

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: P196726

Luminaire Tested: **NAV-AF-04-D-UNV-SLR-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196726
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-04-D-UNV-SLR-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 3000K, 1200mA 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: 22861.4 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G4

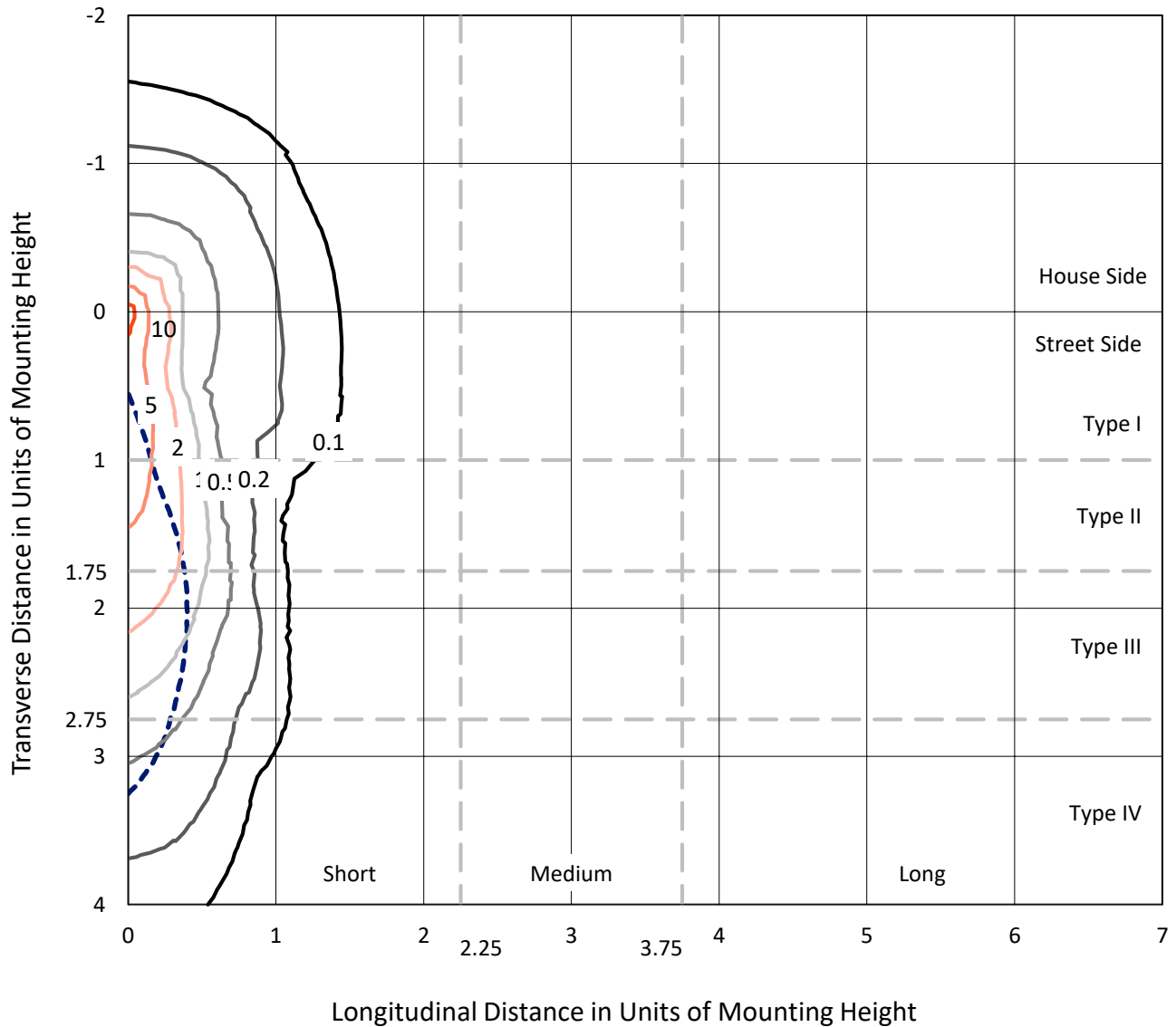
Input Watts (W): 258
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

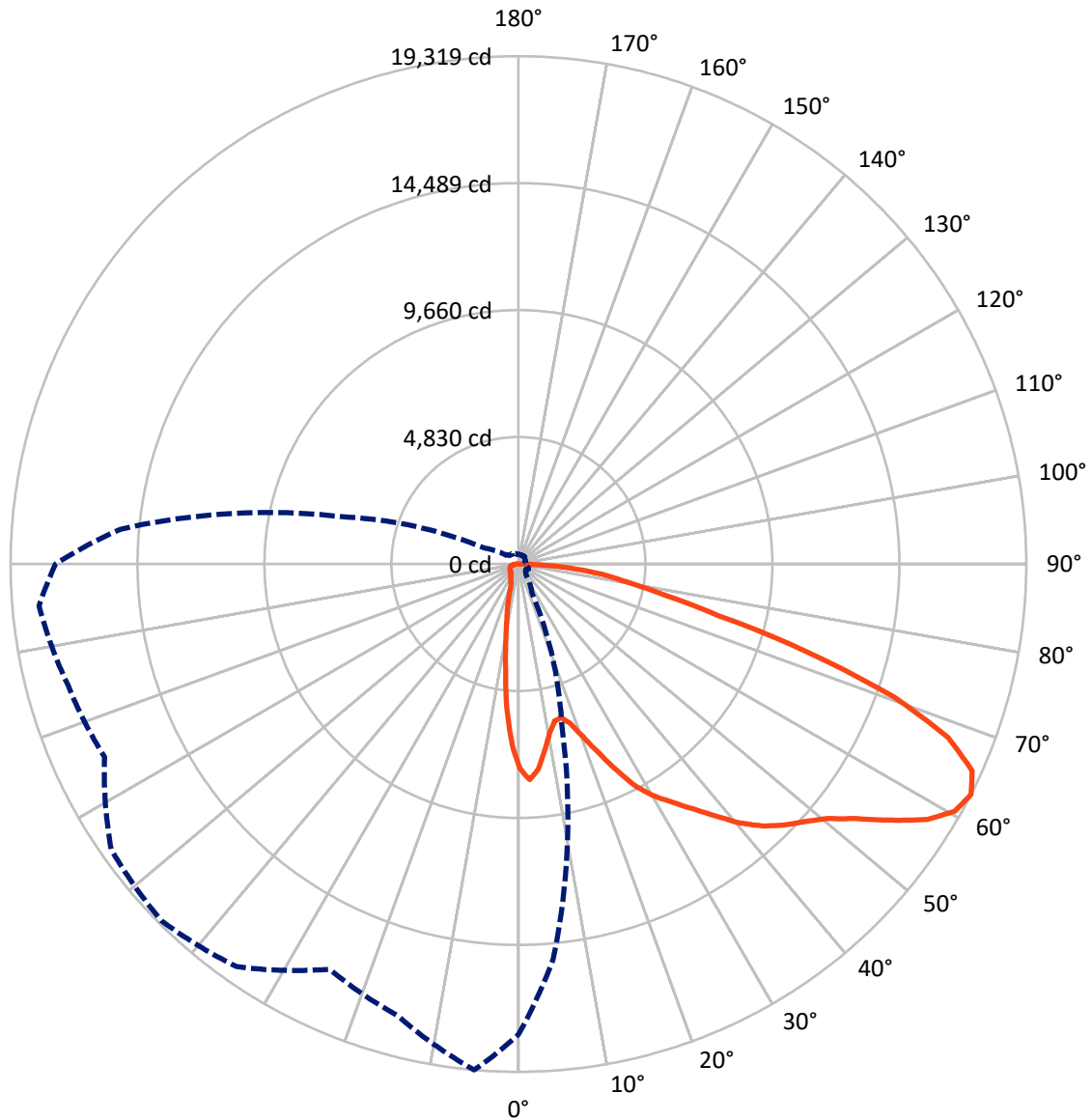
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.5 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	4049.9	0.0	4049.9
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	18811.5	0.0	18811.5
	% Fixture	82.3	0.0	82.3
Total	Lumens	22861.4	0.0	22861.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	566.8	2.5
10°-20°	1035.3	4.5
20°-30°	1489.0	6.5
30°-40°	2280.6	10.0
40°-50°	3334.2	14.6
50°-60°	4851.3	21.2
60°-70°	5620.9	24.6
70°-80°	2930.1	12.8
80°-90°	753.2	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°	22861.4	100.0
0°-180°	22861.4	100.0



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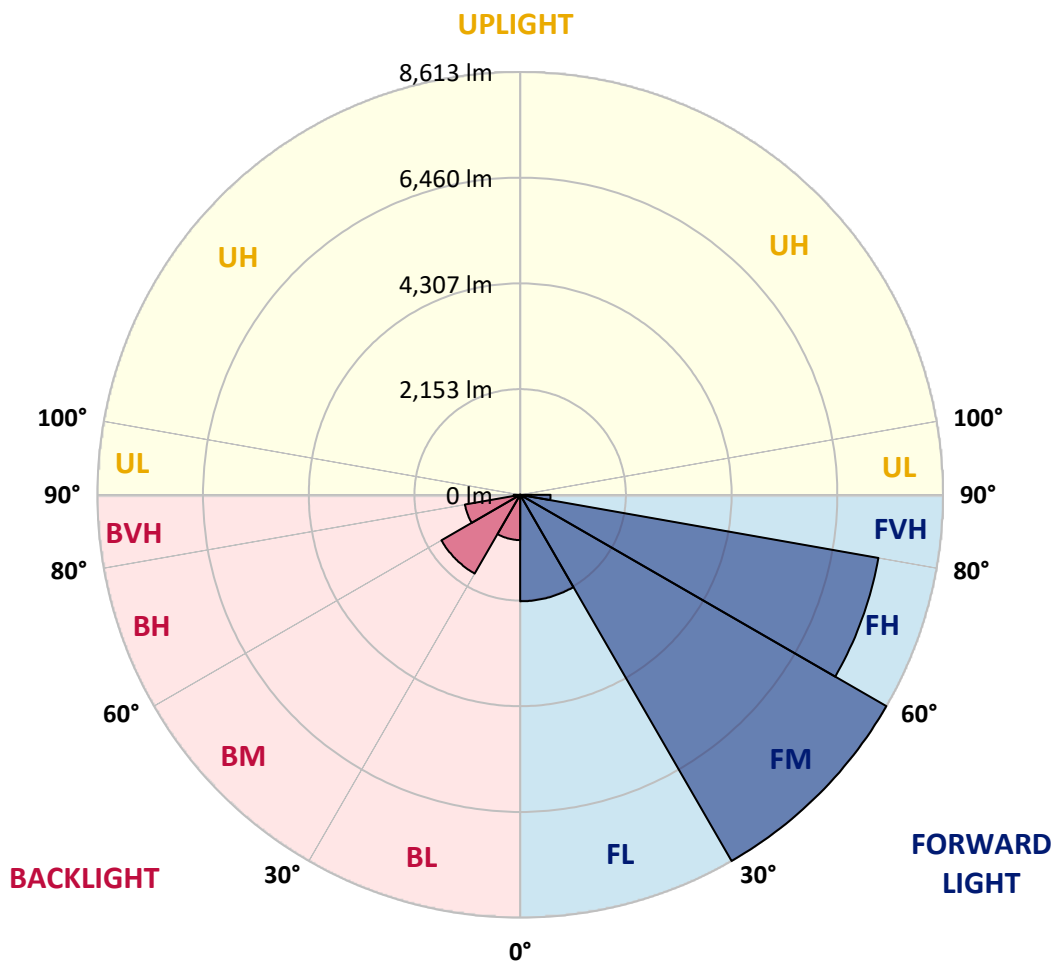
CATALOG NUMBER: NAV-AF-04-D-UNV-SLR-7030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2169.7	9.5			
FM	(30°-60°)	8613.1	37.7			
FH	(60°-80°)	7409.1	32.4			G3/7500
FVH	(80°-90°)	619.6	2.7			G4/750
BL	(0°-30°)	921.4	4.0	B2/1000		
BM	(30°-60°)	1853.0	8.1	B2/2500		
BH	(60°-80°)	1142.0	5.0	B3/2500		G3/2500
BVH	(80°-90°)	133.6	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°	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9
2.5°	8045.9	7933.1	7672.9	7444.2	7159.1	6945.3	6685.0	6547.4	6446.3	6378.3	6323.6
