

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: P195745

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195745
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-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 615mA 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: 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

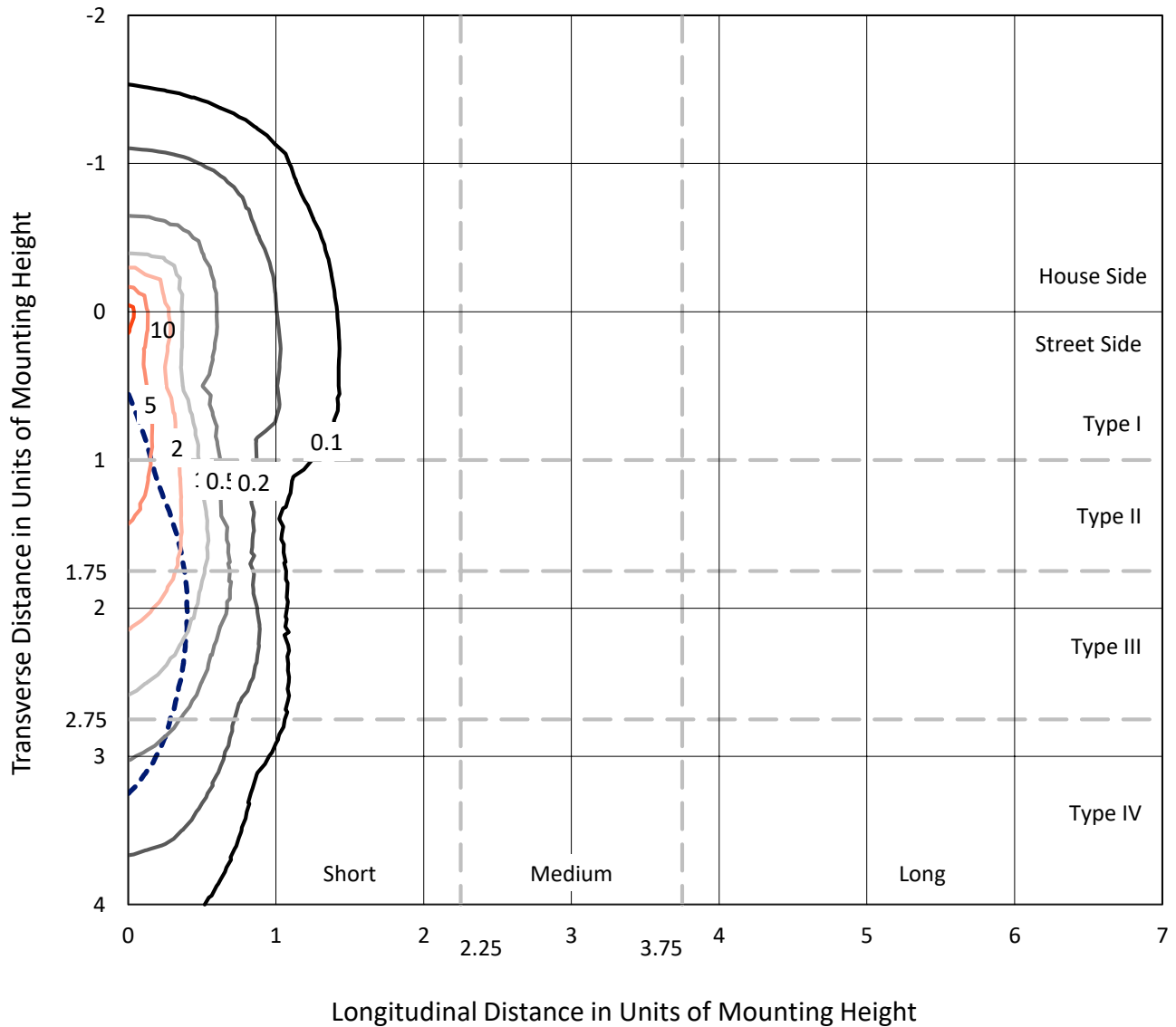


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Iso-Footcandle Lines of Horizontal Illumination

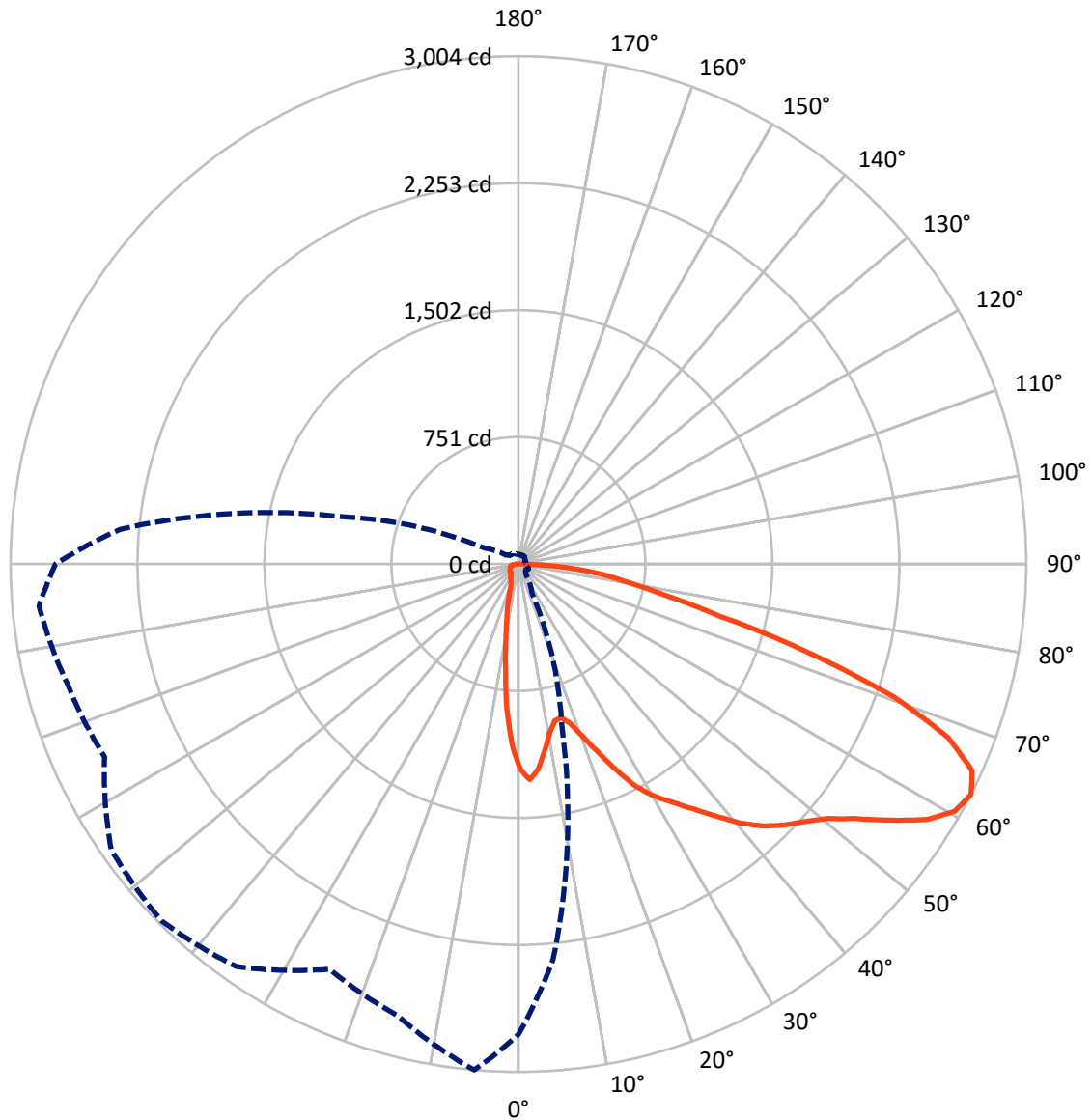
× Max cd
 - - - 1/2 Max cd



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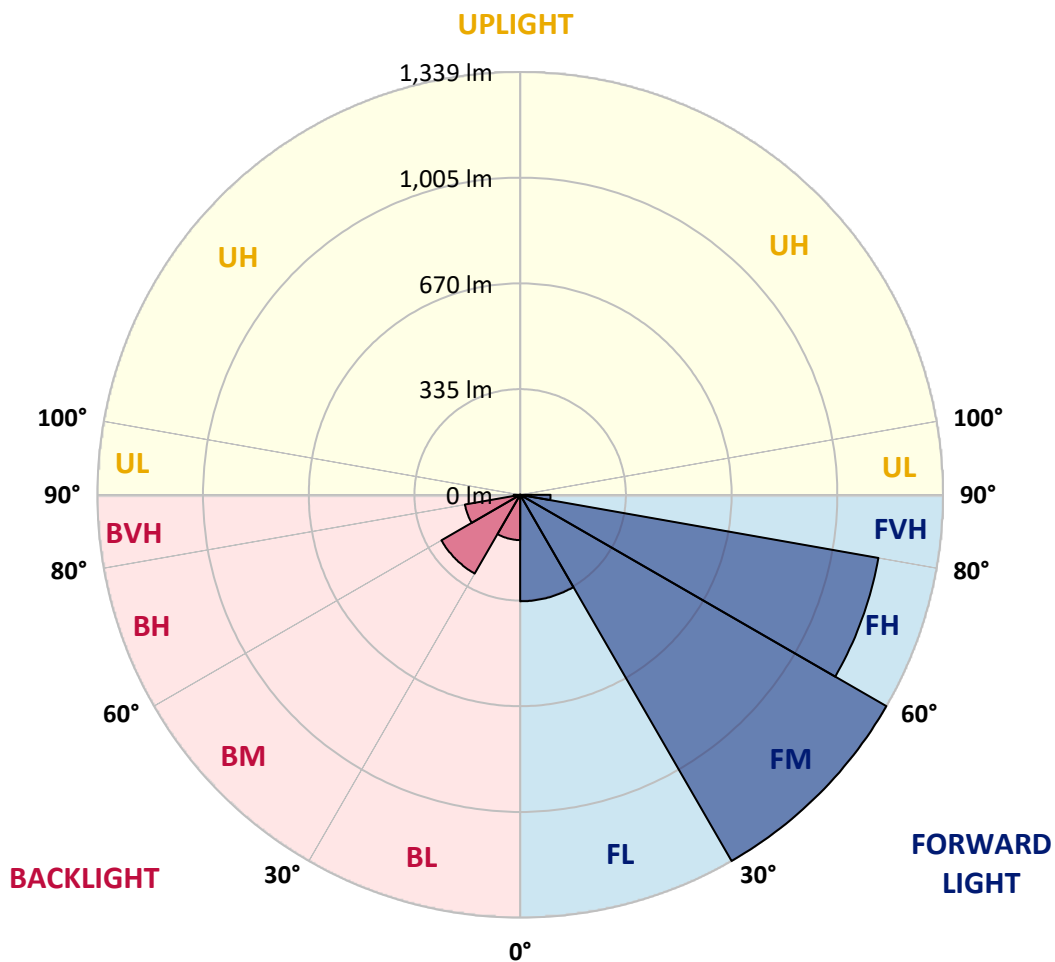
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

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	1233.6	1193.2	1157.6	1113.2	1080.0	1039.5	1018.1	1002.4	991.8	983.3
5°	1168.7	1126.4	1049.1	981.3	908.1	855.2	793.4	759.6	738.7	727.4	722.2
7.5°	1046.2	990.3	890.3	799.3	707.8	641.8	594.9	544.9	518.3	501.1	495.4
10°	939.3	876.1	756.8	654.4	583.8	536.9	496.7	450.8	416.8	387.2	376.1
12.5°	877.1	803.7	667.6	575.1	515.8	465.5	423.0	373.5	337.7	306.7	294.9
15°	864.0	782.0	630.2	524.5	451.8	391.3	340.2	286.4	251.3	225.8	217.5
17.5°	903.7	802.7	614.5	478.4	390.8	316.8	253.9	196.2	167.0	153.1	149.8
20°	985.4	848.0	607.0	436.9	331.5	243.8	175.5	133.3	118.8	114.7	114.4
22.5°	1092.9	921.7	615.3	402.9	275.8	179.9	128.6	109.5	103.6	101.3	101.3
25°	1214.3	1021.5	637.2	376.8	226.8	140.0	110.8	100.5	95.6	93.3	93.6
