

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: P195488

Luminaire Tested: **NAV-AF-02-D-UNV-5WQ-7050-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195488  
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-7050-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10238 lumens  
Efficiency: N/A  
Efficacy: 120.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B4 - U0 - G2

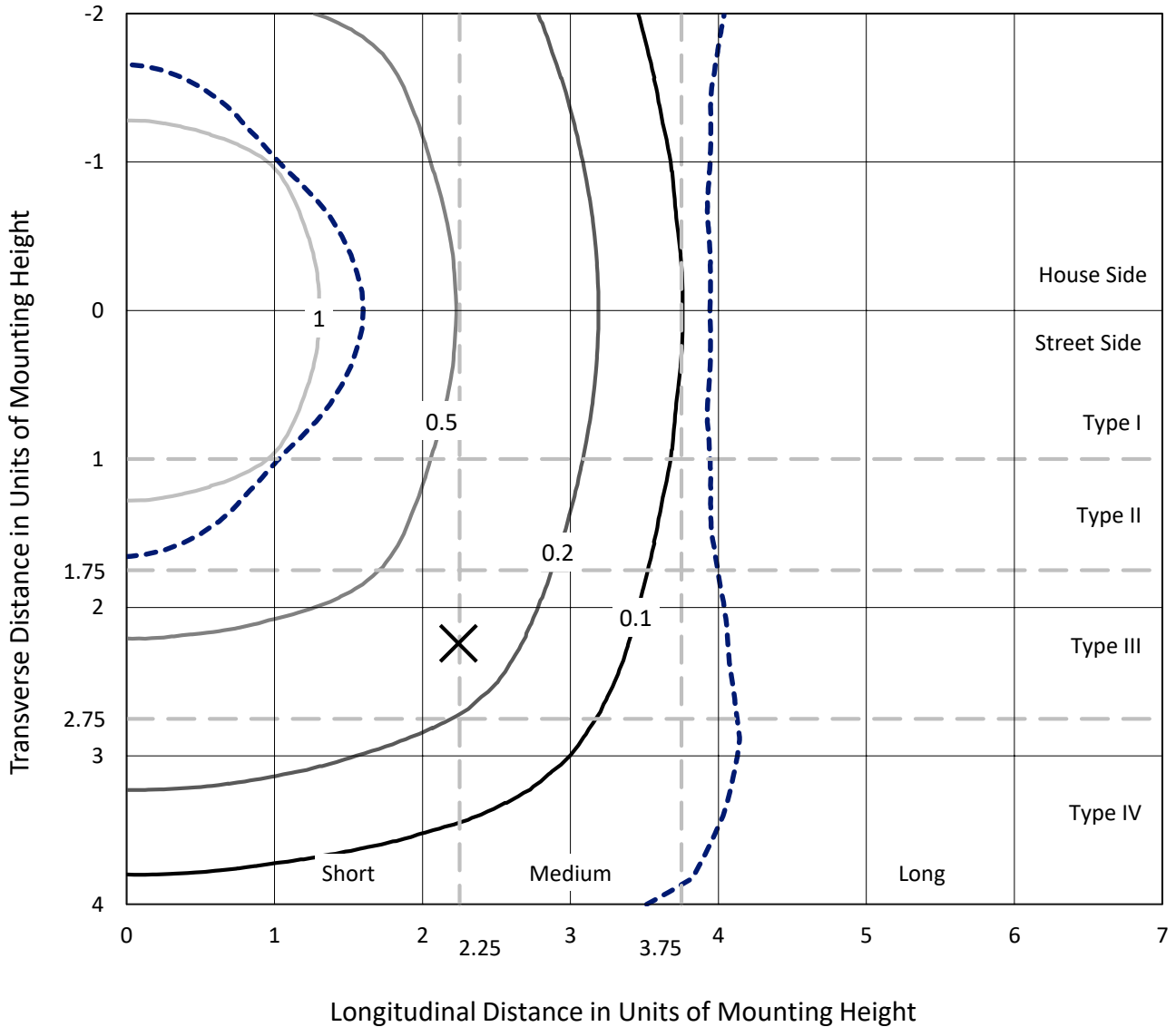
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

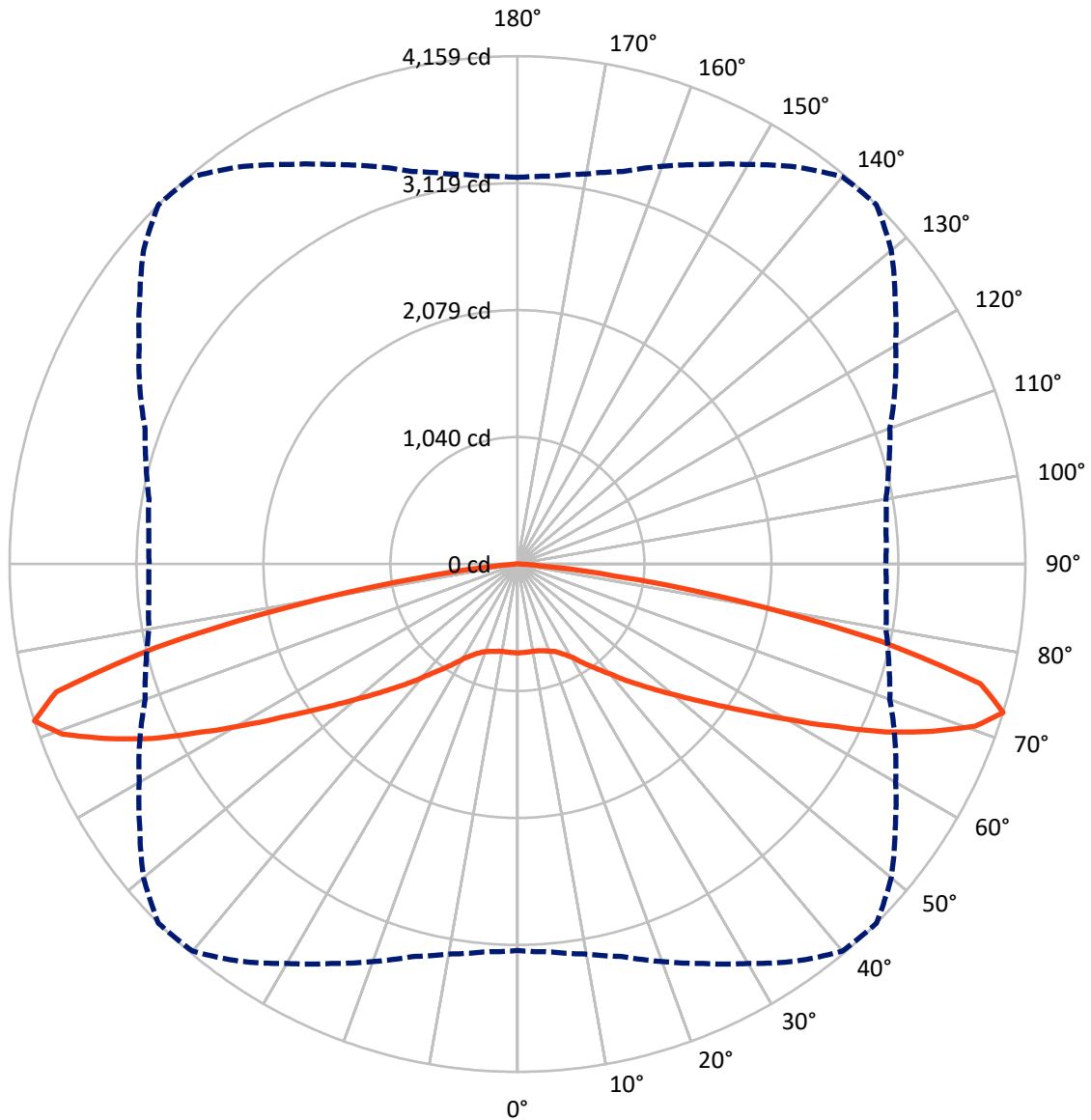
× Max cd  
 - - - 1/2 Max cd



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	5119.0	0.0	5119.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5119.0	0.0	5119.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	10238.0	0.0	10238.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.5	0.7
10°-20°	210.2	2.1
20°-30°	379.6	3.7
30°-40°	647.4	6.3
40°-50°	1102.3	10.8
50°-60°	1773.9	17.3
60°-70°	2950.1	28.8
70°-80°	2853.9	27.9
80°-90°	251.2	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°	10238.0	100.0
0°-180°	10238.0	100.0



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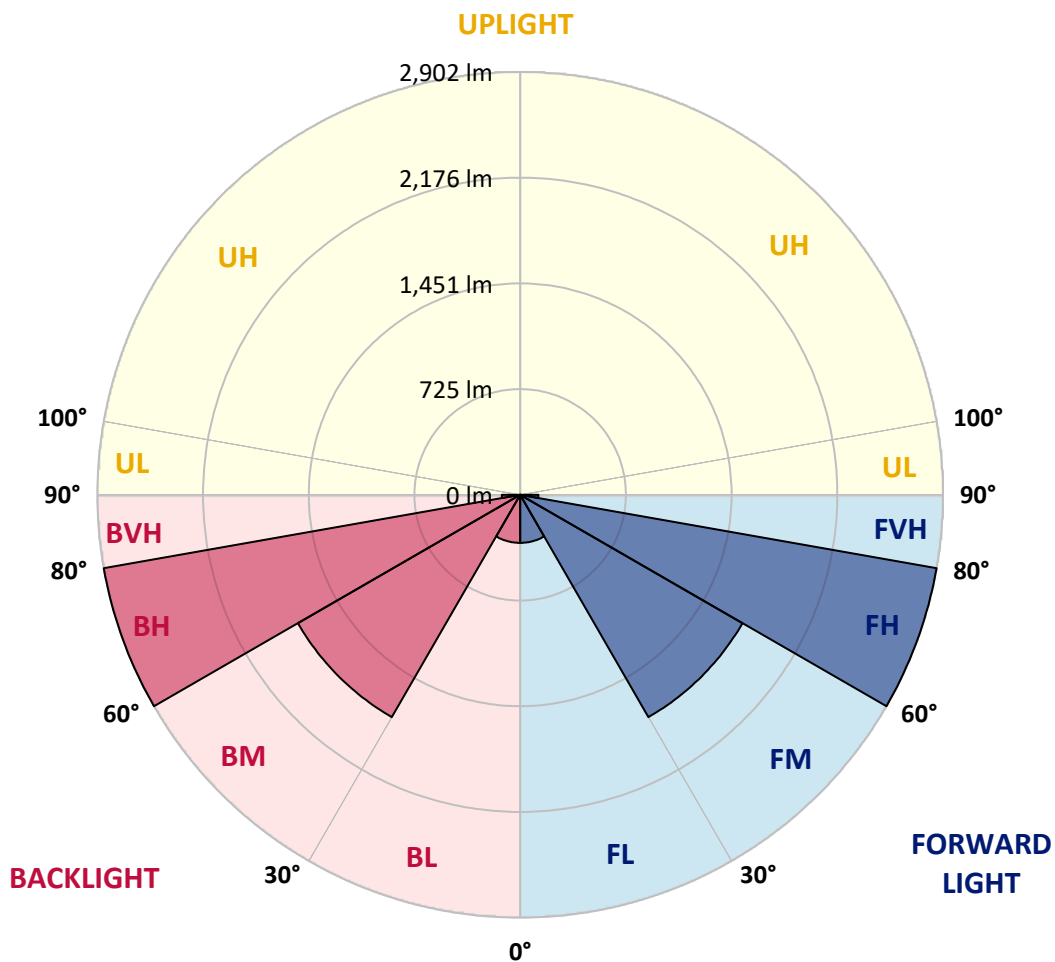
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	329.6	3.2			
FM (30°-60°)	1761.8	17.2			
