

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: P195002

Luminaire Tested: **NAV-AF-02-D-UNV-5WQ-7060-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195002  
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-7060-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5700K, 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: 8349 lumens  
Efficiency: N/A  
Efficacy: 126.5 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

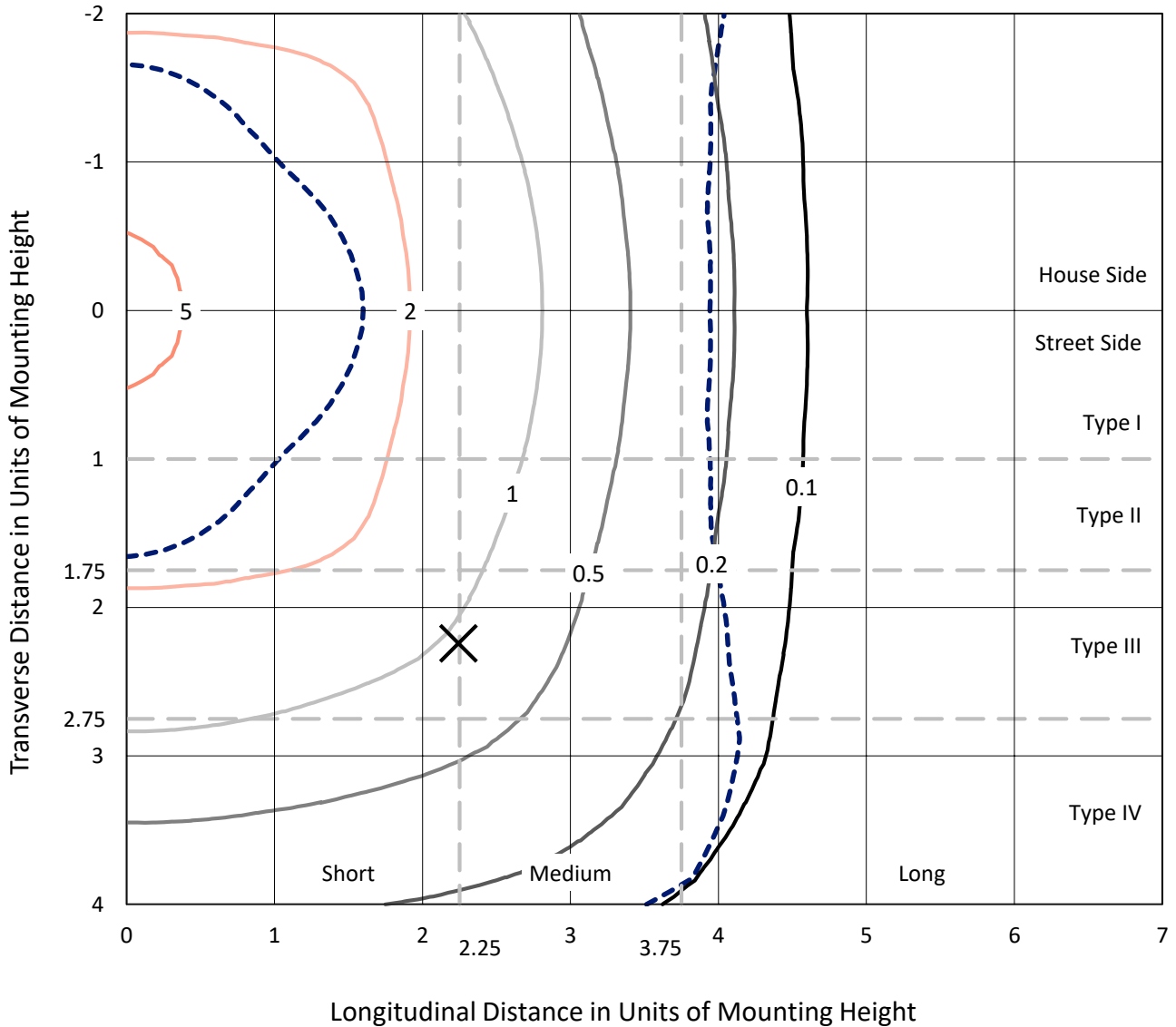
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

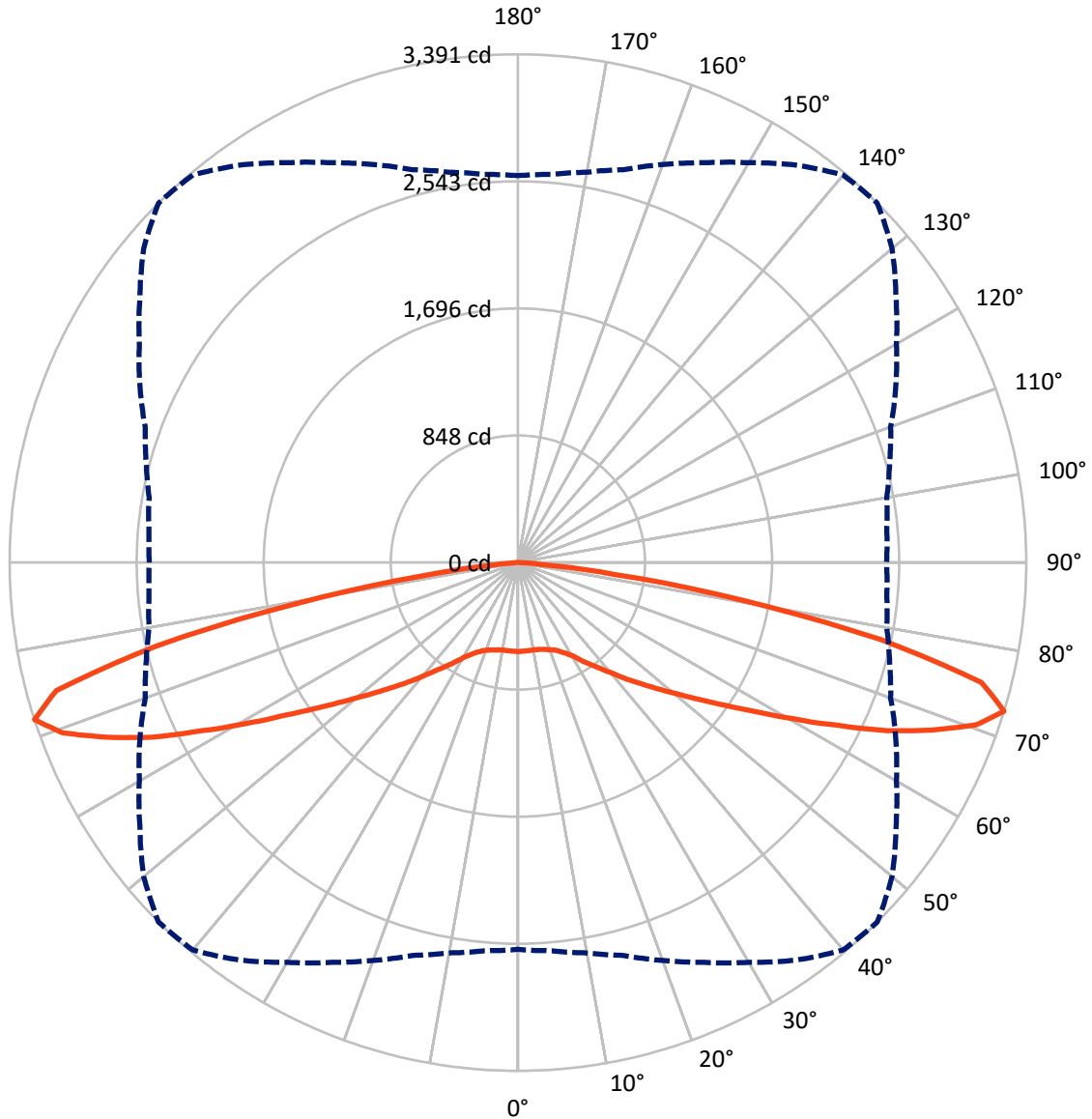
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 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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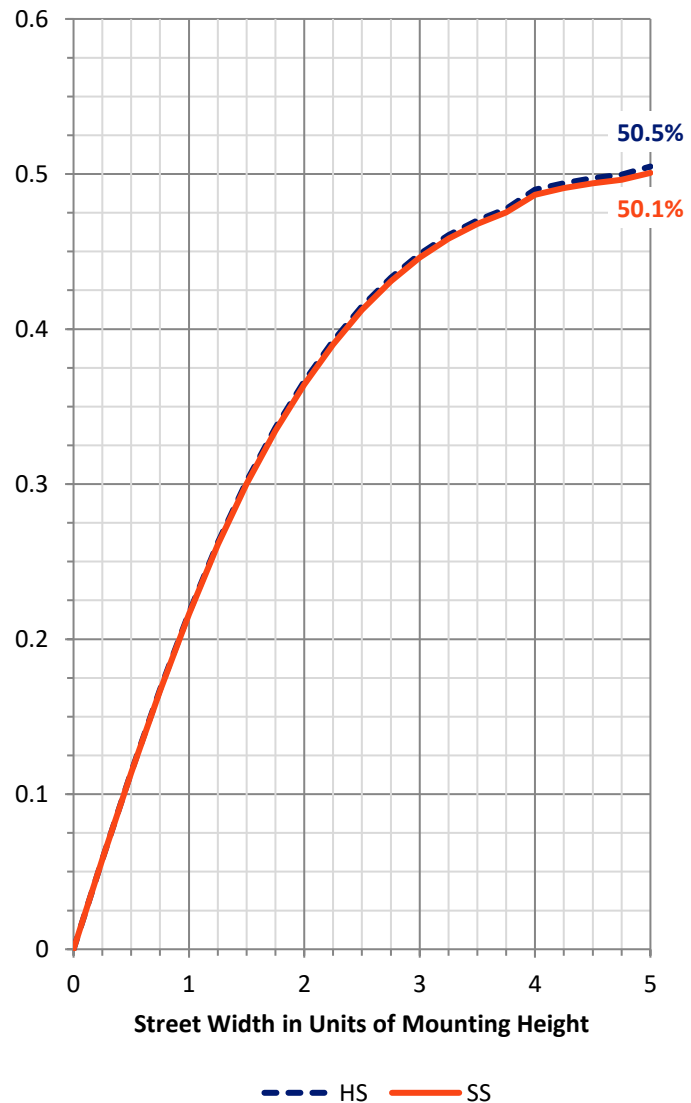
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4174.5	0.0	4174.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	4174.5	0.0	4174.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	8349.0	0.0	8349.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.7	0.7
10°-20°	171.5	2.1
20°-30°	309.5	3.7
