

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: P195271

Luminaire Tested: **NAV-AF-01-D-UNV-SLR-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195271
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-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5700K, 800mA 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: 4360 lumens
Efficiency: N/A
Efficacy: 99.1 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): 44
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

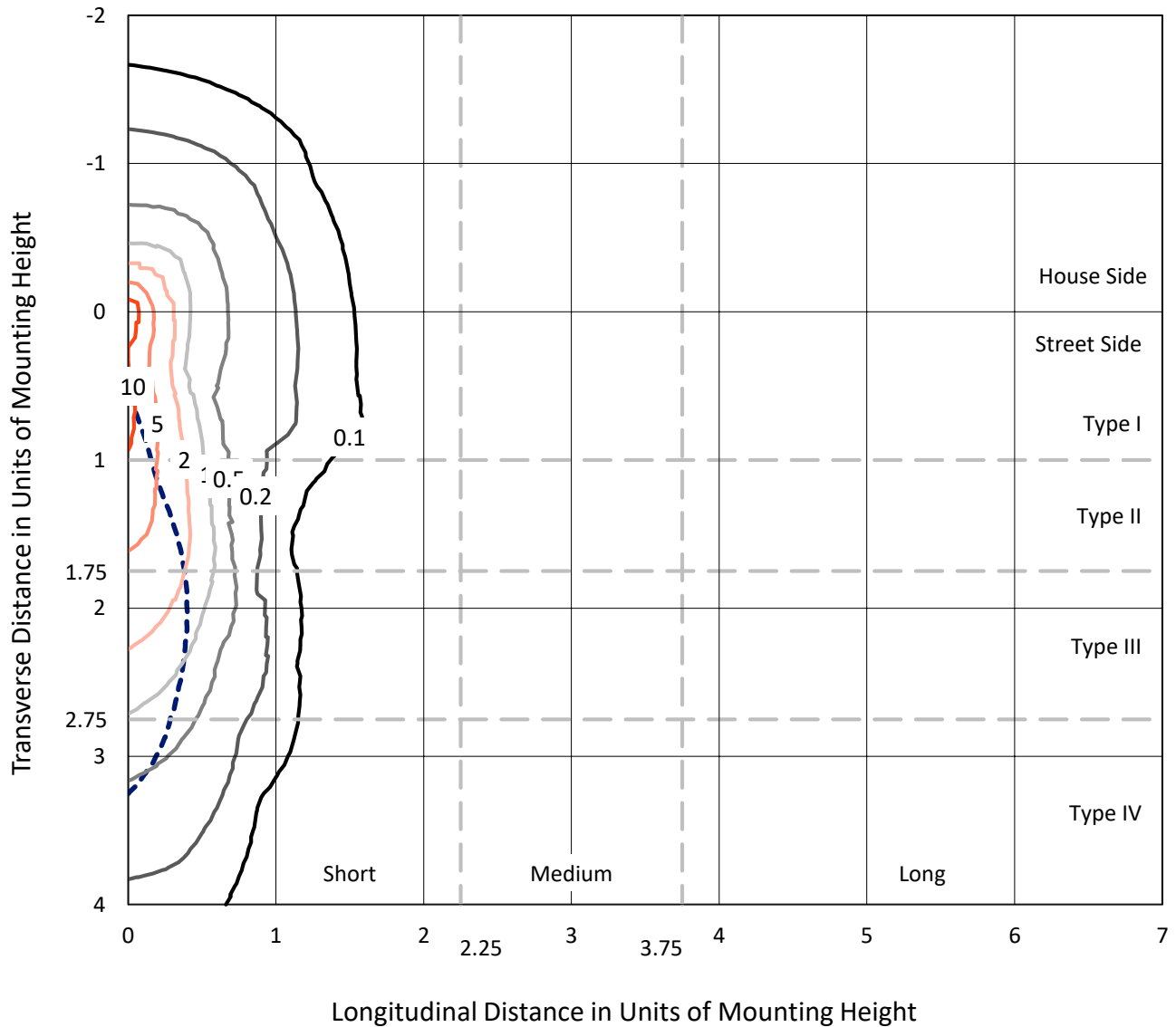


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Iso-Footcandle Lines of Horizontal Illumination

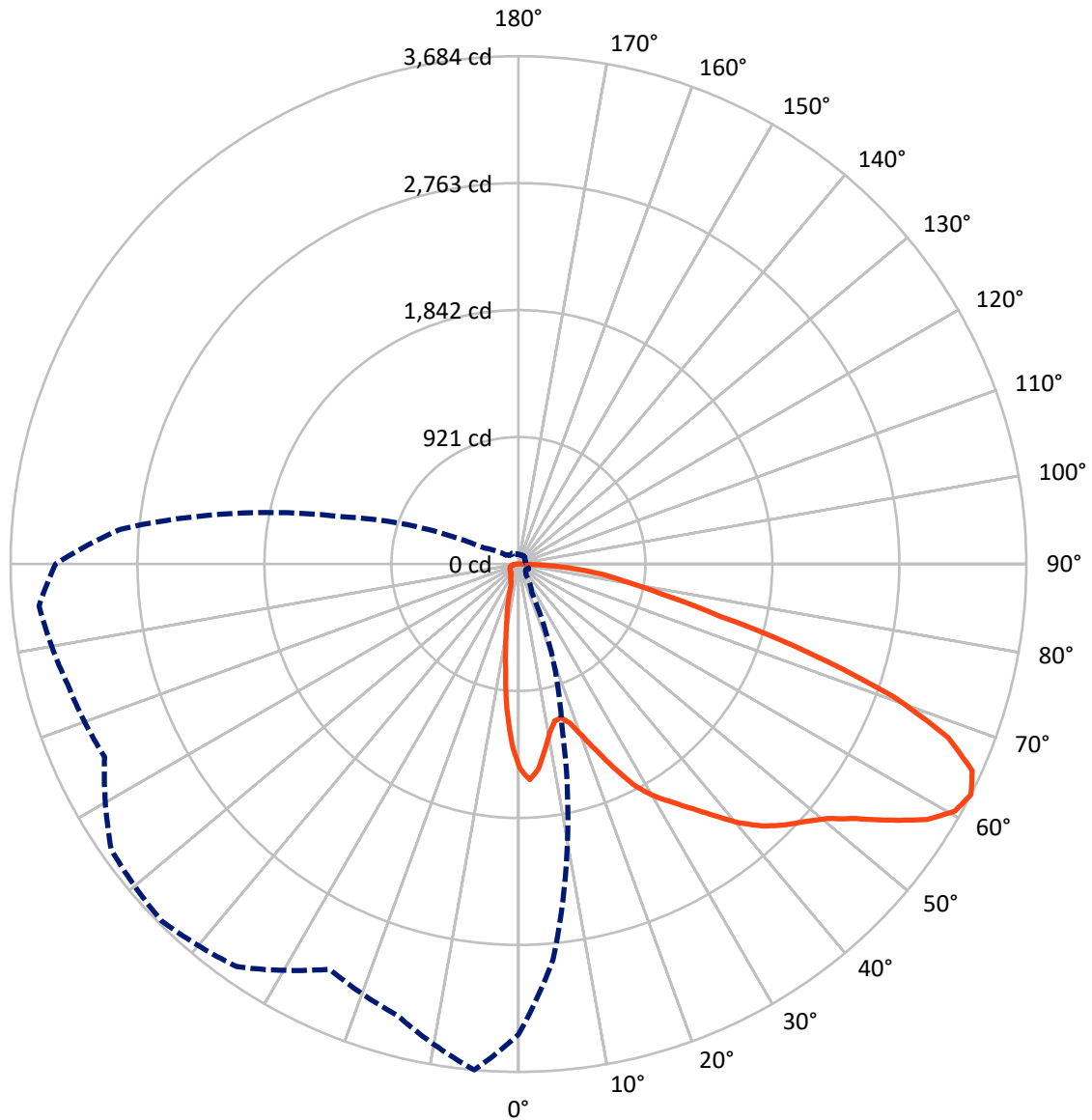
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.9 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	772.4	0.0	772.4
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	3587.6	0.0	3587.6
	% Fixture	82.3	0.0	82.3
Total	Lumens	4360.0	0.0	4360.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	2.5
10°-20°	197.4	4.5
20°-30°	284.0	6.5
30°-40°	434.9	10.0
40°-50°	635.9	14.6
50°-60°	925.2	21.2
60°-70°	1072.0	24.6
70°-80°	558.8	12.8
80°-90°	143.6	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°	4360.0	100.0
0°-180°	4360.0	100.0



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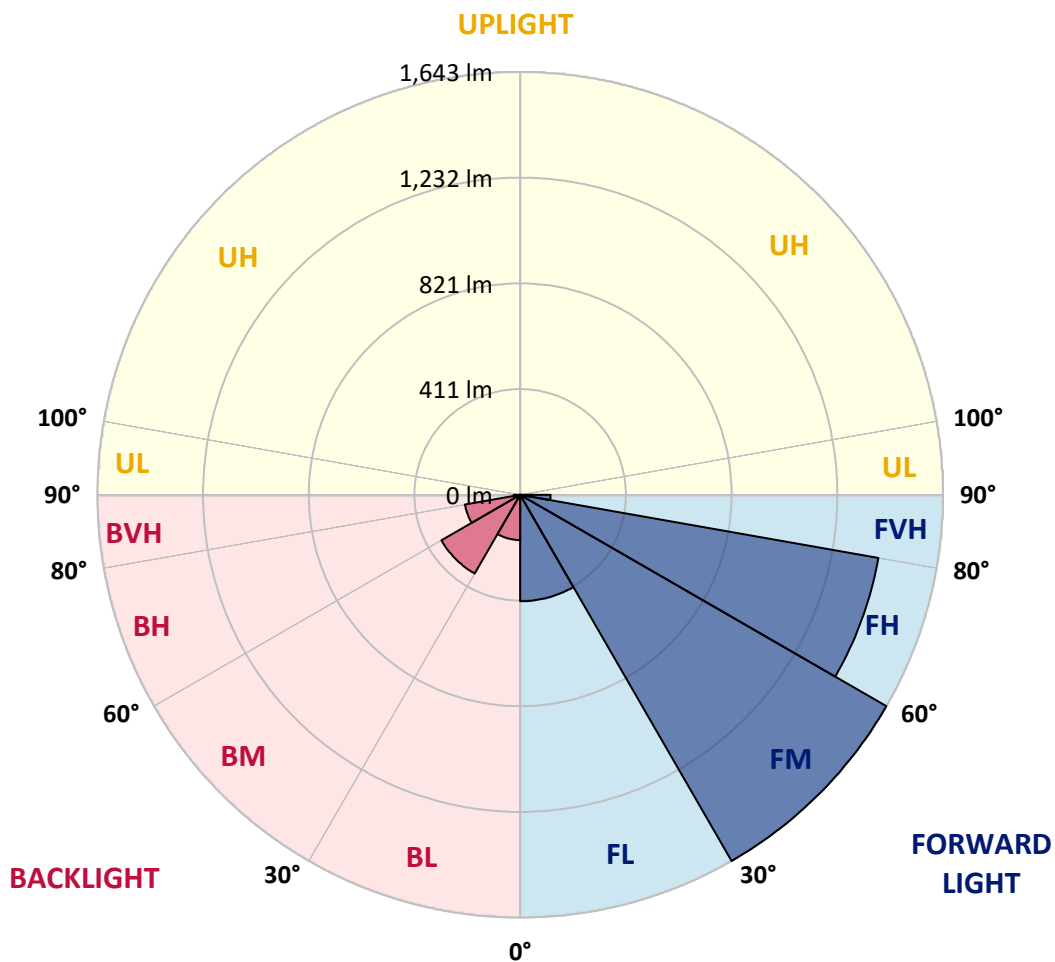
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	413.8	9.5			
FM	(30°-60°)	1642.6	37.7			
FH	(60°-80°)	1413.0	32.4			G1/1800
FVH	(80°-90°)	118.2	2.7			G2/225
BL	(0°-30°)	175.7	4.0	B1/500		
BM	(30°-60°)	353.4	8.1	B1/1000		
BH	(60°-80°)	217.8	5.0	B1/500		G1/500
