

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: P195763

Luminaire Tested: **NAV-AF-01-D-UNV-SLR-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195763
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-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 1200mA 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: 5920 lumens
Efficiency: N/A
Efficacy: 88.4 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

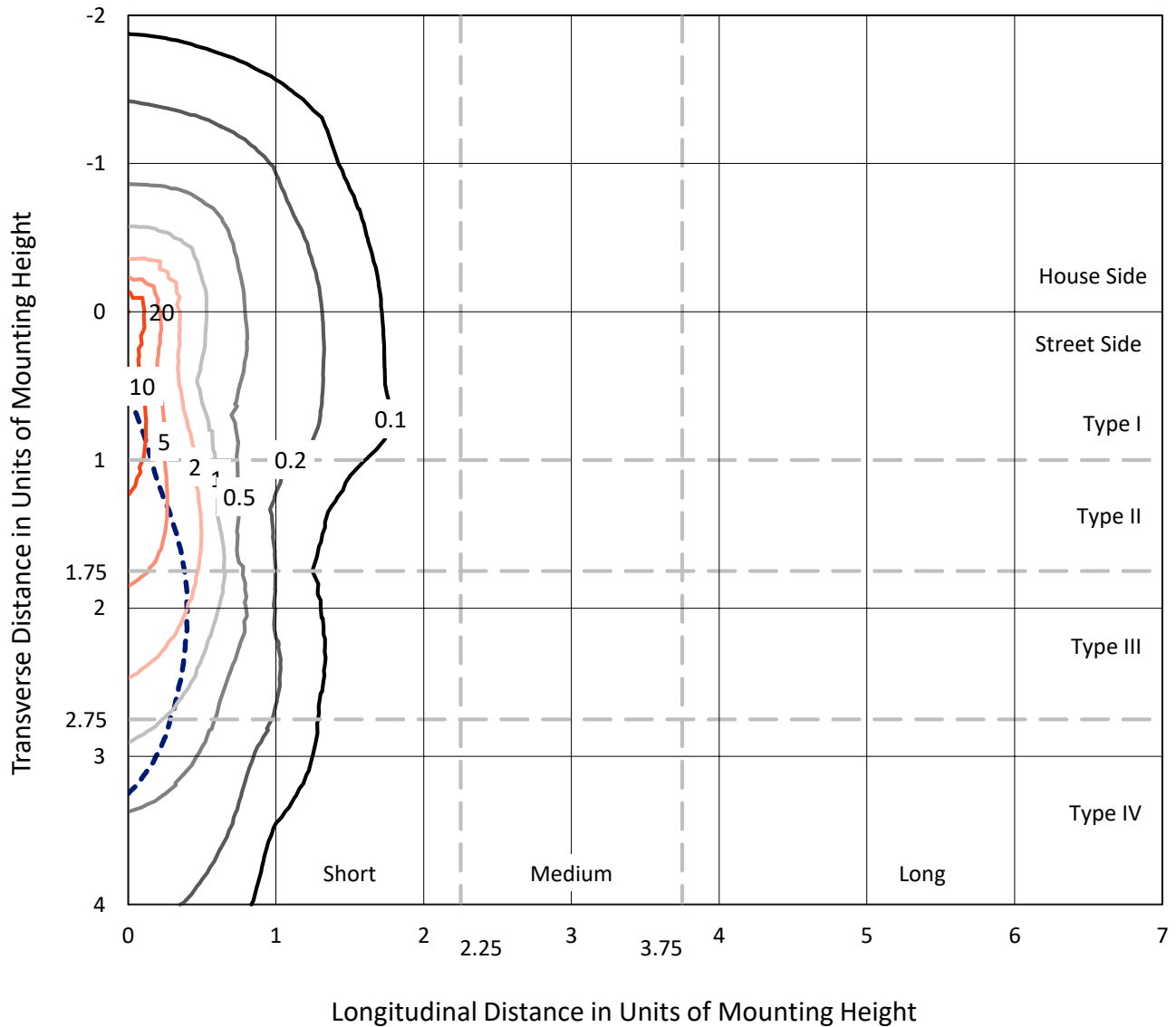
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

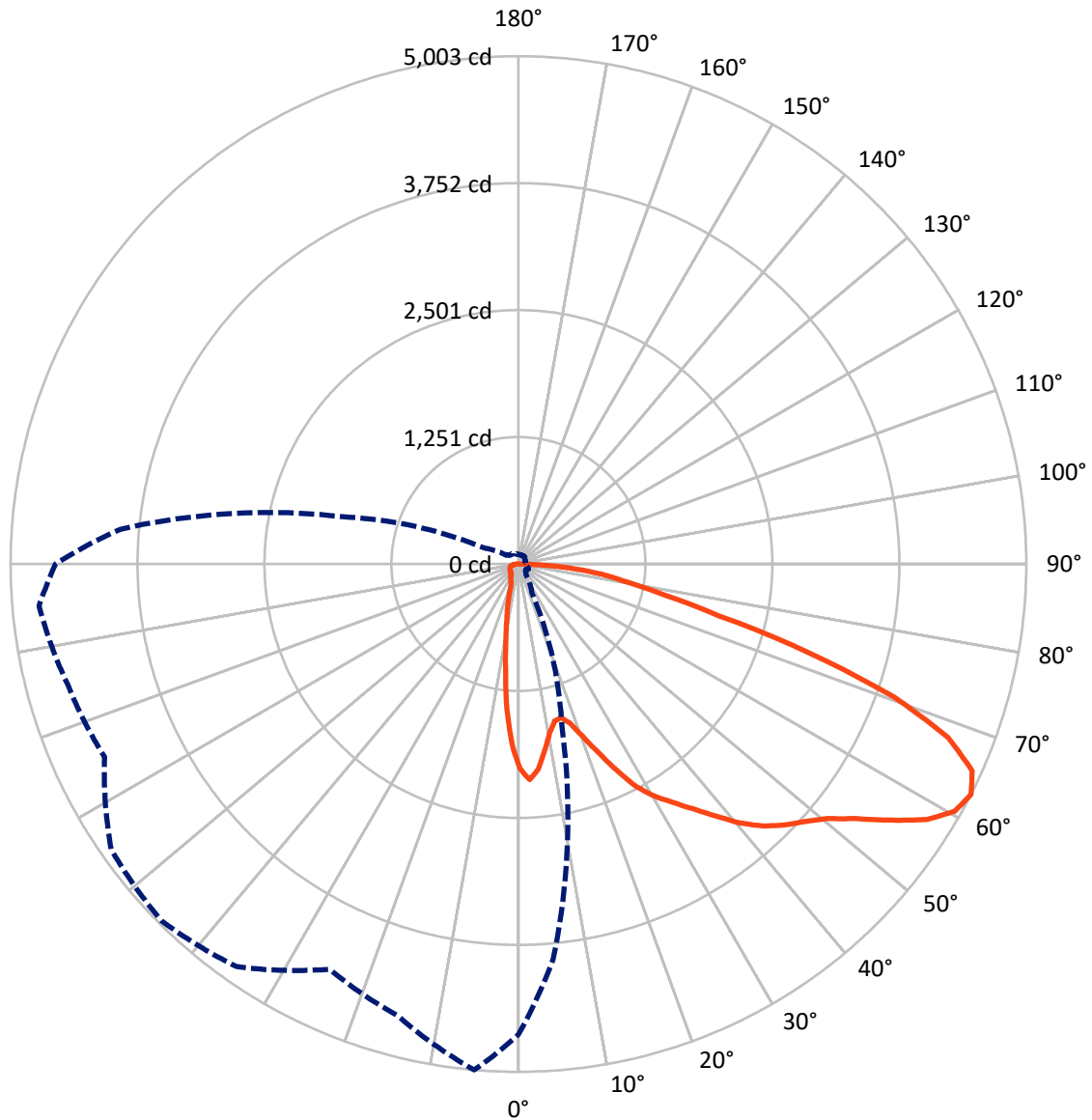
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 20.2 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	1048.7	0.0	1048.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	4871.3	0.0	4871.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	5920.0	0.0	5920.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.8	2.5
10°-20°	268.1	4.5
20°-30°	385.6	6.5
30°-40°	590.6	10.0
40°-50°	863.4	14.6
50°-60°	1256.3	21.2
60°-70°	1455.5	24.6
70°-80°	758.8	12.8
80°-90°	195.0	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°	5920.0	100.0
0°-180°	5920.0	100.0



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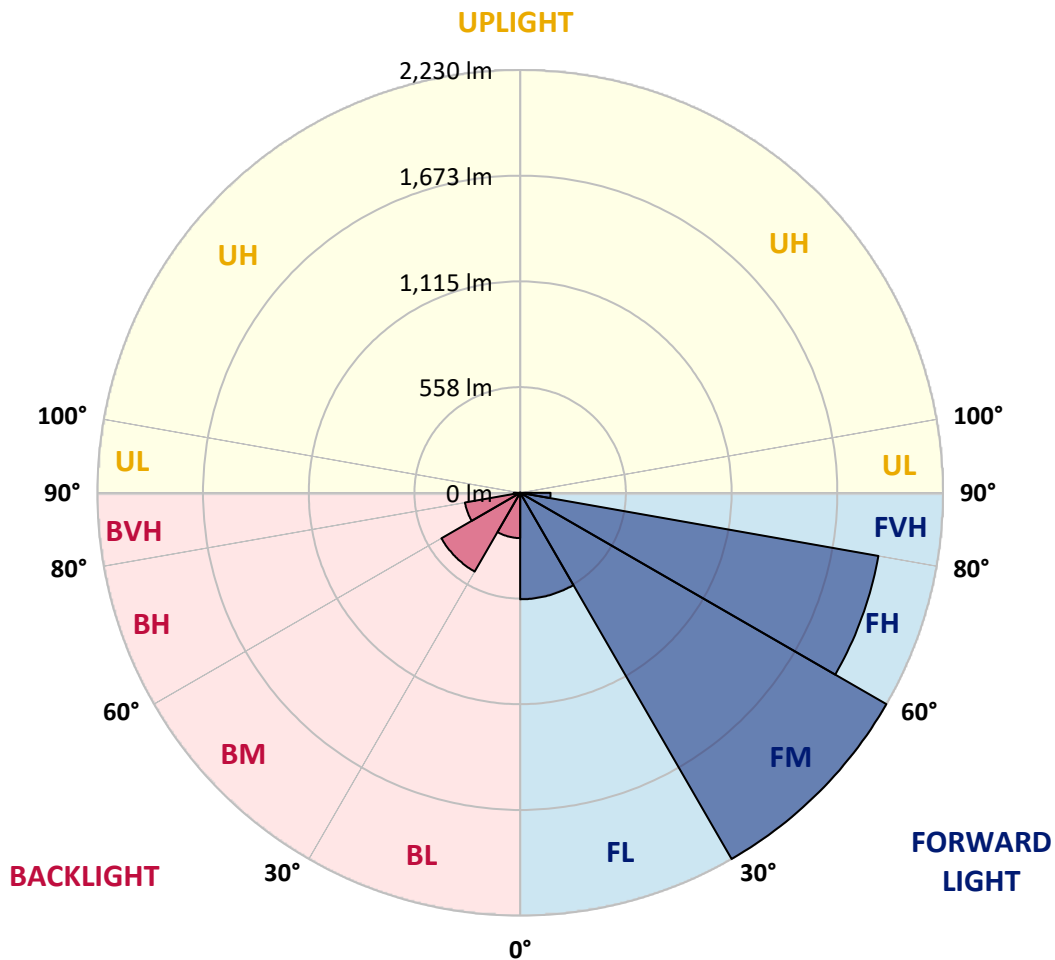
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	561.8	9.5			
FM	(30°-60°)	2230.4	37.7			
FH	(60°-80°)	1918.6	32.4			G2/5000
FVH	(80°-90°)	160.5	2.7			G2/225
BL	(0°-30°)	238.6	4.0	B1/500		
BM	(30°-60°)	479.8	8.1	B1/1000		
BH	(60°-80°)	295.7	5.0	B1/500		G1/500
BVH	(80°-90°)	34.6	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°	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2
