

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: P231094

Luminaire Tested: **ARCH-M-AF48-100-D-U-T2R-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231094
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-AF48-100-D-U-T2R-HSS
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 660mA 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: 11107.2 lumens
Efficiency: N/A
Efficacy: 110.0 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): 101
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

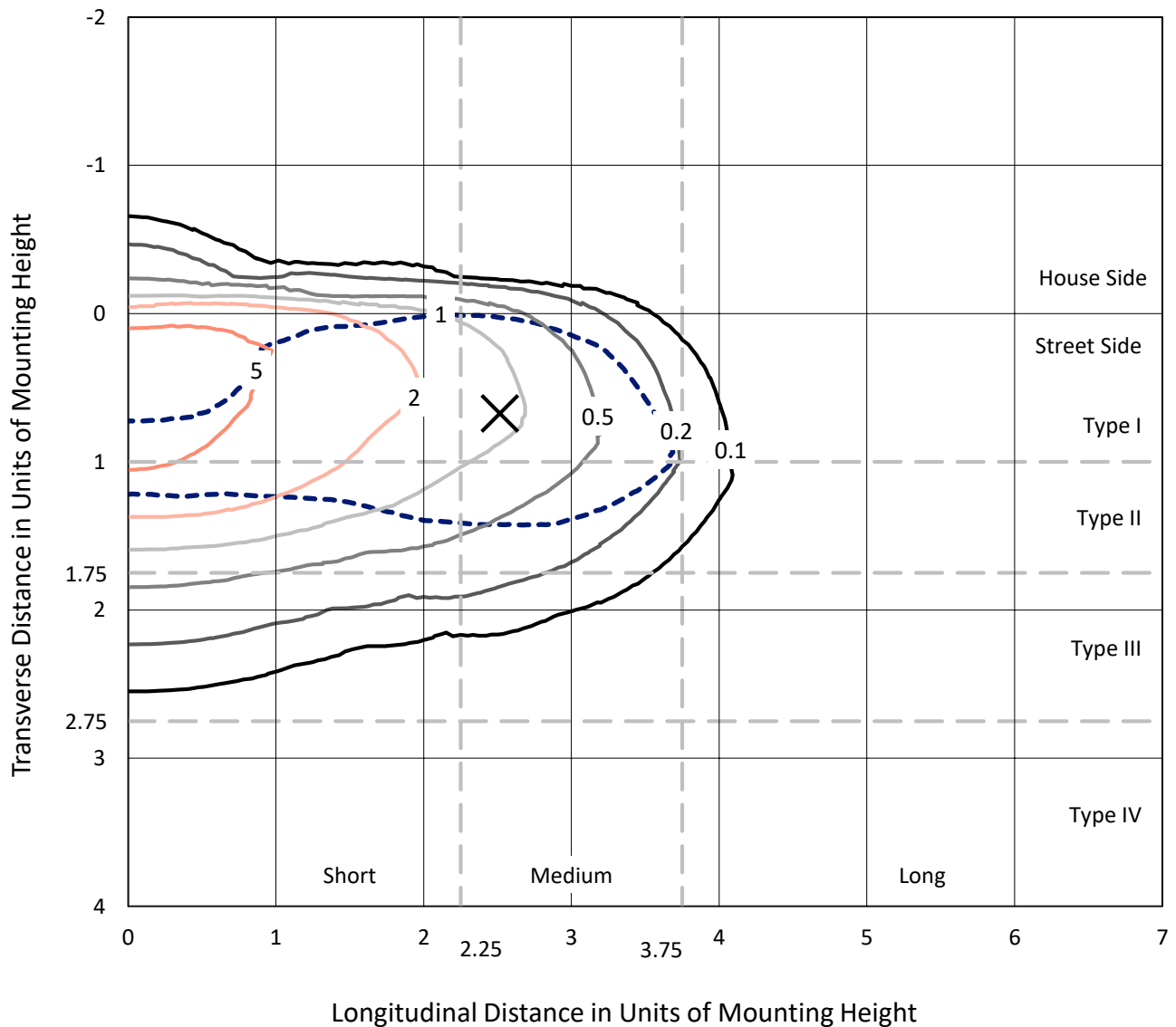


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Iso-Footcandle Lines of Horizontal Illumination

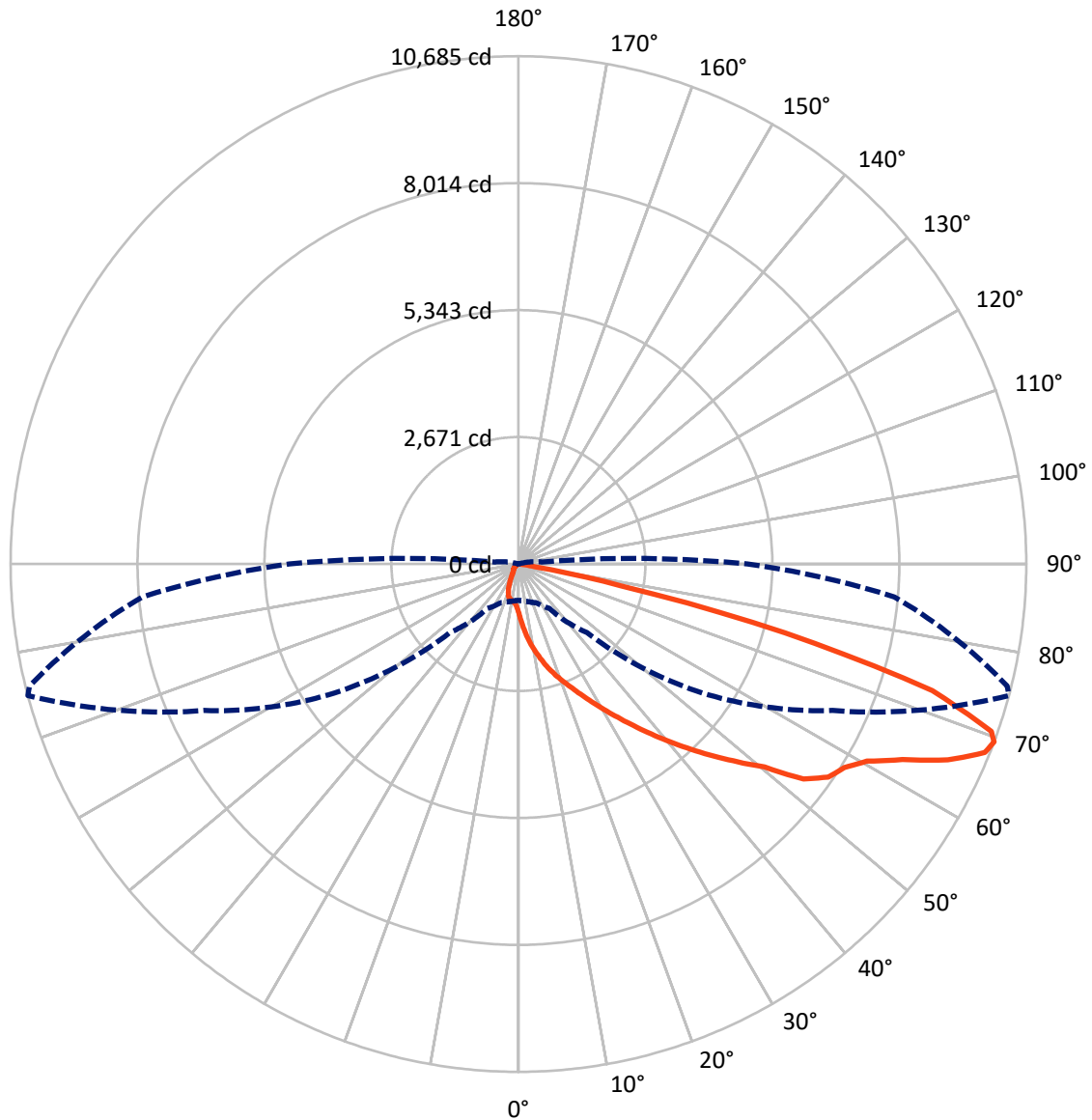
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 7.1 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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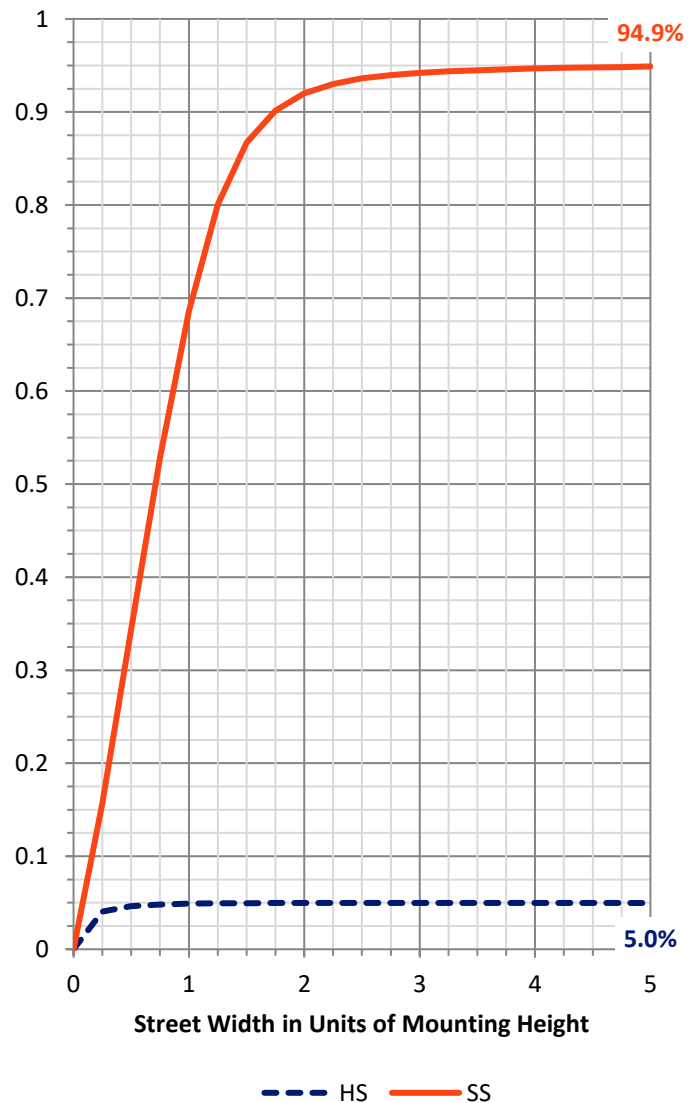
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	554.2	0.0	554.2
	% Fixture	5.0	0.0	5.0
Street Side	Lumens	10553.0	0.0	10553.0
	% Fixture	95.0	0.0	95.0
Total	Lumens	11107.2	0.0	11107.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.5	1.1
10°-20°	430.8	3.9
20°-30°	822.5	7.4
