

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: P196710

Luminaire Tested: **NAV-AF-06-D-UNV-SLR-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196710
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-06-D-UNV-SLR-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20274.1 lumens
Efficiency: N/A
Efficacy: 105.0 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): 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

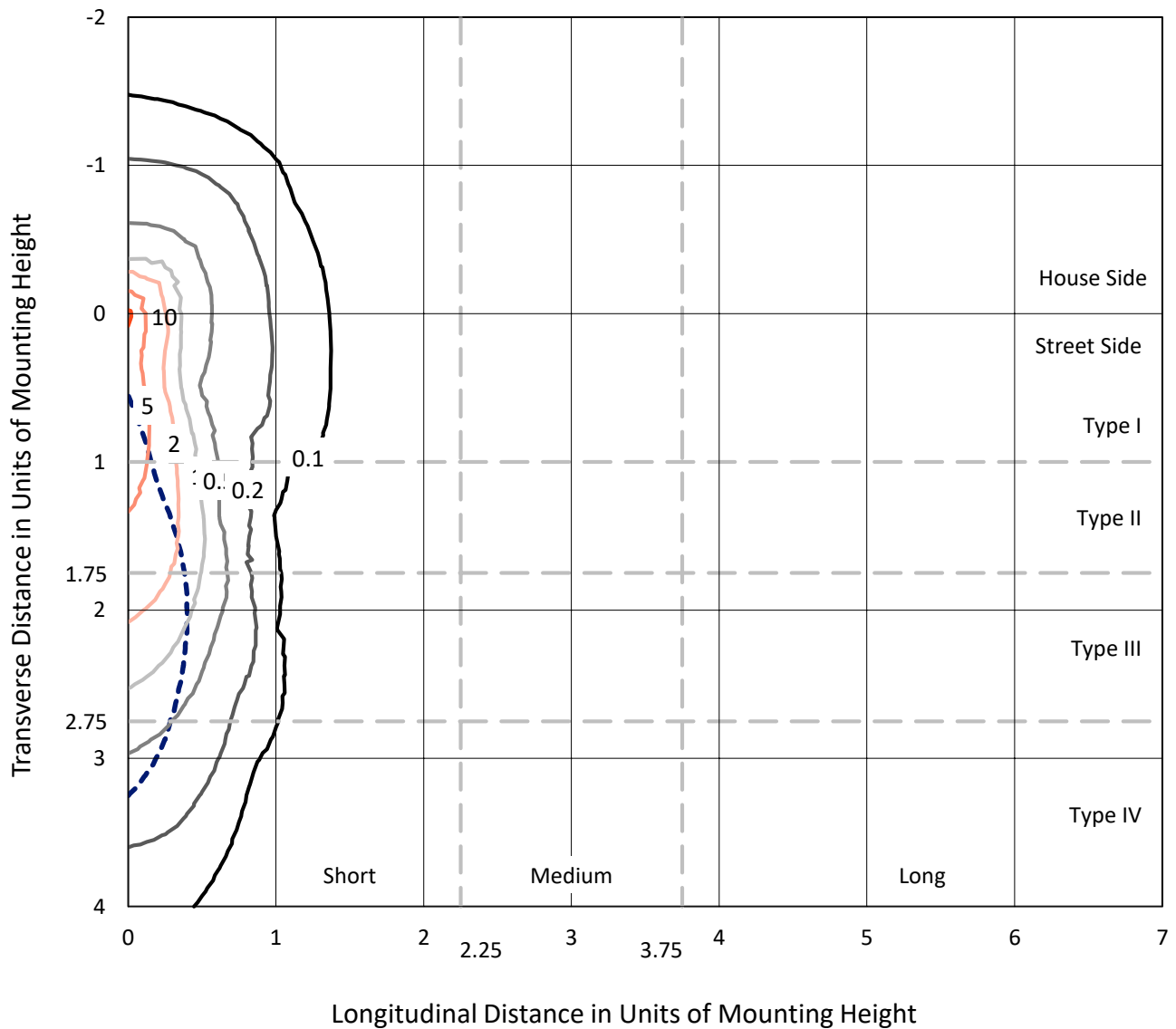


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Iso-Footcandle Lines of Horizontal Illumination

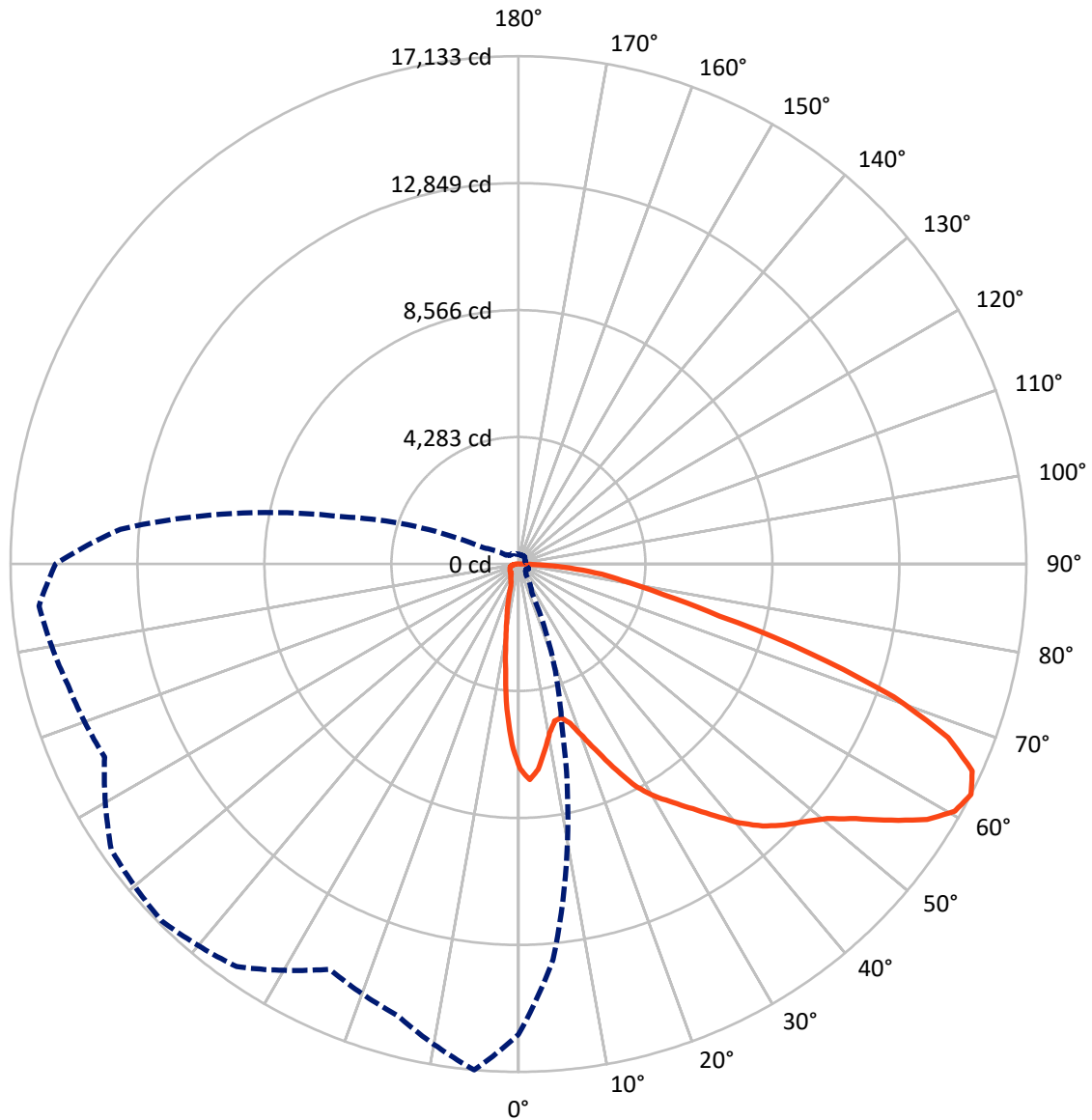
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.1 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3591.6	0.0	3591.6
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	16682.6	0.0	16682.6
	% Fixture	82.3	0.0	82.3
Total	Lumens	20274.1	0.0	20274.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	502.7	2.5
10°-20°	918.1	4.5
20°-30°	1320.5	6.5
30°-40°	2022.5	10.0
40°-50°	2956.9	14.6
50°-60°	4302.3	21.2
60°-70°	4984.8	24.6
70°-80°	2598.5	12.8
80°-90°	668.0	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°	20274.1	100.0
0°-180°	20274.1	100.0



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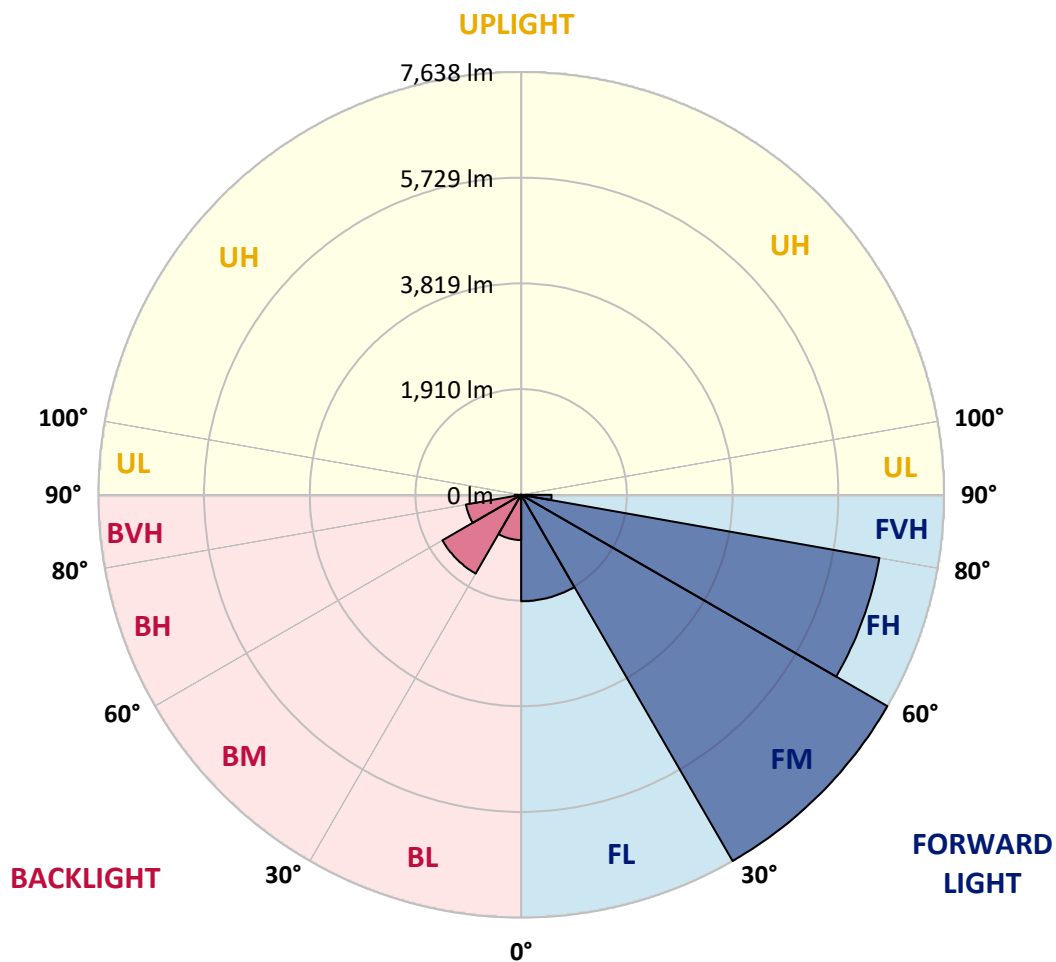
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1924.1	9.5			
FM	(30°-60°)	7638.4	37.7			
FH	(60°-80°)	6570.6	32.4			G3/7500
FVH	(80°-90°)	549.5	2.7			G4/750
BL	(0°-30°)	817.1	4.0	B2/1000		
BM	(30°-60°)	1643.3	8.1	B2/2500		
BH	(60°-80°)	1012.7	5.0	B3/2500		G3/2500
BVH	(80°-90°)	118.4	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°	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8
2.5°	7135.2	7035.3	6804.5	6601.7	6348.8	6159.3	5928.4	5806.5	5716.8	5656.5	5607.9
