

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: P231229

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231229
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-AF48-150-D-U-T3-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 970mA 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: 13711.6 lumens
Efficiency: N/A
Efficacy: 90.8 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

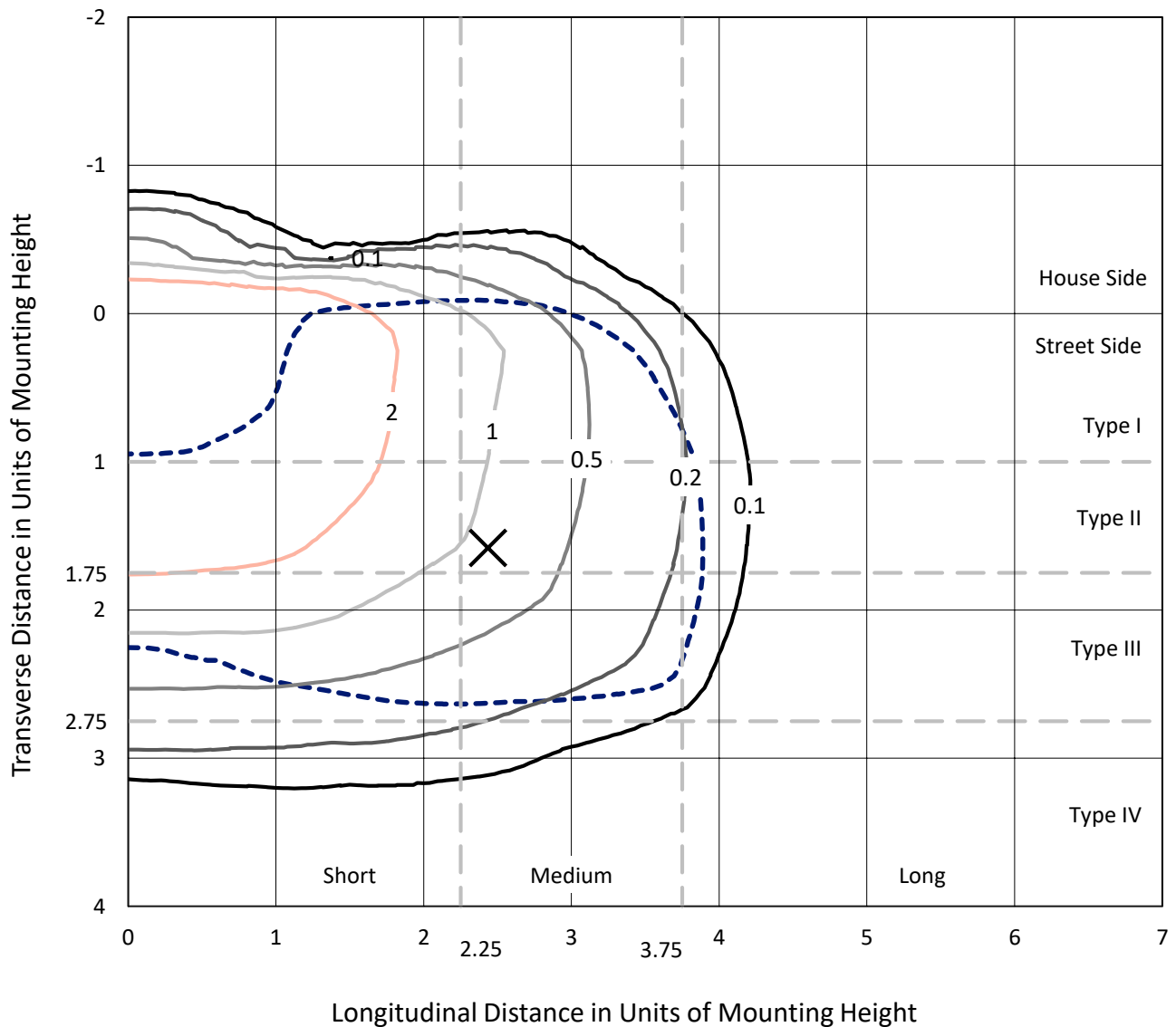
Input Watts (W): 151
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

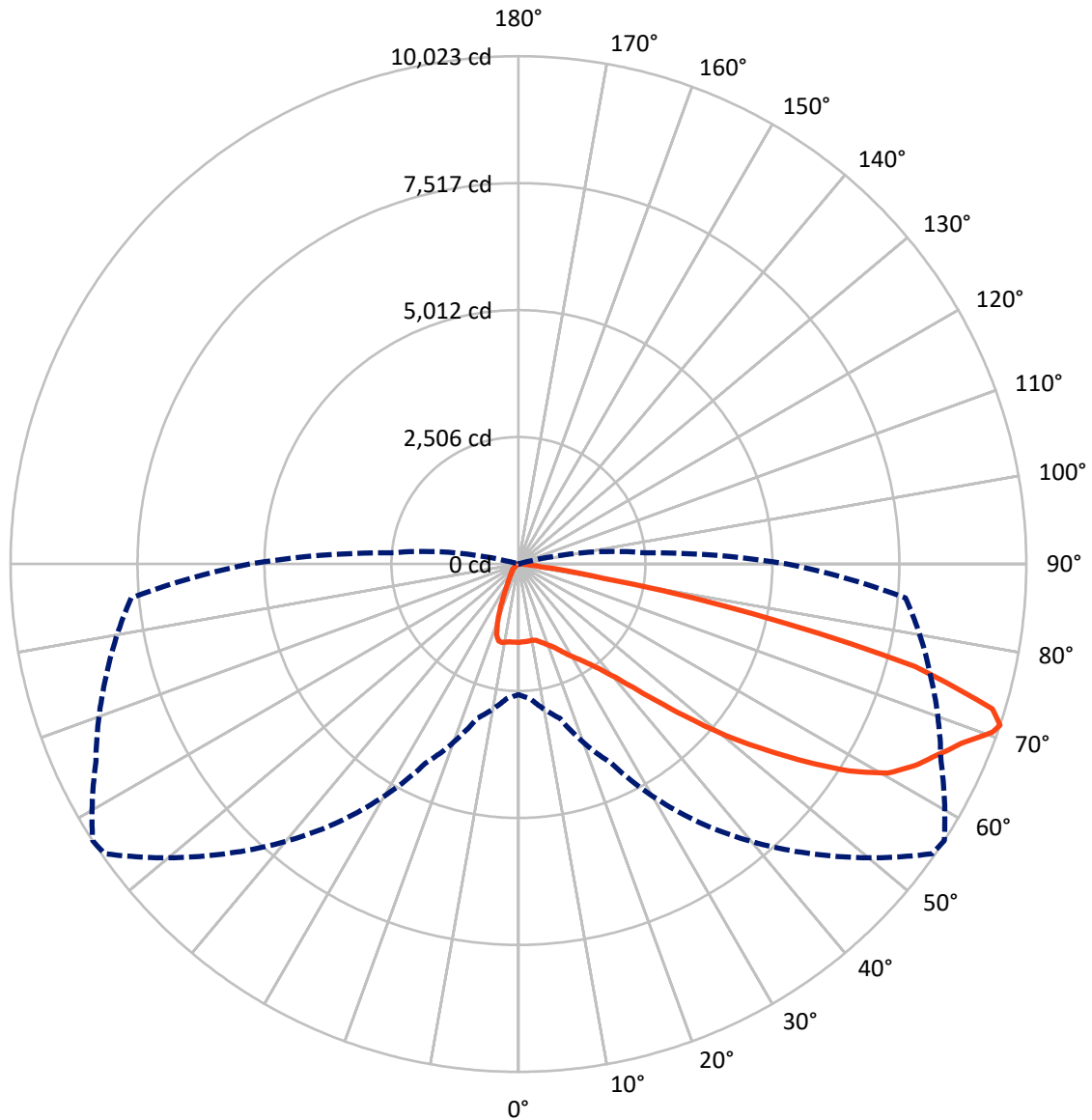
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.8 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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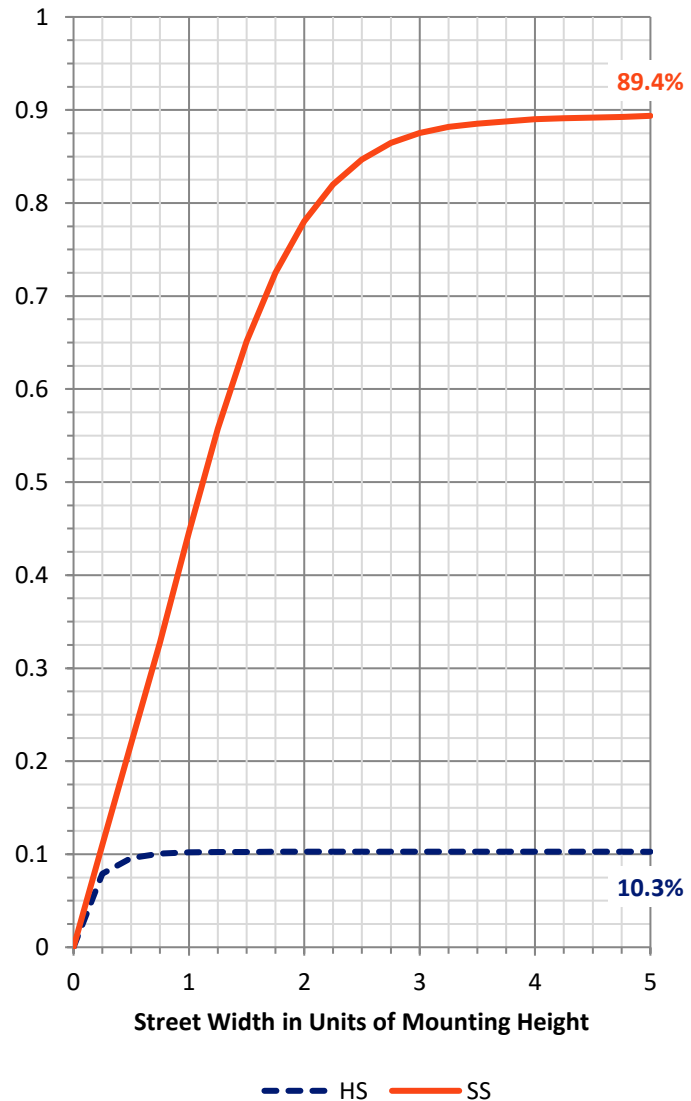
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1420.9	0.0	1420.9
	% Fixture	10.4	0.0	10.4
Street Side	Lumens	12290.7	0.0	12290.7
	% Fixture	89.6	0.0	89.6
Total	Lumens	13711.6	0.0	13711.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.5	1.1
10°-20°	389.1	2.8
20°-30°	607.0	4.4
30°-40°	1026.0	7.5
40°-50°	1992.7	14.5
50°-60°	3346.3	24.4
60°-70°	3993.5	29.1
70°-80°	2104.6	15.3
80°-90°	106.9	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°	13711.6	100.0
