

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: P234704

Luminaire Tested: **ARCH-AF24-50-D-U-T2R-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234704  
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-AF24-50-D-U-T2R-8027-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 670mA LIGHT ENGINE 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: 3987 lumens  
Efficiency: N/A  
Efficacy: 73.8 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): 54  
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

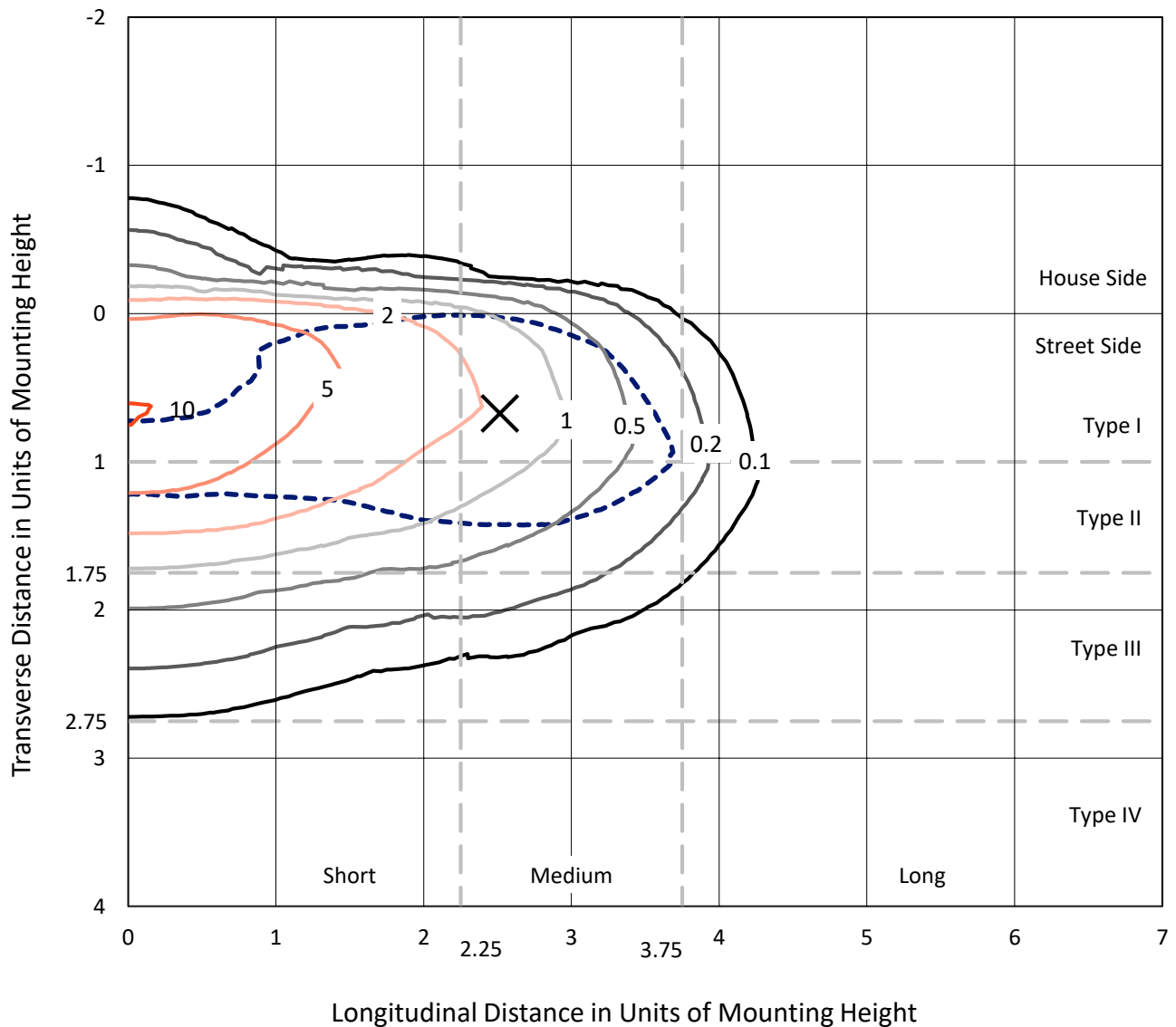


REPORT NUMBER: P234704

CATALOG NUMBER: ARCH-AF24-50-D-U-T2R-8027-HSS

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

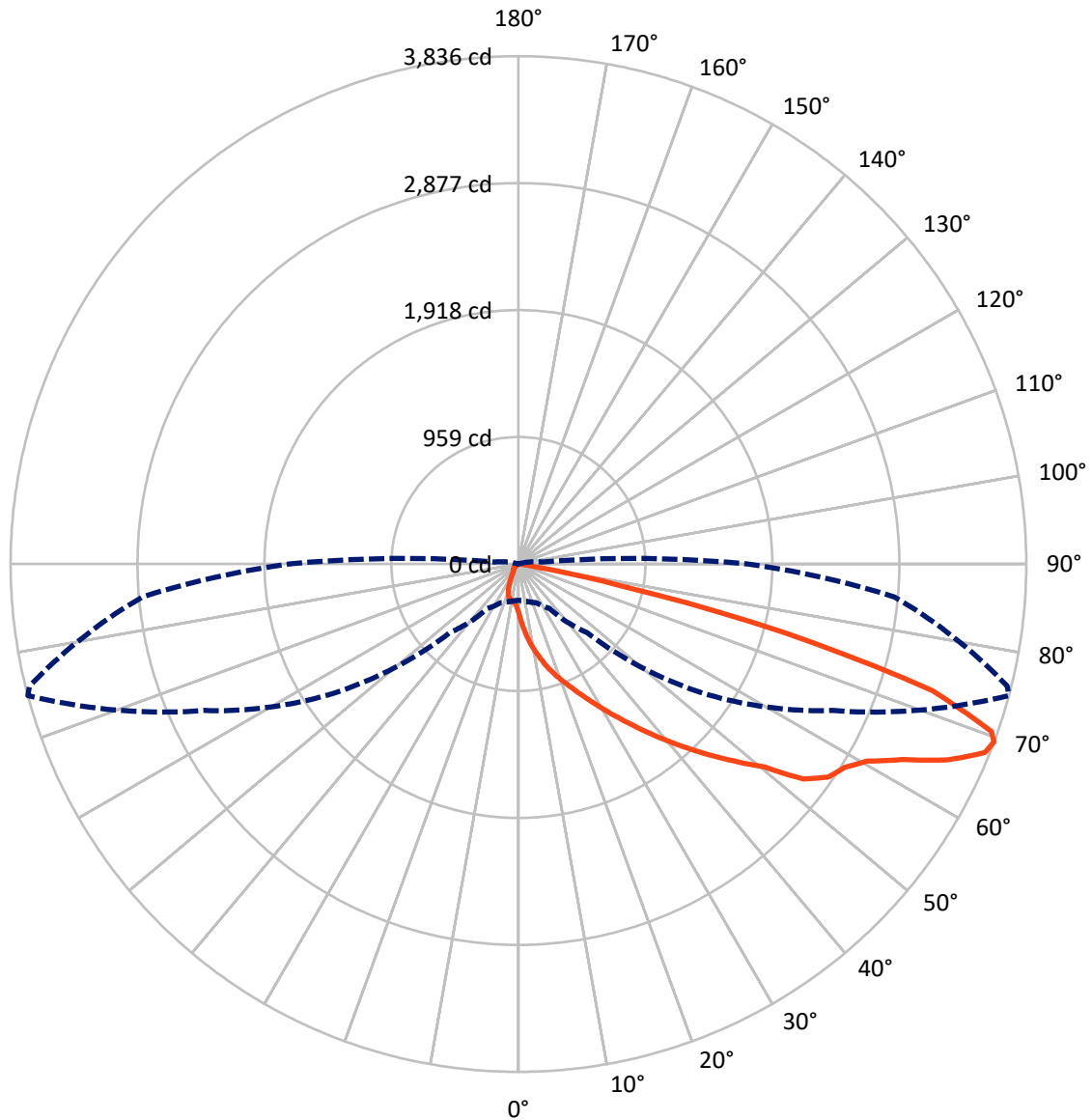


Based on 10 foot mounting height. Maximum calculated value = 10.2 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P234704

