

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: P270375

Luminaire Tested: **NAV-AF-02-D-UNV-SLR-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270375
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-02-D-UNV-SLR-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND SPILL LIGHT
ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7551.5 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 85
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

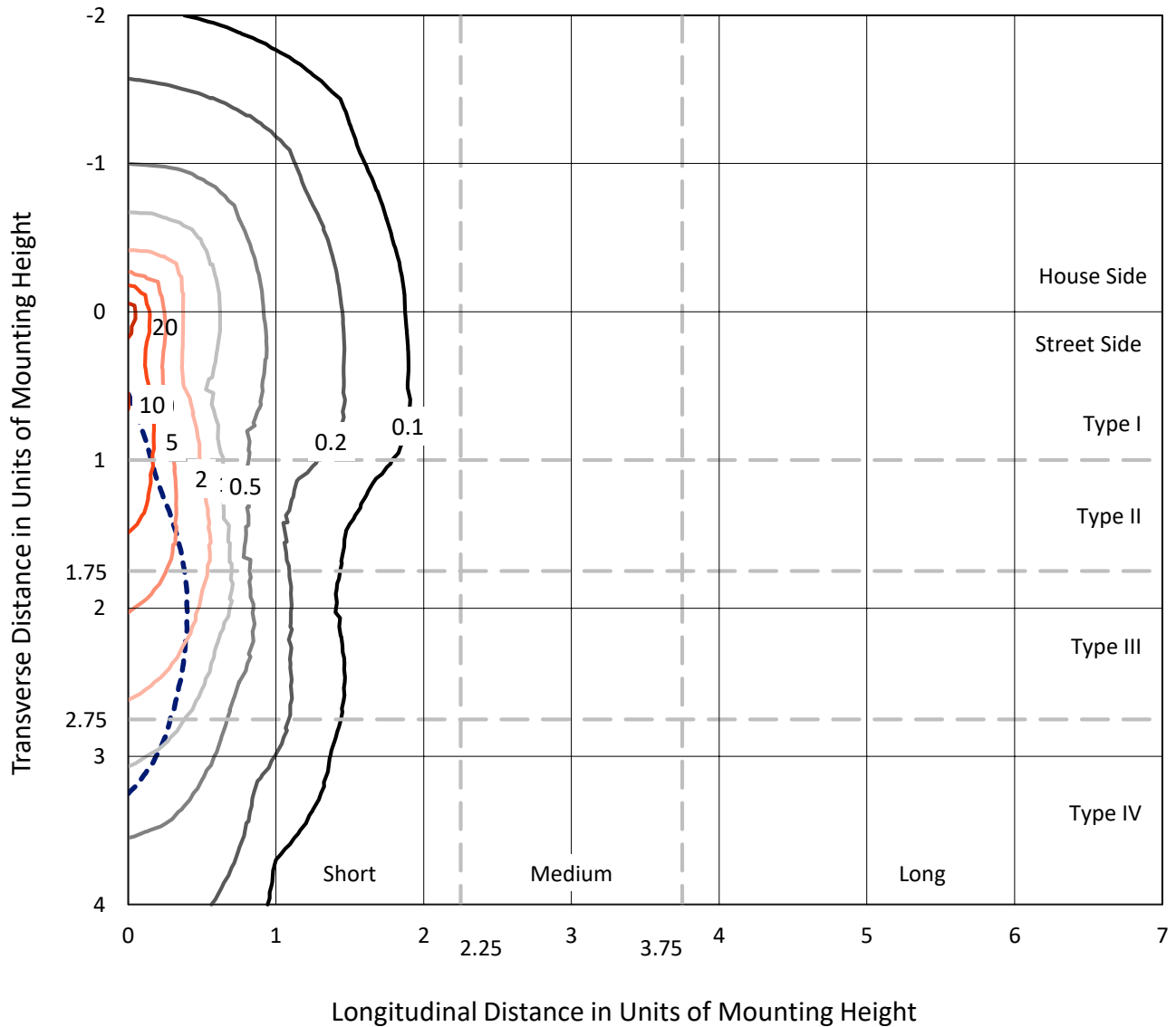


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

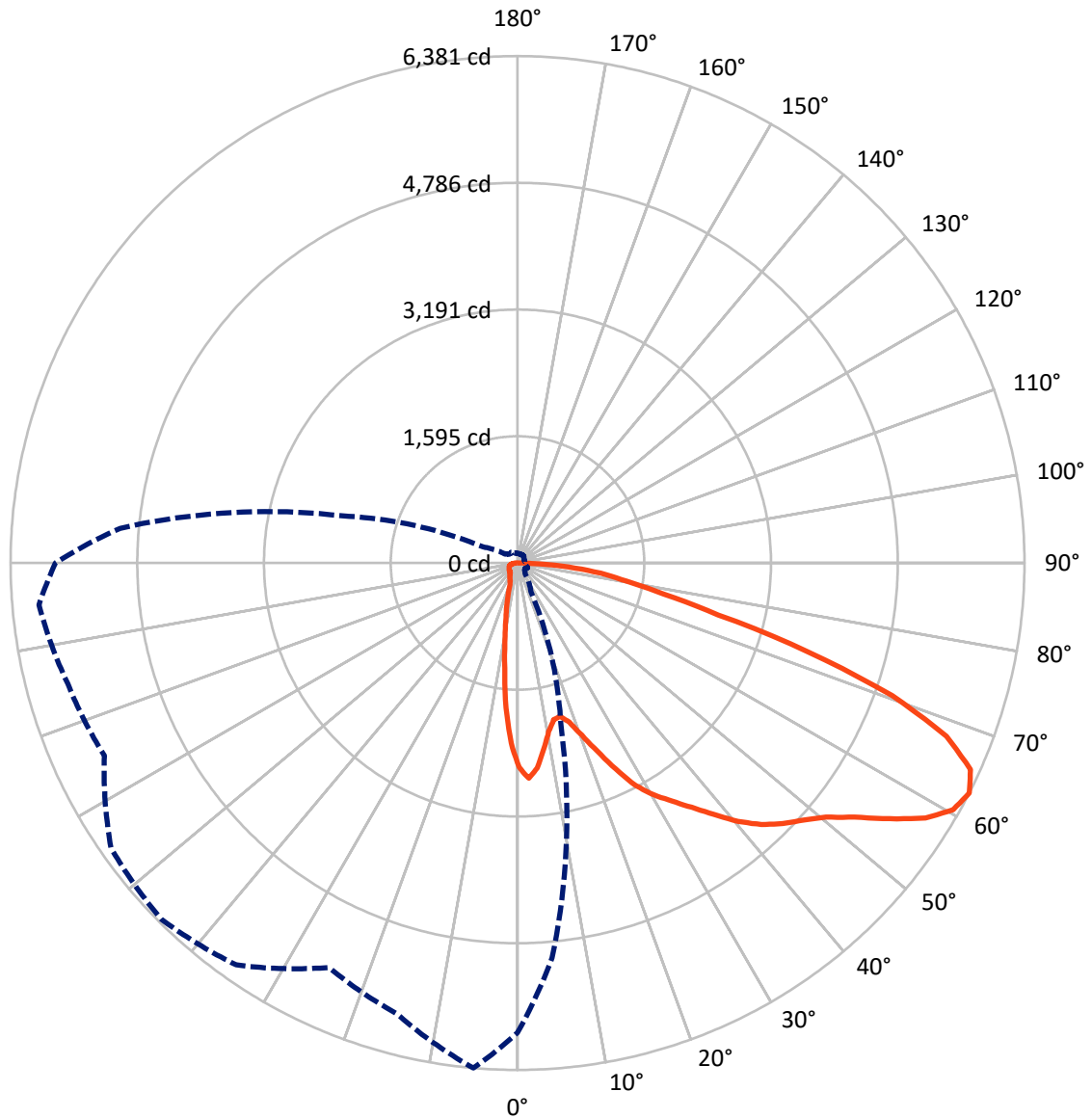


Based on 10 foot mounting height. Maximum calculated value = 25.7 fc
 Type IV - Short - Non-Cutoff

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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	1337.7	0.0	1337.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	6213.7	0.0	6213.7
	% Fixture	82.3	0.0	82.3
Total	Lumens	7551.5	0.0	7551.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.2	2.5
10°-20°	342.0	4.5
20°-30°	491.8	6.5
30°-40°	753.3	10.0
40°-50°	1101.3	14.6
50°-60°	1602.5	21.2
60°-70°	1856.7	24.6
70°-80°	967.9	12.8
80°-90°	248.8	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°	7551.5	100.0
0°-180°	7551.5	100.0



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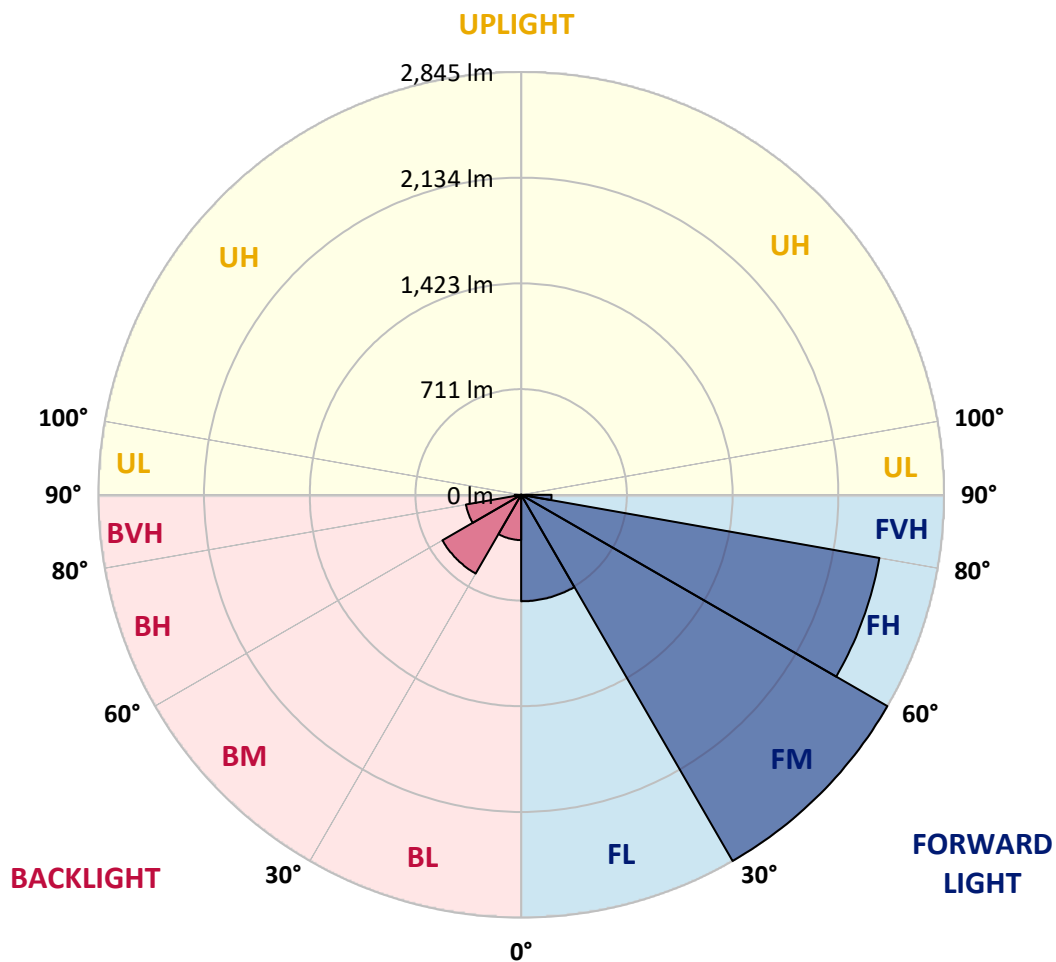
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	716.7	9.5			
FM	(30°-60°)	2845.1	37.7			
FH	(60°-80°)	2447.3	32.4			G2/5000
FVH	(80°-90°)	204.7	2.7			G2/225
BL	(0°-30°)	304.4	4.0	B1/500		
BM	(30°-60°)	612.1	8.1	B1/1000		
BH	(60°-80°)	377.2	5.0	B1/500		G1/500
BVH	(80°-90°)	44.1	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°	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5
