

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: P196243

Luminaire Tested: **NAV-AF-01-D-UNV-SLR-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196243
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-01-D-UNV-SLR-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6055.9 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

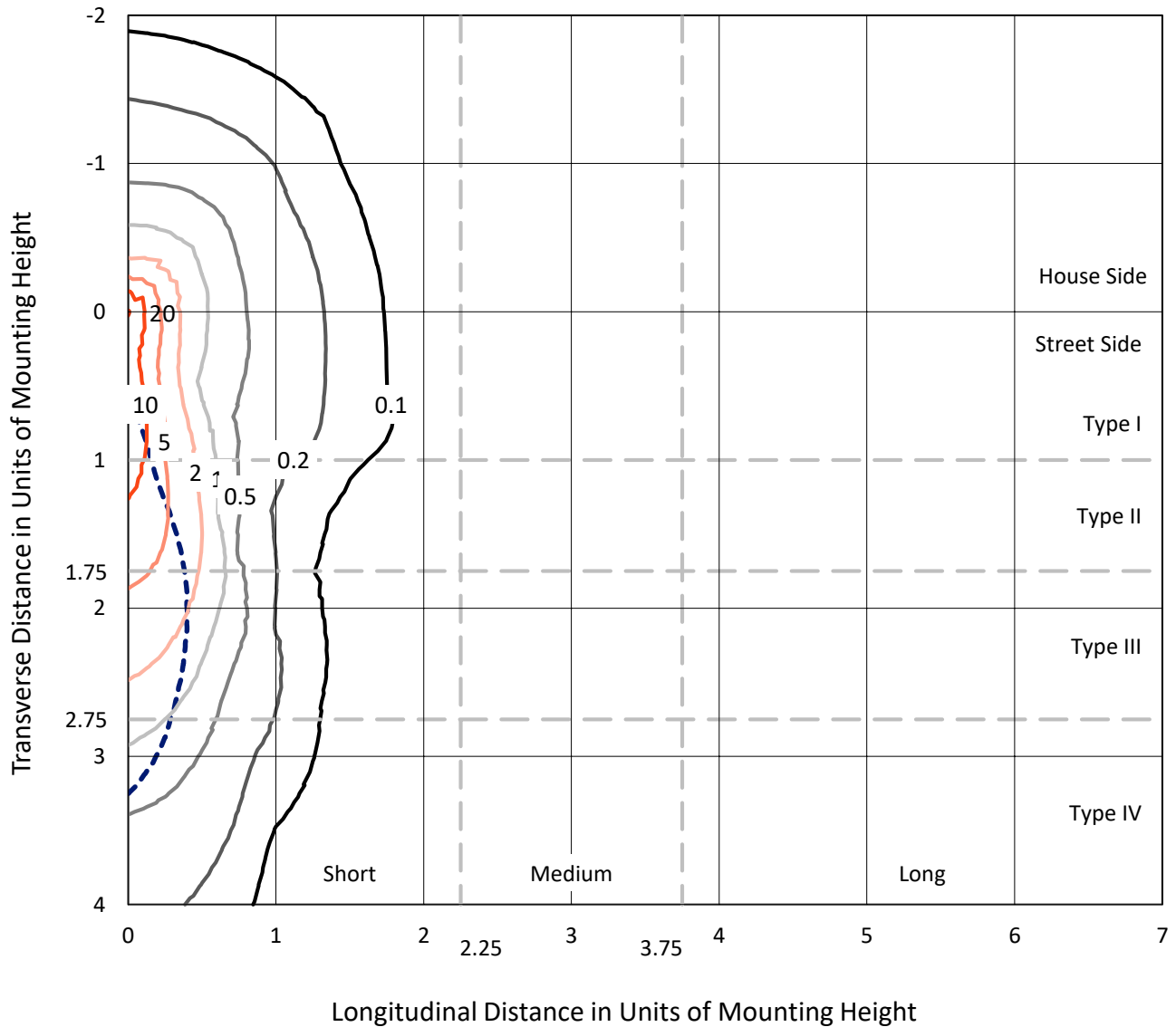
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

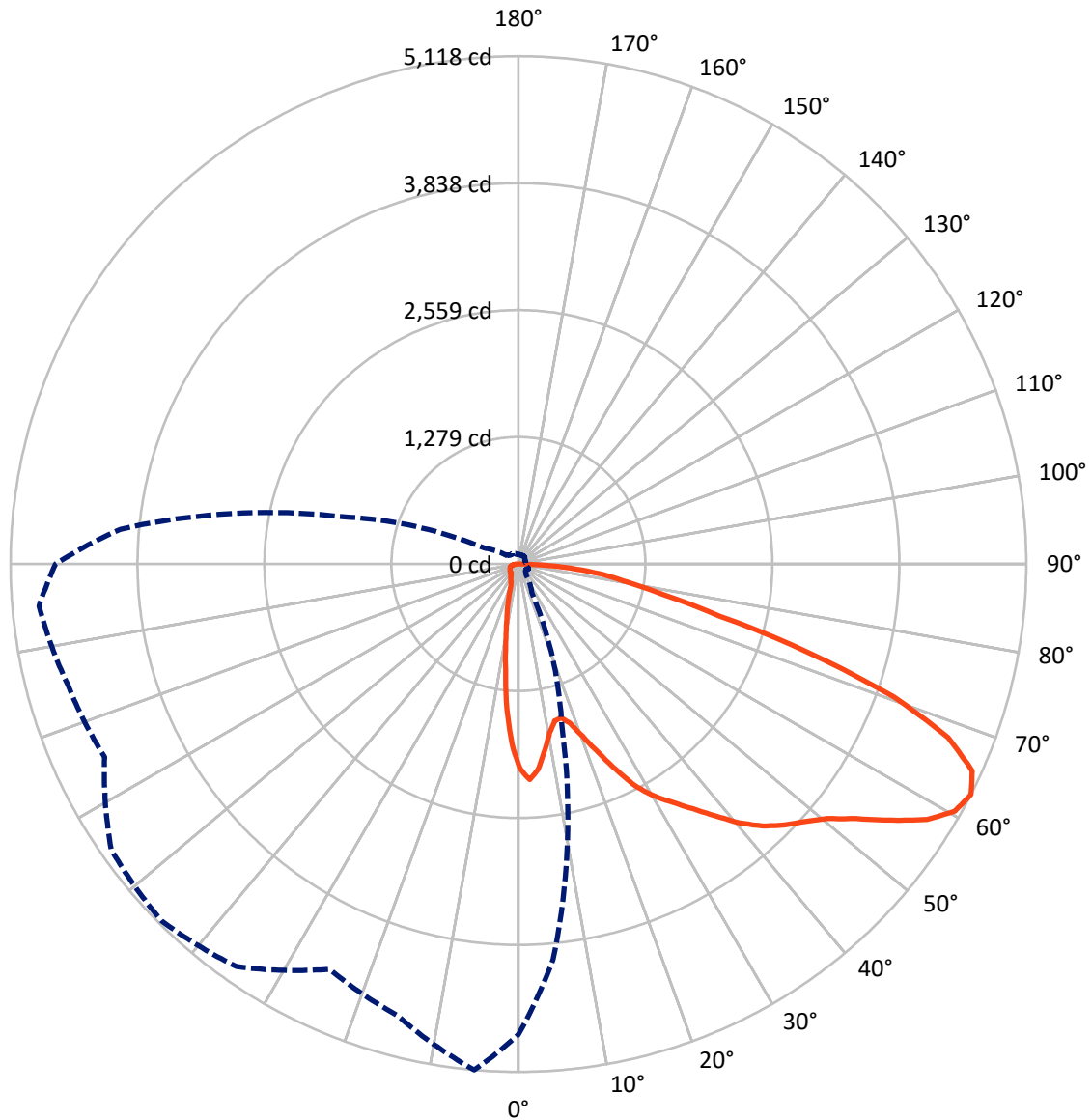
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 20.6 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	1072.8	0.0	1072.8
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	4983.1	0.0	4983.1
	% Fixture	82.3	0.0	82.3
Total	Lumens	6055.9	0.0	6055.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	2.5
10°-20°	274.2	4.5
20°-30°	394.4	6.5
30°-40°	604.1	10.0
40°-50°	883.2	14.6
50°-60°	1285.1	21.2
60°-70°	1489.0	24.6
70°-80°	776.2	12.8
80°-90°	199.5	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°	6055.9	100.0
0°-180°	6055.9	100.0



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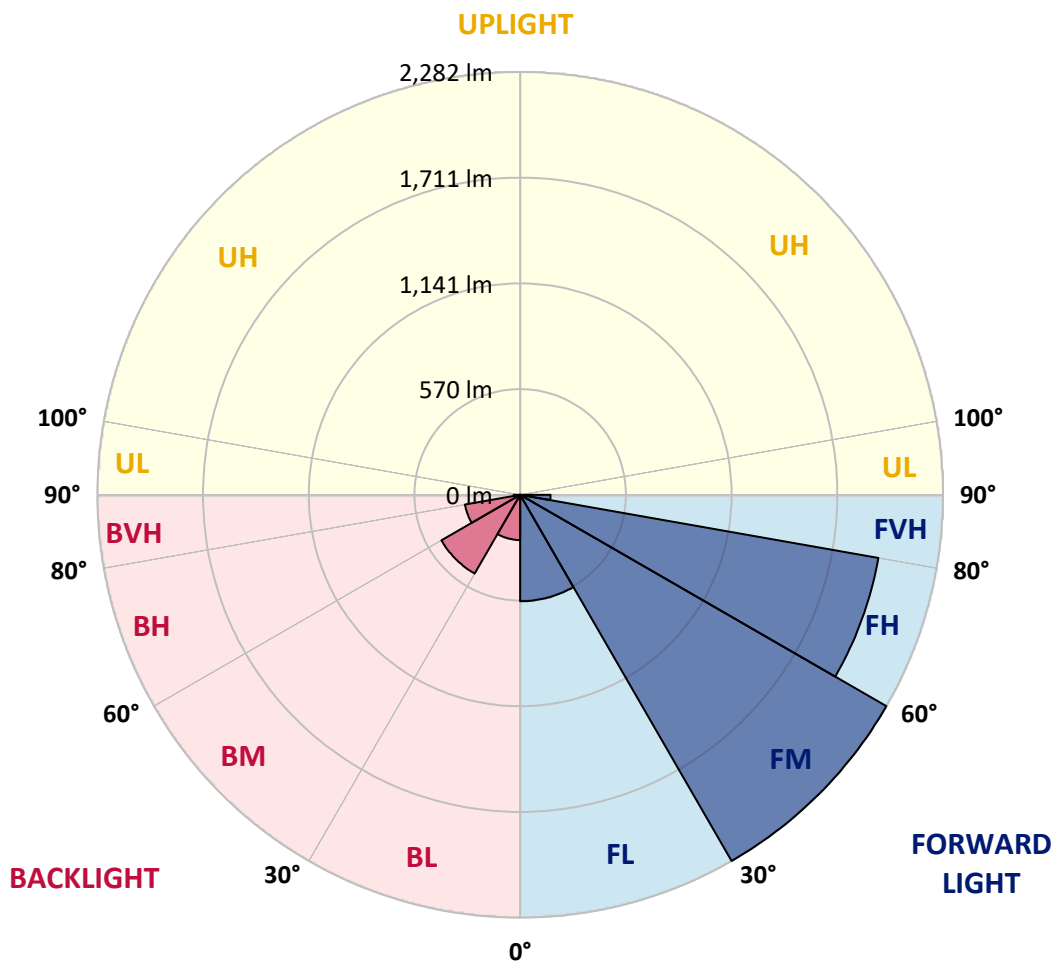
CATALOG NUMBER: NAV-AF-01-D-UNV-SLR-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	574.7	9.5			
FM	(30°-60°)	2281.6	37.7			
FH	(60°-80°)	1962.6	32.4			G2/5000
FVH	(80°-90°)	164.1	2.7			G2/225
BL	(0°-30°)	244.1	4.0	B1/500		
BM	(30°-60°)	490.8	8.1	B1/1000		
BH	(60°-80°)	302.5	5.0	B1/500		G1/500
BVH	(80°-90°)	35.4	0.6			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5
2.5°	2131.3	2101.4	2032.5	1971.9	1896.4	1839.8	1770.8	1734.4	1707.6	1689.6	1675.1
