

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: P231363

Luminaire Tested: **ARCH-M-AF48-60-D-U-T4W-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231363  
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-AF48-60-D-U-T4W-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 405mA 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: 6627.7 lumens  
Efficiency: N/A  
Efficacy: 105.2 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

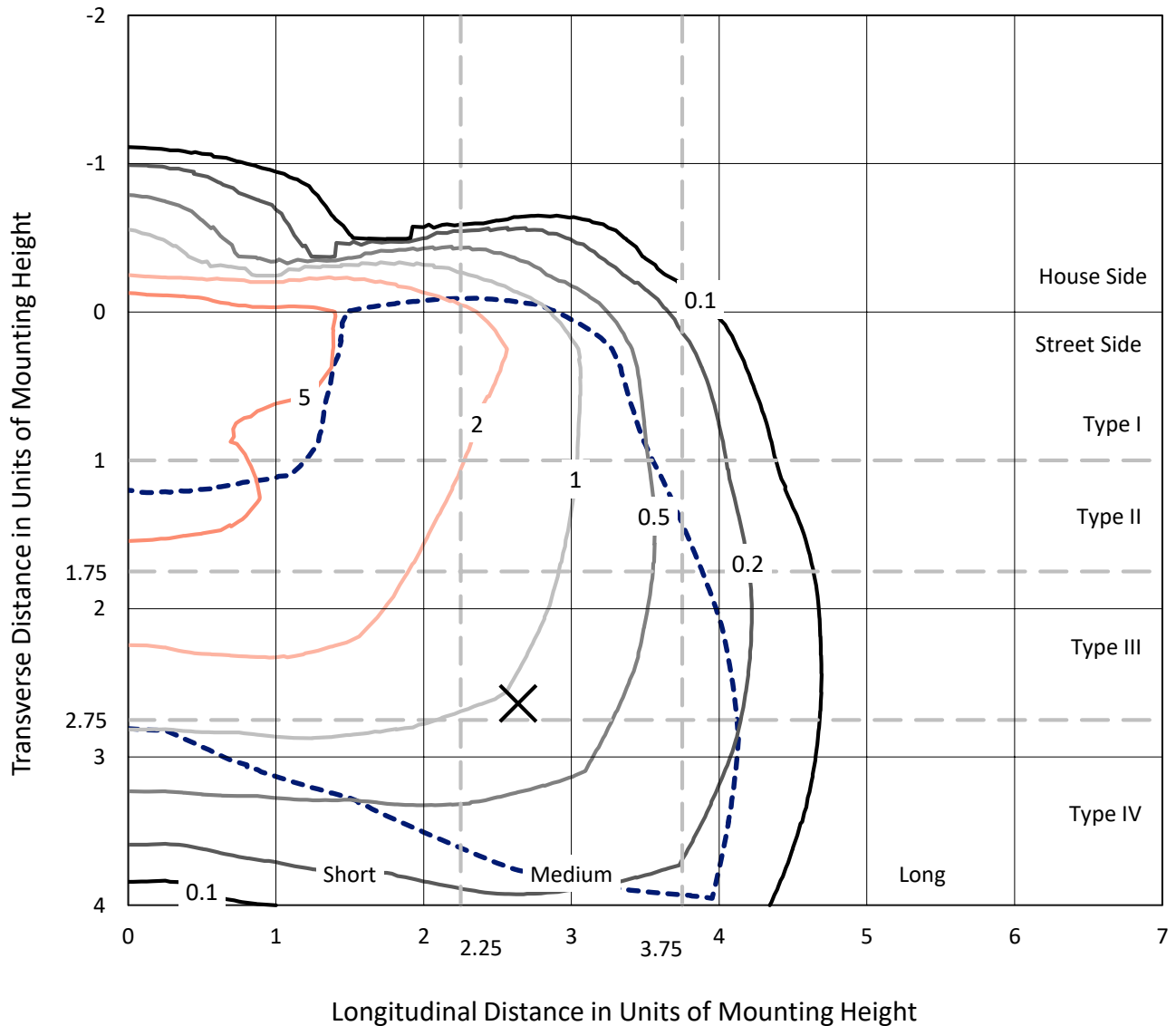
Input Watts (W): 63  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

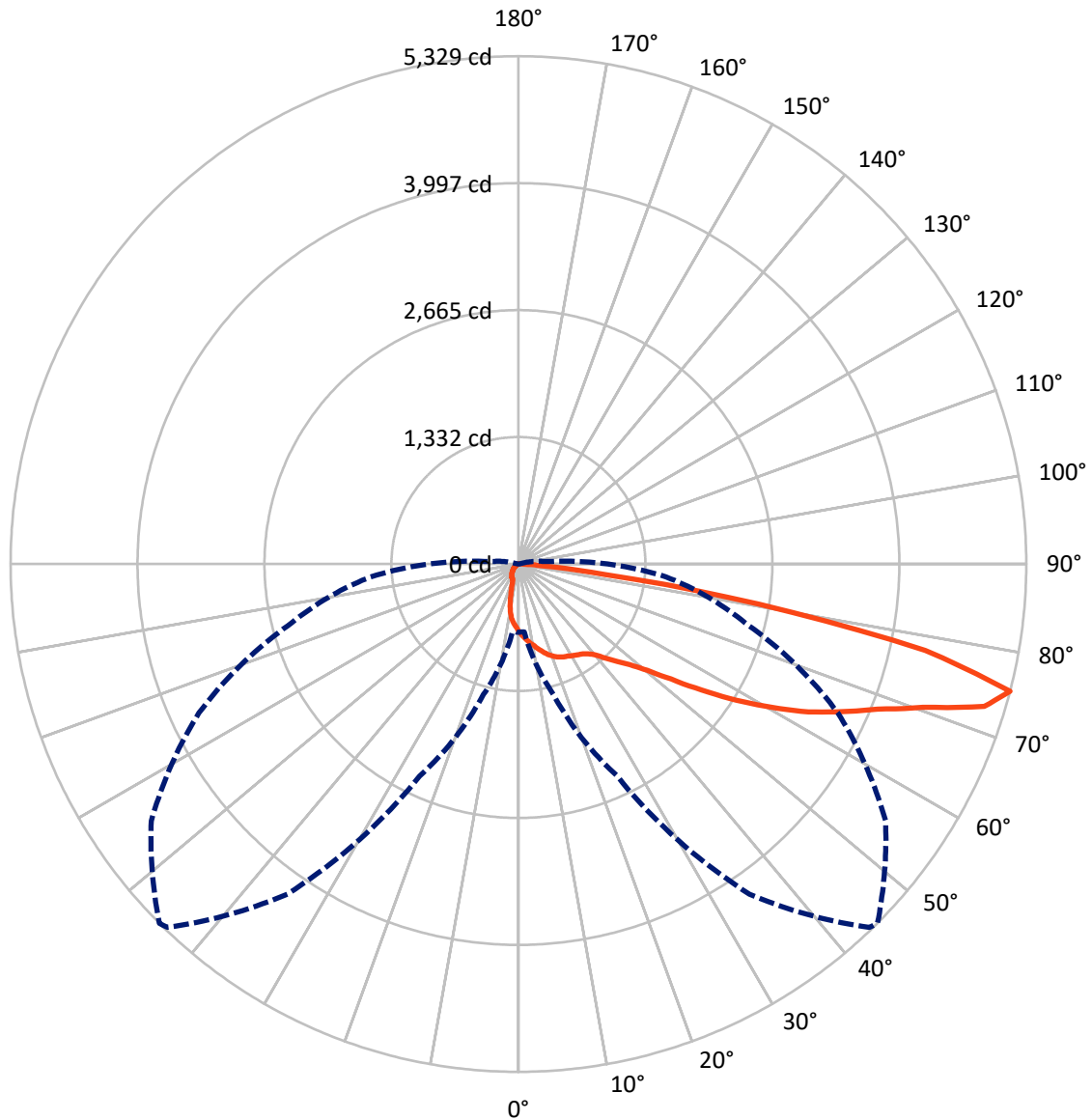
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.5 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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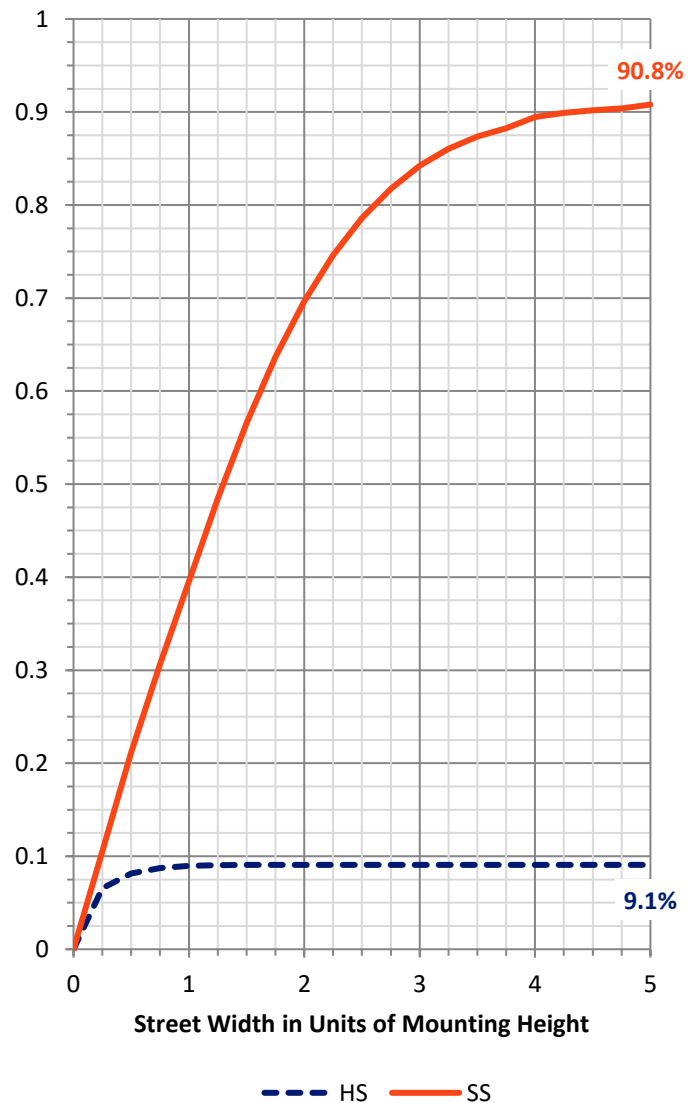
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	606.2	0.0	606.2
	% Fixture	9.1	0.0	9.1
<b>Street Side</b>	Lumens	6021.5	0.0	6021.5
	% Fixture	90.9	0.0	90.9
<b>Total</b>	Lumens	6627.7	0.0	6627.7
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.9	1.0
10°-20°	189.5	2.9
20°-30°	313.9	4.7
30°-40°	454.3	6.9
40°-50°	743.9	11.2
