

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: P197197

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197197
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
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1050mA 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: 4403 lumens
Efficiency: N/A
Efficacy: 74.6 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 - G2

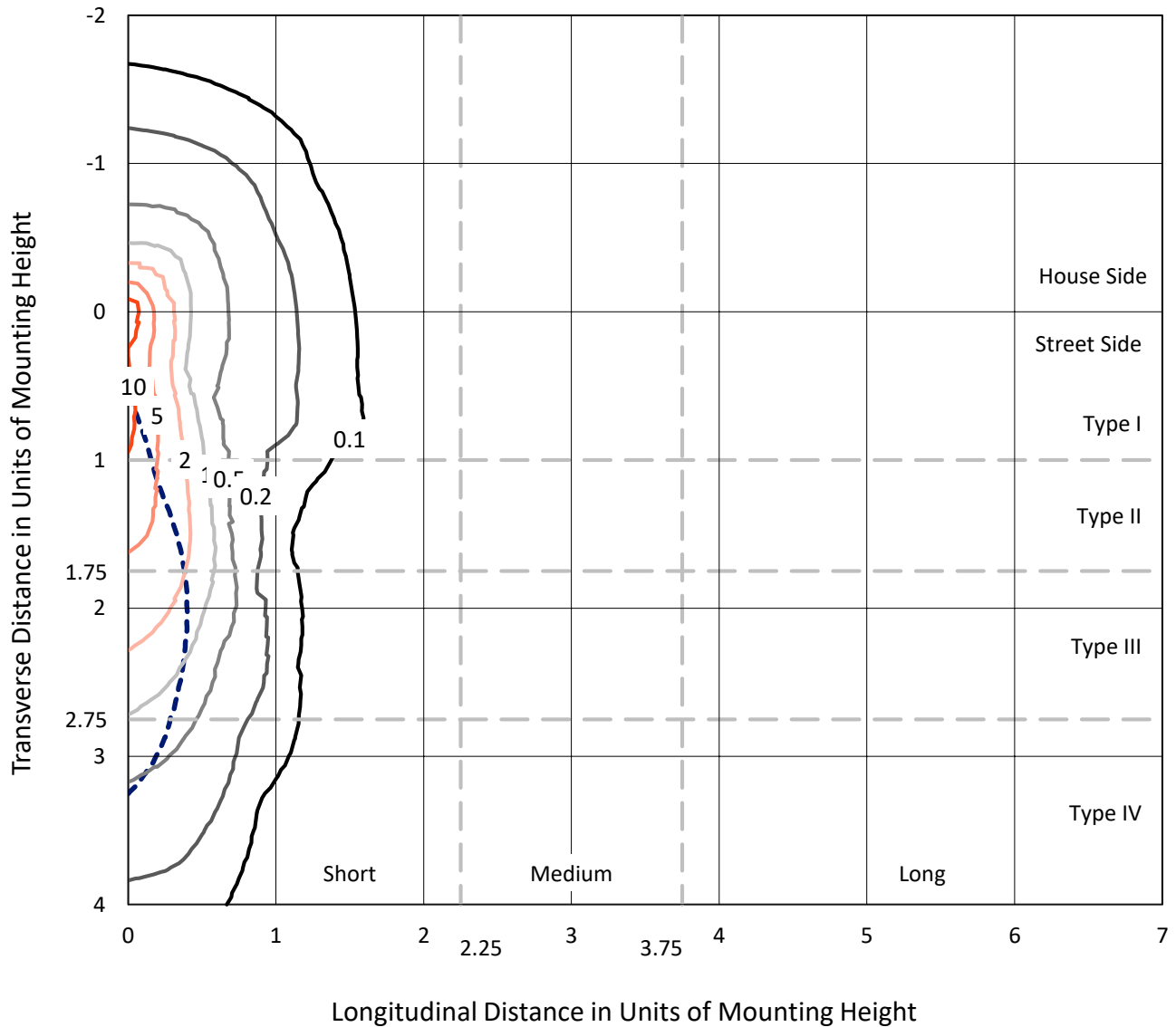
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

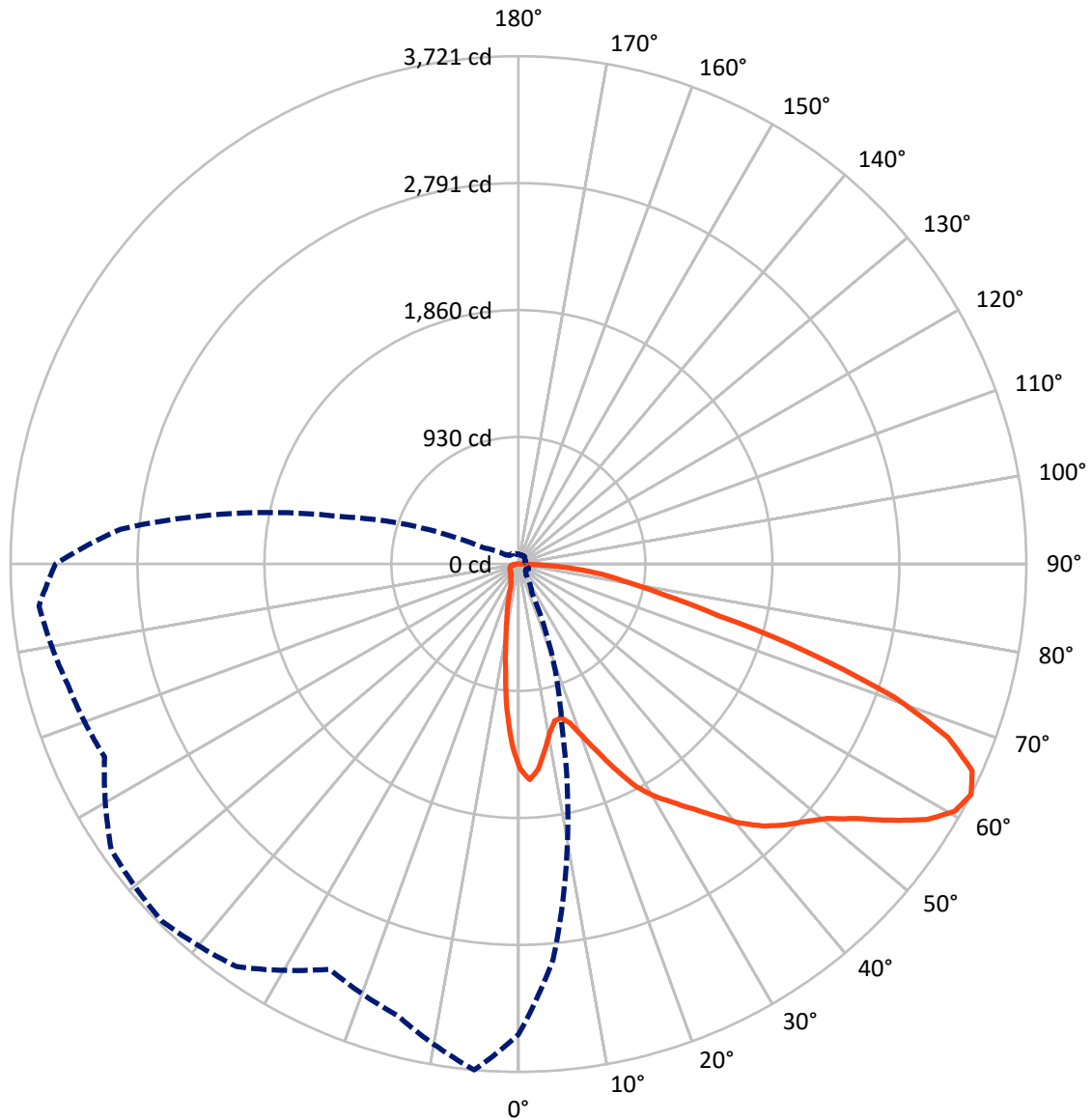
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15 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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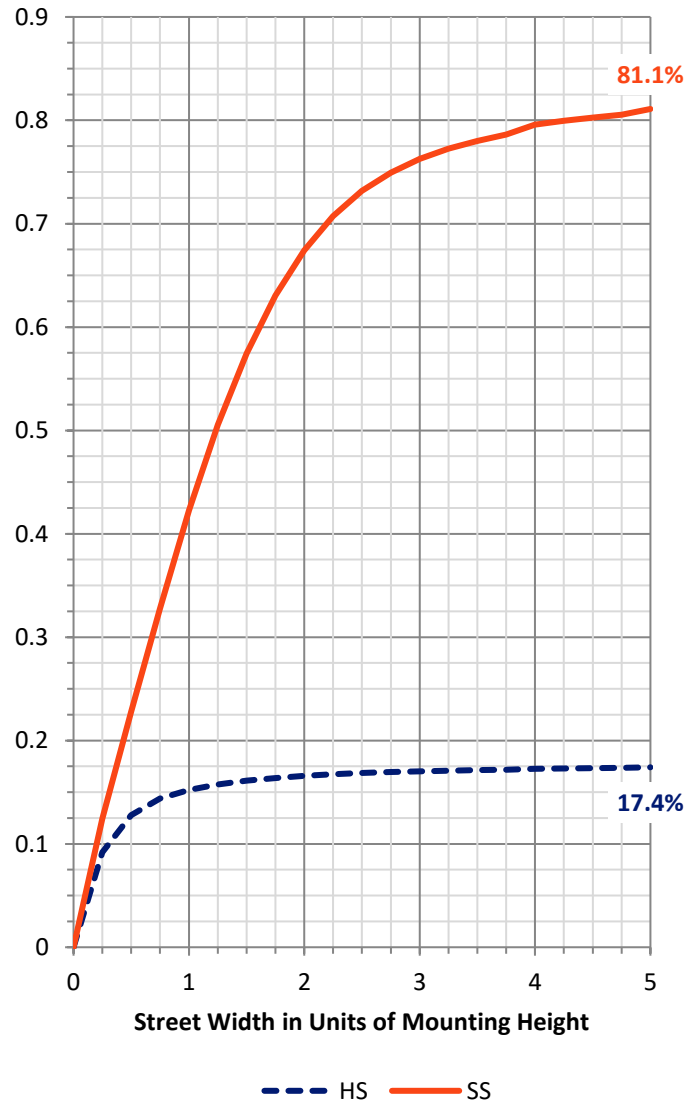
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	780.0	0.0	780.0
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	3623.0	0.0	3623.0
	% Fixture	82.3	0.0	82.3
Total	Lumens	4403.0	0.0	4403.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.2	2.5
10°-20°	199.4	4.5
20°-30°	286.8	6.5
30°-40°	439.2	10.0
40°-50°	642.2	14.6
50°-60°	934.3	21.2
60°-70°	1082.6	24.6
70°-80°	564.3	12.8
80°-90°	145.1	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°	4403.0	100.0
0°-180°	4403.0	100.0



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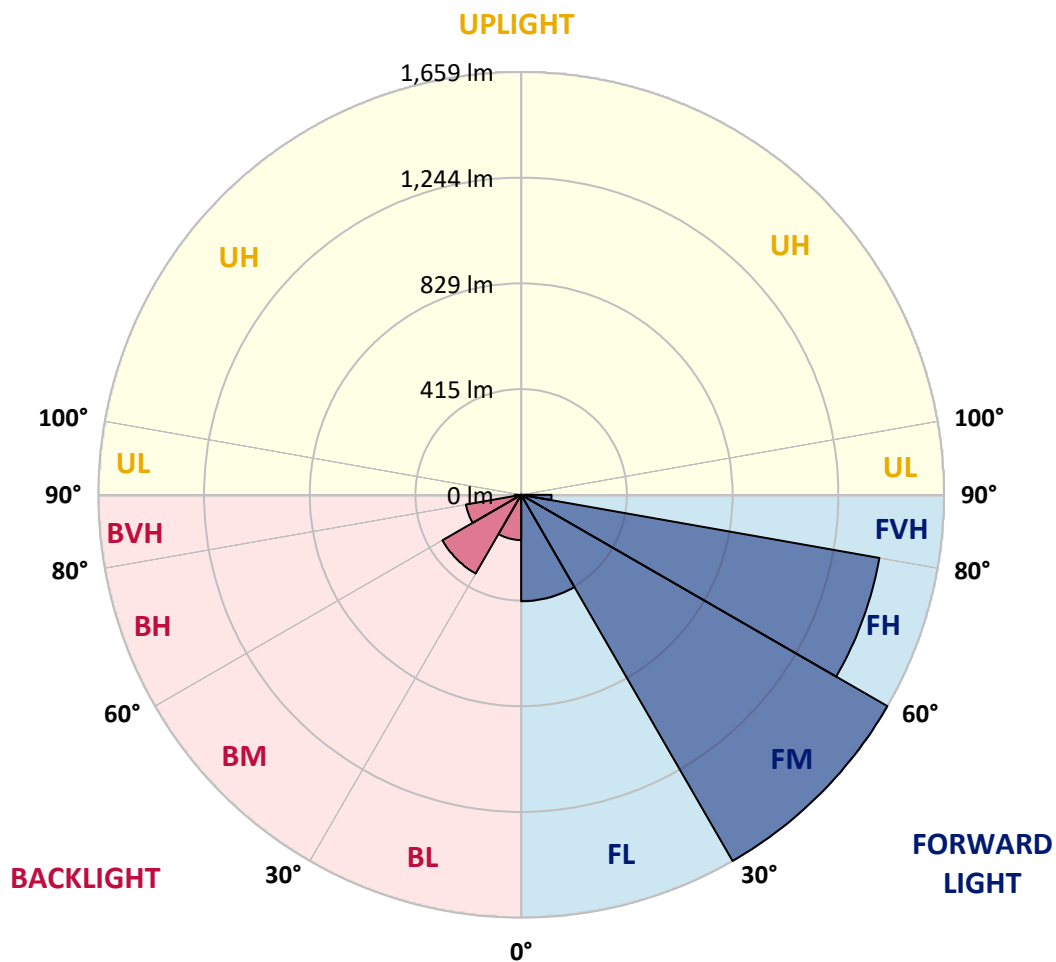
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	417.9	9.5			
FM	(30°-60°)	1658.8	37.7			
