

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: P196442

Luminaire Tested: **NAV-AF-02-D-UNV-5WQ-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196442
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-02-D-UNV-5WQ-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8075.4 lumens
Efficiency: N/A
Efficacy: 122.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G2

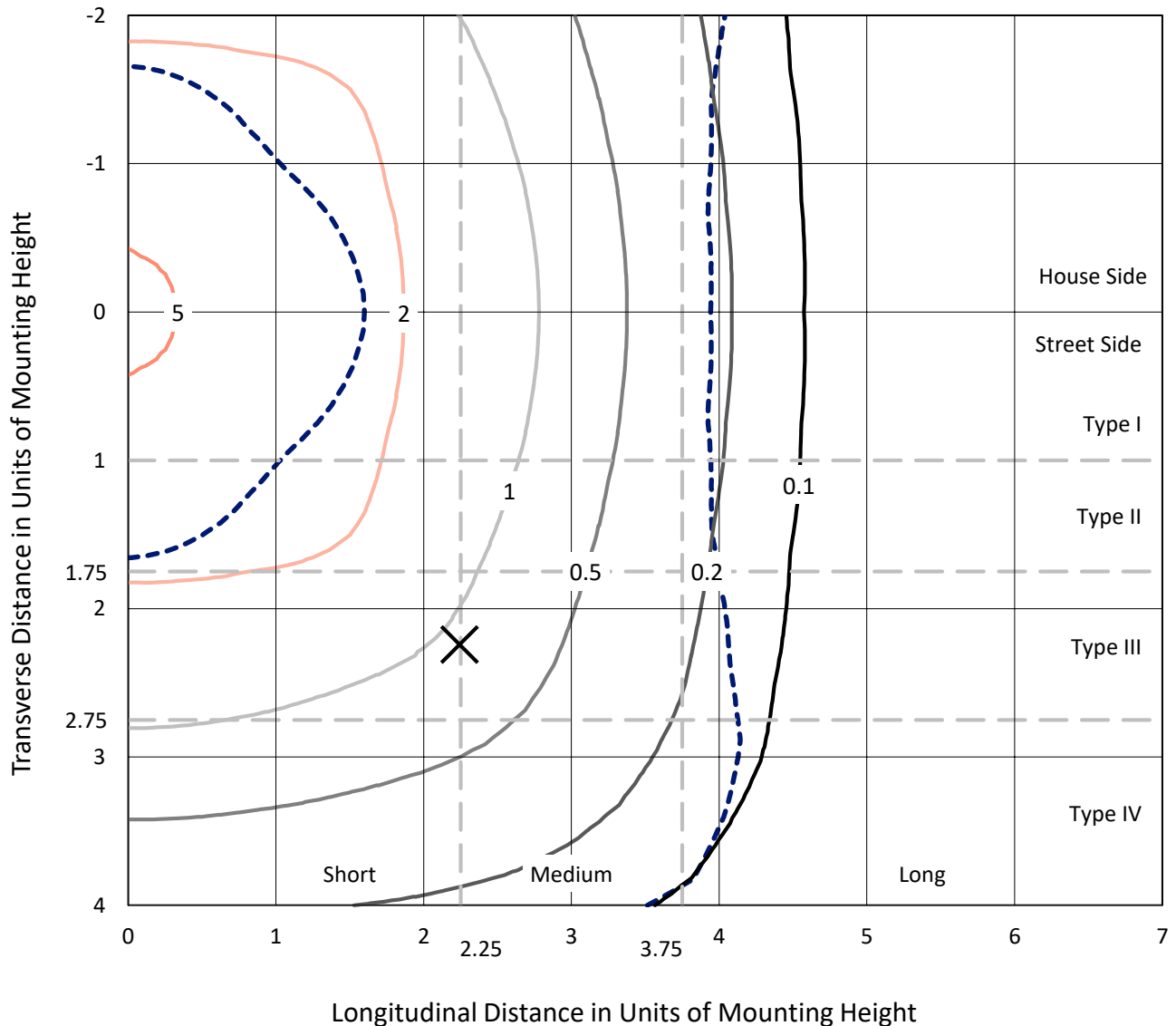
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

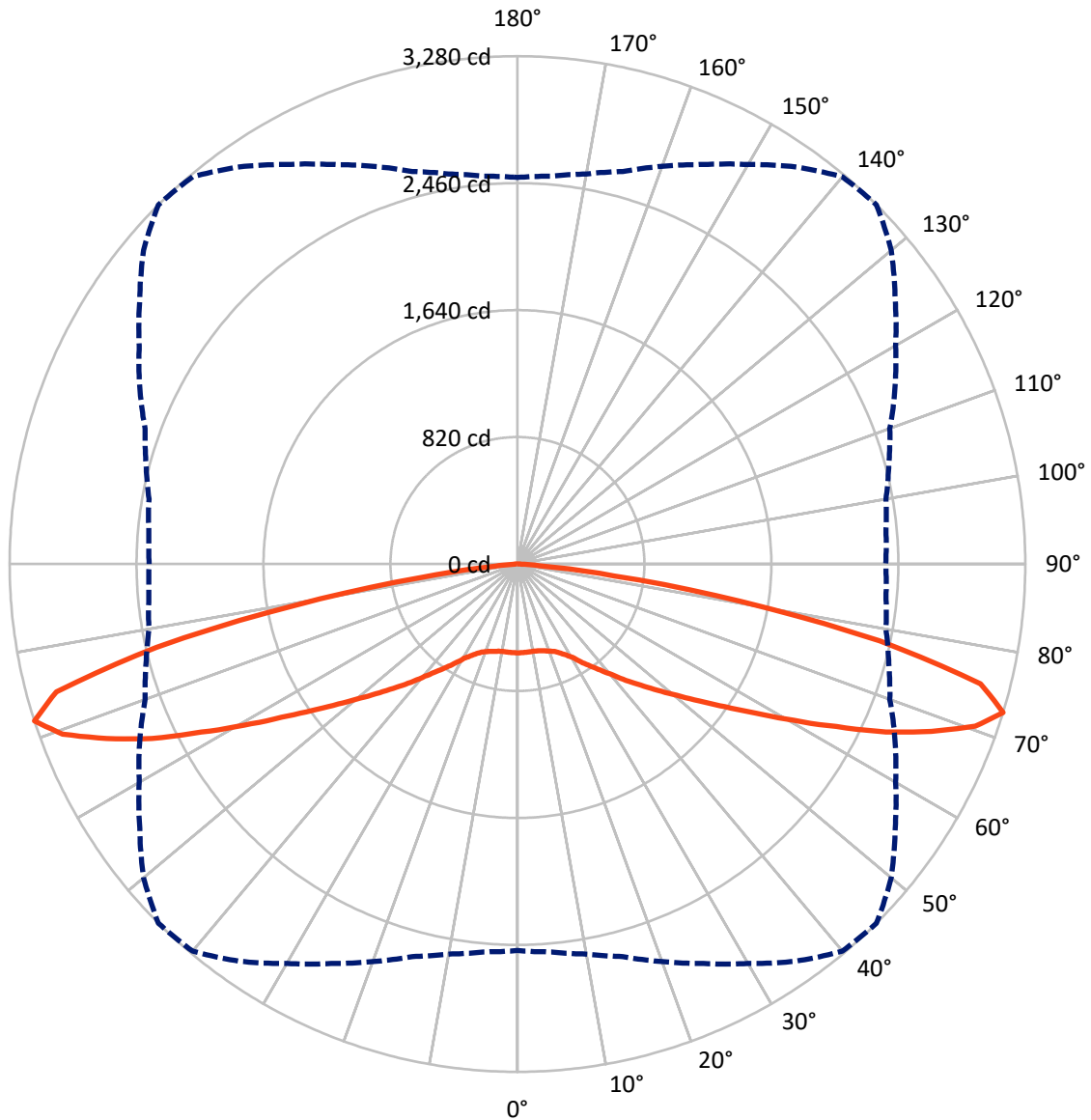
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.7 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	4037.7	0.0	4037.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4037.7	0.0	4037.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	8075.4	0.0	8075.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.8	0.7
10°-20°	165.8	2.1
20°-30°	299.4	3.7
30°-40°	510.7	6.3
40°-50°	869.4	10.8
50°-60°	1399.2	17.3
60°-70°	2326.9	28.8
70°-80°	2251.0	27.9
80°-90°	198.1	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°	8075.4	100.0
0°-180°	8075.4	100.0



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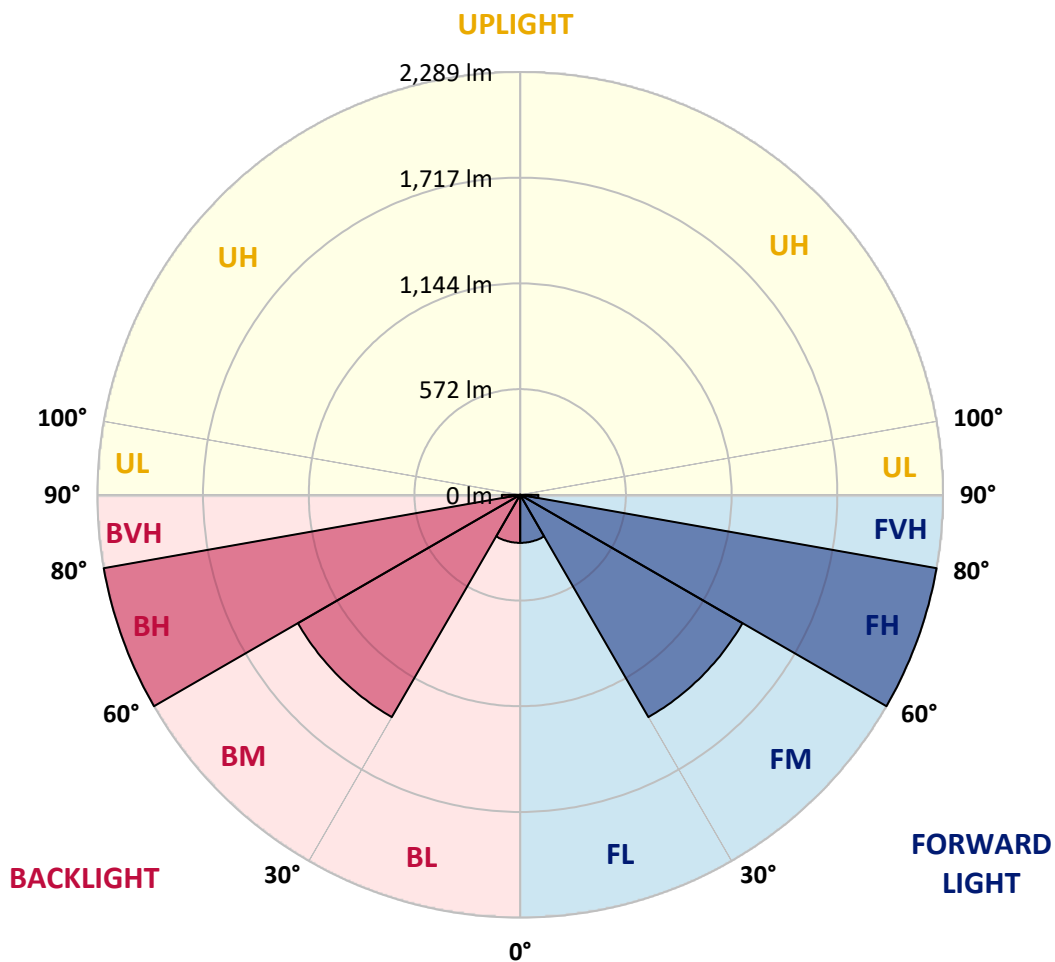
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	260.0	3.2			
FM	(30°-60°)	1389.6	17.2			
