

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: P270292

Luminaire Tested: **NAV-AF-01-D-UNV-SLL-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270292
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-SLL-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5143 lumens
Efficiency: N/A
Efficacy: 76.8 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

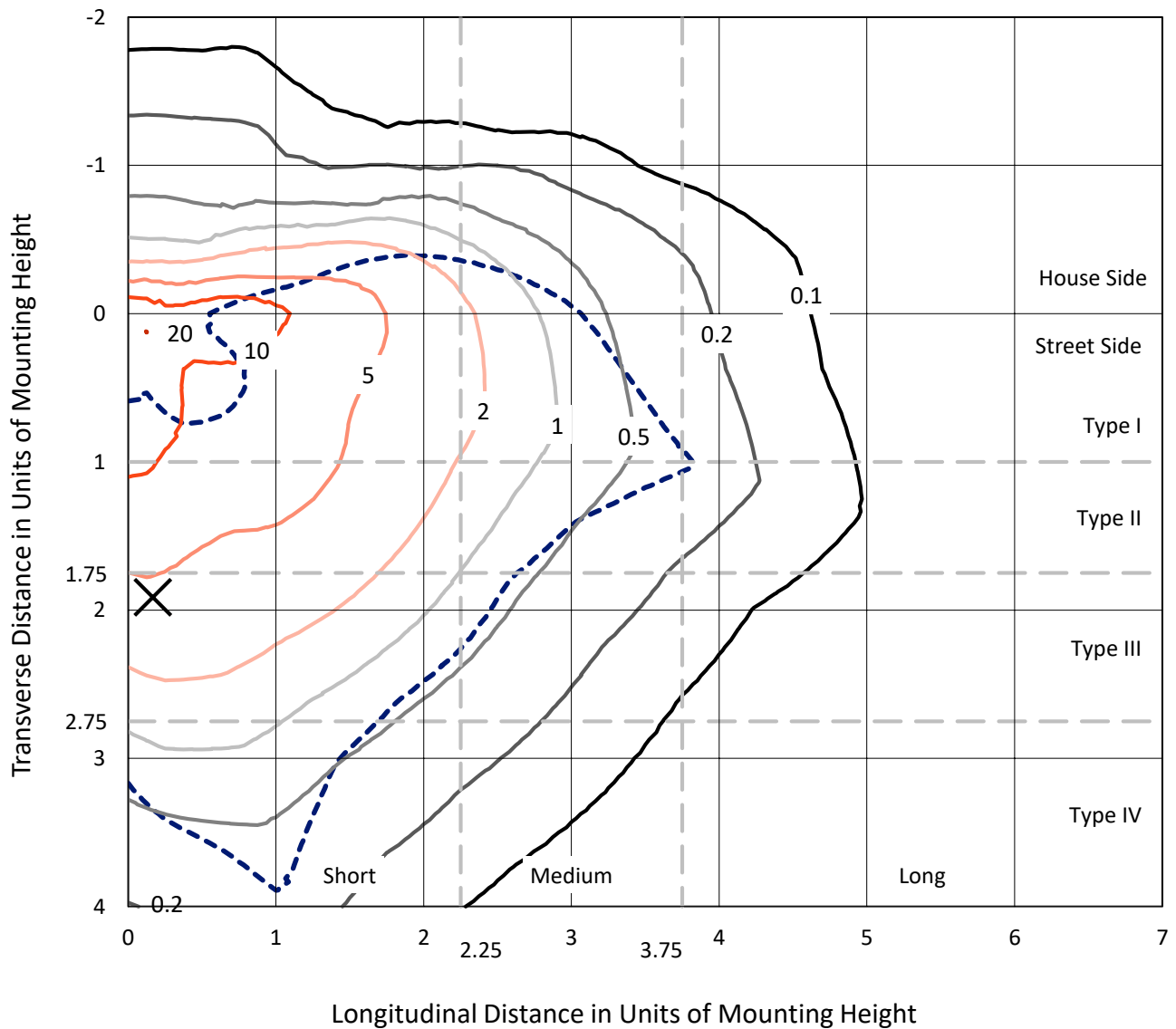


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

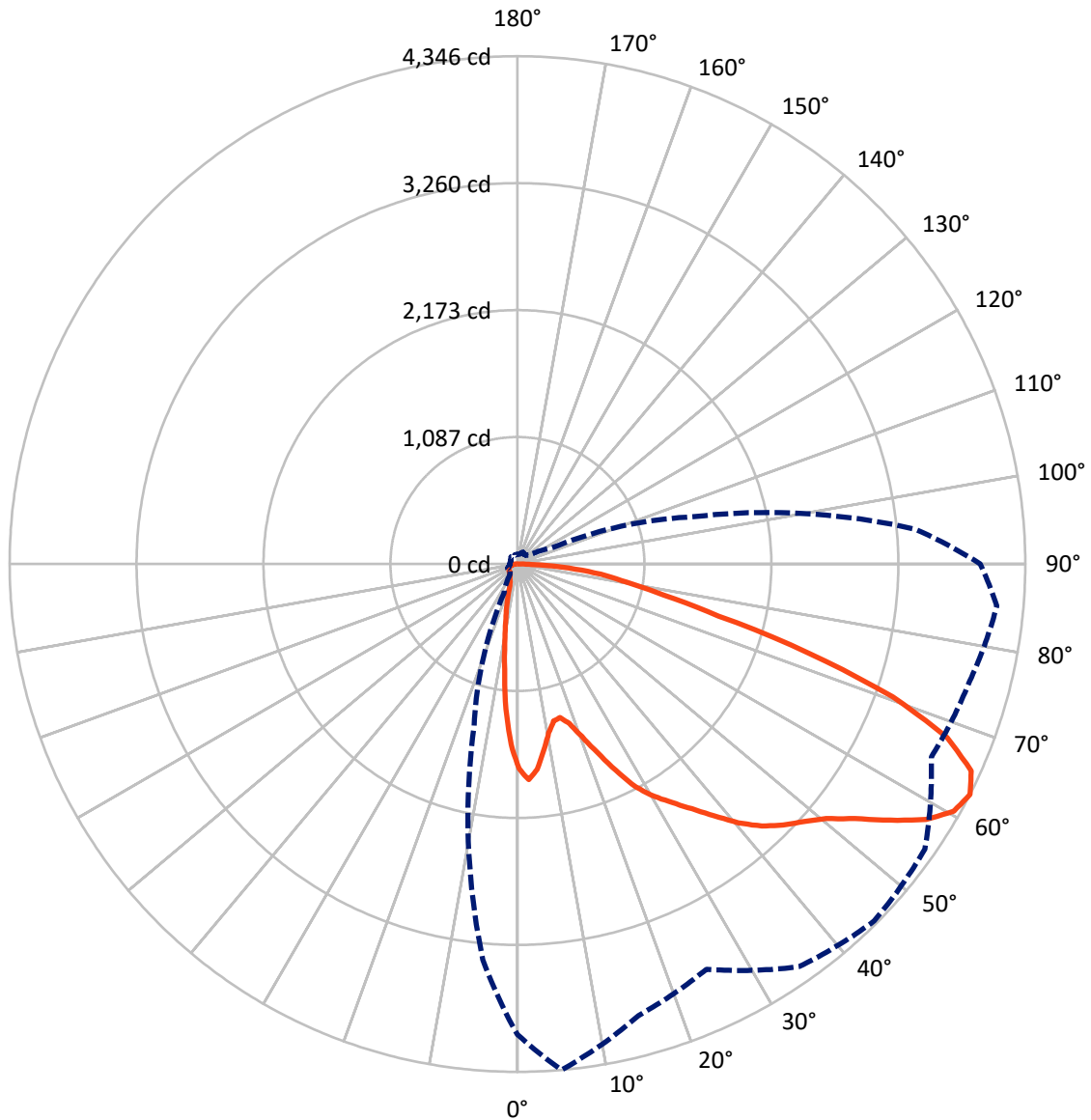


Based on 10 foot mounting height. Maximum calculated value = 20.1 fc
 Type IV - Short - Non-Cutoff

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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
House Side	Lumens	911.1	0.0	911.1
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	4231.9	0.0	4231.9
	% Fixture	82.3	0.0	82.3
Total	Lumens	5143.0	0.0	5143.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.5	2.5
10°-20°	232.9	4.5
20°-30°	335.0	6.5
30°-40°	513.0	10.0
40°-50°	750.1	14.6
50°-60°	1091.4	21.2
60°-70°	1264.5	24.6
70°-80°	659.2	12.8
80°-90°	169.4	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°	5143.0	100.0
0°-180°	5143.0	100.0



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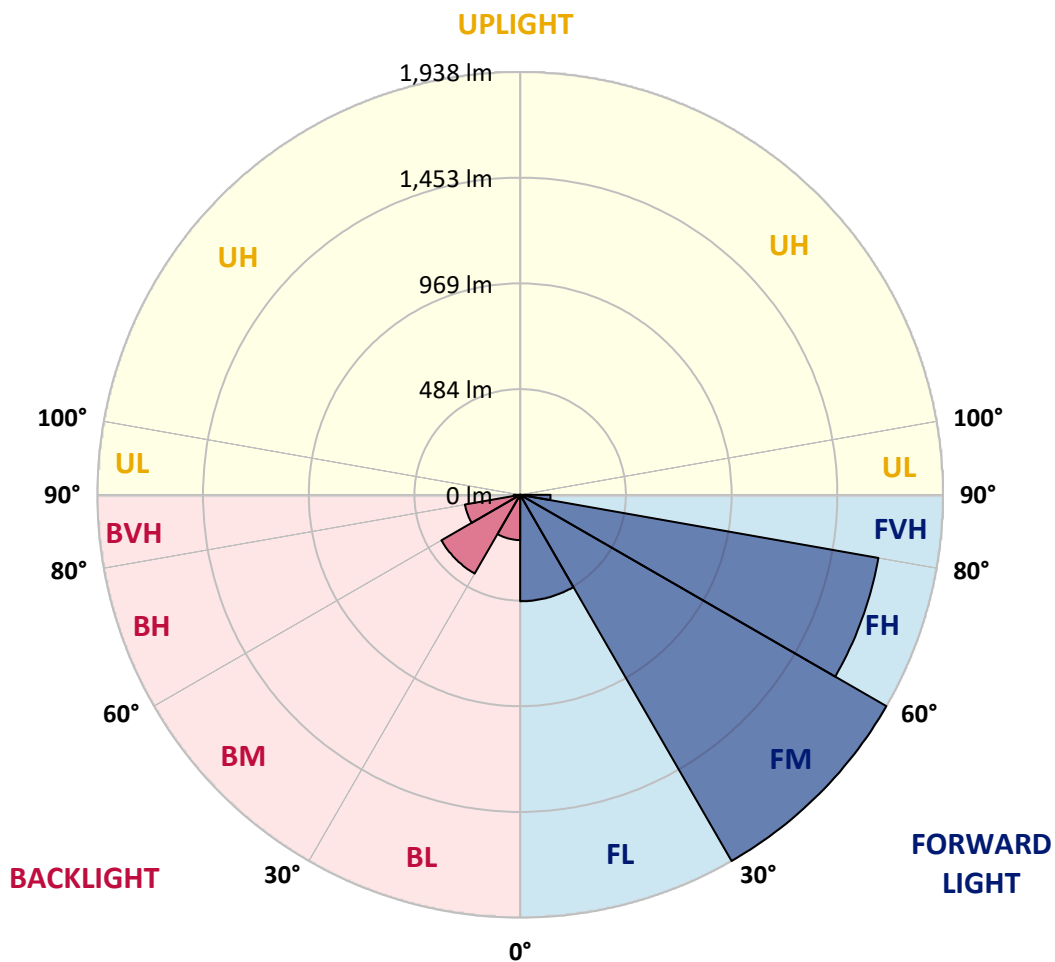
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	488.1	9.5			
FM	(30°-60°)	1937.6	37.7			
FH	(60°-80°)	1666.8	32.4			G1/1800
FVH	(80°-90°)	139.4	2.7			G2/225
BL	(0°-30°)	207.3	4.0	B1/500		
BM	(30°-60°)	416.8	8.1	B1/1000		
BH	(60°-80°)	256.9	5.0	B1/500		G1/500
BVH	(80°-90°)	30.0	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°	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3
