

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: P231158

Luminaire Tested: **ARCH-M-AF48-90-D-U-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231158  
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-AF48-90-D-U-T3  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 600mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12587.4 lumens  
Efficiency: N/A  
Efficacy: 136.8 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 - G2

Input Watts (W): 92  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

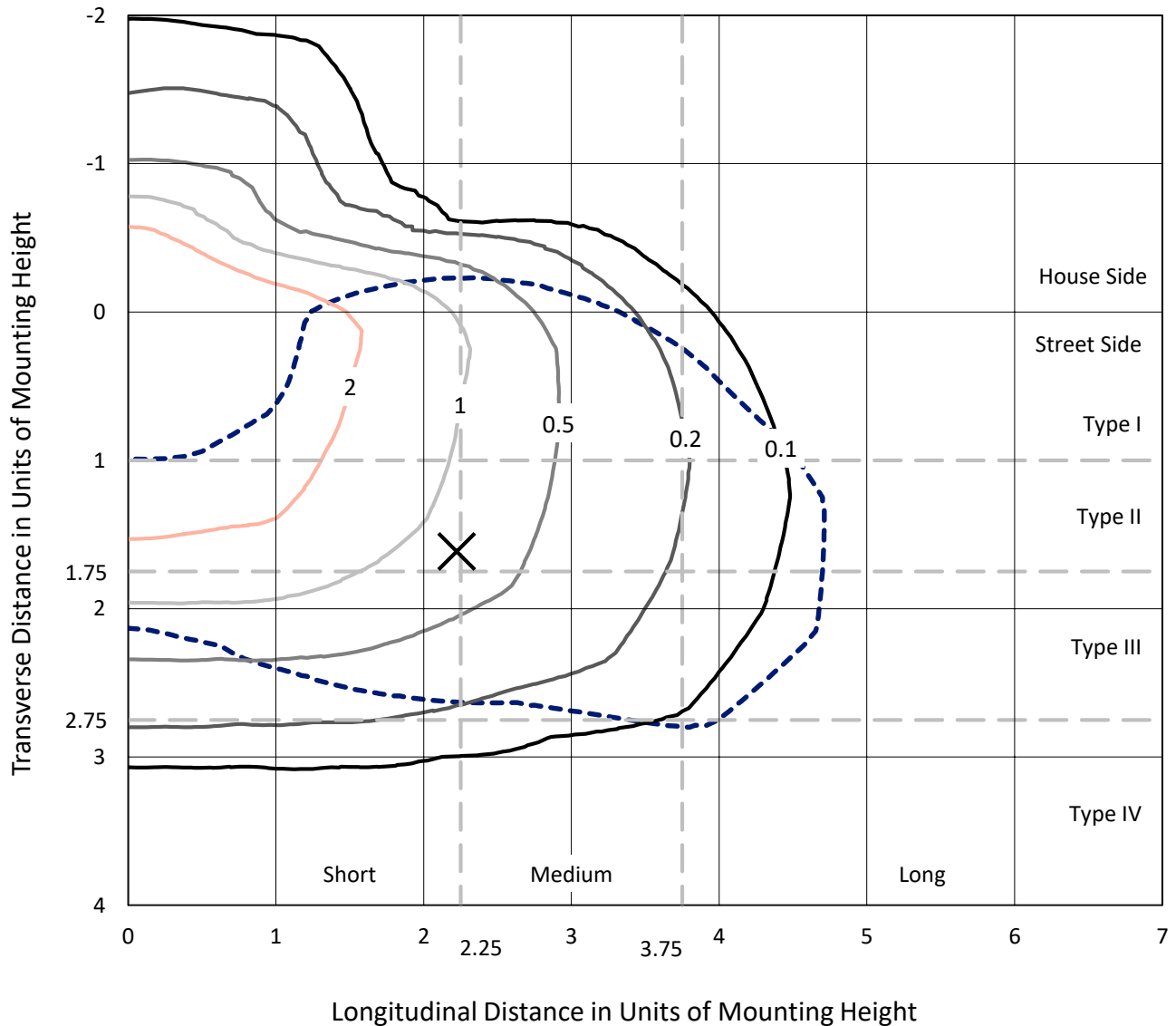


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

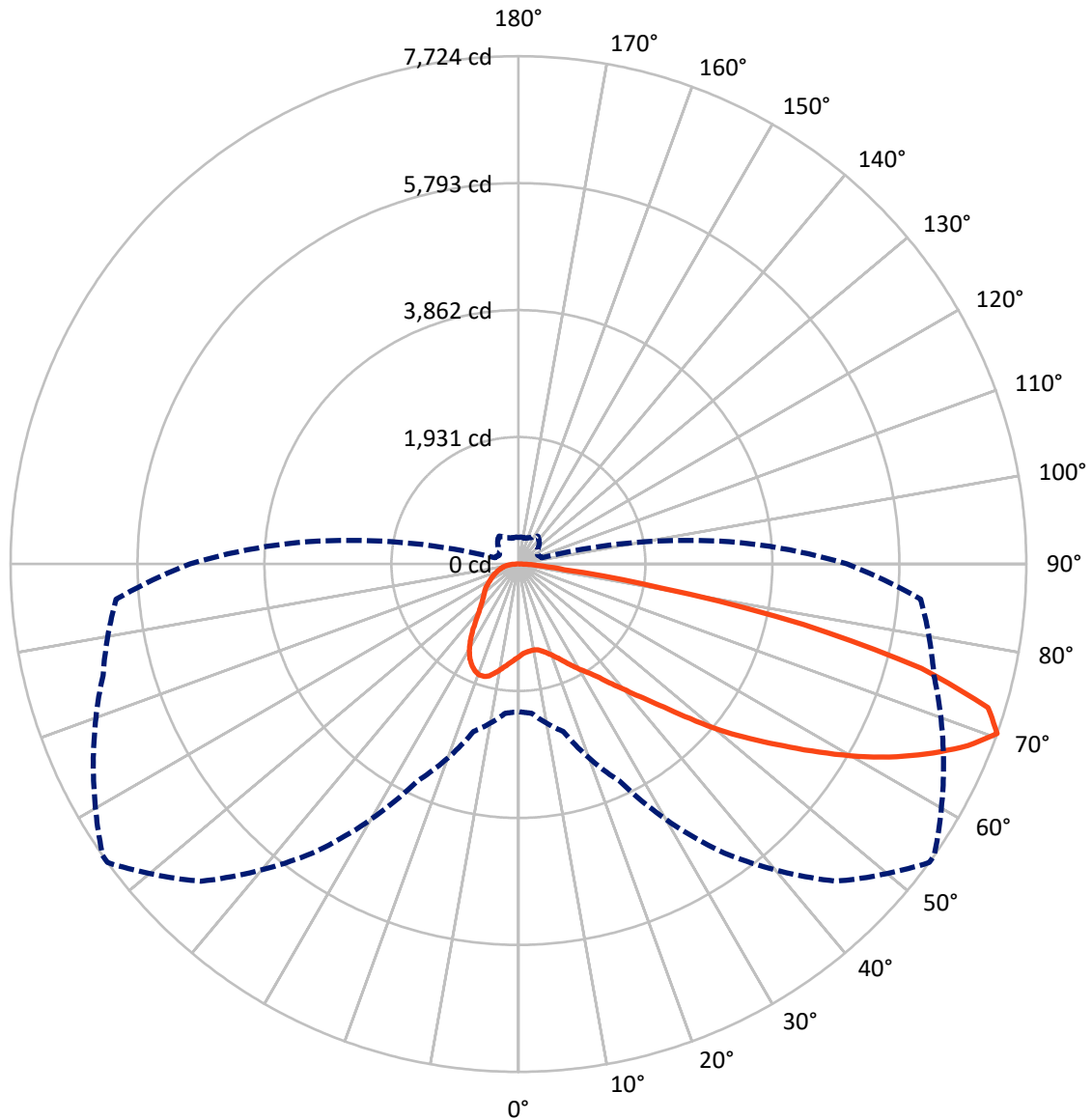


Based on 20 foot mounting height. Maximum calculated value = 4.1 fc  
 Type III - Short - Non-Cutoff

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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	2854.8	0.0	2854.8
	% Fixture	22.7	0.0	22.7
<b>Street Side</b>	Lumens	9732.6	0.0	9732.6
	% Fixture	77.3	0.0	77.3
<b>Total</b>	Lumens	12587.4	0.0	12587.4
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.2	1.1
10°-20°	441.6	3.5
20°-30°	767.2	6.1
30°-40°	1121.2	8.9
40°-50°	1759.7	14.0
50°-60°	2706.0	21.5
60°-70°	3306.0	26.3
70°-80°	2049.8	16.3
80°-90°	297.8	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°	12587.4	100.0
0°-180°	12587.4	100.0

