

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: P197191

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197191
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-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 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: 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 (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

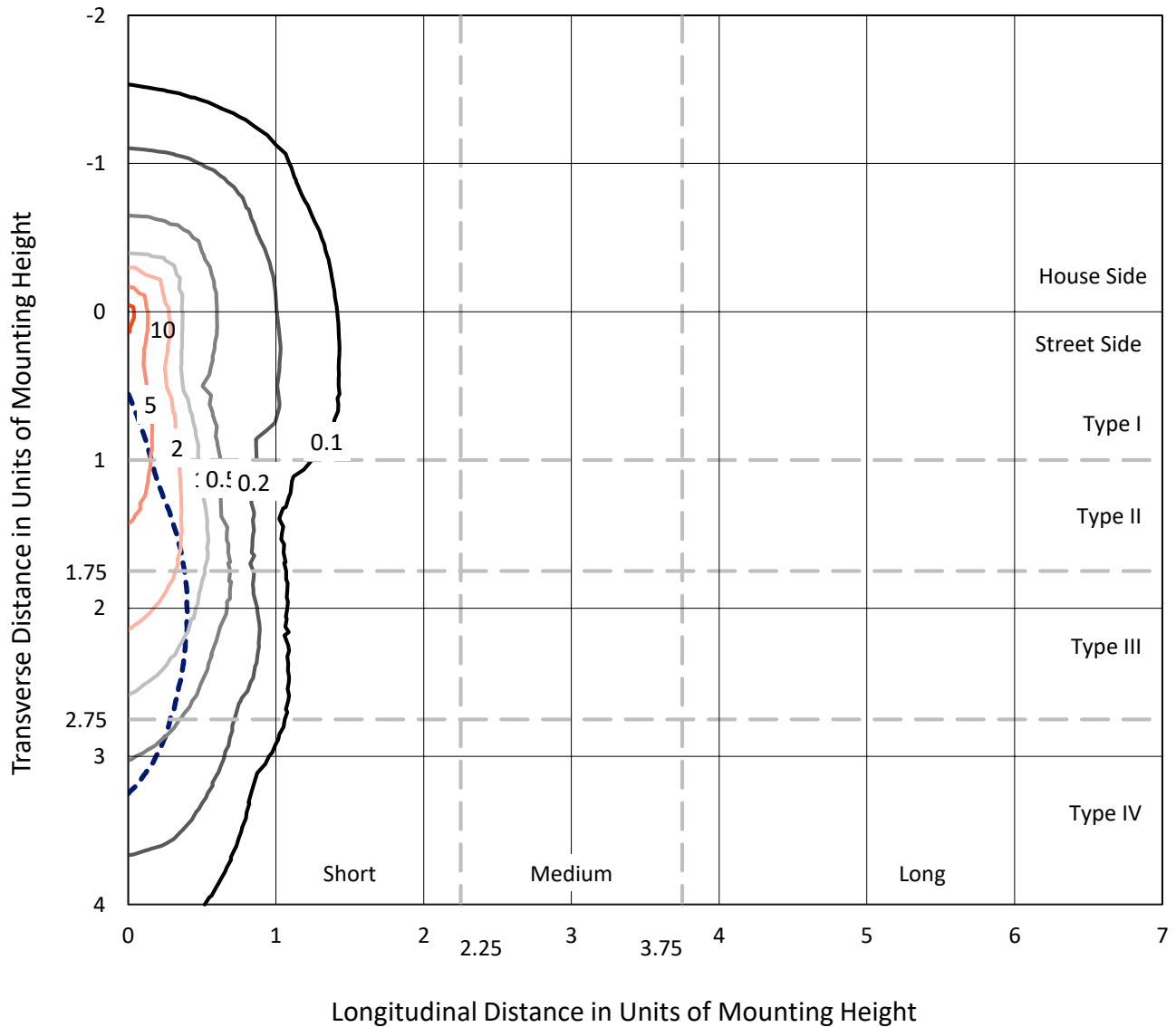


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Iso-Footcandle Lines of Horizontal Illumination

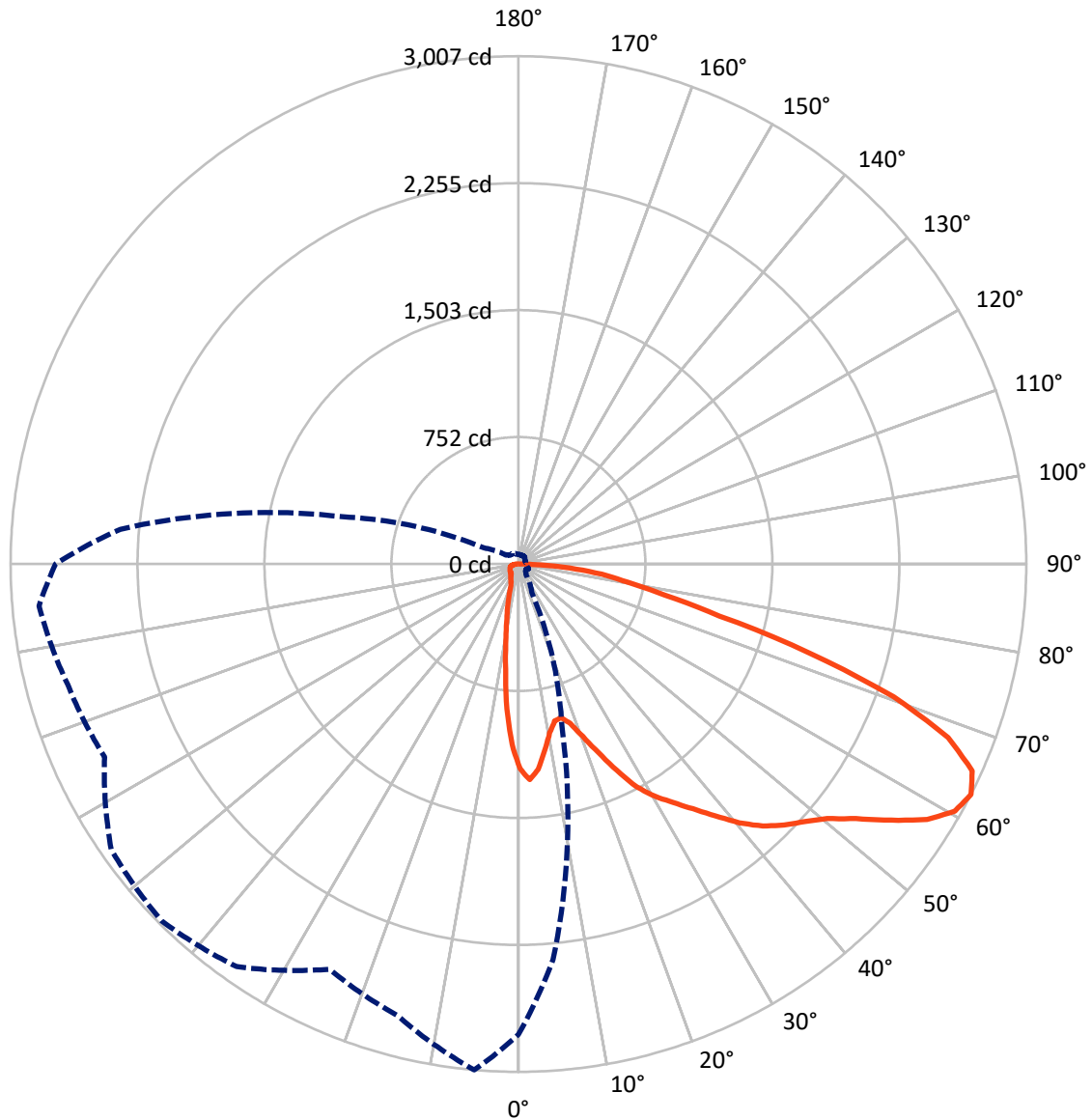
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.1 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	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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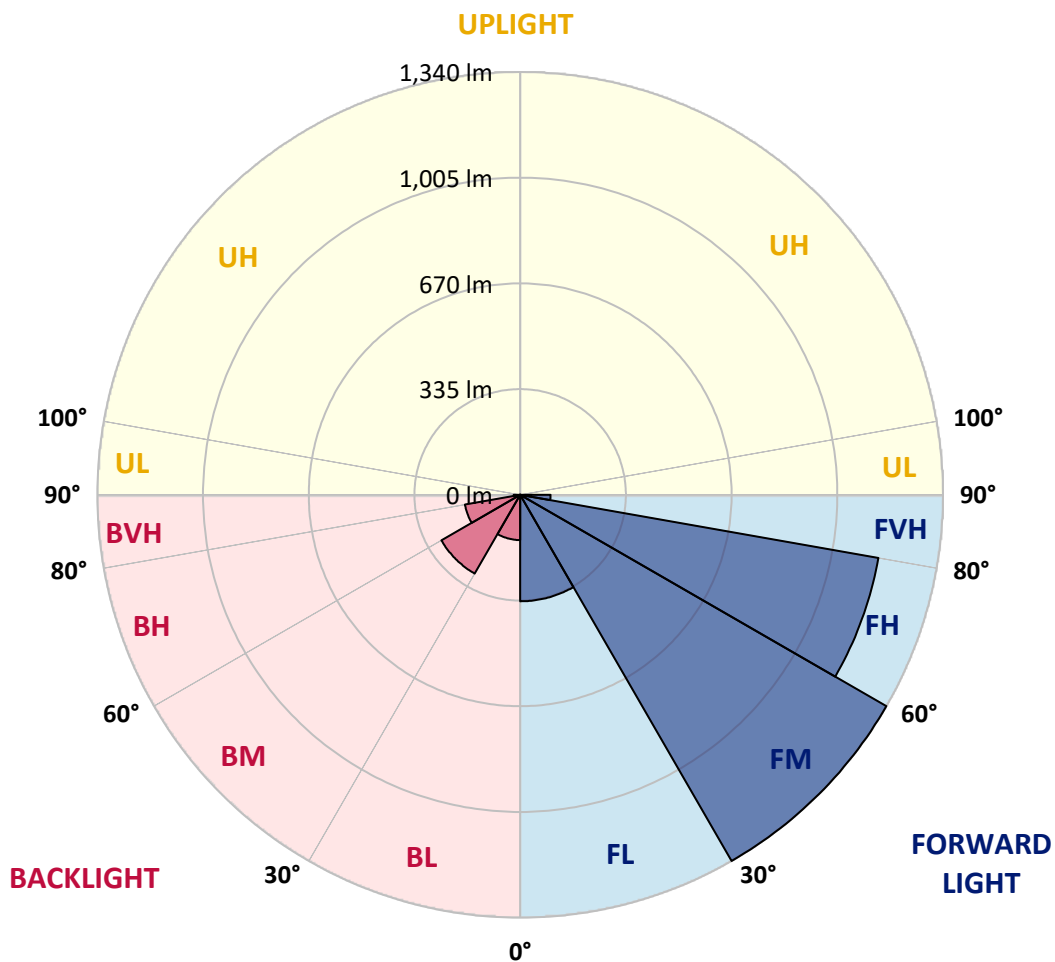
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

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	1234.7	1194.2	1158.6	1114.2	1080.9	1040.4	1019.0	1003.3	992.7	984.2
5°	1169.7	1127.3	1050.0	982.1	908.8	856.0	794.0	760.2	739.4	728.0	722.8
7.5°	1047.1	991.1	891.0	800.0	708.4	642.4	595.4	545.4	518.8	501.5	495.8
10°	940.1	876.9	757.4	655.0	584.3	537.4	497.1	451.2	417.1	387.5	376.4
12.5°	877.9	804.4	668.2	575.5	516.2	465.9	423.3	373.8	337.9	307.0	295.1
15°	864.7	782.7	630.7	525.0	452.2	391.6	340.5	286.6	251.5	226.0	217.7
17.5°	904.5	803.3	615.0	478.8	391.1	317.0	254.1	196.3	167.2	153.2	149.9
20°	986.2	848.7	607.5	437.3	331.8	244.0	175.7	133.4	118.9	114.8	114.5
