

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: P196923

Luminaire Tested: **NAV-AF-03-D-UNV-5WQ-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196923  
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-03-D-UNV-5WQ-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 80 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: 10132 lumens  
Efficiency: N/A  
Efficacy: 105.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B4 - U0 - G2

Input Watts (W): 96  
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

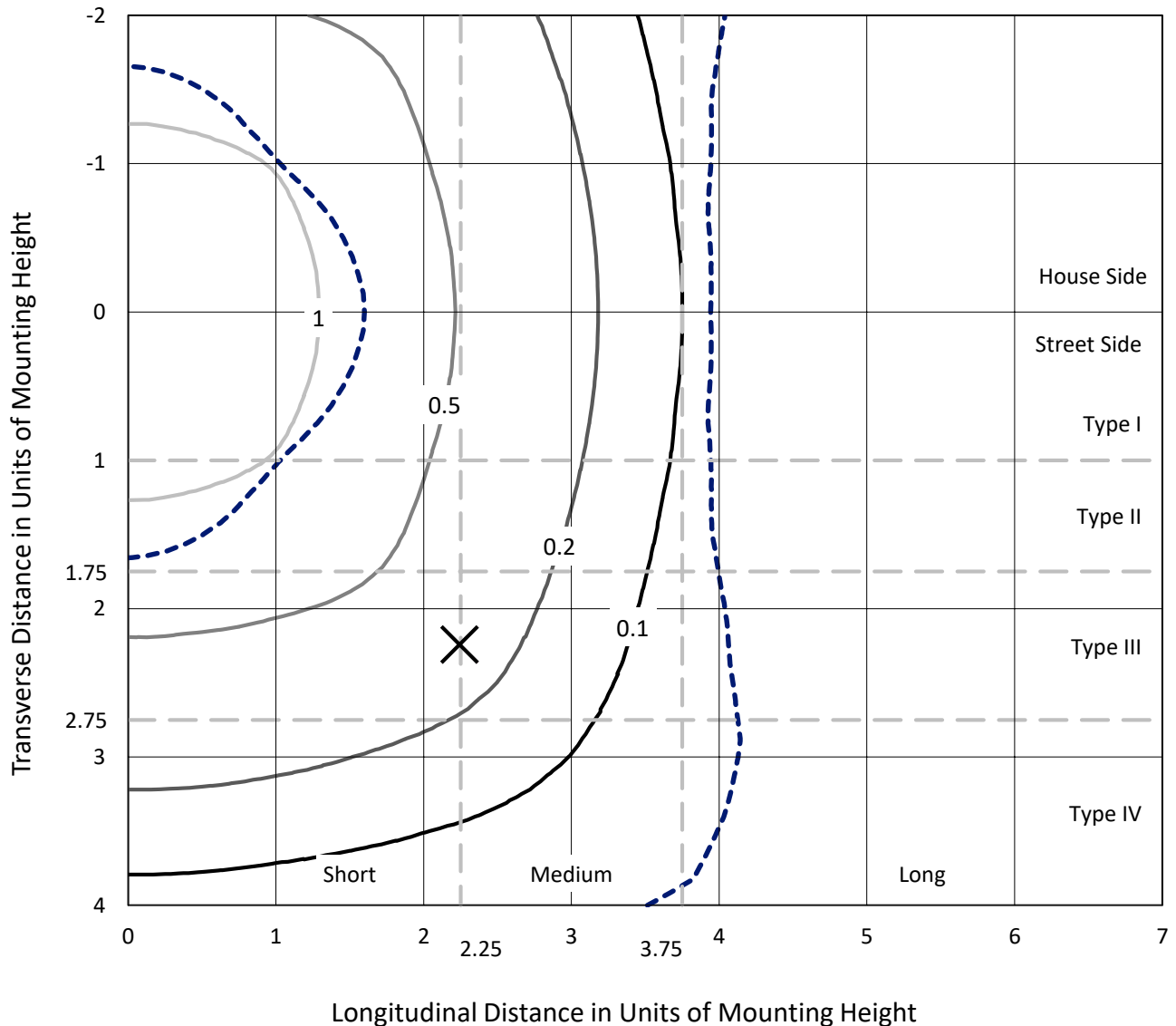


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### Iso-Footcandle Lines of Horizontal Illumination

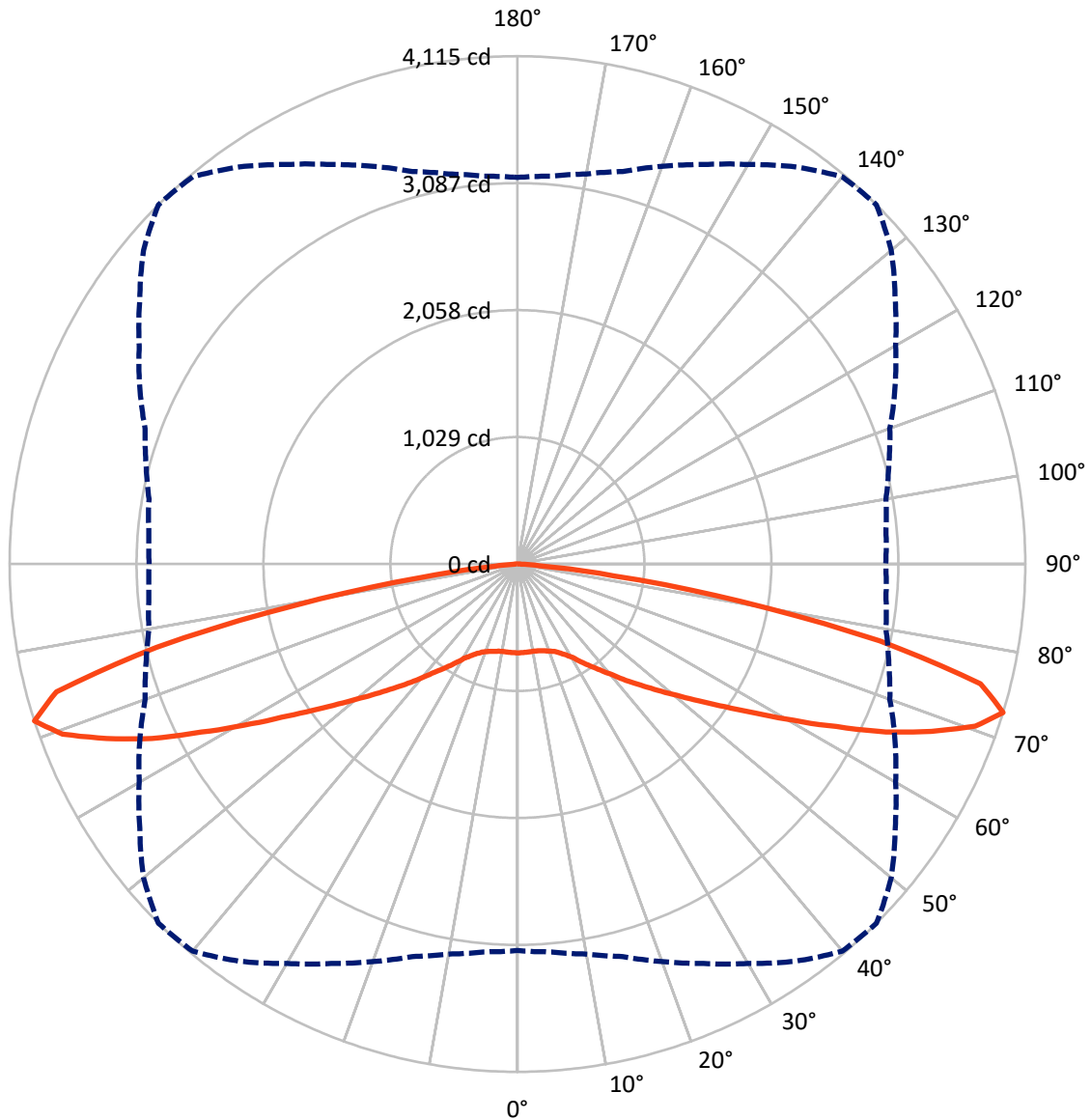
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 1.8 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	5066.0	0.0	5066.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5066.0	0.0	5066.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	10132.0	0.0	10132.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.8	0.7
10°-20°	208.1	2.1
20°-30°	375.6	3.7
30°-40°	640.7	6.3
40°-50°	1090.8	10.8
50°-60°	1755.6	17.3
60°-70°	2919.5	28.8
70°-80°	2824.3	27.9
80°-90°	248.6	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°	10132.0	100.0
0°-180°	10132.0	100.0