5°	7515.4	7243.6	6746.3	6310.4	5839.6	5499.8	5102.0	4884.9	4750.6	4677.7	4644.5
7.5°	6728.0	6368.4	5725.3	5140.1	4551.7	4127.4	3825.7	3504.2	3333.4	3222.3	3185.9
10°	6040.2	5634.1	4866.6	4208.5	3754.3	3452.7	3194.2	2899.0	2680.3	2489.7	2418.5
12.5°	5640.7	5168.3	4293.2	3698.1	3316.8	2993.6	2720.1	2401.8	2171.4	1972.5	1896.3
15°	5556.2	5029.1	4052.8	3373.2	2905.8	2516.2	2188.0	1841.6	1616.2	1452.0	1398.9
17.5°	5811.5	5161.7	3951.7	3076.4	2512.9	2037.1	1632.7	1261.4	1074.1	984.7	963.0
20°	6336.9	5453.4	3903.7	2809.6	2131.6	1568.1	1128.7	856.9	764.2	737.6	736.0
22.5°	7028.1	5927.6	3956.6	2590.7	1773.6	1156.9	827.1	704.5	666.4	651.4	651.4
25°	7808.9	6569.0	4097.5	2423.4	1458.6	900.1	712.8	646.5	614.9	600.1	601.7
27.5°	8763.5	7349.7	4289.8	2269.2	1233.2	789.0	666.4	610.0	578.5	563.6	565.2
30°	9482.9	8021.0	4455.6	2128.4	1117.1	744.3	641.5	588.5	553.6	532.1	530.5
32.5°	10155.9	8612.8	4589.9	2027.2	1050.8	664.8	580.1	540.4	510.6	485.6	480.7
35°	10900.2	9169.7	4652.8	2023.9	1007.8	600.1	530.5	482.4	452.6	424.4	419.3
37.5°	11743.9	9851.0	4705.8	2043.8	984.7	558.7	507.2	460.8	436.0	407.7	401.1
40°	12622.4	10517.3	4747.4	2060.4	981.2	530.5	488.9	447.5	422.8	392.9	386.2
42.5°	13376.6	11107.4	4803.7	2053.7	958.1	525.4	477.4	436.0	412.8	383.0	374.6
45°	13979.9	11576.4	4891.5	2052.1	923.2	537.0	474.0	432.6	404.5	372.9	366.3
47.5°	14541.9	12105.3	5077.2	2045.5	885.1	533.7	492.3	429.3	401.1	369.7	364.7
50°	15185.1	12816.3	5393.7	1995.7	832.1	510.6	525.4	426.0	392.9	364.7	359.7
52.5°	16080.1	13857.4	5862.9	1906.2	759.2	485.6	530.5	424.4	379.5	354.8	348.1
55°	17132.7	14972.9	6368.4	1776.9	662.9	442.6	503.9	417.7	366.3	339.8	329.9
57.5°	17946.6	15796.7	6721.4	1591.3	568.5	417.7	449.2	402.8	349.7	323.2	314.8
60°	18175.3	15833.1	6784.5	1369.1	520.5	401.1	386.2	439.2	336.5	308.3	300.0
