

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: P195973

Luminaire Tested: **NAV-AF-01-D-UNV-5WQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195973
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6501.9 lumens
Efficiency: N/A
Efficacy: 110.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G2

Input Watts (W): 59
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

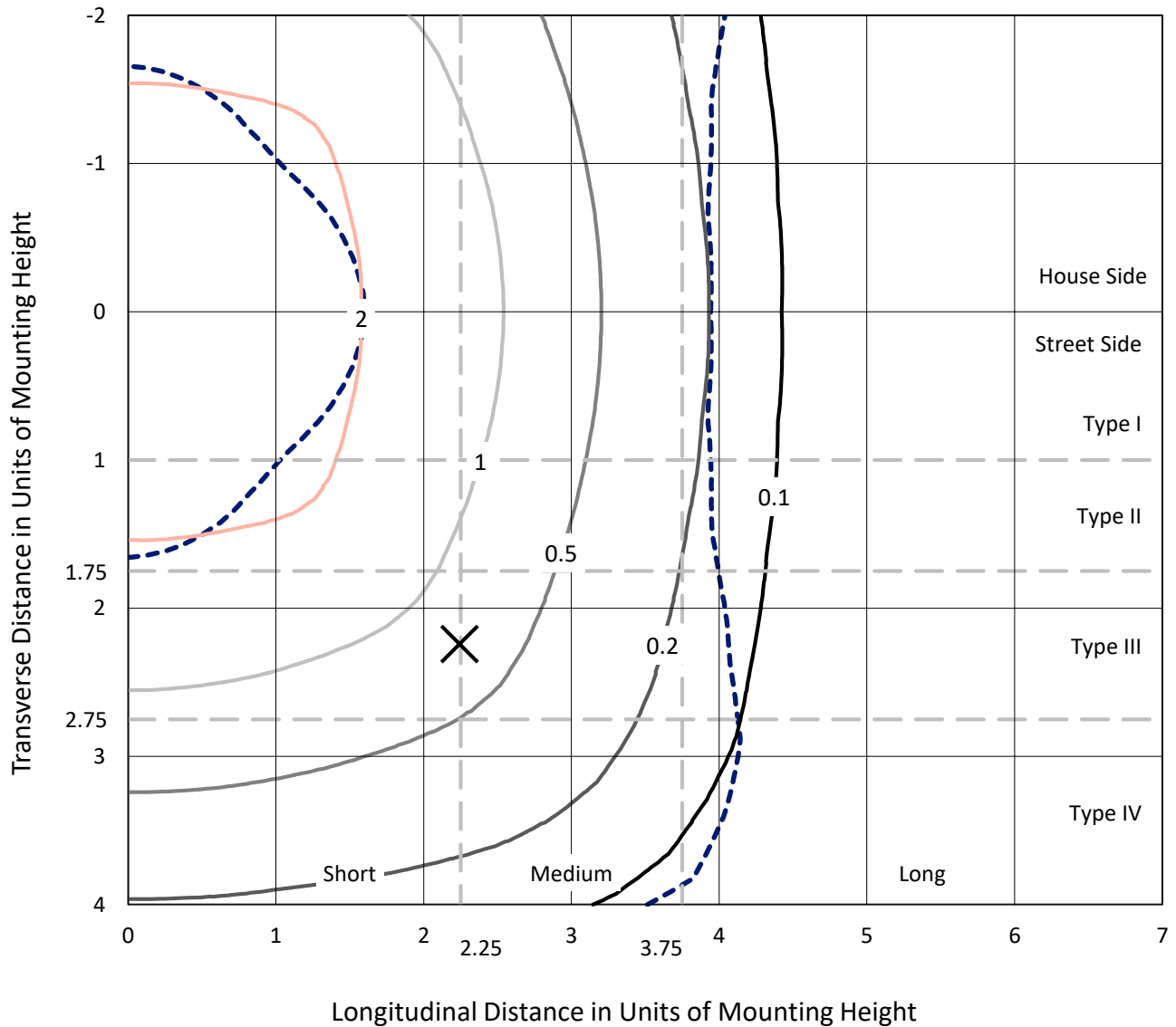


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

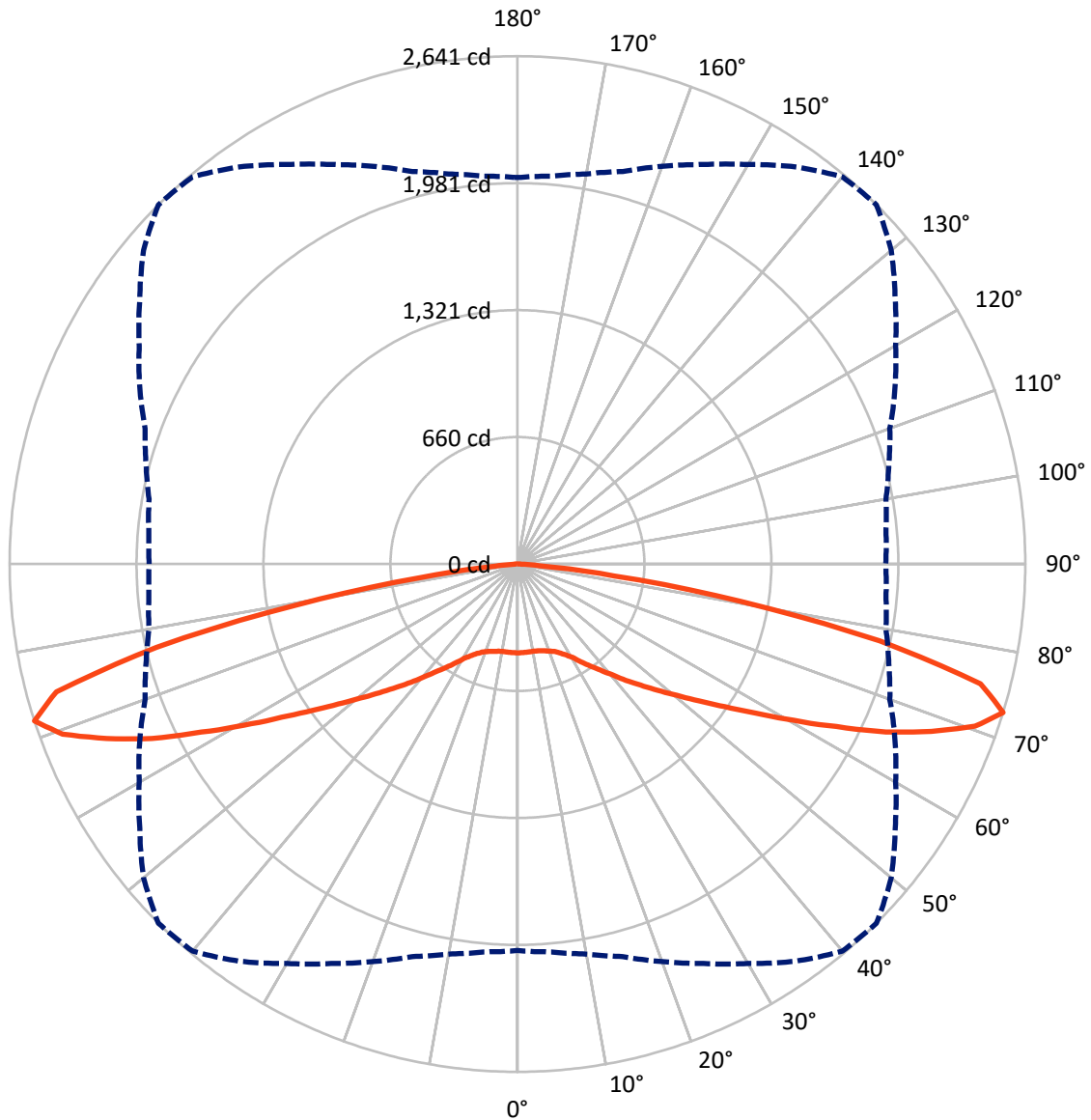


Based on 10 foot mounting height. Maximum calculated value = 4.6 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3250.9	0.0	3250.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3250.9	0.0	3250.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	6501.9	0.0	6501.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.1	0.7
10°-20°	133.5	2.1
20°-30°	241.1	3.7
30°-40°	411.2	6.3
40°-50°	700.0	10.8
50°-60°	1126.6	17.3
60°-70°	1873.5	28.8
70°-80°	1812.4	27.9
80°-90°	159.5	2.5
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°	6501.9	100.0
0°-180°	6501.9	100.0



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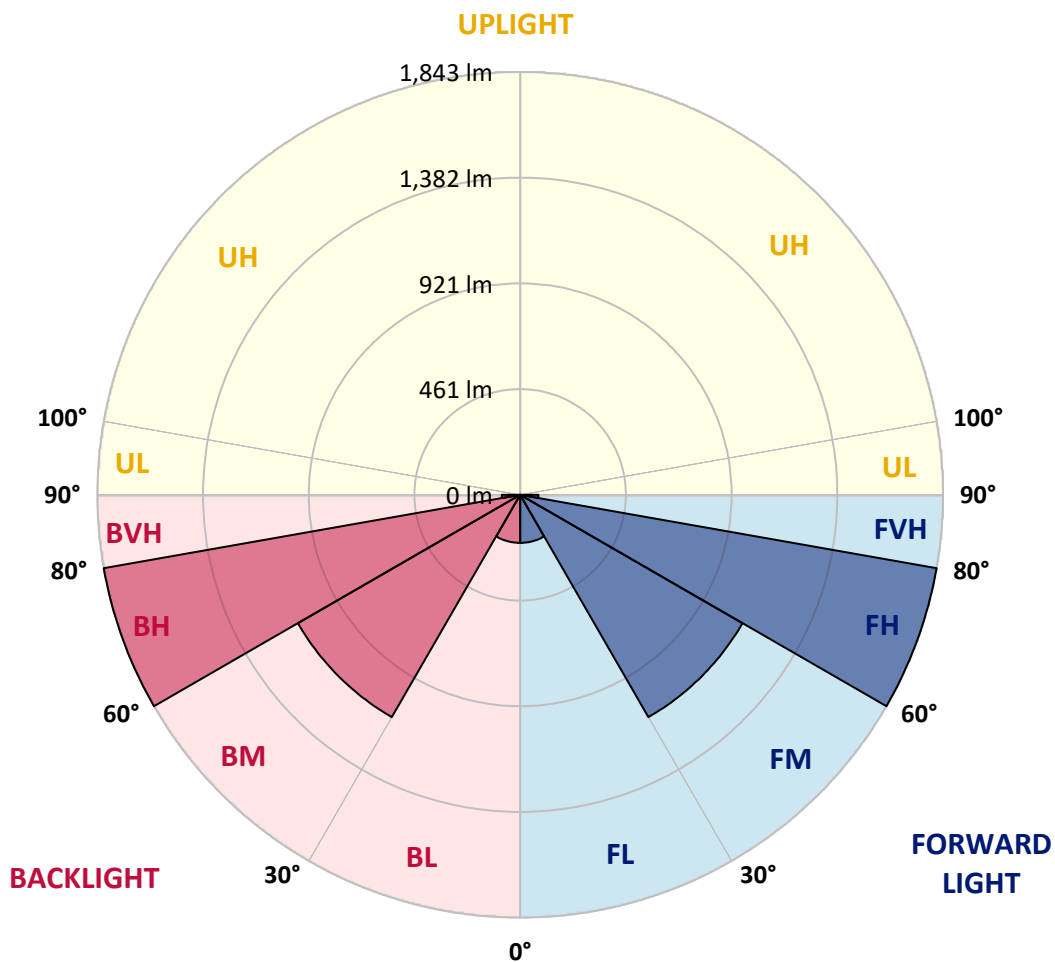
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	209.3	3.2			
