

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: P196399

Luminaire Tested: **NAV-AF-01-D-UNV-5MQ-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196399
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5083.8 lumens
Efficiency: N/A
Efficacy: 115.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G1

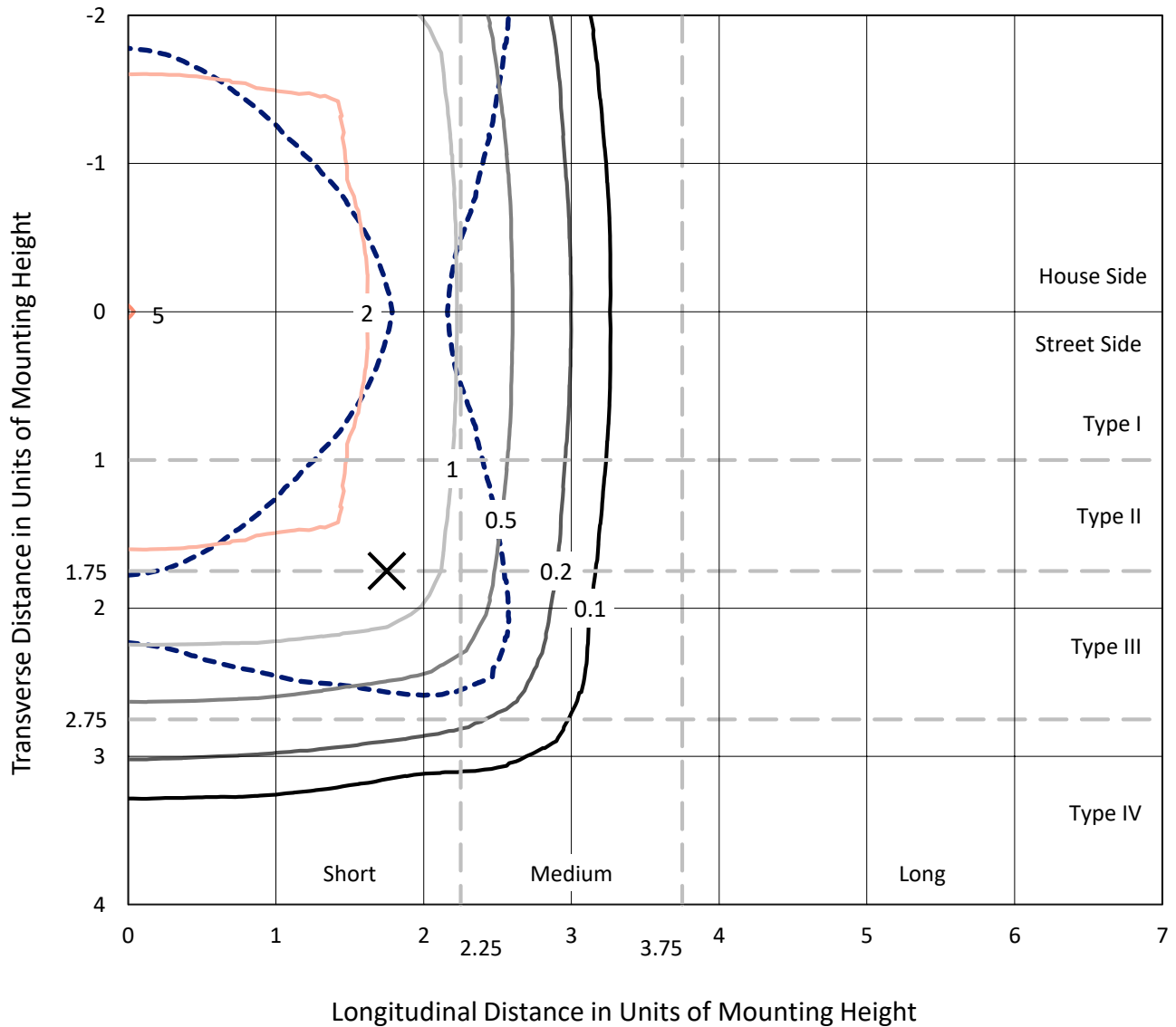
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

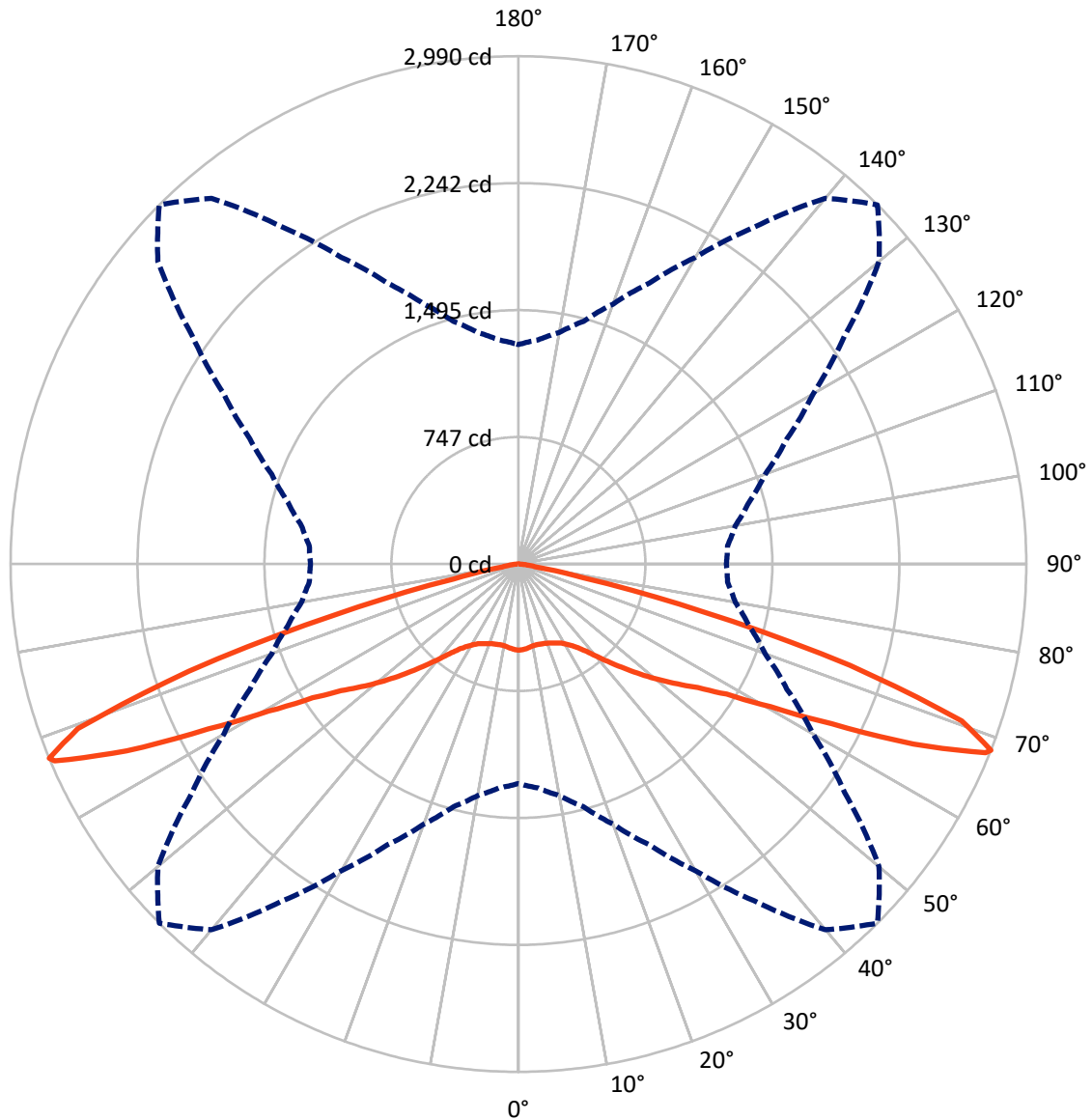
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.1 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2541.9	0.0	2541.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	2541.9	0.0	2541.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	5083.8	0.0	5083.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.5	0.9
10°-20°	137.6	2.7
20°-30°	234.0	4.6
30°-40°	382.9	7.5
40°-50°	684.3	13.5
50°-60°	1155.6	22.7
60°-70°	1792.0	35.2
70°-80°	616.1	12.1
80°-90°	33.9	0.7
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°	5083.8	100.0
0°-180°	5083.8	100.0



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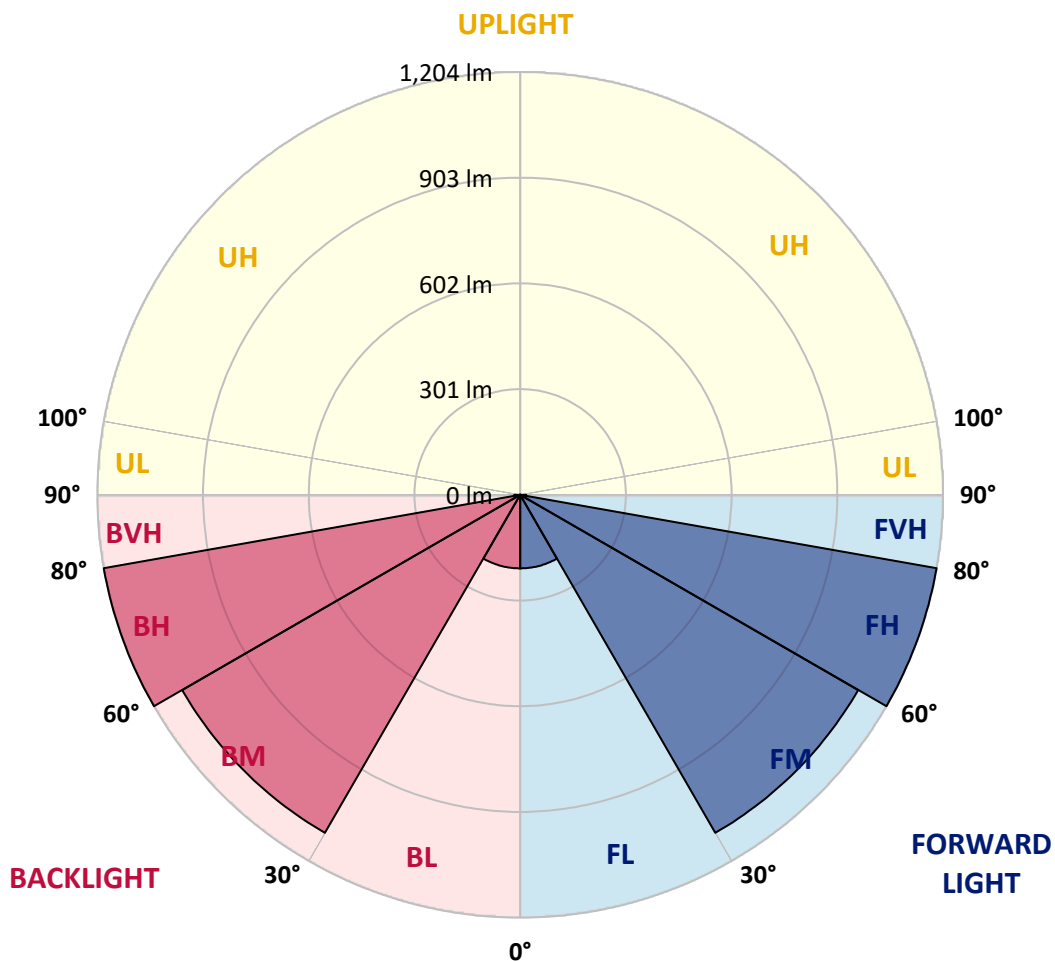
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	209.5	4.1			
FM	(30°-60°)	1111.4	21.9			
FH	(60°-80°)	1204.1	23.7			G1/1800
