

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: P196776

Luminaire Tested: **NAV-AF-06-D-UNV-T2R-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196776  
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-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 40050.1 lumens  
Efficiency: N/A  
Efficacy: 104.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G4

Input Watts (W): 382  
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

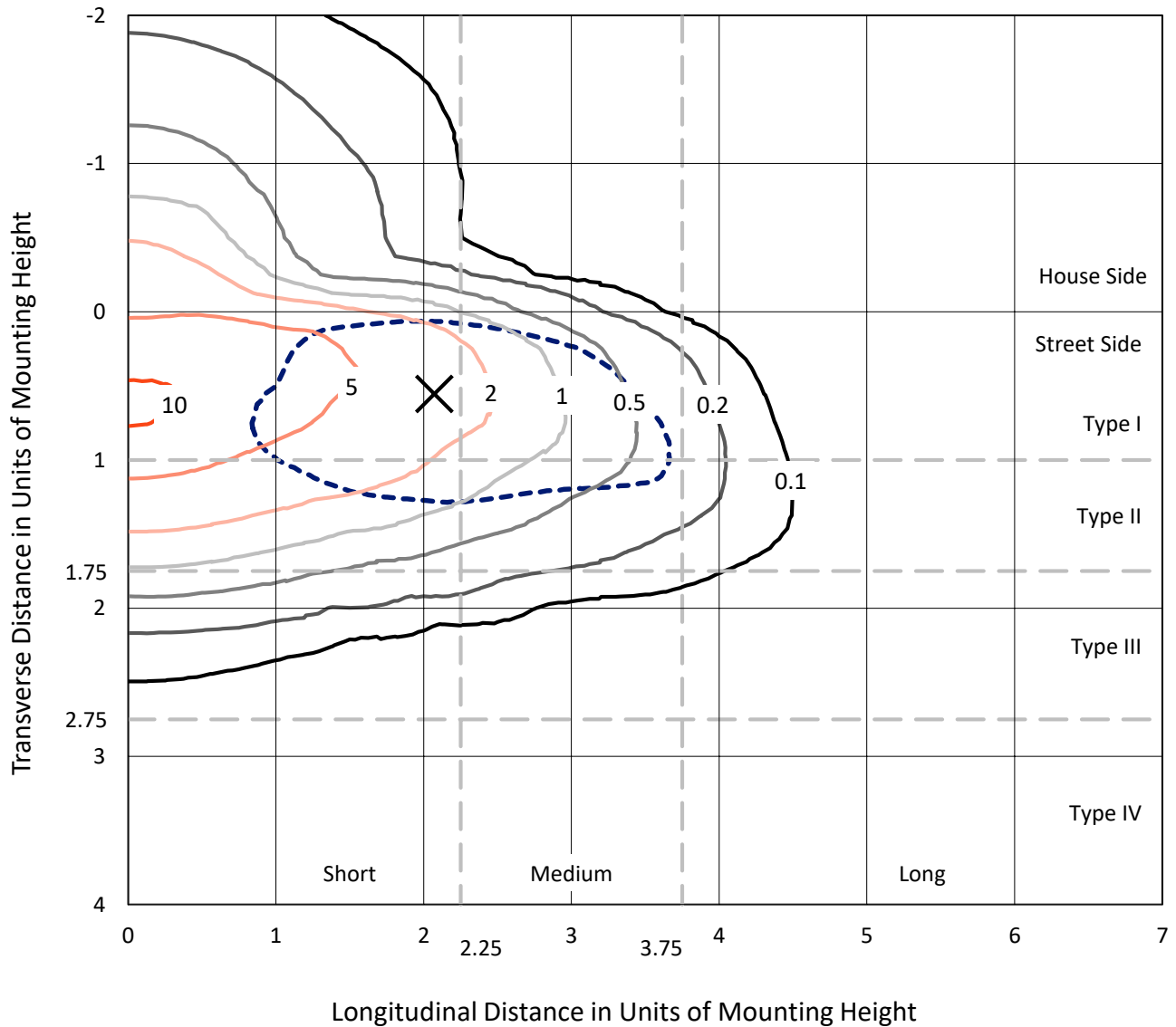


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### Iso-Footcandle Lines of Horizontal Illumination

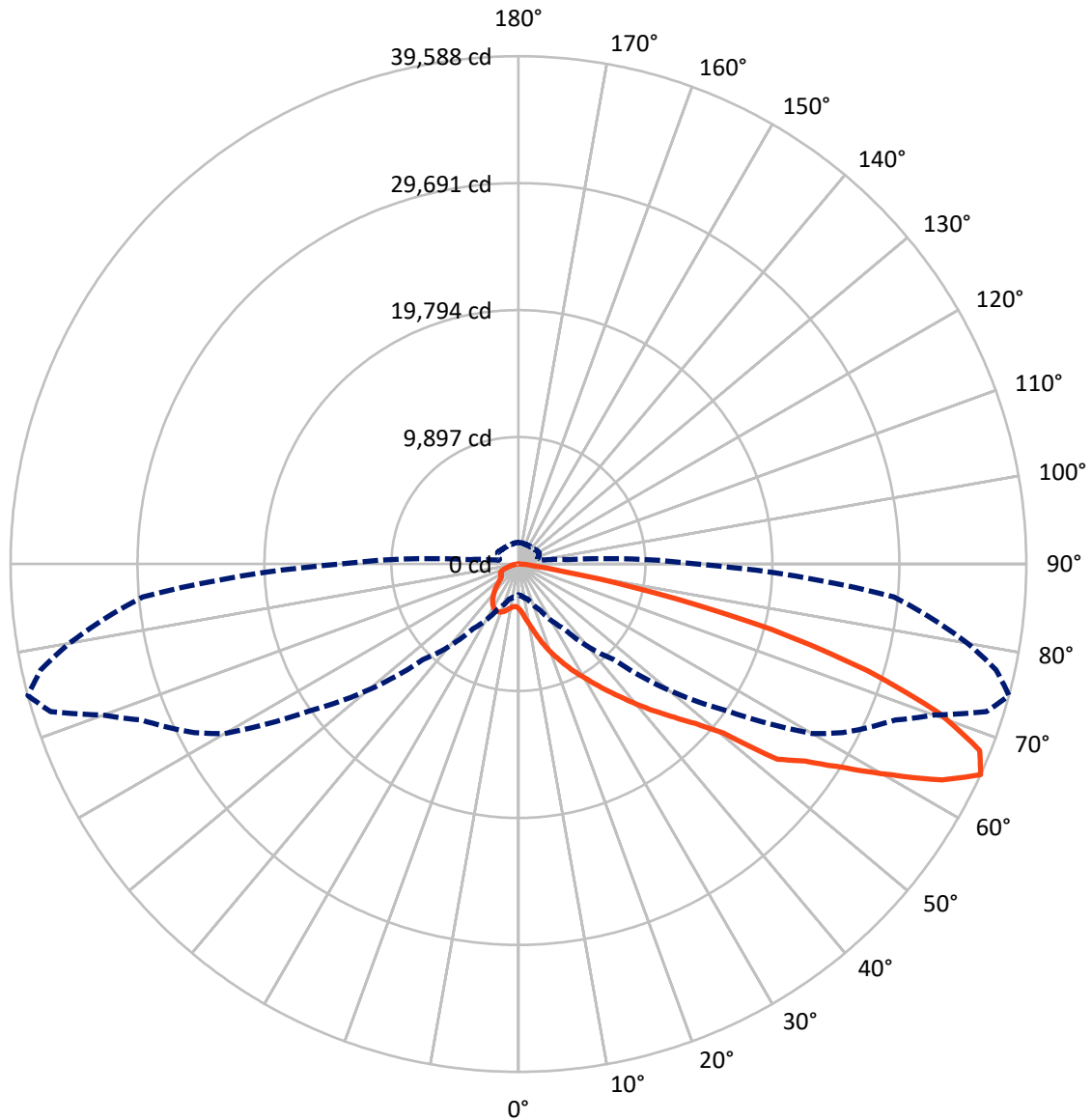
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.1 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	6018.1	0.0	6018.1
	% Fixture	15.0	0.0	15.0
<b>Street Side</b>	Lumens	34031.9	0.0	34031.9
	% Fixture	85.0	0.0	85.0
<b>Total</b>	Lumens	40050.1	0.0	40050.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	409.7	1.0
10°-20°	1564.7	3.9
20°-30°	3157.8	7.9
30°-40°	5362.8	13.4
40°-50°	7479.8	18.7
50°-60°	9167.4	22.9
60°-70°	8625.3	21.5
70°-80°	3782.1	9.4
80°-90°	500.4	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°	40050.1	100.0
0°-180°	40050.1	100.0

**Coefficient of Utilization**



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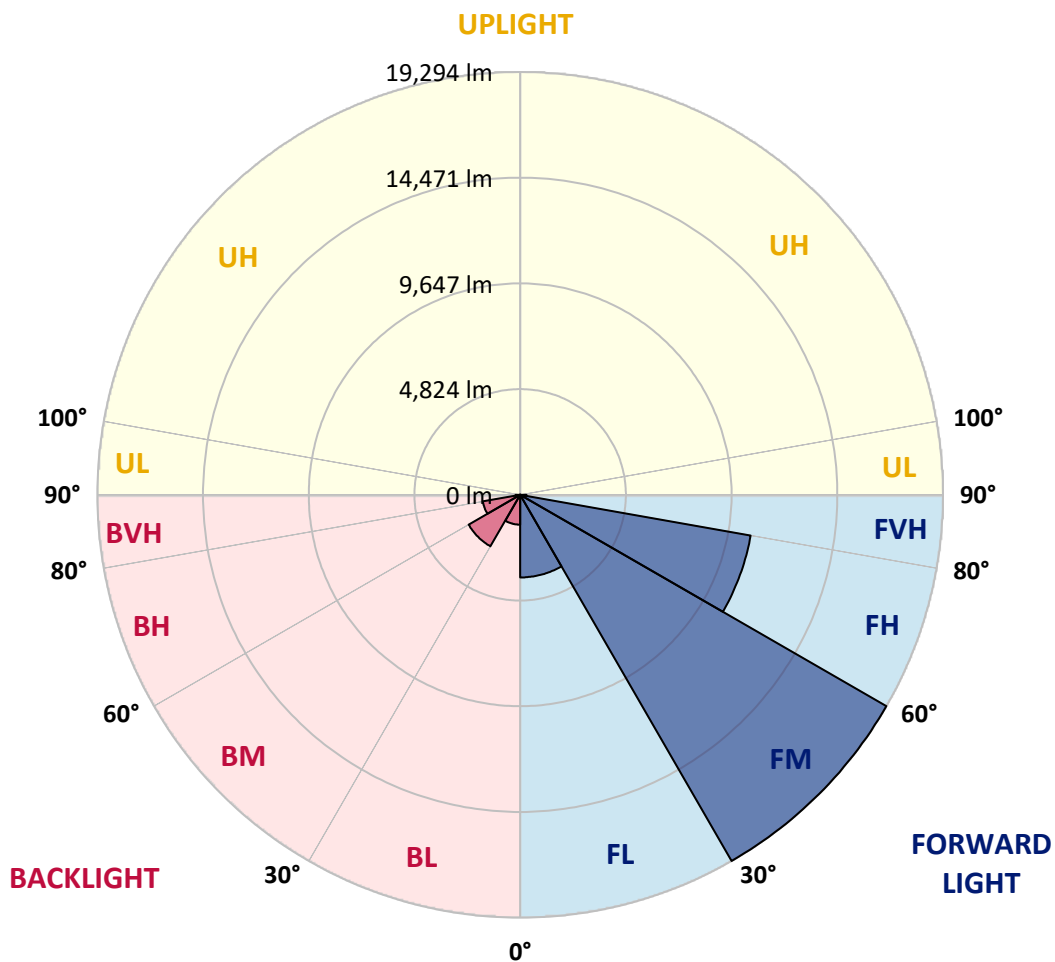
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3769.8	9.4			
FM	(30°-60°)	19294.3	48.2			
FH	(60°-80°)	10677.7	26.7			G4/12000
FVH	(80°-90°)	290.1	0.7			G3/500
BL	(0°-30°)	1362.4	3.4	B3/2500		
BM	(30°-60°)	2715.7	6.8	B3/5000		
