

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: P196033

Luminaire Tested: **NAV-AF-01-D-UNV-RW-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196033  
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-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4207.4 lumens  
Efficiency: N/A  
Efficacy: 123.7 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

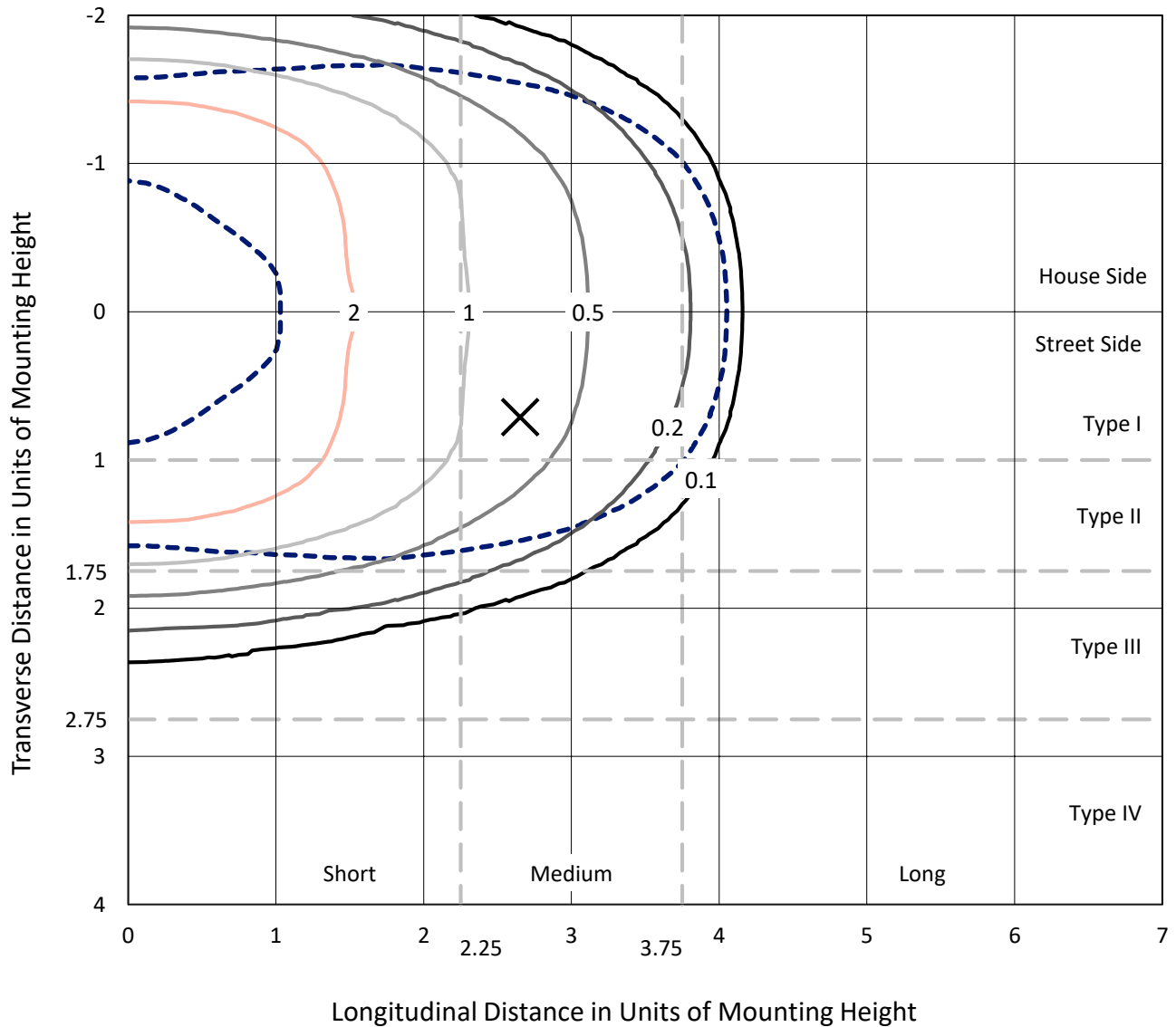
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

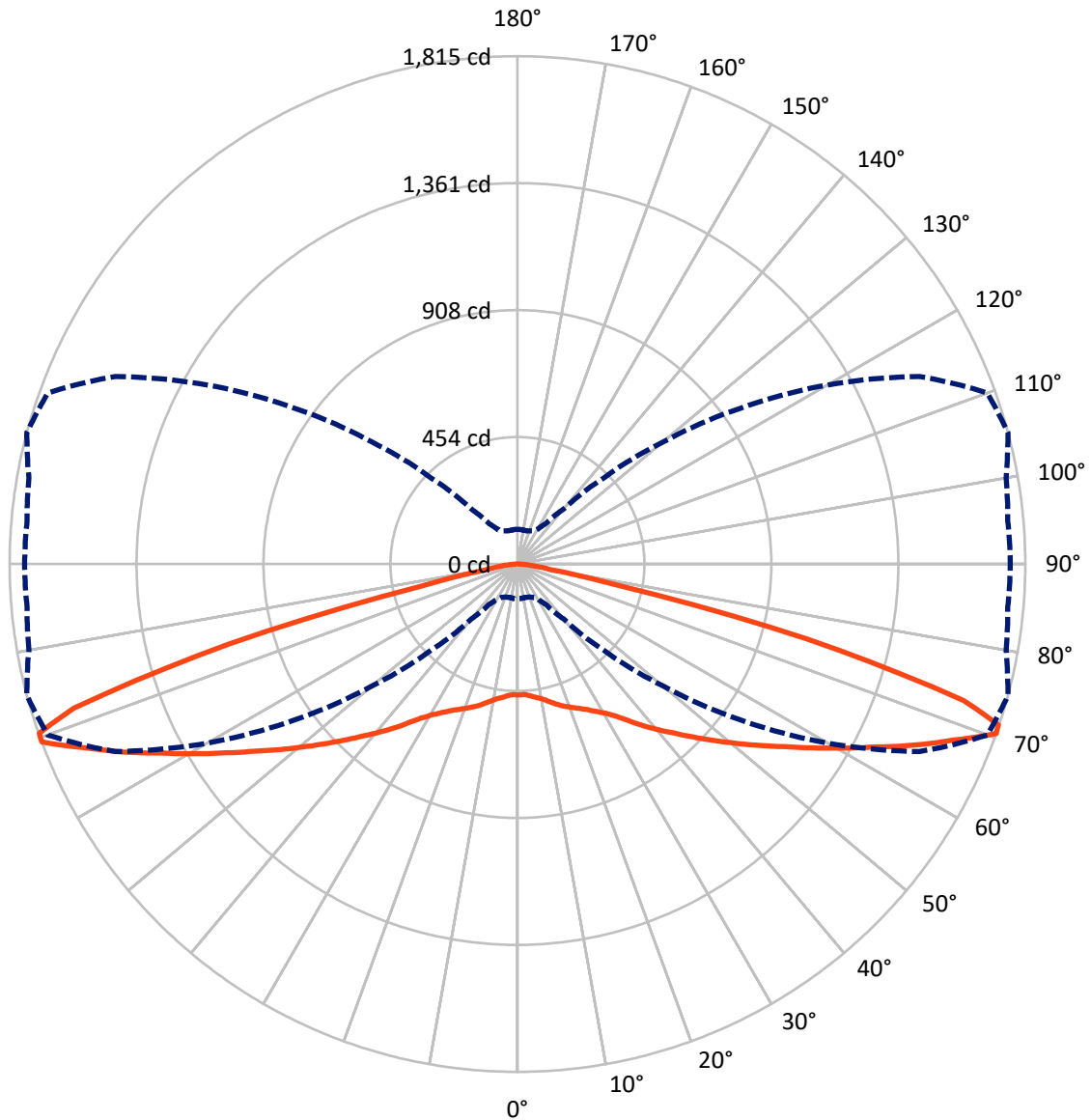
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.7 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
<b>House Side</b>	Lumens	2103.7	0.0	2103.7
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	2103.7	0.0	2103.7
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	4207.4	0.0	4207.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.9	1.1
10°-20°	139.4	3.3
20°-30°	261.8	6.2
30°-40°	461.1	11.0
40°-50°	764.2	18.2
50°-60°	1063.2	25.3
60°-70°	1003.6	23.9
70°-80°	428.7	10.2
80°-90°	40.5	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°	4207.4	100.0
0°-180°	4207.4	100.0



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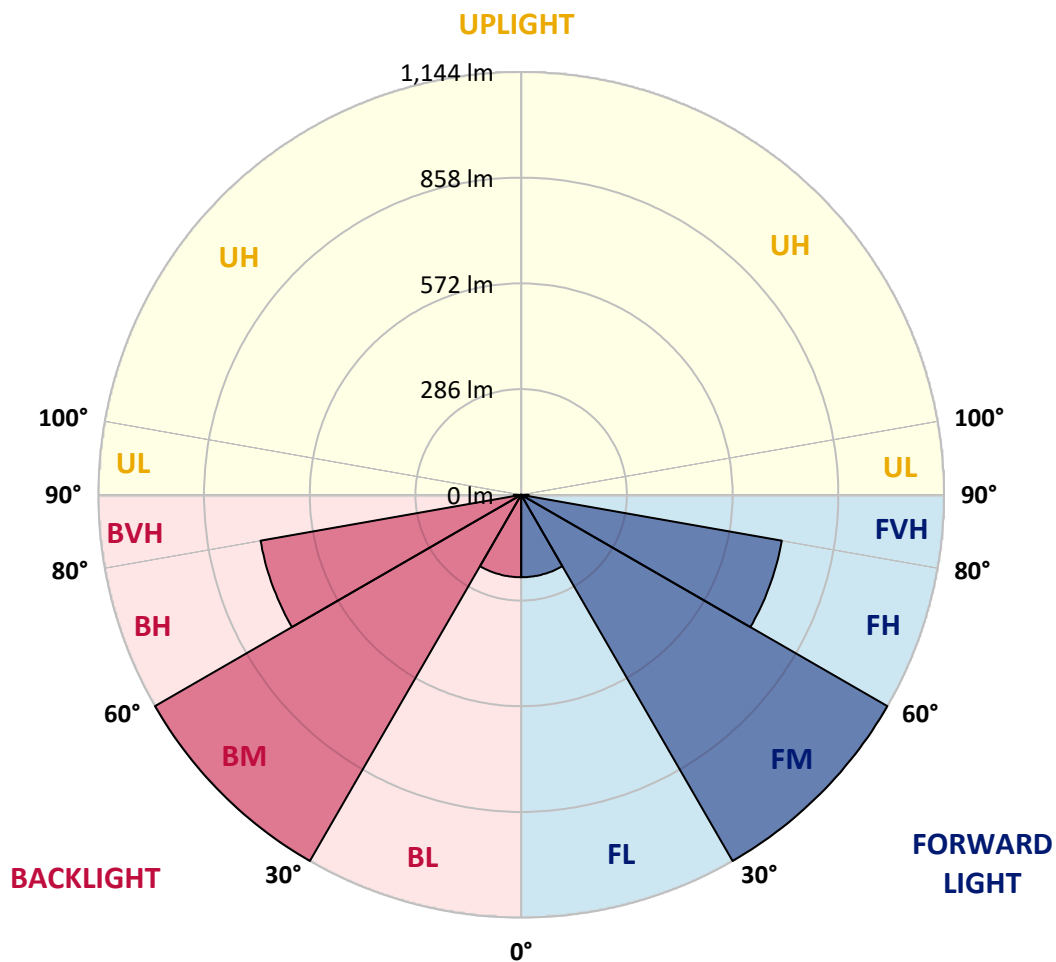
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	223.0	5.3			
