

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: P197167

Luminaire Tested: **NAV-AF-01-D-UNV-SLL-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197167
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-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 800mA 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: 3558 lumens
Efficiency: N/A
Efficacy: 80.9 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 - G1

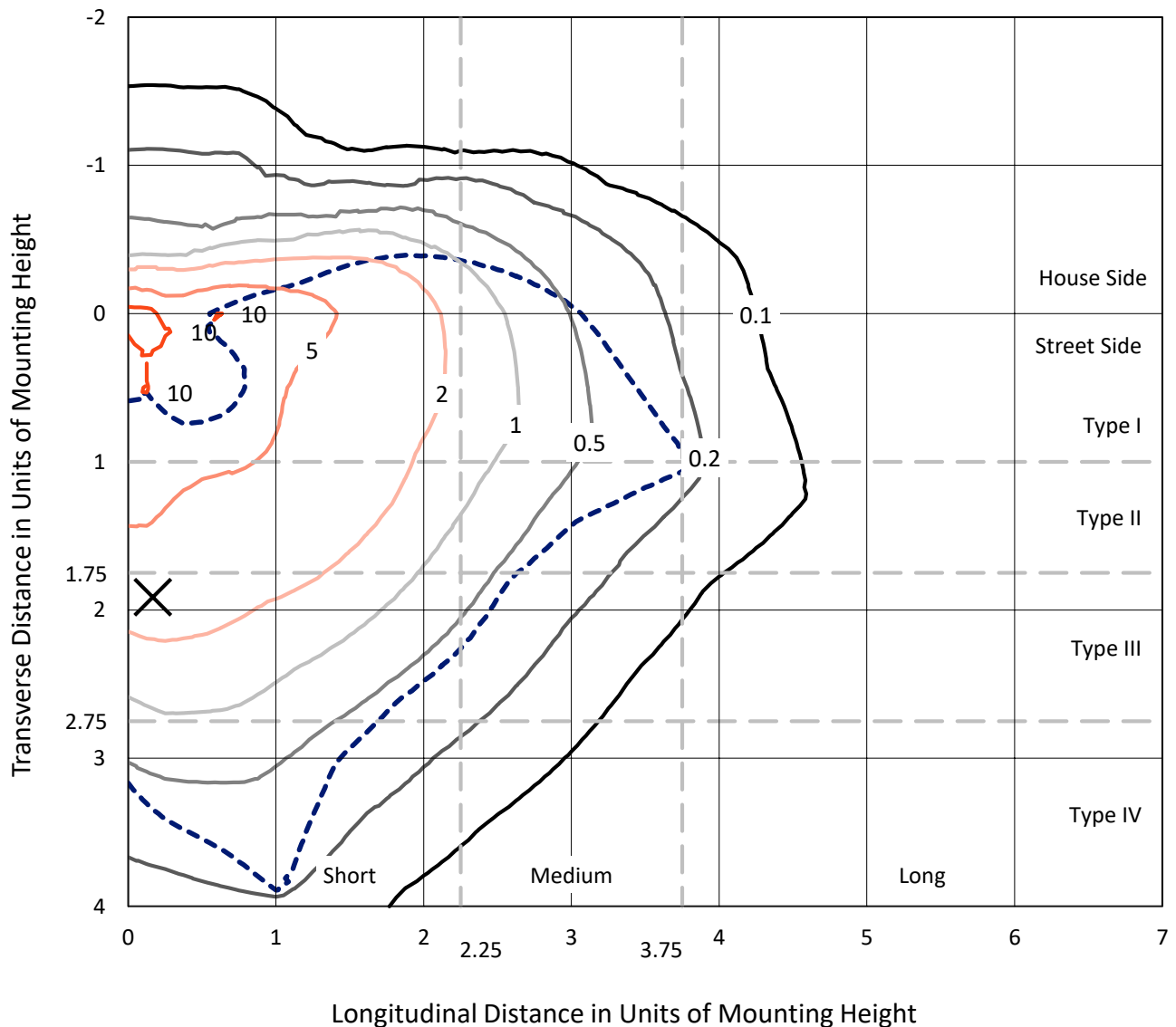
Input Watts (W): 44
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

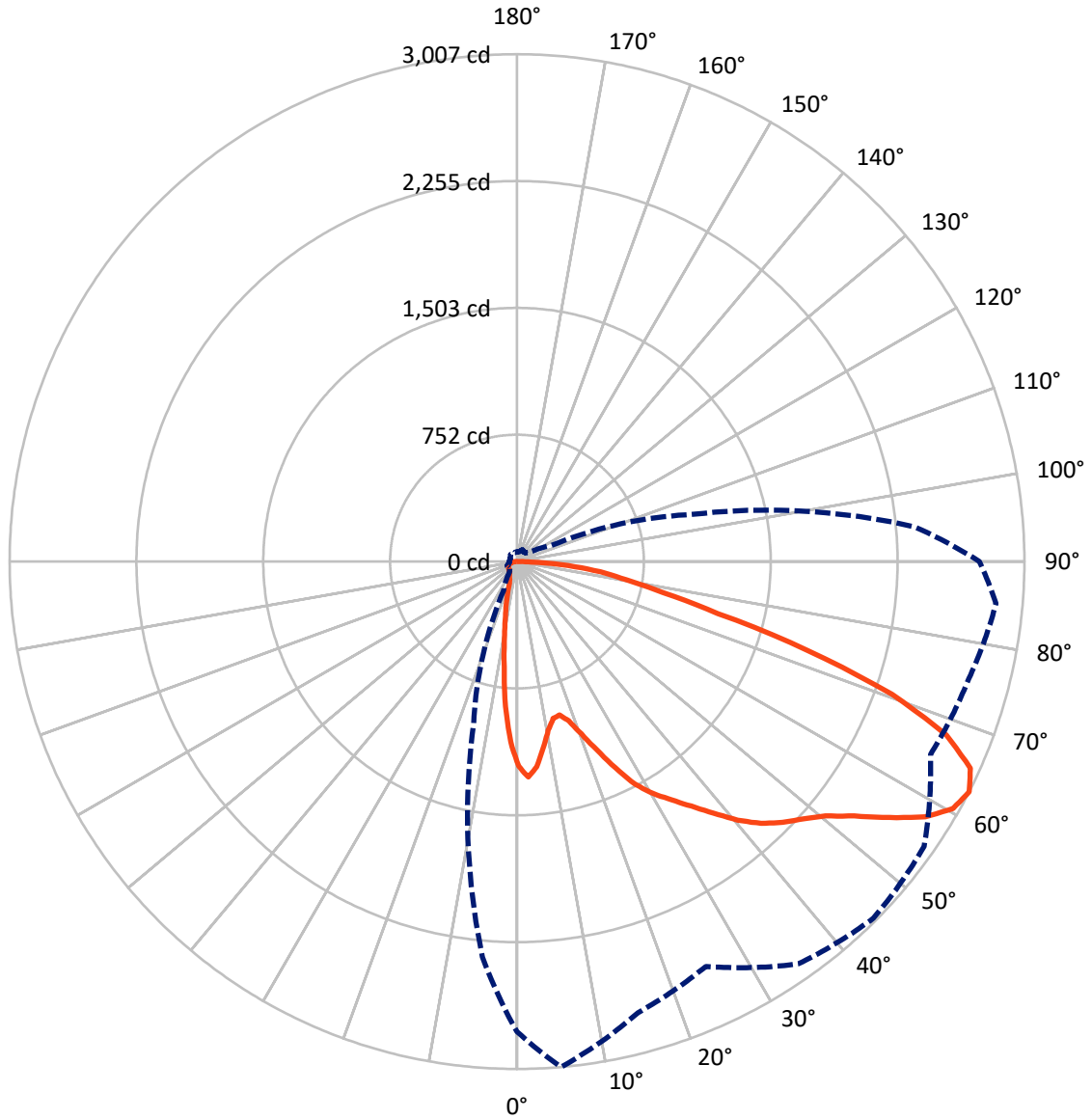
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.9 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	630.3	0.0	630.3
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	2927.7	0.0	2927.7
	% Fixture	82.3	0.0	82.3
Total	Lumens	3558.0	0.0	3558.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.2	2.5
10°-20°	161.1	4.5
20°-30°	231.7	6.5
30°-40°	354.9	10.0
40°-50°	518.9	14.6
50°-60°	755.0	21.2
60°-70°	874.8	24.6
70°-80°	456.0	12.8
80°-90°	117.2	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°	3558.0	100.0
0°-180°	3558.0	100.0



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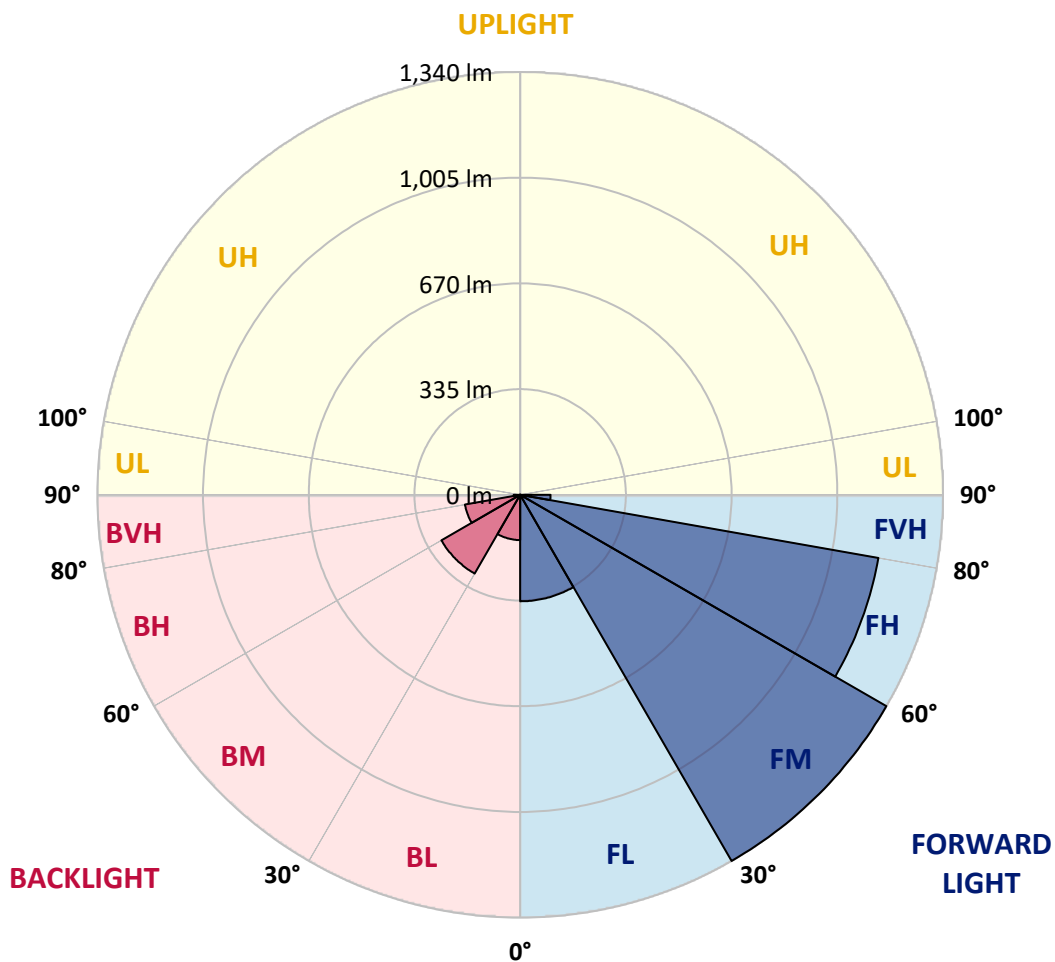
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	337.7	9.5			
FM	(30°-60°)	1340.5	37.7			
FH	(60°-80°)	1153.1	32.4			G1/1800
FVH	(80°-90°)	96.4	2.7			G1/100
BL	(0°-30°)	143.4	4.0	B1/500		
BM	(30°-60°)	288.4	8.1	B1/1000		
BH	(60°-80°)	177.7	5.0	B1/500		G1/500
BVH	(80°-90°)	20.8	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-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0
