

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: P195013

Luminaire Tested: **NAV-AF-01-D-UNV-5WQ-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195013
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-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5700K, 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: 6356 lumens
Efficiency: N/A
Efficacy: 107.7 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

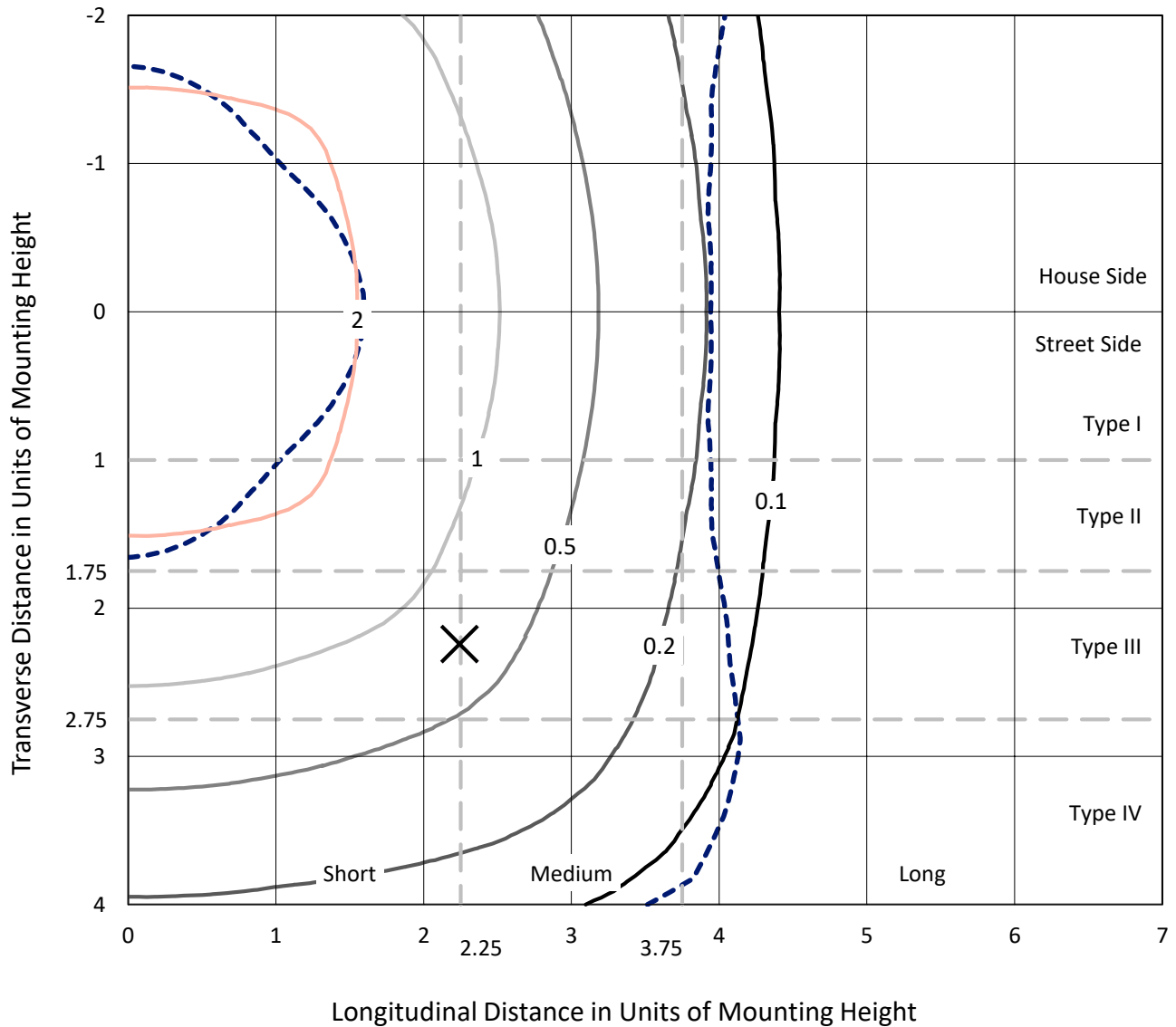


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

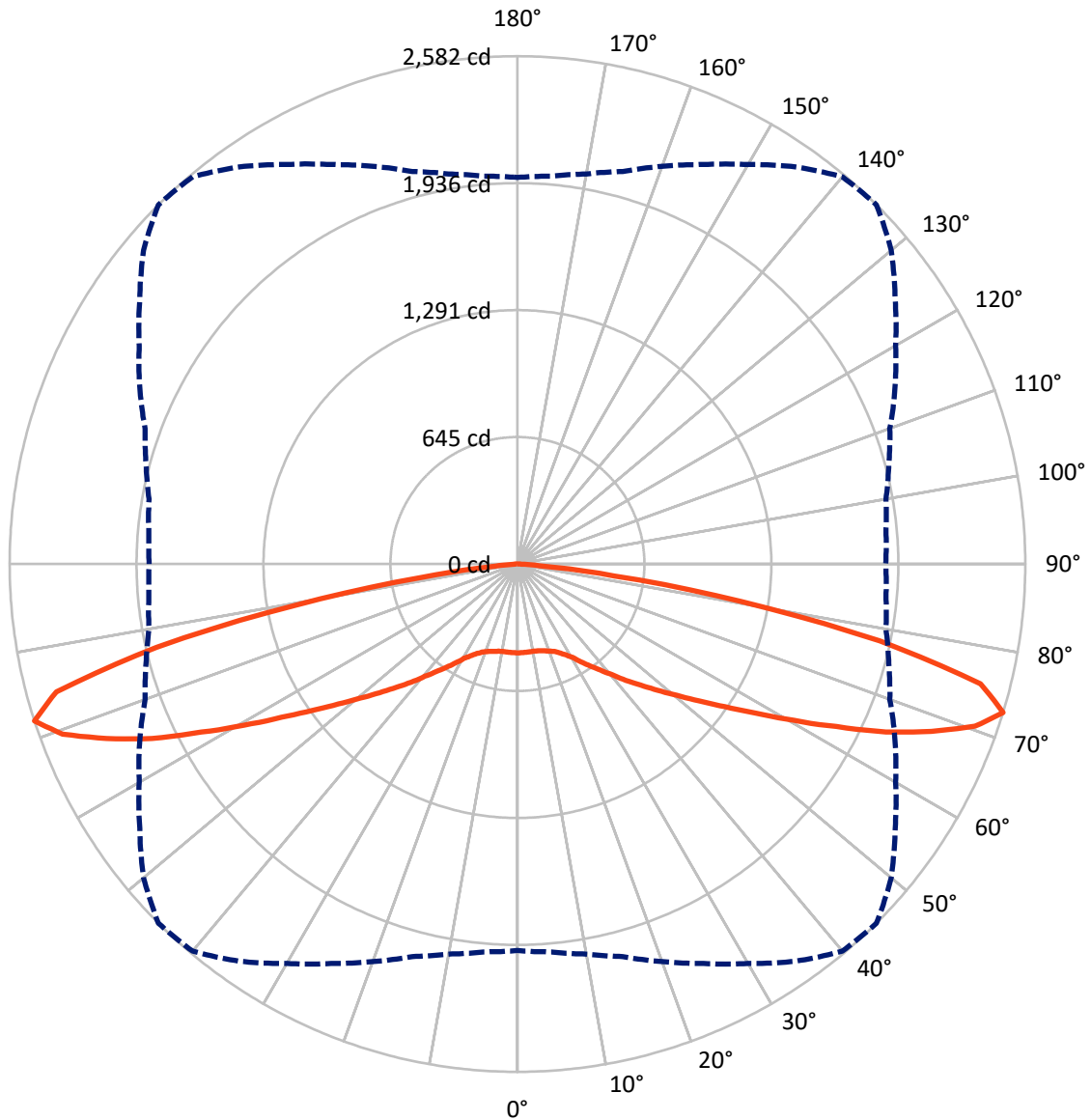


Based on 10 foot mounting height. Maximum calculated value = 4.5 fc
 Type V - Short - Semi-Cutoff

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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	3178.0	0.0	3178.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3178.0	0.0	3178.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	6356.0	0.0	6356.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.1	0.7
10°-20°	130.5	2.1
20°-30°	235.6	3.7
30°-40°	401.9	6.3
40°-50°	684.3	10.8
50°-60°	1101.3	17.3
60°-70°	1831.5	28.8
70°-80°	1771.7	27.9
80°-90°	155.9	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°	6356.0	100.0
0°-180°	6356.0	100.0



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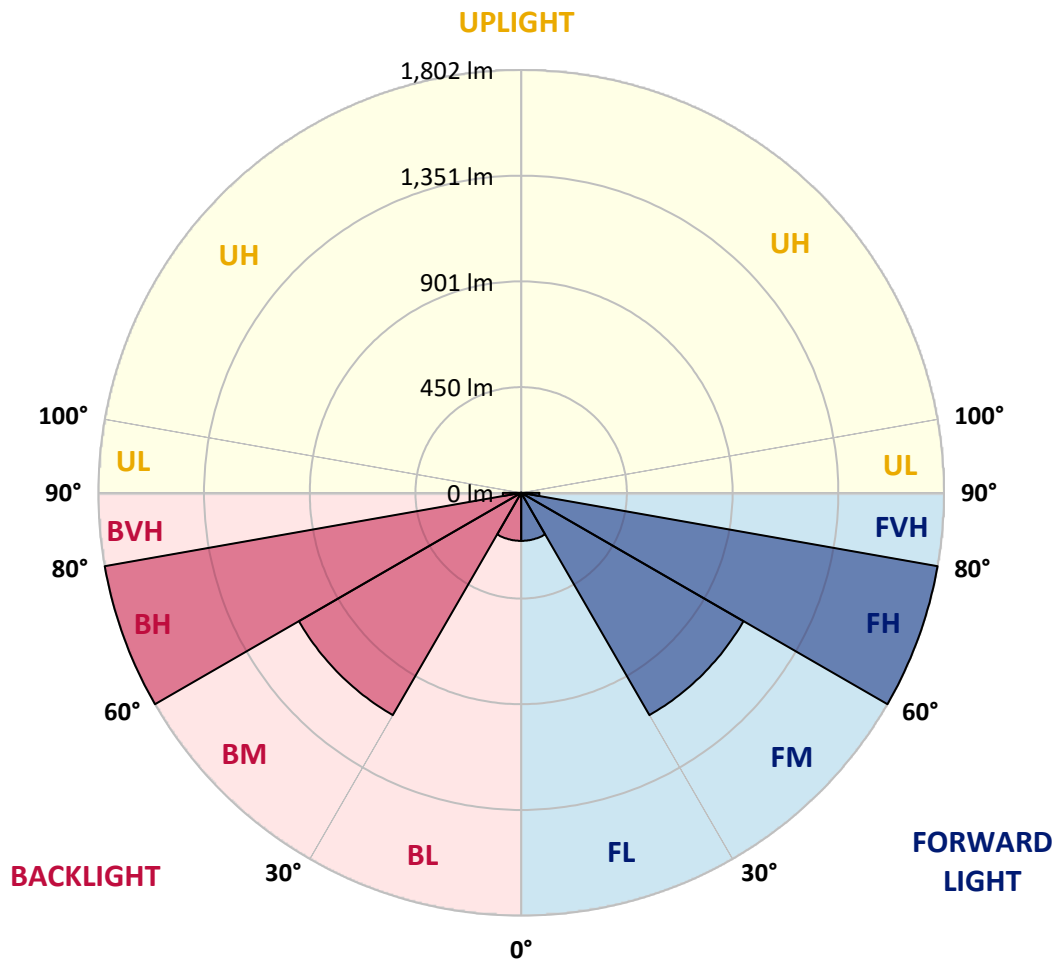