30°-40°	528.0	6.3
40°-50°	898.9	10.8
50°-60°	1446.6	17.3
60°-70°	2405.8	28.8
70°-80°	2327.3	27.9
80°-90°	204.8	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°	8349.0	100.0
0°-180°	8349.0	100.0

**Coefficient of Utilization**



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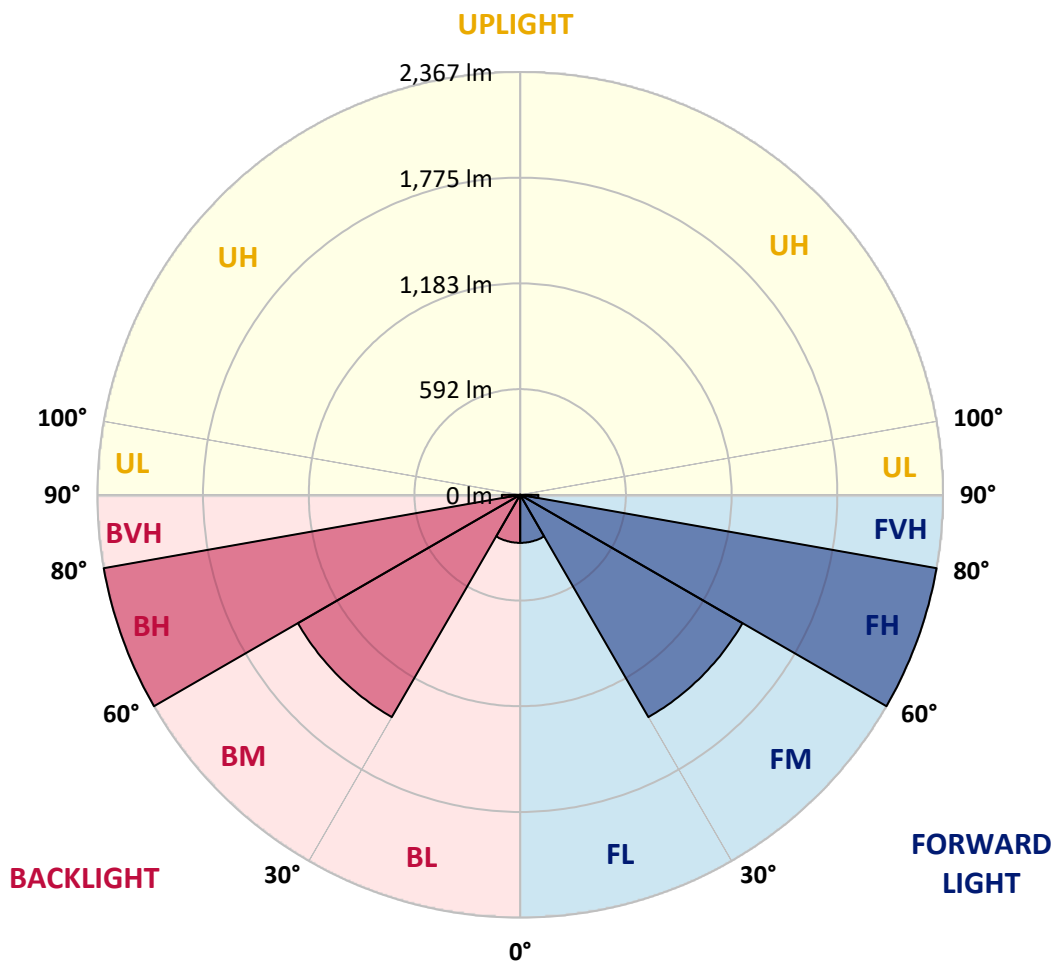
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	268.8	3.2			
FM	(30°-60°)	1436.7	17.2			
FH	(60°-80°)	2366.5	28.3			G2/5000
FVH	(80°-90°)	102.4	1.2			G2/225
BL	(0°-30°)	268.8	3.2	B1/500		
BM	(30°-60°)	1436.7	17.2	B2/2500		
BH	(60°-80°)	2366.5	28.3	B3/2500		G2/5000
BVH	(80°-90°)	102.4	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°	593.6	593.6	593.6	593.6	593.6	593.6	593.6	593.6	593.6	593.6	593.6
2.5°	598.2	598.2	598.7	598.2	597.1	596.6	595.1	594.1	593.0	592.5	591.5
5°	598.7	598.7	599.2	598.7	597.7	596.6	595.6	594.1	593.0	592.0	591.5
7.5°	600.7	601.3	601.8	601.3	599.2	598.2	596.6	595.1	593.0	592.0	591.0
10°	604.9	604.9	604.9	604.3	602.8	600.7	598.7	597.1	594.6	592.0	590.5
12.5°	607.9	608.5	608.5	607.4	605.4	602.8	600.7	599.2	597.1	595.1	593.6
