

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: LUMARK

Report Number: P233527

Luminaire Tested: **VRDN-C02-D-UNV-T3-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233527  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-14)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: VRDN-C02-D-UNV-T3-7030  
Description: VERDEON ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 1140mA LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10703 lumens  
Efficiency: N/A  
Efficacy: 118.9 lumens/watt  
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')  
IES Classification: Type III - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G2

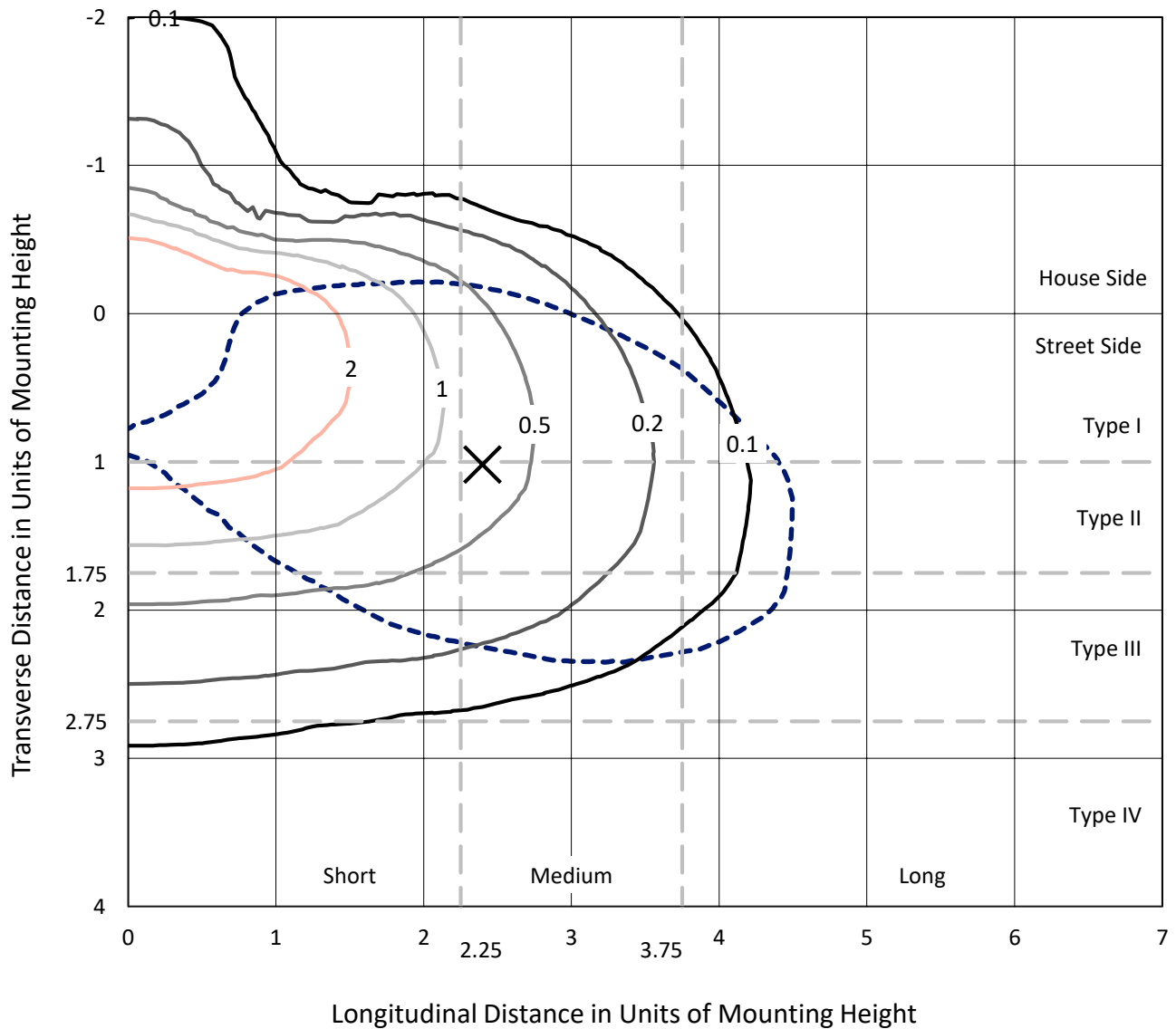
Input Watts (W): 90  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

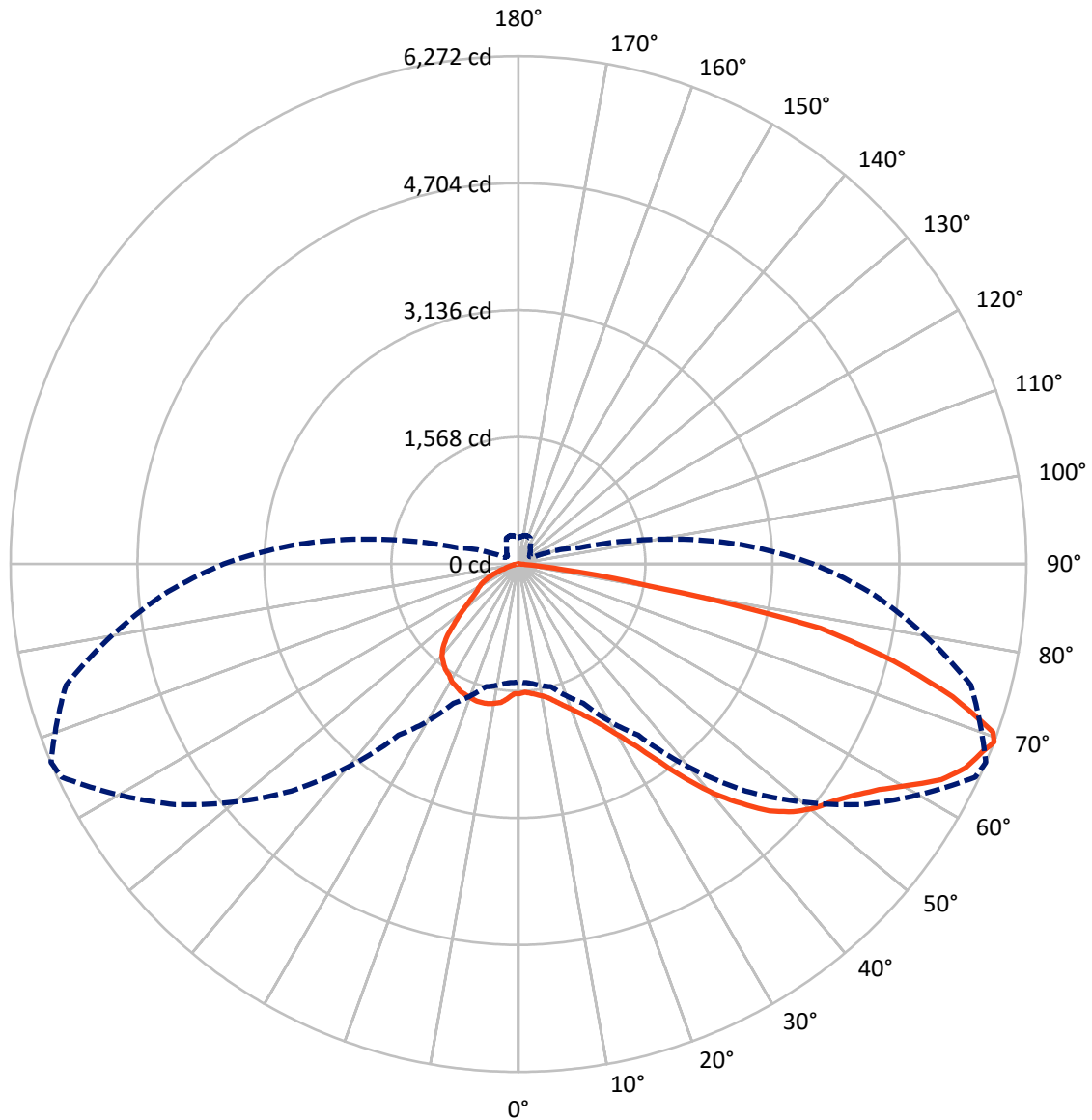
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.7 fc  
 Type III - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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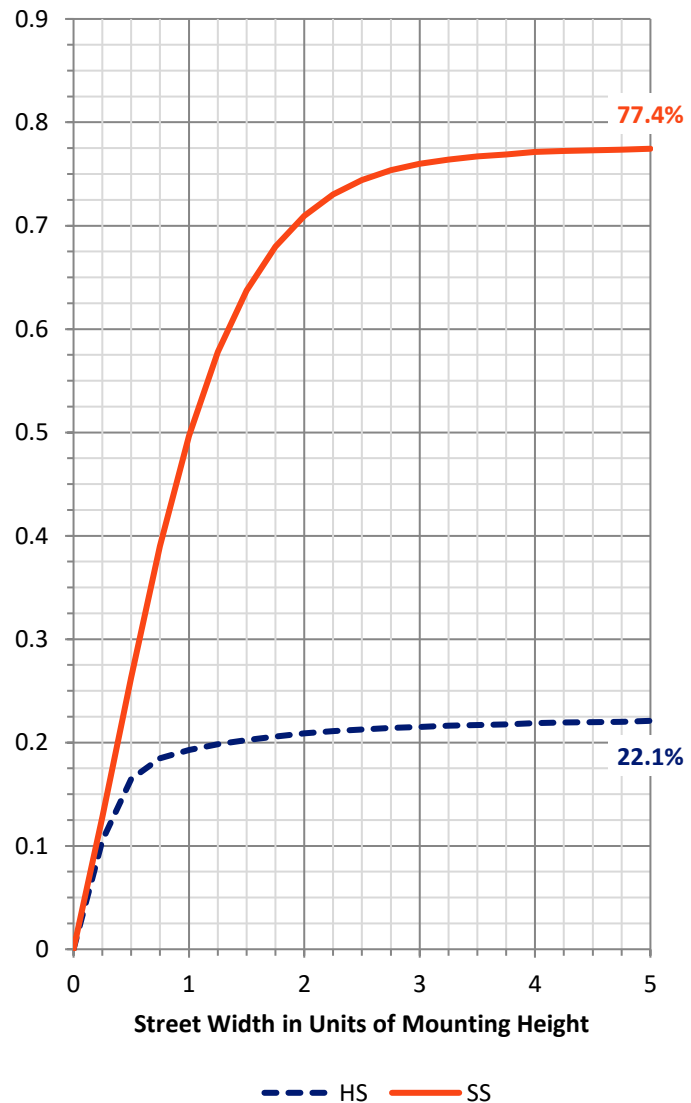
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2410.2	0.0	2410.2
	% Fixture	22.5	0.0	22.5
<b>Street Side</b>	Lumens	8292.8	0.0	8292.8
	% Fixture	77.5	0.0	77.5
<b>Total</b>	Lumens	10703.0	0.0	10703.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.2	1.5
