

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: P234689

Luminaire Tested: **ARCH-AF24-40-D-U-T2R-8027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234689  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29635)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-AF24-40-D-U-T2R-8027  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 500mA LIGHT ENGINE WITH 24 LEDS AND TYPE II ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4012 lumens  
Efficiency: N/A  
Efficacy: 100.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

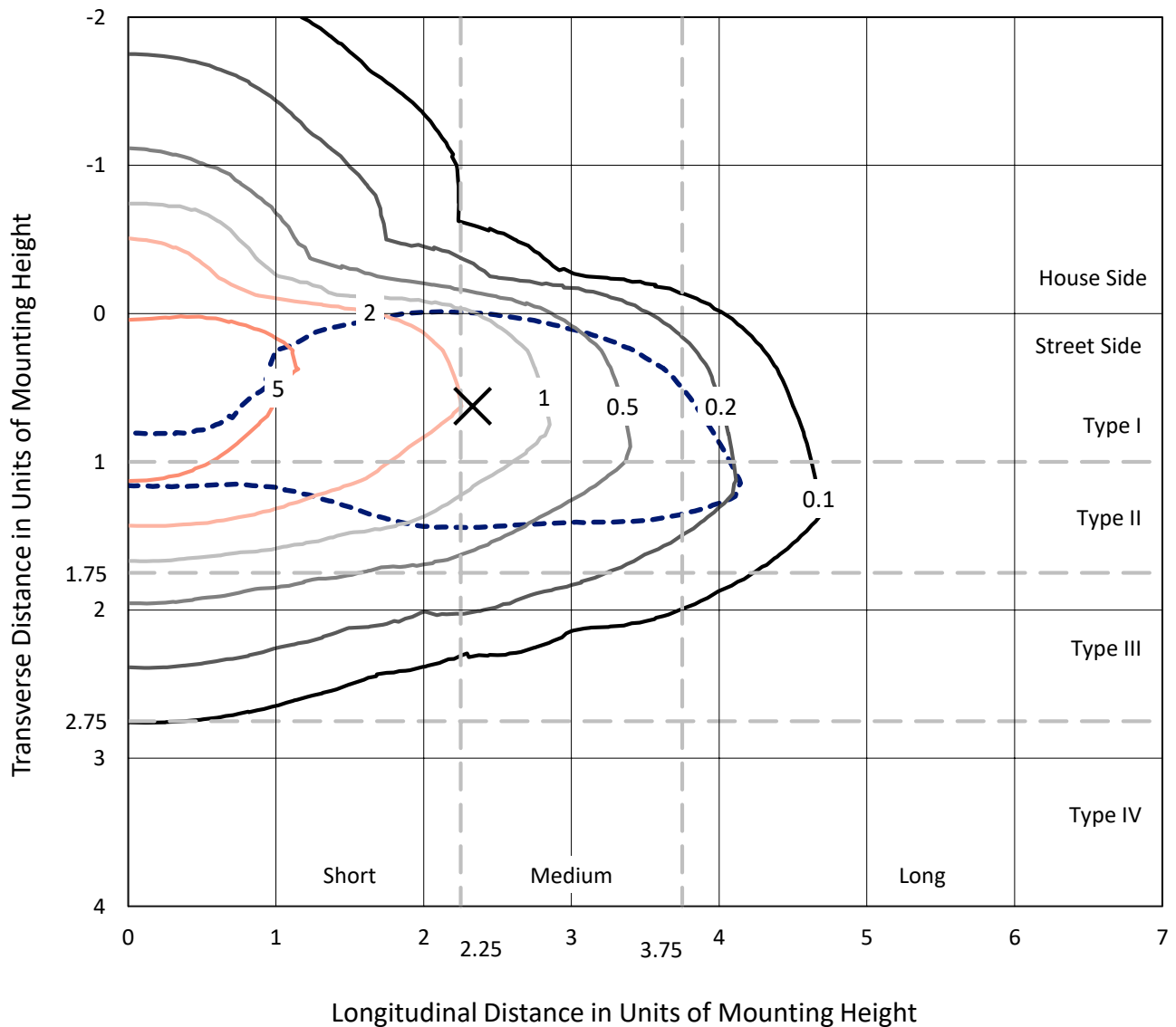
Input Watts (W): 40  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P234689  
 CATALOG NUMBER: ARCH-AF24-40-D-U-T2R-8027