15°	612.6	612.6	612.1	610.0	606.9	604.9	603.8	603.3	602.8	601.8	600.2
17.5°	621.8	621.3	619.8	616.7	613.1	611.5	610.5	610.5	610.5	610.0	609.0
20°	635.2	635.2	633.1	628.0	624.9	623.4	621.8	621.8	621.8	620.3	618.7
22.5°	656.8	657.3	654.2	648.0	643.9	640.8	638.8	637.2	635.7	634.7	632.1
25°	686.1	685.5	681.9	674.2	671.1	668.1	664.0	661.4	659.3	657.8	654.7
27.5°	716.9	716.4	712.3	705.6	703.5	698.9	695.8	692.2	689.6	687.1	684.0
30°	756.5	753.9	750.8	745.7	744.6	741.0	736.9	731.8	727.7	723.6	720.0
32.5°	791.9	791.9	787.3	784.7	786.8	785.2	785.7	782.7	780.1	778.6	775.0
35°	841.2	841.2	839.2	836.1	836.6	833.0	832.5	833.0	835.1	835.1	831.0
37.5°	907.0	908.1	901.4	900.3	897.8	892.6	890.1	891.1	895.7	898.3	892.6
40°	988.7	990.8	988.7	982.1	979.0	970.2	965.1	965.1	968.7	971.3	969.2
42.5°	1069.4	1073.0	1069.4	1064.3	1061.7	1055.0	1052.5	1054.5	1059.1	1062.2	1059.1
45°	1159.4	1161.9	1157.3	1151.1	1148.0	1144.4	1142.9	1144.4	1149.6	1152.7	1151.6
47.5°	1247.7	1251.3	1245.7	1243.1	1243.1	1239.5	1243.6	1247.7	1252.4	1259.6	1256.5
50°	1334.1	1338.7	1335.1	1335.6	1339.7	1346.4	1354.1	1362.3	1370.6	1378.3	1379.3
