

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: P195750

Luminaire Tested: **NAV-AF-06-D-UNV-SLR-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195750
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-06-D-UNV-SLR-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 615mA 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: 20962 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G4

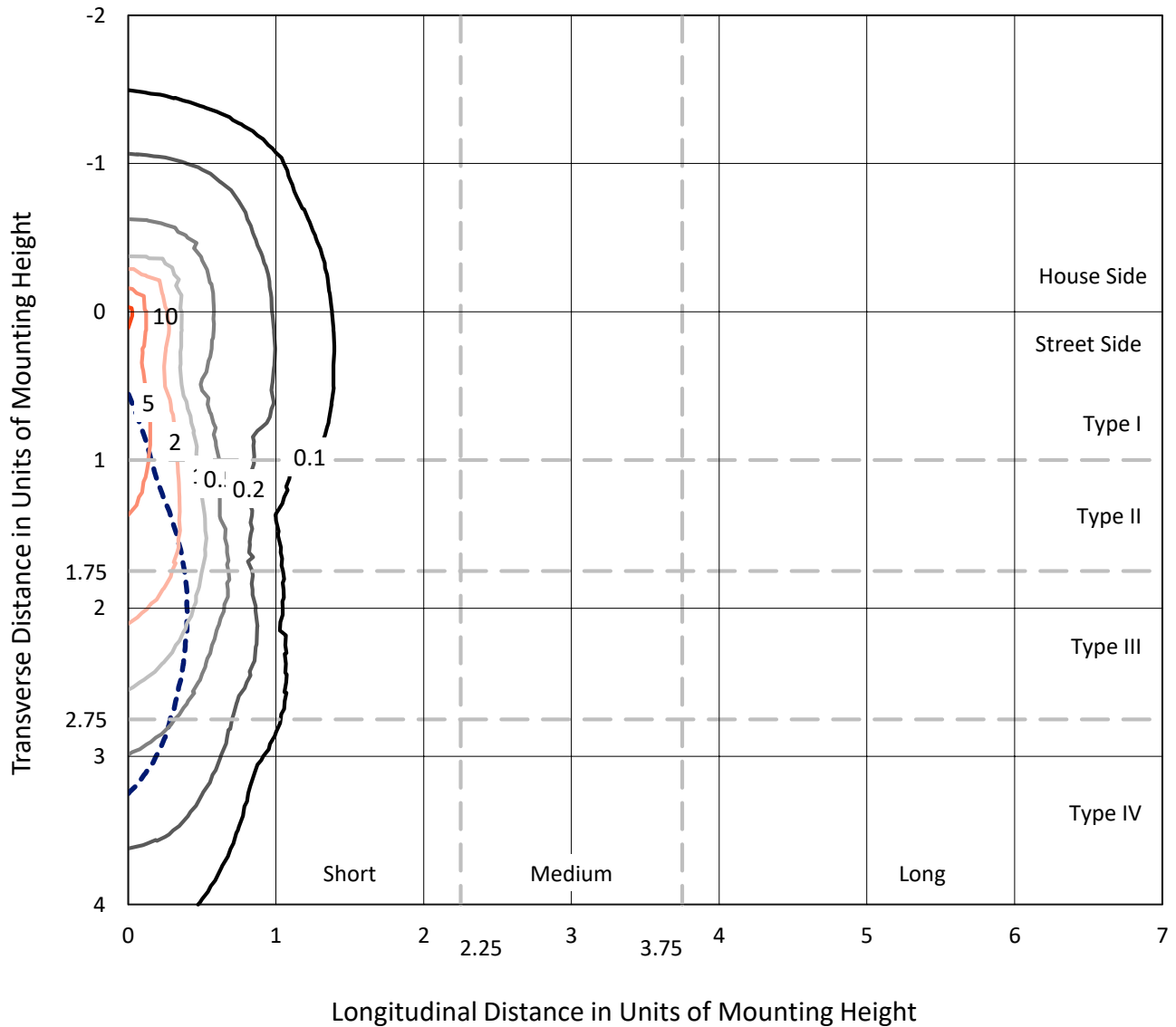
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

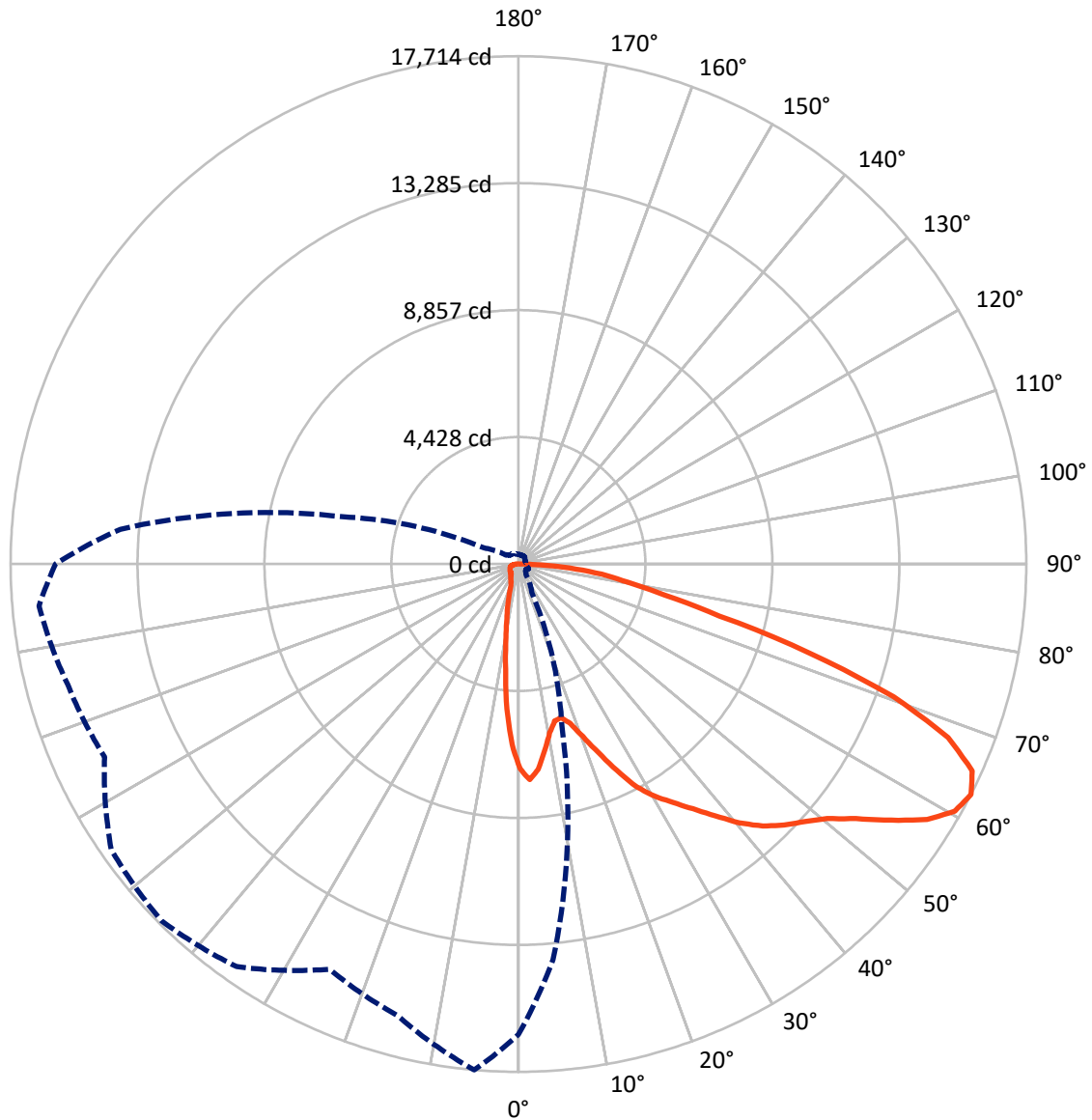
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.4 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	3713.4	0.0	3713.4
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	17248.6	0.0	17248.6
	% Fixture	82.3	0.0	82.3
Total	Lumens	20962.0	0.0	20962.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	519.7	2.5
10°-20°	949.3	4.5
20°-30°	1365.3	6.5
30°-40°	2091.1	10.0
40°-50°	3057.2	14.6
50°-60°	4448.3	21.2
60°-70°	5153.9	24.6
70°-80°	2686.7	12.8
80°-90°	690.6	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°	20962.0	100.0
0°-180°	20962.0	100.0



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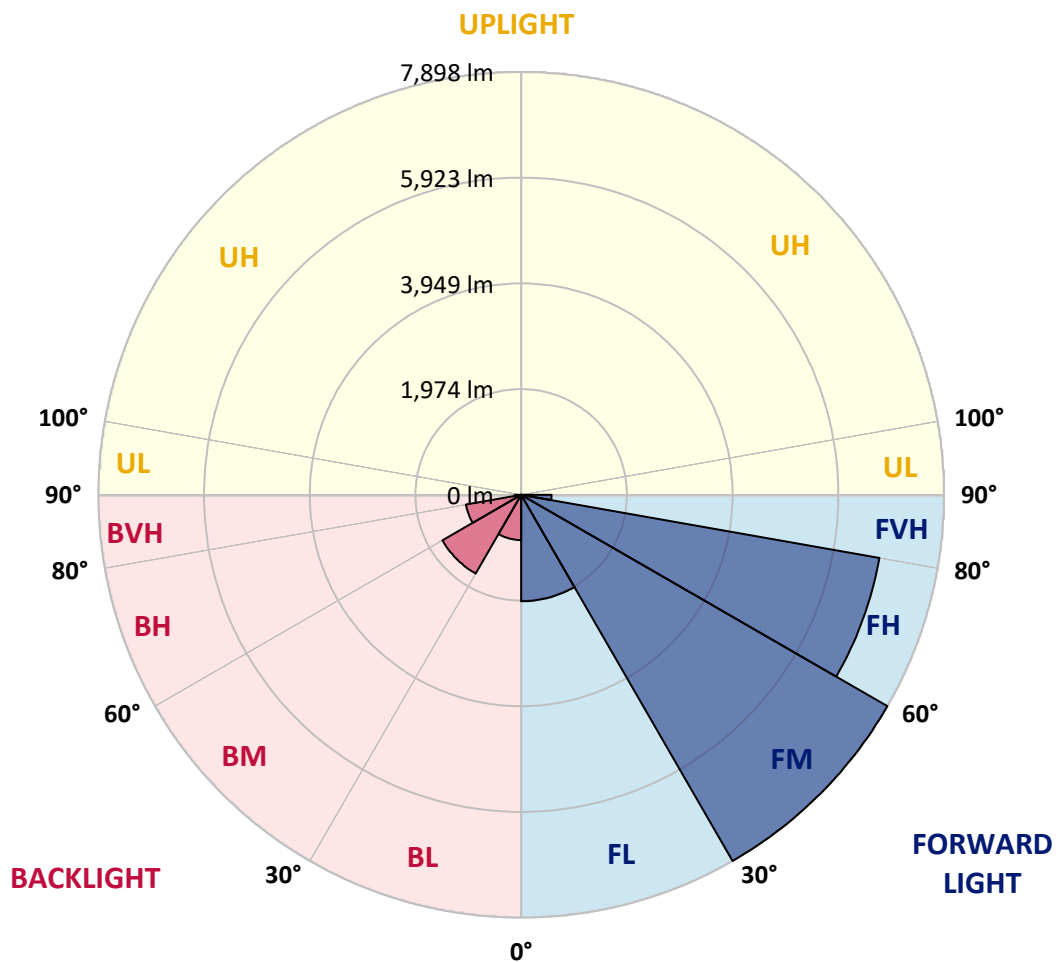
CATALOG NUMBER: NAV-AF-06-D-UNV-SLR-7050-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1989.4	9.5			
FM	(30°-60°)	7897.5	37.7			
FH	(60°-80°)	6793.5	32.4			G3/7500
FVH	(80°-90°)	568.2	2.7			G4/750
BL	(0°-30°)	844.9	4.0	B2/1000		
BM	(30°-60°)	1699.0	8.1	B2/2500		
BH	(60°-80°)	1047.1	5.0	B3/2500		G3/2500
BVH	(80°-90°)	122.5	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4
2.5°	7377.4	7274.0	7035.4	6825.7	6564.3	6368.2	6129.6	6003.4	5910.7	5848.4	5798.3
5°	6891.0	6641.8	6185.8	5786.1	5354.5	5042.9	4678.1	4479.0	4355.9	4289.0	4258.6
