

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: P234852

Luminaire Tested: **ARCH-M-AF48-120-D-U-T4W-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234852  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29625)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-M-AF48-120-D-U-T4W-8027-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 2700K, 785mA LIGHT ENGINES WITH 24 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8820 lumens  
Efficiency: N/A  
Efficacy: 72.3 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 122  
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

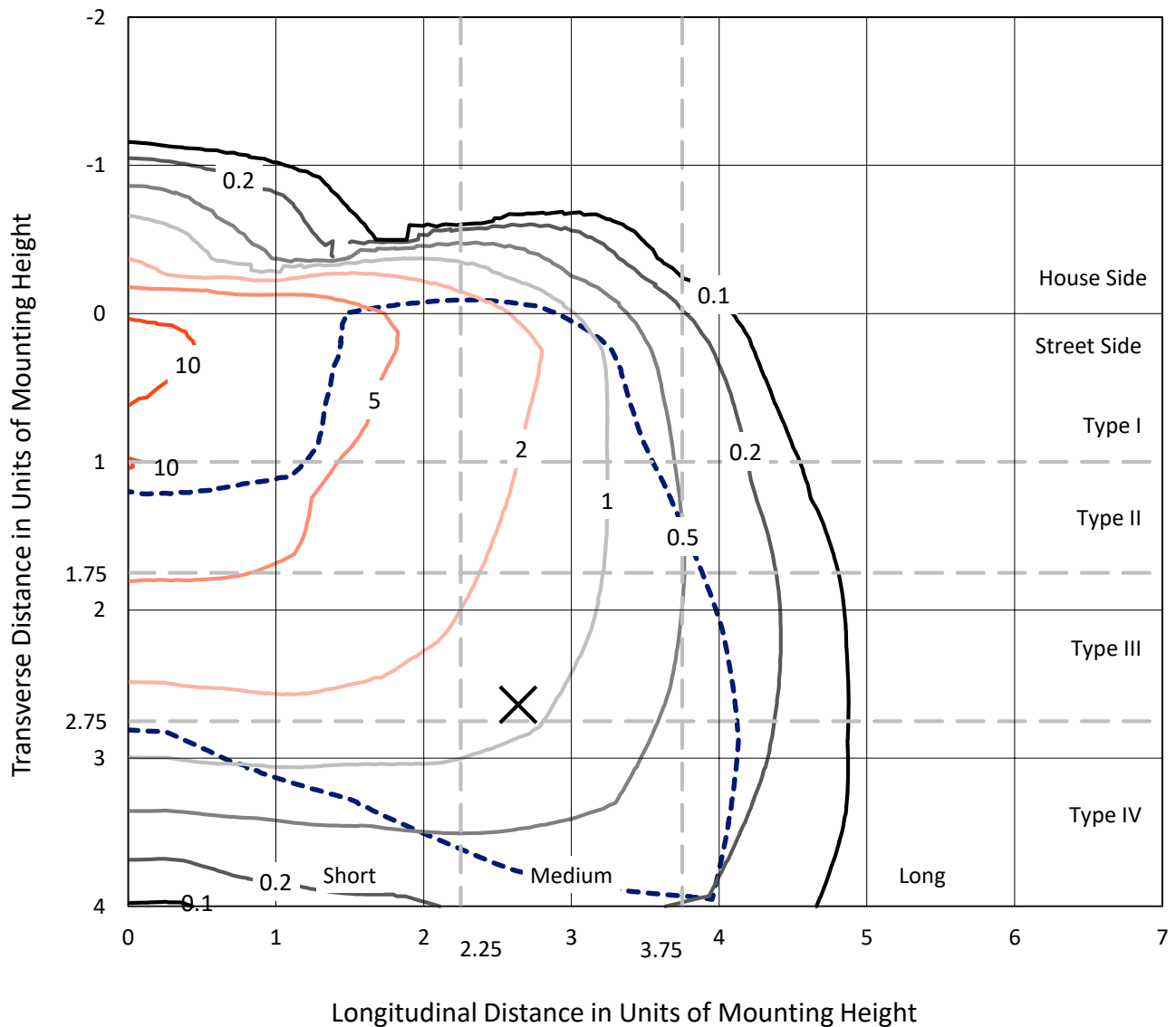


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

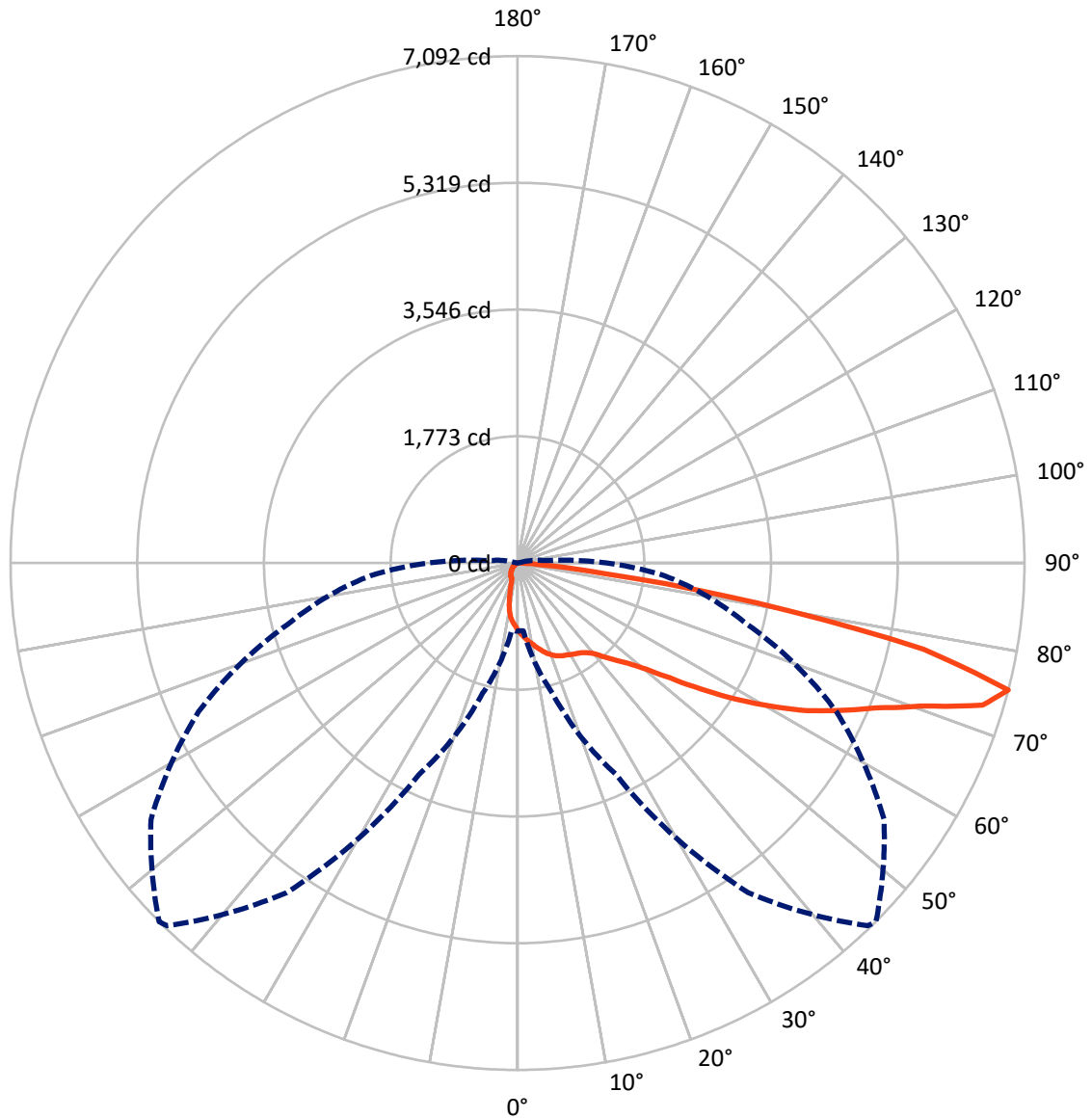


Based on 10 foot mounting height. Maximum calculated value = 12.6 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 75-Deg Vertical

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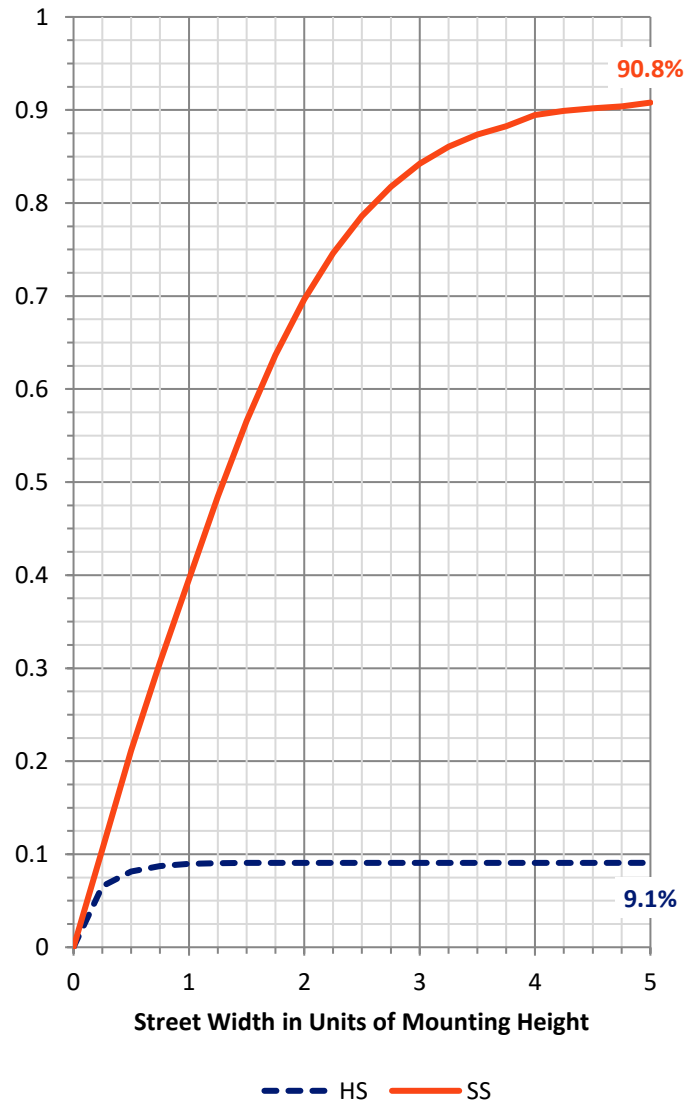
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	806.8	0.0	806.8
	% Fixture	9.1	0.0	9.1
<b>Street Side</b>	Lumens	8013.2	0.0	8013.2
	% Fixture	90.9	0.0	90.9
<b>Total</b>	Lumens	8820.0	0.0	8820.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.0	1.0
