

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: P231079

Luminaire Tested: **ARCH-M-AF48-80-D-U-T2R-7030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231079  
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-AF48-80-D-U-T2R-7030-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 535mA 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: 8027 lumens  
Efficiency: N/A  
Efficacy: 96.7 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): 83  
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

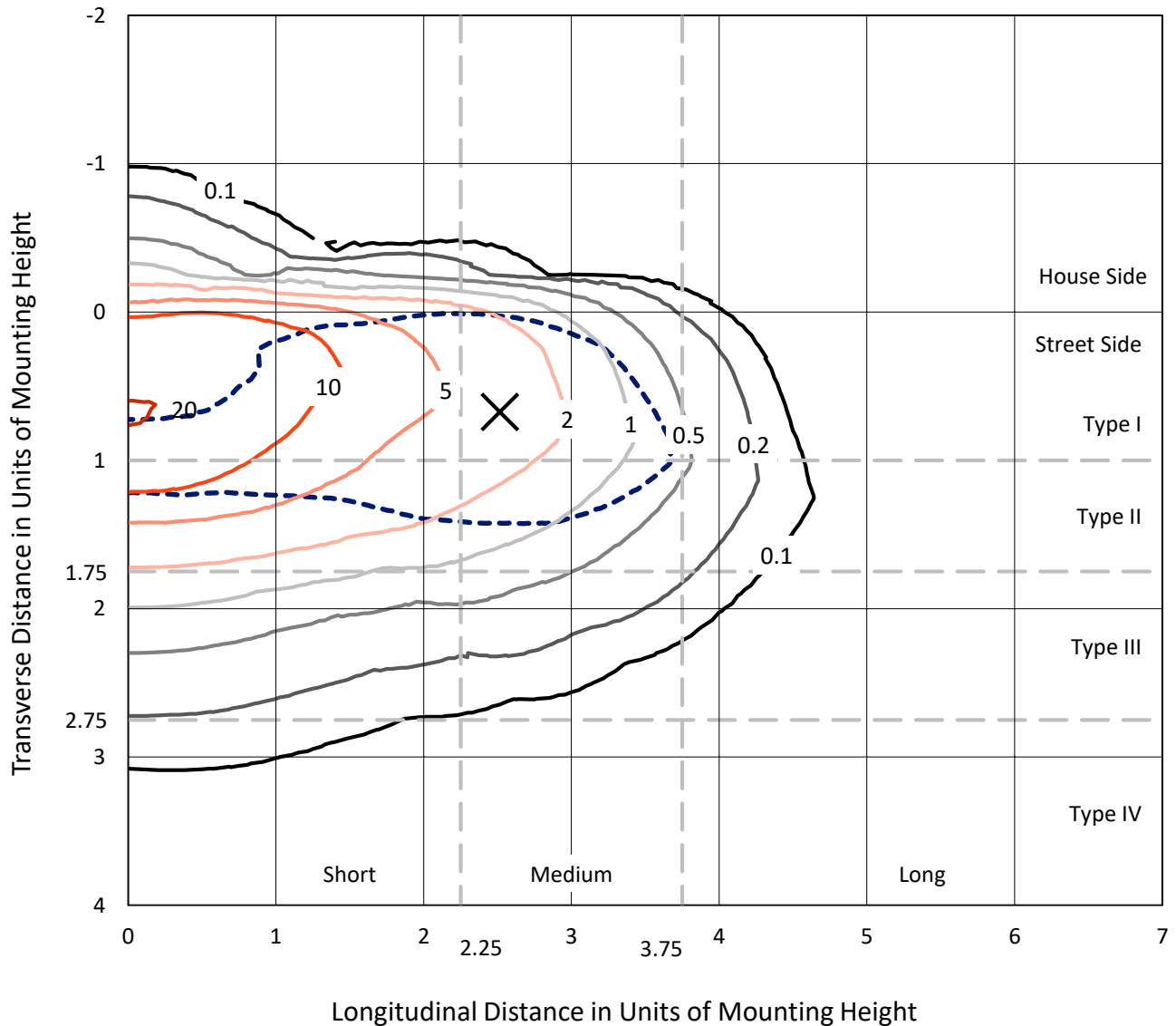


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

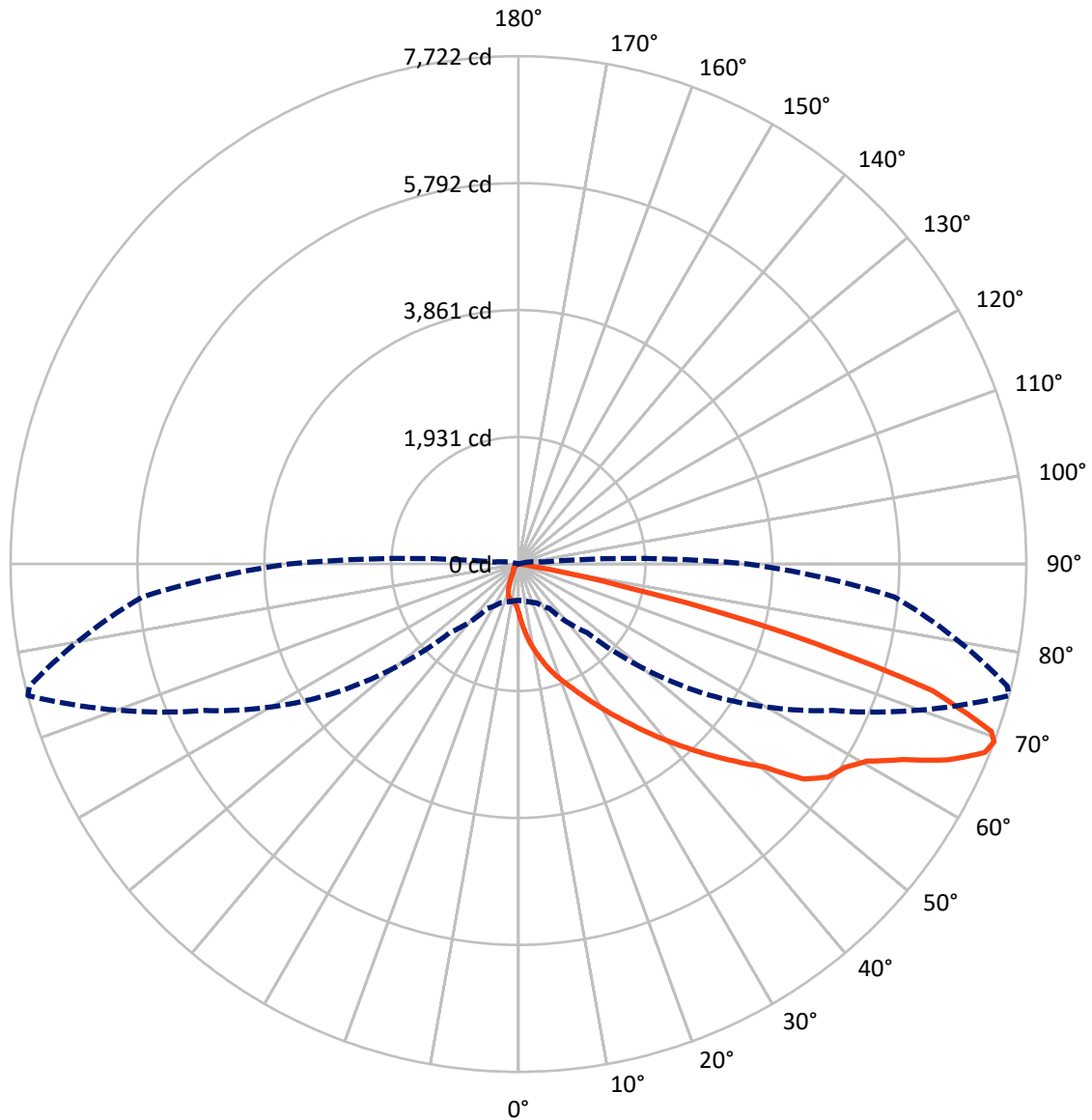


Based on 10 foot mounting height. Maximum calculated value = 20.4 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



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

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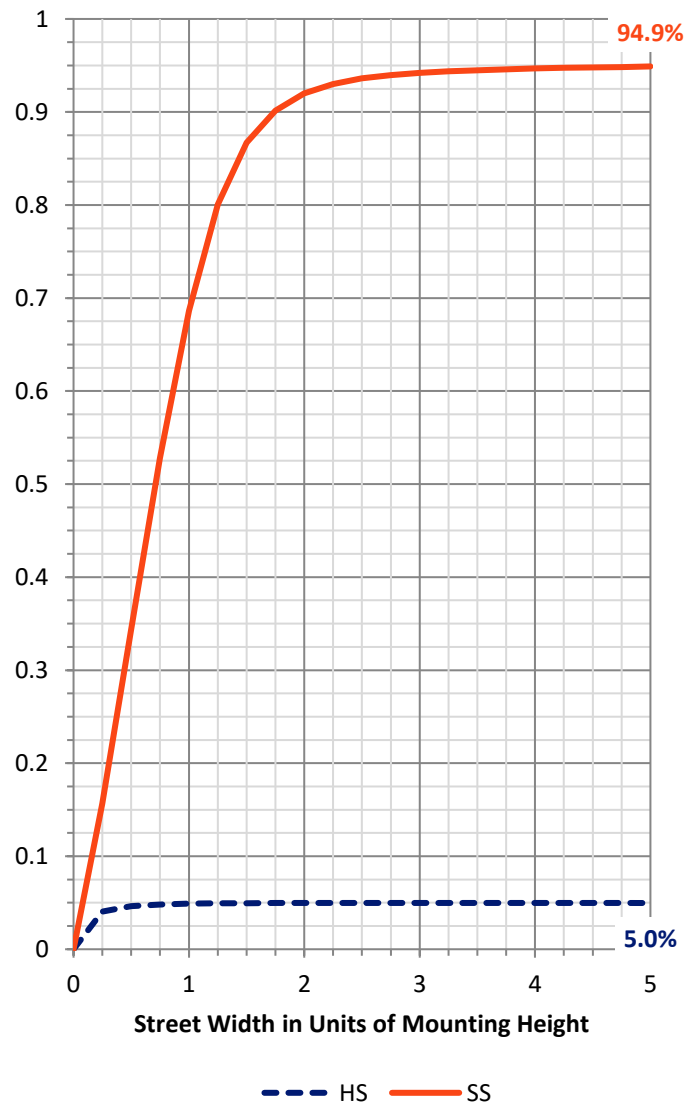
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	400.5	0.0	400.5
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	7626.5	0.0	7626.5
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	8027.0	0.0	8027.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.1	1.1