62.5°	17901.8	15108.8	6373.4	1213.4	503.9	384.6	351.4	419.3	323.2	295.0	286.8
65°	17091.2	13885.5	5453.4	1190.2	520.5	369.7	333.1	334.9	310.0	281.8	273.4
67.5°	15198.3	12085.3	4296.4	1205.0	540.4	354.8	319.9	305.0	295.0	270.2	260.2
70°	12360.5	9730.0	3384.8	1231.6	558.7	334.9	303.3	285.0	276.9	250.3	245.3
72.5°	9521.1	7787.2	2670.3	1213.4	576.9	314.8	280.1	265.2	255.2	230.4	225.4
75°	6761.3	6187.7	1962.6	1040.9	528.9	286.8	253.6	240.4	232.0	205.5	203.9
77.5°	4873.3	4634.6	1365.8	782.4	417.7	252.0	223.8	212.2	207.1	177.3	177.3
80°	3887.0	3527.3	817.1	510.6	305.0	208.9	187.3	182.4	177.3	147.5	149.1
82.5°	2793.0	2446.6	522.1	318.3	223.8	159.1	145.9	144.2	135.9	109.4	109.4
85°	1432.2	1249.8	334.9	213.8	157.5	102.8	96.1	92.9	87.9	68.0	68.0
87.5°	278.5	383.0	185.6	104.5	76.3	36.5	36.5	31.4	36.5	24.9	26.6
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°	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9
2.5°	6428.0	6395.0	6371.7	6360.1	6527.4	6597.2	6676.8	6791.1	6869.0	6835.8	6941.9
5°	4800.3	4823.6	4876.6	4959.5	5193.2	5304.2	5375.5	5469.9	5538.0	5469.9	5582.7
7.5°	3282.0	3316.8	3429.5	3600.2	3882.1	4006.3	4031.2	4032.9	4018.0	3906.9	3983.1
10°	2416.7	2347.1	2372.0	2494.6	2746.6	2857.6	2869.2	2839.4	2834.4	2789.7	2875.9
12.5°	1873.0	1776.9	1720.7	1740.5	1929.4	2020.5	2035.5	2052.1	2120.0	2141.6	2247.7
15°	1397.3	1347.6	1306.2	1287.9	1412.2	1483.5	1491.8	1531.6	1602.9	1622.7	1714.0
17.5°	982.9	996.2	1017.7	1026.1	1115.5	1162.0	1148.8	1148.8	1160.4	1155.3	1206.7
20°	750.8	777.4	818.8	858.7	939.8	966.4	933.2	891.8	865.3	852.0	863.5
22.5°	662.9	681.2	707.8	759.2	827.1	840.4	797.3	764.2	739.2	726.0	727.6
25°	614.9	633.1	654.8	696.2	754.2	760.8	721.0	699.5	679.6	666.4	662.9
