

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: P231107

Luminaire Tested: **ARCH-M-AF48-100-D-U-T2R-7050-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231107  
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-7050-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 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: 10858 lumens  
Efficiency: N/A  
Efficacy: 107.5 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 (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

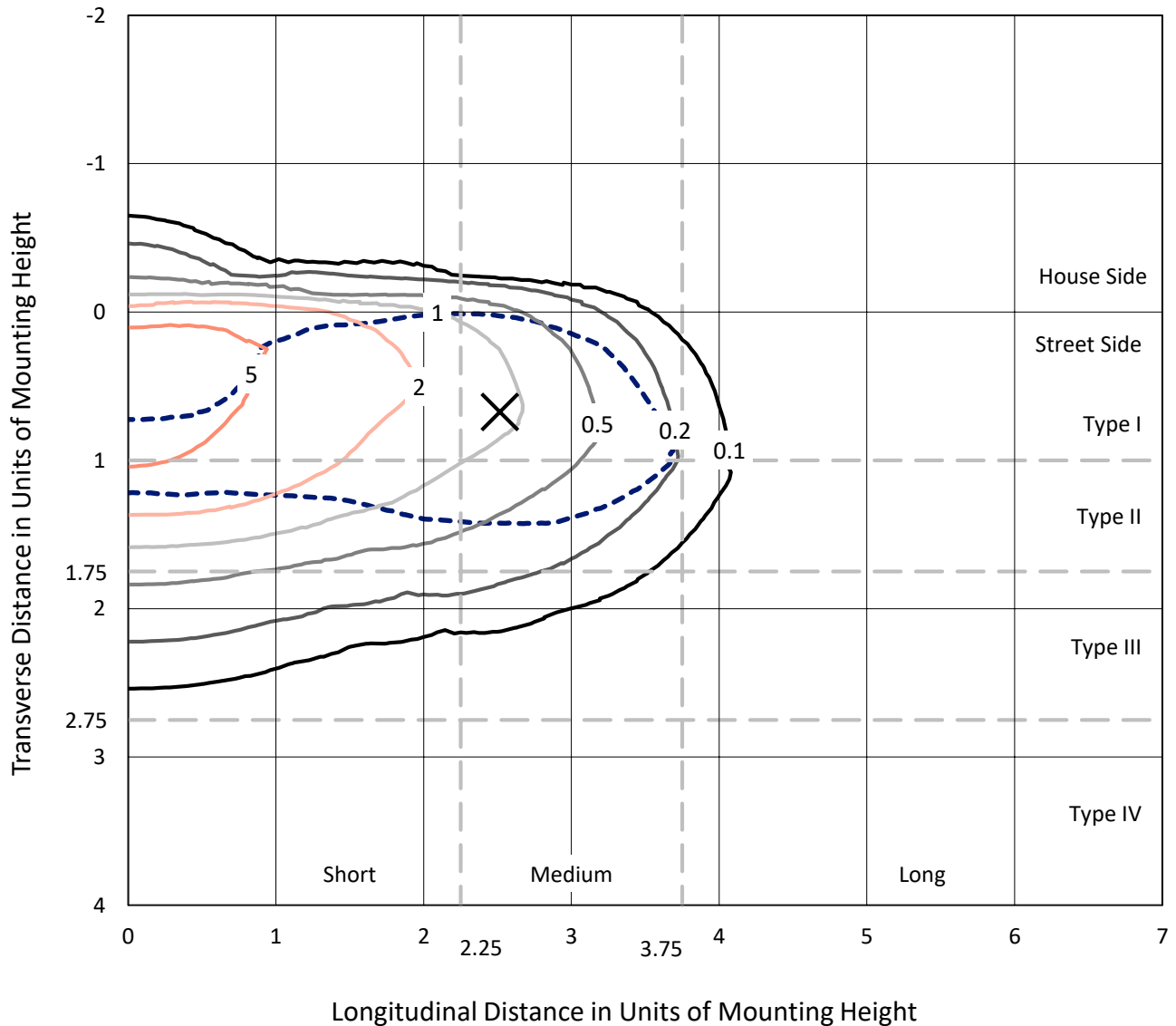


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

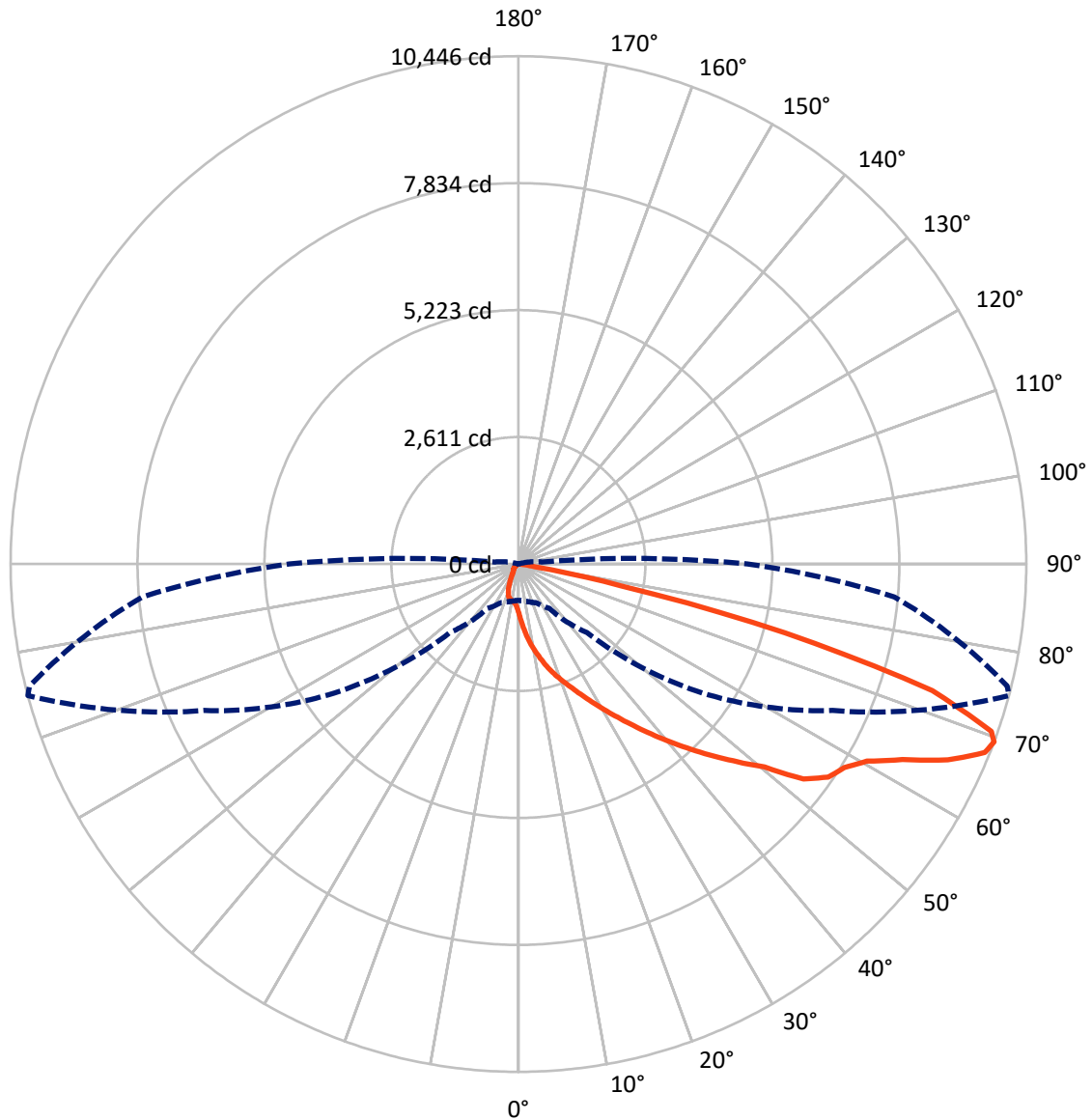


Based on 20 foot mounting height. Maximum calculated value = 6.9 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



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

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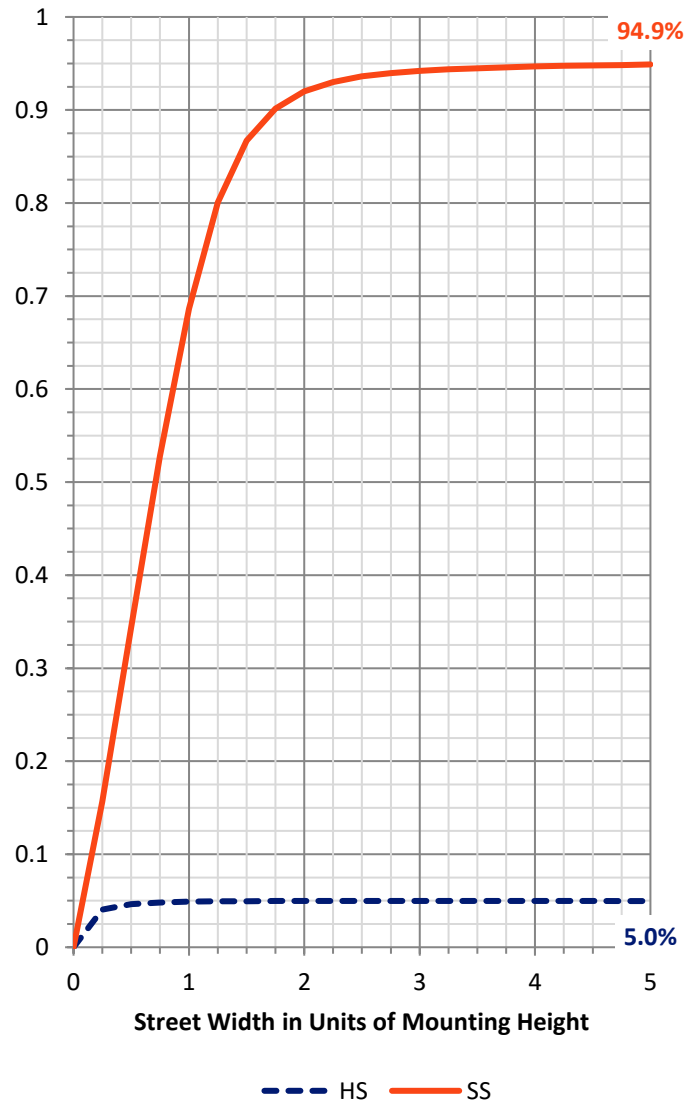
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	541.7	0.0	541.7
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	10316.3	0.0	10316.3
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	10858.0	0.0	10858.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.8	1.1
