

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: P196448

Luminaire Tested: **NAV-AF-02-D-UNV-5WQ-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196448  
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-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 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: 9902.2 lumens  
Efficiency: N/A  
Efficacy: 116.5 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

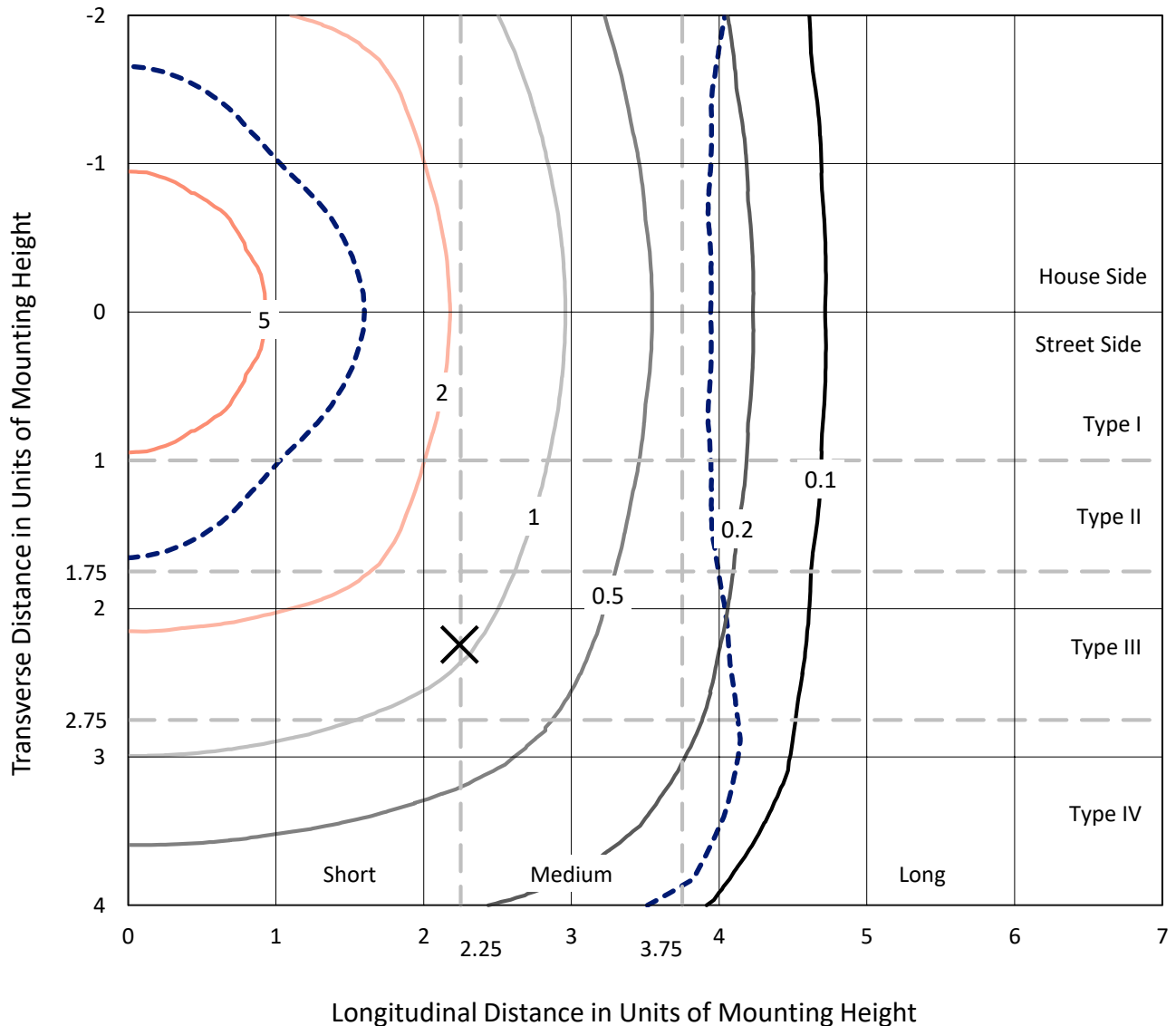
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

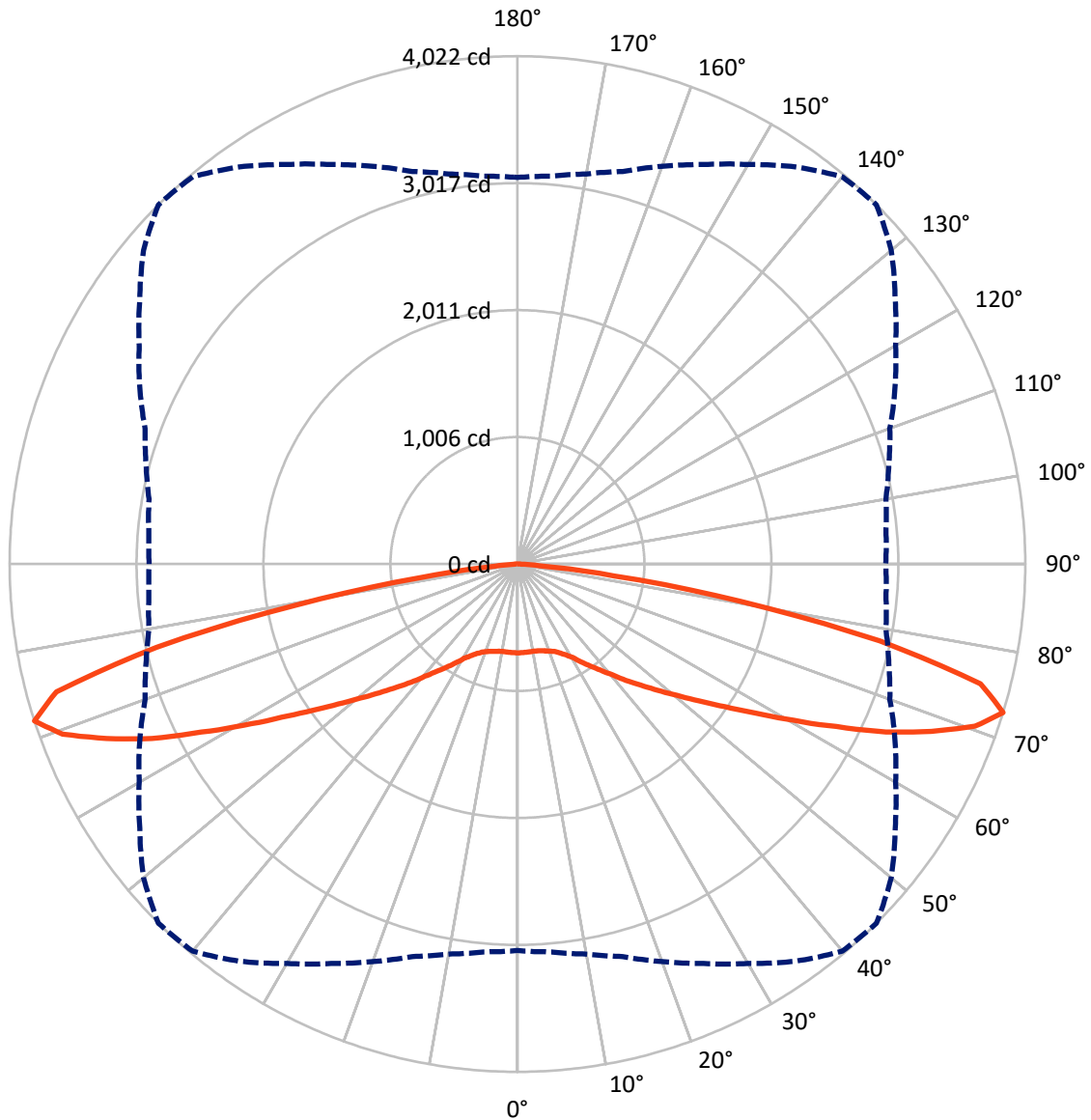
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 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
<b>House Side</b>	Lumens	4951.1	0.0	4951.1
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	4951.1	0.0	4951.1
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	9902.2	0.0	9902.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.2	0.7
10°-20°	203.4	2.1
20°-30°	367.1	3.7
30°-40°	626.2	6.3
40°-50°	1066.1	10.8
50°-60°	1715.7	17.3
60°-70°	2853.3	28.8
70°-80°	2760.2	27.9
80°-90°	242.9	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°	9902.2	100.0
0°-180°	9902.2	100.0



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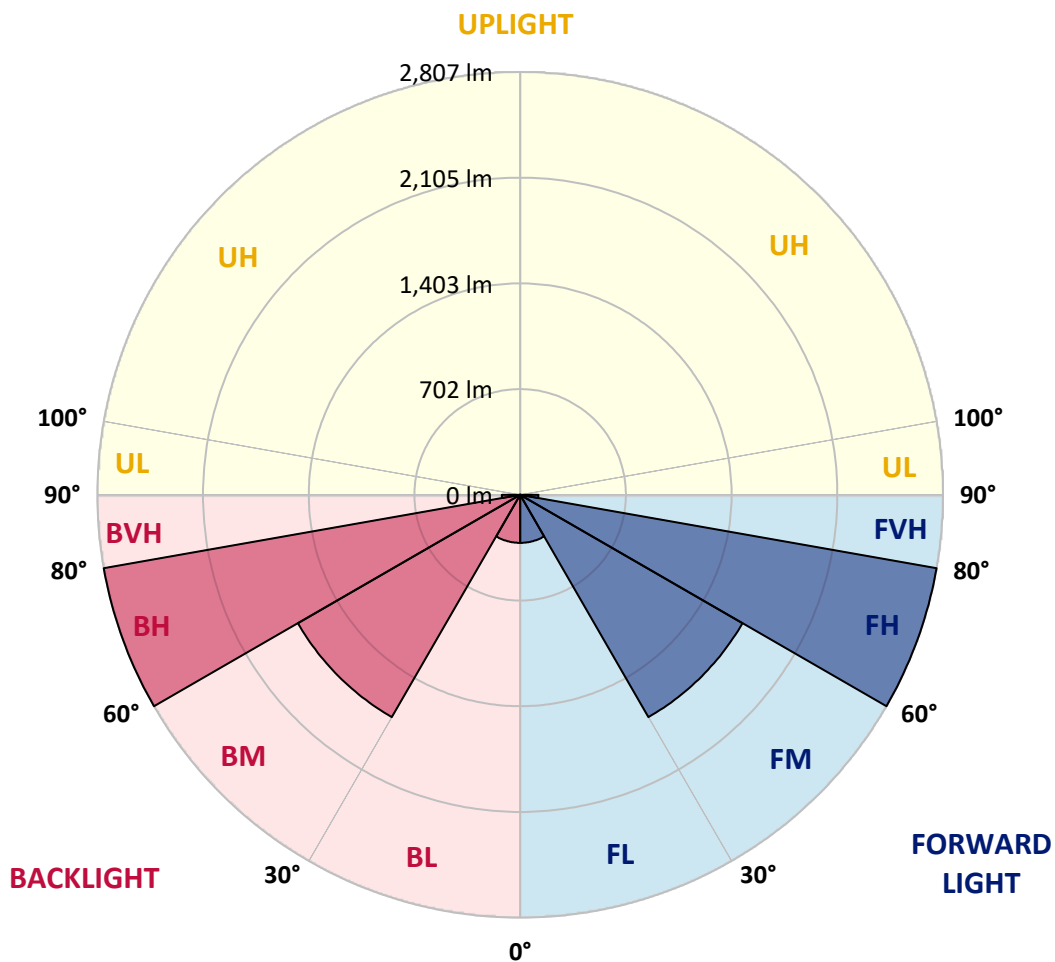
