

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: P231097

Luminaire Tested: **ARCH-M-AF48-130-D-U-T2R-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231097  
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-AF48-130-D-U-T2R-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 845mA 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: 13470.2 lumens  
Efficiency: N/A  
Efficacy: 102.8 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

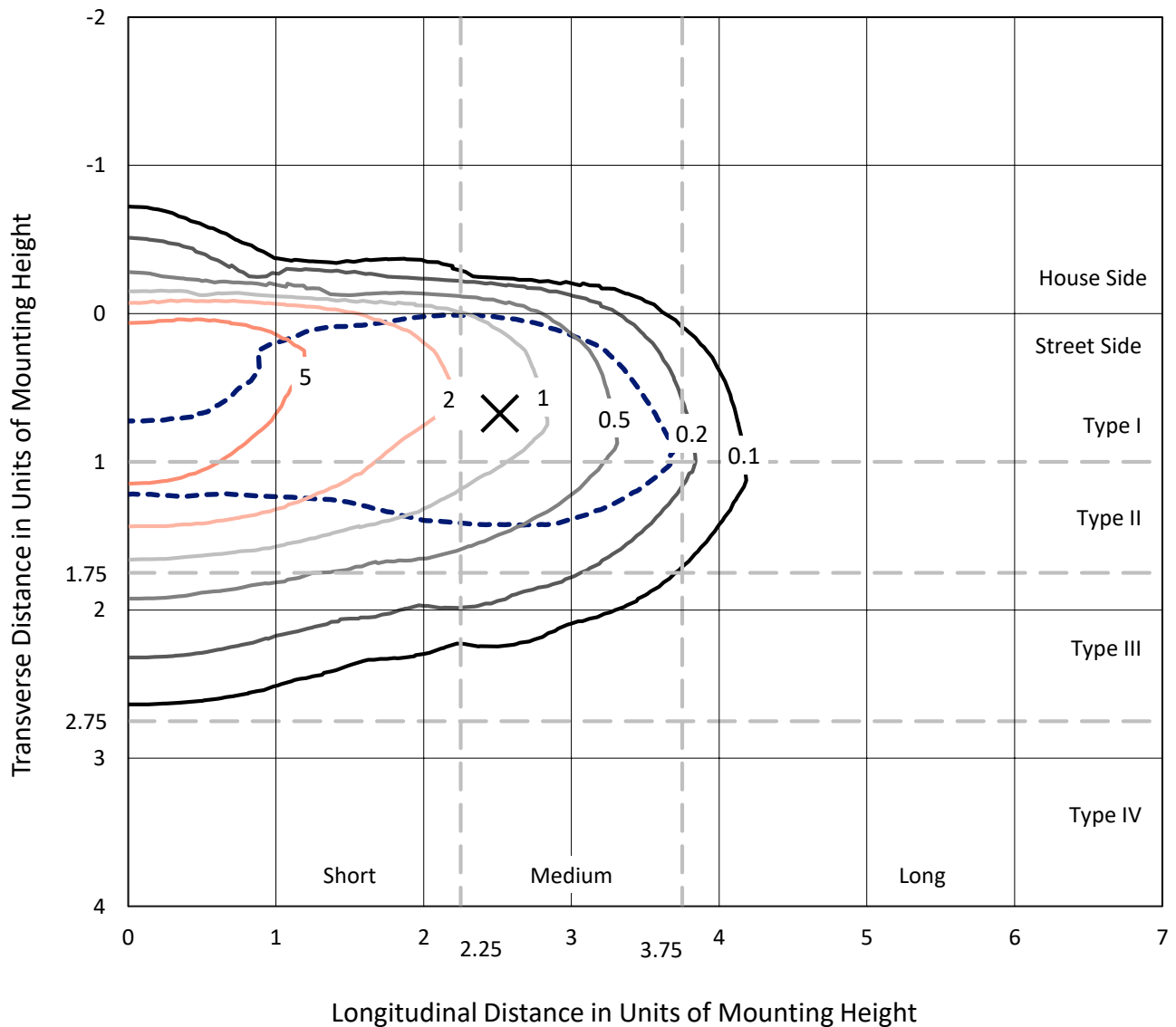
Input Watts (W): 131  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

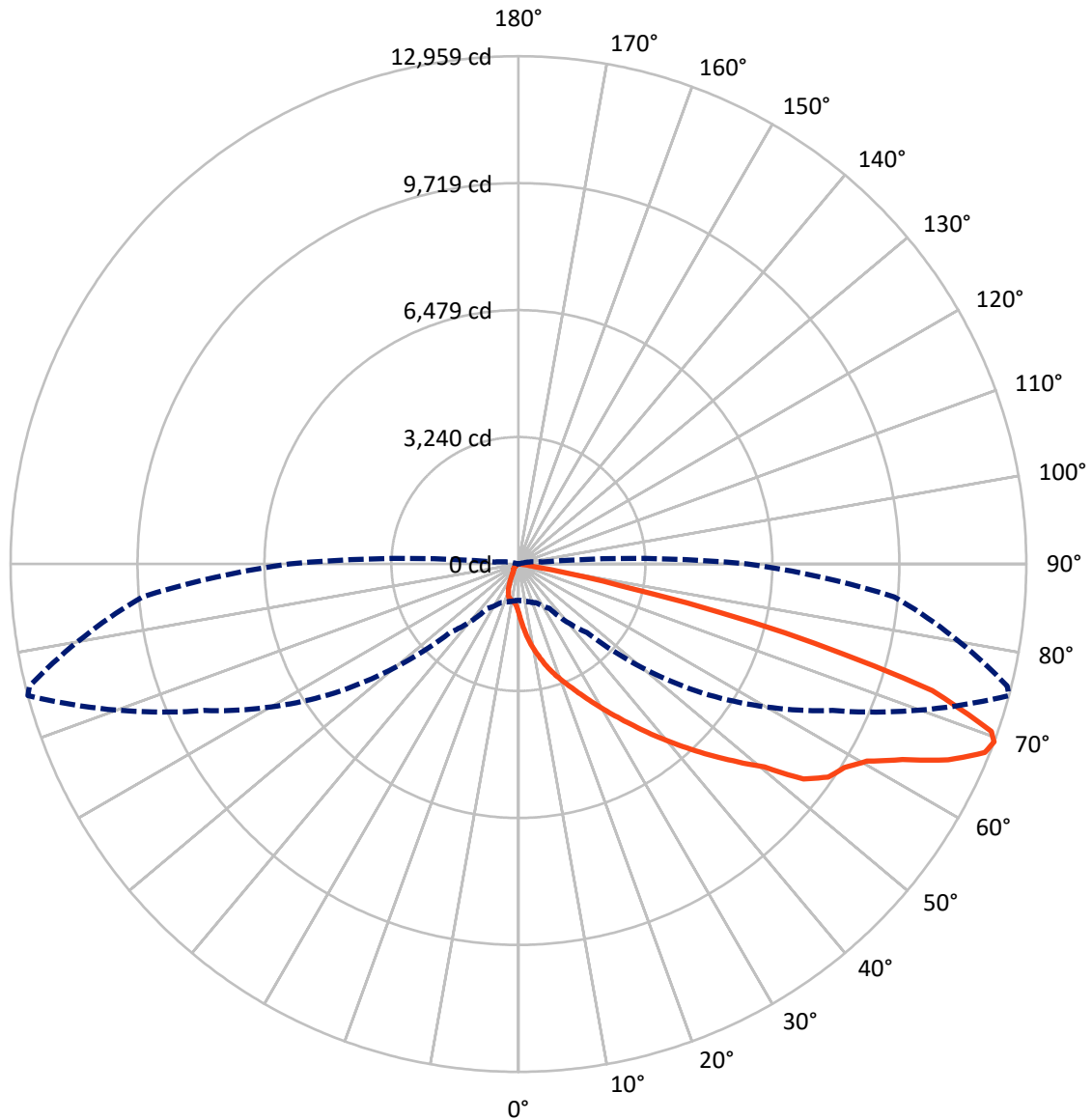
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.6 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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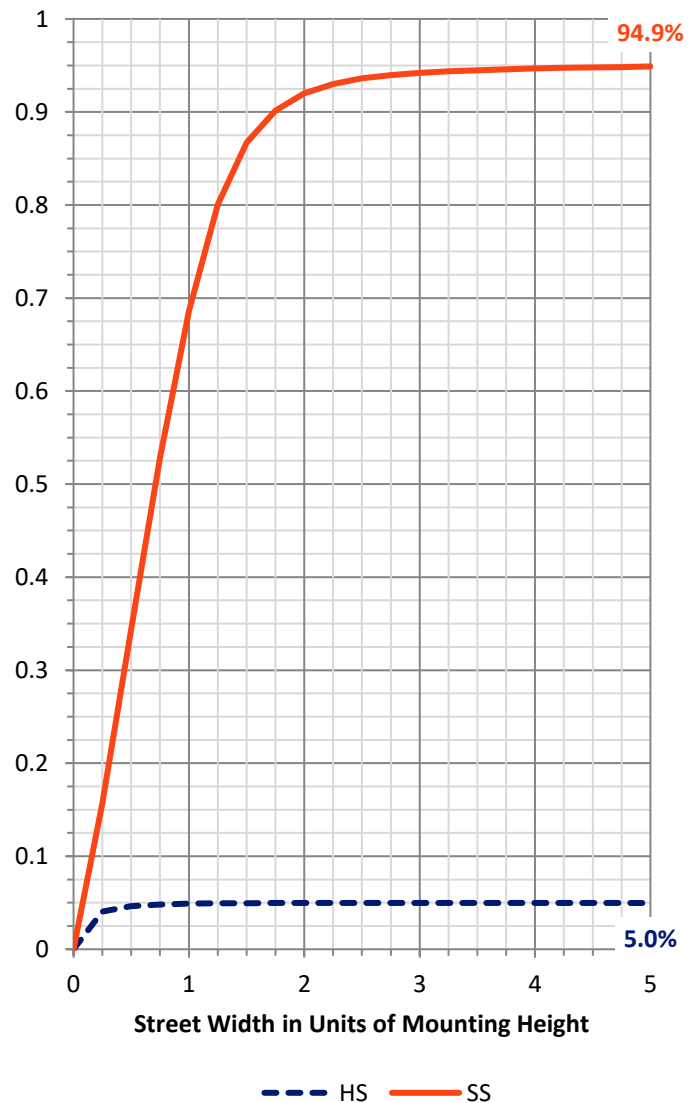
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	672.1	0.0	672.1
	% Fixture	5.0	0.0	5.0
<b>Street Side</b>	Lumens	12798.1	0.0	12798.1
	% Fixture	95.0	0.0	95.0
<b>Total</b>	Lumens	13470.2	0.0	13470.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	146.2	1.1
10°-20°	522.5	3.9
20°-30°	997.5	7.4
30°-40°	1789.3	13.3
40°-50°	2741.4	20.4
50°-60°	3186.2	23.7
60°-70°	2821.4	20.9