BH	(60°-80°)	1729.7	4.3	B3/2500		G3/2500
BVH	(80°-90°)	210.3	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	57.5°	60°	62.5°	65°
0°	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1
2.5°	4369.5	4318.5	4323.6	4252.3	4147.8	4033.2	3938.9	3887.9	3844.7	3831.8	3760.6
5°	5714.7	5651.0	5628.1	5465.0	5220.4	4930.0	4642.1	4530.0	4438.2	4382.2	4244.6
7.5°	6815.4	6782.3	6751.6	6601.3	6359.3	5987.3	5523.6	5358.0	5205.1	5037.0	4871.5
10°	7564.3	7551.7	7538.9	7434.4	7233.2	6909.7	6410.2	6229.3	6038.3	5824.3	5607.7
12.5°	8130.0	8130.0	8140.3	8053.6	7931.2	7681.6	7228.0	7059.9	6866.3	6642.1	6395.0
15°	8509.6	8519.8	8573.3	8598.8	8535.2	8374.6	7977.1	7829.4	7646.0	7424.2	7179.7
17.5°	8761.8	8782.3	8861.3	8945.3	9026.8	8970.7	8675.1	8537.6	8372.1	8168.2	7938.9
20°	9347.9	9322.3	9324.9	9299.5	9419.2	9462.5	9299.5	9184.8	9052.3	8866.3	8657.3
22.5°	10578.5	10530.1	10405.2	10086.7	9941.5	9926.2	9829.4	9768.3	9666.2	9549.1	9340.2
25°	12183.5	12127.4	11880.3	11355.6	10922.4	10522.4	10344.0	10305.8	10239.6	10160.6	10010.3
27.5°	13842.2	13781.0	13462.5	12800.2	12234.6	11426.9	10871.4	10820.5	10759.3	10726.2	10654.9
30°	15302.1	15235.7	14922.4	14249.8	13567.0	12603.9	11582.2	11403.9	11299.5	11309.7	11268.9
32.5°	16583.6	16525.0	16173.4	15488.0	14795.1	13860.0	12504.6	12226.8	11992.6	11905.9	11936.3
35°	17658.7	17605.3	17220.6	16530.1	15832.0	15055.0	13691.9	13274.0	12891.8	12652.3	12624.4
37.5°	18290.6	18260.1	17990.0	17404.0	16710.9	16140.3	15021.8	14558.1	13995.0	13645.9	13493.1
40°	18254.9	18288.1	18242.2	17977.2	17439.6	17024.3	16407.8	15949.2	15398.9	14879.2	14568.3