BVH	(80°-90°)	25.5	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°	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4
2.5°	1534.5	1513.0	1463.3	1419.7	1365.3	1324.6	1274.9	1248.7	1229.4	1216.4	1206.0
5°	1433.3	1381.5	1286.6	1203.5	1113.7	1048.9	973.0	931.6	906.0	892.1	885.8
7.5°	1283.1	1214.5	1091.9	980.3	868.1	787.1	729.6	668.3	635.7	614.5	607.6
10°	1152.0	1074.5	928.1	802.6	716.0	658.5	609.2	552.9	511.2	474.8	461.2
12.5°	1075.8	985.7	818.8	705.3	632.6	570.9	518.8	458.1	414.1	376.2	361.6
15°	1059.6	959.1	772.9	643.3	554.2	479.9	417.3	351.2	308.2	276.9	266.8
17.5°	1108.3	984.4	753.6	586.7	479.2	388.5	311.4	240.6	204.8	187.8	183.7
20°	1208.5	1040.0	744.5	535.8	406.5	299.1	215.3	163.4	145.7	140.7	140.4
22.5°	1340.4	1130.5	754.6	494.1	338.3	220.7	157.7	134.4	127.1	124.2	124.2
25°	1489.3	1252.8	781.5	462.2	278.2	171.7	135.9	123.3	117.3	114.4	114.8
27.5°	1671.3	1401.7	818.1	432.8	235.2	150.5	127.1	116.3	110.3	107.5	107.8
30°	1808.5	1529.7	849.7	405.9	213.1	141.9	122.3	112.2	105.6	101.5	101.2
32.5°	1936.9	1642.6	875.3	386.6	200.4	126.8	110.6	103.1	97.4	92.6	91.7
35°	2078.8	1748.8	887.4	386.0	192.2	114.4	101.2	92.0	86.3	80.9	80.0
37.5°	2239.7	1878.7	897.5	389.8	187.8	106.5	96.7	87.9	83.1	77.8	76.5
40°	2407.3	2005.8	905.4	392.9	187.1	101.2	93.3	85.4	80.6	74.9	73.7
42.5°	2551.1	2118.3	916.1	391.7	182.7	100.2	91.0	83.1	78.7	73.0	71.4
45°	2666.2	2207.8	932.9	391.4	176.1	102.4	90.4	82.5	77.1	71.1	69.9
47.5°	2773.3	2308.6	968.3	390.1	168.8	101.8	93.9	81.9	76.5	70.5	69.5
50°	2896.0	2444.3	1028.7	380.6	158.7	97.4	100.2	81.2	74.9	69.5	68.6
52.5°	3066.7	2642.8	1118.1	363.5	144.8	92.6	101.2	80.9	72.4	67.7	66.4
55°	3267.4	2855.5	1214.5	338.9	126.4	84.4	96.1	79.7	69.9	64.8	62.9