CATALOG NUMBER: ARCH-AF24-50-D-U-T2R-8027-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P234704

CATALOG NUMBER: ARCH-AF24-50-D-U-T2R-8027-HSS

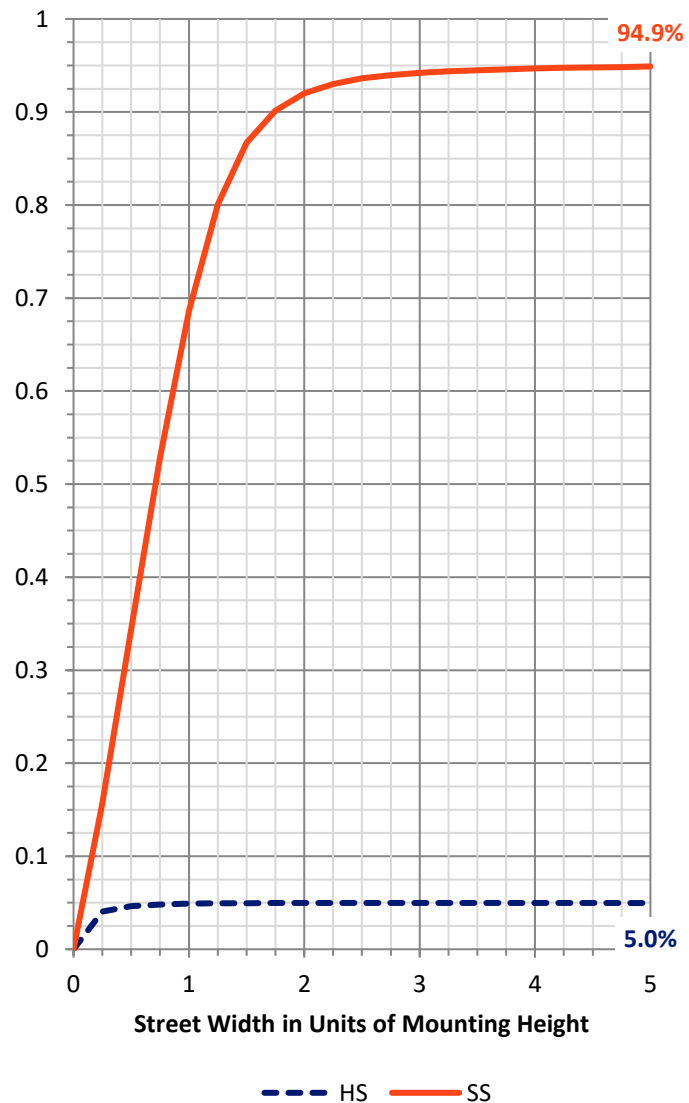
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	198.9	0.0	198.9
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	3788.1	0.0	3788.1
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	3987.0	0.0	3987.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.3	1.1
10°-20°	154.7	3.9
20°-30°	295.2	7.4
30°-40°	529.6	13.3
40°-50°	811.4	20.4
50°-60°	943.1	23.7
60°-70°	835.1	20.9
70°-80°	360.2	9.0
80°-90°	14.4	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°	3987.0	100.0
0°-180°	3987.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P234704

