

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: P234817

Luminaire Tested: **ARCH-M-AF48-160-D-U-T3-8027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234817  
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-AF48-160-D-U-T3-8027  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 2700K, 1030mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14418 lumens  
Efficiency: N/A  
Efficacy: 89.6 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

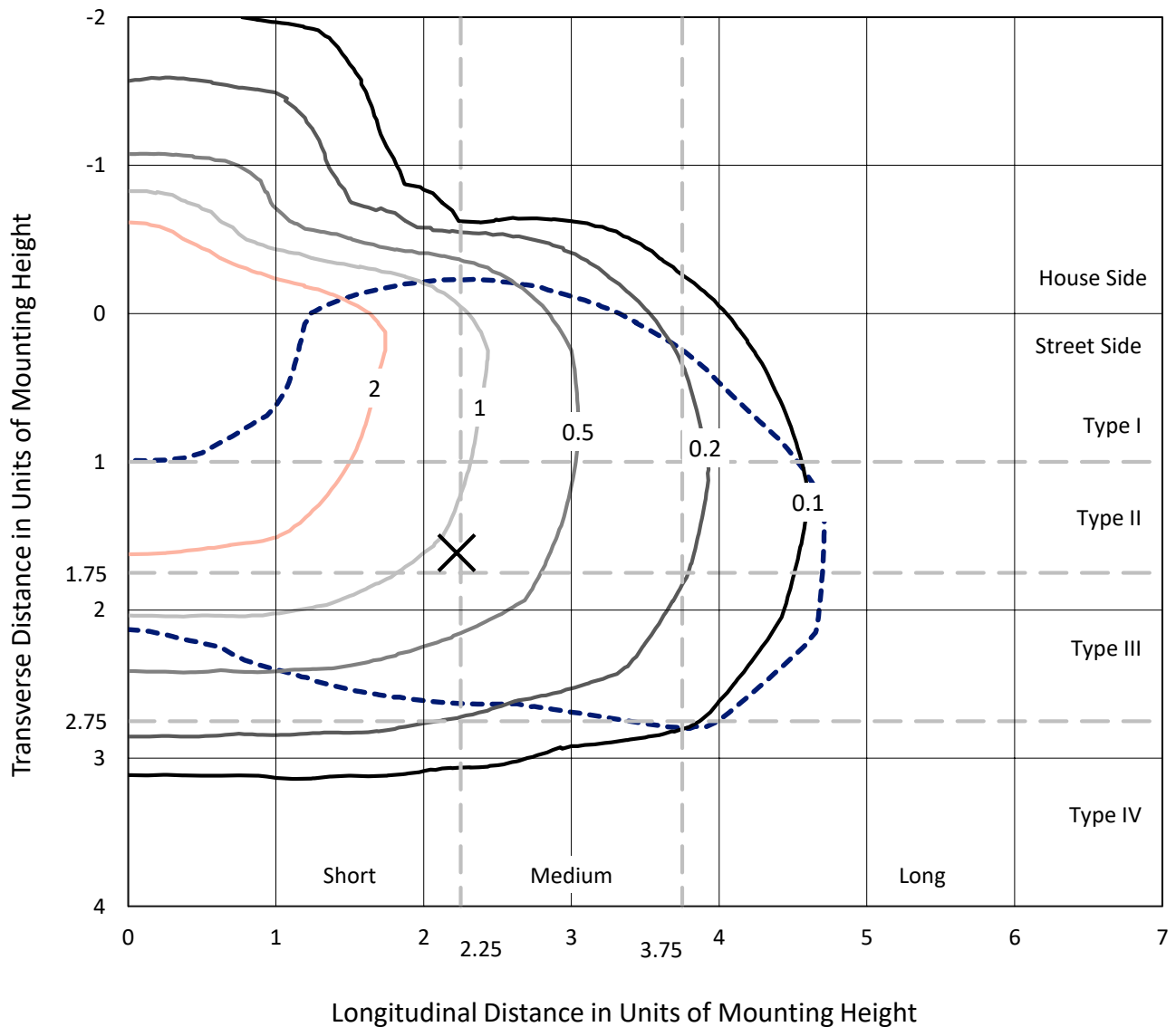
Input Watts (W): 161  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

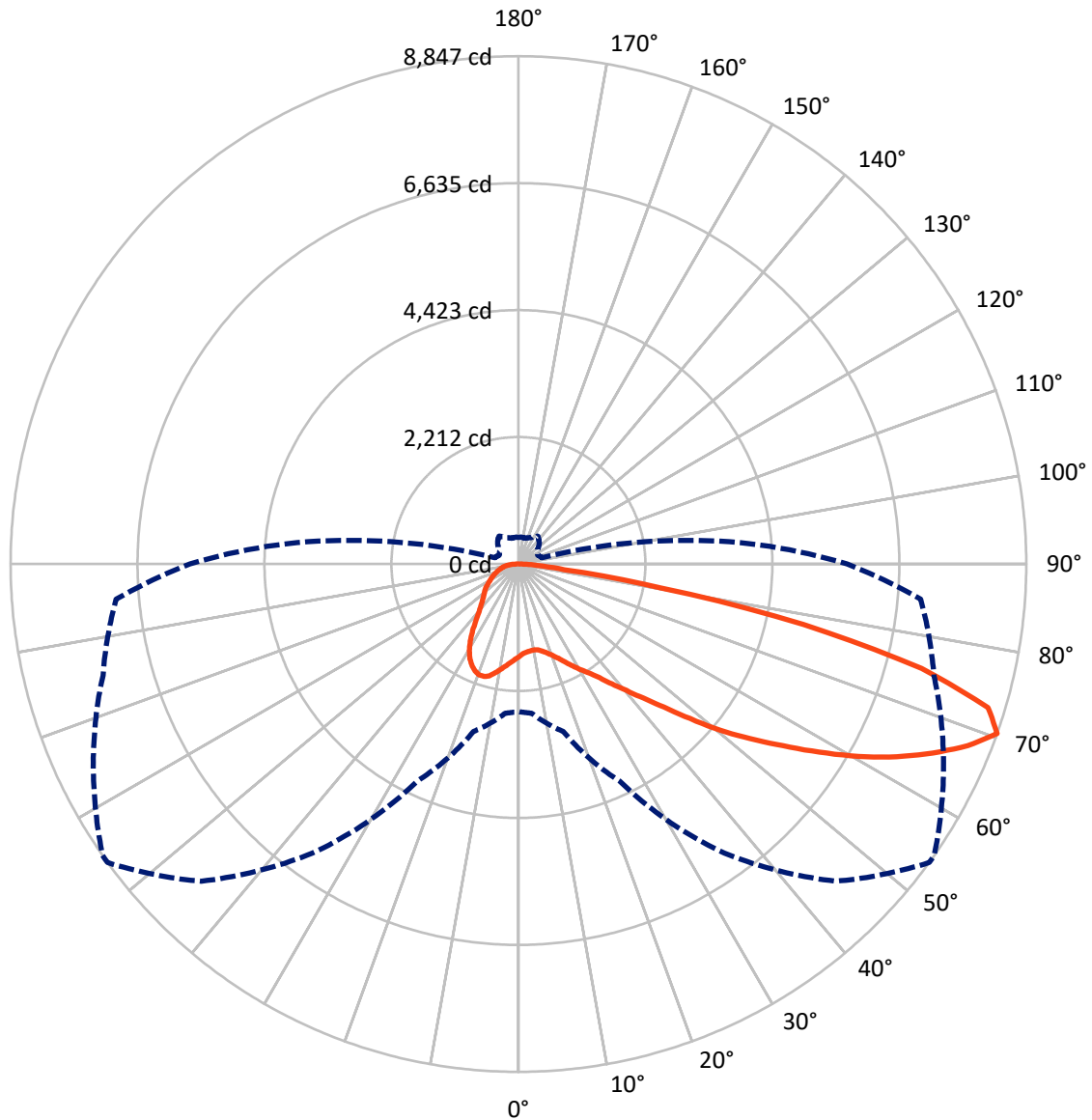
× Max cd  
 - - - 1/2 Max cd



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	3270.0	0.0	3270.0
	% Fixture	22.7	0.0	22.7
<b>Street Side</b>	Lumens	11148.0	0.0	11148.0
	% Fixture	77.3	0.0	77.3
<b>Total</b>	Lumens	14418.0	0.0	14418.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.3	1.1
10°-20°	505.8	3.5
20°-30°	878.8	6.1
30°-40°	1284.2	8.9
40°-50°	2015.6	14.0
50°-60°	3099.5	21.5
60°-70°	3786.8	26.3
70°-80°	2347.9	16.3
80°-90°	341.1	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°	14418.0	100.0
0°-180°	14418.0	100.0

**Coefficient of Utilization**



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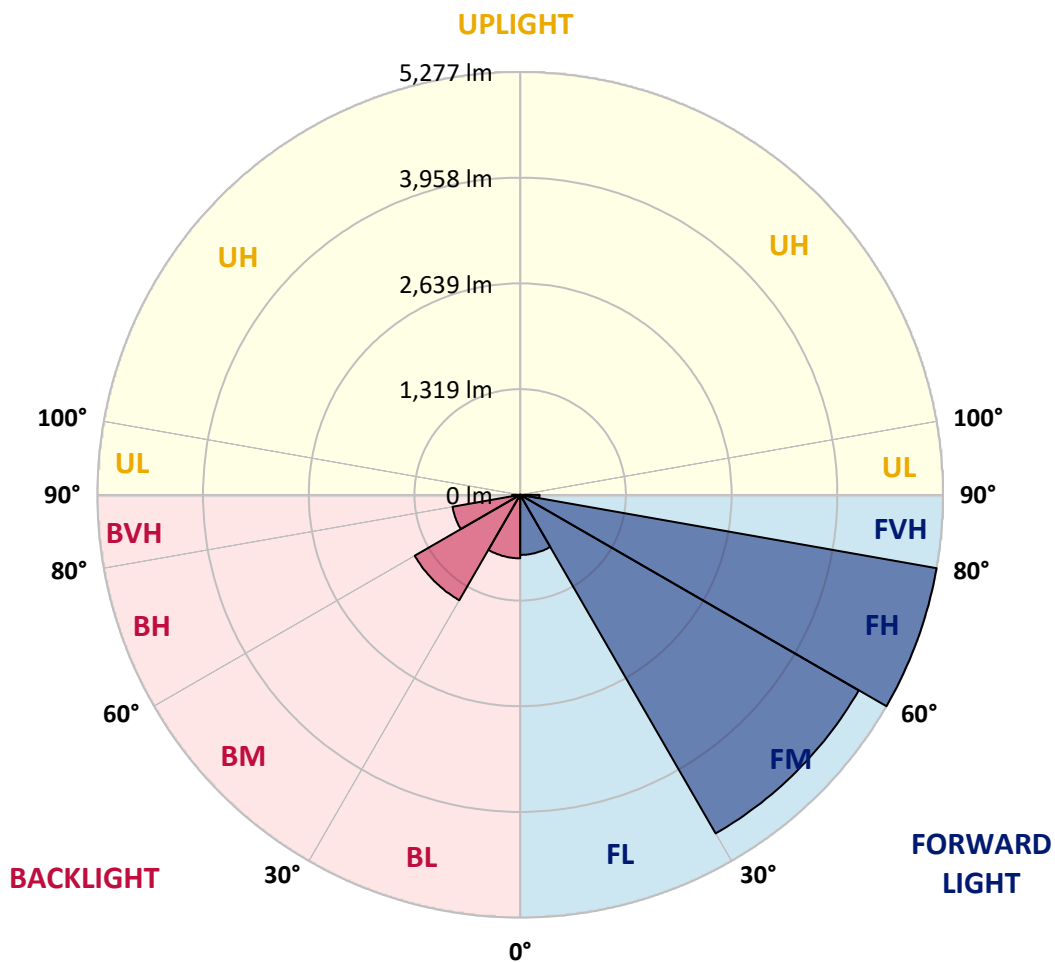
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	750.2	5.2			
FM	(30°-60°)	4879.8	33.8			
FH	(60°-80°)	5277.2	36.6			G3/7500
FVH	(80°-90°)	240.8	1.7			G3/500