10°-20°	516.8	4.8
20°-30°	890.3	8.3
30°-40°	1324.1	12.4
40°-50°	1823.6	17.0
50°-60°	2180.0	20.4
60°-70°	2300.6	21.5
70°-80°	1378.6	12.9
80°-90°	126.8	1.2
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°	10703.0	100.0
0°-180°	10703.0	100.0



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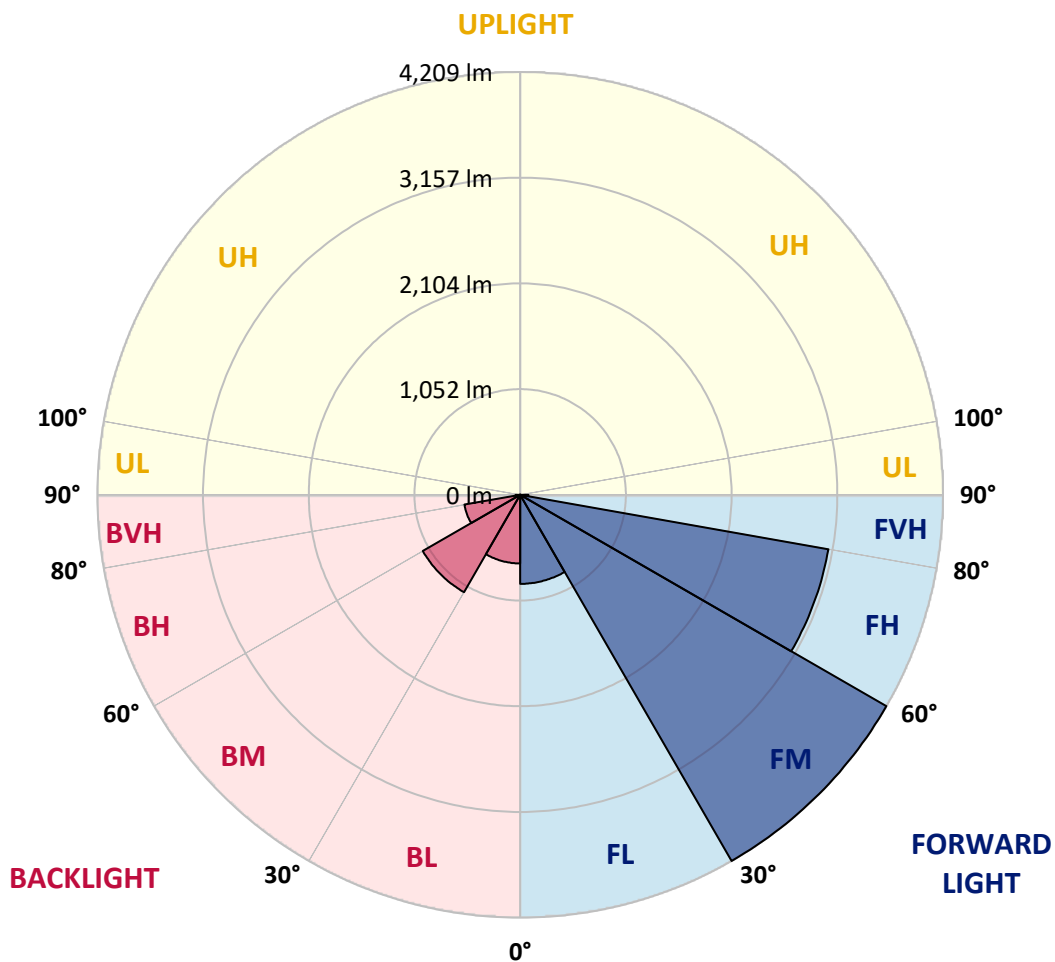
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	886.2	8.3			
FM (30°-60°)	4208.9	39.3			
FH (60°-80°)	3115.6	29.1			G2/5000
FVH (80°-90°)	82.0	0.8			G1/100
BL (0°-30°)	682.9	6.4	B2/1000		
BM (30°-60°)	1118.9	10.5	B2/2500		
BH (60°-80°)	563.5	5.3	B2/1000		G2/1000
BVH (80°-90°)	44.8	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9
2.5°	1627.2	1626.3	1621.4	1603.9	1601.9	1600.0	1588.3	1589.3	1586.3	1589.3	1590.2
5°	1672.0	1668.1	1663.2	1644.7	1637.9	1629.2	1611.7	1610.7	1603.9	1605.8	1607.8
7.5°	1727.5	1723.6	1719.7	1698.3	1691.5	1675.9	1648.6	1635.0	1629.2	1631.1	1634.0
10°	1802.4	1795.6	1789.8	1758.6	1747.9	1721.6	1688.5	1665.2	1657.4	1660.3	1668.1
12.5°	1888.0	1879.3	1869.6	1837.4	1822.8	1782.0	1743.0	1712.9	1701.2	1708.0	1713.8
15°	1976.6	1971.7	1967.9	1929.9	1909.5	1864.7	1816.0	1778.1	1767.4	1773.2	1776.1
17.5°	2093.4	2090.5	2083.7	2044.7	2005.8	1954.2	1891.0	1851.1	1840.4	1843.3	1836.5