2.5°	2657.6	2620.4	2534.5	2458.9	2364.8	2294.1	2208.2	2162.7	2129.3	2106.9	2088.7
5°	2482.5	2392.6	2228.4	2084.4	1928.9	1816.7	1685.3	1613.5	1569.2	1545.2	1534.1
7.5°	2222.3	2103.7	1891.1	1697.8	1503.6	1363.4	1263.6	1157.5	1101.1	1064.4	1052.4
10°	1995.1	1861.1	1607.5	1390.1	1240.1	1140.5	1055.1	957.7	885.4	822.4	798.9
12.5°	1863.3	1707.1	1418.1	1221.5	1095.7	988.9	898.5	793.4	717.2	651.5	626.4
15°	1835.2	1661.1	1338.7	1114.2	959.7	831.1	722.7	608.3	533.9	479.6	462.1
17.5°	1919.6	1705.1	1305.2	1016.3	830.0	672.9	539.3	416.6	354.8	325.2	318.1
20°	2093.2	1801.3	1289.4	928.0	704.1	518.0	372.8	283.1	252.5	243.6	243.1
22.5°	2321.5	1957.9	1306.9	855.7	585.9	382.1	273.3	232.8	220.2	215.1	215.1
25°	2579.5	2169.9	1353.4	800.5	481.9	297.2	235.4	213.5	203.1	198.2	198.7
27.5°	2894.8	2427.7	1416.9	749.5	407.3	260.6	220.2	201.5	191.1	186.2	186.7
30°	3132.4	2649.6	1471.8	703.1	369.1	245.9	211.9	194.4	182.8	175.8	175.2
32.5°	3354.7	2844.9	1516.1	669.6	347.1	219.5	191.6	178.6	168.6	160.4	158.8
35°	3600.5	3028.9	1536.9	668.5	332.9	198.2	175.2	159.3	149.5	140.1	138.5
37.5°	3879.2	3253.9	1554.4	675.0	325.2	184.5	167.5	152.3	144.0	134.7	132.5
40°	4169.5	3474.0	1568.1	680.6	324.2	175.2	161.5	147.9	139.6	129.7	127.6
42.5°	4418.6	3668.9	1586.8	678.4	316.5	173.6	157.7	144.0	136.4	126.5	123.7
45°	4617.8	3823.9	1615.7	677.9	305.0	177.3	156.6	142.9	133.6	123.2	121.0
47.5°	4803.4	3998.5	1677.0	675.6	292.4	176.2	162.7	141.8	132.5	122.1	120.5
50°	5015.9	4233.4	1781.7	659.3	274.8	168.6	173.6	140.8	129.7	120.5	118.8
52.5°	5311.6	4577.4	1936.6	629.6	250.7	160.4	175.2	140.1	125.4	117.1	115.0
55°	5659.2	4945.8	2103.7	587.0	218.9	146.2	166.5	138.0	121.0	112.3	109.0