FM	(30°-60°)	1118.9	17.2			
FH	(60°-80°)	1843.0	28.3			G2/5000
FVH	(80°-90°)	79.8	1.2			G1/100
BL	(0°-30°)	209.3	3.2	B1/500		
BM	(30°-60°)	1118.9	17.2	B2/2500		
BH	(60°-80°)	1843.0	28.3	B3/2500		G2/5000
BVH	(80°-90°)	79.8	1.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3
2.5°	465.9	465.9	466.3	465.9	465.0	464.6	463.4	462.7	461.9	461.5	460.6
5°	466.3	466.3	466.7	466.3	465.4	464.6	463.8	462.7	461.9	461.0	460.6
7.5°	467.8	468.2	468.6	468.2	466.7	465.9	464.6	463.4	461.9	461.0	460.2
10°	471.1	471.1	471.1	470.7	469.4	467.8	466.3	465.0	463.0	461.0	459.8
12.5°	473.4	473.8	473.8	473.0	471.5	469.4	467.8	466.7	465.0	463.4	462.3
15°	477.0	477.0	476.6	475.1	472.6	471.1	470.3	469.8	469.4	468.6	467.4
17.5°	484.3	483.9	482.6	480.3	477.4	476.3	475.5	475.5	475.5	475.1	474.2
20°	494.7	494.7	493.1	489.1	486.6	485.5	484.3	484.3	484.3	483.0	481.8
22.5°	511.5	511.9	509.4	504.6	501.5	499.1	497.5	496.2	495.0	494.3	492.2
25°	534.3	533.9	531.1	525.1	522.6	520.3	517.1	515.1	513.4	512.3	509.8
27.5°	558.3	557.9	554.6	549.5	547.9	544.3	541.9	539.1	537.0	535.1	532.7
30°	589.1	587.1	584.7	580.7	579.9	577.0	573.9	569.9	566.7	563.4	560.7
32.5°	616.7	616.7	613.2	611.1	612.7	611.5	611.9	609.5	607.5	606.3	603.5
