

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: P234851

Luminaire Tested: **ARCH-M-AF48-110-D-U-T4W-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234851  
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-AF48-110-D-U-T4W-8027-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 2700K, 720mA 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: 8219 lumens  
Efficiency: N/A  
Efficacy: 74.0 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): 111  
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

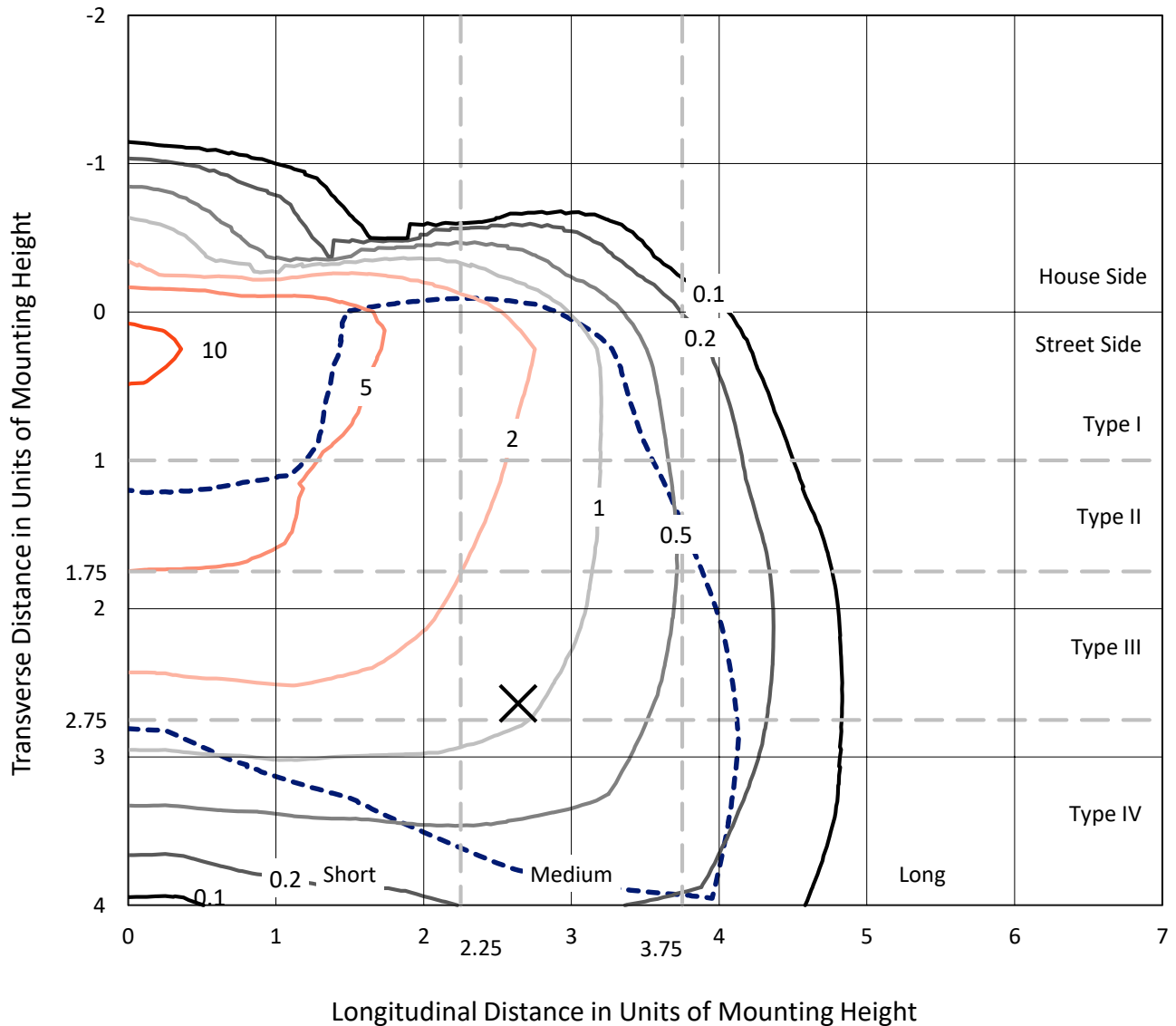


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

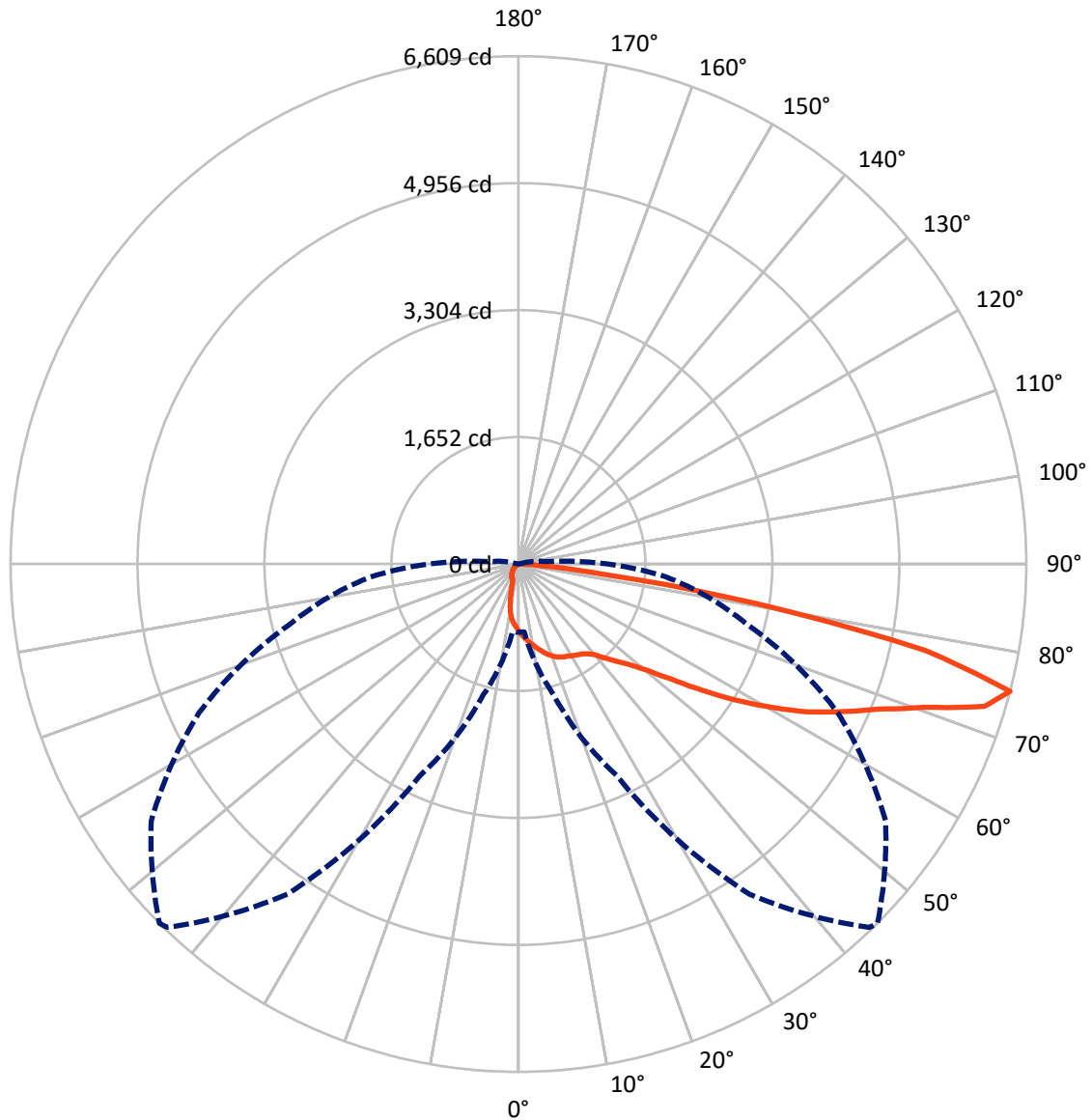


Based on 10 foot mounting height. Maximum calculated value = 11.7 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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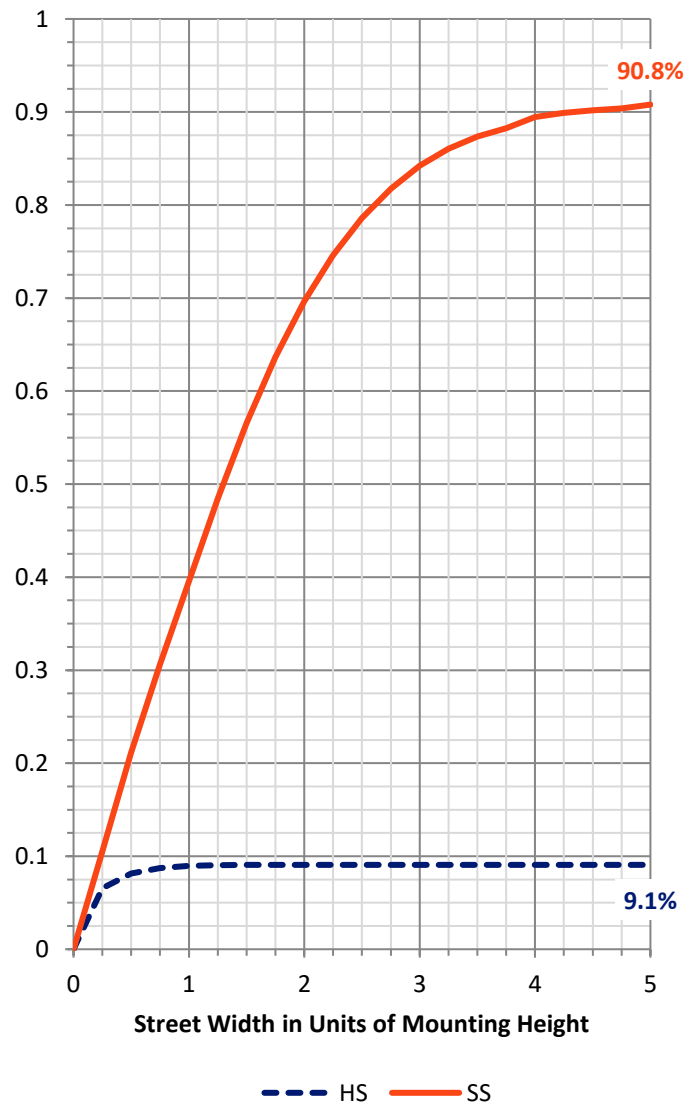
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	751.8	0.0	751.8
	% Fixture	9.1	0.0	9.1
<b>Street Side</b>	Lumens	7467.2	0.0	7467.2
	% Fixture	90.9	0.0	90.9
<b>Total</b>	Lumens	8219.0	0.0	8219.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.0	1.0
10°-20°	235.0	2.9
20°-30°	389.3	4.7
