

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: P231161

Luminaire Tested: **ARCH-M-AF48-120-D-U-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231161  
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-AF48-120-D-U-T3  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 785mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15636.8 lumens  
Efficiency: N/A  
Efficacy: 128.2 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

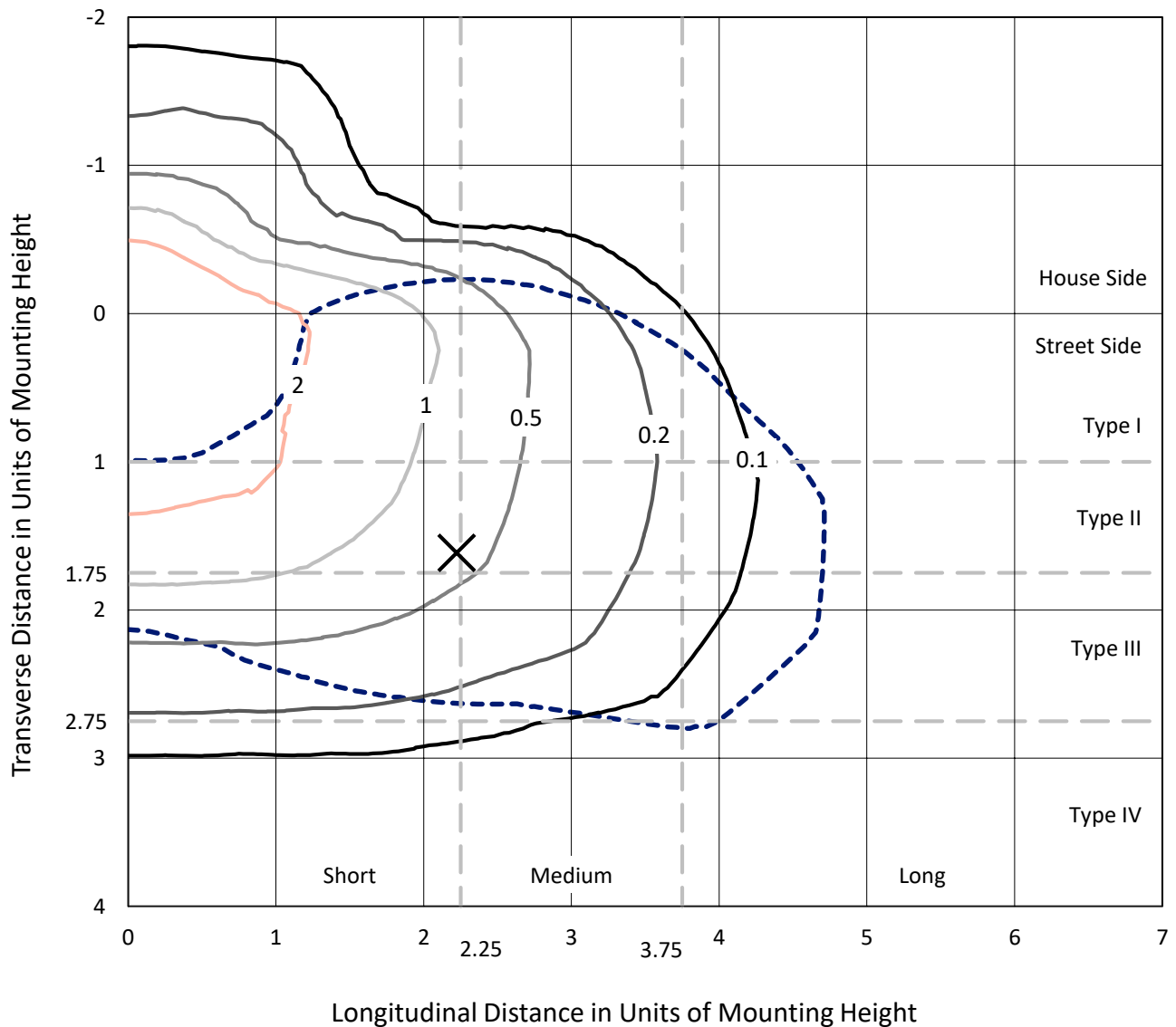
Input Watts (W): 122  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

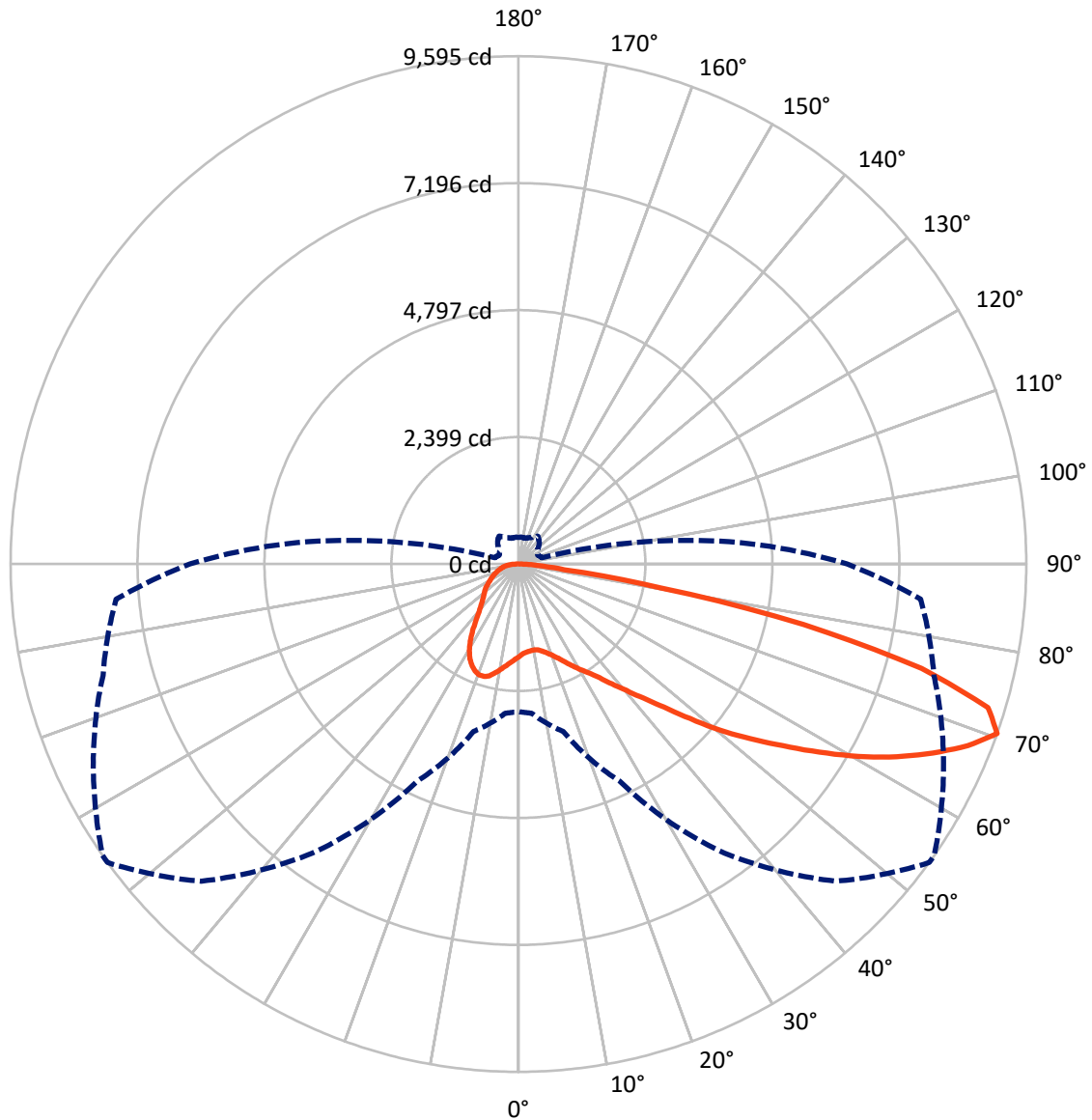


Based on 25 foot mounting height. Maximum calculated value = 3.3 fc  
 Type III - Short - Non-Cutoff

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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	3546.4	0.0	3546.4
	% Fixture	22.7	0.0	22.7
<b>Street Side</b>	Lumens	12090.4	0.0	12090.4
	% Fixture	77.3	0.0	77.3
<b>Total</b>	Lumens	15636.8	0.0	15636.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	171.7	1.1
10°-20°	548.6	3.5
20°-30°	953.1	6.1
30°-40°	1392.8	8.9
40°-50°	2186.0	14.0
50°-60°	3361.5	21.5
60°-70°	4106.9	26.3
70°-80°	2546.3	16.3
80°-90°	369.9	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°	15636.8	100.0
0°-180°	15636.8	100.0



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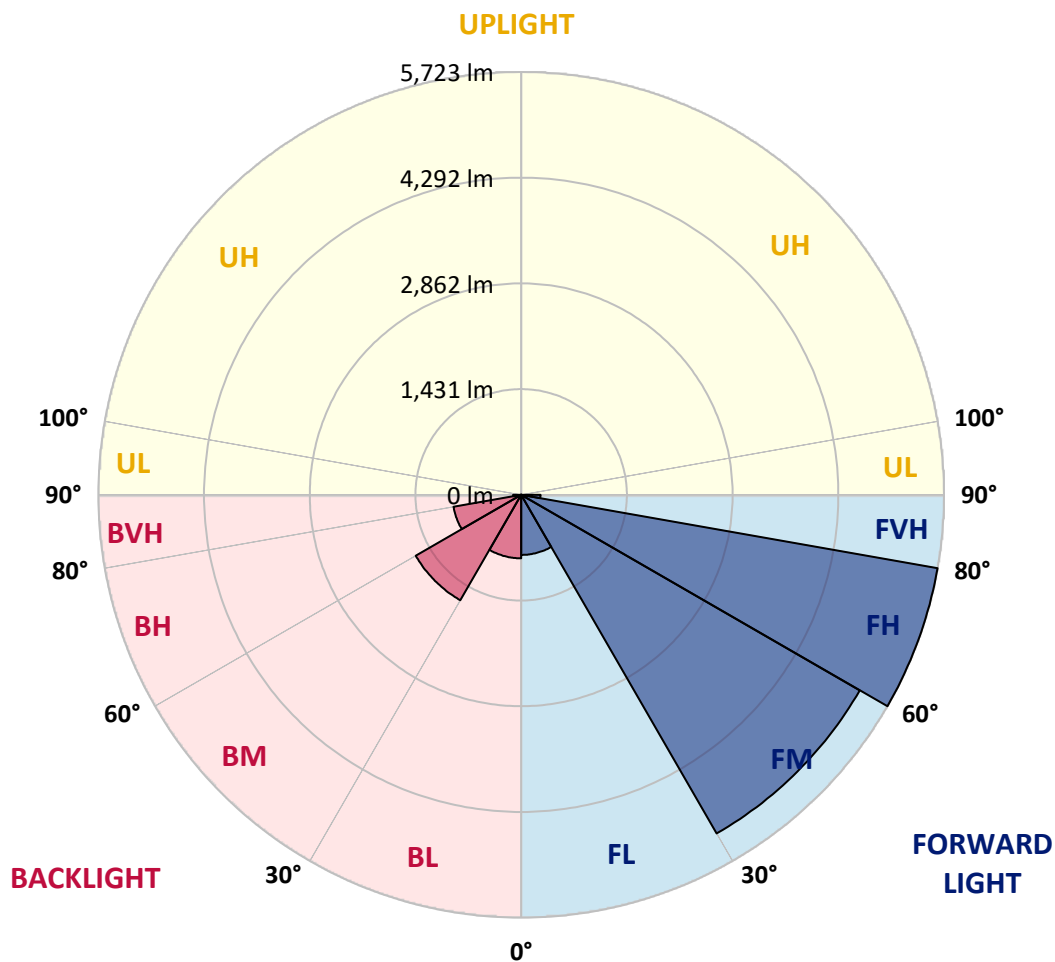
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	813.6	5.2			
FM	(30°-60°)	5292.3	33.8			
FH	(60°-80°)	5723.3	36.6			G3/7500