2.5°	1252.2	1278.8	1309.2	1348.9	1376.0	1386.9	1395.9	1380.7	1366.0	1338.4	1328.6
5°	1169.7	1220.7	1304.6	1384.3	1454.5	1494.7	1507.1	1479.0	1428.9	1356.7	1318.5
7.5°	1047.1	1114.4	1232.3	1349.7	1450.3	1517.4	1522.3	1466.6	1368.0	1249.6	1187.7
10°	940.1	1016.2	1152.6	1283.9	1390.5	1459.1	1445.7	1367.5	1248.6	1113.9	1044.0
12.5°	877.9	954.0	1093.0	1226.4	1326.8	1352.8	1325.5	1259.7	1147.0	1012.0	941.6
15°	864.7	943.2	1071.9	1184.4	1246.5	1229.8	1202.7	1169.4	1089.2	978.8	910.6
17.5°	904.5	992.2	1100.0	1161.7	1159.1	1118.8	1096.1	1102.6	1088.9	1014.9	943.7
20°	986.2	1089.9	1171.5	1155.5	1089.4	1032.9	1019.8	1070.3	1133.5	1105.4	1027.3
22.5°	1093.8	1212.0	1269.0	1173.3	1053.0	992.2	989.6	1068.5	1214.8	1242.4	1147.2
25°	1215.3	1353.1	1367.3	1204.7	1049.2	988.6	986.2	1096.4	1312.6	1378.1	1281.6
27.5°	1363.9	1495.5	1449.3	1246.8	1066.2	999.1	1000.7	1143.9	1414.5	1512.2	1433.0
30°	1475.9	1596.6	1499.9	1288.1	1093.6	1017.7	1021.6	1195.2	1469.4	1605.4	1554.0
32.5°	1580.6	1683.0	1548.4	1328.8	1133.5	1045.3	1058.7	1259.2	1535.5	1685.3	1668.3
35°	1696.4	1779.8	1602.3	1372.4	1190.8	1093.8	1113.2	1320.1	1601.0	1765.3	1781.6
37.5°	1827.7	1890.4	1660.8	1434.1	1273.4	1183.6	1194.4	1382.2	1646.6	1853.8	1903.1
40°	1964.5	2014.5	1724.8	1516.4	1393.3	1304.8	1310.0	1461.9	1682.5	1945.4	2021.0
42.5°	2081.8	2120.8	1789.0	1618.5	1531.1	1428.4	1432.8	1547.8	1716.8	2024.3	2115.4
45°	2175.8	2204.4	1849.7	1726.1	1678.1	1582.7	1581.6	1635.3	1762.7	2090.9	2187.9
47.5°	2263.2	2278.4	1917.3	1830.8	1830.6	1781.3	1744.4	1738.5	1823.9	2146.9	2251.1
