

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: P265887

Luminaire Tested: **ARCH-AF16-40-D-U-T2R-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P265887  
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-7027  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 70 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: 4156.5 lumens  
Efficiency: N/A  
Efficacy: 99.0 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

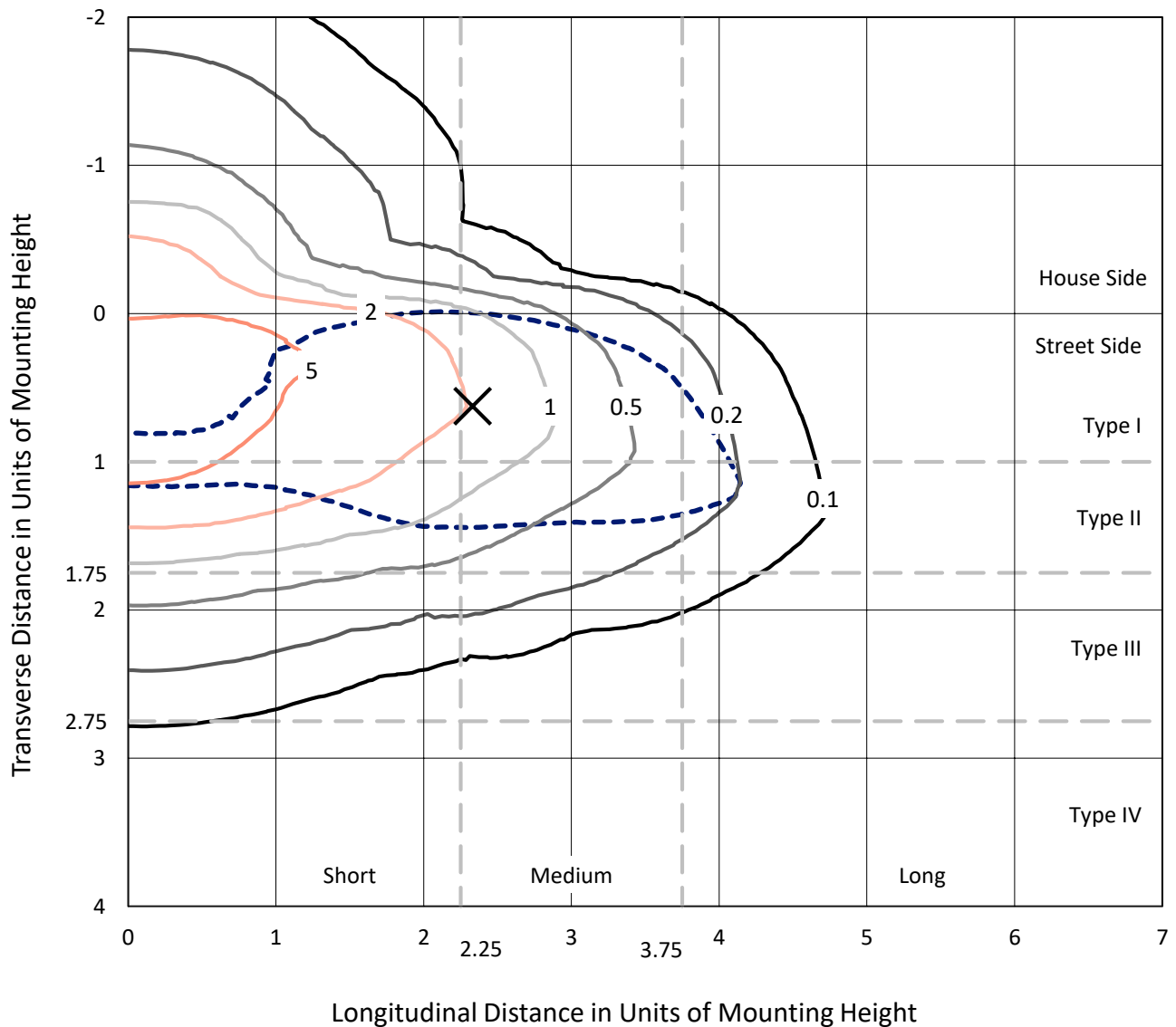
Input Watts (W): 42  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

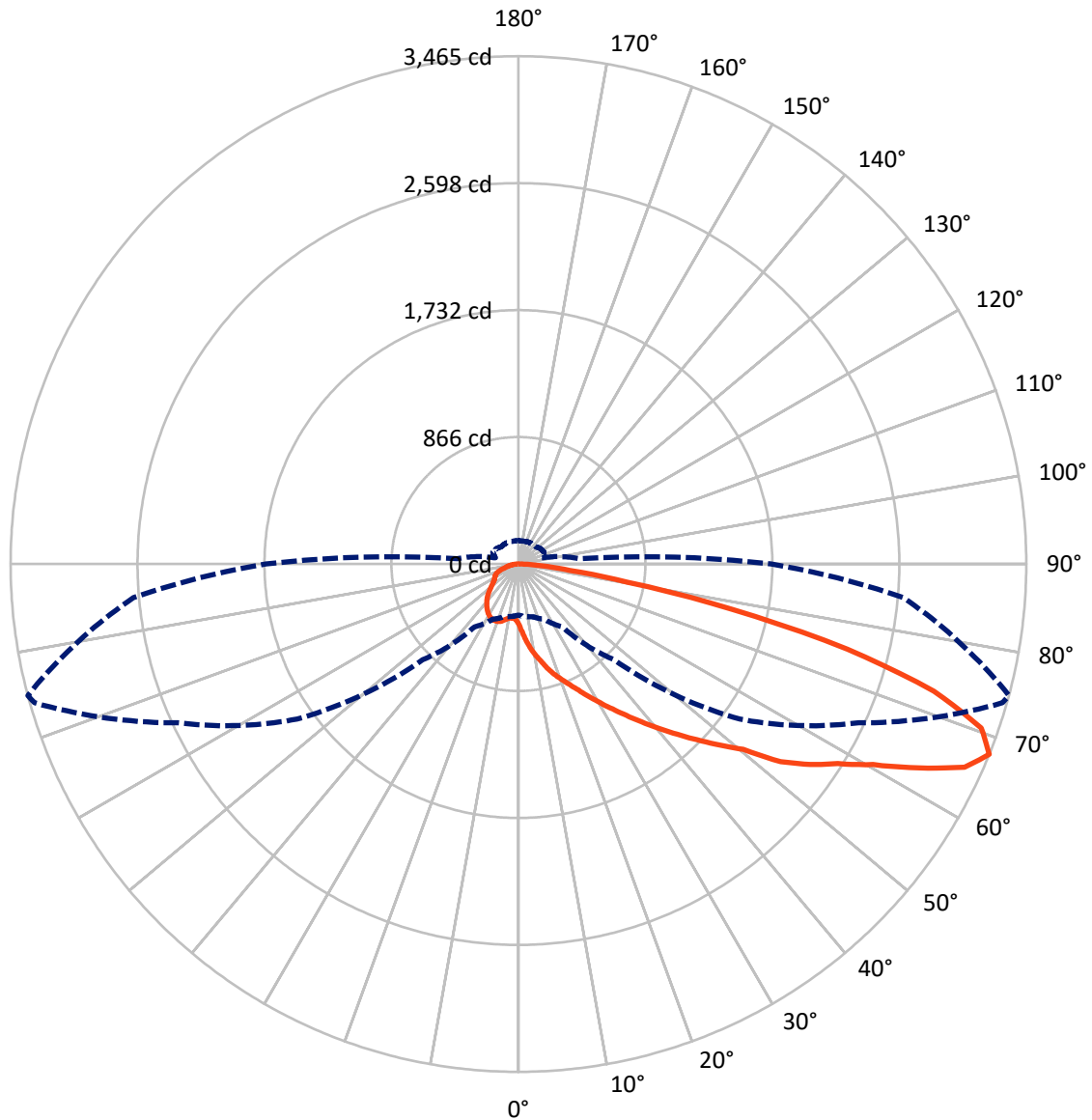
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.6 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	709.8	0.0	709.8
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	3446.8	0.0	3446.8
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	4156.5	0.0	4156.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	48.4	1.2
10°-20°	174.9	4.2
20°-30°	318.9	7.7
30°-40°	523.5	12.6
40°-50°	757.1	18.2
50°-60°	892.2	21.5
60°-70°	867.0	20.9
70°-80°	481.9	11.6
80°-90°	92.7	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°	4156.5	100.0
0°-180°	4156.5	100.0



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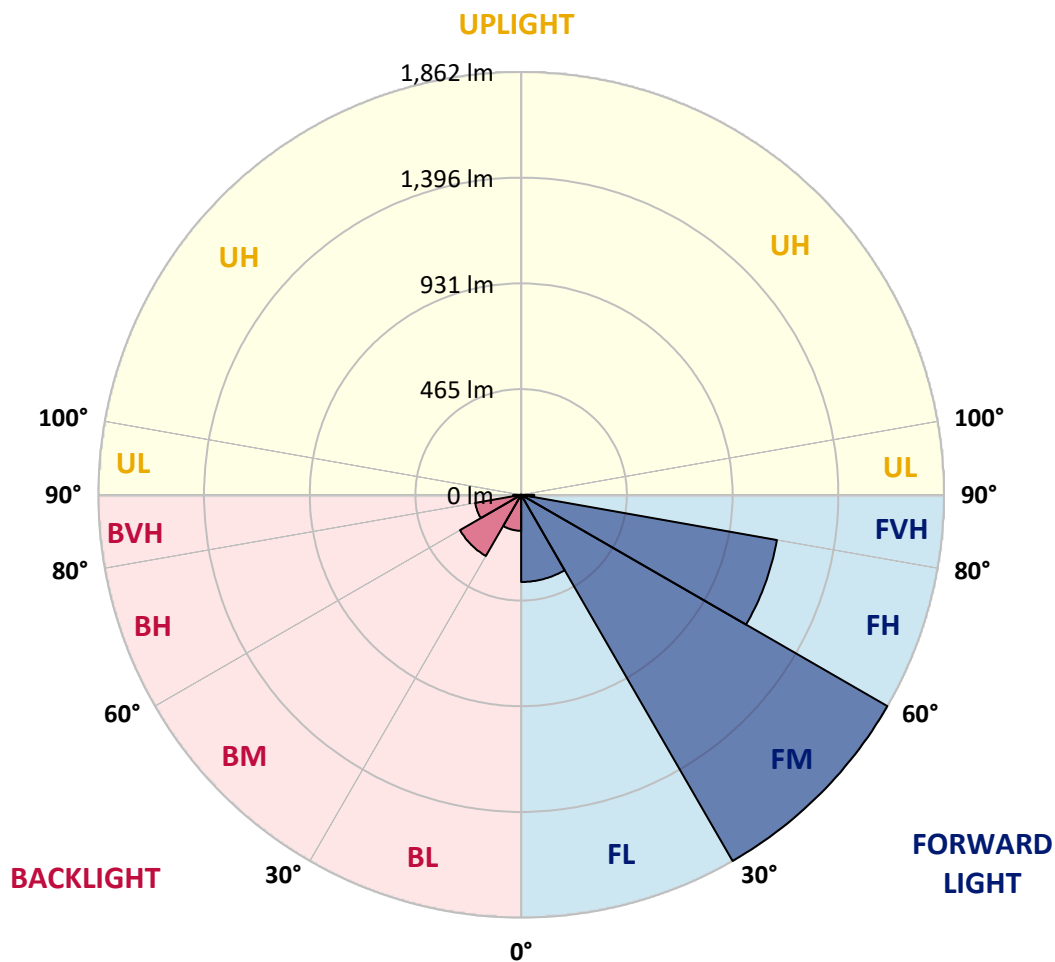
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	383.8	9.2			
FM (30°-60°)	1861.9	44.8			
FH (60°-80°)	1143.4	27.5			G1/1800
