

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: INVUE

Report Number: P401438

Luminaire Tested: **ENT-SA1D-727-U-SLL**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401438
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-7)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-727-U-SLL
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4175 lumens
Efficiency: N/A
Efficacy: 96.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G1

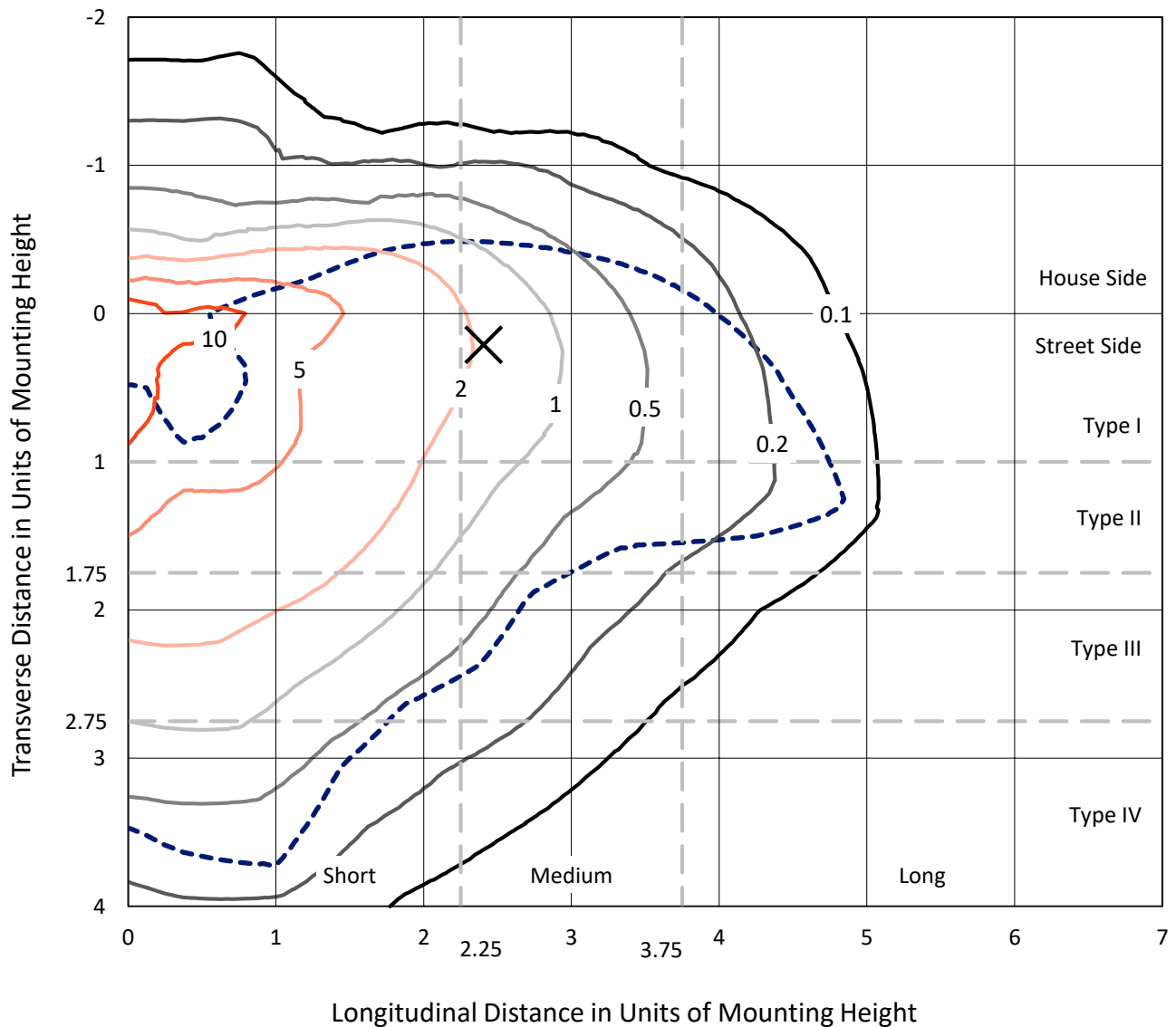
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

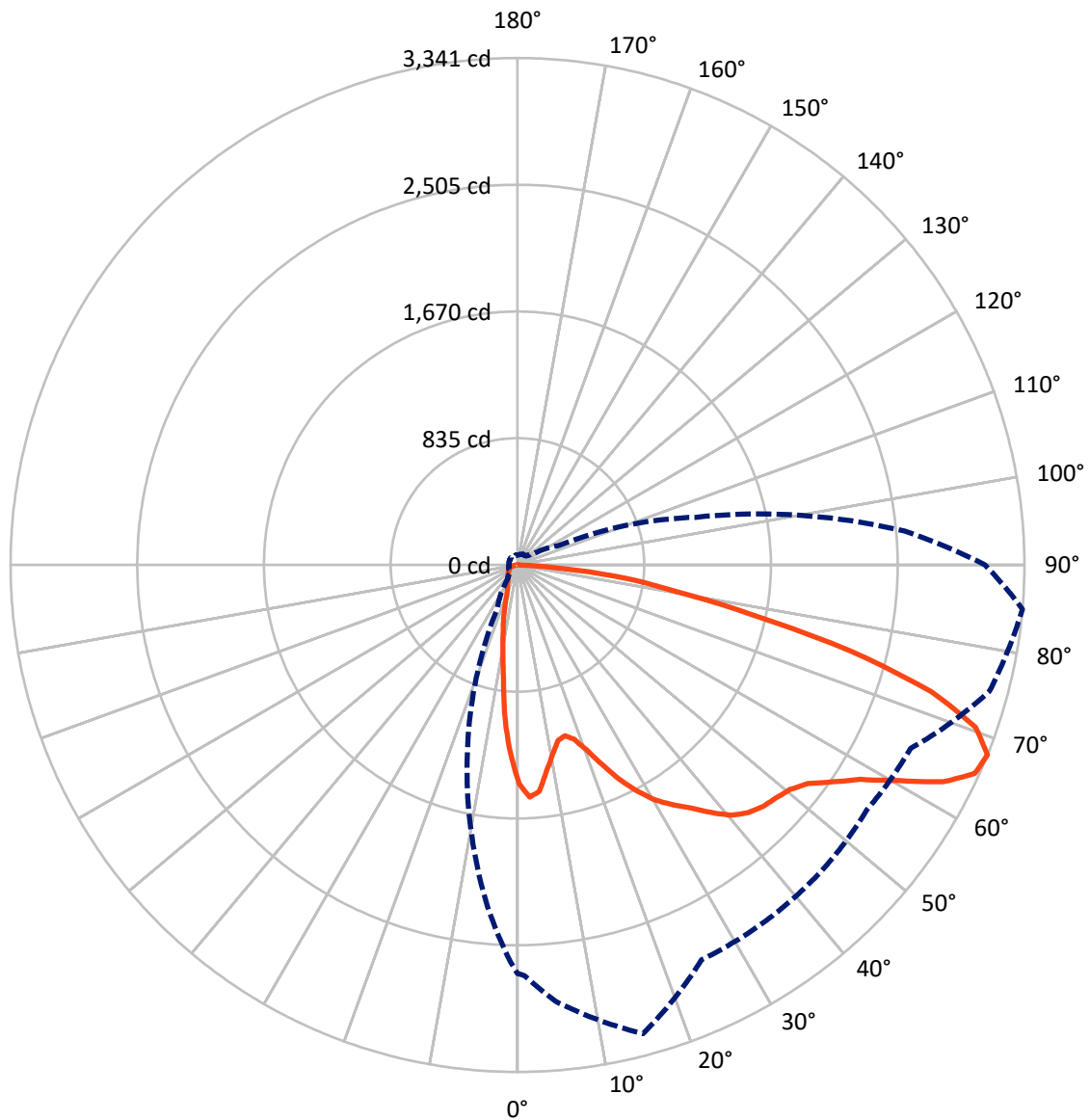
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 15.4 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 85-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	841.2	0.0	841.2
	% Fixture	20.1	0.0	20.1
Street Side	Lumens	3333.8	0.0	3333.8
	% Fixture	79.9	0.0	79.9
Total	Lumens	4175.0	0.0	4175.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.7	2.6
10°-20°	216.3	5.2
20°-30°	302.2	7.2
30°-40°	426.0	10.2
40°-50°	590.3	14.1
50°-60°	829.4	19.9
60°-70°	1014.0	24.3
70°-80°	595.9	14.3
80°-90°	91.3	2.2
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°	4175.0	100.0
0°-180°	4175.0	100.0



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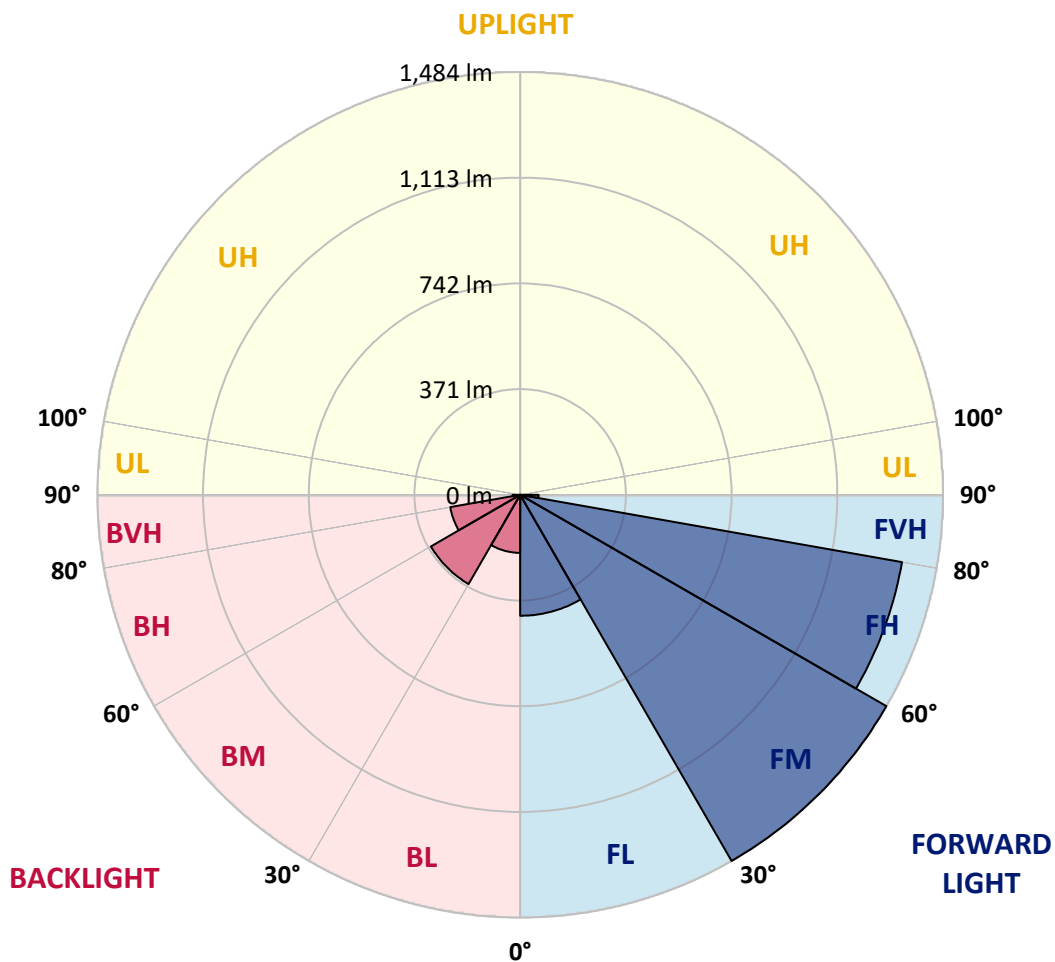
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	424.4	10.2			
FM	(30°-60°)	1484.0	35.5			
FH	(60°-80°)	1360.8	32.6			G1/1800
FVH	(80°-90°)	64.6	1.5			G1/100
BL	(0°-30°)	203.7	4.9	B1/500		
BM	(30°-60°)	361.6	8.7	B1/1000		
BH	(60°-80°)	249.2	6.0	B1/500		G1/500
BVH	(80°-90°)	26.7	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-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4
