

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: P234815

Luminaire Tested: **ARCH-M-AF48-140-D-U-T3-8027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234815  
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-AF48-140-D-U-T3-8027  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 2700K, 905mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13202 lumens  
Efficiency: N/A  
Efficacy: 93.6 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 - G2

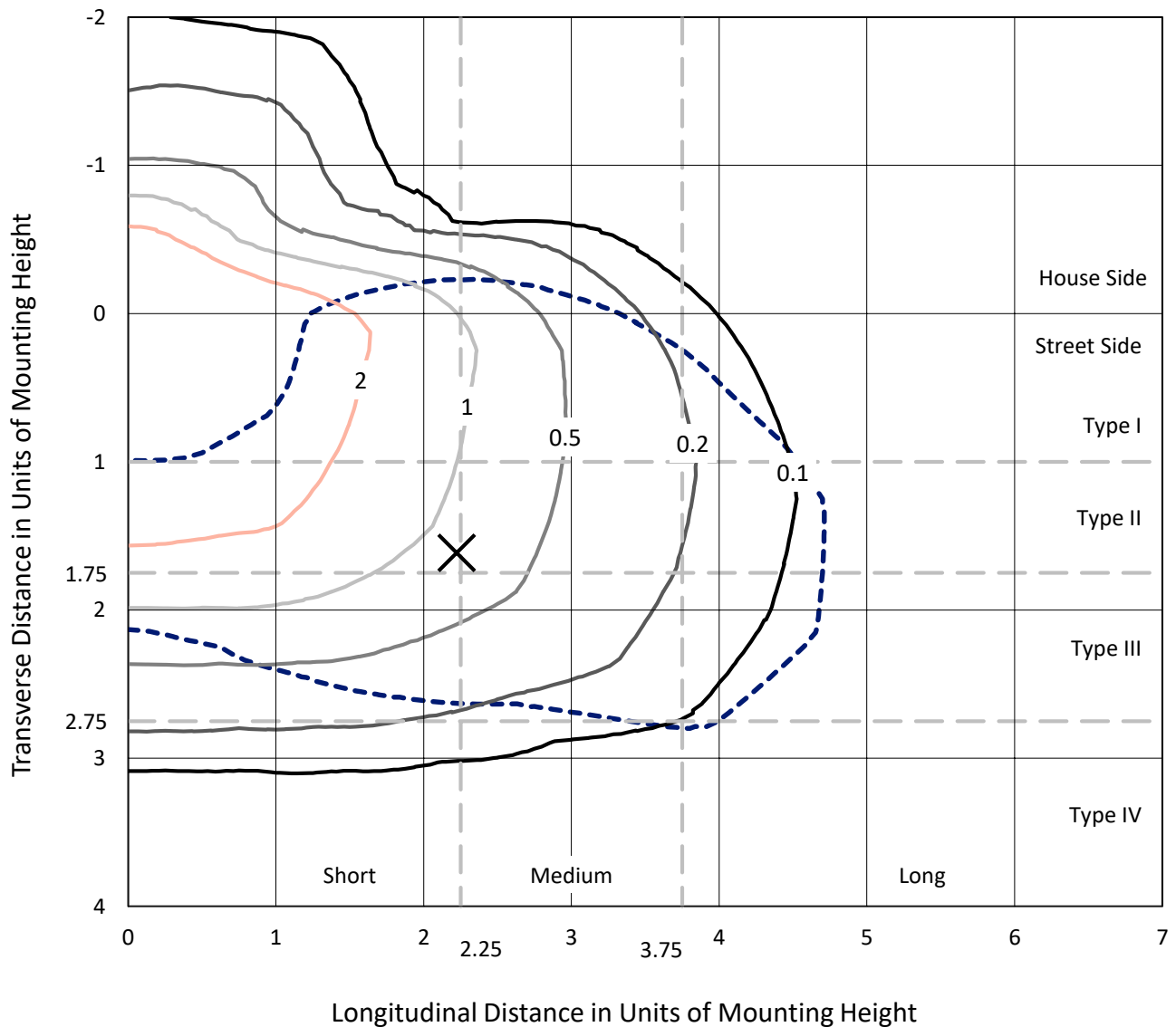
Input Watts (W): 141  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

