

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: P231295

Luminaire Tested: **ARCH-M-AF48-160-D-U-T4W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231295
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-AF48-160-D-U-T4W
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1030mA LIGHT ENGINES WITH 24 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18883.7 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type IV - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

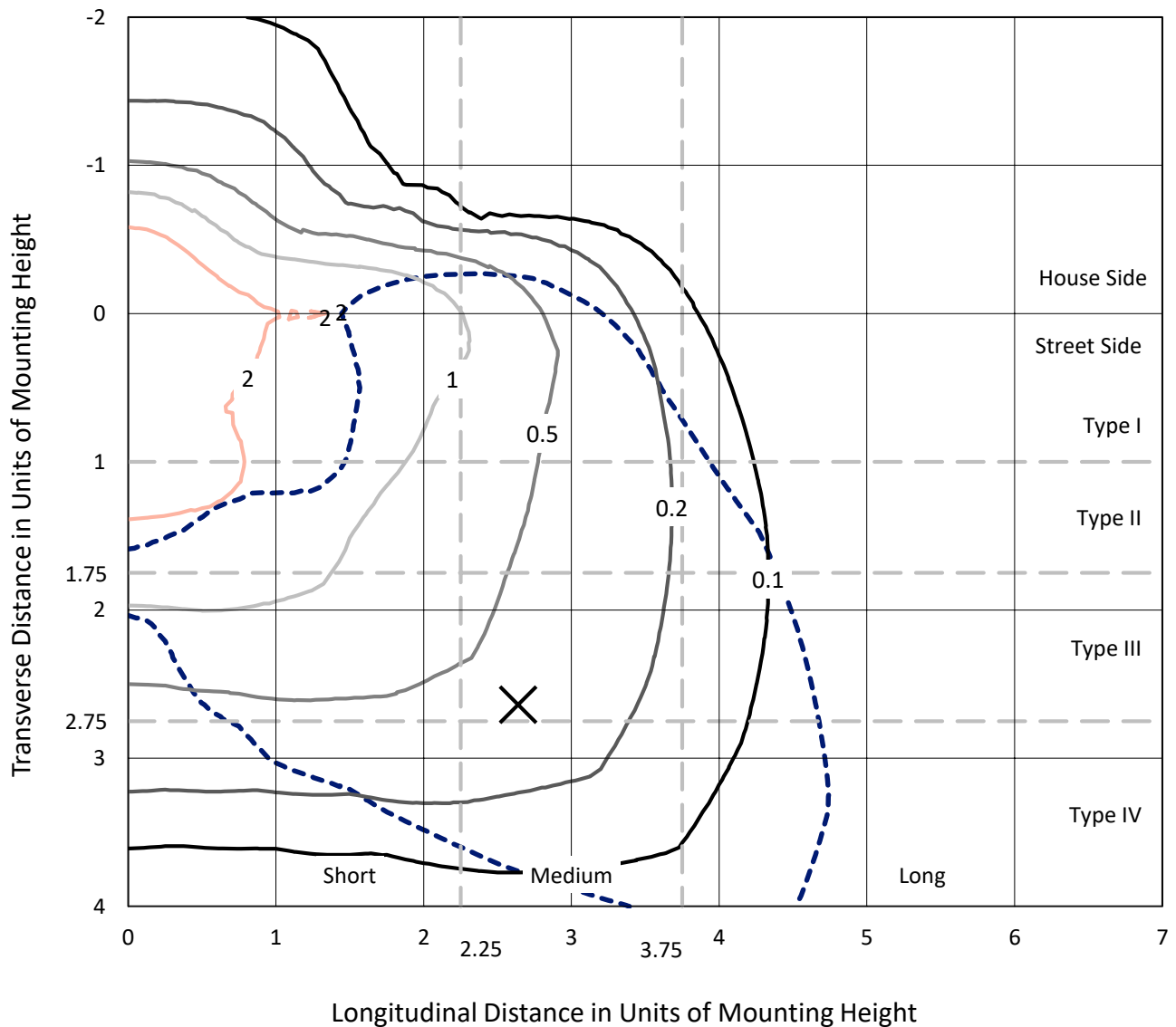
Input Watts (W): 161
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

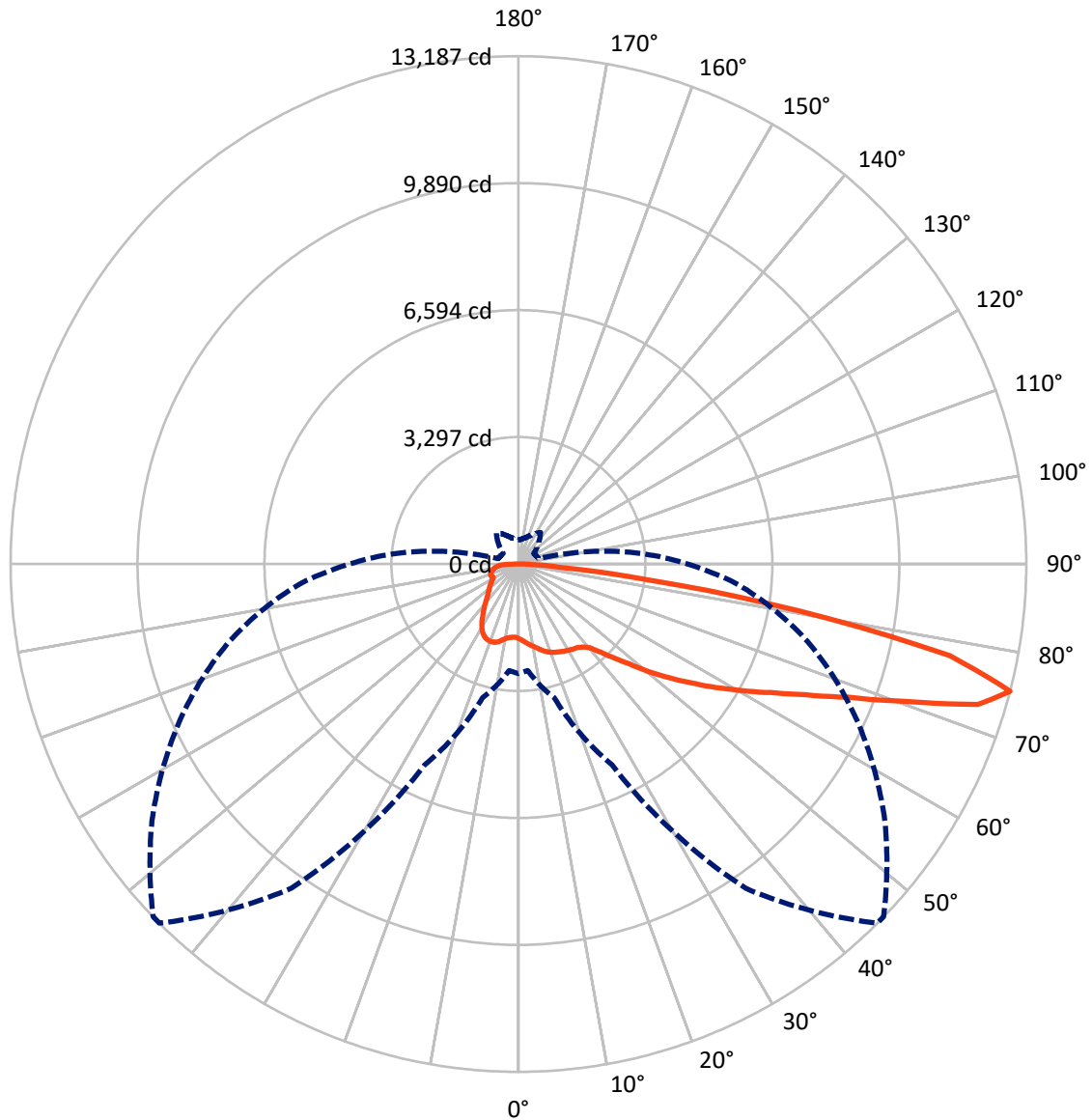
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 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
House Side	Lumens	4374.6	0.0	4374.6
	% Fixture	23.2	0.0	23.2
Street Side	Lumens	14509.1	0.0	14509.1
	% Fixture	76.8	0.0	76.8
Total	Lumens	18883.7	0.0	18883.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.8	1.0
10°-20°	621.7	3.3
20°-30°	1066.8	5.6
30°-40°	1492.0	7.9
40°-50°	2188.7	11.6
50°-60°	3409.4	18.1
60°-70°	4905.8	26.0
70°-80°	4273.5	22.6
80°-90°	733.9	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°	18883.7	100.0
0°-180°	18883.7	100.0



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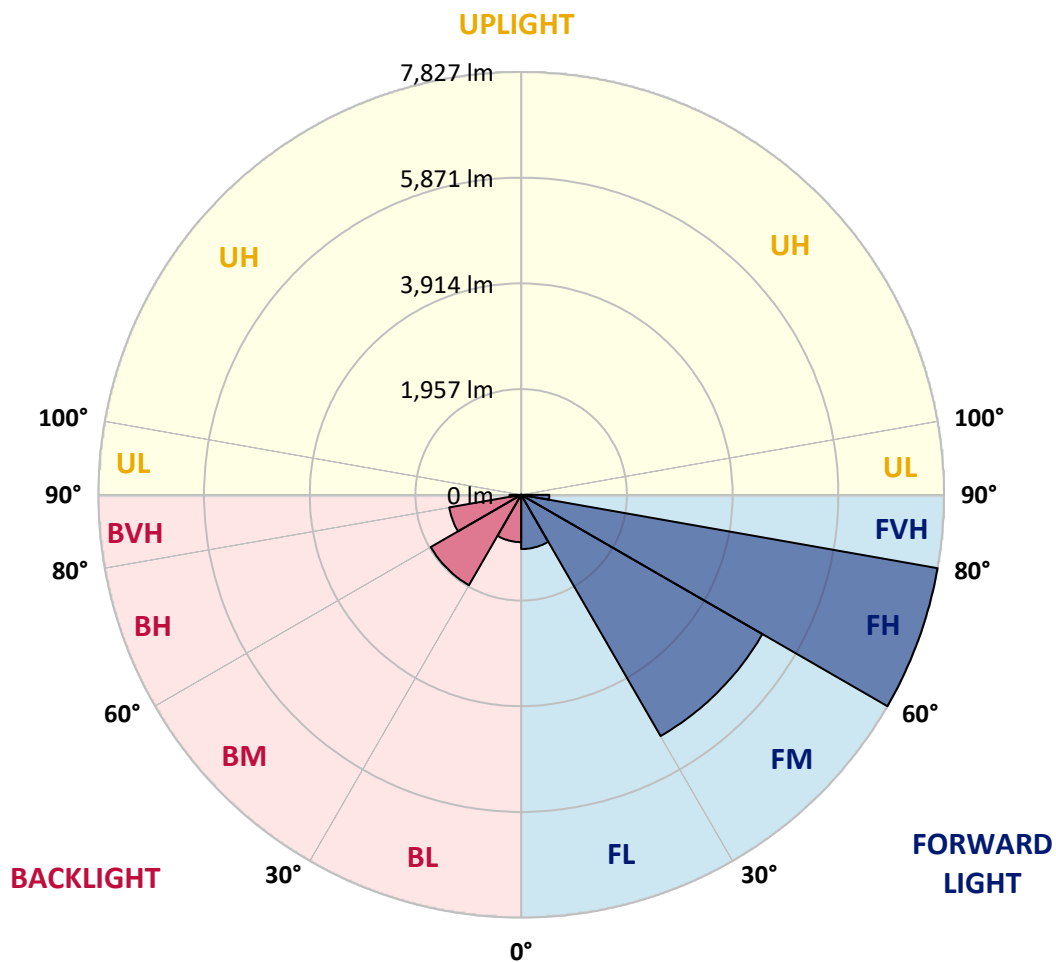
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1004.2	5.3			
FM	(30°-60°)	5156.8	27.3			
FH	(60°-80°)	7827.5	41.5			G4/12000
FVH	(80°-90°)	520.7	2.8			G4/750
