

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: P231164

Luminaire Tested: **ARCH-M-AF48-150-D-U-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231164  
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-AF48-150-D-U-T3  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 970mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 18241.2 lumens  
Efficiency: N/A  
Efficacy: 120.8 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type III - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G3

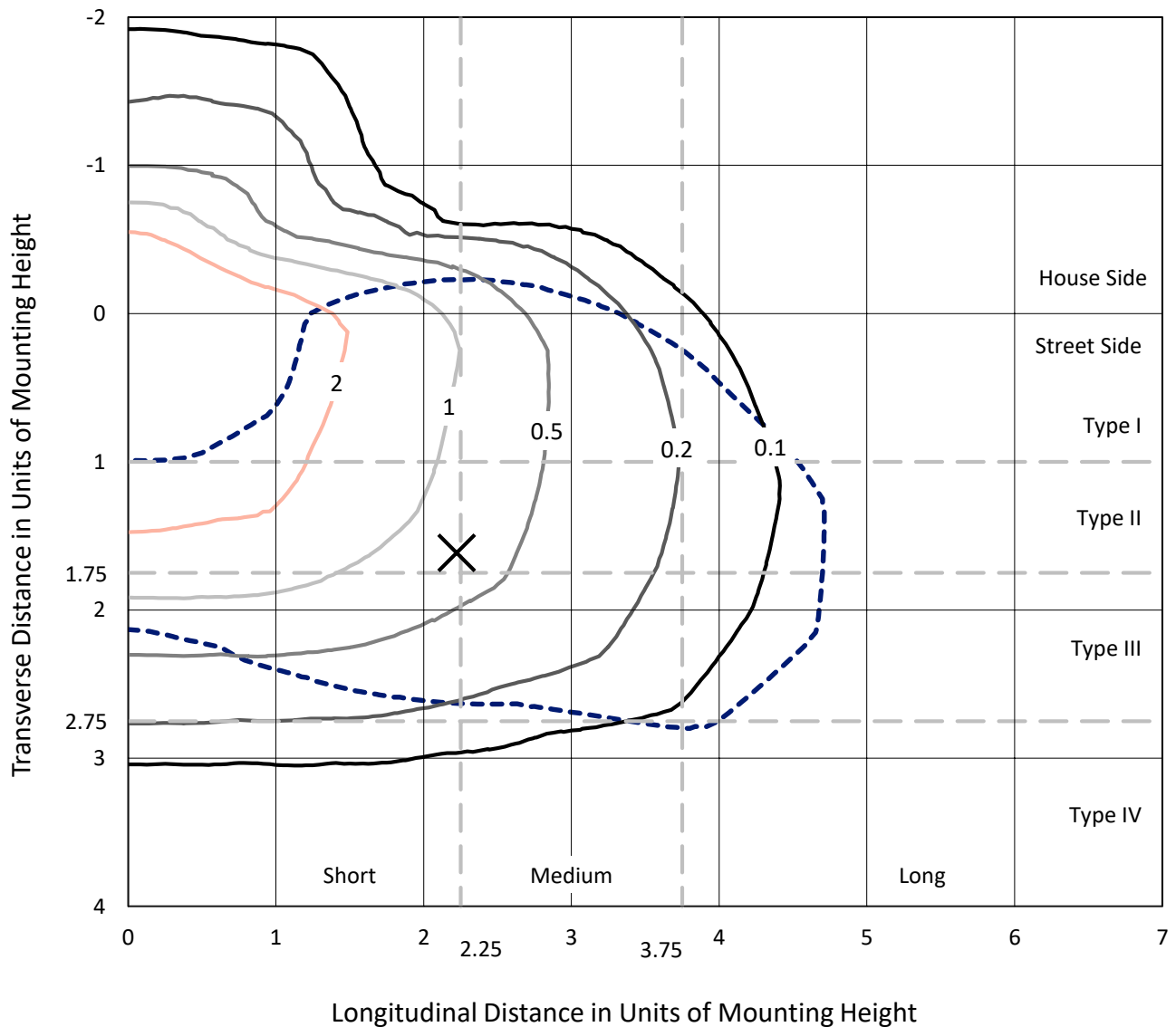
Input Watts (W): 151  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

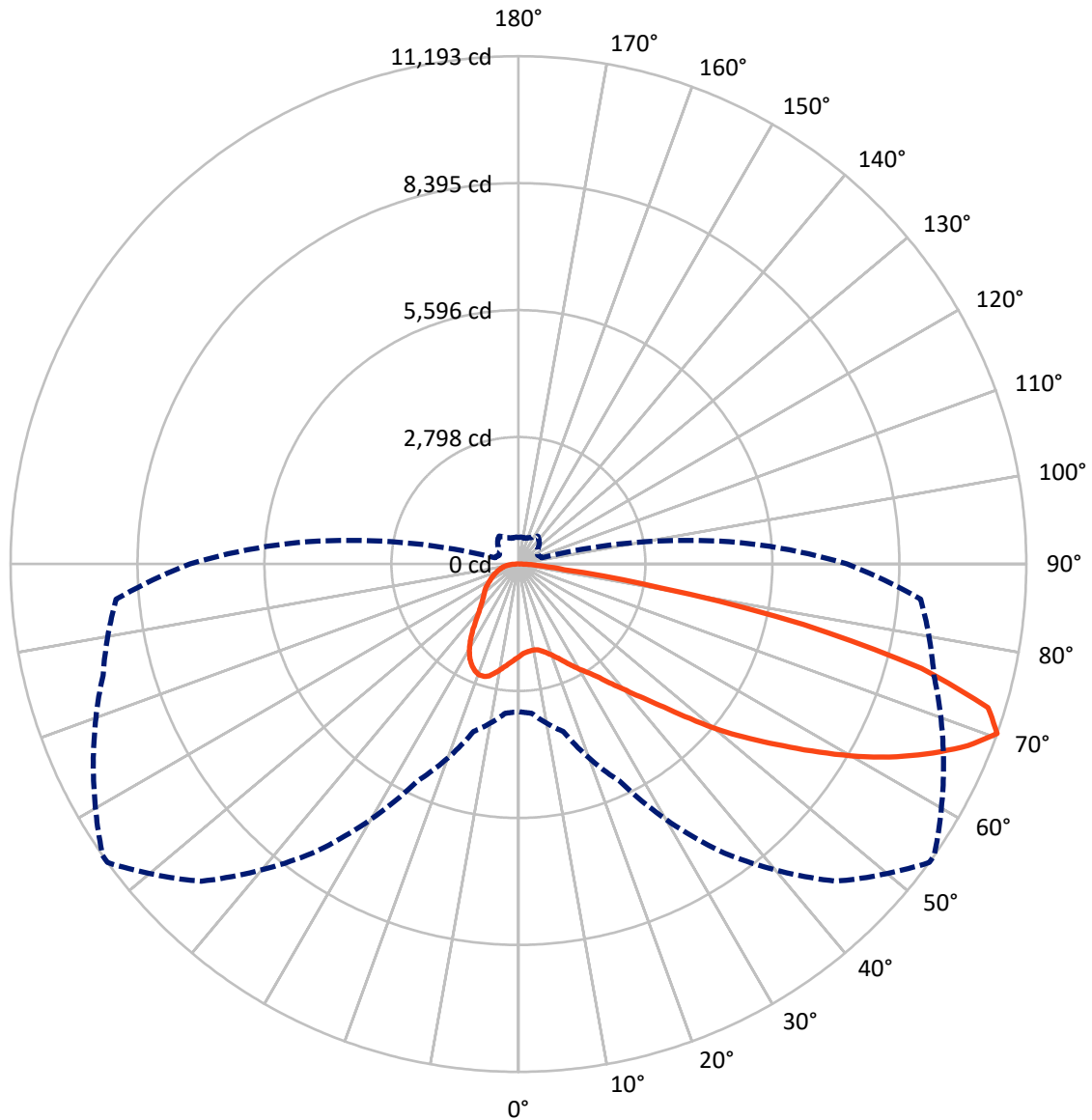


Based on 25 foot mounting height. Maximum calculated value = 3.8 fc  
 Type III - Short - Non-Cutoff

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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	4137.1	0.0	4137.1
	% Fixture	22.7	0.0	22.7
<b>Street Side</b>	Lumens	14104.2	0.0	14104.2
	% Fixture	77.3	0.0	77.3
<b>Total</b>	Lumens	18241.2	0.0	18241.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	200.3	1.1
10°-20°	640.0	3.5
20°-30°	1111.8	6.1
30°-40°	1624.8	8.9
40°-50°	2550.1	14.0
50°-60°	3921.4	21.5
60°-70°	4791.0	26.3
70°-80°	2970.4	16.3
80°-90°	431.5	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°	18241.2	100.0
0°-180°	18241.2	100.0



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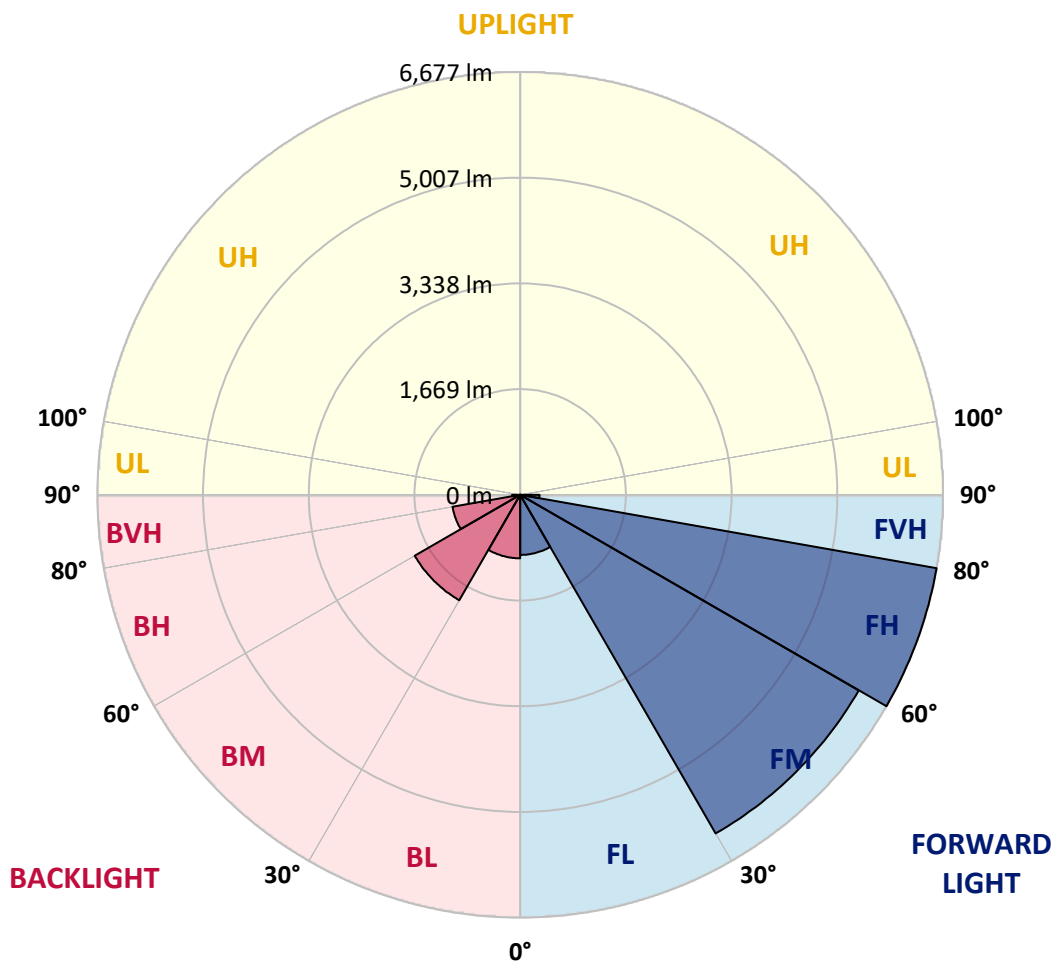
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	949.1	5.2			