35°	655.1	655.1	653.6	651.1	651.5	648.8	648.3	648.8	650.3	650.3	647.1
37.5°	706.3	707.2	701.9	701.1	699.2	695.2	693.2	694.0	697.6	699.6	695.2
40°	770.0	771.6	770.0	764.8	762.4	755.6	751.6	751.6	754.4	756.4	754.7
42.5°	832.8	835.6	832.8	828.8	826.9	821.6	819.6	821.2	824.8	827.3	824.8
45°	902.9	904.9	901.2	896.4	894.1	891.3	890.1	891.3	895.3	897.6	896.8
47.5°	971.7	974.5	970.1	968.1	968.1	965.3	968.5	971.7	975.3	980.9	978.5
50°	1038.9	1042.5	1039.7	1040.1	1043.3	1048.5	1054.6	1060.9	1067.3	1073.4	1074.1
52.5°	1099.0	1104.6	1105.0	1112.2	1122.2	1130.2	1146.9	1160.9	1176.2	1181.4	1179.0
55°	1162.2	1169.7	1179.8	1191.0	1207.0	1223.4	1251.8	1277.1	1297.1	1309.5	1307.4
57.5°	1252.6	1260.3	1270.6	1289.0	1313.1	1335.5	1374.3	1413.5	1443.9	1462.7	1453.5
60°	1369.9	1377.9	1391.5	1411.2	1442.4	1472.7	1525.9	1582.4	1629.7	1651.2	1634.5
62.5°	1525.2	1532.8	1541.6	1567.6	1602.5	1641.6	1708.4	1780.9	1840.9	1861.8	1838.1
65°	1746.5	1755.7	1758.5	1779.7	1813.7	1850.1	1922.1	2003.9	2072.3	2106.3	2059.0
67.5°	1995.8	1999.5	2010.6	2035.5	2070.2	2103.1	2159.9	2237.1	2302.8	2321.6	2271.2
70°	2141.9	2149.1	2168.7	2203.1	2244.8	2296.3	2358.4	2441.7	2516.0	2524.8	2460.8
72.5°	2009.8	2024.6	2059.4	2113.1	2200.4	2291.9	2398.8	2521.7	2628.6	2641.0	2538.0
