

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: P195721

Luminaire Tested: **NAV-AF-01-D-UNV-SLL-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195721
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-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 615mA 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: 3555 lumens
Efficiency: N/A
Efficacy: 104.6 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

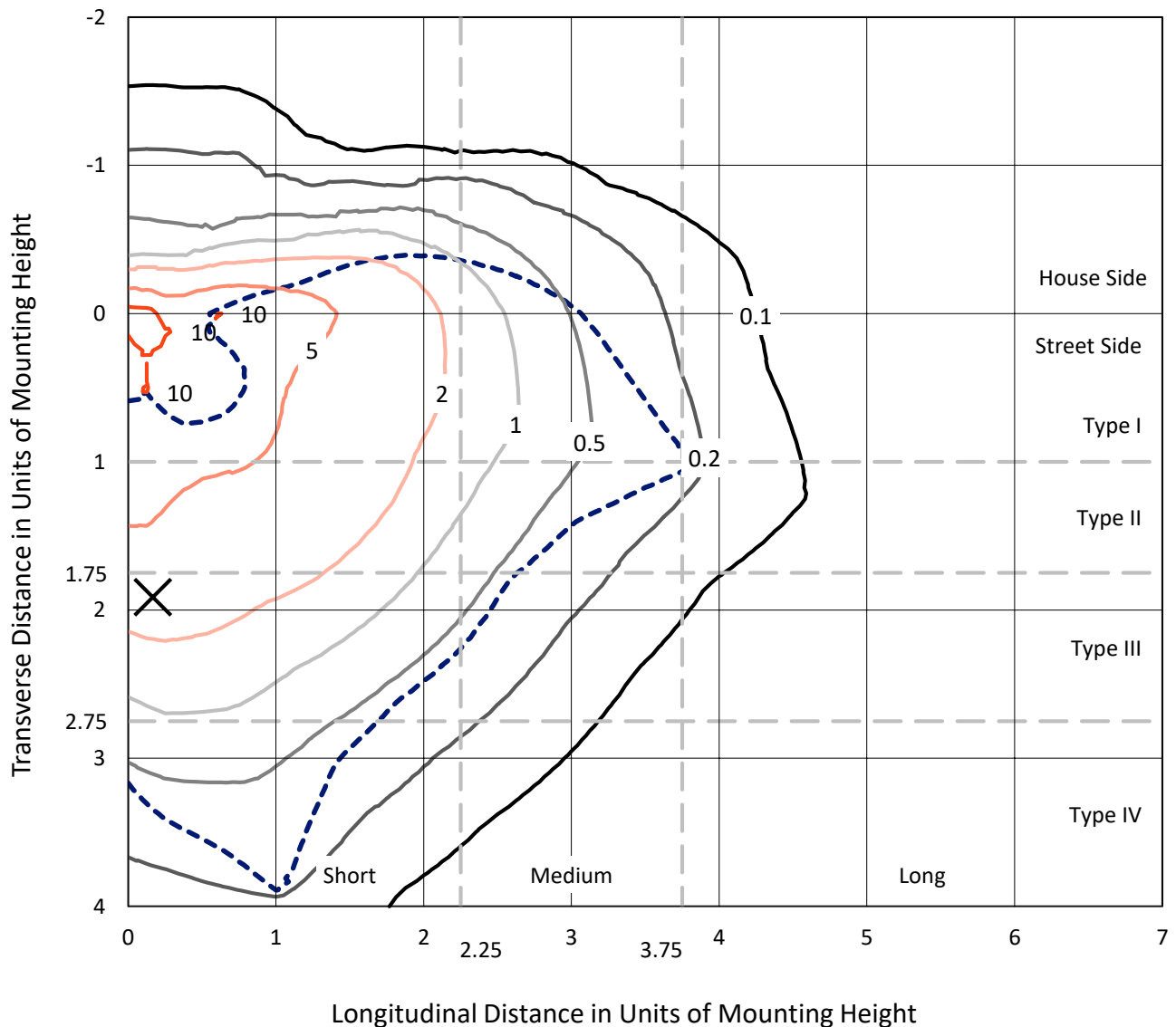
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

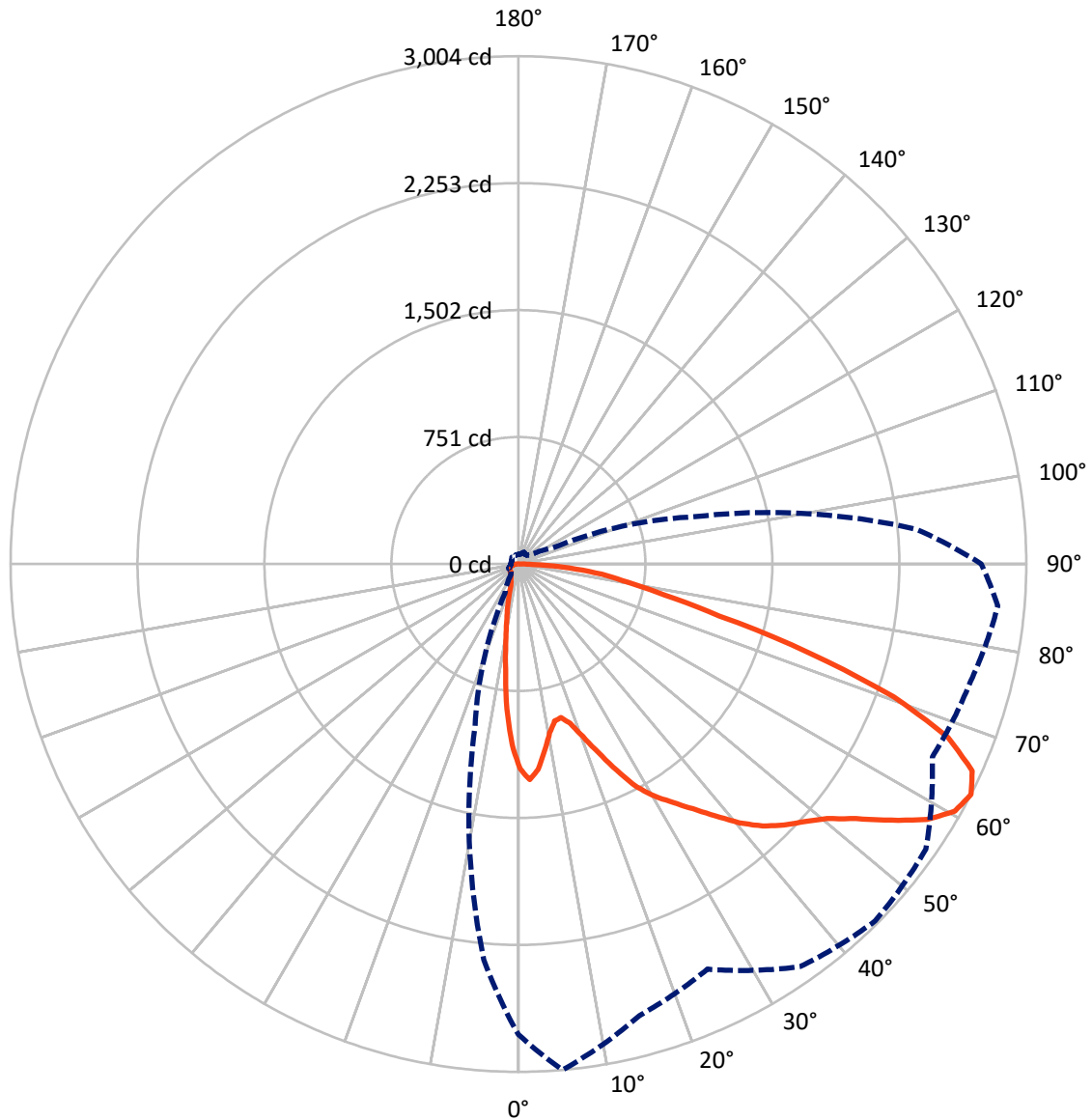
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 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	629.8	0.0	629.8
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	2925.2	0.0	2925.2
	% Fixture	82.3	0.0	82.3
Total	Lumens	3555.0	0.0	3555.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.1	2.5
10°-20°	161.0	4.5
20°-30°	231.5	6.5
30°-40°	354.6	10.0
40°-50°	518.5	14.6
50°-60°	754.4	21.2
60°-70°	874.1	24.6
70°-80°	455.6	12.8
80°-90°	117.1	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°	3555.0	100.0
0°-180°	3555.0	100.0



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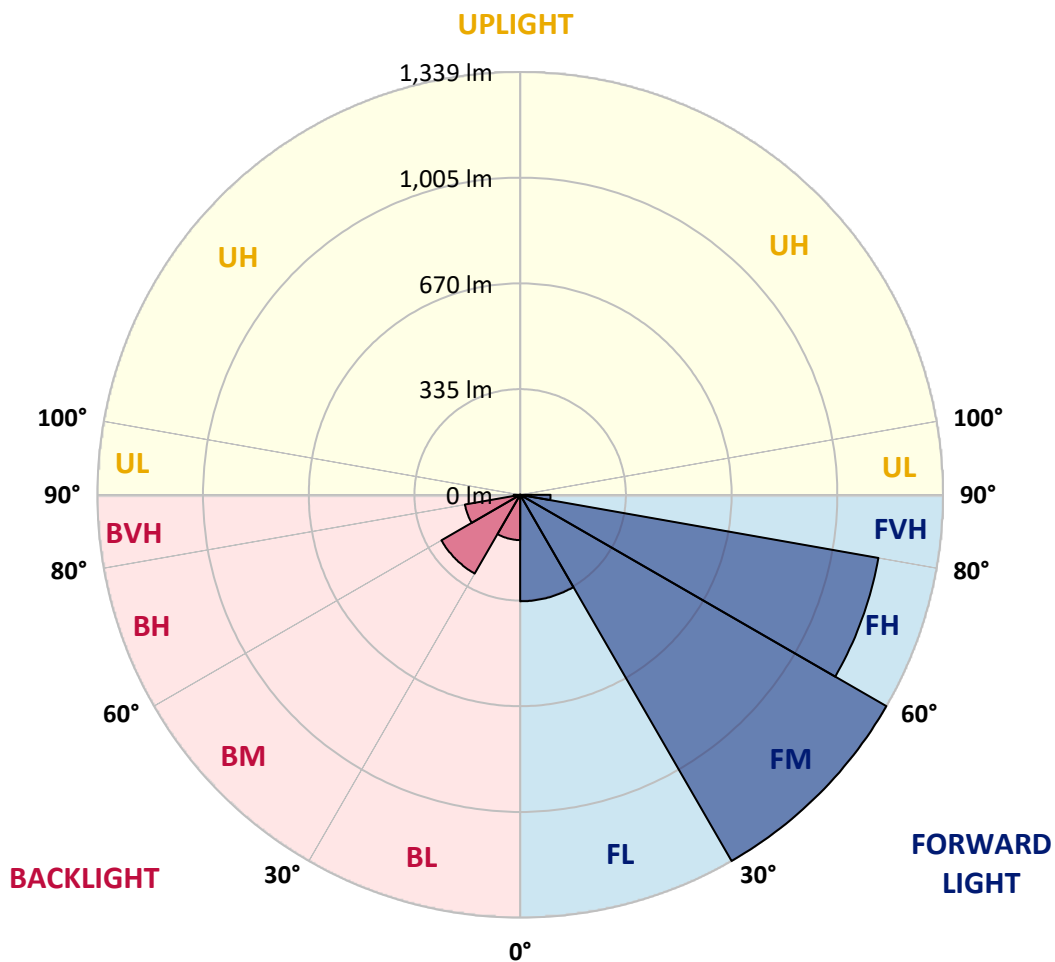
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	337.4	9.5			
FM	(30°-60°)	1339.4	37.7			
FH	(60°-80°)	1152.1	32.4			G1/1800
FVH	(80°-90°)	96.4	2.7			G1/100
BL	(0°-30°)	143.3	4.0	B1/500		
BM	(30°-60°)	288.1	8.1	B1/1000		
BH	(60°-80°)	177.6	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°	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0