5°	6665.0	6423.8	5982.8	5596.3	5178.8	4877.5	4524.7	4332.0	4212.9	4148.2	4118.8
7.5°	5966.6	5647.7	5077.3	4558.4	4036.6	3660.3	3392.7	3107.6	2956.1	2857.6	2825.3
10°	5356.7	4996.4	4315.8	3732.3	3329.4	3062.0	2832.6	2571.0	2376.9	2207.9	2144.8
12.5°	5002.3	4583.4	3807.2	3279.5	2941.5	2654.8	2412.2	2130.0	1925.7	1749.2	1681.6
15°	4927.4	4460.0	3594.1	2991.4	2576.9	2231.4	1940.3	1633.1	1433.3	1287.7	1240.6
17.5°	5153.8	4577.5	3504.5	2728.3	2228.5	1806.6	1447.9	1118.7	952.5	873.2	854.1
20°	5619.8	4836.3	3461.8	2491.6	1890.4	1390.7	1001.1	760.0	677.6	654.1	652.8
22.5°	6232.7	5256.7	3508.9	2297.6	1572.9	1026.1	733.5	624.8	591.0	577.7	577.7
25°	6925.1	5825.6	3633.8	2149.1	1293.6	798.2	632.1	573.3	545.3	532.1	533.6
27.5°	7771.8	6517.9	3804.3	2012.4	1093.6	699.7	591.0	541.0	513.0	499.8	501.3
30°	8409.8	7113.3	3951.4	1887.5	990.8	660.0	568.9	521.8	491.0	471.9	470.4
32.5°	9006.6	7638.0	4070.4	1797.8	932.0	589.5	514.5	479.2	452.8	430.7	426.3
35°	9666.6	8131.9	4126.2	1794.8	893.7	532.1	470.4	427.7	401.3	376.3	371.9
37.5°	10414.8	8736.2	4173.2	1812.5	873.2	495.4	449.8	408.6	386.6	361.6	355.7
40°	11193.9	9327.0	4210.0	1827.2	870.2	470.4	433.6	396.9	374.9	348.4	342.5
42.5°	11862.8	9850.4	4260.0	1821.4	849.6	466.0	423.4	386.6	366.0	339.6	332.2
45°	12397.8	10266.3	4337.9	1819.8	818.8	476.3	420.4	383.7	358.7	330.7	324.8
47.5°	12896.2	10735.3	4502.6	1813.9	784.9	473.3	436.6	380.8	355.7	327.8	323.4
50°	13466.5	11365.9	4783.4	1769.9	737.9	452.8	466.0	377.8	348.4	323.4	319.0
52.5°	14260.3	12289.1	5199.3	1690.5	673.2	430.7	470.4	376.3	336.6	314.5	308.6
55°	15193.7	13278.4	5647.7	1575.8	588.1	392.5	446.9	370.4	324.8	301.3	292.5
57.5°	15915.5	14008.9	5960.7	1411.2	504.2	370.4	398.4	357.2	310.2	286.7	279.2