70°-80°	1217.0	9.0
80°-90°	48.8	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°	13470.2	100.0
0°-180°	13470.2	100.0

**Coefficient of Utilization**



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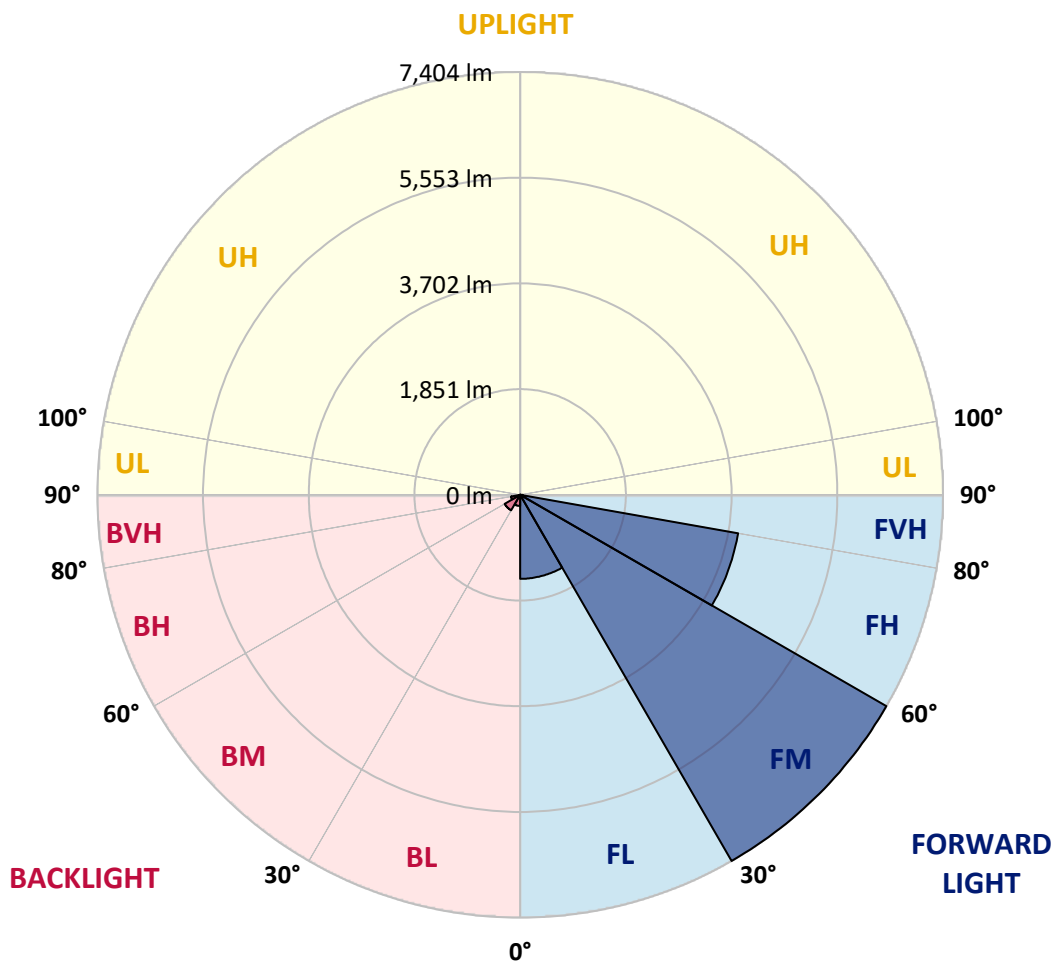
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1471.0	10.9			
FM (30°-60°)	7403.6	55.0			
FH (60°-80°)	3875.6	28.8			G2/5000
FVH (80°-90°)	48.1	0.4			G1/100
BL (0°-30°)	195.2	1.4	B1/500		
BM (30°-60°)	313.3	2.3	B1/1000		
BH (60°-80°)	162.8	1.2	B1/500		G1/500
BVH (80°-90°)	0.7	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°	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4
2.5°	2064.7	2044.4	2024.0	2000.8	1948.4	1858.3	1744.8	1622.7	1471.5	1445.3	1323.2
5°	2506.8	2498.0	2477.7	2445.8	2387.6	2288.6	2160.8	1980.4	1727.5	1683.8	1425.0
7.5°	2817.9	2812.2	2794.7	2756.9	2704.6	2605.7	2471.9	2277.1	1983.3	1933.9	1552.9
10°	3097.2	3094.2	3079.7	3044.8	2992.4	2884.8	2742.3	2538.8	2227.6	2172.3	1701.3
12.5°	3350.2	3353.0	3347.2	3329.8	3292.0	3190.2	3027.3	2806.4	2463.2	2402.1	1878.6
15°	3498.5	3507.2	3530.4	3565.4	3577.0	3495.5	3326.8	3082.6	2704.6	2652.2	2082.2
17.5°	3449.0	3457.8	3530.4	3649.7	3763.1	3774.7	3623.5	3344.3	2943.0	2890.7	2282.9
