

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: P231102

Luminaire Tested: **ARCH-M-AF48-50-D-U-T2R-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231102  
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-AF48-50-D-U-T2R-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 305mA 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: 5624.2 lumens  
Efficiency: N/A  
Efficacy: 117.2 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B0 - U0 - G1

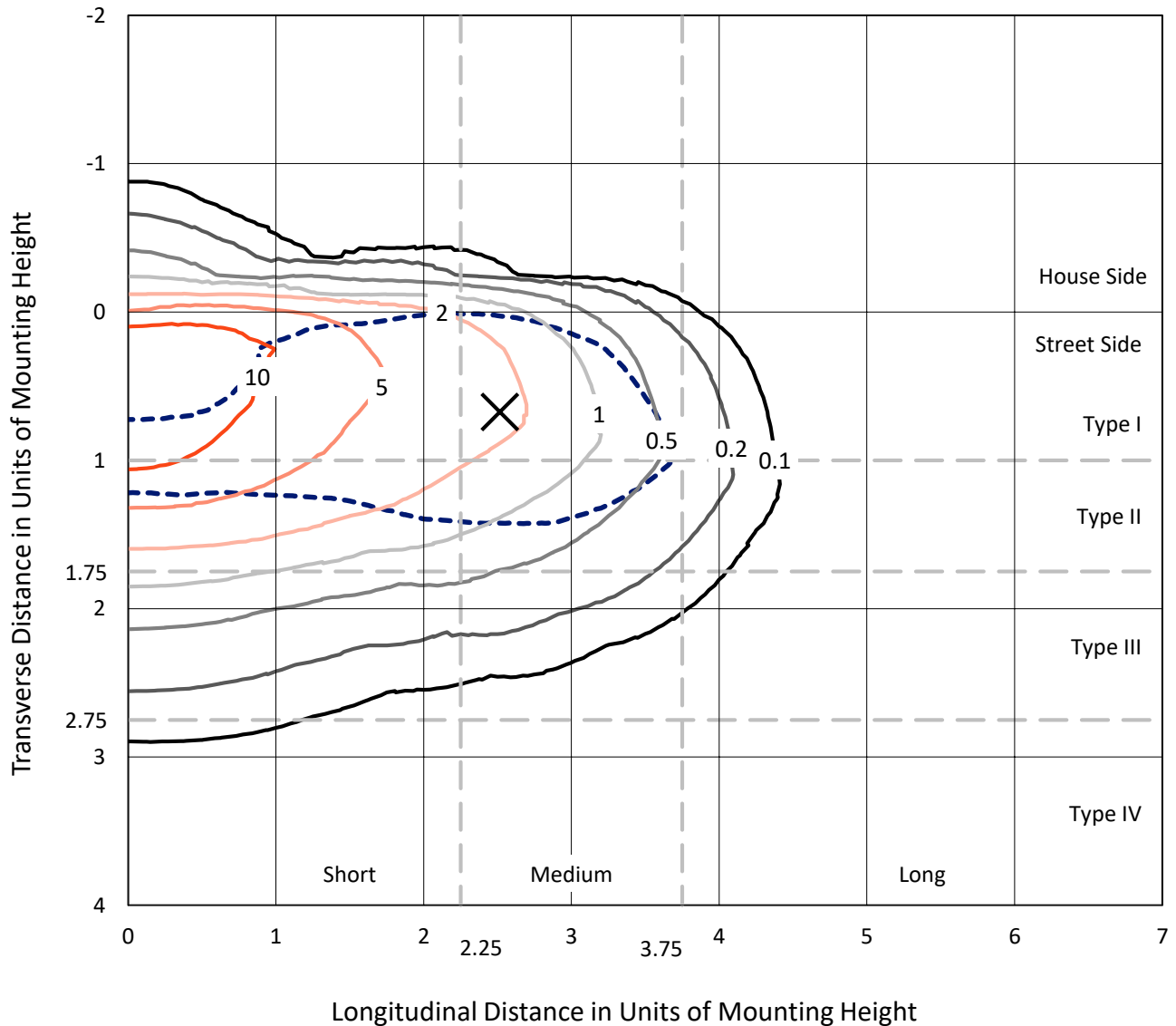
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P231102  
 CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R-HSS

