

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: P195731

Luminaire Tested: **NAV-AF-05-D-UNV-SLL-7050-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195731  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24264)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-05-D-UNV-SLL-7050-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT  
ELIMINATOR LEFT OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21457 lumens  
Efficiency: N/A  
Efficacy: 102.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B3 - U0 - G4

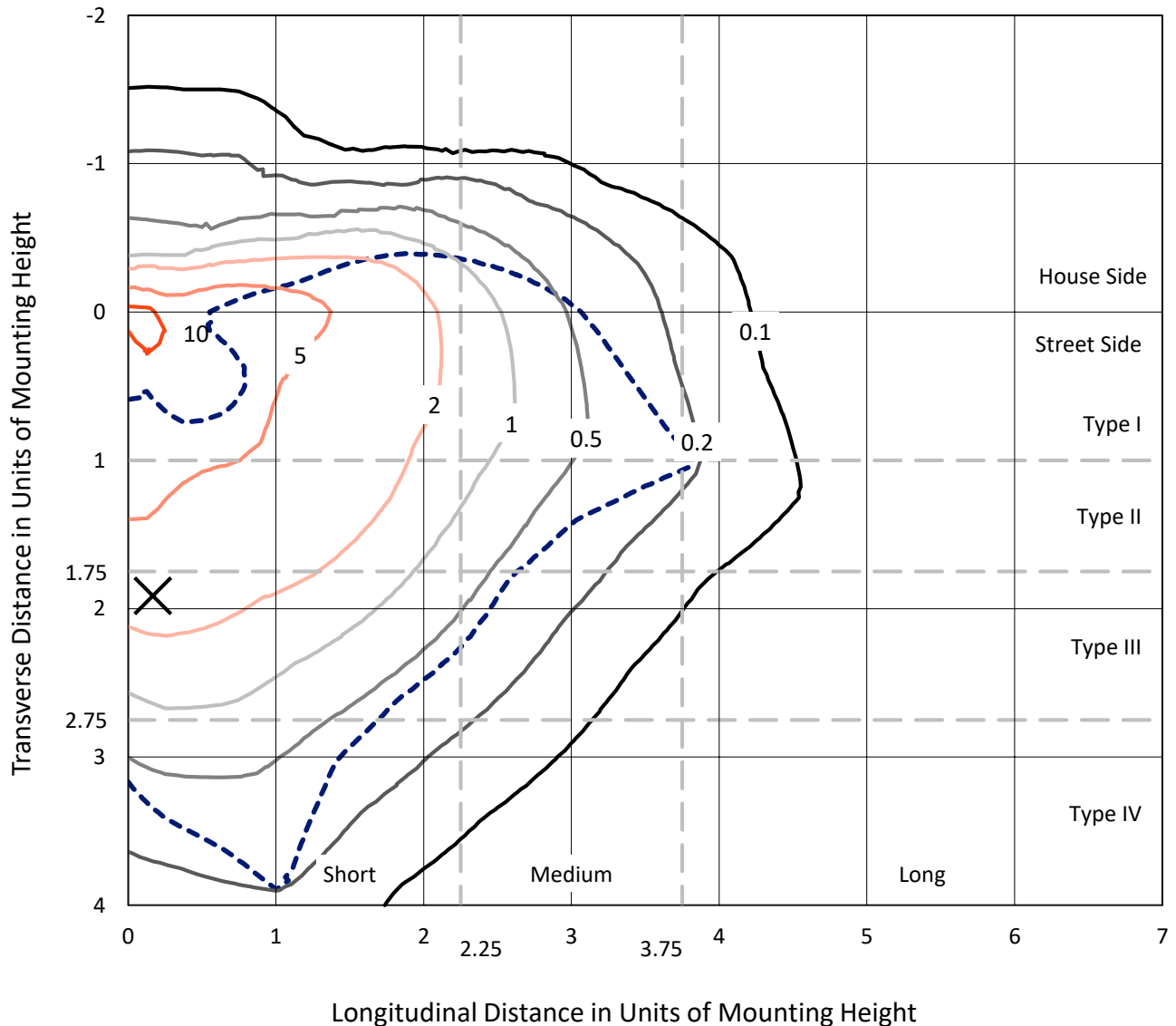
Input Watts (W): 210  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

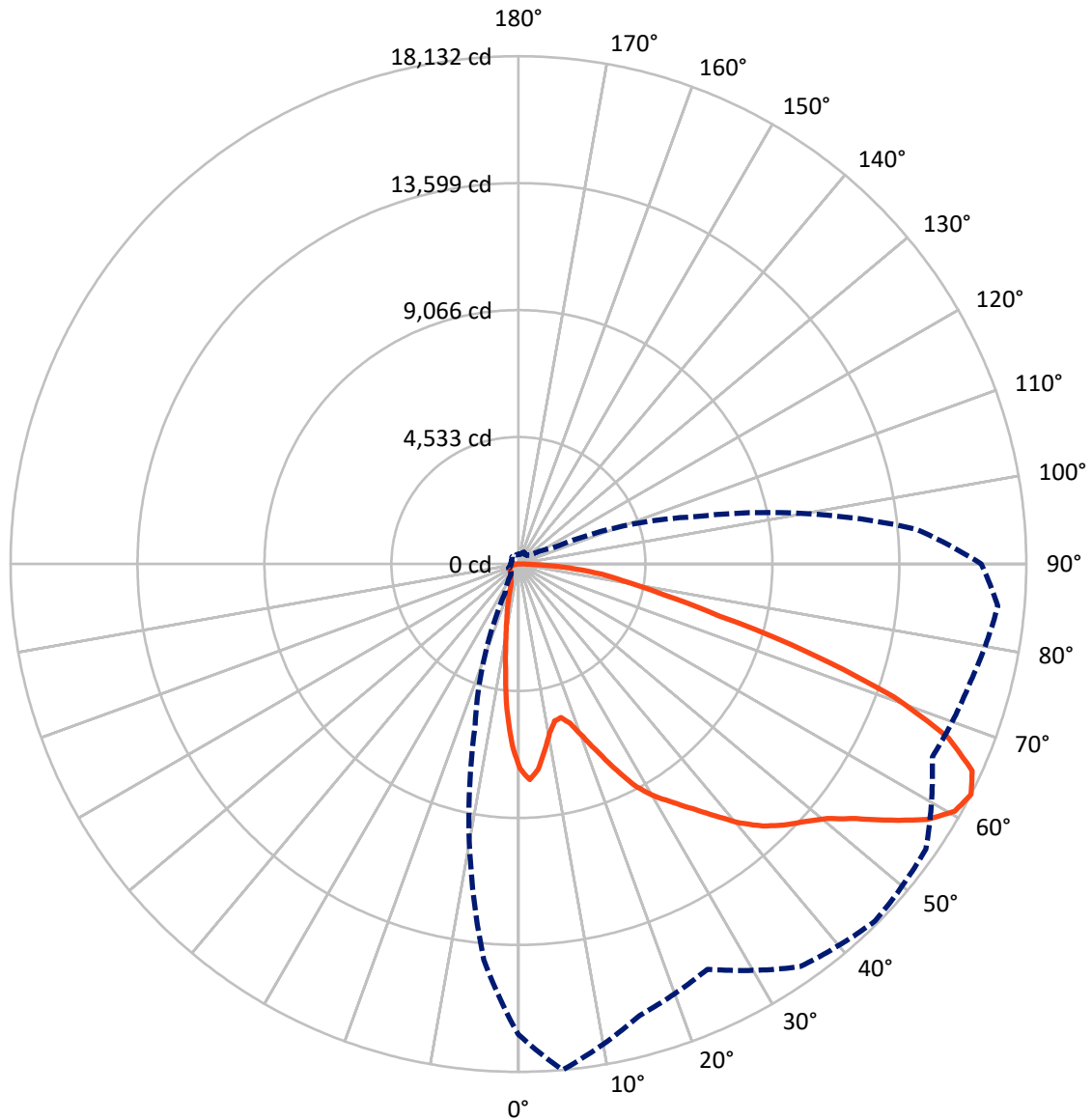
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13.4 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 5-Deg Lateral      - - - Horizontal Cone Through 62.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3801.1	0.0	3801.1
	% Fixture	17.7	0.0	17.7
<b>Street Side</b>	Lumens	17655.9	0.0	17655.9
	% Fixture	82.3	0.0	82.3
<b>Total</b>	Lumens	21457.0	0.0	21457.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	532.0	2.5
10°-20°	971.7	4.5
20°-30°	1397.5	6.5
30°-40°	2140.5	10.0
40°-50°	3129.4	14.6
50°-60°	4553.3	21.2
60°-70°	5275.6	24.6
70°-80°	2750.1	12.8
80°-90°	706.9	3.3
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°	21457.0	100.0
0°-180°	21457.0	100.0



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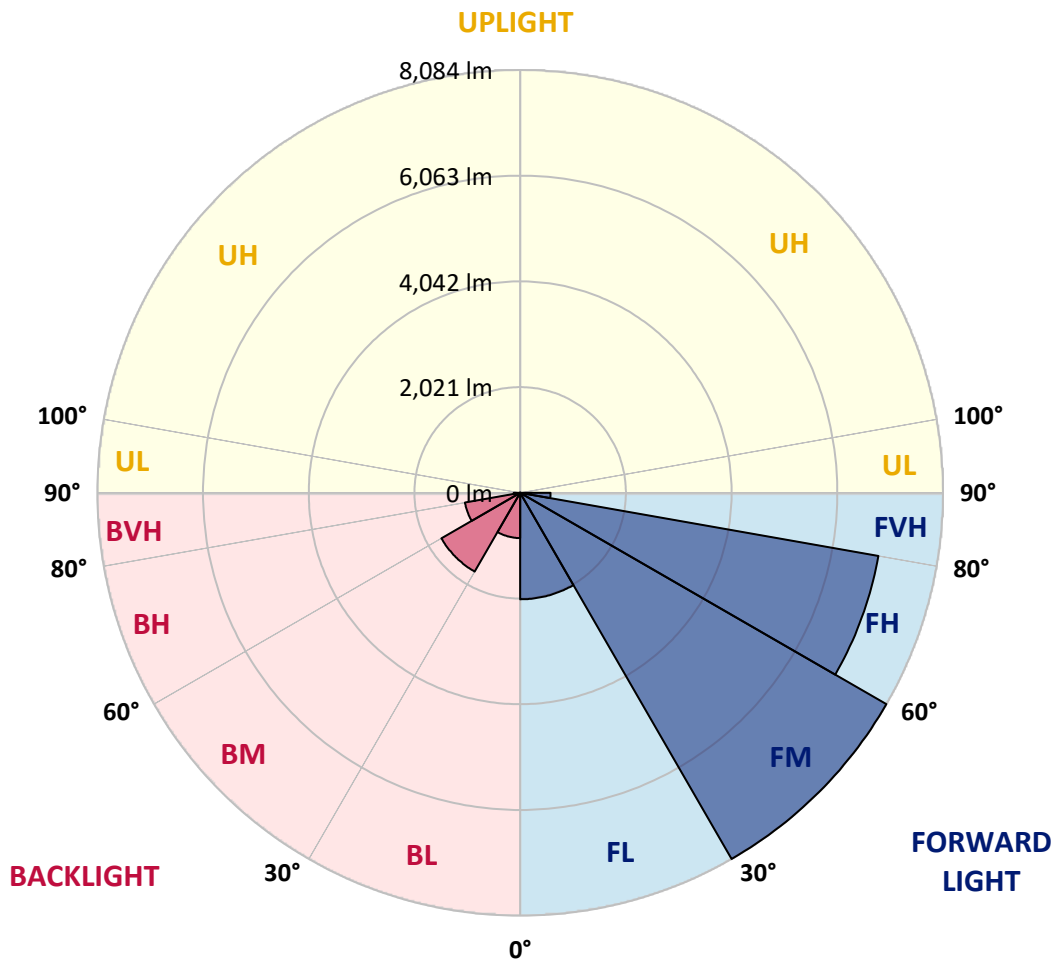
CATALOG NUMBER: NAV-AF-05-D-UNV-SLL-7050-800

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2036.4	9.5			
FM	(30°-60°)	8084.0	37.7			
FH	(60°-80°)	6953.9	32.4			G3/7500
FVH	(80°-90°)	581.6	2.7			G4/750
BL	(0°-30°)	864.8	4.0	B2/1000		
BM	(30°-60°)	1739.2	8.1	B2/2500		
BH	(60°-80°)	1071.8	5.0	B3/2500		G3/2500