FM	(30°-60°)	6173.8	33.8			
FH	(60°-80°)	6676.6	36.6			G3/7500
FVH	(80°-90°)	304.7	1.7			G3/500
BL	(0°-30°)	1003.0	5.5	B3/2500		
BM	(30°-60°)	1922.4	10.5	B2/2500		
BH	(60°-80°)	1084.8	5.9	B3/2500		G3/2500
BVH	(80°-90°)	126.8	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	54°	55°	65°	75°	85°
0°	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8
2.5°	1960.7	1953.9	1953.9	1964.0	1967.3	1977.4	1977.4	1980.7	1990.8	2007.4	2027.5
5°	1900.5	1897.2	1900.5	1913.9	1920.6	1940.6	1947.3	1950.7	1970.7	1997.4	2027.5
7.5°	1840.4	1837.1	1843.8	1863.8	1883.9	1913.9	1930.6	1934.0	1964.0	2000.8	2040.8
10°	1820.3	1817.1	1827.1	1843.8	1863.8	1897.2	1924.0	1927.2	1970.7	2014.1	2070.9
12.5°	1847.1	1843.8	1853.8	1870.5	1890.5	1913.9	1943.9	1947.3	2004.1	2060.8	2121.0
15°	1913.9	1913.9	1917.2	1927.2	1947.3	1967.3	1994.0	1997.4	2057.6	2124.4	2184.4
17.5°	2017.5	2010.8	2010.8	2007.4	2020.7	2030.8	2064.2	2067.6	2131.0	2191.2	2251.2
20°	2144.4	2141.0	2127.6	2111.0	2107.6	2114.3	2147.7	2151.1	2214.5	2264.6	2321.4
22.5°	2298.1	2301.3	2271.3	2234.5	2217.9	2227.9	2258.0	2261.2	2308.1	2351.5	2401.6
25°	2501.7	2491.7	2448.3	2394.9	2361.5	2361.5	2391.6	2391.6	2434.9	2461.7	2495.1
27.5°	2695.5	2675.4	2635.3	2558.5	2505.1	2515.1	2545.2	2545.2	2585.3	2595.3	2612.0
30°	2905.9	2885.8	2835.8	2739.0	2668.8	2662.1	2698.9	2695.5	2749.0	2745.6	2732.2
32.5°	3163.1	3153.1	3069.6	2946.0	2852.5	2829.1	2862.5	2865.8	2899.2	2889.2	2845.8
35°	3523.9	3520.5	3443.7	3226.6	3103.0	3059.5	3079.6	3079.6	3103.0	3076.3	3002.8