7.5°	6169.1	5839.3	5249.6	4713.1	4173.5	3784.4	3507.8	3213.0	3056.4	2954.6	2921.2
10°	5538.4	5166.0	4462.3	3858.9	3442.5	3165.9	2928.8	2658.2	2457.6	2282.8	2217.5
12.5°	5172.1	4738.9	3936.4	3390.8	3041.2	2744.9	2494.1	2202.3	1991.0	1808.6	1738.7
15°	5094.6	4611.2	3716.0	3092.9	2664.3	2307.1	2006.2	1688.6	1481.9	1331.4	1282.8
17.5°	5328.6	4732.8	3623.3	2820.9	2304.1	1867.9	1497.1	1156.6	984.9	902.8	883.0
20°	5810.4	5000.3	3579.3	2576.2	1954.5	1437.8	1035.0	785.8	700.7	676.3	674.8
22.5°	6444.2	5435.0	3627.9	2375.5	1626.2	1060.9	758.4	645.9	611.0	597.3	597.3
25°	7160.0	6023.2	3757.1	2222.0	1337.5	825.3	653.5	592.7	563.9	550.2	551.7
27.5°	8035.5	6739.0	3933.4	2080.7	1130.8	723.5	611.0	559.3	530.4	516.8	518.3
30°	8695.1	7354.6	4085.4	1951.5	1024.4	682.4	588.2	539.5	507.6	487.9	486.4
32.5°	9312.2	7897.2	4208.5	1858.8	963.6	609.5	531.9	495.5	468.1	445.3	440.8
35°	9994.6	8407.8	4266.2	1855.7	924.1	550.2	486.4	442.3	414.9	389.1	384.5
37.5°	10768.2	9032.5	4314.9	1874.0	902.8	512.2	465.1	422.5	399.7	373.9	367.8
40°	11573.7	9643.5	4352.9	1889.2	899.8	486.4	448.4	410.4	387.6	360.2	354.1
42.5°	12265.2	10184.6	4404.5	1883.1	878.5	481.8	437.7	399.7	378.4	351.1	343.5
45°	12818.5	10614.7	4485.1	1881.6	846.6	492.4	434.7	396.7	370.8	342.0	335.9
47.5°	13333.7	11099.5	4655.3	1875.5	811.6	489.4	451.4	393.6	367.8	338.9	334.4
50°	13923.4	11751.5	4945.6	1829.9	763.0	468.1	481.8	390.6	360.2	334.4	329.8
52.5°	14744.1	12706.0	5375.7	1747.8	696.1	445.3	486.4	389.1	348.0	325.2	319.2
55°	15709.2	13728.9	5839.3	1629.3	607.9	405.8	462.0	383.0	335.9	311.6	302.5
57.5°	16455.5	14484.2	6163.0	1459.1	521.3	383.0	411.9	369.3	320.7	296.4	288.8
60°	16665.2	14517.7	6220.8	1255.4	477.2	367.8	354.1	402.8	308.5	282.7	275.1
62.5°	16414.4	13853.5	5843.8	1112.5	462.0	352.6	322.2	384.5	296.4	270.5	262.9