60°	16118.4	14041.2	6016.7	1214.2	461.6	355.7	342.5	389.5	298.4	273.3	266.0
62.5°	15875.8	13398.9	5652.1	1075.9	446.9	341.0	311.6	371.9	286.7	261.6	254.3
65°	15157.0	12314.1	4836.3	1055.5	461.6	327.8	295.4	296.9	274.9	249.8	242.5
67.5°	13478.2	10717.7	3810.2	1068.7	479.2	314.5	283.7	270.5	261.6	239.6	230.7
70°	10961.7	8628.8	3001.7	1092.1	495.4	296.9	269.0	252.8	245.5	222.1	217.5
72.5°	8443.5	6905.9	2368.2	1075.9	511.6	279.2	248.4	235.2	226.3	204.4	200.0
75°	5996.0	5487.4	1740.5	923.1	468.9	254.3	224.8	213.2	205.9	182.3	180.9
77.5°	4321.8	4110.2	1211.2	693.8	370.4	223.4	198.5	188.2	183.8	157.4	157.4
80°	3447.1	3128.1	724.7	452.8	270.5	185.2	166.1	161.7	157.4	130.8	132.3
82.5°	2476.9	2169.7	463.0	282.2	198.5	141.2	129.4	128.0	120.5	97.0	97.0
85°	1270.0	1108.3	296.9	189.7	139.7	91.1	85.2	82.3	77.9	60.3	60.3
87.5°	246.9	339.6	164.7	92.7	67.6	32.3	32.3	28.0	32.3	22.1	23.5
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8
2.5°	5700.6	5671.2	5650.6	5640.3	5788.8	5850.5	5921.1	6022.5	6091.6	6062.2	6156.3
5°	4257.1	4277.6	4324.7	4398.2	4605.5	4703.9	4767.2	4850.9	4911.2	4850.9	4950.9
7.5°	2910.5	2941.5	3041.3	3192.8	3442.6	3553.0	3575.0	3576.5	3563.3	3464.7	3532.4
10°	2143.2	2081.5	2103.6	2212.3	2435.7	2534.3	2544.5	2518.1	2513.6	2473.9	2550.4
12.5°	1661.1	1575.8	1525.8	1543.5	1711.1	1792.0	1805.2	1819.8	1880.2	1899.3	1993.3
15°	1239.2	1195.1	1158.3	1142.2	1252.4	1315.6	1323.0	1358.3	1421.5	1439.2	1520.1
17.5°	871.7	883.5	902.6	909.9	989.4	1030.5	1018.8	1018.8	1029.0	1024.6	1070.2
20°	665.9	689.4	726.1	761.4	833.4	857.0	827.6	790.8	767.3	755.5	765.9
22.5°	588.1	604.2	627.7	673.2	733.5	745.2	707.0	677.6	655.7	643.9	645.2
25°	545.3	561.5	580.6	617.5	668.8	674.6	639.5	620.4	602.7	591.0	588.1
27.5°	508.6	518.9	530.7	554.2	607.2	610.0	586.5	574.8	563.0	554.2	551.2