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	318.8	3.2			
FM	(30°-60°)	1704.0	17.2			
FH	(60°-80°)	2806.8	28.3			G2/5000
FVH	(80°-90°)	121.5	1.2			G2/225
BL	(0°-30°)	318.8	3.2	B1/500		
BM	(30°-60°)	1704.0	17.2	B2/2500		
BH	(60°-80°)	2806.8	28.3	B4/5000		G2/5000
BVH	(80°-90°)	121.5	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°	703.9	703.9	703.9	703.9	703.9	703.9	703.9	703.9	703.9	703.9	703.9
2.5°	709.4	709.4	710.0	709.4	708.2	707.7	705.9	704.6	703.4	702.7	701.6
5°	710.0	710.0	710.6	710.0	708.9	707.7	706.4	704.6	703.4	702.1	701.6
7.5°	712.5	713.1	713.7	713.1	710.6	709.4	707.7	705.9	703.4	702.1	700.9
10°	717.4	717.4	717.4	716.7	715.0	712.5	710.0	708.2	705.2	702.1	700.4
12.5°	721.0	721.6	721.6	720.4	718.0	715.0	712.5	710.6	708.2	705.9	703.9
15°	726.6	726.6	725.9	723.6	719.8	717.4	716.2	715.5	715.0	713.7	712.0
17.5°	737.5	736.9	735.1	731.4	727.1	725.3	724.1	724.1	724.1	723.6	722.2
20°	753.4	753.4	750.9	744.8	741.1	739.3	737.5	737.5	737.5	735.7	733.7
22.5°	778.9	779.6	775.8	768.5	763.7	760.0	757.6	755.7	754.0	752.7	749.6
25°	813.7	813.1	808.8	799.7	796.0	792.3	787.4	784.4	782.0	780.1	776.5
27.5°	850.2	849.6	844.8	836.8	834.4	829.0	825.2	821.0	818.0	814.8	811.2
30°	897.1	894.2	890.5	884.4	883.2	878.9	874.1	867.9	863.0	858.1	853.9
32.5°	939.2	939.2	933.7	930.7	933.2	931.3	931.9	928.2	925.2	923.4	919.1