20°	2220.9	2213.1	2209.2	2165.4	2124.5	2053.5	1980.5	1924.1	1921.1	1922.1	1900.7
22.5°	2364.0	2355.2	2347.4	2307.5	2256.9	2174.2	2078.8	2015.5	2017.5	2019.4	1971.7
25°	2509.9	2503.1	2496.3	2458.4	2407.7	2317.2	2202.4	2131.4	2130.4	2131.4	2065.2
27.5°	2662.7	2654.9	2654.0	2622.8	2572.2	2479.8	2347.4	2275.4	2275.4	2271.5	2171.3
30°	2799.0	2806.8	2806.8	2789.3	2741.6	2649.1	2524.5	2452.5	2462.2	2454.5	2327.0
32.5°	2947.9	2945.9	2959.6	2945.9	2907.0	2821.4	2717.2	2671.5	2688.0	2713.3	2585.8
35°	3034.5	3048.1	3082.2	3101.7	3083.2	3013.1	2937.2	2972.2	2994.6	3108.5	2955.7
37.5°	3134.7	3146.4	3193.1	3240.8	3248.6	3210.7	3210.7	3325.5	3369.3	3518.2	3340.1
40°	3203.8	3215.5	3266.1	3321.6	3397.5	3423.8	3491.9	3670.0	3732.3	3832.5	3626.2
42.5°	3163.0	3168.8	3277.8	3413.1	3525.0	3651.5	3759.6	3985.3	4044.7	4114.8	3861.7
45°	3090.9	3101.7	3222.3	3440.3	3633.0	3884.1	4020.4	4282.2	4350.3	4343.5	4042.8
47.5°	3011.1	3027.7	3162.0	3405.3	3725.5	4085.6	4258.8	4531.3	4570.2	4521.6	4168.3
50°	2922.6	2950.8	3093.9	3370.3	3792.6	4261.7	4435.9	4718.2	4738.6	4639.3	4278.3
52.5°	2821.4	2839.9	2998.5	3303.1	3839.4	4378.5	4577.1	4857.3	4866.1	4785.3	4394.1
55°	2681.2	2697.8	2873.9	3213.6	3846.2	4447.6	4667.6	5006.2	5035.4	4956.6	4499.2
57.5°	2530.4	2550.8	2731.8	3084.1	3783.9	4475.8	4776.6	5198.0	5254.4	5141.5	4583.9
