

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: P231359

Luminaire Tested: **ARCH-M-AF48-150-D-U-T4W-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231359  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29625)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: ARCH-M-AF48-150-D-U-T4W-HSS  
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 970mA LIGHT ENGINES WITH 24 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13545.9 lumens  
Efficiency: N/A  
Efficacy: 89.7 lumens/watt  
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')  
IES Classification: Type IV - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G3

Input Watts (W): 151  
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

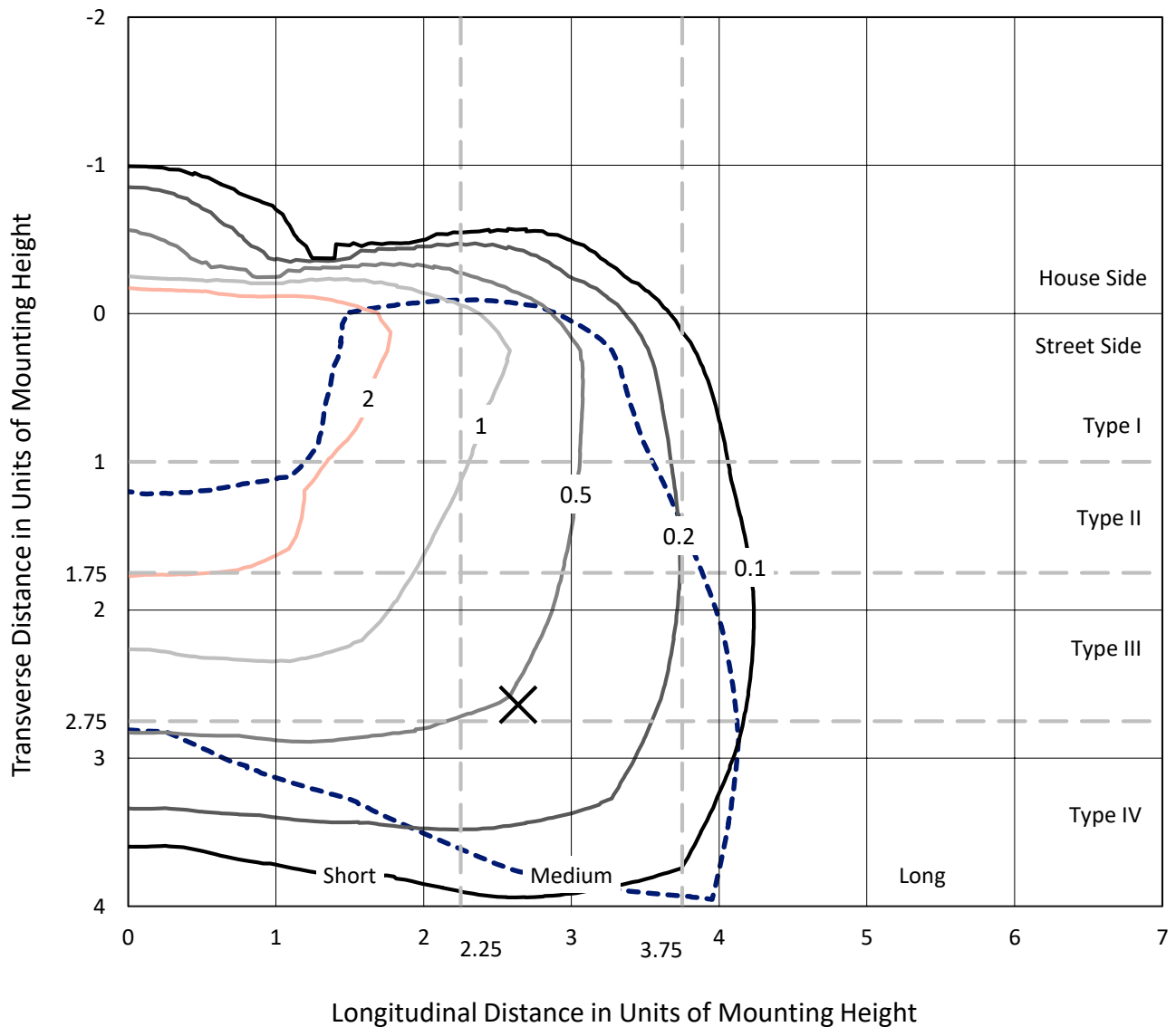


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

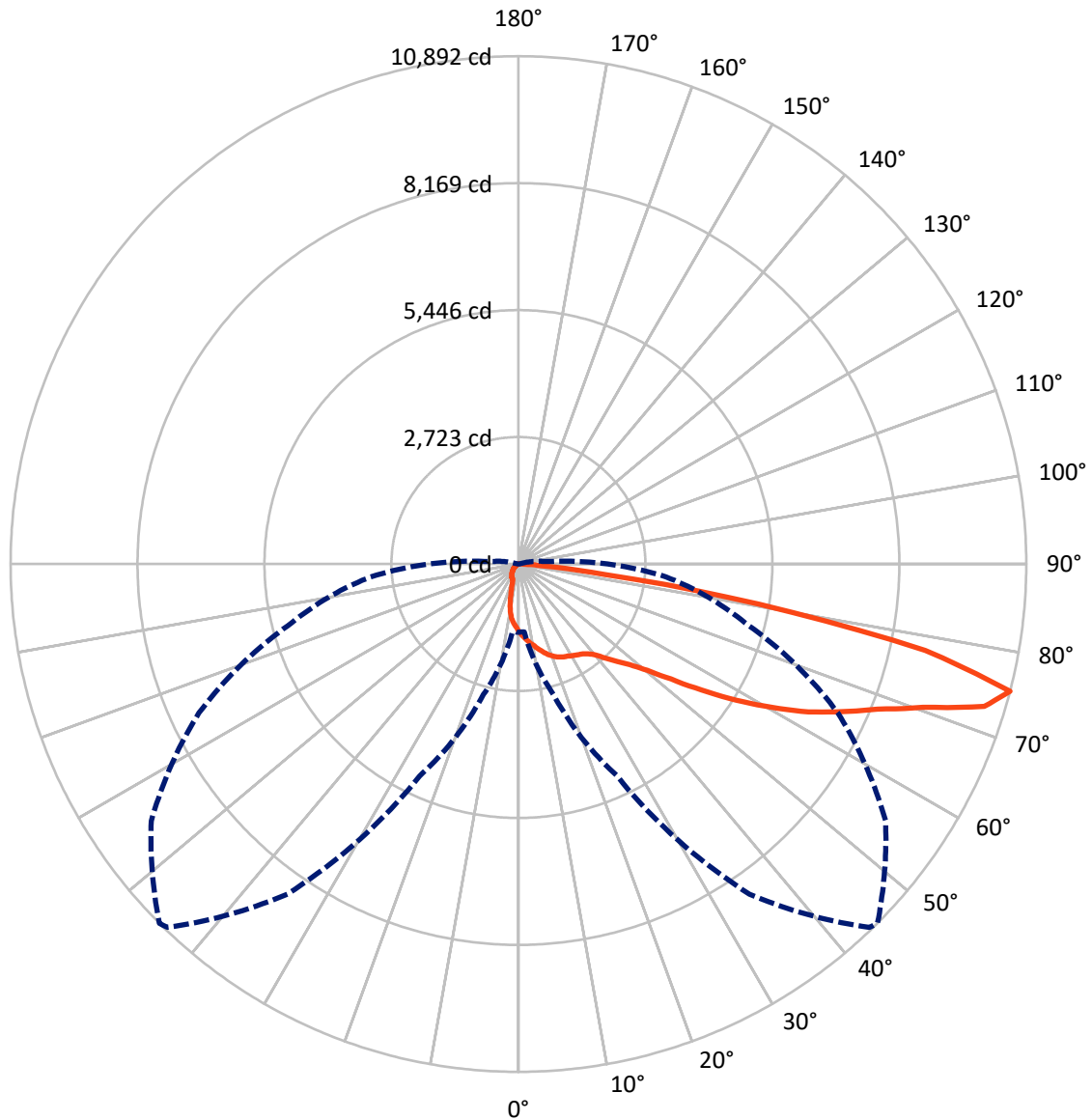


Based on 20 foot mounting height. Maximum calculated value = 4.8 fc  
 Type IV - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 75-Deg Vertical

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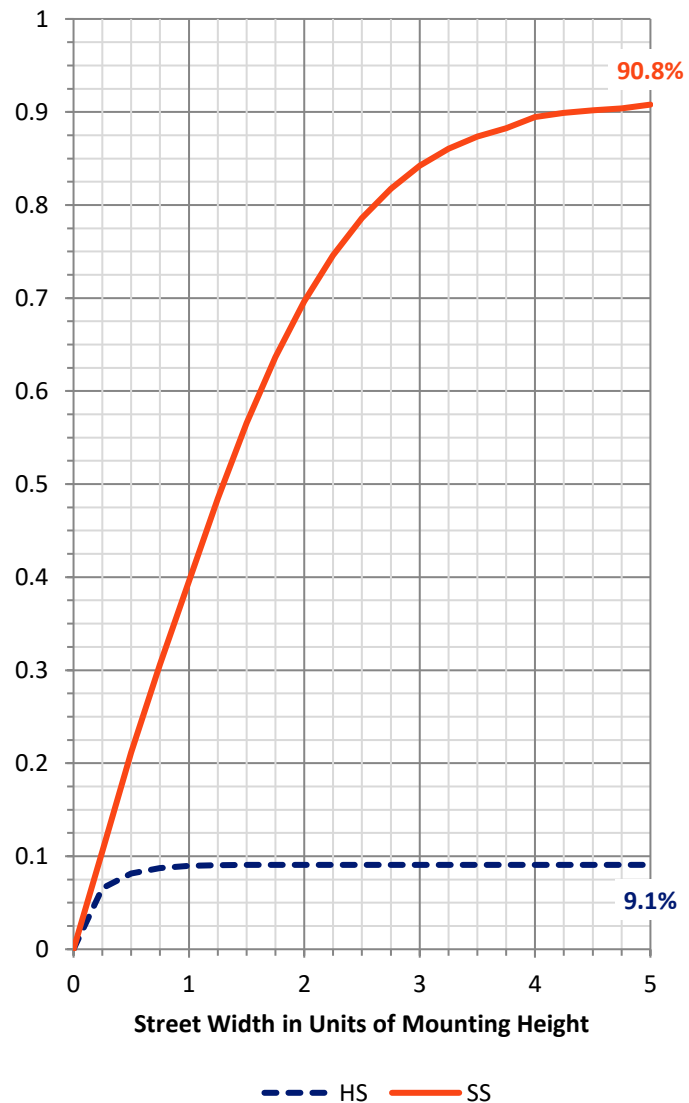
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1239.0	0.0	1239.0
	% Fixture	9.1	0.0	9.1
<b>Street Side</b>	Lumens	12306.9	0.0	12306.9