2.5°	1251.1	1277.7	1308.1	1347.8	1374.9	1385.7	1394.7	1379.5	1364.8	1337.2	1327.4
5°	1168.7	1219.7	1303.5	1383.1	1453.2	1493.4	1505.8	1477.7	1427.7	1355.5	1317.4
7.5°	1046.2	1113.5	1231.3	1348.6	1449.1	1516.1	1521.0	1465.3	1366.9	1248.6	1186.7
10°	939.3	1015.3	1151.7	1282.9	1389.3	1457.9	1444.5	1366.4	1247.5	1113.0	1043.1
12.5°	877.1	953.2	1092.1	1225.4	1325.6	1351.7	1324.4	1258.6	1146.0	1011.2	940.8
15°	864.0	942.4	1071.0	1183.4	1245.5	1228.7	1201.7	1168.4	1088.2	977.9	909.9
17.5°	903.7	991.3	1099.1	1160.7	1158.1	1117.9	1095.2	1101.7	1088.0	1014.0	942.9
20°	985.4	1089.0	1170.5	1154.5	1088.5	1032.1	1018.9	1069.4	1132.6	1104.5	1026.4
22.5°	1092.9	1210.9	1267.9	1172.3	1052.2	991.3	988.8	1067.6	1213.8	1241.4	1146.2
25°	1214.3	1351.9	1366.1	1203.7	1048.3	987.7	985.4	1095.5	1311.5	1376.9	1280.5
27.5°	1362.8	1494.2	1448.1	1245.7	1065.3	998.3	999.8	1142.9	1413.3	1511.0	1431.8
30°	1474.6	1595.3	1498.6	1287.0	1092.6	1016.8	1020.7	1194.2	1468.2	1604.0	1552.7
32.5°	1579.3	1681.6	1547.1	1327.7	1132.6	1044.4	1057.8	1258.1	1534.2	1683.9	1666.9
35°	1695.0	1778.3	1600.9	1371.3	1189.8	1092.9	1112.2	1318.9	1599.6	1763.8	1780.1
37.5°	1826.2	1888.8	1659.4	1432.9	1272.3	1182.6	1193.4	1381.1	1645.3	1852.2	1901.5
40°	1962.8	2012.8	1723.4	1515.1	1392.1	1303.7	1308.9	1460.7	1681.1	1943.7	2019.3
42.5°	2080.1	2119.0	1787.5	1617.2	1529.8	1427.2	1431.6	1546.5	1715.4	2022.6	2113.6
45°	2173.9	2202.5	1848.1	1724.6	1676.7	1581.3	1580.3	1633.9	1761.2	2089.1	2186.0
47.5°	2261.3	2276.5	1915.6	1829.3	1829.0	1779.8	1742.9	1737.0	1822.3	2145.0	2249.2
50°	2361.3	2367.0	2004.8	1935.0	2015.1	2007.4	1939.4	1868.0	1901.5	2207.9	2315.4
