

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: P231095

Luminaire Tested: **ARCH-M-AF48-110-D-U-T2R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231095
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29623)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-M-AF48-110-D-U-T2R-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 720mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11880.5 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B1 - U0 - G2

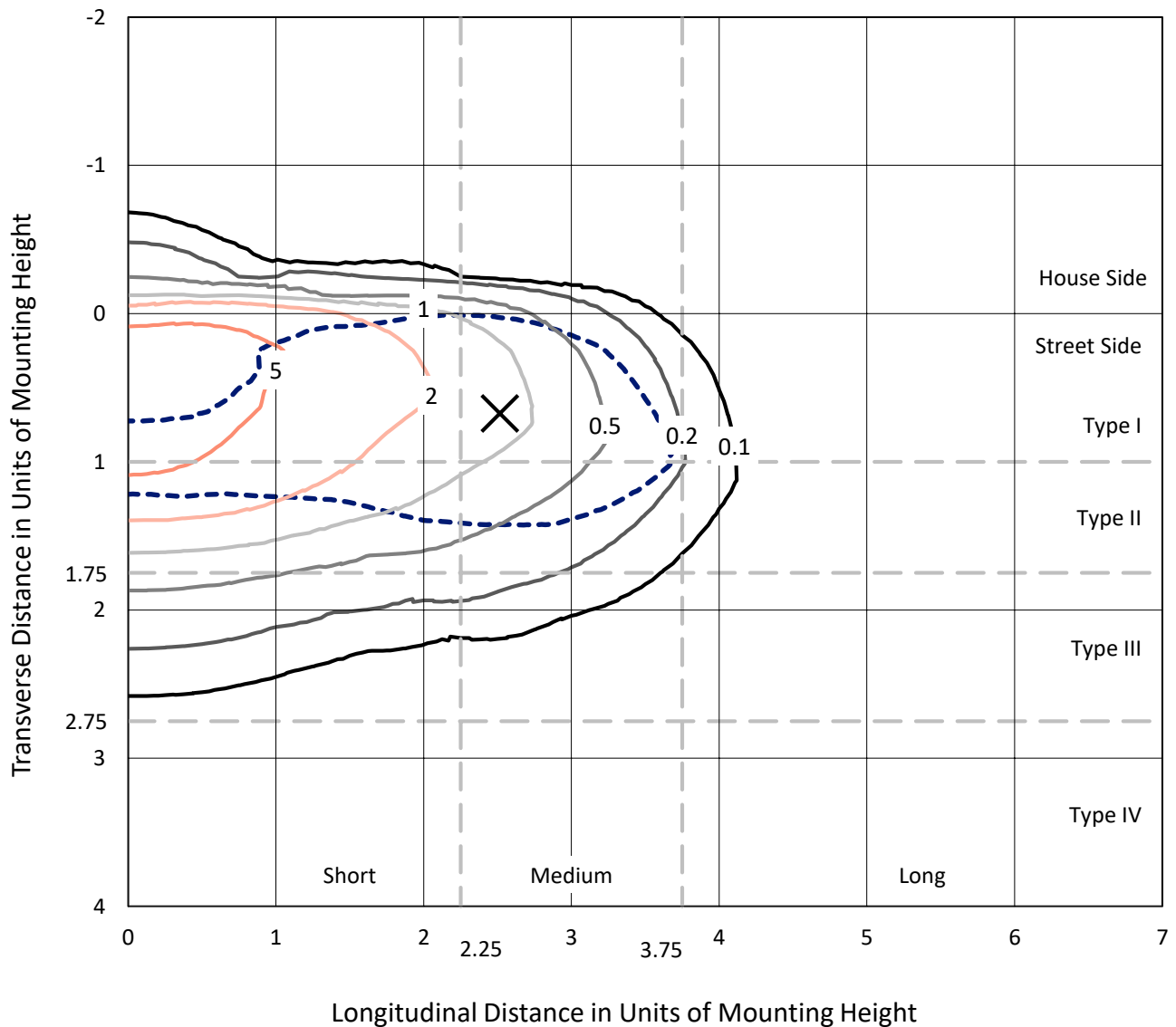
Input Watts (W): 111
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

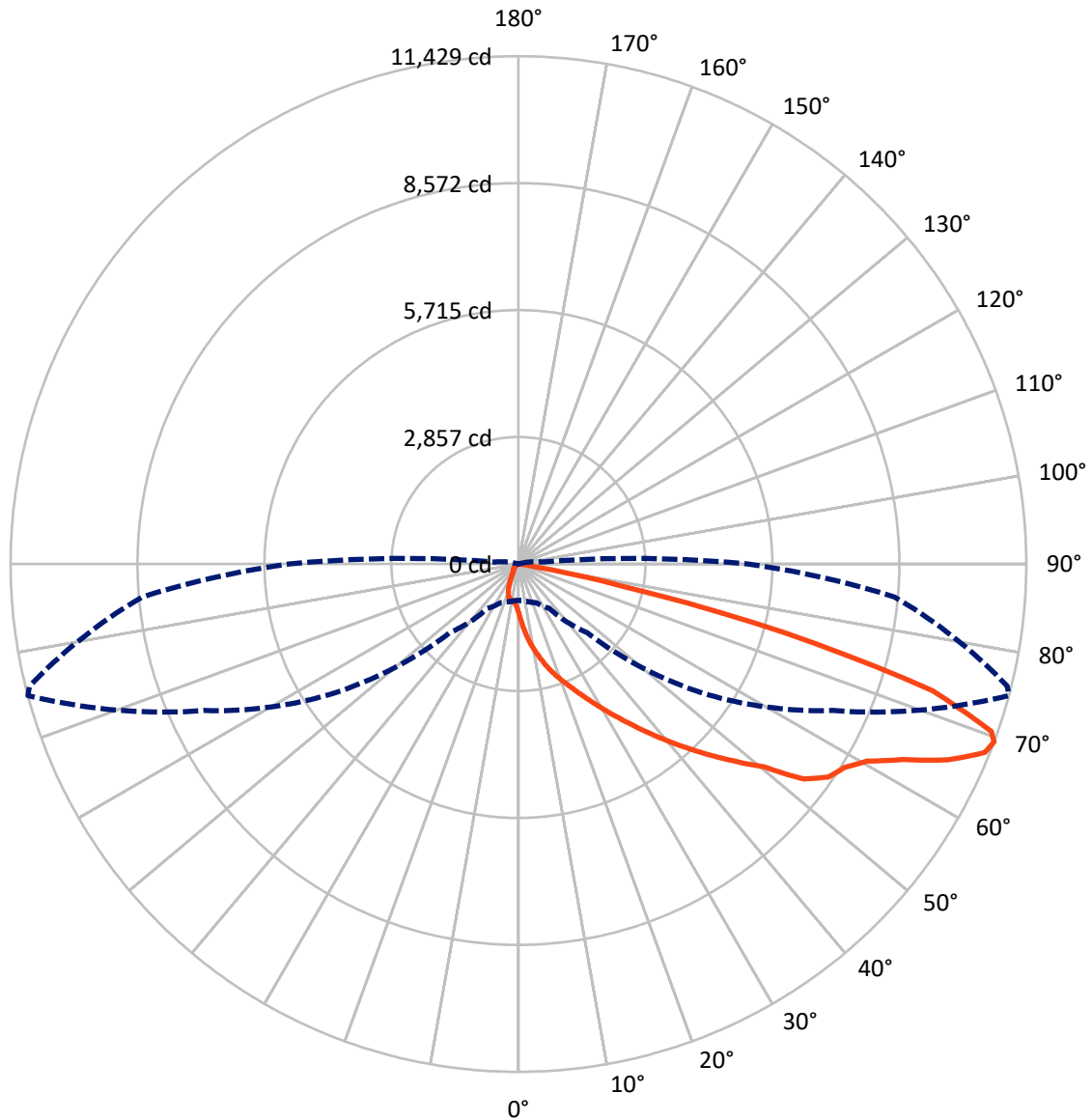
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.6 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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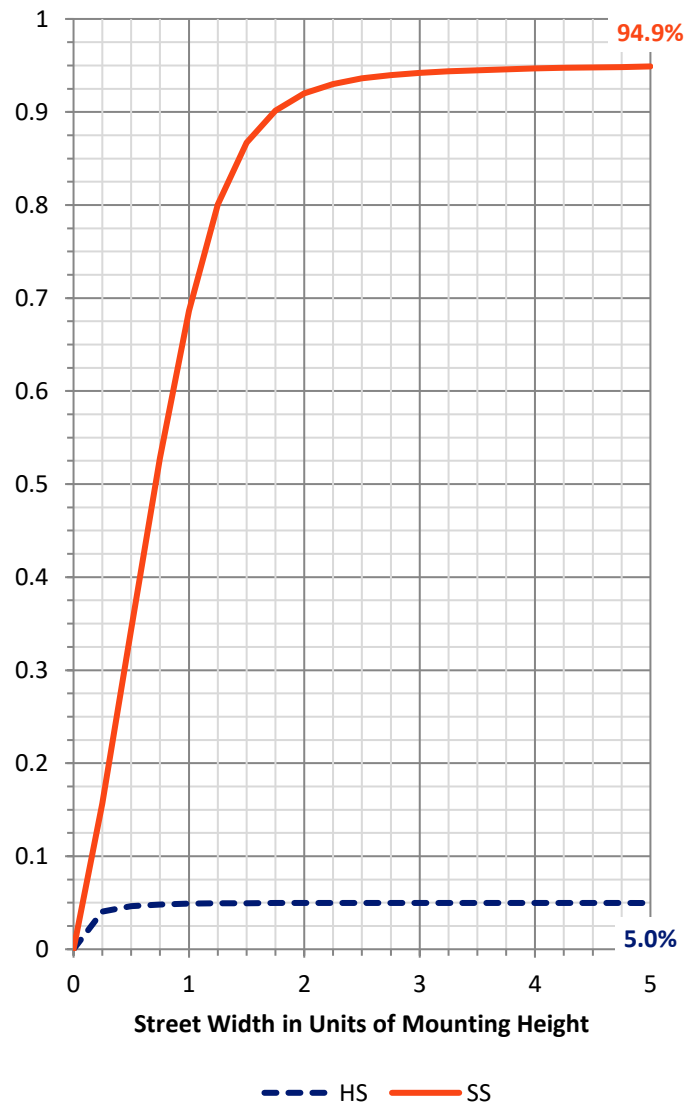
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	592.8	0.0	592.8
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	11287.8	0.0	11287.8
	% Fixture	95.0	0.0	95.0
Total	Lumens	11880.5	0.0	11880.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.9	1.1
10°-20°	460.8	3.9
20°-30°	879.8	7.4
30°-40°	1578.2	13.3
40°-50°	2417.9	20.4