57.5°	3422.7	3012.7	1281.9	303.5	108.4	79.7	85.7	76.8	66.7	61.6	60.1
60°	3466.3	3019.6	1293.9	261.1	99.3	76.5	73.7	83.8	64.2	58.8	57.2
62.5°	3414.1	2881.5	1215.5	231.4	96.1	73.3	67.0	80.0	61.6	56.3	54.7
65°	3259.5	2648.2	1040.0	227.0	99.3	70.5	63.5	63.9	59.1	53.7	52.2
67.5°	2898.5	2304.9	819.4	229.8	103.1	67.7	61.0	58.2	56.3	51.5	49.6
70°	2357.3	1855.6	645.5	234.9	106.5	63.9	57.9	54.4	52.8	47.7	46.8
72.5°	1815.8	1485.1	509.3	231.4	110.0	60.1	53.4	50.6	48.7	43.9	43.0
75°	1289.5	1180.1	374.3	198.5	100.8	54.7	48.4	45.8	44.3	39.2	38.9
77.5°	929.4	883.9	260.5	149.2	79.7	48.1	42.7	40.5	39.5	33.8	33.8
80°	741.3	672.7	155.8	97.4	58.2	39.8	35.7	34.8	33.8	28.1	28.5
82.5°	532.7	466.6	99.6	60.7	42.7	30.3	27.8	27.5	25.9	20.9	20.9
85°	273.1	238.4	63.9	40.8	30.0	19.6	18.3	17.7	16.8	13.0	13.0
87.5°	53.1	73.0	35.4	19.9	14.5	7.0	7.0	6.0	7.0	4.7	5.1
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°	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4
2.5°	1225.9	1219.6	1215.2	1213.0	1244.9	1258.2	1273.3	1295.2	1310.0	1303.7	1323.9
5°	915.5	919.9	930.0	945.8	990.4	1011.6	1025.2	1043.2	1056.2	1043.2	1064.7
7.5°	625.9	632.6	654.1	686.6	740.4	764.1	768.8	769.1	766.3	745.1	759.6
10°	460.9	447.6	452.4	475.8	523.8	545.0	547.2	541.5	540.6	532.0	548.5
12.5°	357.2	338.9	328.1	331.9	368.0	385.4	388.2	391.4	404.3	408.4	428.7
15°	266.5	257.0	249.1	245.6	269.3	282.9	284.5	292.1	305.7	309.5	326.9
17.5°	187.5	190.0	194.1	195.7	212.8	221.6	219.1	219.1	221.3	220.3	230.1
20°	143.2	148.3	156.2	163.8	179.2	184.3	178.0	170.1	165.0	162.5	164.7
22.5°	126.4	129.9	135.0	144.8	157.7	160.3	152.1	145.7	141.0	138.5	138.8