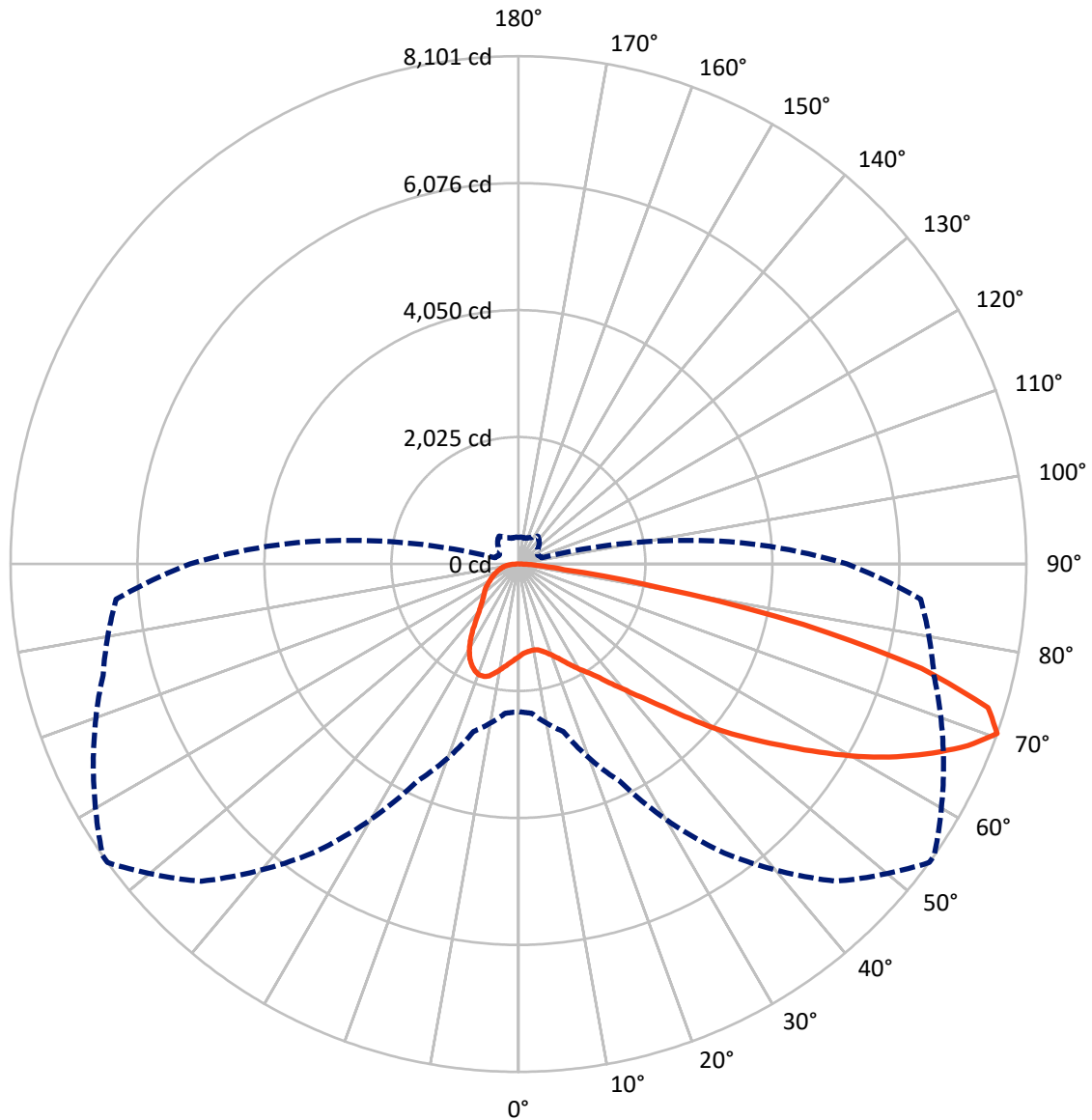
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.3 fc  
 Type III - Short - Non-Cutoff

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CATALOG NUMBER: ARCH-M-AF48-140-D-U-T3-8027

### Luminous Intensity Polar Plot



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

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CATALOG NUMBER: ARCH-M-AF48-140-D-U-T3-8027

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2994.2	0.0	2994.2
	% Fixture	22.7	0.0	22.7
<b>Street Side</b>	Lumens	10207.8	0.0	10207.8
	% Fixture	77.3	0.0	77.3
<b>Total</b>	Lumens	13202.0	0.0	13202.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.0	1.1
10°-20°	463.2	3.5
20°-30°	804.7	6.1
30°-40°	1175.9	8.9
40°-50°	1845.6	14.0
50°-60°	2838.1	21.5
60°-70°	3467.4	26.3
70°-80°	2149.8	16.3
80°-90°	312.3	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°	13202.0	100.0
0°-180°	13202.0	100.0