2.5°	2083.5	2054.3	1986.9	1927.7	1853.9	1798.5	1731.1	1695.5	1669.3	1651.7	1637.5
5°	1946.1	1875.7	1747.0	1634.1	1512.2	1424.2	1321.2	1264.9	1230.2	1211.3	1202.7
7.5°	1742.3	1649.1	1482.6	1331.0	1178.7	1068.8	990.7	907.4	863.2	834.4	825.0
10°	1564.1	1459.0	1260.2	1089.8	972.2	894.1	827.1	750.7	694.1	644.7	626.2
12.5°	1460.7	1338.3	1111.7	957.6	858.9	775.2	704.4	622.0	562.3	510.8	491.0
15°	1438.8	1302.3	1049.5	873.5	752.4	651.6	566.6	476.9	418.5	376.0	362.3
17.5°	1504.9	1336.6	1023.3	796.7	650.7	527.5	422.8	326.6	278.1	255.0	249.4
20°	1641.0	1412.2	1010.8	727.5	552.0	406.1	292.3	221.9	197.9	191.0	190.6
22.5°	1819.9	1534.9	1024.6	670.9	459.3	299.6	214.2	182.4	172.6	168.7	168.7
25°	2022.1	1701.0	1061.1	627.5	377.7	233.1	184.6	167.4	159.2	155.4	155.8
27.5°	2269.3	1903.2	1110.9	587.6	319.3	204.3	172.6	158.0	149.8	145.9	146.4
30°	2455.6	2077.1	1153.8	551.1	289.3	192.7	166.1	152.4	143.4	137.8	137.4
32.5°	2629.9	2230.3	1188.5	524.9	272.1	172.1	150.2	139.9	132.2	125.8	124.5
35°	2822.6	2374.5	1204.9	524.1	261.0	155.4	137.4	124.9	117.2	109.9	108.6
37.5°	3041.1	2550.9	1218.6	529.2	255.0	144.7	131.3	119.3	112.9	105.6	103.9
40°	3268.6	2723.5	1229.3	533.5	254.1	137.4	126.6	115.9	109.5	101.7	100.0
42.5°	3463.9	2876.3	1243.9	531.8	248.1	136.1	123.6	112.9	106.9	99.2	97.0
45°	3620.1	2997.8	1266.7	531.4	239.1	139.1	122.8	112.0	104.7	96.6	94.9
47.5°	3765.6	3134.7	1314.7	529.7	229.2	138.2	127.5	111.2	103.9	95.7	94.4
50°	3932.2	3318.8	1396.7	516.8	215.5	132.2	136.1	110.3	101.7	94.4	93.1
52.5°	4164.0	3588.4	1518.2	493.6	196.6	125.8	137.4	109.9	98.3	91.9	90.1
55°	4436.5	3877.2	1649.1	460.1	171.7	114.6	130.5	108.2	94.9	88.0	85.4
57.5°	4647.3	4090.6	1740.5	412.1	147.2	108.2	116.3	104.3	90.6	83.7	81.6
