

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: P234684

Luminaire Tested: **ARCH-AF16-40-D-U-T2R-8027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234684  
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-AF16-40-D-U-T2R-8027  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 740mA LIGHT ENGINE WITH 16 LEDS AND TYPE II ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3717 lumens  
Efficiency: N/A  
Efficacy: 88.5 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

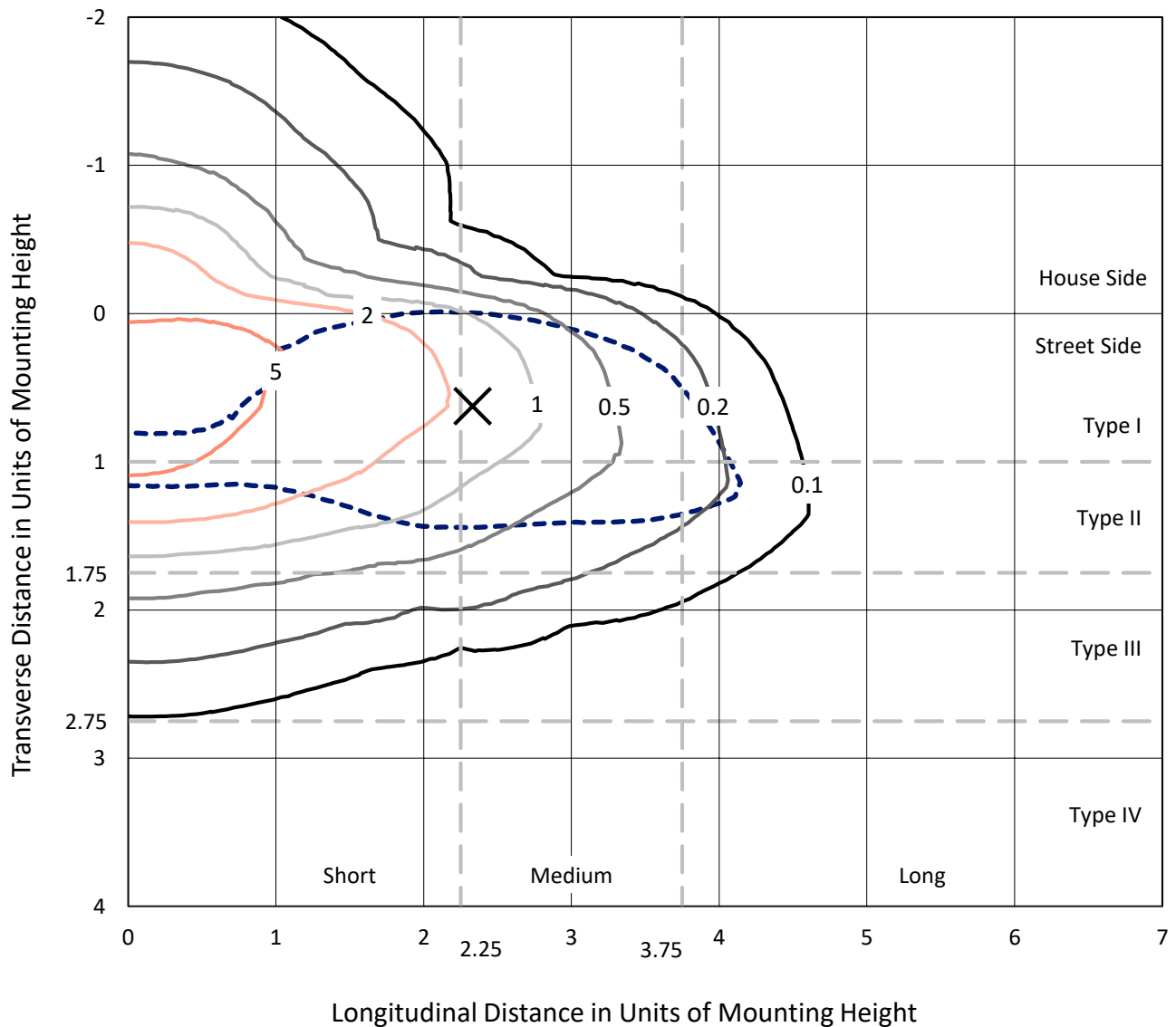
Input Watts (W): 42  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

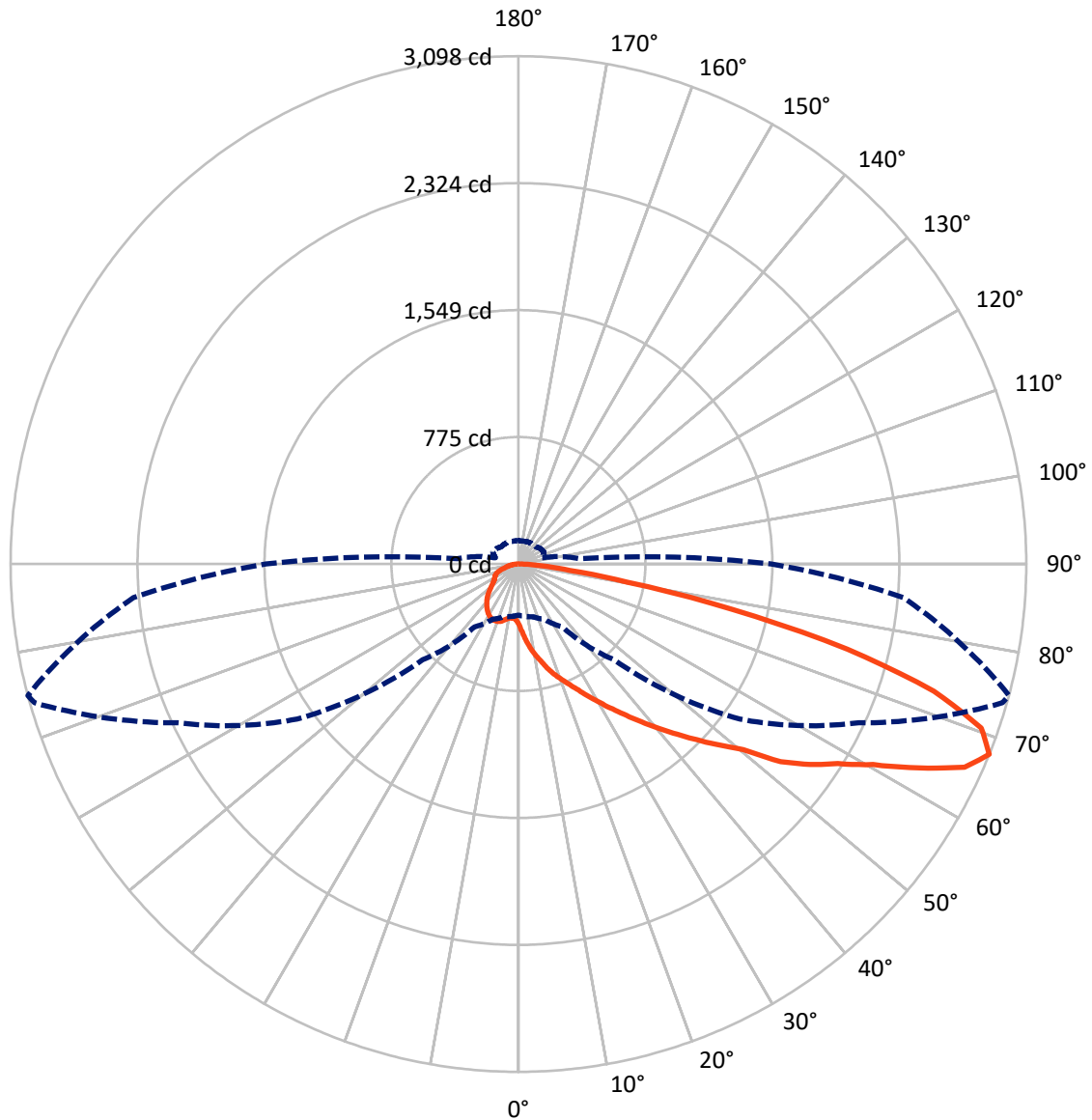


Based on 10 foot mounting height. Maximum calculated value = 7.7 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	634.7	0.0	634.7
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	3082.3	0.0	3082.3
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	3717.0	0.0	3717.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.3	1.2
10°-20°	156.4	4.2
20°-30°	285.2	7.7
30°-40°	468.1	12.6
40°-50°	677.0	18.2
50°-60°	797.9	21.5
60°-70°	775.3	20.9
70°-80°	431.0	11.6
80°-90°	82.9	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°	3717.0	100.0
0°-180°	3717.0	100.0



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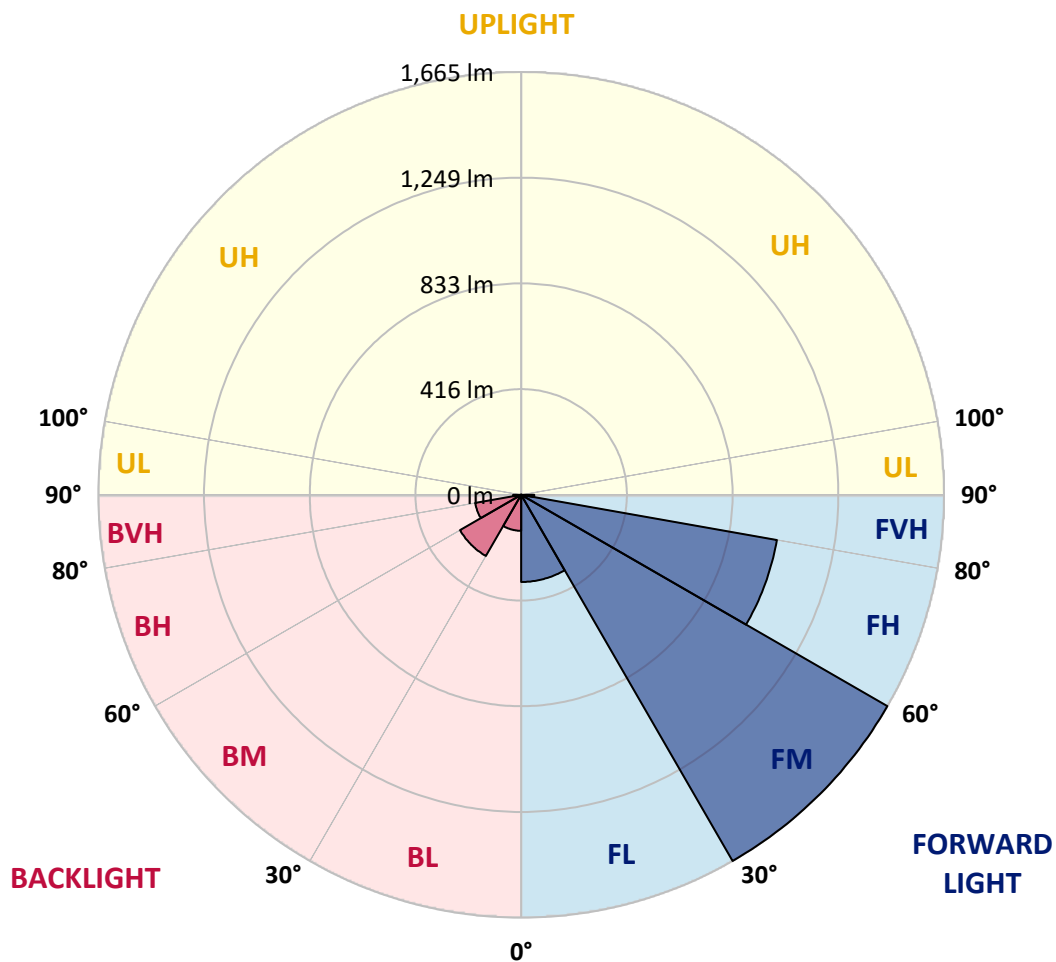
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	343.2	9.2			
