

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: P195962

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195962  
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-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 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: 8540.6 lumens  
Efficiency: N/A  
Efficacy: 129.4 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

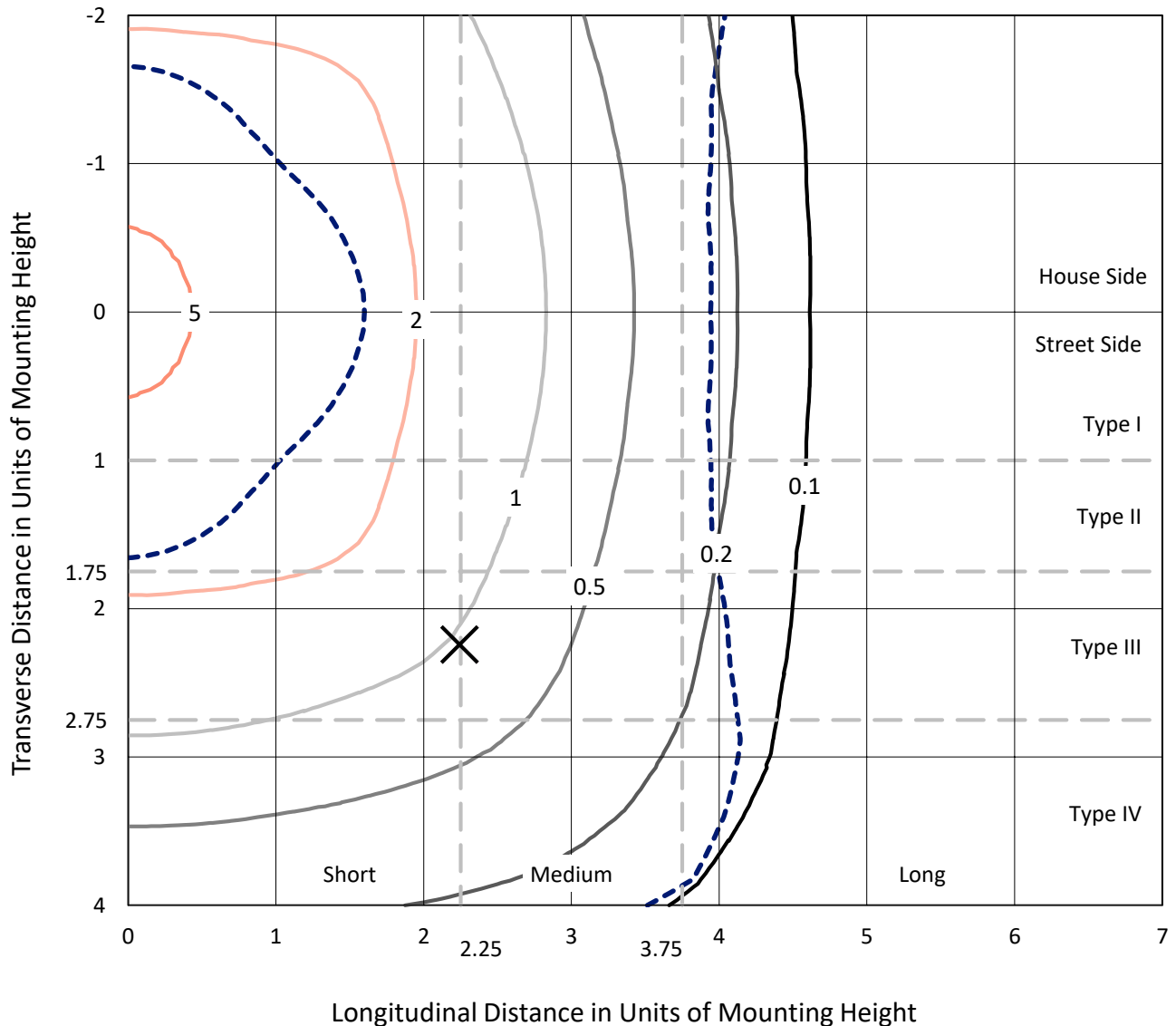
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

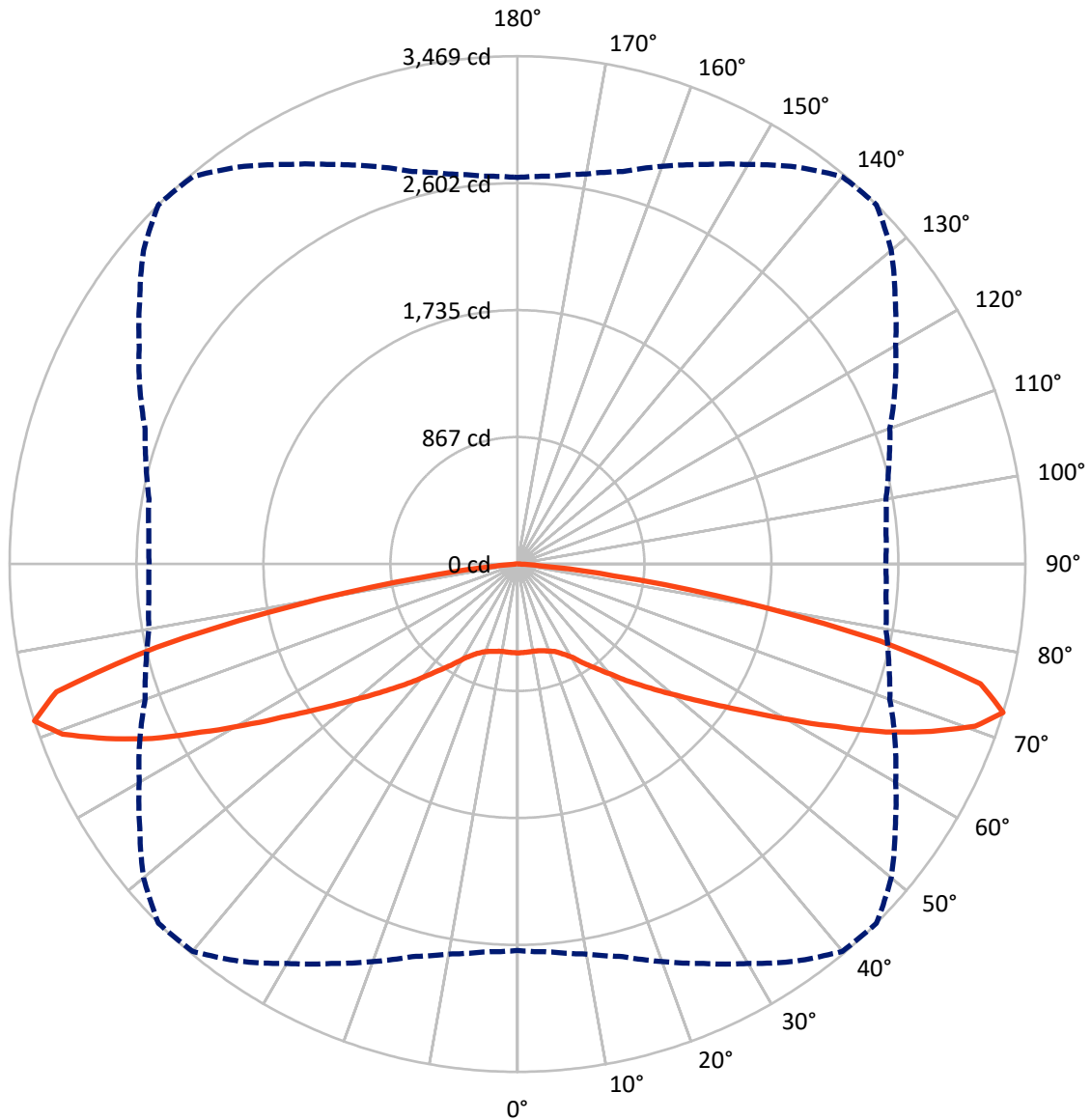
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.1 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
<b>House Side</b>	Lumens	4270.3	0.0	4270.3
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	4270.3	0.0	4270.3
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	8540.6	0.0	8540.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.0	0.7
10°-20°	175.4	2.1
20°-30°	316.6	3.7
30°-40°	540.1	6.3
40°-50°	919.5	10.8
50°-60°	1479.8	17.3
60°-70°	2461.0	28.8
70°-80°	2380.7	27.9
80°-90°	209.5	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°	8540.6	100.0
0°-180°	8540.6	100.0



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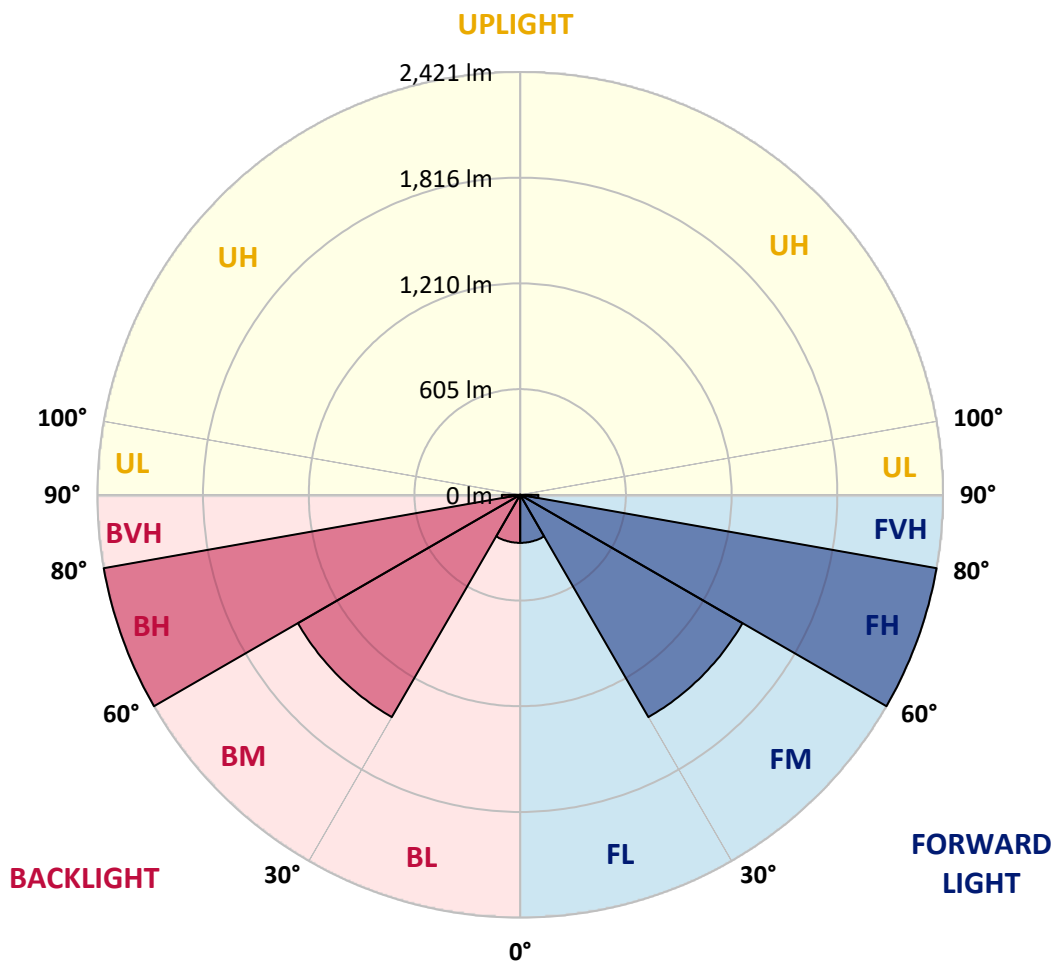
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	275.0	3.2			