FH (60°-80°)	2902.0	28.3			G2/5000
FVH (80°-90°)	125.6	1.2			G2/225
BL (0°-30°)	329.6	3.2	B1/500		
BM (30°-60°)	1761.8	17.2	B2/2500		
BH (60°-80°)	2902.0	28.3	B4/5000		G2/5000
BVH (80°-90°)	125.6	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°	727.8	727.8	727.8	727.8	727.8	727.8	727.8	727.8	727.8	727.8	727.8
2.5°	733.5	733.5	734.1	733.5	732.3	731.6	729.7	728.5	727.2	726.6	725.3
5°	734.1	734.1	734.8	734.1	732.9	731.6	730.4	728.5	727.2	726.0	725.3
7.5°	736.7	737.3	737.9	737.3	734.8	733.5	731.6	729.7	727.2	726.0	724.7
10°	741.7	741.7	741.7	741.1	739.2	736.7	734.1	732.3	729.1	726.0	724.1
12.5°	745.5	746.1	746.1	744.9	742.3	739.2	736.7	734.8	732.3	729.7	727.8
15°	751.2	751.2	750.5	748.0	744.2	741.7	740.4	739.8	739.2	737.9	736.0
17.5°	762.5	761.9	760.0	756.2	751.8	749.9	748.6	748.6	748.6	748.0	746.8
20°	778.9	778.9	776.4	770.1	766.3	764.4	762.5	762.5	762.5	760.6	758.7
22.5°	805.4	806.0	802.2	794.6	789.6	785.8	783.3	781.4	779.5	778.3	775.1
25°	841.3	840.6	836.2	826.8	823.0	819.2	814.2	811.0	808.5	806.6	802.8
27.5°	879.1	878.5	873.4	865.2	862.7	857.0	853.2	848.8	845.7	842.5	838.8
30°	927.6	924.5	920.7	914.4	913.1	908.7	903.7	897.4	892.3	887.3	882.9
32.5°	971.1	971.1	965.4	962.3	964.8	962.9	963.5	959.7	956.6	954.7	950.3
35°	1031.6	1031.6	1029.1	1025.3	1025.9	1021.5	1020.9	1021.5	1024.0	1024.0	1019.0