50°	2363.3	2369.0	2006.5	1936.6	2016.8	2009.1	1941.0	1869.5	1903.1	2209.8	2317.4
52.5°	2502.6	2502.9	2117.2	2039.8	2222.4	2247.0	2167.8	2017.9	2020.2	2332.3	2431.9
55°	2666.4	2677.8	2261.4	2163.4	2437.6	2479.4	2404.8	2194.1	2188.4	2529.9	2617.7
57.5°	2793.1	2853.2	2429.3	2317.9	2638.6	2693.0	2632.9	2376.7	2395.0	2733.7	2770.9
60°	2828.7	2969.3	2596.8	2491.3	2808.6	2890.3	2829.2	2574.1	2597.3	2866.1	2815.0
62.5°	2786.1	3006.7	2767.3	2646.6	2909.4	2987.9	2944.0	2703.3	2762.1	2849.1	2740.5
65°	2660.0	2952.5	2915.4	2712.6	2851.4	2879.2	2867.6	2710.0	2851.6	2688.1	2534.3
67.5°	2365.4	2743.6	2849.3	2571.5	2580.3	2550.3	2535.1	2525.8	2751.0	2428.3	2209.3
70°	1923.7	2357.4	2534.3	2152.0	2087.0	2058.1	2008.1	2131.9	2472.7	2069.0	1818.2
72.5°	1481.8	1803.5	2078.8	1631.4	1496.2	1506.1	1449.3	1630.1	2048.3	1599.4	1388.2
75°	1052.3	1229.8	1659.3	1172.2	993.2	992.7	988.3	1173.3	1616.2	1148.0	1015.6
77.5°	758.4	885.4	1299.9	784.5	704.8	713.8	699.4	797.4	1259.9	825.8	752.5
80°	604.9	655.5	840.2	523.2	524.7	545.9	542.8	545.4	828.9	598.0	562.6
82.5°	434.7	497.6	642.4	400.9	347.0	369.4	373.8	404.5	584.8	422.8	371.0
85°	222.9	303.4	591.0	347.2	217.0	179.8	206.9	319.1	508.0	253.3	180.8
87.5°	43.3	84.1	433.1	193.0	97.5	49.3	81.3	135.2	295.4	45.9	22.4
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°	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0
2.5°	1311.8	1278.8	1247.8	1215.8	1191.1	1160.9	1131.2	1105.4	1080.4	1063.9	1069.0
5°	1279.8	1199.3	1127.1	1060.0	1020.8	973.6	931.5	896.2	868.9	851.3	861.9
7.5°	1134.1	1025.2	930.0	841.5	785.8	724.6	675.6	641.1	619.9	608.0	625.3