FVH	(80°-90°)	261.2	1.7			G3/500
BL	(0°-30°)	859.8	5.5	B2/1000		
BM	(30°-60°)	1647.9	10.5	B2/2500		
BH	(60°-80°)	929.9	5.9	B2/1000		G2/1000
BVH	(80°-90°)	108.7	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°	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5
2.5°	1680.7	1675.0	1675.0	1683.6	1686.4	1695.0	1695.0	1697.9	1706.5	1720.8	1738.0
5°	1629.2	1626.3	1629.2	1640.6	1646.3	1663.5	1669.3	1672.1	1689.3	1712.2	1738.0
7.5°	1577.7	1574.8	1580.6	1597.6	1614.8	1640.6	1654.9	1657.8	1683.6	1715.1	1749.5
10°	1560.5	1557.6	1566.2	1580.6	1597.6	1626.3	1649.2	1652.1	1689.3	1726.5	1775.2
12.5°	1583.4	1580.6	1589.2	1603.4	1620.6	1640.6	1666.4	1669.3	1717.9	1766.6	1818.2
15°	1640.6	1640.6	1643.5	1652.1	1669.3	1686.4	1709.4	1712.2	1763.8	1821.1	1872.6
17.5°	1729.4	1723.7	1723.7	1720.8	1732.3	1740.9	1769.5	1772.4	1826.8	1878.3	1929.8
20°	1838.2	1835.4	1823.9	1809.6	1806.7	1812.5	1841.1	1844.0	1898.3	1941.3	1989.9
22.5°	1969.9	1972.8	1947.0	1915.5	1901.2	1909.7	1935.5	1938.4	1978.5	2015.7	2058.7
25°	2144.6	2136.0	2098.8	2053.0	2024.3	2024.3	2050.1	2050.1	2087.3	2110.2	2138.9
27.5°	2310.6	2293.5	2259.1	2193.2	2147.5	2156.1	2181.7	2181.7	2216.1	2224.7	2239.0
30°	2491.0	2473.8	2430.9	2347.9	2287.7	2282.0	2313.5	2310.6	2356.5	2353.6	2342.1
32.5°	2711.5	2702.9	2631.3	2525.4	2445.3	2425.2	2453.9	2456.6	2485.3	2476.7	2439.5
35°	3020.8	3017.9	2952.0	2765.9	2660.0	2622.7	2639.9	2639.9	2660.0	2637.1	2574.1
37.5°	3410.1	3415.8	3358.6	3083.7	2934.8	2871.8	2874.7	2871.8	2877.6	2851.8	2785.9