52.5°	1411.2	1418.4	1418.9	1428.1	1441.0	1451.2	1472.8	1490.8	1510.3	1517.0	1513.9
55°	1492.4	1502.1	1515.0	1529.4	1549.9	1571.0	1607.5	1639.8	1665.5	1681.5	1678.9
57.5°	1608.5	1618.3	1631.6	1655.3	1686.1	1714.9	1764.7	1815.1	1854.1	1878.3	1866.5
60°	1759.1	1769.3	1786.8	1812.0	1852.1	1891.1	1959.5	2031.9	2092.6	2120.3	2098.8
62.5°	1958.5	1968.2	1979.5	2012.9	2057.6	2108.0	2193.8	2286.8	2363.9	2390.6	2360.3
65°	2242.6	2254.5	2258.1	2285.3	2329.0	2375.7	2468.2	2573.1	2661.0	2704.6	2644.0
67.5°	2562.8	2567.4	2581.8	2613.7	2658.4	2700.5	2773.5	2872.7	2957.0	2981.1	2916.4
70°	2750.4	2759.6	2784.8	2829.0	2882.4	2948.7	3028.4	3135.3	3230.9	3242.2	3160.0
72.5°	2580.8	2599.8	2644.5	2713.4	2825.4	2943.1	3080.3	3238.1	3375.3	3391.2	3259.1
75°	2070.0	2091.6	2145.0	2220.5	2353.1	2527.9	2726.2	2963.1	3168.7	3194.9	3020.2
77.5°	1103.3	1130.1	1207.7	1309.4	1498.5	1729.8	1968.7	2239.0	2413.8	2472.9	2347.0
80°	278.0	292.4	329.9	389.5	517.5	704.0	910.1	1201.0	1417.8	1509.8	1417.8
82.5°	107.9	118.7	129.0	136.2	148.5	174.2	240.5	392.1	528.3	650.6	563.2
85°	41.6	44.2	63.7	72.5	72.5	79.7	91.5	107.9	133.6	145.9	122.3