0°-180°	13711.6	100.0

Coefficient of Utilization



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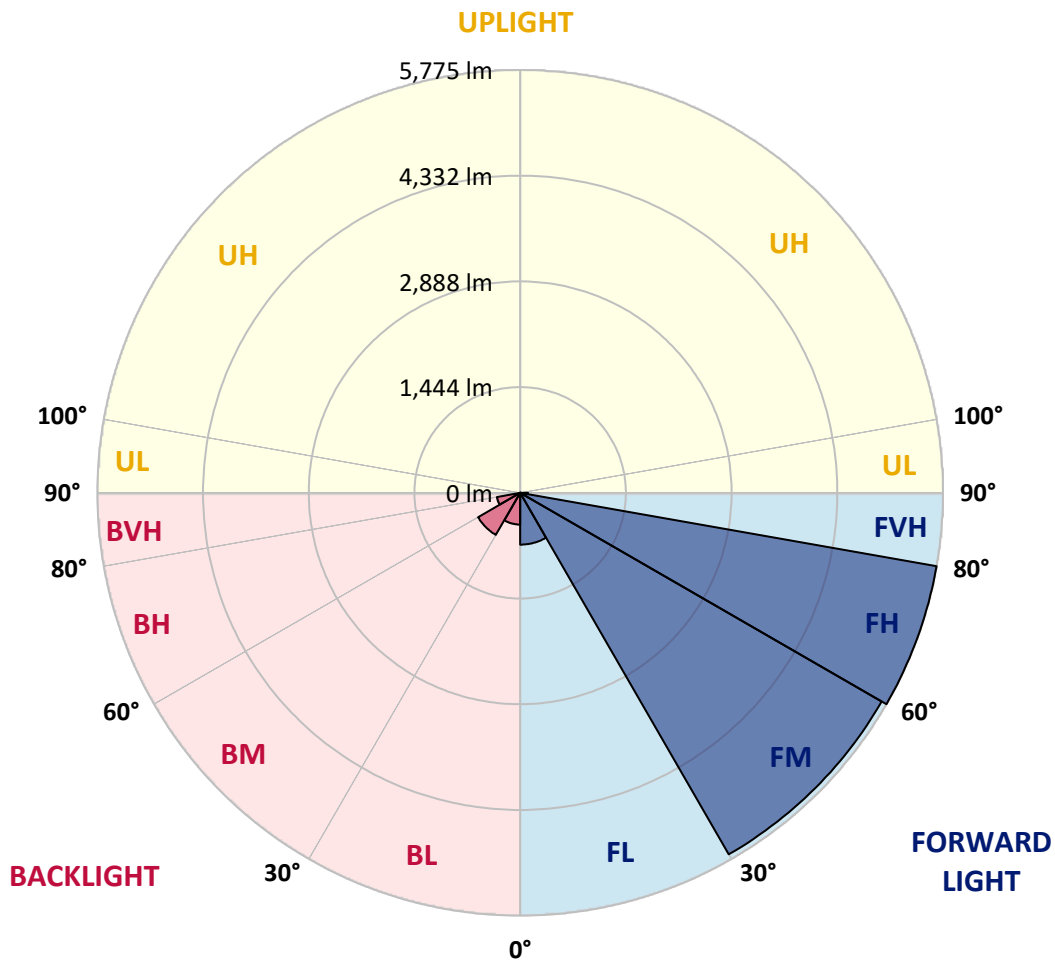
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	707.9	5.2			
FM	(30°-60°)	5701.4	41.6			
FH	(60°-80°)	5775.4	42.1			G3/7500
FVH	(80°-90°)	105.9	0.8			G2/225
BL	(0°-30°)	433.7	3.2	B1/500		
BM	(30°-60°)	663.5	4.8	B1/1000		
BH	(60°-80°)	322.7	2.4	B1/500		G1/500
BVH	(80°-90°)	1.0	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°	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7
2.5°	1527.3	1527.3	1527.3	1530.4	1533.6	1533.6	1540.1	1536.9	1536.9	1536.9	1543.2
5°	1485.7	1488.9	1492.1	1498.5	1511.3	1520.8	1536.9	1536.9	1540.1	1546.4	1549.7
7.5°	1428.2	1431.4	1441.0	1453.8	1479.3	1501.7	1527.3	1533.6	1543.2	1559.2	1565.6
10°	1393.1	1399.5	1412.2	1428.2	1457.0	1485.7	1517.6	1527.3	1556.0	1584.8	1600.7
12.5°	1383.4	1386.7	1399.5	1425.0	1460.2	1495.3	1536.9	1546.4	1587.9	1632.7	1658.3
15°	1399.5	1402.7	1409.0	1437.8	1479.3	1524.1	1578.4	1591.2	1642.2	1693.4	1725.3
17.5°	1428.2	1428.2	1434.6	1460.2	1504.9	1556.0	1626.3	1645.5	1703.0	1760.5	1795.7
20°	1447.4	1447.4	1457.0	1482.6	1533.6	1600.7	1683.8	1709.4	1773.3	1837.2	1869.1
