

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: P231037

Luminaire Tested: **ARCH-M-AF48-50-D-U-T2R**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231037  
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-AF48-50-D-U-T2R  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 305mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6940.7 lumens  
Efficiency: N/A  
Efficacy: 144.6 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 48  
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

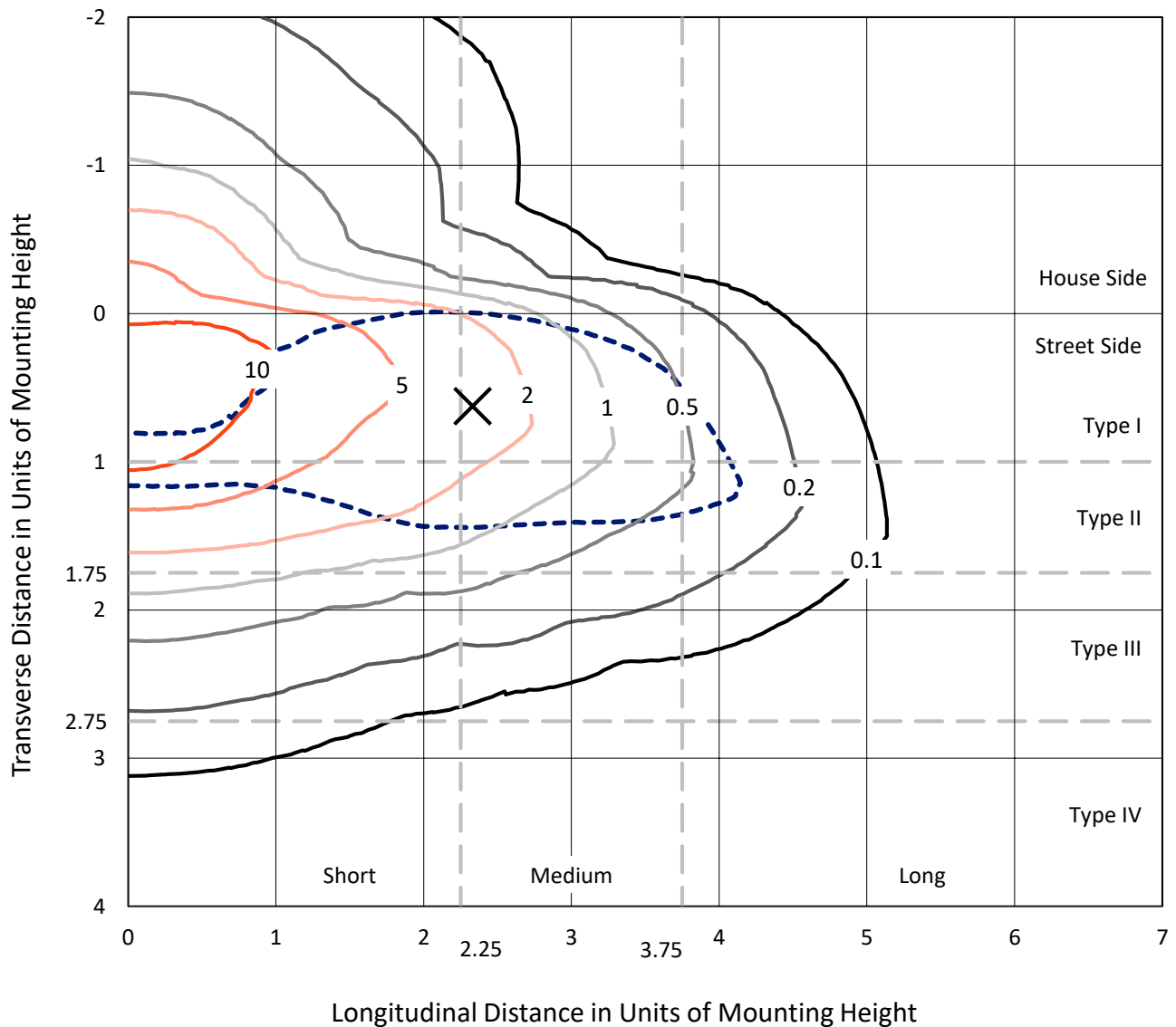


REPORT NUMBER: P231037

CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

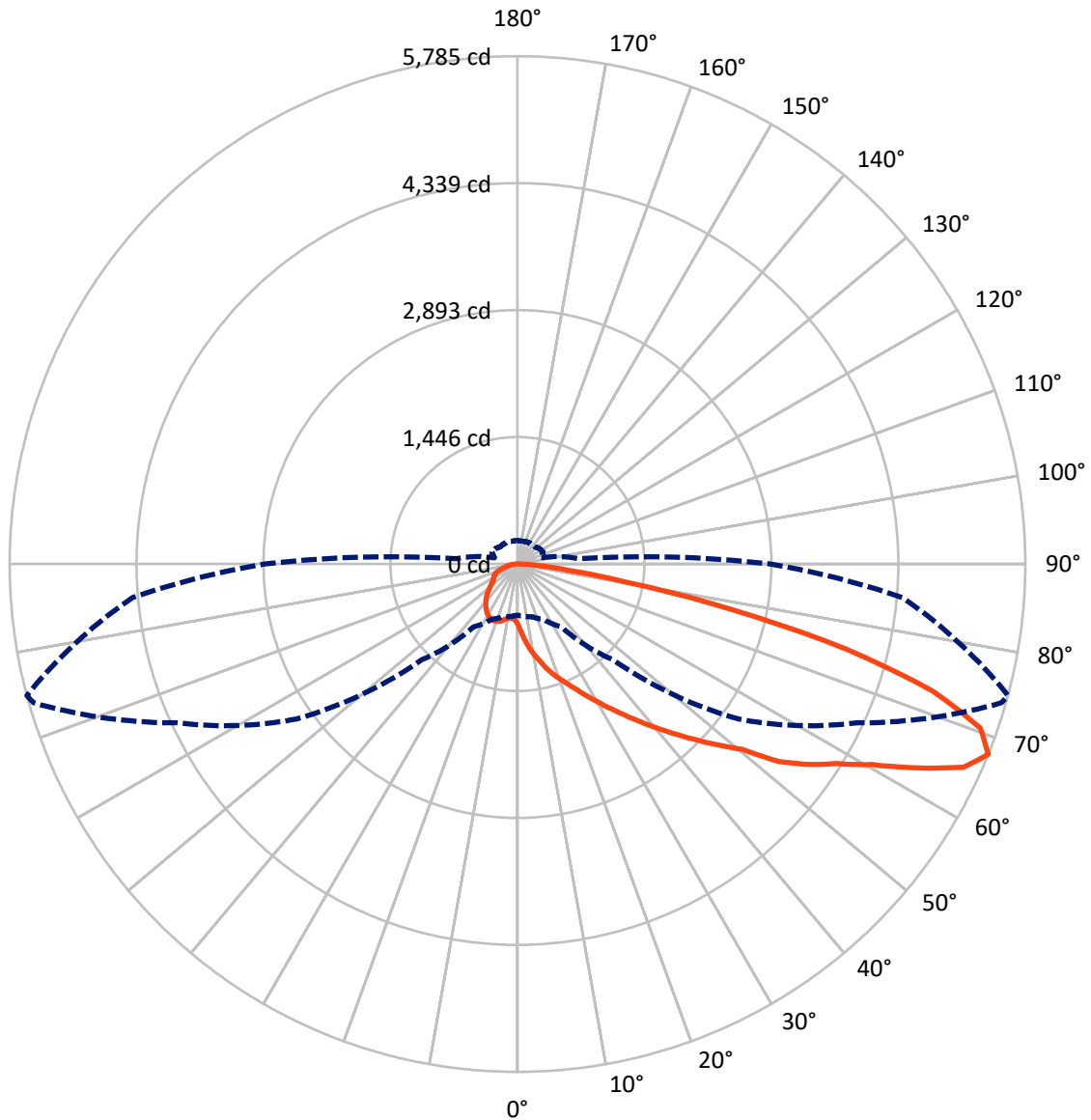


Based on 10 foot mounting height. Maximum calculated value = 14.4 fc  
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P231037

CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P231037

CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1185.2	0.0	1185.2
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	5755.5	0.0	5755.5
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	6940.7	0.0	6940.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.8	1.2
10°-20°	292.0	4.2
20°-30°	532.6	7.7
30°-40°	874.2	12.6
40°-50°	1264.2	18.2
50°-60°	1489.8	21.5
60°-70°	1447.7	20.9
70°-80°	804.7	11.6
80°-90°	154.7	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°	6940.7	100.0
0°-180°	6940.7	100.0



