

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: P234699

Luminaire Tested: **ARCH-AF16-50-D-U-T2R-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234699  
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-AF16-50-D-U-T2R-8027-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 980mA LIGHT ENGINE WITH 16 LEDS AND TYPE II ROADWAY OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3599 lumens  
Efficiency: N/A  
Efficacy: 67.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 53  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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

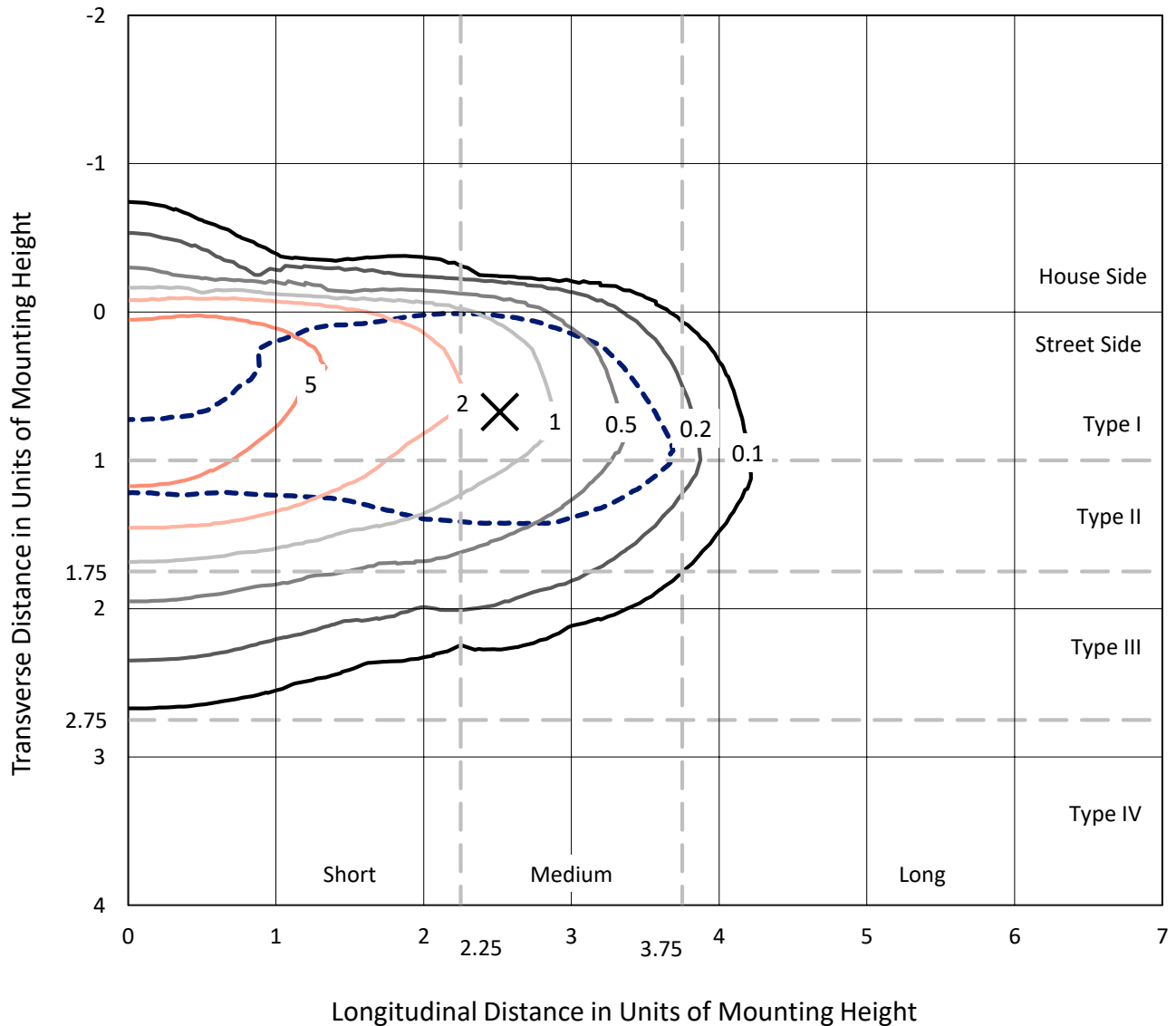


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

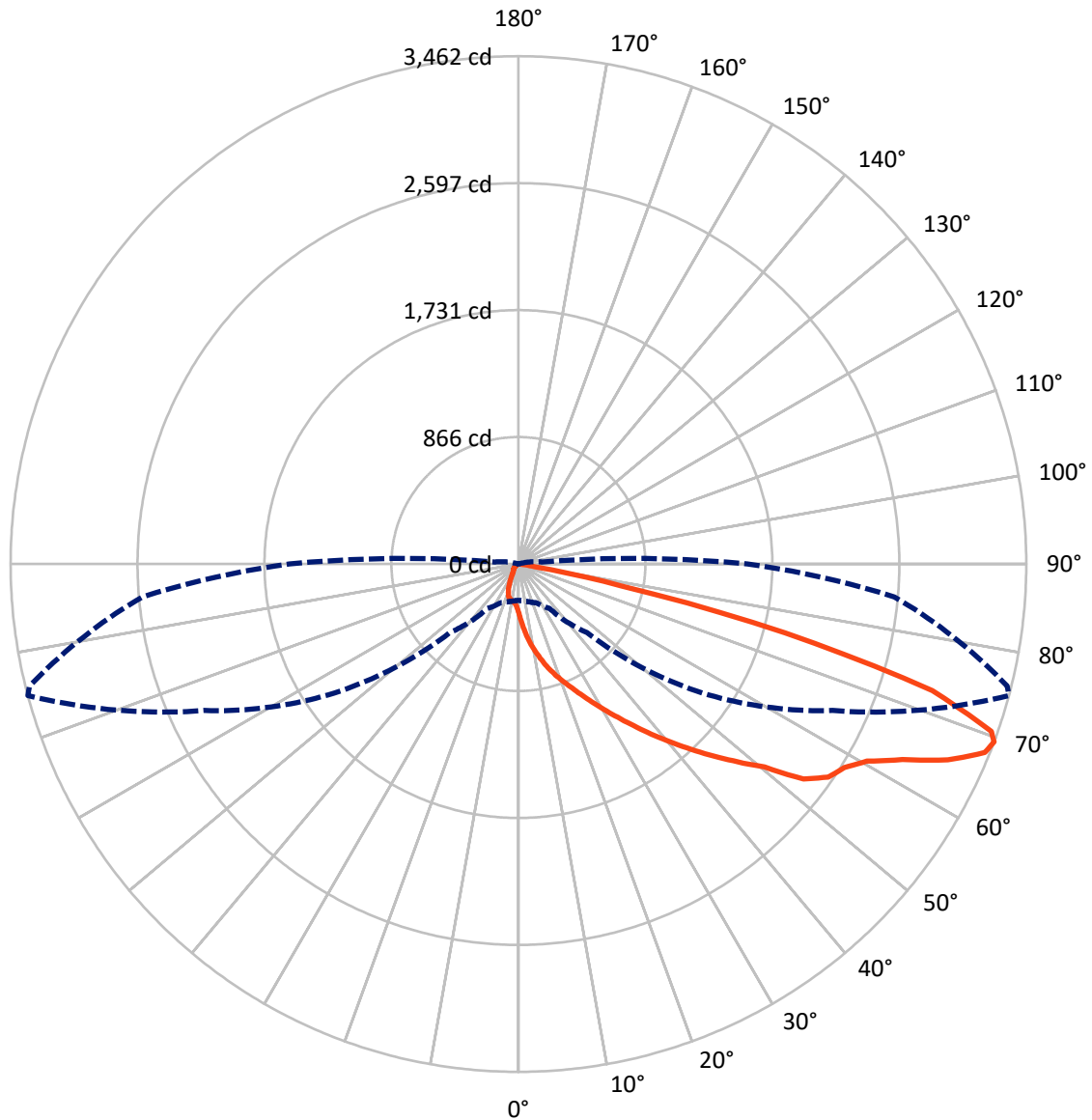


Based on 10 foot mounting height. Maximum calculated value = 9.2 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



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

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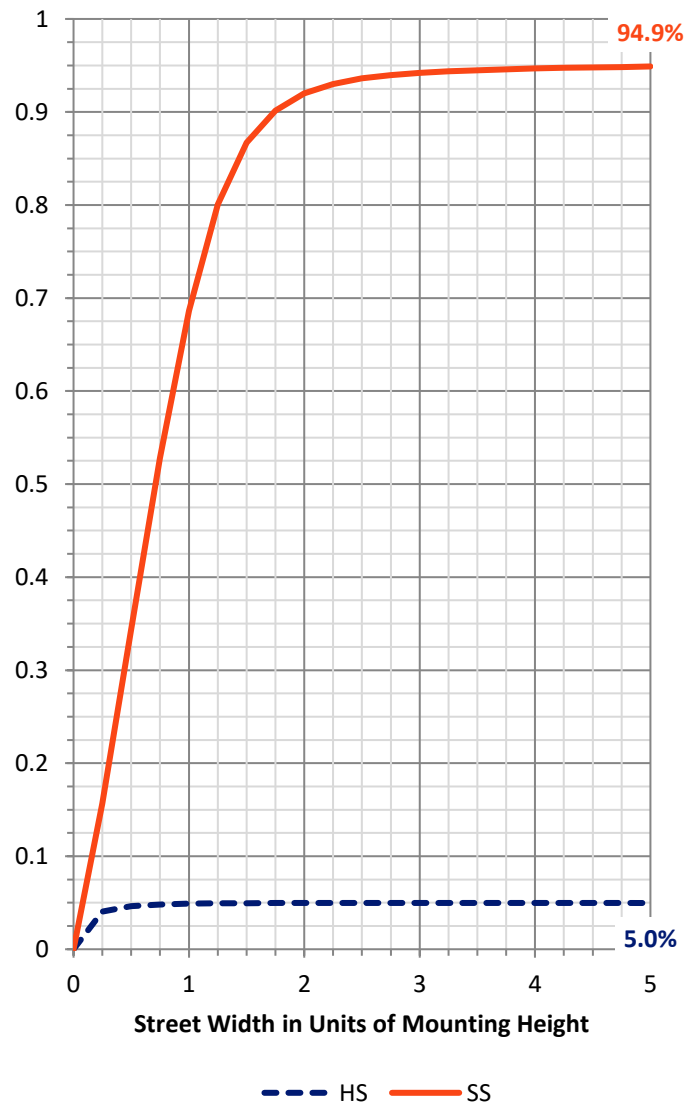
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	179.6	0.0	179.6
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	3419.4	0.0	3419.4
