

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: P197238

Luminaire Tested: **NAV-AF-06-D-UNV-T2R-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197238  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24459)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-06-D-UNV-T2R-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20295 lumens  
Efficiency: N/A  
Efficacy: 105.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 193  
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

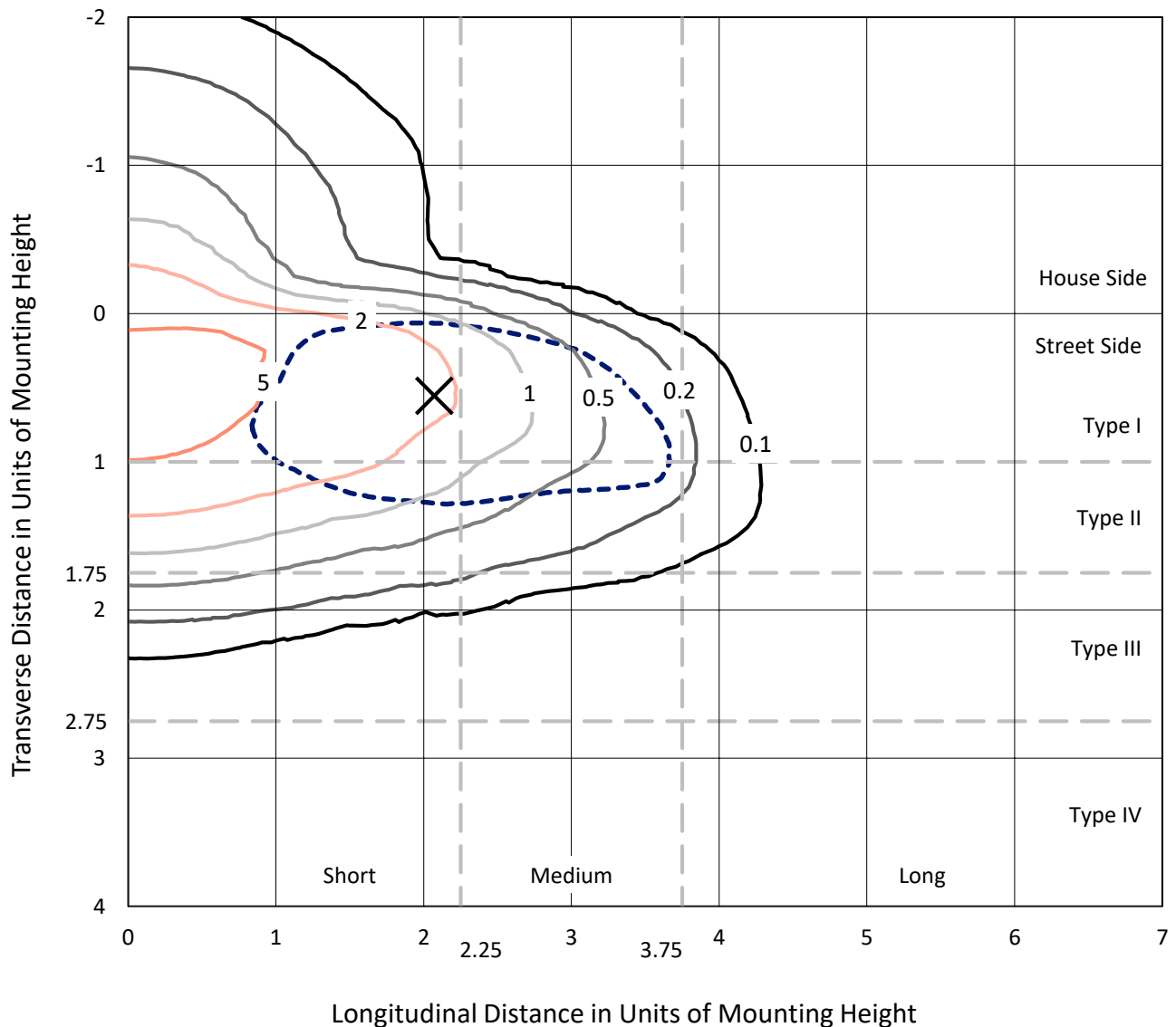


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### Iso-Footcandle Lines of Horizontal Illumination

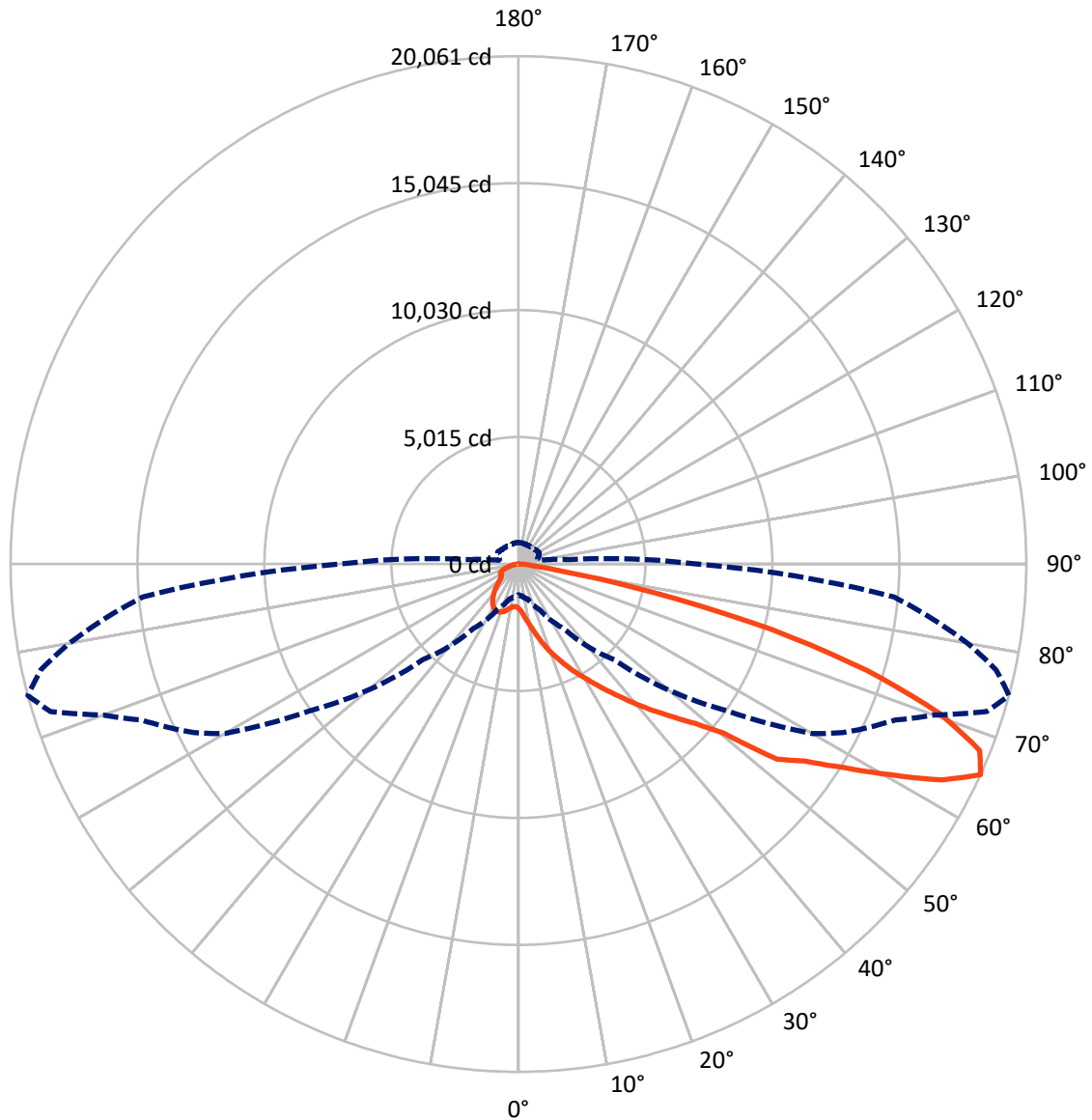
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.1 fc  
 Type II - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3049.6	0.0	3049.6
	% Fixture	15.0	0.0	15.0
<b>Street Side</b>	Lumens	17245.4	0.0	17245.4
	% Fixture	85.0	0.0	85.0
<b>Total</b>	Lumens	20295.0	0.0	20295.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	207.6	1.0
10°-20°	792.9	3.9
20°-30°	1600.2	7.9
30°-40°	2717.5	13.4
40°-50°	3790.3	18.7
50°-60°	4645.5	22.9
60°-70°	4370.8	21.5
70°-80°	1916.6	9.4
80°-90°	253.6	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°	20295.0	100.0
0°-180°	20295.0	100.0

**Coefficient of Utilization**



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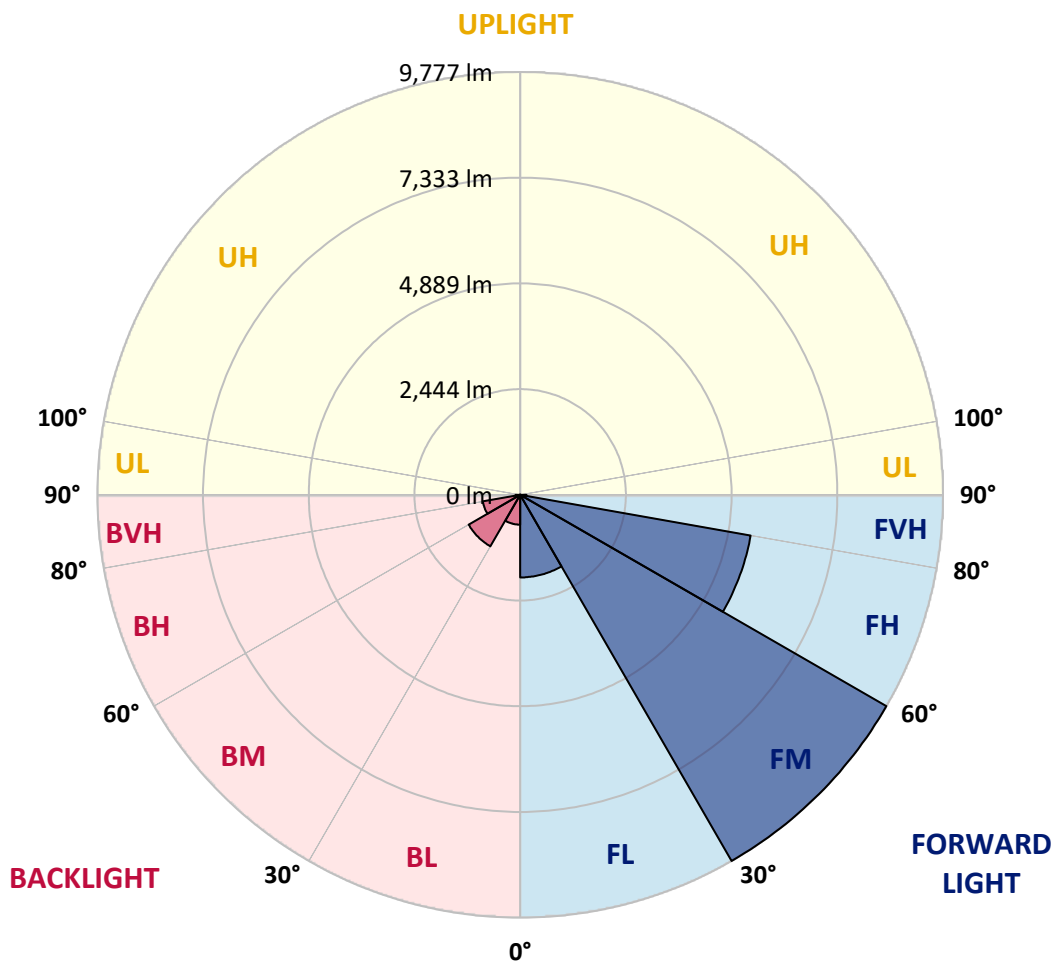
CATALOG NUMBER: NAV-AF-06-D-UNV-T2R-8030-600

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1910.3	9.4			
FM (30°-60°)	9777.2	48.2			
FH (60°-80°)	5410.8	26.7			G3/7500
FVH (80°-90°)	147.0	0.7			G2/225
BL (0°-30°)	690.4	3.4	B2/1000		
BM (30°-60°)	1376.2	6.8	B2/2500		
BH (60°-80°)	876.5	4.3	B2/1000		G2/1000