27.5°	1362.8	1142.9	667.1	352.9	191.8	122.7	103.6	94.9	90.0	87.6	87.9
30°	1474.6	1247.3	692.8	331.0	173.7	115.7	99.8	91.5	86.1	82.7	82.5
32.5°	1579.3	1339.3	713.7	315.2	163.4	103.4	90.2	84.0	79.4	75.5	74.7
35°	1695.0	1425.9	723.5	314.7	156.7	93.3	82.5	75.0	70.4	66.0	65.2
37.5°	1826.2	1531.8	731.8	317.8	153.1	86.9	78.9	71.7	67.8	63.4	62.4
40°	1962.8	1635.5	738.2	320.4	152.6	82.5	76.0	69.6	65.7	61.1	60.1
42.5°	2080.1	1727.2	747.0	319.4	149.0	81.7	74.2	67.8	64.2	59.5	58.3
45°	2173.9	1800.2	760.6	319.1	143.6	83.5	73.7	67.3	62.9	58.0	57.0
47.5°	2261.3	1882.4	789.5	318.1	137.6	83.0	76.6	66.8	62.4	57.5	56.7
50°	2361.3	1993.0	838.7	310.3	129.4	79.4	81.7	66.2	61.1	56.7	55.9
52.5°	2500.5	2154.8	911.7	296.4	118.1	75.5	82.5	66.0	59.0	55.2	54.1
55°	2664.2	2328.3	990.3	276.3	103.1	68.8	78.4	65.0	57.0	52.8	51.3
57.5°	2790.7	2456.4	1045.2	247.4	88.4	65.0	69.9	62.6	54.4	50.3	49.0
60°	2826.3	2462.1	1055.0	212.9	80.9	62.4	60.1	68.3	52.3	47.9	46.7
62.5°	2783.8	2349.4	991.1	188.7	78.4	59.8	54.6	65.2	50.3	45.9	44.6
65°	2657.7	2159.2	848.0	185.1	80.9	57.5	51.8	52.1	48.2	43.8	42.5
67.5°	2363.4	1879.3	668.1	187.4	84.0	55.2	49.7	47.4	45.9	42.0	40.5
70°	1922.1	1513.0	526.3	191.5	86.9	52.1	47.2	44.3	43.0	38.9	38.1
72.5°	1480.6	1210.9	415.2	188.7	89.7	49.0	43.6	41.2	39.7	35.8	35.1
75°	1051.4	962.2	305.2	161.9	82.2	44.6	39.4	37.4	36.1	32.0	31.7
77.5°	757.8	720.7	212.4	121.7	65.0	39.2	34.8	33.0	32.2	27.6	27.6
80°	604.4	548.5	127.1	79.4	47.4	32.5	29.1	28.4	27.6	22.9	23.2
