

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: P234797

Luminaire Tested: **ARCH-M-AF48-90-D-U-T2R-8027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P234797  
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-AF48-90-D-U-T2R-8027-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 2700K, 600mA 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: 7796 lumens  
Efficiency: N/A  
Efficacy: 84.7 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): 92  
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

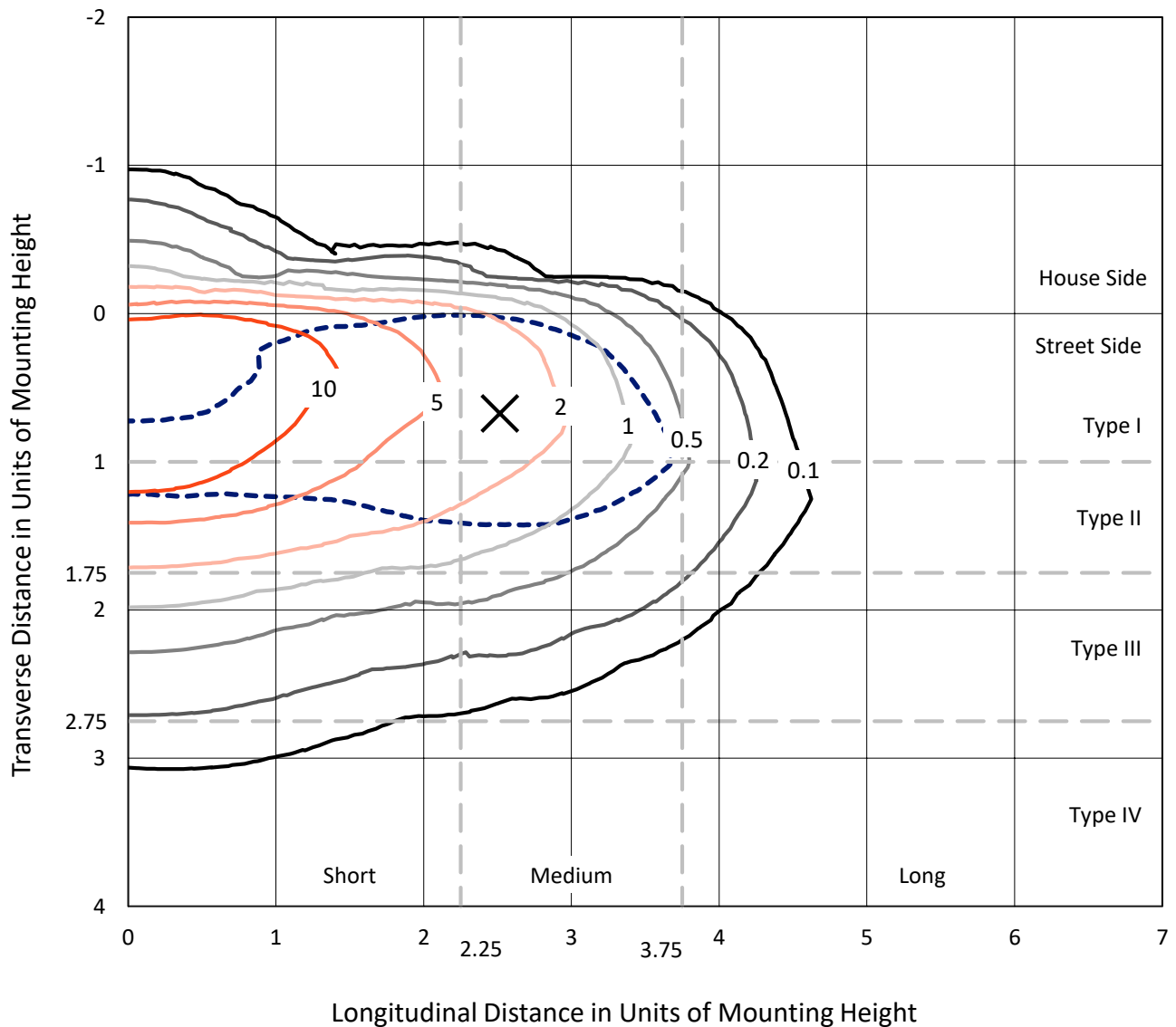


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

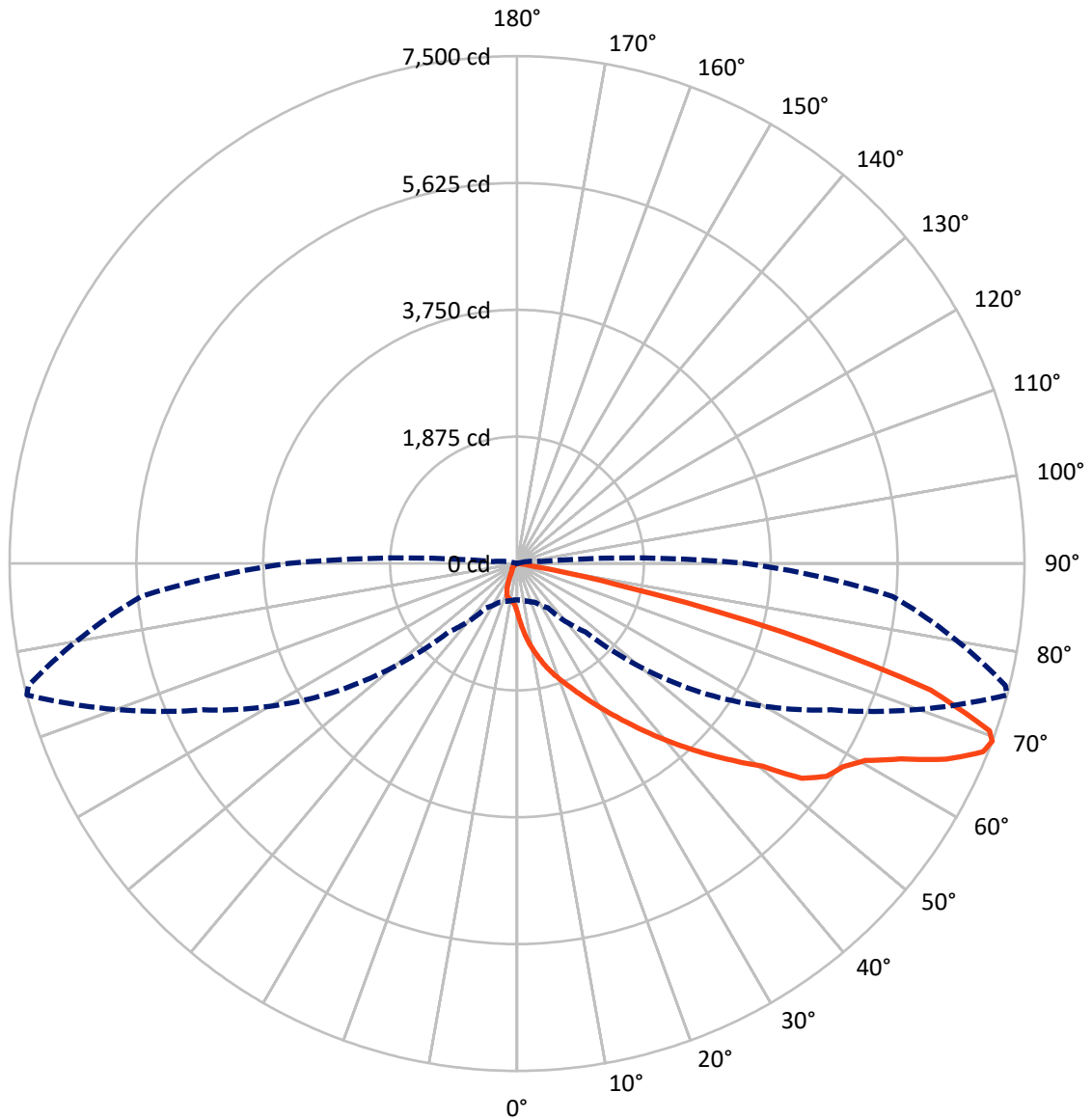


Based on 10 foot mounting height. Maximum calculated value = 19.9 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



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

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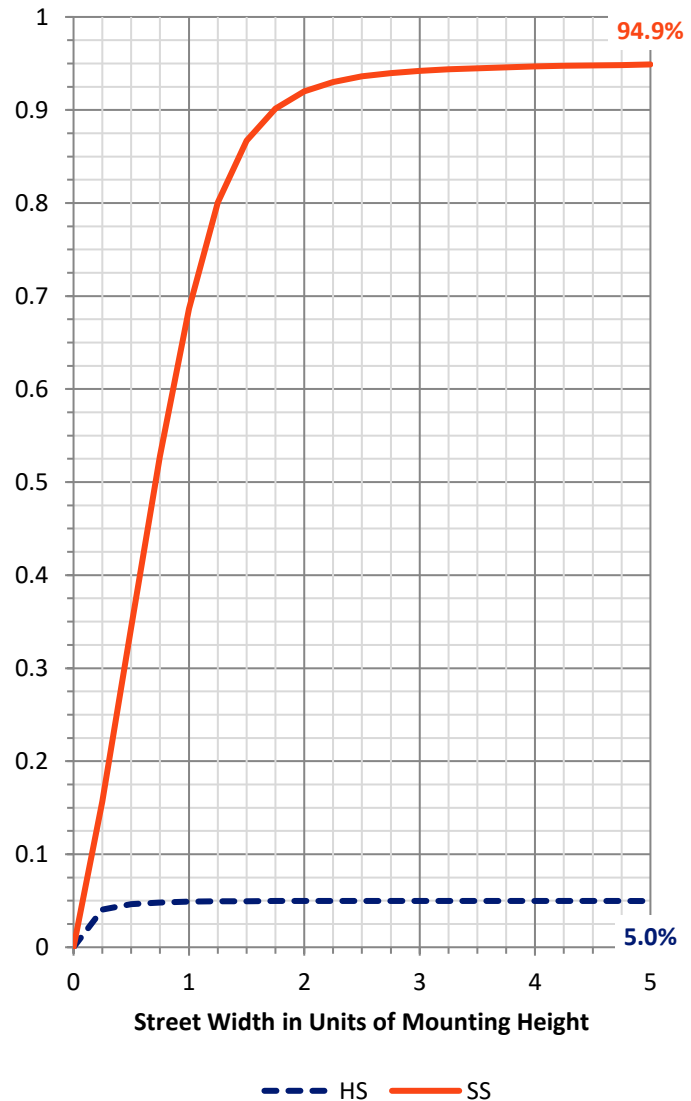
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	389.0	0.0	389.0
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	7407.0	0.0	7407.0
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	7796.0	0.0	7796.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.6	1.1
