

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: P270289

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270289
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
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 1050mA 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: 4688.5 lumens
Efficiency: N/A
Efficacy: 79.5 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

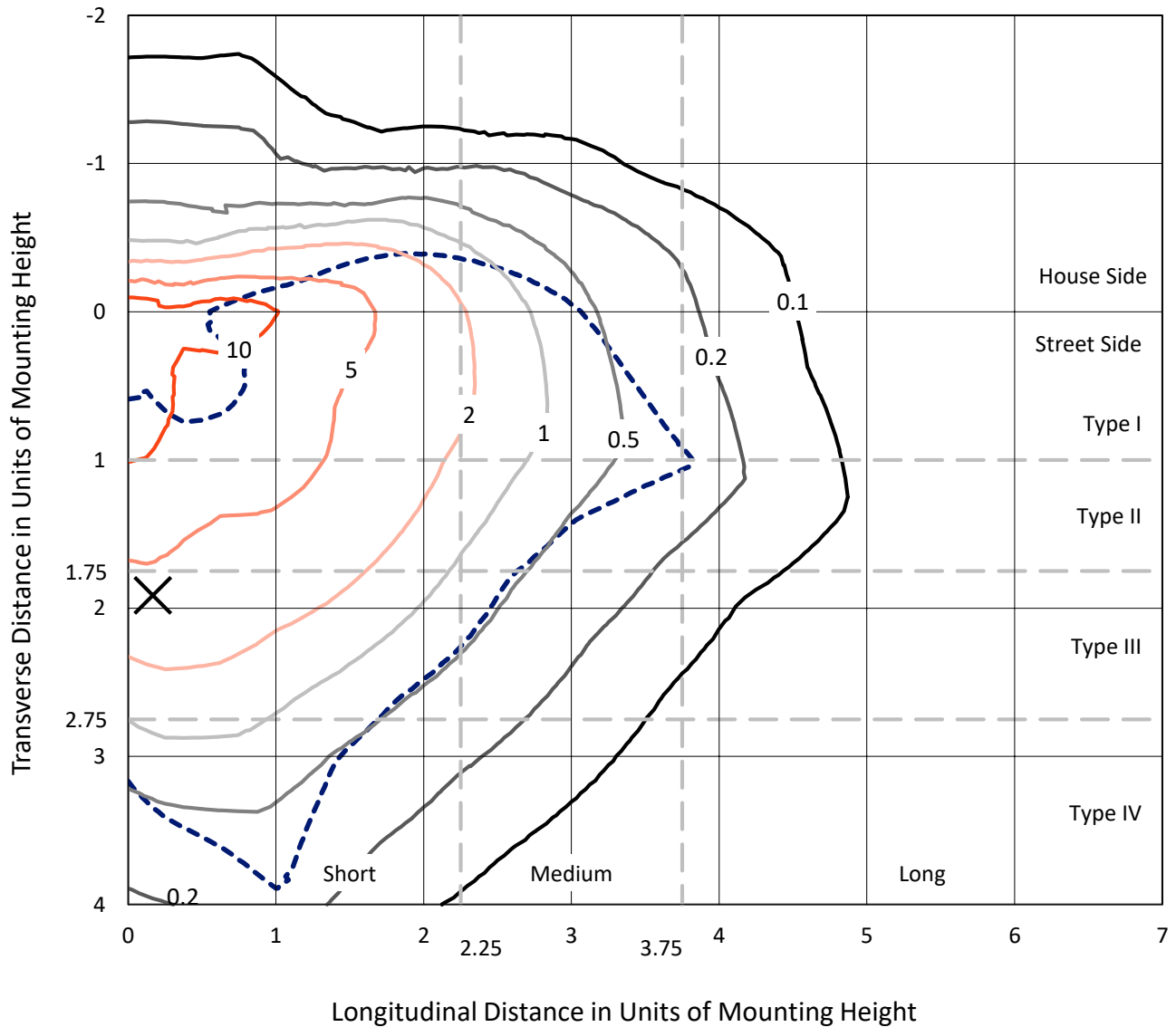
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

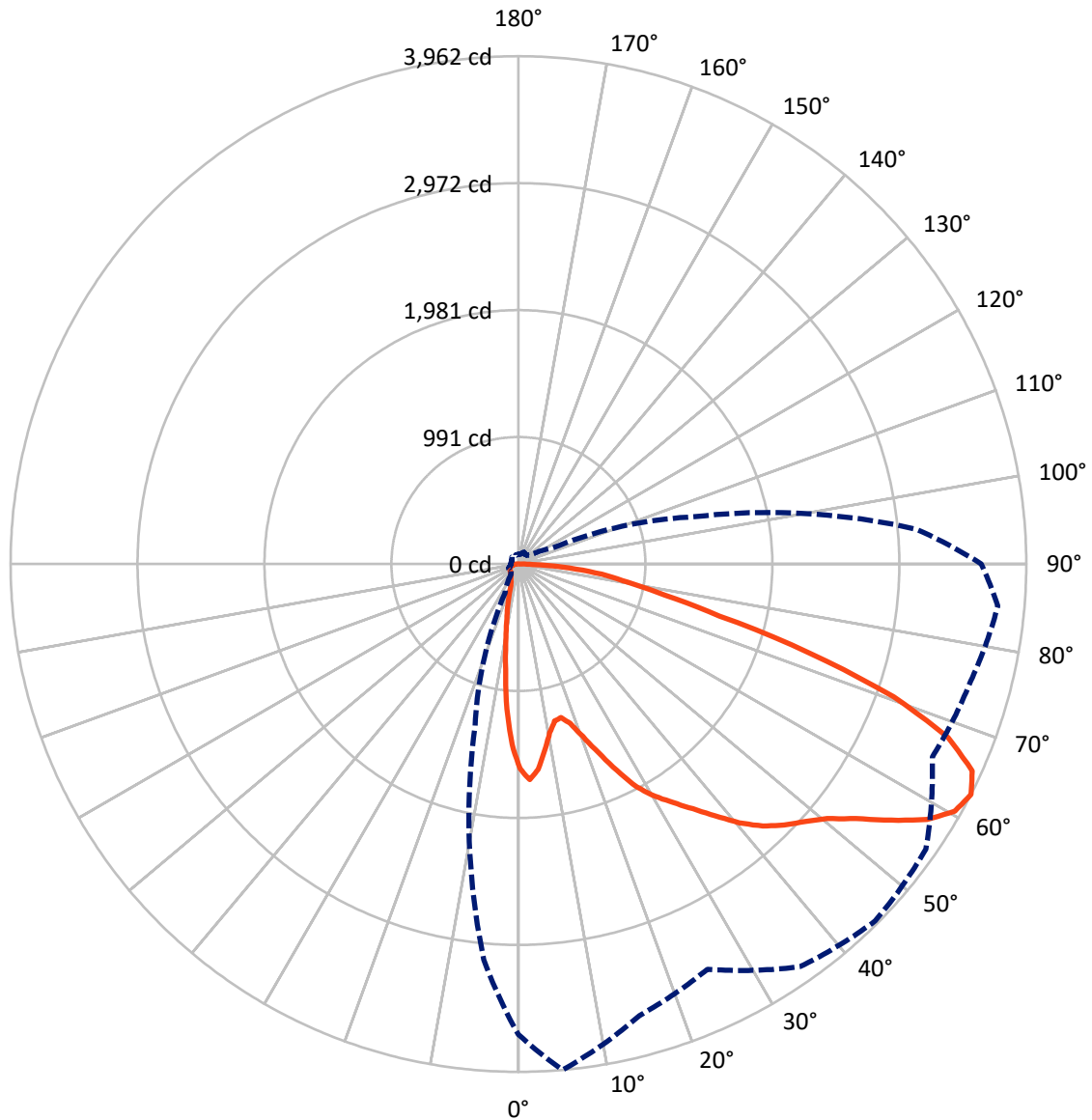
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.3 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	830.6	0.0	830.6
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	3857.9	0.0	3857.9
	% Fixture	82.3	0.0	82.3
Total	Lumens	4688.5	0.0	4688.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.2	2.5
10°-20°	212.3	4.5
20°-30°	305.4	6.5
30°-40°	467.7	10.0
40°-50°	683.8	14.6
50°-60°	994.9	21.2
60°-70°	1152.8	24.6
70°-80°	600.9	12.8
80°-90°	154.5	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°	4688.5	100.0
0°-180°	4688.5	100.0



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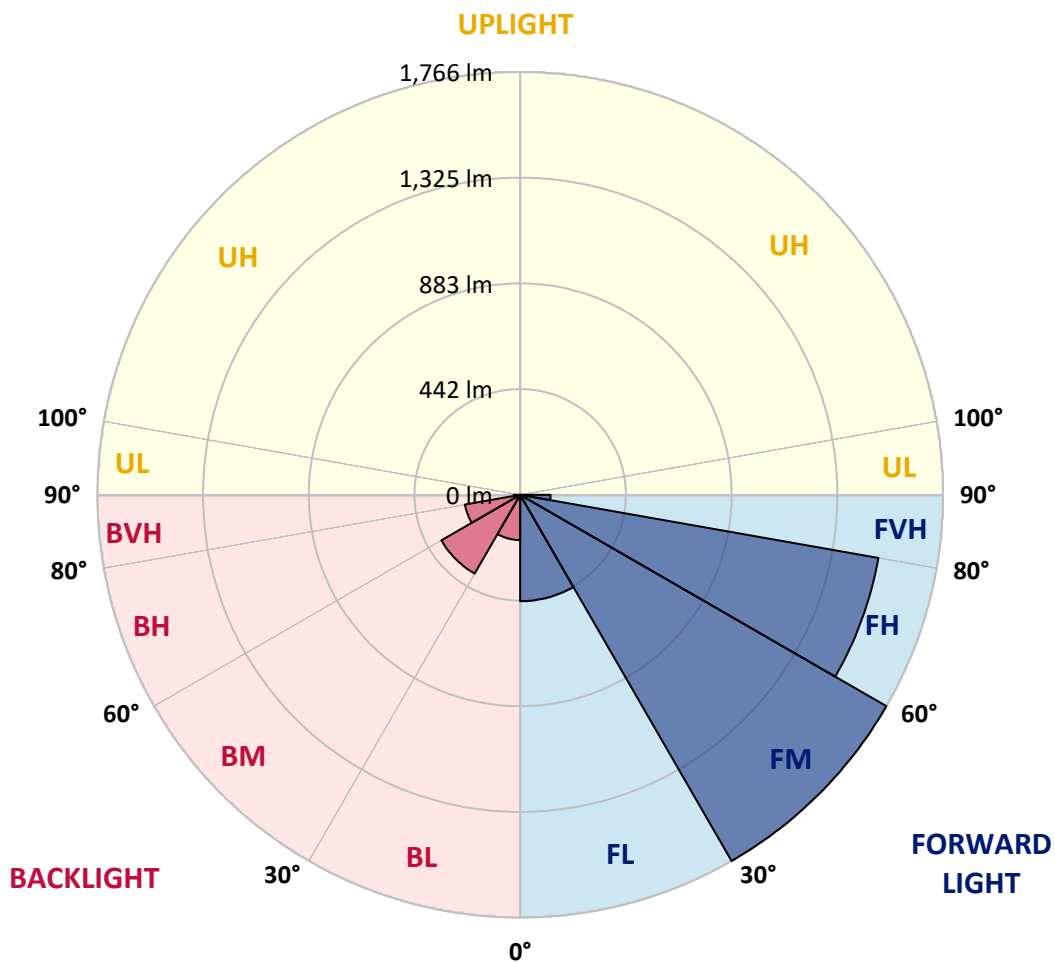
CATALOG NUMBER: NAV-AF-01-D-UNV-SLL-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	445.0	9.5			
FM	(30°-60°)	1766.4	37.7			
FH	(60°-80°)	1519.5	32.4			G1/1800
FVH	(80°-90°)	127.1	2.7			G2/225
BL	(0°-30°)	189.0	4.0	B1/500		
BM	(30°-60°)	380.0	8.1	B1/1000		
BH	(60°-80°)	234.2	5.0	B1/500		G1/500
BVH	(80°-90°)	27.4	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°	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4