2.5°	1810.1	1848.4	1892.4	1949.9	1988.9	2004.7	2017.8	1995.8	1974.5	1934.6	1920.3
5°	1690.7	1764.5	1885.7	2001.0	2102.4	2160.6	2178.4	2137.7	2065.5	1961.0	1905.8
7.5°	1513.6	1610.9	1781.2	1950.9	2096.5	2193.3	2200.5	2119.9	1977.4	1806.3	1716.8
10°	1358.9	1468.8	1666.0	1855.9	2009.9	2109.1	2089.6	1976.7	1804.9	1610.1	1509.2
12.5°	1268.9	1379.0	1579.9	1772.7	1917.8	1955.4	1915.9	1820.9	1657.9	1462.9	1361.0
15°	1249.9	1363.3	1549.3	1711.9	1801.8	1777.6	1738.4	1690.3	1574.4	1414.7	1316.2
17.5°	1307.4	1434.1	1590.0	1679.1	1675.3	1617.2	1584.4	1593.8	1574.0	1466.9	1364.0
20°	1425.6	1575.4	1693.3	1670.2	1574.6	1493.1	1474.1	1547.2	1638.5	1597.8	1484.9
22.5°	1581.0	1751.9	1834.2	1695.9	1522.2	1434.1	1430.5	1544.5	1755.9	1795.8	1658.2
25°	1756.6	1955.8	1976.4	1741.5	1516.6	1428.9	1425.6	1584.8	1897.3	1992.0	1852.6
27.5°	1971.5	2161.6	2094.8	1802.2	1541.1	1444.2	1446.5	1653.4	2044.5	2185.8	2071.4
30°	2133.4	2307.8	2168.0	1861.8	1580.7	1471.1	1476.6	1727.6	2124.0	2320.5	2246.3
32.5°	2284.7	2432.7	2238.0	1920.8	1638.5	1510.9	1530.4	1820.1	2219.4	2436.2	2411.5
35°	2452.2	2572.6	2316.0	1983.7	1721.2	1581.0	1609.0	1908.1	2314.2	2551.6	2575.3
37.5°	2641.9	2732.6	2400.7	2072.8	1840.5	1710.8	1726.5	1998.0	2380.1	2679.6	2750.8
40°	2839.5	2911.9	2493.2	2191.9	2014.0	1886.1	1893.5	2113.3	2432.0	2812.0	2921.3
42.5°	3009.2	3065.6	2586.0	2339.5	2213.2	2064.8	2071.0	2237.4	2481.6	2926.0	3057.7
45°	3145.0	3186.4	2673.6	2495.0	2425.7	2287.8	2286.1	2363.8	2548.0	3022.3	3162.6
47.5°	3271.4	3293.4	2771.4	2646.3	2646.0	2574.8	2521.5	2512.9	2636.3	3103.3	3253.8
50°	3416.1	3424.2	2900.4	2799.3	2915.3	2904.1	2805.6	2702.3	2750.8	3194.3	3349.7
