

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: McGRAW-EDISON

Report Number: P301680

Luminaire Tested: **GLNA-AF-01-LED-E1-T2R-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301680
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P194759)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-01-LED-E1-T2R-7027-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(1) 70 CRI, 2700K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
Roadway OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3703 lumens
Efficiency: N/A
Efficacy: 108.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

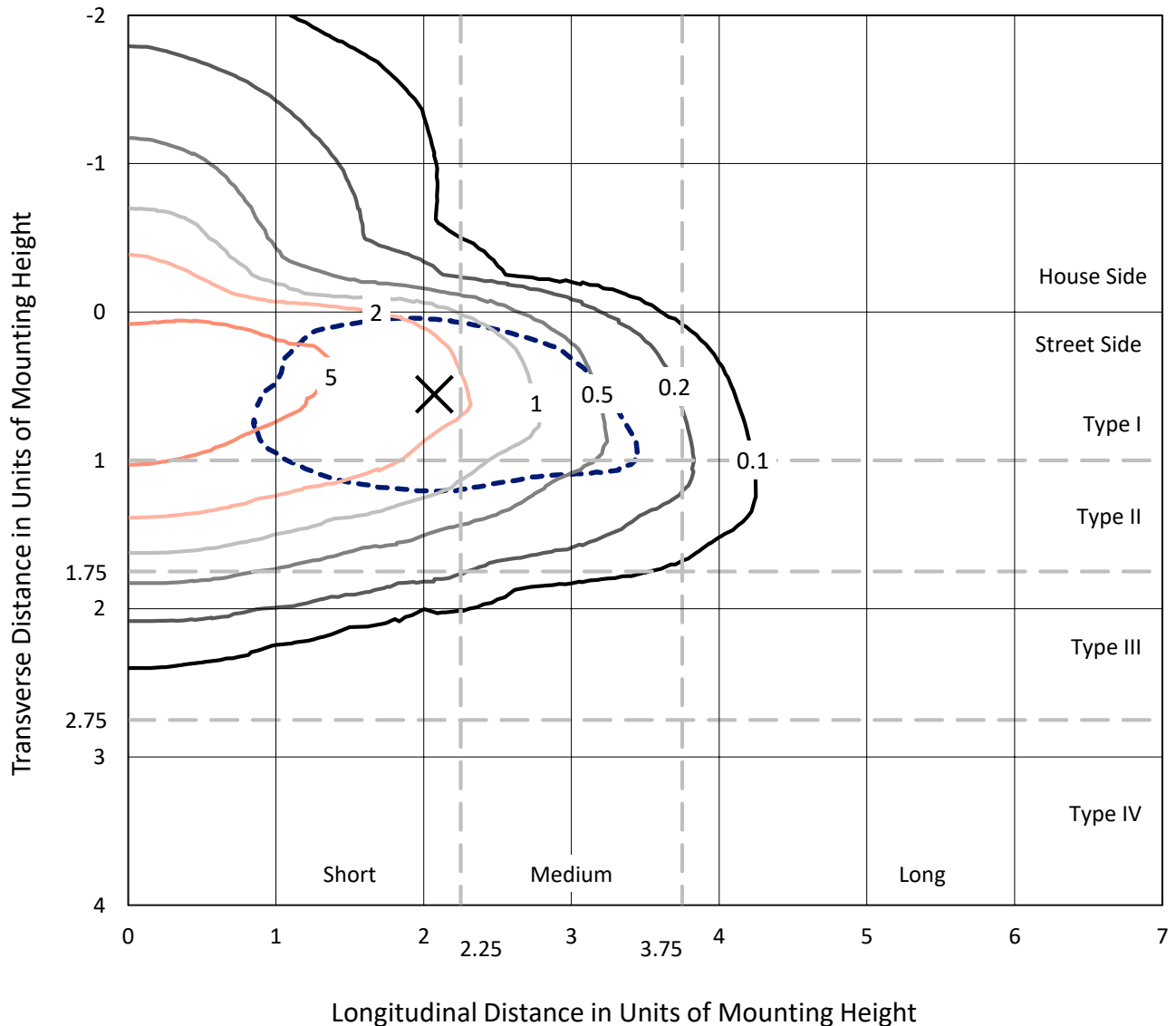
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

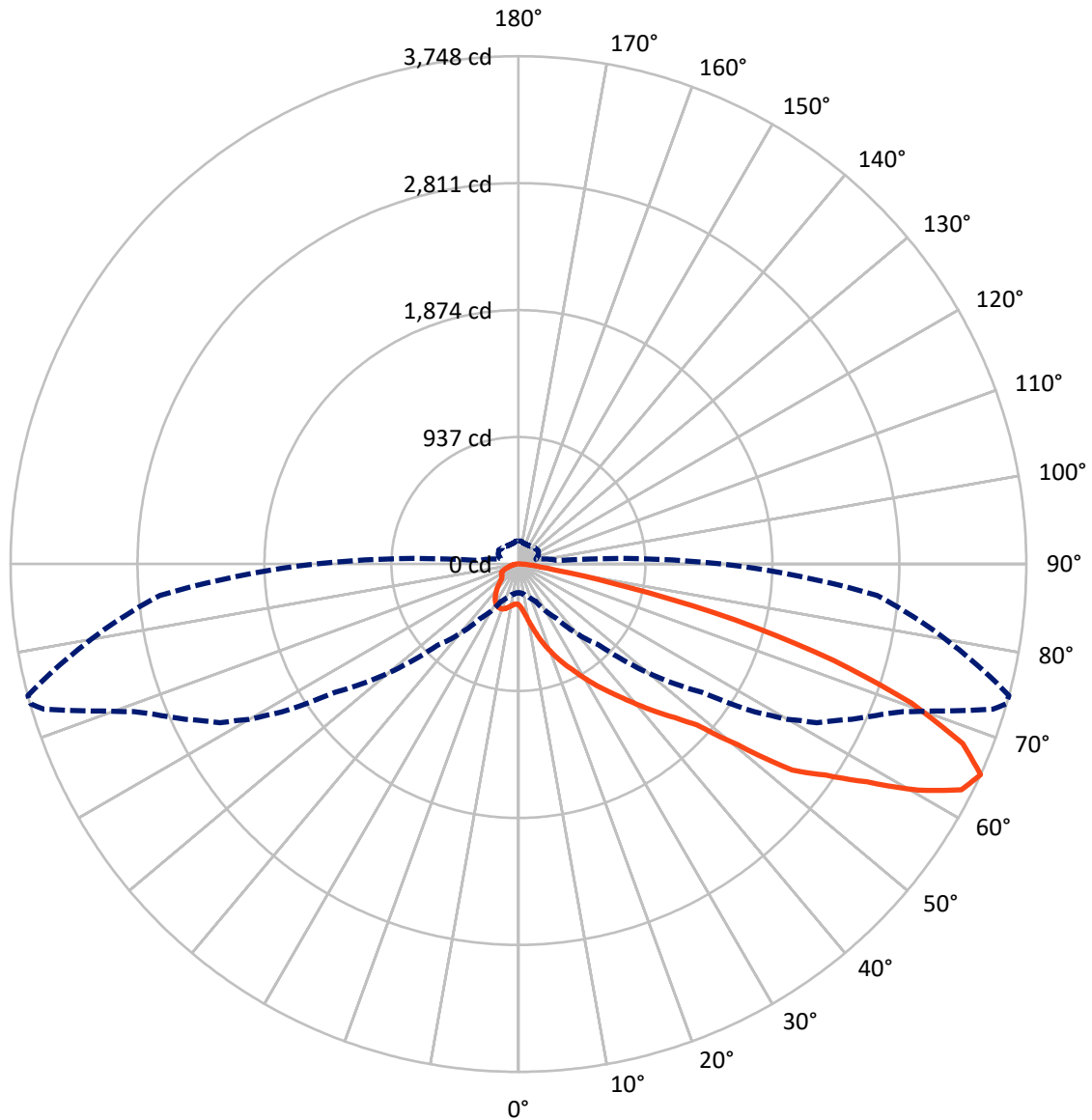
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.3 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	570.9	0.0	570.9
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	3132.1	0.0	3132.1
	% Fixture	84.6	0.0	84.6
Total	Lumens	3703.0	0.0	3703.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.2	1.0
10°-20°	145.3	3.9
20°-30°	298.2	8.1
30°-40°	501.7	13.5
40°-50°	693.2	18.7
50°-60°	865.3	23.4
60°-70°	778.7	21.0
70°-80°	326.4	8.8
80°-90°	57.0	1.5
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°	3703.0	100.0
0°-180°	3703.0	100.0



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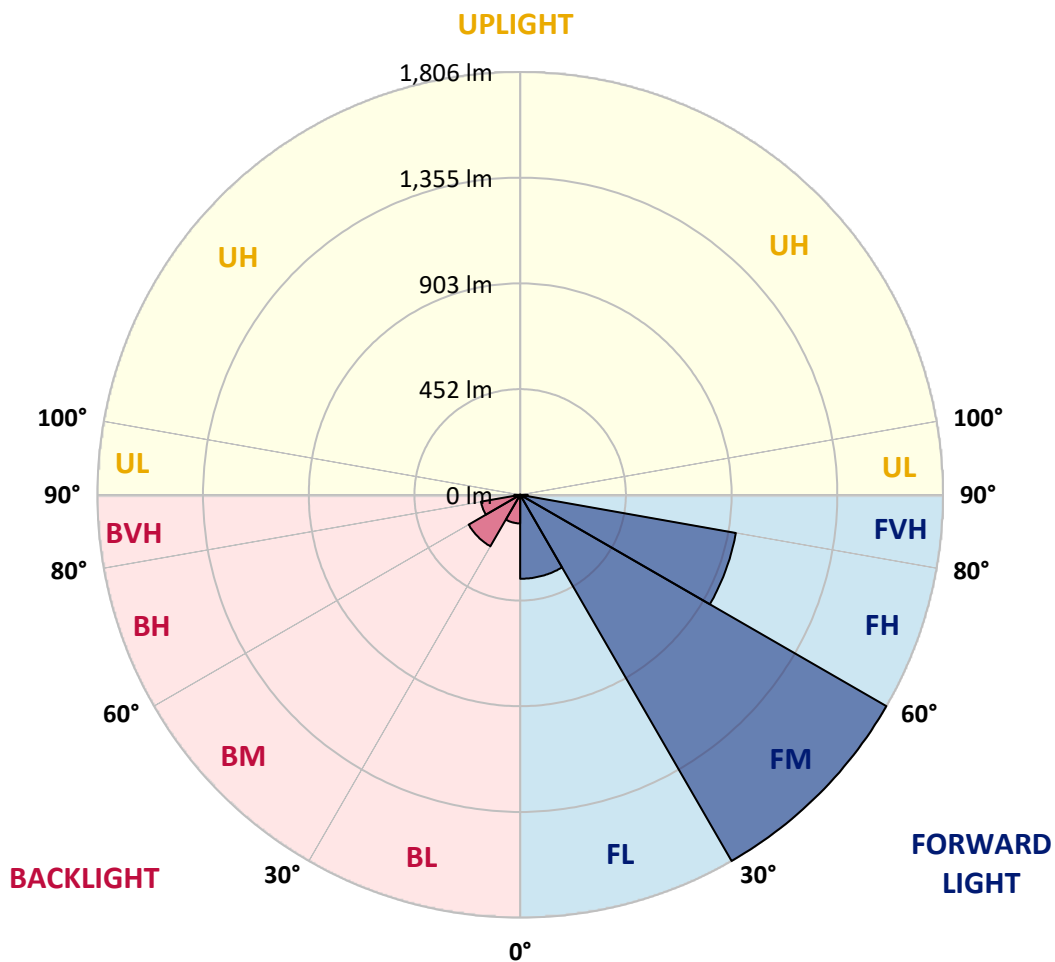
CATALOG NUMBER: GLNA-AF-01-LED-E1-T2R-7027-600

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	358.6	9.7			
FM	(30°-60°)	1806.1	48.8			
FH	(60°-80°)	935.4	25.3			G1/1800
FVH	(80°-90°)	32.1	0.9			G1/100
BL	(0°-30°)	122.1	3.3	B1/500		