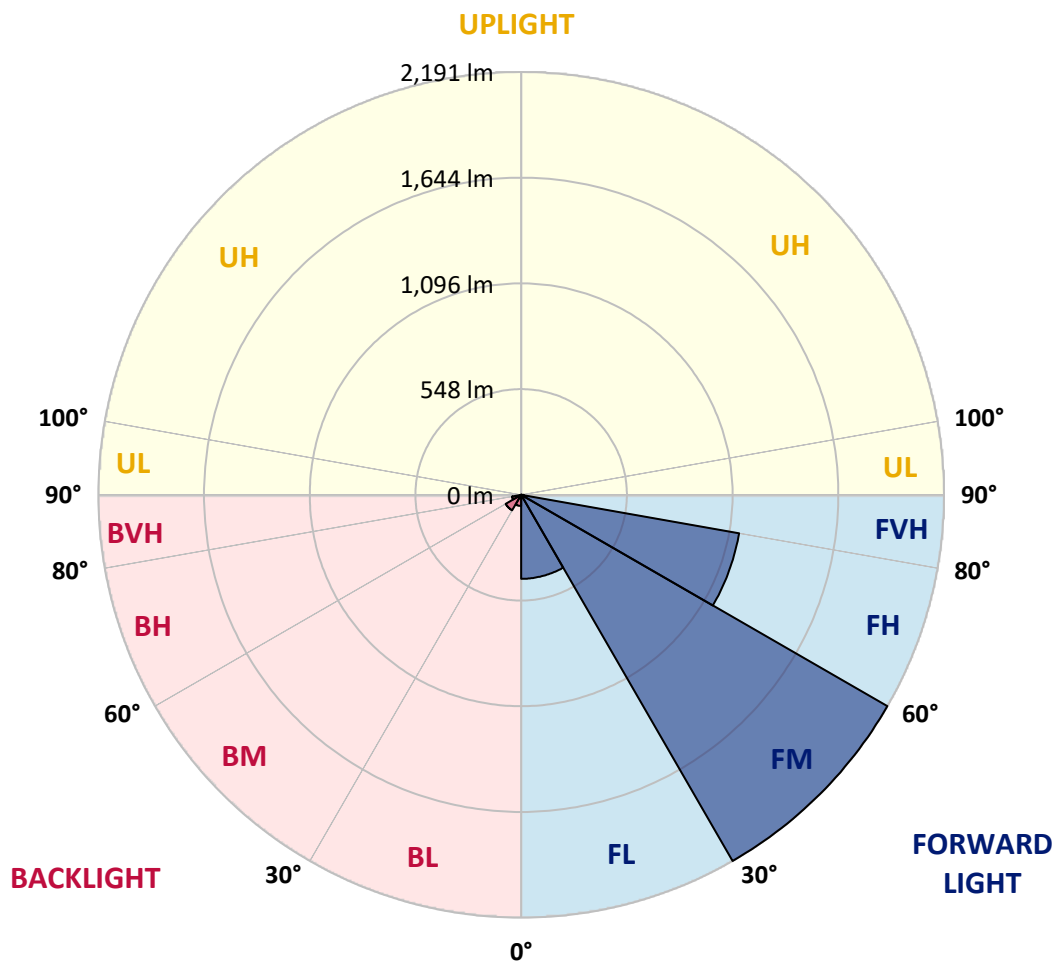
CATALOG NUMBER: ARCH-AF24-50-D-U-T2R-8027-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	435.4	10.9			
FM	(30°-60°)	2191.4	55.0			
FH	(60°-80°)	1147.1	28.8			G1/1800
FVH	(80°-90°)	14.2	0.4			G1/100
BL	(0°-30°)	57.8	1.4	B0/110		
BM	(30°-60°)	92.7	2.3	B0/220		
BH	(60°-80°)	48.2	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





