

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: P231088

Luminaire Tested: **ARCH-M-AF48-40-D-U-T2R-7030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231088  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29623)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-M-AF48-40-D-U-T2R-7030-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 240mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4425 lumens  
Efficiency: N/A  
Efficacy: 116.4 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 38  
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

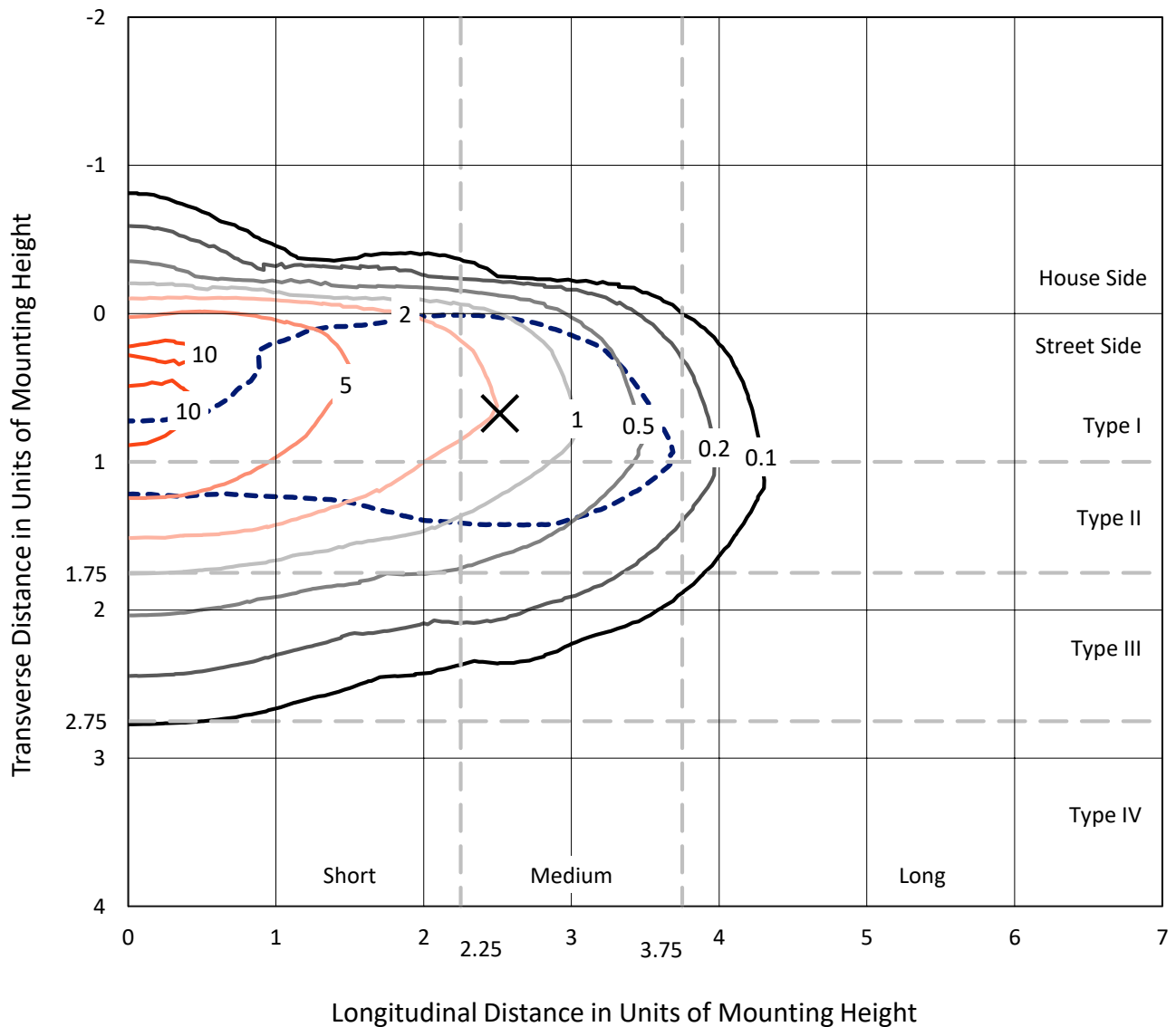


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

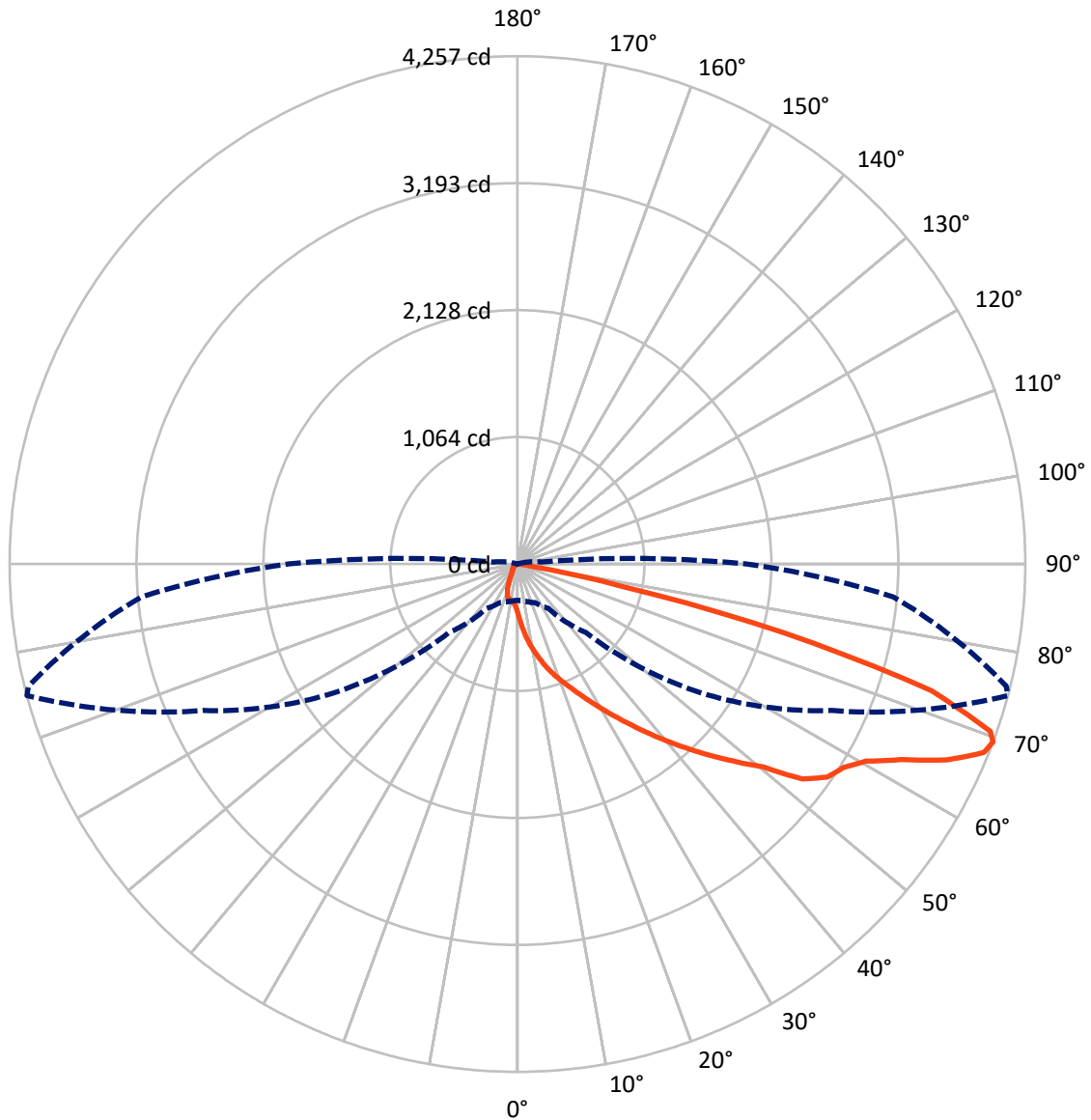


Based on 10 foot mounting height. Maximum calculated value = 11.3 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical



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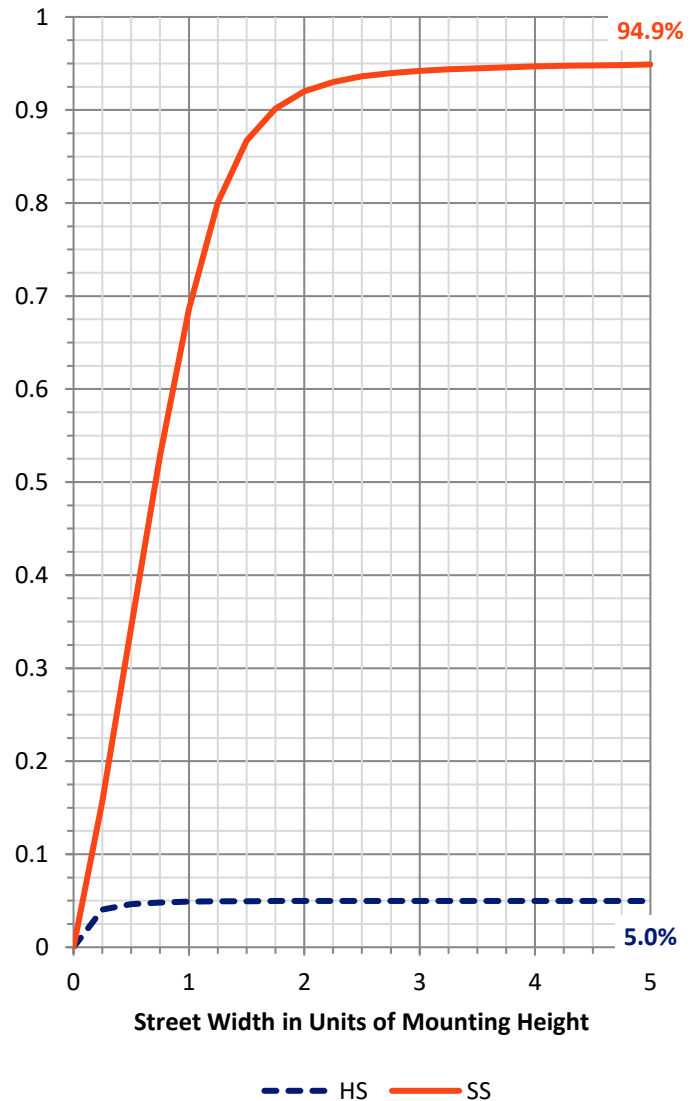
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	220.8	0.0	220.8
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	4204.2	0.0	4204.2
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	4425.0	0.0	4425.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.0	1.1