42.5°	17735.2	17781.1	17987.5	18125.0	17979.8	17727.6	17617.9	17276.6	16782.3	16232.0	15801.4
45°	17021.8	17062.6	17330.0	17827.0	18242.2	18313.5	18677.9	18507.2	18089.3	17620.6	17146.6
47.5°	15928.8	16007.8	16318.6	17108.5	18096.9	18784.8	19567.0	19646.0	19404.0	19016.7	18573.4
50°	14346.7	14451.0	14886.8	16010.3	17546.6	19269.0	20889.4	21190.0	21093.1	20700.8	20252.4
52.5°	12726.2	12830.7	13411.6	14606.6	16660.1	19467.7	22191.3	22960.8	23516.1	23921.2	24000.2
55°	11039.5	11156.8	11793.8	13169.6	15477.8	19215.4	23121.2	23995.1	24558.2	24981.1	25151.8
57.5°	9136.4	9268.9	9885.4	11276.5	13806.4	18201.4	24155.6	25393.8	26232.0	26884.4	27251.2
60°	6952.9	7118.6	7758.1	9159.3	11610.3	16260.0	24616.7	26448.6	27781.2	28759.4	29340.4
62.5°	4407.6	4575.9	5240.8	6695.6	9110.9	13607.8	23312.3	25984.9	28257.6	29704.8	30769.7
65°	2405.2	2479.0	2848.4	3943.9	6142.8	10558.0	20005.3	23156.9	26430.8	28481.8	30117.5
67.5°	1803.9	1814.0	1852.3	2119.7	3271.3	7128.7	15640.9	18527.5	22163.2	24802.7	26756.9
70°	1579.7	1579.7	1584.7	1587.3	1775.8	3862.5	10596.3	13253.5	16586.1	19256.2	21684.2
72.5°	1416.5	1401.2	1396.3	1365.6	1391.1	1979.7	5768.3	8155.4	10965.7	13961.9	16226.8
75°	1222.9	1220.4	1220.4	1189.9	1205.1	1393.6	2501.9	3913.4	6091.7	8881.5	11110.9
77.5°	1057.3	1039.5	1042.0	1024.2	1072.6	1067.6	1187.3	1612.7	2652.3	4665.1	6514.7
80°	871.4	858.6	866.2	856.0	932.5	789.8	800.0	985.9	1317.2	2045.9	2884.1
82.5°	644.6	649.6	698.0	693.0	784.7	532.5	585.9	736.3	886.6	1019.2	1108.3
85°	377.1	384.7	501.9	527.4	575.8	280.2	359.3	438.2	494.3	547.8	570.7