22.5°	1466.5	1469.8	1479.3	1508.1	1565.6	1658.3	1754.2	1779.6	1853.2	1920.3	1952.2
25°	1520.8	1517.6	1520.8	1546.4	1613.5	1728.6	1850.0	1881.9	1958.6	2032.1	2048.0
27.5°	1671.0	1664.6	1623.1	1607.2	1658.3	1802.0	1971.3	2003.3	2092.8	2166.3	2166.3
30°	2016.1	2003.3	1901.1	1770.1	1728.6	1869.1	2086.4	2131.1	2246.2	2310.0	2290.9
32.5°	2453.9	2425.1	2294.1	2070.5	1904.3	1958.6	2207.8	2259.0	2405.9	2460.2	2418.7
35°	2933.1	2929.9	2767.0	2479.4	2242.9	2143.9	2364.3	2425.1	2610.4	2658.3	2591.2
37.5°	3441.1	3453.9	3345.3	2949.1	2671.1	2447.4	2572.0	2642.4	2869.2	2926.7	2862.8
40°	4006.7	4003.4	3961.9	3492.3	3185.5	2878.8	2872.3	2936.3	3211.0	3300.6	3211.0
42.5°	4722.4	4716.0	4565.8	4144.1	3808.5	3441.1	3310.2	3332.5	3639.2	3786.1	3655.2
45°	5450.8	5406.1	5233.6	4869.3	4572.2	4137.6	3888.4	3888.4	4150.4	4351.7	4147.2
47.5°	5856.6	5811.9	5741.6	5540.3	5450.8	4965.2	4597.8	4553.1	4757.5	4962.0	4674.5
50°	6390.2	6390.2	6214.4	6137.8	6291.1	5949.3	5380.5	5335.8	5434.8	5597.8	5220.8
52.5°	6811.9	6735.3	6610.6	6677.7	7115.4	6958.9	6163.4	6077.0	6153.8	6195.3	5696.8
55°	6987.7	6914.2	6904.6	7150.6	7828.0	7610.8	6965.3	6888.7	6882.2	6677.7	6112.2
57.5°	7022.9	6958.9	7080.4	7511.6	8521.3	8144.3	7764.1	7706.6	7527.7	7016.4	6537.2