10°-20°	171.6	3.9
20°-30°	327.7	7.4
30°-40°	587.8	13.3
40°-50°	900.6	20.4
50°-60°	1046.7	23.7
60°-70°	926.8	20.9
70°-80°	399.8	9.0
80°-90°	16.0	0.4
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°	4425.0	100.0
0°-180°	4425.0	100.0

**Coefficient of Utilization**



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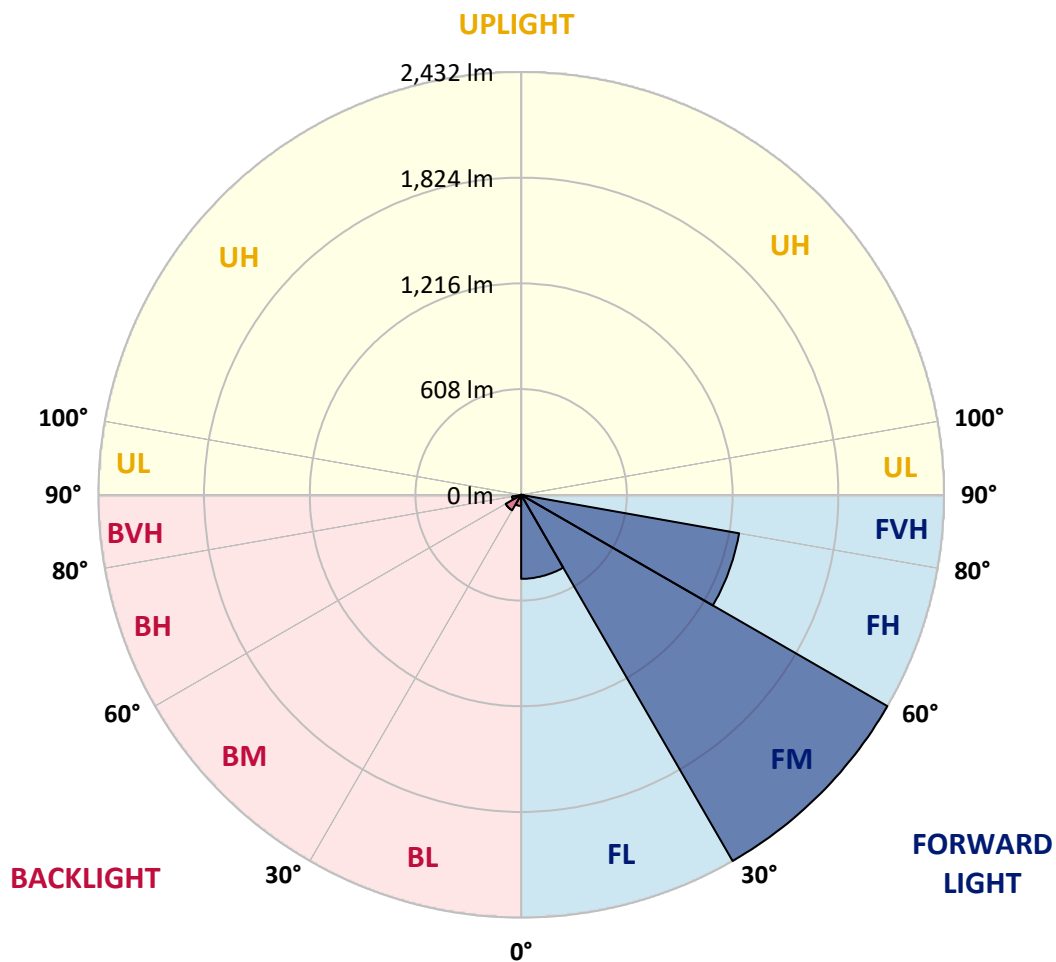
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	483.2	10.9			
FM	(30°-60°)	2432.1	55.0			
FH	(60°-80°)	1273.1	28.8			G1/1800
FVH	(80°-90°)	15.8	0.4			G1/100
BL	(0°-30°)	64.1	1.4	B0/110		
BM	(30°-60°)	102.9	2.3	B0/220		
BH	(60°-80°)	53.5	1.2	B0/110		G0/110
BVH	(80°-90°)	0.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	411.7	411.7	411.7	411.7	411.7	411.7	411.7	411.7	411.7	411.7	411.7
2.5°	678.3	671.6	664.9	657.3	640.1	610.5	573.2	533.1	483.4	474.8	434.7
5°	823.5	820.6	813.9	803.4	784.3	751.8	709.8	650.6	567.5	553.1	468.1
7.5°	925.7	923.8	918.1	905.6	888.5	856.0	812.0	748.0	651.5	635.3	510.1
10°	1017.4	1016.5	1011.7	1000.2	983.0	947.7	900.9	834.0	731.8	713.6	558.9
12.5°	1100.5	1101.5	1099.6	1093.8	1081.4	1048.0	994.5	921.9	809.2	789.1	617.1