BM	(30°-60°)	254.1	6.9	B1/1000		
BH	(60°-80°)	169.7	4.6	B1/500		G1/500
BVH	(80°-90°)	25.0	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9
2.5°	382.1	377.9	378.9	371.9	363.3	352.1	339.7	339.5	339.7	338.4	333.9
5°	529.8	524.8	522.9	507.0	483.9	451.0	415.2	411.4	409.8	405.8	396.5
7.5°	637.7	634.8	631.8	619.9	598.9	562.1	514.1	505.9	497.9	496.0	485.5
10°	707.2	706.5	700.2	697.0	683.9	652.0	605.2	597.3	588.7	585.8	574.7
12.5°	762.2	762.1	759.1	760.0	748.6	725.5	685.1	678.0	671.7	662.5	654.7
15°	800.3	800.4	804.9	809.8	808.0	792.4	754.5	751.4	746.0	739.7	730.4
17.5°	831.5	832.4	836.9	845.8	855.5	854.3	824.3	821.7	816.9	808.4	803.5
20°	901.9	905.3	896.5	896.5	897.6	902.3	887.9	885.8	879.2	874.6	870.7
22.5°	1021.0	1024.8	1005.0	984.9	965.1	950.7	936.3	938.9	934.4	931.2	928.9
25°	1175.5	1178.6	1146.5	1112.5	1072.1	1019.6	984.0	982.4	979.9	978.0	977.0
27.5°	1321.0	1322.3	1291.9	1242.1	1195.3	1119.8	1032.3	1030.4	1027.5	1023.8	1020.6
30°	1445.5	1445.1	1413.9	1366.4	1316.3	1232.7	1105.8	1099.8	1091.0	1081.1	1073.4
32.5°	1553.3	1552.8	1518.5	1469.3	1416.7	1344.5	1206.4	1194.1	1180.5	1161.0	1149.3
35°	1638.1	1637.8	1605.5	1554.2	1493.8	1449.9	1321.7	1306.7	1289.3	1263.2	1245.2
37.5°	1670.2	1670.2	1652.1	1617.1	1563.8	1533.6	1449.9	1431.6	1413.0	1383.4	1363.1
40°	1651.4	1651.7	1655.6	1649.1	1623.2	1600.1	1569.4	1558.5	1542.6	1515.9	1494.7
42.5°	1588.5	1590.4	1616.0	1647.4	1660.3	1656.7	1675.4	1670.5	1659.3	1638.8	1622.0
45°	1508.7	1514.7	1542.7	1602.0	1670.7	1705.6	1764.3	1764.8	1762.7	1751.7	1738.7
47.5°	1399.2	1407.6	1444.6	1524.7	1646.5	1753.1	1854.5	1859.3	1863.7	1856.5	1850.5
50°	1253.7	1263.7	1319.1	1425.3	1597.3	1802.3	2025.1	2046.5	2066.5	2064.0	2068.0