30°-40°	563.3	6.9
40°-50°	922.5	11.2
50°-60°	1643.6	20.0
60°-70°	2416.3	29.4
70°-80°	1822.9	22.2
80°-90°	143.0	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°	8219.0	100.0
0°-180°	8219.0	100.0



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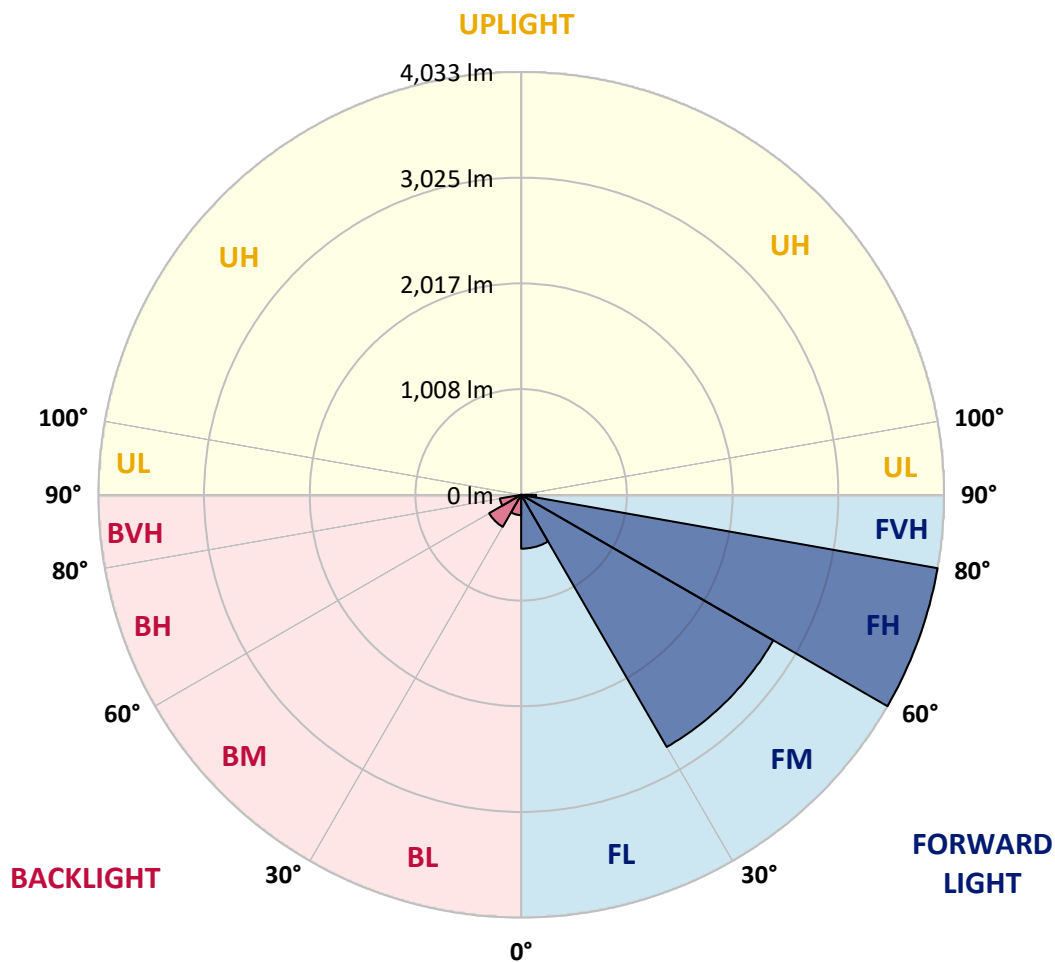
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	514.1	6.3			
FM	(30°-60°)	2777.2	33.8			
FH	(60°-80°)	4033.4	49.1			G2/5000
FVH	(80°-90°)	142.6	1.7			G2/225
BL	(0°-30°)	193.2	2.4	B1/500		
BM	(30°-60°)	352.3	4.3	B1/1000		
BH	(60°-80°)	205.9	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°	879.1	879.1	879.1	879.1	879.1	879.1	879.1	879.1	879.1	879.1	879.1
2.5°	954.9	954.9	953.0	951.0	941.3	931.6	929.6	923.8	906.3	894.6	883.0
5°	1034.7	1036.6	1032.7	1023.0	1001.6	980.2	978.3	962.7	929.6	906.3	881.0
7.5°	1110.5	1114.4	1104.7	1087.2	1061.9	1030.8	1028.8	999.6	956.9	923.8	886.8
10°	1174.7	1174.7	1161.1	1139.7	1112.4	1079.4	1075.5	1042.4	993.8	953.0	904.3
12.5°	1244.7	1242.8	1223.3	1194.1	1163.0	1131.9	1130.0	1089.1	1042.4	989.9	929.6
15°	1308.9	1305.0	1279.7	1252.5	1219.4	1186.4	1184.4	1143.6	1094.9	1032.7	966.6
17.5°	1343.9	1341.9	1318.6	1291.4	1264.1	1238.9	1236.9	1194.1	1141.6	1077.4	1003.5