15°	1149.3	1152.1	1159.8	1171.2	1175.0	1148.3	1092.9	1012.6	888.5	871.3	684.0
17.5°	1133.0	1135.9	1159.8	1198.9	1236.2	1240.0	1190.3	1098.6	966.8	949.6	749.9
20°	1093.8	1097.7	1122.5	1176.0	1248.6	1299.2	1279.2	1192.2	1041.3	1020.3	813.0
22.5°	1137.8	1137.8	1145.4	1177.9	1243.8	1323.1	1349.9	1285.9	1117.7	1091.9	876.0
25°	1288.7	1285.9	1269.6	1256.3	1277.3	1348.0	1403.4	1381.4	1207.5	1177.9	942.9
27.5°	1479.8	1493.2	1462.6	1413.9	1366.1	1396.7	1451.1	1476.0	1306.9	1276.3	1011.7
30°	1693.8	1699.5	1663.2	1598.3	1514.2	1484.6	1507.5	1557.2	1414.8	1381.4	1083.3
32.5°	1886.8	1882.0	1851.4	1783.6	1679.5	1615.5	1580.1	1622.1	1532.3	1494.1	1156.9
35°	2057.8	2061.6	2024.3	1946.0	1843.8	1775.9	1691.9	1695.7	1664.2	1620.2	1241.9
37.5°	2211.6	2204.9	2169.5	2091.2	1998.5	1925.0	1836.1	1772.1	1808.4	1762.6	1337.5
40°	2336.7	2330.0	2292.8	2216.4	2129.4	2069.2	1999.5	1874.3	1960.3	1907.8	1439.7
42.5°	2436.1	2428.4	2396.9	2323.3	2239.3	2185.8	2152.3	2000.4	2122.7	2070.2	1554.3
45°	2484.8	2478.1	2459.0	2403.6	2330.0	2283.2	2299.5	2145.7	2296.6	2252.7	1680.4
47.5°	2427.5	2424.6	2446.6	2437.0	2395.0	2370.2	2426.5	2304.2	2479.1	2436.1	1825.6
50°	2253.6	2258.4	2322.4	2401.7	2421.7	2451.4	2530.7	2471.4	2674.9	2629.1	1992.8