50°-60°	1325.4	20.0
60°-70°	1948.5	29.4
70°-80°	1470.0	22.2
80°-90°	115.3	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°	6627.7	100.0
0°-180°	6627.7	100.0

**Coefficient of Utilization**



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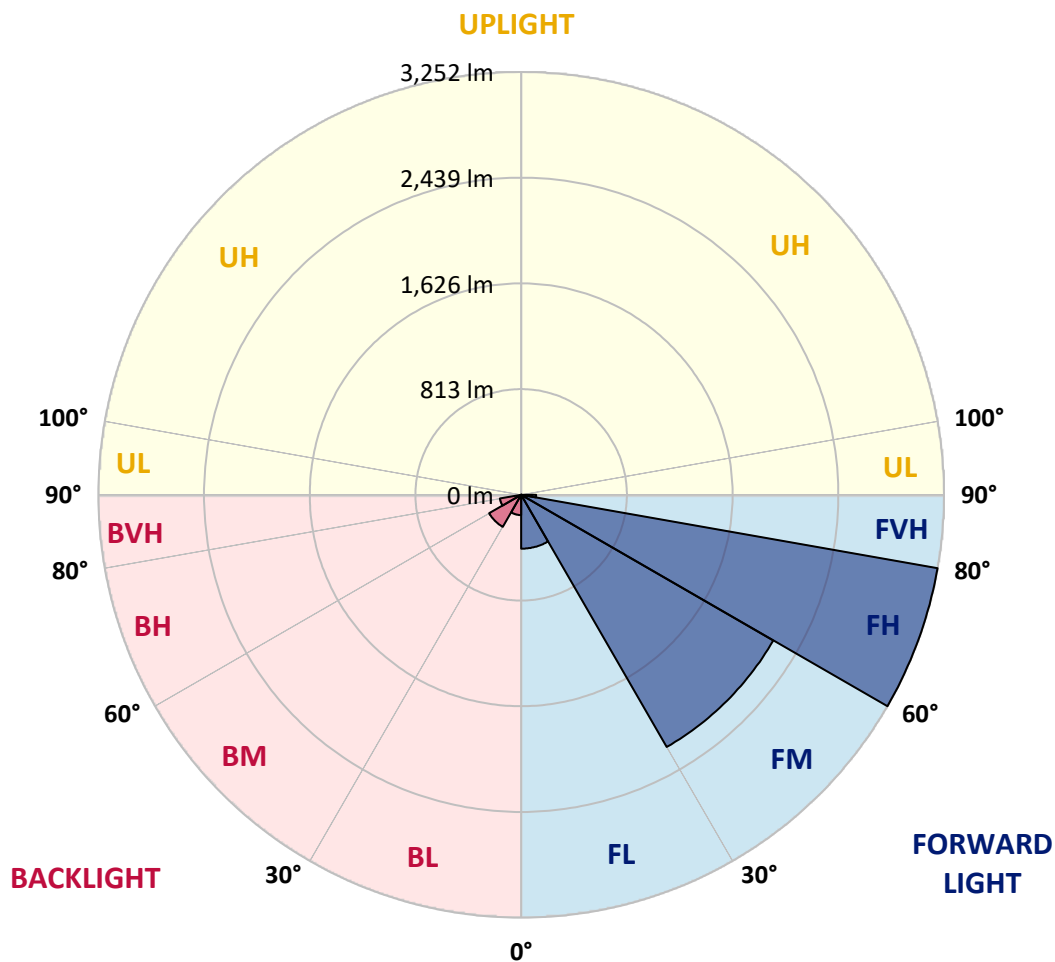
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	414.5	6.3			
FM	(30°-60°)	2239.5	33.8			
FH	(60°-80°)	3252.5	49.1			G2/5000
FVH	(80°-90°)	115.0	1.7			G2/225
BL	(0°-30°)	155.8	2.4	B1/500		
BM	(30°-60°)	284.1	4.3	B1/1000		
BH	(60°-80°)	166.0	2.5	B1/500		G1/500
BVH	(80°-90°)	0.3	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°	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9
2.5°	770.1	770.1	768.4	766.9	759.0	751.3	749.6	744.9	730.8	721.4	712.0
5°	834.3	835.9	832.8	824.9	807.6	790.4	788.9	776.3	749.6	730.8	710.4
7.5°	895.5	898.7	890.8	876.7	856.3	831.1	829.6	806.1	771.6	744.9	715.1
10°	947.3	947.3	936.3	919.0	897.0	870.4	867.3	840.6	801.4	768.4	729.3
12.5°	1003.7	1002.2	986.4	962.9	937.8	912.8	911.1	878.2	840.6	798.3	749.6
15°	1055.5	1052.3	1032.0	1010.0	983.4	956.7	955.1	922.2	882.9	832.8	779.5
17.5°	1083.7	1082.1	1063.3	1041.4	1019.4	999.0	997.5	962.9	920.6	868.8	809.3
