

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: P231230

Luminaire Tested: **ARCH-M-AF48-160-D-U-T3-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231230
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29624)
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-T3-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1030mA LIGHT ENGINES WITH 24 LEDS AND TYPE III OPTICS
WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14268.2 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G3

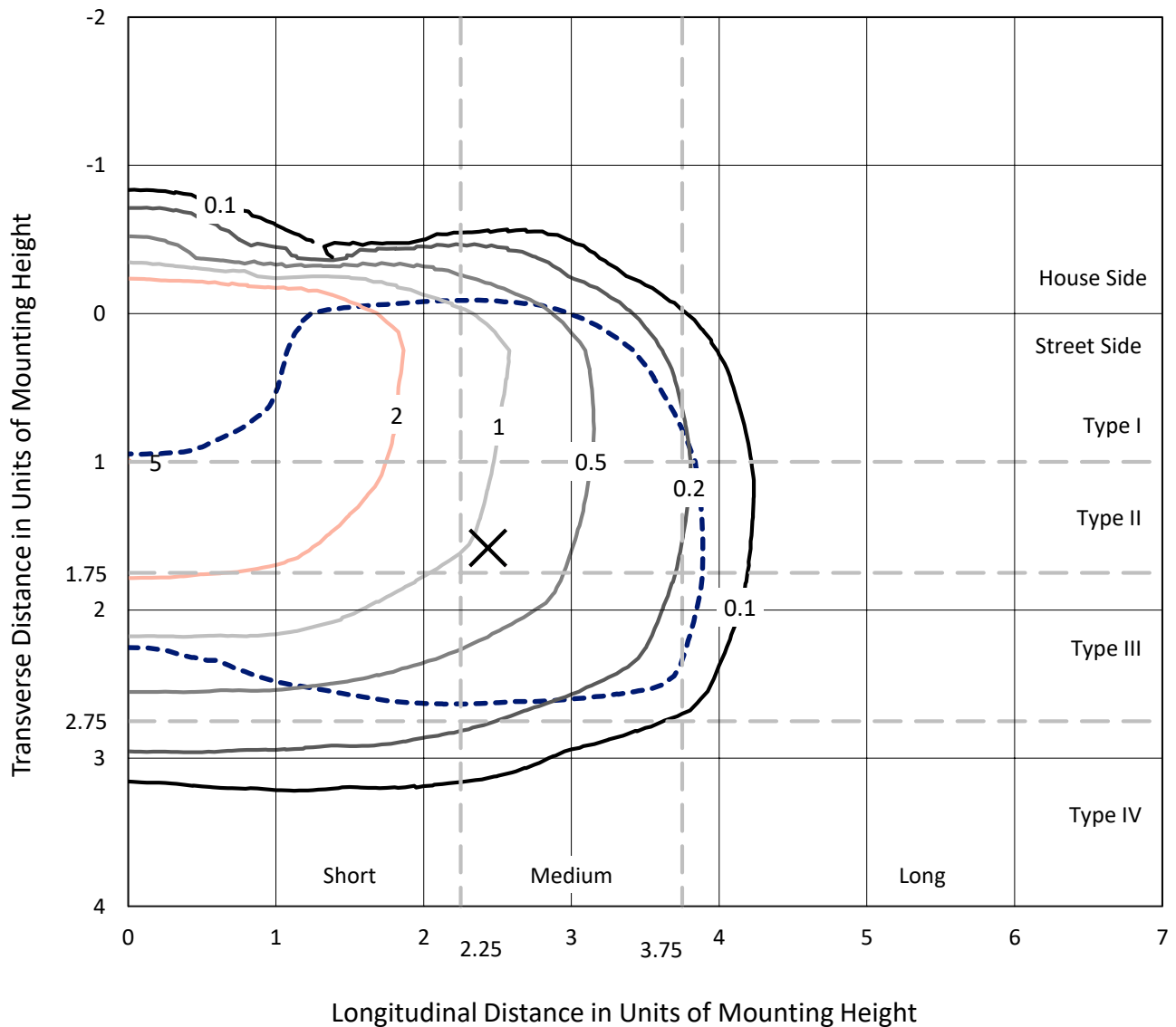
Input Watts (W): 161
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

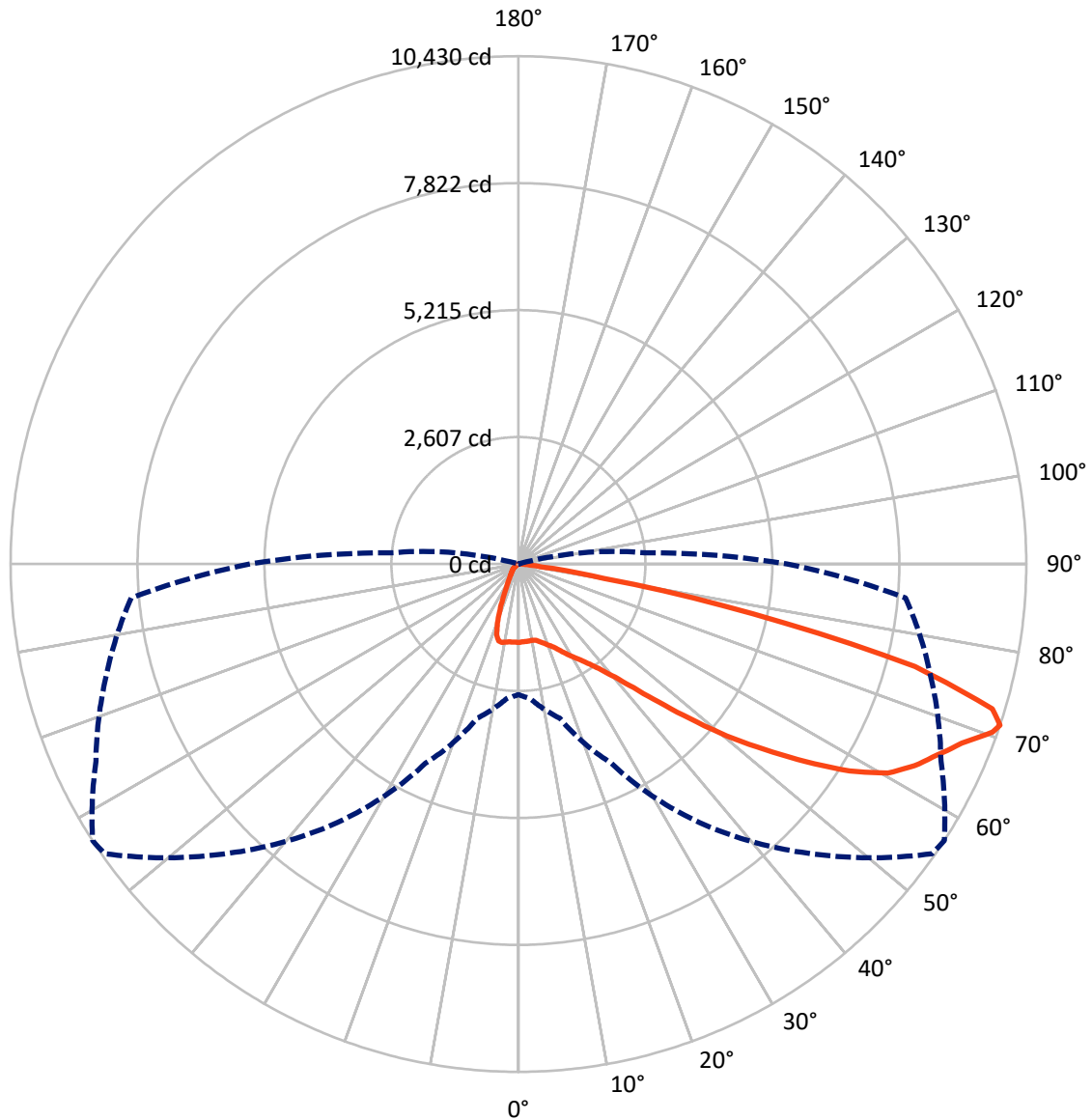
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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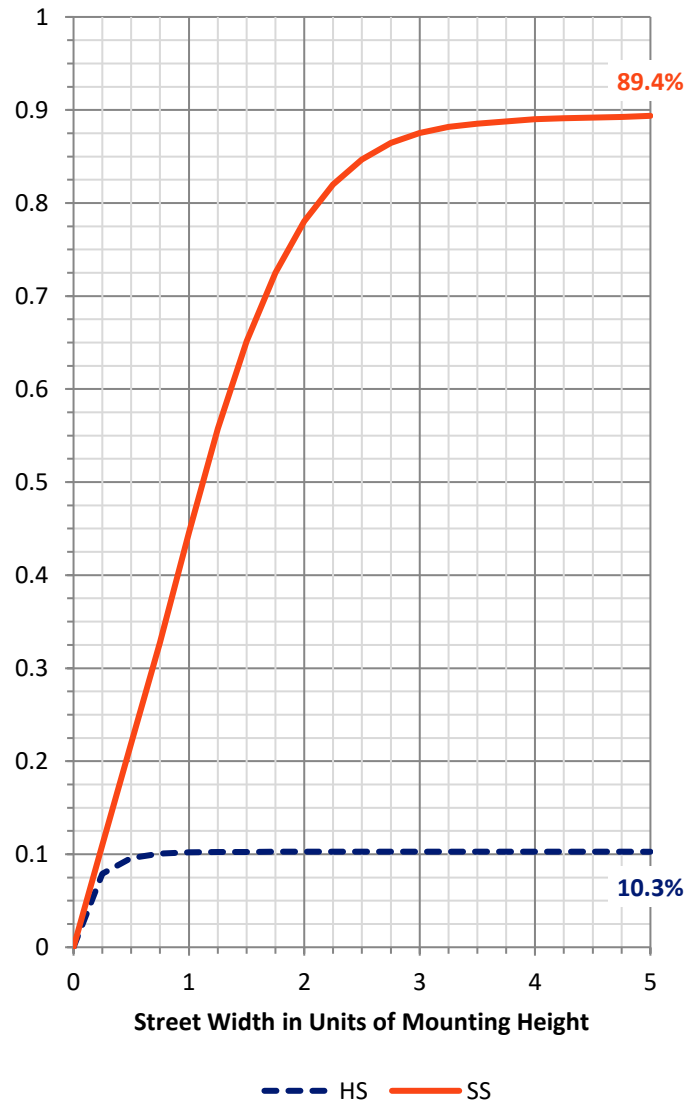
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1478.6	0.0	1478.6
	% Fixture	10.4	0.0	10.4
Street Side	Lumens	12789.5	0.0	12789.5
	% Fixture	89.6	0.0	89.6
Total	Lumens	14268.2	0.0	14268.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.4	1.1
10°-20°	404.9	2.8
20°-30°	631.7	4.4
30°-40°	1067.6	7.5
40°-50°	2073.5	14.5
50°-60°	3482.1	24.4
60°-70°	4155.6	29.1
70°-80°	2190.0	15.3