60°	2355.2	2381.5	2564.4	2926.5	3661.3	4519.6	4980.0	5477.3	5547.4	5350.8	4664.6
62.5°	2173.2	2187.8	2356.2	2708.5	3470.5	4542.0	5164.9	5796.5	5863.7	5548.3	4702.6
65°	1917.2	1940.6	2090.5	2446.7	3201.9	4445.7	5251.5	6019.4	6068.0	5708.9	4665.6
67.5°	1645.7	1645.7	1773.2	2133.3	2843.8	4190.7	5216.5	6126.4	6184.8	5821.8	4548.8
69°	1457.9	1472.5	1569.8	1897.8	2581.0	3963.9	5178.5	6224.7	6272.4	5785.8	4414.5
70°	1313.8	1326.5	1424.8	1726.5	2385.4	3784.9	5096.8	6180.9	6216.0	5674.9	4273.4
72.5°	966.4	977.1	1045.2	1202.9	1793.6	3054.0	4595.5	5588.2	5609.6	5103.6	3770.3
75°	658.9	664.7	716.3	812.6	1046.2	2135.2	3754.7	4720.1	4783.4	4426.2	3087.1
77.5°	227.7	245.3	276.4	373.7	447.7	838.9	2545.0	3719.6	3814.1	3427.7	2159.6
80°	77.9	76.9	147.9	191.7	235.5	385.4	804.9	1559.1	1647.7	1413.1	777.6
82.5°	58.4	60.3	98.3	106.1	72.0	142.1	313.4	476.9	522.6	456.4	322.1
85°	37.0	36.0	43.8	45.7	33.1	60.3	75.9	76.9	79.8	69.1	70.1
87.5°	20.4	20.4	19.5	16.5	8.8	7.8	6.8	6.8	5.8	5.8	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°	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9	1600.9
2.5°	1585.4	1599.0	1601.9	1605.8	1615.5	1628.2	1645.7	1645.7	1652.5	1673.0	1679.8
5°	1607.8	1624.3	1645.7	1668.1	1694.4	1722.6	1750.8	1760.6	1774.2	1801.4	1807.3