### Iso-Footcandle Lines of Horizontal Illumination

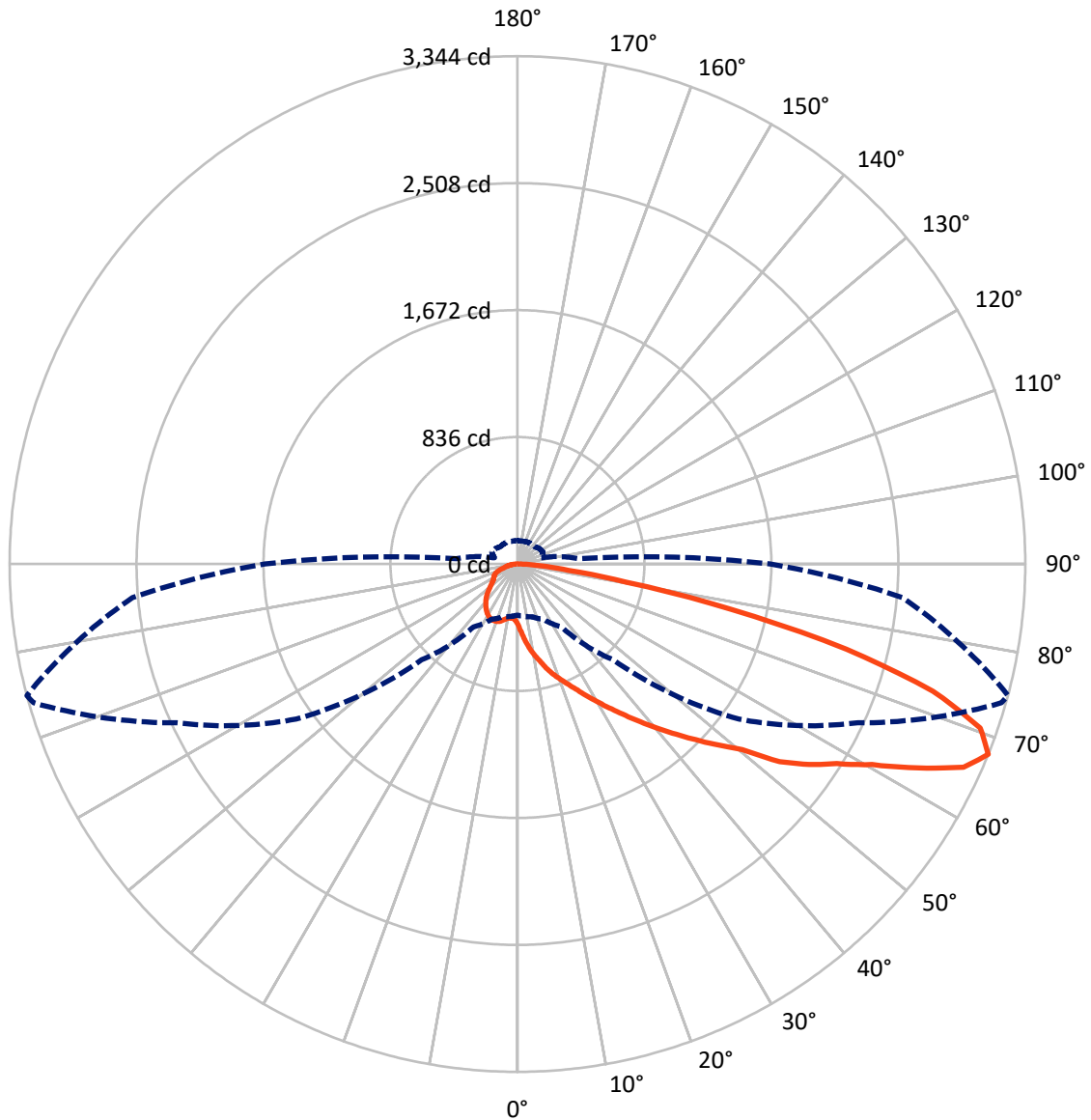
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.3 fc  
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P234689  
CATALOG NUMBER: ARCH-AF24-40-D-U-T2R-8027

### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P234689

CATALOG NUMBER: ARCH-AF24-40-D-U-T2R-8027

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	685.1	0.0	685.1
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	3326.9	0.0	3326.9
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	4012.0	0.0	4012.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.7	1.2
10°-20°	168.8	4.2
20°-30°	307.8	7.7
30°-40°	505.3	12.6
40°-50°	730.7	18.2
50°-60°	861.2	21.5
60°-70°	836.9	20.9
70°-80°	465.2	11.6
80°-90°	89.4	2.2
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°	4012.0	100.0
0°-180°	4012.0	100.0