27.5°	573.5	585.1	598.4	624.9	684.6	687.9	661.3	648.1	634.8	624.9	621.5
30°	535.4	540.4	545.3	571.9	616.7	621.5	608.3	601.7	596.8	590.1	590.1
32.5°	485.6	492.3	500.6	523.8	566.8	573.5	565.2	560.3	552.0	548.7	543.7
35°	426.0	442.6	460.8	488.9	535.4	538.7	528.9	513.8	494.0	488.9	485.6
37.5°	401.1	404.5	427.6	460.8	508.8	512.2	498.9	474.0	459.1	460.8	464.2
40°	384.6	389.5	402.8	436.0	484.0	488.9	477.4	459.1	444.2	445.9	450.9
42.5°	371.3	377.9	386.2	407.7	455.8	465.8	462.5	445.9	430.9	434.3	440.9
45°	364.7	369.7	369.7	384.6	430.9	445.9	447.5	434.3	422.8	426.0	434.3
47.5°	361.3	361.3	356.4	367.9	414.4	429.3	432.6	426.0	419.3	422.8	430.9
50°	356.4	349.7	344.8	354.8	401.1	414.4	417.7	412.8	416.1	422.8	427.6
52.5°	341.4	334.9	334.9	341.4	387.9	401.1	402.8	399.5	406.1	414.4	422.8
55°	323.2	323.2	324.9	331.5	381.2	391.1	389.5	386.2	392.9	402.8	411.1
57.5°	306.7	305.0	313.2	321.6	372.9	379.5	376.3	376.3	381.2	389.5	397.8
60°	296.7	288.5	295.0	308.3	364.7	371.3	366.3	364.7	372.9	379.5	386.2
62.5°	286.8	278.5	283.4	296.7	353.0	358.1	354.8	354.8	363.0	367.9	374.6
65°	271.8	268.6	271.8	285.0	343.1	344.8	344.8	346.5	353.0	356.4	363.0
67.5°	258.6	258.6	260.2	273.4	334.9	331.5	331.5	339.8	341.4	344.8	351.4
70°	242.0	245.3	245.3	261.9	328.3	316.7	318.3	324.9	328.3	331.5	333.1
72.5°	223.8	225.4	228.8	250.3	318.3	301.7	303.3	308.3	310.0	314.8	316.7
75°	203.9	205.5	210.6	238.7	311.6	286.8	283.4	286.8	290.1	293.4	291.7
77.5°	180.8	184.0	188.9	232.0	290.1	283.4	258.6	261.9	265.2	265.2	263.6
80°	152.5	157.5	165.7	222.2	245.3	273.4	230.4	232.0	233.7	233.7	230.4
82.5°	114.4	124.3	135.9	184.0	192.3	233.7	199.0	202.2	197.2	193.9	192.3
85°	74.7	82.9	99.4	127.7	141.0	184.0	164.1	165.7	155.8	154.2	154.2
87.5°	29.8	31.4	44.8	64.7	84.5	114.4	117.7	121.0	112.7	112.7	116.1