FVH (80°-90°)	57.7	1.4			G1/100
BL (0°-30°)	158.4	3.8	B1/500		
BM (30°-60°)	310.8	7.5	B1/1000		
BH (60°-80°)	205.5	4.9	B1/500		G1/500
BVH (80°-90°)	35.0	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°	411.9	411.9	411.9	411.9	411.9	411.9	411.9	411.9	411.9	411.9	411.9
2.5°	583.9	585.6	582.2	574.3	563.1	542.1	524.0	491.8	463.2	459.7	429.3
5°	686.5	688.2	683.9	674.3	662.1	639.6	614.4	572.6	526.5	518.0	453.6
7.5°	756.8	757.7	752.5	743.0	733.3	710.7	685.5	638.6	582.2	575.3	484.8
10°	816.7	818.5	811.6	805.5	795.1	772.5	746.4	696.8	638.6	629.2	517.1
12.5°	872.4	874.1	869.7	864.6	861.1	840.3	811.6	752.5	690.0	679.5	555.2
15°	909.8	911.5	912.4	919.3	923.6	908.9	880.2	815.9	745.6	736.0	600.4
17.5°	899.4	903.7	916.7	942.0	968.8	969.7	946.3	878.5	800.3	789.9	646.5
20°	868.9	872.4	888.1	926.3	979.3	1009.8	1008.0	942.0	851.6	840.3	689.1
22.5°	894.2	898.5	898.5	921.9	974.1	1030.5	1053.2	1004.5	902.8	892.3	731.6
25°	1001.9	1004.5	986.2	976.6	995.9	1048.0	1090.5	1072.2	965.4	953.2	777.8
27.5°	1152.2	1147.9	1125.2	1086.9	1066.2	1080.1	1123.5	1136.5	1037.5	1022.7	825.5
30°	1301.6	1299.0	1273.0	1221.8	1174.9	1145.2	1160.0	1193.8	1115.8	1098.4	871.5
32.5°	1441.6	1437.2	1408.5	1348.5	1295.5	1240.9	1212.2	1246.0	1199.1	1179.1	922.7
35°	1570.1	1558.9	1530.3	1467.7	1412.9	1360.8	1290.3	1295.5	1289.4	1268.6	979.3
37.5°	1674.4	1665.7	1634.5	1576.3	1518.0	1468.5	1394.7	1352.0	1386.9	1366.9	1044.5