**Coefficient of Utilization**



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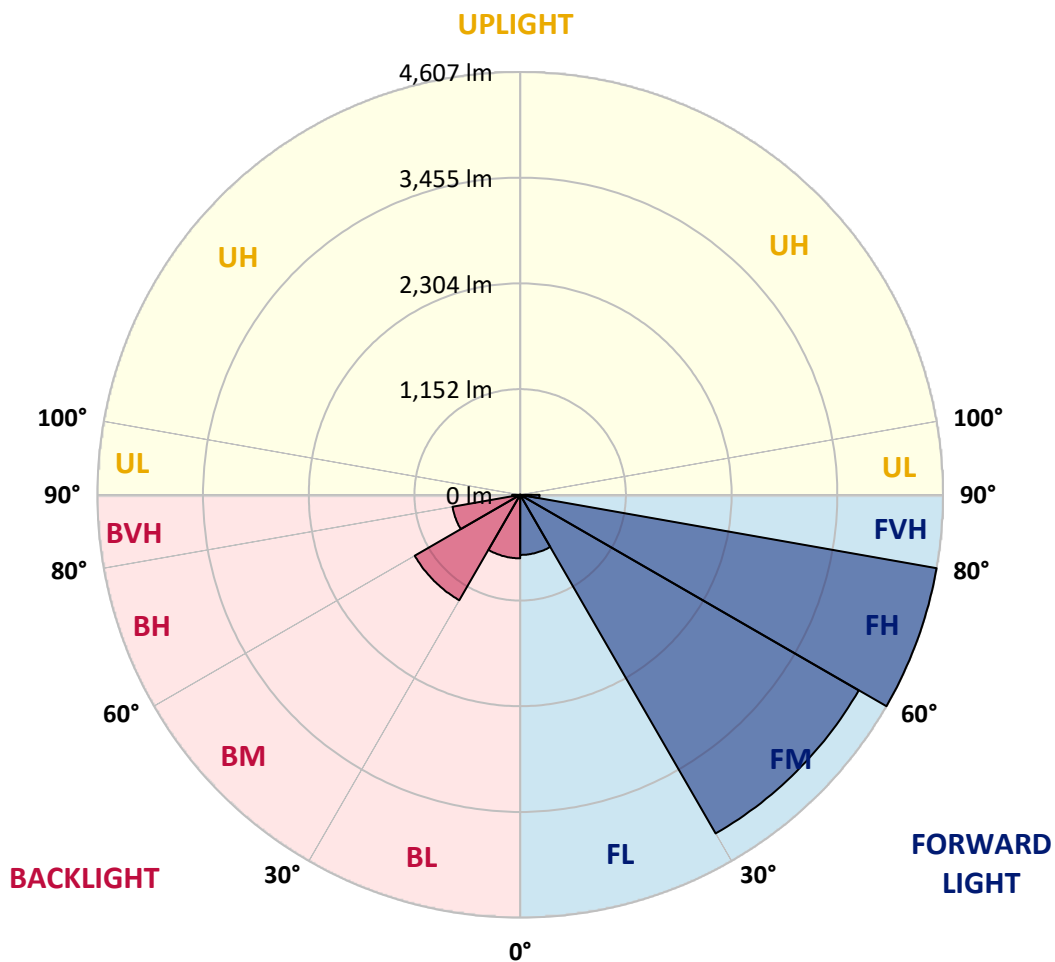
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	654.9	5.2			
FM	(30°-60°)	4260.3	33.8			
FH	(60°-80°)	4607.2	36.6			G2/5000
FVH	(80°-90°)	210.3	1.7			G2/225
BL	(0°-30°)	692.1	5.5	B2/1000		
BM	(30°-60°)	1326.6	10.5	B2/2500		
BH	(60°-80°)	748.6	5.9	B2/1000		G2/1000
BVH	(80°-90°)	87.5	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3
2.5°	1353.0	1348.4	1348.4	1355.3	1357.6	1364.5	1364.5	1366.8	1373.7	1385.2	1399.1
5°	1311.4	1309.2	1311.4	1320.7	1325.3	1339.1	1343.7	1346.0	1359.9	1378.3	1399.1
7.5°	1270.0	1267.6	1272.2	1286.2	1300.0	1320.7	1332.2	1334.5	1355.3	1380.6	1408.3
10°	1256.2	1253.8	1260.8	1272.2	1286.2	1309.2	1327.6	1329.9	1359.9	1389.9	1429.1
12.5°	1274.6	1272.2	1279.2	1290.8	1304.6	1320.7	1341.4	1343.7	1382.9	1422.1	1463.6
15°	1320.7	1320.7	1323.0	1329.9	1343.7	1357.6	1376.0	1378.3	1419.8	1465.9	1507.4
17.5°	1392.1	1387.5	1387.5	1385.2	1394.5	1401.3	1424.5	1426.7	1470.5	1512.0	1553.5
20°	1479.7	1477.4	1468.2	1456.7	1454.3	1459.0	1482.1	1484.3	1528.1	1562.7	1601.8
22.5°	1585.8	1588.0	1567.3	1542.0	1530.4	1537.4	1558.1	1560.4	1592.6	1622.6	1657.2
25°	1726.3	1719.5	1689.5	1652.6	1629.6	1629.6	1650.3	1650.3	1680.3	1698.7	1721.7
27.5°	1860.0	1846.2	1818.5	1765.5	1728.7	1735.5	1756.3	1756.3	1783.9	1790.9	1802.4
30°	2005.2	1991.4	1956.8	1890.0	1841.6	1837.0	1862.4	1860.0	1897.0	1894.6	1885.4
32.5°	2182.7	2175.8	2118.2	2032.9	1968.4	1952.2	1975.3	1977.6	2000.6	1993.7	1963.8
35°	2431.7	2429.3	2376.3	2226.6	2141.2	2111.3	2125.1	2125.1	2141.2	2122.8	2072.1
37.5°	2745.1	2749.7	2703.7	2482.4	2362.5	2311.8	2314.1	2311.8	2316.4	2295.6	2242.6
40°	3058.5	3070.1	3067.8	2800.4	2648.3	2560.8	2528.4	2523.8	2535.4	2526.2	2475.4
42.5°	3471.2	3498.8	3434.3	3192.2	3021.7	2874.2	2786.6	2775.1	2800.4	2812.0	2763.5
45°	3899.8	3890.6	3789.2	3614.1	3459.6	3270.6	3104.7	3086.2	3104.7	3139.2	3088.5
47.5°	4123.4	4116.5	4091.2	4003.5	3980.5	3763.8	3512.6	3496.4	3461.9	3510.4	3450.4
