

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: P231160

Luminaire Tested: **ARCH-M-AF48-110-D-U-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231160  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29465)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-M-AF48-110-D-U-T3  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 720mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14570.9 lumens  
Efficiency: N/A  
Efficacy: 131.3 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

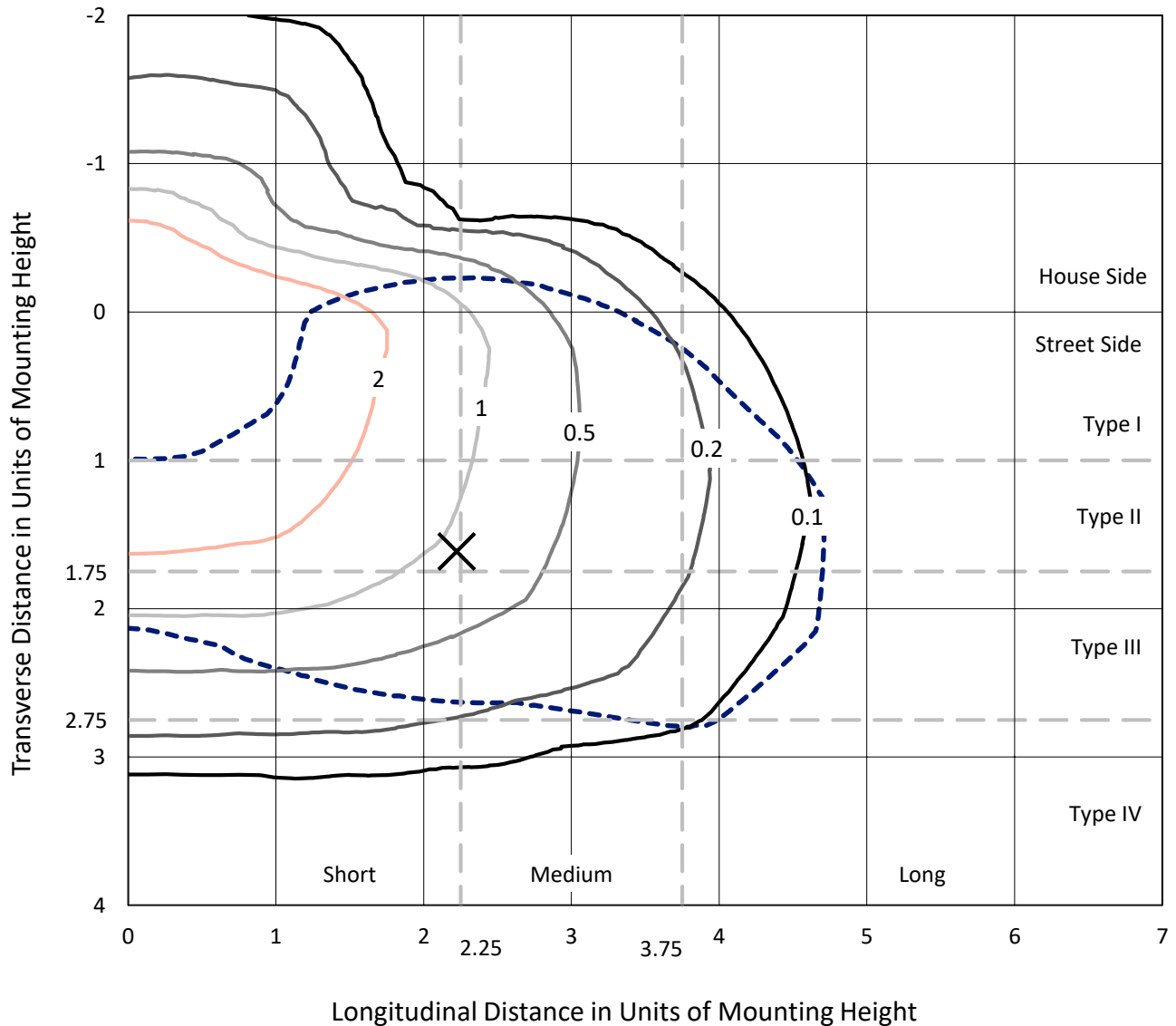
Input Watts (W): 111  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

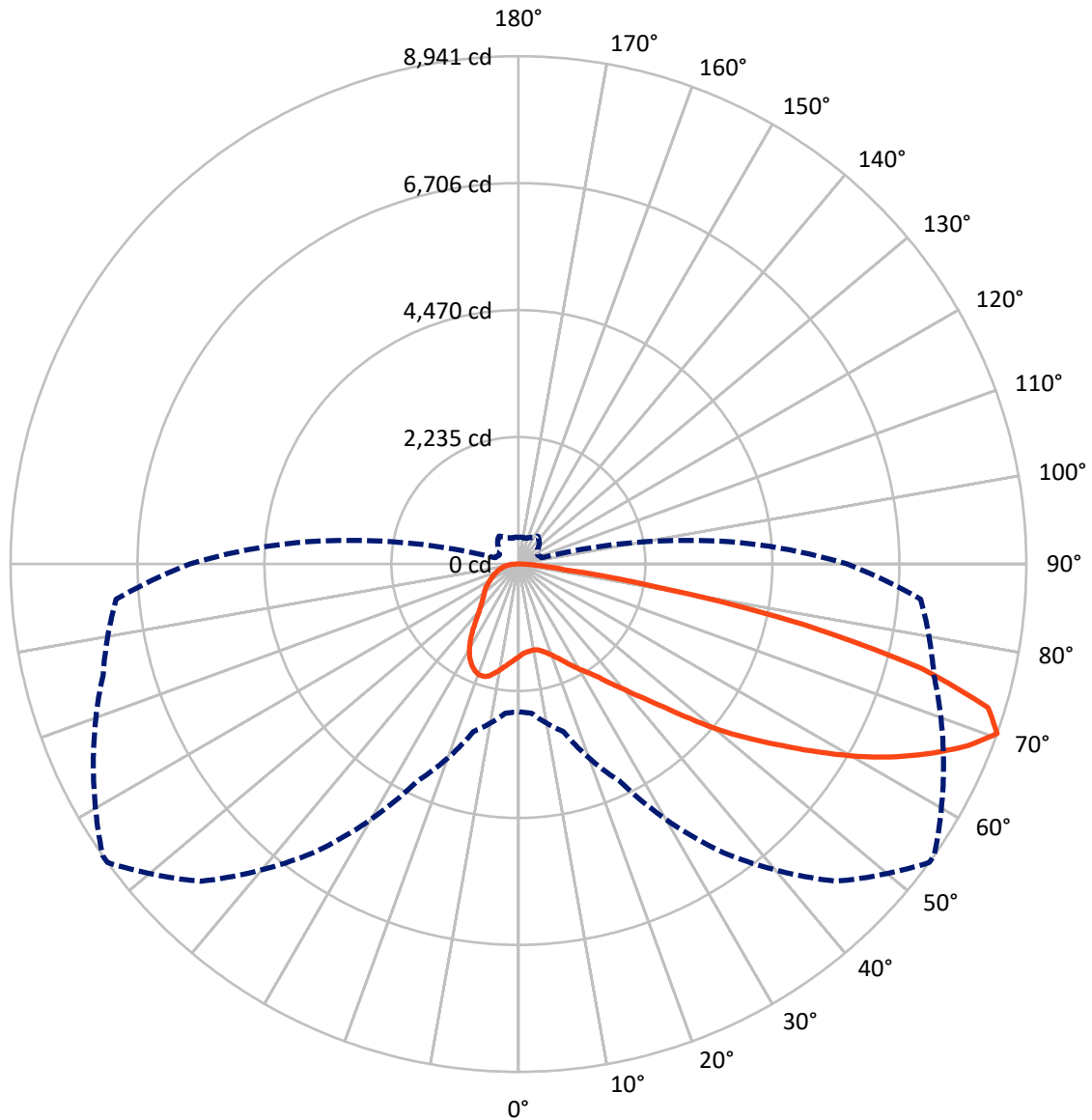
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.7 fc  
 Type III - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 54-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3304.6	0.0	3304.6
	% Fixture	22.7	0.0	22.7
<b>Street Side</b>	Lumens	11266.3	0.0	11266.3
	% Fixture	77.3	0.0	77.3
<b>Total</b>	Lumens	14570.9	0.0	14570.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.0	1.1
10°-20°	511.2	3.5
20°-30°	888.1	6.1
30°-40°	1297.9	8.9
40°-50°	2036.9	14.0
50°-60°	3132.4	21.5
60°-70°	3827.0	26.3
70°-80°	2372.7	16.3
80°-90°	344.7	2.4
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°	14570.9	100.0
0°-180°	14570.9	100.0



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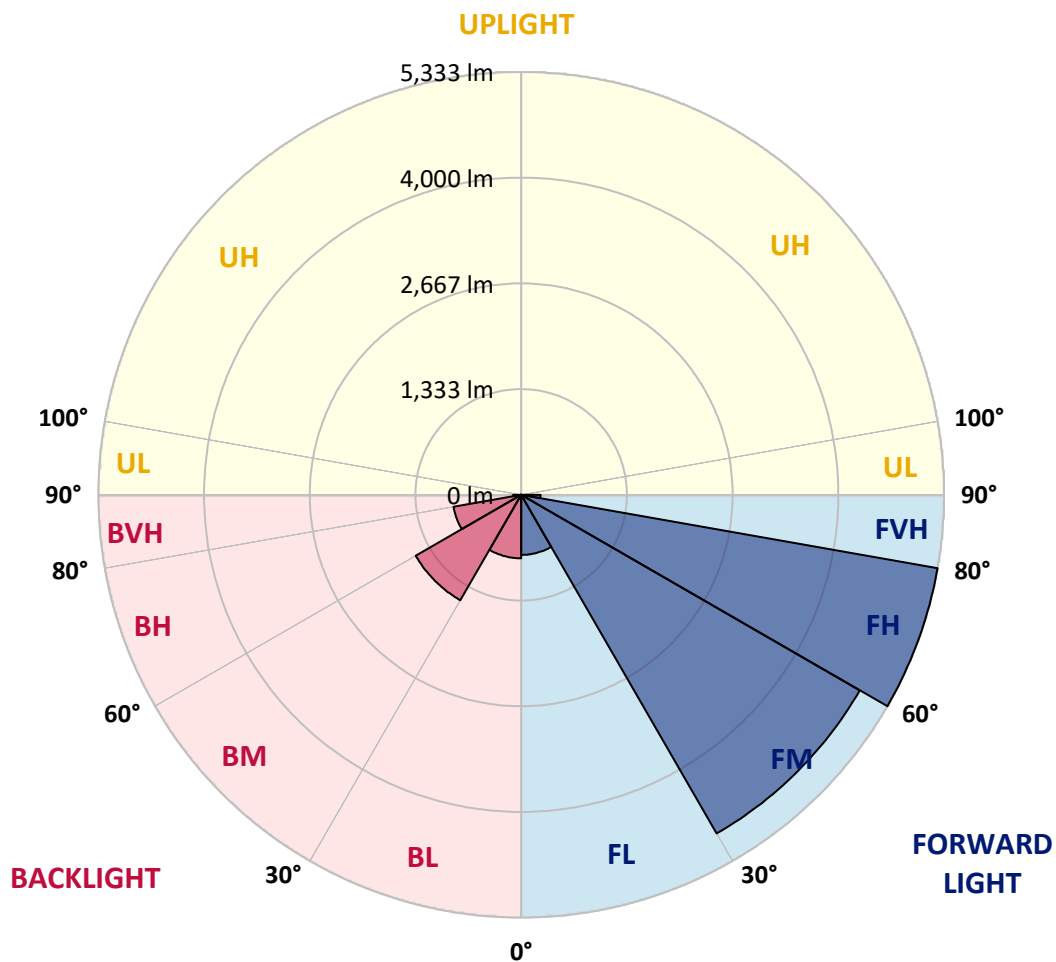
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	758.1	5.2			