2.5°	1650.0	1685.1	1725.3	1777.6	1813.3	1827.5	1839.4	1819.3	1800.1	1763.6	1750.6
5°	1541.3	1608.7	1719.0	1824.2	1916.7	1969.7	1986.0	1949.0	1882.9	1787.7	1737.4
7.5°	1379.8	1468.5	1624.0	1778.6	1911.1	1999.5	2006.1	1932.6	1802.7	1646.8	1565.0
10°	1238.8	1339.1	1518.9	1691.9	1832.4	1922.7	1905.0	1802.0	1645.3	1467.9	1375.8
12.5°	1156.8	1257.1	1440.3	1616.1	1748.3	1782.6	1746.7	1660.0	1511.4	1333.7	1240.7
15°	1139.5	1242.8	1412.5	1560.6	1642.6	1620.5	1584.8	1541.0	1435.2	1289.7	1200.0
17.5°	1191.8	1307.5	1449.5	1530.7	1527.4	1474.4	1444.5	1452.9	1435.0	1337.3	1243.6
20°	1299.6	1436.3	1543.6	1522.5	1435.6	1361.1	1343.9	1410.3	1493.7	1456.6	1353.7
22.5°	1441.4	1597.0	1672.1	1546.1	1387.6	1307.5	1304.0	1408.1	1600.8	1637.3	1511.8
25°	1601.5	1783.0	1801.7	1587.6	1382.5	1302.6	1299.6	1444.7	1729.6	1816.0	1688.9
27.5°	1797.2	1970.6	1909.7	1642.9	1404.9	1316.6	1318.6	1507.4	1864.0	1992.7	1888.3
30°	1944.8	2103.9	1976.5	1697.3	1441.1	1341.1	1346.2	1575.0	1936.3	2115.5	2047.9
32.5°	2082.8	2217.7	2040.3	1751.1	1493.7	1377.5	1395.2	1659.3	2023.3	2220.9	2198.4
35°	2235.4	2345.3	2111.3	1808.5	1569.2	1441.4	1466.8	1739.5	2109.7	2326.3	2347.6
37.5°	2408.4	2491.1	2188.6	1889.8	1677.9	1559.6	1573.9	1821.5	2169.9	2442.9	2507.8
40°	2588.6	2654.6	2272.8	1998.2	1836.0	1719.4	1726.3	1926.4	2217.0	2563.6	2663.1
42.5°	2743.3	2794.6	2357.5	2132.8	2017.6	1882.3	1888.1	2039.6	2262.3	2667.5	2787.5
45°	2867.1	2904.8	2437.5	2274.6	2211.4	2085.5	2084.2	2154.9	2322.8	2755.2	2883.1
47.5°	2982.4	3002.3	2526.5	2412.6	2412.3	2347.4	2298.8	2290.9	2403.3	2829.0	2966.4
50°	3114.2	3121.7	2644.2	2551.9	2657.6	2647.5	2557.7	2463.6	2507.8	2911.9	3053.7