BVH (80°-90°)	106.6	0.5			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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
0°	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4
2.5°	2214.2	2188.4	2190.9	2154.8	2101.9	2043.8	1996.0	1970.2	1948.2	1941.8	1905.6
5°	2895.9	2863.6	2852.0	2769.3	2645.4	2498.2	2352.3	2295.5	2249.0	2220.6	2150.9
7.5°	3453.6	3436.8	3421.3	3345.2	3222.5	3034.0	2799.0	2715.1	2637.7	2552.4	2468.5
10°	3833.2	3826.7	3820.3	3767.3	3665.3	3501.4	3248.3	3156.7	3059.8	2951.4	2841.6
12.5°	4119.8	4119.8	4125.0	4081.1	4019.1	3892.6	3662.8	3577.6	3479.4	3365.8	3240.6
15°	4312.2	4317.3	4344.5	4357.4	4325.1	4243.7	4042.3	3967.5	3874.5	3762.2	3638.2
17.5°	4440.0	4450.3	4490.3	4532.9	4574.3	4545.9	4396.1	4326.4	4242.5	4139.2	4023.0
20°	4736.9	4724.0	4725.3	4712.4	4773.1	4795.0	4712.4	4654.3	4587.2	4492.9	4387.1
22.5°	5360.5	5336.0	5272.7	5111.3	5037.8	5030.0	4980.9	4950.0	4898.3	4838.9	4733.1
25°	6173.9	6145.5	6020.3	5754.3	5534.8	5332.1	5241.7	5222.4	5188.8	5148.8	5072.6
27.5°	7014.4	6983.4	6822.0	6486.3	6199.7	5790.4	5509.0	5483.2	5452.2	5435.4	5399.3
30°	7754.2	7720.6	7561.8	7221.0	6874.9	6386.9	5869.2	5778.8	5725.9	5731.1	5710.4
32.5°	8403.6	8373.9	8195.7	7848.4	7497.2	7023.4	6336.6	6195.8	6077.1	6033.2	6048.7
35°	8948.4	8921.3	8726.3	8376.5	8022.7	7628.9	6938.2	6726.5	6532.8	6411.5	6397.3
37.5°	9268.6	9253.1	9116.2	8819.3	8468.1	8178.9	7612.1	7377.2	7091.8	6915.0	6837.5
40°	9250.5	9267.3	9244.1	9109.8	8837.4	8626.9	8314.5	8082.1	7803.2	7539.8	7382.3
42.5°	8987.1	9010.4	9115.0	9184.7	9111.1	8983.3	8927.8	8754.7	8504.3	8225.4	8007.2
45°	8625.6	8646.3	8781.9	9033.6	9244.1	9280.2	9464.8	9378.3	9166.6	8929.0	8688.9
47.5°	8071.8	8111.8	8269.3	8669.5	9170.5	9519.1	9915.4	9955.4	9832.8	9636.5	9411.9
50°	7270.0	7323.0	7543.7	8113.1	8891.6	9764.4	10585.5	10737.8	10688.8	10489.9	10262.7