FM	(30°-60°)	1144.3	27.2			
FH	(60°-80°)	716.1	17.0			G1/1800
FVH	(80°-90°)	20.3	0.5			G1/100
BL	(0°-30°)	223.0	5.3	B1/500		
BM	(30°-60°)	1144.3	27.2	B2/2500		
BH	(60°-80°)	716.1	17.0	B2/1000		G2/1000
BVH	(80°-90°)	20.3	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°	468.5	468.5	468.5	468.5	468.5	468.5	468.5	468.5	468.5	468.5	468.5
2.5°	471.5	471.2	471.5	470.7	470.9	470.7	470.7	469.6	469.6	469.0	468.3
5°	466.2	466.7	466.7	466.7	467.5	467.5	468.5	468.8	469.6	470.4	470.9
7.5°	457.5	457.8	458.5	459.0	460.6	462.8	464.8	467.2	469.3	472.0	474.9
10°	450.1	450.6	451.9	453.3	456.1	458.8	462.5	466.2	469.8	474.3	478.8
12.5°	446.1	446.9	449.0	451.1	455.6	459.0	464.0	469.8	474.9	479.0	484.1
15°	446.6	446.9	449.8	452.8	459.0	463.8	470.9	477.7	483.9	488.6	494.4
17.5°	454.3	454.8	457.8	462.0	468.0	474.0	481.7	488.9	497.1	502.6	509.4
20°	469.3	470.1	473.3	477.7	484.4	490.7	498.6	506.0	514.4	521.0	527.8
22.5°	488.9	490.2	493.6	499.1	505.7	513.3	521.5	529.2	537.0	543.7	549.5
25°	515.0	516.5	520.2	525.8	532.3	540.5	548.9	556.9	565.1	570.1	574.8
27.5°	550.0	552.6	556.6	561.1	566.9	575.6	583.5	590.0	598.0	603.5	606.7
30°	597.2	600.9	604.1	608.8	613.1	622.3	628.6	633.8	640.0	643.1	643.8
32.5°	655.0	658.4	661.5	664.9	670.7	679.2	685.3	688.1	691.3	690.8	687.9