FM	(30°-60°)	4931.6	33.8			
FH	(60°-80°)	5333.2	36.6			G3/7500
FVH	(80°-90°)	243.4	1.7			G3/500
BL	(0°-30°)	801.2	5.5	B2/1000		
BM	(30°-60°)	1535.6	10.5	B2/2500		
BH	(60°-80°)	866.6	5.9	B2/1000		G2/1000
BVH	(80°-90°)	101.3	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2
2.5°	1566.1	1560.8	1560.8	1568.8	1571.5	1579.5	1579.5	1582.2	1590.2	1603.5	1619.5
5°	1518.2	1515.5	1518.2	1528.8	1534.1	1550.2	1555.5	1558.2	1574.1	1595.5	1619.5
7.5°	1470.1	1467.4	1472.7	1488.8	1504.8	1528.8	1542.1	1544.9	1568.8	1598.2	1630.2
10°	1454.1	1451.5	1459.4	1472.7	1488.8	1515.5	1536.8	1539.4	1574.1	1608.9	1654.2
12.5°	1475.4	1472.7	1480.8	1494.1	1510.1	1528.8	1552.8	1555.5	1600.8	1646.2	1694.2
15°	1528.8	1528.8	1531.5	1539.4	1555.5	1571.5	1592.8	1595.5	1643.6	1696.9	1744.9
17.5°	1611.6	1606.1	1606.1	1603.5	1614.2	1622.2	1648.9	1651.6	1702.2	1750.3	1798.2
20°	1712.9	1710.3	1699.5	1686.2	1683.6	1688.9	1715.6	1718.3	1768.9	1809.0	1854.3
22.5°	1835.6	1838.3	1814.3	1784.9	1771.6	1779.6	1803.6	1806.3	1843.7	1878.3	1918.3
25°	1998.3	1990.4	1955.7	1913.0	1886.3	1886.3	1910.4	1910.4	1945.0	1966.4	1993.0
27.5°	2153.1	2137.1	2105.1	2043.8	2001.1	2009.1	2033.1	2033.1	2065.1	2073.1	2086.4
30°	2321.2	2305.2	2265.2	2187.8	2131.8	2126.4	2155.8	2153.1	2195.9	2193.1	2182.5
32.5°	2526.7	2518.6	2451.9	2353.2	2278.5	2259.9	2286.5	2289.2	2315.9	2307.9	2273.2
35°	2814.9	2812.2	2750.8	2577.3	2478.6	2443.9	2460.0	2460.0	2478.6	2457.3	2398.6
37.5°	3177.7	3183.0	3129.6	2873.5	2734.8	2676.0	2678.7	2676.0	2681.5	2657.4	2596.0