65°	15671.2	12731.8	5000.3	1091.3	477.2	338.9	305.5	307.0	284.2	258.4	250.8
67.5°	13935.6	11081.3	3939.5	1104.9	495.5	325.2	293.3	279.7	270.5	247.7	238.6
70°	11333.6	8921.6	3103.5	1129.3	512.2	307.0	278.1	261.4	253.8	229.5	224.9
72.5°	8730.1	7140.3	2448.5	1112.5	528.9	288.8	256.9	243.2	234.1	211.3	206.7
75°	6199.5	5673.6	1799.5	954.5	484.8	262.9	232.5	220.4	212.8	188.5	186.9
77.5°	4468.4	4249.5	1252.4	717.4	383.0	231.0	205.2	194.5	190.0	162.6	162.6
80°	3564.1	3234.3	749.3	468.1	279.7	191.5	171.7	167.2	162.6	135.3	136.8
82.5°	2561.0	2243.3	478.8	291.8	205.2	145.9	133.7	132.2	124.6	100.3	100.3
85°	1313.2	1146.0	307.0	196.1	144.4	94.2	88.2	85.1	80.6	62.3	62.3
87.5°	255.3	351.1	170.2	95.8	69.9	33.4	33.4	28.9	33.4	22.8	24.3
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°	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4
2.5°	5894.0	5863.6	5842.3	5831.7	5985.2	6049.0	6122.0	6226.9	6298.3	6267.9	6365.2
5°	4401.5	4422.8	4471.4	4547.4	4761.7	4863.5	4928.9	5015.5	5077.8	5015.5	5118.9
7.5°	3009.3	3041.2	3144.6	3301.1	3559.5	3673.5	3696.3	3697.8	3684.1	3582.3	3652.2
10°	2216.0	2152.1	2174.9	2287.4	2518.4	2620.2	2630.9	2603.5	2599.0	2557.9	2637.0
12.5°	1717.4	1629.3	1577.6	1595.8	1769.1	1852.7	1866.4	1881.6	1943.9	1963.7	2060.9
15°	1281.2	1235.6	1197.6	1180.9	1294.9	1360.3	1367.9	1404.3	1469.7	1487.9	1571.5
17.5°	901.3	913.4	933.2	940.8	1022.9	1065.4	1053.3	1053.3	1063.9	1059.3	1106.5
20°	688.5	712.8	750.8	787.3	861.8	886.1	855.7	817.7	793.4	781.2	791.8
22.5°	607.9	624.7	649.0	696.1	758.4	770.6	731.1	700.7	677.9	665.7	667.2
25°	563.9	580.6	600.3	638.3	691.5	697.6	661.1	641.4	623.1	611.0	607.9
27.5°	525.9	536.5	548.7	573.0	627.7	630.7	606.4	594.3	582.1	573.0	569.9