### Iso-Footcandle Lines of Horizontal Illumination

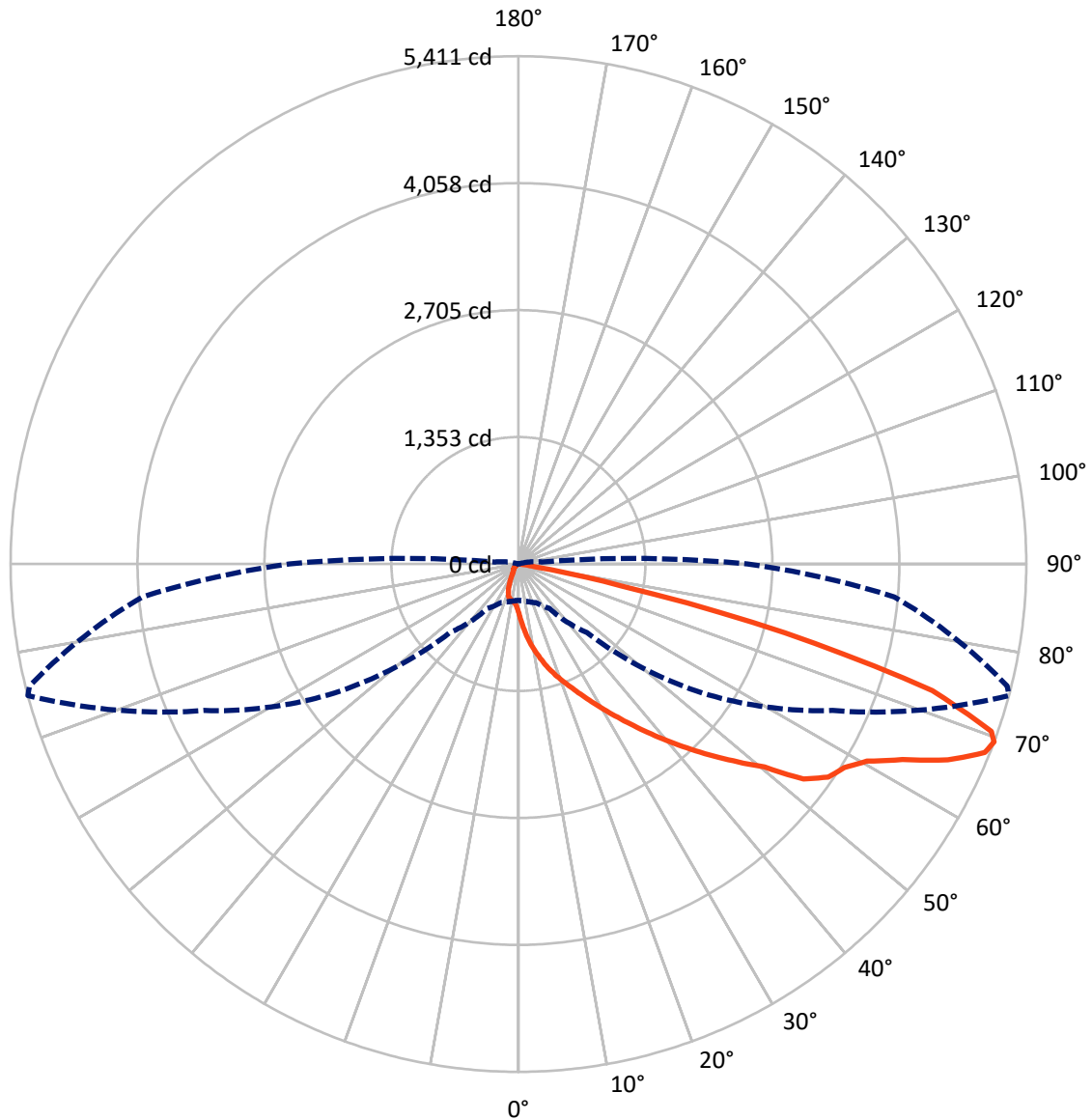
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.3 fc  
 Type II - Medium - Full Cutoff