52.5°	3617.5	3617.8	3060.3	2948.4	3212.5	3247.9	3133.4	2916.7	2920.1	3371.2	3515.2
55°	3854.2	3870.6	3268.8	3127.1	3523.4	3583.9	3476.1	3171.5	3163.2	3657.0	3783.8
57.5°	4037.3	4124.2	3511.6	3350.5	3813.9	3892.6	3805.7	3435.5	3461.9	3951.6	4005.3
60°	4088.7	4292.0	3753.6	3601.0	4059.7	4177.8	4089.5	3720.7	3754.2	4142.9	4069.1
62.5°	4027.2	4346.1	4000.1	3825.5	4205.4	4318.8	4255.5	3907.5	3992.5	4118.2	3961.3
65°	3844.8	4267.8	4214.0	3920.9	4121.6	4161.8	4145.0	3917.1	4122.0	3885.4	3663.3
67.5°	3419.0	3965.7	4118.5	3716.9	3729.7	3686.5	3664.5	3651.0	3976.4	3510.0	3193.5
70°	2780.7	3407.5	3663.3	3110.7	3016.7	2974.9	2902.7	3081.5	3574.1	2990.5	2628.1
72.5°	2141.9	2606.9	3004.8	2358.2	2162.8	2177.0	2094.8	2356.3	2960.8	2312.0	2006.5
75°	1521.0	1777.6	2398.5	1694.5	1435.6	1435.0	1428.6	1695.9	2336.1	1659.3	1468.1
77.5°	1096.3	1279.7	1879.1	1134.0	1018.8	1031.9	1011.0	1152.6	1821.3	1193.6	1087.7
80°	874.4	947.5	1214.5	756.3	758.4	789.0	784.6	788.4	1198.1	864.3	813.2
82.5°	628.4	719.4	928.5	579.4	501.6	534.0	540.3	584.6	845.3	611.1	536.2
85°	322.2	438.6	854.3	502.0	313.6	259.9	299.0	461.3	734.3	366.1	261.3
87.5°	62.6	121.6	626.1	279.0	140.9	71.2	117.5	195.4	427.0	66.4	32.5
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°	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3
2.5°	1896.1	1848.4	1803.6	1757.4	1721.6	1678.0	1635.2	1597.8	1561.7	1537.8	1545.3
5°	1849.9	1733.5	1629.2	1532.1	1475.6	1407.3	1346.5	1295.4	1255.9	1230.6	1245.8
7.5°	1639.2	1481.8	1344.3	1216.3	1135.8	1047.5	976.5	926.6	896.1	878.9	903.9
10°	1423.8	1246.9	1092.6	959.5	880.0	805.2	740.9	688.0	647.0	627.6	637.6
