

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: P234842

Luminaire Tested: **ARCH-M-AF48-150-D-U-T4W-8027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234842  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29615)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-M-AF48-150-D-U-T4W-8027  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 2700K, 970mA LIGHT ENGINES WITH 24 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13784 lumens  
Efficiency: N/A  
Efficacy: 91.3 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 151  
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

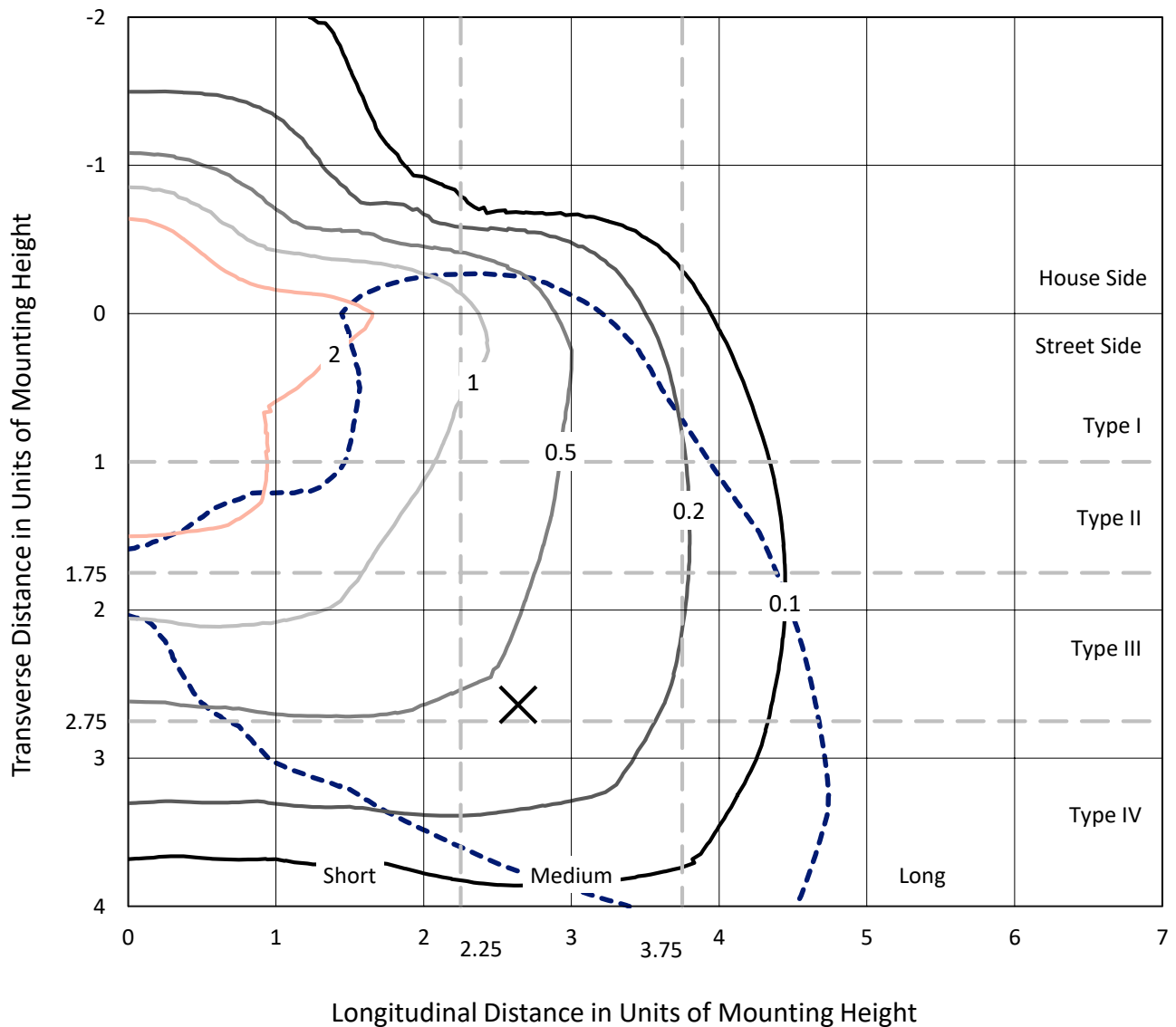


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

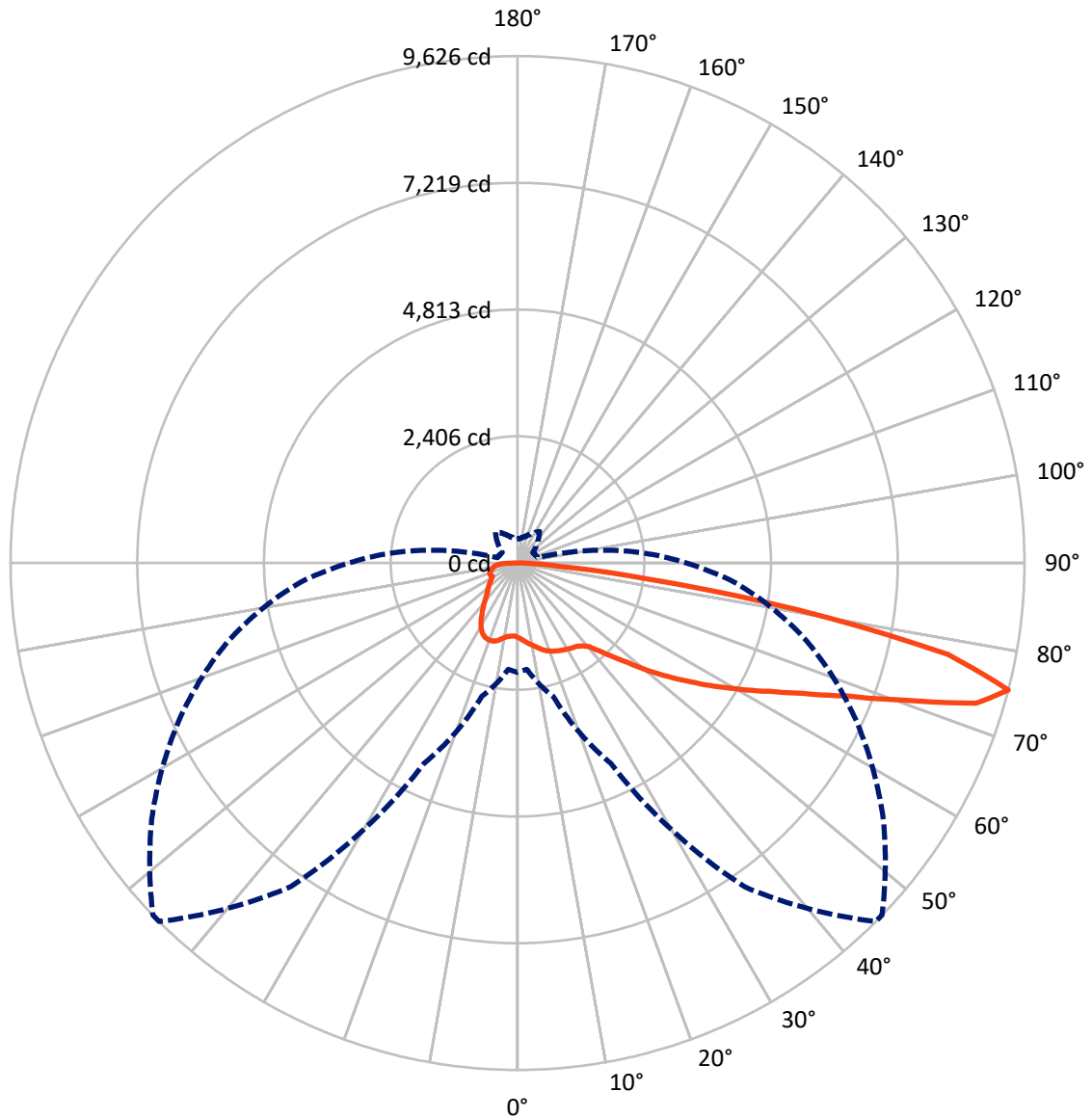


Based on 20 foot mounting height. Maximum calculated value = 4.1 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3193.2	0.0	3193.2
	% Fixture	23.2	0.0	23.2
<b>Street Side</b>	Lumens	10590.8	0.0	10590.8
	% Fixture	76.8	0.0	76.8
<b>Total</b>	Lumens	13784.0	0.0	13784.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.0	1.0
10°-20°	453.8	3.3
20°-30°	778.7	5.6
30°-40°	1089.1	7.9
40°-50°	1597.6	11.6
50°-60°	2488.7	18.1
60°-70°	3581.0	26.0
70°-80°	3119.4	22.6
80°-90°	535.7	3.9
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°	13784.0	100.0
0°-180°	13784.0	100.0



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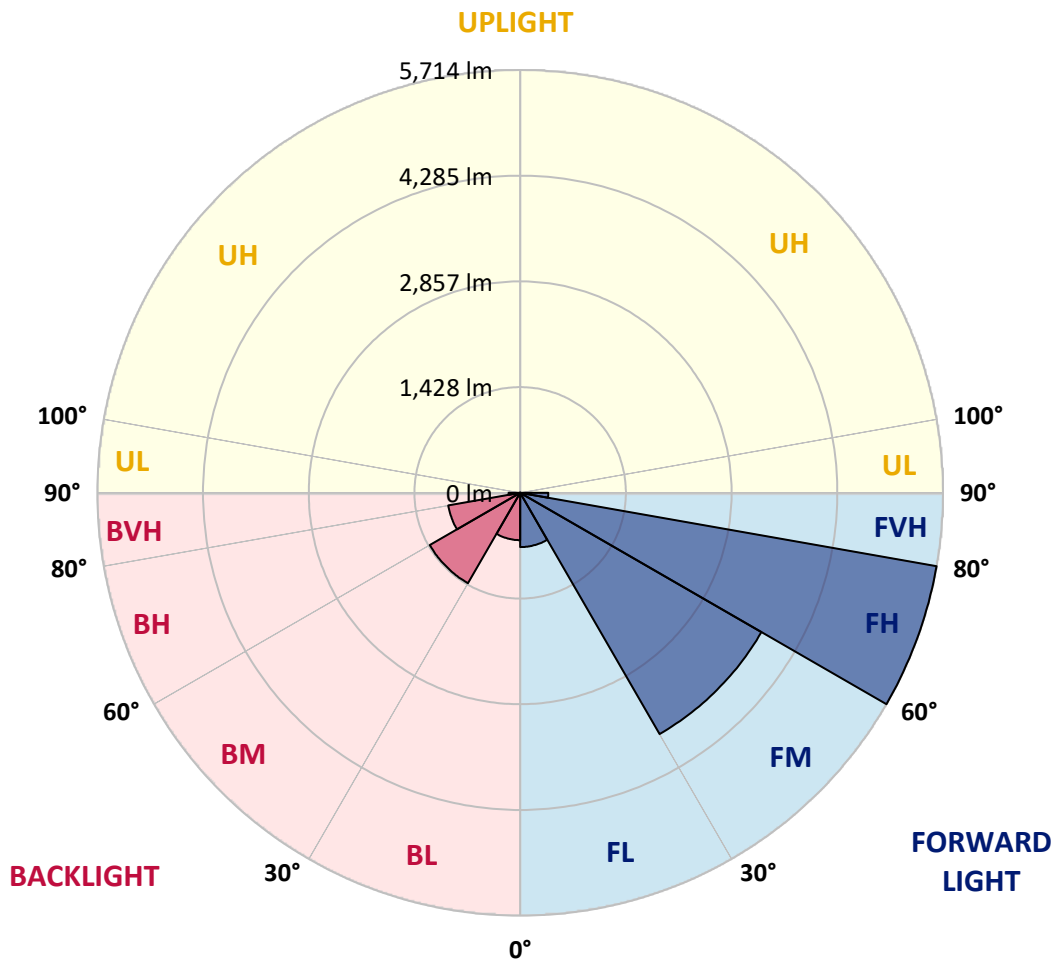
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	733.0	5.3			