25°	117.3	120.8	124.9	132.8	143.8	145.1	137.5	133.4	129.6	127.1	126.4
27.5°	109.4	111.6	114.1	119.2	130.6	131.2	126.1	123.6	121.1	119.2	118.5
30°	102.1	103.1	104.0	109.1	117.6	118.5	116.0	114.8	113.8	112.5	112.5
32.5°	92.6	93.9	95.5	99.9	108.1	109.4	107.8	106.8	105.3	104.6	103.7
35°	81.2	84.4	87.9	93.3	102.1	102.7	100.8	98.0	94.2	93.3	92.6
37.5°	76.5	77.1	81.6	87.9	97.0	97.7	95.2	90.4	87.6	87.9	88.5
40°	73.3	74.3	76.8	83.1	92.3	93.3	91.0	87.6	84.7	85.0	86.0
42.5°	70.8	72.1	73.7	77.8	86.9	88.8	88.2	85.0	82.2	82.8	84.1
45°	69.5	70.5	70.5	73.3	82.2	85.0	85.4	82.8	80.6	81.2	82.8
47.5°	68.9	68.9	68.0	70.2	79.0	81.9	82.5	81.2	80.0	80.6	82.2
50°	68.0	66.7	65.8	67.7	76.5	79.0	79.7	78.7	79.3	80.6	81.6
52.5°	65.1	63.9	63.9	65.1	74.0	76.5	76.8	76.2	77.5	79.0	80.6
55°	61.6	61.6	62.0	63.2	72.7	74.6	74.3	73.7	74.9	76.8	78.4
57.5°	58.5	58.2	59.7	61.3	71.1	72.4	71.8	71.8	72.7	74.3	75.9
60°	56.6	55.0	56.3	58.8	69.5	70.8	69.9	69.5	71.1	72.4	73.7
62.5°	54.7	53.1	54.1	56.6	67.3	68.3	67.7	67.7	69.2	70.2	71.4
65°	51.8	51.2	51.8	54.4	65.4	65.8	65.8	66.1	67.3	68.0	69.2
67.5°	49.3	49.3	49.6	52.2	63.9	63.2	63.2	64.8	65.1	65.8	67.0
70°	46.2	46.8	46.8	49.9	62.6	60.4	60.7	62.0	62.6	63.2	63.5
72.5°	42.7	43.0	43.6	47.7	60.7	57.5	57.9	58.8	59.1	60.1	60.4
75°	38.9	39.2	40.1	45.5	59.4	54.7	54.1	54.7	55.3	56.0	55.6
77.5°	34.5	35.1	36.0	44.3	55.3	54.1	49.3	49.9	50.6	50.6	50.3
80°	29.1	30.0	31.6	42.4	46.8	52.2	43.9	44.3	44.6	44.6	43.9
82.5°	21.8	23.7	25.9	35.1	36.7	44.6	37.9	38.6	37.6	37.0	36.7
85°	14.2	15.8	19.0	24.3	26.9	35.1	31.3	31.6	29.7	29.4	29.4
87.5°	5.7	6.0	8.5	12.3	16.1	21.8	22.4	23.1	21.5	21.5	22.1
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4