10°-20°	302.4	3.9
20°-30°	577.3	7.4
30°-40°	1035.6	13.3
40°-50°	1586.6	20.4
50°-60°	1844.0	23.7
60°-70°	1632.9	20.9
70°-80°	704.3	9.0
80°-90°	28.2	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°	7796.0	100.0
0°-180°	7796.0	100.0



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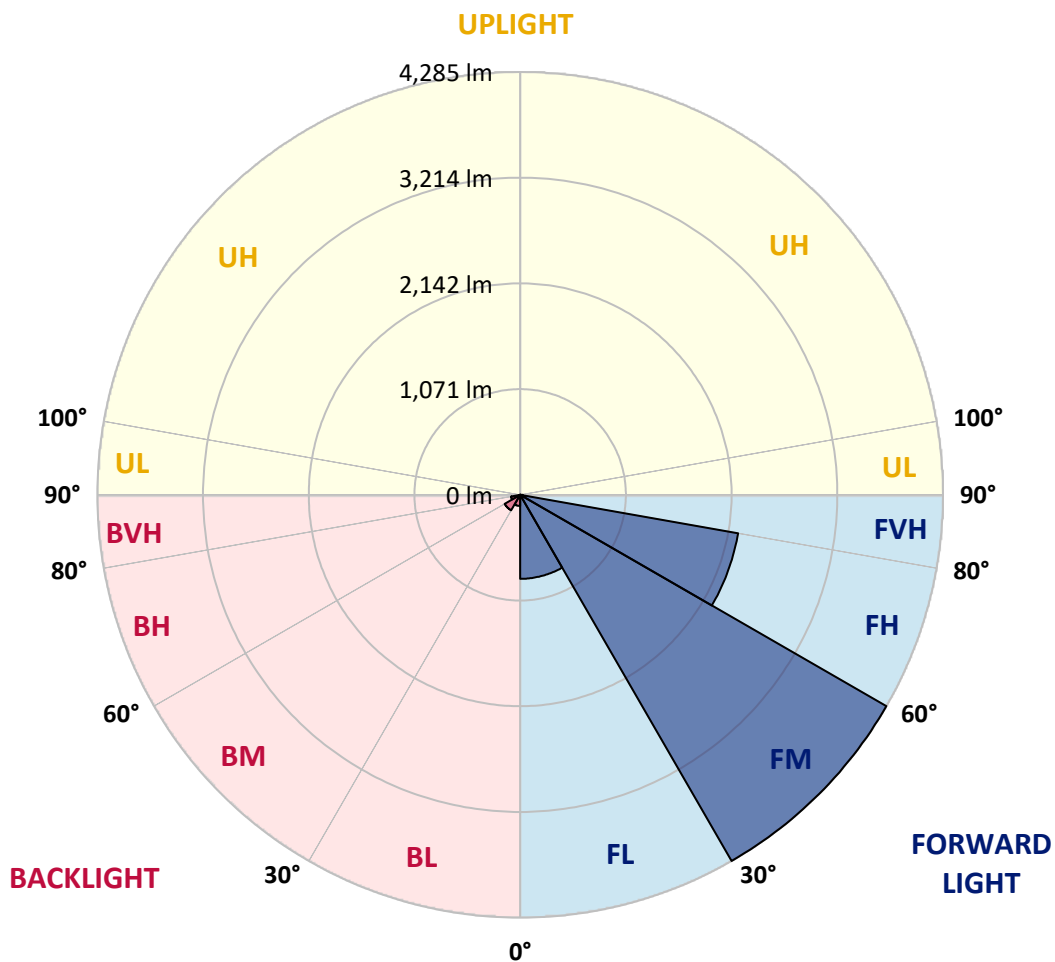
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	851.3	10.9			
FM	(30°-60°)	4284.9	55.0			
FH	(60°-80°)	2243.0	28.8			G2/5000
FVH	(80°-90°)	27.8	0.4			G1/100
BL	(0°-30°)	113.0	1.4	B1/500		
BM	(30°-60°)	181.3	2.3	B0/220		
BH	(60°-80°)	94.2	1.2	B0/110		G0/110
BVH	(80°-90°)	0.4	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°	725.4	725.4	725.4	725.4	725.4	725.4	725.4	725.4	725.4	725.4	725.4
2.5°	1195.0	1183.2	1171.4	1158.0	1127.7	1075.5	1009.9	939.2	851.6	836.5	765.8
5°	1450.8	1445.8	1434.0	1415.5	1381.8	1324.6	1250.5	1146.2	999.8	974.5	824.7
7.5°	1630.9	1627.6	1617.5	1595.6	1565.3	1508.1	1430.6	1317.9	1147.9	1119.3	898.8
10°	1792.5	1790.8	1782.4	1762.2	1731.9	1669.6	1587.2	1469.3	1289.3	1257.3	984.6
12.5°	1938.9	1940.6	1937.2	1927.1	1905.3	1846.4	1752.1	1624.2	1425.6	1390.2	1087.3