2.5°	1482.0	1475.3	1498.1	1531.7	1554.5	1570.6	1576.0	1575.3	1570.6	1557.8	1531.0
5°	1416.2	1410.2	1456.5	1531.0	1596.1	1643.1	1656.5	1637.7	1614.2	1564.5	1498.8
7.5°	1291.4	1300.8	1359.8	1464.5	1569.2	1643.7	1661.9	1632.3	1584.0	1482.7	1371.9
10°	1196.7	1201.4	1267.9	1394.1	1505.5	1582.0	1613.5	1587.4	1524.3	1396.1	1267.9
12.5°	1138.3	1143.0	1207.5	1324.3	1443.1	1502.8	1512.2	1511.5	1459.2	1335.0	1186.7
15°	1146.4	1152.4	1216.9	1313.5	1380.6	1406.8	1407.5	1414.9	1399.4	1304.8	1167.2
17.5°	1224.2	1224.2	1286.0	1344.4	1329.0	1310.2	1324.3	1337.7	1364.5	1322.9	1206.8
20°	1347.1	1352.4	1409.5	1399.4	1305.5	1258.5	1241.7	1265.2	1348.4	1377.3	1300.1
22.5°	1480.0	1494.1	1553.8	1480.0	1301.4	1210.2	1191.4	1216.9	1350.4	1463.2	1428.3
25°	1627.0	1644.4	1684.7	1573.9	1313.5	1183.3	1170.6	1194.7	1355.8	1542.4	1566.6
27.5°	1761.2	1762.5	1802.1	1653.1	1345.1	1186.0	1164.5	1196.1	1370.6	1604.8	1688.7
30°	1856.5	1856.5	1874.0	1693.4	1384.0	1202.8	1169.9	1216.2	1391.4	1639.0	1799.5
32.5°	1943.8	1948.5	1939.7	1735.7	1420.9	1226.9	1182.6	1256.5	1424.3	1667.2	1884.7
35°	2054.5	2053.8	2014.9	1769.3	1455.1	1253.1	1214.2	1307.5	1471.9	1708.8	1965.9
37.5°	2191.4	2184.7	2102.2	1799.5	1496.8	1298.1	1273.9	1377.3	1535.7	1757.8	2068.6
40°	2315.6	2304.9	2182.0	1827.6	1529.6	1385.3	1371.2	1463.9	1616.2	1818.9	2168.6
42.5°	2412.3	2396.1	2249.8	1847.8	1579.3	1522.3	1534.3	1619.6	1697.4	1873.3	2231.0
45°	2493.5	2476.7	2300.8	1857.8	1699.4	1717.6	1741.1	1812.2	1784.0	1888.1	2269.3
47.5°	2551.9	2524.3	2323.0	1887.4	1861.9	1945.8	2018.3	2023.0	1906.2	1887.4	2292.8
50°	2586.1	2555.9	2343.8	1960.5	2050.5	2204.9	2282.0	2245.8	2033.0	1899.5	2326.3
52.5°	2655.2	2623.7	2430.4	2079.3	2243.8	2467.3	2508.9	2450.5	2164.6	1961.9	2393.5