FM	(30°-60°)	1469.7	17.2			
FH	(60°-80°)	2420.8	28.3			G2/5000
FVH	(80°-90°)	104.8	1.2			G2/225
BL	(0°-30°)	275.0	3.2	B1/500		
BM	(30°-60°)	1469.7	17.2	B2/2500		
BH	(60°-80°)	2420.8	28.3	B3/2500		G2/5000
BVH	(80°-90°)	104.8	1.2			G2/225
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°	607.2	607.2	607.2	607.2	607.2	607.2	607.2	607.2	607.2	607.2	607.2
2.5°	611.9	611.9	612.4	611.9	610.8	610.3	608.8	607.7	606.6	606.1	605.1
5°	612.4	612.4	613.0	612.4	611.4	610.3	609.3	607.7	606.6	605.6	605.1
7.5°	614.5	615.1	615.6	615.1	613.0	611.9	610.3	608.8	606.6	605.6	604.6
10°	618.8	618.8	618.8	618.2	616.6	614.5	612.4	610.8	608.2	605.6	604.1
12.5°	621.9	622.5	622.5	621.3	619.3	616.6	614.5	613.0	610.8	608.8	607.2
15°	626.7	626.7	626.1	624.0	620.8	618.8	617.7	617.1	616.6	615.6	614.0
17.5°	636.1	635.6	634.0	630.9	627.2	625.5	624.5	624.5	624.5	624.0	623.0
20°	649.8	649.8	647.6	642.4	639.2	637.7	636.1	636.1	636.1	634.5	632.9
22.5°	671.9	672.4	669.2	662.9	658.7	655.5	653.5	651.8	650.3	649.3	646.6
25°	701.8	701.2	697.6	689.7	686.5	683.4	679.2	676.6	674.4	672.9	669.7
27.5°	733.4	732.8	728.6	721.8	719.6	714.9	711.8	708.1	705.4	702.9	699.7
30°	773.9	771.2	768.0	762.8	761.7	758.0	753.8	748.6	744.4	740.2	736.5
32.5°	810.1	810.1	805.4	802.7	804.9	803.2	803.7	800.7	798.0	796.5	792.8