5°	1990.8	1918.7	1787.1	1671.6	1546.9	1456.9	1351.5	1293.9	1258.4	1239.1	1230.3
7.5°	1782.3	1686.9	1516.6	1361.5	1205.8	1093.3	1013.4	928.2	883.0	853.6	843.9
10°	1600.0	1492.5	1289.1	1114.8	994.5	914.6	846.1	767.9	710.0	659.5	640.6
12.5°	1494.2	1369.0	1137.2	979.6	878.6	793.0	720.6	636.3	575.2	522.5	502.3
15°	1471.8	1332.2	1073.6	893.5	769.7	666.6	579.6	487.8	428.1	384.6	370.6
17.5°	1539.4	1367.3	1046.8	815.0	665.6	539.6	432.5	334.1	284.5	260.9	255.1
20°	1678.7	1444.6	1034.0	744.2	564.7	415.4	299.0	227.0	202.4	195.4	195.0
22.5°	1861.7	1570.1	1048.1	686.3	469.8	306.5	219.1	186.6	176.6	172.6	172.6
25°	2068.5	1740.0	1085.5	641.9	386.4	238.4	188.8	171.2	162.9	159.0	159.4
27.5°	2321.4	1946.9	1136.4	601.1	326.6	209.0	176.6	161.6	153.2	149.2	149.8
30°	2512.0	2124.8	1180.3	563.7	295.9	197.1	169.9	155.9	146.7	141.0	140.6
32.5°	2690.3	2281.5	1215.8	536.9	278.3	176.0	153.6	143.1	135.2	128.7	127.4
35°	2887.4	2429.0	1232.6	536.1	267.0	159.0	140.6	127.8	119.9	112.4	111.1
37.5°	3110.9	2609.4	1246.6	541.3	260.9	148.0	134.3	122.0	115.5	108.0	106.3
40°	3343.6	2786.0	1257.5	545.7	259.9	140.6	129.5	118.6	112.0	104.0	102.3
42.5°	3543.4	2942.3	1272.4	544.0	253.8	139.2	126.4	115.5	109.4	101.5	99.2
45°	3703.2	3066.6	1295.8	543.6	244.6	142.3	125.6	114.6	107.1	98.8	97.1
47.5°	3852.0	3206.6	1344.9	541.9	234.5	141.4	130.4	113.8	106.3	97.9	96.6
50°	4022.4	3395.0	1428.8	528.7	220.4	135.2	139.2	112.8	104.0	96.6	95.2
52.5°	4259.6	3670.8	1553.0	504.9	201.1	128.7	140.6	112.4	100.6	94.0	92.2
55°	4538.3	3966.2	1686.9	470.7	175.6	117.2	133.5	110.7	97.1	90.0	87.4
57.5°	4754.0	4184.5	1780.4	421.6	150.6	110.7	119.0	106.7	92.7	85.6	83.5
60°	4814.5	4194.1	1797.1	362.6	137.9	106.3	102.3	116.3	89.1	81.6	79.5