FM (30°-60°)	1665.0	44.8			
FH (60°-80°)	1022.5	27.5			G1/1800
FVH (80°-90°)	51.6	1.4			G1/100
BL (0°-30°)	141.7	3.8	B1/500		
BM (30°-60°)	278.0	7.5	B1/1000		
BH (60°-80°)	183.8	4.9	B1/500		G1/500
BVH (80°-90°)	31.3	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	74°	75°	85°
0°	368.3	368.3	368.3	368.3	368.3	368.3	368.3	368.3	368.3	368.3	368.3
2.5°	522.2	523.7	520.6	513.6	503.5	484.9	468.6	439.8	414.2	411.1	383.9
5°	613.9	615.4	611.5	603.0	592.1	571.9	549.4	512.1	470.9	463.1	405.6
7.5°	676.8	677.6	672.9	664.4	655.8	635.6	613.1	571.1	520.6	514.4	433.6
10°	730.4	732.0	725.8	720.3	711.0	690.8	667.5	623.2	571.1	562.6	462.3
12.5°	780.2	781.7	777.8	773.2	770.0	751.4	725.8	672.9	617.0	607.6	496.5
15°	813.6	815.1	815.9	822.1	826.0	812.8	787.1	729.6	666.7	658.2	536.9
17.5°	804.2	808.1	819.8	842.3	866.4	867.2	846.2	785.6	715.7	706.3	578.1
20°	777.0	780.2	794.1	828.3	875.7	902.9	901.4	842.3	761.5	751.4	616.2
22.5°	799.6	803.5	803.5	824.4	871.1	921.6	941.8	898.3	807.3	798.0	654.3
25°	895.9	898.3	881.9	873.4	890.5	937.1	975.2	958.9	863.3	852.4	695.5
27.5°	1030.4	1026.5	1006.3	972.1	953.4	965.9	1004.7	1016.4	927.8	914.6	738.2
30°	1164.0	1161.7	1138.4	1092.5	1050.6	1024.1	1037.4	1067.7	997.7	982.2	779.4
32.5°	1289.1	1285.2	1259.6	1206.0	1158.6	1109.6	1084.0	1114.3	1072.3	1054.4	825.2
35°	1404.1	1394.0	1368.4	1312.4	1263.5	1216.8	1153.9	1158.6	1153.1	1134.5	875.7