REPORT NUMBER: P234704

CATALOG NUMBER: ARCH-AF24-50-D-U-T2R-8027-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	371.0	371.0	371.0	371.0	371.0	371.0	371.0	371.0	371.0	371.0	371.0
2.5°	611.1	605.1	599.1	592.2	576.7	550.0	516.5	480.3	435.5	427.8	391.6
5°	742.0	739.4	733.4	723.9	706.7	677.4	639.5	586.2	511.3	498.4	421.8
7.5°	834.1	832.4	827.2	816.0	800.5	771.2	731.6	674.0	587.0	572.4	459.6
10°	916.7	915.9	911.5	901.2	885.7	853.9	811.7	751.4	659.3	643.0	503.5
12.5°	991.6	992.5	990.7	985.6	974.4	944.3	896.1	830.6	729.1	711.0	556.1
15°	1035.5	1038.1	1045.0	1055.3	1058.7	1034.6	984.7	912.4	800.5	785.0	616.3
17.5°	1020.9	1023.4	1045.0	1080.3	1113.8	1117.3	1072.5	989.9	871.1	855.6	675.7
20°	985.6	989.0	1011.4	1059.6	1125.0	1170.6	1152.6	1074.2	938.2	919.3	732.5
22.5°	1025.2	1025.2	1032.1	1061.3	1120.7	1192.2	1216.3	1158.6	1007.1	983.9	789.3
25°	1161.2	1158.6	1144.0	1131.9	1150.8	1214.5	1264.5	1244.7	1088.0	1061.3	849.6
27.5°	1333.3	1345.4	1317.8	1273.9	1230.9	1258.4	1307.5	1329.9	1177.5	1150.0	911.5
30°	1526.1	1531.3	1498.6	1440.1	1364.3	1337.6	1358.3	1403.0	1274.8	1244.7	976.1
32.5°	1700.0	1695.7	1668.2	1607.0	1513.2	1455.6	1423.7	1461.6	1380.7	1346.2	1042.4
35°	1854.1	1857.5	1824.0	1753.4	1661.3	1600.2	1524.4	1527.9	1499.4	1459.9	1119.0
37.5°	1992.7	1986.6	1954.8	1884.2	1800.7	1734.4	1654.4	1596.7	1629.4	1588.1	1205.1
40°	2105.4	2099.4	2065.8	1997.0	1918.6	1864.4	1801.6	1688.8	1766.3	1718.9	1297.2
42.5°	2194.9	2188.1	2159.7	2093.4	2017.6	1969.4	1939.3	1802.4	1912.6	1865.3	1400.5
45°	2238.8	2232.8	2215.6	2165.7	2099.4	2057.2	2071.9	1933.3	2069.3	2029.7	1514.1
47.5°	2187.2	2184.6	2204.4	2195.8	2157.9	2135.6	2186.3	2076.2	2233.7	2194.9	1644.9
50°	2030.5	2034.8	2092.5	2164.0	2182.0	2208.7	2280.2	2226.8	2410.1	2368.8	1795.6
52.5°	1644.1	1673.3	1847.2	2019.4	2152.8	2253.5	2390.3	2442.0	2697.6	2657.2	2030.5
55°	1227.4	1239.5	1428.9	1723.2	2034.8	2250.0	2472.1	2568.5	2839.7	2798.3	2092.5
57.5°	973.5	977.8	1071.6	1372.1	1792.1	2172.6	2515.1	2614.1	2901.6	2867.2	2184.6
60°	764.4	769.5	837.5	1044.1	1450.4	1963.4	2453.2	2653.7	3023.0	2995.5	2345.6
62.5°	594.8	600.0	641.3	762.6	1088.0	1641.5	2328.4	2717.4	3253.7	3240.8	2609.0
65°	460.5	462.2	490.6	547.4	768.7	1292.9	2176.0	2776.8	3565.3	3554.1	2822.4
67.5°	340.0	342.6	362.4	397.7	519.0	928.8	1926.4	2731.2	3800.3	3767.6	2899.9
69°	274.6	277.2	294.4	322.8	409.7	731.6	1698.3	2618.4	3835.6	3804.6	2850.8
70°	235.0	236.7	253.9	278.0	349.5	621.5	1517.5	2521.2	3789.1	3759.0	2738.9
72.5°	150.6	159.2	176.5	192.0	231.5	411.4	1024.3	2090.8	3269.2	3217.5	2145.0
75°	83.5	86.1	117.1	136.0	154.1	267.7	569.8	1304.1	2079.6	2043.5	1147.4
77.5°	68.9	70.6	82.6	103.3	103.3	149.8	215.2	513.9	791.0	713.6	310.7
80°	48.2	49.9	62.8	68.0	74.0	84.4	69.7	112.8	122.2	108.5	46.5
82.5°	33.6	35.3	43.0	55.9	59.4	39.6	25.8	33.6	35.3	35.3	18.1
85°	6.0	8.6	31.8	46.5	35.3	12.1	14.6	12.1	11.2	12.1	4.3
87.5°	0.0	0.0	19.8	22.4	18.9	5.2	6.0	4.3	2.6	3.4	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P234704