7.5°	1641.8	1660.3	1697.3	1727.5	1749.9	1778.1	1801.4	1805.3	1822.8	1848.1	1853.0
10°	1676.9	1693.4	1730.4	1746.0	1776.1	1807.3	1818.9	1824.8	1839.4	1858.9	1855.9
12.5°	1724.5	1729.4	1755.7	1766.4	1781.0	1800.5	1806.3	1806.3	1815.1	1846.2	1847.2
15°	1771.3	1771.3	1775.2	1769.3	1771.3	1781.0	1782.0	1769.3	1779.0	1794.6	1788.8
17.5°	1820.9	1807.3	1789.8	1764.4	1742.1	1741.1	1720.7	1690.5	1681.7	1704.1	1703.1
20°	1867.6	1844.3	1802.4	1745.0	1713.8	1672.0	1620.4	1602.9	1601.9	1605.8	1602.9
22.5°	1928.9	1881.2	1805.3	1726.5	1640.9	1574.7	1531.8	1472.5	1470.5	1461.8	1448.2
25°	2001.9	1933.8	1818.0	1706.1	1581.5	1495.8	1392.7	1329.4	1293.4	1301.2	1277.8
27.5°	2096.3	2013.6	1822.8	1661.3	1499.7	1354.7	1230.2	1148.4	1117.3	1103.6	1088.1
30°	2225.8	2098.3	1857.9	1623.3	1398.5	1206.8	1054.0	935.3	890.5	902.2	904.1
32.5°	2433.1	2258.8	1876.4	1548.4	1281.7	1045.2	846.7	718.2	692.0	725.0	733.8
35°	2794.1	2508.0	1920.2	1503.6	1148.4	856.4	629.7	577.1	583.0	611.2	613.1
37.5°	3149.3	2823.3	2055.4	1406.3	988.8	634.5	488.6	460.3	488.6	524.6	529.4
40°	3398.5	3069.5	2175.1	1310.0	765.0	459.4	372.7	338.7	379.6	437.0	447.7
42.5°	3619.4	3265.2	2259.8	1176.6	523.6	328.0	267.6	276.4	336.7	378.6	388.3
45°	3778.0	3399.5	2318.2	1003.4	333.8	248.2	239.4	267.6	325.1	358.1	361.1
47.5°	3878.3	3478.3	2275.4	790.3	251.1	234.5	235.5	271.5	328.9	365.9	365.0