20°	1088.4	1090.0	1074.3	1055.5	1042.9	1032.0	1032.0	1000.5	955.1	900.2	840.6
22.5°	1090.0	1094.7	1083.7	1058.5	1055.5	1057.0	1060.2	1035.1	988.1	936.3	873.5
25°	1100.9	1107.2	1099.4	1069.6	1066.4	1077.4	1080.5	1069.6	1027.2	975.5	911.1
27.5°	1122.9	1129.1	1122.9	1085.2	1080.5	1091.5	1094.7	1100.9	1069.6	1013.1	950.4
30°	1166.8	1168.4	1154.3	1107.2	1097.8	1111.9	1116.7	1133.8	1108.8	1049.1	988.1
32.5°	1243.7	1228.0	1185.6	1122.9	1115.0	1130.8	1135.5	1154.3	1144.9	1083.7	1027.2
35°	1400.5	1318.9	1221.7	1144.9	1137.0	1152.7	1159.0	1185.6	1190.3	1132.3	1075.8
37.5°	1398.9	1325.2	1306.4	1187.2	1176.2	1187.2	1195.0	1228.0	1246.8	1196.6	1146.4
40°	1497.7	1466.4	1466.4	1267.2	1231.1	1246.8	1254.6	1287.6	1320.5	1281.2	1229.6
42.5°	1808.3	1787.8	1765.9	1420.9	1307.9	1351.8	1356.5	1377.0	1416.2	1403.6	1342.4
45°	2154.8	2136.0	2051.3	1681.2	1439.7	1447.6	1458.5	1491.5	1547.9	1571.5	1499.2
47.5°	2426.1	2407.3	2335.2	1994.9	1645.1	1576.2	1576.2	1640.4	1728.3	1787.8	1718.9
50°	2644.1	2622.2	2578.2	2329.0	1982.3	1761.2	1751.8	1827.1	1957.2	2049.8	2002.7
52.5°	2855.9	2791.5	2764.9	2673.9	2363.4	2029.3	2004.3	2057.6	2237.9	2352.5	2313.2