BVH	(80°-90°)	125.4	0.6			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1
2.5°	7551.6	7711.8	7895.4	8135.0	8298.4	8363.7	8418.1	8326.4	8237.7	8071.2	8012.1
5°	7053.8	7361.8	7867.4	8348.1	8771.3	9014.0	9088.7	8919.1	8617.3	8181.7	7951.4
7.5°	6314.8	6720.8	7431.8	8139.7	8746.4	9150.9	9180.5	8844.4	8250.1	7536.0	7162.7
10°	5669.1	6128.1	6951.1	7742.9	8385.5	8799.3	8718.4	8247.0	7529.8	6717.7	6296.1
12.5°	5294.2	5753.1	6591.7	7396.0	8001.2	8158.3	7993.4	7596.7	6916.8	6103.2	5678.5
15°	5214.9	5687.8	6464.1	7142.4	7517.4	7416.2	7252.9	7052.2	6568.4	5902.5	5491.8
17.5°	5454.4	5983.4	6633.7	7005.5	6990.0	6747.3	6610.4	6649.3	6566.8	6120.3	5690.9
20°	5947.6	6573.0	7064.6	6968.2	6569.9	6229.2	6149.9	6454.8	6835.9	6666.4	6195.0
22.5°	6596.4	7308.9	7652.7	7075.5	6350.6	5983.4	5967.8	6443.9	7326.0	7492.5	6918.4
25°	7329.1	8159.9	8245.5	7265.3	6327.2	5961.6	5947.6	6611.9	7915.6	8310.8	7728.9
27.5°	8225.2	9018.7	8740.2	7518.9	6429.9	6025.4	6034.7	6898.2	8530.2	9119.8	8642.2
30°	8900.4	9628.5	9045.1	7767.8	6594.8	6137.4	6160.8	7207.8	8861.5	9681.4	9371.8
32.5°	9532.1	10149.7	9337.6	8013.6	6835.9	6303.9	6384.8	7593.6	9259.8	10163.7	10061.0
35°	10230.6	10733.1	9662.7	8276.6	7181.3	6596.4	6713.0	7960.8	9655.0	10646.0	10744.0
37.5°	11022.5	11400.5	10015.9	8648.4	7679.2	7137.8	7203.1	8335.7	9930.3	11179.6	11476.7
40°	11847.0	12148.8	10401.7	9144.7	8402.6	7869.0	7900.1	8816.4	10146.6	11731.9	12187.7
42.5°	12554.9	12789.8	10789.1	9760.8	9233.4	8614.2	8640.6	9334.5	10353.5	12207.9	12757.1
45°	13121.2	13293.9	11154.7	10409.5	10120.1	9544.5	9538.3	9861.9	10630.4	12609.3	13194.3
47.5°	13648.6	13740.4	11562.3	11041.1	11039.6	10742.4	10520.0	10484.2	10999.1	12946.9	13575.4
50°	14252.2	14286.4	12100.6	11679.0	12162.8	12116.2	11705.4	11274.5	11476.7	13326.5	13975.3