35°	997.7	997.7	995.4	991.6	992.3	988.0	987.3	988.0	990.4	990.4	985.5
37.5°	1075.7	1077.0	1069.1	1067.8	1064.8	1058.7	1055.7	1056.9	1062.3	1065.4	1058.7
40°	1172.7	1175.1	1172.7	1164.7	1161.1	1150.7	1144.6	1144.6	1148.9	1151.9	1149.5
42.5°	1268.4	1272.7	1268.4	1262.3	1259.2	1251.3	1248.3	1250.7	1256.2	1259.9	1256.2
45°	1375.0	1378.1	1372.7	1365.3	1361.6	1357.3	1355.5	1357.3	1363.4	1367.1	1365.8
47.5°	1479.8	1484.2	1477.4	1474.4	1474.4	1470.1	1475.0	1479.8	1485.4	1493.9	1490.2
50°	1582.3	1587.7	1583.5	1584.0	1588.9	1597.0	1606.0	1615.7	1625.6	1634.6	1635.9
52.5°	1673.7	1682.3	1682.8	1693.8	1709.1	1721.3	1746.8	1768.2	1791.3	1799.3	1795.5
55°	1770.0	1781.6	1796.8	1813.8	1838.3	1863.2	1906.5	1945.0	1975.4	1994.3	1991.2
57.5°	1907.7	1919.3	1935.2	1963.2	1999.8	2033.9	2093.0	2152.7	2199.1	2227.7	2213.7
60°	2086.3	2098.6	2119.2	2149.1	2196.6	2243.0	2324.1	2409.9	2481.9	2514.8	2489.2
62.5°	2322.8	2334.4	2347.8	2387.5	2440.5	2500.2	2601.9	2712.3	2803.7	2835.4	2799.4
65°	2659.8	2673.9	2678.2	2710.4	2762.3	2817.7	2927.4	3051.7	3156.0	3207.8	3135.8
67.5°	3039.6	3045.0	3062.1	3099.9	3152.9	3202.9	3289.5	3407.1	3507.0	3535.7	3458.9
70°	3262.1	3273.0	3302.9	3355.3	3418.7	3497.3	3591.8	3718.5	3831.9	3845.3	3747.8
72.5°	3060.9	3083.4	3136.5	3218.1	3351.0	3490.7	3653.3	3840.5	4003.2	4022.1	3865.5