55°	2829.1	2815.0	2598.2	2239.1	2433.7	2679.4	2698.2	2639.8	2302.2	2069.9	2521.7
57.5°	3025.7	2994.8	2825.0	2439.8	2615.6	2845.2	2875.4	2794.8	2446.5	2221.6	2664.6
60°	3080.8	3074.7	3017.0	2674.0	2803.6	3022.4	3024.4	2921.7	2615.0	2402.2	2882.8
62.5°	3000.2	3019.7	3096.9	2890.8	2961.3	3141.2	3124.4	3017.7	2791.5	2689.5	3147.9
65°	2859.9	2887.5	3042.5	3095.5	2997.5	3117.7	3082.1	3014.3	2902.9	2998.9	3312.3
67.5°	2691.5	2706.2	2886.8	3197.5	2870.7	2859.3	2842.5	2811.6	2858.6	3219.0	3340.5
70°	2516.3	2529.0	2695.5	3057.3	2490.1	2359.2	2345.1	2318.3	2501.5	3216.3	3202.2
72.5°	2121.0	2112.9	2266.6	2551.9	1901.5	1723.6	1843.1	1784.7	2023.6	2889.5	2852.6
75°	1317.5	1361.8	1554.5	1789.4	1302.8	1180.6	1345.7	1331.0	1643.1	2488.1	2271.3
77.5°	802.7	811.5	920.2	1115.5	784.6	818.2	865.2	956.4	1218.2	2016.9	1583.3
80°	420.2	390.6	470.5	612.1	465.8	549.0	634.3	735.0	773.2	1314.9	1058.5
82.5°	121.5	120.8	159.1	256.4	220.8	269.8	320.2	461.8	506.7	781.9	724.9
85°	0.7	0.7	0.7	1.3	2.0	3.4	14.1	118.8	157.1	362.4	298.0
87.5°	0.0	0.0	0.7	1.3	1.3	2.7	4.0	5.4	6.7	8.1	29.5
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4
2.5°	1522.3	1512.2	1490.7	1461.8	1441.7	1406.8	1399.4	1377.3	1355.1	1337.0	1337.7
5°	1467.2	1433.0	1380.6	1320.2	1262.5	1210.8	1200.8	1170.6	1161.8	1153.1	1128.9
7.5°	1322.9	1282.6	1209.5	1120.2	1047.7	998.7	946.4	914.8	886.6	854.4	862.5
10°	1212.2	1154.4	1053.8	949.1	858.4	792.7	735.0	705.4	664.5	634.9	630.9
12.5°	1126.9	1064.5	943.7	820.9	735.6	697.4	660.4	614.1	568.5	529.6	509.4
15°	1098.7	1028.3	888.0	765.8	698.7	652.4	600.7	547.7	492.0	450.4	434.3
17.5°	1131.6	1048.4	887.3	742.3	658.4	590.6	526.2	466.5	400.7	359.1	346.3