FH	(60°-80°)	2289.0	28.3			G2/5000
FVH	(80°-90°)	99.1	1.2			G1/100
BL	(0°-30°)	260.0	3.2	B1/500		
BM	(30°-60°)	1389.6	17.2	B2/2500		
BH	(60°-80°)	2289.0	28.3	B3/2500		G2/5000
BVH	(80°-90°)	99.1	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°	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0
2.5°	578.5	578.5	579.1	578.5	577.6	577.1	575.6	574.6	573.6	573.1	572.1
5°	579.1	579.1	579.5	579.1	578.1	577.1	576.2	574.6	573.6	572.6	572.1
7.5°	581.0	581.6	582.1	581.6	579.5	578.5	577.1	575.6	573.6	572.6	571.7
10°	585.1	585.1	585.1	584.5	583.0	581.0	579.1	577.6	575.1	572.6	571.1
12.5°	588.1	588.5	588.5	587.5	585.5	583.0	581.0	579.5	577.6	575.6	574.0
15°	592.5	592.5	591.9	590.0	587.0	585.1	584.0	583.6	583.0	582.1	580.6
17.5°	601.5	600.9	599.4	596.4	592.9	591.5	590.5	590.5	590.5	590.0	589.0
20°	614.4	614.4	612.4	607.4	604.4	602.9	601.5	601.5	601.5	600.0	598.4
22.5°	635.3	635.8	632.7	626.8	622.8	619.8	617.9	616.3	614.8	613.8	611.5
25°	663.5	663.1	659.6	652.2	649.1	646.2	642.2	639.7	637.7	636.2	633.2
27.5°	693.4	692.9	688.9	682.5	680.4	676.0	673.0	669.5	667.0	664.6	661.6
30°	731.7	729.2	726.2	721.2	720.2	716.7	712.8	707.8	703.8	699.8	696.4
32.5°	765.9	765.9	761.5	759.1	761.0	759.5	760.0	757.0	754.6	753.1	749.5