82.5°	434.3	380.4	81.2	49.5	34.8	24.7	22.7	22.4	21.1	17.0	17.0
85°	222.7	194.3	52.1	33.3	24.5	16.0	14.9	14.4	13.7	10.6	10.6
87.5°	43.3	59.5	28.9	16.2	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°	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0	1212.0
2.5°	999.6	994.4	990.8	989.0	1015.0	1025.9	1038.2	1056.0	1068.1	1063.0	1079.5
5°	746.5	750.1	758.3	771.2	807.6	824.8	835.9	850.6	861.2	850.6	868.1
7.5°	510.4	515.8	533.3	559.8	603.7	623.0	626.9	627.1	624.8	607.5	619.4
10°	375.8	365.0	368.8	387.9	427.1	444.4	446.2	441.5	440.8	433.8	447.2
12.5°	291.3	276.3	267.6	270.6	300.0	314.2	316.5	319.1	329.7	333.0	349.5
15°	217.3	209.6	203.1	200.3	219.6	230.7	232.0	238.2	249.3	252.3	266.5
17.5°	152.8	154.9	158.3	159.6	173.5	180.7	178.6	178.6	180.4	179.7	187.6
20°	116.8	120.9	127.3	133.5	146.1	150.3	145.1	138.7	134.5	132.5	134.3
22.5°	103.1	105.9	110.1	118.1	128.6	130.7	124.0	118.8	115.0	112.9	113.2
25°	95.6	98.5	101.8	108.3	117.3	118.3	112.1	108.8	105.7	103.6	103.1
27.5°	89.2	91.0	93.1	97.2	106.5	107.0	102.8	100.8	98.7	97.2	96.7
30°	83.3	84.0	84.8	88.9	95.9	96.7	94.6	93.6	92.8	91.8	91.8
32.5°	75.5	76.6	77.8	81.5	88.2	89.2	87.9	87.1	85.8	85.3	84.5
35°	66.2	68.8	71.7	76.0	83.3	83.8	82.2	79.9	76.8	76.0	75.5
37.5°	62.4	62.9	66.5	71.7	79.1	79.6	77.6	73.7	71.4	71.7	72.2
40°	59.8	60.6	62.6	67.8	75.3	76.0	74.2	71.4	69.1	69.3	70.1
42.5°	57.7	58.8	60.1	63.4	70.9	72.4	71.9	69.3	67.0	67.5	68.6
45°	56.7	57.5	57.5	59.8	67.0	69.3	69.6	67.5	65.7	66.2	67.5