35°	860.5	860.5	858.5	855.3	855.8	852.1	851.6	852.1	854.3	854.3	850.1
37.5°	927.8	928.9	922.1	921.0	918.4	913.1	910.5	911.6	916.3	918.9	913.1
40°	1011.4	1013.5	1011.4	1004.6	1001.5	992.5	987.2	987.2	990.9	993.6	991.4
42.5°	1093.9	1097.6	1093.9	1088.7	1086.1	1079.2	1076.7	1078.7	1083.4	1086.6	1083.4
45°	1186.0	1188.6	1183.9	1177.5	1174.3	1170.7	1169.1	1170.7	1176.0	1179.2	1178.0
47.5°	1276.3	1280.0	1274.3	1271.6	1271.6	1267.9	1272.1	1276.3	1281.1	1288.5	1285.3
50°	1364.7	1369.4	1365.7	1366.3	1370.4	1377.3	1385.2	1393.6	1402.1	1409.9	1411.0
52.5°	1443.6	1451.0	1451.5	1460.9	1474.1	1484.5	1506.6	1525.0	1545.0	1551.8	1548.6
55°	1526.7	1536.6	1549.8	1564.5	1585.5	1607.1	1644.4	1677.4	1703.7	1720.1	1717.4
57.5°	1645.4	1655.4	1669.0	1693.3	1724.8	1754.3	1805.2	1856.8	1896.7	1921.4	1909.3
60°	1799.5	1809.9	1827.8	1853.6	1894.6	1934.5	2004.5	2078.5	2140.6	2169.0	2147.0
62.5°	2003.4	2013.4	2024.9	2059.1	2104.8	2156.4	2244.1	2339.3	2418.2	2445.5	2414.5
65°	2294.1	2306.2	2309.9	2337.7	2382.5	2430.2	2524.8	2632.2	2722.1	2766.7	2704.7
67.5°	2621.6	2626.3	2641.1	2673.7	2719.4	2762.5	2837.2	2938.6	3024.9	3049.5	2983.3
70°	2813.5	2822.9	2848.7	2893.9	2948.6	3016.4	3097.9	3207.3	3305.1	3316.6	3232.5
72.5°	2640.0	2659.5	2705.2	2775.7	2890.2	3010.6	3151.0	3312.4	3452.8	3469.0	3333.9