60°	4706.5	4100.0	1756.8	354.5	134.8	103.9	100.0	113.7	87.1	79.8	77.7
62.5°	4635.7	3912.4	1650.4	314.2	130.5	99.6	91.0	108.6	83.7	76.4	74.3
65°	4425.8	3595.7	1412.2	308.2	134.8	95.7	86.3	86.7	80.3	73.0	70.8
67.5°	3935.6	3129.5	1112.6	312.1	139.9	91.9	82.8	79.0	76.4	70.0	67.4
70°	3200.8	2519.6	876.5	318.9	144.7	86.7	78.5	73.8	71.7	64.8	63.5
72.5°	2465.5	2016.5	691.5	314.2	149.4	81.6	72.5	68.7	66.1	59.7	58.4
75°	1750.8	1602.3	508.2	269.6	136.9	74.3	65.7	62.2	60.1	53.2	52.8
77.5°	1261.9	1200.1	353.7	202.6	108.2	65.2	57.9	54.9	53.7	45.9	45.9
80°	1006.5	913.4	211.6	132.2	79.0	54.1	48.5	47.2	45.9	38.2	38.6
82.5°	723.3	633.5	135.2	82.4	57.9	41.2	37.8	37.3	35.2	28.3	28.3
85°	370.9	323.6	86.7	55.4	40.8	26.6	24.9	24.0	22.7	17.6	17.6
87.5°	72.1	99.2	48.1	27.0	19.7	9.4	9.4	8.2	9.4	6.4	6.9
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°	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2
2.5°	1664.6	1656.0	1650.0	1647.0	1690.3	1708.3	1728.9	1758.6	1778.7	1770.2	1797.6
5°	1243.1	1249.1	1262.8	1284.3	1344.8	1373.5	1392.0	1416.5	1434.1	1416.5	1445.7
7.5°	849.9	858.9	888.1	932.3	1005.3	1037.5	1043.9	1044.3	1040.5	1011.7	1031.4
10°	625.8	607.8	614.2	646.0	711.2	740.0	743.0	735.3	734.0	722.4	744.7
12.5°	485.0	460.1	445.5	450.7	499.6	523.2	527.1	531.4	549.0	554.6	582.0
15°	361.8	349.0	338.2	333.5	365.7	384.2	386.3	396.6	415.1	420.2	443.8
17.5°	254.5	258.0	263.5	265.7	288.9	300.9	297.5	297.5	300.5	299.2	312.5
20°	194.4	201.3	212.0	222.3	243.4	250.2	241.7	230.9	224.1	220.6	223.6
22.5°	171.7	176.4	183.3	196.6	214.2	217.6	206.5	197.9	191.4	188.0	188.4
25°	159.2	164.0	169.5	180.3	195.3	197.0	186.7	181.1	176.0	172.6	171.7