FH	(60°-80°)	1427.0	32.4			G1/1800
FVH	(80°-90°)	119.3	2.7			G2/225
BL	(0°-30°)	177.5	4.0	B1/500		
BM	(30°-60°)	356.9	8.1	B1/1000		
BH	(60°-80°)	219.9	5.0	B1/500		G1/500
BVH	(80°-90°)	25.7	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°	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1
2.5°	1549.6	1527.9	1477.8	1433.7	1378.8	1337.6	1287.5	1261.0	1241.5	1228.4	1217.9
5°	1447.4	1395.1	1299.3	1215.3	1124.7	1059.2	982.6	940.8	914.9	900.9	894.5
7.5°	1295.8	1226.5	1102.7	990.0	876.6	794.9	736.8	674.9	642.0	620.6	613.6
10°	1163.3	1085.1	937.3	810.6	723.1	665.0	615.2	558.4	516.2	479.5	465.8
12.5°	1086.4	995.4	826.8	712.2	638.8	576.5	523.9	462.6	418.2	379.9	365.2
15°	1070.1	968.6	780.5	649.7	559.6	484.6	421.4	354.7	311.3	279.7	269.4
17.5°	1119.3	994.1	761.1	592.5	484.0	392.3	314.5	242.9	206.9	189.6	185.5
20°	1220.5	1050.3	751.8	541.1	410.5	302.0	217.4	165.0	147.2	142.1	141.7
22.5°	1353.6	1141.6	762.0	499.0	341.6	222.8	159.3	135.7	128.3	125.5	125.5
25°	1503.9	1265.2	789.2	466.7	280.9	173.3	137.3	124.5	118.4	115.6	115.9
27.5°	1687.8	1415.5	826.2	437.0	237.5	152.0	128.3	117.5	111.4	108.5	108.9
30°	1826.4	1544.8	858.1	409.9	215.2	143.3	123.5	113.3	106.6	102.5	102.2
32.5°	1956.0	1658.8	884.0	390.4	202.4	128.0	111.7	104.1	98.3	93.5	92.6
35°	2099.3	1766.0	896.1	389.8	194.1	115.6	102.2	92.9	87.2	81.7	80.8
37.5°	2261.8	1897.2	906.3	393.6	189.6	107.6	97.7	88.7	84.0	78.5	77.3
40°	2431.0	2025.6	914.3	396.8	189.0	102.2	94.2	86.2	81.4	75.7	74.4