75°	2455.0	2480.6	2544.0	2633.5	2790.9	2998.1	3233.4	3514.4	3758.2	3789.2	3582.1
77.5°	1308.6	1340.3	1432.3	1553.0	1777.3	2051.6	2335.0	2655.5	2862.8	2932.9	2783.6
80°	329.8	346.8	391.2	461.9	613.8	835.0	1079.4	1424.4	1681.6	1790.6	1681.6
82.5°	128.0	140.8	153.0	161.4	176.1	206.6	285.2	465.0	626.6	771.6	668.0
85°	49.3	52.5	75.6	86.0	86.0	94.5	108.5	128.0	158.4	173.0	145.1
87.5°	19.5	21.3	26.2	40.2	41.4	36.6	39.0	43.9	33.6	28.1	31.6
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°	703.9	703.9	703.9	703.9	703.9	703.9	703.9	703.9
2.5°	700.9	700.4	699.0	699.7	699.0	699.0	699.0	699.0
5°	700.4	700.4	699.0	699.0	699.0	699.7	699.0	699.0
7.5°	699.7	699.0	697.8	697.3	697.3	696.6	696.6	696.6
10°	698.5	697.3	696.1	695.4	695.4	694.3	694.3	694.3
12.5°	701.6	699.7	698.5	697.8	697.8	697.8	698.5	698.5
15°	710.0	706.4	704.6	703.9	704.6	705.9	706.4	707.0
17.5°	719.3	715.5	712.5	711.3	712.0	713.7	715.5	716.7
20°	730.8	727.7	724.1	722.9	722.9	725.3	726.6	728.3
22.5°	747.3	744.8	741.8	739.9	738.7	741.8	743.6	744.8
25°	773.4	771.1	768.5	766.8	766.1	769.1	770.4	771.1
27.5°	808.2	805.8	804.5	803.9	802.1	803.3	805.1	804.5
30°	853.4	855.2	853.4	853.4	850.2	851.4	850.2	849.1
32.5°	913.6	911.8	906.3	902.7	898.4	898.4	896.6	894.8
35°	973.9	967.9	964.9	966.6	964.9	966.1	963.0	960.0