	% Fixture	90.9	0.0	90.9
<b>Total</b>	Lumens	13545.9	0.0	13545.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.7	1.0
10°-20°	387.4	2.9
20°-30°	641.5	4.7
30°-40°	928.5	6.9
40°-50°	1520.3	11.2
50°-60°	2708.9	20.0
60°-70°	3982.4	29.4
70°-80°	3004.4	22.2
80°-90°	235.7	1.7
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°	13545.9	100.0
0°-180°	13545.9	100.0



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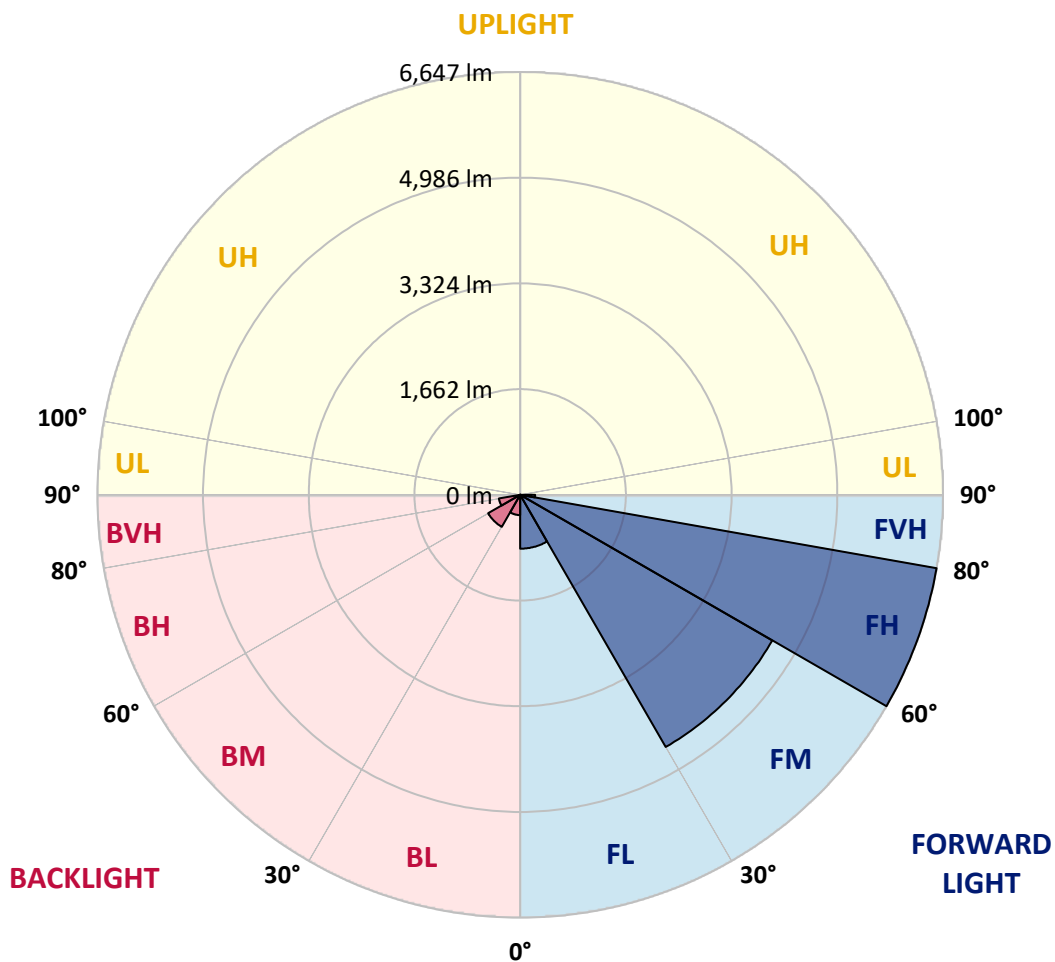
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	847.3	6.3			
FM	(30°-60°)	4577.1	33.8			
FH	(60°-80°)	6647.5	49.1			G3/7500
FVH	(80°-90°)	235.1	1.7			G3/500
BL	(0°-30°)	318.4	2.4	B1/500		
BM	(30°-60°)	580.6	4.3	B1/1000		
BH	(60°-80°)	339.4	2.5	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-G3**

Type IV Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8
2.5°	1573.8	1573.8	1570.6	1567.4	1551.4	1535.3	1532.2	1522.6	1493.7	1474.5	1455.2
5°	1705.3	1708.4	1702.0	1686.0	1650.7	1615.4	1612.3	1586.6	1532.2	1493.7	1452.0
7.5°	1830.3	1836.6	1820.6	1791.8	1750.1	1698.8	1695.6	1647.6	1577.0	1522.6	1461.6
10°	1936.0	1936.0	1913.5	1878.3	1833.4	1778.9	1772.6	1718.0	1637.9	1570.6	1490.4
12.5°	2051.4	2048.3	2016.1	1968.1	1916.8	1865.5	1862.3	1795.0	1718.0	1631.5	1532.2
