

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: P195757

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195757
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
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 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: 5396 lumens
Efficiency: N/A
Efficacy: 91.5 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

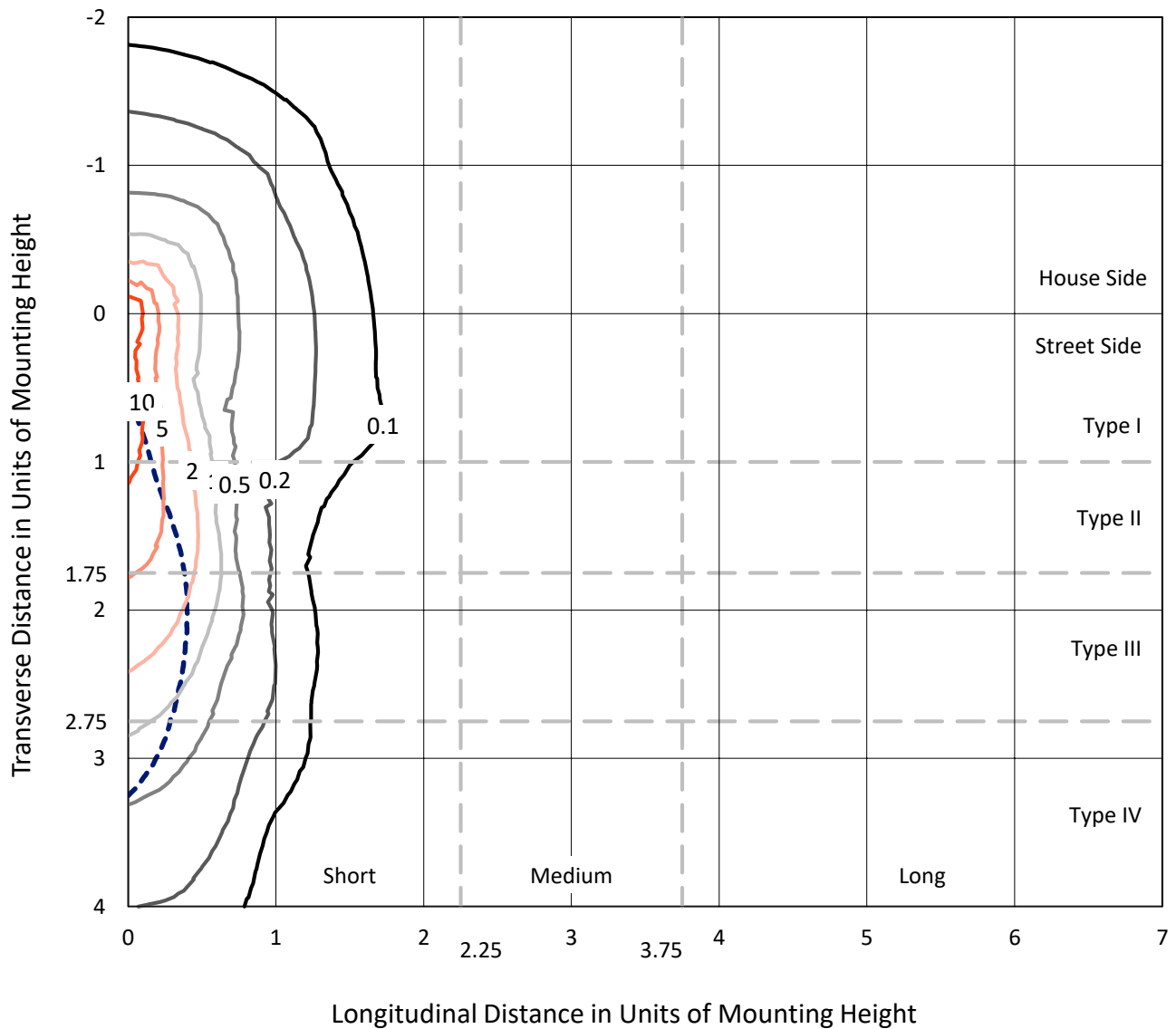
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

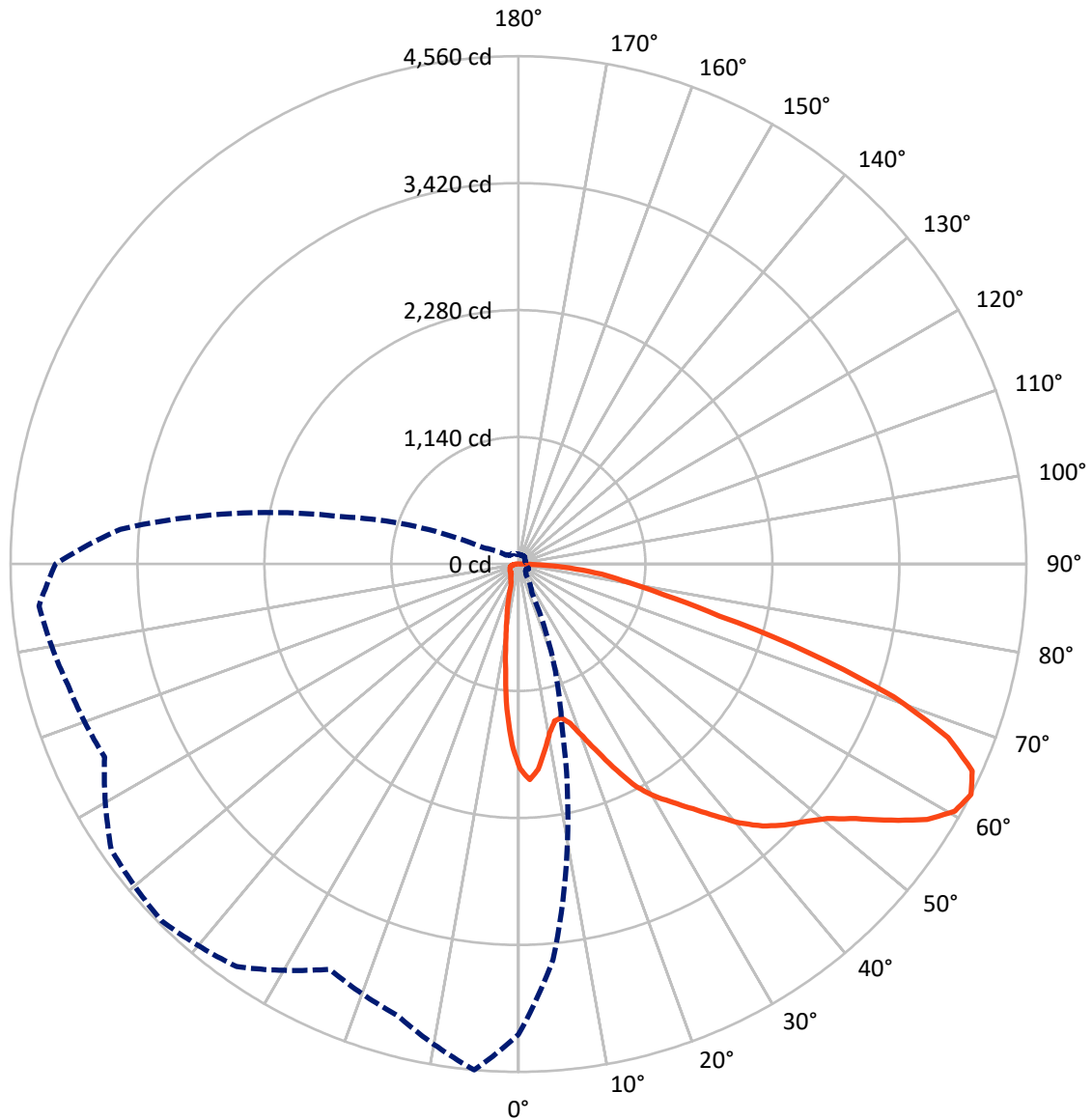
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 18.4 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	955.9	0.0	955.9
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	4440.1	0.0	4440.1
	% Fixture	82.3	0.0	82.3
Total	Lumens	5396.0	0.0	5396.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.8	2.5
10°-20°	244.4	4.5
20°-30°	351.5	6.5
30°-40°	538.3	10.0
40°-50°	787.0	14.6
50°-60°	1145.1	21.2
60°-70°	1326.7	24.6
70°-80°	691.6	12.8
80°-90°	177.8	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°	5396.0	100.0
0°-180°	5396.0	100.0



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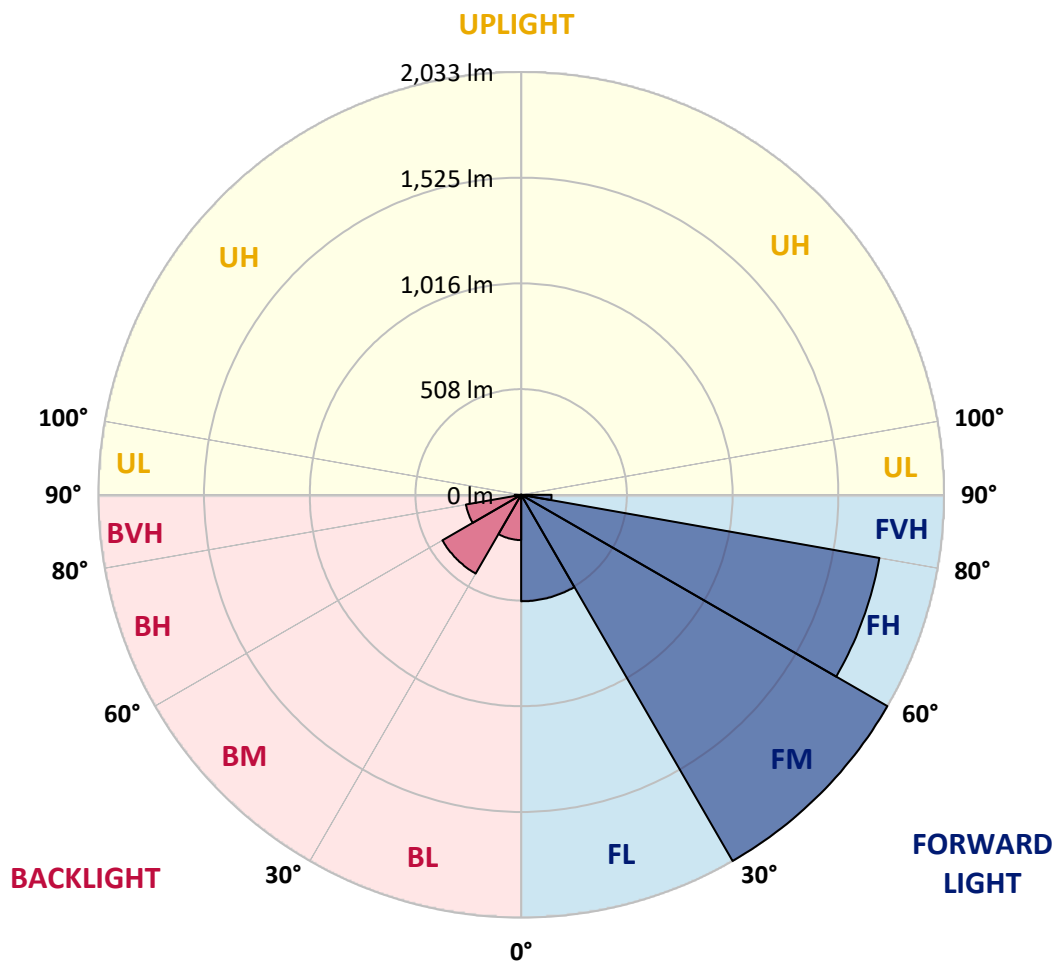
CATALOG NUMBER: NAV-AF-01-D-UNV-SLR-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	512.1	9.5			
FM	(30°-60°)	2033.0	37.7			
FH	(60°-80°)	1748.8	32.4			G1/1800
FVH	(80°-90°)	146.3	2.7			G2/225
BL	(0°-30°)	217.5	4.0	B1/500		
BM	(30°-60°)	437.4	8.1	B1/1000		
BH	(60°-80°)	269.5	5.0	B1/500		G1/500
BVH	(80°-90°)	31.5	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°	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6
