

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: P234752

Luminaire Tested: **ARCH-AF16-20-D-U-T4W-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234752  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29625)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-AF16-20-D-U-T4W-8027-HSS  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 420mA LIGHT ENGINE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1637 lumens  
Efficiency: N/A  
Efficacy: 68.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.75' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B0 - U0 - G1

Input Watts (W): 24  
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

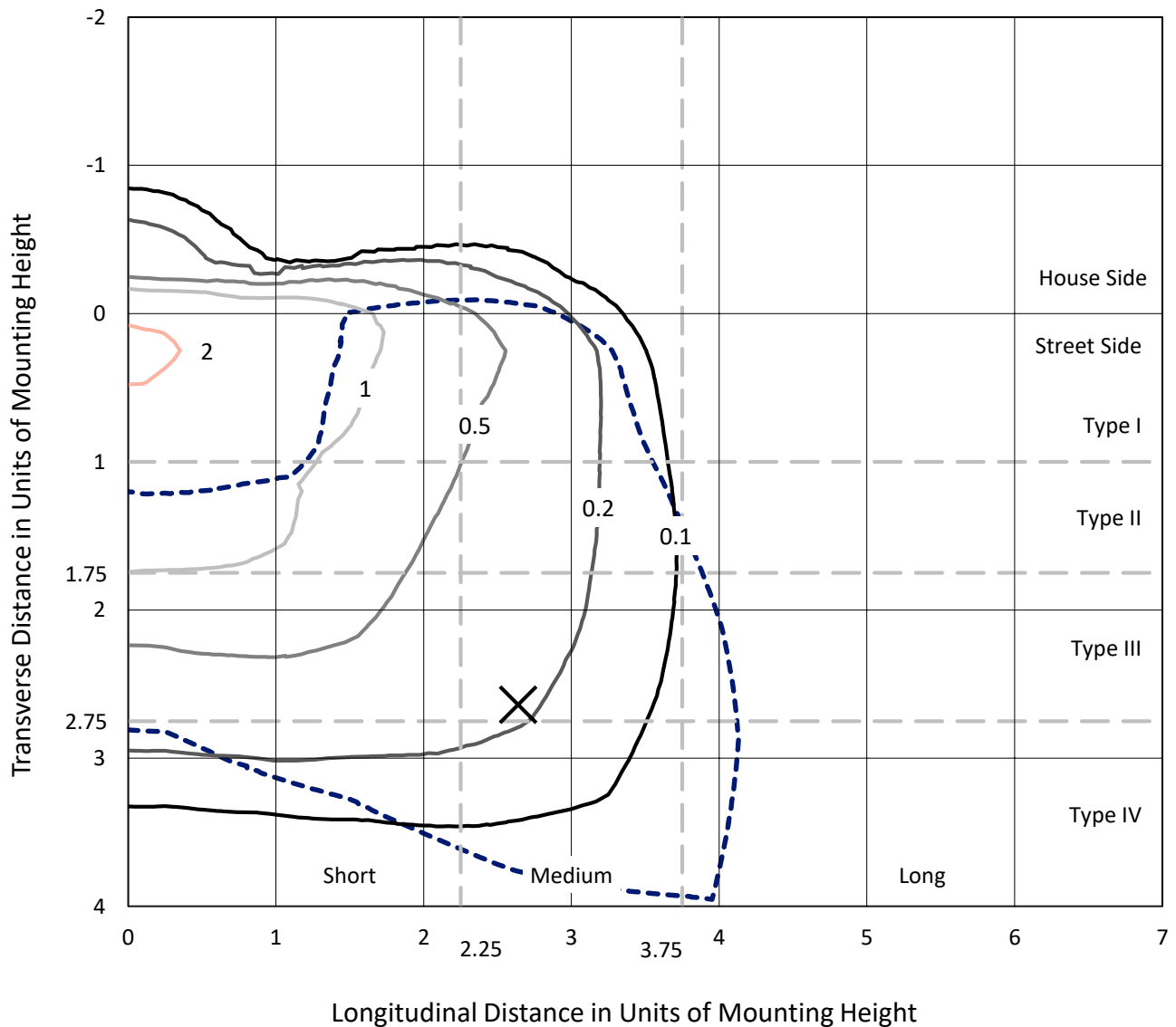


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

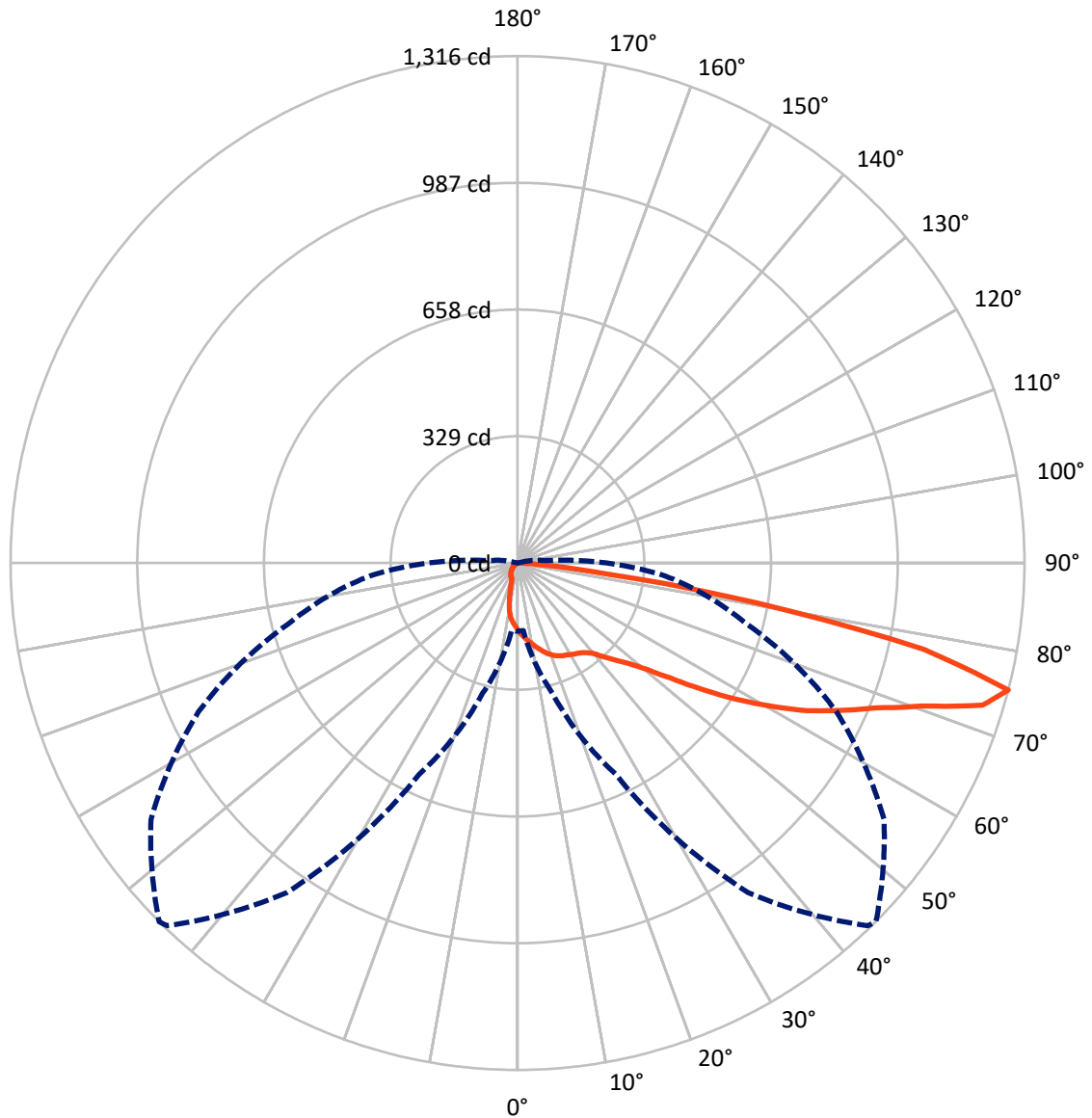


Based on 10 foot mounting height. Maximum calculated value = 2.3 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 75-Deg Vertical