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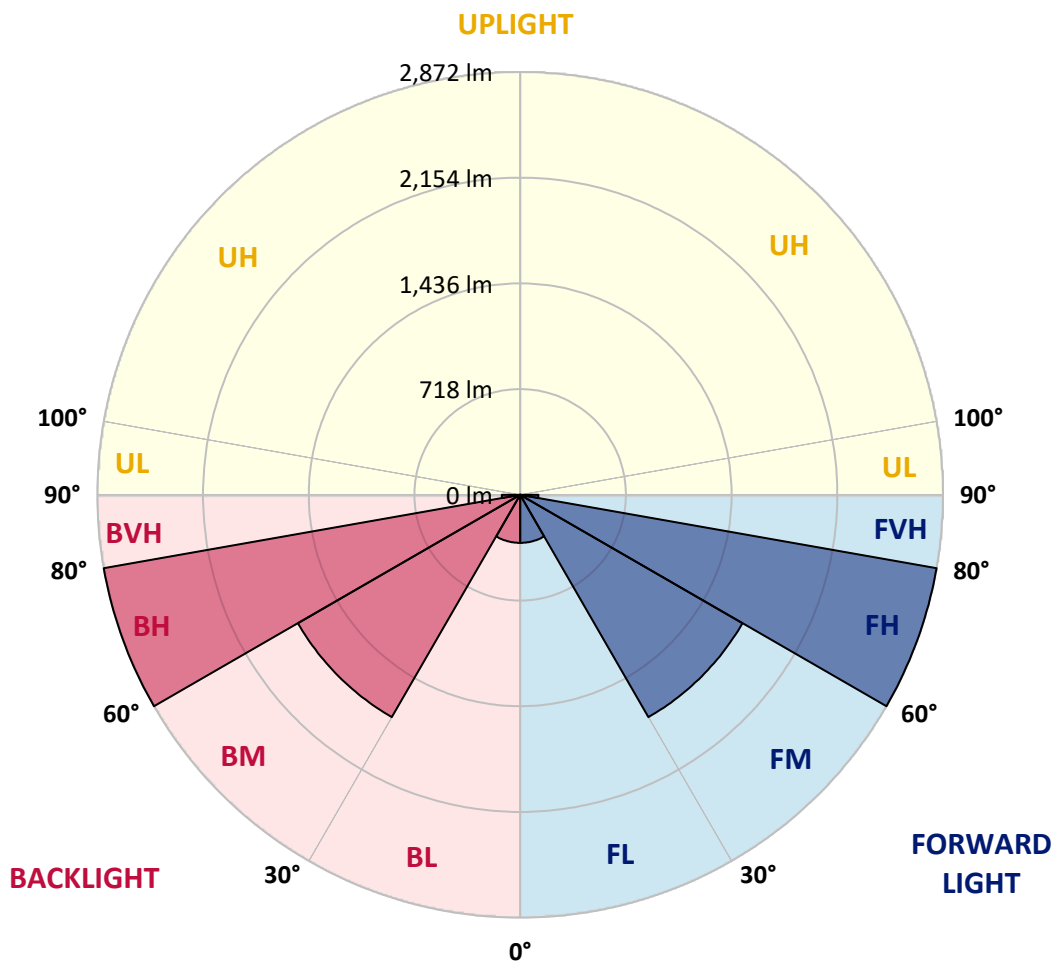
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	326.2	3.2			
FM	(30°-60°)	1743.6	17.2			
FH	(60°-80°)	2871.9	28.3			G2/5000
FVH	(80°-90°)	124.3	1.2			G2/225
BL	(0°-30°)	326.2	3.2	B1/500		
BM	(30°-60°)	1743.6	17.2	B2/2500		
BH	(60°-80°)	2871.9	28.3	B4/5000		G2/5000
BVH	(80°-90°)	124.3	1.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3
2.5°	725.9	725.9	726.5	725.9	724.7	724.1	722.2	720.9	719.7	719.1	717.8
5°	726.5	726.5	727.2	726.5	725.3	724.1	722.8	720.9	719.7	718.4	717.8
7.5°	729.0	729.7	730.3	729.7	727.2	725.9	724.1	722.2	719.7	718.4	717.2
10°	734.0	734.0	734.0	733.4	731.5	729.0	726.5	724.7	721.6	718.4	716.6
12.5°	737.8	738.4	738.4	737.1	734.7	731.5	729.0	727.2	724.7	722.2	720.3
15°	743.4	743.4	742.8	740.3	736.5	734.0	732.8	732.2	731.5	730.3	728.4
17.5°	754.6	754.0	752.1	748.4	744.0	742.1	740.9	740.9	740.9	740.3	739.0
20°	770.8	770.8	768.3	762.1	758.4	756.5	754.6	754.6	754.6	752.7	750.9
22.5°	797.0	797.6	793.9	786.4	781.4	777.7	775.2	773.3	771.4	770.2	767.1
25°	832.6	831.9	827.6	818.2	814.5	810.7	805.7	802.6	800.1	798.3	794.5
27.5°	870.0	869.4	864.4	856.3	853.8	848.2	844.4	840.0	836.9	833.8	830.1
30°	918.0	914.9	911.1	904.9	903.7	899.3	894.3	888.1	883.1	878.1	873.7