10°	984.9	862.7	755.9	663.8	608.8	557.0	512.6	476.0	447.6	434.2	441.1
12.5°	878.1	742.2	630.2	568.3	521.1	474.7	428.8	385.9	349.8	333.3	329.9
15°	838.2	677.4	563.2	494.0	447.1	396.5	347.0	301.1	266.7	252.6	249.5
17.5°	855.7	663.5	523.4	441.7	373.5	312.1	256.4	213.1	187.8	179.8	180.6
20°	917.4	668.7	491.4	387.7	303.6	230.9	175.2	145.2	134.4	132.6	134.7
22.5°	1002.0	689.8	468.2	341.3	242.0	167.9	130.3	116.1	113.3	113.0	115.1
25°	1113.7	731.1	452.7	300.0	191.2	133.1	113.5	105.5	103.2	103.7	105.8
27.5°	1245.2	783.5	442.7	264.4	157.1	118.7	106.0	99.1	96.7	97.3	98.8
30°	1365.5	829.4	427.7	237.6	141.1	113.5	101.9	94.9	91.8	91.8	92.9
32.5°	1473.0	869.1	410.2	217.5	126.4	101.9	92.4	86.9	84.6	85.4	85.9
35°	1568.5	890.0	396.5	205.6	114.5	93.9	84.4	78.7	75.6	76.1	76.9
37.5°	1662.4	898.0	387.5	199.2	106.0	89.0	80.2	75.6	72.2	71.7	71.5
40°	1751.6	896.2	379.0	197.3	100.4	85.4	77.7	73.5	70.2	69.4	69.1
42.5°	1828.8	890.3	371.0	192.4	96.5	82.8	75.6	72.0	68.6	67.6	67.1
45°	1899.2	886.7	362.2	183.4	98.5	81.8	74.6	70.7	67.6	66.3	65.8
47.5°	1977.4	899.6	352.4	173.6	98.0	82.0	74.6	70.2	67.1	65.8	65.3
50°	2070.5	943.2	340.3	160.2	93.4	87.7	74.3	69.4	66.6	65.8	64.8
52.5°	2202.1	1013.8	323.5	142.9	89.8	93.6	74.0	68.1	65.8	64.5	63.2
55°	2382.4	1084.5	301.8	124.6	84.1	89.5	74.6	66.6	64.0	62.7	61.1
57.5°	2530.2	1138.2	274.5	109.4	78.9	84.6	73.8	64.8	61.9	60.6	59.3
60°	2520.7	1143.3	248.4	99.6	75.8	76.1	75.6	63.5	60.1	59.1	58.0
62.5°	2364.6	1079.6	224.2	94.7	73.5	69.4	77.1	61.9	58.3	57.3	56.5
65°	2104.8	931.3	211.3	94.7	71.5	65.8	67.3	59.8	56.5	55.5	54.9
67.5°	1775.4	748.4	199.2	96.7	68.6	63.2	61.1	57.8	54.7	53.7	53.1