35°	720.1	722.7	724.6	730.6	740.1	745.6	750.1	751.2	751.7	746.1	740.6
37.5°	788.6	791.8	793.4	802.9	811.8	818.2	820.3	822.7	821.0	811.8	801.8
40°	862.8	866.1	870.8	879.0	889.7	895.7	898.4	898.0	896.7	885.9	869.6
42.5°	935.5	939.7	943.7	957.9	966.6	976.9	978.2	977.9	975.1	962.6	943.7
45°	997.2	1002.2	1010.4	1026.2	1040.1	1052.5	1057.5	1059.4	1056.5	1043.3	1021.7
47.5°	1048.1	1051.5	1061.8	1081.1	1099.0	1117.2	1127.2	1134.2	1134.0	1124.5	1101.6
50°	1082.9	1086.8	1099.5	1121.2	1143.6	1164.8	1184.7	1200.7	1208.4	1201.6	1180.2
52.5°	1092.9	1097.9	1114.5	1140.4	1166.5	1195.2	1224.8	1253.2	1270.3	1274.6	1257.9
55°	1050.7	1056.2	1080.5	1116.3	1159.3	1201.8	1246.6	1287.2	1322.6	1338.9	1332.3
57.5°	927.8	931.8	962.6	1009.0	1070.5	1145.1	1220.5	1294.9	1355.5	1398.0	1405.3
60°	733.8	738.8	772.5	821.6	891.5	985.8	1091.3	1213.1	1332.1	1429.4	1477.6
62.5°	495.2	498.6	531.0	575.8	652.3	743.3	860.9	1015.1	1184.7	1358.4	1494.4
65°	259.9	259.9	281.8	313.2	374.1	455.6	576.1	734.3	936.0	1153.0	1380.6
67.5°	150.8	150.6	155.6	162.6	181.9	214.9	281.3	397.6	588.5	841.1	1100.0
70°	124.5	123.7	122.9	122.9	125.7	130.7	143.4	175.3	256.6	433.7	676.8
71°	118.9	118.4	116.3	115.5	116.8	119.5	125.0	139.7	182.2	295.8	505.4
72.5°	112.3	111.0	107.8	106.5	106.8	107.8	109.5	115.2	128.2	168.2	288.2
