

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: P234682

Luminaire Tested: **ARCH-AF16-20-D-U-T2R-8027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234682  
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-AF16-20-D-U-T2R-8027  
Description: ARCHEON ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 2700K, 420mA LIGHT ENGINE WITH 16 LEDS AND TYPE II ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2328 lumens  
Efficiency: N/A  
Efficacy: 97.0 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

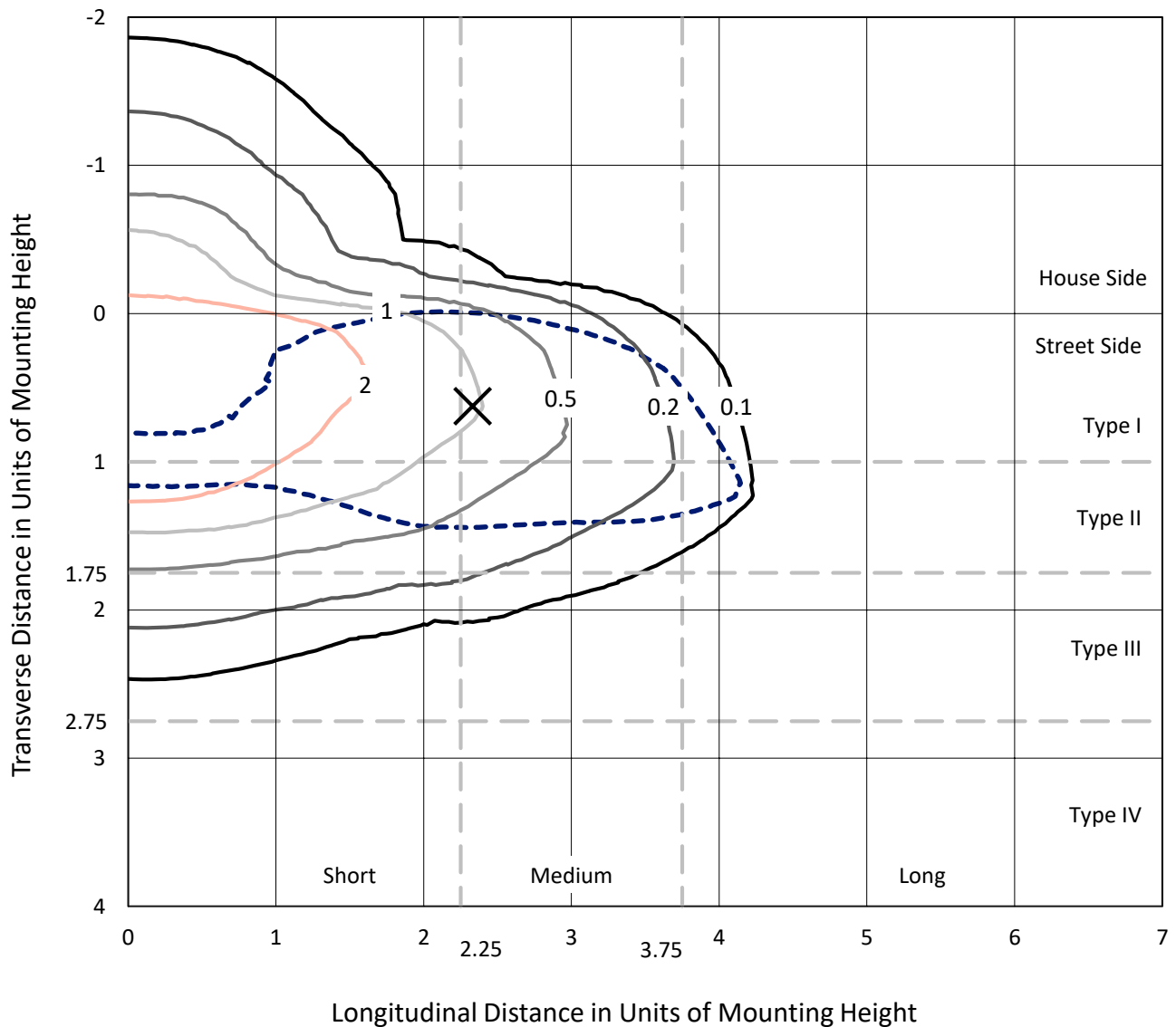
Input Watts (W): 24  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

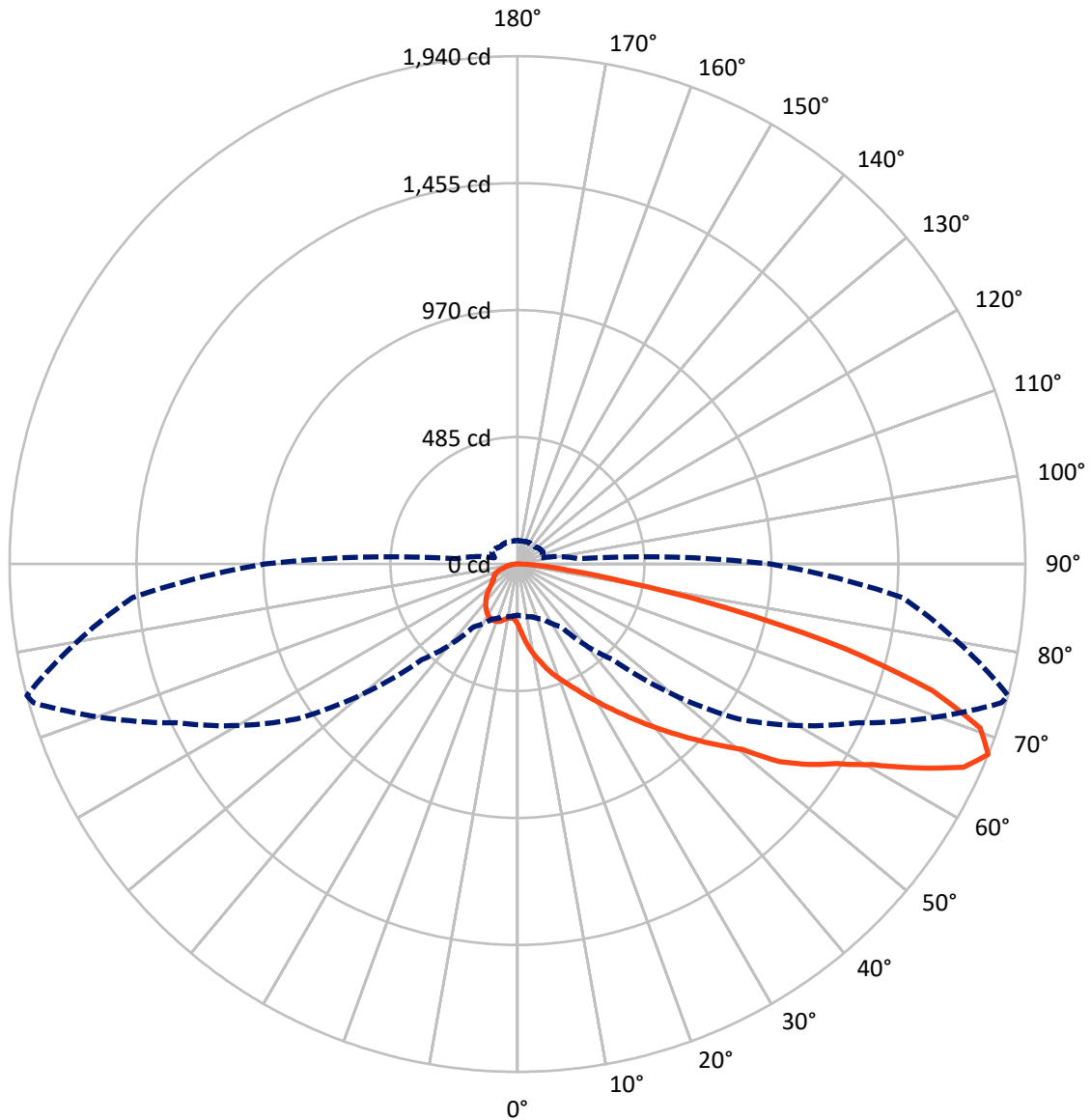
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.8 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	397.5	0.0	397.5
	% Fixture	17.1	0.0	17.1
<b>Street Side</b>	Lumens	1930.5	0.0	1930.5
	% Fixture	82.9	0.0	82.9
<b>Total</b>	Lumens	2328.0	0.0	2328.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.1	1.2
10°-20°	97.9	4.2
20°-30°	178.6	7.7
30°-40°	293.2	12.6
40°-50°	424.0	18.2
50°-60°	499.7	21.5
60°-70°	485.6	20.9
70°-80°	269.9	11.6
80°-90°	51.9	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°	2328.0	100.0
0°-180°	2328.0	100.0



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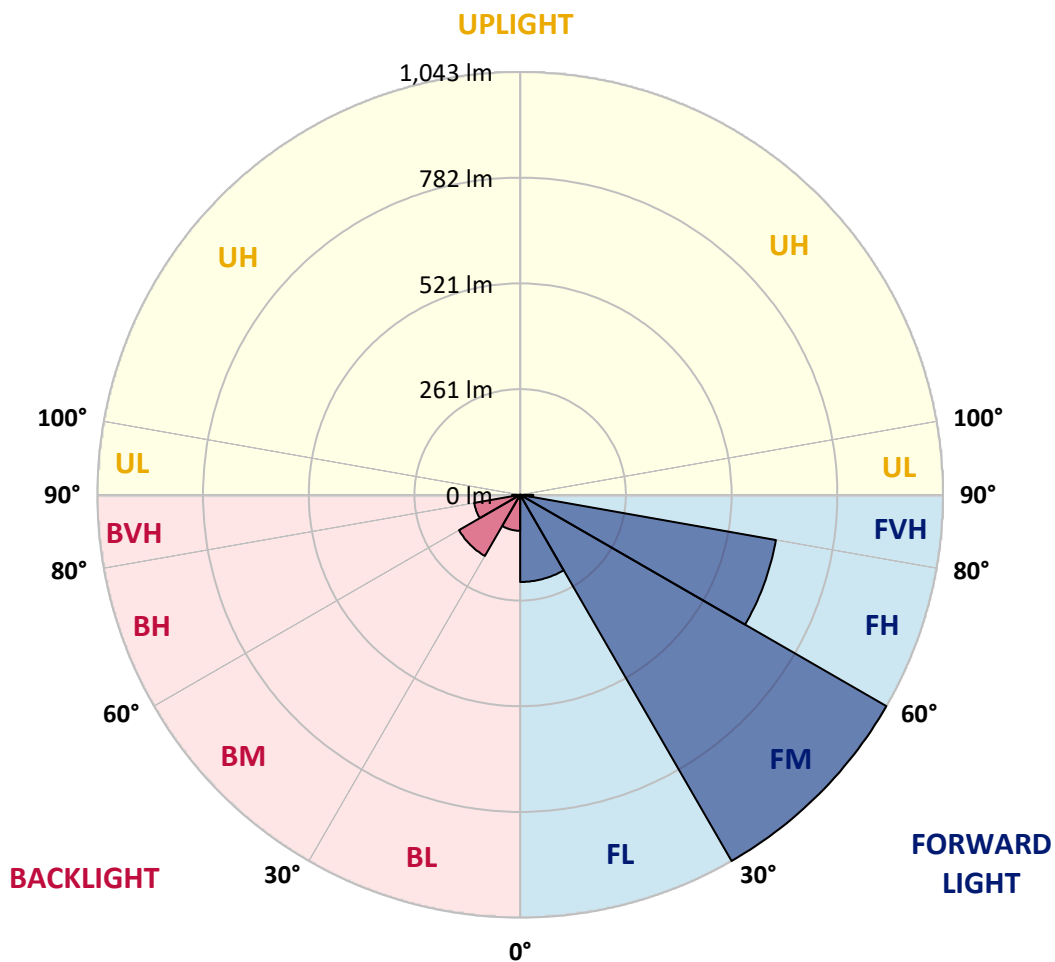