30°	474.8	479.2	483.6	507.2	546.9	551.2	539.5	533.6	529.2	523.4	523.4
32.5°	430.7	436.6	443.9	464.5	502.7	508.6	501.3	496.8	489.5	486.5	482.2
35°	377.8	392.5	408.6	433.6	474.8	477.8	468.9	455.7	438.0	433.6	430.7
37.5°	355.7	358.7	379.2	408.6	451.2	454.2	442.5	420.4	407.2	408.6	411.6
40°	341.0	345.5	357.2	386.6	429.3	433.6	423.4	407.2	394.0	395.4	399.9
42.5°	329.3	335.2	342.5	361.6	404.3	413.1	410.2	395.4	382.2	385.1	391.0
45°	323.4	327.8	327.8	341.0	382.2	395.4	396.9	385.1	374.9	377.8	385.1
47.5°	320.4	320.4	316.1	326.3	367.5	380.8	383.7	377.8	371.9	374.9	382.2
50°	316.1	310.2	305.7	314.5	355.7	367.5	370.4	366.0	369.0	374.9	379.2
52.5°	302.8	296.9	296.9	302.8	343.9	355.7	357.2	354.2	360.1	367.5	374.9
55°	286.7	286.7	288.1	294.0	338.0	346.9	345.5	342.5	348.4	357.2	364.6
57.5°	271.9	270.5	277.8	285.1	330.7	336.6	333.7	333.7	338.0	345.5	352.8
60°	263.1	255.7	261.6	273.3	323.4	329.3	324.8	323.4	330.7	336.6	342.5
62.5°	254.3	246.9	251.4	263.1	313.1	317.5	314.5	314.5	321.9	326.3	332.2
65°	241.0	238.1	241.0	252.8	304.3	305.7	305.7	307.2	313.1	316.1	321.9
67.5°	229.3	229.3	230.7	242.5	296.9	294.0	294.0	301.3	302.8	305.7	311.6
70°	214.5	217.5	217.5	232.2	291.0	280.8	282.2	288.1	291.0	294.0	295.4
72.5°	198.5	200.0	202.9	222.1	282.2	267.5	269.0	273.3	274.9	279.2	280.8
75°	180.9	182.3	186.8	211.6	276.3	254.3	251.4	254.3	257.2	260.1	258.7
77.5°	160.2	163.2	167.6	205.9	257.2	251.4	229.3	232.2	235.2	235.2	233.7
80°	135.3	139.7	147.0	197.0	217.5	242.5	204.4	205.9	207.3	207.3	204.4
82.5°	101.4	110.3	120.5	163.2	170.6	207.3	176.4	179.3	175.0	172.0	170.6
85°	66.1	73.5	88.2	113.2	125.0	163.2	145.6	147.0	138.2	136.7	136.7
87.5°	26.4	28.0	39.7	57.4	75.0	101.4	104.4	107.3	100.0	100.0	102.9
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8