15°	2024.8	2029.8	2043.3	2063.5	2070.2	2023.1	1925.5	1784.1	1565.3	1535.0	1205.1
17.5°	1996.2	2001.2	2043.3	2112.3	2177.9	2184.7	2097.1	1935.6	1703.3	1673.0	1321.2
20°	1927.1	1933.9	1977.6	2071.9	2199.8	2289.0	2253.7	2100.5	1834.6	1797.5	1432.3
22.5°	2004.6	2004.6	2018.0	2075.3	2191.4	2331.1	2378.2	2265.4	1969.2	1923.8	1543.4
25°	2270.5	2265.4	2236.8	2213.3	2250.3	2374.9	2472.5	2433.8	2127.4	2075.3	1661.2
27.5°	2607.1	2630.7	2576.8	2491.0	2406.8	2460.7	2556.6	2600.4	2302.5	2248.6	1782.4
30°	2984.1	2994.2	2930.3	2815.8	2667.7	2615.5	2655.9	2743.4	2492.7	2433.8	1908.6
32.5°	3324.1	3315.7	3261.8	3142.3	2958.9	2846.1	2783.8	2857.9	2699.7	2632.4	2038.2
35°	3625.4	3632.1	3566.5	3428.5	3248.4	3128.9	2980.8	2987.5	2932.0	2854.5	2188.0
37.5°	3896.4	3884.6	3822.3	3684.3	3521.0	3391.4	3234.9	3122.1	3186.1	3105.3	2356.3
40°	4116.9	4105.1	4039.4	3904.8	3751.6	3645.6	3522.7	3302.2	3453.7	3361.1	2536.4
42.5°	4291.9	4278.4	4222.9	4093.3	3945.2	3850.9	3792.0	3524.4	3739.8	3647.3	2738.4
45°	4377.7	4366.0	4332.3	4234.7	4105.1	4022.6	4051.2	3780.2	4046.2	3968.7	2960.6
47.5°	4276.7	4271.7	4310.4	4293.6	4219.5	4175.8	4275.1	4059.6	4367.6	4291.9	3216.4
50°	3970.4	3978.8	4091.6	4231.3	4266.7	4318.8	4458.5	4354.2	4712.7	4631.9	3510.9