55°	2997.0	2987.6	2959.4	2990.7	2763.3	2355.5	2333.7	2344.6	2570.5	2647.3	2598.7
57.5°	3128.7	3127.2	3189.9	3335.7	3199.3	2728.8	2694.4	2677.1	2891.9	2873.2	2915.4
60°	3291.9	3263.6	3409.5	3618.1	3599.3	3092.7	3053.5	3018.9	3138.1	3084.8	3295.0
62.5°	3299.7	3291.9	3588.2	3887.8	3996.1	3462.8	3417.3	3293.4	3353.0	3291.9	3657.3
65°	3000.1	3039.4	3663.5	4030.5	4328.5	3787.5	3732.5	3539.6	3544.3	3503.6	4083.8
67.5°	2932.7	2953.1	3456.6	4184.2	4568.4	4115.2	4063.5	3823.5	3767.0	3770.2	4336.3
70°	2764.9	2796.2	3199.3	4173.2	4758.2	4552.7	4501.0	4240.6	4104.2	3952.1	4141.8
72.5°	2112.5	2165.8	2695.9	3658.8	4706.5	5125.2	5111.1	4769.2	4239.1	3629.0	3133.4
75°	715.1	713.6	1416.2	2457.5	4228.2	5300.8	5329.1	4703.3	3698.1	2503.0	1555.7
77.5°	153.6	155.3	291.7	995.8	2808.8	4256.4	4364.5	3547.5	2385.4	1115.0	356.0
80°	75.3	76.8	120.7	263.5	1122.9	2387.0	2556.4	1823.9	881.4	222.7	59.6
82.5°	37.6	39.2	62.7	139.5	415.6	848.4	906.4	671.3	252.5	125.4	29.8
85°	14.1	14.1	31.4	83.2	189.8	199.2	244.7	194.5	152.1	102.0	7.9
87.5°	3.2	3.2	17.3	40.8	84.7	62.7	62.7	59.6	92.6	69.0	3.2
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°	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9	708.9