10°-20°	252.2	2.9
20°-30°	417.7	4.7
30°-40°	604.5	6.9
40°-50°	989.9	11.2
50°-60°	1763.8	20.0
60°-70°	2593.0	29.4
70°-80°	1956.2	22.2
80°-90°	153.5	1.7
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°	8820.0	100.0
0°-180°	8820.0	100.0



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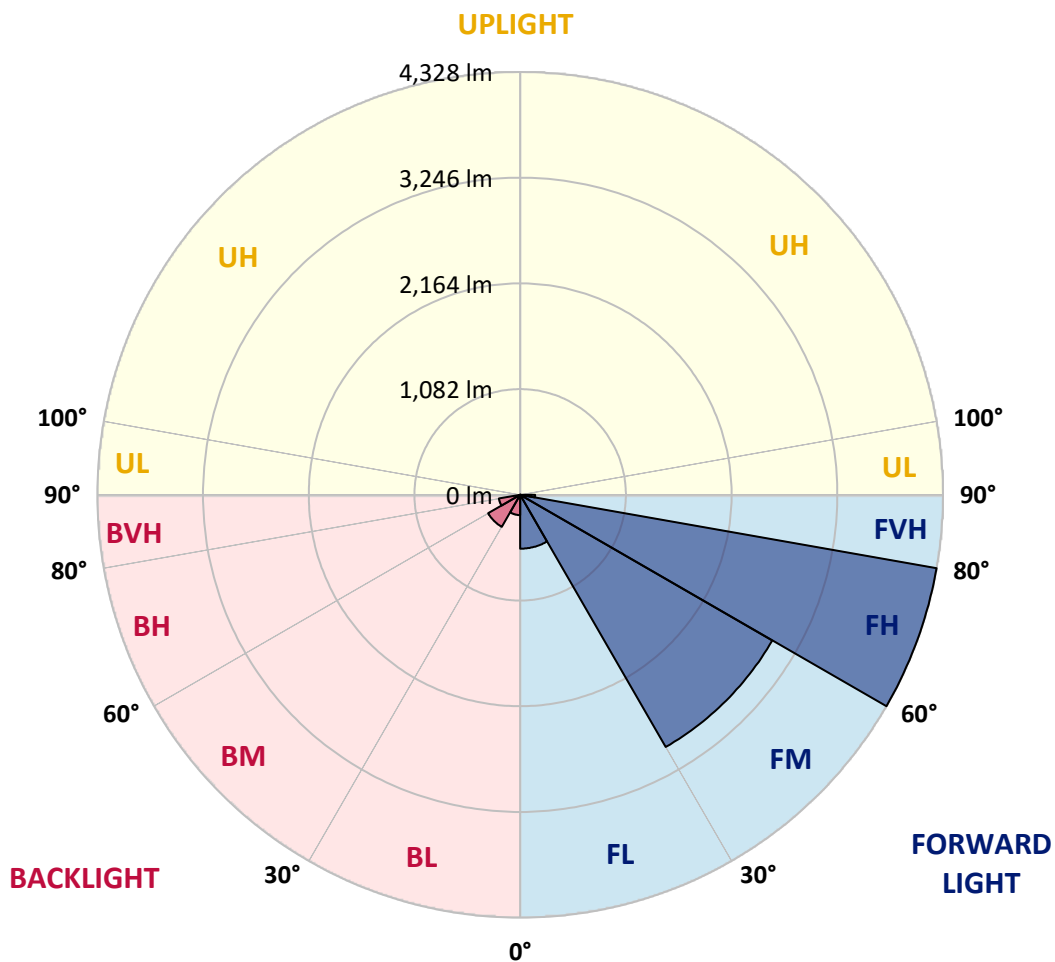
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	551.7	6.3			
FM	(30°-60°)	2980.2	33.8			
FH	(60°-80°)	4328.3	49.1			G2/5000
FVH	(80°-90°)	153.1	1.7			G2/225
BL	(0°-30°)	207.3	2.4	B1/500		
BM	(30°-60°)	378.1	4.3	B1/1000		
BH	(60°-80°)	221.0	2.5	B1/500		G1/500
BVH	(80°-90°)	0.4	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-G2**

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	943.3	943.3	943.3	943.3	943.3	943.3	943.3	943.3	943.3	943.3	943.3
2.5°	1024.7	1024.7	1022.7	1020.6	1010.1	999.7	997.6	991.3	972.6	960.0	947.5
5°	1110.3	1112.4	1108.2	1097.8	1074.8	1051.9	1049.8	1033.1	997.6	972.6	945.4
7.5°	1191.7	1195.9	1185.4	1166.7	1139.5	1106.1	1104.0	1072.7	1026.8	991.3	951.7
10°	1260.6	1260.6	1246.0	1223.0	1193.8	1158.3	1154.1	1118.7	1066.5	1022.7	970.5
12.5°	1335.7	1333.6	1312.8	1281.4	1248.1	1214.7	1212.6	1168.7	1118.7	1062.3	997.6