37.5°	1497.4	1489.6	1461.6	1409.6	1357.5	1313.2	1247.2	1209.1	1240.2	1222.3	934.0
40°	1579.7	1571.2	1542.4	1490.4	1442.2	1400.2	1348.2	1270.5	1338.1	1317.9	999.3
42.5°	1641.9	1635.7	1612.4	1561.1	1514.5	1476.4	1450.7	1348.2	1439.9	1420.4	1070.8
45°	1675.3	1669.1	1656.7	1615.5	1572.7	1543.2	1545.5	1440.6	1546.3	1530.0	1155.5
47.5°	1634.1	1638.8	1649.7	1641.9	1615.5	1601.5	1630.2	1536.2	1665.2	1649.7	1247.2
50°	1523.8	1528.4	1572.0	1625.6	1634.9	1652.0	1706.4	1646.6	1791.1	1778.7	1360.6
52.5°	1252.6	1278.2	1398.7	1526.9	1614.7	1685.4	1791.1	1810.5	2003.2	2003.2	1561.1
55°	946.4	969.0	1106.5	1330.3	1536.2	1688.5	1853.2	1921.6	2156.3	2159.4	1666.0
57.5°	766.9	780.9	848.5	1077.8	1371.5	1649.7	1927.1	2017.2	2283.7	2297.7	1801.2
60°	622.4	630.2	674.5	833.8	1143.8	1544.8	1979.9	2154.0	2465.6	2485.0	1973.7
62.5°	500.4	508.2	537.7	633.3	897.5	1348.2	1970.6	2296.2	2708.0	2739.9	2199.8
65°	399.4	407.9	427.4	486.4	665.1	1104.2	1875.0	2369.2	2959.0	2990.1	2349.8
67.5°	311.6	319.4	332.6	371.4	468.6	826.0	1648.9	2292.3	3071.7	3098.1	2357.5
70°	235.4	239.3	250.2	275.1	334.9	548.6	1290.7	2034.3	2970.6	2994.7	2202.1
72.5°	182.6	181.8	188.0	200.5	233.9	377.6	855.5	1654.3	2626.4	2651.3	1878.9
75°	149.2	148.4	152.3	156.2	169.4	253.3	505.1	1245.6	2119.8	2072.4	1409.6
77.5°	125.9	125.1	129.0	129.8	135.2	174.8	287.5	819.8	1414.2	1332.6	794.1
80°	106.5	105.7	110.3	111.9	115.8	128.2	165.5	443.7	710.2	672.9	379.2
