

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: STREETWORKS

Report Number: P231029

Luminaire Tested: **ARCH-M-AF48-100-D-U-T2R**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231029  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29635)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-M-AF48-100-D-U-T2R  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 660mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13708.6 lumens  
Efficiency: N/A  
Efficacy: 135.7 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 101  
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: 28.75 FT

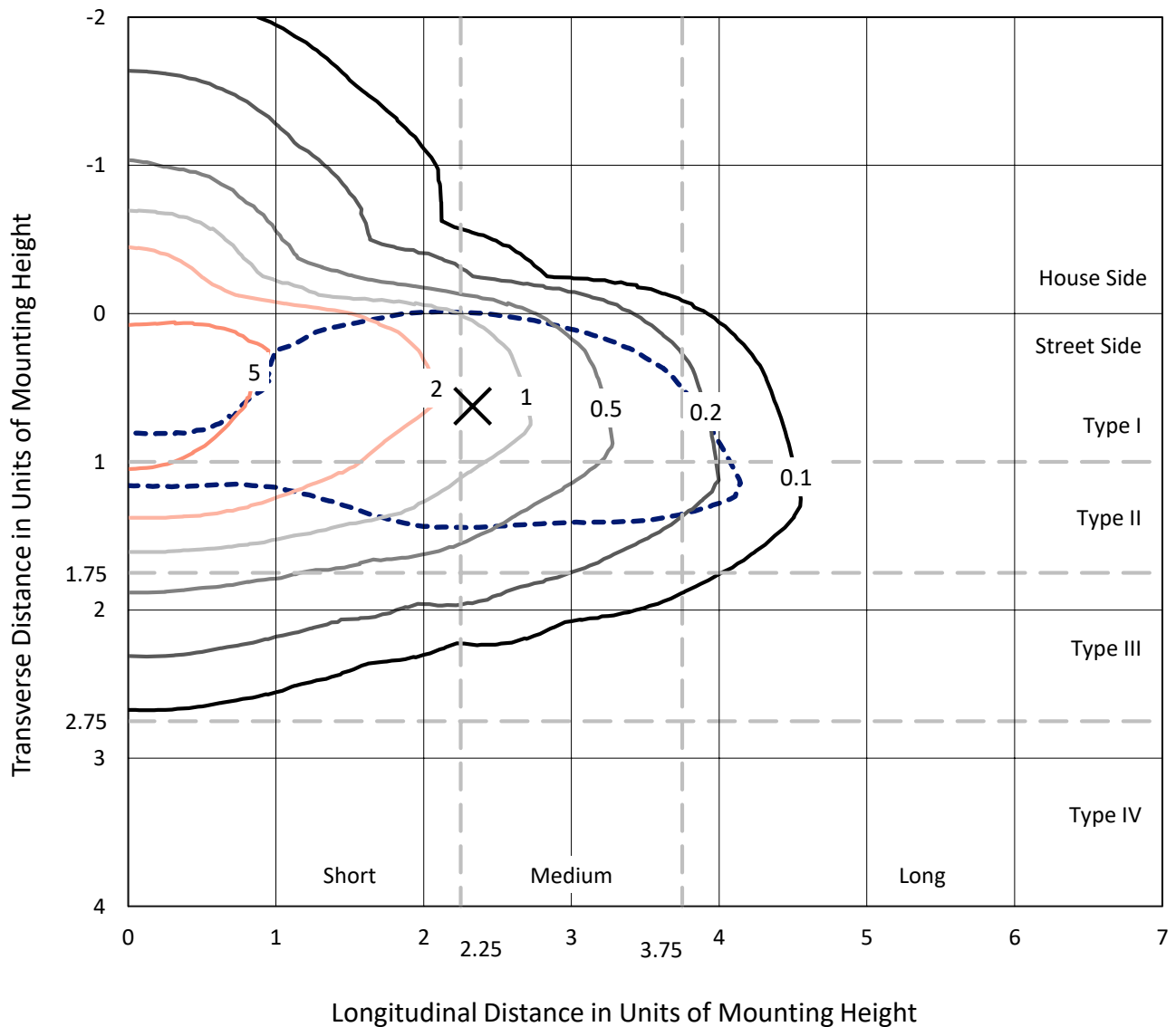


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