50°-60°	2810.2	23.7
60°-70°	2488.4	20.9
70°-80°	1073.4	9.0
80°-90°	43.0	0.4
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°	11880.5	100.0
0°-180°	11880.5	100.0

Coefficient of Utilization



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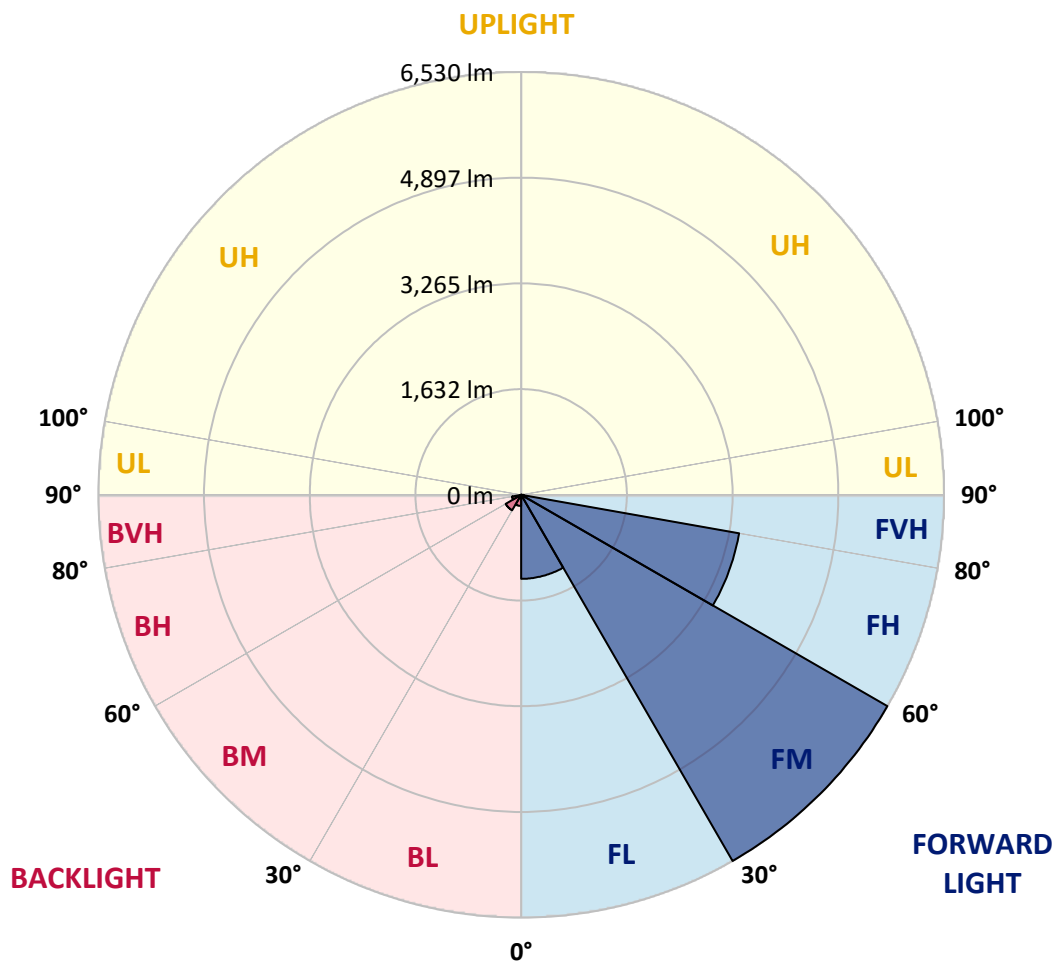
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1297.4	10.9			
FM (30°-60°)	6529.8	55.0			
FH (60°-80°)	3418.2	28.8			G2/5000
FVH (80°-90°)	42.4	0.4			G1/100
BL (0°-30°)	172.2	1.4	B1/500		
BM (30°-60°)	276.4	2.3	B1/1000		
BH (60°-80°)	143.6	1.2	B1/500		G1/500
BVH (80°-90°)	0.6	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5
2.5°	1821.1	1803.2	1785.2	1764.7	1718.5	1639.0	1538.9	1431.2	1297.8	1274.8	1167.1
5°	2211.0	2203.2	2185.3	2157.1	2105.8	2018.6	1905.8	1746.7	1523.6	1485.1	1256.8
7.5°	2485.4	2480.2	2464.9	2431.6	2385.4	2298.2	2180.2	2008.4	1749.2	1705.7	1369.6
10°	2731.7	2729.0	2716.2	2685.5	2639.3	2544.4	2418.8	2239.1	1964.7	1916.0	1500.5
12.5°	2954.8	2957.4	2952.2	2936.8	2903.4	2813.7	2670.1	2475.1	2172.4	2118.6	1657.0
15°	3085.6	3093.3	3113.9	3144.6	3154.9	3083.1	2934.2	2718.8	2385.4	2339.2	1836.5
17.5°	3041.9	3049.7	3113.9	3219.0	3319.0	3329.3	3195.9	2949.7	2595.7	2549.5	2013.5