52.5°	1824.7	1857.1	2050.1	2241.2	2389.3	2501.0	2652.9	2710.3	2994.0	2949.1	2253.6
55°	1362.3	1375.7	1585.8	1912.6	2258.4	2497.2	2743.7	2850.7	3151.6	3105.8	2322.4
57.5°	1080.5	1085.2	1189.4	1522.8	1989.0	2411.2	2791.5	2901.3	3220.4	3182.2	2424.6
60°	848.3	854.1	929.5	1158.8	1609.7	2179.1	2722.7	2945.3	3355.1	3324.5	2603.3
62.5°	660.1	665.9	711.7	846.4	1207.5	1821.8	2584.2	3016.0	3611.1	3596.8	2895.6
65°	511.1	513.0	544.5	607.6	853.1	1434.9	2415.1	3081.9	3957.0	3944.5	3132.5
67.5°	377.4	380.2	402.2	441.4	576.1	1030.8	2138.0	3031.2	4217.8	4181.5	3218.5
69°	304.7	307.6	326.7	358.2	454.7	812.0	1884.9	2906.1	4256.9	4222.5	3164.0
70°	260.8	262.7	281.8	308.6	387.9	689.7	1684.2	2798.1	4205.3	4171.9	3039.8
72.5°	167.2	176.7	195.8	213.0	257.0	456.6	1136.8	2320.5	3628.3	3571.0	2380.7
75°	92.7	95.5	129.9	150.9	171.0	297.1	632.4	1447.3	2308.1	2267.9	1273.4
77.5°	76.4	78.3	91.7	114.6	114.6	166.2	238.8	570.3	877.9	792.0	344.9
80°	53.5	55.4	69.7	75.5	82.2	93.6	77.4	125.1	135.7	120.4	51.6
82.5°	37.3	39.2	47.8	62.1	65.9	43.9	28.7	37.3	39.2	39.2	20.1
85°	6.7	9.6	35.3	51.6	39.2	13.4	16.2	13.4	12.4	13.4	4.8
87.5°	0.0	0.0	22.0	24.8	21.0	5.7	6.7	4.8	2.9	3.8	1.9