60°	6725.7	6757.6	7051.6	7709.8	8930.3	8607.6	8438.2	8377.6	7965.4	7304.0	7010.1
62.5°	6115.4	6192.1	6741.7	7728.9	8780.1	8796.1	8812.1	8770.6	8304.0	7565.9	7486.2
65°	5393.3	5415.7	6077.0	7463.8	8518.1	8738.6	9086.9	9083.7	8562.8	7859.9	8022.9
67.5°	4444.4	4482.7	5054.6	6569.1	7994.2	8713.0	9447.9	9438.4	8856.8	8195.5	8342.4
70°	3306.9	3354.9	3818.2	5108.9	6824.7	8393.5	9920.8	9927.1	9166.8	8451.0	8121.9
71°	2578.4	2664.7	3150.4	4338.9	6227.2	8070.8	9965.5	10023.0	9201.9	8415.9	7668.2
72.5°	1265.3	1367.5	1977.8	3054.5	5125.0	7348.7	9671.6	9783.4	8981.4	7978.2	6556.3
75°	329.1	348.3	591.1	1249.3	2747.7	4869.3	7799.3	8083.6	7342.3	6073.9	4006.7
77.5°	207.7	214.1	277.9	485.7	1028.8	1850.0	4581.8	4722.4	4195.1	3076.8	1412.2
80°	147.0	150.2	175.7	313.1	600.7	540.0	1648.7	1709.4	1517.6	814.8	252.4
82.5°	89.5	89.5	127.8	201.3	370.6	294.0	434.5	463.3	409.0	226.9	83.1
85°	51.1	54.3	79.9	137.4	175.7	143.8	163.0	172.6	175.7	150.2	35.2
87.5°	41.5	44.7	70.3	115.0	95.9	70.3	70.3	73.4	76.7	89.5	16.0
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°	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7	1549.7
2.5°	1543.2	1543.2	1546.4	1543.2	1543.2	1543.2	1546.4	1546.4	1546.4	1552.8	1556.0