10°-20°	311.4	3.9
20°-30°	594.4	7.4
30°-40°	1066.3	13.3
40°-50°	1633.6	20.4
50°-60°	1898.7	23.7
60°-70°	1681.3	20.9
70°-80°	725.2	9.0
80°-90°	29.1	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°	8027.0	100.0
0°-180°	8027.0	100.0

**Coefficient of Utilization**



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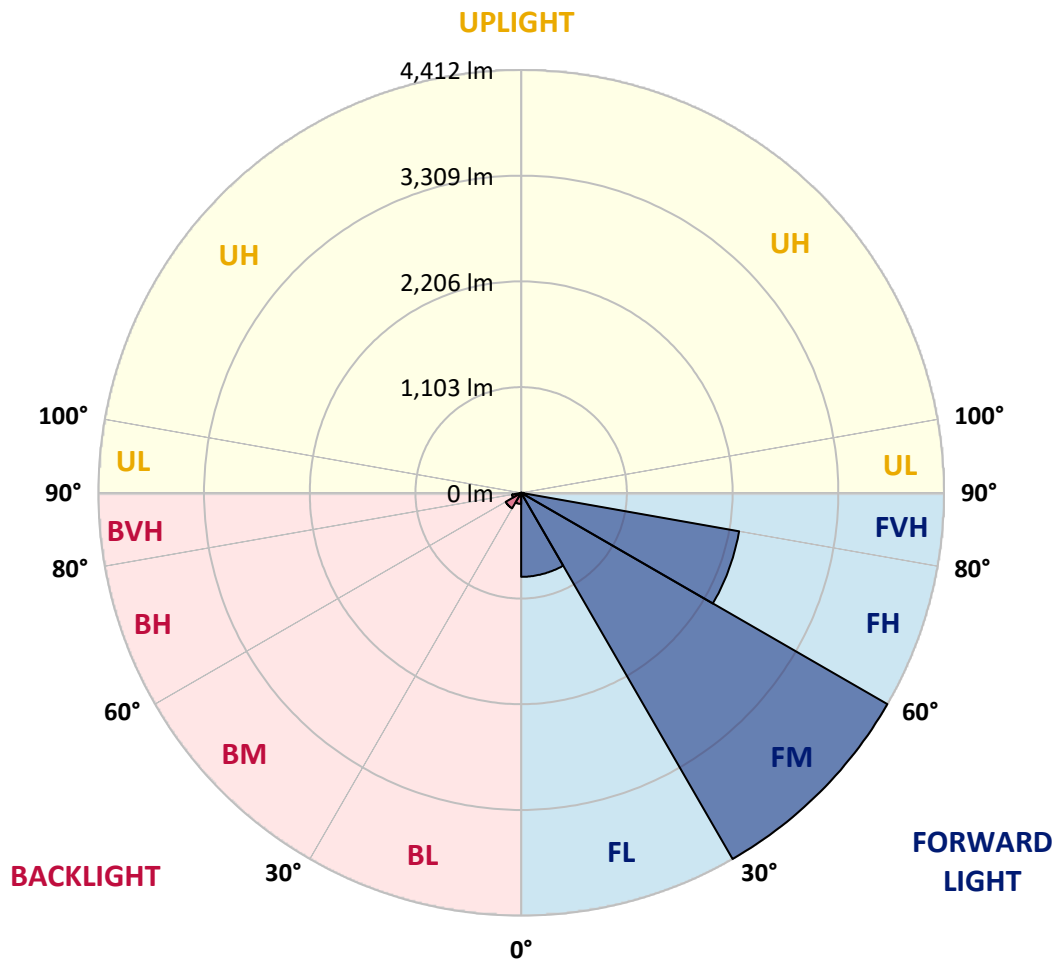
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	876.6	10.9			
FM	(30°-60°)	4411.8	55.0			
FH	(60°-80°)	2309.5	28.8			G2/5000
FVH	(80°-90°)	28.6	0.4			G1/100
BL	(0°-30°)	116.3	1.4	B1/500		
BM	(30°-60°)	186.7	2.3	B0/220		
BH	(60°-80°)	97.0	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°	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9
2.5°	1230.4	1218.3	1206.1	1192.3	1161.1	1107.4	1039.8	967.0	876.9	861.3	788.5
5°	1493.8	1488.6	1476.5	1457.4	1422.8	1363.8	1287.6	1180.2	1029.4	1003.4	849.2
7.5°	1679.2	1675.8	1665.4	1642.9	1611.7	1552.7	1473.0	1356.9	1181.9	1152.4	925.4
10°	1845.6	1843.9	1835.2	1814.4	1783.2	1719.1	1634.2	1512.9	1327.5	1294.5	1013.8
12.5°	1996.4	1998.1	1994.6	1984.2	1961.7	1901.1	1804.0	1672.3	1467.8	1431.4	1119.5