75°	102.3	99.1	95.1	93.3	92.6	92.3	92.3	93.9	96.8	101.5	118.2
77.5°	90.7	86.2	82.0	80.2	78.9	78.1	77.5	76.4	75.9	78.1	84.1
80°	76.7	72.0	68.5	67.5	66.7	65.2	63.0	60.9	59.6	60.7	64.3
82.5°	59.3	54.6	55.1	55.3	54.0	51.5	49.3	47.0	44.6	44.0	45.8
85°	47.2	44.8	43.3	46.6	43.8	40.6	37.7	33.8	28.2	23.2	25.3
87.5°	20.3	20.6	29.6	44.6	39.0	31.4	26.1	21.1	13.4	10.0	10.3
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°	468.5	468.5	468.5	468.5	468.5	468.5	468.5	468.5
2.5°	468.0	468.0	467.2	466.7	466.7	466.7	466.2	466.5
5°	471.2	471.7	472.2	472.0	472.7	473.5	473.3	473.0
7.5°	476.5	478.0	479.6	480.4	481.5	482.5	482.7	482.0
10°	481.7	484.9	487.2	489.4	490.7	491.7	492.6	492.2
12.5°	488.4	492.8	497.1	501.2	504.1	505.7	507.3	506.8
15°	499.1	504.1	509.4	515.0	519.5	521.8	524.2	523.6
17.5°	513.9	518.3	522.6	528.1	533.7	536.3	538.9	538.7
20°	532.3	535.7	538.2	541.3	546.6	549.5	551.9	551.1
22.5°	553.4	554.4	554.7	555.8	560.1	563.4	566.6	567.4
25°	576.3	575.6	574.0	573.2	576.1	579.8	583.8	584.8
27.5°	604.9	602.2	598.2	595.1	595.9	600.7	605.1	606.2
30°	640.7	634.6	626.3	620.1	619.1	624.1	628.8	630.4
32.5°	681.6	673.4	661.8	652.5	648.7	653.1	657.3	659.7
35°	730.1	721.1	707.2	695.3	689.0	691.8	699.3	701.8