22.5°	1093.8	922.5	615.8	403.2	276.0	180.1	128.7	109.6	103.7	101.4	101.4
25°	1215.3	1022.4	637.7	377.2	227.0	140.1	110.9	100.6	95.7	93.4	93.6
27.5°	1363.9	1143.9	667.6	353.2	191.9	122.8	103.7	94.9	90.0	87.7	88.0
30°	1475.9	1248.3	693.4	331.2	173.9	115.8	99.8	91.6	86.2	82.8	82.6
32.5°	1580.6	1340.4	714.3	315.5	163.6	103.4	90.3	84.1	79.5	75.6	74.8
35°	1696.4	1427.1	724.1	315.0	156.8	93.4	82.6	75.1	70.4	66.0	65.3
37.5°	1827.7	1533.1	732.4	318.1	153.2	86.9	78.9	71.7	67.8	63.5	62.4
40°	1964.5	1636.8	738.8	320.7	152.7	82.6	76.1	69.7	65.8	61.1	60.1
42.5°	2081.8	1728.7	747.6	319.6	149.1	81.8	74.3	67.8	64.2	59.6	58.3
45°	2175.8	1801.7	761.3	319.4	143.7	83.6	73.8	67.3	62.9	58.0	57.0
47.5°	2263.2	1884.0	790.2	318.3	137.8	83.1	76.6	66.8	62.4	57.5	56.8
50°	2363.3	1994.7	839.4	310.6	129.5	79.5	81.8	66.3	61.1	56.8	56.0
52.5°	2502.6	2156.7	912.5	296.7	118.2	75.6	82.6	66.0	59.1	55.2	54.2
55°	2666.4	2330.3	991.1	276.5	103.2	68.9	78.4	65.0	57.0	52.9	51.3
57.5°	2793.1	2458.5	1046.1	247.7	88.5	65.0	69.9	62.7	54.4	50.3	49.0
60°	2828.7	2464.2	1055.9	213.1	81.0	62.4	60.1	68.4	52.4	48.0	46.7
62.5°	2786.1	2351.4	991.9	188.8	78.4	59.8	54.7	65.3	50.3	45.9	44.6
65°	2660.0	2161.0	848.7	185.2	81.0	57.5	51.9	52.1	48.2	43.9	42.6
67.5°	2365.4	1880.9	668.7	187.5	84.1	55.2	49.8	47.5	45.9	42.0	40.5
70°	1923.7	1514.3	526.8	191.7	86.9	52.1	47.2	44.4	43.1	39.0	38.2
72.5°	1481.8	1212.0	415.6	188.8	89.8	49.0	43.6	41.3	39.7	35.9	35.1
75°	1052.3	963.0	305.4	162.0	82.3	44.6	39.5	37.4	36.1	32.0	31.7