80°-90°	111.3	0.8
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°	14268.2	100.0
0°-180°	14268.2	100.0



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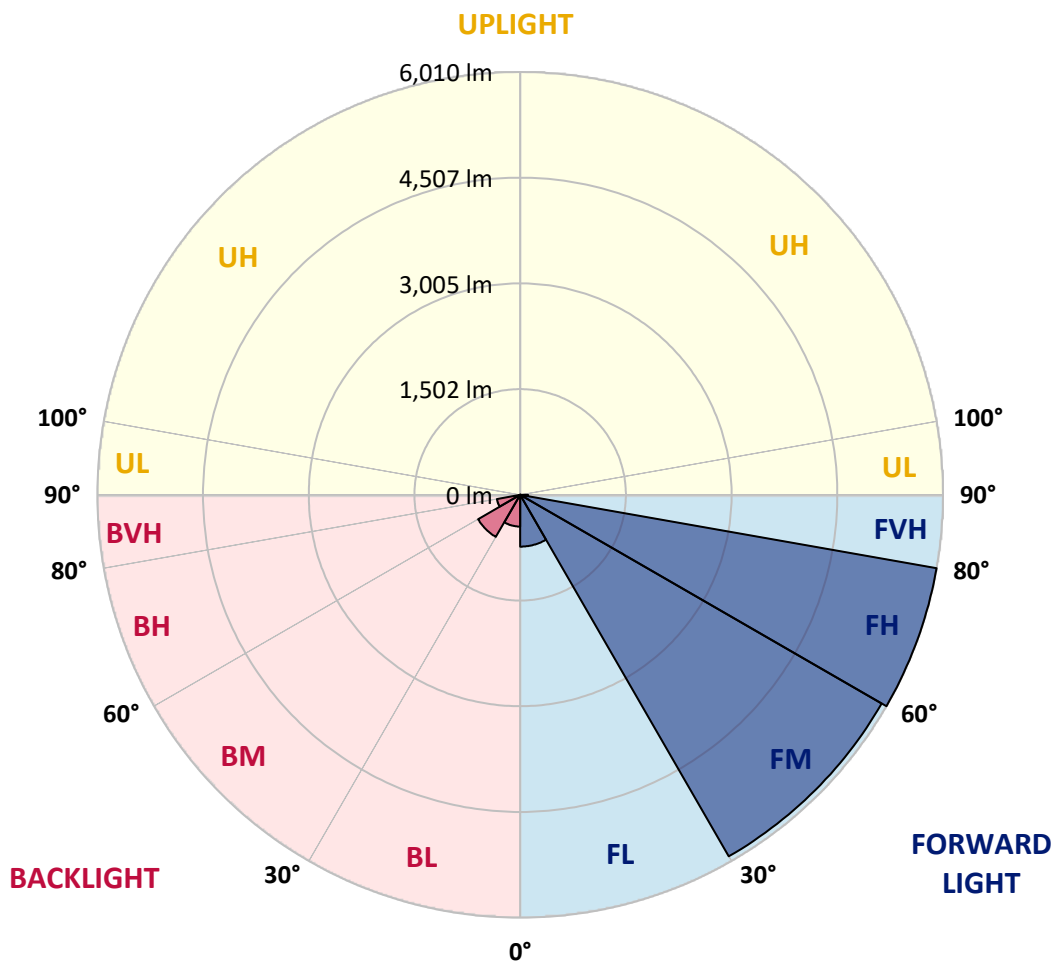
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	736.6	5.2			
FM	(30°-60°)	5932.8	41.6			
FH	(60°-80°)	6009.8	42.1			G3/7500
FVH	(80°-90°)	110.2	0.8			G2/225
BL	(0°-30°)	451.4	3.2	B1/500		
BM	(30°-60°)	690.4	4.8	B1/1000		
BH	(60°-80°)	335.8	2.4	B1/500		G1/500
BVH	(80°-90°)	1.1	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5
2.5°	1589.3	1589.3	1589.3	1592.5	1595.9	1595.9	1602.6	1599.2	1599.2	1599.2	1605.8
5°	1546.0	1549.4	1552.6	1559.3	1572.6	1582.6	1599.2	1599.2	1602.6	1609.2	1612.5
7.5°	1486.1	1489.5	1499.4	1512.7	1539.3	1562.7	1589.3	1595.9	1605.8	1622.5	1629.2
10°	1449.6	1456.3	1469.6	1486.1	1516.1	1546.0	1579.2	1589.3	1619.1	1649.1	1665.7
12.5°	1439.6	1443.0	1456.3	1482.9	1519.4	1556.0	1599.2	1609.2	1652.4	1698.9	1725.5
15°	1456.3	1459.5	1466.2	1496.2	1539.3	1585.9	1642.4	1655.7	1708.9	1762.1	1795.4
17.5°	1486.1	1486.1	1492.8	1519.4	1565.9	1619.1	1692.3	1712.2	1772.1	1831.9	1868.5
20°	1506.1	1506.1	1516.1	1542.7	1595.9	1665.7	1752.1	1778.7	1845.2	1911.8	1945.0