57.5°	5928.1	5218.0	2220.3	525.6	187.7	138.0	148.4	133.0	115.5	106.8	104.1
60°	6003.6	5229.9	2241.0	452.2	171.9	132.5	127.6	145.0	111.1	101.9	99.2
62.5°	5913.3	4990.8	2105.3	400.9	166.5	127.0	116.2	138.5	106.8	97.5	94.7
65°	5645.6	4586.7	1801.3	393.1	171.9	122.1	110.0	110.6	102.3	93.1	90.3
67.5°	5020.3	3992.0	1419.2	398.0	178.6	117.1	105.7	100.7	97.5	89.2	86.0
70°	4082.8	3214.0	1118.0	406.8	184.5	110.6	100.3	94.2	91.4	82.6	81.0
72.5°	3145.0	2572.2	882.0	400.9	190.5	104.1	92.5	87.7	84.4	76.0	74.5
75°	2233.4	2044.0	648.2	343.8	174.7	94.7	83.8	79.4	76.6	67.9	67.4
77.5°	1609.8	1530.9	451.2	258.4	138.0	83.3	73.9	70.1	68.5	58.6	58.6
80°	1283.9	1165.1	269.9	168.6	100.7	69.0	61.9	60.2	58.6	48.7	49.2
82.5°	922.6	808.1	172.5	105.1	73.9	52.6	48.1	47.6	44.8	36.1	36.1
85°	473.0	412.9	110.6	70.6	52.0	34.0	31.8	30.6	29.0	22.5	22.5
87.5°	91.9	126.5	61.4	34.5	25.2	12.0	12.0	10.4	12.0	8.3	8.8
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°	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5
2.5°	2123.4	2112.4	2104.6	2100.9	2156.1	2179.2	2205.3	2243.2	2268.9	2258.0	2293.1
5°	1585.7	1593.4	1610.8	1638.1	1715.5	1752.1	1775.6	1806.9	1829.3	1806.9	1844.1
7.5°	1084.2	1095.7	1132.9	1189.3	1282.3	1323.4	1331.6	1332.1	1327.2	1290.5	1315.7
10°	798.4	775.2	783.5	824.0	907.3	943.8	947.7	937.9	936.3	921.5	950.0
12.5°	618.8	587.0	568.4	574.8	637.3	667.4	672.3	677.9	700.3	707.3	742.4
15°	461.5	445.1	431.5	425.4	466.5	490.0	492.8	505.9	529.5	536.0	566.1
17.5°	324.6	329.0	336.1	338.9	368.5	383.8	379.4	379.4	383.2	381.6	398.6
20°	248.0	256.7	270.5	283.7	310.5	319.2	308.3	294.6	285.8	281.3	285.2
22.5°	218.9	225.0	233.7	250.7	273.3	277.5	263.4	252.5	244.2	239.8	240.3