10°-20°	421.2	3.9
20°-30°	804.1	7.4
30°-40°	1442.3	13.3
40°-50°	2209.8	20.4
50°-60°	2568.3	23.7
60°-70°	2274.3	20.9
70°-80°	981.0	9.0
80°-90°	39.3	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°	10858.0	100.0
0°-180°	10858.0	100.0

**Coefficient of Utilization**



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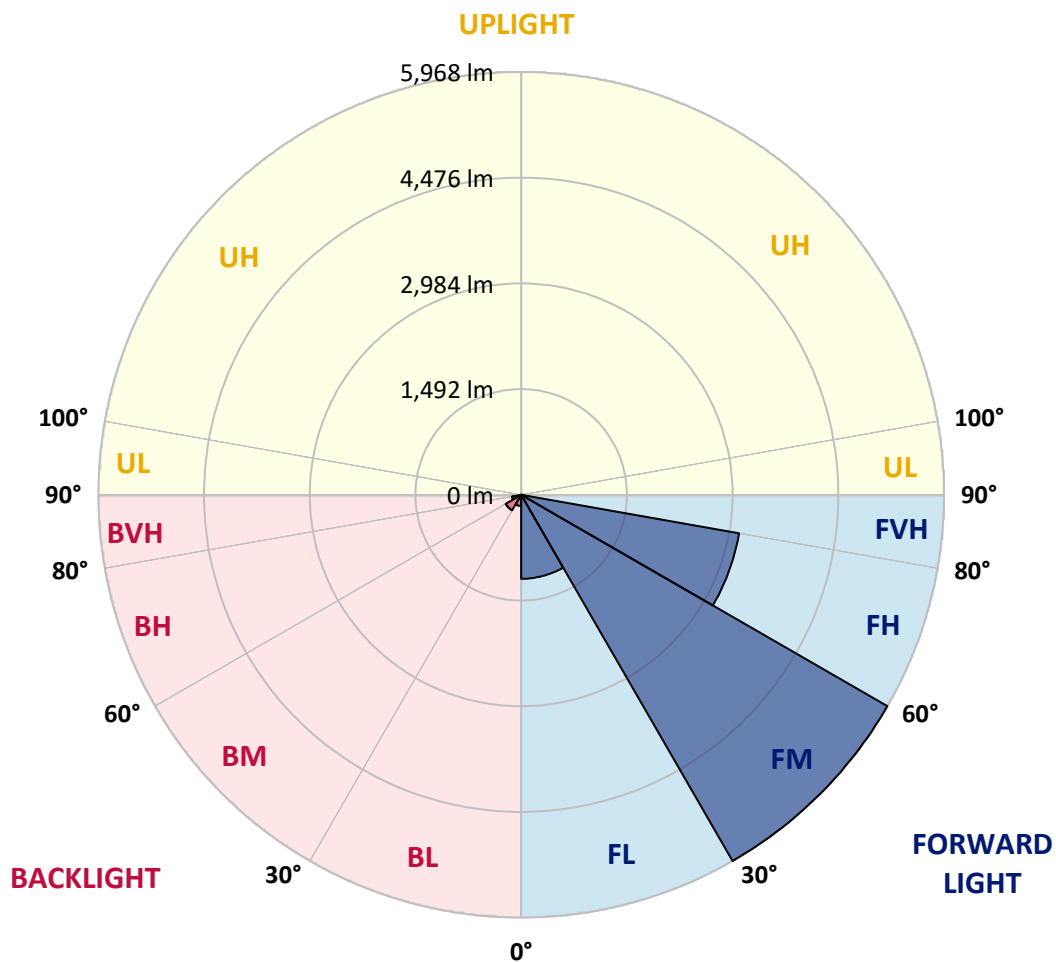
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1185.7	10.9			
FM	(30°-60°)	5967.8	55.0			
FH	(60°-80°)	3124.0	28.8			G2/5000
FVH	(80°-90°)	38.7	0.4			G1/100
BL	(0°-30°)	157.3	1.4	B1/500		
BM	(30°-60°)	252.6	2.3	B1/1000		
BH	(60°-80°)	131.2	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°	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3
2.5°	1664.4	1647.9	1631.5	1612.8	1570.6	1497.9	1406.5	1308.0	1186.1	1165.0	1066.6
5°	2020.7	2013.6	1997.2	1971.4	1924.6	1844.9	1741.7	1596.4	1392.4	1357.3	1148.6
7.5°	2271.5	2266.8	2252.7	2222.3	2180.1	2100.4	1992.5	1835.5	1598.7	1558.9	1251.8
10°	2496.5	2494.2	2482.5	2454.3	2412.1	2325.4	2210.5	2046.5	1795.6	1751.1	1371.3
12.5°	2700.5	2702.8	2698.1	2684.1	2653.6	2571.5	2440.3	2262.1	1985.5	1936.3	1514.3
15°	2820.0	2827.1	2845.8	2873.9	2883.3	2817.7	2681.7	2484.8	2180.1	2137.9	1678.4