40°	3540.5	3553.8	3551.2	3241.7	3065.6	2964.2	2926.9	2921.5	2934.8	2924.2	2865.5
42.5°	4018.2	4050.2	3975.4	3695.3	3497.9	3327.0	3225.7	3212.4	3241.7	3255.0	3199.0
45°	4514.4	4503.7	4386.3	4183.6	4004.8	3785.9	3593.9	3572.6	3593.9	3633.9	3575.2
47.5°	4773.2	4765.2	4735.9	4634.5	4607.8	4357.0	4066.1	4047.5	4007.4	4063.5	3994.1
50°	5200.1	5208.0	5088.1	5077.3	5189.4	5050.6	4599.8	4557.0	4485.0	4530.3	4471.7
52.5°	5509.6	5474.8	5400.2	5493.6	5843.1	5768.3	5101.4	5082.6	5015.9	5005.3	4978.6
55°	5634.9	5634.9	5648.3	5864.4	6363.4	6264.7	5645.7	5664.3	5573.5	5498.9	5533.6
57.5°	5672.4	5688.3	5803.1	6160.6	6974.4	6651.5	6245.9	6272.6	6141.9	5992.4	6101.9
60°	5488.2	5536.2	5811.1	6328.7	7318.5	7062.4	6878.3	6886.3	6696.8	6478.0	6670.2
62.5°	5015.9	5074.7	5565.6	6398.0	7262.4	7483.9	7475.9	7494.6	7235.8	6963.6	7203.8
65°	4437.0	4495.7	5018.6	6203.3	7219.8	7785.5	8022.9	8073.5	7740.1	7374.6	7537.3
67.5°	3585.9	3663.3	4159.5	5547.0	7011.7	8033.5	8535.2	8588.5	8129.6	7587.9	7507.9
70°	2598.7	2636.0	3052.3	4215.6	6163.3	7897.5	8940.7	8938.0	8257.7	7572.0	7107.8
72.5°	1251.4	1280.6	1640.8	2617.4	4407.7	6702.2	8647.2	8697.9	8081.6	7339.9	6192.6
75°	515.0	544.3	664.3	1104.6	2313.2	4429.0	7329.2	7449.2	7339.9	6587.5	4845.2
77.5°	320.2	330.8	389.5	571.0	1056.6	2067.8	5130.7	5293.5	5816.4	5277.4	3199.0
80°	240.1	248.2	290.8	400.2	667.1	763.0	2548.0	2753.5	3524.5	3028.2	1448.8
82.5°	200.1	202.7	232.1	290.8	453.6	437.5	816.4	909.8	1643.6	1155.3	498.9