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	3599.0	0.0	3599.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.0	1.1
10°-20°	139.6	3.9
20°-30°	266.5	7.4
30°-40°	478.1	13.3
40°-50°	732.5	20.4
50°-60°	851.3	23.7
60°-70°	753.8	20.9
70°-80°	325.2	9.0
80°-90°	13.0	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°	3599.0	100.0
0°-180°	3599.0	100.0

**Coefficient of Utilization**



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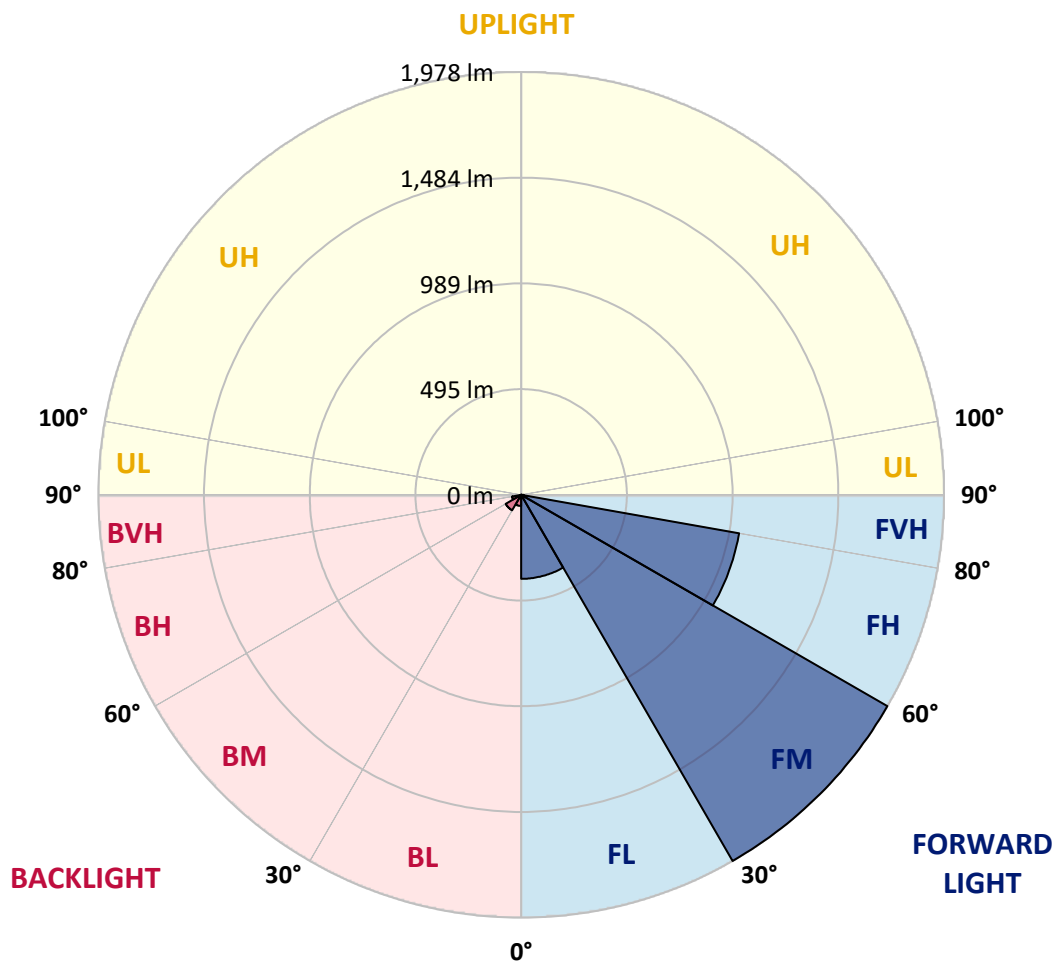
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	393.0	10.9			
FM	(30°-60°)	1978.1	55.0			
FH	(60°-80°)	1035.5	28.8			G1/1800
FVH	(80°-90°)	12.8	0.4			G1/100
BL	(0°-30°)	52.2	1.4	B0/110		
BM	(30°-60°)	83.7	2.3	B0/220		
BH	(60°-80°)	43.5	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°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	551.7	546.2	540.8	534.6	520.6	496.5	466.2	433.6	393.2	386.2	353.5
5°	669.8	667.4	662.0	653.5	637.9	611.5	577.3	529.1	461.5	449.9	380.7
7.5°	752.9	751.4	746.7	736.6	722.6	696.2	660.4	608.4	529.9	516.7	414.9
10°	827.5	826.7	822.8	813.5	799.5	770.8	732.7	678.3	595.2	580.4	454.5
12.5°	895.1	895.9	894.3	889.7	879.6	852.4	808.9	749.8	658.1	641.8	501.9