52.5°	6448.9	6501.8	6796.2	7401.7	8442.3	9865.1	11245.2	11635.1	11916.6	12121.9	12161.9
55°	5594.2	5653.6	5976.4	6673.5	7843.3	9737.3	11716.5	12159.3	12444.6	12658.9	12745.4
57.5°	4629.8	4696.9	5009.4	5714.3	6996.3	9223.4	12240.6	12868.1	13292.9	13623.4	13809.3
60°	3523.3	3607.3	3931.3	4641.4	5883.4	8239.6	12474.3	13402.6	14077.8	14573.6	14868.0
62.5°	2233.6	2318.8	2655.7	3392.9	4616.9	6895.6	11813.3	13167.6	14319.3	15052.6	15592.3
65°	1218.8	1256.2	1443.4	1998.6	3112.8	5350.2	10137.5	11734.5	13393.6	14432.9	15261.7
67.5°	914.1	919.2	938.6	1074.2	1657.7	3612.4	7925.9	9388.7	11231.0	12568.6	13558.8
70°	800.5	800.5	803.0	804.3	899.9	1957.3	5369.6	6716.1	8404.9	9757.9	10988.3
72.5°	717.8	710.1	707.5	692.0	704.9	1003.2	2923.0	4132.7	5556.8	7075.1	8222.8
75°	619.7	618.4	618.4	602.9	610.7	706.2	1267.8	1983.1	3086.9	4500.7	5630.4
77.5°	535.8	526.8	528.0	519.0	543.5	541.0	601.6	817.2	1344.0	2363.9	3301.3
80°	441.5	435.1	439.0	433.8	472.5	400.2	405.4	499.6	667.5	1036.7	1461.5
82.5°	326.6	329.2	353.8	351.2	397.6	269.8	296.9	373.1	449.3	516.4	561.6
85°	191.1	195.0	254.3	267.3	291.8	142.0	182.0	222.1	250.5	277.6	289.2
87.5°	20.7	27.1	142.0	145.9	130.4	42.6	73.6	93.0	99.4	105.9	93.0
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):**

	67.5°	70°	72.5°	75°	77.5°	80°	85°	90°	95°	100°	102.5°
0°	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4
2.5°	1894.0	1877.2	1859.1	1848.8	1830.7	1815.2	1786.8	1763.6	1737.8	1719.7	1712.0
5°	2116.1	2076.0	2033.4	2002.4	1963.7	1930.1	1865.6	1788.1	1763.6	1712.0	1699.0
7.5°	2405.3	2333.0	2260.7	2201.3	2134.1	2078.6	1970.2	1830.7	1812.7	1730.0	1712.0
10°	2744.8	2638.9	2531.8	2440.1	2342.0	2256.8	2096.7	1900.5	1881.1	1775.2	1757.1