85°	186.8	192.1	208.1	208.1	288.2	274.8	338.8	354.9	477.6	394.9	173.4
87.5°	96.1	90.7	184.1	162.8	149.5	133.4	144.0	154.8	178.8	189.5	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°	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2	1630.2
2.5°	1624.9	1632.8	1646.2	1659.5	1675.6	1694.2	1704.8	1718.3	1728.9	1723.6	1720.9
5°	1632.8	1646.2	1675.6	1702.2	1734.2	1771.6	1795.6	1822.3	1843.7	1849.0	1841.0
7.5°	1646.2	1670.2	1710.3	1758.2	1800.9	1849.0	1886.3	1923.7	1950.4	1955.7	1955.7
10°	1678.3	1704.8	1758.2	1822.3	1873.0	1923.7	1966.4	1995.7	2019.7	2030.4	2030.4
12.5°	1723.6	1755.6	1819.6	1897.0	1953.0	2001.1	2025.0	2038.4	2049.1	2059.7	2062.4
15°	1777.0	1811.6	1889.0	1971.7	2030.4	2054.4	2054.4	2051.7	2051.7	2057.1	2062.4
17.5°	1830.3	1867.6	1947.7	2035.8	2073.1	2059.7	2041.1	2033.1	2027.7	2025.0	2033.1
20°	1886.3	1923.7	2003.8	2086.4	2075.8	2019.7	1993.0	1974.4	1958.3	1950.4	1961.0
22.5°	1947.7	1982.4	2065.1	2121.1	2041.1	1955.7	1905.0	1875.7	1849.0	1832.9	1843.7
25°	2019.7	2054.4	2134.5	2131.8	1979.7	1859.6	1779.6	1731.5	1702.2	1686.2	1686.2
27.5°	2105.1	2134.5	2211.8	2105.1	1894.3	1731.5	1614.2	1568.8	1560.8	1547.5	1547.5
30°	2193.1	2217.1	2283.8	2043.8	1777.0	1563.5	1435.4	1414.1	1416.8	1403.4	1406.0
32.5°	2283.8	2307.9	2326.6	1953.0	1624.9	1374.0	1288.7	1272.7	1270.0	1259.4	1248.6
35°	2411.9	2446.6	2331.9	1830.3	1440.7	1216.6	1155.3	1139.3	1123.3	1085.9	1085.9
37.5°	2606.7	2644.0	2318.5	1678.3	1251.4	1093.9	1037.9	1016.5	989.8	952.5	939.2