12.5°	1269.3	1072.8	911.1	821.5	753.3	686.1	619.7	557.8	505.7	481.9	476.9
15°	1211.5	979.2	814.0	714.2	646.2	573.1	501.6	435.1	385.6	365.0	360.6
17.5°	1236.8	959.1	756.6	638.3	539.9	451.2	370.6	307.9	271.5	259.9	261.0
20°	1326.0	966.5	710.4	560.5	438.9	333.7	253.2	209.9	194.3	191.7	194.7
22.5°	1448.2	997.1	676.9	493.3	349.8	242.7	188.4	167.9	163.8	163.3	166.2
25°	1609.8	1056.8	654.4	433.7	276.3	192.3	164.1	152.5	149.2	149.8	152.9
27.5°	1799.9	1132.5	640.0	382.1	227.1	171.5	153.3	143.2	139.9	140.6	142.8
30°	1973.8	1198.9	618.3	343.4	203.9	164.1	147.3	137.3	132.8	132.8	134.2
32.5°	2129.3	1256.3	592.9	314.3	182.7	147.3	133.5	125.7	122.3	123.4	124.1
35°	2267.2	1286.6	573.1	297.2	165.6	135.7	121.9	113.7	109.2	110.0	111.1
37.5°	2403.0	1298.1	560.2	287.8	153.3	128.6	116.1	109.2	104.5	103.7	103.2
40°	2532.0	1295.4	547.7	285.2	145.0	123.4	112.3	106.3	101.4	100.3	99.9
42.5°	2643.4	1286.8	536.2	278.1	139.4	119.7	109.2	104.1	99.3	97.6	96.9
45°	2745.2	1281.6	523.5	265.1	142.4	118.1	107.7	102.1	97.6	95.8	95.1
47.5°	2858.1	1300.2	509.3	250.9	141.8	118.5	107.7	101.4	96.9	95.1	94.3
50°	2992.9	1363.3	491.8	231.6	134.9	126.8	107.3	100.3	96.2	95.1	93.7
52.5°	3183.1	1465.5	467.6	206.6	129.7	135.4	107.0	98.5	95.1	93.2	91.4
55°	3443.7	1567.6	436.2	180.1	121.6	129.4	107.7	96.2	92.4	90.5	88.4
57.5°	3657.3	1645.2	396.7	158.1	114.2	122.3	106.7	93.7	89.6	87.7	85.8
60°	3643.5	1652.6	359.1	144.0	109.7	110.0	109.2	91.7	86.9	85.3	83.9
62.5°	3418.0	1560.5	324.1	136.8	106.3	100.3	111.5	89.6	84.4	82.7	81.7
65°	3042.4	1346.1	305.5	136.8	103.2	95.1	97.3	86.4	81.7	80.2	79.4
67.5°	2566.3	1081.7	287.8	139.9	99.3	91.4	88.4	83.5	79.1	77.6	76.8