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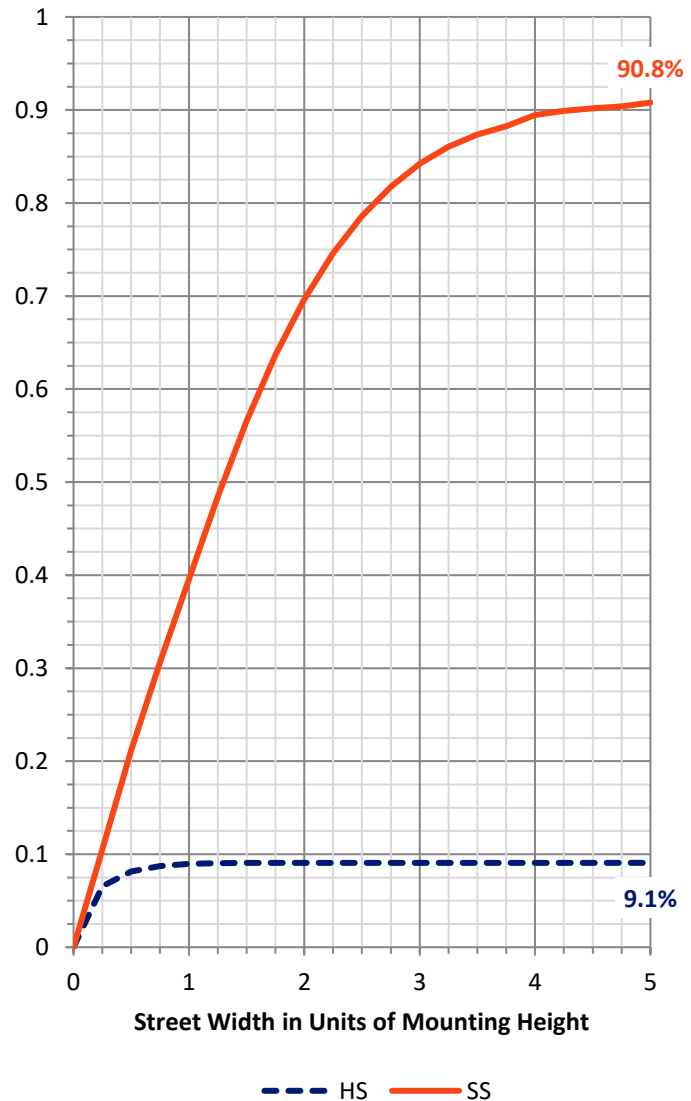
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	149.7	0.0	149.7
	% Fixture	9.1	0.0	9.1
<b>Street Side</b>	Lumens	1487.3	0.0	1487.3
	% Fixture	90.9	0.0	90.9
<b>Total</b>	Lumens	1637.0	0.0	1637.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	16.5	1.0
10°-20°	46.8	2.9
20°-30°	77.5	4.7
30°-40°	112.2	6.9
40°-50°	183.7	11.2
50°-60°	327.4	20.0
60°-70°	481.3	29.4
70°-80°	363.1	22.2
80°-90°	28.5	1.7
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°	1637.0	100.0
0°-180°	1637.0	100.0