20°	2936.8	2947.1	3013.8	3157.4	3352.3	3488.3	3434.5	3201.0	2795.7	2739.4	2182.8
22.5°	3054.8	3054.8	3075.3	3162.6	3339.5	3552.4	3624.2	3452.4	3000.9	2931.7	2352.1
25°	3460.0	3452.4	3408.8	3372.9	3429.3	3619.1	3767.8	3708.9	3242.0	3162.6	2531.6
27.5°	3973.0	4008.9	3926.9	3796.1	3667.8	3749.9	3896.1	3962.8	3508.8	3426.8	2716.2
30°	4547.6	4563.0	4465.5	4291.1	4065.4	3985.9	4047.4	4180.8	3798.6	3708.9	2908.7
32.5°	5065.8	5052.9	4970.8	4788.7	4509.2	4337.3	4242.4	4355.2	4114.1	4011.5	3106.1
35°	5524.9	5535.1	5435.0	5224.7	4950.3	4768.2	4542.5	4552.7	4468.0	4350.1	3334.4
37.5°	5937.8	5919.8	5824.9	5614.6	5365.8	5168.4	4929.8	4757.9	4855.4	4732.3	3590.9
40°	6273.8	6255.9	6155.8	5950.6	5717.2	5555.6	5368.3	5032.4	5263.2	5122.1	3865.3
42.5°	6540.5	6520.0	6435.4	6237.9	6012.2	5868.6	5778.8	5370.9	5699.3	5558.2	4173.1
45°	6671.4	6653.4	6602.1	6453.4	6255.9	6130.1	6173.8	5760.8	6166.0	6048.1	4511.7
47.5°	6517.4	6509.8	6568.8	6543.1	6430.3	6363.6	6514.9	6186.6	6655.9	6540.5	4901.6
50°	6050.7	6063.4	6235.3	6448.2	6502.1	6581.6	6794.4	6635.5	7181.7	7058.7	5350.4
52.5°	4899.0	4986.2	5504.3	6017.3	6414.8	6715.0	7122.8	7276.7	8038.4	7917.9	6050.7
55°	3657.6	3693.5	4257.7	5135.0	6063.4	6704.7	7366.5	7653.7	8461.6	8338.6	6235.3