77.5°	758.4	721.3	212.6	121.8	65.0	39.2	34.8	33.0	32.2	27.6	27.6
80°	604.9	549.0	127.2	79.5	47.5	32.5	29.2	28.4	27.6	23.0	23.2
82.5°	434.7	380.8	81.3	49.5	34.8	24.8	22.7	22.4	21.2	17.0	17.0
85°	222.9	194.5	52.1	33.3	24.5	16.0	15.0	14.4	13.7	10.6	10.6
87.5°	43.3	59.6	28.9	16.3	11.9	5.7	5.7	4.9	5.7	3.9	4.1
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°	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0
2.5°	1000.4	995.3	991.7	989.8	1015.9	1026.7	1039.1	1056.9	1069.0	1063.9	1080.4
5°	747.1	750.7	759.0	771.9	808.2	825.5	836.6	851.3	861.9	851.3	868.9
7.5°	510.8	516.2	533.7	560.3	604.2	623.5	627.4	627.7	625.3	608.0	619.9
10°	376.1	365.3	369.2	388.3	427.5	444.7	446.6	441.9	441.1	434.2	447.6
12.5°	291.5	276.5	267.8	270.9	300.3	314.5	316.8	319.4	329.9	333.3	349.8
15°	217.5	209.7	203.3	200.4	219.8	230.9	232.2	238.4	249.5	252.6	266.7
17.5°	153.0	155.0	158.4	159.7	173.6	180.8	178.8	178.8	180.6	179.8	187.8
20°	116.9	121.0	127.4	133.6	146.3	150.4	145.2	138.8	134.7	132.6	134.4
22.5°	103.2	106.0	110.2	118.2	128.7	130.8	124.1	118.9	115.1	113.0	113.3
25°	95.7	98.5	101.9	108.3	117.4	118.4	112.2	108.9	105.8	103.7	103.2
27.5°	89.3	91.1	93.1	97.3	106.5	107.1	102.9	100.9	98.8	97.3	96.7
30°	83.3	84.1	84.9	89.0	96.0	96.7	94.7	93.6	92.9	91.8	91.8
32.5°	75.6	76.6	77.9	81.5	88.2	89.3	88.0	87.2	85.9	85.4	84.6
35°	66.3	68.9	71.7	76.1	83.3	83.8	82.3	80.0	76.9	76.1	75.6
37.5°	62.4	62.9	66.6	71.7	79.2	79.7	77.7	73.8	71.5	71.7	72.2
40°	59.8	60.6	62.7	67.8	75.3	76.1	74.3	71.5	69.1	69.4	70.2