15°	2157.2	2150.8	2109.1	2064.2	2009.8	1955.3	1952.0	1884.7	1804.6	1702.0	1593.0
17.5°	2214.9	2211.7	2173.3	2128.4	2083.4	2041.8	2038.6	1968.1	1881.5	1775.7	1653.9
20°	2224.5	2227.7	2195.7	2157.2	2131.5	2109.1	2109.1	2045.0	1952.0	1839.9	1718.0
22.5°	2227.7	2237.3	2214.9	2163.6	2157.2	2160.4	2166.8	2115.6	2019.4	1913.5	1785.4
25°	2250.2	2263.0	2246.9	2186.0	2179.6	2202.1	2208.4	2186.0	2099.5	1993.7	1862.3
27.5°	2295.0	2307.9	2295.0	2218.1	2208.4	2231.0	2237.3	2250.2	2186.0	2070.7	1942.4
30°	2384.8	2388.0	2359.1	2263.0	2243.7	2272.6	2282.2	2317.5	2266.1	2144.4	2019.4
32.5°	2541.8	2509.8	2423.3	2295.0	2279.0	2311.1	2320.7	2359.1	2339.9	2214.9	2099.5
35°	2862.3	2695.7	2496.9	2339.9	2323.8	2356.0	2368.7	2423.3	2432.9	2314.2	2198.8
37.5°	2859.1	2708.5	2670.0	2426.4	2404.0	2426.4	2442.5	2509.8	2548.3	2445.7	2343.1
40°	3061.1	2996.9	2996.9	2589.9	2516.2	2548.3	2564.2	2631.5	2698.9	2618.8	2513.0
42.5°	3695.7	3654.1	3609.2	2904.1	2673.3	2763.0	2772.6	2814.2	2894.4	2868.8	2743.8
45°	4404.1	4365.6	4192.6	3436.1	2942.5	2958.5	2981.0	3048.3	3163.7	3211.8	3064.2
47.5°	4958.7	4920.2	4772.8	4077.2	3362.4	3221.4	3221.4	3352.8	3532.2	3654.1	3513.0
50°	5404.1	5359.3	5269.5	4759.9	4051.5	3599.6	3580.3	3734.2	4000.2	4189.4	4093.2