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	214.9	9.2			
FM (30°-60°)	1042.8	44.8			
FH (60°-80°)	640.4	27.5			G0/660
FVH (80°-90°)	32.3	1.4			G1/100
BL (0°-30°)	88.7	3.8	B0/110		
BM (30°-60°)	174.1	7.5	B0/220		
BH (60°-80°)	115.1	4.9	B1/500		G1/500
BVH (80°-90°)	19.6	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°	230.7	230.7	230.7	230.7	230.7	230.7	230.7	230.7	230.7	230.7	230.7
2.5°	327.0	328.0	326.1	321.7	315.4	303.7	293.5	275.5	259.4	257.4	240.4
5°	384.5	385.4	383.0	377.7	370.8	358.2	344.1	320.7	294.9	290.1	254.0
7.5°	423.9	424.4	421.5	416.1	410.8	398.1	384.0	357.7	326.1	322.2	271.6
10°	457.5	458.4	454.6	451.1	445.3	432.7	418.1	390.3	357.7	352.3	289.6
12.5°	488.6	489.6	487.2	484.2	482.3	470.6	454.6	421.5	386.4	380.6	311.0
15°	509.5	510.5	511.0	514.9	517.3	509.1	493.0	457.0	417.6	412.2	336.3
17.5°	503.7	506.1	513.4	527.6	542.6	543.1	530.0	492.0	448.2	442.4	362.1
20°	486.7	488.6	497.4	518.8	548.5	565.5	564.5	527.6	476.9	470.6	385.9
22.5°	500.8	503.2	503.2	516.4	545.6	577.2	589.8	562.6	505.7	499.8	409.8
25°	561.1	562.6	552.4	547.0	557.7	586.9	610.8	600.6	540.7	533.9	435.6
27.5°	645.3	642.9	630.2	608.8	597.1	604.9	629.3	636.6	581.1	572.8	462.3
30°	729.0	727.6	713.0	684.3	658.0	641.4	649.7	668.7	624.9	615.2	488.1
32.5°	807.4	805.0	788.9	755.3	725.6	695.0	678.9	697.9	671.6	660.4	516.8
35°	879.4	873.1	857.0	822.0	791.3	762.1	722.7	725.6	722.2	710.5	548.5