47.5°	56.2	56.2	55.4	57.2	64.4	66.8	67.3	66.2	65.2	65.7	67.0
50°	55.4	54.4	53.6	55.2	62.4	64.4	65.0	64.2	64.7	65.7	66.5
52.5°	53.1	52.1	52.1	53.1	60.3	62.4	62.6	62.1	63.2	64.4	65.7
55°	50.3	50.3	50.5	51.6	59.3	60.8	60.6	60.1	61.1	62.6	63.9
57.5°	47.7	47.4	48.7	50.0	58.0	59.0	58.5	58.5	59.3	60.6	61.9
60°	46.1	44.8	45.9	47.9	56.7	57.7	57.0	56.7	58.0	59.0	60.1
62.5°	44.6	43.3	44.1	46.1	54.9	55.7	55.2	55.2	56.4	57.2	58.3
65°	42.3	41.8	42.3	44.3	53.4	53.6	53.6	53.9	54.9	55.4	56.4
67.5°	40.2	40.2	40.5	42.5	52.1	51.6	51.6	52.8	53.1	53.6	54.6
70°	37.6	38.1	38.1	40.7	51.0	49.2	49.5	50.5	51.0	51.6	51.8
72.5°	34.8	35.1	35.6	38.9	49.5	46.9	47.2	47.9	48.2	49.0	49.2
75°	31.7	32.0	32.7	37.1	48.5	44.6	44.1	44.6	45.1	45.6	45.4
77.5°	28.1	28.6	29.4	36.1	45.1	44.1	40.2	40.7	41.2	41.2	41.0
80°	23.7	24.5	25.8	34.5	38.1	42.5	35.8	36.1	36.3	36.3	35.8
82.5°	17.8	19.3	21.1	28.6	29.9	36.3	30.9	31.4	30.7	30.2	29.9
85°	11.6	12.9	15.5	19.8	21.9	28.6	25.5	25.8	24.2	24.0	24.0
87.5°	4.6	4.9	7.0	10.1	13.1	17.8	18.3	18.8	17.5	17.5	18.0
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):

	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°	1104.5	1130.3	1159.9	1190.1	1214.8	1246.8	1277.7	1310.7	1327.4	1337.2	1364.8
5°	895.4	930.8	972.8	1019.9	1059.1	1126.1	1198.3	1278.7	1317.4	1355.5	1427.7
7.5°	640.5	675.1	724.0	785.1	840.8	929.2	1024.3	1133.1	1186.7	1248.6	1366.9
10°	475.6	512.2	556.5	608.3	663.2	755.2	861.9	984.1	1043.1	1113.0	1247.5
12.5°	385.6	428.4	474.3	520.7	567.8	629.7	741.6	877.4	940.8	1011.2	1146.0