15°	934.7	937.1	943.3	952.6	955.7	934.0	888.9	823.6	722.6	708.6	556.3
17.5°	921.5	923.8	943.3	975.1	1005.4	1008.5	968.1	893.5	786.3	772.3	609.9
20°	889.7	892.8	913.0	956.5	1015.5	1056.7	1040.4	969.7	846.9	829.8	661.2
22.5°	925.4	925.4	931.6	958.0	1011.6	1076.1	1097.9	1045.8	909.1	888.1	712.5
25°	1048.2	1045.8	1032.6	1021.8	1038.8	1096.3	1141.4	1123.5	982.1	958.0	766.9
27.5°	1203.6	1214.4	1189.6	1150.0	1111.1	1136.0	1180.3	1200.5	1062.9	1038.1	822.8
30°	1377.6	1382.3	1352.8	1299.9	1231.5	1207.5	1226.1	1266.5	1150.7	1123.5	881.1
32.5°	1534.6	1530.7	1505.8	1450.7	1366.0	1313.9	1285.2	1319.3	1246.3	1215.2	940.9
35°	1673.7	1676.8	1646.5	1582.7	1499.6	1444.4	1376.1	1379.2	1353.5	1317.8	1010.1
37.5°	1798.7	1793.3	1764.6	1700.8	1625.5	1565.6	1493.4	1441.3	1470.9	1433.6	1087.8
40°	1900.5	1895.1	1864.8	1802.6	1731.9	1683.0	1626.3	1524.5	1594.4	1551.7	1170.9
42.5°	1981.3	1975.1	1949.5	1889.7	1821.3	1777.8	1750.6	1627.0	1726.5	1683.8	1264.2
45°	2021.0	2015.5	2000.0	1954.9	1895.1	1857.0	1870.2	1745.1	1867.9	1832.2	1366.7
47.5°	1974.3	1972.0	1989.9	1982.1	1947.9	1927.7	1973.6	1874.1	2016.3	1981.3	1484.8
50°	1832.9	1836.8	1888.9	1953.4	1969.7	1993.8	2058.3	2010.1	2175.6	2138.3	1620.8