20°	3329.8	3341.5	3417.1	3579.9	3800.9	3955.0	3894.0	3629.3	3169.8	3105.9	2474.8
22.5°	3463.6	3463.6	3486.8	3585.7	3786.4	4027.8	4109.2	3914.3	3402.5	3324.0	2666.7
25°	3923.0	3914.3	3864.9	3824.2	3888.1	4103.4	4272.0	4205.1	3675.9	3585.7	2870.3
27.5°	4504.7	4545.4	4452.3	4304.0	4158.6	4251.7	4417.4	4493.0	3978.3	3885.3	3079.7
30°	5156.1	5173.6	5063.0	4865.3	4609.4	4519.2	4589.1	4740.3	4306.9	4205.1	3297.8
32.5°	5743.6	5729.0	5635.9	5429.4	5112.5	4917.6	4810.0	4938.0	4664.7	4548.3	3521.7
35°	6264.0	6275.7	6162.3	5923.8	5612.6	5406.2	5150.3	5161.9	5066.0	4932.2	3780.5
37.5°	6732.2	6711.9	6604.4	6365.8	6083.8	5859.9	5589.4	5394.5	5505.1	5365.5	4071.3
40°	7113.3	7092.9	6979.5	6746.9	6482.2	6299.0	6086.7	5705.7	5967.5	5807.5	4382.5
42.5°	7415.7	7392.5	7296.5	7072.6	6816.6	6653.8	6552.0	6089.6	6461.9	6301.9	4731.6
45°	7564.0	7543.6	7485.5	7316.9	7092.9	6950.4	6999.8	6531.6	6991.2	6857.4	5115.4
47.5°	7389.5	7380.8	7447.7	7418.6	7290.7	7215.1	7386.6	7014.4	7546.6	7415.7	5557.4
50°	6860.2	6874.7	7069.6	7311.0	7372.1	7462.2	7703.6	7523.3	8142.7	8003.2	6066.3
52.5°	5554.5	5653.3	6240.8	6822.5	7273.2	7613.4	8075.9	8250.3	9114.1	8977.3	6860.2