12.5°	3124.4	2995.3	2857.1	2720.3	2604.1	2484.0	2265.8	2008.9	1977.9	1852.7	1828.2
15°	3515.6	3376.1	3216.1	3050.8	2907.5	2748.7	2473.7	2150.9	2094.1	1946.9	1913.4
17.5°	3901.6	3750.6	3582.7	3398.1	3230.3	3040.5	2698.3	2309.7	2211.6	2039.9	1997.3
20°	4274.7	4121.1	3944.2	3763.5	3554.3	3337.4	2928.1	2465.9	2316.2	2117.4	2061.8
22.5°	4614.3	4482.6	4305.7	4097.9	3886.1	3642.1	3161.8	2622.2	2407.8	2176.7	2105.7
25°	4971.9	4851.8	4676.3	4476.1	4229.5	3958.4	3403.3	2770.6	2481.4	2209.0	2121.2
27.5°	5333.4	5230.1	5064.9	4854.4	4589.8	4288.9	3648.6	2907.5	2540.8	2219.3	2113.5
30°	5719.4	5639.4	5487.0	5252.1	4984.8	4651.7	3915.8	3041.8	2578.3	2205.1	2078.6
32.5°	6084.8	6082.2	5946.7	5702.7	5414.7	5048.1	4197.3	3177.3	2597.6	2165.1	2017.9
35°	6464.4	6517.3	6415.3	6182.9	5879.5	5472.8	4508.4	3321.9	2598.9	2094.1	1939.2
37.5°	6895.6	6989.9	6944.7	6723.9	6405.0	5957.0	4873.8	3484.6	2591.2	1996.0	1824.3
40°	7386.2	7515.3	7514.0	7328.1	6987.3	6499.2	5298.6	3666.6	2573.1	1873.3	1688.7
42.5°	7947.8	8101.5	8144.1	7960.7	7616.0	7091.8	5785.3	3866.8	2544.7	1752.0	1545.4
45°	8590.8	8726.3	8806.4	8636.0	8290.0	7737.4	6344.3	4094.0	2509.8	1595.8	1381.4
47.5°	9278.9	9436.4	9556.5	9410.6	9041.4	8473.3	7006.6	4387.1	2496.9	1417.6	1204.6
50°	10132.3	10295.0	10554.5	10488.7	10286.0	9828.9	8407.4	5079.1	2502.1	1248.5	1056.1
52.5°	12249.7	12622.8	12950.7	12804.8	12323.3	11539.6	9546.2	5463.8	2393.6	1110.3	952.8
55°	12888.8	13312.2	13796.4	13735.7	13273.5	12483.4	10446.0	5785.3	2289.1	1009.6	885.7
57.5°	14006.8	14506.5	15183.0	15170.1	14603.3	13713.7	11604.1	6170.0	2243.9	951.5	852.1
60°	15190.7	15827.2	16762.0	16907.9	16292.0	15366.3	12972.7	6642.6	2250.3	919.2	832.7
62.5°	16055.7	16989.2	18348.7	18785.1	18059.5	17039.5	14392.9	7115.1	2211.6	881.8	809.5
65°	16108.7	17452.7	19381.5	20060.6	19326.0	18015.6	14893.8	7022.1	1979.2	831.4	772.1