37.5°	937.8	932.9	915.4	882.8	850.2	822.5	781.1	757.3	776.7	765.5	585.0
40°	989.4	984.0	966.0	933.4	903.3	877.0	844.4	795.7	838.0	825.4	625.9
42.5°	1028.3	1024.4	1009.8	977.7	948.5	924.7	908.6	844.4	901.8	889.6	670.6
45°	1049.3	1045.4	1037.6	1011.8	985.0	966.5	968.0	902.3	968.5	958.3	723.7
47.5°	1023.5	1026.4	1033.2	1028.3	1011.8	1003.0	1021.0	962.1	1042.9	1033.2	781.1
50°	954.4	957.3	984.5	1018.1	1024.0	1034.7	1068.7	1031.3	1121.8	1114.0	852.2
52.5°	784.5	800.6	876.0	956.3	1011.3	1055.6	1121.8	1133.9	1254.6	1254.6	977.7
55°	592.8	606.9	693.0	833.2	962.1	1057.5	1160.7	1203.5	1350.5	1352.5	1043.4
57.5°	480.3	489.1	531.4	675.0	859.0	1033.2	1206.9	1263.4	1430.3	1439.1	1128.1
60°	389.8	394.7	422.4	522.2	716.4	967.5	1240.0	1349.1	1544.2	1556.4	1236.1
62.5°	313.4	318.3	336.8	396.6	562.1	844.4	1234.2	1438.1	1696.0	1716.0	1377.8
65°	250.1	255.5	267.7	304.7	416.6	691.6	1174.3	1483.9	1853.2	1872.7	1471.7
67.5°	195.2	200.0	208.3	232.6	293.5	517.3	1032.7	1435.7	1923.8	1940.4	1476.6
70°	147.5	149.9	156.7	172.3	209.8	343.6	808.4	1274.1	1860.5	1875.6	1379.2
72.5°	114.4	113.9	117.8	125.6	146.5	236.5	535.8	1036.1	1644.9	1660.5	1176.8
75°	93.4	93.0	95.4	97.8	106.1	158.7	316.3	780.1	1327.6	1298.0	882.8
77.5°	78.8	78.4	80.8	81.3	84.7	109.5	180.1	513.4	885.7	834.6	497.4
80°	66.7	66.2	69.1	70.1	72.5	80.3	103.7	277.9	444.8	421.5	237.5