37.5°	1112.2	1113.5	1105.3	1104.1	1100.9	1094.6	1091.5	1092.7	1098.4	1101.5	1094.6
40°	1212.4	1215.0	1212.4	1204.3	1200.5	1189.8	1183.5	1183.5	1187.9	1191.0	1188.5
42.5°	1311.4	1315.8	1311.4	1305.1	1301.9	1293.7	1290.6	1293.1	1298.8	1302.6	1298.8
45°	1421.7	1424.8	1419.1	1411.6	1407.8	1403.4	1401.5	1403.4	1409.7	1413.5	1412.2
47.5°	1530.0	1534.5	1527.5	1524.4	1524.4	1520.0	1525.0	1530.0	1535.7	1544.5	1540.8
50°	1635.9	1641.6	1637.2	1637.8	1642.9	1651.0	1660.5	1670.6	1680.7	1690.1	1691.4
52.5°	1730.4	1739.3	1739.9	1751.2	1767.0	1779.6	1806.1	1828.1	1852.1	1860.3	1856.5
55°	1830.0	1842.0	1857.7	1875.4	1900.6	1926.4	1971.2	2010.9	2042.4	2061.9	2058.8
57.5°	1972.4	1984.4	2000.8	2029.8	2067.6	2102.9	2164.0	2225.8	2273.6	2303.3	2288.8
60°	2157.1	2169.7	2191.1	2222.0	2271.1	2319.0	2402.8	2491.7	2566.0	2600.1	2573.6
62.5°	2401.6	2413.5	2427.4	2468.4	2523.2	2585.0	2690.2	2804.3	2898.8	2931.5	2894.4
65°	2750.1	2764.6	2769.0	2802.4	2855.9	2913.3	3026.7	3155.3	3263.0	3316.6	3242.2
67.5°	3142.7	3148.3	3166.0	3205.0	3259.9	3311.5	3401.0	3522.6	3626.0	3655.6	3576.2
70°	3372.7	3384.0	3414.9	3469.1	3534.6	3615.9	3713.6	3844.7	3961.9	3975.7	3874.9
72.5°	3164.7	3188.0	3242.8	3327.3	3464.7	3609.0	3777.2	3970.7	4138.9	4158.5	3996.5