15°	1404.6	1400.4	1373.3	1344.1	1308.6	1273.1	1271.0	1227.2	1175.0	1108.2	1037.3
17.5°	1442.2	1440.1	1415.0	1385.8	1356.6	1329.5	1327.4	1281.4	1225.1	1156.2	1076.9
20°	1448.4	1450.5	1429.6	1404.6	1387.9	1373.3	1373.3	1331.5	1271.0	1198.0	1118.7
22.5°	1450.5	1456.8	1442.2	1408.8	1404.6	1406.7	1410.8	1377.5	1314.8	1246.0	1162.5
25°	1465.1	1473.5	1463.0	1423.4	1419.2	1433.8	1438.0	1423.4	1367.0	1298.1	1212.6
27.5°	1494.3	1502.7	1494.3	1444.2	1438.0	1452.6	1456.8	1465.1	1423.4	1348.2	1264.8
30°	1552.8	1554.9	1536.1	1473.5	1460.9	1479.7	1486.0	1508.9	1475.5	1396.2	1314.8
32.5°	1655.0	1634.2	1577.8	1494.3	1483.9	1504.8	1511.0	1536.1	1523.5	1442.2	1367.0
35°	1863.7	1755.2	1625.8	1523.5	1513.1	1534.0	1542.3	1577.8	1584.1	1506.9	1431.7
37.5°	1861.6	1763.6	1738.5	1579.9	1565.3	1579.9	1590.3	1634.2	1659.2	1592.4	1525.6
40°	1993.1	1951.4	1951.4	1686.3	1638.3	1659.2	1669.6	1713.5	1757.3	1705.1	1636.2
42.5°	2406.4	2379.2	2350.0	1890.9	1740.6	1799.0	1805.3	1832.4	1884.6	1867.9	1786.5
45°	2867.6	2842.6	2729.9	2237.3	1915.9	1926.3	1941.0	1984.8	2059.9	2091.2	1995.2
47.5°	3228.7	3203.6	3107.6	2654.7	2189.3	2097.5	2097.5	2183.1	2299.9	2379.2	2287.4
50°	3518.8	3489.5	3431.1	3099.3	2638.0	2343.8	2331.2	2431.4	2604.6	2727.8	2665.2