42.5°	2576.3	2139.2	925.2	395.5	184.5	101.2	91.9	84.0	79.5	73.7	72.1
45°	2692.5	2229.6	942.1	395.2	177.8	103.4	91.3	83.3	77.9	71.8	70.6
47.5°	2800.7	2331.4	977.8	393.9	170.5	102.8	94.8	82.7	77.3	71.2	70.2
50°	2924.6	2468.4	1038.8	384.4	160.3	98.3	101.2	82.0	75.7	70.2	69.3
52.5°	3097.0	2668.9	1129.2	367.1	146.2	93.5	102.2	81.7	73.1	68.3	67.0
55°	3299.7	2883.7	1226.5	342.2	127.7	85.2	97.0	80.4	70.6	65.4	63.5
57.5°	3456.4	3042.4	1294.5	306.5	109.5	80.4	86.5	77.6	67.4	62.3	60.7
60°	3500.5	3049.4	1306.7	263.7	100.2	77.3	74.4	84.6	64.8	59.4	57.8
62.5°	3447.8	2909.9	1227.5	233.7	97.0	74.1	67.7	80.8	62.3	56.8	55.2
65°	3291.7	2674.3	1050.3	229.2	100.2	71.2	64.2	64.5	59.7	54.3	52.7
67.5°	2927.1	2327.6	827.5	232.1	104.1	68.3	61.6	58.7	56.8	52.0	50.1
70°	2380.6	1873.9	651.9	237.2	107.6	64.5	58.4	54.9	53.3	48.2	47.2
72.5°	1833.7	1499.8	514.3	233.7	111.1	60.7	54.0	51.1	49.2	44.4	43.4
75°	1302.2	1191.7	378.0	200.5	101.8	55.2	48.8	46.3	44.7	39.6	39.3
77.5°	938.6	892.6	263.1	150.7	80.4	48.5	43.1	40.9	39.9	34.2	34.2
80°	748.6	679.3	157.4	98.3	58.7	40.2	36.1	35.1	34.2	28.4	28.7
82.5°	537.9	471.2	100.6	61.3	43.1	30.6	28.1	27.8	26.2	21.1	21.1
85°	275.8	240.7	64.5	41.2	30.3	19.8	18.5	17.9	16.9	13.1	13.1
87.5°	53.6	73.7	35.8	20.1	14.7	7.0	7.0	6.1	7.0	4.8	5.1
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°	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1
2.5°	1238.0	1231.6	1227.2	1224.9	1257.2	1270.6	1285.9	1307.9	1322.9	1316.5	1337.0
