

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: P195771

Luminaire Tested: **NAV-AF-03-D-UNV-T2-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195771  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
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-T2-7050-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11682 lumens  
Efficiency: N/A  
Efficacy: 121.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G2

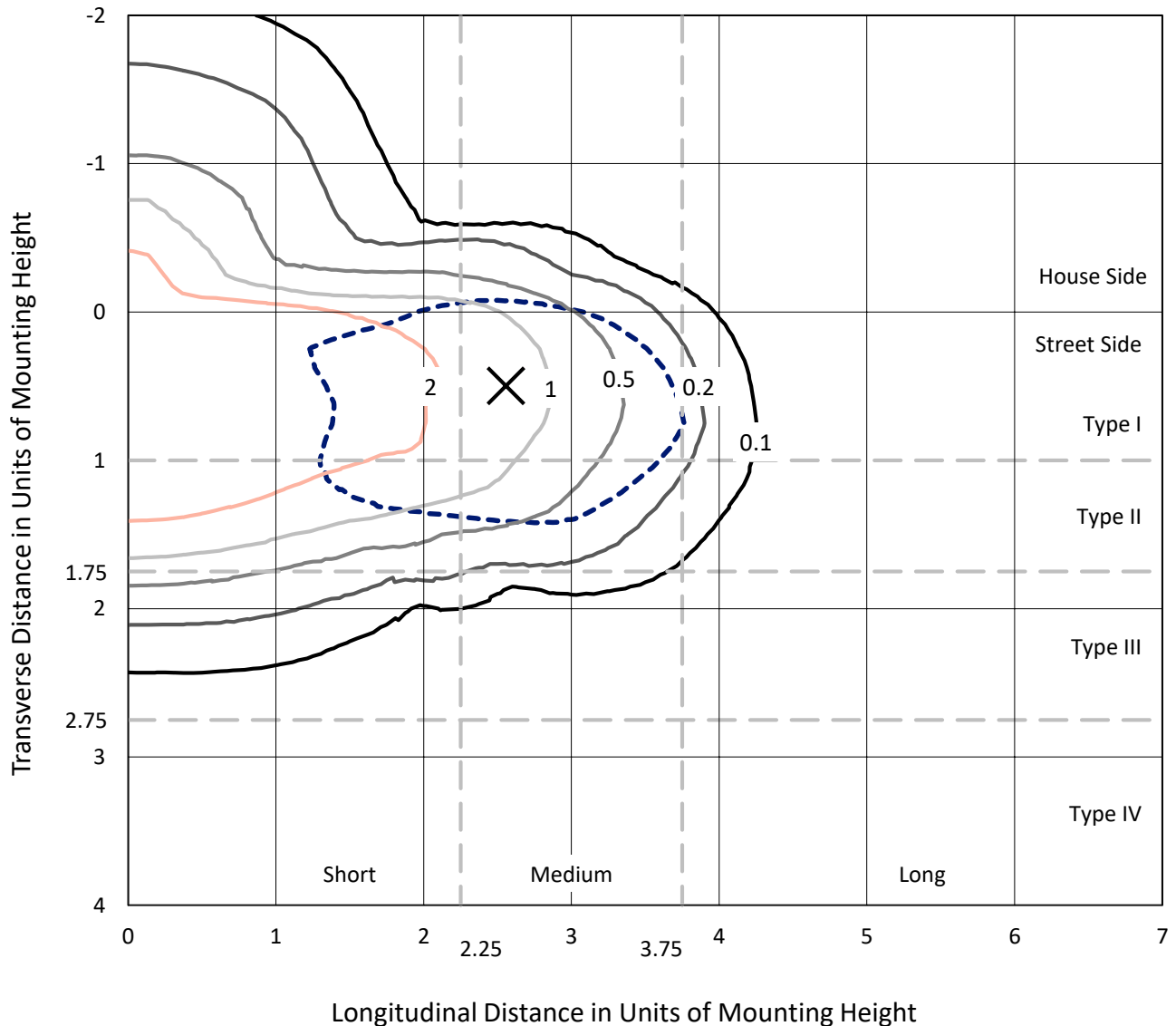
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

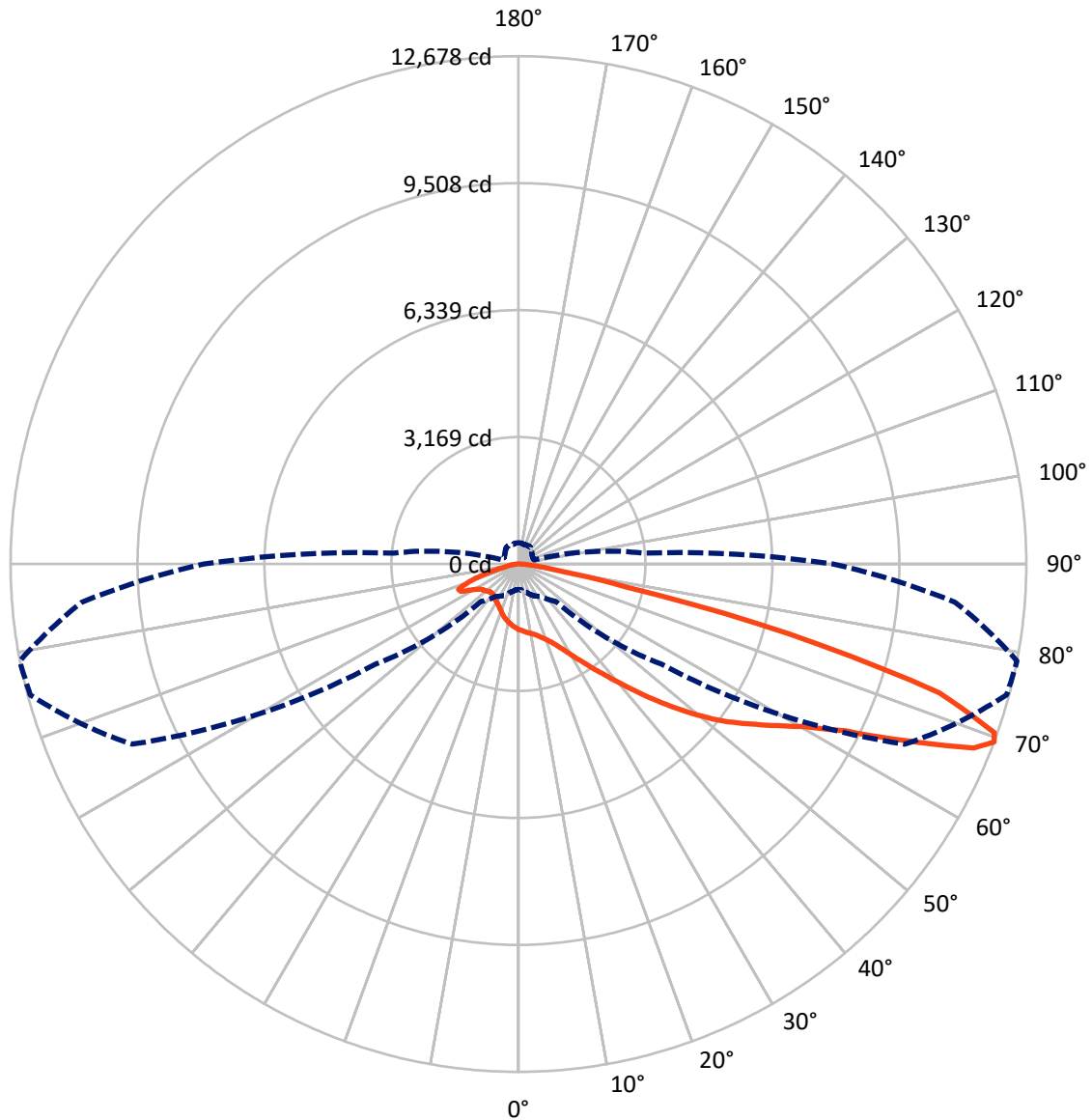
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2197.6	0.0	2197.6
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	9484.4	0.0	9484.4
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	11682.0	0.0	11682.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.0	1.3
10°-20°	435.7	3.7
20°-30°	720.0	6.2
30°-40°	1165.8	10.0
40°-50°	1862.4	15.9
50°-60°	2667.2	22.8
60°-70°	2971.6	25.4
70°-80°	1486.7	12.7
80°-90°	220.6	1.9
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°	11682.0	100.0
0°-180°	11682.0	100.0



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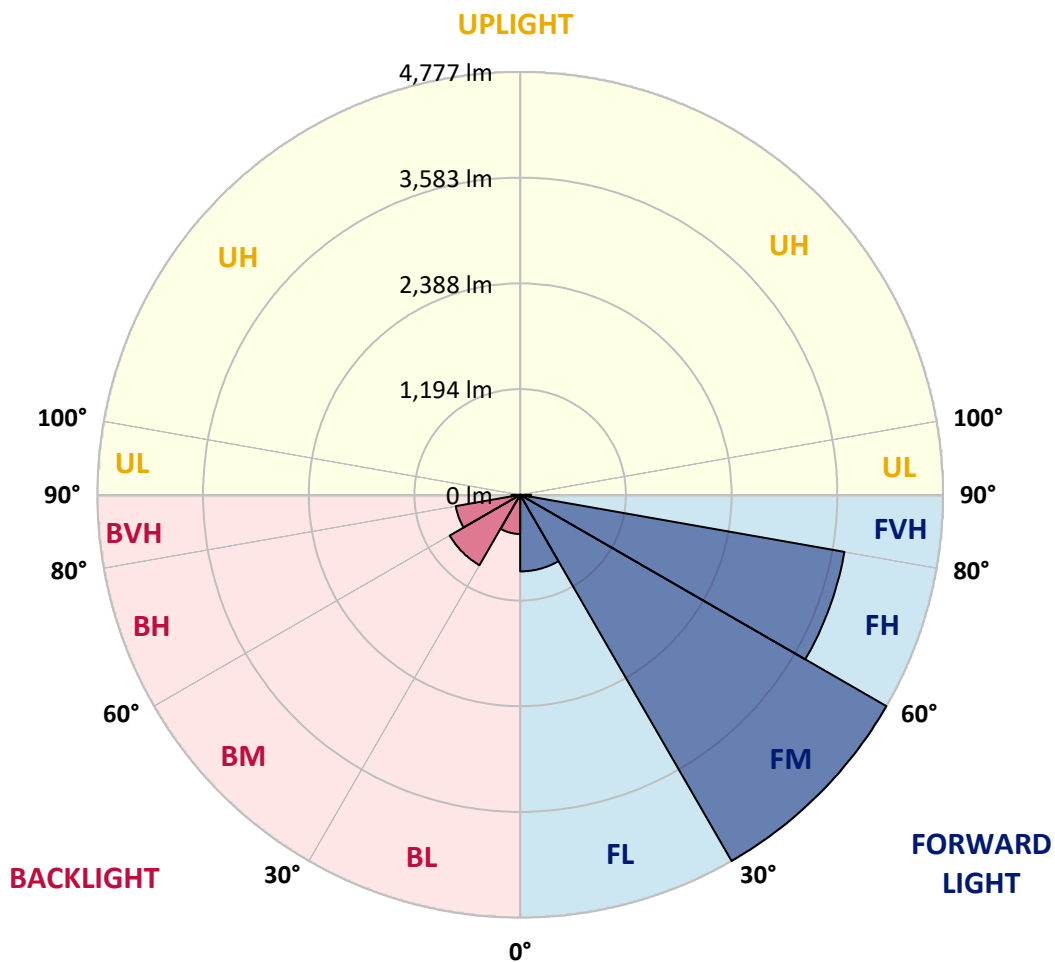
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	864.9	7.4			
FM (30°-60°)	4776.8	40.9			
FH (60°-80°)	3719.4	31.8			G2/5000
FVH (80°-90°)	123.3	1.1			G2/225
BL (0°-30°)	442.7	3.8	B1/500		
BM (30°-60°)	918.6	7.9	B1/1000		
BH (60°-80°)	738.9	6.3	B2/1000		G2/1000