22.5°	1526.0	1529.4	1539.3	1569.3	1629.2	1725.5	1825.3	1851.8	1928.4	1998.2	2031.5
25°	1582.6	1579.2	1582.6	1609.2	1679.0	1798.7	1925.1	1958.3	2038.1	2114.5	2131.2
27.5°	1738.8	1732.2	1689.0	1672.3	1725.5	1875.2	2051.4	2084.7	2177.8	2254.2	2254.2
30°	2098.0	2084.7	1978.3	1841.9	1798.7	1945.0	2171.1	2217.7	2337.3	2403.8	2383.9
32.5°	2553.4	2523.5	2387.2	2154.4	1981.6	2038.1	2297.4	2350.6	2503.6	2560.0	2516.9
35°	3052.2	3048.8	2879.3	2580.0	2334.0	2231.0	2460.3	2523.5	2716.3	2766.2	2696.4
37.5°	3580.7	3594.0	3481.0	3068.8	2779.5	2546.7	2676.4	2749.6	2985.7	3045.5	2979.0
40°	4169.2	4166.0	4122.7	3633.9	3314.8	2995.6	2989.0	3055.5	3341.4	3434.5	3341.4
42.5°	4914.1	4907.4	4751.1	4312.2	3963.1	3580.7	3444.5	3467.7	3787.0	3939.9	3803.5
45°	5672.1	5625.5	5446.0	5067.0	4757.7	4305.6	4046.3	4046.3	4318.9	4528.3	4315.5
47.5°	6094.3	6047.8	5974.6	5765.1	5672.1	5166.7	4784.3	4737.8	4950.6	5163.3	4864.1
50°	6649.6	6649.6	6466.7	6386.9	6546.5	6190.7	5598.9	5552.4	5655.4	5825.0	5432.7
52.5°	7088.4	7008.6	6878.9	6948.8	7404.2	7241.4	6413.5	6323.7	6403.5	6446.7	5928.1
55°	7271.2	7194.8	7184.8	7440.8	8145.7	7919.6	7248.0	7168.2	7161.6	6948.8	6360.3
57.5°	7307.9	7241.4	7367.7	7816.6	8867.1	8474.8	8079.2	8019.3	7833.1	7301.2	6802.5