5°	924.5	929.0	939.2	955.2	1000.2	1021.6	1035.3	1053.5	1066.6	1053.5	1075.2
7.5°	632.1	638.8	660.5	693.4	747.7	771.6	776.4	776.7	773.8	752.5	767.1
10°	465.5	452.0	456.8	480.5	529.0	550.4	552.6	546.9	545.9	537.3	553.9
12.5°	360.7	342.2	331.4	335.2	371.6	389.2	392.0	395.2	408.3	412.5	432.9
15°	269.1	259.5	251.6	248.1	272.0	285.7	287.3	295.0	308.7	312.5	330.1
17.5°	189.3	191.9	196.0	197.6	214.8	223.8	221.2	221.2	223.5	222.5	232.4
20°	144.6	149.7	157.7	165.4	181.0	186.1	179.7	171.8	166.6	164.1	166.3
22.5°	127.7	131.2	136.3	146.2	159.3	161.9	153.6	147.2	142.4	139.8	140.1
25°	118.4	121.9	126.1	134.1	145.3	146.5	138.9	134.7	130.9	128.3	127.7
27.5°	110.5	112.7	115.2	120.4	131.8	132.5	127.4	124.8	122.3	120.4	119.7
30°	103.1	104.1	105.0	110.1	118.8	119.7	117.2	115.9	114.9	113.6	113.6
32.5°	93.5	94.8	96.4	100.9	109.2	110.5	108.9	107.9	106.3	105.7	104.7
35°	82.0	85.2	88.7	94.2	103.1	103.8	101.8	99.0	95.1	94.2	93.5
37.5°	77.3	77.9	82.4	88.7	98.0	98.6	96.1	91.3	88.4	88.7	89.4
40°	74.1	75.0	77.6	84.0	93.2	94.2	91.9	88.4	85.6	85.9	86.8
42.5°	71.5	72.8	74.4	78.5	87.8	89.7	89.1	85.9	83.0	83.6	84.9
45°	70.2	71.2	71.2	74.1	83.0	85.9	86.2	83.6	81.4	82.0	83.6
47.5°	69.6	69.6	68.6	70.9	79.8	82.7	83.3	82.0	80.8	81.4	83.0
50°	68.6	67.4	66.4	68.3	77.3	79.8	80.4	79.5	80.1	81.4	82.4
52.5°	65.8	64.5	64.5	65.8	74.7	77.3	77.6	76.9	78.2	79.8	81.4
55°	62.3	62.3	62.6	63.8	73.4	75.3	75.0	74.4	75.7	77.6	79.2
