

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: P195345

Luminaire Tested: **NAV-AF-03-D-UNV-T3-7060-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195345  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-T3-7060-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14639 lumens  
Efficiency: N/A  
Efficacy: 118.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

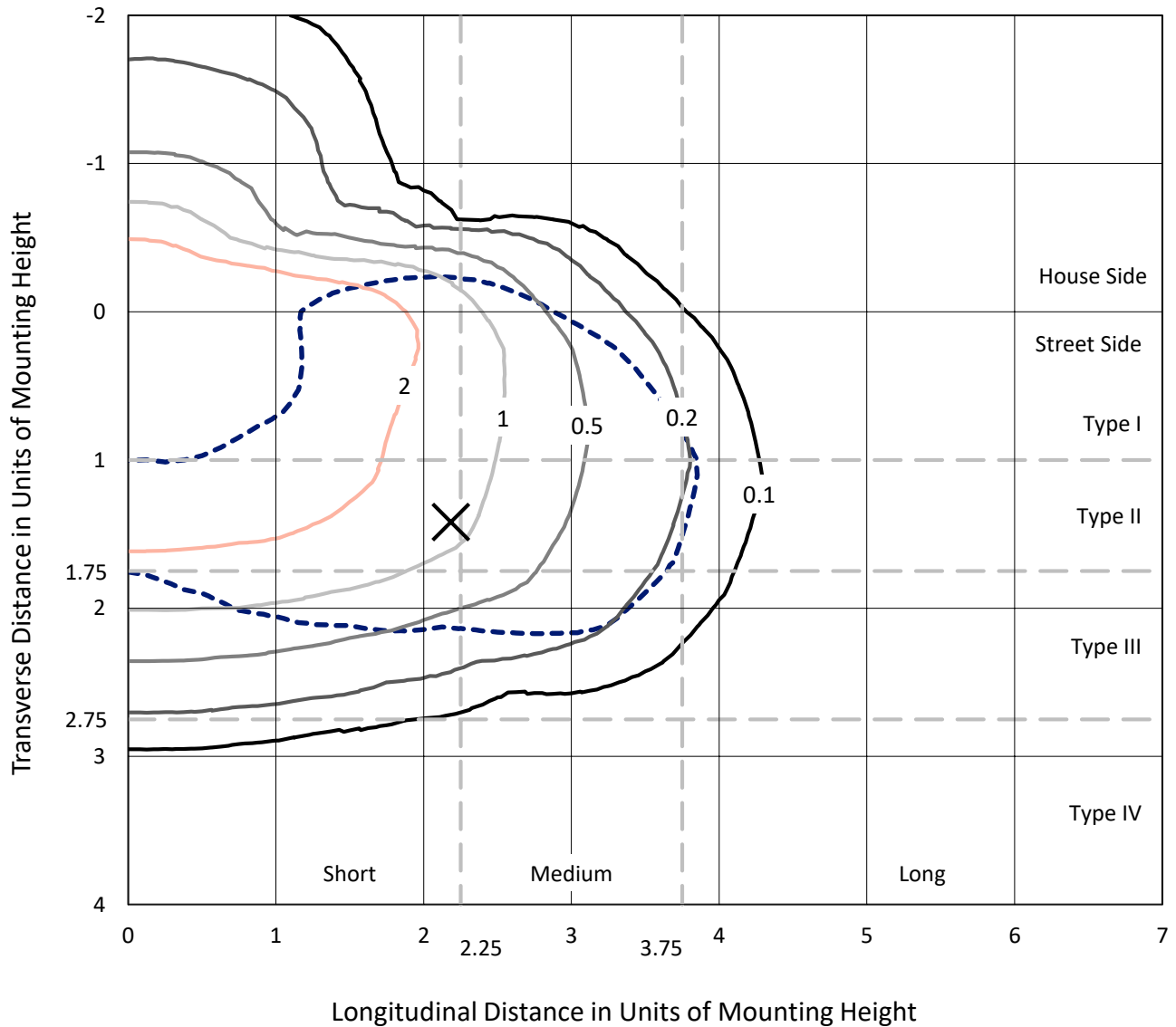
Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

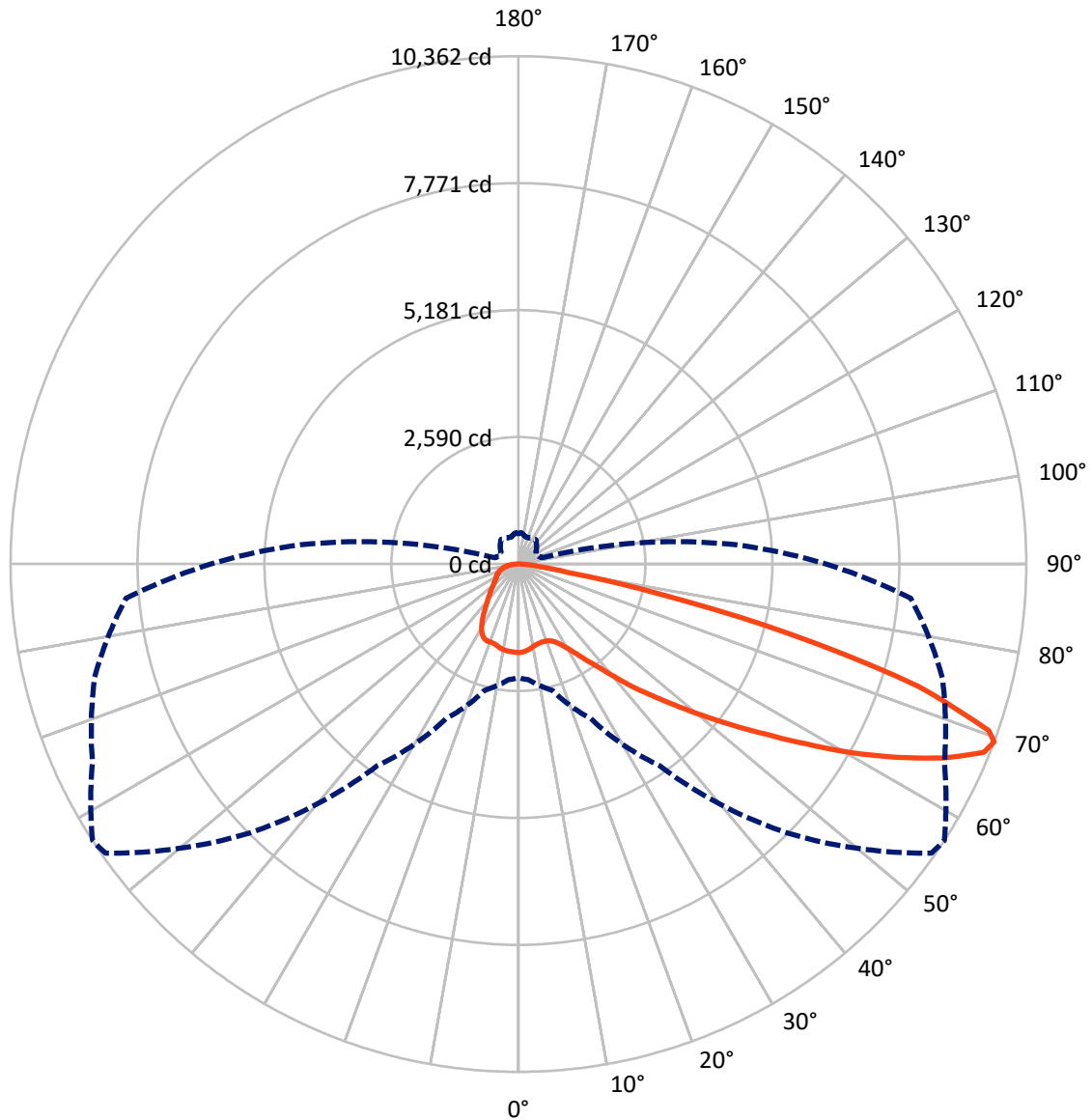
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.6 fc  
 Type III - Short - Semi-Cutoff

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CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7060-800

### Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7060-800

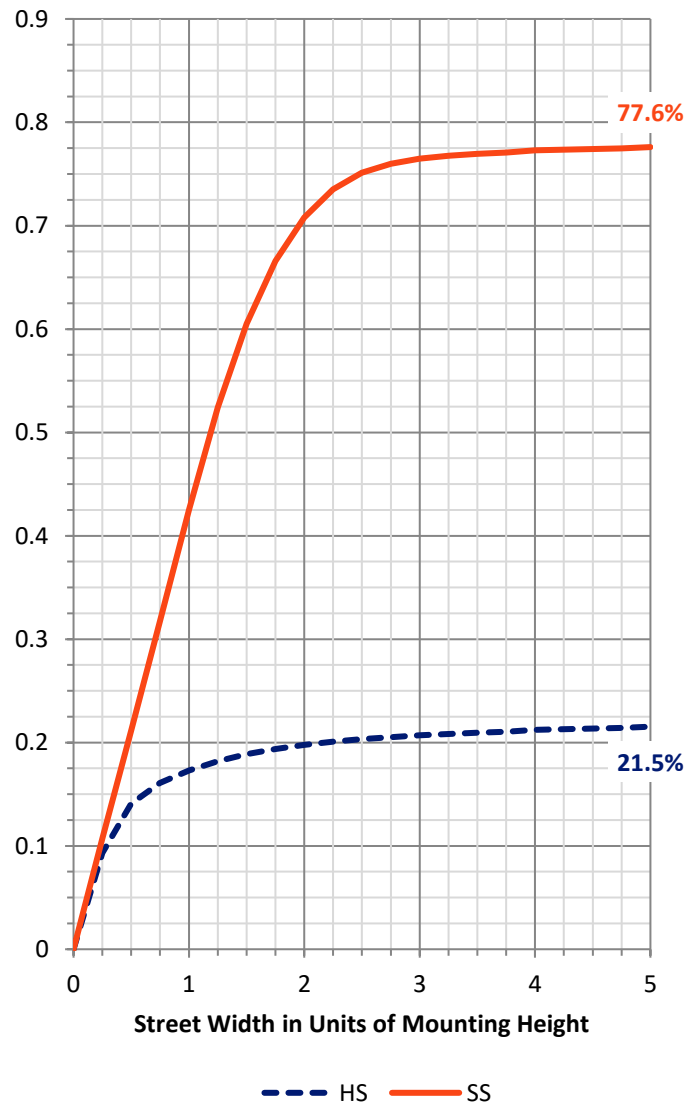
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3230.3	0.0	3230.3
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	11408.7	0.0	11408.7
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	14639.0	0.0	14639.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.3	1.2
10°-20°	481.5	3.3
20°-30°	800.9	5.5
30°-40°	1307.9	8.9
40°-50°	2207.4	15.1
50°-60°	3433.7	23.5
60°-70°	4090.3	27.9
70°-80°	1905.5	13.0