FM	(30°-60°)	3764.1	27.3			
FH	(60°-80°)	5713.6	41.5			G3/7500
FVH	(80°-90°)	380.1	2.8			G3/500
BL	(0°-30°)	639.5	4.6	B2/1000		
BM	(30°-60°)	1411.2	10.2	B2/2500		
BH	(60°-80°)	986.8	7.2	B2/1000		G2/1000
BVH	(80°-90°)	155.6	1.1			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 IV Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1
2.5°	1482.8	1472.0	1472.0	1464.0	1464.0	1450.6	1445.2	1442.6	1429.1	1421.1	1413.1
5°	1568.6	1555.2	1552.5	1533.7	1525.7	1496.2	1493.5	1474.7	1450.6	1426.5	1407.7
7.5°	1646.3	1638.3	1624.9	1606.1	1582.0	1544.4	1541.8	1512.3	1472.0	1439.9	1413.1
10°	1702.6	1697.3	1678.5	1654.4	1627.6	1590.0	1587.3	1555.2	1506.9	1469.4	1431.8
12.5°	1769.7	1761.6	1737.5	1705.3	1675.8	1641.0	1638.3	1611.5	1557.8	1509.6	1461.3
15°	1834.0	1823.3	1793.8	1761.6	1729.5	1700.0	1700.0	1670.5	1614.2	1557.8	1501.5
17.5°	1866.2	1860.8	1831.3	1796.5	1769.7	1748.2	1745.5	1718.7	1662.4	1603.4	1541.8
20°	1876.9	1879.6	1852.8	1815.3	1796.5	1785.8	1783.1	1764.3	1702.6	1646.3	1587.3
22.5°	1874.2	1882.3	1860.8	1820.6	1815.3	1815.3	1815.3	1793.8	1745.5	1689.2	1630.2
25°	1885.0	1895.7	1879.6	1831.3	1831.3	1842.1	1842.1	1831.3	1788.4	1740.2	1681.2
27.5°	1922.5	1930.6	1917.1	1850.1	1852.8	1868.9	1866.2	1868.9	1842.1	1796.5	1737.5
30°	1968.1	1978.8	1962.7	1879.6	1876.9	1893.0	1893.0	1906.4	1887.6	1839.4	1791.1
32.5°	2091.4	2088.7	2037.8	1911.8	1903.7	1919.8	1919.8	1933.2	1922.5	1885.0	1839.4
35°	2458.8	2418.6	2305.9	2016.4	1935.9	1944.0	1944.0	1968.1	1973.5	1944.0	1903.7