35°	813.7	813.7	811.7	808.7	809.2	805.7	805.2	805.7	807.8	807.8	803.7
37.5°	877.4	878.3	871.8	870.8	868.4	863.3	860.9	861.8	866.3	868.8	863.3
40°	956.3	958.3	956.3	949.9	946.8	938.4	933.5	933.5	936.9	939.4	937.5
42.5°	1034.3	1037.9	1034.3	1029.4	1026.9	1020.5	1018.0	1019.9	1024.5	1027.4	1024.5
45°	1121.3	1123.8	1119.4	1113.4	1110.4	1106.9	1105.4	1106.9	1111.9	1114.9	1113.9
47.5°	1206.9	1210.4	1204.9	1202.4	1202.4	1198.9	1202.8	1206.9	1211.3	1218.2	1215.3
50°	1290.4	1294.8	1291.3	1291.9	1295.9	1302.3	1309.7	1317.6	1325.7	1333.1	1334.0
52.5°	1364.8	1371.9	1372.4	1381.4	1393.7	1403.7	1424.5	1442.0	1460.8	1467.4	1464.3
55°	1443.5	1452.9	1465.2	1479.3	1499.1	1519.5	1554.8	1586.1	1610.9	1626.4	1623.9
57.5°	1555.8	1565.2	1578.1	1600.9	1630.8	1658.7	1706.8	1755.6	1793.4	1816.8	1805.3
60°	1701.3	1711.3	1728.3	1752.6	1791.5	1829.1	1895.2	1965.3	2024.0	2050.8	2029.9
62.5°	1894.2	1903.8	1914.7	1947.0	1990.1	2038.9	2122.0	2211.9	2286.5	2312.3	2283.0
65°	2169.2	2180.6	2184.1	2210.5	2252.6	2297.8	2387.4	2488.7	2573.7	2616.0	2557.3
67.5°	2478.8	2483.3	2497.2	2528.0	2571.3	2612.1	2682.7	2778.6	2860.1	2883.5	2820.7
70°	2660.3	2669.2	2693.6	2736.3	2788.0	2852.1	2929.1	3032.5	3125.0	3136.0	3056.4
72.5°	2496.2	2514.6	2557.9	2624.4	2732.8	2846.6	2979.4	3131.9	3264.6	3280.1	3152.3