57.5°	2900.9	2913.8	3193.3	4088.5	5340.2	6473.8	7494.6	7789.7	8646.4	8543.8	6509.8
60°	2277.6	2293.0	2495.7	3111.2	4321.9	5850.6	7310.0	7907.6	9008.0	8926.0	6989.4
62.5°	1772.4	1787.7	1910.9	2272.5	3242.0	4891.3	6938.1	8097.5	9695.4	9657.0	7774.3
65°	1372.2	1377.4	1462.0	1631.3	2290.5	3852.5	6484.1	8274.4	10623.9	10590.5	8410.4
67.5°	1013.1	1020.8	1079.8	1185.0	1546.6	2767.6	5740.3	8138.5	11324.2	11226.7	8641.2
69°	818.3	825.9	877.2	961.9	1220.9	2180.2	5060.5	7802.5	11429.3	11337.0	8495.0
70°	700.2	705.3	756.7	828.5	1041.4	1851.8	4522.0	7512.7	11290.8	11201.0	8161.6
72.5°	448.9	474.5	525.8	571.9	690.0	1226.0	3052.3	6230.2	9741.6	9587.7	6391.8
75°	248.8	256.5	348.8	405.3	459.1	797.7	1698.0	3885.9	6196.8	6089.1	3419.0
77.5°	205.2	210.3	246.2	307.8	307.8	446.3	641.2	1531.3	2357.2	2126.3	926.0
80°	143.6	148.7	187.2	202.6	220.5	251.3	207.8	336.0	364.2	323.2	138.5
82.5°	100.0	105.2	128.3	166.7	177.0	117.9	76.9	100.0	105.2	105.2	53.9
85°	18.0	25.7	94.9	138.5	105.2	35.9	43.6	35.9	33.3	35.9	12.8
87.5°	0.0	0.0	59.0	66.7	56.5	15.3	18.0	12.8	7.7	10.2	5.1
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°	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5	1105.5
