

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: P195925

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195925
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
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6655.3 lumens
Efficiency: N/A
Efficacy: 112.8 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): 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

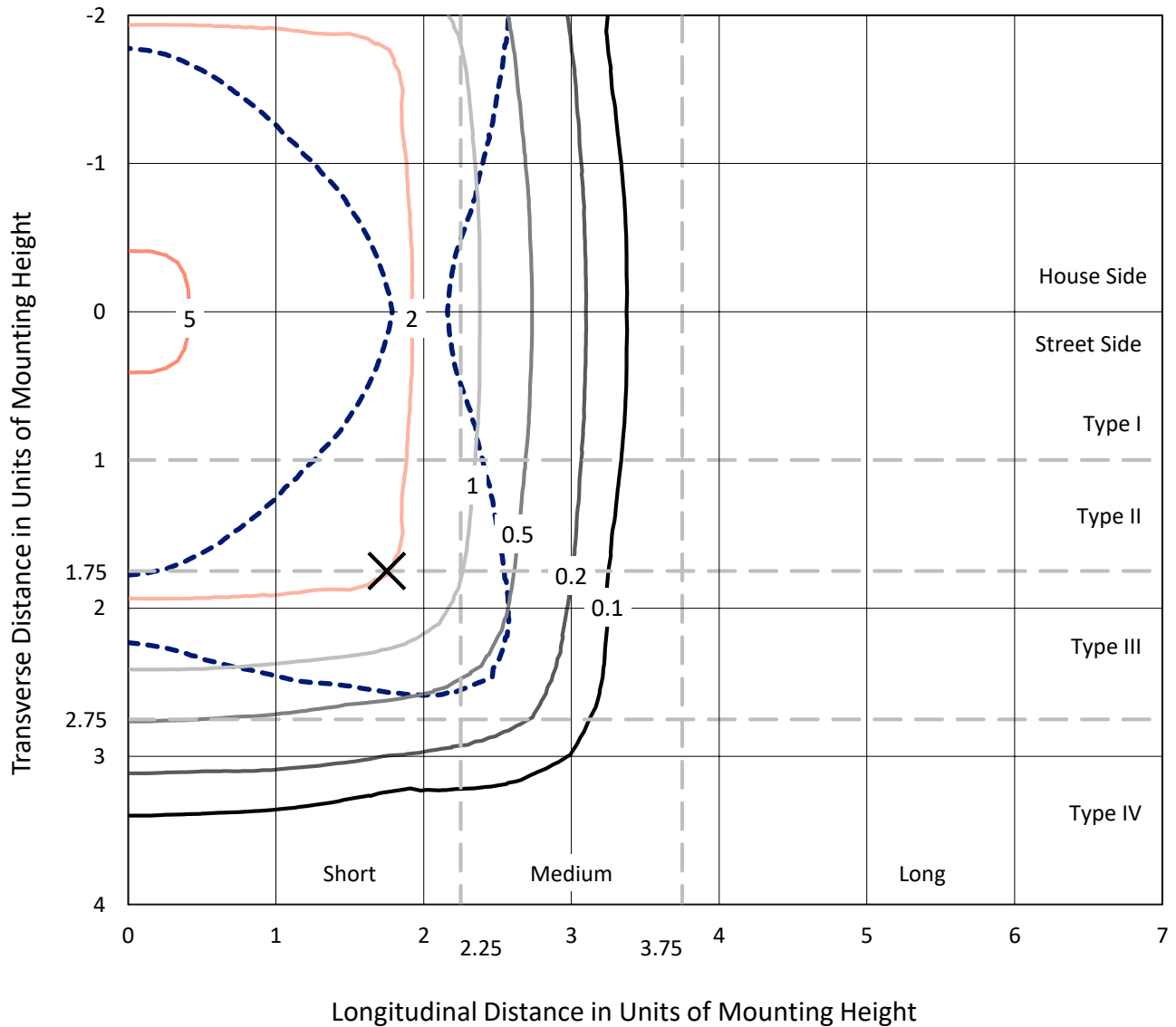


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Iso-Footcandle Lines of Horizontal Illumination

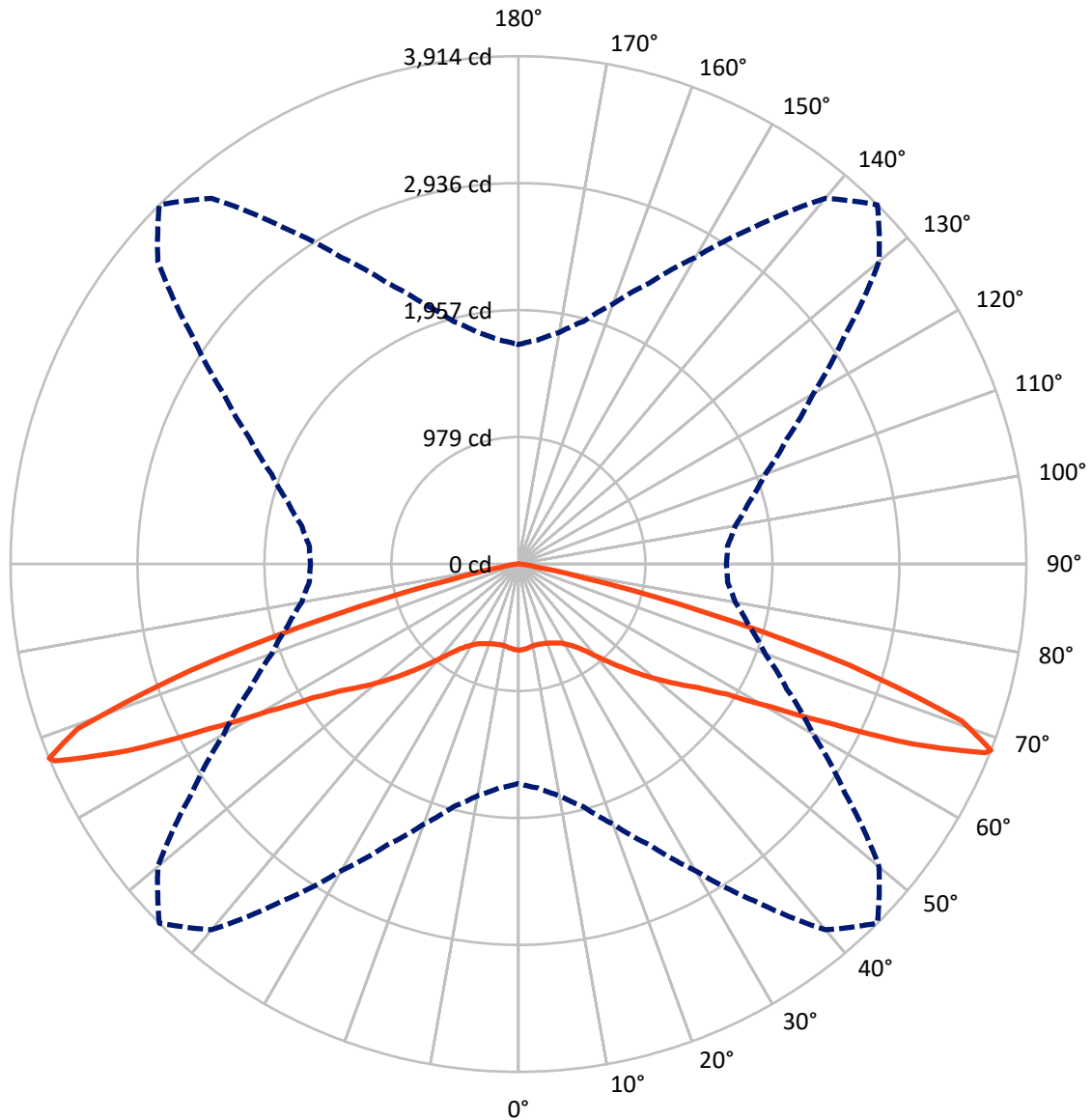
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.6 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	3327.6	0.0	3327.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	3327.6	0.0	3327.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	6655.3	0.0	6655.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.1	0.9
10°-20°	180.2	2.7
20°-30°	306.3	4.6
30°-40°	501.3	7.5
40°-50°	895.8	13.5
50°-60°	1512.9	22.7
60°-70°	2345.9	35.2
70°-80°	806.6	12.1
80°-90°	44.3	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°	6655.3	100.0
0°-180°	6655.3	100.0



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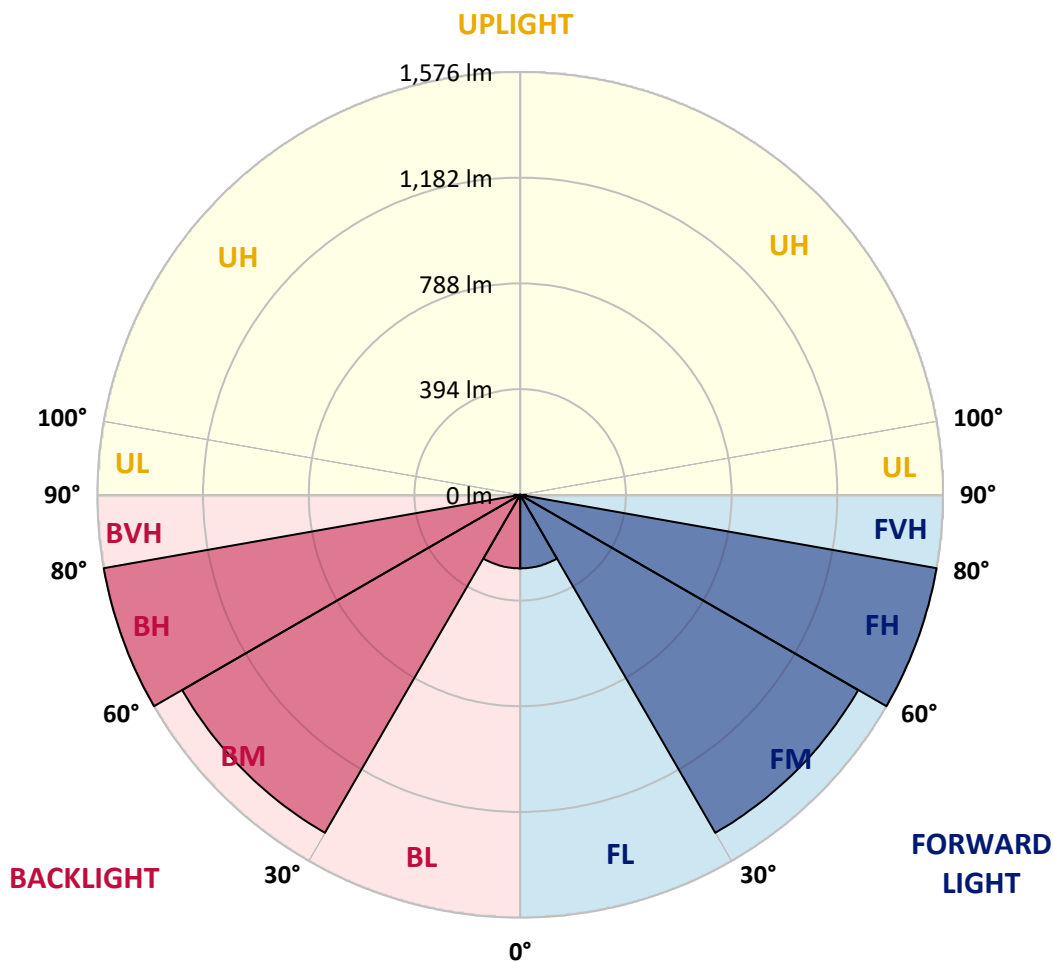
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	274.3	4.1			