87.5°	40.8	53.5	280.2	287.9	257.3	84.1	145.2	183.4	196.2	208.9	183.4
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):**

	67.5°	70°	72.5°	75°	77.5°	80°	85°	90°	95°	100°	102.5°
0°	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1
2.5°	3737.6	3704.6	3668.8	3648.3	3612.7	3582.2	3526.2	3480.2	3429.3	3393.7	3378.4
5°	4175.8	4096.9	4012.8	3951.6	3875.2	3809.0	3681.6	3528.7	3480.2	3378.4	3352.9
7.5°	4746.6	4603.8	4461.2	4344.0	4211.5	4101.9	3887.9	3612.7	3577.1	3414.1	3378.4
10°	5416.6	5207.8	4996.2	4815.3	4621.6	4453.5	4137.6	3750.4	3712.1	3503.2	3467.6
12.5°	6165.6	5910.9	5638.3	5368.2	5138.9	4901.9	4471.3	3964.4	3903.2	3656.1	3607.6
15°	6937.6	6662.5	6346.6	6020.4	5737.6	5424.2	4881.6	4244.6	4132.5	3842.1	3775.8
17.5°	7699.4	7401.3	7070.1	6705.8	6374.6	6000.1	5324.9	4558.0	4364.4	4025.5	3941.4
20°	8435.7	8132.6	7783.5	7426.8	7014.1	6586.0	5778.4	4866.3	4570.8	4178.4	4068.9
22.5°	9105.7	8845.9	8496.9	8086.8	7668.9	7187.3	6239.6	5174.5	4751.6	4295.5	4155.4
25°	9811.6	9574.6	9228.1	8833.2	8346.6	7811.5	6715.9	5467.6	4896.9	4359.2	4186.0
27.5°	10525.0	10321.0	9995.0	9579.8	9057.4	8463.8	7200.0	5737.6	5014.0	4379.6	4170.8
30°	11286.7	11128.7	10828.1	10364.5	9837.0	9179.8	7727.5	6002.6	5087.9	4351.6	4101.9
32.5°	12007.7	12002.6	11735.1	11253.6	10685.4	9961.8	8282.8	6270.2	5126.1	4272.7	3982.2
35°	12756.8	12861.2	12660.0	12201.4	11602.7	10800.1	8896.9	6555.4	5128.7	4132.5	3826.8
37.5°	13607.8	13793.8	13704.6	13268.9	12639.5	11755.5	9617.9	6876.4	5113.5	3938.9	3600.0
40°	14576.0	14830.8	14828.1	14461.2	13788.6	12825.6	10456.1	7235.7	5077.8	3696.9	3332.5