27.5°	148.5	151.5	155.0	161.8	177.3	178.1	171.3	167.8	164.4	161.8	161.0
30°	138.6	139.9	141.2	148.1	159.7	161.0	157.5	155.8	154.5	152.8	152.8
32.5°	125.8	127.5	129.6	135.6	146.8	148.5	146.4	145.1	142.9	142.1	140.8
35°	110.3	114.6	119.3	126.6	138.6	139.5	136.9	133.1	127.9	126.6	125.8
37.5°	103.9	104.7	110.7	119.3	131.8	132.6	129.2	122.8	118.9	119.3	120.2
40°	99.6	100.9	104.3	112.9	125.3	126.6	123.6	118.9	115.0	115.5	116.8
42.5°	96.1	97.9	100.0	105.6	118.0	120.6	119.8	115.5	111.6	112.5	114.2
45°	94.4	95.7	95.7	99.6	111.6	115.5	115.9	112.5	109.5	110.3	112.5
47.5°	93.6	93.6	92.3	95.3	107.3	111.2	112.0	110.3	108.6	109.5	111.6
50°	92.3	90.6	89.3	91.9	103.9	107.3	108.2	106.9	107.7	109.5	110.7
52.5°	88.4	86.7	86.7	88.4	100.4	103.9	104.3	103.4	105.2	107.3	109.5
55°	83.7	83.7	84.1	85.8	98.7	101.3	100.9	100.0	101.7	104.3	106.4
57.5°	79.4	79.0	81.1	83.3	96.6	98.3	97.4	97.4	98.7	100.9	103.0
60°	76.8	74.7	76.4	79.8	94.4	96.1	94.9	94.4	96.6	98.3	100.0
62.5°	74.3	72.1	73.4	76.8	91.4	92.7	91.9	91.9	94.0	95.3	97.0
65°	70.4	69.5	70.4	73.8	88.9	89.3	89.3	89.7	91.4	92.3	94.0
67.5°	67.0	67.0	67.4	70.8	86.7	85.8	85.8	88.0	88.4	89.3	91.0
70°	62.7	63.5	63.5	67.8	85.0	82.0	82.4	84.1	85.0	85.8	86.3
72.5°	57.9	58.4	59.2	64.8	82.4	78.1	78.5	79.8	80.3	81.6	82.0
75°	52.8	53.2	54.5	61.8	80.7	74.3	73.4	74.3	75.1	76.0	75.5
77.5°	46.8	47.6	48.9	60.1	75.1	73.4	67.0	67.8	68.7	68.7	68.2
80°	39.5	40.8	42.9	57.5	63.5	70.8	59.7	60.1	60.5	60.5	59.7
82.5°	29.6	32.2	35.2	47.6	49.8	60.5	51.5	52.4	51.1	50.2	49.8
85°	19.3	21.5	25.8	33.1	36.5	47.6	42.5	42.9	40.3	39.9	39.9
87.5°	7.7	8.2	11.6	16.7	21.9	29.6	30.5	31.3	29.2	29.2	30.0
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°	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2