32.5°	961.0	961.0	955.4	952.3	954.8	952.9	953.6	949.8	946.7	944.8	940.5
35°	1020.9	1020.9	1018.4	1014.7	1015.3	1010.9	1010.3	1010.9	1013.4	1013.4	1008.4
37.5°	1100.7	1102.0	1093.9	1092.6	1089.5	1083.3	1080.2	1081.4	1087.0	1090.1	1083.3
40°	1199.9	1202.4	1199.9	1191.8	1188.0	1177.4	1171.2	1171.2	1175.6	1178.7	1176.2
42.5°	1297.8	1302.2	1297.8	1291.6	1288.4	1280.3	1277.2	1279.7	1285.3	1289.1	1285.3
45°	1406.9	1410.1	1404.4	1397.0	1393.2	1388.9	1387.0	1388.9	1395.1	1398.8	1397.6
47.5°	1514.2	1518.6	1511.7	1508.6	1508.6	1504.2	1509.2	1514.2	1519.8	1528.6	1524.8
50°	1619.0	1624.6	1620.2	1620.9	1625.8	1633.9	1643.3	1653.3	1663.3	1672.6	1673.9
52.5°	1712.5	1721.3	1721.9	1733.1	1748.7	1761.2	1787.4	1809.2	1832.9	1841.0	1837.3
55°	1811.1	1822.9	1838.5	1856.0	1880.9	1906.5	1950.8	1990.0	2021.2	2040.6	2037.4
57.5°	1952.0	1963.9	1980.1	2008.8	2046.2	2081.1	2141.6	2202.7	2250.1	2279.4	2265.1
60°	2134.7	2147.2	2168.4	2199.0	2247.6	2295.0	2378.0	2465.9	2539.5	2573.2	2547.0
62.5°	2376.7	2388.6	2402.3	2442.8	2497.1	2558.2	2662.3	2775.2	2868.8	2901.2	2864.4
65°	2721.6	2735.9	2740.3	2773.3	2826.4	2883.1	2995.4	3122.6	3229.2	3282.2	3208.6
67.5°	3110.1	3115.7	3133.2	3171.9	3226.1	3277.3	3365.8	3486.2	3588.4	3617.8	3539.2
70°	3337.7	3349.0	3379.5	3433.2	3498.0	3578.5	3675.1	3804.9	3920.9	3934.6	3834.8