FVH	(80°-90°)	16.9	0.3			G1/100
BL	(0°-30°)	209.5	4.1	B1/500		
BM	(30°-60°)	1111.4	21.9	B2/2500		
BH	(60°-80°)	1204.1	23.7	B3/2500		G1/1800
BVH	(80°-90°)	16.9	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	507.2	507.2	507.2	507.2	507.2	507.2	507.2	507.2	507.2	507.2	507.2
2.5°	509.2	509.2	509.9	509.5	508.7	507.7	506.9	505.9	505.3	504.7	504.0
5°	504.0	504.0	505.0	504.3	503.6	502.8	502.1	501.2	500.6	500.0	500.3
7.5°	497.1	497.7	498.4	498.1	496.8	496.6	495.6	495.3	494.7	493.8	494.1
10°	491.2	491.5	492.2	491.8	491.5	490.6	490.3	490.0	489.7	488.5	488.2
12.5°	485.3	485.9	486.5	486.9	486.5	486.9	487.2	487.6	487.2	486.5	486.5
15°	480.6	481.3	482.3	483.2	483.5	485.3	486.5	487.9	488.7	489.1	488.2
17.5°	478.2	479.1	480.3	482.3	483.8	485.9	488.2	490.0	491.5	491.8	490.9
20°	477.9	478.8	480.6	482.8	485.6	488.5	491.8	494.7	496.2	497.1	496.2
22.5°	480.0	481.3	483.8	486.5	490.0	493.8	498.1	501.2	504.3	505.6	504.7
25°	486.3	487.6	490.3	493.8	497.4	502.1	506.5	510.6	513.6	515.2	513.9
27.5°	499.4	499.7	502.8	506.5	510.9	514.9	520.5	522.4	524.9	526.4	524.9
30°	517.7	518.3	521.1	527.0	531.1	536.4	539.5	541.4	544.2	545.8	543.9
32.5°	545.8	546.4	548.8	554.5	558.2	562.2	566.0	567.2	570.0	571.9	569.7
35°	585.3	586.5	588.7	592.4	595.6	598.6	601.5	600.5	602.3	604.9	602.7