80°-90°	242.4	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°	14639.0	100.0
0°-180°	14639.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P195345

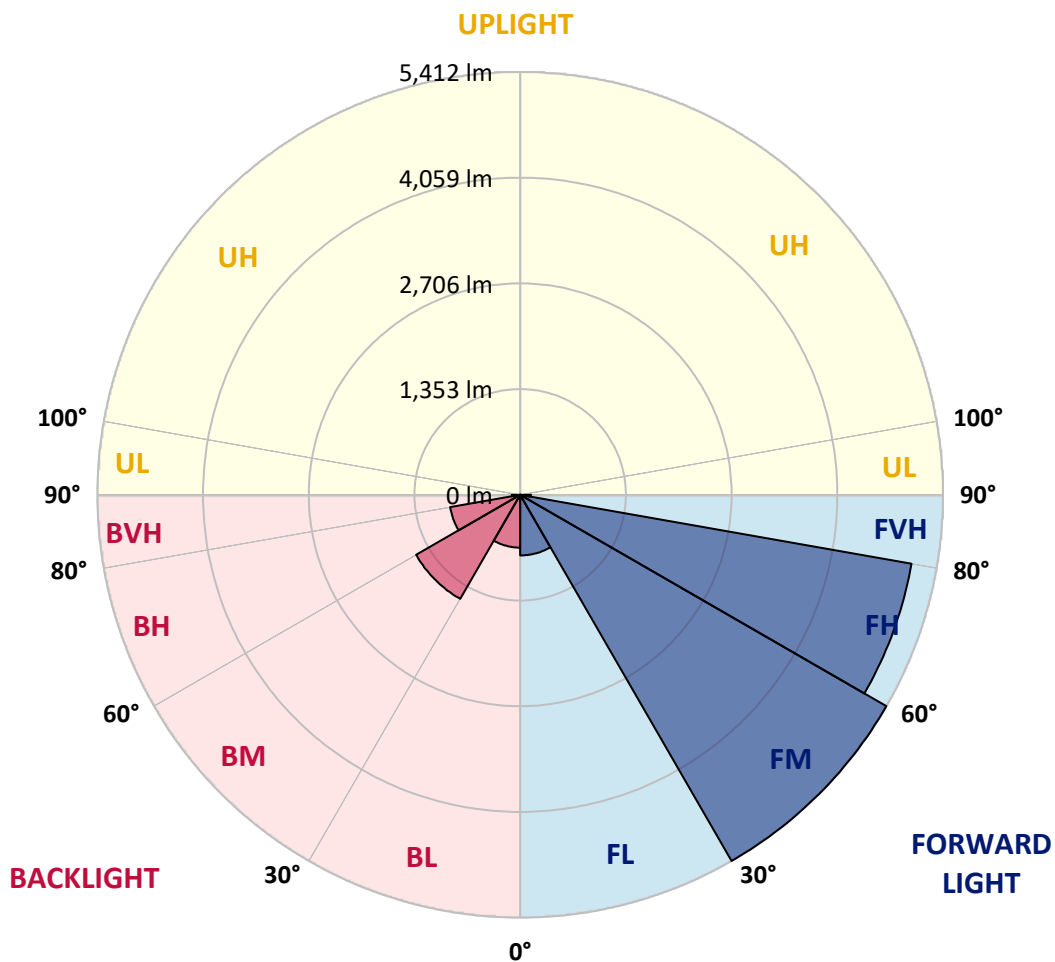
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	775.3	5.3			
FM	(30°-60°)	5411.6	37.0			
FH	(60°-80°)	5085.6	34.7			G3/7500
FVH	(80°-90°)	136.2	0.9			G2/225
BL	(0°-30°)	676.5	4.6	B2/1000		
BM	(30°-60°)	1537.4	10.5	B2/2500		
BH	(60°-80°)	910.3	6.2	B2/1000		G2/1000
BVH	(80°-90°)	106.1	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8
2.5°	1798.5	1798.5	1803.2	1803.2	1803.2	1801.3	1795.7	1797.5	1793.8	1791.0	1786.3
5°	1761.9	1763.8	1769.4	1771.3	1774.1	1775.1	1775.1	1774.1	1775.1	1775.1	1772.2
7.5°	1711.3	1713.2	1719.8	1723.5	1731.9	1739.4	1743.2	1743.2	1747.9	1751.6	1752.6
10°	1680.4	1680.4	1684.1	1684.1	1690.7	1694.5	1706.6	1705.7	1718.8	1731.0	1736.6
12.5°	1676.6	1676.6	1674.8	1668.2	1664.5	1663.5	1675.7	1677.6	1697.3	1718.8	1729.1
15°	1688.8	1688.8	1683.2	1670.1	1656.0	1649.5	1661.7	1665.4	1687.0	1712.3	1728.2
17.5°	1728.2	1727.3	1715.1	1688.8	1664.5	1654.2	1657.9	1661.7	1681.3	1710.4	1730.1
20°	1815.4	1815.4	1789.1	1741.3	1699.1	1674.8	1669.1	1672.0	1686.0	1713.2	1738.5
22.5°	1968.1	1970.9	1924.1	1845.3	1773.2	1721.6	1699.1	1702.0	1708.5	1734.8	1762.9