42.5°	57.8	58.8	60.1	63.5	70.9	72.5	72.0	69.4	67.1	67.6	68.6
45°	56.8	57.5	57.5	59.8	67.1	69.4	69.7	67.6	65.8	66.3	67.6
47.5°	56.2	56.2	55.5	57.3	64.5	66.8	67.3	66.3	65.3	65.8	67.1
50°	55.5	54.4	53.7	55.2	62.4	64.5	65.0	64.2	64.8	65.8	66.6
52.5°	53.1	52.1	52.1	53.1	60.4	62.4	62.7	62.2	63.2	64.5	65.8
55°	50.3	50.3	50.6	51.6	59.3	60.9	60.6	60.1	61.1	62.7	64.0
57.5°	47.7	47.5	48.8	50.0	58.0	59.1	58.6	58.6	59.3	60.6	61.9
60°	46.2	44.9	45.9	48.0	56.8	57.8	57.0	56.8	58.0	59.1	60.1
62.5°	44.6	43.3	44.1	46.2	54.9	55.7	55.2	55.2	56.5	57.3	58.3
65°	42.3	41.8	42.3	44.4	53.4	53.7	53.7	53.9	54.9	55.5	56.5
67.5°	40.2	40.2	40.5	42.6	52.1	51.6	51.6	52.9	53.1	53.7	54.7
70°	37.7	38.2	38.2	40.8	51.1	49.3	49.5	50.6	51.1	51.6	51.9
72.5°	34.8	35.1	35.6	39.0	49.5	47.0	47.2	48.0	48.2	49.0	49.3
75°	31.7	32.0	32.8	37.1	48.5	44.6	44.1	44.6	45.1	45.7	45.4
77.5°	28.1	28.6	29.4	36.1	45.1	44.1	40.2	40.8	41.3	41.3	41.0
80°	23.7	24.5	25.8	34.6	38.2	42.6	35.9	36.1	36.4	36.4	35.9
82.5°	17.8	19.3	21.2	28.6	29.9	36.4	31.0	31.5	30.7	30.2	29.9
85°	11.6	12.9	15.5	19.9	21.9	28.6	25.5	25.8	24.2	24.0	24.0
87.5°	4.6	4.9	7.0	10.1	13.2	17.8	18.3	18.8	17.5	17.5	18.1
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°	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0	1213.0
2.5°	1105.4	1131.2	1160.9	1191.1	1215.8	1247.8	1278.8	1311.8	1328.6	1338.4	1366.0
5°	896.2	931.5	973.6	1020.8	1060.0	1127.1	1199.3	1279.8	1318.5	1356.7	1428.9
7.5°	641.1	675.6	724.6	785.8	841.5	930.0	1025.2	1134.1	1187.7	1249.6	1368.0
10°	476.0	512.6	557.0	608.8	663.8	755.9	862.7	984.9	1044.0	1113.9	1248.6