62.5°	4742.1	4002.2	1688.3	321.4	133.5	101.9	93.1	111.1	85.6	78.2	76.0
65°	4527.4	3678.2	1444.6	315.3	137.9	97.9	88.3	88.7	82.1	74.7	72.4
67.5°	4025.9	3201.3	1138.1	319.3	143.1	94.0	84.7	80.8	78.2	71.6	68.9
70°	3274.3	2577.4	896.6	326.2	148.0	88.7	80.3	75.5	73.3	66.3	65.0
72.5°	2522.1	2062.8	707.4	321.4	152.8	83.5	74.2	70.3	67.6	61.1	59.7
75°	1791.0	1639.1	519.9	275.8	140.0	76.0	67.2	63.6	61.5	54.4	54.0
77.5°	1290.9	1227.6	361.8	207.2	110.7	66.7	59.2	56.2	54.9	47.0	47.0
80°	1029.6	934.4	216.5	135.2	80.8	55.3	49.6	48.3	47.0	39.1	39.5
82.5°	739.9	648.0	138.3	84.3	59.2	42.1	38.7	38.2	36.0	28.9	28.9
85°	379.4	331.0	88.7	56.7	41.7	27.2	25.5	24.6	23.2	18.0	18.0
87.5°	73.8	101.5	49.2	27.6	20.2	9.6	9.6	8.4	9.6	6.5	7.1
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5
2.5°	1702.8	1694.0	1687.9	1684.8	1729.1	1747.5	1768.6	1799.0	1819.5	1810.8	1838.9
5°	1271.6	1277.8	1291.8	1313.8	1375.7	1405.0	1423.9	1449.0	1467.0	1449.0	1478.9
7.5°	869.4	878.6	908.5	953.7	1028.4	1061.3	1067.9	1068.3	1064.4	1034.9	1055.1
10°	640.2	621.7	628.3	660.8	727.5	757.0	760.1	752.2	750.8	739.0	761.8
12.5°	496.1	470.7	455.7	461.0	511.1	535.2	539.2	543.6	561.6	567.3	595.4
15°	370.1	357.0	346.0	341.2	374.1	393.0	395.2	405.7	424.6	429.8	454.0
17.5°	260.3	263.9	269.5	271.8	295.5	307.8	304.3	304.3	307.4	306.1	319.7
20°	198.9	205.9	216.9	227.4	249.0	255.9	247.2	236.2	229.2	225.7	228.7
22.5°	175.6	180.4	187.5	201.1	219.1	222.6	211.2	202.4	195.8	192.3	192.7
25°	162.9	167.8	173.4	184.4	199.8	201.5	191.0	185.3	180.0	176.6	175.6
27.5°	151.9	155.0	158.6	165.5	181.4	182.2	175.2	171.7	168.2	165.5	164.7