52.5°	1097.9	1109.7	1177.5	1295.8	1512.6	1813.7	2134.1	2169.0	2203.9	2232.4	2262.7
55°	957.3	951.0	1018.9	1143.5	1373.4	1762.3	2232.1	2274.2	2313.1	2348.1	2384.2
57.5°	766.8	777.2	845.2	968.4	1189.2	1617.4	2299.5	2361.1	2417.0	2475.0	2526.2
60°	560.5	570.8	644.6	769.8	989.2	1397.6	2248.0	2341.3	2430.8	2519.7	2589.1
62.5°	338.4	346.2	411.2	530.4	762.8	1137.0	2018.4	2140.8	2272.6	2378.8	2485.2
65°	210.7	215.0	239.1	304.6	489.9	848.9	1649.1	1782.5	1924.5	2059.3	2169.9
67.5°	172.5	174.0	178.4	192.4	269.0	553.5	1227.4	1345.6	1473.7	1604.1	1727.1
70°	155.1	154.1	154.1	154.9	172.5	297.6	803.6	880.6	987.3	1100.7	1213.2
72.5°	140.0	139.0	137.1	134.5	140.7	181.6	415.4	473.4	550.4	651.1	758.9
75°	125.8	124.4	122.2	118.9	123.2	137.1	199.4	223.8	261.3	315.0	375.1
77.5°	111.1	109.3	107.3	104.8	110.4	106.6	116.9	125.7	140.0	157.2	179.8
80°	94.5	92.9	92.2	91.0	97.6	81.2	82.6	88.0	96.4	105.7	116.2
82.5°	74.0	74.0	76.7	77.3	84.6	58.4	61.7	66.4	70.8	75.7	80.6
85°	48.7	49.1	58.5	62.2	66.8	39.3	46.3	47.8	51.4	54.2	56.3
87.5°	15.2	16.5	35.8	39.6	38.4	22.3	28.4	29.1	31.6	33.5	35.3
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):

	60°	61°	62°	63°	64°	65°	66°	67°	68°	69°	70°
0°	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9
2.5°	333.9	331.8	329.9	329.7	328.3	326.4	327.0	324.1	324.2	322.7	320.9
5°	392.6	391.2	384.2	382.3	377.0	373.7	373.2	366.1	365.3	361.3	356.8
7.5°	477.1	472.5	462.7	458.0	449.0	442.4	439.2	429.9	425.4	414.9	410.1
10°	565.6	559.8	547.7	541.1	532.5	521.8	516.0	502.5	497.2	487.6	476.1
12.5°	647.6	641.9	629.4	624.3	612.9	601.5	595.2	580.0	573.1	557.7	548.6
15°	723.5	717.7	706.9	701.6	690.2	680.9	672.5	657.5	649.4	635.0	623.1