60°	6998.6	7031.9	7337.7	8022.7	9292.7	8957.0	8780.7	8717.6	8288.7	7600.4	7294.6
62.5°	6363.6	6443.4	7015.3	8042.6	9136.5	9153.1	9169.7	9126.5	8641.1	7873.0	7790.0
65°	5612.2	5635.4	6323.7	7766.7	8863.9	9093.2	9455.6	9452.4	8910.4	8178.9	8348.5
67.5°	4624.8	4664.7	5259.8	6835.8	8318.5	9066.6	9831.4	9821.4	9216.3	8528.0	8681.0
70°	3441.1	3491.0	3973.1	5316.3	7101.7	8734.2	10323.4	10330.1	9538.8	8794.0	8451.5
71°	2683.1	2772.8	3278.3	4515.0	6480.0	8398.3	10370.0	10429.8	9575.3	8757.5	7979.4
72.5°	1316.6	1423.0	2058.1	3178.5	5332.9	7647.0	10064.1	10180.4	9345.9	8302.0	6822.5
75°	342.5	362.4	615.1	1300.0	2859.4	5067.0	8115.8	8411.6	7640.3	6320.4	4169.2
77.5°	216.1	222.8	289.3	505.3	1070.6	1925.1	4767.8	4914.1	4365.4	3201.7	1469.6
80°	152.9	156.3	182.9	325.8	625.0	561.9	1715.6	1778.7	1579.2	847.8	262.7
82.5°	93.1	93.1	133.0	209.5	385.7	305.9	452.1	482.1	425.5	236.1	86.4
85°	53.2	56.6	83.2	143.0	182.9	149.7	169.6	179.5	182.9	156.3	36.6
87.5°	43.3	46.5	73.1	119.7	99.7	73.1	73.1	76.5	79.8	93.1	16.7
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°	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5	1612.5
2.5°	1605.8	1605.8	1609.2	1605.8	1605.8	1605.8	1609.2	1609.2	1609.2	1615.9	1619.1