REPORT NUMBER: P231102  
CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P231102

CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R-HSS

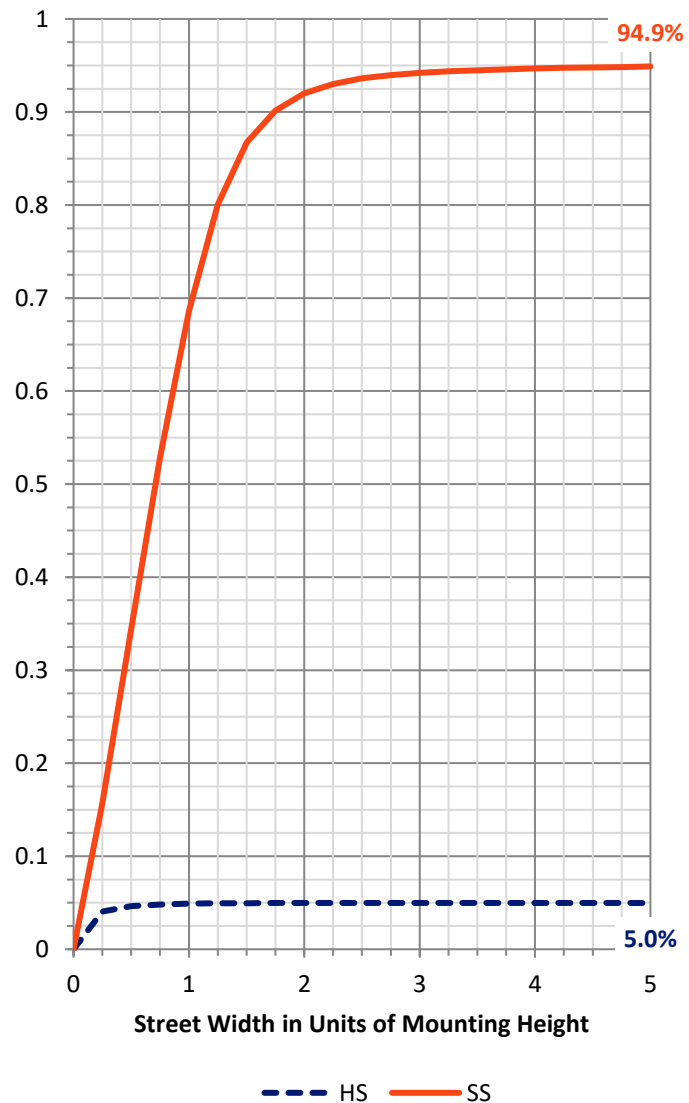
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	280.6	0.0	280.6
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	5343.6	0.0	5343.6
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	5624.2	0.0	5624.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.0	1.1
10°-20°	218.2	3.9
20°-30°	416.5	7.4
30°-40°	747.1	13.3
40°-50°	1144.6	20.4
50°-60°	1330.3	23.7
60°-70°	1178.0	20.9
70°-80°	508.1	9.0
80°-90°	20.4	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°	5624.2	100.0
0°-180°	5624.2	100.0