REPORT NUMBER: P234815

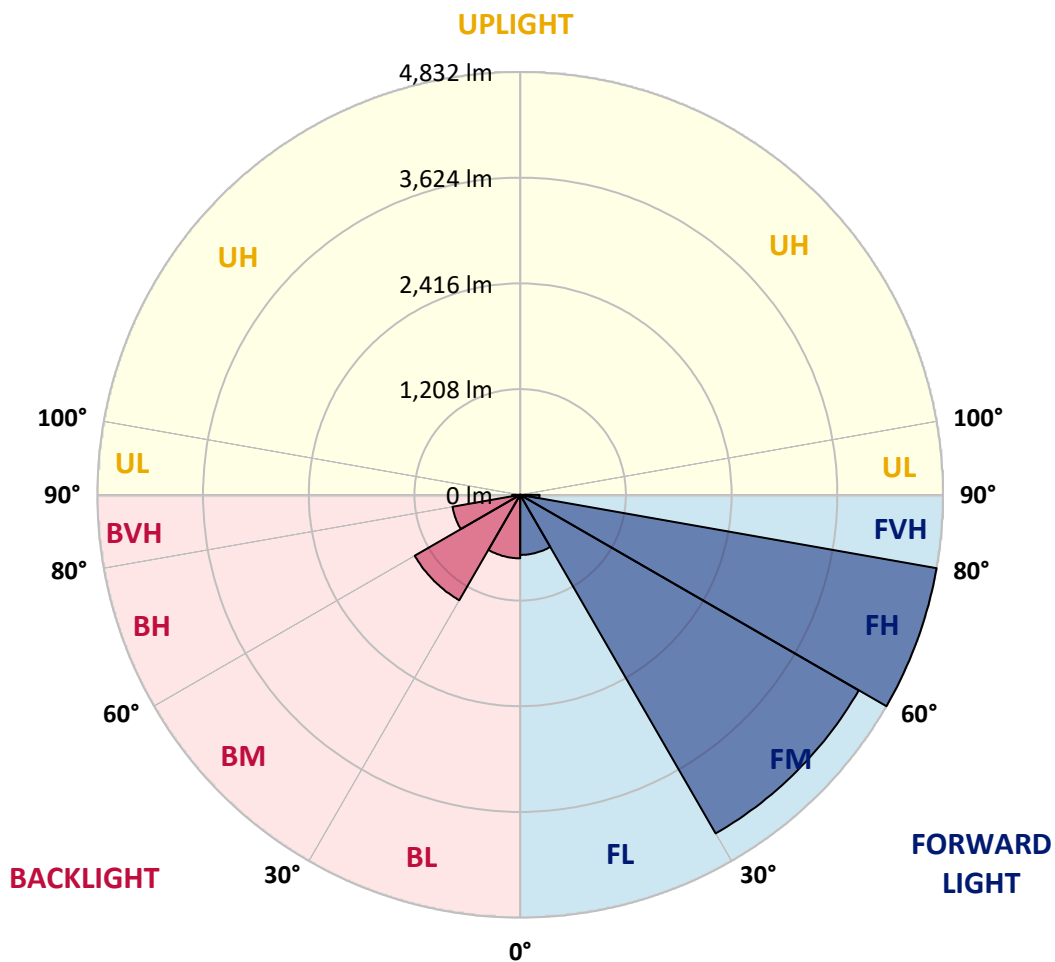
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	686.9	5.2			
FM	(30°-60°)	4468.3	33.8			
FH	(60°-80°)	4832.1	36.6			G2/5000
FVH	(80°-90°)	220.5	1.7			G2/225
BL	(0°-30°)	725.9	5.5	B2/1000		
BM	(30°-60°)	1391.3	10.5	B2/2500		
BH	(60°-80°)	785.1	5.9	B2/1000		G2/1000
BVH	(80°-90°)	91.8	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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CATALOG NUMBER: ARCH-M-AF48-140-D-U-T3-8027