52.5°	5836.9	5705.5	5651.0	5465.1	4830.5	4147.7	4096.4	4205.4	4574.0	4808.0	4727.9
55°	6125.4	6106.2	6048.5	6112.5	5647.8	4814.4	4769.5	4792.0	5253.6	5410.6	5311.3
57.5°	6394.7	6391.4	6519.7	6817.8	6538.9	5577.2	5506.7	5471.5	5910.6	5872.1	5958.7
60°	6727.9	6670.3	6968.3	7394.7	7356.2	6320.9	6240.8	6170.2	6413.9	6304.9	6734.4
62.5°	6744.0	6727.9	7333.8	7946.0	8167.1	7077.4	6984.4	6731.2	6853.0	6727.9	7474.8
65°	6131.8	6212.0	7487.7	8237.7	8846.7	7740.9	7628.7	7234.4	7244.0	7160.7	8346.7
67.5°	5994.0	6035.6	7064.5	8551.9	9337.1	8410.8	8305.0	7814.6	7699.2	7705.6	8862.7
70°	5651.0	5715.1	6538.9	8529.4	9725.0	9305.1	9199.3	8667.3	8388.3	8077.4	8465.2
72.5°	4317.6	4426.5	5509.9	7478.1	9619.2	10475.0	10446.2	9747.4	8664.0	7417.1	6404.3
75°	1461.6	1458.4	2894.4	5022.8	8641.6	10834.0	10891.7	9612.8	7558.2	5115.7	3179.6
77.5°	314.1	317.3	596.2	2035.4	5740.7	8699.3	8920.4	7250.5	4875.3	2279.0	727.6
80°	153.9	157.0	246.8	538.5	2295.0	4878.6	5224.7	3727.8	1801.4	455.1	121.8
82.5°	76.9	80.1	128.2	285.3	849.5	1734.1	1852.7	1371.9	516.1	256.5	60.9
85°	28.8	28.8	64.1	169.9	387.8	407.0	500.0	397.4	310.9	208.4	16.1
87.5°	6.4	6.4	35.3	83.4	173.1	128.2	128.2	121.8	189.1	141.1	6.4
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°	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8	1448.8