37.5°	3978.2	3984.8	3918.0	3597.3	3423.6	3350.2	3353.5	3350.2	3356.8	3326.7	3249.9
40°	4432.3	4449.1	4445.7	4058.3	3837.8	3710.9	3664.1	3657.5	3674.1	3660.8	3587.3
42.5°	5030.3	5070.4	4976.9	4626.1	4378.9	4165.1	4038.2	4021.5	4058.3	4075.0	4004.9
45°	5651.5	5638.2	5491.2	5237.3	5013.6	4739.6	4499.1	4472.4	4499.1	4549.3	4475.8
47.5°	5975.6	5965.5	5928.7	5801.9	5768.4	5454.5	5090.4	5067.0	5016.9	5087.0	5000.2
50°	6510.0	6520.0	6369.6	6356.3	6496.6	6322.9	5758.4	5705.0	5614.8	5671.5	5598.1
52.5°	6897.3	6854.0	6760.5	6877.4	7314.9	7221.4	6386.4	6363.0	6279.5	6266.1	6232.7
55°	7054.4	7054.4	7071.0	7341.6	7966.2	7842.7	7067.8	7091.1	6977.5	6884.0	6927.4
57.5°	7101.1	7121.2	7264.8	7712.4	8731.1	8327.0	7819.2	7852.7	7689.0	7502.0	7638.9
60°	6870.6	6930.8	7274.8	7922.9	9162.1	8841.4	8610.9	8620.9	8383.8	8109.9	8350.3
62.5°	6279.5	6352.9	6967.5	8009.7	9091.9	9369.1	9359.1	9382.5	9058.4	8717.8	9018.4
65°	5554.6	5628.2	6282.9	7765.8	9038.4	9746.6	10043.8	10107.3	9689.8	9232.1	9435.9
67.5°	4489.1	4586.0	5207.3	6944.2	8777.9	10057.1	10685.1	10751.9	10177.4	9499.3	9399.2
70°	3253.3	3300.0	3821.1	5277.4	7715.7	9886.8	11192.8	11189.4	10337.7	9479.4	8898.1
72.5°	1566.5	1603.3	2054.2	3276.7	5517.9	8390.4	10825.4	10888.9	10117.3	9188.8	7752.4
75°	644.7	681.4	831.7	1382.8	2895.9	5544.6	9175.4	9325.7	9188.8	8246.8	6065.7
77.5°	400.8	414.2	487.6	714.8	1322.7	2588.6	6423.1	6626.9	7281.5	6606.8	4004.9
80°	300.6	310.7	364.1	501.0	835.0	955.2	3189.9	3447.0	4412.3	3791.1	1813.7
82.5°	250.5	253.9	290.6	364.1	567.8	547.8	1022.1	1139.0	2057.6	1446.2	624.6