20°	1222.2	1118.2	906.1	720.2	609.4	517.5	426.9	362.4	295.3	265.8	252.4
22.5°	1348.4	1212.8	935.0	693.3	555.1	428.2	326.2	245.0	212.1	197.3	194.0
25°	1478.0	1333.0	975.9	670.5	495.3	341.0	234.2	196.0	180.5	173.8	173.8
27.5°	1620.2	1453.1	1020.2	643.0	433.6	253.7	190.6	172.5	164.4	160.4	159.7
30°	1735.7	1551.1	1070.5	610.8	377.9	208.1	169.1	157.1	149.7	147.7	147.7
32.5°	1818.9	1624.3	1123.6	578.6	326.9	187.9	157.1	146.3	138.3	136.9	136.9
35°	1916.2	1694.1	1147.7	560.4	296.0	175.2	148.3	137.6	130.2	126.9	126.9
37.5°	2033.0	1777.3	1161.2	543.0	282.6	163.1	142.3	130.2	122.8	118.8	118.8
40°	2181.4	1871.9	1175.3	525.5	274.5	153.0	135.6	123.5	117.5	112.8	112.8
42.5°	2287.4	1959.2	1186.0	510.8	260.4	148.3	130.2	118.8	111.4	107.4	106.7
45°	2343.1	2040.4	1190.7	502.0	244.3	152.4	126.2	114.8	106.0	102.0	101.3
47.5°	2380.7	2107.5	1196.7	495.3	231.6	145.0	125.5	110.7	102.0	96.7	96.7
50°	2440.4	2196.1	1212.2	482.6	224.2	135.6	135.6	108.7	97.3	92.6	92.0
52.5°	2547.2	2323.0	1253.8	468.5	216.1	126.2	139.6	109.4	94.0	88.6	87.3
55°	2708.2	2525.0	1322.9	448.4	204.7	114.8	130.2	110.1	90.6	85.9	83.9
57.5°	2917.7	2769.3	1403.5	432.2	185.2	105.4	118.8	106.7	86.6	82.6	81.2
60°	3058.6	2932.4	1454.5	411.4	157.7	99.3	102.0	103.4	82.6	77.9	77.2
62.5°	3134.4	2935.1	1455.1	382.6	132.2	94.0	91.3	105.4	79.2	73.2	72.5
65°	3139.8	2792.1	1382.0	345.7	123.5	87.9	83.9	93.3	75.8	69.8	69.1
67.5°	3081.4	2559.2	1214.9	303.4	126.9	83.2	77.9	78.5	71.8	66.4	65.8
70°	2872.0	2257.9	974.6	269.8	127.5	77.2	73.2	71.1	67.8	63.1	61.7
72.5°	2478.0	1886.7	738.3	259.1	129.5	72.5	67.8	65.8	63.1	59.1	57.7
75°	1869.9	1471.9	554.4	241.6	130.9	67.1	61.7	60.4	57.7	53.7	53.0
77.5°	1292.0	1091.4	385.3	204.0	116.8	61.1	55.7	54.4	52.4	48.3	47.7