30°	141.8	143.1	144.4	151.5	163.4	164.7	161.1	159.4	158.0	156.3	156.3
32.5°	128.7	130.4	132.6	138.7	150.2	151.9	149.8	148.4	146.2	145.4	144.0
35°	112.8	117.2	122.0	129.5	141.8	142.7	140.0	136.2	130.8	129.5	128.7
37.5°	106.3	107.1	113.2	122.0	134.8	135.6	132.2	125.6	121.6	122.0	123.0
40°	101.9	103.2	106.7	115.5	128.2	129.5	126.4	121.6	117.6	118.2	119.5
42.5°	98.3	100.1	102.3	108.0	120.7	123.4	122.5	118.2	114.2	115.1	116.8
45°	96.6	97.9	97.9	101.9	114.2	118.2	118.6	115.1	112.0	112.8	115.1
47.5°	95.7	95.7	94.4	97.5	109.8	113.8	114.6	112.8	111.1	112.0	114.2
50°	94.4	92.7	91.3	94.0	106.3	109.8	110.7	109.4	110.2	112.0	113.2
52.5°	90.4	88.7	88.7	90.4	102.7	106.3	106.7	105.8	107.6	109.8	112.0
55°	85.6	85.6	86.0	87.8	101.0	103.6	103.2	102.3	104.0	106.7	108.8
57.5°	81.2	80.8	83.0	85.2	98.8	100.6	99.6	99.6	101.0	103.2	105.4
60°	78.6	76.4	78.2	81.6	96.6	98.3	97.1	96.6	98.8	100.6	102.3
62.5°	76.0	73.8	75.1	78.6	93.5	94.8	94.0	94.0	96.2	97.5	99.2
65°	72.0	71.1	72.0	75.5	90.9	91.3	91.3	91.8	93.5	94.4	96.2
67.5°	68.5	68.5	68.9	72.4	88.7	87.8	87.8	90.0	90.4	91.3	93.1
70°	64.1	65.0	65.0	69.4	87.0	83.9	84.3	86.0	87.0	87.8	88.3
72.5°	59.2	59.7	60.6	66.3	84.3	79.9	80.3	81.6	82.1	83.5	83.9
75°	54.0	54.4	55.8	63.2	82.6	76.0	75.1	76.0	76.8	77.7	77.2
77.5°	47.9	48.7	50.0	61.5	76.8	75.1	68.5	69.4	70.3	70.3	69.8
80°	40.4	41.7	43.9	58.8	65.0	72.4	61.1	61.5	61.9	61.9	61.1
82.5°	30.3	32.9	36.0	48.7	50.9	61.9	52.7	53.6	52.3	51.4	50.9
85°	19.7	22.0	26.4	33.9	37.3	48.7	43.5	43.9	41.2	40.8	40.8
87.5°	7.9	8.4	11.9	17.1	22.4	30.3	31.2	32.0	29.9	29.9	30.7
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°	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5