57.5°	59.1	58.7	60.3	61.9	71.8	73.1	72.5	72.5	73.4	75.0	76.6
60°	57.1	55.5	56.8	59.4	70.2	71.5	70.6	70.2	71.8	73.1	74.4
62.5°	55.2	53.6	54.6	57.1	68.0	69.0	68.3	68.3	69.9	70.9	72.1
65°	52.4	51.7	52.4	54.9	66.1	66.4	66.4	66.7	68.0	68.6	69.9
67.5°	49.8	49.8	50.1	52.7	64.5	63.8	63.8	65.4	65.8	66.4	67.7
70°	46.6	47.2	47.2	50.4	63.2	61.0	61.3	62.6	63.2	63.8	64.2
72.5°	43.1	43.4	44.1	48.2	61.3	58.1	58.4	59.4	59.7	60.7	61.0
75°	39.3	39.6	40.5	46.0	60.0	55.2	54.6	55.2	55.9	56.5	56.2
77.5°	34.8	35.4	36.4	44.7	55.9	54.6	49.8	50.4	51.1	51.1	50.8
80°	29.4	30.3	31.9	42.8	47.2	52.7	44.4	44.7	45.0	45.0	44.4
82.5°	22.0	23.9	26.2	35.4	37.0	45.0	38.3	38.9	38.0	37.4	37.0
85°	14.4	16.0	19.2	24.6	27.1	35.4	31.6	31.9	30.0	29.7	29.7
87.5°	5.7	6.1	8.6	12.5	16.3	22.0	22.7	23.3	21.7	21.7	22.3
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°	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1
2.5°	1367.9	1399.9	1436.6	1473.9	1504.6	1544.2	1582.5	1623.3	1644.1	1656.2	1690.4
5°	1109.0	1152.8	1204.8	1263.2	1311.8	1394.8	1484.2	1583.8	1631.6	1678.9	1768.3
7.5°	793.3	836.1	896.7	972.4	1041.4	1150.9	1268.7	1403.4	1469.8	1546.4	1692.9
10°	589.0	634.3	689.2	753.4	821.4	935.4	1067.5	1218.9	1292.0	1378.5	1545.1
12.5°	477.6	530.6	587.4	644.9	703.3	779.9	918.5	1086.7	1165.2	1252.4	1419.3
15°	372.6	429.4	490.7	553.2	611.3	696.9	838.3	1037.2	1126.9	1211.2	1347.8
17.5°	263.7	317.3	386.3	462.3	546.5	647.7	821.1	1058.9	1167.8	1255.9	1347.5