52.5°	3297.8	3298.1	2790.0	2688.0	2928.7	2961.0	2856.5	2659.1	2662.0	3073.5	3204.7
55°	3513.7	3528.6	2979.9	2850.9	3212.1	3267.1	3169.0	2891.3	2883.7	3333.8	3449.4
57.5°	3680.5	3759.8	3201.3	3054.3	3476.9	3548.7	3469.4	3131.9	3156.0	3602.5	3651.3
60°	3727.4	3912.7	3421.9	3282.9	3700.9	3808.8	3728.1	3392.0	3422.5	3776.7	3709.6
62.5°	3671.5	3962.1	3646.6	3487.5	3833.8	3937.2	3879.4	3562.3	3639.8	3754.3	3611.2
65°	3505.1	3890.6	3841.7	3574.5	3757.4	3794.1	3778.8	3571.1	3757.7	3542.1	3339.5
67.5°	3116.9	3615.3	3754.6	3388.5	3400.2	3360.6	3340.6	3328.4	3625.2	3199.9	2911.2
70°	2534.9	3106.3	3339.5	2835.8	2750.2	2712.1	2646.0	2809.3	3258.3	2726.4	2395.9
72.5°	1952.6	2376.6	2739.3	2149.9	1971.7	1984.5	1909.7	2148.0	2699.1	2107.7	1829.3
75°	1386.7	1620.5	2186.6	1544.6	1308.8	1308.1	1302.4	1546.1	2129.7	1512.7	1338.4
77.5°	999.5	1166.7	1713.0	1033.8	928.7	940.6	921.7	1050.7	1660.2	1088.1	991.5
80°	797.2	863.8	1107.3	689.4	691.4	719.4	715.2	718.6	1092.2	788.1	741.5
82.5°	572.8	655.8	846.5	528.3	457.2	486.8	492.6	533.1	770.7	557.2	488.9
85°	293.7	399.7	778.8	457.5	285.9	237.0	272.6	420.4	669.3	333.8	238.3
87.5°	57.1	110.9	570.8	254.3	128.5	64.9	107.1	178.1	389.2	60.5	29.6
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°	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4
2.5°	1728.6	1685.1	1644.3	1602.1	1569.5	1529.8	1490.6	1456.6	1423.6	1402.0	1408.7
5°	1686.5	1580.4	1485.2	1396.9	1345.1	1283.0	1227.5	1180.9	1144.9	1121.9	1135.7
7.5°	1494.4	1351.0	1225.5	1108.9	1035.4	954.9	890.3	844.8	816.9	801.3	824.0
10°	1298.0	1136.7	996.0	874.7	802.2	733.9	675.4	627.1	589.7	572.1	581.4