2.5°	1881.5	1925.4	1975.8	2027.3	2069.4	2123.9	2176.5	2232.7	2261.2	2278.0	2325.0
5°	1525.3	1585.6	1657.1	1737.5	1804.2	1918.3	2041.3	2178.3	2244.1	2309.1	2432.1
7.5°	1091.1	1150.0	1233.4	1337.4	1432.3	1582.9	1744.9	1930.2	2021.6	2126.9	2328.4
10°	810.1	872.5	948.0	1036.2	1129.7	1286.5	1468.2	1676.4	1777.0	1895.9	2125.2
12.5°	656.8	729.8	807.9	886.9	967.3	1072.7	1263.2	1494.6	1602.7	1722.5	1952.2
15°	512.4	590.5	674.8	761.0	840.9	958.5	1153.1	1426.6	1550.0	1665.9	1853.8
17.5°	362.6	436.5	531.3	635.8	751.7	890.9	1129.3	1456.5	1606.1	1727.4	1853.4
20°	247.2	298.1	393.0	516.8	659.9	836.5	1138.1	1561.3	1748.4	1881.5	1929.3
22.5°	197.6	221.8	285.8	411.8	580.9	797.0	1174.1	1705.4	1952.6	2114.6	2067.7
25°	179.6	193.2	226.6	325.4	510.7	770.6	1244.3	1895.5	2181.3	2345.6	2234.0
27.5°	168.6	180.4	201.9	267.4	450.1	753.5	1333.5	2119.5	2439.1	2573.9	2407.5
30°	161.6	173.4	193.2	240.2	404.4	728.0	1411.7	2324.0	2645.0	2732.4	2501.0
32.5°	148.0	157.2	173.4	215.1	370.1	698.2	1479.3	2507.2	2839.5	2868.6	2613.4
35°	133.9	143.6	159.8	195.0	350.0	674.8	1514.8	2669.6	3032.3	3004.6	2724.9
37.5°	128.7	136.6	151.5	180.4	339.0	659.5	1528.5	2829.5	3239.1	3155.3	2802.7
40°	125.1	132.2	145.4	170.8	335.9	645.0	1525.3	2981.4	3439.8	3311.1	2863.6
42.5°	122.5	128.7	141.0	164.2	327.5	631.4	1515.3	3112.6	3600.5	3445.5	2922.1
45°	120.3	126.8	139.2	167.8	312.2	616.4	1509.2	3232.5	3723.8	3558.7	3000.2
47.5°	119.5	126.8	139.6	166.8	295.5	599.8	1531.1	3365.6	3831.5	3654.1	3104.3
50°	118.2	126.4	149.2	159.0	272.7	579.2	1605.3	3524.1	3944.3	3761.2	3239.1
52.5°	115.9	126.0	159.4	152.8	243.3	550.7	1725.6	3748.0	4139.3	3969.8	3438.4