2.5°	6298.9	6445.9	6614.9	6786.9	6928.0	7110.3	7286.7	7474.9	7570.5	7626.3	7783.5
5°	5106.7	5308.2	5547.7	5816.8	6040.2	6422.4	6833.9	7292.6	7513.1	7730.6	8142.2
7.5°	3652.9	3849.9	4129.2	4477.6	4795.1	5299.3	5841.8	6462.0	6767.8	7120.7	7795.3
10°	2712.2	2920.8	3173.7	3469.2	3782.2	4307.0	4915.6	5612.4	5949.0	6347.4	7114.8
12.5°	2199.1	2443.1	2704.8	2969.3	3238.3	3591.2	4229.1	5003.8	5365.4	5766.7	6535.6
15°	1715.5	1977.1	2259.4	2547.5	2815.1	3209.0	3860.1	4775.9	5189.0	5577.1	6206.3
17.5°	1214.2	1461.2	1778.6	2128.6	2516.6	2982.6	3780.8	4875.9	5377.2	5782.9	6204.9
20°	827.6	998.1	1315.6	1730.1	2209.3	2800.4	3810.2	5227.3	5853.4	6298.9	6459.1
22.5°	661.4	742.3	957.0	1378.9	1944.9	2668.0	3930.7	5709.5	6537.0	7079.5	6922.1
25°	601.3	646.9	758.5	1089.2	1709.6	2579.8	4165.9	6345.9	7302.9	7852.7	7479.3
27.5°	564.5	604.2	676.2	895.3	1506.6	2522.5	4464.4	7095.7	8165.7	8617.1	8059.9
30°	541.0	580.6	646.9	804.0	1353.8	2437.2	4726.0	7780.6	8855.1	9147.7	8373.0
32.5°	495.4	526.3	580.6	720.3	1239.2	2337.3	4952.4	8393.7	9506.4	9603.5	8749.4
35°	448.3	480.6	535.1	652.8	1171.6	2259.4	5071.5	8937.5	10151.8	10059.1	9122.7
37.5°	430.7	457.1	507.2	604.2	1134.8	2207.9	5117.0	9472.6	10844.1	10563.3	9382.8
40°	418.9	442.5	486.5	571.9	1124.5	2159.4	5106.7	9981.2	11515.8	11085.1	9587.3
42.5°	410.2	430.7	471.9	549.8	1096.6	2113.8	5072.9	10420.7	12053.8	11534.9	9782.7
45°	402.7	424.8	466.0	561.5	1045.2	2063.9	5052.3	10822.0	12466.9	11914.1	10044.4
47.5°	399.9	424.8	467.4	558.7	989.4	2007.9	5125.8	11267.5	12827.0	12233.2	10392.7
50°	395.4	423.4	499.8	532.1	912.9	1939.0	5374.3	11798.1	13204.8	12591.9	10844.1
52.5°	388.1	421.8	533.6	511.6	814.4	1843.3	5777.1	12547.8	13857.6	13290.1	11511.4