52.5°	1484.1	1510.5	1667.4	1822.8	1943.3	2034.2	2157.7	2204.3	2435.1	2398.6	1832.9
55°	1108.0	1118.9	1289.8	1555.5	1836.8	2031.1	2231.5	2318.6	2563.3	2526.0	1888.9
57.5°	878.8	882.7	967.4	1238.5	1617.7	1961.1	2270.4	2359.7	2619.3	2588.2	1972.0
60°	690.0	694.6	756.0	942.5	1309.2	1772.3	2214.4	2395.5	2728.8	2703.9	2117.3
62.5°	536.9	541.6	578.9	688.4	982.1	1481.7	2101.8	2453.0	2937.0	2925.4	2355.1
65°	415.7	417.2	442.9	494.2	693.9	1167.0	1964.2	2506.6	3218.3	3208.2	2547.8
67.5°	306.9	309.2	327.1	359.0	468.5	838.4	1738.9	2465.4	3430.4	3400.9	2617.7
69°	247.9	250.2	265.7	291.4	369.9	660.4	1533.0	2363.6	3462.3	3434.3	2573.4
70°	212.1	213.7	229.2	251.0	315.5	561.0	1369.8	2275.8	3420.3	3393.1	2472.4
72.5°	136.0	143.7	159.3	173.3	209.0	371.4	924.6	1887.3	2951.0	2904.4	1936.3
75°	75.4	77.7	105.7	122.8	139.1	241.6	514.4	1177.2	1877.2	1844.6	1035.7
77.5°	62.2	63.7	74.6	93.2	93.2	135.2	194.2	463.9	714.1	644.1	280.5
80°	43.5	45.1	56.7	61.4	66.8	76.1	62.9	101.8	110.3	97.9	42.0
82.5°	30.3	31.9	38.8	50.5	53.6	35.7	23.3	30.3	31.9	31.9	16.3
85°	5.4	7.8	28.7	42.0	31.9	10.9	13.2	10.9	10.1	10.9	3.9
87.5°	0.0	0.0	17.9	20.2	17.1	4.7	5.4	3.9	2.3	3.1	1.6