52.5°	15092.3	15093.8	12768.0	12301.3	13402.8	13550.5	13072.9	12169.0	12183.0	14065.5	14666.0
55°	16080.2	16148.6	13637.7	13046.5	14700.2	14952.3	14502.7	13231.6	13197.4	15257.2	15786.2
57.5°	16844.1	17206.6	14650.5	13978.4	15912.2	16240.4	15877.9	14333.1	14443.5	16486.2	16710.3
60°	17058.8	17906.6	15660.1	15023.8	16937.4	17430.6	17061.9	15523.2	15663.3	17284.3	16976.3
62.5°	16802.1	18132.2	16688.5	15960.4	17545.7	18018.7	17754.2	16302.7	16657.4	17181.7	16526.7
65°	16041.3	17805.5	17581.5	16358.7	17195.7	17363.7	17293.7	16343.1	17197.2	16210.9	15283.7
67.5°	14264.6	16545.4	17183.2	15507.7	15560.6	15380.1	15288.3	15232.3	16590.5	14644.2	13323.4
70°	11601.2	14216.4	15283.7	12978.0	12586.0	12411.7	12109.9	12856.7	14911.8	12477.1	10964.9
72.5°	8936.2	10876.2	12536.2	9838.5	9023.3	9082.4	8740.2	9830.8	12352.6	9645.6	8371.5
75°	6345.9	7416.2	10006.6	7069.3	5989.6	5986.5	5960.1	7075.5	9746.8	6923.1	6125.0
77.5°	4573.9	5339.3	7839.4	4731.0	4250.3	4304.7	4217.6	4808.8	7598.3	4979.9	4538.1
80°	3648.2	3953.2	5067.1	3155.1	3164.4	3292.0	3273.3	3288.8	4998.6	3606.2	3393.1
82.5°	2621.4	3001.0	3873.8	2417.6	2092.5	2227.8	2254.3	2439.4	3526.9	2549.9	2237.2
85°	1344.2	1829.6	3564.2	2094.0	1308.4	1084.4	1247.7	1924.5	3063.3	1527.7	1090.6
87.5°	261.4	507.2	2612.1	1163.7	588.1	297.1	490.1	815.2	1781.3	276.9	135.3
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):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1
2.5°	7911.0	7711.8	7525.1	7332.2	7182.9	7000.9	6821.9	6666.4	6515.5	6415.9	6447.0
5°	7718.1	7232.7	6797.1	6392.6	6156.1	5871.4	5617.8	5404.7	5239.8	5134.0	5197.7
7.5°	6839.1	6182.5	5608.5	5074.8	4738.8	4370.1	4074.5	3866.0	3738.5	3666.9	3771.1
10°	5939.8	5202.4	4558.3	4002.9	3671.6	3358.9	3091.3	2870.4	2699.2	2618.3	2660.3
12.5°	5295.8	4475.9	3800.7	3427.3	3142.6	2862.6	2585.7	2327.4	2109.6	2010.0	1989.8