25°	203.1	209.1	216.3	230.0	249.1	251.3	238.2	231.0	224.4	220.2	218.9
27.5°	189.5	193.2	197.6	206.4	226.2	227.2	218.5	214.1	209.8	206.4	205.4
30°	176.8	178.6	180.1	189.0	203.6	205.4	201.0	198.7	197.1	194.9	194.9
32.5°	160.4	162.7	165.4	173.1	187.2	189.5	186.7	185.1	182.4	181.3	179.7
35°	140.8	146.2	152.3	161.5	176.8	178.0	174.7	169.7	163.1	161.5	160.4
37.5°	132.5	133.6	141.3	152.3	168.2	169.2	164.7	156.6	151.6	152.3	153.3
40°	127.0	128.6	133.0	144.0	159.9	161.5	157.7	151.6	146.8	147.3	148.8
42.5°	122.7	124.9	127.6	134.7	150.6	153.9	152.7	147.3	142.3	143.5	145.6
45°	120.5	122.1	122.1	127.0	142.3	147.3	147.9	143.5	139.6	140.8	143.5
47.5°	119.4	119.4	117.7	121.5	136.9	141.8	142.9	140.8	138.5	139.6	142.3
50°	117.7	115.5	113.8	117.1	132.5	136.9	138.0	136.4	137.4	139.6	141.3
52.5°	112.7	110.6	110.6	112.7	128.1	132.5	133.0	132.0	134.1	136.9	139.6
55°	106.8	106.8	107.3	109.6	125.9	129.3	128.6	127.6	129.7	133.0	135.7
57.5°	101.2	100.7	103.5	106.2	123.2	125.4	124.2	124.2	125.9	128.6	131.4
60°	98.1	95.3	97.5	101.9	120.5	122.7	121.0	120.5	123.2	125.4	127.6
62.5°	94.7	91.9	93.7	98.1	116.6	118.2	117.1	117.1	120.0	121.5	123.7
65°	89.8	88.8	89.8	94.2	113.4	113.8	113.8	114.4	116.6	117.7	120.0
67.5°	85.3	85.3	86.0	90.3	110.6	109.6	109.6	112.3	112.7	113.8	116.2
70°	79.9	81.0	81.0	86.4	108.4	104.7	105.1	107.3	108.4	109.6	110.0
72.5°	73.9	74.5	75.5	82.6	105.1	99.6	100.3	101.9	102.3	104.1	104.7
75°	67.4	67.9	69.4	78.8	102.9	94.7	93.7	94.7	95.8	96.8	96.4
77.5°	59.6	60.7	62.4	76.6	95.8	93.7	85.3	86.4	87.7	87.7	87.0
80°	50.3	52.0	54.7	73.4	81.0	90.3	76.0	76.6	77.3	77.3	76.0
82.5°	37.8	41.1	44.8	60.7	63.5	77.3	65.7	66.8	65.1	64.0	63.5
85°	24.7	27.4	32.9	42.2	46.5	60.7	54.2	54.7	51.5	50.9	50.9
87.5°	9.8	10.4	14.8	21.4	27.9	37.8	38.8	40.0	37.2	37.2	38.3
