

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: P196453

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196453
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-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 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: 6146.9 lumens
Efficiency: N/A
Efficacy: 104.2 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 - G1

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

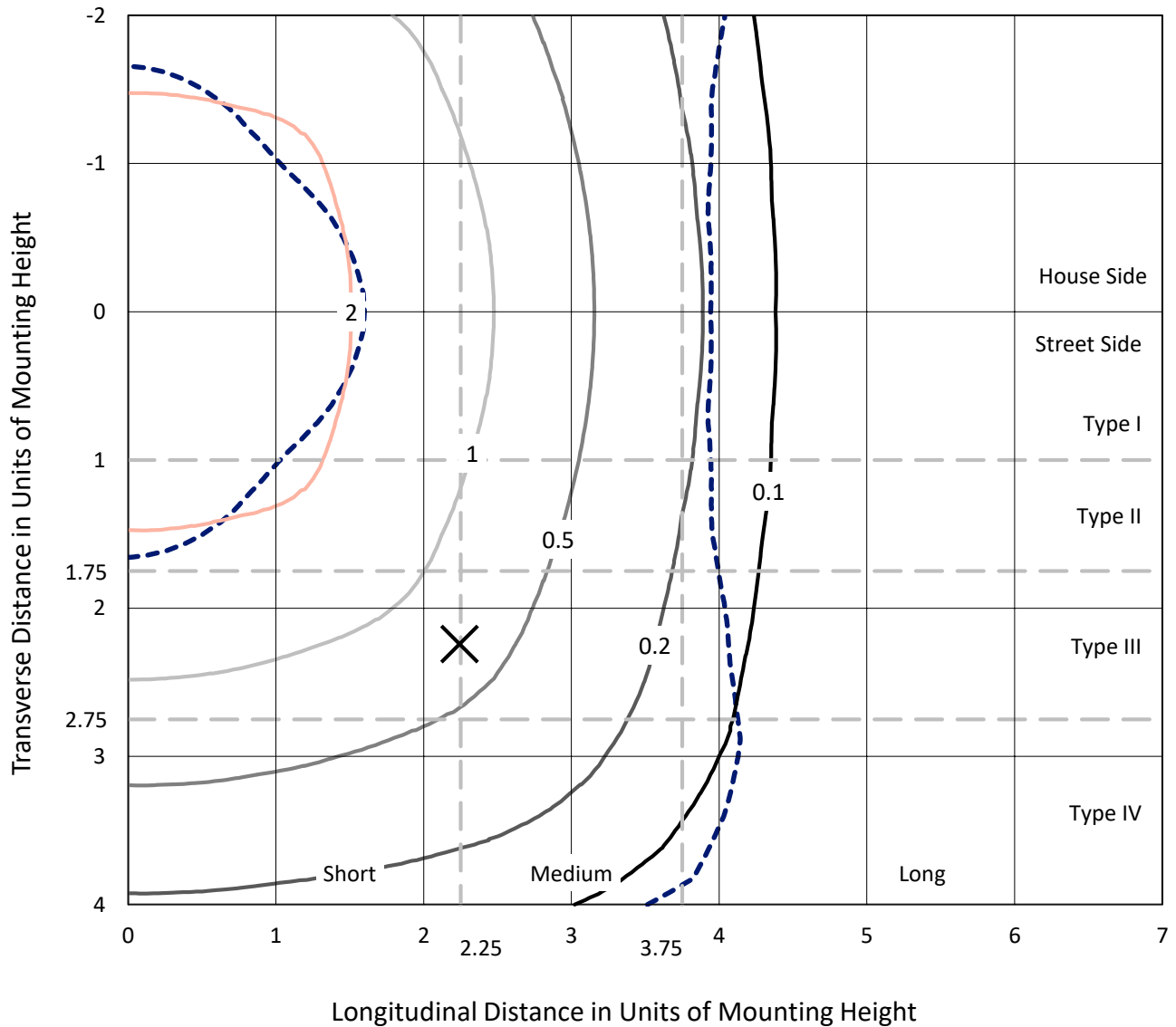


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

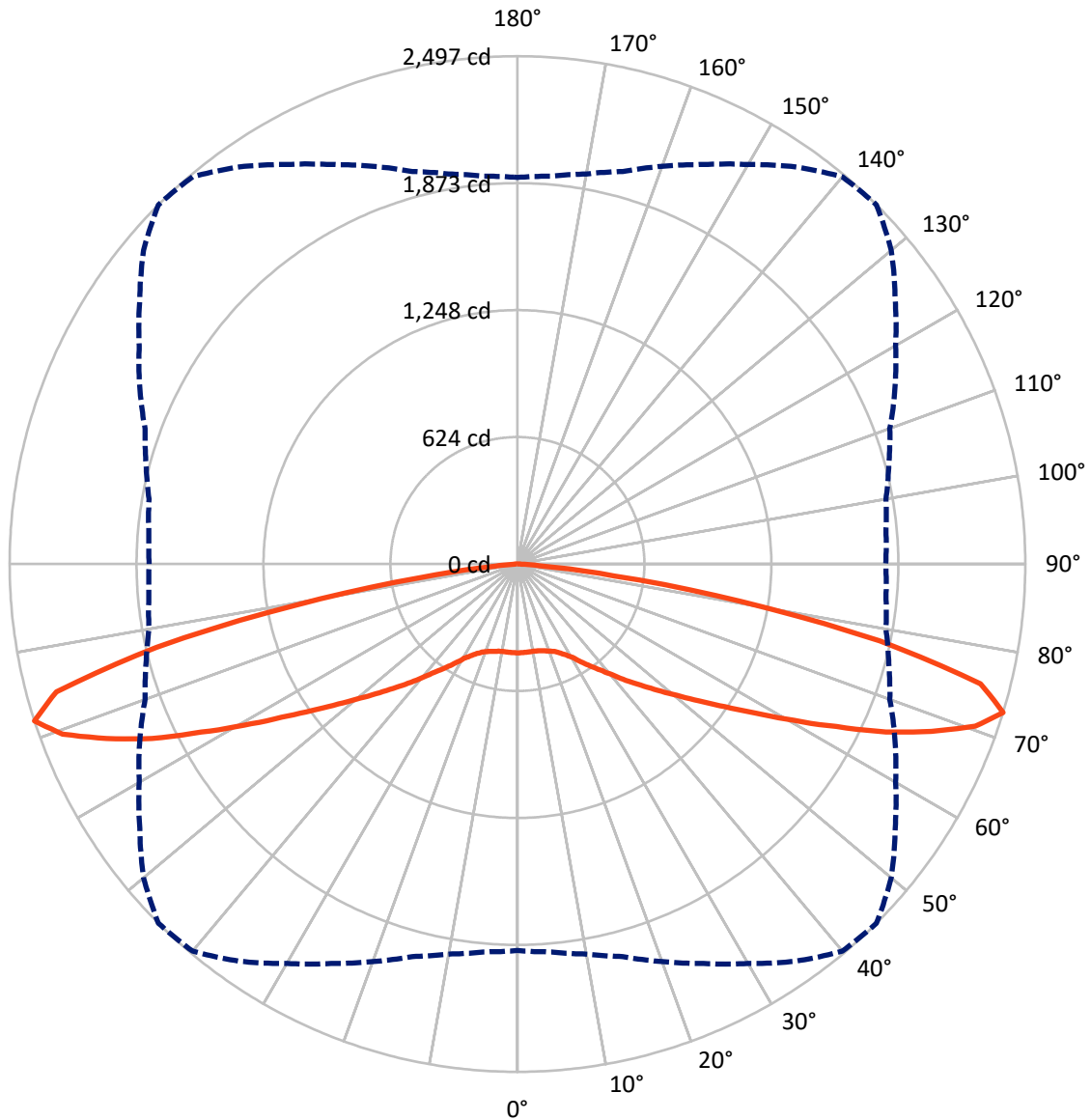


Based on 10 foot mounting height. Maximum calculated value = 4.4 fc
 Type V - Short - Semi-Cutoff