2.5°	1839.3	1882.2	1931.5	1981.8	2023.0	2076.2	2127.7	2182.6	2210.5	2226.9	2272.8
5°	1491.1	1550.0	1619.9	1698.5	1763.7	1875.3	1995.5	2129.4	2193.8	2257.3	2377.5
7.5°	1066.6	1124.2	1205.7	1307.4	1400.2	1547.4	1705.8	1886.9	1976.2	2079.2	2276.2
10°	791.9	852.9	926.7	1013.0	1104.4	1257.6	1435.3	1638.8	1737.1	1853.4	2077.5
12.5°	642.1	713.4	789.8	867.0	945.6	1048.6	1234.9	1461.1	1566.7	1683.9	1908.4
15°	500.9	577.3	659.7	743.9	822.0	937.0	1127.2	1394.6	1515.2	1628.5	1812.2
17.5°	354.5	426.7	519.4	621.5	734.8	870.9	1104.0	1423.8	1570.1	1688.6	1811.8
20°	241.7	291.4	384.2	505.2	645.1	817.7	1112.6	1526.3	1709.2	1839.3	1886.0
22.5°	193.2	216.8	279.4	402.6	567.9	779.1	1147.8	1667.1	1908.8	2067.2	2021.3
25°	175.6	188.9	221.5	318.1	499.2	753.3	1216.4	1853.0	2132.4	2293.0	2183.9
27.5°	164.8	176.4	197.4	261.4	440.0	736.6	1303.6	2071.9	2384.4	2516.2	2353.5
30°	158.0	169.5	188.9	234.8	395.3	711.7	1380.0	2271.9	2585.7	2671.1	2444.9
32.5°	144.7	153.7	169.5	210.3	361.8	682.5	1446.1	2450.9	2775.8	2804.2	2554.8
35°	130.9	140.4	156.2	190.6	342.1	659.7	1480.8	2609.7	2964.3	2937.2	2663.8
37.5°	125.8	133.5	148.1	176.4	331.4	644.7	1494.2	2766.0	3166.4	3084.5	2739.8
40°	122.3	129.2	142.1	167.0	328.4	630.5	1491.1	2914.5	3362.6	3236.8	2799.4
42.5°	119.8	125.8	137.8	160.5	320.2	617.2	1481.3	3042.8	3519.7	3368.2	2856.5
45°	117.6	124.0	136.1	164.0	305.2	602.6	1475.3	3160.0	3640.3	3478.9	2932.9
47.5°	116.8	124.0	136.5	163.1	288.9	586.3	1496.7	3290.1	3745.5	3572.1	3034.7
50°	115.5	123.6	145.9	155.4	266.6	566.2	1569.3	3445.0	3855.8	3676.8	3166.4
52.5°	113.3	123.2	155.8	149.4	237.8	538.3	1686.9	3663.9	4046.4	3880.7	3361.3