REPORT NUMBER: P231037

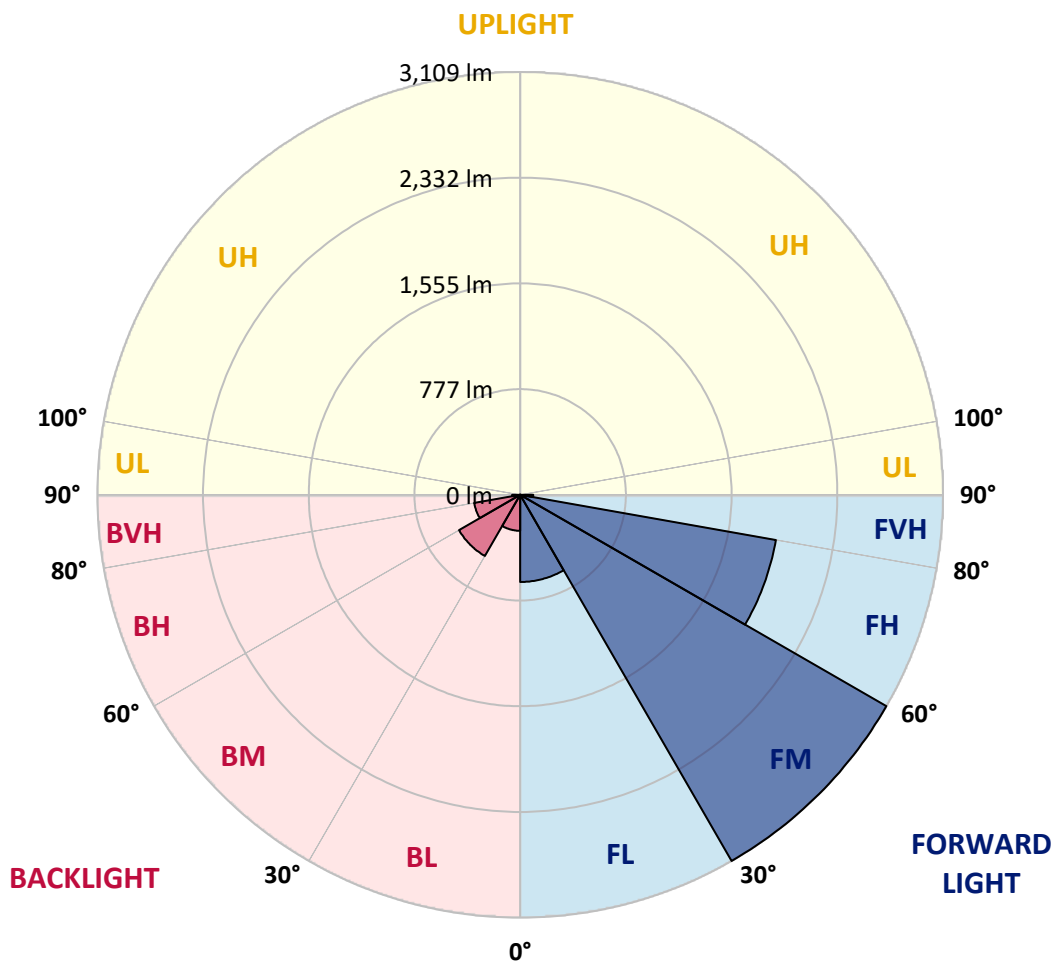
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	640.8	9.2			
FM (30°-60°)	3109.1	44.8			
FH (60°-80°)	1909.3	27.5			G2/5000
FVH (80°-90°)	96.3	1.4			G1/100
BL (0°-30°)	264.5	3.8	B1/500		
BM (30°-60°)	519.1	7.5	B1/1000		
BH (60°-80°)	343.2	4.9	B1/500		G1/500
BVH (80°-90°)	58.4	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Medium