42.5°	15684.1	15987.4	16071.5	15709.8	15029.3	13995.0	11416.6	7630.6	5021.7	3457.4	3049.8
45°	16953.0	17220.6	17378.4	17042.1	16359.4	15268.9	12519.8	8079.0	4952.9	3149.1	2726.1
47.5°	18311.0	18621.8	18858.8	18570.9	17842.1	16721.1	13826.9	8657.3	4927.5	2797.5	2377.1
50°	19995.1	20316.1	20828.2	20698.3	20298.3	19396.4	16591.2	10023.0	4937.7	2463.7	2084.1
52.5°	24173.5	24909.8	25557.0	25269.1	24318.7	22772.2	18838.4	10782.2	4723.6	2191.0	1880.3
55°	25434.6	26270.3	27225.8	27106.0	26193.9	24634.5	20614.2	11416.6	4517.3	1992.4	1747.8
57.5°	27641.0	28627.0	29962.0	29936.6	28818.1	27062.7	22899.5	12175.9	4428.1	1877.7	1681.5
60°	29977.4	31233.4	33078.0	33365.9	32150.6	30323.9	25600.2	13108.4	4440.9	1814.0	1643.4
62.5°	31684.3	33526.4	36209.3	37070.3	35638.5	33625.7	28402.8	14040.9	4364.4	1740.2	1597.5
65°	31788.8	34441.0	38247.6	39587.6	38137.9	35551.9	29391.3	13857.5	3905.8	1640.7	1523.6
67.5°	29241.0	32695.9	37320.1	38790.1	37307.3	34364.7	27658.9	12114.7	3174.5	1467.6	1396.3
70°	24354.3	28364.6	33164.7	34802.9	33577.3	30599.0	24071.6	9676.5	2372.0	1238.2	1205.1
72.5°	18820.6	22560.7	26920.0	28436.0	27498.4	24879.2	18986.2	7052.2	1694.3	1003.9	978.3
75°	13454.8	16639.6	19804.0	20382.4	19457.6	17052.4	12318.6	4405.2	1187.3	822.9	787.3
77.5°	8331.2	10402.7	11539.0	10795.1	9615.4	7992.5	5014.0	2175.8	789.8	670.1	634.4
80°	3696.9	4338.9	4051.0	3610.3	2851.0	2343.9	1531.3	965.7	509.5	517.3	496.8
82.5°	1243.4	1314.6	1279.0	1271.3	1146.4	1003.9	649.6	417.8	285.3	331.2	323.5
85°	606.4	634.4	637.0	659.9	573.3	445.9	175.8	165.6	122.3	178.3	186.0