50°	4492.2	4499.1	4395.4	4386.2	4483.0	4363.1	3973.6	3936.7	3874.5	3913.7	3863.0
52.5°	4759.6	4729.6	4665.1	4745.8	5047.6	4983.1	4406.9	4390.8	4333.1	4323.9	4300.9
55°	4867.9	4867.9	4879.4	5066.1	5497.1	5411.8	4877.1	4893.3	4814.9	4750.4	4780.4
57.5°	4900.1	4913.9	5013.1	5321.9	6025.0	5746.0	5395.7	5418.8	5305.8	5176.7	5271.3
60°	4741.2	4782.6	5020.0	5467.2	6322.2	6101.0	5941.9	5948.9	5785.2	5596.3	5762.2
62.5°	4333.1	4383.9	4808.0	5527.1	6273.9	6465.2	6458.3	6474.4	6250.8	6015.7	6223.1
65°	3833.0	3883.7	4335.5	5358.8	6237.0	6725.6	6930.8	6974.6	6686.4	6370.6	6511.3
67.5°	3097.7	3164.6	3593.3	4791.8	6057.2	6940.0	7373.3	7419.4	7023.0	6555.1	6485.9
70°	2245.0	2277.2	2636.8	3641.7	5324.3	6822.5	7723.6	7721.3	7133.5	6541.3	6140.2
72.5°	1081.0	1106.3	1417.5	2261.1	3807.6	5789.8	7470.1	7513.9	6981.4	6340.7	5349.6
75°	444.9	470.1	573.9	954.2	1998.3	3826.0	6331.5	6435.2	6340.7	5690.8	4185.6
77.5°	276.6	285.8	336.6	493.3	912.8	1786.3	4432.2	4572.9	5024.6	4559.1	2763.5
80°	207.5	214.3	251.2	345.8	576.2	659.2	2201.2	2378.7	3044.7	2616.0	1251.6
82.5°	172.9	175.1	200.5	251.2	391.8	378.0	705.3	785.9	1419.8	998.0	431.0
85°	161.3	165.9	179.7	179.7	248.9	237.4	292.8	306.6	412.6	341.2	149.9
87.5°	83.0	78.4	159.1	140.6	129.1	115.3	124.5	133.7	154.5	163.7	66.8
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°	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3	1408.3
2.5°	1403.7	1410.5	1422.1	1433.7	1447.5	1463.6	1472.8	1484.3	1493.5	1488.9	1486.7
5°	1410.5	1422.1	1447.5	1470.5	1498.2	1530.4	1551.2	1574.2	1592.6	1597.2	1590.4
7.5°	1422.1	1442.9	1477.4	1518.9	1555.8	1597.2	1629.6	1661.8	1684.9	1689.5	1689.5
10°	1449.7	1472.8	1518.9	1574.2	1618.0	1661.8	1698.7	1724.1	1744.7	1754.1	1754.1
12.5°	1488.9	1516.6	1572.0	1638.8	1687.2	1728.7	1749.3	1760.9	1770.1	1779.3	1781.7
15°	1535.0	1565.0	1631.8	1703.3	1754.1	1774.7	1774.7	1772.5	1772.5	1777.1	1781.7
17.5°	1581.2	1613.4	1682.5	1758.7	1790.9	1779.3	1763.3	1756.3	1751.7	1749.3	1756.3
20°	1629.6	1661.8	1730.9	1802.4	1793.2	1744.7	1721.7	1705.6	1691.8	1684.9	1694.1