52.5°	3214.7	3271.9	3611.9	3948.5	4209.4	4406.3	4674.0	4774.9	5274.8	5195.7	3970.4
55°	2400.1	2423.7	2793.9	3369.6	3978.8	4399.6	4833.9	5022.4	5552.5	5471.7	4091.6
57.5°	1903.6	1912.0	2095.5	2682.9	3504.2	4248.1	4918.0	5111.6	5673.7	5606.4	4271.7
60°	1494.6	1504.7	1637.7	2041.6	2836.0	3839.1	4796.8	5189.0	5911.0	5857.2	4586.4
62.5°	1163.0	1173.1	1253.9	1491.2	2127.4	3209.7	4552.8	5313.5	6362.1	6336.9	5101.5
65°	900.5	903.8	959.4	1070.4	1503.0	2528.0	4254.9	5429.7	6971.4	6949.5	5518.9
67.5°	664.8	669.9	708.6	777.6	1014.9	1816.1	3766.8	5340.5	7430.9	7366.9	5670.4
69°	536.9	542.0	575.6	631.2	801.2	1430.6	3320.8	5120.0	7499.9	7439.3	5574.4
70°	459.5	462.9	496.5	543.6	683.3	1215.2	2967.3	4929.8	7409.0	7350.1	5355.6
72.5°	294.5	311.4	345.0	375.3	452.8	804.5	2002.9	4088.2	6392.4	6291.4	4194.3
75°	163.3	168.3	228.9	265.9	301.3	523.4	1114.2	2549.9	4066.4	3995.7	2243.6
77.5°	134.6	138.0	161.6	202.0	202.0	292.9	420.8	1004.8	1546.8	1395.3	607.6
80°	94.3	97.6	122.9	133.0	144.7	164.9	136.3	220.5	239.0	212.1	90.9
82.5°	65.6	69.0	84.2	109.4	116.1	77.4	50.5	65.6	69.0	69.0	35.3
85°	11.8	16.8	62.3	90.9	69.0	23.6	28.6	23.6	21.9	23.6	8.4
87.5°	0.0	0.0	38.7	43.8	37.0	10.1	11.8	8.4	5.0	6.7	3.4