37.5°	639.3	639.1	639.7	642.6	645.6	647.6	651.8	649.6	651.6	653.8	652.5
40°	702.6	702.6	702.3	707.4	708.5	710.4	715.1	712.3	714.8	717.3	715.1
42.5°	774.5	775.7	777.4	781.4	784.8	785.5	787.6	786.3	789.5	791.7	789.5
45°	857.3	859.3	861.1	870.5	872.0	873.2	874.8	870.7	874.2	876.0	875.3
47.5°	943.2	946.7	950.8	960.4	966.6	969.4	970.7	966.0	966.3	969.1	969.4
50°	1040.3	1044.2	1048.3	1059.0	1065.0	1069.9	1071.5	1066.3	1066.9	1069.0	1069.6
52.5°	1130.1	1134.4	1143.2	1157.8	1166.2	1174.9	1175.5	1169.0	1171.8	1173.3	1172.2
55°	1214.4	1220.0	1231.6	1251.1	1266.5	1283.6	1291.3	1284.2	1284.2	1282.9	1282.2
57.5°	1312.8	1319.0	1330.9	1353.6	1374.7	1399.4	1420.5	1427.7	1440.8	1445.1	1438.3
60°	1461.1	1467.6	1479.7	1509.5	1536.3	1572.1	1606.9	1635.3	1681.4	1706.3	1683.9
62.5°	1596.4	1606.3	1635.1	1687.3	1745.2	1811.5	1888.4	1943.1	2027.0	2068.8	2012.3
65°	1565.5	1585.8	1641.8	1724.0	1843.6	1987.4	2144.0	2294.3	2467.5	2556.2	2441.6
67.5°	1367.6	1384.8	1445.1	1540.7	1689.8	1888.1	2131.5	2442.8	2800.0	2966.2	2763.5
68°	1292.0	1324.0	1384.1	1479.1	1629.4	1824.3	2084.2	2420.4	2810.2	2989.9	2771.1
70°	990.6	1002.1	1059.7	1145.0	1307.2	1498.4	1760.8	2144.0	2584.5	2769.4	2544.3
72.5°	470.7	477.6	514.9	599.0	702.0	857.6	1089.4	1450.8	1847.7	2040.0	1815.6