55°	113.2	126.8	152.3	143.1	212.1	513.7	1845.9	4055.0	4455.4	4306.1	3724.8
57.5°	110.2	125.6	144.0	134.3	186.2	467.2	1937.3	4306.5	4716.2	4653.0	4076.5
60°	108.0	128.7	129.5	129.1	169.5	422.8	1946.1	4290.3	4791.3	4878.2	4420.7
62.5°	105.4	131.2	118.2	125.1	161.1	381.6	1837.5	4024.6	4664.3	4849.2	4701.3
65°	101.9	114.6	112.0	121.6	161.1	359.6	1585.1	3582.5	4313.6	4575.2	4853.6
67.5°	98.3	104.0	107.6	116.8	164.7	339.0	1273.8	3021.8	3760.3	4133.1	4682.4
70°	93.5	98.3	102.7	112.4	162.9	324.5	1002.4	2421.9	3094.6	3521.4	4208.6
72.5°	89.1	92.7	97.1	105.8	162.9	317.9	805.3	1899.9	2362.7	2722.3	3486.3
75°	82.6	85.6	89.6	99.2	159.8	290.7	604.7	1522.3	1728.7	1953.9	2750.8
77.5°	76.0	78.2	81.2	90.9	144.0	242.8	427.7	1179.0	1280.8	1405.5	2144.5
80°	67.6	69.4	71.6	81.2	119.5	188.3	278.3	922.1	957.7	1017.8	1410.8
82.5°	58.0	60.6	61.1	69.8	96.2	136.6	165.5	631.9	631.4	719.6	995.4
85°	47.5	48.7	49.6	54.9	71.1	90.9	108.8	345.1	307.8	431.2	864.6
87.5°	35.6	34.3	35.6	36.9	47.0	53.6	58.4	63.6	38.2	78.2	502.8
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5	2064.5
2.5°	2349.9	2375.9	2360.5	2342.0	2296.0	2228.3	2176.5	2131.3
5°	2517.3	2565.2	2544.1	2475.5	2356.2	2220.4	2077.7	1990.8
7.5°	2496.2	2591.0	2582.6	2468.5	2297.2	2097.5	1896.9	1782.3
10°	2327.6	2460.6	2483.4	2366.7	2185.3	1961.8	1729.5	1600.0
12.5°	2144.0	2256.0	2302.6	2258.2	2087.4	1860.4	1623.7	1494.2
15°	1990.4	2047.0	2093.1	2121.6	2015.8	1824.4	1605.3	1471.8
17.5°	1876.6	1865.7	1904.3	1972.8	1977.2	1872.2	1688.7	1539.4
20°	1821.8	1735.7	1758.0	1854.2	1966.6	1993.8	1855.1	1678.7
22.5°	1818.7	1684.3	1688.7	1792.3	1996.9	2159.9	2062.8	1861.7