20°	1349.7	1351.7	1332.2	1308.9	1293.3	1279.7	1279.7	1240.8	1184.4	1116.3	1042.4
22.5°	1351.7	1357.5	1343.9	1312.8	1308.9	1310.8	1314.7	1283.6	1225.2	1161.1	1083.3
25°	1365.3	1373.1	1363.3	1326.4	1322.5	1336.1	1340.0	1326.4	1273.9	1209.7	1130.0
27.5°	1392.5	1400.3	1392.5	1345.8	1340.0	1353.6	1357.5	1365.3	1326.4	1256.4	1178.6
30°	1447.0	1448.9	1431.4	1373.1	1361.4	1378.9	1384.7	1406.1	1375.0	1301.1	1225.2
32.5°	1542.3	1522.8	1470.3	1392.5	1382.8	1402.2	1408.1	1431.4	1419.7	1343.9	1273.9
35°	1736.7	1635.6	1515.0	1419.7	1410.0	1429.5	1437.2	1470.3	1476.1	1404.2	1334.2
37.5°	1734.8	1643.4	1620.0	1472.2	1458.6	1472.2	1482.0	1522.8	1546.1	1483.9	1421.7
40°	1857.3	1818.4	1818.4	1571.4	1526.7	1546.1	1555.9	1596.7	1637.6	1588.9	1524.8
42.5°	2242.4	2217.1	2189.9	1762.0	1622.0	1676.5	1682.3	1707.6	1756.2	1740.6	1664.8
45°	2672.2	2648.9	2543.8	2084.9	1785.4	1795.1	1808.7	1849.5	1919.6	1948.7	1859.3
47.5°	3008.7	2985.3	2895.9	2473.8	2040.1	1954.6	1954.6	2034.3	2143.2	2217.1	2131.5
50°	3279.0	3251.8	3197.3	2888.1	2458.3	2184.1	2172.4	2265.7	2427.2	2541.9	2483.6
52.5°	3541.5	3461.8	3428.7	3315.9	2930.9	2516.6	2485.5	2551.6	2775.3	2917.3	2868.6