12.5°	1157.1	978.1	830.6	748.8	686.7	625.5	564.9	508.6	461.0	439.2	434.8
15°	1104.5	892.6	742.1	651.0	589.1	522.5	457.2	396.7	351.4	332.8	328.7
17.5°	1127.6	874.3	689.8	582.0	492.2	411.3	337.9	280.8	247.5	237.0	238.1
20°	1208.8	881.1	647.6	511.0	400.1	304.3	230.9	191.3	177.1	174.7	177.4
22.5°	1320.4	909.1	617.0	449.7	318.9	221.3	171.7	153.0	149.3	148.8	151.6
25°	1467.6	963.4	596.7	395.3	252.0	175.3	149.6	139.1	136.0	136.6	139.3
27.5°	1640.9	1032.4	583.4	348.5	207.0	156.3	139.7	130.6	127.5	128.2	130.3
30°	1799.3	1092.9	563.6	313.1	185.9	149.6	134.2	125.1	121.0	121.0	122.3
32.5°	1941.1	1145.2	540.5	286.6	166.5	134.2	121.7	114.5	111.5	112.5	113.1
35°	2066.9	1172.7	522.5	270.8	150.9	123.7	111.2	103.7	99.6	100.3	101.2
37.5°	2190.5	1183.3	510.5	262.5	139.7	117.3	105.7	99.6	95.2	94.5	94.1
40°	2308.3	1180.9	499.4	260.1	132.2	112.5	102.3	96.8	92.4	91.4	91.1
42.5°	2409.9	1173.1	488.9	253.6	127.1	109.1	99.6	94.9	90.4	89.0	88.5
45°	2502.7	1168.3	477.3	241.7	129.8	107.7	98.3	93.2	89.0	87.3	86.6
47.5°	2605.7	1185.4	464.3	228.8	129.1	108.1	98.3	92.4	88.5	86.6	86.0
50°	2728.4	1242.8	448.3	211.1	123.1	115.6	97.9	91.4	87.8	86.6	85.2
52.5°	2901.7	1336.0	426.2	188.4	118.2	123.3	97.6	89.7	86.6	85.0	83.4
55°	3139.3	1429.2	397.7	164.2	110.9	117.9	98.3	87.8	84.4	82.6	80.6
57.5°	3334.1	1499.8	361.7	144.2	104.1	111.5	97.2	85.2	81.6	79.9	78.2
60°	3321.7	1506.6	327.3	131.2	99.9	100.3	99.6	83.6	79.2	77.9	76.4
62.5°	3116.0	1422.6	295.5	124.8	96.8	91.4	101.7	81.6	76.8	75.5	74.5
65°	2773.5	1227.3	278.5	124.8	94.1	86.6	88.8	79.0	74.5	73.1	72.5
67.5°	2339.5	986.2	262.5	127.5	90.4	83.4	80.6	76.1	72.0	70.6	70.0
70°	1875.1	776.0	251.3	126.1	87.0	79.5	76.1	72.5	68.4	68.0	67.4