2.5°	1445.6	1432.7	1410.3	1387.9	1371.9	1352.6	1343.0	1333.4	1330.2	1327.0	1333.4
5°	1429.6	1410.3	1368.7	1333.4	1301.4	1275.7	1256.5	1237.3	1227.6	1221.2	1224.5
7.5°	1429.6	1400.7	1339.9	1285.3	1234.1	1179.6	1125.0	1083.4	1051.4	1032.2	1035.3
10°	1445.6	1407.2	1327.0	1253.3	1157.2	1041.8	923.1	833.4	772.5	737.2	737.2
12.5°	1480.8	1429.6	1330.2	1214.9	1051.4	849.5	669.9	560.9	516.1	490.4	493.6
15°	1528.9	1468.0	1346.2	1163.5	903.9	631.5	468.0	397.4	397.4	403.9	407.0
17.5°	1583.4	1516.1	1359.1	1086.6	714.8	451.9	368.6	362.2	371.8	387.8	387.8
20°	1637.9	1564.2	1365.4	964.8	535.3	359.0	349.3	349.3	355.8	371.8	375.0
22.5°	1705.3	1625.1	1359.1	814.2	400.7	339.7	336.6	336.6	336.6	355.8	355.8
25°	1775.7	1695.6	1333.4	653.9	339.7	326.9	323.8	320.5	320.5	336.6	339.7
27.5°	1855.8	1769.3	1272.6	500.0	320.5	314.1	310.9	304.5	304.5	317.3	317.3
30°	1936.0	1852.7	1179.6	378.2	304.5	301.3	294.9	288.5	282.0	294.9	294.9
32.5°	2022.6	1939.2	1057.7	301.3	282.0	282.0	278.9	269.2	262.8	269.2	272.4
35°	2138.0	2038.6	919.9	262.8	253.2	253.2	253.2	250.0	237.2	243.6	243.6
37.5°	2291.8	2176.4	759.6	243.6	230.8	224.3	224.3	224.3	214.7	218.0	218.0
40°	2487.3	2336.7	605.8	227.6	214.7	198.8	192.3	195.5	189.1	189.1	185.9