75°	2117.5	2139.6	2194.2	2271.5	2407.1	2585.9	2788.8	3031.1	3241.4	3268.2	3089.5
77.5°	1128.6	1156.0	1235.4	1339.5	1532.9	1769.5	2013.9	2290.4	2469.2	2529.7	2400.9
80°	284.4	299.1	337.5	398.4	529.4	720.2	931.0	1228.6	1450.3	1544.5	1450.3
82.5°	110.4	121.4	132.0	139.3	151.9	178.2	246.0	401.1	540.4	665.5	576.1
85°	42.6	45.2	65.2	74.2	74.2	81.5	93.6	110.4	136.7	149.2	125.1
87.5°	16.8	18.4	22.6	34.7	35.7	31.5	33.7	37.8	28.9	24.1	27.3
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°	607.2	607.2	607.2	607.2	607.2	607.2	607.2	607.2
2.5°	604.6	604.1	602.9	603.5	602.9	602.9	602.9	602.9
5°	604.1	604.1	602.9	602.9	602.9	603.5	602.9	602.9
7.5°	603.5	602.9	601.9	601.4	601.4	600.9	600.9	600.9
10°	602.4	601.4	600.4	599.9	599.9	598.7	598.7	598.7
12.5°	605.1	603.5	602.4	601.9	601.9	601.9	602.4	602.4
15°	612.4	609.3	607.7	607.2	607.7	608.8	609.3	609.8
17.5°	620.3	617.1	614.5	613.5	614.0	615.6	617.1	618.2
20°	630.3	627.7	624.5	623.5	623.5	625.5	626.7	628.2
22.5°	644.5	642.4	639.8	638.2	637.1	639.8	641.4	642.4
25°	667.1	665.0	662.9	661.3	660.8	663.4	664.5	665.0
27.5°	697.0	695.0	693.9	693.4	691.8	692.8	694.5	693.9
30°	736.0	737.5	736.0	736.0	733.4	734.4	733.4	732.3
32.5°	788.0	786.4	781.7	778.6	774.9	774.9	773.2	771.7
35°	840.0	834.8	832.2	833.7	832.2	833.2	830.6	828.0