72.5°	1471.0	623.5	246.1	126.1	81.9	75.1	71.8	69.0	64.9	64.6	63.6
75°	1178.5	468.0	225.0	123.7	76.8	69.3	66.3	63.9	59.8	60.1	59.5
77.5°	912.8	331.1	187.9	111.5	70.3	62.9	60.5	58.7	54.1	54.3	54.3
80°	714.0	215.6	145.9	92.4	62.9	55.4	53.7	52.3	47.3	47.9	47.9
82.5°	489.1	128.2	105.7	74.5	54.1	47.3	46.9	44.8	39.4	39.7	40.5
85°	267.2	84.4	70.3	55.1	42.5	38.4	37.6	36.7	31.6	31.6	32.0
87.5°	49.2	45.3	41.5	36.4	28.6	27.6	26.5	27.6	23.7	23.1	23.1
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°	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4
2.5°	1392.7	1369.2	1352.9	1338.7	1304.3	1306.8	1311.4	1318.4	1297.0	1308.1	1322.0
5°	1121.9	1102.4	1087.8	1065.0	1017.2	1000.2	989.3	984.5	952.6	959.3	974.3
7.5°	827.1	826.7	821.6	796.2	738.3	703.4	680.2	673.1	653.3	660.9	683.6
10°	582.3	588.4	586.1	563.2	511.7	486.4	481.3	495.7	496.0	510.5	549.8
12.5°	420.9	417.4	414.4	395.8	356.9	352.9	364.4	384.1	388.8	404.5	445.3
15°	314.0	306.0	304.3	289.7	264.1	267.9	276.4	286.6	286.9	297.8	331.5
17.5°	235.5	235.5	238.3	228.8	210.5	208.8	204.4	201.6	197.4	201.8	220.3
20°	182.8	191.3	198.2	192.7	176.1	168.0	159.4	154.0	150.9	151.3	156.8
22.5°	156.8	163.5	172.4	169.6	155.6	145.2	139.7	136.0	133.6	133.6	136.6
25°	143.5	148.0	156.0	154.7	142.8	134.2	129.8	126.1	123.3	123.1	126.1
27.5°	132.9	135.6	141.0	140.3	128.2	122.7	120.1	117.6	115.9	115.6	118.7
30°	123.3	124.8	127.5	126.4	117.3	111.8	110.9	109.9	108.8	109.1	113.5
32.5°	115.0	115.9	117.6	116.3	107.3	102.6	101.0	99.6	98.5	99.6	104.7
35°	105.5	108.4	110.5	109.9	100.3	94.5	90.8	87.3	86.0	87.0	92.9
37.5°	97.2	102.3	105.0	104.4	94.5	87.8	83.0	82.3	82.3	83.6	89.4