52.5°	3800.5	3714.9	3679.5	3558.4	3145.2	2700.6	2667.3	2738.2	2978.2	3130.6	3078.4
55°	3988.4	3975.8	3938.3	3980.0	3677.4	3134.7	3105.5	3120.1	3420.7	3522.9	3458.2
57.5°	4163.7	4161.6	4245.1	4439.2	4257.6	3631.5	3585.6	3562.6	3848.5	3823.5	3879.8
60°	4380.7	4343.2	4537.2	4814.8	4789.8	4115.7	4063.5	4017.6	4176.2	4105.2	4384.9
62.5°	4391.2	4380.7	4775.2	5173.8	5317.8	4608.2	4547.7	4382.8	4462.1	4380.7	4867.0
65°	3992.5	4044.7	4875.3	5363.7	5760.3	5040.2	4967.2	4710.5	4716.7	4662.5	5434.7
67.5°	3902.8	3929.9	4599.9	5568.3	6079.6	5476.4	5407.5	5088.2	5013.1	5017.3	5770.7
70°	3679.5	3721.2	4257.6	5553.6	6332.1	6058.7	5989.8	5643.4	5461.8	5259.4	5511.9
72.5°	2811.3	2882.2	3587.6	4869.1	6263.2	6820.5	6801.7	6346.7	5641.3	4829.4	4169.9
75°	951.7	949.6	1884.6	3270.4	5626.7	7054.2	7091.8	6259.1	4921.3	3330.9	2070.4
77.5°	204.5	206.6	388.2	1325.3	3737.9	5664.3	5808.3	4720.9	3174.4	1483.9	473.8
80°	100.2	102.3	160.7	350.6	1494.3	3176.5	3401.9	2427.2	1172.9	296.4	79.3
82.5°	50.1	52.2	83.5	185.7	553.1	1129.1	1206.3	893.3	336.0	167.0	39.7
85°	18.8	18.8	41.7	110.6	252.5	265.1	325.6	258.8	202.4	135.7	10.4
87.5°	4.2	4.2	23.0	54.3	112.7	83.5	83.5	79.3	123.1	91.8	4.2