17.5°	797.1	791.0	781.5	776.8	765.8	756.3	747.2	733.0	724.7	710.4	699.7
20°	865.5	860.9	854.1	847.8	836.7	828.2	817.3	805.0	793.1	782.6	772.4
22.5°	925.1	923.3	916.0	913.2	903.7	896.3	886.9	874.8	866.2	852.9	843.4
25°	976.4	975.9	972.4	971.5	964.9	957.8	955.8	945.8	937.9	926.1	916.3
27.5°	1020.6	1021.1	1020.3	1022.7	1021.0	1017.8	1018.0	1014.7	1010.1	1000.3	991.7
30°	1069.7	1066.9	1068.5	1072.0	1073.0	1073.4	1079.1	1081.1	1080.7	1074.2	1070.0
32.5°	1139.1	1132.4	1126.3	1125.8	1129.3	1130.7	1140.5	1145.6	1150.0	1151.5	1152.2
35°	1227.6	1214.3	1201.5	1194.7	1188.7	1190.2	1197.3	1205.5	1215.2	1221.8	1229.7
37.5°	1339.1	1322.8	1300.2	1284.0	1280.0	1271.3	1275.8	1282.3	1291.7	1302.1	1315.8
40°	1474.2	1449.5	1424.1	1402.7	1391.2	1375.0	1374.8	1373.6	1379.4	1389.0	1408.3
42.5°	1604.3	1582.3	1555.4	1532.9	1517.9	1496.3	1491.9	1480.5	1483.1	1491.6	1510.3
45°	1726.0	1708.0	1691.5	1665.6	1652.8	1629.5	1622.1	1608.6	1601.1	1605.0	1623.7
47.5°	1844.0	1832.5	1815.3	1798.5	1788.6	1767.8	1758.3	1748.7	1739.0	1738.7	1758.3
50°	2074.0	2067.9	2047.5	2030.0	2034.7	2009.2	2010.7	1984.8	1996.5	1997.9	2039.1
52.5°	2290.1	2311.5	2326.6	2344.9	2356.9	2359.2	2367.0	2378.8	2393.0	2421.0	2459.2
55°	2413.8	2440.7	2456.3	2470.3	2493.4	2498.3	2511.5	2527.1	2539.5	2571.1	2603.5
57.5°	2560.9	2610.7	2634.9	2657.1	2688.3	2700.2	2722.2	2739.2	2755.3	2792.6	2831.9
60°	2651.5	2712.2	2761.4	2796.6	2835.7	2863.8	2896.9	2923.5	2961.4	3006.1	3064.6
62.5°	2579.5	2668.5	2733.9	2794.4	2847.5	2901.1	2948.6	2998.4	3055.8	3123.5	3214.3
65°	2292.6	2383.1	2495.1	2557.9	2628.2	2710.9	2783.1	2863.8	2942.1	3040.6	3174.9
67.5°	1845.6	1950.9	2076.8	2140.1	2220.9	2313.2	2394.2	2492.7	2584.2	2703.5	2869.6