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°	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5
2.5°	2346.2	2400.9	2464.0	2527.9	2580.6	2648.4	2714.0	2784.1	2819.8	2840.6	2899.1
5°	1902.2	1977.1	2066.3	2166.5	2249.7	2392.1	2545.4	2716.2	2798.4	2879.4	3032.8
7.5°	1360.7	1434.0	1538.0	1667.8	1786.0	1973.8	2175.9	2406.9	2520.9	2652.2	2903.5
10°	1010.1	1087.9	1182.1	1292.1	1408.8	1604.3	1830.9	2090.4	2215.8	2364.2	2650.0
12.5°	819.2	910.1	1007.4	1106.1	1206.2	1337.5	1575.3	1863.8	1998.5	2147.9	2434.2
15°	639.0	736.4	841.5	948.9	1048.5	1195.3	1437.7	1779.0	1932.8	2077.3	2311.7
17.5°	452.2	544.3	662.5	792.8	937.3	1110.9	1408.3	1816.2	2002.9	2154.0	2311.1
20°	308.3	371.8	490.0	644.4	822.9	1043.0	1419.2	1946.9	2180.2	2346.2	2405.8
22.5°	246.3	276.5	356.4	513.7	724.4	993.7	1464.1	2126.6	2434.9	2636.9	2578.2
25°	223.9	240.9	282.5	405.8	636.8	960.8	1551.7	2363.7	2720.1	2924.9	2785.9
27.5°	210.3	225.0	251.9	333.5	561.3	939.5	1662.9	2643.0	3041.5	3209.6	3002.0
30°	201.5	216.3	240.9	299.4	504.3	907.7	1760.3	2898.0	3298.2	3407.2	3118.6
32.5°	184.5	196.0	216.3	268.2	461.5	870.5	1844.6	3126.5	3540.8	3577.1	3259.0
35°	166.9	179.0	199.3	243.1	436.3	841.5	1889.0	3328.9	3781.2	3746.7	3398.0
37.5°	160.4	170.3	189.0	225.0	422.7	822.4	1905.9	3528.3	4039.0	3934.5	3494.9
40°	156.0	164.7	181.3	213.0	418.9	804.3	1902.2	3717.6	4289.2	4128.9	3570.9
42.5°	152.7	160.4	175.8	204.8	408.5	787.4	1889.6	3881.3	4489.6	4296.5	3643.7
45°	150.0	158.2	173.6	209.1	389.2	768.7	1881.9	4030.9	4643.6	4437.6	3741.3
47.5°	148.8	158.2	174.1	208.0	368.5	747.8	1909.2	4196.8	4777.6	4556.6	3870.9
50°	147.3	157.7	186.2	198.2	340.0	722.1	2001.8	4394.5	4918.4	4690.1	4039.0