25°	2193.0	2185.5	2119.0	2007.5	1895.0	1806.9	1761.0	1763.8	1763.8	1788.2	1817.2
27.5°	2431.1	2433.0	2337.4	2217.4	2069.3	1938.1	1865.0	1864.1	1863.1	1886.6	1917.5
30°	2700.1	2701.0	2590.4	2451.7	2282.1	2114.3	2004.7	2003.7	1995.3	2024.3	2064.6
32.5°	2994.3	2993.4	2865.0	2708.5	2520.1	2329.9	2187.4	2186.5	2179.9	2219.3	2268.0
35°	3320.5	3320.5	3193.0	3000.0	2796.6	2584.8	2419.8	2418.9	2422.7	2476.1	2522.0
37.5°	3713.2	3721.6	3567.9	3333.6	3111.5	2885.6	2693.5	2687.9	2659.8	2749.7	2825.7
40°	4122.7	4146.2	3986.8	3713.2	3473.3	3239.9	3028.1	3024.3	3000.0	3095.6	3218.3
42.5°	4566.0	4619.4	4442.3	4163.0	3901.6	3649.4	3436.7	3426.4	3332.7	3481.7	3673.8
45°	5147.1	5181.8	4925.0	4671.9	4425.4	4137.7	3884.7	3829.4	3735.7	3926.9	4176.2
47.5°	5542.6	5525.7	5365.5	5195.8	5037.4	4761.9	4373.0	4302.7	4188.3	4441.4	4716.0
50°	5788.1	5800.3	5710.3	5701.9	5693.5	5501.3	4924.0	4839.7	4707.5	5007.4	5328.0
52.5°	5950.3	5895.0	5910.9	6102.1	6333.6	6241.7	5547.3	5453.6	5317.7	5617.6	5979.3
55°	5882.8	5809.7	5956.8	6333.6	6878.1	6898.7	6231.4	6134.9	6018.7	6266.1	6762.8
57.5°	5603.5	5640.1	5872.5	6396.4	7250.2	7487.3	7017.7	6919.3	6690.7	6941.8	7507.0
60°	5210.8	5284.9	5640.1	6297.0	7510.7	7945.6	7880.9	7815.3	7421.7	7599.7	8288.6