FM	(30°-60°)	1455.0	21.9			
FH	(60°-80°)	1576.2	23.7			G1/1800
FVH	(80°-90°)	22.2	0.3			G1/100
BL	(0°-30°)	274.3	4.1	B1/500		
BM	(30°-60°)	1455.0	21.9	B2/2500		
BH	(60°-80°)	1576.2	23.7	B3/2500		G1/1800
BVH	(80°-90°)	22.2	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°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	666.8	666.8	667.6	667.2	665.9	664.7	663.5	662.3	661.4	660.6	659.8
5°	659.8	659.8	661.0	660.2	659.4	658.2	657.3	656.1	655.3	654.5	654.9
7.5°	650.8	651.6	652.4	652.0	650.4	650.0	648.9	648.4	647.6	646.4	646.8
10°	643.1	643.5	644.4	643.9	643.5	642.3	641.9	641.5	641.1	639.4	639.0
12.5°	635.4	636.2	637.0	637.4	637.0	637.4	637.8	638.2	637.8	637.0	637.0
15°	629.2	630.0	631.3	632.5	632.9	635.4	637.0	638.6	639.9	640.3	639.0
17.5°	625.9	627.2	628.8	631.3	633.3	636.2	639.0	641.5	643.5	643.9	642.7
20°	625.5	626.8	629.2	632.1	635.8	639.4	643.9	647.6	649.6	650.8	649.6
22.5°	628.4	630.0	633.3	637.0	641.5	646.4	652.0	656.1	660.2	661.8	660.6
25°	636.6	638.2	641.9	646.4	651.2	657.3	663.1	668.4	672.5	674.5	672.9
27.5°	653.7	654.1	658.2	663.1	668.8	674.1	681.4	683.8	687.1	689.2	687.1
30°	677.7	678.5	682.2	690.0	695.3	702.2	706.2	708.7	712.4	714.4	712.0
32.5°	714.4	715.2	718.5	725.8	730.7	736.0	740.9	742.6	746.2	748.7	745.8