55°	4146.9	4187.7	4827.5	5822.0	6874.7	7601.9	8352.1	8677.8	9593.8	9454.3	7069.6
57.5°	3289.1	3303.6	3620.6	4635.5	6054.7	7340.1	8497.6	8832.0	9803.2	9686.9	7380.8
60°	2582.4	2599.8	2829.6	3527.5	4900.1	6633.4	8288.2	8965.8	10213.3	10120.3	7924.6
62.5°	2009.5	2027.0	2166.5	2576.6	3675.9	5545.8	7866.5	9180.9	10992.7	10949.1	8814.5
65°	1555.8	1561.6	1657.6	1849.6	2597.0	4368.0	7351.7	9381.6	12045.5	12007.6	9535.7
67.5°	1148.7	1157.5	1224.3	1343.5	1753.6	3137.9	6508.3	9227.4	12839.4	12728.8	9797.4
69°	927.7	936.4	994.6	1090.6	1384.3	2471.9	5737.7	8846.5	12958.5	12853.9	9631.7
70°	793.9	799.7	857.8	939.3	1180.7	2099.7	5127.0	8517.9	12801.5	12699.7	9253.6
72.5°	508.9	538.0	596.2	648.6	782.3	1390.1	3460.6	7063.8	11045.0	10870.6	7247.0
75°	282.1	290.8	395.5	459.5	520.6	904.4	1925.2	4405.7	7026.0	6903.9	3876.5
77.5°	232.6	238.4	279.2	348.9	348.9	506.1	727.0	1736.2	2672.6	2410.8	1049.9
80°	162.9	168.7	212.3	229.8	250.1	285.0	235.6	380.9	413.0	366.4	157.0
82.5°	113.4	119.3	145.4	189.0	200.7	133.8	87.3	113.4	119.3	119.3	61.1
85°	20.4	29.1	107.6	157.0	119.3	40.7	49.4	40.7	37.8	40.7	14.5
87.5°	0.0	0.0	66.9	75.6	63.9	17.5	20.4	14.5	8.7	11.7	5.8
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°	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4	1253.4