70°	1423.0	589.0	190.6	95.7	66.0	60.4	57.8	54.9	51.9	51.6	51.1
72.5°	1116.3	473.1	186.8	95.7	62.2	57.0	54.4	52.4	49.3	49.0	48.2
75°	894.4	355.2	170.8	93.9	58.3	52.6	50.3	48.5	45.4	45.7	45.1
77.5°	692.7	251.3	142.7	84.6	53.4	47.7	45.9	44.6	41.0	41.3	41.3
80°	541.7	163.6	110.7	70.2	47.7	42.0	40.8	39.7	35.9	36.4	36.4
82.5°	371.2	97.3	80.2	56.5	41.0	35.9	35.6	34.1	29.9	30.2	30.7
85°	202.8	64.0	53.4	41.8	32.2	29.2	28.6	27.9	24.0	24.0	24.2
87.5°	37.4	34.3	31.5	27.6	21.7	20.9	20.1	20.9	18.1	17.5	17.5
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0
2.5°	1056.9	1039.1	1026.7	1015.9	989.8	991.7	995.3	1000.4	984.2	992.7	1003.3
5°	851.3	836.6	825.5	808.2	771.9	759.0	750.7	747.1	722.8	728.0	739.4
7.5°	627.7	627.4	623.5	604.2	560.3	533.7	516.2	510.8	495.8	501.5	518.8
10°	441.9	446.6	444.7	427.5	388.3	369.2	365.3	376.1	376.4	387.5	417.1
12.5°	319.4	316.8	314.5	300.3	270.9	267.8	276.5	291.5	295.1	307.0	337.9
15°	238.4	232.2	230.9	219.8	200.4	203.3	209.7	217.5	217.7	226.0	251.5
17.5°	178.8	178.8	180.8	173.6	159.7	158.4	155.0	153.0	149.9	153.2	167.2
20°	138.8	145.2	150.4	146.3	133.6	127.4	121.0	116.9	114.5	114.8	118.9
22.5°	118.9	124.1	130.8	128.7	118.2	110.2	106.0	103.2	101.4	101.4	103.7
25°	108.9	112.2	118.4	117.4	108.3	101.9	98.5	95.7	93.6	93.4	95.7
27.5°	100.9	102.9	107.1	106.5	97.3	93.1	91.1	89.3	88.0	87.7	90.0
30°	93.6	94.7	96.7	96.0	89.0	84.9	84.1	83.3	82.6	82.8	86.2
32.5°	87.2	88.0	89.3	88.2	81.5	77.9	76.6	75.6	74.8	75.6	79.5
35°	80.0	82.3	83.8	83.3	76.1	71.7	68.9	66.3	65.3	66.0	70.4
37.5°	73.8	77.7	79.7	79.2	71.7	66.6	62.9	62.4	62.4	63.5	67.8