87.5°	183.4	186.0	168.2	183.4	147.7	101.9	33.1	45.9	23.0	43.2	43.2
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°	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1
2.5°	3350.3	3340.2	3322.3	3302.0	3296.9	3271.3	3263.7	3251.0	3243.4	3230.6	3220.4
5°	3319.8	3302.0	3281.6	3258.6	3258.6	3222.9	3207.7	3192.3	3192.3	3169.5	3159.2
7.5°	3350.3	3327.4	3304.4	3284.2	3291.8	3251.0	3235.7	3220.4	3217.9	3195.0	3184.7
10°	3437.0	3414.1	3386.1	3365.6	3358.0	3324.9	3307.1	3284.2	3268.8	3253.5	3238.2
12.5°	3569.5	3538.9	3503.2	3459.9	3442.1	3414.1	3386.1	3355.5	3319.8	3304.4	3281.6
15°	3727.4	3676.5	3628.1	3574.5	3526.2	3498.2	3459.9	3411.5	3363.1	3342.7	3312.0
17.5°	3857.4	3803.9	3735.0	3671.3	3584.8	3561.9	3508.4	3449.8	3370.7	3363.1	3317.2
20°	3966.8	3885.4	3801.3	3724.8	3592.3	3579.7	3513.4	3444.6	3332.5	3332.5	3276.4
22.5°	4028.1	3916.0	3816.7	3714.7	3549.1	3538.9	3462.4	3380.9	3243.4	3248.4	3179.7
25°	4038.2	3903.2	3778.4	3656.1	3465.0	3447.1	3350.3	3261.2	3110.8	3100.7	3029.3
27.5°	3997.5	3839.5	3694.3	3546.5	3340.2	3302.0	3195.0	3087.8	2940.1	2914.7	2838.2
30°	3903.2	3717.2	3554.2	3383.4	3166.9	3105.8	2993.7	2884.1	2733.7	2700.7	2629.4
32.5°	3752.9	3541.4	3360.5	3189.9	2950.3	2873.9	2761.8	2652.3	2507.1	2481.5	2415.2
35°	3554.2	3317.2	3126.1	2945.3	2705.8	2626.8	2519.7	2423.0	2290.5	2280.2	2234.5
37.5°	3304.4	3057.4	2853.6	2680.2	2453.5	2412.8	2303.1	2231.8	2122.4	2132.5	2109.6
40°	3021.7	2769.5	2575.8	2423.0	2226.8	2191.0	2124.9	2071.3	1977.0	2005.1	2007.6
42.5°	2736.3	2484.1	2308.3	2170.8	2002.6	1979.7	1933.8	1903.2	1831.8	1887.9	1910.8