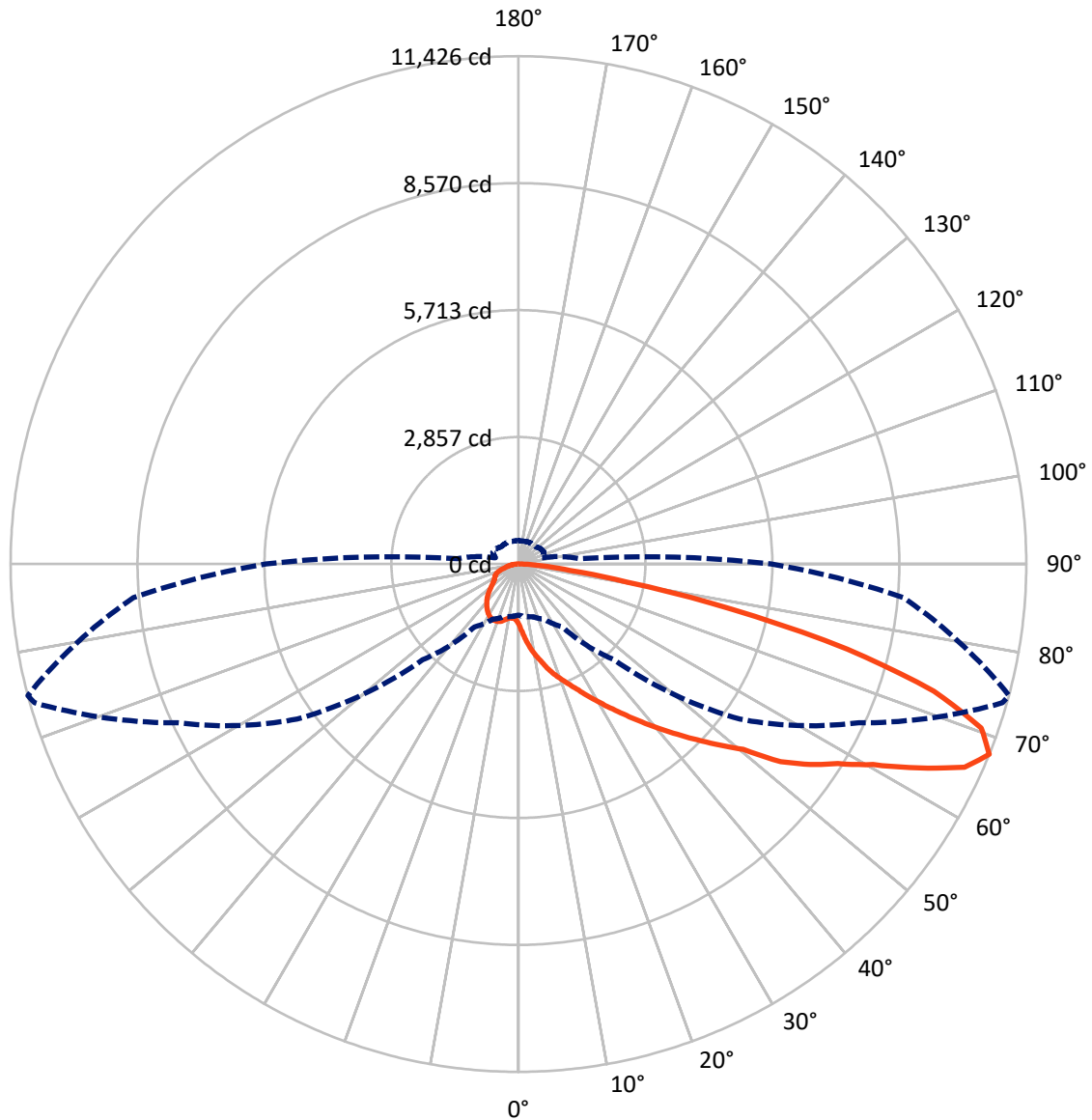


Based on 20 foot mounting height. Maximum calculated value = 7.1 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical



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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2340.9	0.0	2340.9
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	11367.6	0.0	11367.6
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	13708.6	0.0	13708.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.6	1.2
10°-20°	576.7	4.2
20°-30°	1051.9	7.7
30°-40°	1726.5	12.6
40°-50°	2496.8	18.2
50°-60°	2942.5	21.5
60°-70°	2859.4	20.9
70°-80°	1589.5	11.6
80°-90°	305.6	2.2
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°	13708.6	100.0
0°-180°	13708.6	100.0