40°	3799.5	3813.9	3811.0	3478.9	3289.9	3181.1	3141.0	3135.2	3149.6	3138.1	3075.1
42.5°	4312.0	4346.4	4266.2	3965.6	3753.7	3570.5	3461.7	3447.3	3478.9	3493.2	3433.0
45°	4844.6	4833.1	4707.2	4489.5	4297.7	4063.0	3856.8	3833.9	3856.8	3899.8	3836.8
47.5°	5122.3	5113.7	5082.2	4973.5	4944.8	4675.7	4363.6	4343.6	4300.6	4360.7	4286.3
50°	5580.5	5589.1	5460.2	5448.7	5569.0	5420.1	4936.2	4890.4	4813.1	4861.8	4798.8
52.5°	5912.7	5875.4	5795.2	5895.5	6270.5	6190.4	5474.5	5454.5	5382.9	5371.4	5342.9
55°	6047.2	6047.2	6061.5	6293.4	6828.8	6722.9	6058.6	6078.7	5981.3	5901.2	5938.3
57.5°	6087.3	6104.5	6227.5	6611.2	7484.5	7138.0	6702.9	6731.5	6591.2	6430.9	6548.2
60°	5889.7	5941.2	6236.1	6791.6	7853.9	7579.0	7381.4	7390.0	7186.7	6952.0	7158.1
62.5°	5382.9	5445.9	5972.7	6866.0	7793.8	8031.4	8022.8	8042.8	7765.1	7473.1	7730.7
65°	4761.6	4824.5	5385.7	6657.1	7747.9	8355.0	8609.8	8664.2	8306.3	7914.1	8088.7
67.5°	3848.2	3931.2	4463.9	5952.7	7524.6	8621.2	9159.5	9216.8	8724.3	8143.1	8057.2
70°	2788.8	2828.9	3275.6	4523.9	6614.1	8475.2	9594.8	9591.9	8861.7	8125.9	7627.7
72.5°	1342.8	1374.3	1760.9	2808.8	4730.1	7192.5	9279.8	9334.2	8672.8	7876.8	6645.6
75°	552.6	584.1	713.0	1185.4	2482.4	4753.0	7865.4	7994.2	7876.8	7069.4	5199.7
77.5°	343.6	355.1	418.1	612.7	1133.8	2219.0	5506.0	5680.7	6241.8	5663.5	3433.0
80°	257.7	266.3	312.1	429.5	715.9	818.9	2734.4	2954.9	3782.4	3249.8	1554.8
82.5°	214.7	217.6	249.1	312.1	486.7	469.5	876.2	976.4	1763.8	1239.8	535.4