REPORT NUMBER: P234689

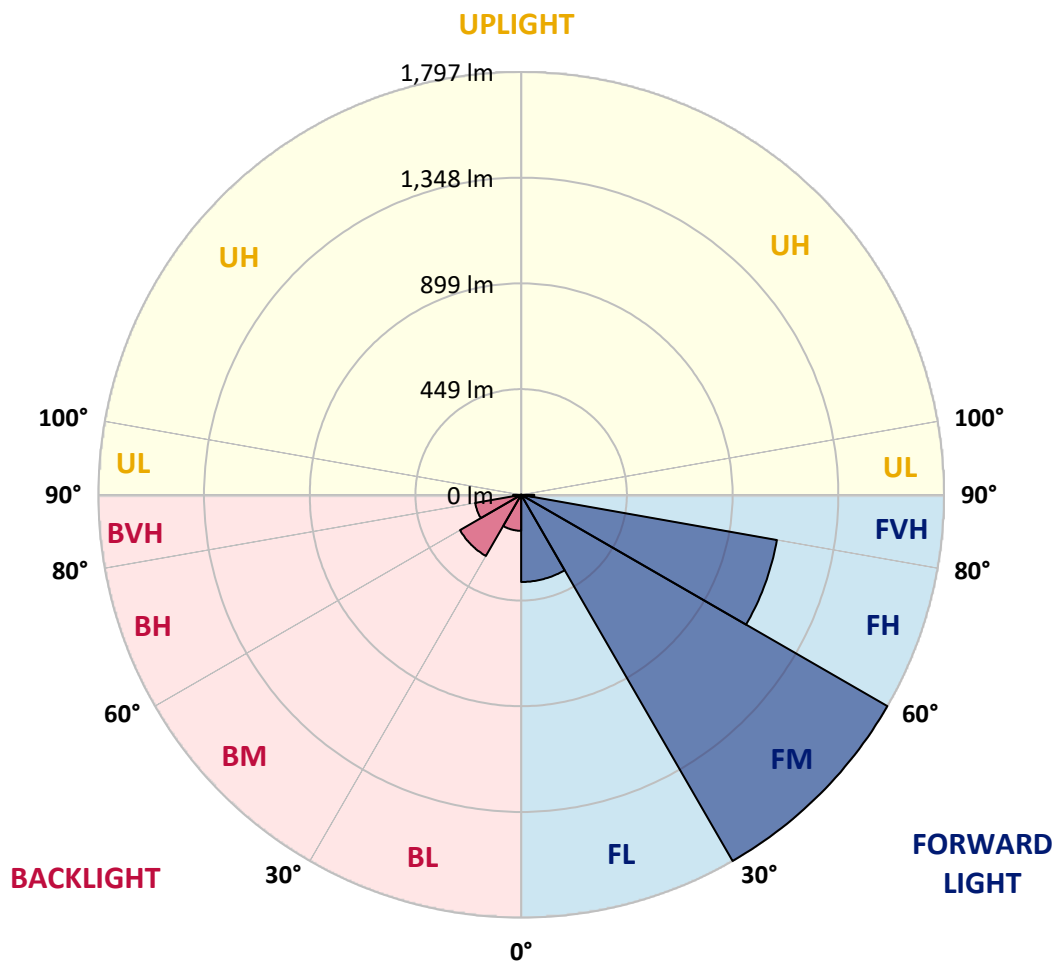
CATALOG NUMBER: ARCH-AF24-40-D-U-T2R-8027

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	370.4	9.2			
FM (30°-60°)	1797.2	44.8			
FH (60°-80°)	1103.7	27.5			G1/1800
FVH (80°-90°)	55.7	1.4			G1/100
BL (0°-30°)	152.9	3.8	B1/500		
BM (30°-60°)	300.0	7.5	B1/1000		
BH (60°-80°)	198.4	4.9	B1/500		G1/500
BVH (80°-90°)	33.8	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type II Medium