52.5°	2500.5	2500.8	2115.4	2038.1	2220.6	2245.1	2165.9	2016.2	2018.5	2330.4	2429.9
55°	2664.2	2675.5	2259.5	2161.5	2435.5	2477.3	2402.8	2192.2	2186.5	2527.8	2615.5
57.5°	2790.7	2850.8	2427.3	2315.9	2636.3	2690.7	2630.7	2374.7	2393.0	2731.4	2768.6
60°	2826.3	2966.8	2594.6	2489.2	2806.2	2887.9	2826.8	2571.9	2595.1	2863.7	2812.6
62.5°	2783.8	3004.2	2765.0	2644.3	2907.0	2985.3	2941.5	2701.0	2759.8	2846.7	2738.1
65°	2657.7	2950.0	2912.9	2710.3	2849.0	2876.8	2865.2	2707.7	2849.2	2685.8	2532.2
67.5°	2363.4	2741.2	2846.9	2569.3	2578.1	2548.2	2533.0	2523.7	2748.7	2426.3	2207.4
70°	1922.1	2355.4	2532.2	2150.2	2085.2	2056.4	2006.4	2130.1	2470.6	2067.2	1816.7
72.5°	1480.6	1802.0	2077.0	1630.1	1495.0	1504.8	1448.1	1628.8	2046.6	1598.1	1387.0
75°	1051.4	1228.7	1657.9	1171.2	992.4	991.8	987.5	1172.3	1614.8	1147.0	1014.8
77.5°	757.8	884.6	1298.8	783.8	704.2	713.2	698.8	796.7	1258.9	825.1	751.9
80°	604.4	655.0	839.5	522.7	524.3	545.4	542.3	544.9	828.2	597.5	562.2
82.5°	434.3	497.2	641.8	400.6	346.7	369.1	373.5	404.2	584.3	422.5	370.7
85°	222.7	303.1	590.5	346.9	216.8	179.7	206.7	318.8	507.5	253.1	180.7
87.5°	43.3	84.0	432.8	192.8	97.4	49.2	81.2	135.1	295.1	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°	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0
2.5°	1310.7	1277.7	1246.8	1214.8	1190.1	1159.9	1130.3	1104.5	1079.5	1063.0	1068.1
5°	1278.7	1198.3	1126.1	1059.1	1019.9	972.8	930.8	895.4	868.1	850.6	861.2
7.5°	1133.1	1024.3	929.2	840.8	785.1	724.0	675.1	640.5	619.4	607.5	624.8
10°	984.1	861.9	755.2	663.2	608.3	556.5	512.2	475.6	447.2	433.8	440.8