30°	490.9	495.5	500.0	524.4	565.4	569.9	557.8	551.7	547.1	541.1	541.1
32.5°	445.3	451.4	459.0	480.3	519.8	525.9	518.3	513.7	506.1	503.1	498.5
35°	390.6	405.8	422.5	448.4	490.9	494.0	484.8	471.2	452.9	448.4	445.3
37.5°	367.8	370.8	392.1	422.5	466.6	469.6	457.5	434.7	421.0	422.5	425.6
40°	352.6	357.2	369.3	399.7	443.8	448.4	437.7	421.0	407.3	408.8	413.4
42.5°	340.4	346.5	354.1	373.9	418.0	427.1	424.0	408.8	395.2	398.2	404.3
45°	334.4	338.9	338.9	352.6	395.2	408.8	410.4	398.2	387.6	390.6	398.2
47.5°	331.3	331.3	326.8	337.4	380.0	393.6	396.7	390.6	384.5	387.6	395.2
50°	326.8	320.7	316.1	325.2	367.8	380.0	383.0	378.4	381.5	387.6	392.1
52.5°	313.1	307.0	307.0	313.1	355.6	367.8	369.3	366.3	372.4	380.0	387.6
55°	296.4	296.4	297.9	304.0	349.6	358.7	357.2	354.1	360.2	369.3	376.9
57.5°	281.2	279.7	287.3	294.9	342.0	348.0	345.0	345.0	349.6	357.2	364.8
60°	272.1	264.5	270.5	282.7	334.4	340.4	335.9	334.4	342.0	348.0	354.1
62.5°	262.9	255.3	259.9	272.1	323.7	328.3	325.2	325.2	332.8	337.4	343.5
65°	249.3	246.2	249.3	261.4	314.6	316.1	316.1	317.6	323.7	326.8	332.8
67.5°	237.1	237.1	238.6	250.8	307.0	304.0	304.0	311.6	313.1	316.1	322.2
70°	221.9	224.9	224.9	240.1	300.9	290.3	291.8	297.9	300.9	304.0	305.5
72.5°	205.2	206.7	209.7	229.5	291.8	276.6	278.1	282.7	284.2	288.8	290.3
75°	186.9	188.5	193.0	218.9	285.7	262.9	259.9	262.9	266.0	269.0	267.5
77.5°	165.7	168.7	173.3	212.8	266.0	259.9	237.1	240.1	243.2	243.2	241.7
80°	139.8	144.4	152.0	203.7	224.9	250.8	211.3	212.8	214.3	214.3	211.3
82.5°	104.9	114.0	124.6	168.7	176.3	214.3	182.4	185.4	180.9	177.8	176.3
85°	68.4	76.0	91.2	117.0	129.2	168.7	150.5	152.0	142.9	141.3	141.3
87.5°	27.4	28.9	41.0	59.3	77.5	104.9	107.9	110.9	103.4	103.4	106.4
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°	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4