REPORT NUMBER: P234689

CATALOG NUMBER: ARCH-AF24-40-D-U-T2R-8027

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	74°	75°	85°
0°	397.5	397.5	397.5	397.5	397.5	397.5	397.5	397.5	397.5	397.5	397.5
2.5°	563.6	565.3	561.9	554.4	543.5	523.4	505.7	474.7	447.0	443.7	414.3
5°	662.6	664.3	660.1	650.8	639.1	617.3	593.0	552.7	508.3	499.9	437.8
7.5°	730.5	731.4	726.3	717.1	707.9	686.1	661.7	616.5	561.9	555.2	468.0
10°	788.4	790.1	783.4	777.5	767.4	745.6	720.5	672.6	616.5	607.2	499.0
12.5°	842.1	843.7	839.6	834.5	831.2	811.0	783.4	726.3	665.9	655.9	535.9
15°	878.1	879.8	880.6	887.4	891.6	877.3	849.6	787.6	719.6	710.4	579.6
17.5°	868.1	872.3	884.8	909.2	935.2	936.0	913.4	847.9	772.5	762.4	624.0
20°	838.7	842.1	857.2	894.1	945.2	974.6	972.9	909.2	821.9	811.0	665.1
22.5°	863.0	867.2	867.2	889.9	940.2	994.7	1016.5	969.6	871.4	861.4	706.2
25°	967.0	969.6	951.9	942.7	961.2	1011.5	1052.6	1035.0	931.8	920.1	750.6
27.5°	1112.1	1107.9	1086.1	1049.2	1029.1	1042.5	1084.5	1097.0	1001.4	987.2	796.8
30°	1256.4	1253.9	1228.7	1179.2	1133.9	1105.4	1119.7	1152.4	1076.9	1060.1	841.2
32.5°	1391.4	1387.2	1359.6	1301.7	1250.5	1197.7	1170.0	1202.7	1157.4	1138.1	890.7
35°	1515.6	1504.7	1477.0	1416.6	1363.7	1313.4	1245.5	1250.5	1244.6	1224.5	945.2
37.5°	1616.2	1607.8	1577.6	1521.4	1465.2	1417.4	1346.1	1305.0	1338.6	1319.3	1008.1
40°	1705.1	1695.9	1664.8	1608.7	1556.7	1511.4	1455.2	1371.3	1444.3	1422.5	1078.6
42.5°	1772.2	1765.5	1740.3	1685.0	1634.7	1593.6	1565.9	1455.2	1554.1	1533.2	1155.7
45°	1808.3	1801.6	1788.1	1743.7	1697.6	1665.7	1668.2	1555.0	1669.0	1651.4	1247.2
47.5°	1763.8	1768.8	1780.6	1772.2	1743.7	1728.6	1759.6	1658.1	1797.4	1780.6	1346.1
50°	1644.7	1649.7	1696.7	1754.6	1764.7	1783.1	1841.8	1777.2	1933.2	1919.8	1468.6
52.5°	1352.0	1379.7	1509.7	1648.1	1742.8	1819.2	1933.2	1954.2	2162.2	2162.2	1685.0
55°	1021.6	1045.9	1194.3	1435.9	1658.1	1822.5	2000.3	2074.1	2327.4	2330.8	1798.2
57.5°	827.8	842.9	915.9	1163.3	1480.3	1780.6	2080.0	2177.3	2465.0	2480.1	1944.1
60°	671.8	680.2	728.0	899.9	1234.6	1667.4	2137.0	2324.9	2661.2	2682.2	2130.3
62.5°	540.1	548.5	580.4	683.6	968.7	1455.2	2127.0	2478.4	2922.9	2957.3	2374.4
65°	431.1	440.3	461.3	525.0	717.9	1191.8	2023.8	2557.2	3193.8	3227.4	2536.3
67.5°	336.3	344.7	359.0	400.9	505.7	891.6	1779.7	2474.2	3315.4	3343.9	2544.7
70°	254.1	258.3	270.1	296.9	361.5	592.1	1393.1	2195.8	3206.4	3232.4	2376.9
72.5°	197.1	196.3	203.0	216.4	252.5	407.6	923.4	1785.6	2834.8	2861.7	2028.0
75°	161.0	160.2	164.4	168.6	182.8	273.4	545.2	1344.5	2288.0	2236.8	1521.4
77.5°	135.9	135.0	139.2	140.1	145.9	188.7	310.3	884.8	1526.5	1438.4	857.2
80°	114.9	114.1	119.1	120.8	125.0	138.4	178.6	478.9	766.6	726.3	409.3
82.5°	86.4	89.7	99.0	103.2	108.2	102.3	110.7	211.4	355.6	339.7	177.8
85°	41.9	49.5	74.6	83.0	88.9	64.6	75.5	99.8	160.2	152.6	72.1
87.5°	14.3	12.6	44.5	52.8	57.9	29.4	41.9	55.4	66.3	60.4	22.6
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: P234689