20°	179.7	216.8	285.7	375.7	479.8	608.2	827.5	1135.2	1271.2	1367.9	1402.7
22.5°	143.7	161.2	207.8	299.4	422.4	579.4	853.6	1239.9	1419.7	1537.5	1503.3
25°	130.6	140.5	164.7	236.6	371.3	560.3	904.7	1378.2	1586.0	1705.4	1624.3
27.5°	122.6	131.2	146.9	194.4	327.2	547.8	969.5	1541.0	1773.4	1871.4	1750.4
30°	117.5	126.1	140.5	174.6	294.0	529.3	1026.4	1689.7	1923.1	1986.6	1818.4
32.5°	107.6	114.3	126.1	156.4	269.1	507.6	1075.5	1822.9	2064.5	2085.6	1900.1
35°	97.4	104.4	116.2	141.7	254.4	490.7	1101.4	1941.0	2204.7	2184.6	1981.2
37.5°	93.5	99.3	110.1	131.2	246.5	479.5	1111.3	2057.2	2355.0	2294.1	2037.7
40°	91.0	96.1	105.7	124.2	244.2	469.0	1109.0	2167.6	2500.9	2407.4	2082.1
42.5°	89.1	93.5	102.5	119.4	238.2	459.1	1101.7	2263.1	2617.8	2505.1	2124.5
45°	87.5	92.3	101.2	121.9	227.0	448.2	1097.2	2350.3	2707.5	2587.4	2181.4
47.5°	86.8	92.3	101.5	121.3	214.8	436.1	1113.2	2447.0	2785.7	2656.7	2257.0
50°	85.9	91.9	108.5	115.6	198.2	421.1	1167.1	2562.2	2867.7	2734.6	2355.0
52.5°	84.3	91.6	115.9	111.1	176.9	400.3	1254.6	2725.0	3009.5	2886.3	2500.0
55°	82.4	92.3	110.8	104.1	154.2	373.5	1342.1	2948.2	3239.3	3130.8	2708.1
57.5°	80.1	91.3	104.7	97.7	135.4	339.7	1408.5	3131.1	3429.0	3383.0	2963.8
60°	78.5	93.5	94.2	93.9	123.2	307.4	1414.9	3119.3	3483.6	3546.8	3214.1
62.5°	76.6	95.5	85.9	91.0	117.2	277.4	1336.0	2926.2	3391.3	3525.7	3418.1
65°	74.1	83.3	81.4	88.4	117.2	261.5	1152.5	2604.7	3136.2	3326.5	3528.9
67.5°	71.5	75.7	78.2	84.9	119.7	246.5	926.1	2197.0	2734.0	3005.0	3404.4