75°	1612.1	1628.8	1670.5	1729.3	1832.5	1968.6	2123.0	2307.6	2467.7	2488.0	2352.0
77.5°	859.3	880.0	940.5	1019.7	1167.0	1347.1	1533.2	1743.7	1879.8	1925.8	1827.7
80°	216.6	227.7	257.0	303.3	403.0	548.3	708.8	935.3	1104.2	1175.8	1104.2
82.5°	84.1	92.5	100.5	106.1	115.7	135.6	187.3	305.4	411.4	506.7	438.6
85°	32.4	34.4	49.6	56.5	56.5	62.0	71.2	84.1	104.0	113.6	95.2
87.5°	12.8	14.0	17.2	26.4	27.2	24.0	25.6	28.8	22.0	18.4	20.8
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°	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3
2.5°	460.2	459.8	459.0	459.4	459.0	459.0	459.0	459.0
5°	459.8	459.8	459.0	459.0	459.0	459.4	459.0	459.0
7.5°	459.4	459.0	458.3	457.9	457.9	457.5	457.5	457.5
10°	458.6	457.9	457.1	456.6	456.6	455.8	455.8	455.8
12.5°	460.6	459.4	458.6	458.3	458.3	458.3	458.6	458.6
15°	466.3	463.8	462.7	462.3	462.7	463.4	463.8	464.2
17.5°	472.2	469.8	467.8	467.1	467.4	468.6	469.8	470.7
20°	479.9	477.8	475.5	474.6	474.6	476.3	477.0	478.2
22.5°	490.6	489.1	487.0	485.8	485.1	487.0	488.3	489.1
25°	507.9	506.3	504.6	503.5	503.1	505.0	505.8	506.3
27.5°	530.7	529.1	528.3	527.8	526.7	527.4	528.7	528.3
30°	560.3	561.5	560.3	560.3	558.3	559.0	558.3	557.5
32.5°	599.9	598.7	595.2	592.7	589.9	589.9	588.7	587.5
35°	639.5	635.6	633.5	634.7	633.5	634.3	632.3	630.3