37.5°	1045.3	1041.7	1041.0	1046.4	1045.3	1046.4	1046.4	1042.3
40°	1139.8	1137.3	1141.5	1150.7	1154.5	1153.8	1155.0	1149.5
42.5°	1248.3	1244.0	1245.8	1253.8	1258.0	1259.2	1258.6	1253.8
45°	1356.8	1358.0	1358.0	1366.5	1370.7	1373.2	1368.9	1367.1
47.5°	1479.3	1481.1	1476.8	1482.3	1483.5	1487.8	1484.2	1481.1
50°	1620.7	1614.0	1604.2	1606.0	1606.0	1604.8	1600.5	1597.0
52.5°	1778.5	1763.2	1745.0	1738.9	1732.2	1725.5	1717.0	1710.2
55°	1958.4	1932.1	1899.2	1883.9	1871.2	1855.9	1836.4	1829.8
57.5°	2166.7	2121.7	2077.8	2050.4	2017.5	1997.4	1972.3	1971.1
60°	2414.2	2353.2	2275.9	2235.0	2202.1	2178.3	2159.4	2152.2
62.5°	2700.2	2595.2	2511.8	2467.8	2429.5	2414.8	2391.0	2394.1
65°	2993.2	2886.6	2805.6	2770.2	2734.2	2724.5	2702.5	2710.4
67.5°	3310.8	3223.0	3134.0	3101.1	3068.2	3058.5	3035.9	3042.7
70°	3595.4	3483.8	3382.6	3318.1	3262.1	3216.9	3188.3	3176.7
72.5°	3652.1	3458.9	3299.8	3138.3	3045.0	2963.3	2929.9	2917.0
75°	3281.5	2981.6	2755.0	2565.4	2460.5	2341.7	2328.9	2311.2
77.5°	2552.7	2211.3	1936.9	1693.2	1552.3	1407.4	1357.3	1319.6
80°	1522.5	1170.2	907.0	635.7	518.7	417.5	392.6	366.3
82.5°	544.8	349.2	235.2	183.4	164.0	151.1	141.4	128.6
85°	131.6	110.9	104.8	95.0	93.9	79.9	56.7	50.6
87.5°	42.1	38.4	39.0	37.1	39.0	29.3	23.8	21.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)