55°	110.7	124.0	148.9	139.9	207.3	502.2	1804.5	3964.0	4355.4	4209.5	3641.2
57.5°	107.7	122.8	140.8	131.3	182.0	456.7	1893.8	4209.9	4610.4	4548.6	3985.0
60°	105.6	125.8	126.6	126.2	165.7	413.3	1902.4	4194.0	4683.8	4768.8	4321.5
62.5°	103.0	128.3	115.5	122.3	157.5	373.0	1796.3	3934.3	4559.7	4740.4	4595.8
65°	99.6	112.0	109.5	118.9	157.5	351.5	1549.5	3502.1	4216.8	4472.6	4744.7
67.5°	96.1	101.7	105.2	114.2	161.0	331.4	1245.2	2954.0	3675.9	4040.4	4577.3
70°	91.4	96.1	100.4	109.9	159.2	317.2	979.9	2367.6	3025.2	3442.4	4114.2
72.5°	87.1	90.6	94.9	103.4	159.2	310.8	787.2	1857.3	2309.7	2661.2	3408.1
75°	80.7	83.7	87.6	97.0	156.2	284.2	591.1	1488.1	1689.9	1910.1	2689.1
77.5°	74.3	76.4	79.4	88.9	140.8	237.4	418.1	1152.5	1252.1	1374.0	2096.4
80°	66.1	67.8	70.0	79.4	116.8	184.1	272.1	901.4	936.2	995.0	1379.1
82.5°	56.7	59.2	59.7	68.2	94.0	133.5	161.8	617.7	617.2	703.5	973.1
85°	46.4	47.6	48.5	53.7	69.5	88.9	106.4	337.4	300.9	421.5	845.2
87.5°	34.8	33.5	34.8	36.1	45.9	52.4	57.1	62.2	37.3	76.4	491.5
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°	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2	2018.2
2.5°	2297.2	2322.6	2307.5	2289.5	2244.5	2178.3	2127.7	2083.5
5°	2460.8	2507.6	2487.0	2420.0	2303.3	2170.6	2031.1	1946.1
7.5°	2440.2	2532.9	2524.7	2413.1	2245.7	2050.4	1854.3	1742.3
10°	2275.4	2405.4	2427.7	2313.6	2136.3	1917.8	1690.7	1564.1
12.5°	2095.9	2205.4	2250.9	2207.5	2040.6	1818.7	1587.3	1460.7
15°	1945.7	2001.1	2046.1	2074.0	1970.6	1783.5	1569.3	1438.8
17.5°	1834.5	1823.8	1861.6	1928.5	1932.8	1830.2	1650.8	1504.9
20°	1780.9	1696.8	1718.6	1812.6	1922.5	1949.1	1813.5	1641.0
22.5°	1777.9	1646.5	1650.8	1752.1	1952.1	2111.4	2016.5	1819.9
