.0	561.3	562.3	562.9	564.9	567.4	570.1	573.0	575.5	578.8	582.4
10°	552.0	552.6	554.2	555.9	559.3	562.6	567.1	571.7	576.2	581.8	587.2
12.5°	547.1	548.1	550.7	553.2	558.7	562.9	569.1	576.2	582.4	587.5	593.6
15°	547.8	548.1	551.7	555.2	562.9	568.8	577.5	585.9	593.3	599.1	606.3
17.5°	557.1	557.8	561.3	566.5	574.0	581.3	590.8	599.4	609.5	616.3	624.7
20°	575.5	576.5	580.4	585.9	594.0	601.8	611.4	620.5	630.9	638.9	647.3
22.5°	599.4	601.1	605.3	612.1	620.2	629.5	639.5	649.0	658.7	666.8	673.8
25°	631.5	633.4	638.0	644.8	652.8	662.9	673.2	682.9	692.9	699.1	704.9
27.5°	674.5	677.7	682.6	688.0	695.2	705.8	715.6	723.6	733.4	740.1	744.0
30°	732.4	736.9	740.8	746.7	751.8	763.1	770.9	777.3	784.8	788.7	789.6
32.5°	803.2	807.4	811.3	815.5	822.6	833.0	840.4	843.9	847.8	847.2	843.6
35°	883.1	886.3	888.5	896.0	907.7	914.4	919.9	921.3	921.9	915.0	908.3
37.5°	967.1	971.0	972.9	984.6	995.6	1003.3	1006.0	1008.8	1006.9	995.6	983.3
40°	1058.0	1062.2	1068.1	1078.1	1091.0	1098.4	1101.6	1101.3	1099.7	1086.5	1066.4
42.5°	1147.2	1152.5	1157.3	1174.8	1185.4	1198.0	1199.6	1199.3	1195.7	1180.6	1157.3
45°	1222.9	1229.1	1239.1	1258.4	1275.6	1290.8	1297.0	1299.2	1295.7	1279.5	1253.0
47.5°	1285.3	1289.5	1302.1	1325.7	1347.7	1370.0	1382.3	1391.0	1390.7	1379.0	1350.9
50°	1328.0	1332.8	1348.4	1374.8	1402.4	1428.6	1452.8	1472.5	1481.9	1473.5	1447.3
52.5°	1340.3	1346.4	1366.8	1398.5	1430.5	1465.8	1502.0	1536.9	1557.9	1563.1	1542.7
55°	1288.5	1295.4	1325.1	1369.0	1421.8	1473.9	1528.8	1578.6	1621.9	1641.9	1633.9
57.5°	1137.8	1142.7	1180.6	1237.5	1312.8	1404.3	1496.8	1587.9	1662.3	1714.4	1723.5
60°	899.9	906.0	947.5	1007.5	1093.2	1209.0	1338.3	1487.7	1633.6	1752.8	1812.1
62.5°	607.2	611.4	651.2	706.1	799.9	911.6	1055.7	1244.9	1452.8	1665.9	1832.7
65°	318.9	318.9	345.7	384.1	458.8	558.7	706.6	900.5	1147.9	1414.0	1693.1
67.5°	184.9	184.6	190.8	199.5	223.1	263.5	345.0	487.6	721.7	1031.4	1349.0
70°	152.6	151.6	150.7	150.7	154.3	160.4	175.9	215.0	314.7	531.9	830.0
71°	145.9	145.2	142.6	141.6	143.2	146.5	153.2	171.3	223.4	362.8	619.9
72.5°	137.8	136.2	132.3	130.6	130.9	132.3	134.2	141.3	157.1	206.3	353.4
75°	125.4	121.6	116.7	114.5	113.4	113.1	113.1	115.1	118.7	124.5	144.8
77.5°	111.2	105.8	100.6	98.3	96.7	95.7	95.0	93.8	93.1	95.7	103.1
80°	94.1	88.3	84.1	82.8	81.8	79.9	77.2	74.7	73.0	74.4	78.9