70°	1330.3	1466.5	1572.4	1638.4	1732.8	1827.9	1906.1	2020.7	2096.4	2218.7	2390.4
72.5°	842.4	949.8	1079.5	1162.7	1246.5	1343.0	1422.9	1521.7	1592.3	1703.8	1859.3
75°	452.9	532.1	646.0	725.1	814.9	897.2	990.8	1057.0	1109.3	1197.5	1323.7
77.5°	212.2	260.4	318.1	378.9	439.8	503.2	564.9	618.5	641.0	691.5	765.9
80°	128.8	144.4	161.2	180.0	205.4	225.9	253.1	272.7	274.1	290.1	312.8
82.5°	86.1	91.8	96.9	101.6	108.1	113.2	119.0	125.8	128.6	132.3	139.7
85°	58.7	61.5	62.5	65.6	64.8	66.6	68.9	71.2	72.4	72.2	75.5
87.5°	36.1	37.5	38.2	38.9	38.4	37.7	38.7	40.0	40.3	39.3	39.6
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):

	71°	72°	73°	74°	75°	85°	90°	95°	105°	115°	125°
0°	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9	300.9
2.5°	321.3	319.7	318.1	317.1	316.7	307.4	303.4	300.8	295.2	290.6	286.9
5°	354.4	351.1	348.5	345.3	343.5	320.0	311.4	305.5	295.7	289.9	284.6
7.5°	407.7	398.4	393.0	386.8	381.6	339.2	325.0	315.7	302.0	294.3	288.3
10°	468.2	458.5	449.9	440.4	432.2	364.6	343.9	329.5	311.4	301.5	293.6
12.5°	535.6	526.2	515.3	503.2	492.7	396.8	368.1	347.6	322.8	309.5	298.5
15°	615.4	598.7	585.6	571.6	559.3	435.4	396.3	367.9	334.9	316.9	302.2
17.5°	689.5	672.0	654.1	641.9	627.7	478.7	424.7	388.6	344.9	321.6	302.9
20°	761.9	742.8	727.4	710.9	696.0	523.5	455.0	406.8	351.4	321.8	298.5
22.5°	825.7	813.8	796.6	778.7	763.6	568.4	483.4	422.2	353.9	317.8	290.8
25°	898.2	885.7	864.6	849.5	832.7	614.2	511.3	434.2	352.5	310.2	278.8
27.5°	975.7	961.7	940.2	924.4	904.1	661.6	536.8	442.7	347.2	298.0	262.9
30°	1056.5	1043.7	1022.5	1006.6	986.1	712.0	565.4	448.5	336.7	281.0	244.3