2.5°	6512.6	6664.6	6839.4	7017.2	7163.1	7351.5	7533.9	7728.5	7827.3	7885.0	8047.6
5°	5280.0	5488.2	5735.9	6014.1	6245.1	6640.3	7065.8	7540.0	7768.0	7992.9	8418.5
7.5°	3776.8	3980.5	4269.3	4629.5	4957.8	5479.1	6039.9	6681.3	6997.4	7362.2	8059.8
10°	2804.1	3020.0	3281.4	3586.9	3910.6	4453.2	5082.4	5802.8	6150.9	6562.7	7356.1
12.5°	2273.7	2526.0	2796.5	3070.1	3348.2	3713.0	4372.6	5173.6	5547.5	5962.4	6757.3
15°	1773.7	2044.2	2336.0	2633.9	2910.5	3317.8	3991.1	4938.0	5365.1	5766.3	6416.8
17.5°	1255.4	1510.7	1839.0	2200.8	2602.0	3083.8	3909.1	5041.4	5559.6	5979.1	6415.3
20°	855.7	1032.0	1360.3	1788.9	2284.3	2895.3	3939.5	5404.6	6052.1	6512.6	6678.2
22.5°	683.9	767.5	989.4	1425.6	2010.8	2758.5	4064.1	5903.1	6758.8	7319.6	7157.0
25°	621.6	668.7	784.2	1126.2	1767.6	2667.3	4307.3	6561.2	7550.6	8119.1	7733.0
27.5°	583.6	624.7	699.1	925.6	1557.9	2608.1	4615.8	7336.3	8442.8	8909.4	8333.4
30°	559.3	600.3	668.7	831.4	1399.8	2519.9	4886.3	8044.6	9155.6	9458.1	8657.1
32.5°	512.2	544.1	600.3	744.7	1281.2	2416.6	5120.4	8678.4	9828.9	9929.2	9046.2
35°	463.6	497.0	553.2	674.8	1211.3	2336.0	5243.5	9240.7	10496.1	10400.4	9432.2
37.5°	445.3	472.7	524.4	624.7	1173.3	2282.8	5290.6	9794.0	11212.0	10921.7	9701.2
40°	433.2	457.5	503.1	591.2	1162.7	2232.7	5280.0	10319.8	11906.6	11461.2	9912.5
42.5°	424.0	445.3	487.9	568.4	1133.8	2185.6	5245.0	10774.3	12462.8	11926.3	10114.6
45°	416.4	439.2	481.8	580.6	1080.6	2133.9	5223.7	11189.2	12889.9	12318.4	10385.2
47.5°	413.4	439.2	483.3	577.5	1022.9	2076.1	5299.7	11649.7	13262.3	12648.2	10745.4
50°	408.8	437.7	516.8	550.2	943.8	2004.7	5556.6	12198.4	13652.9	13019.1	11212.0
52.5°	401.2	436.2	551.7	528.9	842.0	1905.9	5973.0	12973.5	14327.7	13741.0	11902.0