2.5°	1262.1	1201.0	1096.4	1020.7	956.8	907.4	887.0	855.0	831.8	843.3	828.8
5°	1297.0	1189.4	1020.7	913.2	837.5	773.6	721.2	680.5	648.6	642.7	636.9
7.5°	1352.2	1198.2	977.1	843.3	730.0	631.1	549.6	488.6	442.0	442.0	424.6
10°	1427.8	1221.4	950.9	773.6	604.9	471.1	389.6	331.5	308.2	305.4	299.5
12.5°	1532.6	1265.0	930.6	683.4	471.1	343.2	293.7	273.3	264.6	261.8	258.8
15°	1675.1	1329.0	907.4	572.9	357.7	282.1	261.8	244.3	235.6	232.6	229.8
17.5°	1811.7	1387.1	857.8	459.5	290.8	255.9	232.6	218.1	206.4	203.6	203.6
20°	1939.7	1436.6	773.6	357.7	261.8	229.8	206.4	189.0	177.4	174.5	174.5
22.5°	2073.5	1477.3	668.9	290.8	238.4	203.6	180.3	162.9	151.2	148.3	145.4
25°	2216.0	1506.4	549.6	258.8	215.2	180.3	154.2	139.6	130.8	128.0	125.0
27.5°	2370.1	1518.1	436.2	235.6	189.0	157.0	133.8	119.3	113.4	110.5	110.5
30°	2509.7	1506.4	337.4	209.4	165.7	136.7	116.3	104.6	98.9	96.0	96.0
32.5°	2655.1	1477.3	270.5	186.1	145.4	116.3	98.9	90.1	87.3	84.3	84.3
35°	2809.2	1439.5	232.6	165.7	125.0	101.8	87.3	81.4	78.6	75.6	75.6
37.5°	2989.6	1393.0	212.3	148.3	110.5	90.1	75.6	72.7	69.8	69.8	69.8
40°	3193.1	1334.8	197.7	133.8	98.9	78.6	66.9	63.9	61.1	61.1	61.1