87.5°	16.4	18.0	22.1	33.9	34.9	30.8	32.9	37.0	28.3	23.6	26.7
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°	593.6	593.6	593.6	593.6	593.6	593.6	593.6	593.6
2.5°	591.0	590.5	589.4	590.0	589.4	589.4	589.4	589.4
5°	590.5	590.5	589.4	589.4	589.4	590.0	589.4	589.4
7.5°	590.0	589.4	588.4	587.9	587.9	587.4	587.4	587.4
10°	588.9	587.9	586.9	586.4	586.4	585.3	585.3	585.3
12.5°	591.5	590.0	588.9	588.4	588.4	588.4	588.9	588.9
15°	598.7	595.6	594.1	593.6	594.1	595.1	595.6	596.1
17.5°	606.4	603.3	600.7	599.7	600.2	601.8	603.3	604.3
20°	616.2	613.6	610.5	609.5	609.5	611.5	612.6	614.1
22.5°	630.0	628.0	625.4	623.9	622.8	625.4	627.0	628.0
25°	652.1	650.1	648.0	646.5	646.0	648.5	649.6	650.1
27.5°	681.4	679.4	678.3	677.8	676.3	677.3	678.9	678.3
30°	719.5	721.0	719.5	719.5	716.9	717.9	716.9	715.9
32.5°	770.3	768.8	764.2	761.1	757.5	757.5	755.9	754.4
35°	821.2	816.1	813.5	815.0	813.5	814.5	812.0	809.4
37.5°	881.3	878.3	877.7	882.4	881.3	882.4	882.4	878.8
40°	961.0	958.9	962.5	970.2	973.3	972.8	973.8	969.2
42.5°	1052.5	1048.9	1050.4	1057.1	1060.7	1061.7	1061.2	1057.1