5°	1549.7	1549.7	1549.7	1546.4	1543.2	1543.2	1549.7	1552.8	1552.8	1562.4	1562.4
7.5°	1565.6	1565.6	1559.2	1552.8	1546.4	1536.9	1540.1	1543.2	1540.1	1543.2	1543.2
10°	1600.7	1600.7	1591.2	1578.4	1559.2	1530.4	1492.1	1444.2	1399.5	1383.4	1377.1
12.5°	1658.3	1655.0	1635.9	1613.5	1572.0	1472.9	1329.1	1159.8	1019.3	980.9	968.1
15°	1722.1	1715.8	1693.4	1655.0	1543.2	1281.2	980.9	763.6	629.4	597.5	591.1
17.5°	1789.2	1779.6	1747.7	1671.0	1412.2	952.2	632.6	479.3	405.8	399.4	402.6
20°	1859.5	1846.7	1802.0	1639.1	1140.7	635.9	409.0	370.6	364.3	364.3	367.4
22.5°	1939.4	1923.5	1862.7	1524.1	830.7	421.8	351.5	348.3	345.0	341.9	341.9
25°	2032.1	2013.0	1920.3	1316.3	571.9	345.0	335.5	325.9	319.5	313.1	310.0
27.5°	2143.9	2118.3	1965.0	1060.8	393.0	322.7	316.3	300.3	287.6	274.8	274.8
30°	2255.7	2223.8	1952.2	798.8	319.5	300.3	287.6	268.4	249.2	236.4	233.2
32.5°	2374.0	2342.0	1869.1	536.7	290.7	274.8	258.8	230.1	207.7	191.7	188.5
35°	2549.7	2524.1	1706.2	354.7	262.0	242.8	220.4	191.7	163.0	147.0	143.8
37.5°	2811.7	2779.8	1504.9	271.6	230.1	201.3	182.1	150.2	121.4	105.5	102.2
40°	3163.2	3067.3	1265.3	239.7	201.3	166.1	140.6	108.6	86.2	76.7	76.7
42.5°	3572.1	3345.3	1006.5	217.3	178.9	137.4	102.2	73.4	60.7	57.5	57.5