**Coefficient of Utilization**



REPORT NUMBER: P231102

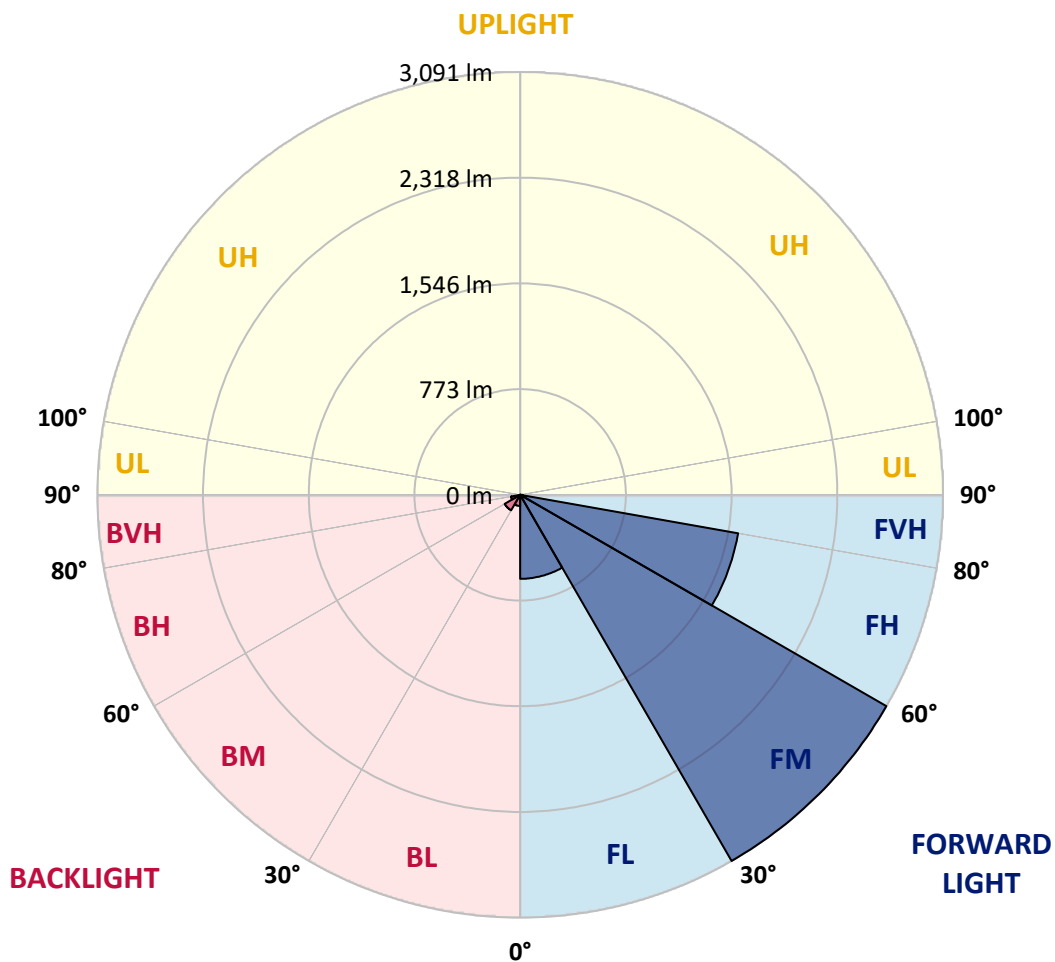
CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R-HSS

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	614.2	10.9			
FM	(30°-60°)	3091.2	55.0			
FH	(60°-80°)	1618.1	28.8			G1/1800
FVH	(80°-90°)	20.1	0.4			G1/100
BL	(0°-30°)	81.5	1.4	B0/110		
BM	(30°-60°)	130.8	2.3	B0/220		
BH	(60°-80°)	68.0	1.2	B0/110		G0/110
BVH	(80°-90°)	0.3	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 II Medium