5°	1612.5	1612.5	1612.5	1609.2	1605.8	1605.8	1612.5	1615.9	1615.9	1625.8	1625.8
7.5°	1629.2	1629.2	1622.5	1615.9	1609.2	1599.2	1602.6	1605.8	1602.6	1605.8	1605.8
10°	1665.7	1665.7	1655.7	1642.4	1622.5	1592.5	1552.6	1502.8	1456.3	1439.6	1432.9
12.5°	1725.5	1722.2	1702.3	1679.0	1635.8	1532.7	1383.1	1206.9	1060.6	1020.7	1007.4
15°	1792.0	1785.4	1762.1	1722.2	1605.8	1333.2	1020.7	794.6	655.0	621.7	615.1
17.5°	1861.9	1851.8	1818.6	1738.8	1469.6	990.8	658.3	498.7	422.3	415.6	418.9
20°	1935.0	1921.7	1875.2	1705.6	1186.9	661.6	425.5	385.7	379.0	379.0	382.4
22.5°	2018.2	2001.5	1938.4	1585.9	864.4	438.8	365.7	362.4	359.1	355.8	355.8
25°	2114.5	2094.6	1998.2	1369.8	595.2	359.1	349.1	339.1	332.5	325.8	322.5
27.5°	2231.0	2204.4	2044.8	1103.9	409.0	335.8	329.2	312.5	299.2	285.9	285.9
30°	2347.3	2314.0	2031.5	831.1	332.5	312.5	299.2	279.3	259.3	246.0	242.7
32.5°	2470.3	2437.1	1945.0	558.5	302.6	285.9	269.3	239.4	216.1	199.5	196.2
35°	2653.1	2626.5	1775.4	369.1	272.6	252.7	229.4	199.5	169.6	152.9	149.7
37.5°	2925.8	2892.6	1565.9	282.6	239.4	209.5	189.6	156.3	126.3	109.8	106.4
40°	3291.5	3191.8	1316.6	249.4	209.5	172.9	146.3	113.0	89.8	79.8	79.8
42.5°	3717.1	3481.0	1047.3	226.1	186.2	143.0	106.4	76.5	63.2	59.8	59.8