75°	172.5	174.0	182.8	202.6	241.3	299.8	411.0	635.7	941.0	1122.3	944.9
77.5°	93.1	93.4	96.8	101.8	108.6	116.5	133.2	178.6	288.2	392.2	304.5
80°	58.6	58.2	61.6	65.7	70.4	74.1	75.6	81.0	91.2	106.7	98.2
82.5°	29.9	32.7	40.4	44.8	51.7	52.9	51.4	51.1	54.2	58.6	60.4
85°	16.5	14.6	21.6	28.6	31.1	32.0	32.3	30.5	29.9	29.3	30.8
87.5°	8.4	7.7	9.3	14.3	15.3	12.4	12.8	10.9	7.4	7.4	7.7
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°	507.2	507.2	507.2	507.2	507.2	507.2	507.2	507.2
2.5°	503.3	503.6	503.0	503.0	503.0	503.3	503.0	502.8
5°	499.4	500.0	500.0	500.3	500.6	500.6	500.6	500.6
7.5°	493.5	493.8	494.4	494.4	494.4	494.4	494.4	494.4
10°	487.9	487.2	486.9	486.3	486.3	485.3	485.6	485.9
12.5°	485.0	483.8	483.2	482.3	481.7	480.6	480.6	481.0
15°	486.3	484.4	482.5	482.0	481.3	480.6	480.0	480.3
17.5°	488.7	486.5	484.4	483.2	482.0	481.0	480.6	481.0
20°	494.1	490.9	487.6	485.3	482.8	482.3	481.3	482.3
22.5°	501.2	497.4	493.1	489.1	486.3	485.0	483.8	484.7
25°	509.9	505.9	501.5	496.8	493.8	492.8	491.2	491.2
27.5°	522.0	518.7	514.9	510.6	507.4	506.5	504.0	504.0
30°	541.4	538.0	534.5	530.8	527.7	526.7	523.7	523.7
32.5°	566.9	563.1	560.9	557.9	555.4	553.8	550.1	549.8
35°	601.2	597.7	597.4	595.3	592.7	593.1	589.4	588.7