12.5°	385.9	428.8	474.7	521.1	568.3	630.2	742.2	878.1	941.6	1012.0	1147.0
15°	301.1	347.0	396.5	447.1	494.0	563.2	677.4	838.2	910.6	978.8	1089.2
17.5°	213.1	256.4	312.1	373.5	441.7	523.4	663.5	855.7	943.7	1014.9	1088.9
20°	145.2	175.2	230.9	303.6	387.7	491.4	668.7	917.4	1027.3	1105.4	1133.5
22.5°	116.1	130.3	167.9	242.0	341.3	468.2	689.8	1002.0	1147.2	1242.4	1214.8
25°	105.5	113.5	133.1	191.2	300.0	452.7	731.1	1113.7	1281.6	1378.1	1312.6
27.5°	99.1	106.0	118.7	157.1	264.4	442.7	783.5	1245.2	1433.0	1512.2	1414.5
30°	94.9	101.9	113.5	141.1	237.6	427.7	829.4	1365.5	1554.0	1605.4	1469.4
32.5°	86.9	92.4	101.9	126.4	217.5	410.2	869.1	1473.0	1668.3	1685.3	1535.5
35°	78.7	84.4	93.9	114.5	205.6	396.5	890.0	1568.5	1781.6	1765.3	1601.0
37.5°	75.6	80.2	89.0	106.0	199.2	387.5	898.0	1662.4	1903.1	1853.8	1646.6
40°	73.5	77.7	85.4	100.4	197.3	379.0	896.2	1751.6	2021.0	1945.4	1682.5
42.5°	72.0	75.6	82.8	96.5	192.4	371.0	890.3	1828.8	2115.4	2024.3	1716.8
45°	70.7	74.6	81.8	98.5	183.4	362.2	886.7	1899.2	2187.9	2090.9	1762.7
47.5°	70.2	74.6	82.0	98.0	173.6	352.4	899.6	1977.4	2251.1	2146.9	1823.9
50°	69.4	74.3	87.7	93.4	160.2	340.3	943.2	2070.5	2317.4	2209.8	1903.1
52.5°	68.1	74.0	93.6	89.8	142.9	323.5	1013.8	2202.1	2431.9	2332.3	2020.2
55°	66.6	74.6	89.5	84.1	124.6	301.8	1084.5	2382.4	2617.7	2529.9	2188.4
57.5°	64.8	73.8	84.6	78.9	109.4	274.5	1138.2	2530.2	2770.9	2733.7	2395.0
60°	63.5	75.6	76.1	75.8	99.6	248.4	1143.3	2520.7	2815.0	2866.1	2597.3