55°	3716.6	3704.9	3669.9	3708.8	3426.8	2921.1	2893.9	2907.5	3187.6	3282.9	3222.6
57.5°	3880.0	3878.0	3955.8	4136.7	3967.5	3384.0	3341.2	3319.8	3586.3	3562.9	3615.5
60°	4082.2	4047.2	4228.1	4486.7	4463.4	3835.2	3786.6	3743.8	3891.6	3825.5	4086.1
62.5°	4091.9	4082.2	4449.8	4821.3	4955.4	4294.2	4237.8	4084.2	4158.1	4082.2	4535.4
65°	3720.5	3769.1	4543.1	4998.2	5367.8	4696.8	4628.7	4389.5	4395.3	4344.8	5064.4
67.5°	3636.8	3662.1	4286.4	5188.8	5665.3	5103.3	5039.1	4741.5	4671.5	4675.4	5377.5
70°	3428.7	3467.6	3967.5	5175.2	5900.6	5645.9	5581.7	5258.8	5089.6	4901.0	5136.3
72.5°	2619.7	2685.8	3343.2	4537.3	5836.5	6355.7	6338.2	5914.3	5256.9	4500.4	3885.8
75°	886.8	884.9	1756.2	3047.6	5243.3	6573.6	6608.6	5832.6	4585.9	3104.0	1929.3
77.5°	190.6	192.5	361.7	1235.0	3483.2	5278.3	5412.5	4399.2	2958.1	1382.8	441.5
80°	93.4	95.3	149.8	326.7	1392.5	2960.0	3170.1	2261.8	1093.0	276.2	73.9
82.5°	46.7	48.6	77.8	173.1	515.4	1052.2	1124.1	832.4	313.1	155.6	37.0
85°	17.5	17.5	38.9	103.1	235.3	247.0	303.4	241.2	188.6	126.4	9.7
87.5°	3.9	3.9	21.4	50.6	105.0	77.8	77.8	73.9	114.7	85.6	3.9
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°	879.1	879.1	879.1	879.1	879.1	879.1	879.1	879.1	879.1	879.1	879.1