BL	(0°-30°)	876.2	4.6	B2/1000		
BM	(30°-60°)	1933.3	10.2	B2/2500		
BH	(60°-80°)	1351.9	7.2	B3/2500		G3/2500
BVH	(80°-90°)	213.2	1.1			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8
2.5°	2031.4	2016.6	2016.6	2005.6	2005.6	1987.3	1979.9	1976.2	1957.9	1946.9	1935.8
5°	2148.9	2130.5	2126.8	2101.1	2090.1	2049.7	2046.0	2020.3	1987.3	1954.2	1928.5
7.5°	2255.4	2244.4	2226.0	2200.4	2167.2	2115.9	2112.2	2071.8	2016.6	1972.6	1935.8
10°	2332.5	2325.2	2299.5	2266.4	2229.7	2178.3	2174.6	2130.5	2064.4	2013.0	1961.5
12.5°	2424.4	2413.3	2380.3	2336.2	2295.8	2248.0	2244.4	2207.6	2134.2	2068.1	2001.9
15°	2512.6	2497.8	2457.4	2413.3	2369.3	2328.8	2328.8	2288.4	2211.3	2134.2	2057.1
17.5°	2556.7	2549.3	2508.9	2461.1	2424.4	2395.0	2391.4	2354.6	2277.5	2196.7	2112.2
20°	2571.3	2575.0	2538.2	2486.8	2461.1	2446.4	2442.8	2417.0	2332.5	2255.4	2174.6
22.5°	2567.6	2578.7	2549.3	2494.2	2486.8	2486.8	2486.8	2457.4	2391.4	2314.2	2233.4
25°	2582.3	2597.1	2575.0	2508.9	2508.9	2523.6	2523.6	2508.9	2450.1	2384.0	2303.2
27.5°	2633.8	2644.8	2626.4	2534.6	2538.2	2560.3	2556.7	2560.3	2523.6	2461.1	2380.3
30°	2696.2	2710.9	2688.8	2575.0	2571.3	2593.4	2593.4	2611.7	2586.0	2519.9	2453.8
32.5°	2865.2	2861.5	2791.7	2619.1	2608.0	2630.1	2630.1	2648.4	2633.8	2582.3	2519.9
35°	3368.5	3313.3	3159.1	2762.4	2652.1	2663.2	2663.2	2696.2	2703.6	2663.2	2608.0
37.5°	3882.7	3864.3	3746.8	3144.3	2813.7	2732.9	2729.2	2777.0	2810.0	2777.0	2740.3
40°	4400.6	4386.0	4360.2	3655.0	3151.7	2857.8	2846.9	2887.3	2946.0	2924.0	2901.9