62.5°	61.9	77.1	69.4	73.5	94.7	224.2	1079.6	2364.6	2740.5	2849.1	2762.1
65°	59.8	67.3	65.8	71.5	94.7	211.3	931.3	2104.8	2534.3	2688.1	2851.6
67.5°	57.8	61.1	63.2	68.6	96.7	199.2	748.4	1775.4	2209.3	2428.3	2751.0
70°	54.9	57.8	60.4	66.0	95.7	190.6	589.0	1423.0	1818.2	2069.0	2472.7
72.5°	52.4	54.4	57.0	62.2	95.7	186.8	473.1	1116.3	1388.2	1599.4	2048.3
75°	48.5	50.3	52.6	58.3	93.9	170.8	355.2	894.4	1015.6	1148.0	1616.2
77.5°	44.6	45.9	47.7	53.4	84.6	142.7	251.3	692.7	752.5	825.8	1259.9
80°	39.7	40.8	42.0	47.7	70.2	110.7	163.6	541.7	562.6	598.0	828.9
82.5°	34.1	35.6	35.9	41.0	56.5	80.2	97.3	371.2	371.0	422.8	584.8
85°	27.9	28.6	29.2	32.2	41.8	53.4	64.0	202.8	180.8	253.3	508.0
87.5°	20.9	20.1	20.9	21.7	27.6	31.5	34.3	37.4	22.4	45.9	295.4
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):

	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°	1380.7	1395.9	1386.9	1376.0	1348.9	1309.2	1278.8	1252.2
5°	1479.0	1507.1	1494.7	1454.5	1384.3	1304.6	1220.7	1169.7
7.5°	1466.6	1522.3	1517.4	1450.3	1349.7	1232.3	1114.4	1047.1
10°	1367.5	1445.7	1459.1	1390.5	1283.9	1152.6	1016.2	940.1
12.5°	1259.7	1325.5	1352.8	1326.8	1226.4	1093.0	954.0	877.9
15°	1169.4	1202.7	1229.8	1246.5	1184.4	1071.9	943.2	864.7
17.5°	1102.6	1096.1	1118.8	1159.1	1161.7	1100.0	992.2	904.5
20°	1070.3	1019.8	1032.9	1089.4	1155.5	1171.5	1089.9	986.2
22.5°	1068.5	989.6	992.2	1053.0	1173.3	1269.0	1212.0	1093.8
25°	1096.4	986.2	988.6	1049.2	1204.7	1367.3	1353.1	1215.3
27.5°	1143.9	1000.7	999.1	1066.2	1246.8	1449.3	1495.5	1363.9