12.5°	877.4	741.6	629.7	567.8	520.7	474.3	428.4	385.6	349.5	333.0	329.7
15°	837.5	676.9	562.7	493.6	446.7	396.2	346.7	300.8	266.5	252.3	249.3
17.5°	855.0	662.9	523.0	441.3	373.2	311.9	256.2	212.9	187.6	179.7	180.4
20°	916.6	668.1	491.0	387.4	303.4	230.7	175.0	145.1	134.3	132.5	134.5
22.5°	1001.1	689.2	467.8	341.0	241.8	167.8	130.2	116.0	113.2	112.9	115.0
25°	1112.7	730.5	452.4	299.8	191.0	133.0	113.4	105.4	103.1	103.6	105.7
27.5°	1244.2	782.8	442.3	264.2	157.0	118.6	105.9	99.0	96.7	97.2	98.7
30°	1364.3	828.7	427.4	237.4	141.0	113.4	101.8	94.9	91.8	91.8	92.8
32.5°	1471.8	868.4	409.8	217.3	126.3	101.8	92.3	86.9	84.5	85.3	85.8
35°	1567.2	889.3	396.2	205.4	114.4	93.8	84.3	78.6	75.5	76.0	76.8
37.5°	1661.0	897.2	387.2	199.0	105.9	88.9	80.2	75.5	72.2	71.7	71.4
40°	1750.2	895.4	378.6	197.2	100.3	85.3	77.6	73.5	70.1	69.3	69.1
42.5°	1827.2	889.5	370.7	192.3	96.4	82.7	75.5	71.9	68.6	67.5	67.0
45°	1897.6	885.9	361.9	183.3	98.5	81.7	74.5	70.6	67.5	66.2	65.7
47.5°	1975.7	898.8	352.1	173.5	97.9	82.0	74.5	70.1	67.0	65.7	65.2
50°	2068.8	942.4	340.0	160.1	93.3	87.6	74.2	69.3	66.5	65.7	64.7
52.5°	2200.2	1013.0	323.2	142.8	89.7	93.6	74.0	68.0	65.7	64.4	63.2
55°	2380.4	1083.6	301.6	124.5	84.0	89.4	74.5	66.5	63.9	62.6	61.1
57.5°	2528.1	1137.2	274.3	109.3	78.9	84.5	73.7	64.7	61.9	60.6	59.3
60°	2518.5	1142.4	248.2	99.5	75.8	76.0	75.5	63.4	60.1	59.0	58.0
62.5°	2362.6	1078.7	224.0	94.6	73.5	69.3	77.1	61.9	58.3	57.2	56.4
65°	2103.0	930.5	211.1	94.6	71.4	65.7	67.3	59.8	56.4	55.4	54.9
67.5°	1773.9	747.8	199.0	96.7	68.6	63.2	61.1	57.7	54.6	53.6	53.1
70°	1421.8	588.5	190.5	95.6	66.0	60.3	57.7	54.9	51.8	51.6	51.0