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	204.7	3.2			
FM (30°-60°)	1093.8	17.2			
FH (60°-80°)	1801.6	28.3			G2/5000
FVH (80°-90°)	78.0	1.2			G1/100
BL (0°-30°)	204.7	3.2	B1/500		
BM (30°-60°)	1093.8	17.2	B2/2500		
BH (60°-80°)	1801.6	28.3	B3/2500		G2/5000
BVH (80°-90°)	78.0	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°	451.9	451.9	451.9	451.9	451.9	451.9	451.9	451.9	451.9	451.9	451.9
2.5°	455.4	455.4	455.8	455.4	454.6	454.2	453.0	452.3	451.5	451.1	450.3
5°	455.8	455.8	456.2	455.8	455.0	454.2	453.4	452.3	451.5	450.7	450.3
7.5°	457.3	457.7	458.1	457.7	456.2	455.4	454.2	453.0	451.5	450.7	449.9
10°	460.5	460.5	460.5	460.1	458.9	457.3	455.8	454.6	452.6	450.7	449.5
12.5°	462.8	463.2	463.2	462.4	460.9	458.9	457.3	456.2	454.6	453.0	451.9
15°	466.3	466.3	465.9	464.4	462.0	460.5	459.7	459.3	458.9	458.1	456.9
17.5°	473.4	473.0	471.8	469.5	466.7	465.6	464.8	464.8	464.8	464.4	463.6
20°	483.6	483.6	482.0	478.1	475.7	474.6	473.4	473.4	473.4	472.2	471.0
22.5°	500.0	500.4	498.0	493.3	490.2	487.9	486.3	485.1	483.9	483.2	481.2
25°	522.3	521.9	519.2	513.3	510.9	508.6	505.5	503.5	501.9	500.8	498.4
27.5°	545.8	545.4	542.2	537.2	535.6	532.1	529.7	527.0	525.0	523.1	520.7
30°	575.9	573.9	571.6	567.7	566.9	564.1	561.0	557.1	554.0	550.8	548.1