15°	300.8	346.7	396.2	446.7	493.6	562.7	676.9	837.5	909.9	977.9	1088.2
17.5°	212.9	256.2	311.9	373.2	441.3	523.0	662.9	855.0	942.9	1014.0	1088.0
20°	145.1	175.0	230.7	303.4	387.4	491.0	668.1	916.6	1026.4	1104.5	1132.6
22.5°	116.0	130.2	167.8	241.8	341.0	467.8	689.2	1001.1	1146.2	1241.4	1213.8
25°	105.4	113.4	133.0	191.0	299.8	452.4	730.5	1112.7	1280.5	1376.9	1311.5
27.5°	99.0	105.9	118.6	157.0	264.2	442.3	782.8	1244.2	1431.8	1511.0	1413.3
30°	94.9	101.8	113.4	141.0	237.4	427.4	828.7	1364.3	1552.7	1604.0	1468.2
32.5°	86.9	92.3	101.8	126.3	217.3	409.8	868.4	1471.8	1666.9	1683.9	1534.2
35°	78.6	84.3	93.8	114.4	205.4	396.2	889.3	1567.2	1780.1	1763.8	1599.6
37.5°	75.5	80.2	88.9	105.9	199.0	387.2	897.2	1661.0	1901.5	1852.2	1645.3
40°	73.5	77.6	85.3	100.3	197.2	378.6	895.4	1750.2	2019.3	1943.7	1681.1
42.5°	71.9	75.5	82.7	96.4	192.3	370.7	889.5	1827.2	2113.6	2022.6	1715.4
45°	70.6	74.5	81.7	98.5	183.3	361.9	885.9	1897.6	2186.0	2089.1	1761.2
47.5°	70.1	74.5	82.0	97.9	173.5	352.1	898.8	1975.7	2249.2	2145.0	1822.3
50°	69.3	74.2	87.6	93.3	160.1	340.0	942.4	2068.8	2315.4	2207.9	1901.5
52.5°	68.0	74.0	93.6	89.7	142.8	323.2	1013.0	2200.2	2429.9	2330.4	2018.5
55°	66.5	74.5	89.4	84.0	124.5	301.6	1083.6	2380.4	2615.5	2527.8	2186.5
57.5°	64.7	73.7	84.5	78.9	109.3	274.3	1137.2	2528.1	2768.6	2731.4	2393.0
60°	63.4	75.5	76.0	75.8	99.5	248.2	1142.4	2518.5	2812.6	2863.7	2595.1
62.5°	61.9	77.1	69.3	73.5	94.6	224.0	1078.7	2362.6	2738.1	2846.7	2759.8