40°	94.1	97.9	100.3	99.3	89.4	82.6	79.9	79.0	79.2	80.6	86.6
42.5°	91.4	94.9	95.5	93.5	83.6	79.2	77.6	76.1	76.8	78.5	84.6
45°	89.0	91.7	91.4	88.5	79.0	75.7	75.7	74.7	75.1	76.4	83.0
47.5°	87.3	88.8	88.0	85.0	75.5	73.1	74.1	74.1	74.7	75.7	82.3
50°	84.6	85.7	85.0	82.3	72.8	70.6	71.8	73.1	73.8	74.7	80.6
52.5°	81.9	82.6	82.3	79.5	70.0	68.7	68.7	70.0	71.3	72.8	77.9
55°	79.2	79.9	80.2	78.2	68.0	66.7	66.3	66.3	67.6	69.7	75.1
57.5°	77.2	77.2	77.9	76.4	65.9	64.3	62.5	62.9	64.6	66.3	71.8
60°	74.7	75.1	76.1	74.7	63.2	60.5	59.2	60.8	61.5	63.2	69.0
62.5°	72.8	72.8	73.4	72.5	60.8	58.1	57.1	58.7	58.7	60.5	66.3
65°	71.1	70.6	70.6	70.3	58.5	55.8	55.1	55.8	56.1	57.9	63.6
67.5°	69.7	68.0	68.0	68.7	56.1	53.4	53.0	53.0	53.4	55.4	60.5
70°	66.7	65.2	64.9	67.4	53.7	50.3	50.3	49.6	50.3	51.4	56.8
72.5°	63.2	62.3	61.9	65.2	51.4	46.9	46.3	46.0	46.3	47.3	52.3
75°	58.7	58.1	58.7	63.9	49.0	43.2	42.1	41.9	41.9	42.1	47.6
77.5°	53.7	53.0	58.1	59.5	47.6	38.7	37.6	37.1	36.4	36.4	42.5
80°	47.6	47.3	56.1	50.3	45.5	34.0	32.2	31.4	30.6	30.3	36.4
82.5°	41.5	40.9	47.9	39.4	37.6	27.8	25.5	23.4	22.5	22.5	27.8
85°	34.0	33.6	37.6	28.8	26.2	20.4	17.0	15.4	14.0	14.0	18.1
87.5°	24.9	24.2	23.4	17.3	13.2	9.3	6.5	6.1	5.4	5.1	7.5
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4	1598.4
2.5°	1342.7	1371.1	1424.4	1468.2	1526.7	1573.7	1627.0	1650.0
5°	1001.8	1046.3	1127.9	1197.6	1294.2	1383.6	1485.5	1541.3
7.5°	718.6	784.6	846.5	933.5	1054.3	1174.2	1306.0	1379.8
10°	594.6	655.0	708.1	769.9	863.1	998.0	1155.5	1238.8
12.5°	492.6	557.8	613.9	680.2	758.3	880.5	1059.9	1156.8
15°	377.6	448.8	516.0	595.9	691.8	831.1	1031.3	1139.5