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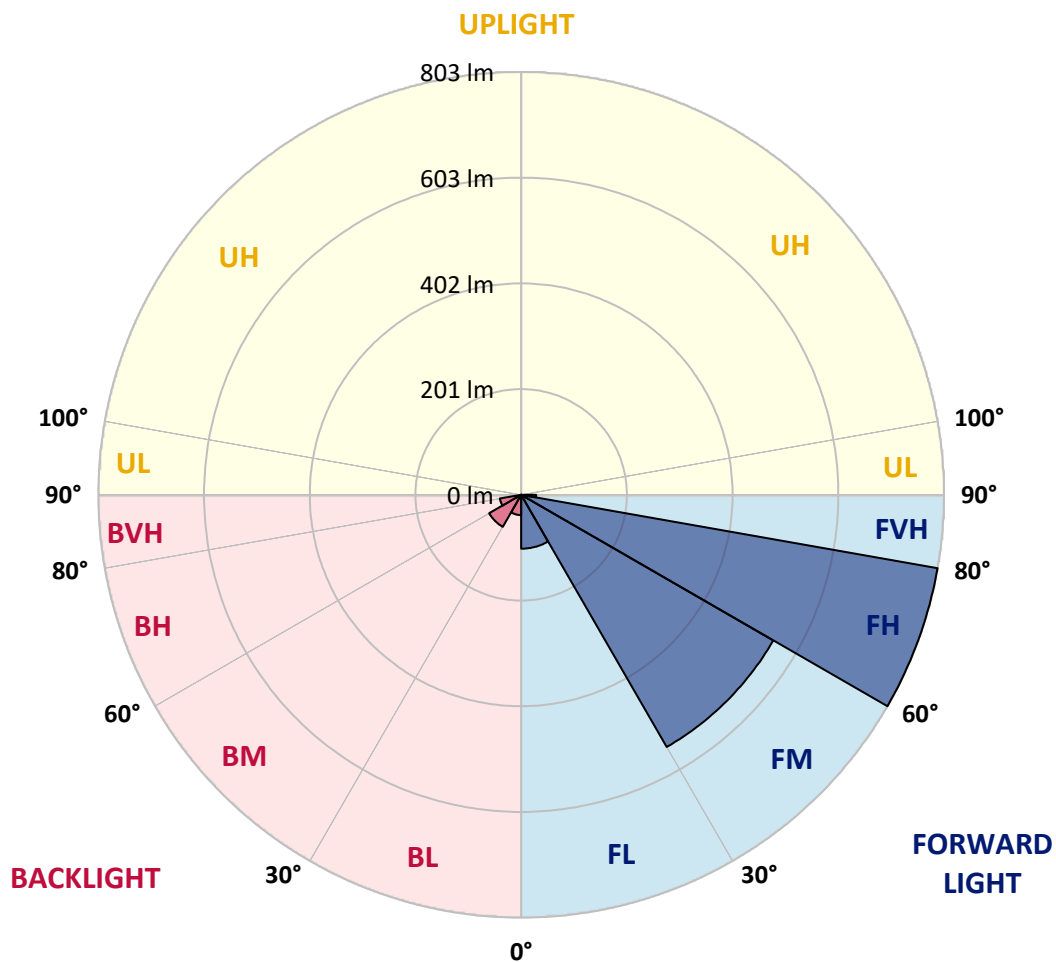
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	102.4	6.3			
FM	(30°-60°)	553.1	33.8			
FH	(60°-80°)	803.3	49.1			G1/1800
FVH	(80°-90°)	28.4	1.7			G1/100
BL	(0°-30°)	38.5	2.4	B0/110		
BM	(30°-60°)	70.2	4.3	B0/220		
BH	(60°-80°)	41.0	2.5	B0/110		G0/110
BVH	(80°-90°)	0.1	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 IV Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1
2.5°	190.2	190.2	189.8	189.4	187.5	185.5	185.2	184.0	180.5	178.2	175.9
5°	206.1	206.5	205.7	203.8	199.5	195.2	194.8	191.7	185.2	180.5	175.5
7.5°	221.2	222.0	220.0	216.5	211.5	205.3	204.9	199.1	190.6	184.0	176.6
10°	234.0	234.0	231.3	227.0	221.6	215.0	214.2	207.6	197.9	189.8	180.1
12.5°	247.9	247.5	243.6	237.8	231.6	225.4	225.1	216.9	207.6	197.2	185.2
15°	260.7	259.9	254.9	249.5	242.9	236.3	235.9	227.8	218.1	205.7	192.5
17.5°	267.7	267.3	262.6	257.2	251.8	246.7	246.4	237.8	227.4	214.6	199.9
20°	268.8	269.2	265.3	260.7	257.6	254.9	254.9	247.1	235.9	222.3	207.6
22.5°	269.2	270.4	267.7	261.5	260.7	261.1	261.9	255.7	244.0	231.3	215.8
25°	271.9	273.5	271.5	264.2	263.4	266.1	266.9	264.2	253.7	240.9	225.1
27.5°	277.3	278.9	277.3	268.1	266.9	269.6	270.4	271.9	264.2	250.2	234.7
30°	288.2	288.6	285.1	273.5	271.2	274.6	275.8	280.1	273.9	259.1	244.0
32.5°	307.2	303.3	292.8	277.3	275.4	279.3	280.4	285.1	282.8	267.7	253.7
35°	345.9	325.8	301.8	282.8	280.8	284.7	286.3	292.8	294.0	279.7	265.7
37.5°	345.5	327.3	322.7	293.2	290.5	293.2	295.2	303.3	307.9	295.6	283.2
40°	369.9	362.2	362.2	313.0	304.1	307.9	309.9	318.0	326.2	316.5	303.7
42.5°	446.6	441.6	436.2	350.9	323.1	333.9	335.1	340.1	349.8	346.7	331.6
45°	532.2	527.6	506.7	415.2	355.6	357.5	360.2	368.4	382.3	388.1	370.3
47.5°	599.2	594.6	576.8	492.7	406.3	389.3	389.3	405.2	426.9	441.6	424.5
50°	653.1	647.7	636.8	575.2	489.6	435.0	432.7	451.3	483.4	506.3	494.7
52.5°	705.4	689.5	682.9	660.4	583.7	501.2	495.0	508.2	552.8	581.0	571.4
55°	740.2	737.9	730.9	738.7	682.5	581.8	576.4	579.1	634.9	653.9	641.9
57.5°	772.8	772.4	787.9	823.9	790.2	674.0	665.5	661.2	714.3	709.6	720.1
60°	813.1	806.1	842.1	893.6	889.0	763.9	754.2	745.7	775.1	761.9	813.8
62.5°	815.0	813.1	886.3	960.3	987.0	855.3	844.1	813.5	828.2	813.1	903.3
65°	741.0	750.7	904.9	995.5	1069.1	935.5	921.9	874.3	875.4	865.4	1008.7
67.5°	724.4	729.4	853.7	1033.5	1128.4	1016.4	1003.6	944.4	930.4	931.2	1071.0
70°	682.9	690.7	790.2	1030.8	1175.2	1124.5	1111.7	1047.4	1013.7	976.1	1023.0
72.5°	521.8	534.9	665.9	903.7	1162.5	1265.9	1262.4	1178.0	1047.0	896.3	773.9
75°	176.6	176.2	349.8	607.0	1044.3	1309.3	1316.2	1161.7	913.4	618.2	384.3