25°	1866.1	1678.7	1682.5	1785.8	2050.5	2327.1	2303.0	2068.5
27.5°	1946.9	1703.2	1700.6	1814.7	2122.1	2466.7	2545.4	2321.4
30°	2034.2	1738.8	1732.2	1861.3	2192.4	2552.9	2717.5	2512.0
32.5°	2143.2	1802.0	1779.1	1929.3	2261.7	2635.3	2864.6	2690.3
35°	2246.8	1894.6	1861.7	2026.8	2335.9	2727.2	3029.3	2887.4
37.5°	2352.6	2032.9	2014.5	2167.3	2440.9	2826.8	3217.6	3110.9
40°	2488.3	2229.6	2220.9	2371.5	2580.9	2935.7	3428.8	3343.6
42.5°	2634.5	2438.7	2431.2	2606.0	2754.8	3045.0	3609.7	3543.4
45°	2783.3	2692.0	2693.7	2856.3	2937.9	3148.2	3752.0	3703.2
47.5°	2959.0	2969.1	3031.8	3115.7	3116.2	3263.2	3878.0	3852.0
50°	3182.0	3303.6	3419.6	3432.7	3296.2	3415.2	4032.1	4022.4
52.5°	3434.5	3689.6	3824.4	3782.7	3471.8	3603.5	4260.0	4259.6
55°	3734.4	4093.1	4220.0	4148.9	3682.1	3849.0	4557.7	4538.3
57.5°	4045.3	4481.2	4583.5	4491.0	3945.1	4134.9	4856.3	4754.0
60°	4381.2	4815.4	4919.5	4780.2	4240.2	4419.8	5053.9	4814.5
62.5°	4601.1	5010.8	5085.5	4952.0	4504.6	4710.1	5117.5	4742.1
65°	4612.6	4880.8	4900.7	4853.2	4617.0	4962.0	5025.3	4527.4
67.5°	4299.1	4314.9	4340.8	4391.7	4376.8	4849.7	4669.7	4025.9
70°	3628.6	3417.8	3503.0	3552.2	3662.8	4313.6	4012.3	3274.3
72.5°	2774.5	2466.7	2563.4	2546.6	2776.8	3538.1	3069.7	2522.1
75°	1996.9	1682.1	1689.6	1690.4	1995.2	2824.2	2093.1	1791.0
77.5°	1357.3	1190.3	1215.0	1199.6	1335.3	2212.5	1506.9	1290.9
80°	928.2	923.8	929.1	893.1	890.5	1430.1	1115.7	1029.6
82.5°	688.4	636.3	628.8	590.5	682.3	1093.3	847.0	739.9
85°	543.2	352.1	306.1	369.3	591.0	1006.0	516.4	379.4
87.5°	230.1	138.3	83.9	165.9	328.5	737.2	143.1	73.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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