2.5°	1899.1	1872.5	1811.0	1757.1	1689.8	1639.3	1577.9	1545.4	1521.5	1505.5	1492.6
5°	1773.9	1709.7	1592.3	1489.4	1378.3	1298.1	1204.2	1153.0	1121.3	1104.1	1096.3
7.5°	1588.0	1503.1	1351.3	1213.2	1074.3	974.2	903.0	827.1	786.8	760.6	752.0
10°	1425.7	1329.8	1148.7	993.4	886.2	814.9	753.9	684.3	632.6	587.6	570.8
12.5°	1331.4	1219.9	1013.3	872.9	782.9	706.6	642.0	566.9	512.5	465.6	447.6
15°	1311.4	1187.0	956.6	796.2	685.8	593.9	516.4	434.7	381.5	342.7	330.2
17.5°	1371.7	1218.3	932.7	726.1	593.1	480.8	385.4	297.7	253.5	232.4	227.3
20°	1495.7	1287.2	921.4	663.1	503.1	370.1	266.4	202.3	180.4	174.1	173.7
22.5°	1658.9	1399.1	933.9	611.5	418.6	273.1	195.2	166.3	157.3	153.8	153.8
25°	1843.1	1550.5	967.1	572.0	344.3	212.4	168.2	152.6	145.1	141.6	142.0
27.5°	2068.5	1734.8	1012.5	535.6	291.1	186.2	157.3	144.0	136.5	133.0	133.4
30°	2238.3	1893.2	1051.6	502.4	263.7	175.7	151.4	138.9	130.7	125.6	125.2
32.5°	2397.1	2032.9	1083.3	478.5	248.0	156.9	136.9	127.5	120.5	114.6	113.5
35°	2572.8	2164.3	1098.2	477.7	237.9	141.6	125.2	113.9	106.8	100.2	99.0
37.5°	2771.9	2325.1	1110.7	482.4	232.4	131.8	119.7	108.8	102.9	96.2	94.7
40°	2979.3	2482.4	1120.5	486.3	231.6	125.2	115.4	105.6	99.8	92.7	91.2
42.5°	3157.3	2621.7	1133.8	484.7	226.1	124.0	112.7	102.9	97.4	90.4	88.4
45°	3299.7	2732.4	1154.5	484.4	217.9	126.8	111.9	102.1	95.5	88.0	86.5
47.5°	3432.3	2857.2	1198.4	482.8	208.9	126.0	116.2	101.3	94.7	87.2	86.1
50°	3584.1	3025.1	1273.1	471.1	196.4	120.5	124.0	100.5	92.7	86.1	84.9
52.5°	3795.4	3270.8	1383.8	449.9	179.2	114.6	125.2	100.2	89.6	83.7	82.2
55°	4043.8	3534.1	1503.1	419.4	156.5	104.5	118.9	98.6	86.5	80.2	77.9