35°	766.2	767.8	770.7	775.6	779.6	783.7	787.4	786.1	788.6	791.9	789.0
37.5°	837.1	836.7	837.5	841.2	845.3	847.7	853.3	850.6	853.0	855.8	854.2
40°	919.8	919.8	919.4	926.0	927.6	930.0	936.1	932.4	935.7	939.0	936.1
42.5°	1013.9	1015.6	1017.6	1023.0	1027.5	1028.3	1031.1	1029.5	1033.5	1036.4	1033.5
45°	1122.4	1124.8	1127.3	1139.5	1141.5	1143.1	1145.2	1139.9	1144.4	1146.8	1146.0
47.5°	1234.9	1239.3	1244.6	1257.3	1265.4	1269.1	1270.7	1264.6	1265.0	1268.7	1269.1
50°	1362.1	1366.9	1372.2	1386.5	1394.2	1400.7	1402.8	1395.8	1396.6	1399.5	1400.3
52.5°	1479.4	1485.1	1496.5	1515.6	1526.7	1538.1	1538.9	1530.3	1534.0	1536.1	1534.4
55°	1589.9	1597.1	1612.3	1637.9	1657.9	1680.3	1690.5	1681.1	1681.1	1679.5	1678.7
57.5°	1718.7	1726.7	1742.3	1772.0	1799.7	1831.9	1859.6	1869.0	1886.1	1891.8	1882.8
60°	1912.6	1921.2	1937.1	1976.1	2011.2	2058.1	2103.7	2140.8	2201.2	2233.7	2204.4
62.5°	2089.9	2102.9	2140.4	2208.9	2284.7	2371.5	2472.2	2543.9	2653.5	2708.2	2634.4
65°	2049.6	2076.0	2149.4	2256.9	2413.4	2601.8	2806.8	3003.6	3230.2	3346.4	3196.3
67.5°	1790.4	1812.8	1891.8	2017.0	2212.1	2471.8	2790.4	3197.9	3665.4	3883.1	3617.8
68°	1691.3	1733.3	1812.0	1936.2	2133.1	2388.2	2728.5	3168.7	3678.9	3914.0	3627.6
70°	1296.8	1311.8	1387.3	1498.9	1711.3	1961.5	2305.0	2806.8	3383.4	3625.5	3330.8