52.5°	144.5	157.2	198.7	190.5	303.4	686.7	2151.8	4673.7	5161.5	4950.2	4287.7
55°	141.3	158.2	190.0	178.6	264.5	640.6	2301.7	5056.4	5555.7	5369.6	4644.6
57.5°	137.4	156.6	179.7	167.5	232.1	582.6	2415.7	5370.1	5880.9	5802.2	5083.1
60°	134.7	160.4	161.5	160.9	211.3	527.2	2426.6	5349.9	5974.5	6083.1	5512.4
62.5°	131.4	163.8	147.3	156.0	201.0	475.8	2291.3	5018.7	5816.3	6046.9	5862.3
65°	127.0	142.9	139.6	151.6	201.0	448.4	1976.6	4467.2	5379.0	5705.2	6052.3
67.5°	122.7	129.7	134.1	145.6	205.4	422.7	1588.4	3768.1	4689.1	5153.8	5838.9
70°	116.6	122.7	128.1	140.1	203.1	404.6	1250.0	3020.1	3858.9	4391.2	5248.0
72.5°	111.1	115.5	121.0	132.0	203.1	396.4	1004.1	2369.1	2946.3	3394.7	4347.3
75°	102.9	106.8	111.7	123.7	199.3	362.5	753.9	1898.3	2155.7	2436.6	3430.3
77.5°	94.7	97.5	101.2	113.4	179.7	302.8	533.4	1470.0	1597.1	1752.7	2674.2
80°	84.4	86.4	89.2	101.2	148.8	234.8	347.1	1149.8	1194.1	1269.1	1759.2
82.5°	72.3	75.5	76.0	87.0	120.0	170.3	206.4	788.0	787.4	897.3	1241.3
85°	59.1	60.7	61.9	68.5	88.8	113.4	135.7	430.4	383.8	537.6	1078.1
87.5°	44.3	42.7	44.3	46.1	58.6	66.8	72.9	79.4	47.6	97.5	626.8
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°	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5	2574.5
2.5°	2930.4	2962.7	2943.4	2920.5	2863.0	2778.6	2714.0	2657.6
5°	3138.9	3198.7	3172.4	3086.9	2938.0	2768.8	2590.9	2482.5
7.5°	3112.6	3230.9	3220.6	3078.2	2864.7	2615.5	2365.2	2222.3
10°	2902.5	3068.3	3096.7	2951.1	2725.0	2446.4	2156.7	1995.1
12.5°	2673.5	2813.2	2871.3	2815.9	2602.8	2319.9	2024.8	1863.3
15°	2481.9	2552.5	2610.0	2645.7	2513.6	2275.0	2001.8	1835.2
17.5°	2340.2	2326.4	2374.6	2460.0	2465.5	2334.7	2105.7	1919.6
20°	2271.6	2164.3	2192.4	2312.1	2452.4	2486.2	2313.2	2093.2