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9
2.5°	7102.7	7268.5	7459.1	7653.1	7812.1	8017.7	8216.7	8428.8	8536.5	8599.5	8776.8
5°	5758.4	5985.6	6255.6	6559.1	6811.0	7241.9	7706.0	8223.2	8471.9	8717.1	9181.3
7.5°	4119.1	4341.2	4656.1	5049.0	5407.0	5975.5	6587.2	7286.7	7631.4	8029.3	8790.1
10°	3058.2	3293.6	3578.7	3911.9	4264.9	4856.7	5542.9	6328.7	6708.2	7157.3	8022.7
12.5°	2479.7	2754.9	3050.0	3348.2	3651.7	4049.4	4768.8	5642.3	6050.1	6502.7	7369.5
15°	1934.4	2229.4	2547.7	2872.5	3174.2	3618.4	4352.8	5385.5	5851.3	6288.9	6998.3
17.5°	1369.1	1647.6	2005.7	2400.2	2837.8	3363.2	4263.3	5498.2	6063.5	6520.9	6996.6
20°	933.2	1125.5	1483.5	1951.0	2491.3	3157.7	4296.4	5894.3	6600.5	7102.7	7283.3
22.5°	745.9	837.0	1079.1	1554.8	2193.0	3008.5	4432.3	6438.0	7371.1	7982.9	7805.5
25°	678.0	729.3	855.3	1228.3	1927.8	2909.0	4697.6	7155.7	8234.9	8854.8	8433.7
27.5°	636.6	681.2	762.5	1009.4	1699.0	2844.3	5034.0	8001.0	9207.9	9716.7	9088.5
30°	610.0	654.8	729.3	906.8	1526.6	2748.3	5329.1	8773.5	9985.2	10315.0	9441.5
32.5°	558.7	593.4	654.8	812.3	1397.3	2635.6	5584.3	9464.7	10719.5	10828.9	9865.9
35°	505.6	542.0	603.3	736.0	1321.1	2547.7	5718.6	10078.1	11447.2	11342.8	10286.9
37.5°	485.6	515.4	571.9	681.2	1279.7	2489.7	5770.0	10681.4	12228.0	11911.3	10580.3
40°	472.4	498.9	548.7	644.8	1268.1	2435.0	5758.4	11254.9	12985.5	12499.8	10810.6
42.5°	462.5	485.6	532.1	619.9	1236.6	2383.6	5720.3	11750.5	13592.1	13007.0	11031.2
45°	454.2	479.0	525.4	633.1	1178.6	2327.2	5697.1	12203.0	14057.9	13434.6	11326.3
47.5°	450.9	479.0	527.0	629.9	1115.5	2264.3	5780.0	12705.3	14464.0	13794.3	11719.0
50°	445.9	477.4	563.6	600.1	1029.3	2186.4	6060.1	13303.7	14890.0	14198.8	12228.0
52.5°	437.6	475.8	601.7	576.9	918.4	2078.5	6514.2	14149.1	15625.9	14986.1	12980.4