17.5°	258.7	334.9	417.8	515.4	630.9	810.5	1058.7	1191.8
20°	175.8	231.6	321.7	437.1	576.3	800.6	1118.4	1299.6
22.5°	144.4	169.6	237.3	363.8	531.3	811.4	1215.6	1441.4
25°	132.6	146.2	184.6	299.1	497.0	840.4	1347.2	1601.5
27.5°	125.1	136.6	161.9	253.0	465.4	879.8	1507.4	1797.2
30°	120.7	131.5	152.6	229.1	436.4	913.8	1644.9	1944.8
32.5°	110.9	118.9	136.4	215.6	415.7	941.3	1766.3	2082.8
35°	99.0	108.8	123.1	206.7	415.0	954.2	1880.6	2235.4
37.5°	94.5	104.1	114.5	201.8	419.1	965.0	2020.3	2408.4
40°	91.7	100.3	108.8	201.2	422.6	973.7	2156.9	2588.6
42.5°	89.4	97.9	107.7	196.5	421.1	985.1	2277.9	2743.3
45°	88.8	97.2	110.1	189.4	420.9	1003.1	2374.2	2867.1
47.5°	88.0	101.0	109.5	181.5	419.5	1041.2	2482.6	2982.4
50°	87.3	107.7	104.7	170.7	409.3	1106.2	2628.4	3114.2
52.5°	87.0	108.8	99.6	155.6	390.9	1202.4	2842.0	3297.8
55°	85.7	103.3	90.8	136.0	364.4	1306.0	3070.8	3513.7
57.5°	82.6	92.2	85.7	116.6	326.4	1378.4	3239.6	3680.5
60°	90.1	79.2	82.3	106.8	280.8	1391.4	3247.2	3727.4
62.5°	86.0	72.0	79.0	103.3	248.8	1307.0	3098.7	3671.5
65°	68.7	68.4	75.7	106.8	244.1	1118.4	2847.6	3505.1
67.5°	62.5	65.5	72.8	110.9	247.2	881.1	2478.6	3116.9
70°	58.5	62.3	68.7	114.5	252.6	694.2	1995.4	2534.9
72.5°	54.3	57.4	64.6	118.2	248.8	547.6	1597.0	1952.6
75°	49.2	52.0	58.7	108.4	213.4	402.5	1269.0	1386.7
77.5°	43.5	46.0	51.7	85.7	160.4	280.1	950.4	999.5
80°	37.4	38.4	42.8	62.5	104.7	167.7	723.3	797.2
82.5°	29.6	30.0	32.7	46.0	65.2	107.1	501.8	572.8
85°	19.0	19.8	21.1	32.2	43.8	68.7	256.3	293.7
87.5°	6.5	7.5	7.5	15.6	21.4	38.1	78.5	57.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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