80°	872.5	748.4	236.3	153.0	88.6	53.7	48.3	48.3	46.3	42.3	42.3
82.5°	607.4	559.1	136.3	100.0	64.4	44.3	42.3	42.3	40.3	36.2	35.6
85°	253.7	338.3	61.1	54.4	45.0	34.9	34.9	35.6	33.6	30.2	29.5
87.5°	8.7	36.2	24.2	25.5	26.8	24.2	26.8	26.8	26.2	23.5	22.8
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4
2.5°	1318.2	1309.5	1282.6	1279.3	1259.1	1257.8	1266.5	1251.8	1253.1	1271.2	1268.5
5°	1134.3	1114.2	1113.5	1091.4	1066.5	1060.5	1039.0	1030.9	1027.6	1020.2	1047.1
7.5°	887.3	877.9	886.0	883.3	860.5	847.7	802.1	767.2	749.7	757.1	759.1
10°	630.9	645.0	666.5	687.3	671.2	628.9	609.4	581.2	577.9	575.9	589.3
12.5°	500.0	483.9	494.0	501.4	485.9	467.8	459.8	447.7	454.4	469.8	478.6
15°	415.5	387.3	374.5	365.8	369.8	359.1	363.1	359.1	363.8	368.5	384.6
17.5°	328.2	318.1	294.0	282.6	283.2	278.5	279.9	279.2	276.5	287.3	300.0
20°	247.0	244.3	238.9	230.9	232.2	228.9	226.9	215.5	210.8	214.1	224.8
22.5°	192.6	196.0	199.3	198.7	202.0	193.3	185.2	175.2	173.8	174.5	177.2
25°	172.5	173.8	176.5	179.9	181.9	173.8	162.4	156.4	155.7	157.1	157.1
27.5°	160.4	159.1	162.4	166.5	169.1	159.1	149.7	144.3	143.0	141.6	140.9
30°	147.7	147.7	150.3	154.4	156.4	147.7	139.6	134.2	130.9	128.9	128.2
32.5°	138.3	138.9	140.3	143.0	146.3	137.6	130.9	126.2	120.1	118.1	116.8
35°	127.5	130.2	132.2	132.9	135.6	129.5	122.8	115.4	110.1	108.1	108.1
37.5°	118.8	120.8	124.2	123.5	125.5	121.5	114.1	106.0	103.4	102.7	102.0
40°	112.1	112.1	114.8	117.5	120.1	112.8	104.0	100.0	98.0	96.7	97.3
42.5°	106.0	105.4	105.4	110.1	114.8	104.0	96.7	94.0	93.3	92.0	92.6
45°	100.7	100.0	98.0	100.0	106.7	95.3	90.6	88.6	87.9	87.9	87.9
47.5°	96.0	94.6	92.0	92.6	97.3	88.6	84.6	83.9	83.2	83.2	83.9