2.5°	1113.2	1059.3	967.0	900.3	843.8	800.3	782.3	754.1	733.6	743.8	731.0
5°	1144.0	1049.0	900.3	805.4	738.7	682.3	636.1	600.2	571.9	566.8	561.7
7.5°	1192.7	1056.7	861.8	743.8	643.8	556.6	484.8	430.9	389.8	389.8	374.5
10°	1259.4	1077.3	838.7	682.3	533.5	415.5	343.7	292.4	271.9	269.3	264.2
12.5°	1351.7	1115.7	820.8	602.7	415.5	302.7	259.0	241.1	233.4	230.9	228.3
15°	1477.3	1172.2	800.3	505.3	315.5	248.8	230.9	215.4	207.8	205.2	202.6
17.5°	1598.0	1223.4	756.7	405.3	256.5	225.7	205.2	192.4	182.1	179.5	179.5
20°	1710.8	1267.0	682.3	315.5	230.9	202.6	182.1	166.7	156.4	153.9	153.9
22.5°	1828.8	1302.9	589.9	256.5	210.3	179.5	159.1	143.6	133.4	130.8	128.3
25°	1954.4	1328.6	484.8	228.3	189.8	159.1	136.0	123.2	115.4	112.8	110.3
27.5°	2090.4	1338.8	384.7	207.8	166.7	138.5	117.9	105.2	100.0	97.5	97.5
30°	2213.6	1328.6	297.6	184.6	146.2	120.5	102.6	92.4	87.3	84.6	84.6
32.5°	2341.7	1302.9	238.6	164.2	128.3	102.6	87.3	79.5	76.9	74.4	74.4
35°	2477.7	1269.7	205.2	146.2	110.3	89.8	76.9	71.8	69.3	66.7	66.7
37.5°	2636.8	1228.6	187.2	130.8	97.5	79.5	66.7	64.1	61.6	61.6	61.6
40°	2816.3	1177.3	174.4	117.9	87.3	69.3	59.0	56.5	53.9	53.9	53.9