BVH (80°-90°)	97.3	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4
2.5°	1799.8	1796.0	1795.3	1783.8	1777.7	1764.7	1734.1	1702.8	1673.7	1658.5	1642.4
5°	1950.4	1942.8	1938.9	1919.8	1903.0	1874.0	1825.8	1776.2	1724.2	1697.4	1665.3
7.5°	2041.4	2042.1	2042.1	2026.8	2010.0	1974.9	1913.7	1845.7	1768.5	1733.4	1682.9
10°	2049.0	2049.8	2061.2	2065.1	2068.9	2050.5	1994.0	1908.4	1809.0	1763.2	1697.4
12.5°	1973.3	1978.7	1997.8	2025.3	2064.3	2084.2	2059.7	1975.6	1861.0	1805.2	1725.0
15°	1871.7	1877.0	1901.5	1943.5	2006.2	2072.7	2107.1	2052.8	1929.0	1863.3	1765.5
17.5°	1822.0	1828.1	1844.9	1878.6	1939.7	2029.1	2132.3	2135.4	2009.3	1933.6	1813.6
20°	1798.3	1802.9	1824.3	1851.8	1898.4	1984.0	2134.6	2222.5	2104.8	2016.9	1872.5
22.5°	1852.6	1854.1	1864.8	1880.1	1911.4	1977.2	2133.1	2312.7	2224.0	2121.6	1948.1
25°	2011.6	2001.6	1994.0	1974.9	1982.5	2029.1	2157.5	2409.0	2376.9	2259.2	2049.0
27.5°	2199.6	2198.0	2178.2	2133.8	2105.6	2135.4	2227.1	2516.7	2564.1	2434.2	2181.2
30°	2409.0	2409.7	2389.1	2334.8	2277.5	2280.6	2337.9	2641.3	2788.0	2645.1	2344.0
32.5°	2628.3	2642.1	2603.9	2549.6	2480.0	2457.9	2496.9	2791.9	3047.1	2894.3	2532.8
35°	2890.5	2892.8	2850.7	2771.2	2701.7	2666.5	2702.4	2979.9	3346.0	3187.0	2762.8
37.5°	3162.5	3164.1	3120.5	3018.9	2931.0	2908.0	2947.8	3208.4	3662.4	3520.2	3033.4
40°	3384.9	3401.0	3366.6	3271.1	3182.4	3168.7	3226.0	3482.0	4066.7	3914.6	3355.1