30°	1195.2	1021.6	1017.7	1093.6	1288.1	1499.9	1596.6	1475.9
32.5°	1259.2	1058.7	1045.3	1133.5	1328.8	1548.4	1683.0	1580.6
35°	1320.1	1113.2	1093.8	1190.8	1372.4	1602.3	1779.8	1696.4
37.5°	1382.2	1194.4	1183.6	1273.4	1434.1	1660.8	1890.4	1827.7
40°	1461.9	1310.0	1304.8	1393.3	1516.4	1724.8	2014.5	1964.5
42.5°	1547.8	1432.8	1428.4	1531.1	1618.5	1789.0	2120.8	2081.8
45°	1635.3	1581.6	1582.7	1678.1	1726.1	1849.7	2204.4	2175.8
47.5°	1738.5	1744.4	1781.3	1830.6	1830.8	1917.3	2278.4	2263.2
50°	1869.5	1941.0	2009.1	2016.8	1936.6	2006.5	2369.0	2363.3
52.5°	2017.9	2167.8	2247.0	2222.4	2039.8	2117.2	2502.9	2502.6
55°	2194.1	2404.8	2479.4	2437.6	2163.4	2261.4	2677.8	2666.4
57.5°	2376.7	2632.9	2693.0	2638.6	2317.9	2429.3	2853.2	2793.1
60°	2574.1	2829.2	2890.3	2808.6	2491.3	2596.8	2969.3	2828.7
62.5°	2703.3	2944.0	2987.9	2909.4	2646.6	2767.3	3006.7	2786.1
65°	2710.0	2867.6	2879.2	2851.4	2712.6	2915.4	2952.5	2660.0
67.5°	2525.8	2535.1	2550.3	2580.3	2571.5	2849.3	2743.6	2365.4
70°	2131.9	2008.1	2058.1	2087.0	2152.0	2534.3	2357.4	1923.7
72.5°	1630.1	1449.3	1506.1	1496.2	1631.4	2078.8	1803.5	1481.8
75°	1173.3	988.3	992.7	993.2	1172.2	1659.3	1229.8	1052.3
77.5°	797.4	699.4	713.8	704.8	784.5	1299.9	885.4	758.4
80°	545.4	542.8	545.9	524.7	523.2	840.2	655.5	604.9
82.5°	404.5	373.8	369.4	347.0	400.9	642.4	497.6	434.7
85°	319.1	206.9	179.8	217.0	347.2	591.0	303.4	222.9
87.5°	135.2	81.3	49.3	97.5	193.0	433.1	84.1	43.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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