CATALOG NUMBER: ARCH-AF24-40-D-U-T2R-8027

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	397.5	397.5	397.5	397.5	397.5	397.5	397.5	397.5	397.5	397.5	397.5
2.5°	401.7	389.2	370.7	356.5	347.2	339.7	336.3	335.5	333.8	333.0	333.0
5°	410.1	387.5	359.0	343.9	339.7	336.3	338.0	338.8	338.8	338.8	338.8
7.5°	422.7	390.8	356.5	346.4	345.5	345.5	350.6	353.1	354.8	354.8	354.8
10°	439.5	396.7	360.6	352.3	354.8	356.5	362.3	365.7	367.4	368.2	369.0
12.5°	462.1	409.3	369.0	362.3	365.7	366.5	370.7	372.4	374.1	374.9	374.9
15°	492.3	427.7	382.5	374.1	374.9	374.1	374.1	372.4	371.5	371.5	373.2
17.5°	523.4	445.4	394.2	382.5	379.1	372.4	367.4	363.2	360.6	359.0	359.8
20°	554.4	461.3	400.9	384.1	374.9	364.0	354.8	348.9	345.5	342.2	343.9
22.5°	585.4	476.4	403.4	379.1	365.7	349.7	339.7	330.5	322.9	317.9	318.7
25°	619.8	493.2	403.4	373.2	353.1	336.3	323.7	308.6	297.7	293.5	295.2
27.5°	654.2	507.4	399.2	362.3	338.8	322.1	303.6	286.0	279.3	276.8	277.6
30°	688.6	518.3	390.0	348.9	323.7	305.3	281.0	269.2	260.8	254.1	255.0
32.5°	723.0	525.9	377.4	332.1	307.8	284.3	264.2	250.8	235.7	227.3	228.1
35°	762.4	531.7	362.3	315.4	290.2	265.9	250.8	229.0	213.0	206.3	204.6
37.5°	803.5	535.9	346.4	296.9	272.6	252.5	237.4	210.5	195.4	186.2	185.4
40°	847.9	537.6	327.1	277.6	255.8	244.1	219.7	199.6	173.6	167.7	167.7
42.5°	900.8	536.8	307.8	258.3	237.4	224.8	207.2	197.9	175.3	169.4	166.1
45°	961.2	536.8	286.8	235.7	218.9	200.5	192.9	187.0	171.9	174.5	176.1
47.5°	1029.9	535.1	261.7	217.2	203.8	187.9	183.7	171.1	165.2	166.9	168.6
50°	1124.7	537.6	239.0	202.1	192.9	179.5	174.5	167.7	165.2	166.1	165.2
52.5°	1256.4	529.2	217.2	192.9	184.5	166.9	166.9	166.1	166.9	166.1	166.1
55°	1328.5	510.8	201.3	187.9	178.6	161.0	164.4	166.1	167.7	166.9	166.9
57.5°	1430.8	498.2	188.7	184.5	175.3	159.4	162.7	166.1	166.9	166.1	166.1
60°	1551.6	489.8	180.3	185.4	172.8	159.4	163.5	166.1	165.2	164.4	164.4
62.5°	1691.7	486.5	174.5	187.9	170.3	160.2	163.5	166.1	162.7	161.9	161.9
65°	1744.5	456.3	166.9	189.5	171.9	160.2	162.7	163.5	159.4	158.5	157.7
67.5°	1663.2	404.3	156.0	186.2	177.0	160.2	160.2	159.4	154.3	153.5	151.8
70°	1481.2	335.5	139.2	175.3	180.3	161.0	156.8	152.6	147.6	147.6	144.3
72.5°	1212.8	264.2	117.4	156.0	177.8	163.5	150.1	144.3	138.4	138.4	135.0
75°	873.9	197.1	93.9	130.0	166.9	162.7	141.7	134.2	127.5	126.6	122.5
77.5°	498.2	138.4	76.3	101.5	148.5	158.5	134.2	122.5	114.9	112.4	109.9
80°	255.8	93.1	62.1	79.7	123.3	146.8	128.3	109.0	100.6	96.5	92.3
82.5°	121.6	62.1	47.8	58.7	93.1	128.3	120.8	93.9	84.7	79.7	74.6
85°	54.5	36.9	31.9	37.7	66.3	99.8	106.5	77.2	66.3	83.0	61.2
87.5°	17.6	16.8	16.8	17.6	31.9	43.6	78.0	57.0	52.8	43.6	36.9
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)