BL	(0°-30°)	792.8	5.5	B2/1000		
BM	(30°-60°)	1519.5	10.5	B2/2500		
BH	(60°-80°)	857.5	5.9	B2/1000		G2/1000
BVH	(80°-90°)	100.2	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°	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1
2.5°	1549.7	1544.4	1544.4	1552.4	1555.0	1562.9	1562.9	1565.6	1573.5	1586.7	1602.5
5°	1502.2	1499.6	1502.2	1512.8	1518.0	1533.9	1539.2	1541.8	1557.6	1578.8	1602.5
7.5°	1454.7	1452.0	1457.3	1473.2	1489.0	1512.8	1526.0	1528.6	1552.4	1581.4	1613.1
10°	1438.8	1436.2	1444.1	1457.3	1473.2	1499.6	1520.7	1523.3	1557.6	1592.0	1636.8
12.5°	1460.0	1457.3	1465.2	1478.4	1494.3	1512.8	1536.5	1539.2	1584.0	1628.9	1676.4
15°	1512.8	1512.8	1515.4	1523.3	1539.2	1555.0	1576.1	1578.8	1626.3	1679.1	1726.6
17.5°	1594.6	1589.3	1589.3	1586.7	1597.2	1605.2	1631.6	1634.2	1684.4	1731.9	1779.4
20°	1694.9	1692.3	1681.7	1668.5	1665.9	1671.2	1697.6	1700.2	1750.4	1790.0	1834.8
22.5°	1816.4	1819.0	1795.2	1766.2	1753.0	1760.9	1784.7	1787.3	1824.3	1858.6	1898.2
25°	1977.4	1969.5	1935.2	1892.9	1866.5	1866.5	1890.3	1890.3	1924.6	1945.7	1972.1
27.5°	2130.5	2114.7	2083.0	2022.3	1980.1	1988.0	2011.7	2011.7	2043.4	2051.3	2064.5
30°	2296.9	2281.0	2241.4	2164.9	2109.4	2104.1	2133.2	2130.5	2172.8	2170.1	2159.6
32.5°	2500.1	2492.2	2426.2	2328.5	2254.6	2236.1	2262.5	2265.2	2291.6	2283.7	2249.3
35°	2785.3	2782.6	2721.9	2550.3	2452.6	2418.3	2434.1	2434.1	2452.6	2431.5	2373.4
37.5°	3144.3	3149.6	3096.8	2843.4	2706.1	2648.0	2650.6	2648.0	2653.3	2629.5	2568.8