82.5°	80.0	83.1	91.7	95.6	100.2	94.8	102.6	195.8	329.5	314.7	164.7
85°	38.9	45.8	69.2	76.9	82.4	59.8	69.9	92.5	148.4	141.4	66.8
87.5°	13.2	11.7	41.2	49.0	53.6	27.2	38.9	51.3	61.4	55.9	21.0
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°	368.3	368.3	368.3	368.3	368.3	368.3	368.3	368.3	368.3	368.3	368.3
2.5°	372.2	360.5	343.5	330.2	321.7	314.7	311.6	310.8	309.3	308.5	308.5
5°	380.0	359.0	332.6	318.6	314.7	311.6	313.1	313.9	313.9	313.9	313.9
7.5°	391.6	362.1	330.2	320.9	320.1	320.1	324.8	327.1	328.7	328.7	328.7
10°	407.2	367.5	334.1	326.4	328.7	330.2	335.7	338.8	340.3	341.1	341.9
12.5°	428.2	379.2	341.9	335.7	338.8	339.6	343.5	345.0	346.6	347.3	347.3
15°	456.1	396.3	354.3	346.6	347.3	346.6	346.6	345.0	344.2	344.2	345.8
17.5°	484.9	412.6	365.2	354.3	351.2	345.0	340.3	336.5	334.1	332.6	333.4
20°	513.6	427.4	371.4	355.9	347.3	337.2	328.7	323.2	320.1	317.0	318.6
22.5°	542.4	441.4	373.8	351.2	338.8	324.0	314.7	306.2	299.2	294.5	295.3
25°	574.2	456.9	373.8	345.8	327.1	311.6	299.9	286.0	275.9	272.0	273.5
27.5°	606.1	470.1	369.9	335.7	313.9	298.4	281.3	265.0	258.8	256.4	257.2
30°	638.0	480.2	361.3	323.2	299.9	282.8	260.3	249.4	241.7	235.4	236.2
32.5°	669.8	487.2	349.7	307.7	285.2	263.4	244.8	232.3	218.3	210.6	211.4
35°	706.3	492.6	335.7	292.2	268.9	246.3	232.3	212.1	197.4	191.2	189.6
37.5°	744.4	496.5	320.9	275.1	252.5	233.9	219.9	195.0	181.1	172.5	171.7
40°	785.6	498.1	303.0	257.2	237.0	226.1	203.6	184.9	160.8	155.4	155.4