32.5°	602.9	602.9	599.4	597.4	599.0	597.8	598.2	595.8	593.9	592.7	590.0
35°	640.4	640.4	638.9	636.5	636.9	634.2	633.8	634.2	635.7	635.7	632.6
37.5°	690.5	691.3	686.2	685.4	683.5	679.6	677.6	678.4	681.9	683.9	679.6
40°	752.7	754.3	752.7	747.6	745.3	738.6	734.7	734.7	737.5	739.4	737.8
42.5°	814.1	816.9	814.1	810.2	808.3	803.2	801.2	802.8	806.3	808.7	806.3
45°	882.6	884.6	881.0	876.3	874.0	871.3	870.1	871.3	875.2	877.5	876.7
47.5°	949.9	952.6	948.3	946.4	946.4	943.6	946.8	949.9	953.4	958.9	956.5
50°	1015.6	1019.1	1016.4	1016.8	1019.9	1025.0	1030.9	1037.1	1043.4	1049.3	1050.0
52.5°	1074.3	1079.8	1080.2	1087.2	1097.0	1104.8	1121.2	1134.9	1149.8	1154.9	1152.5
55°	1136.1	1143.5	1153.3	1164.3	1179.9	1196.0	1223.7	1248.4	1268.0	1280.1	1278.1
57.5°	1224.5	1232.0	1242.1	1260.1	1283.6	1305.5	1343.5	1381.8	1411.5	1429.9	1420.9
60°	1339.2	1347.0	1360.3	1379.5	1410.0	1439.7	1491.7	1546.9	1593.1	1614.2	1597.8
62.5°	1491.0	1498.4	1507.0	1532.4	1566.5	1604.8	1670.1	1740.9	1799.6	1820.0	1796.9
65°	1707.3	1716.3	1719.0	1739.8	1773.0	1808.6	1879.0	1958.9	2025.8	2059.0	2012.8
67.5°	1951.0	1954.6	1965.5	1989.8	2023.8	2055.9	2111.4	2186.9	2251.1	2269.5	2220.2
70°	2093.8	2100.9	2120.0	2153.7	2194.4	2244.8	2305.5	2386.9	2459.6	2468.2	2405.6