40°	3503.4	3516.6	3513.9	3207.7	3033.4	2933.1	2896.2	2890.9	2904.1	2893.5	2835.4
42.5°	3975.9	4007.6	3933.7	3656.5	3461.1	3292.2	3191.8	3178.6	3207.7	3220.9	3165.4
45°	4467.0	4456.4	4340.3	4139.6	3962.7	3746.3	3556.2	3535.1	3556.2	3595.8	3537.7
47.5°	4723.1	4715.2	4686.1	4585.8	4559.4	4311.2	4023.5	4005.0	3965.4	4020.8	3952.2
50°	5145.5	5153.4	5034.6	5024.1	5134.9	4997.7	4551.5	4509.2	4438.0	4482.8	4424.8
52.5°	5451.7	5417.4	5343.5	5435.9	5781.8	5707.8	5047.8	5029.3	4963.3	4952.8	4926.4
55°	5575.8	5575.8	5589.0	5802.9	6296.6	6198.9	5586.4	5604.9	5515.1	5441.2	5475.5
57.5°	5612.8	5628.6	5742.2	6095.9	6901.1	6581.7	6180.4	6206.8	6077.4	5929.6	6037.8
60°	5430.6	5478.1	5750.1	6262.2	7241.7	6988.3	6806.1	6814.0	6626.6	6410.1	6600.2
62.5°	4963.3	5021.4	5507.2	6330.9	7186.3	7405.4	7397.5	7416.0	7159.9	6890.6	7128.2
65°	4390.4	4448.5	4966.0	6138.2	7144.0	7703.7	7938.7	7988.9	7658.8	7297.2	7458.2
67.5°	3548.3	3624.8	4115.9	5488.7	6938.1	7949.3	8445.6	8498.4	8044.3	7508.4	7429.2
70°	2571.4	2608.4	3020.2	4171.3	6098.6	7814.6	8846.9	8844.2	8171.0	7492.5	7033.1
72.5°	1238.2	1267.2	1623.6	2589.9	4361.4	6631.9	8556.5	8606.6	7996.8	7262.8	6127.6
75°	509.5	538.6	657.4	1093.0	2288.9	4382.5	7252.3	7371.1	7262.8	6518.3	4794.4
77.5°	316.8	327.4	385.5	565.0	1045.5	2046.1	5076.9	5237.9	5755.4	5222.1	3165.4
80°	237.6	245.5	287.8	396.0	660.0	755.1	2521.3	2724.6	3487.5	2996.5	1433.6
82.5°	198.0	200.6	229.7	287.8	448.8	433.0	807.9	900.3	1626.3	1143.2	493.7
85°	184.8	190.1	205.9	205.9	285.1	271.9	335.3	351.1	472.6	390.7	171.6