70°	2056.8	851.4	275.6	138.3	95.5	87.2	83.5	79.4	75.0	74.6	73.8
72.5°	1613.4	683.9	270.0	138.3	89.9	82.5	78.7	75.6	71.2	70.8	69.7
75°	1292.8	513.6	246.9	135.7	84.4	76.0	72.8	70.1	65.7	65.9	65.2
77.5°	1001.3	363.2	206.3	122.3	77.2	69.0	66.4	64.5	59.3	59.6	59.6
80°	783.1	236.4	160.0	101.4	69.0	60.7	58.8	57.4	51.8	52.6	52.6
82.5°	536.6	140.6	116.1	81.7	59.3	51.8	51.5	49.2	43.3	43.7	44.3
85°	293.0	92.4	77.2	60.4	46.6	42.1	41.4	40.2	34.7	34.7	35.0
87.5°	54.1	49.5	45.5	40.0	31.4	30.3	29.0	30.3	26.1	25.3	25.3
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3
2.5°	1527.7	1502.0	1484.1	1468.5	1430.8	1433.3	1438.6	1446.1	1422.6	1435.0	1450.1
5°	1230.6	1209.3	1193.3	1168.2	1115.7	1097.0	1085.2	1079.9	1044.9	1052.4	1068.8
7.5°	907.3	906.8	901.3	873.3	809.9	771.6	746.1	738.3	716.7	724.9	749.8
10°	638.8	645.5	642.8	617.9	561.3	533.7	528.1	543.7	544.1	560.2	602.9
12.5°	461.6	458.0	454.5	434.1	391.5	387.1	399.7	421.3	426.5	443.8	488.5
15°	344.6	335.5	333.7	317.7	289.8	293.8	303.2	314.3	314.8	326.7	363.5
17.5°	258.4	258.4	261.3	250.9	230.9	229.0	224.0	221.2	216.6	221.5	241.6
20°	200.6	209.9	217.4	211.5	193.1	184.2	174.9	168.9	165.6	165.9	171.8
22.5°	171.8	179.3	189.1	186.0	170.8	159.2	153.3	149.2	146.6	146.6	149.8
25°	157.4	162.2	171.1	169.7	156.7	147.3	142.4	138.3	135.4	134.9	138.3
27.5°	145.9	148.8	154.8	154.0	140.6	134.7	131.6	129.0	127.2	126.8	130.2
30°	135.4	136.8	139.9	138.7	128.6	122.7	121.6	120.5	119.4	119.7	124.5
32.5°	126.0	127.2	129.0	127.5	117.9	112.6	110.8	109.2	108.2	109.2	114.9
35°	115.6	118.9	121.2	120.5	110.0	103.7	99.5	95.8	94.3	95.5	101.8
37.5°	106.7	112.3	115.3	114.4	103.7	96.2	91.0	90.2	90.2	91.7	98.1