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°	725.4	725.4	725.4	725.4	725.4	725.4	725.4	725.4	725.4	725.4	725.4
2.5°	730.5	695.1	634.5	590.8	553.7	525.1	513.3	494.8	481.4	488.1	479.7
5°	750.7	688.4	590.8	528.5	484.7	447.7	417.4	393.8	375.3	372.0	368.6
7.5°	782.6	693.4	565.5	488.1	422.5	365.2	318.1	282.8	255.8	255.8	245.7
10°	826.4	706.9	550.4	447.7	350.1	272.7	225.5	191.9	178.4	176.7	173.4
12.5°	887.0	732.1	538.6	395.5	272.7	198.6	170.0	158.2	153.2	151.5	149.8
15°	969.5	769.2	525.1	331.6	207.0	163.3	151.5	141.4	136.3	134.6	133.0
17.5°	1048.6	802.8	496.5	265.9	168.3	148.1	134.6	126.2	119.5	117.8	117.8
20°	1122.6	831.5	447.7	207.0	151.5	133.0	119.5	109.4	102.7	101.0	101.0
22.5°	1200.0	855.0	387.1	168.3	138.0	117.8	104.4	94.3	87.5	85.8	84.2
25°	1282.5	871.8	318.1	149.8	124.5	104.4	89.2	80.8	75.7	74.1	72.4
27.5°	1371.7	878.6	252.5	136.3	109.4	90.9	77.4	69.0	65.6	64.0	64.0
30°	1452.5	871.8	195.2	121.2	95.9	79.1	67.3	60.6	57.2	55.5	55.5
32.5°	1536.7	855.0	156.5	107.7	84.2	67.3	57.2	52.2	50.5	48.8	48.8
35°	1625.9	833.1	134.6	95.9	72.4	58.9	50.5	47.1	45.4	43.8	43.8
37.5°	1730.2	806.2	122.9	85.8	64.0	52.2	43.8	42.1	40.4	40.4	40.4
40°	1848.0	772.5	114.5	77.4	57.2	45.4	38.7	37.0	35.3	35.3	35.3