57.5°	4235.9	3728.5	1586.5	375.6	134.2	98.6	106.0	95.1	82.6	76.3	74.3
60°	4289.9	3737.1	1601.3	323.2	122.8	94.7	91.2	103.7	79.4	72.8	70.8
62.5°	4225.4	3566.1	1504.3	286.4	118.9	90.8	82.9	99.0	76.3	69.6	67.7
65°	4034.1	3277.4	1287.2	280.9	122.8	87.2	78.6	79.0	73.2	66.5	64.6
67.5°	3587.3	2852.5	1014.1	284.4	127.5	83.7	75.5	72.0	69.6	63.8	61.4
70°	2917.5	2296.6	798.9	290.7	131.8	79.0	71.6	67.3	65.3	59.1	57.9
72.5°	2247.3	1838.0	630.3	286.4	136.2	74.3	66.1	62.6	60.3	54.4	53.2
75°	1595.9	1460.5	463.2	245.7	124.8	67.7	59.9	56.7	54.8	48.5	48.1
77.5°	1150.2	1093.9	322.4	184.7	98.6	59.5	52.8	50.1	48.9	41.9	41.9
80°	917.5	832.6	192.9	120.5	72.0	49.3	44.2	43.0	41.9	34.8	35.2
82.5°	659.2	577.5	123.2	75.1	52.8	37.6	34.4	34.0	32.1	25.8	25.8
85°	338.0	295.0	79.0	50.5	37.2	24.3	22.7	21.9	20.7	16.0	16.0
87.5°	65.7	90.4	43.8	24.6	18.0	8.6	8.6	7.4	8.6	5.9	6.3
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6
2.5°	1517.2	1509.4	1503.9	1501.2	1540.7	1557.1	1575.9	1602.9	1621.3	1613.5	1638.5
5°	1133.0	1138.5	1151.0	1170.6	1225.8	1252.0	1268.8	1291.1	1307.1	1291.1	1317.7
7.5°	774.7	782.9	809.5	849.8	916.3	945.6	951.5	951.9	948.4	922.1	940.1
10°	570.4	554.0	559.9	588.8	648.3	674.5	677.2	670.2	669.0	658.5	678.8
12.5°	442.1	419.4	406.1	410.8	455.4	476.9	480.4	484.4	500.4	505.5	530.5
15°	329.8	318.1	308.3	304.0	333.3	350.2	352.1	361.5	378.3	383.0	404.5
17.5°	232.0	235.1	240.2	242.2	263.3	274.3	271.1	271.1	273.9	272.7	284.8
20°	177.2	183.5	193.3	202.7	221.8	228.1	220.3	210.5	204.2	201.1	203.8
22.5°	156.5	160.8	167.1	179.2	195.2	198.4	188.2	180.4	174.5	171.4	171.8
25°	145.1	149.5	154.5	164.3	178.0	179.6	170.2	165.1	160.4	157.3	156.5