42.5°	2753.4	2509.8	455.1	214.7	201.9	179.5	166.6	163.5	157.0	153.9	153.9
45°	3134.8	2721.4	326.9	201.9	192.3	157.0	144.2	134.6	118.6	108.9	108.9
47.5°	3628.4	2961.7	243.6	189.1	182.7	137.8	121.8	102.6	80.1	73.8	73.8
50°	4231.0	3231.0	205.1	169.9	166.6	121.8	96.2	67.3	44.9	38.5	41.6
52.5°	4817.6	3484.2	182.7	150.7	147.4	105.8	70.5	35.3	19.2	19.2	19.2
55°	5311.3	3663.7	166.6	134.6	128.2	83.4	38.5	16.1	9.6	9.6	9.6
57.5°	5756.8	3766.3	150.7	118.6	102.6	57.7	16.1	6.4	6.4	3.2	3.2
60°	6163.9	3827.2	131.4	102.6	80.1	32.0	6.4	3.2	3.2	0.0	0.0
62.5°	6564.5	3872.1	112.2	83.4	60.9	12.8	3.2	3.2	0.0	0.0	0.0
65°	6869.0	3856.0	89.7	67.3	38.5	6.4	3.2	0.0	0.0	0.0	0.0
67.5°	6859.4	3638.0	67.3	51.2	19.2	3.2	0.0	0.0	0.0	0.0	0.0
70°	6135.0	3064.2	44.9	32.0	6.4	3.2	0.0	0.0	0.0	0.0	0.0
72.5°	4352.9	1964.9	28.8	19.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0
75°	1916.8	596.2	16.1	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	375.0	137.8	9.6	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	89.7	16.1	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	38.5	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	9.6	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.4	3.2	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)