72.5°	1964.7	1979.2	2013.2	2065.7	2151.0	2240.5	2345.0	2465.1	2569.6	2581.7	2481.1
75°	1575.9	1592.3	1633.0	1690.5	1791.4	1924.4	2075.4	2255.8	2412.3	2432.2	2299.2
77.5°	840.0	860.3	919.4	996.8	1140.8	1316.9	1498.8	1704.6	1837.6	1882.6	1786.7
80°	211.7	222.6	251.2	296.5	394.0	536.0	692.9	914.3	1079.4	1149.4	1079.4
82.5°	82.2	90.4	98.2	103.7	113.1	132.6	183.1	298.5	402.2	495.3	428.8
85°	31.7	33.6	48.5	55.2	55.2	60.6	69.6	82.2	101.7	111.1	93.1
87.5°	12.5	13.7	16.8	25.8	26.6	23.5	25.0	28.2	21.5	18.0	20.3
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°	451.9	451.9	451.9	451.9	451.9	451.9	451.9	451.9
2.5°	449.9	449.5	448.7	449.1	448.7	448.7	448.7	448.7
5°	449.5	449.5	448.7	448.7	448.7	449.1	448.7	448.7
7.5°	449.1	448.7	448.0	447.6	447.6	447.2	447.2	447.2
10°	448.3	447.6	446.8	446.4	446.4	445.6	445.6	445.6
12.5°	450.3	449.1	448.3	448.0	448.0	448.0	448.3	448.3
15°	455.8	453.4	452.3	451.9	452.3	453.0	453.4	453.8
17.5°	461.6	459.3	457.3	456.6	456.9	458.1	459.3	460.1
20°	469.1	467.1	464.8	464.0	464.0	465.6	466.3	467.5
22.5°	479.6	478.1	476.1	474.9	474.2	476.1	477.3	478.1
25°	496.5	494.9	493.3	492.2	491.8	493.7	494.5	494.9
27.5°	518.8	517.2	516.4	516.0	514.9	515.6	516.8	516.4
30°	547.7	548.9	547.7	547.7	545.8	546.5	545.8	545.0
32.5°	586.4	585.3	581.8	579.4	576.7	576.7	575.5	574.3