27.5°	135.4	138.1	141.2	147.5	161.6	162.4	156.1	153.0	149.8	147.5	146.7
30°	126.4	127.5	128.7	135.0	145.5	146.7	143.6	142.0	140.8	139.3	139.3
32.5°	114.6	116.2	118.2	123.6	133.8	135.4	133.4	132.2	130.3	129.5	128.3
35°	100.5	104.5	108.8	115.4	126.4	127.2	124.8	121.3	116.6	115.4	114.6
37.5°	94.7	95.5	100.9	108.8	120.1	120.9	117.8	111.9	108.4	108.8	109.5
40°	90.8	91.9	95.1	102.9	114.2	115.4	112.7	108.4	104.9	105.2	106.4
42.5°	87.6	89.2	91.2	96.2	107.6	109.9	109.2	105.2	101.7	102.5	104.1
45°	86.1	87.2	87.2	90.8	101.7	105.2	105.6	102.5	99.8	100.5	102.5
47.5°	85.3	85.3	84.1	86.9	97.8	101.3	102.1	100.5	99.0	99.8	101.7
50°	84.1	82.6	81.4	83.7	94.7	97.8	98.6	97.4	98.2	99.8	100.9
52.5°	80.6	79.0	79.0	80.6	91.5	94.7	95.1	94.3	95.9	97.8	99.8
55°	76.3	76.3	76.7	78.2	90.0	92.3	91.9	91.2	92.7	95.1	97.0
57.5°	72.4	72.0	73.9	75.9	88.0	89.6	88.8	88.8	90.0	91.9	93.9
60°	70.0	68.1	69.6	72.8	86.1	87.6	86.5	86.1	88.0	89.6	91.2
62.5°	67.7	65.7	66.9	70.0	83.3	84.5	83.7	83.7	85.7	86.9	88.4
65°	64.2	63.4	64.2	67.3	81.0	81.4	81.4	81.8	83.3	84.1	85.7
67.5°	61.0	61.0	61.4	64.6	79.0	78.2	78.2	80.2	80.6	81.4	82.9
70°	57.1	57.9	57.9	61.8	77.5	74.7	75.1	76.7	77.5	78.2	78.6
72.5°	52.8	53.2	54.0	59.1	75.1	71.2	71.6	72.8	73.2	74.3	74.7
75°	48.1	48.5	49.7	56.3	73.6	67.7	66.9	67.7	68.5	69.2	68.9
77.5°	42.6	43.4	44.6	54.8	68.5	66.9	61.0	61.8	62.6	62.6	62.2
80°	36.0	37.2	39.1	52.4	57.9	64.6	54.4	54.8	55.2	55.2	54.4
82.5°	27.0	29.3	32.1	43.4	45.4	55.2	46.9	47.7	46.6	45.8	45.4
85°	17.6	19.6	23.5	30.1	33.3	43.4	38.7	39.1	36.8	36.4	36.4
87.5°	7.0	7.4	10.6	15.3	20.0	27.0	27.8	28.6	26.6	26.6	27.4
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6