2.5°	707.3	701.0	690.1	679.0	671.3	661.8	657.1	652.4	650.8	649.3	652.4
5°	699.5	690.1	669.6	652.4	636.7	624.2	614.8	605.4	600.7	597.5	599.0
7.5°	699.5	685.4	655.5	628.9	603.7	577.1	550.4	530.1	514.4	505.0	506.6
10°	707.3	688.4	649.3	613.2	566.2	509.7	451.6	407.7	378.0	360.7	360.7
12.5°	724.6	699.5	650.8	594.3	514.4	415.6	327.8	274.5	252.5	240.0	241.5
15°	748.1	718.3	658.7	569.3	442.2	308.9	228.9	194.5	194.5	197.6	199.2
17.5°	774.8	741.8	664.9	531.6	349.7	221.2	180.3	177.2	181.9	189.8	189.8
20°	801.4	765.4	668.1	472.1	261.9	175.6	170.9	170.9	174.1	181.9	183.5
22.5°	834.3	795.1	664.9	398.3	196.0	166.2	164.7	164.7	164.7	174.1	174.1
25°	868.8	829.6	652.4	320.0	166.2	160.0	158.4	156.8	156.8	164.7	166.2
27.5°	908.1	865.7	622.6	244.7	156.8	153.6	152.1	148.9	148.9	155.3	155.3
30°	947.3	906.4	577.1	185.1	148.9	147.4	144.2	141.2	138.0	144.2	144.2
32.5°	989.6	948.8	517.5	147.4	138.0	138.0	136.5	131.8	128.6	131.8	133.3
35°	1046.1	997.5	450.1	128.6	123.9	123.9	123.9	122.3	116.0	119.2	119.2
37.5°	1121.4	1064.9	371.6	119.2	112.9	109.8	109.8	109.8	105.1	106.7	106.7
40°	1217.0	1143.2	296.5	111.4	105.1	97.3	94.1	95.6	92.6	92.6	90.9