82.5°	72.7	66.9	67.6	67.9	66.3	63.0	60.5	57.6	54.6	54.0	56.3
85°	57.9	54.9	53.0	57.2	53.7	49.8	46.2	41.4	34.6	28.4	31.0
87.5°	24.9	25.3	36.2	54.6	47.9	38.5	32.0	25.9	16.5	12.3	12.6
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°	574.6	574.6	574.6	574.6	574.6	574.6	574.6	574.6
2.5°	574.0	574.0	573.0	572.3	572.3	572.3	571.7	572.0
5°	577.9	578.5	579.1	578.8	579.8	580.7	580.4	580.1
7.5°	584.3	586.3	588.2	589.1	590.4	591.8	592.1	591.1
10°	590.8	594.6	597.5	600.2	601.8	603.0	604.1	603.6
12.5°	598.8	604.4	609.5	614.7	618.3	620.2	622.2	621.4
15°	612.1	618.3	624.7	631.5	637.0	639.9	642.8	642.2
17.5°	630.2	635.7	640.9	647.6	654.5	657.7	660.9	660.6
20°	652.8	657.0	659.9	663.8	670.3	673.8	676.8	675.8
22.5°	678.7	680.0	680.4	681.6	686.8	691.0	694.9	695.8
25°	706.9	705.8	703.9	703.0	706.6	711.1	715.9	717.2
27.5°	741.7	738.6	733.7	729.8	730.8	736.6	742.0	743.4
30°	785.7	778.3	767.9	760.6	759.2	765.4	771.2	773.1
32.5°	835.9	825.8	811.6	800.3	795.4	801.0	806.1	809.1
35°	895.4	884.3	867.3	852.6	845.0	848.4	857.5	860.7
37.5°	965.9	950.6	931.6	913.1	900.2	900.8	910.5	914.4
40°	1043.8	1021.8	997.5	974.6	955.8	954.5	963.2	966.2
42.5°	1124.9	1096.8	1068.4	1038.3	1015.0	1010.8	1022.1	1022.4
45°	1212.2	1176.0	1140.8	1105.8	1081.6	1074.2	1085.1	1086.5
47.5°	1305.4	1260.1	1218.3	1180.6	1154.4	1142.7	1153.4	1155.3
50°	1402.4	1355.5	1307.0	1265.0	1234.2	1220.0	1232.6	1233.9
52.5°	1498.4	1454.1	1405.9	1357.8	1320.5	1304.4	1319.3	1323.8
55°	1595.1	1552.4	1507.1	1458.9	1412.1	1397.9	1414.0	1418.8
57.5°	1695.6	1654.6	1613.5	1565.0	1519.4	1497.7	1515.2	1522.0
60°	1806.5	1770.3	1731.5	1682.8	1637.7	1612.6	1627.4	1635.2
62.5°	1915.5	1908.1	1872.8	1822.1	1765.2	1739.9	1752.5	1758.0
65°	1924.6	2045.2	2043.5	1993.1	1913.5	1871.2	1874.8	1877.3
67.5°	1679.8	1956.6	2133.5	2149.3	2060.7	1994.4	1986.7	1988.3
70°	1189.3	1569.2	1944.6	2191.1	2225.9	2174.5	2157.7	2160.3
71°	952.9	1346.4	1759.7	2091.1	2223.4	2208.4	2199.1	2205.9
72.5°	608.2	992.1	1394.3	1790.7	2044.6	2117.3	2127.9	2132.1
75°	220.9	426.8	722.4	1035.0	1311.8	1502.3	1607.1	1615.4
77.5°	118.7	152.9	236.4	353.1	443.7	492.1	498.0	500.2
80°	87.3	101.2	115.8	132.3	142.6	144.5	141.0	133.5
82.5°	61.8	69.9	75.7	81.5	85.7	82.1	68.2	52.1
85°	35.9	39.5	42.7	45.6	46.2	43.7	28.7	23.6
87.5°	14.2	15.5	15.2	17.2	16.5	15.2	11.4	9.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)