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°	943.3	943.3	943.3	943.3	943.3	943.3	943.3	943.3	943.3	943.3	943.3
2.5°	941.3	932.9	918.3	903.7	893.3	880.7	874.5	868.2	866.1	864.0	868.2
5°	930.8	918.3	891.2	868.2	847.3	830.6	818.1	805.6	799.3	795.2	797.3
7.5°	930.8	912.0	872.4	836.9	803.5	768.0	732.6	705.4	684.6	672.0	674.1
10°	941.3	916.2	864.0	816.0	753.4	678.3	601.1	542.6	503.0	480.0	480.0
12.5°	964.2	930.8	866.1	791.0	684.6	553.1	436.2	365.2	336.0	319.3	321.4
15°	995.5	955.9	876.6	757.6	588.5	411.1	304.7	258.8	258.8	263.0	265.1
17.5°	1031.0	987.2	884.9	707.5	465.4	294.3	240.0	235.8	242.1	252.5	252.5
20°	1066.5	1018.5	889.1	628.2	348.5	233.7	227.5	227.5	231.7	242.1	244.2
22.5°	1110.3	1058.1	884.9	530.1	260.9	221.2	219.1	219.1	219.1	231.7	231.7
25°	1156.2	1104.0	868.2	425.8	221.2	212.9	210.8	208.7	208.7	219.1	221.2
27.5°	1208.4	1152.1	828.6	325.6	208.7	204.5	202.4	198.3	198.3	206.6	206.6
30°	1260.6	1206.3	768.0	246.3	198.3	196.2	192.0	187.8	183.7	192.0	192.0
32.5°	1316.9	1262.7	688.7	196.2	183.7	183.7	181.6	175.3	171.1	175.3	177.4
35°	1392.1	1327.4	599.0	171.1	164.9	164.9	164.9	162.8	154.4	158.6	158.6
37.5°	1492.2	1417.1	494.6	158.6	150.3	146.1	146.1	146.1	139.8	141.9	141.9
40°	1619.6	1521.5	394.5	148.2	139.8	129.4	125.2	127.3	123.1	123.1	121.0