2.5°	1354.6	1386.2	1422.6	1459.5	1489.9	1529.1	1567.0	1607.5	1628.0	1640.0	1673.9
5°	1098.2	1141.5	1193.0	1250.9	1298.9	1381.1	1469.7	1568.3	1615.7	1662.5	1751.0
7.5°	785.6	827.9	888.0	962.9	1031.2	1139.6	1256.3	1389.7	1455.4	1531.3	1676.4
10°	583.2	628.1	682.5	746.1	813.4	926.2	1057.1	1207.0	1279.4	1365.0	1530.0
12.5°	472.9	525.4	581.7	638.6	696.4	772.3	909.5	1076.1	1153.8	1240.2	1405.5
15°	368.9	425.2	485.9	547.8	605.4	690.1	830.1	1027.1	1115.9	1199.4	1334.7
17.5°	261.1	314.2	382.5	457.7	541.2	641.4	813.1	1048.6	1156.4	1243.6	1334.4
20°	178.0	214.6	282.9	372.1	475.1	602.2	819.4	1124.1	1258.8	1354.6	1389.0
22.5°	142.3	159.6	205.8	296.5	418.2	573.8	845.3	1227.8	1405.8	1522.4	1488.6
25°	129.3	139.1	163.1	234.2	367.7	554.8	895.9	1364.7	1570.5	1688.7	1608.4
27.5°	121.4	129.9	145.4	192.5	324.0	542.5	960.1	1525.9	1756.1	1853.1	1733.3
30°	116.3	124.9	139.1	172.9	291.1	524.1	1016.3	1673.2	1904.3	1967.2	1800.6
32.5°	106.5	113.2	124.9	154.9	266.5	502.6	1065.0	1805.1	2044.4	2065.2	1881.6
35°	96.4	103.4	115.1	140.4	252.0	485.9	1090.6	1922.0	2183.1	2163.2	1961.9
37.5°	92.6	98.3	109.1	129.9	244.0	474.8	1100.4	2037.1	2332.0	2271.7	2017.8
40°	90.1	95.2	104.6	123.0	241.8	464.4	1098.2	2146.5	2476.5	2383.9	2061.8
42.5°	88.2	92.6	101.5	118.2	235.8	454.6	1090.9	2241.0	2592.2	2480.6	2103.8
45°	86.6	91.4	100.2	120.8	224.8	443.8	1086.5	2327.3	2681.0	2562.2	2160.1
47.5°	86.0	91.4	100.5	120.1	212.8	431.8	1102.3	2423.1	2758.5	2630.8	2235.0
50°	85.0	91.0	107.5	114.4	196.3	417.0	1155.7	2537.2	2839.7	2707.9	2332.0
52.5°	83.5	90.7	114.8	110.0	175.1	396.4	1242.4	2698.4	2980.1	2858.1	2475.6