15°	2084.8	2090.0	2103.8	2124.6	2131.6	2083.0	1982.5	1836.9	1611.7	1580.5	1240.8
17.5°	2055.3	2060.5	2103.8	2174.9	2242.5	2249.4	2159.3	1992.9	1753.8	1722.6	1360.4
20°	1984.2	1991.2	2036.2	2133.3	2265.0	2356.8	2320.4	2162.7	1888.9	1850.8	1474.8
22.5°	2064.0	2064.0	2077.8	2136.7	2256.3	2400.2	2448.7	2332.6	2027.6	1980.8	1589.1
25°	2337.8	2332.6	2303.1	2278.9	2317.0	2445.2	2545.7	2505.9	2190.5	2136.7	1710.4
27.5°	2684.4	2708.6	2653.2	2564.8	2478.1	2533.6	2632.4	2677.4	2370.7	2315.2	1835.2
30°	3072.6	3083.0	3017.1	2899.3	2746.8	2693.0	2734.6	2824.7	2566.5	2505.9	1965.2
32.5°	3422.6	3413.9	3358.5	3235.5	3046.6	2930.4	2866.3	2942.6	2779.7	2710.4	2098.6
35°	3732.8	3739.7	3672.2	3530.1	3344.6	3221.6	3069.1	3076.0	3018.8	2939.1	2252.9
37.5°	4011.8	3999.7	3935.6	3793.5	3625.4	3491.9	3330.8	3214.7	3280.5	3197.3	2426.2
40°	4238.8	4226.7	4159.1	4020.5	3862.8	3753.6	3627.1	3400.1	3556.1	3460.7	2611.6
42.5°	4419.1	4405.2	4348.0	4214.6	4062.1	3965.0	3904.4	3628.8	3850.7	3755.3	2819.5
45°	4507.5	4495.3	4460.7	4360.1	4226.7	4141.8	4171.3	3892.2	4166.1	4086.3	3048.3
47.5°	4403.5	4398.3	4438.1	4420.8	4344.6	4299.5	4401.7	4179.9	4497.1	4419.1	3311.7
50°	4088.1	4096.7	4212.8	4356.7	4393.1	4446.8	4590.6	4483.2	4852.3	4769.1	3615.0