35°	625.2	621.3	619.3	620.5	619.3	620.1	618.1	616.2
37.5°	670.9	668.6	668.2	671.7	670.9	671.7	671.7	669.0
40°	731.6	730.0	732.8	738.6	741.0	740.6	741.4	737.8
42.5°	801.2	798.5	799.7	804.7	807.5	808.3	807.9	804.7
45°	870.9	871.6	871.6	877.1	879.9	881.4	878.7	877.5
47.5°	949.5	950.7	947.9	951.5	952.2	955.0	952.6	950.7
50°	1040.3	1036.0	1029.7	1030.9	1030.9	1030.1	1027.4	1025.0
52.5°	1141.6	1131.8	1120.1	1116.2	1111.9	1107.6	1102.1	1097.8
55°	1257.0	1240.2	1219.1	1209.3	1201.1	1191.3	1178.8	1174.5
57.5°	1390.8	1361.9	1333.7	1316.1	1295.0	1282.0	1266.0	1265.2
60°	1549.6	1510.5	1460.8	1434.6	1413.5	1398.2	1386.1	1381.4
62.5°	1733.1	1665.8	1612.2	1584.1	1559.4	1550.0	1534.8	1536.7
65°	1921.3	1852.8	1800.8	1778.1	1755.0	1748.8	1734.7	1739.8
67.5°	2125.1	2068.8	2011.7	1990.5	1969.4	1963.2	1948.7	1953.0
70°	2307.8	2236.2	2171.3	2129.8	2093.8	2064.9	2046.5	2039.1
72.5°	2344.2	2220.2	2118.1	2014.4	1954.6	1902.1	1880.6	1872.4
75°	2106.4	1913.9	1768.3	1646.7	1579.4	1503.1	1494.9	1483.5
77.5°	1638.4	1419.4	1243.3	1086.8	996.4	903.3	871.3	847.0
80°	977.3	751.2	582.1	408.0	332.9	268.0	251.9	235.1
82.5°	349.8	224.2	151.0	117.8	105.2	97.0	90.8	82.5
85°	84.5	71.2	67.3	61.0	60.2	51.3	36.4	32.5
87.5°	27.0	24.6	25.0	23.9	25.0	18.8	15.3	13.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)