37.5°	901.5	898.5	897.8	902.7	901.5	902.7	902.7	899.0
40°	983.1	980.9	984.6	992.5	995.6	995.1	996.1	991.4
42.5°	1076.7	1073.0	1074.5	1081.4	1085.0	1086.1	1085.6	1081.4
45°	1170.2	1171.3	1171.3	1178.6	1182.3	1184.4	1180.7	1179.2
47.5°	1275.8	1277.5	1273.8	1278.5	1279.5	1283.2	1280.0	1277.5
50°	1397.9	1392.0	1383.6	1385.2	1385.2	1384.2	1380.5	1377.3
52.5°	1534.0	1520.8	1505.1	1499.7	1494.0	1488.2	1480.8	1475.1
55°	1689.1	1666.5	1638.1	1625.0	1613.9	1600.7	1583.9	1578.1
57.5°	1868.8	1830.0	1792.1	1768.5	1740.0	1722.6	1701.2	1700.0
60°	2082.2	2029.7	1962.9	1927.8	1899.3	1878.9	1862.5	1856.2
62.5°	2328.8	2238.4	2166.4	2128.6	2095.4	2082.8	2062.3	2064.9
65°	2581.6	2489.7	2419.8	2389.3	2358.2	2349.8	2330.9	2337.7
67.5°	2855.6	2779.9	2703.1	2674.7	2646.4	2637.9	2618.4	2624.3
70°	3101.1	3004.8	2917.6	2861.9	2813.5	2774.5	2749.9	2739.9
72.5°	3150.0	2983.3	2846.1	2706.8	2626.3	2555.9	2527.0	2515.9
75°	2830.3	2571.7	2376.1	2212.6	2122.2	2019.7	2008.7	1993.4
77.5°	2201.6	1907.2	1670.7	1460.4	1338.9	1213.8	1170.7	1138.1
80°	1313.2	1009.3	782.3	548.3	447.3	360.1	338.5	316.0
82.5°	469.9	301.3	203.0	158.3	141.4	130.3	121.9	110.9
85°	113.5	95.6	90.4	82.0	80.9	68.8	48.9	43.7
87.5°	36.3	33.1	33.7	32.0	33.7	25.3	20.5	18.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)