40°	103.2	107.3	110.0	108.9	98.1	90.5	87.7	86.4	86.9	88.4	95.1
42.5°	100.3	104.1	104.8	102.5	91.7	86.9	85.0	83.5	84.4	86.1	92.9
45°	97.6	100.7	100.3	96.9	86.4	83.2	83.2	82.0	82.5	83.9	91.0
47.5°	95.8	97.3	96.6	93.2	82.7	80.2	81.2	81.2	82.0	83.2	90.2
50°	92.9	94.0	93.2	90.2	79.8	77.6	78.7	80.2	80.8	82.0	88.4
52.5°	89.9	90.5	90.2	87.2	76.8	75.3	75.3	76.8	78.3	79.8	85.3
55°	86.9	87.7	88.0	85.8	74.6	73.1	72.8	72.8	74.2	76.4	82.5
57.5°	84.6	84.6	85.3	83.9	72.4	70.4	68.6	69.0	70.8	72.8	78.7
60°	82.0	82.5	83.5	82.0	69.3	66.4	64.9	66.7	67.6	69.3	75.6
62.5°	79.8	79.8	80.6	79.4	66.7	63.8	62.6	64.5	64.5	66.4	72.8
65°	78.0	77.6	77.6	77.2	64.0	61.2	60.4	61.2	61.5	63.4	69.7
67.5°	76.4	74.6	74.6	75.3	61.5	58.5	58.2	58.2	58.5	60.7	66.4
70°	73.1	71.5	71.2	73.8	58.8	55.2	55.2	54.4	55.2	56.4	62.3
72.5°	69.3	68.2	67.8	71.5	56.4	51.5	50.8	50.3	50.8	51.8	57.4
75°	64.5	63.8	64.5	70.1	53.7	47.4	46.3	45.9	45.9	46.3	52.2
77.5°	58.8	58.2	63.8	65.2	52.2	42.5	41.4	40.7	40.0	40.0	46.6
80°	52.2	51.8	61.5	55.2	49.9	37.3	35.5	34.3	33.5	33.1	40.0
82.5°	45.5	44.7	52.6	43.3	41.4	30.6	27.9	25.7	24.7	24.7	30.6
85°	37.3	36.9	41.4	31.7	28.7	22.4	18.7	16.8	15.4	15.4	19.8
87.5°	27.2	26.5	25.7	19.0	14.6	10.2	7.0	6.6	6.0	5.6	8.3
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3	1753.3
2.5°	1473.0	1503.9	1562.4	1610.5	1674.7	1726.2	1784.7	1810.1
5°	1098.8	1147.8	1237.2	1313.7	1419.6	1517.6	1629.5	1690.7
7.5°	788.4	860.7	928.5	1024.0	1156.4	1288.0	1432.6	1513.6
10°	652.2	718.6	776.8	844.5	946.8	1094.9	1267.5	1358.9
12.5°	540.3	611.9	673.4	746.1	831.9	965.8	1162.6	1268.9
15°	414.3	492.2	566.0	653.6	758.9	911.7	1131.3	1249.9