75°	2002.1	2023.1	2074.8	2147.8	2276.0	2445.0	2636.9	2866.0	3064.8	3090.2	2921.1
77.5°	1067.1	1093.0	1168.1	1266.6	1449.5	1673.1	1904.2	2165.6	2334.7	2391.8	2270.1
80°	268.9	282.9	319.1	376.7	500.5	681.0	880.3	1161.7	1371.4	1460.4	1371.4
82.5°	104.4	114.8	124.8	131.7	143.6	168.5	232.6	379.2	511.0	629.3	544.7
85°	40.2	42.7	61.6	70.0	70.0	77.0	88.5	104.4	129.3	141.2	118.3
87.5°	16.0	17.4	21.5	32.8	33.8	29.8	31.8	35.8	27.4	22.8	25.9
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°	574.0	574.0	574.0	574.0	574.0	574.0	574.0	574.0
2.5°	571.7	571.1	570.2	570.7	570.2	570.2	570.2	570.2
5°	571.1	571.1	570.2	570.2	570.2	570.7	570.2	570.2
7.5°	570.7	570.2	569.1	568.5	568.5	568.1	568.1	568.1
10°	569.7	568.5	567.6	567.2	567.2	566.2	566.2	566.2
12.5°	572.1	570.7	569.7	569.1	569.1	569.1	569.7	569.7
15°	579.1	576.2	574.6	574.0	574.6	575.6	576.2	576.6
17.5°	586.5	583.6	581.0	580.0	580.6	582.1	583.6	584.5
20°	596.0	593.5	590.5	589.5	589.5	591.5	592.5	594.0
22.5°	609.3	607.4	605.0	603.4	602.4	605.0	606.4	607.4
25°	630.8	628.8	626.8	625.3	624.8	627.2	628.2	628.8
27.5°	659.1	657.0	656.1	655.7	654.1	655.1	656.6	656.1
30°	695.9	697.4	695.9	695.9	693.4	694.4	693.4	692.3
32.5°	745.0	743.6	739.1	736.2	732.7	732.7	731.2	729.7
35°	794.4	789.3	786.8	788.3	786.8	787.9	785.3	782.9