50°	90.6	89.3	87.3	86.6	87.9	83.9	80.5	79.2	79.2	79.2	80.5
52.5°	85.9	85.2	82.6	81.9	82.6	79.9	76.5	75.8	75.8	75.8	77.9
55°	82.6	81.2	79.9	78.5	79.9	76.5	73.8	72.5	72.5	73.8	75.2
57.5°	79.2	77.9	77.2	75.8	77.2	73.8	71.1	69.8	70.5	71.1	71.1
60°	75.8	74.5	73.8	72.5	74.5	71.1	68.5	67.8	67.8	67.1	67.1
62.5°	72.5	71.8	70.5	69.1	71.8	67.8	65.8	64.4	63.8	63.8	63.8
65°	68.5	67.8	67.1	66.4	67.8	64.4	62.4	61.7	60.4	59.7	60.4
67.5°	65.1	65.1	63.8	62.4	64.4	60.4	59.1	58.4	56.4	55.7	56.4
70°	61.1	61.1	59.7	59.1	61.7	56.4	55.0	54.4	53.0	52.4	52.4
72.5°	57.1	57.1	55.7	55.0	58.4	52.4	51.0	50.3	48.3	47.7	47.7
75°	53.0	52.4	51.7	51.0	55.0	48.3	46.3	45.0	43.0	42.3	41.6
77.5°	48.3	47.7	46.3	47.0	49.7	43.0	40.3	39.6	37.6	36.9	36.2
80°	42.3	41.6	40.9	42.3	42.3	37.6	34.2	32.9	30.9	29.5	28.9
82.5°	36.2	35.6	35.6	36.9	34.9	32.9	28.9	26.2	22.8	20.8	20.1
85°	29.5	30.9	29.5	30.9	26.2	26.2	20.1	15.4	10.7	8.7	8.1
87.5°	22.8	23.5	22.8	23.5	18.1	17.5	9.4	5.4	0.7	0.0	0.0
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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4	1442.4
2.5°	1288.7	1290.0	1318.9	1347.7	1365.2	1408.8	1430.3	1454.5	1467.2	1482.0
5°	1034.3	1059.8	1083.3	1141.0	1170.6	1239.7	1290.0	1370.6	1396.1	1416.2
7.5°	781.3	819.5	848.4	920.2	975.9	1061.8	1149.7	1245.7	1273.2	1291.4
10°	620.8	655.8	710.1	766.5	828.9	933.0	1028.3	1127.6	1175.9	1196.7
12.5°	521.5	577.2	641.0	693.3	743.0	819.5	940.3	1065.8	1116.2	1138.3
15°	430.2	492.7	557.8	622.2	683.9	770.5	897.4	1060.5	1124.2	1146.4
17.5°	341.6	392.6	458.4	536.3	626.2	736.3	905.4	1117.5	1195.4	1224.2
20°	243.0	292.6	359.8	455.7	562.5	700.7	924.2	1203.4	1314.2	1347.1
22.5°	183.2	210.8	272.5	367.1	505.4	672.5	953.8	1320.9	1450.4	1480.0