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0
2.5°	1419.0	1414.2	1414.2	1421.4	1423.9	1431.1	1431.1	1433.5	1440.8	1452.9	1467.4
5°	1375.5	1373.1	1375.5	1385.2	1390.0	1404.5	1409.3	1411.8	1426.3	1445.6	1467.4
7.5°	1332.0	1329.6	1334.4	1348.9	1363.4	1385.2	1397.3	1399.7	1421.4	1448.0	1477.0
10°	1317.5	1315.1	1322.3	1334.4	1348.9	1373.1	1392.4	1394.8	1426.3	1457.7	1498.8
12.5°	1336.8	1334.4	1341.7	1353.7	1368.3	1385.2	1406.9	1409.3	1450.4	1491.5	1535.1
15°	1385.2	1385.2	1387.6	1394.8	1409.3	1423.9	1443.2	1445.6	1489.1	1537.5	1581.0
17.5°	1460.1	1455.3	1455.3	1452.9	1462.5	1469.8	1494.0	1496.4	1542.3	1585.8	1629.3
20°	1552.0	1549.6	1539.9	1527.8	1525.4	1530.2	1554.4	1556.8	1602.7	1639.0	1680.1
22.5°	1663.2	1665.6	1643.8	1617.2	1605.2	1612.4	1634.2	1636.6	1670.4	1701.9	1738.1
25°	1810.6	1803.4	1772.0	1733.3	1709.1	1709.1	1730.9	1730.9	1762.3	1781.6	1805.8
27.5°	1950.8	1936.3	1907.3	1851.7	1813.1	1820.3	1842.1	1842.1	1871.1	1878.3	1890.4
30°	2103.1	2088.6	2052.4	1982.3	1931.5	1926.7	1953.3	1950.8	1989.5	1987.1	1977.4
32.5°	2289.3	2282.0	2221.6	2132.2	2064.5	2047.5	2071.7	2074.1	2098.3	2091.1	2059.6
35°	2550.4	2547.9	2492.3	2335.2	2245.8	2214.3	2228.9	2228.9	2245.8	2226.4	2173.3
37.5°	2879.1	2884.0	2835.6	2603.5	2477.8	2424.7	2427.1	2424.7	2429.5	2407.7	2352.1
40°	3207.9	3220.0	3217.6	2937.2	2777.6	2685.7	2651.9	2647.1	2659.2	2649.5	2596.3
42.5°	3640.6	3669.6	3601.9	3348.1	3169.2	3014.5	2922.6	2910.6	2937.2	2949.2	2898.5
45°	4090.3	4080.6	3974.2	3790.5	3628.5	3430.3	3256.3	3236.9	3256.3	3292.5	3239.3
47.5°	4324.7	4317.5	4290.9	4199.0	4174.9	3947.6	3684.1	3667.2	3630.9	3681.7	3618.9
50°	4711.5	4718.8	4610.0	4600.3	4701.9	4576.2	4167.6	4128.9	4063.7	4104.8	4051.6
52.5°	4992.0	4960.5	4892.8	4977.4	5294.1	5226.4	4622.1	4605.2	4544.7	4535.1	4510.9
55°	5105.6	5105.6	5117.7	5313.5	5765.5	5676.1	5115.2	5132.2	5050.0	4982.3	5013.7
57.5°	5139.4	5153.9	5257.9	5581.8	6319.1	6026.6	5659.2	5683.3	5564.9	5429.5	5528.6
60°	4972.6	5016.1	5265.1	5734.1	6631.0	6398.9	6232.1	6239.3	6067.7	5869.5	6043.5
62.5°	4544.7	4597.9	5042.7	5796.9	6580.2	6780.8	6773.6	6790.5	6556.0	6309.4	6527.0
65°	4020.2	4073.3	4547.1	5620.5	6541.5	7054.0	7269.2	7315.1	7012.9	6681.7	6829.2
67.5°	3249.0	3319.1	3768.7	5025.8	6353.0	7278.8	7733.3	7781.6	7365.8	6875.1	6802.6
70°	2354.6	2388.4	2765.5	3819.5	5584.2	7155.5	8100.7	8098.3	7481.9	6860.6	6440.0
72.5°	1133.8	1160.4	1486.7	2371.5	3993.6	6072.5	7834.8	7880.8	7322.3	6650.3	5610.8
75°	466.6	493.2	601.9	1000.8	2095.9	4012.9	6640.6	6749.4	6650.3	5968.6	4390.0
77.5°	290.1	299.8	352.9	517.3	957.3	1873.5	4648.7	4796.1	5270.0	4781.6	2898.5
80°	217.6	224.8	263.5	362.6	604.4	691.4	2308.6	2494.8	3193.4	2743.8	1312.7
82.5°	181.3	183.7	210.3	263.5	411.0	396.5	739.7	824.3	1489.1	1046.7	452.1
85°	169.2	174.1	188.6	188.6	261.1	249.0	307.0	321.5	432.7	357.8	157.1
87.5°	87.0	82.2	166.8	147.5	135.4	120.9	130.5	140.2	162.0	171.6	70.1
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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CATALOG NUMBER: ARCH-M-AF48-140-D-U-T3-8027