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°	411.7	411.7	411.7	411.7	411.7	411.7	411.7	411.7	411.7	411.7	411.7
2.5°	414.6	394.5	360.2	335.3	314.3	298.1	291.4	280.9	273.2	277.0	272.3
5°	426.1	390.7	335.3	300.0	275.1	254.1	236.9	223.5	213.0	211.1	209.2
7.5°	444.2	393.6	321.0	277.0	239.8	207.3	180.6	160.5	145.2	145.2	139.5
10°	469.1	401.2	312.4	254.1	198.7	154.8	128.0	108.9	101.3	100.3	98.4
12.5°	503.5	415.6	305.7	224.5	154.8	112.7	96.5	89.8	86.9	86.0	85.0
15°	550.3	436.6	298.1	188.2	117.5	92.7	86.0	80.2	77.4	76.4	75.5
17.5°	595.2	455.7	281.8	150.9	95.5	84.1	76.4	71.6	67.8	66.9	66.9
20°	637.2	471.9	254.1	117.5	86.0	75.5	67.8	62.1	58.3	57.3	57.3
22.5°	681.1	485.3	219.7	95.5	78.3	66.9	59.2	53.5	49.7	48.7	47.8
25°	728.0	494.9	180.6	85.0	70.7	59.2	50.6	45.9	43.0	42.0	41.1
27.5°	778.6	498.7	143.3	77.4	62.1	51.6	43.9	39.2	37.3	36.3	36.3
30°	824.4	494.9	110.8	68.8	54.5	44.9	38.2	34.4	32.5	31.5	31.5
32.5°	872.2	485.3	88.8	61.1	47.8	38.2	32.5	29.6	28.7	27.7	27.7
35°	922.8	472.9	76.4	54.5	41.1	33.4	28.7	26.7	25.8	24.8	24.8
37.5°	982.1	457.6	69.7	48.7	36.3	29.6	24.8	23.9	22.9	22.9	22.9
40°	1048.9	438.5	65.0	43.9	32.5	25.8	22.0	21.0	20.1	20.1	20.1
42.5°	1119.6	416.5	60.2	39.2	28.7	22.0	19.1	19.1	18.2	18.2	17.2