85°	200.4	206.1	223.3	223.3	309.2	294.9	363.7	380.8	512.5	423.8	186.1
87.5°	103.1	97.4	197.5	174.6	160.3	143.2	154.6	166.0	191.8	203.3	83.1
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°	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5	1749.5
2.5°	1743.7	1752.3	1766.6	1781.0	1798.1	1818.2	1829.6	1844.0	1855.4	1849.7	1846.8
5°	1752.3	1766.6	1798.1	1826.8	1861.2	1901.2	1926.9	1955.6	1978.5	1984.2	1975.6
7.5°	1766.6	1792.4	1835.4	1886.8	1932.7	1984.2	2024.3	2064.4	2093.1	2098.8	2098.8
10°	1801.0	1829.6	1886.8	1955.6	2010.0	2064.4	2110.2	2141.8	2167.5	2178.9	2178.9
12.5°	1849.7	1884.0	1952.7	2035.8	2095.9	2147.5	2173.2	2187.5	2198.9	2210.4	2213.3
15°	1906.9	1944.1	2027.2	2116.0	2178.9	2204.7	2204.7	2201.8	2201.8	2207.5	2213.3
17.5°	1964.2	2004.3	2090.2	2184.6	2224.7	2210.4	2190.3	2181.7	2176.0	2173.2	2181.7
20°	2024.3	2064.4	2150.3	2239.0	2227.6	2167.5	2138.9	2118.8	2101.7	2093.1	2104.5
22.5°	2090.2	2127.4	2216.1	2276.3	2190.3	2098.8	2044.4	2012.9	1984.2	1967.0	1978.5
25°	2167.5	2204.7	2290.6	2287.7	2124.6	1995.7	1909.7	1858.3	1826.8	1809.6	1809.6
27.5°	2259.1	2290.6	2373.7	2259.1	2032.9	1858.3	1732.3	1683.6	1675.0	1660.7	1660.7
30°	2353.6	2379.4	2451.0	2193.2	1906.9	1677.8	1540.5	1517.5	1520.4	1506.1	1509.0
32.5°	2451.0	2476.7	2496.7	2095.9	1743.7	1474.6	1382.9	1365.7	1362.9	1351.4	1340.0
35°	2588.4	2625.6	2502.4	1964.2	1546.2	1305.6	1239.8	1222.6	1205.4	1165.3	1165.3
37.5°	2797.4	2837.5	2488.1	1801.0	1342.8	1173.9	1113.8	1090.9	1062.2	1022.1	1007.9