17.5°	2780.2	2787.2	2845.8	2941.9	3033.3	3042.7	2920.8	2695.8	2372.3	2330.1	1840.2
20°	2684.1	2693.4	2754.4	2885.7	3063.8	3188.1	3138.8	2925.5	2555.1	2503.6	1994.9
22.5°	2791.9	2791.9	2810.6	2890.3	3052.1	3246.7	3312.3	3155.2	2742.7	2679.4	2149.6
25°	3162.3	3155.2	3115.4	3082.6	3134.1	3307.6	3443.6	3389.7	2963.0	2890.3	2313.7
27.5°	3631.1	3663.9	3588.9	3469.4	3352.1	3427.2	3560.8	3621.7	3206.8	3131.8	2482.5
30°	4156.2	4170.3	4081.2	3921.8	3715.5	3642.8	3699.1	3821.0	3471.7	3389.7	2658.3
32.5°	4629.7	4618.0	4543.0	4376.5	4121.0	3964.0	3877.2	3980.4	3760.0	3666.3	2838.8
35°	5049.3	5058.7	4967.3	4775.1	4524.2	4357.8	4151.5	4160.9	4083.5	3975.7	3047.4
37.5°	5426.7	5410.3	5323.6	5131.4	4904.0	4723.5	4505.5	4348.4	4437.5	4325.0	3281.8
40°	5733.8	5717.4	5626.0	5438.5	5225.1	5077.5	4906.3	4599.2	4810.2	4681.3	3532.6
42.5°	5977.6	5958.9	5881.5	5701.0	5494.7	5363.4	5281.4	4908.7	5208.7	5079.8	3813.9
45°	6097.2	6080.8	6033.9	5897.9	5717.4	5602.5	5642.4	5265.0	5635.4	5527.5	4123.4
47.5°	5956.5	5949.5	6003.4	5980.0	5876.8	5815.9	5954.2	5654.1	6083.1	5977.6	4479.7
50°	5529.9	5541.6	5698.7	5893.2	5942.4	6015.1	6209.7	6064.3	6563.6	6451.1	4889.9
52.5°	4477.3	4557.0	5030.6	5499.4	5862.7	6137.0	6509.7	6650.4	7346.6	7236.4	5529.9