40°	71.5	74.3	76.1	75.3	67.8	62.7	60.6	59.8	60.1	61.1	65.8
42.5°	69.4	72.0	72.5	70.9	63.5	60.1	58.8	57.8	58.3	59.6	64.2
45°	67.6	69.7	69.4	67.1	59.8	57.5	57.5	56.8	57.0	58.0	62.9
47.5°	66.3	67.3	66.8	64.5	57.3	55.5	56.2	56.2	56.8	57.5	62.4
50°	64.2	65.0	64.5	62.4	55.2	53.7	54.4	55.5	56.0	56.8	61.1
52.5°	62.2	62.7	62.4	60.4	53.1	52.1	52.1	53.1	54.2	55.2	59.1
55°	60.1	60.6	60.9	59.3	51.6	50.6	50.3	50.3	51.3	52.9	57.0
57.5°	58.6	58.6	59.1	58.0	50.0	48.8	47.5	47.7	49.0	50.3	54.4
60°	56.8	57.0	57.8	56.8	48.0	45.9	44.9	46.2	46.7	48.0	52.4
62.5°	55.2	55.2	55.7	54.9	46.2	44.1	43.3	44.6	44.6	45.9	50.3
65°	53.9	53.7	53.7	53.4	44.4	42.3	41.8	42.3	42.6	43.9	48.2
67.5°	52.9	51.6	51.6	52.1	42.6	40.5	40.2	40.2	40.5	42.0	45.9
70°	50.6	49.5	49.3	51.1	40.8	38.2	38.2	37.7	38.2	39.0	43.1
72.5°	48.0	47.2	47.0	49.5	39.0	35.6	35.1	34.8	35.1	35.9	39.7
75°	44.6	44.1	44.6	48.5	37.1	32.8	32.0	31.7	31.7	32.0	36.1
77.5°	40.8	40.2	44.1	45.1	36.1	29.4	28.6	28.1	27.6	27.6	32.2
80°	36.1	35.9	42.6	38.2	34.6	25.8	24.5	23.7	23.2	23.0	27.6
82.5°	31.5	31.0	36.4	29.9	28.6	21.2	19.3	17.8	17.0	17.0	21.2
85°	25.8	25.5	28.6	21.9	19.9	15.5	12.9	11.6	10.6	10.6	13.7
87.5°	18.8	18.3	17.8	13.2	10.1	7.0	4.9	4.6	4.1	3.9	5.7
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0
2.5°	1019.0	1040.4	1080.9	1114.2	1158.6	1194.2	1234.7	1252.2
5°	760.2	794.0	856.0	908.8	982.1	1050.0	1127.3	1169.7
7.5°	545.4	595.4	642.4	708.4	800.0	891.0	991.1	1047.1
10°	451.2	497.1	537.4	584.3	655.0	757.4	876.9	940.1
12.5°	373.8	423.3	465.9	516.2	575.5	668.2	804.4	877.9
15°	286.6	340.5	391.6	452.2	525.0	630.7	782.7	864.7