37.5°	686.3	683.9	683.5	687.1	686.3	687.1	687.1	684.4
40°	748.4	746.8	749.6	755.6	758.0	757.6	758.4	754.7
42.5°	819.6	816.8	818.1	823.2	826.0	826.9	826.4	823.2
45°	890.9	891.6	891.6	897.2	900.1	901.6	898.9	897.6
47.5°	971.3	972.5	969.7	973.3	974.1	976.9	974.5	972.5
50°	1064.2	1059.8	1053.3	1054.6	1054.6	1053.7	1051.0	1048.5
52.5°	1167.8	1157.8	1145.8	1141.8	1137.4	1133.0	1127.4	1123.0
55°	1285.8	1268.7	1247.1	1237.1	1228.7	1218.6	1205.9	1201.5
57.5°	1422.7	1393.2	1364.3	1346.3	1324.7	1311.4	1295.1	1294.2
60°	1585.2	1545.2	1494.3	1467.5	1445.9	1430.3	1417.9	1413.1
62.5°	1772.9	1704.0	1649.2	1620.5	1595.2	1585.6	1570.0	1572.0
65°	1965.4	1895.3	1842.1	1818.9	1795.3	1788.9	1774.5	1779.7
67.5°	2173.9	2116.3	2057.9	2036.2	2014.6	2008.3	1993.4	1997.8
70°	2360.8	2287.5	2221.1	2178.7	2141.9	2112.3	2093.5	2085.9
72.5°	2398.0	2271.2	2166.7	2060.6	1999.5	1945.8	1923.8	1915.4
75°	2154.7	1957.8	1808.9	1684.5	1615.6	1537.6	1529.2	1517.5
77.5°	1676.0	1452.0	1271.8	1111.7	1019.3	924.0	891.3	866.4
80°	999.7	768.4	595.5	417.4	340.5	274.2	257.7	240.5
82.5°	357.8	229.3	154.5	120.5	107.6	99.2	92.9	84.4
85°	86.4	72.8	68.8	62.4	61.6	52.5	37.2	33.2
87.5°	27.6	25.2	25.6	24.4	25.6	19.2	15.7	14.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)