40°	1766.5	1756.9	1724.8	1666.6	1612.7	1565.8	1507.5	1420.7	1496.2	1473.7	1117.4
42.5°	1836.0	1829.0	1803.1	1745.6	1693.6	1650.9	1622.2	1507.5	1610.1	1588.5	1197.4
45°	1873.4	1866.5	1852.6	1806.5	1758.7	1725.7	1728.2	1611.0	1729.1	1710.9	1292.1
47.5°	1827.4	1832.6	1844.8	1836.0	1806.5	1791.0	1823.0	1717.9	1862.1	1844.8	1394.7
50°	1703.9	1709.1	1757.9	1817.8	1828.2	1847.4	1908.2	1841.3	2003.0	1988.9	1521.5
52.5°	1400.7	1429.5	1564.0	1707.5	1805.7	1884.7	2003.0	2024.6	2240.2	2240.2	1745.6
55°	1058.4	1083.5	1237.3	1487.7	1717.9	1888.1	2072.4	2148.8	2411.3	2414.7	1863.1
57.5°	857.6	873.3	948.9	1205.3	1533.6	1844.8	2154.9	2255.7	2553.8	2569.4	2014.2
60°	696.0	704.7	754.2	932.4	1279.0	1727.4	2214.1	2408.6	2757.2	2778.8	2207.0
62.5°	559.6	568.3	601.2	708.1	1003.6	1507.5	2203.6	2567.7	3028.2	3063.8	2460.0
65°	446.6	456.2	477.9	544.0	743.7	1234.8	2096.7	2649.5	3308.8	3343.8	2627.6
67.5°	348.5	357.2	371.9	415.3	524.0	923.6	1844.0	2563.4	3434.8	3464.5	2636.3
70°	263.4	267.6	279.8	307.6	374.6	613.5	1443.2	2274.9	3321.9	3348.9	2462.6
72.5°	204.3	203.3	210.4	224.1	261.5	422.4	956.7	1850.0	2937.0	2964.9	2101.0
75°	166.8	165.9	170.3	174.7	189.5	283.2	564.9	1392.9	2370.4	2317.4	1576.3
77.5°	140.8	139.9	144.3	145.2	151.2	195.6	321.6	916.7	1581.5	1490.2	888.1
80°	119.0	118.1	123.3	125.1	129.4	143.4	185.1	496.1	794.2	752.5	424.0
82.5°	89.6	93.0	102.5	106.9	112.1	106.0	114.8	218.9	368.5	352.0	184.2