67.5°	14817.6	16568.3	18911.6	19656.5	18905.1	17414.0	14015.9	6139.0	1608.7	743.7	707.5
70°	12341.3	14373.5	16805.9	17636.0	17015.0	15505.8	12198.0	4903.5	1202.0	627.5	610.7
72.5°	9537.1	11432.4	13641.4	14409.6	13934.5	12607.3	9621.1	3573.7	858.6	508.7	495.8
75°	6818.1	8432.0	10035.5	10328.6	9859.9	8641.1	6242.3	2232.3	601.6	417.0	398.9
77.5°	4221.8	5271.4	5847.3	5470.3	4872.5	4050.1	2540.8	1102.6	400.2	339.6	321.5
80°	1873.3	2198.7	2052.8	1829.4	1444.7	1187.8	775.9	489.3	258.2	262.1	251.8
82.5°	630.0	666.2	648.1	644.2	581.0	508.7	329.2	211.7	144.6	167.8	164.0
85°	307.3	321.5	322.8	334.4	290.5	225.9	89.1	83.9	62.0	90.4	94.2
87.5°	93.0	94.2	85.2	93.0	74.9	51.6	16.8	23.2	11.6	21.9	21.9
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):**

	105°	107.5°	110°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°
0°	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4
2.5°	1697.8	1692.6	1683.6	1673.2	1670.6	1657.7	1653.9	1647.4	1643.5	1637.1	1631.9
5°	1682.3	1673.2	1662.9	1651.3	1651.3	1633.2	1625.5	1617.7	1617.7	1606.1	1600.9
7.5°	1697.8	1686.1	1674.5	1664.2	1668.1	1647.4	1639.7	1631.9	1630.6	1619.0	1613.8
10°	1741.7	1730.0	1715.8	1705.5	1701.6	1684.8	1675.8	1664.2	1656.4	1648.7	1641.0
12.5°	1808.8	1793.3	1775.2	1753.3	1744.2	1730.0	1715.8	1700.3	1682.3	1674.5	1662.9
15°	1888.8	1863.0	1838.5	1811.4	1786.8	1772.6	1753.3	1728.7	1704.2	1693.9	1678.4
17.5°	1954.7	1927.6	1892.7	1860.4	1816.5	1804.9	1777.8	1748.1	1708.1	1704.2	1681.0
20°	2010.2	1968.9	1926.3	1887.5	1820.4	1814.0	1780.4	1745.5	1688.7	1688.7	1660.3
22.5°	2041.2	1984.4	1934.0	1882.4	1798.5	1793.3	1754.6	1713.3	1643.5	1646.1	1611.3
25°	2046.3	1977.9	1914.7	1852.7	1755.9	1746.8	1697.8	1652.6	1576.4	1571.2	1535.1