87.5°	95.0	89.8	182.2	161.0	147.8	132.0	142.6	153.1	176.9	187.4	76.6
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°	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1	1613.1
2.5°	1607.8	1615.7	1628.9	1642.1	1658.0	1676.4	1687.0	1700.2	1710.8	1705.5	1702.8
5°	1615.7	1628.9	1658.0	1684.4	1716.0	1753.0	1776.8	1803.2	1824.3	1829.6	1821.6
7.5°	1628.9	1652.7	1692.3	1739.8	1782.0	1829.6	1866.5	1903.5	1929.9	1935.2	1935.2
10°	1660.6	1687.0	1739.8	1803.2	1853.3	1903.5	1945.7	1974.8	1998.5	2009.1	2009.1
12.5°	1705.5	1737.2	1800.5	1877.1	1932.5	1980.1	2003.8	2017.0	2027.6	2038.1	2040.8
15°	1758.3	1792.6	1869.2	1951.0	2009.1	2032.9	2032.9	2030.2	2030.2	2035.5	2040.8
17.5°	1811.1	1848.0	1927.3	2014.4	2051.3	2038.1	2019.7	2011.7	2006.5	2003.8	2011.7
20°	1866.5	1903.5	1982.7	2064.5	2054.0	1998.5	1972.1	1953.7	1937.8	1929.9	1940.5
22.5°	1927.3	1961.6	2043.4	2098.9	2019.7	1935.2	1885.0	1856.0	1829.6	1813.7	1824.3
25°	1998.5	2032.9	2112.1	2109.4	1958.9	1840.1	1760.9	1713.4	1684.4	1668.5	1668.5
27.5°	2083.0	2112.1	2188.6	2083.0	1874.4	1713.4	1597.2	1552.4	1544.4	1531.2	1531.2
30°	2170.1	2193.9	2259.9	2022.3	1758.3	1547.1	1420.4	1399.2	1401.9	1388.7	1391.3
32.5°	2259.9	2283.7	2302.1	1932.5	1607.8	1359.6	1275.2	1259.3	1256.7	1246.1	1235.6
35°	2386.6	2420.9	2307.4	1811.1	1425.6	1203.9	1143.2	1127.3	1111.5	1074.5	1074.5
37.5°	2579.3	2616.3	2294.2	1660.6	1238.2	1082.4	1027.0	1005.9	979.5	942.5	929.3
40°	2843.4	2843.4	2265.2	1491.6	1087.7	984.7	931.9	905.5	876.5	839.5	831.6