37.5°	2834.2	2820.7	2734.9	2295.2	2053.9	1994.9	1992.2	2027.1	2051.2	2027.1	2000.3
40°	3212.2	3201.5	3182.7	2667.9	2300.6	2086.1	2078.0	2107.5	2150.4	2134.3	2118.2
42.5°	3563.5	3558.1	3576.9	3035.3	2614.3	2281.8	2257.7	2222.8	2284.5	2279.1	2279.1
45°	3839.7	3853.1	3863.8	3378.5	2954.8	2533.8	2504.4	2386.4	2469.5	2490.9	2507.0
47.5°	3995.2	4005.9	4043.4	3713.6	3295.3	2826.1	2804.7	2611.6	2721.5	2785.9	2831.5
50°	4217.7	4188.2	4220.4	4040.7	3705.6	3206.9	3147.9	2914.6	3054.0	3166.6	3273.9
52.5°	4432.2	4384.0	4410.8	4418.8	4172.1	3579.6	3517.9	3271.2	3445.5	3622.5	3812.8
55°	4625.3	4622.6	4649.4	4786.2	4622.6	3979.1	3909.4	3665.4	3917.4	4107.8	4429.5
57.5°	4780.8	4807.6	4925.6	5212.5	5142.8	4413.5	4335.7	4123.9	4421.5	4611.9	5145.5
60°	4963.1	5006.0	5201.8	5574.5	5617.4	4869.3	4788.8	4636.0	4939.0	5132.0	5974.0
62.5°	5024.8	5086.5	5488.7	5955.2	6113.4	5368.0	5295.6	5193.7	5483.3	5657.6	6799.8
65°	4614.6	4732.5	5646.9	6150.9	6647.0	5968.6	5906.9	5818.5	6024.9	6140.2	7360.2
67.5°	4501.9	4555.6	5338.5	6432.5	7148.4	6740.8	6679.2	6526.3	6531.7	6483.4	7542.6
70°	4343.7	4402.7	5022.1	6644.3	7867.0	7797.3	7722.2	7271.7	6995.6	6703.3	7183.3
72.5°	3700.2	3681.5	4327.7	6073.2	8212.9	9105.8	9017.3	8073.5	7338.8	6512.9	6062.5
75°	2078.0	2024.4	2625.0	4201.6	7499.7	9625.9	9623.3	8478.3	7097.5	5673.7	4126.6
77.5°	603.3	587.2	866.1	1761.6	5048.9	8363.0	8464.9	7647.1	5923.0	4075.6	2265.7
80°	284.2	289.6	372.7	581.8	2155.8	5397.5	5689.8	5035.5	3539.3	1879.6	935.8
82.5°	179.6	182.3	254.7	375.4	911.6	2450.7	2692.0	2265.7	1402.3	812.4	412.9