82.5°	50.1	52.1	57.4	59.9	62.8	59.4	64.2	122.6	206.3	197.1	103.2
85°	24.3	28.7	43.3	48.2	51.6	37.5	43.8	57.9	93.0	88.6	41.9
87.5°	8.3	7.3	25.8	30.7	33.6	17.0	24.3	32.1	38.4	35.0	13.1
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°	230.7	230.7	230.7	230.7	230.7	230.7	230.7	230.7	230.7	230.7	230.7
2.5°	233.1	225.8	215.1	206.8	201.5	197.1	195.2	194.7	193.7	193.2	193.2
5°	238.0	224.8	208.3	199.5	197.1	195.2	196.1	196.6	196.6	196.6	196.6
7.5°	245.3	226.8	206.8	201.0	200.5	200.5	203.4	204.9	205.9	205.9	205.9
10°	255.0	230.2	209.3	204.4	205.9	206.8	210.2	212.2	213.2	213.6	214.1
12.5°	268.2	237.5	214.1	210.2	212.2	212.7	215.1	216.1	217.1	217.5	217.5
15°	285.7	248.2	221.9	217.1	217.5	217.1	217.1	216.1	215.6	215.6	216.6
17.5°	303.7	258.4	228.7	221.9	220.0	216.1	213.2	210.7	209.3	208.3	208.8
20°	321.7	267.7	232.6	222.9	217.5	211.2	205.9	202.5	200.5	198.6	199.5
22.5°	339.7	276.4	234.1	220.0	212.2	202.9	197.1	191.7	187.4	184.4	184.9
25°	359.6	286.2	234.1	216.6	204.9	195.2	187.9	179.1	172.8	170.3	171.3
27.5°	379.6	294.4	231.7	210.2	196.6	186.9	176.2	166.0	162.1	160.6	161.1
30°	399.6	300.8	226.3	202.5	187.9	177.1	163.0	156.2	151.4	147.5	147.9
32.5°	419.5	305.1	219.0	192.7	178.6	165.0	153.3	145.5	136.8	131.9	132.4
35°	442.4	308.5	210.2	183.0	168.4	154.3	145.5	132.9	123.6	119.7	118.7
37.5°	466.2	311.0	201.0	172.3	158.2	146.5	137.7	122.2	113.4	108.0	107.6