2.5°	1676.5	1715.6	1760.6	1806.3	1843.9	1892.4	1939.4	1989.4	2014.9	2029.7	2071.6
5°	1359.2	1412.8	1476.5	1548.1	1607.6	1709.3	1818.9	1940.9	1999.6	2057.5	2167.1
7.5°	972.2	1024.7	1099.0	1191.7	1276.2	1410.4	1554.8	1719.9	1801.3	1895.2	2074.7
10°	721.8	777.4	844.7	923.3	1006.7	1146.3	1308.3	1493.7	1583.3	1689.4	1893.6
12.5°	585.3	650.2	719.9	790.3	861.9	955.8	1125.6	1331.8	1428.0	1534.8	1739.4
15°	456.6	526.2	601.3	678.0	749.2	854.1	1027.4	1271.1	1381.1	1484.4	1651.8
17.5°	323.2	388.9	473.4	566.5	669.8	793.8	1006.3	1297.7	1431.2	1539.1	1651.4
20°	220.3	265.7	350.2	460.5	588.0	745.3	1014.1	1391.2	1557.9	1676.5	1719.1
22.5°	176.1	197.6	254.7	367.0	517.6	710.1	1046.2	1519.6	1739.8	1884.2	1842.3
25°	160.0	172.1	201.9	289.9	455.0	686.6	1108.8	1689.0	1943.7	2090.0	1990.6
27.5°	150.2	160.8	180.0	238.3	401.0	671.4	1188.2	1888.5	2173.3	2293.4	2145.2
30°	144.0	154.5	172.1	214.0	360.3	648.7	1257.8	2070.8	2356.8	2434.7	2228.5
32.5°	131.8	140.1	154.5	191.7	329.8	622.1	1318.1	2234.0	2530.1	2556.0	2328.7
35°	119.3	127.9	142.4	173.7	311.8	601.3	1349.8	2378.7	2701.9	2677.2	2428.0
37.5°	114.6	121.7	135.0	160.8	302.0	587.6	1361.9	2521.1	2886.2	2811.4	2497.3
40°	111.5	117.8	129.5	152.2	299.3	574.7	1359.2	2656.5	3065.0	2950.3	2551.7
42.5°	109.2	114.6	125.6	146.3	291.9	562.6	1350.2	2773.5	3208.2	3070.0	2603.7
45°	107.2	113.1	124.0	149.5	278.2	549.3	1344.7	2880.3	3318.1	3171.0	2673.3
47.5°	106.4	113.1	124.4	148.7	263.3	534.4	1364.2	2998.8	3413.9	3255.9	2766.1
50°	105.2	112.7	133.0	141.6	243.0	516.0	1430.4	3140.1	3514.5	3351.3	2886.2
52.5°	103.3	112.3	142.0	136.2	216.7	490.6	1537.6	3339.6	3688.2	3537.2	3063.8