72.5°	1115.3	472.7	186.6	95.6	62.1	57.0	54.4	52.3	49.2	49.0	48.2
75°	893.6	354.9	170.6	93.8	58.3	52.6	50.3	48.5	45.4	45.6	45.1
77.5°	692.1	251.1	142.5	84.5	53.4	47.7	45.9	44.6	41.0	41.2	41.2
80°	541.3	163.4	110.6	70.1	47.7	42.0	40.7	39.7	35.8	36.3	36.3
82.5°	370.9	97.2	80.2	56.4	41.0	35.8	35.6	34.0	29.9	30.2	30.7
85°	202.6	63.9	53.4	41.8	32.2	29.1	28.6	27.8	24.0	24.0	24.2
87.5°	37.4	34.3	31.4	27.6	21.7	20.9	20.1	20.9	18.0	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°	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0
2.5°	1056.0	1038.2	1025.9	1015.0	989.0	990.8	994.4	999.6	983.3	991.8	1002.4
5°	850.6	835.9	824.8	807.6	771.2	758.3	750.1	746.5	722.2	727.4	738.7
7.5°	627.1	626.9	623.0	603.7	559.8	533.3	515.8	510.4	495.4	501.1	518.3
10°	441.5	446.2	444.4	427.1	387.9	368.8	365.0	375.8	376.1	387.2	416.8
12.5°	319.1	316.5	314.2	300.0	270.6	267.6	276.3	291.3	294.9	306.7	337.7
15°	238.2	232.0	230.7	219.6	200.3	203.1	209.6	217.3	217.5	225.8	251.3
17.5°	178.6	178.6	180.7	173.5	159.6	158.3	154.9	152.8	149.8	153.1	167.0
20°	138.7	145.1	150.3	146.1	133.5	127.3	120.9	116.8	114.4	114.7	118.8
22.5°	118.8	124.0	130.7	128.6	118.1	110.1	105.9	103.1	101.3	101.3	103.6
25°	108.8	112.1	118.3	117.3	108.3	101.8	98.5	95.6	93.6	93.3	95.6
27.5°	100.8	102.8	107.0	106.5	97.2	93.1	91.0	89.2	87.9	87.6	90.0
30°	93.6	94.6	96.7	95.9	88.9	84.8	84.0	83.3	82.5	82.7	86.1
32.5°	87.1	87.9	89.2	88.2	81.5	77.8	76.6	75.5	74.7	75.5	79.4
35°	79.9	82.2	83.8	83.3	76.0	71.7	68.8	66.2	65.2	66.0	70.4
37.5°	73.7	77.6	79.6	79.1	71.7	66.5	62.9	62.4	62.4	63.4	67.8