2.5°	877.1	869.3	855.7	842.1	832.4	820.7	814.9	809.1	807.1	805.2	809.1
5°	867.4	855.7	830.4	809.1	789.6	774.0	762.4	750.7	744.9	741.0	742.9
7.5°	867.4	849.9	812.9	779.9	748.8	715.7	682.6	657.4	637.9	626.2	628.2
10°	877.1	853.8	805.2	760.4	702.1	632.1	560.1	505.7	468.7	447.3	447.3
12.5°	898.5	867.4	807.1	737.1	637.9	515.4	406.5	340.3	313.1	297.6	299.5
15°	927.7	890.7	816.8	706.0	548.4	383.1	283.9	241.2	241.2	245.0	247.0
17.5°	960.7	919.9	824.6	659.3	433.7	274.2	223.7	219.8	225.6	235.3	235.3
20°	993.8	949.1	828.5	585.4	324.8	217.8	212.0	212.0	215.9	225.6	227.5
22.5°	1034.7	986.0	824.6	494.0	243.1	206.2	204.2	204.2	204.2	215.9	215.9
25°	1077.4	1028.8	809.1	396.7	206.2	198.4	196.4	194.5	194.5	204.2	206.2
27.5°	1126.1	1073.6	772.1	303.4	194.5	190.6	188.6	184.8	184.8	192.5	192.5
30°	1174.7	1124.1	715.7	229.5	184.8	182.8	178.9	175.0	171.1	178.9	178.9
32.5°	1227.2	1176.6	641.8	182.8	171.1	171.1	169.2	163.4	159.5	163.4	165.3
35°	1297.2	1236.9	558.2	159.5	153.6	153.6	153.6	151.7	143.9	147.8	147.8
37.5°	1390.6	1320.5	460.9	147.8	140.0	136.1	136.1	136.1	130.3	132.2	132.2
40°	1509.2	1417.8	367.6	138.1	130.3	120.6	116.7	118.6	114.7	114.7	112.8