72.5°	3131.9	3155.0	3209.3	3292.8	3428.8	3571.6	3738.1	3929.6	4096.1	4115.4	3955.2
75°	2512.0	2538.2	2603.1	2694.8	2855.7	3067.7	3308.4	3595.9	3845.4	3877.2	3665.2
77.5°	1339.0	1371.4	1465.6	1589.0	1818.5	2099.2	2389.2	2717.2	2929.3	3001.0	2848.2
80°	337.4	354.9	400.4	472.7	628.0	854.4	1104.5	1457.5	1720.6	1832.3	1720.6
82.5°	131.0	144.1	156.5	165.3	180.2	211.4	291.9	475.8	641.1	789.5	683.5
85°	50.5	53.6	77.3	87.9	87.9	96.7	111.0	131.0	162.1	177.1	148.4
87.5°	20.0	21.8	26.8	41.2	42.4	37.4	39.9	44.9	34.3	28.7	32.4
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°	720.3	720.3	720.3	720.3	720.3	720.3	720.3	720.3
2.5°	717.2	716.6	715.3	715.9	715.3	715.3	715.3	715.3
5°	716.6	716.6	715.3	715.3	715.3	715.9	715.3	715.3
7.5°	715.9	715.3	714.1	713.4	713.4	712.8	712.8	712.8
10°	714.7	713.4	712.2	711.6	711.6	710.3	710.3	710.3
12.5°	717.8	715.9	714.7	714.1	714.1	714.1	714.7	714.7
15°	726.5	722.8	720.9	720.3	720.9	722.2	722.8	723.4
17.5°	735.9	732.2	729.0	727.8	728.4	730.3	732.2	733.4
20°	747.7	744.6	740.9	739.6	739.6	742.1	743.4	745.3
22.5°	764.6	762.1	759.0	757.1	755.9	759.0	760.8	762.1
25°	791.4	788.9	786.4	784.5	783.9	787.0	788.3	788.9
27.5°	827.0	824.5	823.2	822.6	820.7	822.0	823.8	823.2
30°	873.1	875.0	873.1	873.1	870.0	871.2	870.0	868.7
32.5°	934.8	933.0	927.4	923.6	919.3	919.3	917.4	915.5
35°	996.6	990.3	987.2	989.1	987.2	988.5	985.4	982.2