27.5°	2025.7	1945.6	1872.1	1797.2	1692.6	1673.2	1619.0	1564.8	1489.9	1477.0	1438.3
30°	1977.9	1883.7	1801.0	1714.5	1604.8	1573.8	1517.0	1461.5	1385.3	1368.5	1332.4
32.5°	1901.7	1794.6	1702.9	1616.4	1495.1	1456.3	1399.5	1344.0	1270.4	1257.5	1223.9
35°	1801.0	1681.0	1584.1	1492.5	1371.1	1331.1	1276.9	1227.8	1160.7	1155.5	1132.3
37.5°	1674.5	1549.3	1446.0	1358.2	1243.3	1222.6	1167.1	1131.0	1075.5	1080.6	1069.0
40°	1531.2	1403.4	1305.3	1227.8	1128.4	1110.3	1076.8	1049.6	1001.9	1016.1	1017.4
42.5°	1386.6	1258.8	1169.7	1100.0	1014.8	1003.2	979.9	964.4	928.3	956.7	968.3
45°	1222.6	1103.9	1027.7	974.8	911.5	911.5	899.9	898.6	874.1	914.1	925.7
47.5°	1063.8	970.9	918.0	885.7	841.8	862.4	858.6	868.9	850.8	892.1	902.5
50°	943.8	879.2	846.9	831.4	800.5	832.7	840.5	854.7	839.2	875.3	883.1
52.5°	867.6	825.0	806.9	803.0	781.1	821.1	834.0	846.9	828.9	862.4	861.1
55°	825.0	796.6	790.1	797.9	781.1	819.8	832.7	841.8	826.3	849.5	848.2
57.5°	809.5	794.0	797.9	809.5	797.9	830.2	836.6	846.9	831.4	841.8	846.9
60°	808.2	808.2	823.7	839.2	831.4	854.7	858.6	857.3	843.1	844.4	846.9
62.5°	800.5	819.8	845.7	870.2	867.6	896.0	898.6	881.8	870.2	857.3	853.4
65°	775.9	808.2	845.7	879.2	884.4	928.3	933.4	916.7	908.9	887.0	870.2
67.5°	721.7	763.0	806.9	848.2	857.3	916.7	928.3	934.7	938.6	924.4	902.5
70°	630.0	672.6	717.8	765.6	778.5	844.4	868.9	898.6	921.8	942.5	934.7
72.5°	512.6	551.3	590.0	633.9	653.3	721.7	754.0	805.6	841.8	894.7	916.7
75°	406.7	429.9	453.2	480.3	495.8	562.9	602.9	664.9	714.0	787.6	836.6
77.5°	320.2	331.8	343.4	355.0	361.5	398.9	431.2	493.2	550.0	643.0	715.3
80°	246.6	253.0	254.3	258.2	255.6	273.7	285.3	322.8	371.8	463.5	548.7
82.5°	158.8	164.0	166.5	173.0	160.1	183.3	191.1	195.0	220.8	287.9	348.6
85°	89.1	90.4	91.7	94.2	76.2	99.4	100.7	94.2	91.7	118.8	134.3