42.5°	3408.3	1267.9	183.2	119.3	87.3	66.9	58.2	58.2	55.2	55.2	52.4
45°	3649.7	1201.0	168.7	104.6	75.6	58.2	49.4	46.5	46.5	43.6	43.6
47.5°	3934.7	1140.0	154.2	93.1	66.9	49.4	43.6	40.7	37.8	34.9	34.9
50°	4336.0	1134.1	136.7	81.4	61.1	40.7	34.9	32.0	29.1	26.2	26.2
52.5°	4734.4	1081.8	116.3	66.9	49.4	34.9	26.2	23.2	20.4	20.4	17.5
55°	4824.5	994.6	101.8	58.2	37.8	26.2	20.4	14.5	14.5	11.7	11.7
57.5°	5022.3	953.9	87.3	46.5	29.1	20.4	11.7	8.7	8.7	8.7	8.7
60°	5412.0	942.2	75.6	40.7	20.4	14.5	8.7	5.8	5.8	2.9	2.9
62.5°	5950.0	930.6	63.9	34.9	14.5	8.7	5.8	2.9	0.0	0.0	0.0
65°	6246.6	852.1	52.4	26.2	11.7	8.7	2.9	0.0	0.0	0.0	0.0
67.5°	6168.1	703.8	46.5	17.5	8.7	5.8	2.9	0.0	0.0	0.0	0.0
69°	5839.5	593.2	37.8	14.5	8.7	5.8	2.9	0.0	0.0	0.0	0.0
70°	5444.0	511.8	34.9	11.7	5.8	2.9	2.9	0.0	0.0	0.0	0.0
72.5°	3864.9	267.5	23.2	8.7	5.8	2.9	0.0	0.0	0.0	0.0	0.0
75°	1805.9	119.3	14.5	5.8	2.9	2.9	0.0	0.0	0.0	0.0	0.0
77.5°	398.4	55.2	8.7	5.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0
80°	75.6	20.4	5.8	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	26.2	8.7	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	8.7	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.9	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)