52.5°	3310.0	3368.9	3719.0	4065.5	4334.2	4536.9	4812.5	4916.4	5431.1	5349.7	4088.1
55°	2471.2	2495.5	2876.7	3469.4	4096.7	4530.0	4977.1	5171.2	5717.1	5633.9	4212.8
57.5°	1960.0	1968.7	2157.5	2762.4	3608.0	4374.0	5063.7	5263.0	5841.8	5772.5	4398.3
60°	1538.9	1549.3	1686.2	2102.1	2920.1	3952.9	4939.0	5342.7	6086.2	6030.7	4722.3
62.5°	1197.5	1207.9	1291.1	1535.4	2190.5	3304.8	4687.7	5471.0	6550.6	6524.6	5252.6
65°	927.1	930.6	987.8	1102.2	1547.5	2602.9	4380.9	5590.6	7178.0	7155.4	5682.4
67.5°	684.5	689.7	729.6	800.6	1045.0	1869.9	3878.4	5498.7	7651.1	7585.2	5838.4
69°	552.8	558.0	592.7	649.9	824.9	1473.0	3419.1	5271.7	7722.1	7659.7	5739.6
70°	473.1	476.6	511.2	559.7	703.6	1251.2	3055.2	5075.9	7628.5	7567.9	5514.3
72.5°	303.3	320.6	355.3	386.5	466.2	828.4	2062.2	4209.4	6581.8	6477.8	4318.6
75°	168.1	173.3	235.7	273.8	310.2	539.0	1147.2	2625.4	4186.9	4114.1	2310.0
77.5°	138.6	142.1	166.4	208.0	208.0	301.5	433.2	1034.6	1592.6	1436.6	625.6
80°	97.0	100.5	126.5	136.9	149.0	169.8	140.4	227.0	246.1	218.4	93.6
82.5°	67.6	71.1	86.6	112.6	119.6	79.7	52.0	67.6	71.1	71.1	36.4
85°	12.1	17.3	64.1	93.6	71.1	24.3	29.5	24.3	22.5	24.3	8.7
87.5°	0.0	0.0	39.9	45.1	38.1	10.4	12.1	8.7	5.2	6.9	3.5