87.5°	21.9	20.7	21.9	21.9	9.0	20.7	20.7	14.2	10.3	19.4	15.5
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):**

	135°	145°	155°	165°	175°	180°
0°	1758.4	1758.4	1758.4	1758.4	1758.4	1758.4
2.5°	1620.3	1617.7	1619.0	1612.5	1610.0	1611.3
5°	1594.5	1589.3	1589.3	1585.4	1580.3	1580.3
7.5°	1606.1	1595.8	1591.9	1584.1	1576.4	1577.7
10°	1624.2	1606.1	1593.2	1581.6	1572.5	1572.5
12.5°	1635.8	1603.5	1584.1	1568.7	1558.3	1558.3
15°	1638.4	1589.3	1560.9	1544.1	1533.8	1533.8
17.5°	1622.9	1560.9	1524.8	1502.8	1491.2	1493.8
20°	1584.1	1508.0	1465.4	1442.1	1430.5	1431.8
22.5°	1523.5	1435.7	1386.6	1359.5	1347.9	1347.9
25°	1440.8	1345.3	1292.4	1270.4	1260.1	1260.1
27.5°	1346.6	1248.5	1202.0	1185.2	1178.7	1178.7
30°	1240.7	1159.4	1125.8	1114.2	1103.9	1103.9
32.5°	1151.6	1093.5	1081.9	1066.4	1039.3	1038.0
35°	1080.6	1074.2	1065.1	1018.7	979.9	974.8
37.5°	1041.9	1080.6	1023.8	943.8	912.8	911.5
40°	1021.2	1057.4	959.3	920.5	916.7	916.7
42.5°	972.2	998.0	955.4	933.4	933.4	934.7
45°	920.5	942.5	964.4	945.1	951.5	952.8
47.5°	884.4	928.3	964.4	947.6	960.6	968.3
50°	850.8	915.4	945.1	945.1	959.3	960.6
52.5°	843.1	897.3	927.0	941.2	942.5	936.0
55°	844.4	883.1	912.8	930.9	923.1	923.1
57.5°	843.1	875.3	901.2	907.6	911.5	911.5
60°	844.4	865.0	885.7	883.1	896.0	896.0
62.5°	848.2	850.8	861.1	858.6	877.9	877.9
65°	857.3	832.7	826.3	828.9	852.1	850.8
67.5°	874.1	808.2	787.6	788.8	822.4	817.2
70°	898.6	774.6	743.7	735.9	792.7	783.7
72.5°	906.3	735.9	686.8	679.1	712.7	686.8
75°	870.2	704.9	626.2	600.3	586.1	578.4
77.5°	775.9	685.6	562.9	508.7	486.7	481.6
80°	643.0	645.5	480.3	415.7	482.9	481.6
82.5°	485.4	557.7	384.7	360.2	349.9	291.8
85°	235.0	419.6	295.7	247.9	148.5	140.7
87.5°	20.7	175.6	170.4	111.0	50.4	47.8
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)