37.5°	787.6	775.2	759.6	744.6	734.1	734.6	742.5	745.6
40°	851.1	833.2	813.5	794.7	779.4	778.4	785.4	787.9
42.5°	917.3	894.4	871.1	846.6	827.7	824.2	833.4	833.7
45°	988.5	958.9	930.2	901.7	882.0	875.9	884.9	885.9
47.5°	1064.4	1027.6	993.5	962.6	941.3	931.8	940.5	942.0
50°	1143.6	1105.3	1065.7	1031.4	1006.4	994.8	1005.0	1006.2
52.5°	1221.8	1185.7	1146.4	1107.1	1076.9	1063.7	1075.7	1079.4
55°	1300.7	1265.9	1229.0	1189.7	1151.4	1139.9	1153.0	1157.0
57.5°	1382.6	1349.2	1315.7	1276.1	1239.0	1221.3	1235.5	1241.0
60°	1473.2	1443.6	1412.0	1372.1	1335.5	1314.9	1327.1	1333.3
62.5°	1561.9	1555.9	1527.2	1485.7	1439.4	1418.8	1429.1	1433.6
65°	1569.3	1667.7	1666.4	1625.3	1560.4	1525.8	1528.7	1530.8
67.5°	1369.7	1595.4	1739.6	1752.6	1680.3	1626.3	1619.9	1621.3
70°	969.8	1279.6	1585.7	1786.6	1815.1	1773.2	1759.5	1761.5
71°	777.0	1097.9	1434.9	1705.2	1813.0	1800.8	1793.2	1798.8
72.5°	495.9	808.9	1136.9	1460.2	1667.2	1726.5	1735.2	1738.6
75°	180.0	348.0	589.0	844.0	1069.7	1225.0	1310.4	1317.3
77.5°	96.8	124.7	192.7	288.0	361.7	401.3	406.0	407.9
80°	71.2	82.6	94.4	107.8	116.3	117.8	115.0	108.9
82.5°	50.3	57.0	61.7	66.5	69.9	67.0	55.6	42.5
85°	29.3	32.1	34.8	37.1	37.7	35.6	23.4	19.2
87.5°	11.6	12.7	12.4	14.0	13.4	12.4	9.2	7.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)