CATALOG NUMBER: ARCH-AF24-50-D-U-T2R-8027-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	371.0	371.0	371.0	371.0	371.0	371.0	371.0	371.0	371.0	371.0	371.0
2.5°	373.6	355.5	324.5	302.1	283.2	268.6	262.5	253.1	246.2	249.6	245.3
5°	383.9	352.1	302.1	270.3	247.9	229.0	213.5	201.4	192.0	190.2	188.5
7.5°	400.3	354.6	289.2	249.6	216.1	186.8	162.7	144.6	130.8	130.8	125.7
10°	422.6	361.5	281.5	229.0	179.0	139.4	115.3	98.1	91.2	90.4	88.7
12.5°	453.6	374.4	275.4	202.3	139.4	101.6	86.9	80.9	78.3	77.5	76.6
15°	495.8	393.4	268.6	169.6	105.9	83.5	77.5	72.3	69.7	68.9	68.0
17.5°	536.3	410.6	253.9	136.0	86.1	75.7	68.9	64.6	61.1	60.3	60.3
20°	574.1	425.2	229.0	105.9	77.5	68.0	61.1	55.9	52.5	51.6	51.6
22.5°	613.7	437.3	198.0	86.1	70.6	60.3	53.4	48.2	44.8	43.9	43.0
25°	655.9	445.9	162.7	76.6	63.7	53.4	45.6	41.3	38.7	37.9	37.0
27.5°	701.5	449.3	129.1	69.7	55.9	46.5	39.6	35.3	33.6	32.7	32.7
30°	742.8	445.9	99.8	62.0	49.1	40.5	34.4	31.0	29.3	28.4	28.4
32.5°	785.9	437.3	80.1	55.1	43.0	34.4	29.3	26.7	25.8	25.0	25.0
35°	831.5	426.1	68.9	49.1	37.0	30.1	25.8	24.1	23.2	22.4	22.4
37.5°	884.9	412.3	62.8	43.9	32.7	26.7	22.4	21.5	20.7	20.7	20.7
40°	945.1	395.1	58.5	39.6	29.3	23.2	19.8	18.9	18.1	18.1	18.1
42.5°	1008.8	375.3	54.2	35.3	25.8	19.8	17.2	17.2	16.4	16.4	15.5
45°	1080.3	355.5	49.9	31.0	22.4	17.2	14.6	13.8	13.8	12.9	12.9
47.5°	1164.6	337.4	45.6	27.5	19.8	14.6	12.9	12.1	11.2	10.3	10.3
50°	1283.4	335.7	40.5	24.1	18.1	12.1	10.3	9.5	8.6	7.7	7.7
52.5°	1401.3	320.2	34.4	19.8	14.6	10.3	7.7	6.9	6.0	6.0	5.2
55°	1428.0	294.4	30.1	17.2	11.2	7.7	6.0	4.3	4.3	3.4	3.4
57.5°	1486.5	282.3	25.8	13.8	8.6	6.0	3.4	2.6	2.6	2.6	2.6
60°	1601.9	278.9	22.4	12.1	6.0	4.3	2.6	1.7	1.7	0.9	0.9
62.5°	1761.1	275.4	18.9	10.3	4.3	2.6	1.7	0.9	0.0	0.0	0.0
65°	1848.9	252.2	15.5	7.7	3.4	2.6	0.9	0.0	0.0	0.0	0.0
67.5°	1825.7	208.3	13.8	5.2	2.6	1.7	0.9	0.0	0.0	0.0	0.0
69°	1728.4	175.6	11.2	4.3	2.6	1.7	0.9	0.0	0.0	0.0	0.0
70°	1611.3	151.5	10.3	3.4	1.7	0.9	0.9	0.0	0.0	0.0	0.0
72.5°	1144.0	79.2	6.9	2.6	1.7	0.9	0.0	0.0	0.0	0.0	0.0
75°	534.5	35.3	4.3	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0
77.5°	117.9	16.4	2.6	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
80°	22.4	6.0	1.7	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	7.7	2.6	0.9	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	2.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.9	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)