75°	2538.3	2564.8	2630.3	2723.0	2885.5	3099.8	3343.0	3633.6	3885.6	3917.8	3703.5
77.5°	1353.0	1385.7	1480.9	1605.7	1837.6	2121.1	2414.2	2745.6	2959.9	3032.4	2878.0
80°	340.9	358.6	404.6	477.7	634.6	863.3	1116.0	1472.7	1738.6	1851.4	1738.6
82.5°	132.3	145.6	158.2	167.0	182.1	213.6	294.9	480.8	647.8	797.8	690.7
85°	51.0	54.2	78.1	88.9	88.9	97.7	112.2	132.3	163.8	179.0	150.0
87.5°	20.2	22.1	27.1	41.6	42.9	37.8	40.3	45.4	34.7	29.0	32.8
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°	727.8	727.8	727.8	727.8	727.8	727.8	727.8	727.8
2.5°	724.7	724.1	722.8	723.4	722.8	722.8	722.8	722.8
5°	724.1	724.1	722.8	722.8	722.8	723.4	722.8	722.8
7.5°	723.4	722.8	721.5	720.9	720.9	720.3	720.3	720.3
10°	722.2	720.9	719.7	719.0	719.0	717.8	717.8	717.8
12.5°	725.3	723.4	722.2	721.5	721.5	721.5	722.2	722.2
15°	734.1	730.4	728.5	727.8	728.5	729.7	730.4	731.0
17.5°	743.6	739.8	736.7	735.4	736.0	737.9	739.8	741.1
20°	755.6	752.4	748.6	747.4	747.4	749.9	751.2	753.1
22.5°	772.6	770.1	766.9	765.0	763.8	766.9	768.8	770.1
25°	799.7	797.2	794.6	792.8	792.1	795.3	796.5	797.2
27.5°	835.6	833.1	831.8	831.2	829.3	830.6	832.5	831.8
30°	882.2	884.1	882.2	882.2	879.1	880.3	879.1	877.8
32.5°	944.6	942.7	937.1	933.3	928.9	928.9	927.0	925.1
35°	1007.0	1000.7	997.6	999.4	997.6	998.8	995.7	992.5