22.5°	1682.5	1712.5	1783.9	1832.4	1763.3	1689.5	1645.7	1620.4	1597.2	1583.4	1592.6
25°	1744.7	1774.7	1843.9	1841.6	1710.2	1606.5	1537.4	1495.9	1470.5	1456.7	1456.7
27.5°	1818.5	1843.9	1910.8	1818.5	1636.4	1495.9	1394.5	1355.3	1348.4	1336.8	1336.8
30°	1894.6	1915.4	1973.0	1765.5	1535.0	1350.7	1240.0	1221.6	1223.9	1212.4	1214.7
32.5°	1973.0	1993.7	2009.9	1687.2	1403.7	1187.0	1113.3	1099.5	1097.1	1087.9	1078.7
35°	2083.6	2113.5	2014.5	1581.2	1244.6	1051.0	998.0	984.2	970.4	938.0	938.0
37.5°	2251.8	2284.1	2002.9	1449.7	1081.0	945.0	896.6	878.2	855.1	822.9	811.3
40°	2482.4	2482.4	1977.6	1302.2	949.6	859.7	813.7	790.5	765.2	732.9	726.0
42.5°	2754.3	2689.7	1938.4	1152.5	852.8	802.1	760.6	735.3	705.3	668.4	663.8
45°	3072.4	2897.2	1883.0	1018.8	781.3	767.5	742.2	698.4	647.6	608.5	601.6
47.5°	3381.3	3083.9	1830.1	924.2	721.4	753.7	732.9	659.2	590.0	534.7	527.8
50°	3720.1	3249.9	1767.9	845.9	675.4	744.5	721.4	601.6	525.5	486.3	481.7
52.5°	4058.9	3418.1	1701.0	762.9	636.2	726.0	693.8	560.1	523.2	470.1	463.3
55°	4416.2	3614.1	1622.6	670.7	590.0	689.2	656.9	557.8	539.3	470.1	454.1
57.5°	4764.2	3830.7	1495.9	580.8	539.3	633.8	643.0	543.9	504.7	465.5	447.1
60°	5149.1	4061.2	1286.2	504.7	495.5	587.8	624.6	514.0	465.5	451.7	442.5
62.5°	5458.0	4268.7	1004.9	451.7	458.7	550.9	601.6	495.5	449.5	437.9	435.6
65°	5591.7	4273.3	721.4	405.7	421.8	516.3	578.5	479.5	435.6	431.0	428.7
67.5°	5451.0	4038.1	507.1	361.8	382.6	484.1	548.6	463.3	421.8	424.1	419.5
70°	4997.0	3542.6	371.1	320.4	345.8	449.5	516.3	442.5	405.7	410.3	403.3
72.5°	4181.0	2761.3	297.4	285.8	315.8	412.6	484.1	419.5	380.3	382.6	368.8
75°	3088.5	1830.1	248.9	255.8	281.2	378.0	442.5	389.5	352.6	343.4	334.2
77.5°	1837.0	940.4	205.1	223.6	251.2	336.6	396.4	352.6	322.6	306.6	299.6
80°	758.3	380.3	168.3	189.0	219.0	299.6	350.4	308.8	288.1	272.0	262.8
82.5°	302.0	186.7	133.7	154.5	184.4	260.4	306.6	272.0	251.2	239.7	214.3
85°	115.3	92.2	89.9	108.3	138.3	200.5	253.5	228.2	212.1	182.1	175.1
87.5°	46.1	41.5	41.5	53.0	78.4	126.7	182.1	159.1	165.9	131.3	133.7
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)