42.5°	3637.1	3655.5	3614.2	3514.9	3444.6	3440.0	3529.4	3793.8	4468.7	4370.8	3719.7
45°	3921.5	3947.4	3890.1	3778.5	3718.9	3819.8	3825.2	4139.3	4931.8	4881.4	4130.1
47.5°	4231.7	4253.1	4206.5	4086.5	4021.6	4167.6	4114.8	4513.0	5432.4	5428.6	4574.1
50°	4471.0	4494.7	4499.2	4446.5	4378.5	4396.8	4432.8	4905.8	5931.5	5991.1	5033.5
52.5°	4427.4	4450.3	4553.5	4691.8	4801.1	4753.7	4797.3	5323.1	6413.7	6539.8	5469.9
55°	4075.8	4088.1	4281.4	4610.1	5075.5	5301.7	5304.8	5777.1	6872.3	7048.8	5884.1
57.5°	3442.3	3443.8	3695.2	4179.8	4915.8	5657.1	6105.7	6347.2	7350.7	7611.3	6397.7
60°	2435.7	2441.8	2734.5	3368.1	4343.3	5614.3	6967.1	7367.5	7904.8	8243.4	7059.5
62.5°	1446.0	1459.8	1680.6	2188.9	3226.0	5064.0	7476.1	9182.7	8721.1	9170.4	8118.8
65°	940.8	952.3	1084.5	1339.8	1906.1	3684.5	7308.7	10940.5	10265.6	10628.7	9641.2
67.5°	724.5	733.7	837.6	992.0	1169.3	1991.7	5843.6	11308.9	12145.7	12258.9	10926.0
69°	636.6	644.3	720.7	869.0	984.4	1318.4	4354.8	10640.1	12615.8	12677.7	10942.0
70°	590.0	596.1	668.0	796.4	904.1	1052.4	3333.0	9863.6	12443.8	12602.0	10626.4
72.5°	486.1	491.4	542.6	641.2	739.0	749.7	1476.6	7202.5	10478.1	10984.1	8992.4
75°	405.8	408.9	442.5	514.4	598.4	596.9	754.3	4079.7	6393.9	6996.9	5552.4
77.5°	338.6	340.9	363.0	407.4	472.3	470.0	531.2	1760.9	2823.2	2723.8	1911.4
80°	298.8	300.4	311.8	323.3	364.6	362.3	393.6	808.6	1148.7	1061.6	723.0
82.5°	227.0	230.0	288.1	293.5	282.8	272.8	274.4	470.8	588.5	535.8	388.2
85°	128.4	129.2	185.0	216.3	246.1	185.0	178.1	243.0	290.4	254.5	169.7