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°	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9	746.9
2.5°	752.1	715.7	653.3	608.3	570.1	540.7	528.6	509.5	495.6	502.6	493.9
5°	772.9	708.8	608.3	544.2	499.1	461.0	429.8	405.5	386.5	383.0	379.5
7.5°	805.8	714.0	582.3	502.6	435.0	376.1	327.5	291.1	263.4	263.4	253.0
10°	850.9	727.8	566.7	461.0	360.5	280.7	232.2	197.6	183.7	182.0	178.5
12.5°	913.3	753.8	554.5	407.2	280.7	204.5	175.0	162.9	157.7	156.0	154.2
15°	998.2	792.0	540.7	341.4	213.2	168.1	156.0	145.6	140.4	138.6	136.9
17.5°	1079.6	826.6	511.2	273.8	173.3	152.5	138.6	130.0	123.0	121.3	121.3
20°	1155.9	856.1	461.0	213.2	156.0	136.9	123.0	112.6	105.7	104.0	104.0
22.5°	1235.6	880.3	398.6	173.3	142.1	121.3	107.4	97.0	90.1	88.4	86.6
25°	1320.5	897.7	327.5	154.2	128.2	107.4	91.8	83.2	78.0	76.3	74.5
27.5°	1412.4	904.6	259.9	140.4	112.6	93.6	79.7	71.1	67.6	65.9	65.9
30°	1495.6	897.7	201.0	124.8	98.8	81.4	69.3	62.4	58.9	57.2	57.2
32.5°	1582.2	880.3	161.2	110.9	86.6	69.3	58.9	53.7	52.0	50.3	50.3
35°	1674.0	857.8	138.6	98.8	74.5	60.7	52.0	48.5	46.8	45.1	45.1
37.5°	1781.5	830.1	126.5	88.4	65.9	53.7	45.1	43.3	41.6	41.6	41.6