32.5°	1143.3	1132.6	1111.6	1094.9	1073.0	766.4	592.1	450.3	320.8	260.8	224.7
35°	1225.7	1218.3	1200.6	1185.0	1162.2	818.0	620.3	449.4	301.8	238.7	206.8
37.5°	1318.4	1314.0	1305.3	1285.4	1257.6	887.9	654.1	445.7	278.7	216.8	193.2
40°	1417.3	1417.6	1408.2	1394.6	1368.7	972.8	694.4	438.5	253.4	197.5	180.7
42.5°	1521.9	1527.3	1522.8	1513.1	1488.2	1058.3	742.6	429.8	228.9	178.8	168.5
45°	1641.8	1648.4	1655.4	1641.2	1617.1	1171.2	806.1	418.4	202.4	163.2	160.0
47.5°	1780.1	1790.6	1796.9	1797.1	1772.9	1311.0	909.1	411.5	179.0	152.7	156.0
50°	2071.9	2075.2	2090.1	2116.1	2097.5	1634.7	1089.1	407.3	163.0	146.2	153.0
52.5°	2492.3	2529.0	2554.8	2553.0	2527.7	1840.3	1188.3	385.6	153.5	143.7	151.6
55°	2663.6	2709.4	2757.0	2769.6	2750.0	2015.8	1282.1	363.9	149.0	145.5	152.1
57.5°	2891.8	2968.9	3034.3	3061.8	3033.4	2240.3	1405.5	352.5	147.6	150.2	155.5
60°	3158.4	3253.7	3339.6	3389.0	3389.0	2498.3	1533.5	347.7	145.6	157.2	161.1
62.5°	3329.6	3469.7	3599.4	3671.8	3669.6	2678.0	1590.2	331.6	141.3	162.1	168.8
65°	3330.3	3496.9	3662.1	3743.5	3747.6	2655.9	1496.5	292.9	133.2	162.8	176.5
67.5°	3052.7	3230.2	3422.9	3513.9	3534.9	2444.9	1295.4	240.8	120.1	155.8	179.3
70°	2578.2	2751.6	2948.2	3037.7	3075.0	2084.1	1043.4	185.6	103.3	140.4	173.5
72.5°	2031.2	2201.2	2338.1	2403.5	2432.6	1593.0	759.8	140.2	84.6	118.3	157.9
75°	1438.1	1565.7	1638.4	1653.0	1657.5	960.3	461.7	104.3	69.8	92.0	133.4
77.5°	811.7	866.4	860.4	866.9	812.9	370.7	201.1	74.7	57.5	69.9	103.4
80°	316.9	326.7	306.9	300.8	275.9	137.9	88.7	52.0	45.9	52.9	72.4
82.5°	139.7	144.2	140.0	141.1	135.0	71.2	53.1	37.7	35.0	38.7	48.0
85°	77.0	78.4	78.0	80.3	77.0	28.4	25.2	23.1	24.5	26.3	30.8