87.5°	57.3	59.6	88.7	102.4	133.0	108.5	101.6	103.2	125.3	103.9	67.3
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4	1639.4
2.5°	1627.1	1614.1	1583.6	1552.2	1520.9	1501.0	1480.4	1461.3	1453.6	1452.9	1438.4
5°	1634.0	1603.4	1533.9	1457.5	1384.9	1328.3	1280.9	1250.3	1220.5	1215.2	1202.2
7.5°	1636.3	1586.6	1473.5	1351.2	1240.4	1162.5	1115.1	1094.4	1079.9	1076.1	1071.5
10°	1635.5	1565.2	1406.3	1238.9	1112.8	1053.9	1036.3	1040.9	1047.0	1050.1	1050.1
12.5°	1647.8	1555.3	1339.0	1133.4	1030.2	1002.0	1015.7	1039.4	1057.7	1065.4	1066.9
15°	1669.9	1549.2	1264.9	1041.7	972.1	979.0	1012.7	1047.0	1073.0	1084.5	1087.6
17.5°	1697.4	1540.8	1179.3	966.0	938.5	962.2	1005.8	1049.3	1080.7	1095.2	1097.5
20°	1728.0	1528.5	1090.6	909.5	908.7	938.5	982.1	1031.0	1064.6	1080.7	1079.9
22.5°	1769.3	1517.1	1008.1	868.2	875.9	903.4	939.3	983.6	1014.9	1029.5	1026.4
25°	1824.3	1506.4	933.9	831.5	838.4	856.7	882.0	915.6	937.8	945.4	940.0
27.5°	1898.4	1498.0	875.9	797.9	797.1	805.5	820.8	839.2	849.9	847.6	839.2
30°	1989.4	1489.6	833.1	768.1	757.4	756.6	763.5	774.2	781.1	767.3	760.4
32.5°	2091.0	1475.0	794.8	742.1	723.0	716.1	719.2	733.7	762.0	748.2	742.9
35°	2211.0	1458.2	756.6	713.8	699.3	686.3	688.6	719.9	805.5	795.6	790.3
37.5°	2355.5	1442.9	721.5	683.3	682.5	666.4	664.9	702.4	817.0	795.6	791.0
40°	2529.0	1439.9	690.1	649.6	661.9	655.7	650.4	673.3	753.6	710.0	701.6
42.5°	2738.4	1453.6	667.2	617.5	638.2	652.7	642.7	648.1	681.0	642.0	635.1