55°	427.6	479.0	575.1	540.4	800.7	1939.4	6968.4	15307.7	16819.4	16255.8	14061.2
57.5°	416.1	474.0	543.7	507.2	702.9	1763.7	7313.2	16257.4	17804.1	17565.3	15388.9
60°	407.7	485.6	488.9	487.3	639.8	1596.3	7346.4	16196.1	18087.5	18415.6	16688.5
62.5°	397.8	495.6	445.9	472.4	608.3	1440.5	6937.0	15193.3	17608.4	18306.3	17747.6
65°	384.6	432.6	422.8	459.1	608.3	1357.5	5983.8	13524.1	16284.0	17271.9	18322.8
67.5°	371.3	392.9	406.1	440.9	621.5	1279.7	4808.6	11407.4	14195.5	15602.8	17676.4
70°	353.0	371.3	387.9	424.4	614.9	1224.9	3784.2	9143.2	11682.5	13293.7	15887.8
72.5°	336.5	349.7	366.3	399.5	614.9	1200.1	3040.0	7172.4	8919.4	10276.9	13161.2
75°	311.6	323.2	338.1	374.6	603.3	1097.3	2282.4	5746.8	6525.8	7376.2	10384.6
77.5°	286.8	295.0	306.7	343.1	543.7	916.6	1614.6	4450.5	4835.2	5305.8	8095.6
80°	255.2	261.9	270.2	306.7	450.9	711.1	1050.8	3480.9	3615.2	3842.2	5325.8
82.5°	218.8	228.8	230.4	263.6	363.0	515.4	624.9	2385.2	2383.6	2716.7	3757.8
85°	178.9	184.0	187.3	207.1	268.6	343.1	411.1	1302.8	1162.0	1627.8	3263.8
87.5°	134.3	129.3	134.3	139.2	177.3	202.2	220.4	240.4	144.2	295.0	1898.0
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°	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9	7793.9
2.5°	8871.3	8969.1	8911.0	8841.5	8667.4	8412.2	8216.7	8045.9
5°	9502.9	9683.5	9604.0	9345.4	8894.6	8382.4	7843.6	7515.4
7.5°	9423.3	9781.3	9749.9	9318.8	8672.5	7918.2	7160.8	6728.0
10°	8786.8	9289.0	9375.2	8934.3	8249.7	7406.0	6529.3	6040.2
12.5°	8093.9	8516.6	8692.3	8524.9	7880.1	7023.1	6129.7	5640.7
15°	7513.8	7727.6	7901.6	8009.4	7609.9	6887.2	6060.1	5556.2
17.5°	7084.5	7043.1	7188.9	7447.4	7464.0	7067.9	6375.1	5811.5
20°	6877.4	6552.4	6637.0	6999.9	7424.2	7527.1	7003.3	6336.9
22.5°	6865.7	6358.5	6375.1	6766.2	7538.7	8153.6	7787.2	7028.1
25°	7044.7	6336.9	6351.8	6741.3	7740.9	8785.1	8694.0	7808.9