85°	112.6	112.6	168.9	246.7	544.3	782.9	850.0	772.2	600.6	442.4	225.2
87.5°	61.7	61.7	101.9	142.1	297.6	252.0	260.1	308.4	375.4	270.8	112.6
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°	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1	1413.1
2.5°	1410.4	1405.0	1397.0	1394.3	1391.6	1388.9	1391.6	1397.0	1391.6	1391.6	1394.3
5°	1402.3	1397.0	1386.2	1386.2	1388.9	1391.6	1405.0	1413.1	1415.7	1415.7	1415.7
7.5°	1402.3	1394.3	1386.2	1388.9	1394.3	1405.0	1426.5	1439.9	1450.6	1453.3	1453.3
10°	1415.7	1405.0	1399.6	1405.0	1421.1	1429.1	1450.6	1472.0	1485.5	1490.8	1490.8
12.5°	1439.9	1429.1	1429.1	1439.9	1461.3	1472.0	1490.8	1506.9	1523.0	1531.0	1531.0
15°	1480.1	1466.7	1469.4	1488.1	1512.3	1523.0	1536.4	1541.8	1555.2	1565.9	1565.9
17.5°	1517.6	1504.2	1509.6	1531.0	1547.1	1552.5	1560.5	1557.8	1563.2	1571.3	1573.9
20°	1560.5	1547.1	1549.8	1563.2	1565.9	1560.5	1560.5	1552.5	1549.8	1563.2	1568.6
22.5°	1603.4	1590.0	1587.3	1579.3	1565.9	1552.5	1544.4	1536.4	1531.0	1544.4	1549.8
25°	1654.4	1635.6	1622.2	1587.3	1552.5	1528.4	1517.6	1512.3	1509.6	1523.0	1528.4
27.5°	1710.7	1691.9	1651.7	1576.6	1520.3	1480.1	1472.0	1472.0	1477.4	1485.5	1490.8
30°	1764.3	1745.5	1673.1	1552.5	1464.0	1405.0	1397.0	1405.0	1418.4	1426.5	1434.5
32.5°	1817.9	1799.2	1686.6	1514.9	1380.9	1305.8	1300.4	1313.8	1335.3	1340.7	1346.0
35°	1890.3	1871.6	1702.6	1461.3	1276.3	1195.9	1190.5	1198.5	1217.3	1225.4	1233.4
37.5°	1992.2	1981.5	1726.8	1402.3	1179.8	1091.3	1075.2	1069.8	1080.6	1077.9	1088.6