65°	59.8	67.3	65.7	71.4	94.6	211.1	930.5	2103.0	2532.2	2685.8	2849.2
67.5°	57.7	61.1	63.2	68.6	96.7	199.0	747.8	1773.9	2207.4	2426.3	2748.7
70°	54.9	57.7	60.3	66.0	95.6	190.5	588.5	1421.8	1816.7	2067.2	2470.6
72.5°	52.3	54.4	57.0	62.1	95.6	186.6	472.7	1115.3	1387.0	1598.1	2046.6
75°	48.5	50.3	52.6	58.3	93.8	170.6	354.9	893.6	1014.8	1147.0	1614.8
77.5°	44.6	45.9	47.7	53.4	84.5	142.5	251.1	692.1	751.9	825.1	1258.9
80°	39.7	40.7	42.0	47.7	70.1	110.6	163.4	541.3	562.2	597.5	828.2
82.5°	34.0	35.6	35.8	41.0	56.4	80.2	97.2	370.9	370.7	422.5	584.3
85°	27.8	28.6	29.1	32.2	41.8	53.4	63.9	202.6	180.7	253.1	507.5
87.5°	20.9	20.1	20.9	21.7	27.6	31.4	34.3	37.4	22.4	45.9	295.1
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):

	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°	1379.5	1394.7	1385.7	1374.9	1347.8	1308.1	1277.7	1251.1
5°	1477.7	1505.8	1493.4	1453.2	1383.1	1303.5	1219.7	1168.7
7.5°	1465.3	1521.0	1516.1	1449.1	1348.6	1231.3	1113.5	1046.2
10°	1366.4	1444.5	1457.9	1389.3	1282.9	1151.7	1015.3	939.3
12.5°	1258.6	1324.4	1351.7	1325.6	1225.4	1092.1	953.2	877.1
15°	1168.4	1201.7	1228.7	1245.5	1183.4	1071.0	942.4	864.0
17.5°	1101.7	1095.2	1117.9	1158.1	1160.7	1099.1	991.3	903.7
20°	1069.4	1018.9	1032.1	1088.5	1154.5	1170.5	1089.0	985.4
22.5°	1067.6	988.8	991.3	1052.2	1172.3	1267.9	1210.9	1092.9
25°	1095.5	985.4	987.7	1048.3	1203.7	1366.1	1351.9	1214.3
27.5°	1142.9	999.8	998.3	1065.3	1245.7	1448.1	1494.2	1362.8
30°	1194.2	1020.7	1016.8	1092.6	1287.0	1498.6	1595.3	1474.6