25°	161.1	170.5	202.0	293.3	448.4	647.0	992.7	1437.7	1594.7	1627.0
27.5°	143.0	148.3	164.4	235.6	406.1	620.8	1039.0	1563.9	1718.9	1761.2
30°	128.9	135.6	149.0	197.3	365.1	583.3	1081.3	1677.3	1824.3	1856.5
32.5°	118.1	125.5	137.6	178.5	330.2	555.1	1105.4	1761.9	1914.2	1943.8
35°	110.7	117.5	129.5	161.8	299.4	535.6	1112.8	1845.8	2024.3	2054.5
37.5°	104.0	110.7	121.5	145.0	277.9	510.1	1124.2	1945.8	2151.8	2191.4
40°	99.3	104.7	114.8	133.6	248.3	482.6	1137.7	2062.6	2276.0	2315.6
42.5°	94.6	100.7	109.4	134.2	218.8	459.1	1146.4	2152.5	2374.7	2412.3
45°	90.6	97.3	107.4	131.6	196.7	437.6	1142.4	2227.7	2464.6	2493.5
47.5°	86.6	94.6	112.8	126.2	189.9	418.2	1145.7	2300.2	2529.0	2551.9
50°	83.9	94.0	120.8	118.1	191.3	409.4	1177.9	2386.7	2577.4	2586.1
52.5°	81.9	96.0	114.1	106.7	191.3	405.4	1239.7	2526.4	2661.3	2655.2
55°	78.5	95.3	106.7	96.7	183.2	407.4	1298.1	2710.9	2862.6	2829.1
57.5°	75.8	91.3	96.0	89.3	164.4	408.1	1384.7	2866.6	3021.0	3025.7
60°	72.5	98.0	83.2	83.2	140.9	404.7	1461.2	2864.0	3049.9	3080.8
62.5°	69.1	96.0	74.5	77.2	124.8	392.0	1507.5	2696.8	2943.2	3000.2
65°	65.1	75.8	68.5	71.8	118.1	360.4	1441.7	2489.4	2798.9	2859.9
67.5°	60.4	62.4	62.4	66.4	115.4	312.8	1275.9	2260.6	2617.6	2691.5
70°	55.0	55.7	57.1	63.1	107.4	269.1	1039.0	2016.9	2423.0	2516.3
72.5°	49.7	50.3	50.3	57.1	100.7	232.2	735.6	1598.1	2023.0	2121.0
75°	43.6	44.3	43.6	49.7	87.9	173.8	436.9	1010.8	1206.8	1317.5
77.5°	36.9	36.9	35.6	38.9	60.4	110.1	238.9	614.1	734.3	802.7
80°	30.2	27.5	22.8	23.5	32.9	63.1	106.7	352.4	402.7	420.2
82.5°	20.1	15.4	9.4	8.7	10.7	17.5	24.8	139.6	128.2	121.5
85°	4.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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