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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	3073.5	0.0	3073.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3073.5	0.0	3073.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	6146.9	0.0	6146.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.7	0.7
10°-20°	126.2	2.1
20°-30°	227.9	3.7
30°-40°	388.7	6.3
40°-50°	661.8	10.8
50°-60°	1065.1	17.3
60°-70°	1771.2	28.8
70°-80°	1713.5	27.9
80°-90°	150.8	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°	6146.9	100.0
0°-180°	6146.9	100.0



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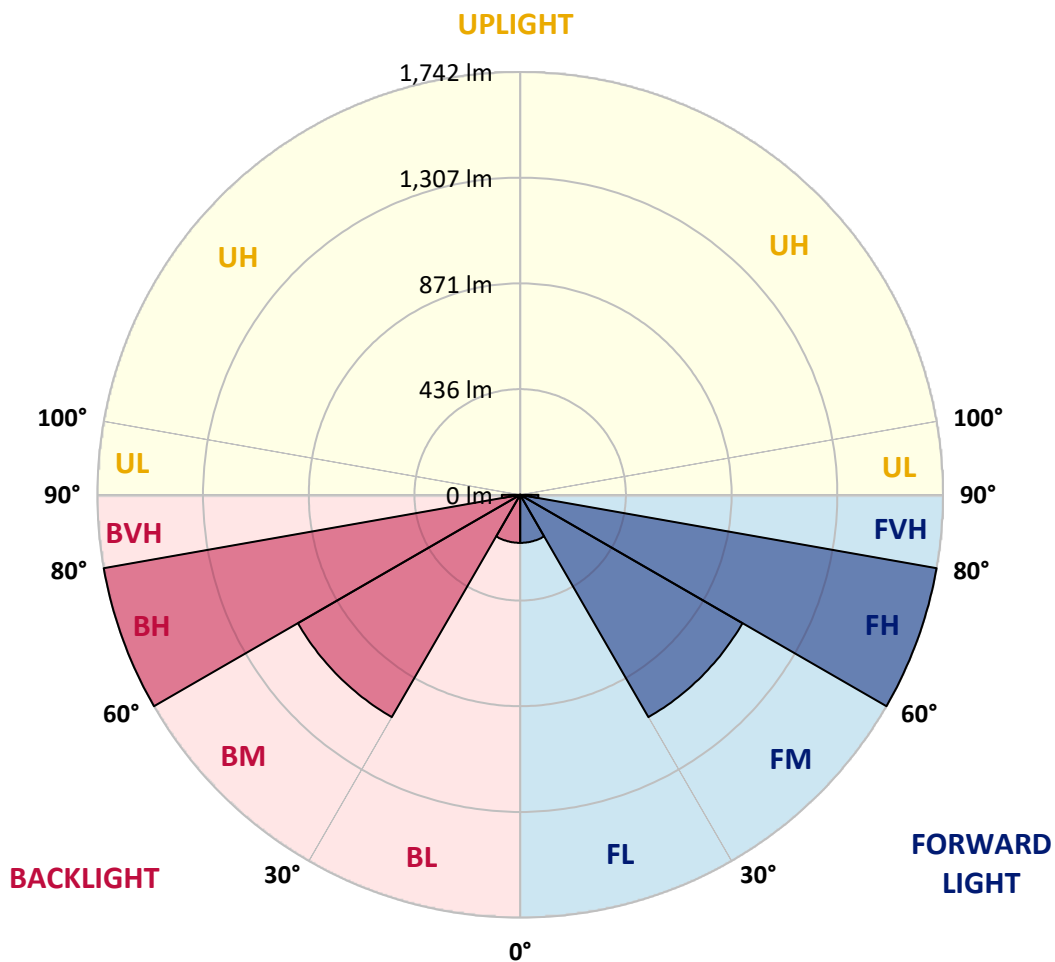
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	197.9	3.2			
FM	(30°-60°)	1057.8	17.2			
FH	(60°-80°)	1742.4	28.3			G1/1800
FVH	(80°-90°)	75.4	1.2			G1/100
BL	(0°-30°)	197.9	3.2	B1/500		
BM	(30°-60°)	1057.8	17.2	B2/2500		
BH	(60°-80°)	1742.4	28.3	B3/2500		G1/1800
BVH	(80°-90°)	75.4	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-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	437.0	437.0	437.0	437.0	437.0	437.0	437.0	437.0	437.0	437.0	437.0
2.5°	440.5	440.5	440.8	440.5	439.7	439.2	438.1	437.4	436.6	436.3	435.5
5°	440.8	440.8	441.2	440.8	440.0	439.2	438.5	437.4	436.6	435.8	435.5
7.5°	442.3	442.7	443.0	442.7	441.2	440.5	439.2	438.1	436.6	435.8	435.1
10°	445.3	445.3	445.3	444.9	443.8	442.3	440.8	439.7	437.8	435.8	434.8
12.5°	447.6	448.0	448.0	447.2	445.7	443.8	442.3	441.2	439.7	438.1	437.0
15°	451.0	451.0	450.5	449.0	446.9	445.3	444.5	444.1	443.8	443.0	442.0
17.5°	457.8	457.5	456.2	454.0	451.4	450.2	449.5	449.5	449.5	449.0	448.4
20°	467.6	467.6	466.1	462.3	460.1	459.0	457.8	457.8	457.8	456.7	455.5
22.5°	483.6	483.9	481.7	477.1	474.0	471.8	470.3	469.2	468.0	467.3	465.3
25°	505.1	504.8	502.0	496.4	494.2	491.8	488.8	487.0	485.4	484.3	482.1
27.5°	527.8	527.4	524.5	519.5	518.0	514.6	512.3	509.7	507.7	505.9	503.5