32.5°	1258.1	1057.8	1044.4	1132.6	1327.7	1547.1	1681.6	1579.3
35°	1318.9	1112.2	1092.9	1189.8	1371.3	1600.9	1778.3	1695.0
37.5°	1381.1	1193.4	1182.6	1272.3	1432.9	1659.4	1888.8	1826.2
40°	1460.7	1308.9	1303.7	1392.1	1515.1	1723.4	2012.8	1962.8
42.5°	1546.5	1431.6	1427.2	1529.8	1617.2	1787.5	2119.0	2080.1
45°	1633.9	1580.3	1581.3	1676.7	1724.6	1848.1	2202.5	2173.9
47.5°	1737.0	1742.9	1779.8	1829.0	1829.3	1915.6	2276.5	2261.3
50°	1868.0	1939.4	2007.4	2015.1	1935.0	2004.8	2367.0	2361.3
52.5°	2016.2	2165.9	2245.1	2220.6	2038.1	2115.4	2500.8	2500.5
55°	2192.2	2402.8	2477.3	2435.5	2161.5	2259.5	2675.5	2664.2
57.5°	2374.7	2630.7	2690.7	2636.3	2315.9	2427.3	2850.8	2790.7
60°	2571.9	2826.8	2887.9	2806.2	2489.2	2594.6	2966.8	2826.3
62.5°	2701.0	2941.5	2985.3	2907.0	2644.3	2765.0	3004.2	2783.8
65°	2707.7	2865.2	2876.8	2849.0	2710.3	2912.9	2950.0	2657.7
67.5°	2523.7	2533.0	2548.2	2578.1	2569.3	2846.9	2741.2	2363.4
70°	2130.1	2006.4	2056.4	2085.2	2150.2	2532.2	2355.4	1922.1
72.5°	1628.8	1448.1	1504.8	1495.0	1630.1	2077.0	1802.0	1480.6
75°	1172.3	987.5	991.8	992.4	1171.2	1657.9	1228.7	1051.4
77.5°	796.7	698.8	713.2	704.2	783.8	1298.8	884.6	757.8
80°	544.9	542.3	545.4	524.3	522.7	839.5	655.0	604.4
82.5°	404.2	373.5	369.1	346.7	400.6	641.8	497.2	434.3
85°	318.8	206.7	179.7	216.8	346.9	590.5	303.1	222.7
87.5°	135.1	81.2	49.2	97.4	192.8	432.8	84.0	43.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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