15°	5054.6	4085.4	3396.2	2979.3	2696.1	2391.2	2092.5	1815.6	1608.6	1523.1	1504.4
17.5°	5160.4	4001.4	3156.6	2663.4	2252.7	1882.5	1546.4	1285.0	1132.6	1084.4	1089.0
20°	5532.2	4032.5	2963.7	2338.3	1831.1	1392.4	1056.4	875.9	810.5	799.7	812.1
22.5°	6042.5	4160.1	2823.7	2058.3	1459.3	1012.8	785.7	700.1	683.0	681.4	693.9
25°	6716.2	4409.0	2730.3	1809.3	1152.8	802.8	684.5	636.3	622.3	625.4	637.9
27.5°	7509.6	4724.8	2669.7	1594.6	947.4	715.6	639.4	597.4	583.4	586.5	595.9
30°	8234.6	5001.7	2579.4	1432.8	851.0	684.5	614.5	572.5	553.8	553.8	560.1
32.5°	8883.3	5241.3	2473.6	1311.5	762.3	614.5	557.0	524.3	510.3	515.0	518.1
35°	9458.9	5367.3	2391.2	1239.9	690.8	566.3	508.7	474.5	455.8	458.9	463.6
37.5°	10025.2	5415.6	2336.7	1201.0	639.4	536.7	483.8	455.8	435.6	432.5	430.9
40°	10563.5	5404.7	2285.4	1190.1	605.2	515.0	468.3	443.4	423.2	418.5	416.9
42.5°	11028.7	5368.9	2237.2	1160.6	581.8	499.4	455.8	434.1	413.8	407.6	404.5
45°	11453.4	5347.1	2184.3	1106.1	594.3	493.2	449.6	426.3	407.6	399.8	396.7
47.5°	11924.8	5424.9	2125.1	1047.0	591.2	494.7	449.6	423.2	404.5	396.7	393.6
50°	12486.4	5687.8	2052.0	966.1	563.2	529.0	448.1	418.5	401.4	396.7	390.5
52.5°	13279.8	6114.1	1950.9	861.9	541.4	564.7	446.5	410.7	396.7	388.9	381.2
55°	14367.3	6540.4	1820.2	751.4	507.2	539.8	449.6	401.4	385.8	378.0	368.7
57.5°	15258.8	6864.0	1655.3	659.6	476.1	510.3	444.9	390.5	373.4	365.6	357.8
60°	15201.2	6895.1	1498.2	600.5	457.4	458.9	455.8	382.7	362.5	356.3	350.0
62.5°	14260.0	6510.8	1351.9	571.0	443.4	418.5	465.2	373.4	351.6	345.4	340.7
65°	12693.3	5616.2	1274.2	571.0	430.9	396.7	406.0	360.9	340.7	334.5	331.4
67.5°	10706.6	4513.2	1201.0	583.4	413.8	381.2	368.7	348.5	329.8	323.6	320.5
70°	8581.5	3551.8	1149.7	577.2	398.3	364.0	348.5	331.4	312.7	311.1	308.0