42.5°	3006.0	1118.3	161.6	105.2	76.9	59.0	51.2	51.2	48.7	48.7	46.1
45°	3219.0	1059.3	148.7	92.4	66.7	51.2	43.6	41.0	41.0	38.5	38.5
47.5°	3470.4	1005.5	136.0	82.0	59.0	43.6	38.5	35.9	33.3	30.8	30.8
50°	3824.3	1000.3	120.5	71.8	53.9	35.9	30.8	28.2	25.7	23.1	23.1
52.5°	4175.7	954.1	102.6	59.0	43.6	30.8	23.1	20.6	18.0	18.0	15.3
55°	4255.2	877.2	89.8	51.2	33.3	23.1	18.0	12.8	12.8	10.2	10.2
57.5°	4429.6	841.3	76.9	41.0	25.7	18.0	10.2	7.7	7.7	7.7	7.7
60°	4773.3	831.0	66.7	35.9	18.0	12.8	7.7	5.1	5.1	2.6	2.6
62.5°	5247.8	820.8	56.5	30.8	12.8	7.7	5.1	2.6	0.0	0.0	0.0
65°	5509.4	751.6	46.1	23.1	10.2	7.7	2.6	0.0	0.0	0.0	0.0
67.5°	5440.2	620.7	41.0	15.3	7.7	5.1	2.6	0.0	0.0	0.0	0.0
69°	5150.4	523.2	33.3	12.8	7.7	5.1	2.6	0.0	0.0	0.0	0.0
70°	4801.5	451.4	30.8	10.2	5.1	2.6	2.6	0.0	0.0	0.0	0.0
72.5°	3408.8	236.0	20.6	7.7	5.1	2.6	0.0	0.0	0.0	0.0	0.0
75°	1592.8	105.2	12.8	5.1	2.6	2.6	0.0	0.0	0.0	0.0	0.0
77.5°	351.4	48.7	7.7	5.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0
80°	66.7	18.0	5.1	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	23.1	7.7	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	7.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.6	0.0	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)