40°	492.0	312.0	189.8	161.1	148.4	141.6	127.5	115.8	100.7	97.3	97.3
42.5°	522.7	311.5	178.6	149.9	137.7	130.4	120.2	114.9	101.7	98.3	96.4
45°	557.7	311.5	166.4	136.8	127.0	116.3	111.9	108.5	99.8	101.2	102.2
47.5°	597.6	310.5	151.8	126.0	118.3	109.0	106.6	99.3	95.9	96.8	97.8
50°	652.6	312.0	138.7	117.3	111.9	104.1	101.2	97.3	95.9	96.4	95.9
52.5°	729.0	307.1	126.0	111.9	107.1	96.8	96.8	96.4	96.8	96.4	96.4
55°	770.9	296.4	116.8	109.0	103.7	93.4	95.4	96.4	97.3	96.8	96.8
57.5°	830.3	289.1	109.5	107.1	101.7	92.5	94.4	96.4	96.8	96.4	96.4
60°	900.3	284.2	104.6	107.6	100.3	92.5	94.9	96.4	95.9	95.4	95.4
62.5°	981.6	282.3	101.2	109.0	98.8	93.0	94.9	96.4	94.4	93.9	93.9
65°	1012.3	264.7	96.8	110.0	99.8	93.0	94.4	94.9	92.5	92.0	91.5
67.5°	965.1	234.6	90.5	108.0	102.7	93.0	93.0	92.5	89.5	89.1	88.1
70°	859.5	194.7	80.8	101.7	104.6	93.4	91.0	88.6	85.7	85.7	83.7
72.5°	703.7	153.3	68.1	90.5	103.2	94.9	87.1	83.7	80.3	80.3	78.4
75°	507.1	114.4	54.5	75.4	96.8	94.4	82.2	77.9	74.0	73.5	71.1
77.5°	289.1	80.3	44.3	58.9	86.1	92.0	77.9	71.1	66.7	65.2	63.8
80°	148.4	54.0	36.0	46.2	71.5	85.2	74.5	63.3	58.4	56.0	53.5
82.5°	70.6	36.0	27.7	34.1	54.0	74.5	70.1	54.5	49.2	46.2	43.3
85°	31.6	21.4	18.5	21.9	38.4	57.9	61.8	44.8	38.4	48.2	35.5
87.5°	10.2	9.7	9.7	10.2	18.5	25.3	45.3	33.1	30.7	25.3	21.4
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)