45°	4006.7	3604.1	747.7	201.3	156.5	108.6	73.4	51.1	44.7	41.5	41.5
47.5°	4453.9	3815.0	520.8	182.1	131.0	83.1	51.1	38.4	31.9	28.7	28.7
50°	4872.5	3952.4	367.4	163.0	111.8	60.7	38.4	28.7	22.4	22.4	22.4
52.5°	5163.2	3939.6	265.1	140.6	86.2	41.5	25.6	19.1	19.1	19.1	19.1
55°	5418.9	3891.6	207.7	121.4	67.1	28.7	19.1	16.0	16.0	12.8	12.8
57.5°	5636.2	3815.0	175.7	99.0	48.0	22.4	12.8	12.8	9.6	9.6	9.6
60°	5821.5	3719.1	147.0	83.1	31.9	16.0	9.6	6.3	6.3	3.2	6.3
62.5°	6073.9	3658.4	127.8	63.9	22.4	9.6	6.3	3.2	3.2	0.0	0.0
65°	6259.2	3543.4	108.6	44.7	12.8	6.3	3.2	3.2	0.0	0.0	0.0
67.5°	6265.6	3335.6	79.9	25.6	9.6	6.3	3.2	0.0	0.0	0.0	0.0
70°	5760.7	2843.6	51.1	12.8	6.3	3.2	3.2	0.0	0.0	0.0	0.0
71°	5297.5	2517.7	41.5	9.6	6.3	3.2	0.0	0.0	0.0	0.0	0.0
72.5°	4364.5	1850.0	31.9	9.6	3.2	3.2	0.0	0.0	0.0	0.0	0.0
75°	2405.9	671.0	16.0	6.3	3.2	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	770.0	204.5	9.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	131.0	31.9	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	44.7	12.8	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	12.8	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.3	3.2	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)