85°	43.5	51.3	77.3	86.0	92.0	67.0	78.2	103.5	165.9	158.1	74.6
87.5°	14.8	13.0	46.1	54.7	59.9	30.5	43.5	57.3	68.6	62.5	23.4
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°	411.9	411.9	411.9	411.9	411.9	411.9	411.9	411.9	411.9	411.9	411.9
2.5°	416.3	403.2	384.0	369.4	359.7	352.0	348.5	347.6	345.8	344.9	344.9
5°	424.9	401.5	371.9	356.3	352.0	348.5	350.2	351.1	351.1	351.1	351.1
7.5°	438.0	405.0	369.4	358.9	358.1	358.1	363.3	365.8	367.5	367.5	367.5
10°	455.4	411.1	373.6	364.9	367.5	369.4	375.4	378.8	380.6	381.5	382.3
12.5°	478.7	424.0	382.3	375.4	378.8	379.8	384.0	385.8	387.6	388.3	388.3
15°	510.1	443.1	396.2	387.6	388.3	387.6	387.6	385.8	385.0	385.0	386.7
17.5°	542.1	461.4	408.4	396.2	392.7	385.8	380.6	376.2	373.6	371.9	372.7
20°	574.3	477.9	415.3	397.9	388.3	377.1	367.5	361.5	358.1	354.6	356.3
22.5°	606.5	493.6	417.9	392.7	378.8	362.3	352.0	342.3	334.6	329.3	330.1
25°	642.2	511.0	417.9	386.7	365.8	348.5	335.3	319.7	308.5	304.2	305.9
27.5°	677.9	525.7	413.6	375.4	351.1	333.7	314.5	296.4	289.3	286.7	287.5
30°	713.4	536.9	404.1	361.5	335.3	316.4	291.1	279.0	270.2	263.4	264.1
32.5°	749.0	544.8	391.0	344.1	318.9	294.6	273.8	259.8	244.2	235.4	236.3
35°	789.9	550.9	375.4	326.8	300.7	275.4	259.8	237.2	220.8	213.7	212.0
37.5°	832.4	555.2	358.9	307.6	282.3	261.5	245.9	218.1	202.5	192.9	192.1
40°	878.5	556.9	338.9	287.5	265.0	252.9	227.7	206.8	179.9	173.8	173.8