30°	556.9	555.0	552.8	549.0	548.3	545.6	542.6	538.7	535.7	532.7	530.1
32.5°	583.0	583.0	579.6	577.8	579.3	578.1	578.5	576.3	574.3	573.2	570.6
35°	619.4	619.4	617.9	615.5	616.0	613.3	613.0	613.3	614.8	614.8	611.9
37.5°	667.8	668.5	663.6	662.8	661.0	657.2	655.3	656.1	659.5	661.3	657.2
40°	728.0	729.5	728.0	723.1	720.8	714.3	710.5	710.5	713.3	715.1	713.6
42.5°	787.3	790.1	787.3	783.6	781.6	776.8	774.8	776.4	779.8	782.1	779.8
45°	853.6	855.5	852.0	847.6	845.2	842.6	841.6	842.6	846.4	848.6	847.9
47.5°	918.7	921.3	917.1	915.3	915.3	912.7	915.6	918.7	922.0	927.4	925.1
50°	982.2	985.6	983.0	983.4	986.4	991.3	997.0	1003.0	1009.1	1014.8	1015.4
52.5°	1038.9	1044.3	1044.6	1051.4	1060.9	1068.4	1084.4	1097.6	1111.9	1116.9	1114.7
55°	1098.7	1105.9	1115.4	1126.0	1141.1	1156.6	1183.5	1207.4	1226.2	1238.0	1236.0
57.5°	1184.3	1191.5	1201.3	1218.7	1241.4	1262.6	1299.3	1336.4	1365.0	1382.9	1374.2
60°	1295.2	1302.7	1315.6	1334.0	1363.5	1392.4	1442.7	1496.0	1540.7	1561.1	1545.3
62.5°	1441.9	1449.1	1457.4	1482.0	1515.0	1552.0	1615.2	1683.6	1740.4	1760.0	1737.8
65°	1651.1	1659.8	1662.5	1682.6	1714.8	1749.1	1817.2	1894.4	1959.1	1991.2	1946.7
67.5°	1886.9	1890.3	1900.9	1924.3	1957.3	1988.3	2041.9	2115.0	2177.1	2194.8	2147.2
70°	2025.0	2031.7	2050.4	2082.8	2122.2	2171.0	2229.7	2308.3	2378.7	2387.1	2326.4
72.5°	1900.1	1914.1	1947.0	1997.7	2080.2	2166.8	2267.9	2384.0	2485.0	2496.8	2399.6
75°	1524.0	1539.9	1579.3	1634.8	1732.6	1861.1	2007.2	2181.6	2332.9	2352.3	2223.7
77.5°	812.4	832.0	889.2	964.1	1103.3	1273.5	1449.5	1648.5	1777.1	1820.7	1727.9
80°	204.7	215.2	242.9	286.8	381.0	518.3	670.1	884.2	1043.9	1111.6	1043.9
82.5°	79.4	87.4	94.9	100.3	109.4	128.3	177.1	288.7	389.0	479.0	414.6
85°	30.6	32.6	46.9	53.3	53.3	58.7	67.3	79.4	98.4	107.4	90.0
87.5°	12.1	13.2	16.3	25.0	25.6	22.7	24.2	27.2	20.8	17.4	19.6
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°	437.0	437.0	437.0	437.0	437.0	437.0	437.0	437.0
2.5°	435.1	434.8	434.0	434.3	434.0	434.0	434.0	434.0