55°	379.2	424.8	510.1	479.2	709.9	1719.8	6179.8	13575.3	14916.0	14416.1	12469.9
57.5°	369.0	420.4	482.2	449.8	623.4	1564.0	6485.5	14417.7	15789.0	15577.4	13647.3
60°	361.6	430.7	433.6	432.2	567.4	1415.6	6514.9	14363.2	16040.5	16331.5	14799.8
62.5°	352.8	439.6	395.4	418.9	539.5	1277.5	6151.9	13473.9	15615.7	16234.5	15739.2
65°	341.0	383.7	374.9	407.2	539.5	1203.9	5306.6	11993.6	14441.2	15317.3	16249.1
67.5°	329.3	348.4	360.1	391.0	551.2	1134.8	4264.4	10116.5	12589.0	13836.9	15675.9
70°	313.1	329.3	343.9	376.3	545.3	1086.4	3356.0	8108.4	10360.4	11789.3	14089.7
72.5°	298.4	310.2	324.8	354.2	545.3	1064.3	2696.0	6360.6	7910.0	9113.9	11671.6
75°	276.3	286.7	299.9	332.2	535.1	973.2	2024.1	5096.4	5787.4	6541.5	9209.5
77.5°	254.3	261.6	271.9	304.3	482.2	812.9	1431.8	3946.9	4288.0	4705.5	7179.4
80°	226.3	232.2	239.6	271.9	399.9	630.7	932.0	3087.0	3206.0	3407.5	4723.1
82.5°	194.1	202.9	204.4	233.7	321.9	457.1	554.2	2115.3	2113.8	2409.2	3332.4
85°	158.8	163.2	166.1	183.8	238.1	304.3	364.6	1155.4	1030.5	1443.6	2894.4
87.5°	119.1	114.6	119.1	123.5	157.4	179.3	195.5	213.2	128.0	261.6	1683.1
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°	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8	6911.8
2.5°	7867.3	7954.1	7902.6	7840.9	7686.5	7460.1	7286.7	7135.2
5°	8427.3	8587.7	8517.1	8287.8	7888.0	7433.7	6956.0	6665.0
7.5°	8356.8	8674.4	8646.4	8264.3	7691.0	7022.1	6350.3	5966.6
10°	7792.4	8237.8	8314.2	7923.3	7316.1	6567.9	5790.3	5356.7
12.5°	7177.9	7552.8	7708.6	7560.0	6988.3	6228.4	5435.9	5002.3
15°	6663.4	6853.1	7007.5	7103.0	6748.7	6107.8	5374.3	4927.4
17.5°	6282.7	6246.0	6375.3	6604.6	6619.4	6267.9	5653.5	5153.8
20°	6099.0	5810.9	5885.8	6207.8	6584.1	6675.2	6210.8	5619.8
22.5°	6088.7	5638.9	5653.5	6000.5	6685.5	7230.9	6905.9	6232.7