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°	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9	334.9
2.5°	337.2	320.9	292.9	272.7	255.6	242.4	237.0	228.4	222.2	225.3	221.4
5°	346.5	317.8	272.7	244.0	223.8	206.7	192.7	181.8	173.3	171.7	170.2
7.5°	361.3	320.1	261.1	225.3	195.0	168.6	146.9	130.5	118.1	118.1	113.4
10°	381.5	326.3	254.1	206.7	161.6	125.9	104.1	88.6	82.4	81.6	80.0
12.5°	409.5	338.0	248.6	182.6	125.9	91.7	78.5	73.0	70.7	69.9	69.2
15°	447.6	355.1	242.4	153.1	95.6	75.4	69.9	65.3	62.9	62.2	61.4
17.5°	484.1	370.6	229.2	122.8	77.7	68.4	62.2	58.3	55.2	54.4	54.4
20°	518.3	383.8	206.7	95.6	69.9	61.4	55.2	50.5	47.4	46.6	46.6
22.5°	554.0	394.7	178.7	77.7	63.7	54.4	48.2	43.5	40.4	39.6	38.8
25°	592.1	402.5	146.9	69.2	57.5	48.2	41.2	37.3	35.0	34.2	33.4
27.5°	633.3	405.6	116.5	62.9	50.5	42.0	35.7	31.9	30.3	29.5	29.5
30°	670.5	402.5	90.1	55.9	44.3	36.5	31.1	28.0	26.4	25.6	25.6
32.5°	709.4	394.7	72.3	49.7	38.8	31.1	26.4	24.1	23.3	22.5	22.5
35°	750.6	384.6	62.2	44.3	33.4	27.2	23.3	21.8	21.0	20.2	20.2
37.5°	798.8	372.2	56.7	39.6	29.5	24.1	20.2	19.4	18.6	18.6	18.6
40°	853.1	356.6	52.8	35.7	26.4	21.0	17.9	17.1	16.3	16.3	16.3