72.5°	6731.7	2853.2	1126.4	577.2	374.9	343.8	328.3	315.8	297.1	295.6	290.9
75°	5393.8	2142.3	1029.9	566.3	351.6	317.4	303.4	292.5	273.8	275.4	272.3
77.5°	4177.2	1515.3	860.3	510.3	322.0	287.8	276.9	269.1	247.4	248.9	248.9
80°	3267.1	986.3	667.4	423.2	287.8	253.6	245.8	239.6	216.2	219.4	219.4
82.5°	2238.7	586.5	483.8	340.7	247.4	216.2	214.7	205.4	180.5	182.0	185.1
85°	1222.8	385.8	322.0	252.0	194.5	175.8	172.7	168.0	144.7	144.7	146.2
87.5°	225.6	206.9	189.8	166.5	130.7	126.0	121.3	126.0	108.9	105.8	105.8
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):**

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1
2.5°	6373.9	6266.5	6191.9	6126.5	5969.4	5980.3	6002.1	6033.2	5935.2	5986.5	6050.3
5°	5134.0	5045.3	4978.4	4874.2	4654.8	4577.0	4527.2	4505.4	4359.2	4390.3	4458.8
7.5°	3785.1	3783.6	3760.2	3643.6	3379.1	3218.8	3113.0	3080.4	2990.1	3024.4	3128.6
10°	2665.0	2693.0	2682.1	2577.9	2341.4	2226.3	2202.9	2268.3	2269.8	2336.7	2515.6
12.5°	1926.0	1910.5	1896.5	1810.9	1633.5	1614.9	1667.8	1758.0	1779.8	1851.3	2038.0
15°	1437.5	1400.2	1392.4	1325.5	1208.8	1225.9	1264.8	1311.5	1313.0	1362.8	1516.9
17.5°	1078.1	1078.1	1090.6	1047.0	963.0	955.2	935.0	922.6	903.9	924.1	1008.1
20°	837.0	875.9	907.0	882.1	805.9	768.5	729.6	704.8	690.8	692.3	717.2
22.5°	717.2	748.3	788.8	776.3	712.5	664.3	639.4	622.3	611.4	611.4	625.4
25°	656.5	676.7	714.1	707.9	653.4	614.5	594.3	577.2	564.7	563.2	577.2
27.5°	608.3	620.7	645.6	642.5	586.5	561.6	549.2	538.3	530.5	529.0	543.0
30°	564.7	571.0	583.4	578.7	536.7	511.8	507.2	502.5	497.8	499.4	519.6
32.5°	525.8	530.5	538.3	532.1	491.6	469.8	462.1	455.8	451.2	455.8	479.2
35°	482.3	496.3	505.6	502.5	458.9	432.5	415.4	399.8	393.6	398.3	424.7
37.5°	444.9	468.3	480.7	477.6	432.5	401.4	379.6	376.5	376.5	382.7	409.2
40°	430.9	448.1	458.9	454.3	409.2	378.0	365.6	360.9	362.5	368.7	396.7