30°-40°	1475.4	13.3
40°-50°	2260.5	20.4
50°-60°	2627.2	23.7
60°-70°	2326.5	20.9
70°-80°	1003.5	9.0
80°-90°	40.2	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°	11107.2	100.0
0°-180°	11107.2	100.0



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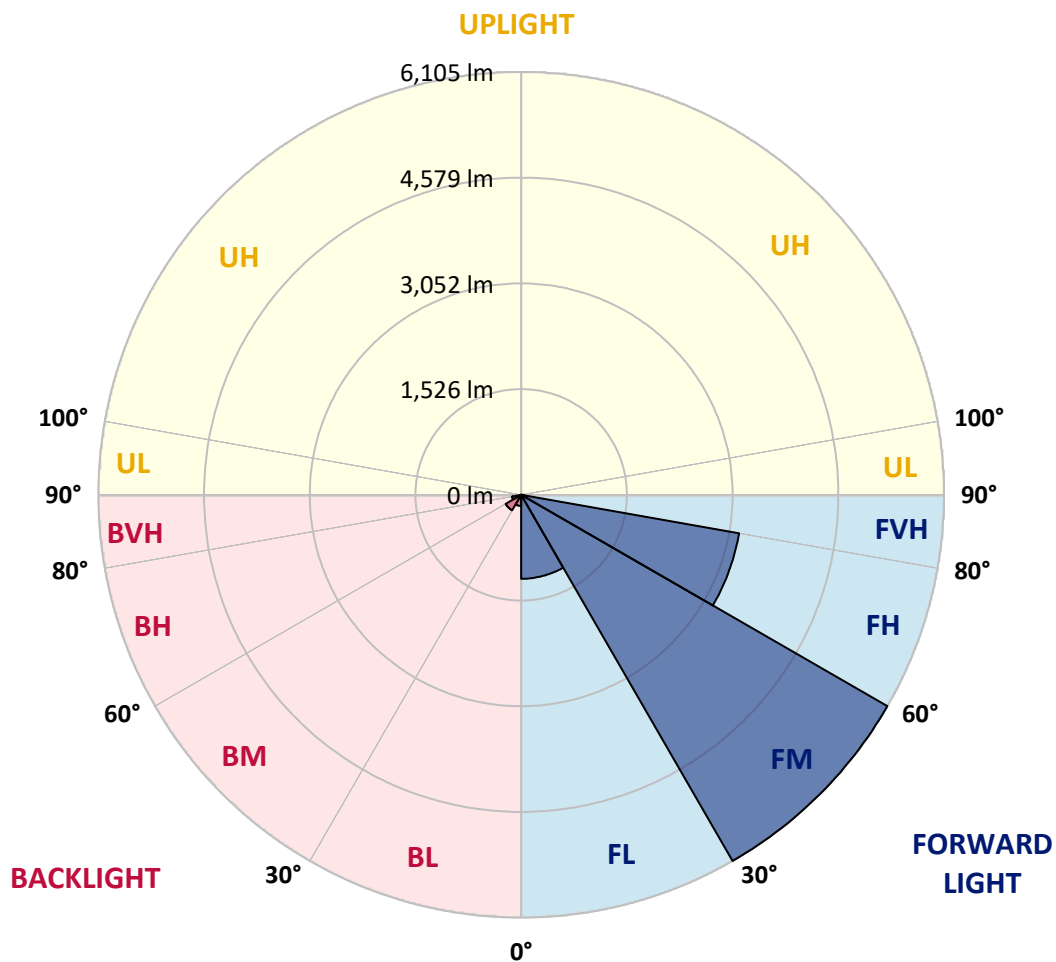
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1212.9	10.9			
FM (30°-60°)	6104.8	55.0			
FH (60°-80°)	3195.7	28.8			G2/5000
FVH (80°-90°)	39.6	0.4			G1/100
BL (0°-30°)	160.9	1.4	B1/500		
BM (30°-60°)	258.4	2.3	B1/1000		
BH (60°-80°)	134.3	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°	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5
2.5°	1702.6	1685.7	1668.9	1649.8	1606.6	1532.3	1438.8	1338.0	1213.3	1191.7	1091.1
5°	2067.1	2059.8	2043.0	2016.6	1968.8	1887.2	1781.7	1633.0	1424.4	1388.5	1175.0
7.5°	2323.6	2318.8	2304.4	2273.3	2230.1	2148.6	2038.2	1877.6	1635.4	1594.7	1280.5
10°	2553.8	2551.4	2539.5	2510.6	2467.5	2378.8	2261.2	2093.5	1836.8	1791.3	1402.8
12.5°	2762.5	2764.8	2760.0	2745.7	2714.5	2630.5	2496.3	2314.0	2031.1	1980.7	1549.1
15°	2884.7	2892.0	2911.1	2939.9	2949.5	2882.4	2743.2	2541.8	2230.1	2187.0	1716.9