55°	81.6	91.4	109.7	103.1	152.7	369.9	1329.0	2919.4	3207.7	3100.2	2681.7
57.5°	79.3	90.4	103.7	96.7	134.0	336.4	1394.7	3100.5	3395.5	3350.0	2934.9
60°	77.8	92.6	93.3	92.9	122.0	304.4	1401.1	3088.8	3449.5	3512.1	3182.7
62.5°	75.9	94.5	85.0	90.1	116.0	274.7	1323.0	2897.6	3358.2	3491.3	3384.7
65°	73.3	82.5	80.6	87.6	116.0	258.9	1141.2	2579.2	3105.6	3294.0	3494.4
67.5°	70.8	74.9	77.5	84.1	118.5	244.0	917.1	2175.6	2707.3	2975.7	3371.1
70°	67.3	70.8	74.0	80.9	117.3	233.6	721.7	1743.7	2228.0	2535.3	3030.0
72.5°	64.2	66.7	69.9	76.2	117.3	228.9	579.8	1367.9	1701.1	1960.0	2510.0
75°	59.4	61.6	64.5	71.4	115.1	209.3	435.3	1096.0	1244.6	1406.7	1980.5
77.5°	54.7	56.3	58.5	65.4	103.7	174.8	307.9	848.8	922.1	1011.9	1543.9
80°	48.7	49.9	51.5	58.5	86.0	135.6	200.4	663.9	689.5	732.8	1015.7
82.5°	41.7	43.6	43.9	50.3	69.2	98.3	119.2	454.9	454.6	518.1	716.7
85°	34.1	35.1	35.7	39.5	51.2	65.4	78.4	248.5	221.6	310.4	622.4
87.5°	25.6	24.7	25.6	26.6	33.8	38.6	42.0	45.8	27.5	56.3	362.0
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°	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4	1486.4
2.5°	1691.9	1710.5	1699.5	1686.2	1653.0	1604.3	1567.0	1534.5
5°	1812.3	1846.8	1831.6	1782.3	1696.3	1598.6	1495.9	1433.3
7.5°	1797.2	1865.4	1859.4	1777.2	1654.0	1510.1	1365.7	1283.1
10°	1675.8	1771.6	1788.0	1703.9	1573.3	1412.4	1245.2	1152.0
12.5°	1543.6	1624.2	1657.7	1625.8	1502.8	1339.4	1169.0	1075.8
15°	1433.0	1473.8	1507.0	1527.5	1451.3	1313.5	1155.7	1059.6
17.5°	1351.1	1343.2	1371.0	1420.3	1423.5	1347.9	1215.8	1108.3
20°	1311.6	1249.6	1265.8	1335.0	1415.9	1435.5	1335.6	1208.5
22.5°	1309.4	1212.6	1215.8	1290.4	1437.7	1555.0	1485.1	1340.4