62.5°	4789.1	4862.2	5298.9	6127.4	7393.6	8351.4	8728.1	8687.8	8228.6	8233.3	8784.4
65°	4165.8	4195.8	4641.9	5664.4	7068.3	8717.8	9576.3	9540.7	8999.9	8774.0	8923.1
67.5°	3146.2	3183.7	3550.1	4471.4	6078.7	8519.1	10253.9	10248.3	9463.8	8974.6	8593.2
69°	2323.3	2369.2	2668.2	3471.4	5026.2	7761.9	10285.7	10361.7	9589.4	8954.0	8035.5
70°	1700.1	1752.6	2029.0	2755.4	4186.5	6925.9	10013.0	10176.1	9541.6	8823.7	7600.7
72.5°	722.6	740.4	876.3	1243.7	2123.7	4176.2	8201.4	8544.4	8617.5	7906.2	5938.1
75°	452.7	458.3	511.7	638.2	944.7	1727.3	5311.1	5778.8	6433.9	6134.0	3975.6
77.5°	341.1	345.8	376.8	439.5	586.7	644.8	2463.9	2938.1	3685.1	3608.2	1978.4
80°	261.5	264.3	284.9	319.6	413.3	403.9	799.4	1004.7	1537.9	1357.1	700.1
82.5°	205.2	206.2	224.0	230.6	288.7	271.8	401.1	447.0	621.4	516.4	342.1
85°	181.8	184.6	202.4	168.7	184.6	164.0	220.2	239.0	329.9	311.1	129.3
87.5°	92.8	97.5	169.6	144.3	92.8	77.8	96.5	104.0	134.0	145.3	62.8
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°	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8	1808.8
2.5°	1787.2	1788.2	1791.0	1795.7	1803.2	1812.5	1823.8	1835.0	1841.6	1846.3	1844.4
5°	1772.2	1773.2	1778.8	1787.2	1796.6	1810.7	1829.4	1843.5	1853.8	1860.3	1859.4
7.5°	1753.5	1756.3	1767.6	1776.9	1790.0	1801.3	1816.3	1829.4	1839.7	1846.3	1845.3