72.5°	616.2	625.1	674.1	784.1	919.0	1122.8	1426.0	1899.1	2418.8	2670.6	2376.8
75°	225.8	227.8	239.3	265.4	315.9	392.5	538.0	832.2	1232.0	1469.2	1236.8
77.5°	121.8	122.2	126.7	133.3	142.2	152.4	174.4	233.9	377.4	513.5	398.5
80°	76.6	76.2	80.7	86.0	92.1	97.0	99.0	106.0	119.4	139.8	128.4
82.5°	39.1	42.8	53.0	58.7	67.6	69.3	67.2	66.8	70.9	76.6	79.1
85°	21.6	19.1	28.1	37.5	40.7	41.9	42.4	39.9	39.1	38.3	40.3
87.5°	11.0	10.2	12.3	18.7	19.9	16.3	16.7	14.2	9.8	9.8	10.2
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°	663.9	663.9	663.9	663.9	663.9	663.9	663.9	663.9
2.5°	659.0	659.4	658.6	658.6	658.6	659.0	658.6	658.2
5°	653.7	654.5	654.5	654.9	655.3	655.3	655.3	655.3
7.5°	646.0	646.4	647.2	647.2	647.2	647.2	647.2	647.2
10°	638.6	637.8	637.4	636.6	636.6	635.4	635.8	636.2
12.5°	634.9	633.3	632.5	631.3	630.4	629.2	629.2	629.6
15°	636.6	634.1	631.7	630.9	630.0	629.2	628.4	628.8
17.5°	639.9	637.0	634.1	632.5	630.9	629.6	629.2	629.6
20°	646.8	642.7	638.2	635.4	632.1	631.3	630.0	631.3
22.5°	656.1	651.2	645.6	640.3	636.6	634.9	633.3	634.5
25°	667.6	662.3	656.5	650.4	646.4	645.2	643.1	643.1
27.5°	683.4	678.9	674.1	668.4	664.3	663.1	659.8	659.8
30°	708.7	704.2	699.8	694.9	690.8	689.6	685.5	685.5
32.5°	742.2	737.2	734.4	730.3	727.0	725.1	720.2	719.7
35°	787.0	782.5	782.0	779.2	776.0	776.4	771.5	770.7