40°	71.4	74.2	76.0	75.3	67.8	62.6	60.6	59.8	60.1	61.1	65.7
42.5°	69.3	71.9	72.4	70.9	63.4	60.1	58.8	57.7	58.3	59.5	64.2
45°	67.5	69.6	69.3	67.0	59.8	57.5	57.5	56.7	57.0	58.0	62.9
47.5°	66.2	67.3	66.8	64.4	57.2	55.4	56.2	56.2	56.7	57.5	62.4
50°	64.2	65.0	64.4	62.4	55.2	53.6	54.4	55.4	55.9	56.7	61.1
52.5°	62.1	62.6	62.4	60.3	53.1	52.1	52.1	53.1	54.1	55.2	59.0
55°	60.1	60.6	60.8	59.3	51.6	50.5	50.3	50.3	51.3	52.8	57.0
57.5°	58.5	58.5	59.0	58.0	50.0	48.7	47.4	47.7	49.0	50.3	54.4
60°	56.7	57.0	57.7	56.7	47.9	45.9	44.8	46.1	46.7	47.9	52.3
62.5°	55.2	55.2	55.7	54.9	46.1	44.1	43.3	44.6	44.6	45.9	50.3
65°	53.9	53.6	53.6	53.4	44.3	42.3	41.8	42.3	42.5	43.8	48.2
67.5°	52.8	51.6	51.6	52.1	42.5	40.5	40.2	40.2	40.5	42.0	45.9
70°	50.5	49.5	49.2	51.0	40.7	38.1	38.1	37.6	38.1	38.9	43.0
72.5°	47.9	47.2	46.9	49.5	38.9	35.6	35.1	34.8	35.1	35.8	39.7
75°	44.6	44.1	44.6	48.5	37.1	32.7	32.0	31.7	31.7	32.0	36.1
77.5°	40.7	40.2	44.1	45.1	36.1	29.4	28.6	28.1	27.6	27.6	32.2
80°	36.1	35.8	42.5	38.1	34.5	25.8	24.5	23.7	23.2	22.9	27.6
82.5°	31.4	30.9	36.3	29.9	28.6	21.1	19.3	17.8	17.0	17.0	21.1
85°	25.8	25.5	28.6	21.9	19.8	15.5	12.9	11.6	10.6	10.6	13.7
87.5°	18.8	18.3	17.8	13.1	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°	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0
2.5°	1018.1	1039.5	1080.0	1113.2	1157.6	1193.2	1233.6	1251.1
5°	759.6	793.4	855.2	908.1	981.3	1049.1	1126.4	1168.7
7.5°	544.9	594.9	641.8	707.8	799.3	890.3	990.3	1046.2
10°	450.8	496.7	536.9	583.8	654.4	756.8	876.1	939.3
12.5°	373.5	423.0	465.5	515.8	575.1	667.6	803.7	877.1
15°	286.4	340.2	391.3	451.8	524.5	630.2	782.0	864.0