17.5°	283.8	367.2	458.2	565.4	692.1	889.0	1161.1	1307.4
20°	192.7	254.0	352.8	479.5	632.0	878.2	1226.8	1425.6
22.5°	158.6	186.0	260.2	398.9	582.8	890.1	1333.4	1581.0
25°	145.4	160.3	202.5	328.2	545.2	921.8	1477.8	1756.6
27.5°	137.3	149.8	177.4	277.4	510.4	965.0	1653.4	1971.5
30°	132.4	144.3	167.4	251.3	478.7	1002.2	1804.4	2133.4
32.5°	121.6	130.6	149.6	236.4	456.1	1032.5	1937.6	2284.7
35°	108.5	119.4	134.9	226.7	455.4	1046.7	2062.9	2452.2
37.5°	103.7	114.2	125.7	221.5	459.8	1058.7	2216.1	2641.9
40°	100.7	110.0	119.4	220.8	463.5	1067.9	2366.0	2839.5
42.5°	98.1	107.3	118.1	215.6	462.0	1080.7	2498.7	3009.2
45°	97.3	106.7	120.8	207.7	461.6	1100.5	2604.2	3145.0
47.5°	96.6	110.8	120.1	199.2	460.1	1142.1	2723.2	3271.4
50°	95.8	118.1	114.9	187.1	449.0	1213.4	2883.2	3416.1
52.5°	95.5	119.4	109.2	170.8	428.9	1318.9	3117.4	3617.5
55°	94.0	113.4	99.5	149.2	399.7	1432.6	3368.4	3854.2
57.5°	90.5	101.1	94.0	127.9	358.0	1512.0	3553.7	4037.3
60°	98.9	86.9	90.2	117.0	307.9	1526.2	3561.9	4088.7
62.5°	94.3	79.1	86.4	113.4	272.9	1433.8	3398.8	4027.2
65°	75.3	75.0	83.2	117.0	267.8	1226.8	3123.8	3844.8
67.5°	68.6	72.0	79.8	121.6	271.1	966.5	2718.8	3419.0
70°	64.0	68.2	75.3	125.7	277.0	761.5	2188.9	2780.7
72.5°	59.6	63.1	70.8	129.7	272.9	600.7	1751.9	2141.9
75°	54.1	57.0	64.5	118.9	234.2	441.4	1392.1	1521.0
77.5°	47.7	50.3	56.7	94.0	176.0	307.3	1042.7	1096.3
80°	41.1	42.1	47.0	68.6	114.9	183.9	793.6	874.4
82.5°	32.5	32.8	35.8	50.3	71.5	117.5	550.4	628.4
85°	20.9	21.6	23.1	35.5	48.1	75.3	281.2	322.2
87.5°	7.0	8.3	8.3	17.2	23.4	41.9	86.1	62.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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