42.5°	4881.8	4874.5	4900.2	4158.2	3581.5	3126.0	3092.9	3045.2	3129.7	3122.4	3122.4
45°	5260.2	5278.5	5293.3	4628.4	4048.0	3471.3	3430.9	3269.2	3383.1	3412.6	3434.6
47.5°	5473.3	5487.9	5539.4	5087.5	4514.5	3871.7	3842.3	3577.9	3728.5	3816.6	3879.0
50°	5778.1	5737.7	5781.8	5535.7	5076.5	4393.3	4312.5	3992.9	4184.0	4338.2	4485.1
52.5°	6072.0	6005.8	6042.7	6053.6	5715.7	4903.9	4819.4	4481.4	4720.2	4962.6	5223.5
55°	6336.5	6332.8	6369.5	6556.9	6332.8	5451.2	5355.8	5021.5	5366.7	5627.6	6068.3
57.5°	6549.5	6586.3	6747.9	7140.9	7045.5	6046.3	5939.8	5649.6	6057.3	6318.2	7049.2
60°	6799.3	6858.1	7126.3	7636.8	7695.7	6670.8	6560.6	6351.2	6766.3	7030.7	8184.2
62.5°	6883.8	6968.3	7519.3	8158.4	8375.2	7354.0	7254.9	7115.2	7511.9	7750.7	9315.6
65°	6321.8	6483.5	7736.1	8426.7	9106.2	8176.9	8092.4	7971.1	8254.0	8411.9	10083.3
67.5°	6167.5	6241.0	7313.6	8812.3	9793.1	9234.8	9150.3	8940.9	8948.3	8882.1	10333.0
70°	5950.8	6031.6	6880.2	9102.5	10777.5	10682.1	10579.2	9962.1	9583.7	9183.3	9840.9
72.5°	5069.2	5043.5	5928.7	8320.1	11251.4	12474.6	12353.4	11060.3	10053.9	8922.5	8305.4
75°	2846.9	2773.3	3596.2	5756.1	10274.3	13187.3	13183.6	11615.1	9723.4	7772.8	5653.2
77.5°	826.5	804.4	1186.5	2413.3	6916.9	11457.2	11596.7	10476.3	8114.4	5583.5	3103.9
80°	389.3	396.7	510.6	797.1	2953.4	7394.4	7794.8	6898.5	4848.8	2575.0	1282.0
82.5°	246.1	249.8	348.9	514.2	1248.9	3357.4	3688.0	3103.9	1921.1	1113.0	565.7
85°	154.3	154.3	231.4	338.0	745.7	1072.6	1164.4	1057.9	822.9	606.1	308.5