70°	68.0	71.5	74.7	81.7	118.4	235.9	728.8	1760.9	2250.0	2560.3	3059.9
72.5°	64.8	67.4	70.6	76.9	118.4	231.1	585.5	1381.4	1717.8	1979.3	2534.8
75°	60.0	62.3	65.1	72.1	116.2	211.3	439.6	1106.8	1256.9	1420.6	2000.0
77.5°	55.2	56.8	59.1	66.1	104.7	176.5	310.9	857.2	931.2	1021.9	1559.2
80°	49.2	50.4	52.0	59.1	86.8	137.0	202.4	670.4	696.3	740.0	1025.7
82.5°	42.1	44.1	44.4	50.8	69.9	99.3	120.4	459.4	459.1	523.2	723.7
85°	34.5	35.4	36.1	39.9	51.7	66.1	79.2	250.9	223.8	313.5	628.6
87.5°	25.9	24.9	25.9	26.8	34.2	38.9	42.5	46.3	27.8	56.8	365.5
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°	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1	1501.1
2.5°	1708.6	1727.4	1716.2	1702.8	1669.3	1620.1	1582.5	1549.6
5°	1830.2	1865.0	1849.7	1799.9	1713.0	1614.4	1510.6	1447.4
7.5°	1814.9	1883.8	1877.8	1794.8	1670.3	1525.0	1379.1	1295.8
10°	1692.3	1789.0	1805.6	1720.7	1588.9	1426.4	1257.5	1163.3
12.5°	1558.9	1640.3	1674.1	1641.9	1517.7	1352.6	1180.6	1086.4
15°	1447.1	1488.3	1521.8	1542.6	1465.6	1326.4	1167.1	1070.1
17.5°	1364.4	1356.5	1384.5	1434.3	1437.5	1361.2	1227.8	1119.3
20°	1324.5	1262.0	1278.2	1348.2	1429.9	1449.7	1348.8	1220.5
22.5°	1322.3	1224.6	1227.8	1303.1	1451.9	1570.3	1499.8	1353.6
25°	1356.8	1220.5	1223.3	1298.4	1490.9	1692.0	1674.4	1503.9
27.5°	1415.5	1238.3	1236.4	1319.4	1542.9	1793.5	1850.6	1687.8
30°	1479.0	1264.2	1259.4	1353.3	1594.0	1856.1	1975.8	1826.4
32.5°	1558.2	1310.2	1293.6	1402.7	1644.4	1916.1	2082.7	1956.0