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0	1477.0
2.5°	1472.2	1479.5	1491.5	1503.6	1518.1	1535.1	1544.7	1556.8	1566.5	1561.6	1559.2
5°	1479.5	1491.5	1518.1	1542.3	1571.3	1605.2	1626.9	1651.1	1670.4	1675.3	1668.0
7.5°	1491.5	1513.3	1549.6	1593.1	1631.8	1675.3	1709.1	1743.0	1767.1	1772.0	1772.0
10°	1520.6	1544.7	1593.1	1651.1	1697.0	1743.0	1781.6	1808.2	1830.0	1839.6	1839.6
12.5°	1561.6	1590.7	1648.7	1718.8	1769.5	1813.1	1834.8	1846.9	1856.6	1866.2	1868.7
15°	1610.0	1641.4	1711.5	1786.5	1839.6	1861.4	1861.4	1859.0	1859.0	1863.8	1868.7
17.5°	1658.3	1692.2	1764.7	1844.5	1878.3	1866.2	1849.3	1842.1	1837.2	1834.8	1842.1
20°	1709.1	1743.0	1815.5	1890.4	1880.7	1830.0	1805.8	1788.9	1774.4	1767.1	1776.8
22.5°	1764.7	1796.1	1871.1	1921.8	1849.3	1772.0	1726.0	1699.4	1675.3	1660.8	1670.4
25°	1830.0	1861.4	1933.9	1931.5	1793.7	1684.9	1612.4	1568.9	1542.3	1527.8	1527.8
27.5°	1907.3	1933.9	2004.0	1907.3	1716.4	1568.9	1462.5	1421.4	1414.2	1402.1	1402.1
30°	1987.1	2008.9	2069.3	1851.7	1610.0	1416.6	1300.6	1281.2	1283.6	1271.6	1274.0
32.5°	2069.3	2091.1	2108.0	1769.5	1472.2	1245.0	1167.6	1153.1	1150.7	1141.0	1131.3
35°	2185.3	2216.8	2112.8	1658.3	1305.4	1102.3	1046.7	1032.2	1017.7	983.9	983.9
37.5°	2361.8	2395.7	2100.7	1520.6	1133.8	991.1	940.4	921.0	896.9	863.0	850.9
40°	2603.5	2603.5	2074.1	1365.8	996.0	901.7	853.3	829.2	802.6	768.7	761.5
42.5°	2888.8	2821.1	2033.0	1208.7	894.4	841.3	797.7	771.2	739.7	701.0	696.2
45°	3222.4	3038.7	1975.0	1068.5	819.5	805.0	778.4	732.5	679.3	638.2	630.9
47.5°	3546.3	3234.5	1919.4	969.4	756.6	790.5	768.7	691.4	618.9	560.8	553.6
50°	3901.7	3408.5	1854.2	887.2	708.3	780.8	756.6	630.9	551.2	510.1	505.2
52.5°	4257.1	3585.0	1784.0	800.2	667.2	761.5	727.6	587.4	548.8	493.2	485.9
55°	4631.8	3790.5	1701.9	703.5	618.9	722.8	689.0	585.0	565.7	493.2	476.2
57.5°	4996.8	4017.7	1568.9	609.2	565.7	664.8	674.5	570.5	529.4	488.3	469.0
60°	5400.5	4259.5	1348.9	529.4	519.7	616.4	655.1	539.1	488.3	473.8	464.1
62.5°	5724.4	4477.0	1054.0	473.8	481.1	577.8	630.9	519.7	471.4	459.3	456.9
65°	5864.6	4481.9	756.6	425.5	442.4	541.5	606.8	502.8	456.9	452.1	449.6
67.5°	5717.2	4235.3	531.8	379.5	401.3	507.7	575.3	485.9	442.4	444.8	440.0
70°	5240.9	3715.6	389.2	336.0	362.6	471.4	541.5	464.1	425.5	430.3	423.0
72.5°	4385.2	2896.1	311.8	299.8	331.2	432.7	507.7	440.0	398.9	401.3	386.8
75°	3239.3	1919.4	261.1	268.3	294.9	396.5	464.1	408.5	369.9	360.2	350.5
77.5°	1926.7	986.3	215.1	234.5	263.5	352.9	415.8	369.9	338.4	321.5	314.3
80°	795.3	398.9	176.5	198.2	229.7	314.3	367.4	323.9	302.2	285.3	275.6
82.5°	316.7	195.8	140.2	162.0	193.4	273.2	321.5	285.3	263.5	251.4	224.8
85°	120.9	96.7	94.3	113.6	145.0	210.3	265.9	239.3	222.4	191.0	183.7
87.5°	48.3	43.5	43.5	55.6	82.2	133.0	191.0	166.8	174.1	137.8	140.2
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)