45°	1198.9	394.5	55.4	34.4	24.8	19.1	16.2	15.3	15.3	14.3	14.3
47.5°	1292.6	374.5	50.6	30.6	22.0	16.2	14.3	13.4	12.4	11.5	11.5
50°	1424.4	372.6	44.9	26.7	20.1	13.4	11.5	10.5	9.6	8.6	8.6
52.5°	1555.3	355.4	38.2	22.0	16.2	11.5	8.6	7.6	6.7	6.7	5.7
55°	1584.9	326.7	33.4	19.1	12.4	8.6	6.7	4.8	4.8	3.8	3.8
57.5°	1649.8	313.3	28.7	15.3	9.6	6.7	3.8	2.9	2.9	2.9	2.9
60°	1777.9	309.5	24.8	13.4	6.7	4.8	2.9	1.9	1.9	1.0	1.0
62.5°	1954.6	305.7	21.0	11.5	4.8	2.9	1.9	1.0	0.0	0.0	0.0
65°	2052.0	279.9	17.2	8.6	3.8	2.9	1.0	0.0	0.0	0.0	0.0
67.5°	2026.2	231.2	15.3	5.7	2.9	1.9	1.0	0.0	0.0	0.0	0.0
69°	1918.3	194.9	12.4	4.8	2.9	1.9	1.0	0.0	0.0	0.0	0.0
70°	1788.4	168.1	11.5	3.8	1.9	1.0	1.0	0.0	0.0	0.0	0.0
72.5°	1269.6	87.9	7.6	2.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0
75°	593.3	39.2	4.8	1.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0
77.5°	130.9	18.2	2.9	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	24.8	6.7	1.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	8.6	2.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	2.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.0	0.0	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)