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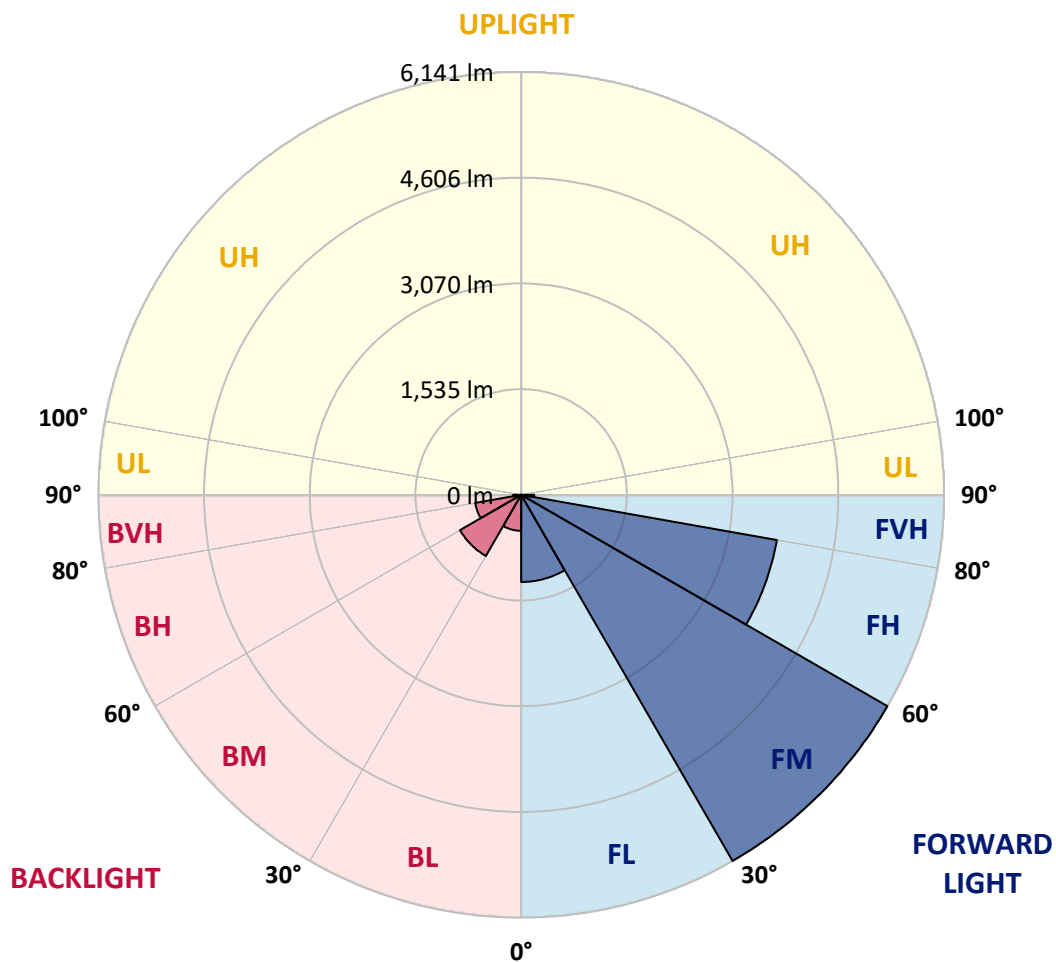
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1265.7	9.2			
FM (30°-60°)	6140.7	44.8			
FH (60°-80°)	3771.1	27.5			G2/5000
FVH (80°-90°)	190.2	1.4			G2/225
BL (0°-30°)	522.5	3.8	B2/1000		
BM (30°-60°)	1025.2	7.5	B2/2500		
BH (60°-80°)	677.8	4.9	B2/1000		G2/1000
BVH (80°-90°)	115.4	0.8			G2/225
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°	74°	75°	85°
0°	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4
2.5°	1925.8	1931.5	1920.1	1894.3	1857.1	1788.2	1728.1	1622.0	1527.5	1516.0	1415.7
5°	2264.0	2269.7	2255.4	2223.9	2183.7	2109.2	2026.2	1888.6	1736.7	1708.0	1496.0
7.5°	2496.1	2499.0	2481.8	2450.3	2418.8	2344.2	2261.1	2106.4	1920.1	1897.2	1599.1
10°	2693.8	2699.6	2676.7	2656.6	2622.2	2547.7	2461.7	2298.4	2106.4	2074.9	1705.2
12.5°	2877.3	2883.0	2868.7	2851.5	2840.0	2771.2	2676.7	2481.8	2275.5	2241.1	1831.3
15°	3000.5	3006.2	3009.1	3032.0	3046.3	2997.7	2903.0	2691.0	2458.9	2427.4	1980.2
17.5°	2966.0	2980.5	3023.4	3106.5	3195.4	3198.3	3120.8	2897.3	2639.4	2605.0	2132.1
20°	2865.8	2877.3	2928.8	3054.9	3229.8	3330.0	3324.3	3106.5	2808.5	2771.2	2272.6
22.5°	2948.9	2963.2	2963.2	3040.6	3212.6	3398.9	3473.3	3312.8	2977.6	2943.1	2413.0
25°	3304.2	3312.8	3252.7	3221.2	3284.2	3456.1	3596.6	3536.3	3183.9	3143.7	2564.8
27.5°	3800.1	3785.7	3711.2	3585.1	3516.3	3562.2	3705.4	3748.5	3421.8	3373.1	2722.5
30°	4292.9	4284.3	4198.4	4029.3	3874.5	3777.1	3825.8	3937.6	3679.7	3622.4	2874.4
32.5°	4754.4	4740.0	4645.4	4447.7	4272.9	4092.3	3997.8	4109.5	3954.8	3888.8	3043.5
35°	5178.5	5141.2	5046.6	4840.3	4659.7	4487.8	4255.7	4272.9	4252.8	4184.1	3229.8
37.5°	5522.4	5493.8	5390.5	5198.5	5006.5	4843.2	4599.6	4459.1	4573.8	4507.8	3444.7
40°	5826.1	5794.6	5688.6	5496.6	5318.9	5164.2	4972.2	4685.5	4934.9	4860.3	3685.4
42.5°	6055.5	6032.4	5946.5	5757.4	5585.4	5445.0	5350.4	4972.2	5310.3	5238.6	3949.1
45°	6178.6	6155.7	6109.9	5958.0	5800.3	5691.5	5700.1	5313.2	5703.0	5642.7	4261.4
47.5°	6026.7	6043.9	6084.1	6055.5	5958.0	5906.4	6012.4	5665.7	6141.4	6084.1	4599.6