42.5°	910.6	338.8	49.0	31.9	23.3	17.9	15.5	15.5	14.8	14.8	14.0
45°	975.1	320.9	45.1	28.0	20.2	15.5	13.2	12.4	12.4	11.7	11.7
47.5°	1051.3	304.6	41.2	24.9	17.9	13.2	11.7	10.9	10.1	9.3	9.3
50°	1158.5	303.0	36.5	21.8	16.3	10.9	9.3	8.5	7.8	7.0	7.0
52.5°	1265.0	289.0	31.1	17.9	13.2	9.3	7.0	6.2	5.4	5.4	4.7
55°	1289.0	265.7	27.2	15.5	10.1	7.0	5.4	3.9	3.9	3.1	3.1
57.5°	1341.9	254.9	23.3	12.4	7.8	5.4	3.1	2.3	2.3	2.3	2.3
60°	1446.0	251.7	20.2	10.9	5.4	3.9	2.3	1.6	1.6	0.8	0.8
62.5°	1589.7	248.6	17.1	9.3	3.9	2.3	1.6	0.8	0.0	0.0	0.0
65°	1669.0	227.7	14.0	7.0	3.1	2.3	0.8	0.0	0.0	0.0	0.0
67.5°	1648.0	188.0	12.4	4.7	2.3	1.6	0.8	0.0	0.0	0.0	0.0
69°	1560.2	158.5	10.1	3.9	2.3	1.6	0.8	0.0	0.0	0.0	0.0
70°	1454.5	136.8	9.3	3.1	1.6	0.8	0.8	0.0	0.0	0.0	0.0
72.5°	1032.6	71.5	6.2	2.3	1.6	0.8	0.0	0.0	0.0	0.0	0.0
75°	482.5	31.9	3.9	1.6	0.8	0.8	0.0	0.0	0.0	0.0	0.0
77.5°	106.4	14.8	2.3	1.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0
80°	20.2	5.4	1.6	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	7.0	2.3	0.8	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	2.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.8	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)