85°	233.8	240.5	260.5	260.5	360.7	344.0	424.2	444.3	597.9	494.4	217.1
87.5°	120.2	113.5	230.5	203.8	187.1	167.0	180.3	193.7	223.8	237.1	96.9
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°	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8	2040.8
2.5°	2034.1	2044.2	2060.8	2077.6	2097.6	2121.0	2134.4	2151.1	2164.5	2157.7	2154.4
5°	2044.2	2060.8	2097.6	2131.0	2171.1	2217.9	2247.9	2281.3	2308.1	2314.7	2304.7
7.5°	2060.8	2090.9	2141.0	2201.2	2254.6	2314.7	2361.5	2408.2	2441.7	2448.3	2448.3
10°	2100.9	2134.4	2201.2	2281.3	2344.8	2408.2	2461.7	2498.5	2528.5	2541.8	2541.8
12.5°	2157.7	2197.8	2278.0	2374.9	2445.0	2505.1	2535.2	2551.9	2565.3	2578.6	2581.9
15°	2224.5	2268.0	2364.9	2468.4	2541.8	2571.9	2571.9	2568.5	2568.5	2575.3	2581.9
17.5°	2291.3	2338.1	2438.3	2548.6	2595.3	2578.6	2555.2	2545.2	2538.6	2535.2	2545.2
20°	2361.5	2408.2	2508.5	2612.0	2598.6	2528.5	2495.1	2471.8	2451.7	2441.7	2455.0
22.5°	2438.3	2481.7	2585.3	2655.4	2555.2	2448.3	2384.9	2348.1	2314.7	2294.7	2308.1
25°	2528.5	2571.9	2672.2	2668.8	2478.4	2328.0	2227.9	2167.7	2131.0	2111.0	2111.0
27.5°	2635.3	2672.2	2769.0	2635.3	2371.5	2167.7	2020.7	1964.0	1953.9	1937.3	1937.3
30°	2745.6	2775.7	2859.1	2558.5	2224.5	1957.3	1797.0	1770.3	1773.6	1756.9	1760.3
32.5°	2859.1	2889.2	2912.6	2445.0	2034.1	1720.2	1613.3	1593.2	1589.9	1576.6	1563.2
35°	3019.4	3062.9	2919.3	2291.3	1803.7	1523.1	1446.2	1426.2	1406.3	1359.4	1359.4
37.5°	3263.3	3310.1	2902.6	2100.9	1566.5	1369.4	1299.4	1272.6	1239.2	1192.5	1175.8