42.5°	1792.8	1634.2	296.4	139.8	131.5	116.9	108.5	106.4	102.3	100.2	100.2
45°	2041.1	1771.9	212.9	131.5	125.2	102.3	93.9	87.7	77.2	71.0	71.0
47.5°	2362.5	1928.4	158.6	123.1	119.0	89.7	79.3	66.8	52.2	48.0	48.0
50°	2754.9	2103.7	133.6	110.6	108.5	79.3	62.6	43.8	29.2	25.0	27.1
52.5°	3136.8	2268.6	119.0	98.1	96.0	68.9	45.9	23.0	12.5	12.5	12.5
55°	3458.2	2385.5	108.5	87.7	83.5	54.3	25.0	10.4	6.3	6.3	6.3
57.5°	3748.3	2452.3	98.1	77.2	66.8	37.6	10.4	4.2	4.2	2.1	2.1
60°	4013.4	2491.9	85.6	66.8	52.2	20.9	4.2	2.1	2.1	0.0	0.0
62.5°	4274.3	2521.2	73.0	54.3	39.7	8.3	2.1	2.1	0.0	0.0	0.0
65°	4472.5	2510.7	58.4	43.8	25.0	4.2	2.1	0.0	0.0	0.0	0.0
67.5°	4466.3	2368.8	43.8	33.4	12.5	2.1	0.0	0.0	0.0	0.0	0.0
70°	3994.6	1995.2	29.2	20.9	4.2	2.1	0.0	0.0	0.0	0.0	0.0
72.5°	2834.2	1279.4	18.8	12.5	2.1	0.0	0.0	0.0	0.0	0.0	0.0
75°	1248.1	388.2	10.4	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	244.2	89.7	6.3	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	58.4	10.4	2.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	25.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	6.3	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.2	2.1	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)