REPORT NUMBER: P231037

CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	74°	75°	85°
0°	687.7	687.7	687.7	687.7	687.7	687.7	687.7	687.7	687.7	687.7	687.7
2.5°	975.1	977.9	972.1	959.1	940.2	905.4	874.9	821.2	773.4	767.5	716.8
5°	1146.2	1149.2	1141.9	1126.0	1105.6	1068.0	1025.8	956.2	879.3	864.8	757.4
7.5°	1263.8	1265.3	1256.5	1240.5	1224.6	1186.9	1144.8	1066.4	972.1	960.6	809.7
10°	1363.9	1366.8	1355.2	1345.1	1327.6	1289.9	1246.4	1163.7	1066.4	1050.5	863.4
12.5°	1456.8	1459.6	1452.4	1443.7	1437.9	1403.1	1355.2	1256.5	1152.0	1134.7	927.2
15°	1519.2	1522.0	1523.5	1535.1	1542.4	1517.8	1469.9	1362.5	1244.9	1229.0	1002.6
17.5°	1501.8	1509.0	1530.7	1572.9	1617.8	1619.2	1580.0	1466.9	1336.4	1318.9	1079.5
20°	1451.0	1456.8	1482.9	1546.7	1635.2	1686.0	1683.2	1572.9	1421.9	1403.1	1150.6
22.5°	1493.0	1500.3	1500.3	1539.4	1626.5	1720.8	1758.6	1677.3	1507.5	1490.1	1221.7
25°	1672.9	1677.3	1646.8	1630.9	1662.8	1749.9	1821.0	1790.5	1612.1	1591.7	1298.6
27.5°	1924.0	1916.7	1879.0	1815.1	1780.3	1803.6	1876.1	1897.9	1732.5	1707.8	1378.4
30°	2173.6	2169.2	2125.7	2040.1	1961.7	1912.4	1937.1	1993.6	1863.0	1834.0	1455.4
32.5°	2407.1	2399.9	2352.0	2251.9	2163.4	2072.0	2024.1	2080.7	2002.3	1969.0	1541.0
35°	2621.9	2603.0	2555.1	2450.7	2359.2	2272.2	2154.6	2163.4	2153.2	2118.4	1635.2
37.5°	2796.0	2781.5	2729.2	2632.1	2534.9	2452.1	2328.8	2257.7	2315.8	2282.4	1744.0
40°	2949.8	2933.8	2880.1	2782.9	2693.0	2614.7	2517.4	2372.3	2498.6	2460.8	1866.0
42.5°	3065.9	3054.3	3010.7	2915.0	2827.9	2756.9	2709.0	2517.4	2688.6	2652.4	1999.5
45°	3128.3	3116.6	3093.5	3016.6	2936.8	2881.7	2885.9	2690.1	2887.4	2857.0	2157.6
47.5°	3051.4	3060.1	3080.4	3065.9	3016.6	2990.4	3044.1	2868.6	3109.5	3080.4	2328.8
50°	2845.3	2854.0	2935.3	3035.4	3052.8	3084.7	3186.3	3074.6	3344.4	3321.2	2540.6
52.5°	2339.0	2386.9	2611.7	2851.2	3015.1	3147.1	3344.4	3380.8	3740.6	3740.6	2915.0
55°	1767.2	1809.4	2066.2	2484.0	2868.6	3152.9	3460.5	3588.2	4026.4	4032.3	3110.9
57.5°	1432.1	1458.2	1584.4	2012.5	2561.0	3080.4	3598.4	3766.7	4264.4	4290.5	3363.4
60°	1162.2	1176.7	1259.5	1556.9	2135.8	2884.5	3697.0	4022.0	4603.9	4640.2	3685.5
62.5°	934.5	948.9	1004.0	1182.5	1675.9	2517.4	3679.7	4287.6	5056.7	5116.1	4107.7
65°	745.8	761.8	798.0	908.3	1242.1	2061.9	3501.2	4424.0	5525.3	5583.3	4387.7
67.5°	581.9	596.4	621.0	693.6	874.9	1542.4	3079.0	4280.3	5735.7	5785.0	4402.3
70°	439.7	446.9	467.2	513.6	625.3	1024.4	2410.1	3798.6	5547.1	5592.1	4112.1
72.5°	340.9	339.5	351.2	374.4	436.7	705.1	1597.5	3089.1	4904.2	4950.7	3508.4
75°	278.5	277.1	284.4	291.6	316.3	473.0	943.2	2325.9	3958.2	3869.7	2632.1
77.5°	235.1	233.6	240.9	242.3	252.5	326.4	536.8	1530.7	2640.7	2488.4	1482.9
80°	198.8	197.3	206.0	209.0	216.1	239.4	309.0	828.5	1326.2	1256.5	708.1
82.5°	149.5	155.3	171.2	178.5	187.2	177.0	191.5	365.6	615.2	587.7	307.6
85°	72.5	85.6	129.1	143.6	153.9	111.7	130.6	172.7	277.1	264.1	124.8
87.5°	24.7	21.8	76.9	91.5	100.1	50.7	72.5	95.7	114.7	104.4	39.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P231037

CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	687.7	687.7	687.7	687.7	687.7	687.7	687.7	687.7	687.7	687.7	687.7
2.5°	695.0	673.2	641.3	616.6	600.7	587.7	581.9	580.4	577.5	576.0	576.0
5°	709.5	670.3	621.0	594.8	587.7	581.9	584.7	586.2	586.2	586.2	586.2
7.5°	731.3	676.2	616.6	599.2	597.8	597.8	606.5	610.9	613.8	613.8	613.8
10°	760.3	686.3	623.9	609.4	613.8	616.6	626.9	632.6	635.6	637.0	638.4
12.5°	799.4	708.1	638.4	626.9	632.6	634.0	641.3	644.3	647.1	648.6	648.6
15°	851.7	740.0	661.6	647.1	648.6	647.1	647.1	644.3	642.8	642.8	645.7
17.5°	905.4	770.5	682.0	661.6	655.8	644.3	635.6	628.3	623.9	621.0	622.5
20°	959.1	798.0	693.6	664.5	648.6	629.7	613.8	603.6	597.8	592.0	594.8
22.5°	1012.8	824.2	698.0	655.8	632.6	605.1	587.7	571.7	558.6	549.9	551.4
25°	1072.3	853.1	698.0	645.7	610.9	581.9	560.1	534.0	515.1	507.8	510.8
27.5°	1131.8	877.8	690.7	626.9	586.2	557.2	525.3	494.8	483.1	478.8	480.3
30°	1191.2	896.7	674.7	603.6	560.1	528.1	486.1	465.7	451.2	439.7	441.1
32.5°	1250.8	909.7	652.9	574.6	532.5	491.8	457.1	433.8	407.7	393.2	394.7
35°	1318.9	919.9	626.9	545.5	502.1	459.9	433.8	396.1	368.6	356.9	354.0
37.5°	1390.0	927.2	599.2	513.6	471.6	436.7	410.6	364.2	338.1	322.1	320.7
40°	1466.9	930.1	565.9	480.3	442.5	422.3	380.1	345.3	300.3	290.2	290.2
42.5°	1558.4	928.6	532.5	446.9	410.6	388.8	358.3	342.4	303.2	293.1	287.2
45°	1662.8	928.6	496.2	407.7	378.7	346.8	333.7	323.6	297.5	301.8	304.7
47.5°	1781.8	925.7	452.7	375.8	352.6	325.0	317.7	296.0	285.8	288.8	291.6
50°	1945.8	930.1	413.5	349.6	333.7	310.5	301.8	290.2	285.8	287.2	285.8
52.5°	2173.6	915.5	375.8	333.7	319.3	288.8	288.8	287.2	288.8	287.2	287.2
55°	2298.4	883.6	348.2	325.0	309.0	278.5	284.4	287.2	290.2	288.8	288.8
57.5°	2475.3	861.8	326.4	319.3	303.2	275.7	281.5	287.2	288.8	287.2	287.2
60°	2684.3	847.4	312.0	320.7	298.9	275.7	282.9	287.2	285.8	284.4	284.4
62.5°	2926.6	841.6	301.8	325.0	294.5	277.1	282.9	287.2	281.5	280.1	280.1
65°	3018.0	789.3	288.8	328.0	297.5	277.1	281.5	282.9	275.7	274.3	272.8
67.5°	2877.3	699.4	269.9	322.1	306.2	277.1	277.1	275.7	267.0	265.6	262.6
70°	2562.4	580.4	240.9	303.2	312.0	278.5	271.3	264.1	255.3	255.3	249.6
72.5°	2098.1	457.1	203.2	269.9	307.6	282.9	259.7	249.6	239.4	239.4	233.6
75°	1511.9	340.9	162.5	224.9	288.8	281.5	245.2	232.1	220.5	219.1	211.9
77.5°	861.8	239.4	132.1	175.5	256.9	274.3	232.1	211.9	198.8	194.5	190.1
80°	442.5	161.0	107.4	137.8	213.3	253.9	222.0	188.6	174.1	166.8	159.6
82.5°	210.4	107.4	82.7	101.6	161.0	222.0	209.0	162.5	146.6	137.8	129.1
85°	94.3	63.8	55.1	65.3	114.7	172.7	184.2	133.5	114.7	143.6	105.9
87.5°	30.5	29.1	29.1	30.5	55.1	75.5	134.9	98.7	91.5	75.5	63.8
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)