17.5°	2844.0	2851.2	2911.1	3009.4	3102.9	3112.5	2987.8	2757.7	2426.7	2383.6	1882.4
20°	2745.7	2755.2	2817.6	2951.9	3134.1	3261.3	3210.8	2992.6	2613.7	2561.1	2040.7
22.5°	2856.0	2856.0	2875.1	2956.6	3122.1	3321.2	3388.3	3227.6	2805.6	2740.9	2198.9
25°	3234.9	3227.6	3186.9	3153.3	3206.0	3383.5	3522.6	3467.5	3031.0	2956.6	2366.8
27.5°	3714.4	3748.0	3671.3	3549.0	3429.0	3505.9	3642.5	3704.8	3280.4	3203.7	2539.5
30°	4251.6	4266.0	4174.9	4011.8	3800.8	3726.4	3784.0	3908.7	3551.4	3467.5	2719.3
32.5°	4736.0	4724.0	4647.3	4476.9	4215.6	4055.0	3966.2	4071.8	3846.3	3750.4	2904.0
35°	5165.2	5174.8	5081.3	4884.7	4628.0	4457.8	4246.8	4256.4	4177.2	4066.9	3117.3
37.5°	5551.2	5534.5	5445.8	5249.2	5016.6	4831.9	4608.9	4448.2	4539.3	4424.3	3357.1
40°	5865.4	5848.6	5755.1	5563.3	5345.0	5194.0	5018.9	4704.8	4920.6	4788.7	3613.7
42.5°	6114.8	6095.7	6016.5	5831.8	5620.8	5486.5	5402.6	5021.4	5328.2	5196.4	3901.4
45°	6237.1	6220.4	6172.4	6033.3	5848.6	5731.1	5771.9	5385.8	5764.7	5654.4	4218.0
47.5°	6093.2	6086.0	6141.2	6117.2	6011.7	5949.4	6090.9	5783.9	6222.7	6114.8	4582.5
50°	5656.8	5668.8	5829.5	6028.5	6078.8	6153.2	6352.2	6203.5	6714.2	6599.2	5002.1
52.5°	4580.1	4661.6	5146.1	5625.6	5997.3	6277.8	6659.1	6803.0	7515.2	7402.5	5656.8