27.5°	7349.7	6429.7	6419.7	6850.8	8011.0	9312.2	9609.0	8763.5
30°	7679.5	6564.0	6539.1	7026.5	8276.3	9637.1	10258.7	9482.9
32.5°	8090.6	6802.7	6716.5	7283.3	8538.2	9948.7	10814.1	10155.9
35°	8481.8	7152.4	7028.1	7651.3	8818.4	10295.2	11435.6	10900.2
37.5°	8881.2	7674.6	7605.0	8181.8	9214.5	10671.5	12146.7	11743.9
40°	9393.4	8417.2	8384.0	8952.6	9743.2	11082.5	12944.0	12622.4
42.5°	9945.5	9206.1	9178.0	9837.7	10399.7	11495.2	13627.0	13376.6
45°	10507.4	10162.5	10169.2	10782.5	11090.8	11884.7	14164.0	13979.9
47.5°	11170.3	11208.5	11445.6	11762.1	11763.8	12319.1	14639.6	14541.9
50°	12012.4	12471.6	12909.2	12958.9	12443.4	12892.6	15221.5	15185.1
52.5°	12965.6	13928.6	14437.4	14279.9	13106.4	13603.7	16081.8	16080.1
55°	14097.6	15451.9	15931.0	15662.5	13900.4	14530.3	17205.6	17132.7
57.5°	15271.2	16917.1	17303.4	16953.6	14893.3	15609.4	18332.7	17946.6
60°	16539.2	18178.5	18571.5	18046.1	16007.1	16685.1	19078.7	18175.3
62.5°	17369.7	18916.3	19198.1	18694.1	17005.0	17780.8	19319.0	17901.8
65°	17412.7	18425.6	18500.3	18321.1	17429.4	18732.3	18970.9	17091.2
67.5°	16229.3	16289.0	16386.8	16579.0	16522.7	18307.9	17628.3	15198.3
70°	13698.2	12902.5	13224.0	13409.7	13827.6	16284.0	15146.9	12360.5
72.5°	10474.2	9312.2	9676.9	9613.9	10482.5	13356.7	11588.1	9521.1
75°	7538.7	6350.1	6378.3	6381.7	7532.0	10661.5	7901.6	6761.3
77.5°	5123.6	4493.8	4586.4	4528.5	5040.6	8352.6	5688.8	4873.3
80°	3504.2	3487.5	3507.4	3371.5	3361.6	5398.7	4212.0	3887.0
82.5°	2599.1	2401.8	2373.6	2229.4	2575.9	4127.4	3197.5	2793.0
85°	2050.5	1329.3	1155.3	1394.0	2231.1	3797.6	1949.3	1432.2
87.5°	868.6	522.1	316.7	626.6	1239.9	2783.1	540.4	278.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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