45°	4169.2	3750.3	778.0	209.5	163.0	113.0	76.5	53.2	46.5	43.3	43.3
47.5°	4634.7	3969.8	542.0	189.6	136.4	86.4	53.2	39.9	33.2	30.0	30.0
50°	5070.3	4112.8	382.4	169.6	116.4	63.2	39.9	30.0	23.3	23.3	23.3
52.5°	5372.8	4099.5	276.0	146.3	89.8	43.3	26.6	19.9	19.9	19.9	19.9
55°	5638.8	4049.6	216.1	126.3	69.9	30.0	19.9	16.7	16.7	13.3	13.3
57.5°	5864.9	3969.8	182.9	103.1	49.9	23.3	13.3	13.3	10.0	10.0	10.0
60°	6057.7	3870.0	152.9	86.4	33.2	16.7	10.0	6.6	6.6	3.4	6.6
62.5°	6320.4	3806.9	133.0	66.5	23.3	10.0	6.6	3.4	3.4	0.0	0.0
65°	6513.2	3687.1	113.0	46.5	13.3	6.6	3.4	3.4	0.0	0.0	0.0
67.5°	6519.9	3471.1	83.2	26.6	10.0	6.6	3.4	0.0	0.0	0.0	0.0
70°	5994.6	2959.1	53.2	13.3	6.6	3.4	3.4	0.0	0.0	0.0	0.0
71°	5512.5	2619.9	43.3	10.0	6.6	3.4	0.0	0.0	0.0	0.0	0.0
72.5°	4541.6	1925.1	33.2	10.0	3.4	3.4	0.0	0.0	0.0	0.0	0.0
75°	2503.6	698.2	16.7	6.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	801.3	212.8	10.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	136.4	33.2	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	46.5	13.3	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	13.3	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.6	3.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)