87.5°	37.5	37.9	36.7	38.6	37.3	14.4	12.4	13.2	14.4	14.7	14.7
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):

	135°	145°	155°	165°	175°	180°
0°	300.9	300.9	300.9	300.9	300.9	300.9
2.5°	284.3	282.9	283.1	282.7	282.0	282.0
5°	281.9	280.5	280.5	280.1	279.2	279.4
7.5°	284.3	282.0	281.1	279.9	278.7	278.7
10°	287.1	283.1	280.6	278.5	276.9	276.9
12.5°	289.2	282.9	278.8	276.0	274.5	274.5
15°	289.9	281.7	276.0	272.7	271.3	271.1
17.5°	287.6	276.9	270.1	266.3	264.5	264.0
20°	280.6	268.3	260.1	255.7	253.3	252.4
22.5°	270.1	256.1	246.5	241.9	238.7	238.2
25°	255.4	240.3	230.9	226.4	224.7	224.1
27.5°	238.2	224.1	216.1	213.3	211.7	211.6
30°	221.9	210.0	204.0	201.9	200.0	199.7
32.5°	206.6	199.1	196.8	193.8	189.3	188.8
35°	195.8	195.1	193.5	186.8	181.3	179.6
37.5°	189.1	195.6	187.5	174.4	170.4	170.0
40°	185.3	190.2	176.3	171.8	172.1	171.8
42.5°	176.5	181.6	176.7	174.6	175.9	176.3
45°	167.7	173.3	179.3	177.9	181.3	181.3
47.5°	162.8	171.2	179.1	179.1	184.1	185.8
50°	157.2	169.5	176.3	178.8	182.7	181.3
52.5°	156.9	166.5	172.3	176.7	178.4	176.8
55°	157.4	164.0	168.3	173.2	175.3	175.4
57.5°	158.1	162.6	165.4	167.7	174.0	174.0
60°	159.8	161.4	163.0	164.2	172.5	172.6
62.5°	162.6	160.2	159.8	161.1	171.6	170.9
65°	167.1	158.4	155.8	157.0	170.7	168.6
67.5°	173.0	155.8	150.7	151.6	170.0	165.4
70°	178.4	151.6	144.4	143.6	163.4	155.3
72.5°	179.0	146.7	135.7	133.1	142.0	134.2
75°	170.2	143.3	126.0	118.3	117.2	116.2
77.5°	153.4	141.4	114.8	102.7	100.6	101.3
80°	128.3	134.2	101.3	86.9	98.3	97.1
82.5°	95.9	118.5	86.1	77.0	76.7	67.9
85°	53.3	92.4	70.1	57.7	40.1	38.9
87.5°	14.9	51.4	49.1	32.6	22.3	23.1
90°	0.0	0.0	0.0	0.0	0.0	0.0

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