10°	1739.4	1742.3	1756.3	1768.5	1779.7	1781.6	1778.8	1775.1	1774.1	1778.8	1776.9
12.5°	1732.9	1738.5	1751.6	1760.1	1755.4	1737.6	1716.9	1708.5	1705.7	1715.1	1716.0
15°	1734.8	1739.4	1750.7	1745.1	1719.8	1689.8	1678.5	1685.1	1690.7	1696.3	1697.3
17.5°	1739.4	1742.3	1745.1	1724.4	1688.8	1669.1	1665.4	1658.8	1642.0	1632.6	1631.7
20°	1747.9	1751.6	1746.9	1714.1	1682.3	1656.0	1611.0	1570.7	1532.3	1511.7	1503.3
22.5°	1776.9	1779.7	1765.7	1733.8	1685.1	1599.8	1508.9	1439.5	1380.5	1348.6	1336.4
25°	1834.1	1838.8	1819.1	1778.8	1651.3	1502.3	1373.9	1280.2	1206.2	1167.7	1157.4
27.5°	1934.4	1939.1	1917.5	1812.5	1572.6	1372.1	1216.5	1123.7	1060.0	1027.2	1022.5
30°	2084.3	2090.9	2071.2	1811.6	1452.7	1206.2	1062.8	1008.4	971.9	949.4	948.4
32.5°	2292.4	2316.8	2236.2	1779.7	1304.6	1038.4	946.6	927.8	910.0	895.0	895.0
35°	2556.7	2613.8	2399.2	1713.2	1141.5	924.1	881.9	864.1	841.6	825.7	823.8
37.5°	2872.5	2961.5	2515.4	1595.1	1000.9	868.8	842.5	813.5	777.9	746.9	739.4
40°	3306.4	3327.1	2572.6	1403.0	896.0	838.8	806.0	769.4	724.5	689.8	686.0
42.5°	3742.2	3674.8	2561.4	1196.8	836.0	811.6	768.5	728.2	687.9	658.8	658.8
45°	4238.0	3978.4	2476.1	989.7	781.6	780.7	733.8	695.4	664.5	642.9	638.2
47.5°	4712.2	4251.1	2328.9	836.9	725.4	749.8	711.3	680.4	652.3	631.7	627.9