42.5°	933.2	556.1	318.9	267.6	245.9	232.9	214.7	205.1	181.5	175.4	172.0
45°	995.9	556.1	297.2	244.2	226.8	207.7	199.9	193.8	178.1	180.6	182.4
47.5°	1067.0	554.3	271.1	225.0	211.1	194.7	190.4	177.2	171.1	173.0	174.7
50°	1165.2	556.9	247.7	209.5	199.9	185.9	180.6	173.8	171.1	172.0	171.1
52.5°	1301.6	548.2	225.0	199.9	191.2	173.0	173.0	172.0	173.0	172.0	172.0
55°	1376.5	529.2	208.5	194.7	185.1	166.8	170.3	172.0	173.8	173.0	173.0
57.5°	1482.5	516.2	195.6	191.2	181.5	165.1	168.6	172.0	173.0	172.0	172.0
60°	1607.5	507.5	186.8	192.1	179.0	165.1	169.4	172.0	171.1	170.3	170.3
62.5°	1752.7	503.9	180.6	194.7	176.3	165.9	169.4	172.0	168.6	167.8	167.8
65°	1807.4	472.7	173.0	196.4	178.1	165.9	168.6	169.4	165.1	164.2	163.3
67.5°	1723.0	418.8	161.7	192.9	183.3	165.9	165.9	165.1	159.9	159.0	157.3
70°	1534.6	347.6	144.3	181.5	186.8	166.8	162.6	158.1	152.9	152.9	149.5
72.5°	1256.5	273.8	121.6	161.7	184.2	169.4	155.5	149.5	143.4	143.4	139.9
75°	905.4	204.3	97.3	134.7	173.0	168.6	146.9	139.1	132.1	131.2	126.9
77.5°	516.2	143.4	79.1	105.1	153.8	164.2	139.1	126.9	119.0	116.4	113.8
80°	265.0	96.5	64.3	82.6	127.6	152.1	132.9	112.9	104.3	99.9	95.6
82.5°	126.0	64.3	49.5	60.8	96.5	132.9	125.1	97.3	87.8	82.6	77.3
85°	56.5	38.3	33.0	39.0	68.6	103.5	110.3	79.9	68.6	86.0	63.4
87.5°	18.2	17.3	17.3	18.2	33.0	45.2	80.8	59.1	54.7	45.2	38.3
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)