42.5°	418.5	434.1	437.2	427.8	382.7	362.5	354.7	348.5	351.6	359.4	387.4
45°	407.6	420.1	418.5	404.5	360.9	346.9	346.9	342.3	343.8	350.0	379.6
47.5°	399.8	406.0	402.9	388.9	345.4	334.5	339.2	339.2	342.3	346.9	376.5
50°	387.4	392.0	388.9	376.5	332.9	323.6	328.3	334.5	337.6	342.3	368.7
52.5°	374.9	378.0	376.5	364.0	320.5	314.3	314.3	320.5	326.7	332.9	356.3
55°	362.5	365.6	367.2	357.8	311.1	304.9	303.4	303.4	309.6	318.9	343.8
57.5°	353.2	353.2	356.3	350.0	301.8	294.0	286.3	287.8	295.6	303.4	328.3
60°	342.3	343.8	348.5	342.3	289.4	276.9	270.7	278.5	281.6	289.4	315.8
62.5°	332.9	332.9	336.0	331.4	278.5	266.0	261.4	269.1	269.1	276.9	303.4
65°	325.2	323.6	323.6	322.0	267.6	255.1	252.0	255.1	256.7	264.5	290.9
67.5°	318.9	311.1	311.1	314.3	256.7	244.3	242.7	242.7	244.3	253.6	276.9
70°	304.9	298.7	297.1	308.0	245.8	230.3	230.3	227.1	230.3	234.9	259.8
72.5°	289.4	284.7	283.1	298.7	234.9	214.7	211.6	210.0	211.6	216.2	239.6
75°	269.1	266.0	269.1	292.5	224.0	197.6	192.9	191.4	191.4	192.9	217.8
77.5°	245.8	242.7	266.0	272.3	217.8	177.4	172.7	169.6	166.5	166.5	194.5
80°	217.8	216.2	256.7	230.3	208.5	155.6	147.8	143.1	140.0	138.5	166.5
82.5°	189.8	186.7	219.4	180.5	172.7	127.6	116.7	107.3	102.7	102.7	127.6
85°	155.6	154.0	172.7	132.2	119.8	93.3	77.8	70.0	63.8	63.8	82.5
87.5°	113.6	110.5	107.3	79.3	60.7	42.0	29.6	28.0	24.9	23.3	34.2
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):**

	295°	305°	315°	325°	335°	345°	355°	360°
0°	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1	7315.1
2.5°	6145.2	6274.3	6518.6	6719.3	6986.9	7201.5	7445.8	7551.6
5°	4584.8	4788.6	5162.0	5480.9	5922.7	6331.9	6798.6	7053.8
7.5°	3288.8	3590.7	3873.8	4272.1	4824.4	5373.5	5977.2	6314.8
10°	2721.0	2997.9	3240.6	3523.8	3950.0	4567.7	5288.0	5669.1
12.5°	2254.3	2553.0	2809.7	3113.0	3470.9	4029.4	4850.8	5294.2