25°	6247.5	5619.8	5633.0	5978.4	6864.9	7790.9	7710.1	6925.1
27.5°	6517.9	5702.0	5693.3	6075.5	7104.5	8258.4	8521.4	7771.8
30°	6810.4	5821.2	5799.1	6231.3	7339.6	8546.5	9097.7	8409.8
32.5°	7174.9	6032.9	5956.4	6459.1	7571.8	8822.8	9590.1	9006.6
35°	7522.0	6342.9	6232.7	6785.4	7820.3	9130.0	10141.5	9666.6
37.5°	7876.2	6806.0	6744.2	7255.8	8171.6	9463.7	10772.1	10414.8
40°	8330.4	7464.6	7435.2	7939.5	8640.6	9828.3	11479.1	11193.9
42.5°	8820.0	8164.3	8139.3	8724.4	9222.7	10194.3	12084.7	11862.8
45°	9318.1	9012.5	9018.4	9562.3	9835.6	10539.8	12561.0	12397.8
47.5°	9906.2	9940.1	10150.1	10431.0	10432.5	10925.0	12982.8	12896.2
50°	10653.0	11060.2	11448.1	11492.3	11035.1	11433.6	13498.9	13466.5
52.5°	11498.2	12352.3	12803.5	12663.9	11623.1	12064.2	14261.8	14260.3
55°	12502.2	13703.2	14128.0	13889.9	12327.2	12885.8	15258.4	15193.7
57.5°	13542.9	15002.6	15345.1	15034.9	13207.8	13842.8	16258.0	15915.5
60°	14667.5	16121.3	16469.7	16003.7	14195.6	14796.9	16919.5	16118.4
62.5°	15403.9	16775.4	17025.4	16578.5	15080.5	15768.6	17132.6	15875.8
65°	15442.1	16340.4	16406.5	16247.7	15456.9	16612.4	16824.0	15157.0
67.5°	14392.6	14445.5	14532.2	14702.8	14652.8	16235.9	15633.3	13478.2
70°	12148.0	11442.4	11727.6	11892.3	12262.6	14441.2	13432.7	10961.7
72.5°	9288.7	8258.4	8581.8	8525.9	9296.3	11845.2	10276.6	8443.5
75°	6685.5	5631.6	5656.5	5659.4	6679.6	9455.0	7007.5	5996.0
77.5°	4543.8	3985.1	4067.4	4016.1	4470.3	7407.2	5044.9	4321.8
80°	3107.6	3092.8	3110.5	2990.0	2981.1	4787.7	3735.2	3447.1
82.5°	2305.0	2130.0	2105.0	1977.1	2284.4	3660.3	2835.6	2476.9
85°	1818.4	1178.9	1024.6	1236.3	1978.5	3367.7	1728.7	1270.0
87.5°	770.3	463.0	280.8	555.7	1099.5	2468.0	479.2	246.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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