55°	3342.8	3375.6	3891.3	4693.0	5541.6	6127.6	6732.4	6995.0	7733.4	7620.9	5698.7
57.5°	2651.2	2663.0	2918.5	3736.6	4880.5	5916.7	6849.6	7119.2	7902.2	7808.4	5949.5
60°	2081.6	2095.7	2280.9	2843.5	3949.9	5347.0	6680.9	7227.0	8232.7	8157.7	6387.8
62.5°	1619.8	1633.9	1746.4	2076.9	2963.0	4470.3	6341.0	7400.5	8860.9	8825.8	7105.1
65°	1254.1	1258.8	1336.2	1490.9	2093.3	3520.9	5926.0	7562.3	9709.5	9679.0	7686.5
67.5°	925.9	933.0	986.9	1083.0	1413.5	2529.3	5246.2	7438.0	10349.5	10260.4	7897.5
69°	747.8	754.8	801.7	879.1	1115.8	1992.5	4625.0	7130.9	10445.6	10361.2	7763.9
70°	640.0	644.6	691.5	757.2	951.7	1692.5	4132.8	6866.0	10319.0	10236.9	7459.1
72.5°	410.2	433.7	480.6	522.7	630.6	1120.5	2789.6	5694.0	8903.1	8762.5	5841.6
75°	227.4	234.4	318.8	370.4	419.6	729.0	1551.8	3551.4	5663.5	5565.0	3124.8
77.5°	187.5	192.2	225.0	281.3	281.3	407.9	586.0	1399.5	2154.3	1943.3	846.2
80°	131.3	136.0	171.1	185.2	201.6	229.7	189.9	307.1	332.9	295.4	126.6
82.5°	91.4	96.1	117.2	152.4	161.7	107.8	70.3	91.4	96.1	96.1	49.2
85°	16.4	23.4	86.7	126.6	96.1	32.8	39.9	32.8	30.5	32.8	11.7
87.5°	0.0	0.0	53.9	60.9	51.6	14.1	16.4	11.7	7.0	9.4	4.7