55°	100.9	113.1	135.8	127.5	189.0	457.7	1644.8	3613.1	3969.9	3836.9	3318.9
57.5°	98.2	111.9	128.3	119.7	165.9	416.3	1726.1	3837.3	4202.3	4146.0	3632.3
60°	96.2	114.6	115.4	115.0	151.0	376.8	1734.0	3822.8	4269.2	4346.7	3939.0
62.5°	93.9	117.0	105.2	111.5	143.6	340.0	1637.3	3586.1	4156.1	4320.8	4189.0
65°	90.8	102.1	99.8	108.4	143.6	320.4	1412.4	3192.1	3843.5	4076.7	4324.8
67.5°	87.6	92.7	95.9	104.1	146.7	302.0	1135.0	2692.5	3350.6	3682.7	4172.2
70°	83.3	87.6	91.5	100.2	145.1	289.1	893.2	2158.1	2757.4	3137.7	3750.0
72.5°	79.4	82.6	86.5	94.3	145.1	283.3	717.5	1692.9	2105.3	2425.7	3106.4
75°	73.6	76.3	79.8	88.4	142.4	259.0	538.7	1356.4	1540.3	1741.0	2451.1
77.5°	67.7	69.6	72.4	81.0	128.3	216.4	381.1	1050.5	1141.2	1252.4	1910.8
80°	60.3	61.8	63.8	72.4	106.4	167.8	248.0	821.6	853.3	906.9	1257.0
82.5°	51.6	54.0	54.4	62.2	85.7	121.7	147.5	563.0	562.6	641.2	886.9
85°	42.3	43.4	44.2	48.9	63.4	81.0	97.0	307.5	274.3	384.2	770.3
87.5°	31.7	30.5	31.7	32.9	41.9	47.7	52.0	56.7	34.0	69.6	448.0
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6	1839.6
2.5°	2093.9	2117.0	2103.3	2086.9	2045.8	1985.5	1939.4	1899.1
5°	2243.0	2285.6	2266.8	2205.8	2099.4	1978.5	1851.3	1773.9
7.5°	2224.2	2308.7	2301.3	2199.5	2047.0	1868.9	1690.2	1588.0
10°	2074.0	2192.5	2212.8	2108.8	1947.2	1748.1	1541.1	1425.7
12.5°	1910.4	2010.2	2051.7	2012.1	1859.9	1657.7	1446.8	1331.4
15°	1773.5	1824.0	1865.0	1890.5	1796.2	1625.6	1430.4	1311.4
17.5°	1672.2	1662.4	1696.8	1757.8	1761.7	1668.2	1504.7	1371.7
20°	1623.2	1546.6	1566.5	1652.2	1752.4	1776.6	1653.0	1495.7
22.5°	1620.5	1500.8	1504.7	1597.0	1779.4	1924.5	1838.0	1658.9
25°	1662.8	1495.7	1499.2	1591.2	1827.1	2073.6	2052.0	1843.1