37.5°	1080.7	1077.0	1076.3	1082.0	1080.7	1082.0	1082.0	1077.6
40°	1178.4	1175.9	1180.3	1189.8	1193.5	1192.9	1194.2	1188.5
42.5°	1290.6	1286.2	1288.1	1296.3	1300.7	1301.9	1301.3	1296.3
45°	1402.8	1404.0	1404.0	1412.8	1417.2	1419.8	1415.4	1413.5
47.5°	1529.4	1531.3	1526.9	1532.6	1533.8	1538.2	1534.5	1531.3
50°	1675.6	1668.7	1658.6	1660.5	1660.5	1659.2	1654.8	1651.0
52.5°	1838.8	1823.1	1804.2	1797.9	1790.9	1784.0	1775.2	1768.3
55°	2024.7	1997.6	1963.6	1947.9	1934.6	1918.9	1898.7	1891.8
57.5°	2240.3	2193.6	2148.2	2119.9	2085.9	2065.1	2039.2	2038.0
60°	2496.1	2433.1	2353.1	2310.8	2276.8	2252.2	2232.7	2225.1
62.5°	2791.6	2683.3	2596.9	2551.6	2511.9	2496.7	2472.2	2475.3
65°	3094.8	2984.5	2900.7	2864.1	2826.9	2816.9	2794.2	2802.4
67.5°	3423.1	3332.3	3240.3	3206.3	3172.3	3162.2	3138.9	3145.8
70°	3717.4	3602.0	3497.4	3430.6	3372.7	3326.0	3296.4	3284.4
72.5°	3776.0	3576.2	3411.7	3244.7	3148.3	3063.9	3029.2	3016.0
75°	3392.8	3082.8	2848.4	2652.4	2544.0	2421.1	2407.9	2389.6
77.5°	2639.1	2286.3	2002.7	1750.6	1605.0	1455.1	1403.4	1364.3
80°	1574.2	1209.9	937.7	657.3	536.3	431.7	405.8	378.7
82.5°	563.4	361.1	243.2	189.7	169.5	156.3	146.2	133.0
85°	136.1	114.7	108.4	98.3	97.0	82.6	58.6	52.3
87.5°	43.5	39.7	40.3	38.4	40.3	30.2	24.6	22.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)