40°	1902.8	795.4	117.8	79.7	58.9	46.8	39.9	38.1	36.4	36.4	36.4
42.5°	2031.0	755.6	109.2	71.1	52.0	39.9	34.7	34.7	32.9	32.9	31.2
45°	2174.9	715.7	100.5	62.4	45.1	34.7	29.5	27.7	27.7	26.0	26.0
47.5°	2344.7	679.3	91.8	55.5	39.9	29.5	26.0	24.3	22.5	20.8	20.8
50°	2583.9	675.9	81.4	48.5	36.4	24.3	20.8	19.1	17.3	15.6	15.6
52.5°	2821.3	644.7	69.3	39.9	29.5	20.8	15.6	13.9	12.1	12.1	10.4
55°	2875.0	592.7	60.7	34.7	22.5	15.6	12.1	8.7	8.7	6.9	6.9
57.5°	2992.8	568.4	52.0	27.7	17.3	12.1	6.9	5.2	5.2	5.2	5.2
60°	3225.1	561.5	45.1	24.3	12.1	8.7	5.2	3.5	3.5	1.7	1.7
62.5°	3545.7	554.5	38.1	20.8	8.7	5.2	3.5	1.7	0.0	0.0	0.0
65°	3722.4	507.8	31.2	15.6	6.9	5.2	1.7	0.0	0.0	0.0	0.0
67.5°	3675.6	419.4	27.7	10.4	5.2	3.5	1.7	0.0	0.0	0.0	0.0
69°	3479.8	353.5	22.5	8.7	5.2	3.5	1.7	0.0	0.0	0.0	0.0
70°	3244.1	305.0	20.8	6.9	3.5	1.7	1.7	0.0	0.0	0.0	0.0
72.5°	2303.1	159.4	13.9	5.2	3.5	1.7	0.0	0.0	0.0	0.0	0.0
75°	1076.2	71.1	8.7	3.5	1.7	1.7	0.0	0.0	0.0	0.0	0.0
77.5°	237.4	32.9	5.2	3.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0
80°	45.1	12.1	3.5	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	15.6	5.2	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	5.2	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)