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°	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3	1010.3
2.5°	1017.4	968.1	883.7	822.8	771.2	731.4	715.0	689.2	670.4	679.8	668.1
5°	1045.5	958.8	822.8	736.1	675.1	623.5	581.4	548.5	522.7	518.1	513.4
7.5°	1090.0	965.8	787.6	679.8	588.4	508.7	443.0	393.8	356.3	356.3	342.2
10°	1151.0	984.5	766.5	623.5	487.6	379.8	314.1	267.2	248.5	246.1	241.4
12.5°	1235.4	1019.7	750.1	550.9	379.8	276.6	236.8	220.4	213.3	211.0	208.6
15°	1350.2	1071.3	731.4	461.8	288.3	227.4	211.0	196.9	189.9	187.5	185.2
17.5°	1460.4	1118.2	691.5	370.4	234.4	206.3	187.5	175.8	166.4	164.1	164.1
20°	1563.6	1158.0	623.5	288.3	211.0	185.2	166.4	152.4	143.0	140.6	140.6
22.5°	1671.4	1190.8	539.2	234.4	192.2	164.1	145.3	131.3	121.9	119.6	117.2
25°	1786.2	1214.3	443.0	208.6	173.5	145.3	124.2	112.5	105.5	103.1	100.8
27.5°	1910.5	1223.7	351.6	189.9	152.4	126.6	107.8	96.1	91.4	89.1	89.1
30°	2023.0	1214.3	271.9	168.8	133.6	110.2	93.8	84.4	79.7	77.4	77.4
32.5°	2140.2	1190.8	218.0	150.0	117.2	93.8	79.7	72.7	70.3	68.0	68.0
35°	2264.5	1160.4	187.5	133.6	100.8	82.0	70.3	65.6	63.3	60.9	60.9
37.5°	2409.8	1122.9	171.1	119.6	89.1	72.7	60.9	58.6	56.3	56.3	56.3
40°	2573.9	1076.0	159.4	107.8	79.7	63.3	53.9	51.6	49.2	49.2	49.2