50°	5619.8	5637.0	5797.5	5995.2	6029.6	6092.7	6293.3	6072.6	6605.6	6559.8	5018.0
52.5°	4619.6	4714.3	5158.4	5631.2	5955.1	6215.9	6605.6	6677.3	7388.0	7388.0	5757.4
55°	3490.5	3573.7	4080.9	4906.3	5665.7	6227.3	6834.9	7087.1	7952.5	7964.0	6144.3
57.5°	2828.6	2880.1	3129.4	3974.9	5058.1	6084.1	7107.2	7439.6	8422.6	8474.1	6642.9
60°	2295.5	2324.1	2487.5	3075.0	4218.4	5697.2	7302.0	7943.9	9093.1	9164.8	7279.1
62.5°	1845.6	1874.3	1983.1	2335.6	3310.0	4972.2	7267.7	8468.4	9987.3	10104.8	8113.0
65°	1473.0	1504.6	1576.2	1793.9	2453.1	4072.3	6915.1	8737.8	10912.9	11027.5	8666.1
67.5°	1149.2	1177.8	1226.5	1369.8	1728.1	3046.3	6081.2	8454.1	11328.5	11426.0	8694.8
70°	868.4	882.7	922.8	1014.5	1235.1	2023.3	4760.1	7502.6	10955.9	11044.8	8121.6
72.5°	673.5	670.5	693.6	739.4	862.6	1392.7	3155.2	6101.3	9686.3	9778.1	6929.5
75°	550.2	547.4	561.7	576.0	624.7	934.3	1862.8	4593.9	7817.9	7643.1	5198.5
77.5°	464.2	461.4	475.7	478.5	498.7	644.8	1060.4	3023.4	5215.7	4914.9	2928.8
80°	392.6	389.7	406.9	412.7	427.0	472.8	610.4	1636.4	2619.4	2481.8	1398.5
82.5°	295.2	306.7	338.2	352.5	369.7	349.6	378.3	722.2	1215.1	1160.6	607.5
85°	143.3	169.1	255.0	283.7	303.8	220.7	257.9	341.1	547.4	521.6	246.4
87.5°	48.7	43.0	151.9	180.6	197.7	100.4	143.3	189.1	226.4	206.3	77.3
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°	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4	1358.4
2.5°	1372.7	1329.7	1266.7	1217.9	1186.4	1160.6	1149.2	1146.3	1140.6	1137.7	1137.7
5°	1401.3	1324.0	1226.5	1175.0	1160.6	1149.2	1154.9	1157.8	1157.8	1157.8	1157.8
7.5°	1444.4	1335.5	1217.9	1183.6	1180.7	1180.7	1197.9	1206.5	1212.2	1212.2	1212.2
10°	1501.7	1355.5	1232.2	1203.6	1212.2	1217.9	1238.0	1249.5	1255.3	1258.1	1261.0
12.5°	1579.0	1398.5	1261.0	1238.0	1249.5	1252.4	1266.7	1272.4	1278.2	1281.0	1281.0
15°	1682.2	1461.6	1306.8	1278.2	1281.0	1278.2	1278.2	1272.4	1269.6	1269.6	1275.3
17.5°	1788.2	1521.7	1346.9	1306.8	1295.4	1272.4	1255.3	1240.8	1232.2	1226.5	1229.4
20°	1894.3	1576.2	1369.8	1312.5	1281.0	1243.7	1212.2	1192.1	1180.7	1169.2	1175.0