25°	1343.5	1208.5	1211.4	1285.7	1476.3	1675.5	1658.1	1489.3
27.5°	1401.7	1226.2	1224.3	1306.5	1527.8	1776.0	1832.6	1671.3
30°	1464.6	1251.8	1247.1	1340.0	1578.4	1837.9	1956.5	1808.5
32.5°	1543.0	1297.4	1280.9	1389.0	1628.4	1897.4	2062.4	1936.9
35°	1617.6	1364.1	1340.4	1459.2	1681.8	1963.4	2180.9	2078.8
37.5°	1693.8	1463.6	1450.4	1560.4	1757.3	2035.2	2316.6	2239.7
40°	1791.5	1605.3	1599.0	1707.4	1858.2	2113.6	2468.6	2407.3
42.5°	1896.7	1755.7	1750.4	1876.2	1983.4	2192.3	2598.8	2551.1
45°	2003.9	1938.2	1939.4	2056.4	2115.2	2266.6	2701.3	2666.2
47.5°	2130.4	2137.6	2182.8	2243.2	2243.5	2349.4	2792.0	2773.3
50°	2290.9	2378.5	2462.0	2471.5	2373.1	2458.8	2903.0	2896.0
52.5°	2472.7	2656.4	2753.4	2723.4	2499.6	2594.4	3067.0	3066.7
55°	2688.6	2946.9	3038.3	2987.0	2651.0	2771.1	3281.4	3267.4
57.5°	2912.4	3226.4	3300.0	3233.3	2840.4	2976.9	3496.3	3422.7
60°	3154.3	3466.9	3541.8	3441.6	3052.8	3182.1	3638.6	3466.3
62.5°	3312.7	3607.6	3661.3	3565.2	3243.1	3391.1	3684.4	3414.1
65°	3320.9	3514.0	3528.2	3494.1	3324.0	3572.5	3618.0	3259.5
67.5°	3095.2	3106.5	3125.2	3161.9	3151.1	3491.6	3362.0	2898.5
70°	2612.4	2460.7	2522.0	2557.4	2637.1	3105.6	2888.7	2357.3
72.5°	1997.6	1776.0	1845.5	1833.5	1999.2	2547.3	2210.0	1815.8
75°	1437.7	1211.1	1216.4	1217.1	1436.5	2033.3	1507.0	1289.5
77.5°	977.1	857.0	874.7	863.6	961.3	1592.9	1084.9	929.4
80°	668.3	665.1	668.9	643.0	641.1	1029.6	803.3	741.3
82.5°	495.7	458.1	452.7	425.2	491.3	787.1	609.8	532.7
85°	391.0	253.5	220.3	265.9	425.5	724.2	371.8	273.1
87.5°	165.6	99.6	60.4	119.5	236.5	530.8	103.1	53.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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