15°	1728.4	2053.6	2361.6	2727.2	3165.9	3803.8	4720.1	5214.9
17.5°	1183.9	1532.4	1912.0	2358.5	2887.5	3708.9	4844.6	5454.4
20°	804.3	1059.5	1471.7	2000.7	2637.0	3663.8	5118.4	5947.6
22.5°	661.2	776.3	1085.9	1664.6	2431.6	3713.6	5563.3	6596.4
25°	606.7	669.0	844.8	1369.1	2274.5	3845.8	6165.4	7329.1
27.5°	572.5	625.4	740.5	1157.5	2129.8	4026.3	6898.2	8225.2
30°	552.3	602.1	698.5	1048.6	1997.6	4181.8	7528.3	8900.4
32.5°	507.2	544.5	623.9	986.3	1902.7	4307.9	8083.7	9532.1
35°	452.7	497.8	563.2	945.9	1899.6	4367.0	8606.4	10230.6
37.5°	432.5	476.1	524.3	924.1	1918.2	4416.8	9245.8	11022.5
40°	420.1	458.9	497.8	921.0	1933.8	4455.7	9871.2	11847.0
42.5°	409.2	448.1	493.2	899.2	1927.6	4508.6	10425.1	12554.9
45°	406.0	444.9	504.1	866.6	1926.0	4591.0	10865.3	13121.2
47.5°	402.9	462.1	501.0	830.8	1919.8	4765.3	11361.6	13648.6
50°	399.8	493.2	479.2	781.0	1873.1	5062.4	12029.0	14252.2
52.5°	398.3	497.8	455.8	712.5	1789.1	5502.7	13006.0	15092.3
55°	392.0	472.9	415.4	622.3	1667.8	5977.2	14053.1	16080.2
57.5°	378.0	421.6	392.0	533.6	1493.5	6308.6	14826.3	16844.1
60°	412.3	362.5	376.5	488.5	1285.0	6367.7	14860.5	17058.8
62.5°	393.6	329.8	360.9	472.9	1138.8	5981.8	14180.6	16802.1
65°	314.3	312.7	346.9	488.5	1117.0	5118.4	13032.5	16041.3
67.5°	286.3	300.3	332.9	507.2	1131.0	4032.5	11342.9	14264.6
70°	267.6	284.7	314.3	524.3	1155.9	3176.8	9132.2	11601.2
72.5°	248.9	262.9	295.6	541.4	1138.8	2506.3	7308.9	8936.2
75°	225.6	238.0	269.1	496.3	977.0	1842.0	5807.6	6345.9
77.5°	199.1	210.0	236.5	392.0	734.3	1281.9	4349.9	4573.9
80°	171.1	175.8	196.0	286.3	479.2	767.0	3310.6	3648.2
82.5°	135.3	136.9	149.4	210.0	298.7	490.1	2296.3	2621.4
85°	87.1	90.2	96.5	147.8	200.7	314.3	1173.0	1344.2
87.5°	29.6	34.2	34.2	71.6	98.0	174.2	359.4	261.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)