55°	3419.5	3453.1	3980.6	4800.7	5668.8	6268.2	6886.9	7155.5	7910.9	7795.8	5829.5
57.5°	2712.0	2724.1	2985.5	3822.4	4992.5	6052.5	7006.8	7282.6	8083.6	7987.6	6086.0
60°	2129.4	2143.8	2333.2	2908.8	4040.6	5469.7	6834.2	7392.9	8421.6	8344.9	6534.4
62.5°	1657.0	1671.4	1786.5	2124.6	3031.0	4572.9	6486.5	7570.3	9064.3	9028.4	7268.2
65°	1282.9	1287.7	1366.9	1525.1	2141.3	3601.7	6062.0	7735.9	9932.3	9901.1	7862.9
67.5°	947.2	954.4	1009.6	1107.9	1445.9	2587.3	5366.6	7608.7	10587.0	10495.9	8078.8
69°	765.0	772.1	820.1	899.3	1141.4	2038.2	4731.1	7294.6	10685.3	10599.0	7942.1
70°	654.7	659.4	707.4	774.6	973.5	1731.3	4227.7	7023.6	10555.8	10471.8	7630.3
72.5°	419.6	443.7	491.6	534.7	645.1	1146.2	2853.6	5824.7	9107.4	8963.6	5975.7
75°	232.6	239.8	326.1	378.9	429.2	745.7	1587.4	3632.9	5793.5	5692.7	3196.5
77.5°	191.8	196.6	230.2	287.8	287.8	417.3	599.4	1431.6	2203.7	1987.9	865.6
80°	134.3	139.1	175.0	189.5	206.2	235.0	194.3	314.1	340.5	302.2	129.5
82.5°	93.5	98.3	119.9	155.9	165.4	110.3	71.9	93.5	98.3	98.3	50.3
85°	16.8	23.9	88.7	129.5	98.3	33.6	40.8	33.6	31.2	33.6	12.0
87.5°	0.0	0.0	55.1	62.3	52.8	14.4	16.8	12.0	7.2	9.6	4.8