87.5°	84.5	84.5	139.6	194.7	407.7	345.2	356.3	422.5	514.2	371.0	154.3
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°	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8	1935.8
2.5°	1932.1	1924.8	1913.8	1910.2	1906.5	1902.8	1906.5	1913.8	1906.5	1906.5	1910.2
5°	1921.1	1913.8	1899.1	1899.1	1902.8	1906.5	1924.8	1935.8	1939.5	1939.5	1939.5
7.5°	1921.1	1910.2	1899.1	1902.8	1910.2	1924.8	1954.2	1972.6	1987.3	1991.0	1991.0
10°	1939.5	1924.8	1917.5	1924.8	1946.9	1957.9	1987.3	2016.6	2035.1	2042.3	2042.3
12.5°	1972.6	1957.9	1957.9	1972.6	2001.9	2016.6	2042.3	2064.4	2086.4	2097.5	2097.5
15°	2027.7	2009.3	2013.0	2038.7	2071.8	2086.4	2104.8	2112.2	2130.5	2145.2	2145.2
17.5°	2079.1	2060.7	2068.1	2097.5	2119.6	2126.8	2137.9	2134.2	2141.5	2152.6	2156.3
20°	2137.9	2119.6	2123.1	2141.5	2145.2	2137.9	2137.9	2126.8	2123.1	2141.5	2148.9
22.5°	2196.7	2178.3	2174.6	2163.5	2145.2	2126.8	2115.9	2104.8	2097.5	2115.9	2123.1
25°	2266.4	2240.8	2222.4	2174.6	2126.8	2093.8	2079.1	2071.8	2068.1	2086.4	2093.8
27.5°	2343.6	2317.9	2262.8	2160.0	2082.7	2027.7	2016.6	2016.6	2024.0	2035.1	2042.3
30°	2417.0	2391.4	2292.1	2126.8	2005.6	1924.8	1913.8	1924.8	1943.2	1954.2	1965.2
32.5°	2490.5	2464.8	2310.5	2075.5	1891.7	1788.9	1781.6	1799.9	1829.3	1836.7	1844.0
35°	2589.7	2564.0	2332.5	2001.9	1748.5	1638.3	1631.0	1641.9	1667.7	1678.7	1689.7
37.5°	2729.2	2714.6	2365.6	1921.1	1616.3	1495.0	1473.0	1465.7	1480.3	1476.6	1491.4
40°	2913.0	2924.0	2424.4	1814.6	1487.7	1362.8	1315.0	1293.0	1278.3	1248.9	1263.7