37.5°	650.3	647.6	648.5	646.6	644.4	646.3	644.1	644.1
40°	713.3	712.3	713.3	712.0	712.3	712.6	710.7	711.4
42.5°	789.2	786.6	792.2	791.7	790.7	793.2	788.9	785.8
45°	876.7	875.7	881.2	882.3	880.4	881.9	874.2	873.8
47.5°	971.7	971.7	976.6	976.0	974.0	974.4	965.1	959.2
50°	1070.6	1069.9	1075.0	1073.7	1071.2	1071.0	1061.2	1055.3
52.5°	1173.7	1173.7	1180.8	1177.4	1171.5	1168.6	1156.8	1149.1
55°	1287.6	1286.0	1288.1	1277.0	1265.4	1257.0	1242.5	1236.5
57.5°	1431.8	1413.7	1398.1	1383.8	1367.6	1357.6	1340.5	1334.3
60°	1636.2	1588.0	1567.1	1538.5	1511.7	1498.4	1475.6	1463.5
62.5°	1919.5	1839.6	1782.9	1719.7	1658.7	1615.7	1581.2	1565.9
65°	2247.0	2072.7	1928.5	1793.2	1678.3	1587.1	1536.3	1520.5
67.5°	2371.6	2051.6	1802.8	1608.6	1469.1	1360.4	1299.7	1287.0
68°	2345.1	2002.9	1744.6	1545.7	1405.6	1296.1	1235.6	1224.0
70°	2068.8	1689.8	1417.1	1219.2	1088.3	984.1	941.4	923.0
72.5°	1410.2	1085.3	832.4	665.9	568.1	502.1	462.9	449.5
75°	649.1	438.6	293.0	218.8	185.8	170.0	157.9	154.7
77.5°	189.2	137.5	118.3	109.6	103.0	97.5	93.4	93.1
80°	89.9	84.3	81.8	76.3	70.4	65.1	61.3	62.0
82.5°	60.4	58.9	58.9	53.2	43.9	37.7	31.1	28.0
85°	32.0	33.4	35.2	33.4	29.0	21.6	13.9	15.3
87.5°	10.9	12.4	13.1	12.8	11.5	8.7	6.5	6.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)