45°	2412.8	2178.4	2028.1	1923.6	1798.7	1798.7	1775.8	1773.3	1724.8	1803.9	1826.9
47.5°	2099.4	1916.0	1811.5	1747.8	1661.2	1701.9	1694.3	1714.8	1679.0	1760.5	1780.9
50°	1862.5	1735.0	1671.3	1640.7	1579.7	1643.4	1658.7	1686.6	1656.1	1727.4	1742.6
52.5°	1712.1	1628.1	1592.4	1584.7	1541.4	1620.5	1645.9	1671.3	1635.7	1701.9	1699.4
55°	1628.1	1572.0	1559.2	1574.5	1541.4	1617.8	1643.4	1661.2	1630.5	1676.5	1673.9
57.5°	1597.5	1566.9	1574.5	1597.5	1574.5	1638.3	1651.0	1671.3	1640.7	1661.2	1671.3
60°	1594.9	1594.9	1625.4	1656.1	1640.7	1686.6	1694.3	1691.8	1663.7	1666.2	1671.3
62.5°	1579.7	1617.8	1668.8	1717.2	1712.1	1768.2	1773.3	1740.2	1717.2	1691.8	1684.1
65°	1531.3	1594.9	1668.8	1735.0	1745.2	1831.8	1842.0	1808.9	1793.6	1750.4	1717.2
67.5°	1424.2	1505.7	1592.4	1673.9	1691.8	1808.9	1831.8	1844.7	1852.3	1824.2	1780.9
70°	1243.4	1327.4	1416.5	1510.8	1536.3	1666.2	1714.8	1773.3	1819.1	1859.9	1844.7
72.5°	1011.5	1087.9	1164.3	1251.0	1289.1	1424.2	1487.9	1589.8	1661.2	1765.6	1808.9
75°	802.5	848.4	894.3	947.9	978.3	1110.8	1189.9	1312.1	1408.9	1554.1	1651.0
77.5°	631.8	654.8	677.7	700.7	713.4	787.3	850.9	973.3	1085.4	1268.8	1411.5
80°	486.6	499.4	501.9	509.5	504.4	540.2	563.0	637.0	733.7	914.6	1082.8
82.5°	313.3	323.5	328.7	341.4	316.0	361.7	377.1	384.7	435.7	568.1	687.9
85°	175.8	178.3	181.0	186.0	150.3	196.2	198.8	186.0	181.0	234.4	265.0
87.5°	43.2	40.8	43.2	43.2	17.8	40.8	40.8	28.1	20.4	38.2	30.6
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°	3470.1	3470.1	3470.1	3470.1	3470.1	3470.1
2.5°	3197.5	3192.3	3195.0	3182.1	3177.2	3179.7
5°	3146.5	3136.3	3136.3	3128.6	3118.5	3118.5