42.5°	1347.1	1228.0	222.7	105.1	98.8	87.9	81.5	80.0	76.8	75.3	75.3
45°	1533.8	1331.5	160.0	98.8	94.1	76.8	70.6	65.9	58.0	53.3	53.3
47.5°	1775.3	1449.1	119.2	92.6	89.4	67.4	59.6	50.2	39.2	36.1	36.1
50°	2070.1	1580.9	100.4	83.2	81.5	59.6	47.1	32.9	22.0	18.8	20.4
52.5°	2357.2	1704.7	89.4	73.8	72.1	51.8	34.5	17.3	9.4	9.4	9.4
55°	2598.7	1792.5	81.5	65.9	62.7	40.8	18.8	7.9	4.7	4.7	4.7
57.5°	2816.7	1842.7	73.8	58.0	50.2	28.2	7.9	3.2	3.2	1.5	1.5
60°	3015.9	1872.5	64.3	50.2	39.2	15.7	3.2	1.5	1.5	0.0	0.0
62.5°	3211.9	1894.5	54.9	40.8	29.8	6.2	1.5	1.5	0.0	0.0	0.0
65°	3360.8	1886.6	43.9	32.9	18.8	3.2	1.5	0.0	0.0	0.0	0.0
67.5°	3356.1	1780.0	32.9	25.1	9.4	1.5	0.0	0.0	0.0	0.0	0.0
70°	3001.7	1499.2	22.0	15.7	3.2	1.5	0.0	0.0	0.0	0.0	0.0
72.5°	2129.8	961.4	14.1	9.4	1.5	0.0	0.0	0.0	0.0	0.0	0.0
75°	937.8	291.7	7.9	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	183.5	67.4	4.7	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	43.9	7.9	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	18.8	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	4.7	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.2	1.5	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)