42.5°	2747.4	1022.1	147.7	96.1	70.3	53.9	46.9	46.9	44.5	44.5	42.2
45°	2941.9	968.1	136.0	84.4	60.9	46.9	39.9	37.5	37.5	35.2	35.2
47.5°	3171.6	918.9	124.2	75.0	53.9	39.9	35.2	32.8	30.5	28.1	28.1
50°	3495.1	914.2	110.2	65.6	49.2	32.8	28.1	25.8	23.4	21.1	21.1
52.5°	3816.3	872.0	93.8	53.9	39.9	28.1	21.1	18.8	16.4	16.4	14.1
55°	3889.0	801.7	82.0	46.9	30.5	21.1	16.4	11.7	11.7	9.4	9.4
57.5°	4048.4	768.9	70.3	37.5	23.4	16.4	9.4	7.0	7.0	7.0	7.0
60°	4362.5	759.5	60.9	32.8	16.4	11.7	7.0	4.7	4.7	2.3	2.3
62.5°	4796.2	750.1	51.6	28.1	11.7	7.0	4.7	2.3	0.0	0.0	0.0
65°	5035.3	686.8	42.2	21.1	9.4	7.0	2.3	0.0	0.0	0.0	0.0
67.5°	4972.0	567.3	37.5	14.1	7.0	4.7	2.3	0.0	0.0	0.0	0.0
69°	4707.1	478.2	30.5	11.7	7.0	4.7	2.3	0.0	0.0	0.0	0.0
70°	4388.3	412.6	28.1	9.4	4.7	2.3	2.3	0.0	0.0	0.0	0.0
72.5°	3115.4	215.7	18.8	7.0	4.7	2.3	0.0	0.0	0.0	0.0	0.0
75°	1455.7	96.1	11.7	4.7	2.3	2.3	0.0	0.0	0.0	0.0	0.0
77.5°	321.1	44.5	7.0	4.7	2.3	0.0	0.0	0.0	0.0	0.0	0.0
80°	60.9	16.4	4.7	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	21.1	7.0	2.3	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	7.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.3	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)