42.5°	834.5	497.3	285.2	239.3	219.9	208.2	191.9	183.4	162.4	157.0	153.9
45°	890.5	497.3	265.7	218.3	202.8	185.7	178.7	173.3	159.3	161.6	163.2
47.5°	954.2	495.8	242.4	201.3	188.8	174.1	170.2	158.5	153.1	154.6	156.2
50°	1042.0	498.1	221.5	187.3	178.7	166.3	161.6	155.4	153.1	153.9	153.1
52.5°	1164.0	490.3	201.3	178.7	170.9	154.6	154.6	153.9	154.6	153.9	153.9
55°	1230.8	473.2	186.5	174.1	165.5	149.2	152.3	153.9	155.4	154.6	154.6
57.5°	1325.6	461.6	174.8	170.9	162.4	147.6	150.7	153.9	154.6	153.9	153.9
60°	1437.5	453.8	167.1	171.7	160.1	147.6	151.5	153.9	153.1	152.3	152.3
62.5°	1567.3	450.7	161.6	174.1	157.7	148.4	151.5	153.9	150.7	150.0	150.0
65°	1616.2	422.7	154.6	175.6	159.3	148.4	150.7	151.5	147.6	146.9	146.1
67.5°	1540.9	374.5	144.5	172.5	164.0	148.4	148.4	147.6	143.0	142.2	140.6
70°	1372.3	310.8	129.0	162.4	167.1	149.2	145.3	141.4	136.8	136.8	133.7
72.5°	1123.6	244.8	108.8	144.5	164.7	151.5	139.1	133.7	128.2	128.2	125.1
75°	809.7	182.6	87.0	120.4	154.6	150.7	131.3	124.3	118.1	117.3	113.4
77.5°	461.6	128.2	70.7	94.0	137.5	146.9	124.3	113.4	106.5	104.1	101.8
80°	237.0	86.3	57.5	73.8	114.2	136.0	118.9	101.0	93.2	89.4	85.5
82.5°	112.7	57.5	44.3	54.4	86.3	118.9	111.9	87.0	78.5	73.8	69.2
85°	50.5	34.2	29.5	35.0	61.4	92.5	98.7	71.5	61.4	76.9	56.7
87.5°	16.3	15.5	15.5	16.3	29.5	40.4	72.3	52.8	49.0	40.4	34.2
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)