7.5°	3169.5	3149.1	3141.4	3126.1	3110.8	3113.5
10°	3205.1	3169.5	3143.9	3121.1	3103.2	3103.2
12.5°	3228.1	3164.3	3126.1	3095.6	3075.2	3075.2
15°	3233.2	3136.3	3080.2	3047.1	3026.8	3026.8
17.5°	3202.6	3080.2	3008.9	2965.7	2942.7	2947.9
20°	3126.1	2975.7	2891.8	2845.8	2822.9	2825.6
22.5°	3006.4	2833.1	2736.3	2682.9	2659.9	2659.9
25°	2843.4	2654.8	2550.3	2507.1	2486.6	2486.6
27.5°	2657.3	2463.7	2372.0	2338.9	2326.1	2326.1
30°	2448.4	2287.9	2221.7	2198.8	2178.4	2178.4
32.5°	2272.6	2158.0	2135.0	2104.5	2051.1	2048.4
35°	2132.5	2119.7	2101.9	2010.3	1933.8	1923.6
37.5°	2056.0	2132.5	2020.4	1862.5	1801.2	1798.7
40°	2015.3	2086.7	1893.0	1816.6	1808.9	1808.9
42.5°	1918.5	1969.4	1885.4	1842.0	1842.0	1844.7
45°	1816.6	1859.9	1903.2	1864.9	1877.7	1880.3
47.5°	1745.2	1831.8	1903.2	1870.1	1895.5	1910.8
50°	1679.0	1806.4	1864.9	1864.9	1893.0	1895.5
52.5°	1663.7	1770.8	1829.3	1857.3	1859.9	1847.1
55°	1666.2	1742.6	1801.2	1836.9	1821.7	1821.7
57.5°	1663.7	1727.4	1778.4	1791.1	1798.7	1798.7
60°	1666.2	1707.0	1747.8	1742.6	1768.2	1768.2
62.5°	1673.9	1679.0	1699.4	1694.3	1732.6	1732.6
65°	1691.8	1643.4	1630.5	1635.7	1681.5	1679.0
67.5°	1724.8	1594.9	1554.1	1556.7	1622.9	1612.7
70°	1773.3	1528.6	1467.6	1452.3	1564.4	1546.6
72.5°	1788.6	1452.3	1355.5	1340.2	1406.3	1355.5
75°	1717.2	1391.1	1235.7	1184.7	1156.7	1141.4
77.5°	1531.3	1352.8	1110.8	1003.9	960.5	950.3
80°	1268.8	1273.9	947.9	820.4	952.8	950.3
82.5°	957.9	1100.7	759.3	710.8	690.4	575.8
85°	463.7	828.0	583.5	489.2	293.1	277.7
87.5°	40.8	346.5	336.3	219.1	99.3	94.3
90°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)