42.5°	3181.1	3188.4	2490.5	1693.4	1377.5	1237.9	1175.5	1135.1	1105.7	1057.9	1065.3
45°	3574.2	3511.7	2567.6	1564.8	1278.3	1138.7	1065.3	1017.5	977.1	936.7	940.4
47.5°	4095.8	3904.7	2652.1	1458.3	1179.2	1057.9	991.8	936.7	888.9	855.9	859.6
50°	4738.6	4393.3	2736.6	1359.1	1079.9	995.4	936.7	877.9	830.1	797.1	793.4
52.5°	5587.2	4981.1	2791.7	1248.9	980.8	940.4	888.9	833.8	775.1	734.7	731.0
55°	6468.7	5664.3	2839.5	1116.7	885.3	877.9	852.2	789.7	720.0	668.5	661.2
57.5°	7438.5	6395.3	2876.2	988.2	811.8	826.5	819.2	745.7	668.5	620.8	617.1
60°	8320.1	7152.0	2758.7	874.2	745.7	775.1	782.5	720.0	679.5	690.6	694.3
62.5°	9209.0	7736.1	2310.5	789.7	701.6	742.0	804.4	800.8	782.5	800.8	804.4
65°	9528.6	7857.3	1638.3	720.0	657.6	756.7	874.2	867.0	782.5	749.3	742.0
67.5°	9348.6	7497.3	1102.0	664.9	624.5	775.1	947.8	867.0	753.0	708.9	694.3
70°	8492.7	6611.9	808.1	609.8	595.1	771.4	988.2	863.3	738.4	690.6	672.2
72.5°	6773.6	5102.3	650.2	558.3	551.0	753.0	1010.2	855.9	723.6	672.2	650.2
75°	4386.0	3173.8	547.3	506.9	484.9	723.6	999.1	833.8	705.3	639.1	624.5
77.5°	2035.1	1366.5	466.5	448.2	422.5	679.5	966.1	789.7	664.9	602.4	584.1
80°	947.8	646.5	393.0	389.3	378.4	642.8	922.0	738.4	617.1	565.7	536.3
82.5°	506.9	389.3	319.6	319.6	330.6	598.7	867.0	675.9	554.6	529.0	451.8
85°	268.1	224.0	231.4	249.8	282.8	529.0	793.4	609.8	484.9	404.1	393.0
87.5°	136.0	143.2	143.2	169.0	216.8	429.7	653.9	503.3	411.4	330.6	323.3
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)