55°	392.1	439.2	527.4	495.5	734.1	1778.2	6389.5	14035.9	15422.0	14905.2	12892.9
57.5°	381.5	434.7	498.5	465.1	644.4	1617.1	6705.6	14906.7	16324.8	16105.9	14110.3
60°	373.9	445.3	448.4	446.8	586.7	1463.6	6736.0	14850.5	16584.7	16885.6	15301.9
62.5°	364.8	454.4	408.8	433.2	557.8	1320.8	6360.6	13931.0	16145.4	16785.3	16273.1
65°	352.6	396.7	387.6	421.0	557.8	1244.8	5486.7	12400.5	14931.1	15836.9	16800.5
67.5°	340.4	360.2	372.4	404.3	569.9	1173.3	4409.1	10459.6	13016.0	14306.4	16207.7
70°	323.7	340.4	355.6	389.1	563.9	1123.2	3469.8	8383.5	10711.9	12189.2	14567.8
72.5°	308.5	320.7	335.9	366.3	563.9	1100.4	2787.4	6576.4	8178.3	9423.1	12067.7
75°	285.7	296.4	310.1	343.5	553.2	1006.1	2092.8	5269.3	5983.7	6763.4	9521.9
77.5°	262.9	270.5	281.2	314.6	498.5	840.5	1480.3	4080.8	4433.4	4865.1	7423.0
80°	234.1	240.1	247.7	281.2	413.4	652.0	963.6	3191.7	3314.8	3523.0	4883.3
82.5°	200.6	209.7	211.3	241.7	332.8	472.7	573.0	2187.1	2185.6	2491.0	3445.5
85°	164.1	168.7	171.7	190.0	246.2	314.6	376.9	1194.6	1065.4	1492.5	2992.6
87.5°	123.1	118.5	123.1	127.7	162.6	185.4	202.1	220.4	132.2	270.5	1740.2
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°	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4	7146.4
2.5°	8134.3	8223.9	8170.7	8106.9	7947.3	7713.3	7533.9	7377.4
5°	8713.3	8879.0	8806.0	8568.9	8155.5	7685.9	7192.0	6891.0
7.5°	8640.4	8968.7	8939.8	8544.6	7951.9	7260.4	6565.8	6169.1
10°	8056.8	8517.3	8596.3	8192.0	7564.3	6790.7	5986.7	5538.4
12.5°	7421.5	7809.0	7970.1	7816.6	7225.4	6439.6	5620.4	5172.1
15°	6889.5	7085.6	7245.2	7343.9	6977.7	6315.0	5556.6	5094.6
17.5°	6495.9	6457.9	6591.6	6828.7	6843.9	6480.7	5845.4	5328.6
20°	6305.9	6008.0	6085.5	6418.4	6807.4	6901.7	6421.4	5810.4
22.5°	6295.2	5830.2	5845.4	6204.1	6912.3	7476.2	7140.3	6444.2