REPORT NUMBER: P231102

CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	76°	85°
0°	523.3	523.3	523.3	523.3	523.3	523.3	523.3	523.3	523.3	523.3	523.3
2.5°	862.1	853.6	845.1	835.3	813.6	775.9	728.5	677.5	614.4	603.4	552.5
5°	1046.7	1043.0	1034.5	1021.1	996.9	955.6	902.1	826.9	721.3	703.1	594.9
7.5°	1176.6	1174.1	1166.9	1151.1	1129.2	1087.9	1032.1	950.7	828.1	807.4	648.3
10°	1293.1	1291.9	1285.8	1271.3	1249.4	1204.5	1145.0	1060.0	930.1	907.1	710.3
12.5°	1398.8	1400.0	1397.6	1390.3	1374.5	1332.0	1264.0	1171.7	1028.5	1002.9	784.4
15°	1460.7	1464.4	1474.1	1488.6	1493.5	1459.4	1389.1	1287.1	1129.2	1107.3	869.4
17.5°	1440.1	1443.7	1474.1	1523.9	1571.2	1576.1	1512.9	1396.3	1228.8	1207.0	953.2
20°	1390.3	1395.1	1426.7	1494.7	1587.0	1651.3	1625.9	1515.3	1323.5	1296.8	1033.3
22.5°	1446.1	1446.1	1455.9	1497.1	1580.9	1681.7	1715.7	1634.4	1420.7	1387.8	1113.5
25°	1637.9	1634.4	1613.7	1596.7	1623.4	1713.2	1783.7	1755.8	1534.7	1497.1	1198.4
27.5°	1880.8	1897.8	1859.0	1797.0	1736.4	1775.2	1844.4	1876.0	1661.1	1622.2	1285.8
30°	2152.8	2160.1	2113.9	2031.4	1924.6	1886.9	1916.0	1979.2	1798.2	1755.8	1376.9
32.5°	2398.1	2392.0	2353.2	2267.0	2134.6	2053.3	2008.4	2061.8	1947.6	1899.0	1470.4
35°	2615.4	2620.3	2572.9	2473.4	2343.5	2257.2	2150.3	2155.3	2115.2	2059.3	1578.5
37.5°	2811.0	2802.4	2757.5	2657.9	2540.2	2446.7	2333.8	2252.3	2298.5	2240.3	1699.9
40°	2969.9	2961.4	2914.1	2817.0	2706.5	2630.0	2541.3	2382.2	2491.6	2424.8	1829.9
42.5°	3096.3	3086.5	3046.4	2953.0	2846.2	2778.1	2735.7	2542.5	2698.0	2631.2	1975.5
45°	3158.2	3149.7	3125.4	3054.9	2961.4	2902.0	2922.7	2727.1	2919.0	2863.1	2135.8
47.5°	3085.3	3081.6	3109.6	3097.5	3044.0	3012.5	3084.1	2928.7	3150.9	3096.3	2320.4
50°	2864.4	2870.4	2951.7	3052.6	3078.1	3115.7	3216.5	3141.2	3399.8	3341.6	2532.8
52.5°	2319.1	2360.5	2605.8	2848.5	3036.7	3178.8	3371.9	3444.8	3805.4	3748.3	2864.4
55°	1731.4	1748.4	2015.6	2430.8	2870.4	3174.0	3487.2	3623.2	4005.7	3947.5	2951.7
57.5°	1373.3	1379.3	1511.7	1935.4	2528.0	3064.7	3547.9	3687.5	4093.1	4044.5	3081.6
60°	1078.2	1085.6	1181.4	1472.8	2046.0	2769.6	3460.5	3743.4	4264.4	4225.5	3308.7
62.5°	839.0	846.3	904.6	1075.8	1534.7	2315.6	3284.5	3833.3	4589.8	4571.6	3680.3
65°	649.6	652.0	692.1	772.2	1084.3	1823.7	3069.6	3917.1	5029.3	5013.5	3981.4
67.5°	479.7	483.2	511.2	561.0	732.1	1310.1	2717.5	3852.7	5360.8	5314.6	4090.7
69°	387.3	391.0	415.2	455.3	578.0	1032.1	2395.6	3693.7	5410.6	5366.8	4021.5
70°	331.4	333.9	358.2	392.2	493.0	876.7	2140.6	3556.5	5345.0	5302.5	3863.7
72.5°	212.5	224.6	248.9	270.8	326.6	580.4	1444.9	2949.4	4611.6	4538.7	3025.8
75°	117.7	121.4	165.1	191.8	217.4	377.6	803.8	1839.6	2933.5	2882.6	1618.5
77.5°	97.2	99.5	116.5	145.7	145.7	211.2	303.5	724.9	1115.8	1006.6	438.3
80°	68.0	70.4	88.6	96.0	104.4	119.0	98.3	159.1	172.5	153.0	65.6
82.5°	47.4	49.8	60.7	79.0	83.8	55.9	36.4	47.4	49.8	49.8	25.5
85°	8.5	12.2	44.9	65.6	49.8	17.0	20.7	17.0	15.8	17.0	6.0
87.5°	0.0	0.0	27.9	31.6	26.7	7.3	8.5	6.0	3.7	4.8	2.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P231102