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°	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5	1033.5
2.5°	1040.8	990.3	904.0	841.7	788.9	748.2	731.4	705.0	685.8	695.4	683.4
5°	1069.5	980.8	841.7	753.0	690.6	637.8	594.7	561.1	534.7	530.0	525.2
7.5°	1115.0	988.0	805.7	695.4	601.9	520.4	453.2	402.8	364.5	364.5	350.1
10°	1177.4	1007.1	784.1	637.8	498.8	388.5	321.3	273.3	254.2	251.7	246.9
12.5°	1263.8	1043.1	767.3	563.5	388.5	282.9	242.2	225.5	218.2	215.8	213.4
15°	1381.2	1095.9	748.2	472.4	294.9	232.6	215.8	201.4	194.3	191.8	189.5
17.5°	1493.9	1143.9	707.4	378.9	239.8	211.0	191.8	179.8	170.2	167.9	167.9
20°	1599.5	1184.6	637.8	294.9	215.8	189.5	170.2	155.9	146.3	143.8	143.8
22.5°	1709.8	1218.1	551.6	239.8	196.6	167.9	148.6	134.3	124.7	122.3	119.9
25°	1827.2	1242.2	453.2	213.4	177.5	148.6	127.1	115.1	107.9	105.5	103.1
27.5°	1954.3	1251.8	359.7	194.3	155.9	129.5	110.3	98.3	93.5	91.1	91.1
30°	2069.4	1242.2	278.1	172.7	136.7	112.7	96.0	86.3	81.5	79.2	79.2
32.5°	2189.3	1218.1	223.0	153.4	119.9	96.0	81.5	74.4	71.9	69.6	69.6
35°	2316.5	1187.0	191.8	136.7	103.1	83.9	71.9	67.1	64.8	62.3	62.3
37.5°	2465.1	1148.7	175.0	122.3	91.1	74.4	62.3	59.9	57.6	57.6	57.6
40°	2633.0	1100.7	163.1	110.3	81.5	64.8	55.1	52.8	50.3	50.3	50.3