25°	6459.4	5810.4	5824.1	6181.3	7097.7	8055.2	7971.6	7160.0
27.5°	6739.0	5895.5	5886.4	6281.6	7345.5	8538.6	8810.6	8035.5
30°	7041.5	6018.6	5995.8	6442.7	7588.6	8836.4	9406.4	8695.1
32.5°	7418.4	6237.5	6158.5	6678.2	7828.8	9122.2	9915.5	9312.2
35°	7777.1	6558.2	6444.2	7015.7	8085.6	9439.8	10485.5	9994.6
37.5°	8143.4	7036.9	6973.1	7502.0	8448.9	9784.8	11137.5	10768.2
40°	8613.0	7717.8	7687.4	8208.7	8933.7	10161.8	11868.6	11573.7
42.5°	9119.1	8441.3	8415.4	9020.3	9535.6	10540.2	12494.7	12265.2
45°	9634.4	9318.2	9324.3	9886.7	10169.4	10897.4	12987.2	12818.5
47.5°	10242.3	10277.3	10494.6	10784.9	10786.4	11295.6	13423.4	13333.7
50°	11014.4	11435.4	11836.6	11882.2	11409.6	11821.4	13956.8	13923.4
52.5°	11888.3	12771.4	13237.9	13093.6	12017.5	12473.5	14745.6	14744.1
55°	12926.4	14168.1	14607.3	14361.1	12745.5	13323.1	15776.1	15709.2
57.5°	14002.4	15511.7	15865.8	15545.1	13655.9	14312.5	16809.6	16455.5
60°	15165.1	16668.3	17028.5	16546.7	14677.3	15298.9	17493.5	16665.2
62.5°	15926.6	17344.6	17603.0	17140.9	15592.2	16303.5	17713.9	16414.4
65°	15966.1	16894.7	16963.1	16799.0	15981.3	17175.9	17394.8	15671.2
67.5°	14880.9	14935.6	15025.3	15201.6	15149.9	16786.8	16163.7	13935.6
70°	12560.1	11830.6	12125.4	12295.6	12678.6	14931.1	13888.4	11333.6
72.5°	9604.0	8538.6	8872.9	8815.2	9611.6	12247.0	10625.3	8730.1
75°	6912.3	5822.6	5848.4	5851.4	6906.2	9775.7	7245.2	6199.5
77.5°	4697.9	4120.3	4205.4	4152.2	4621.9	7658.6	5216.1	4468.4
80°	3213.0	3197.8	3216.0	3091.4	3082.3	4950.2	3862.0	3564.1
82.5°	2383.1	2202.3	2176.4	2044.2	2361.9	3784.4	2931.8	2561.0
85°	1880.1	1218.9	1059.3	1278.2	2045.7	3482.0	1787.4	1313.2
87.5°	796.4	478.8	290.3	574.5	1136.9	2551.8	495.5	255.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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