40°	2126.3	2134.3	1769.7	1324.6	1085.9	994.8	959.9	943.8	933.1	911.6	922.4
42.5°	2322.0	2327.4	1817.9	1236.1	1005.5	903.6	858.0	828.5	807.1	772.2	777.6
45°	2608.9	2563.3	1874.2	1142.2	933.1	831.2	777.6	742.7	713.2	683.7	686.4
47.5°	2989.7	2850.2	1935.9	1064.5	860.7	772.2	724.0	683.7	648.9	624.7	627.4
50°	3458.9	3206.9	1997.6	992.1	788.3	726.6	683.7	640.8	606.0	581.8	579.2
52.5°	4078.3	3635.9	2037.8	911.6	715.9	686.4	648.9	608.7	565.8	536.3	533.6
55°	4721.8	4134.6	2072.7	815.1	646.2	640.8	622.1	576.5	525.5	488.0	482.6
57.5°	5429.7	4668.2	2099.5	721.3	592.6	603.3	597.9	544.3	488.0	453.1	450.5
60°	6073.2	5220.5	2013.7	638.2	544.3	565.8	571.1	525.5	496.0	504.1	506.8
62.5°	6722.1	5646.9	1686.6	576.5	512.1	541.6	587.2	584.5	571.1	584.5	587.2
65°	6955.3	5735.3	1195.9	525.5	480.0	552.4	638.2	632.8	571.1	547.0	541.6
67.5°	6824.0	5472.6	804.4	485.3	455.8	565.8	691.8	632.8	549.7	517.5	506.8
70°	6199.2	4826.4	589.9	445.1	434.4	563.1	721.3	630.1	538.9	504.1	490.7
72.5°	4944.4	3724.4	474.6	407.6	402.2	549.7	737.4	624.7	528.2	490.7	474.6
75°	3201.5	2316.7	399.5	370.0	353.9	528.2	729.3	608.7	514.8	466.5	455.8
77.5°	1485.5	997.5	340.5	327.1	308.4	496.0	705.2	576.5	485.3	439.7	426.3
80°	691.8	471.9	286.9	284.2	276.2	469.2	673.0	538.9	450.5	412.9	391.5
82.5°	370.0	284.2	233.3	233.3	241.3	437.1	632.8	493.4	404.9	386.1	329.8
85°	195.7	163.6	168.9	182.3	206.5	386.1	579.2	445.1	353.9	294.9	286.9
87.5°	99.2	104.6	104.6	123.3	158.2	313.7	477.3	367.3	300.3	241.3	236.0
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)