50°	3968.8	3520.1	2136.2	626.8	238.4	224.8	240.4	282.2	341.6	375.7	373.7
52.5°	4065.1	3561.0	1966.9	491.5	228.7	219.9	246.2	289.0	341.6	363.0	360.1
55°	4147.9	3597.0	1839.4	395.1	221.9	219.0	252.1	299.8	339.7	348.4	342.6
57.5°	4190.7	3535.7	1701.2	331.9	215.1	219.0	256.0	297.8	351.3	379.6	373.7
60°	4167.3	3478.3	1589.3	308.5	205.3	218.0	257.9	319.2	431.1	457.4	455.5
62.5°	4124.5	3415.0	1432.6	277.4	194.6	219.9	256.9	338.7	496.3	487.6	463.3
65°	4036.9	3288.5	1218.5	241.4	183.9	223.8	256.9	381.5	433.1	423.4	412.6
67.5°	3850.1	3015.0	975.2	207.3	172.3	212.2	253.0	363.0	372.7	347.4	334.8
69°	3640.8	2754.2	771.8	188.8	165.4	206.3	252.1	350.4	366.9	339.7	325.1
70°	3477.3	2550.8	623.8	175.2	158.6	204.4	251.1	341.6	364.0	333.8	318.2
72.5°	2896.3	2061.3	327.0	141.1	135.3	185.9	242.3	333.8	365.0	320.2	297.8
75°	2275.4	1466.6	217.0	108.0	104.1	162.5	221.9	321.2	343.5	288.1	254.0
77.5°	1403.4	642.3	149.9	74.9	75.9	126.5	190.8	287.1	346.5	291.0	247.2
80°	407.8	248.2	95.4	50.6	46.7	74.9	149.9	247.2	328.9	298.8	269.6
82.5°	235.5	161.6	64.2	32.1	28.2	34.1	94.4	191.7	290.0	273.5	279.3
85°	53.5	44.8	23.4	15.6	15.6	19.5	32.1	110.9	200.5	234.5	264.7
87.5°	5.8	5.8	5.8	5.8	5.8	4.9	5.8	30.2	87.6	124.6	145.0
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)