5°	434.8	434.8	434.0	434.0	434.0	434.3	434.0	434.0
7.5°	434.3	434.0	433.2	432.8	432.8	432.4	432.4	432.4
10°	433.5	432.8	432.1	431.7	431.7	430.9	430.9	430.9
12.5°	435.5	434.3	433.5	433.2	433.2	433.2	433.5	433.5
15°	440.8	438.5	437.4	437.0	437.4	438.1	438.5	438.9
17.5°	446.5	444.1	442.3	441.5	442.0	443.0	444.1	444.9
20°	453.7	451.8	449.5	448.7	448.7	450.2	451.0	452.2
22.5°	464.0	462.3	460.4	459.3	458.6	460.4	461.6	462.3
25°	480.0	478.7	477.1	476.0	475.6	477.5	478.2	478.7
27.5°	501.7	500.2	499.5	499.1	497.9	498.7	499.9	499.5
30°	529.7	530.8	529.7	529.7	527.8	528.6	527.8	527.0
32.5°	567.2	566.1	562.5	560.4	557.7	557.7	556.5	555.5
35°	604.6	600.8	599.0	600.1	599.0	599.8	597.7	595.9
37.5°	648.9	646.6	646.3	649.6	648.9	649.6	649.6	647.1
40°	707.6	706.1	708.6	714.3	716.6	716.2	717.0	713.6
42.5°	774.8	772.3	773.3	778.3	780.8	781.6	781.3	778.3
45°	842.2	842.9	842.9	848.3	850.9	852.4	849.8	848.6
47.5°	918.3	919.4	916.8	920.2	920.9	923.6	921.3	919.4
50°	1006.1	1001.9	995.8	997.0	997.0	996.2	993.6	991.3
52.5°	1104.1	1094.6	1083.2	1079.5	1075.3	1071.2	1065.9	1061.7
55°	1215.6	1199.3	1178.9	1169.5	1161.5	1152.1	1140.0	1135.9
57.5°	1345.1	1317.0	1289.8	1272.8	1252.3	1239.9	1224.4	1223.6
60°	1498.7	1460.8	1412.8	1387.4	1367.1	1352.2	1340.5	1336.0
62.5°	1676.1	1611.0	1559.2	1532.0	1508.1	1499.0	1484.3	1486.2
65°	1858.1	1791.9	1741.6	1719.6	1697.4	1691.3	1677.6	1682.6
67.5°	2055.2	2000.7	1945.5	1925.0	1904.6	1898.6	1884.6	1888.8
70°	2231.9	2162.7	2099.9	2059.7	2025.0	1996.9	1979.1	1972.0
72.5°	2267.1	2147.2	2048.4	1948.2	1890.3	1839.6	1818.7	1810.8
75°	2037.0	1851.0	1710.1	1592.5	1527.5	1453.7	1445.7	1434.7
77.5°	1584.6	1372.7	1202.4	1051.1	963.6	873.6	842.6	819.1
80°	945.1	726.5	563.0	394.7	322.0	259.2	243.6	227.4
82.5°	338.2	216.8	146.1	113.8	101.8	93.9	87.7	79.9
85°	81.7	68.9	65.1	59.0	58.2	49.6	35.2	31.3
87.5°	26.1	23.8	24.2	23.1	24.2	18.1	14.7	13.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)