40°	2873.5	2873.5	2289.2	1507.4	1099.3	995.2	941.8	915.1	885.8	848.4	840.5
42.5°	3188.3	3113.7	2243.8	1334.0	987.1	928.5	880.5	851.1	816.4	773.8	768.4
45°	3556.5	3353.7	2179.8	1179.3	904.5	888.4	859.1	808.4	749.7	704.4	696.3
47.5°	3914.0	3569.9	2118.4	1069.9	835.1	872.5	848.4	763.0	683.0	619.0	611.0
50°	4306.2	3762.0	2046.4	979.2	781.7	861.8	835.1	696.3	608.3	562.9	557.6
52.5°	4698.5	3956.8	1969.1	883.1	736.4	840.5	803.1	648.3	605.7	544.3	536.3
55°	5112.0	4183.6	1878.3	776.4	683.0	797.8	760.4	645.7	624.3	544.3	525.6
57.5°	5514.9	4434.3	1731.5	672.4	624.3	733.8	744.4	629.6	584.3	539.0	517.6
60°	5960.4	4701.2	1488.8	584.3	573.7	680.4	723.0	594.9	539.0	522.9	512.3
62.5°	6317.9	4941.3	1163.3	522.9	530.9	637.7	696.3	573.7	520.3	507.0	504.3
65°	6472.7	4946.6	835.1	469.5	488.3	597.6	669.7	555.0	504.3	498.9	496.2
67.5°	6310.0	4674.5	587.0	418.9	442.9	560.3	635.0	536.3	488.3	490.9	485.6
70°	5784.4	4100.8	429.5	370.8	400.2	520.3	597.6	512.3	469.5	475.0	466.9
72.5°	4839.9	3196.3	344.2	330.8	365.5	477.6	560.3	485.6	440.3	442.9	426.9
75°	3575.2	2118.4	288.2	296.1	325.5	437.5	512.3	450.9	408.3	397.5	386.9
77.5°	2126.4	1088.5	237.4	258.8	290.8	389.5	458.9	408.3	373.5	354.9	346.9
80°	877.8	440.3	194.8	218.8	253.5	346.9	405.5	357.5	333.5	314.9	304.1
82.5°	349.5	216.1	154.8	178.8	213.5	301.5	354.9	314.9	290.8	277.5	248.2
85°	133.4	106.7	104.0	125.4	160.1	232.1	293.5	264.1	245.5	210.7	202.7
87.5°	53.4	48.0	48.0	61.4	90.7	146.8	210.7	184.1	192.1	152.1	154.8
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)