37.5°	851.4	847.7	848.9	846.5	843.6	846.1	843.2	843.2
40°	933.6	932.4	933.6	932.0	932.4	932.8	930.4	931.2
42.5°	1033.1	1029.9	1037.2	1036.4	1035.1	1038.4	1032.7	1028.7
45°	1147.6	1146.4	1153.8	1155.0	1152.6	1154.6	1144.4	1144.0
47.5°	1271.9	1271.9	1278.5	1277.7	1275.2	1275.6	1263.3	1255.7
50°	1401.5	1400.7	1407.3	1405.6	1402.4	1402.0	1389.3	1381.6
52.5°	1536.5	1536.5	1545.8	1541.3	1533.6	1529.9	1514.5	1504.2
55°	1685.6	1683.6	1686.4	1671.7	1656.7	1645.6	1626.5	1618.7
57.5°	1874.3	1850.6	1830.3	1811.5	1790.4	1777.3	1754.9	1746.7
60°	2142.1	2078.8	2051.5	2014.1	1979.0	1961.5	1931.7	1915.9
62.5°	2512.9	2408.1	2334.0	2251.3	2171.4	2115.2	2069.9	2049.9
65°	2941.6	2713.4	2524.7	2347.5	2197.1	2077.6	2011.2	1990.5
67.5°	3104.7	2685.8	2360.0	2105.7	1923.1	1781.0	1701.5	1684.8
68°	3070.0	2622.1	2283.8	2023.5	1840.1	1696.6	1617.5	1602.5
70°	2708.2	2212.1	1855.1	1595.9	1424.8	1288.2	1232.5	1208.4
72.5°	1846.1	1420.7	1089.7	871.8	743.8	657.3	606.0	588.5
75°	849.8	574.2	383.5	286.5	243.3	222.5	206.6	202.5
77.5°	247.8	180.1	154.9	143.4	134.9	127.6	122.2	121.8
80°	117.7	110.5	107.2	99.8	92.1	85.2	80.3	81.1
82.5°	79.1	77.0	77.0	69.7	57.5	49.3	40.7	36.7
85°	41.9	43.6	46.0	43.6	38.0	28.1	18.3	19.9
87.5°	14.2	16.3	17.1	16.7	15.0	11.5	8.6	8.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)