37.5°	852.4	849.5	849.0	853.5	852.4	853.5	853.5	849.9
40°	929.5	927.5	931.0	938.4	941.4	940.9	942.0	937.5
42.5°	1018.0	1014.5	1016.0	1022.4	1026.0	1026.9	1026.4	1022.4
45°	1106.5	1107.5	1107.5	1114.5	1117.8	1119.9	1116.4	1114.9
47.5°	1206.3	1207.9	1204.4	1208.9	1209.8	1213.4	1210.4	1207.9
50°	1321.7	1316.2	1308.3	1309.7	1309.7	1308.7	1305.2	1302.3
52.5°	1450.4	1438.0	1423.1	1418.0	1412.6	1407.1	1400.1	1394.7
55°	1597.1	1575.6	1548.9	1536.4	1526.0	1513.6	1497.6	1492.2
57.5°	1767.0	1730.2	1694.5	1672.1	1645.2	1628.8	1608.6	1607.4
60°	1968.9	1919.1	1856.0	1822.7	1795.9	1776.4	1761.0	1755.1
62.5°	2201.9	2116.5	2048.4	2012.5	1981.3	1969.3	1950.0	1952.5
65°	2441.1	2354.1	2287.9	2259.2	2229.8	2221.8	2204.0	2210.5
67.5°	2700.1	2628.4	2555.9	2529.1	2502.1	2494.2	2475.9	2481.3
70°	2932.1	2841.2	2758.7	2706.0	2660.3	2623.5	2600.1	2590.6
72.5°	2978.3	2820.7	2691.0	2559.3	2483.3	2416.7	2389.4	2378.9
75°	2676.1	2431.6	2246.7	2092.1	2006.6	1909.7	1899.3	1884.8
77.5°	2081.6	1803.4	1579.7	1380.8	1266.0	1147.7	1106.9	1076.1
80°	1241.6	954.4	739.5	518.4	423.0	340.5	320.1	298.8
82.5°	444.3	284.8	191.9	149.5	133.8	123.3	115.3	104.9
85°	107.4	90.4	85.4	77.6	76.6	65.1	46.2	41.3
87.5°	34.3	31.3	31.8	30.4	31.8	23.8	19.3	17.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)