42.5°	1972.6	733.8	106.0	69.0	50.5	38.7	33.7	33.7	32.0	32.0	30.3
45°	2112.3	695.1	97.6	60.6	43.8	33.7	28.6	26.9	26.9	25.2	25.2
47.5°	2277.2	659.8	89.2	53.9	38.7	28.6	25.2	23.6	21.9	20.2	20.2
50°	2509.5	656.4	79.1	47.1	35.3	23.6	20.2	18.5	16.8	15.1	15.1
52.5°	2740.1	626.1	67.3	38.7	28.6	20.2	15.1	13.5	11.8	11.8	10.1
55°	2792.3	575.6	58.9	33.7	21.9	15.1	11.8	8.4	8.4	6.7	6.7
57.5°	2906.7	552.1	50.5	26.9	16.8	11.8	6.7	5.0	5.0	5.0	5.0
60°	3132.2	545.3	43.8	23.6	11.8	8.4	5.0	3.4	3.4	1.7	1.7
62.5°	3443.6	538.6	37.0	20.2	8.4	5.0	3.4	1.7	0.0	0.0	0.0
65°	3615.3	493.1	30.3	15.1	6.7	5.0	1.7	0.0	0.0	0.0	0.0
67.5°	3569.8	407.3	26.9	10.1	5.0	3.4	1.7	0.0	0.0	0.0	0.0
69°	3379.7	343.4	21.9	8.4	5.0	3.4	1.7	0.0	0.0	0.0	0.0
70°	3150.8	296.2	20.2	6.7	3.4	1.7	1.7	0.0	0.0	0.0	0.0
72.5°	2236.8	154.8	13.5	5.0	3.4	1.7	0.0	0.0	0.0	0.0	0.0
75°	1045.2	69.0	8.4	3.4	1.7	1.7	0.0	0.0	0.0	0.0	0.0
77.5°	230.6	32.0	5.0	3.4	1.7	0.0	0.0	0.0	0.0	0.0	0.0
80°	43.8	11.8	3.4	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	15.1	5.0	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	5.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.7	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)