45°	1143.9	1145.0	1145.0	1152.2	1155.8	1157.8	1154.2	1152.7
47.5°	1247.2	1248.8	1245.2	1249.8	1250.8	1254.4	1251.3	1248.8
50°	1366.5	1360.8	1352.6	1354.1	1354.1	1353.1	1349.5	1346.4
52.5°	1499.6	1486.7	1471.3	1466.1	1460.5	1454.8	1447.6	1442.0
55°	1651.2	1629.1	1601.3	1588.5	1577.7	1564.8	1548.4	1542.7
57.5°	1826.9	1788.9	1751.9	1728.8	1701.0	1684.0	1663.0	1661.9
60°	2035.5	1984.2	1918.9	1884.5	1856.7	1836.7	1820.7	1814.6
62.5°	2276.6	2188.2	2117.8	2080.8	2048.4	2036.1	2016.0	2018.6
65°	2523.7	2433.8	2365.5	2335.7	2305.3	2297.1	2278.6	2285.3
67.5°	2791.5	2717.5	2642.5	2614.7	2587.0	2578.7	2559.7	2565.4
70°	3031.5	2937.4	2852.1	2797.7	2750.4	2712.3	2688.2	2678.4
72.5°	3079.3	2916.4	2782.2	2646.1	2567.4	2498.6	2470.3	2459.5
75°	2766.8	2514.0	2322.8	2163.0	2074.6	1974.4	1963.6	1948.7
77.5°	2152.2	1864.4	1633.2	1427.6	1308.9	1186.6	1144.4	1112.6
80°	1283.7	986.7	764.7	536.0	437.3	352.0	330.9	308.9
82.5°	459.4	294.5	198.4	154.7	138.2	127.4	119.2	108.4
85°	111.0	93.5	88.4	80.2	79.1	67.3	47.8	42.7
87.5°	35.5	32.4	32.9	31.3	32.9	24.7	20.0	18.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)