77.5°	38.0	38.3	72.0	246.0	693.8	1051.3	1078.0	876.2	589.2	275.4	87.9
80°	18.6	19.0	29.8	65.1	277.3	589.6	631.4	450.5	217.7	55.0	14.7
82.5°	9.3	9.7	15.5	34.5	102.6	209.6	223.9	165.8	62.4	31.0	7.4
85°	3.5	3.5	7.7	20.5	46.9	49.2	60.4	48.0	37.6	25.2	1.9
87.5°	0.8	0.8	4.3	10.1	20.9	15.5	15.5	14.7	22.9	17.0	0.8
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°	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1
2.5°	174.7	173.1	170.4	167.7	165.8	163.5	162.3	161.1	160.8	160.4	161.1
5°	172.8	170.4	165.4	161.1	157.3	154.2	151.8	149.5	148.4	147.6	148.0
7.5°	172.8	169.3	161.9	155.3	149.1	142.5	136.0	130.9	127.1	124.7	125.1
10°	174.7	170.1	160.4	151.5	139.8	125.9	111.6	100.7	93.4	89.1	89.1
12.5°	179.0	172.8	160.8	146.8	127.1	102.6	81.0	67.8	62.4	59.3	59.7
15°	184.8	177.4	162.7	140.6	109.2	76.3	56.6	48.0	48.0	48.8	49.2
17.5°	191.4	183.2	164.2	131.3	86.4	54.6	44.5	43.8	44.9	46.9	46.9
20°	197.9	189.0	165.0	116.6	64.7	43.4	42.2	42.2	43.0	44.9	45.3
22.5°	206.1	196.4	164.2	98.4	48.4	41.1	40.7	40.7	40.7	43.0	43.0
25°	214.6	204.9	161.1	79.0	41.1	39.5	39.1	38.7	38.7	40.7	41.1
27.5°	224.3	213.8	153.8	60.4	38.7	38.0	37.6	36.8	36.8	38.3	38.3
30°	234.0	223.9	142.5	45.7	36.8	36.4	35.6	34.9	34.1	35.6	35.6
32.5°	244.4	234.4	127.8	36.4	34.1	34.1	33.7	32.5	31.8	32.5	32.9
35°	258.4	246.4	111.2	31.8	30.6	30.6	30.6	30.2	28.7	29.4	29.4
37.5°	277.0	263.0	91.8	29.4	27.9	27.1	27.1	27.1	26.0	26.3	26.3
40°	300.6	282.4	73.2	27.5	26.0	24.0	23.2	23.6	22.9	22.9	22.5
42.5°	332.7	303.3	55.0	26.0	24.4	21.7	20.1	19.8	19.0	18.6	18.6
45°	378.8	328.9	39.5	24.4	23.2	19.0	17.4	16.3	14.3	13.2	13.2
47.5°	438.5	357.9	29.4	22.9	22.1	16.7	14.7	12.4	9.7	8.9	8.9
50°	511.3	390.5	24.8	20.5	20.1	14.7	11.6	8.1	5.4	4.6	5.0
52.5°	582.2	421.1	22.1	18.2	17.8	12.8	8.5	4.3	2.3	2.3	2.3
55°	641.9	442.8	20.1	16.3	15.5	10.1	4.6	1.9	1.2	1.2	1.2
57.5°	695.7	455.1	18.2	14.3	12.4	7.0	1.9	0.8	0.8	0.4	0.4
60°	744.9	462.5	15.9	12.4	9.7	3.9	0.8	0.4	0.4	0.0	0.0
62.5°	793.3	467.9	13.6	10.1	7.4	1.5	0.4	0.4	0.0	0.0	0.0
65°	830.1	466.0	10.8	8.1	4.6	0.8	0.4	0.0	0.0	0.0	0.0
67.5°	828.9	439.7	8.1	6.2	2.3	0.4	0.0	0.0	0.0	0.0	0.0
70°	741.4	370.3	5.4	3.9	0.8	0.4	0.0	0.0	0.0	0.0	0.0
72.5°	526.0	237.5	3.5	2.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0
75°	231.6	72.0	1.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	45.3	16.7	1.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	10.8	1.9	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	4.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	1.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.8	0.4	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)