42.5°	1670.6	1522.8	276.2	130.3	122.5	108.9	101.1	99.2	95.3	93.4	93.4
45°	1902.1	1651.2	198.4	122.5	116.7	95.3	87.5	81.7	72.0	66.1	66.1
47.5°	2201.6	1797.0	147.8	114.7	110.9	83.6	73.9	62.2	48.6	44.7	44.7
50°	2567.2	1960.4	124.5	103.1	101.1	73.9	58.3	40.8	27.2	23.3	25.3
52.5°	2923.1	2114.0	110.9	91.4	89.5	64.2	42.8	21.4	11.7	11.7	11.7
55°	3222.6	2222.9	101.1	81.7	77.8	50.6	23.3	9.7	5.8	5.8	5.8
57.5°	3492.9	2285.2	91.4	72.0	62.2	35.0	9.7	3.9	3.9	1.9	1.9
60°	3739.9	2322.1	79.7	62.2	48.6	19.4	3.9	1.9	1.9	0.0	0.0
62.5°	3983.0	2349.4	68.1	50.6	37.0	7.8	1.9	1.9	0.0	0.0	0.0
65°	4167.8	2339.6	54.5	40.8	23.3	3.9	1.9	0.0	0.0	0.0	0.0
67.5°	4162.0	2207.4	40.8	31.1	11.7	1.9	0.0	0.0	0.0	0.0	0.0
70°	3722.4	1859.3	27.2	19.4	3.9	1.9	0.0	0.0	0.0	0.0	0.0
72.5°	2641.1	1192.2	17.5	11.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0
75°	1163.0	361.7	9.7	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	227.5	83.6	5.8	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	54.5	9.7	1.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	23.3	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	5.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.9	1.9	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)