40°	3083.7	3083.7	2456.6	1617.7	1179.7	1068.0	1010.8	982.1	950.6	910.5	901.9
42.5°	3421.6	3341.4	2408.0	1431.6	1059.4	996.5	944.9	913.4	876.2	830.3	824.6
45°	3816.7	3599.2	2339.3	1265.6	970.7	953.5	922.0	867.6	804.6	755.9	747.3
47.5°	4200.3	3831.1	2273.4	1148.2	896.2	936.3	910.5	818.9	732.9	664.3	655.7
50°	4621.3	4037.2	2196.1	1050.8	838.9	924.8	896.2	747.3	652.8	604.2	598.4
52.5°	5042.2	4246.2	2113.1	947.8	790.2	901.9	861.8	695.8	650.0	584.1	575.5
55°	5486.0	4489.5	2015.7	833.2	732.9	856.1	816.0	692.9	670.0	584.1	564.1
57.5°	5918.4	4758.8	1858.3	721.6	670.0	787.4	798.8	675.8	627.1	578.4	555.5
60°	6396.5	5045.1	1597.6	627.1	615.6	730.1	775.9	638.5	578.4	561.2	549.7
62.5°	6780.2	5302.8	1248.4	561.2	569.8	684.4	747.3	615.6	558.3	544.0	541.1
65°	6946.2	5308.5	896.2	503.9	524.0	641.4	718.7	595.6	541.1	535.4	532.5
67.5°	6771.6	5016.4	629.9	449.5	475.3	601.3	681.5	575.5	524.0	526.8	521.1
70°	6207.6	4400.8	460.9	398.0	429.5	558.3	641.4	549.7	503.9	509.6	501.0
72.5°	5193.9	3430.2	369.4	355.1	392.3	512.5	601.3	521.1	472.4	475.3	458.1
75°	3836.8	2273.4	309.2	317.8	349.3	469.5	549.7	483.9	438.0	426.7	415.2
77.5°	2282.0	1168.2	254.8	277.7	312.1	418.1	492.4	438.0	400.9	380.8	372.3
80°	942.0	472.4	209.0	234.8	272.0	372.3	435.2	383.7	357.9	337.9	326.4
82.5°	375.1	231.9	166.0	191.8	229.0	323.6	380.8	337.9	312.1	297.8	266.3
85°	143.2	114.6	111.7	134.6	171.8	249.1	315.0	283.5	263.4	226.2	217.6
87.5°	57.3	51.6	51.6	65.9	97.4	157.4	226.2	197.5	206.1	163.2	166.0
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)