27.5°	1734.8	1517.6	1515.3	1617.0	1890.9	2198.0	2268.0	2068.5
30°	1812.6	1549.3	1543.4	1658.5	1953.5	2274.7	2421.4	2238.3
32.5°	1909.6	1605.6	1585.3	1719.1	2015.3	2348.2	2552.4	2397.1
35°	2002.0	1688.2	1658.9	1806.0	2081.4	2430.0	2699.2	2572.8
37.5°	2096.3	1811.4	1795.0	1931.2	2174.9	2518.8	2867.0	2771.9
40°	2217.1	1986.7	1978.9	2113.1	2299.7	2615.8	3055.2	2979.3
42.5°	2347.4	2172.9	2166.3	2322.0	2454.6	2713.2	3216.4	3157.3
45°	2480.1	2398.7	2400.2	2545.0	2617.8	2805.2	3343.1	3299.7
47.5°	2636.6	2645.6	2701.5	2776.2	2776.6	2907.7	3455.4	3432.3
50°	2835.3	2943.7	3047.0	3058.7	2937.0	3043.1	3592.7	3584.1
52.5°	3060.3	3287.6	3407.7	3370.5	3093.5	3210.9	3795.8	3795.4
55°	3327.5	3647.1	3760.2	3696.8	3280.9	3429.6	4061.1	4043.8
57.5°	3604.5	3993.0	4084.1	4001.6	3515.3	3684.3	4327.1	4235.9
60°	3903.8	4290.7	4383.4	4259.4	3778.2	3938.2	4503.2	4289.9
62.5°	4099.8	4464.8	4531.3	4412.4	4013.7	4196.8	4559.9	4225.4
65°	4110.0	4349.0	4366.6	4324.4	4113.9	4421.4	4477.7	4034.1
67.5°	3830.6	3844.7	3867.8	3913.2	3899.9	4321.2	4160.8	3587.3
70°	3233.2	3045.4	3121.3	3165.1	3263.7	3843.5	3575.1	2917.5
72.5°	2472.2	2198.0	2284.1	2269.2	2474.2	3152.6	2735.1	2247.3
75°	1779.4	1498.8	1505.5	1506.3	1777.8	2516.4	1865.0	1595.9
77.5°	1209.3	1060.6	1082.6	1068.9	1189.8	1971.5	1342.7	1150.2
80°	827.1	823.2	827.9	795.8	793.4	1274.3	994.1	917.5
82.5°	613.5	566.9	560.3	526.2	608.0	974.2	754.7	659.2
85°	484.0	313.8	272.7	329.0	526.6	896.3	460.1	338.0
87.5°	205.0	123.2	74.7	147.9	292.6	656.9	127.5	65.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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