50°	5287.7	4567.0	2172.4	730.1	671.0	722.6	702.0	686.0	658.8	623.2	619.5
52.5°	5859.4	4936.2	2051.5	649.5	623.2	701.0	707.6	709.5	684.2	614.8	610.1
55°	6473.2	5330.8	1924.1	586.7	583.9	690.7	720.7	718.8	706.6	616.7	609.2
57.5°	7057.1	5727.2	1733.8	542.6	552.9	680.4	723.5	693.5	672.0	626.0	613.9
60°	7540.7	6055.2	1454.5	511.7	526.7	659.8	704.8	659.8	623.2	624.2	612.9
62.5°	7775.9	6147.1	1112.5	476.1	505.1	626.0	677.6	634.5	600.7	627.9	621.4
65°	7596.9	5885.6	792.9	443.3	478.9	586.7	661.7	612.9	589.5	646.7	639.2
67.5°	6954.0	5173.3	575.4	414.2	453.6	546.4	631.7	593.2	578.3	660.7	643.9
69°	6270.8	4466.7	498.6	397.4	435.8	524.8	612.0	582.9	569.8	641.0	616.7
70°	5702.8	3922.2	460.2	387.1	420.8	512.6	597.0	576.4	561.4	617.6	588.6
72.5°	4089.0	2535.1	387.1	356.1	381.4	485.5	564.2	552.0	529.5	557.6	538.9
75°	2470.5	1323.3	329.0	324.3	340.2	448.0	525.8	510.8	488.3	491.1	481.7
77.5°	1134.9	611.1	275.5	286.8	297.1	401.1	478.9	462.0	441.4	433.9	434.9
80°	497.7	357.1	230.6	244.6	250.2	360.8	428.3	409.6	387.1	427.4	396.4
82.5°	269.0	207.1	179.9	189.3	205.2	314.0	372.1	347.7	326.1	379.6	306.5
85°	108.7	105.9	121.8	131.2	142.5	225.9	311.1	285.8	259.6	232.4	226.8
87.5°	46.9	50.6	60.0	63.7	75.9	140.6	209.0	182.8	183.7	157.4	154.6
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)