42.5°	3154.9	3081.0	2220.3	1320.0	976.8	918.7	871.2	842.2	807.9	765.6	760.3
45°	3519.2	3318.6	2156.9	1166.9	895.0	879.1	850.1	799.9	741.9	697.0	689.1
47.5°	3873.0	3532.4	2096.2	1058.7	826.3	863.3	839.5	755.1	675.9	612.5	604.6
50°	4261.1	3722.5	2024.9	968.9	773.5	852.7	826.3	689.1	601.9	557.1	551.8
52.5°	4649.2	3915.2	1948.4	873.9	728.7	831.6	794.7	641.5	599.3	538.6	530.7
55°	5058.4	4139.6	1858.6	768.3	675.9	789.4	752.4	638.9	617.8	538.6	520.1
57.5°	5457.0	4387.8	1713.4	665.3	617.8	726.0	736.6	623.1	578.2	533.3	512.2
60°	5897.9	4651.8	1473.2	578.2	567.6	673.2	715.5	588.7	533.3	517.5	506.9
62.5°	6251.7	4889.4	1151.1	517.5	525.4	631.0	689.1	567.6	514.8	501.6	499.0
65°	6404.8	4894.7	826.3	464.7	483.1	591.4	662.7	549.1	499.0	493.7	491.1
67.5°	6243.8	4625.4	580.8	414.5	438.3	554.4	628.3	530.7	483.1	485.8	480.5
70°	5723.7	4057.8	425.1	367.0	396.0	514.8	591.4	506.9	464.7	469.9	462.0
72.5°	4789.1	3162.8	340.6	327.4	361.7	472.6	554.4	480.5	435.6	438.3	422.4
75°	3537.7	2096.2	285.1	293.0	322.1	433.0	506.9	446.2	403.9	393.4	382.8
77.5°	2104.1	1077.1	235.0	256.1	287.8	385.5	454.1	403.9	369.6	351.1	343.2
80°	868.6	435.6	192.7	216.5	250.8	343.2	401.3	353.8	330.0	311.5	301.0
82.5°	345.8	213.8	153.1	176.9	211.2	298.3	351.1	311.5	287.8	274.6	245.5
85°	132.0	105.6	103.0	124.1	158.4	229.7	290.4	261.4	242.9	208.6	200.6
87.5°	52.8	47.5	47.5	60.7	89.8	145.2	208.6	182.2	190.1	150.5	153.1
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)