CATALOG NUMBER: ARCH-M-AF48-50-D-U-T2R-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	523.3	523.3	523.3	523.3	523.3	523.3	523.3	523.3	523.3	523.3	523.3
2.5°	526.9	501.5	457.8	426.2	399.5	378.8	370.3	357.0	347.3	352.1	346.1
5°	541.6	496.6	426.2	381.3	349.6	322.9	301.2	284.2	270.8	268.3	265.9
7.5°	564.6	500.2	408.0	352.1	304.7	263.5	229.4	204.0	184.5	184.5	177.3
10°	596.2	509.9	397.0	322.9	252.6	196.7	162.8	138.4	128.7	127.5	125.1
12.5°	639.9	528.1	388.5	285.3	196.7	143.3	122.7	114.2	110.5	109.3	108.0
15°	699.4	554.8	378.8	239.2	149.4	117.7	109.3	102.0	98.3	97.2	96.0
17.5°	756.5	579.2	358.2	191.8	121.4	106.9	97.2	91.0	86.2	85.0	85.0
20°	809.9	599.9	322.9	149.4	109.3	96.0	86.2	79.0	74.1	72.8	72.8
22.5°	865.7	616.8	279.3	121.4	99.5	85.0	75.3	68.0	63.1	61.9	60.7
25°	925.3	629.0	229.4	108.0	89.8	75.3	64.3	58.3	54.6	53.4	52.2
27.5°	989.6	633.8	182.1	98.3	79.0	65.6	55.9	49.8	47.4	46.1	46.1
30°	1047.9	629.0	140.9	87.5	69.3	57.1	48.6	43.7	41.3	40.1	40.1
32.5°	1108.6	616.8	112.9	77.7	60.7	48.6	41.3	37.6	36.4	35.2	35.2
35°	1172.9	601.1	97.2	69.3	52.2	42.5	36.4	34.0	32.7	31.6	31.6
37.5°	1248.2	581.6	88.6	61.9	46.1	37.6	31.6	30.4	29.2	29.2	29.2
40°	1333.2	557.3	82.6	55.9	41.3	32.7	27.9	26.7	25.5	25.5	25.5
42.5°	1423.0	529.4	76.5	49.8	36.4	27.9	24.2	24.2	23.1	23.1	21.9
45°	1523.9	501.5	70.4	43.7	31.6	24.2	20.7	19.4	19.4	18.2	18.2
47.5°	1642.9	476.0	64.3	38.9	27.9	20.7	18.2	17.0	15.8	14.5	14.5
50°	1810.4	473.5	57.1	34.0	25.5	17.0	14.5	13.4	12.2	10.9	10.9
52.5°	1976.8	451.7	48.6	27.9	20.7	14.5	10.9	9.7	8.5	8.5	7.3
55°	2014.4	415.2	42.5	24.2	15.8	10.9	8.5	6.0	6.0	4.8	4.8
57.5°	2096.9	398.2	36.4	19.4	12.2	8.5	4.8	3.7	3.7	3.7	3.7
60°	2259.7	393.4	31.6	17.0	8.5	6.0	3.7	2.5	2.5	1.2	1.2
62.5°	2484.3	388.5	26.7	14.5	6.0	3.7	2.5	1.2	0.0	0.0	0.0
65°	2608.1	355.8	21.9	10.9	4.8	3.7	1.2	0.0	0.0	0.0	0.0
67.5°	2575.4	293.8	19.4	7.3	3.7	2.5	1.2	0.0	0.0	0.0	0.0
69°	2438.1	247.7	15.8	6.0	3.7	2.5	1.2	0.0	0.0	0.0	0.0
70°	2273.0	213.7	14.5	4.8	2.5	1.2	1.2	0.0	0.0	0.0	0.0
72.5°	1613.7	111.7	9.7	3.7	2.5	1.2	0.0	0.0	0.0	0.0	0.0
75°	754.0	49.8	6.0	2.5	1.2	1.2	0.0	0.0	0.0	0.0	0.0
77.5°	166.3	23.1	3.7	2.5	1.2	0.0	0.0	0.0	0.0	0.0	0.0
80°	31.6	8.5	2.5	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	10.9	3.7	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	3.7	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.2	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)