17.5°	196.3	254.1	317.0	391.1	478.8	615.0	803.3	904.5
20°	133.4	175.7	244.0	331.8	437.3	607.5	848.7	986.2
22.5°	109.6	128.7	180.1	276.0	403.2	615.8	922.5	1093.8
25°	100.6	110.9	140.1	227.0	377.2	637.7	1022.4	1215.3
27.5°	94.9	103.7	122.8	191.9	353.2	667.6	1143.9	1363.9
30°	91.6	99.8	115.8	173.9	331.2	693.4	1248.3	1475.9
32.5°	84.1	90.3	103.4	163.6	315.5	714.3	1340.4	1580.6
35°	75.1	82.6	93.4	156.8	315.0	724.1	1427.1	1696.4
37.5°	71.7	78.9	86.9	153.2	318.1	732.4	1533.1	1827.7
40°	69.7	76.1	82.6	152.7	320.7	738.8	1636.8	1964.5
42.5°	67.8	74.3	81.8	149.1	319.6	747.6	1728.7	2081.8
45°	67.3	73.8	83.6	143.7	319.4	761.3	1801.7	2175.8
47.5°	66.8	76.6	83.1	137.8	318.3	790.2	1884.0	2263.2
50°	66.3	81.8	79.5	129.5	310.6	839.4	1994.7	2363.3
52.5°	66.0	82.6	75.6	118.2	296.7	912.5	2156.7	2502.6
55°	65.0	78.4	68.9	103.2	276.5	991.1	2330.3	2666.4
57.5°	62.7	69.9	65.0	88.5	247.7	1046.1	2458.5	2793.1
60°	68.4	60.1	62.4	81.0	213.1	1055.9	2464.2	2828.7
62.5°	65.3	54.7	59.8	78.4	188.8	991.9	2351.4	2786.1
65°	52.1	51.9	57.5	81.0	185.2	848.7	2161.0	2660.0
67.5°	47.5	49.8	55.2	84.1	187.5	668.7	1880.9	2365.4
70°	44.4	47.2	52.1	86.9	191.7	526.8	1514.3	1923.7
72.5°	41.3	43.6	49.0	89.8	188.8	415.6	1212.0	1481.8
75°	37.4	39.5	44.6	82.3	162.0	305.4	963.0	1052.3
77.5°	33.0	34.8	39.2	65.0	121.8	212.6	721.3	758.4
80°	28.4	29.2	32.5	47.5	79.5	127.2	549.0	604.9
82.5°	22.4	22.7	24.8	34.8	49.5	81.3	380.8	434.7
85°	14.4	15.0	16.0	24.5	33.3	52.1	194.5	222.9
87.5°	4.9	5.7	5.7	11.9	16.3	28.9	59.6	43.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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