40°	3597.3	3597.3	2865.8	1887.1	1376.2	1245.9	1179.1	1145.7	1108.9	1062.1	1052.1
42.5°	3991.5	3898.0	2809.0	1670.1	1235.8	1162.4	1102.2	1065.5	1022.1	968.6	962.0
45°	4452.4	4198.6	2728.9	1476.3	1132.3	1112.3	1075.5	1012.1	938.6	881.8	871.8
47.5°	4900.0	4469.1	2652.1	1339.3	1045.5	1092.2	1062.1	955.2	855.1	774.9	764.9
50°	5391.0	4709.6	2561.9	1225.8	978.7	1078.9	1045.5	871.8	761.6	704.8	698.1
52.5°	5882.0	4953.4	2465.0	1105.6	921.9	1052.1	1005.4	811.6	758.2	681.4	671.4
55°	6399.7	5237.3	2351.5	972.0	855.1	998.7	952.0	808.3	781.6	681.4	658.0
57.5°	6904.1	5551.3	2167.7	841.7	781.6	918.5	931.9	788.3	731.5	674.7	647.9
60°	7461.9	5885.3	1863.8	731.5	718.1	851.7	905.2	744.8	674.7	654.7	641.3
62.5°	7909.5	6186.0	1456.3	654.7	664.7	798.3	871.8	718.1	651.3	634.6	631.3
65°	8103.2	6192.6	1045.5	587.9	611.2	748.2	838.4	694.8	631.3	624.6	621.2
67.5°	7899.4	5851.9	734.8	524.4	554.4	701.4	794.9	671.4	611.2	614.6	607.9
70°	7241.5	5133.8	537.8	464.3	501.0	651.3	748.2	641.3	587.9	594.5	584.5
72.5°	6059.0	4001.5	430.9	414.2	457.6	597.9	701.4	607.9	551.2	554.4	534.4
75°	4475.8	2652.1	360.7	370.7	407.5	547.8	641.3	564.5	511.1	497.7	484.4
77.5°	2662.1	1362.8	297.3	324.0	364.1	487.6	574.5	511.1	467.6	444.3	434.2
80°	1099.0	551.2	243.9	273.8	317.3	434.2	507.7	447.5	417.6	394.1	380.7
82.5°	437.5	270.6	193.7	223.8	267.2	377.5	444.3	394.1	364.1	347.4	310.7
85°	167.0	133.6	130.2	157.0	200.4	290.6	367.4	330.7	307.3	263.9	253.9
87.5°	66.8	60.1	60.1	76.8	113.5	183.7	263.9	230.5	240.5	190.4	193.7
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)