17.5°	196.2	253.9	316.8	390.8	478.4	614.5	802.7	903.7
20°	133.3	175.5	243.8	331.5	436.9	607.0	848.0	985.4
22.5°	109.5	128.6	179.9	275.8	402.9	615.3	921.7	1092.9
25°	100.5	110.8	140.0	226.8	376.8	637.2	1021.5	1214.3
27.5°	94.9	103.6	122.7	191.8	352.9	667.1	1142.9	1362.8
30°	91.5	99.8	115.7	173.7	331.0	692.8	1247.3	1474.6
32.5°	84.0	90.2	103.4	163.4	315.2	713.7	1339.3	1579.3
35°	75.0	82.5	93.3	156.7	314.7	723.5	1425.9	1695.0
37.5°	71.7	78.9	86.9	153.1	317.8	731.8	1531.8	1826.2
40°	69.6	76.0	82.5	152.6	320.4	738.2	1635.5	1962.8
42.5°	67.8	74.2	81.7	149.0	319.4	747.0	1727.2	2080.1
45°	67.3	73.7	83.5	143.6	319.1	760.6	1800.2	2173.9
47.5°	66.8	76.6	83.0	137.6	318.1	789.5	1882.4	2261.3
50°	66.2	81.7	79.4	129.4	310.3	838.7	1993.0	2361.3
52.5°	66.0	82.5	75.5	118.1	296.4	911.7	2154.8	2500.5
55°	65.0	78.4	68.8	103.1	276.3	990.3	2328.3	2664.2
57.5°	62.6	69.9	65.0	88.4	247.4	1045.2	2456.4	2790.7
60°	68.3	60.1	62.4	80.9	212.9	1055.0	2462.1	2826.3
62.5°	65.2	54.6	59.8	78.4	188.7	991.1	2349.4	2783.8
65°	52.1	51.8	57.5	80.9	185.1	848.0	2159.2	2657.7
67.5°	47.4	49.7	55.2	84.0	187.4	668.1	1879.3	2363.4
70°	44.3	47.2	52.1	86.9	191.5	526.3	1513.0	1922.1
72.5°	41.2	43.6	49.0	89.7	188.7	415.2	1210.9	1480.6
75°	37.4	39.4	44.6	82.2	161.9	305.2	962.2	1051.4
77.5°	33.0	34.8	39.2	65.0	121.7	212.4	720.7	757.8
80°	28.4	29.1	32.5	47.4	79.4	127.1	548.5	604.4
82.5°	22.4	22.7	24.7	34.8	49.5	81.2	380.4	434.3
85°	14.4	14.9	16.0	24.5	33.3	52.1	194.3	222.7
87.5°	4.9	5.7	5.7	11.9	16.2	28.9	59.5	43.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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