37.5°	1069.5	1065.8	1065.2	1070.8	1069.5	1070.8	1070.8	1066.4
40°	1166.2	1163.7	1168.1	1177.4	1181.2	1180.6	1181.8	1176.2
42.5°	1277.2	1272.9	1274.7	1282.8	1287.2	1288.4	1287.8	1282.8
45°	1388.2	1389.5	1389.5	1398.2	1402.6	1405.1	1400.7	1398.8
47.5°	1513.6	1515.5	1511.1	1516.7	1518.0	1522.3	1518.6	1515.5
50°	1658.3	1651.4	1641.4	1643.3	1643.3	1642.1	1637.7	1633.9
52.5°	1819.8	1804.2	1785.5	1779.3	1772.4	1765.5	1756.8	1749.9
55°	2003.8	1977.0	1943.3	1927.7	1914.6	1899.0	1879.0	1872.2
57.5°	2217.1	2170.9	2126.0	2097.9	2064.3	2043.7	2018.1	2016.9
60°	2470.3	2407.9	2328.7	2286.9	2253.2	2228.9	2209.6	2202.1
62.5°	2762.7	2655.5	2570.0	2525.1	2485.8	2470.9	2446.6	2449.7
65°	3062.7	2953.6	2870.6	2834.5	2797.7	2787.7	2765.2	2773.3
67.5°	3387.6	3297.8	3206.8	3173.1	3139.4	3129.4	3106.4	3113.2
70°	3678.9	3564.8	3461.2	3395.1	3337.7	3291.6	3262.3	3250.4
72.5°	3736.9	3539.2	3376.4	3211.1	3115.7	3032.2	2997.9	2984.8
75°	3357.7	3050.9	2818.9	2624.9	2517.7	2396.0	2382.9	2364.9
77.5°	2611.8	2262.6	1981.9	1732.5	1588.4	1440.0	1388.9	1350.2
80°	1557.9	1197.4	928.0	650.5	530.7	427.2	401.6	374.8
82.5°	557.5	357.3	240.7	187.7	167.8	154.7	144.7	131.6
85°	134.7	113.5	107.3	97.3	96.0	81.7	58.0	51.8
87.5°	43.0	39.3	39.9	38.0	39.9	29.9	24.3	21.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)