42.5°	2810.5	1045.6	151.1	98.3	71.9	55.1	48.0	48.0	45.5	45.5	43.2
45°	3009.4	990.3	139.1	86.3	62.3	48.0	40.8	38.4	38.4	36.0	36.0
47.5°	3244.4	940.0	127.1	76.7	55.1	40.8	36.0	33.6	31.2	28.7	28.7
50°	3575.3	935.2	112.7	67.1	50.3	33.6	28.7	26.4	23.9	21.6	21.6
52.5°	3903.9	892.0	96.0	55.1	40.8	28.7	21.6	19.2	16.8	16.8	14.4
55°	3978.3	820.1	83.9	48.0	31.2	21.6	16.8	12.0	12.0	9.6	9.6
57.5°	4141.3	786.5	71.9	38.4	23.9	16.8	9.6	7.2	7.2	7.2	7.2
60°	4462.6	776.9	62.3	33.6	16.8	12.0	7.2	4.8	4.8	2.4	2.4
62.5°	4906.3	767.3	52.8	28.7	12.0	7.2	4.8	2.4	0.0	0.0	0.0
65°	5150.9	702.6	43.2	21.6	9.6	7.2	2.4	0.0	0.0	0.0	0.0
67.5°	5086.1	580.3	38.4	14.4	7.2	4.8	2.4	0.0	0.0	0.0	0.0
69°	4815.1	489.2	31.2	12.0	7.2	4.8	2.4	0.0	0.0	0.0	0.0
70°	4489.0	422.1	28.7	9.6	4.8	2.4	2.4	0.0	0.0	0.0	0.0
72.5°	3186.9	220.7	19.2	7.2	4.8	2.4	0.0	0.0	0.0	0.0	0.0
75°	1489.1	98.3	12.0	4.8	2.4	2.4	0.0	0.0	0.0	0.0	0.0
77.5°	328.5	45.5	7.2	4.8	2.4	0.0	0.0	0.0	0.0	0.0	0.0
80°	62.3	16.8	4.8	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	21.6	7.2	2.4	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	7.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.4	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)