25°	1824.2	1641.0	1644.8	1745.7	2004.5	2274.9	2251.3	2022.1
27.5°	1903.2	1665.0	1662.4	1774.0	2074.5	2411.4	2488.3	2269.3
30°	1988.6	1699.8	1693.3	1819.5	2143.2	2495.6	2656.5	2455.6
32.5°	2095.1	1761.6	1739.2	1886.0	2211.0	2576.2	2800.3	2629.9
35°	2196.4	1852.1	1819.9	1981.3	2283.5	2666.0	2961.3	2822.6
37.5°	2299.8	1987.3	1969.3	2118.7	2386.1	2763.4	3145.4	3041.1
40°	2432.5	2179.6	2171.1	2318.3	2523.0	2869.8	3351.9	3268.6
42.5°	2575.4	2384.0	2376.7	2547.5	2693.0	2976.7	3528.7	3463.9
45°	2720.9	2631.6	2633.3	2792.2	2872.0	3077.6	3667.8	3620.1
47.5°	2892.6	2902.5	2963.8	3045.8	3046.3	3190.0	3791.0	3765.6
50°	3110.6	3229.5	3342.9	3355.7	3222.2	3338.6	3941.6	3932.2
52.5°	3357.4	3606.8	3738.6	3697.8	3393.9	3522.7	4164.4	4164.0
55°	3650.6	4001.3	4125.3	4055.8	3599.5	3762.6	4455.4	4436.5
57.5°	3954.5	4380.7	4480.7	4390.2	3856.6	4042.1	4747.3	4647.3
60°	4282.9	4707.4	4809.1	4673.0	4145.1	4320.6	4940.5	4706.5
62.5°	4497.9	4898.4	4971.4	4840.9	4403.5	4604.4	5002.7	4635.7
65°	4509.1	4771.3	4790.7	4744.3	4513.4	4850.7	4912.6	4425.8
67.5°	4202.6	4218.1	4243.4	4293.2	4278.6	4740.9	4564.9	3935.6
70°	3547.2	3341.1	3424.4	3472.5	3580.6	4216.8	3922.3	3200.8
72.5°	2712.3	2411.4	2505.9	2489.5	2714.5	3458.7	3000.8	2465.5
75°	1952.1	1644.4	1651.7	1652.5	1950.4	2760.8	2046.1	1750.8
77.5°	1326.8	1163.6	1187.7	1172.7	1305.3	2162.9	1473.1	1261.9
80°	907.4	903.1	908.3	873.1	870.5	1398.0	1090.7	1006.5
82.5°	673.0	622.0	614.7	577.3	667.0	1068.8	828.0	723.3
85°	531.0	344.2	299.2	361.0	577.7	983.4	504.8	370.9
87.5°	224.9	135.2	82.0	162.2	321.1	720.7	139.9	72.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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