22.5°	2000.3	1627.7	1378.4	1295.4	1249.5	1195.0	1160.6	1129.1	1103.4	1086.2	1089.0
25°	2117.8	1685.1	1378.4	1275.3	1206.5	1149.2	1106.2	1054.6	1017.3	1003.0	1008.7
27.5°	2235.4	1733.8	1364.1	1238.0	1157.8	1100.5	1037.4	977.2	954.3	945.7	948.6
30°	2352.8	1771.0	1332.6	1192.1	1106.2	1043.1	960.0	919.9	891.3	868.4	871.2
32.5°	2470.3	1796.8	1289.6	1134.9	1051.7	971.5	902.8	856.8	805.3	776.6	779.5
35°	2605.0	1816.9	1238.0	1077.6	991.5	908.5	856.8	782.4	727.9	705.0	699.3
37.5°	2745.4	1831.3	1183.6	1014.5	931.4	862.6	811.0	719.3	667.7	636.2	633.3
40°	2897.3	1837.0	1117.7	948.6	874.1	833.9	750.8	682.1	593.2	573.2	573.2
42.5°	3077.9	1834.2	1051.7	882.7	811.0	768.0	707.9	676.4	598.9	578.9	567.4
45°	3284.2	1834.2	980.1	805.3	748.0	685.0	659.1	639.0	587.5	596.1	601.8
47.5°	3519.2	1828.4	894.2	742.3	696.4	641.9	627.6	584.6	564.6	570.3	576.0
50°	3843.0	1837.0	816.7	690.7	659.1	613.3	596.1	573.2	564.6	567.4	564.6
52.5°	4292.9	1808.3	742.3	659.1	630.4	570.3	570.3	567.4	570.3	567.4	567.4
55°	4539.4	1745.3	687.8	641.9	610.4	550.2	561.7	567.4	573.2	570.3	570.3
57.5°	4889.0	1702.3	644.8	630.4	598.9	544.5	556.0	567.4	570.3	567.4	567.4
60°	5301.7	1673.6	616.1	633.3	590.3	544.5	558.8	567.4	564.6	561.7	561.7
62.5°	5780.3	1662.2	596.1	641.9	581.8	547.4	558.8	567.4	556.0	553.1	553.1
65°	5960.8	1559.0	570.3	647.6	587.5	547.4	556.0	558.8	544.5	541.7	538.8
67.5°	5682.9	1381.3	533.1	636.2	604.7	547.4	547.4	544.5	527.3	524.5	518.7
70°	5060.9	1146.3	475.7	598.9	616.1	550.2	535.9	521.6	504.4	504.4	493.0
72.5°	4144.0	902.8	401.2	533.1	607.5	558.8	513.0	493.0	472.8	472.8	461.4
75°	2986.2	673.5	321.0	444.2	570.3	556.0	484.4	458.5	435.6	432.7	418.4
77.5°	1702.3	472.8	260.8	346.8	507.3	541.7	458.5	418.4	392.6	384.0	375.4
80°	874.1	318.1	212.1	272.2	421.3	501.6	438.4	372.6	343.9	329.6	315.3
82.5°	415.5	212.1	163.4	200.6	318.1	438.4	412.7	321.0	289.5	272.2	255.0
85°	186.3	126.1	108.9	129.0	226.4	341.1	364.0	263.6	226.4	283.7	209.2
87.5°	60.1	57.3	57.3	60.1	108.9	149.0	266.5	194.9	180.6	149.0	126.1
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)