45°	2982.9	1491.1	650.4	589.3	612.9	650.4	638.9	634.3	639.7	618.3	613.7
47.5°	3268.0	1557.6	638.9	565.6	589.3	644.3	637.4	628.2	625.9	613.7	610.6
50°	3573.0	1647.0	631.3	544.2	567.9	633.6	636.6	623.6	619.8	614.5	612.9
52.5°	3875.6	1744.1	622.1	525.8	550.3	620.6	637.4	619.1	613.7	610.6	609.1
55°	4176.7	1844.9	605.3	509.8	537.3	605.3	636.6	612.9	606.8	606.8	606.8
57.5°	4567.3	1998.6	583.1	496.8	520.5	585.4	626.7	606.1	597.7	598.4	599.2
60°	5131.3	2256.1	558.7	482.3	498.3	562.5	611.4	593.8	583.9	587.0	587.7
62.5°	6073.6	2706.3	525.1	461.6	475.4	538.0	591.5	577.0	567.9	573.2	574.0
65°	7330.1	3251.2	480.7	435.6	451.7	510.5	566.3	557.2	547.2	560.2	559.4
67.5°	8096.6	3410.9	434.1	408.1	428.8	481.5	535.0	531.2	524.3	547.2	545.7
69°	7845.2	3122.0	407.4	390.5	412.7	461.6	515.1	513.6	508.2	530.4	528.9
70°	7454.7	2852.2	390.5	379.1	404.3	449.4	502.1	502.1	496.8	515.9	512.1
72.5°	5988.0	2115.5	351.6	350.0	375.3	415.8	467.0	470.8	467.7	474.6	470.8
75°	3515.6	1274.8	313.3	317.9	340.1	379.8	428.0	431.0	428.0	427.2	428.0
77.5°	1219.0	571.7	276.7	283.5	302.6	343.2	385.2	391.3	386.7	381.4	382.9
80°	476.9	332.5	236.9	246.9	262.9	301.9	342.4	346.2	339.3	338.6	332.5
82.5°	286.6	202.5	184.2	200.2	220.1	262.1	295.8	294.2	288.9	320.2	280.5
85°	124.6	112.3	134.5	150.6	160.5	196.4	249.9	243.0	230.0	202.5	197.9
87.5°	50.4	58.1	74.1	89.4	96.3	126.9	171.2	165.1	167.4	137.6	136.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)