22.5°	2267.9	2100.2	2105.7	2235.1	2490.1	2693.3	2572.2	2321.5
25°	2327.0	2093.2	2098.1	2226.8	2556.9	2901.9	2871.8	2579.5
27.5°	2427.7	2123.9	2120.5	2262.9	2646.1	3075.9	3174.0	2894.8
30°	2536.6	2168.1	2160.0	2321.0	2733.8	3183.4	3388.6	3132.4
32.5°	2672.5	2247.0	2218.5	2405.8	2820.3	3286.3	3572.1	3354.7
35°	2801.6	2362.5	2321.5	2527.4	2912.8	3400.7	3777.4	3600.5
37.5°	2933.7	2535.0	2512.0	2702.6	3043.6	3524.9	4012.3	3879.2
40°	3102.8	2780.3	2769.4	2957.2	3218.4	3660.8	4275.7	4169.5
42.5°	3285.1	3040.9	3031.6	3249.6	3435.2	3797.0	4501.1	4418.6
45°	3470.7	3356.8	3359.0	3561.7	3663.5	3925.8	4678.6	4617.8
47.5°	3689.8	3702.4	3780.6	3885.2	3885.8	4069.2	4835.8	4803.4
50°	3968.0	4119.5	4264.2	4280.6	4110.3	4258.7	5028.0	5015.9
52.5°	4282.7	4600.8	4768.9	4716.9	4329.3	4493.5	5312.0	5311.6
55°	4656.8	5104.0	5262.4	5173.6	4591.5	4799.6	5683.2	5659.2
57.5°	5044.3	5588.0	5715.6	5600.0	4919.5	5156.0	6055.7	5928.1
60°	5463.2	6004.7	6134.4	5961.0	5287.5	5511.5	6302.0	6003.6
62.5°	5737.6	6248.4	6341.5	6174.9	5617.0	5873.3	6381.4	5913.3
65°	5751.8	6086.2	6110.9	6051.8	5757.2	6187.5	6266.4	5645.6
67.5°	5360.8	5380.5	5412.8	5476.3	5457.7	6047.4	5823.0	5020.3
70°	4524.8	4261.9	4368.2	4429.5	4567.4	5379.0	5003.3	4082.8
72.5°	3459.8	3075.9	3196.4	3175.7	3462.5	4411.9	3827.8	3145.0
75°	2490.1	2097.5	2106.9	2108.0	2487.9	3521.6	2610.0	2233.4
77.5°	1692.3	1484.3	1515.0	1495.9	1665.0	2759.0	1879.2	1609.8
80°	1157.5	1151.9	1158.5	1113.7	1110.3	1783.2	1391.2	1283.9
82.5°	858.5	793.4	784.0	736.4	850.9	1363.4	1056.1	922.6
85°	677.3	439.1	381.6	460.6	737.0	1254.4	643.8	473.0
87.5°	286.9	172.5	104.7	207.0	409.5	919.2	178.6	91.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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