35°	1633.6	1377.5	1353.6	1473.6	1698.4	1982.8	2202.4	2099.3
37.5°	1710.5	1478.1	1464.7	1575.8	1774.7	2055.3	2339.4	2261.8
40°	1809.1	1621.1	1614.7	1724.2	1876.5	2134.4	2493.0	2431.0
42.5°	1915.4	1773.1	1767.6	1894.7	2002.9	2213.9	2624.5	2576.3
45°	2023.7	1957.3	1958.5	2076.7	2136.0	2289.0	2727.9	2692.5
47.5°	2151.4	2158.7	2204.4	2265.3	2265.7	2372.6	2819.5	2800.7
50°	2313.5	2402.0	2486.2	2495.8	2396.5	2483.1	2931.6	2924.6
52.5°	2497.1	2682.6	2780.6	2750.3	2524.2	2620.0	3097.3	3097.0
55°	2715.1	2976.0	3068.2	3016.5	2677.2	2798.5	3313.7	3299.7
57.5°	2941.2	3258.2	3332.6	3265.2	2868.4	3006.3	3530.8	3456.4
60°	3185.4	3501.1	3576.8	3475.6	3082.9	3213.5	3674.5	3500.5
62.5°	3345.3	3643.2	3697.4	3600.4	3275.1	3424.5	3720.8	3447.8
65°	3353.6	3548.7	3563.0	3528.6	3356.8	3607.7	3653.7	3291.7
67.5°	3125.7	3137.2	3156.0	3193.0	3182.2	3526.0	3395.1	2927.1
70°	2638.2	2485.0	2546.9	2582.7	2663.1	3136.2	2917.2	2380.6
72.5°	2017.3	1793.5	1863.7	1851.6	2018.9	2572.4	2231.8	1833.7
75°	1451.9	1223.0	1228.4	1229.1	1450.6	2053.4	1521.8	1302.2
77.5°	986.8	865.5	883.3	872.2	970.8	1608.7	1095.6	938.6
80°	674.9	671.7	675.5	649.3	647.4	1039.8	811.2	748.6
82.5°	500.6	462.6	457.2	429.4	496.1	794.9	615.8	537.9
85°	394.9	256.0	222.5	268.5	429.7	731.4	375.4	275.8
87.5°	167.3	100.6	61.0	120.7	238.8	536.0	104.1	53.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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